

THE CENTRAL INDIANA TRANSIT PLAN

YOUR INPUT, YOUR TRANSIT.



INDY CONNECT
CENTRAL INDIANA'S
TRANSIT INITIATIVE

THANK YOU, FROM INDY CONNECT'S LEADERSHIP

After years of study and perhaps the largest public outreach effort our region has ever seen, it is with great pleasure that we present the Central Indiana Transit Plan.

Our region's business, community, and political leaders, along with current transit riders and thousands of residents, have long recognized Central Indiana's under-investment in transit. Originating as a partnership between business and government leaders called the Central Indiana Transit Task Force, then as a partnership between public agencies called Indy Connect, the Central Indiana Transit Plan represents the most comprehensively designed, most thoroughly vetted, and most inclusive transportation planning effort our region has ever created.

This plan would not be possible without the enthusiasm of our many partners, each of whom has played critical roles along the way.

The Indy Chamber, Central Indiana Corporate Partnership, MIBOR Realtor Association, and the Central Indiana Community Foundation started this discussion years ago, and they have stayed consistently engaged. Our outstanding municipal partners have also provided feedback every time it was requested: the cities of Beech Grove, Carmel, Fishers, Greenwood, Indianapolis, Lawrence, Noblesville, Plainfield, Southport, Westfield, and the town of Speedway.

Most importantly, this plan could not have come this far without you, the residents of Central Indiana. Tens of thousands of you gave evenings, mornings, and afternoons to discuss and critique plans, and even more of you engaged through **IndyConnect.org**, **Facebook**, and **Twitter**. Thank you for your participation, and the discussions we've had.

This plan marks the beginning of a great, region-wide conversation about our future—our infrastructure, our investment priorities, and how we'll enable people to get around. We look forward to hearing from you!



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Executive Director, CIRTA



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EXECUTIVE SUMMARY

Overview

In 2014, Indiana passed legislation to enable a stable, dedicated funding source for transit investments, provided via a public referendum process.¹ It allows six Central Indiana counties to ask for voter approval of a local income tax that would fund transit within that county. The Central Indiana Transit Plan is the county-specific, regionally-coordinated transit vision, designed with years of planning and public input. It includes a highly detailed Marion County Transit Plan, a preliminary Hamilton County Transit Plan, and a model for other counties to develop their own transit vision within a regional context.

This plan was refined after hundreds of hours of public input and is presented here in a question and answer format. It can be read cover to cover, or skip around to look for a specific question and its answer. For those who wish to dig deeper, visit IndyConnect.org for detailed planning and engineering studies, financial models, and research reports.



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Conclusion

Review of transit systems nationally, and world-wide, confirm that successful transit systems require infrastructure investment, which has been lacking in Central Indiana. Systems that are reliable, with long hours of service, short wait times, and easy transfers encourage ridership from all residents. For heavily populated areas, transit can effectively provide transportation options beyond the car.

The Central Indiana business community has identified that mass transit can help recruit and retain a diverse and skilled workforce, as well as provide increased access to jobs, health care, and recreation for at-risk populations. Transit helps us remain competitive with other U.S. regions, prepares us for future population growth patterns, and provides a better quality of life for many people. Finally, Central Indiana research indicates that every \$1 spent in transit investment will yield a \$3 economic benefit, making transit an asset for economic development.²

Recommendations

The Plan has integrated regional goals with rider demands for a responsive, smart, transit network.

NETWORK DESIGN

- Improve and increase **local transit services** in Marion County
- Provide new **local transit services** in Hamilton County
- Provide new **rapid transit services** that connect the region
- Continue to plan for transit improvements in **other Central Indiana counties**

REGIONAL PLANNING, LOCAL IMPLEMENTATION

Indiana state law requires that transit be funded locally. Best practices indicate that the most effective and efficient use of transit investment dollars is done regionally. This tension is managed by planning with a regional perspective, but implementing to meet local needs. The Indy Connect partnership will continue in its role to assist counties with transit planning:

- **CIRTA** – The Central Indiana Transportation Authority provides cross-county services such as Workforce Connectors, ride sharing programs, and consultation services to collar counties considering expanding transit services. Also works with other collar county MPOs.
- **IndyGo** – Marion County service provider; provides regional guidance for transit operations; provides guidance for community engagement.
- **Indianapolis MPO** – The Metropolitan Planning Organization provides technical support and planning guidance for transportation planning in the metropolitan area.

REGIONAL CONNECTIVITY

Successful transit for Central Indiana begins with a strong Marion County network that can eventually link to surrounding counties. The Plan proposes four rapid transit corridors that create key routes linked to a vastly improved local bus network. With a successful referendum, three of these rapid transit lines can be built within five years, and one line can be completed within ten years. These lines link multiple cities within three counties as well as provide connectivity to the Indianapolis International Airport.

FUNDING

Indiana state law (**IC 8-25-2**) allows for a local income tax of 0.10% - 0.25% dedicated to transit. In all counties studied, 0.25% (25 cents per \$100 of income) would be required to sufficiently fund a successful transit network. These funds would

supplement, not replace, existing local, state, and federal funding sources. The financial modeling and projections for the Central Indiana Transit Plan are conservative and were reviewed by transit experts, as well as a team of local businesses in the construction, finance, real estate and consulting industries.

TRANSIT PROVIDERS

Each county may choose a transit provider or create their own agency. Regional connectivity between cities and counties would be negotiated via inter-local agreements.

- **Marion County** – IndyGo will continue to be the service provider and will operate the Red, Blue, and Purple rapid transit lines. Hamilton and Marion Counties will determine who will operate the Green Line in 2017, as part of finalizing that corridor's analysis and planning.
- **Hamilton County** – Recommends hiring CIRTA as a contract manager and holding a competitive bid process to select a service provider. IndyGo will be invited to participate in this process.
- **The City of Greenwood** - Has an existing transit system (Access Johnson County) and also has an established service agreement with IndyGo.
- **Other Counties** – Other counties have only just begun assessing their transit needs. CIRTA will work with transit experts, local leaders and stakeholders to assist with developing county plans, including how to select a service provider.
- **Current Rural Transit Providers** - Serve a critical role by providing coverage in areas that are difficult for the fixed network to reach, as well as service for those needing door-to-door assistance. They continue to be essential partners in the Central Indiana Transit Plan.

When implemented, the Central Indiana Transit Plan will increase residents' access to jobs, higher education, and health care, and position the region to compete well with other metropolitan areas around the country.

INTRODUCTION & ASSUMPTIONS



Is this the Central Indiana Transit Plan or the “Indy Connect Plan”?

Indy Connect was originally a joint brand of IndyGo, CIRT, and the MPO, but the brand evolved and began incorporating many of the partners and initiatives related to transit planning in Central Indiana. The financial model, rapid transit studies, network design studies, public- and private-sector partnerships, economic impact analyses, and public outreach efforts now all fit under the umbrella of “Indy Connect: Central Indiana’s Transit Initiative.” This document, the “Central Indiana Transit Plan,” is the most comprehensive single product of the Indy Connect initiative, but the detailed plans, reports, and studies that led to these findings can be found at IndyConnect.org.

Indy Connect is Central Indiana’s regional transit initiative. Since its launch in 2009, Indy Connect’s transit planning has grown into a detailed series of planning and engineering documents including private-sector task force reports, financial models, numerous public input sessions, and research reports on national best practices. This document attempts to distill all of these pieces into a single, unified resource. The Central Indiana Transit Plan is a combined vision for the future of transit in Central Indiana, a summary of recommendations made so far, and a one-stop source for answers to the most commonly asked questions.

If you’re reading this plan, you’re probably looking for answers to specific questions. We’ve assumed that you aren’t a transit expert, and have tried to anticipate and answer your questions. If you can’t find your answer here, visit IndyConnect.org to review detailed studies, submit comments, ask questions, or make a request to have someone speak with your neighborhood organization or any other group.

This plan makes some assumptions based on the best information available:

1. Indiana state law requires that Marion County pass a referendum for transit funding before any other county or adjacent townships. The Central Indiana Transit Plan assumes that Marion County and three adjacent townships (Pleasant in Johnson County, Clay and Washington in Hamilton County) will each hold public referendums on transit in November 2016. (See page 52 for more on the referendum process.)
2. The existing service agreement between IndyGo and the City of Greenwood will continue, and therefore that service is included as part of this plan.
3. Based on the structure of state law, the Plan assumes IndyGo will continue to operate in Marion County, and other counties, including Hamilton County, will hold a competitive bidding process to contract with a transit service provider(s).
4. The plan assumes that new, dedicated revenue streams would supplement, not replace, existing revenue streams in each county.
5. The financial modeling and projections are conservative. They were reviewed by transit experts, as well as a team of Central Indiana businesses in the construction, finance, real estate, and consulting industries.

THE INDY CONNECT PARTNERS



Central Indiana Regional Transportation Authority
CONNECTING PEOPLE AND PLACES

The Central Indiana Regional Transportation Authority (CIRTA) is a quasi-governmental agency that provides transportation options to suburban and rural communities in Boone, Delaware, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby counties. For more information: www.CIRTA.us



The Indianapolis Metropolitan Planning Organization (MPO) is a government agency mandated by the federal government to provide comprehensive transportation planning to large urban areas. The MPO's jurisdiction includes Marion County and portions of Boone, Hamilton, Hancock, Hendricks, Johnson, Morgan, and Shelby counties. For more information: www.IndyMPO.org

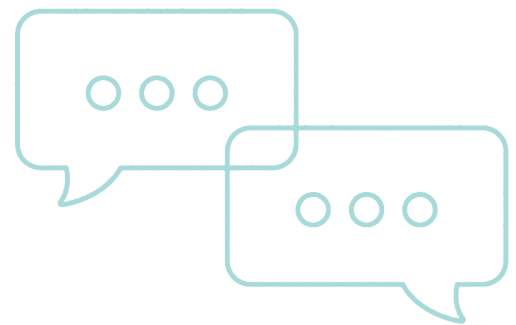


IndyGo is the region's largest transit provider, operating a fleet of 200 buses on 37 fixed routes in the cities and towns of Indianapolis, Speedway, Beech Grove, Southport, and Greenwood. IndyGo also operates an on-demand para-transit service known as Open Door. For more information: www.IndyGo.net

MISSION

The Central Indiana Transit Plan exists to connect the people of Central Indiana to jobs, education, healthcare, and fun.

Central Indiana has seen an increased demand for frequent, reliable, and safe transit. Using data that identifies the major population, employment, and activity centers throughout Central Indiana, the Central Indiana Transit Plan proposes the best means of creating those essential connections for all residents. Using lessons learned from peer cities — Atlanta, Cleveland, Charlotte, Cincinnati, Columbus, Denver, Grand Rapids, Kansas City, Minneapolis, Salt Lake City, and many others—the Central Indiana Transit Plan has been “right-sized” for Central Indiana, ensuring that the vision and goals are attainable within the current financial and political environments. This plan presents a pathway to a better quality of life for all Central Indiana residents through this vital transit initiative.



SECTION 1. TRANSIT BASICS & BACKGROUND

Local transit service typically has stops spaced every two blocks consistently along the entire route. Because of the closely-spaced stops, local service has the most access, but the slowest trip time. The amount of time between buses on the same route can vary from 10 minutes to an hour or more.

Express transit service typically has only a few stops at each end of a route, and no stops in the middle. Express service has the least access overall and often the best trip time, especially when routes make use of interstates and similar limited access roads.

Rapid transit service uses the most direct route possible between two end points. Stations are spaced every ½ to 1 mile for walkable access, frequent service, and good trip time. Rapid transit lines provide the backbone of a transit network but need to connect to local routes for a network to be fully useful for people.

On-demand services do not have set routes. They are needed in every transit network to provide service for people who aren't able to take regular transit due to age, health, disability, or similar factors. Door-to-door service is provided on a reservation basis. Some on-demand services are available for all residents while others are limited only to riders with special needs.

Other transit services are available such as intercity transit services (Megabus, Greyhound, Amtrak), as well as taxis, Uber, and Lyft.

What is transit?

In this plan, “transit” refers to a typical service used in cities and regions throughout the world to move people from one place to another. There are many terms that can describe this form of transportation, including “mass transit,” “public transit,” “mass transportation,” and “public transportation.” For simplicity’s sake, this document uses only the term “transit.”

What are the various types of transit services?

Transit providers can supply various types of service depending on the size and layout of the service area, and the needs of transit riders. Most transit networks will use one or two of the service types below, if not all of them.

TYPES OF TRANSIT SERVICE

Local



Rapid



Express



Rapid transit services on the busiest corridors may never reach their full potential without the local transit network to support them. Trails, sidewalks, and bikeways need to supplement the local transit network so that after ending their transit trip, riders can safely reach their final destination by walking or bicycle. The goal is to develop safe, reliable connectivity with a wide variety of choices – which includes cars. Transit helps communities use roads to their maximum capacity.

What are the Seven Demands of Transit Riders?³

1. It takes me where I want to go.
2. It takes me when I want to go.
3. It is a good use of my time.
4. It is a good use of my money.
5. It respects me in the level of safety, comfort, and amenity it provides.
6. I can trust it.
7. It gives me freedom to change my plans.

How do you measure success in transit?

Typically, success of transit is measured in three areas.

RIDERSHIP VS. COVERAGE

RIDERSHIP: Refers to how many people use a transit system and how many trips they take with it.

A successful ridership model focuses on providing fewer routes, along high density corridors, with frequent buses. It connects people to the densest employment centers, and operates for longer hours each day. Ridership models allow for very effective routes but usually don't cover as much territory. Successful ridership models focus on the number of riders and operating expenses per passenger trip.

COVERAGE: Measures how many people live within a half-mile of all transit lines, not worrying about issues like frequency of services, or operational hours. It simply strives to hit all geographic locations.

Successful coverage models ensure that all residents have access to transit, but these models usually are not cost-effective. Measurements to determine success focus on geography covered, rather than number of customers served.

No transit system is completely coverage- or ridership-based. Providers strive to blend the two values into systems that record the highest number of trips possible while still serving some of the less-dense areas in the community, with special efforts made to reach areas where many low-income people live.

The Central Indiana Transit Plan strives for an 80% ridership / 20% coverage model with additional funding. Learn about other plan recommendations starting on page 23.

COMMUNITY VALUES

There are many choices to be made when creating a transit network and the best transit plan must correspond to community values. Through public meetings, community exercises, expert advice, and stakeholder meetings we've developed a set of goals and expectations that reflect each county's values and needs, while keeping us all connected. Your Input, Your Transit.



EFFECTIVE MANAGEMENT

Productivity, service effectiveness, and financial performance are key elements of effective transit system management. Metrics that illustrate how the transit agencies manage their resources include:

- **Total Passenger Boardings** – How many passengers get on a transit vehicle.
- **Revenue Miles Per Capita** – The number of on-duty, traveled vehicle miles that are generating revenue per number of people in the service area.
- **Operating Expense per Passenger Trip** – This can be reviewed system-wide, or per route to see how effective a particular route is in the network.
- **Revenue Hours per Capita** – This number divides the revenue hours (on-duty hours along a vehicle's route) by the service population to determine how much service is available for residents. It is common to use this metric to compare transit systems in peer cities or regions to indicate if a transit system is well- or under-funded.

QUALITIES FOR GROWING RIDERSHIP⁴

A TRANSIT AGENCY CAN GROW ITS NUMBER OF RIDERS BY INVESTING IN A FREQUENT, CONNECTED NETWORK SERVING AREAS OF:

DENSITY

More people going to and from areas around each stop increases ridership.



HIGH RIDERSHIP



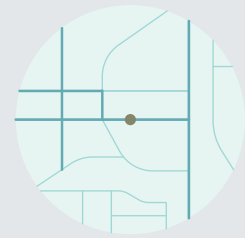
LOW RIDERSHIP

WALKABILITY

Ridership is higher among people who can easily walk to a stop.



HIGH RIDERSHIP



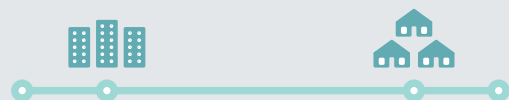
LOW RIDERSHIP

CONTINUITY

Transit that doesn't cross long low-density gaps increases ridership.



HIGH RIDERSHIP



LOW RIDERSHIP

LINEARITY

Transit that runs in straight lines attracts through-riders.



HIGH RIDERSHIP



LOW RIDERSHIP

Why doesn't transit pay for itself?

Some people will say a transit system failed because fare revenue couldn't cover all costs. In fact, all successful transit systems rely on some percentage of public funding, as do our public roads. In Indiana, only about 56%⁵ of road building and maintenance is paid for through gasoline taxes. The rest is covered through a variety of federal, state and local funding. You can read more about the details of transit financing in "Section 6. Money & Real Estate."



USER FEES ACCOUNTED FOR LESS THAN HALF OF REVENUES USED FOR U.S. ROADS AND HIGHWAYS IN 2012⁶

48% | User Revenue

42% | Non-User Revenue

10% | Bond Revenue

What are frequency and service standards?

Frequency refers to how often a vehicle on a route arrives at a particular stop.

Span refers to how many hours per day a particular transit line is running.

Service Standards are the goals set for frequency and span of service, based on the service type.

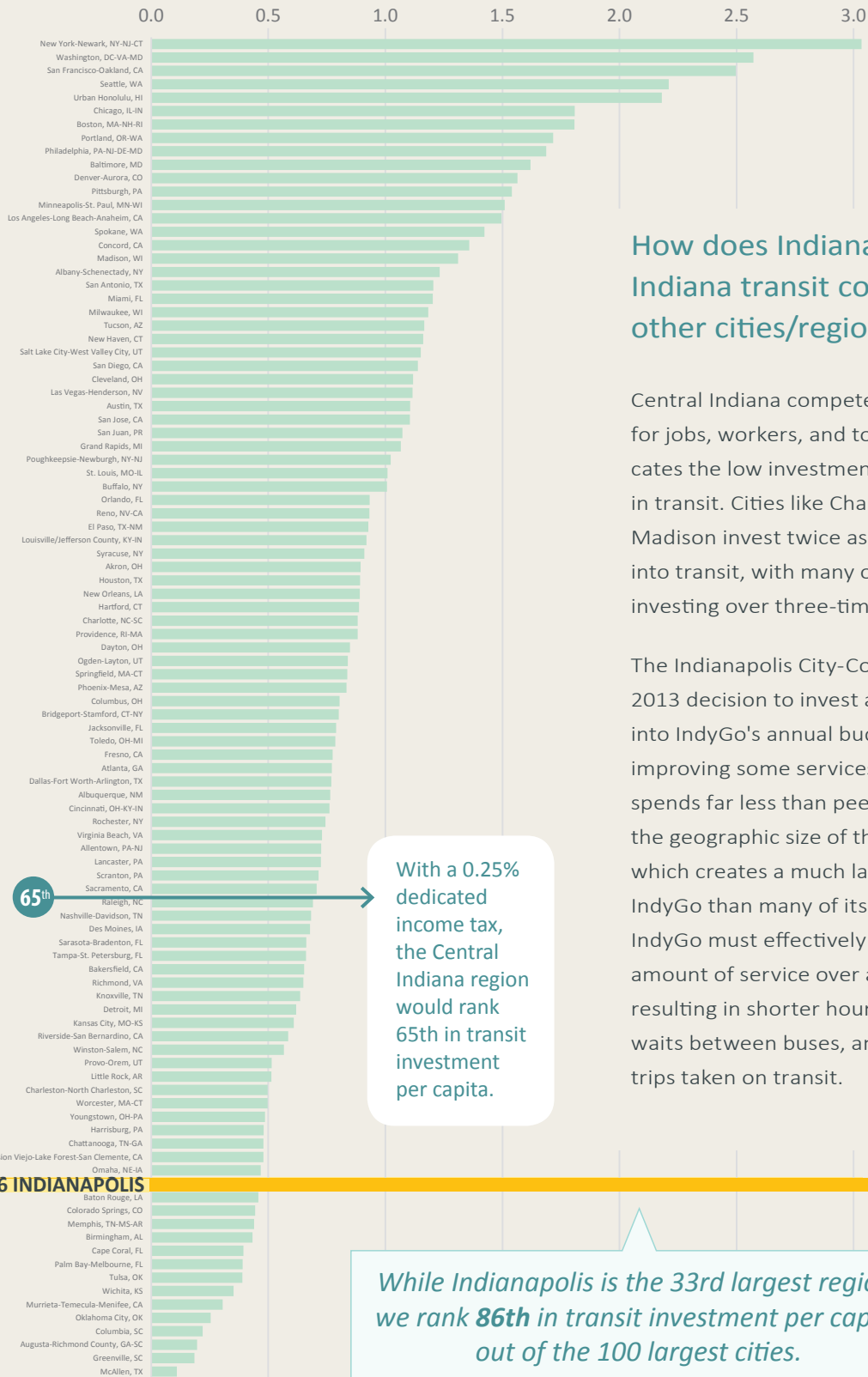
Knowing how often a vehicle comes and how many hours per day it operates are important. For example, knowing that a bus will come every 10 or

15 minutes (so you don't have to refer to a schedule), and that it will still be operating when you are ready to go home, even if that is at 10 or 11 p.m., you are far more likely to consider using transit.

Below is a simple example of a service standards schedule. Sometimes the frequencies and spans can vary greatly, and sometimes they are very similar. For detailed information on the service standards for a particular Central Indiana county, refer to "Section 3. The Marion County Transit Plan" and "Section 4. Hamilton County Transit Recommendations."

SAMPLE SERVICE STANDARDS SCHEDULE			
Service Type	Frequency	Span (hours/day)	
		Monday-Saturday	Sunday
LOCAL TRANSIT	30 min.	5am-1am (20hr)	6am-10pm (16hr)
FREQUENT LOCAL TRANSIT	15 min.	5am-1am (20hr)	6am-10pm (16hr)
RAPID TRANSIT	10 min.	5am-1am (20hr)	6am-10pm (16hr)

100 LARGEST REGIONS IN U.S. -- REVENUE HOURS PER CAPITA⁷



How does Indianapolis/Central Indiana transit compare to other cities/regions?

Central Indiana competes with other regions for jobs, workers, and tourism. This graph indicates the low investment that Indianapolis has in transit. Cities like Charlotte, Cleveland, and Madison invest twice as much as Indianapolis into transit, with many of the largest U.S. cities investing over three-times as much.

The Indianapolis City-County Council's 2013 decision to invest an additional \$6M into IndyGo's annual budget was critical for improving some services, but Indianapolis still spends far less than peer regions. Because of the geographic size of the City of Indianapolis, which creates a much larger service area for IndyGo than many of its peer transit agencies, IndyGo must effectively spread a limited amount of service over a very large area, resulting in shorter hours of operation, longer waits between buses, and fewer riders and trips taken on transit.

Do competitor cities invest in regional transit?

Central Indiana regularly competes with regions throughout the U.S. to attract businesses and grow the workforce. Central Indiana's competitor cities invest in transit, and most have been doing so for years, including:

- **Houston, TX:** Updated their transit system from a large number of low-frequency routes to a smaller number of high-frequency routes in high-demand areas, and extended weekend service. The changes were launched in August 2015. By January 2016, ridership rose on local routes by 4%, on park-and-ride routes by 6%, and on rapid transit routes by almost 26%.⁸
- **Minneapolis/St. Paul, MN:** Investments along their Green Line have been over \$4 billion since the line began operating.⁹ Averages more than 40,000 daily riders, well above projections for 2030 ridership.¹⁰
- **Salt Lake City Metro (Includes Provo), UT:** Began investing in transit in 1999, which has generated more than \$7 billion in private investment. UTA carries over 42 million riders per year. 37% of University of Utah students, staff and faculty ride the system daily.¹¹
- **Charlotte Area Transit, NC:** Blue Line cost \$500 million in 2007, by 2010 it had generated \$1.9 billion in private investment. 16,000 trips per day.¹²
- **Central Ohio Transit Authority (Columbus/Dublin):** Established dedicated funding source in 1999. Added 40 fixed routes in 2011.¹³ Served 18.9 million trips in 2015.¹⁴ The "COTA: NextGen" project will plan to further expand transit.¹⁵
- **Denver/Boulder, CO:** FasTracks included six new rail corridors, extensions to three existing corridors, redevelopment of Denver Union Station, and realignment of the bus network. \$3 billion injected into local economy and \$4 return on every \$1 in transit investment over 20 years.¹⁶

"Public transit is worth a great deal to a city. Hidden economic value can range from as much as \$1.5 million a year for the smallest of cities to a whopping \$1.8 billion a year for the largest cities, according to urban economists Daniel Chatman and Robert Nolan, who analyzed 2003-2007 data from 290 metropolitan areas. Their study shows that adding about four seats to rail lines and buses per 1,000 resident produces 320 more employees per square mile for the central city, an increase of 19%."

Rosabeth Moss Kanter¹⁷

Transit Funding Referendums¹⁸

Many cities have passed successful referendums in recent years to provide additional funding and support for their transit systems.

- Charlotte, NC (1998)
- Las Vegas, NV (1992, 2002)
- Branson, MO (2004)
- Phoenix, AZ (2000, 2004)
- San Diego, CA (2004)
- Kansas City, MO (2006, 2008, 2012)
- Denver/Boulder, CO (2004)
- Los Angeles, CA (2008)
- Oklahoma City, OK (2009)
- St. Louis, MO (2010)
- Toledo, OH (2010)
- Grand Rapids, MI (2011)
- Durham, NC (2011)
- Baton Rouge, LA (2012)

What are some of the benefits of transit?



CHOICE

When transit is a good option, many people choose to use it. When the City-County Council invested additional funding into IndyGo to improve frequency, extend hours, and increase productivity on the system's three busiest lines (Routes 8, 10, and 39), ridership on those routes increased 8.4% in the first year. In 2014, those three routes accounted for 40.5% of all trips taken on IndyGo's 31 routes.¹⁹



STRONGER NEIGHBORHOODS

Good transit stabilizes residential property values, helps redevelopment, and attracts investment. Housing near good public transit is in high demand, even in bad housing markets. During the last recession, residential values performed 42% better when they were located near high quality transit service.²⁰

Transit-friendly, walkable places are in high demand, but short supply in our region. A 2012 MPO and MIBOR Realtor Association survey revealed 75% of Central Indiana homeowners say they would prefer to live in suburban mixed-use, walkable urban, or downtown neighborhoods,²¹ but more than 80% of homes constructed in Central Indiana are in housing-only subdivisions.²²



REGIONAL COMPETITIVENESS

Central Indiana competes with other regions for talent. Many recent graduates and young professionals are choosing their city before they find their job, and they're often choosing walkable neighborhoods with good transit access. Locally, a 2015 survey by IndyHub found that 74% of millennials surveyed indicated that they are dissatisfied with transit options in Indianapolis.²³



ECONOMIC GROWTH

Young professionals and the businesses that recruit them are both looking for transit-served locations. The 2,100 residents, workers, and businesses who participated in the 2015 Indianapolis Region Comprehensive Economic Development Strategy (CEDS) survey and focus groups noted that transit is the biggest challenge as the Central Indiana region seeks to grow quality jobs.²⁴

More than 30 Indiana-based companies (e.g. Allison Transmission, Cummins, Remy, etc.) supply the state's transit systems and export nationally and internationally.²⁵ Buses are good business.



STABLE WORKFORCE

People need reliable, affordable ways to get to work. About 59% of transit trips are trips to work,²⁶ and businesses located on transit routes have significantly less employee turnover.²⁷ Only 33% of all jobs in Indianapolis are reachable via transit in 90 minutes, ranking 64th in transit accessible jobs nationally.²⁸

In addition, quickly developing counties like Hamilton County are adding jobs, but don't have enough workers²⁹ while high population counties, like Marion, have workers looking for jobs. Transit brings the workers to the job and keeps business thriving.



RETURN ON INVESTMENT

In Indiana, transit typically returns \$3 in economic output for every \$1 invested, not including the real estate development that good transit service can attract.³⁰ Walkable urban office space in the 30 largest U.S. metros commands a 74% rent-per-square-foot premium over rents in drivable suburban areas, and these price premiums continue to grow.³¹



NON-DRIVERS CAN GET AROUND

Seniors looking to downsize and age in place, need good transit to stay mobile. About 79% of Indy's senior citizens have poor transit access, ranking 40th out of 46 mid-sized U.S. metros.³² Indy's over-65 demographic will continue to grow exponentially over the next decade.

Other non-drivers who benefit from transit include young people and people who can't drive or don't have licenses. People without cars can experience major isolation without access to transit, making 15% fewer healthcare trips, 59% fewer shopping trips and restaurant visits, and 65% fewer trips for social, family, and religious activities than drivers do.³³



PRODUCTIVE TRAVELING

Distracted driving is on the rise,³⁷ and convenient transit can provide an alternative for people who prefer to have conversations, do work, or use smartphones while traveling.

Americans are driving less, particularly Millennials, who are waiting longer to get their licenses and driving less than their parents did at their age.³⁸ In 2008, vehicle miles traveled per year fell, then stabilized during the recession³⁹ due to factors like cost of gasoline, available sidewalks, bikeways, and transit, and travel preferences (like doing other things during a trip while someone else drives).



RIDERS SAVE MONEY

Owning and relying upon a single car costs on average over \$8,000 a year.³⁴ Most Central Indiana households spend more than 20% of their income on transportation costs, so switching even one driver to transit can save families thousands of dollars. Indy households spend about \$12,000 per year on transportation.³⁵



BETTER HEALTH

Studies show that the average transit rider gets more physical activity per day than non-riders by walking to stops and final destinations,⁴⁰ and they're less likely to be in a collision than car passengers.

Better transit access leads to better health. A 2006 study by The Children's Health Fund found that 3.2 million children in the United States missed or did not schedule a health care visit in 2005 because of transportation issues.⁴¹



CLEANER AIR & LOWER ENERGY USE

More transit riders means fewer automobiles on the road, and less air pollution from tailpipes. Electric buses can use solar energy or natural gas-generated power, which is cleaner than coal-generated. Renewable energy sources, like solar panels, are being used by IndyGo to offset the cost of energy.



THE PATH OUT OF POVERTY

Reliable, affordable transportation to work and school is a critical tool for low-income families to climb out of poverty. The relationship between transportation and economic mobility is stronger than that of crime, elementary school test scores, or the percentage of two-parent families in a community.⁴²

Only about 1 of every 20 kids born in poverty in Indianapolis can climb to the top of the economic ladder, making Indy one of the least upwardly mobile cities in the U.S. (ranked 46th of 50).⁴³ Transit provides reliable, low-cost access to work and school.



FOOD ACCESS

All people deserve access to healthy, affordable food. Where private development fails, transit can connect residents in food deserts to the best established grocery stores in town.³⁶

Surveys show transit is a top priority within Central Indiana. Frequent, reliable transit service consistently lands at the top of wish lists in local surveys.

INDY CHAMBER (2015)⁴⁴

The Comprehensive Economic Development Strategy (CEDS) seeks to define the region's strengths, weaknesses, challenges, and opportunities for economic growth. The 2,100 residents, workers, and businesses participating in the CEDS survey and focus groups said that the lack of transit options, frequency, and reliability is a major competitive disadvantage for our region.

“Higher education leaders expressed concern about their ability to attract students who desire an interconnected urban experience where a car is not a requirement to move about the region. Entrepreneurs, on the other hand, voiced difficulty competing against highly urbanized areas with extensive public transportation infrastructure for start-up workers, while young professionals asserted that the dearth of public transportation directly diminished their quality of life.”

INDYHUB (2015)⁴⁵

IndyHub polled 1,555 young professionals on their perspectives about Indianapolis. When asked what Indy is missing, the most common answer was transit. Further, when asked to rank their satisfaction of Indy's current transit service on a scale from 1-10, 74% indicated that they are dissatisfied with transit, with 1/5 of all respondents indicating that they are extremely dissatisfied.

DOWNTOWN INDY (2013)⁴⁶

Velocity, Downtown Indy Inc.'s five-year strategic action plan, engaged nearly 4,000 downtown residents, businesses, and civic leaders in a survey on perceptions of downtown Indy. Transit emerged as the top concern and top priority for stakeholders.

“71% of respondents saw improved transportation options as a very important improvement to enhance Downtown Indianapolis over the next five years... The top actions respondents said were very important to achieving their vision were supporting more transit and alternatives to cars (67%) and creating a circular or shuttle between attractions (58%)... When asked to list the most important action to achieve their vision for the future, the greatest percentage of respondents (22.4%) said supporting more transit and alternatives to cars.”

HAMILTON COUNTY HEALTH (2013)⁴⁷

A comprehensive community health needs assessment in Hamilton County cited lack of transportation as a major barrier to receiving health care. 11% of all residents, and 39% of those surveyed on-site at St. Vincent Hospital, said that the lack of transportation prevented them from participating in activities outside the home.

What trends influence transit needs?

Economic trends, demographic changes, and shifting lifestyles are leading to greater demand for more transportation options, including more transit and more walkable, mixed-use, transit-served housing. These trends are affecting communities across the country, and Central Indiana is no exception.

ECONOMIC TRENDS

The Central Indiana Transit Task Force (CITTF) found that expanding various transit options will do far more for the vitality of the regional core and enhancing regional competitiveness than highway improvements alone.⁴⁸ The Comprehensive Economic Development Strategy (CEDS) created for Central Indiana indicated that an improved and expanded transit system will enable a broader economic impact on the region from visitors to the largest sporting events and tourism.

Regarding the region's workforce, various surveys have indicated that people in Central Indiana are dissatisfied with their current transit options (see facing page). In some counties of Central Indiana, development and jobs are growing but there are no transit systems in place to assist workers, especially those earning lower wages, in getting to work.

DEMOGRAPHIC CHANGES

About 390,000 Baby Boomers live in Central Indiana, making up about 27% of the region's population.⁴⁹ These Hoosiers started turning 65 in 2011, and thousands more will turn 65 each year until 2029. This is an important birthday, since studies show that total miles driven drops sharply after a person turns 65.⁵⁰

About 28% of Central Indiana's population are Millennials,⁵¹ who are beginning to dominate the workplace and marketplace. This generation is less interested in driving than their parents.⁵² 63% would

“Public transportation and place making are intricately linked. Walkable neighborhood centers and mixed-use development, increasingly desired by the Millennial generation, are greatly assisted by a diverse array of transportation options that connect residents and visitors to different areas of a region.”

— CEDS REPORT, INDY CHAMBER⁵³

prefer to live where they don't need a car very often,⁵⁴ and 56% prefer to live in mixed-use, walkable neighborhoods.⁵⁵

SHIFTING LIFESTYLES

Housing preferences are changing. A number of studies point to a national shift in preference to more connected, transit-served, mixed-use neighborhoods. A 2012 MPO and MIBOR Realtor Association 10-county, 1,502-person survey in Central Indiana found that while 75% of consumers say they would prefer to live in suburban mixed-use, walkable urban, or downtown neighborhoods,⁵⁶ 88% of homes approved for construction are in housing-only subdivisions.⁵⁷

The limited number of mixed-use, walkable projects that are being built in Central Indiana are generally located in “downtown” settings, like the Carmel Arts & Design District, the Fishers Nickelplate District, and Downtown Indianapolis, where those walkable developments attract higher rents and lower vacancy rates. For example, Downtown Indianapolis will grow from about 18,200 residential units in 2010 to nearly 30,000 by 2020.⁵⁸

In order for an area to be walkable, residences and businesses must be closer to each other, usually resulting in few parking spaces for the public and residents, and therefore a stronger need for frequent, reliable transit choices.

SECTION 2. THE CENTRAL INDIANA TRANSIT PLAN



What's in a Name?

Indy Connect = a multi-agency initiative to plan for regional transit, and producer of the Central Indiana Transit Plan – the overall vision for transit in the Central Indiana region

IndyGo = the service provider for transit in Indianapolis / Marion County

IndyGo Forward = the planning process for transit in Marion County, and predecessor of the Marion County Transit Plan, the first step in implementing the Central Indiana Transit Plan's regional vision

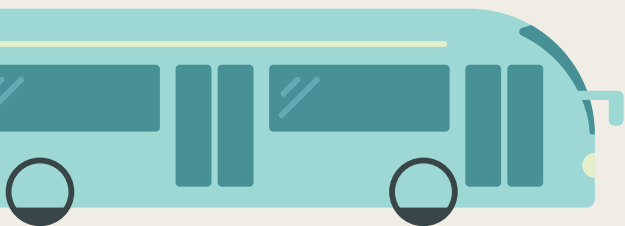
Indy Connect Now = banner for a number of advocacy organizations that worked in 2014 for passage of Indiana SEA 176 (now **IC 8-25-2**) which provided an opportunity for a stable transit funding source via county referendum

What is the Central Indiana Transit Plan?

The broad, multi-county, multi-year vision for transit for all of Central Indiana developed by the Indy Connect partnership (CIRTA, IndyGo, and the MPO) and vast amounts of public input.

What are the goals of the Central Indiana Transit Plan?

- To expand quality transportation choices and provide frequent, reliable transit service to as many people as possible in Central Indiana.
- To connect people to places of employment, healthcare, education, shopping, family, recreation, and cultural amenities.
- To provide service upgrades in areas where transit can compete with private automobile use.
- To create opportunities to transfer between frequent routes, thereby reducing overall travel times.
- To develop transit in coordination with current or future connections to other modes of transportation (e.g., autos, bikeshare, carshare, trails, etc.).
- To provide convenient connections to areas of high walkability where there are limited parking options.
- To leverage public investment in transit to support economic growth, retain existing businesses, attract new businesses, expand housing choices, and stimulate redevelopment efforts.
- To support regional efforts to improve air quality and reduce greenhouse gas emissions via reduced automobile emissions.
- To honor the principles of the "Riders' Seven Demands" for transit. (see page 8)



How did the Plan Develop? (The Transit Timeline)

In 2009, a group of elected officials and business leaders studied a common question: How can Central Indiana's transportation investments best position the region for economic growth? Called the Central Indiana Transit Task Force (CITTF), members included the Central Indiana Corporate Partnership (CICP), Indy Chamber, MIBOR Realtor Association, and Central Indiana Community Foundation (CICF). They studied highway and bridge expansions, trails and sidewalks, high-occupancy vehicle lanes, toll roads, and transit, and prioritized projects based on detailed return on investment (ROI) calculations.⁵⁹

Task Force members were surprised by the results: transit projects far outpaced other modes of transportation in terms of return on investment. This led them to agree with the Indianapolis Metropolitan Planning Organization's Long Range Transportation Plan and its proposed infrastructure improvements, but recommended including transit. In early 2010, with the CITTF report as a starting point, Indy Connect was created and began working for funding legislation, as well as seeking ideas and refinements from a wide range of Central Indiana residents.

2009

CITTF forms to prioritize future transportation investments.

MPO receives U.S. FTA grant to study Green Line.

2010

Indy Connect forms - partnership of IndyGo, MPO, and CIRT.A.

Indy Connect revises CITTF plan with public input.

Indy Connect holds dozens of public input meetings in Central Indiana.

2011

Green Line advisory committee forms; 10+ public input meetings held.

Indy Connect Vision Plan is adopted into MPO's 2035 Long Range Transportation Plan.

2012

MPO receives U.S. FTA grant to study Red and Blue Line corridors.

Indy Connect holds 20+ public input meetings on network design and Green Line alternatives.

Downtown Indy Transit Center site identified on Washington Street.

First workforce connector begins to job sites in Plainfield.

2013

CICP, MIBOR, Indy Chamber, and partners form Indy Connect NOW; work with Indiana General Assembly on transit funding legislation.

Indy Connect holds 30+ public input meetings and completes Red and Blue Line studies; IRTC adopts Red and Blue Line recommendations.

Indianapolis increases IndyGo's annual operating budget by \$6 million to boost frequency on Routes 8, 10, and 39 and create 86th Street crosstown route.

2014

SB176 passes (now **IC 8-25**), enabling six Central Indiana counties to hold income tax referendums to fund transit.

MPO conducts Purple Line study, including 20+ public input meetings.

Hamilton County Transit Forum convenes to study governance and routes.

IndyGo Forward process for planning an improved local bus network .

IndyGo receives a U.S. DOT TIGER VI grant for Red Line engineering.

MPO completes TOD Strategic Plan to guide strategies and investments.

2015

HCTF produces draft plan, holds dozens of public input meetings.

Construction begins on new Downtown Indy Transit Center.

Additional workforce connector opens in Plainfield and new one in Whitestown.

2016

IndyGo receives U.S. FTA Small Starts Grant for Red Line Construction

Indy Connect focuses on educating the public on the recommendations of the Central Indiana Transit Plan.

Indianapolis/Marion County City-County Council certifies a transit referendum to be placed on the November 2016 general election ballot.

What is the plan for transit in Central Indiana, specifically?

Recommendations for Central Indiana include new and improved local and rapid transit services. Through various studies and much public input, routes, service standards and county-specific governance plans are recommended, as well as strategies for financial and physical implementation.

The Central Indiana Transit Plan has four main components:

- Recommendations for improving and increasing **local transit services in Marion County**
- Recommendations for new **local transit services in Hamilton County**
- Recommendations for **new rapid transit services** that connect the entire region
- Recommendations for **next steps for other Central Indiana counties** to implement transit

When implemented, the Central Indiana Transit Plan will increase residents' access to jobs, higher education, and health care, and position the region to compete well with other metropolitan areas around the country.

 **Learn More about the Plan**

Section 3. The Marion County Transit Plan

Section 4. Hamilton County Transit Recommendations

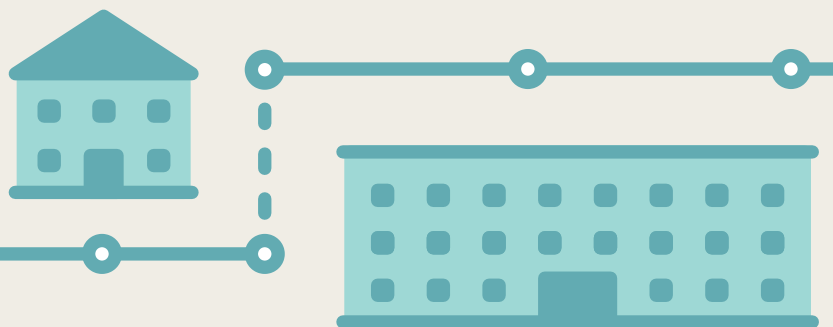
Section 5. Other Central Indiana Counties

Where's the Map?

This plan includes a Marion County map in "Section 3. The Marion County Transit Plan." Detailed route maps for proposed regional rapid transit lines can be found at IndyConnect.org. Detailed maps for current IndyGo routes can be found at IndyGo.net. For Hamilton County, much planning still needs to be done before a map of route recommendations is produced.

When the Indiana State Legislature passed a bill⁶⁰ in 2014 to enable opportunities for transit funding in Central Indiana, it made that funding possible only on a county-by-county basis, with certain townships adjacent to Marion County eligible independently from their county. Each county (or township) that wants to be part of a regional transit network, starting with Marion County, will need to create its own vision for transit and hold its own referendum (a public question on a voting ballot). Residents will then decide if they want to fund transit. In counties (or townships) where referendums pass, funding will then be available within that jurisdiction to pay for their own part of the regional transit network.

An online map of the envisioned transit network in Central Indiana can be found at IndyConnect.org. It currently includes transit in Marion County as the only County that has gone through the planning and public input process to create a vision map for the local transit network. As time goes on, the Indy Connect partnership will assist other counties to create their part of the regional transit vision. As additional counties complete their planning and public input processes, that online map and this document will be updated.



Did the public have input in the Plan?

The Central Indiana Transit Plan has evolved from several decades of planning studies and public input. In 2009 a blue ribbon panel of area businesses and community leaders (the Central Indiana Transit Task Force) outlined the need to accelerate the region's transit investments. From this, the Indy Connect transportation planning initiative was formed. Collecting thousands of comments and educating tens of thousands of people on the transit planning process and studies, the Indy Connect public involvement effort won "Best of Show" at the 2010 Indy ADDY Awards, Silver at the 2010 Regional ADDY Awards, recognition from the Federal Highway Administration and Federal Transit Administration as a national best practice, and awards from the Indiana Chapter of the American Planning Association. Indy Connect is likely the region's largest-ever public outreach process.

More recently, transit experts have worked with the community to continue collecting input into the Central Indiana Transit Plan. Public input and outreach since 2010 includes:



More than 75 public meetings reaching over 2,500 individuals

More than 250 stakeholder group presentations



Contact with 150,000 local residents through dozens of festivals and fairs

More than 110,000 visits and over 300,000 page views to IndyConnect.org



Will there be additional opportunities for public comment?

Absolutely. An overall vision for the Central Indiana Transit Plan is in place, but planning and design for individual routes and projects will continue, and open houses and public meetings will be ongoing. You can also visit IndyConnect.org to leave comments, request a speaker, or to sign up for the email newsletter.

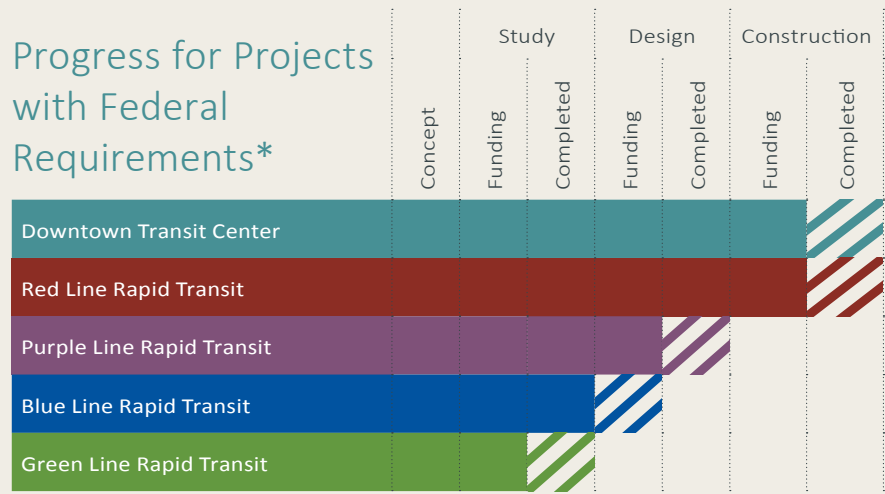
How far along are individual studies?

Transit plans for Central Indiana counties, whether they are local bus networks or rapid transit corridor studies, go through a process to ensure that they are planned using the best data and information, and meet the needs and desires of the public. As studies progress, plans may change in response to new information, public input, or funding availability.



*Public Input happens throughout the process

Rapid transit corridor studies are part of a federal process to ensure that the routes will connect the most people with the most destinations, without causing harm to residents or the natural environment. Each study must go through steps to make sure that the public is involved in the planning process, and that the recommended route and service will maximize the results (ridership and future development) in that corridor.



*Public Input happens throughout the process

Local transit networks also include much public feedback, which helps the transit provider to understand the needs and concerns of riders. When planning local transit networks, it is vitally important to balance the needs of community access to transit with the cost of operating it.



What are the recommendations?

Public input and the many studies and reports created as part of Indy Connect have led to the following recommendations for transit improvements in Central Indiana:

- 1.** Create a quality rider experience
 - » Longer hours of service
 - » Shorter wait times
 - » Accommodate bicycles on transit vehicles
 - » Every route running every day of the week
- 2.** Provide an 80% ridership / 20% coverage system model to connect the areas with the most people to concentrated areas of employment, recreation, retail, and health care
 - » Use a mix of vehicles to best meet operational goals
 - » Provide higher levels of frequency, while providing as much coverage as is economically feasible
 - » Provide rapid transit routes, operated by IndyGo using inter-local agreements
 - » Local transit route operators will be selected by each county
 - » Provide coverage service to at-risk and disadvantaged populations
- 3.** Leverage transit investments to generate economic development
 - » Strategically invest affordable housing funds from sources, such as Community Development Block Grants (CDBG) and the Home Investment Partnerships Program (HOME)
 - » Ensure that local land use plans and ordinances maximize the opportunity for tax-generating developments in areas that are most likely to attract transit oriented development
- 4.** Use transit vehicles and energy sources that minimize environmental impact
 - » All rapid transit vehicles will be electric
 - » IndyGo has installed a 1.0 megawatt solar array on the roof of their maintenance facility that provides renewable energy to power electric vehicles and reduces dependence on other energy sources
 - » 13% of IndyGo's existing 165-bus fleet are fully electric, and 9% are hybrid diesel-electric. IndyGo plans to continue to invest in fuel alternatives to diesel and minimize environmental impact.
 - » Hamilton County is committed to using environmentally-friendly transit vehicles.
- 5.** Continue to engage the public throughout construction and implementation
 - » Public meetings
 - » Community conversations
 - » Providing information and opportunities to comment on [IndyConnect.org](https://www.indyconnect.org)
- 6.** Continue to assist Central Indiana counties with local transit network planning
 - » Facilitate local transit network planning processes for interested Central Indiana counties (CIRTA)
 - » Provide operational expertise to the region in transit operations (IndyGo)
 - » Provide leadership in the community engagement planning to the region (MPO)
 - » Provide technical support and planning expertise (IndyGo & MPO)
- 7.** Continue to emphasize that rural on-demand transit providers are an important part of providing transportation options in Central Indiana, and will continue to be engaged in transit planning processes

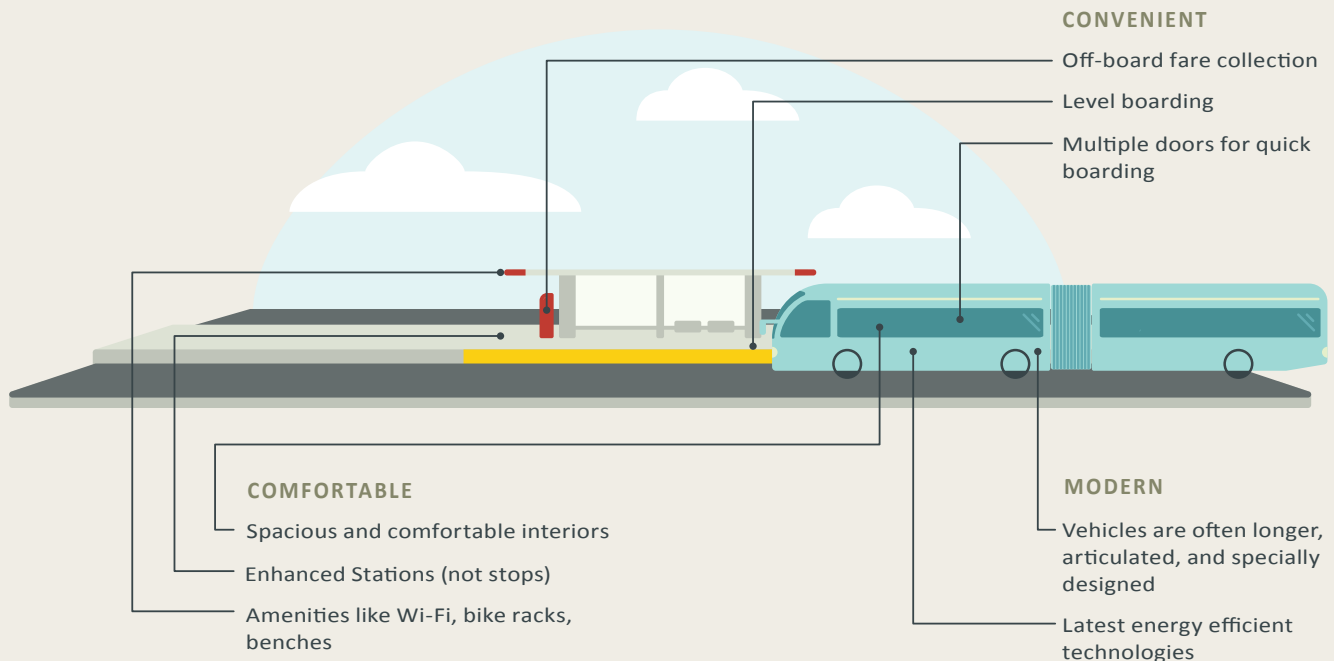
What is Bus Rapid Transit (BRT) and why is it recommended for some rapid transit lines?

BRT is recommended on several of the proposed rapid transit routes in the Central Indiana Transit Plan because of its high level of service, reliability, comfort, and convenience, its ability to generate transit oriented development (TOD) where markets are ripe, and because of the more affordable cost when compared to vehicle types that require more expensive infrastructure, like light or commuter rail systems.

Rapid Transit is a specific type of transit service that provides a backbone for a transit system. These routes are complemented by the rest of the local transit network.

Local transit routes are very accessible, with stops every two blocks or so, and have bus stops that range from simple signs to shelters with seating and trash cans. The vehicles are typically shorter and have on-board fare boxes that allow riders to swipe their transit passes or feed cash into the machine as they enter. By contrast, a rapid transit service has:

- Large, comfortable stations with seating, wind protection, roofs, trash cans, next vehicle arrival information, maps and route information, heating, Wi-Fi, good lighting, and safety features like cameras and emergency call buttons
- Higher station platforms that are level with the floor of the vehicle making it easier and quicker to get on and off the vehicles
- A machine at the station where riders can pay for and receive tickets instead of paying on the vehicle, making it faster to load passengers
- Vehicles that arrive at the stations frequently for less waiting (at least every 15 minutes), and for up to 20 hours per day
- Long, straight routes, often anywhere from 10 to 40 miles or more
- Stations located generally every five blocks apart on a roadway (1/2 mile spacing between stations - could be more space between stations if not on a road, like in a railroad corridor)
- The ability to operate in its own corridor, on a street in regular lanes of traffic, or on a street in dedicated lanes that are physically separated from other roadway traffic



What is an ideal corridor for rapid transit service?

To get good ridership numbers and good use out of the investment in rapid transit, a selected corridor needs to have higher concentrations of:

- residences (like apartments and small-lot homes), and
- jobs (like many shops clustered near one intersection, or a large business with hundreds of employees and little outdoor parking).

Corridors that were primarily developed for automobile access to businesses (large parking lots, buildings set far back from the street, limited or no sidewalks, and wide streets with uncomfortable or unsafe pedestrian street crossings) tend to have lower ridership on rapid or local bus routes than corridors that are more walkable. They may be necessary places to serve with transit, but wider streets and longer distances between the front doors of buildings make it difficult for people who must walk from transit stops through parking lots or cross wide, busy streets to get to where they're going.

What types of vehicles were considered for rapid transit lines?

In addition to Bus Rapid Transit (BRT), the Indy Connect planning studies considered three forms of trains: streetcars, light rail (smaller passenger trains), and commuter rail (very large passenger trains).

Streetcars, cable cars, and trolleys are three different types of vehicles that all tend to run services

like local transit with stops every few blocks. They operate on rails and are generally electrically powered, like most light rail services, but they generally use routes that are shorter than five miles. The rapid transit routes recommended by the Central Indiana Transit Plan range from 17 to 35 miles long.



The Indianapolis Interurban

Central Indiana may be behind in transit options today, but this wasn't always the case. A century ago, Indiana's interurban system operated more than 3,000 cars over the state's 2,100 miles of line, stemming from the Indianapolis Traction Terminal (the world's largest) in downtown Indianapolis and connecting most of the state's major villages and cities. In the early 1900s, 12 interurban lines met in downtown Indianapolis, as well as several electric streetcar routes ("City Car Lines") operating throughout the city. The system didn't survive the rapid expansion of the automobile and the highway system in the 1960s, but the impact of the interurban system can be seen in the development patterns of places like College Avenue, Washington Street, Fountain Square, and Noblesville.





Commuter rail is generally a very long distance form of transit that uses a locomotive pulling cars in a dedicated railroad corridor, often one also used or owned by railroad companies for moving large shipments. Commuter rail can carry large numbers of people long distances, but often do not run frequently. Active rail corridors in Central Indiana are all privately owned by freight railroad companies, making it impossible to achieve 10- to 15-minute service frequencies while also accommodating freight trains, which would be given priority. Most of the inactive rail corridors in Central Indiana that are near proposed rapid transit routes have been or are being converted into trail corridors.



Light rail can operate either in a completely independent corridor or on an existing roadway, either with or physically separated from regular traffic. Light rail uses trains on modern rails in new or reconstructed railroad corridors, or built into the roadway. Light rail cannot operate on freight railroad corridors for safety reasons. Light rail is expensive to build (\$7M/mile for BRT v. \$20M-\$60M/mile for light rail), and if built to use an existing roadway, must stop at traffic lights and make turns with the other vehicles. Light rail does have a higher potential to move larger numbers of people quickly for very high demand transit corridors, but Central Indiana isn't estimated to have ridership high enough to justify the cost of light rail.



Bus rapid transit (BRT) can operate either in a completely independent corridor or on an existing roadway, either with or physically separated from regular traffic. BRT uses buses on rubber tires, and the buses can be diesel, compressed natural gas, or electrically powered. When compared to other rapid transit vehicle options, BRT service is least expensive to build. BRT was intentionally designed to provide all of the services and the same user experience as light rail, only in a more cost-effective way. The only feature of rail service that BRT can't match is capacity – a train can connect several vehicles together and carry 500 people in one train, whereas a bus is limited to itself and can carry a maximum of 100 people. When the number of riders is so high that a BRT vehicle must come at least every 2 minutes to carry the load, then rail service begins to be cost competitive. Central Indiana isn't estimated to have ridership high enough to justify the cost of light rail.



The Green Line (connection from Indianapolis northeast to Fishers and Noblesville) is the only line in the Central Indiana Transit Plan that is being considered for light rail. That option is still being considered, even though the Indiana Legislature in 2014 prohibited the use of light rail in Central Indiana due to the high initial costs to lay track. Either light rail or BRT for the Green Line would use an existing rail corridor -- the Hoosier Heritage Port Authority corridor. The cost and ridership estimates for either vehicle type are similar due to the need to either lay entirely new track or create an entirely new paved busway. A decision for the Green Line will be made later in its environmental process, and public meetings on the Green Line will be held in 2017.

Why don't we just use shorter buses on routes where buses aren't full?

Running smaller buses during times when buses are less full would require the operator to maintain two separate vehicle fleets; 40'-60' standard buses when routes are in higher demand and 30' short buses the rest of the day. This would be significantly more expensive than the nominal increase in fuel consumption of 40' or 60' buses operating all day long.

Additionally, when a person sees a bus that has only a few riders on it, they usually assume that means that there are only a few riders on that bus for its entire route, all day long, when actually:

- Many buses are full during certain times of the day, like during the morning and evening rush hours, and less full during other hours. Similarly, highways are crowded during morning and evening rush hours when the most people want to use them, and less so during other hours.
- Buses on frequent routes (service every 15 minutes or better) usually have more people on them than less frequent routes, because people are more likely to choose to ride the bus if it is convenient for them.
- Buses will have more or less riders depending on where they are on the route. Toward the end of a route going away from downtown, most people have already left the bus along the route. When coming into downtown, the bus will pick up riders all along the route so that buses are generally more full by the time they get downtown. Also, routes that don't go through downtown will have more passengers in the middle than at either end.



Why are electric transit vehicles recommended?

Electric vehicles have many advantages, including low to no air pollution, lower cost to fuel,⁶¹ and quiet operation.⁶² Central Indiana has already made a significant investment toward electric and hybrid-electric transit vehicles. As of March 2016, 13% of IndyGo buses were electric, and 9% were hybrid-electric. IndyGo plans to continue to invest in fuel alternatives to diesel, and to minimize environmental impact.

The rapid transit vehicles will also be fully electric. They will use a high-power charger at the end of each line, paired with fast charge batteries, to enable a 10-minute charge that gives a bus enough power for a full round-trip without the need for the overhead electric wires typical in light rail corridors.

As other counties plan for large-scale transit networks, they are also considering setting goals for using electric vehicles in new or expanded vehicle fleets.

CLEANER AIR

Electric buses operate using the charge from on-board batteries, so vehicles emit no pollution or fumes. This creates a more pleasant environment city-wide, but also for pedestrians walking adjacent to streets with many buses, riders waiting at bus stops to board, and patrons of sidewalk cafes who dine near the roadway.

A common challenge to the use of electric vehicles is that many cities use electricity created from burning coal, which can create its own level of pollution and energy inefficiency. But in Indianapolis, the main power plant transitioned to 100% natural gas power in early 2016. In addition, IndyGo recently installed a 1.0 megawatt solar array on the roof of the vehicle maintenance facility which offsets the amount of power that IndyGo must purchase. This further increases the energy efficiency of using electric

power and also provides a renewable power source for charging the electric vehicles.

LOWER COST⁶³

A newer diesel bus will use approximately 9,000 gallons of fuel per year (5 miles per gallon average x 45,000 miles per year average). Using the average diesel gas price for September 2014, it would cost IndyGo approximately:

- \$35,500 per year to fuel one diesel bus
- \$29,000 per year to fuel a hybrid diesel-electric bus
- \$11,300 per year to fuel an electric bus (less than half the cost of a hybrid and one-third the cost of a diesel bus)

QUIET VEHICLES

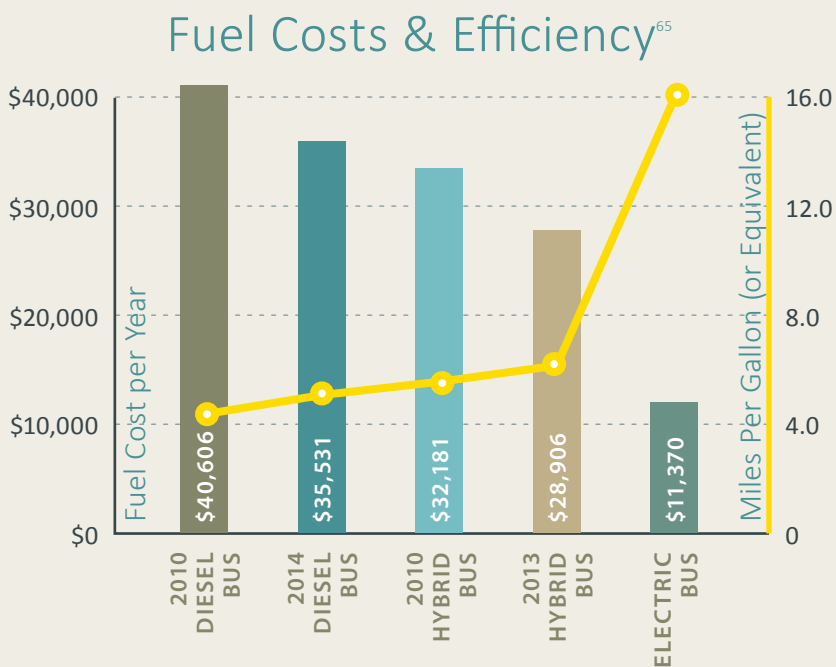
The rumble of a combustion engine transit vehicle can be disturbing and distracting. Electric vehicles are quiet, generally 10-15 decibels lower than a diesel bus, and quieter than a typical conversation.⁶⁴

Why are dedicated lanes recommended for rapid transit lines?

In order for a transit service to be rapid, it needs to be able to avoid congestion. Using dedicated lanes allows rapid transit services to reliably come when a rider expects it and often be competitive in travel time with driving. Having dedicated lanes also results in lower operating costs because the faster the vehicles move the fewer of them are needed on the route.

In many locations, the rapid transit lanes can actually help with other traffic flow as well. With rapid transit's increased frequency and number of vehicles on a route, not having dedicated lanes would result in traffic impacts equal to or worse than having dedicated lanes due to vehicles stopping in the regular travel lane every 5-10 minutes, often blocking all traffic. Most areas recommended for dedicated lanes would also have dedicated left turn lanes for regular vehicles. Dedicated turn lanes and dedicated rapid transit lanes allow traffic in the regular lanes to keep moving.

Many of the rapid transit routes will use Bus Rapid Transit (BRT) vehicles. One concern of the relative low cost of BRT is called "BRT creep." This term refers to the tendency of the rapid transit plans in some cities to be "dumbed down" to the point that the service is no longer "rapid" and is instead a slightly enhanced version of local bus service. In order to compete with other cities nationally, and to influence housing choices and developer investments locally, the infrastructure investment for rapid lines must be significant and permanent. True BRT services include the Cleveland Healthline, Eugene (OR) EmX, and the San Bernardino sbX.



How will transit integrate with other transportation options?

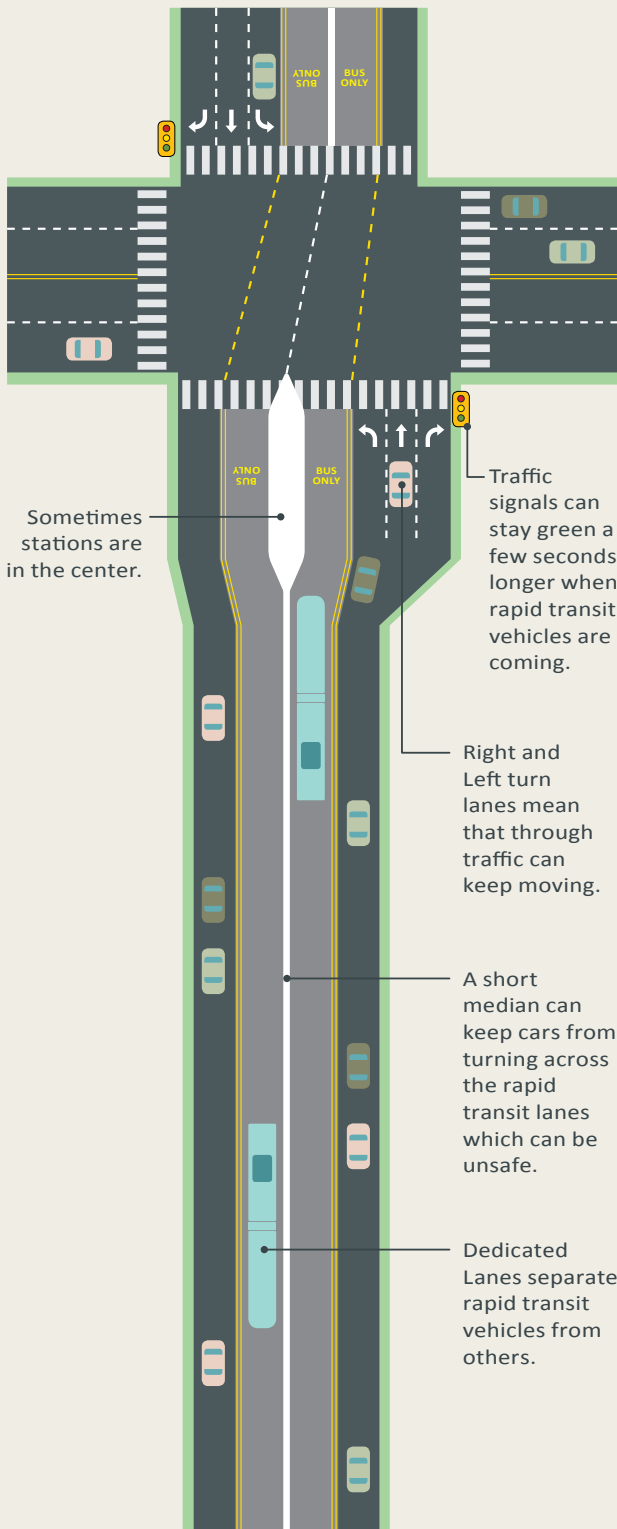
Every transit rider starts and ends his or her trip as a pedestrian; as such, infrastructure that makes it easier to walk or ride a bike also makes transit more useful. The Central Indiana Transit Plan considers the various services below when planning for stop locations and connectivity to these other transportation networks, especially to make sure that sidewalks connect to stops and stations, that bike racks are available at stations, and that stations are coordinated as much as possible with carshare and bikeshare service facilities.

SIDEWALKS

Many cities and towns in Central Indiana have set priorities for maintaining and adding to their sidewalk networks. For example, Indianapolis constructed more than 150 miles of sidewalks from 2009-2014 and retrofitted older sidewalks with ADA-compliant improvements like ramps at intersections.

Communities also often have ordinances that require builders of housing or shopping developments to include sidewalks. For older neighborhoods, many communities have programs that will pay up to half the cost of sidewalk installation if property owners pay the rest. In addition, for general maintenance of existing sidewalks or installation of sidewalks in areas where they are most needed,

some communities, like Indianapolis, are creating targeted pedestrian investment programs to rank and score potential projects to ensure that the areas of most need or highest demand for sidewalks (like connecting to new transit stations) are top priorities.



MULTI-USE PATHS AND TRAILS

Central Indiana has seen a huge increase in the number of multi-use paths and trails in the past decade. Trails include conversions of old rail corridors (Monon, Pennsy, B&O, Midland Trace, etc.), greenways (Franklin Gateway, Fall Creek, Pogue's Run, White River, etc.), and investments in downtowns (Cultural Trail), as well as the multi-use paths being created along new and reconstructed roadways.

BIKE LANES

Some Central Indiana communities are installing, or considering adding, bike lanes on-road alongside regular traffic. Bike lanes come in many forms; some are located next to traffic lanes and some are buffered from other traffic by painted areas or vertical posts. Indianapolis has made the most significant investment in on-road bike lanes.

As of early 2016, there are approximately 95 miles of bike lanes in Indianapolis with many additional planned bike lanes.



BIKESHARE SYSTEMS

Greenwood, Carmel, and Indianapolis are three Central Indiana communities with active bikeshare programs. A few other communities are considering and/or planning to create a bikeshare. The Pacers Bikeshare in Indianapolis has 250 rentable bikes that can dock at 24 locations along the Cultural Trail. Carmel has a Zagster system with facilities near the Monon Trail and the Arts & Design District. Greenwood has Bike It to serve the recreation center and adjacent trail. All of these facilities are options that can take transit riders from their last transit stop to their final destinations.



CARSHARE SYSTEMS

BlueIndy is a carshare service that uses electric cars. It launched in 2015 in select neighborhoods of Indianapolis, but is proposed to expand to eventually be a region-wide service. Carshare, along with ride-hailing services like taxis, Uber, and Lyft, can fill in the gaps when transit services aren't operating

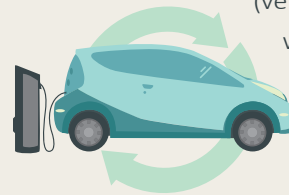
(very late or early hours) or

when regular transit riders

need to go somewhere

that isn't served by a

transit route.



Who rides transit?

The short answer is anyone who would find it useful. When a transit system is not useful to someone, they likely won't use it. But when a transit system is improved to provide more reliable, more frequent, and more convenient service than was previously available, more people use it. In 2013, the City-County Council invested \$6 million to reduce the time between buses on Routes 8, 10, and 39. As a result, the number of trips on those routes increased by 8.4% from 2012-2014, and in 2013 and 2014 ridership on the IndyGo system reached record numbers.⁶⁶

Other pressures can also broaden the range of people who find transit useful. For example, when (1) gas prices increase, (2) parking spots are harder to locate or are expensive, (3) commutes to work become longer, or (4) people age, transit can become an attractive alternative to driving a personal vehicle. In addition, the regional trends mentioned on page 17 will have an increasing impact on transit use in Central Indiana in the future.



SECTION 3. THE MARION COUNTY TRANSIT PLAN

What are the recommendations of the Marion County Transit Plan?

The plan recommends:

- Improvements to the local bus network
 - » Shorter wait times between buses
 - » Service earlier in the morning and later at night
 - » More efficient transfers
 - » Advanced payment technology and real time arrival information
- Three rapid transit lines, Red, Blue, and Purple

The proposed network represents a shift toward a higher ridership network and will allow for more frequent service in most locations. It alters 27 of the 31 routes and consolidates parallel routes onto fewer main streets. It will also make the wait time between buses shorter for passengers. The trade-off of this is that some passengers may have to walk a few blocks farther to reach their route, but once they get their stop, the wait time will be shorter. See detailed maps of for the Marion County Transit Plan at IndyConnect.org.



HIGHER FREQUENCIES

Higher frequencies mean shorter wait times. Shorter wait times mean shorter trips and commutes.



3 RAPID TRANSIT LINES

Three rapid transit lines would run every 10 minutes and include fare payment at covered stations, level boarding, faster travel time, and some dedicated lanes.



EVERY ROUTE, EVERY DAY

Every bus route would run every day, even on the weekend.



LONGER HOURS

Service would be earlier in the morning and later at night, all week. On weekdays, every route would run 20 hours per day.



EASIER TRANSFERS

Advanced payment technology, real time arrival information, and an improved grid pattern would make transfers easier and more efficient.

RECOMMENDED SCHEDULE OF STANDARDS FOR THE TRANSIT NETWORK

Service Type	Frequency	Weekday Hours	Saturday Hours	Sunday & Holiday Hours
RAPID	10 mins	20	18	16
FREQUENT	15 mins	20	18	16
BASIC	30 mins	20	18	16
COVERAGE	60-120 mins	20	18	16
ON-DEMAND	N/A - only for qualifying residents and pick-up is reserved in advance.			

Basic or coverage services are less frequent. These services have an important role in providing connectivity, but they should not be held to the same productivity standards as services designed to be rapid or frequent.

How was the Marion County Transit Plan developed?

Several scenarios were initially developed by transit planning experts beginning in September of 2014, relying on documented factors including employment and residential density, current IndyGo data on bus use, minority and low-income population locations, and locations of community services and amenities. The proposed transit network was designed to optimize connections between key origins and destinations in a connected, systematic way.

The next step was to engage the public and civic leaders in a discussion about transit priorities and values to determine which of the transit scenarios were best for our community. That discussion centered around the limited amount of resources available to provide transit service and whether to focus those resources on serving the most people and get the most ridership, or to provide transit services to the population most in need of them,

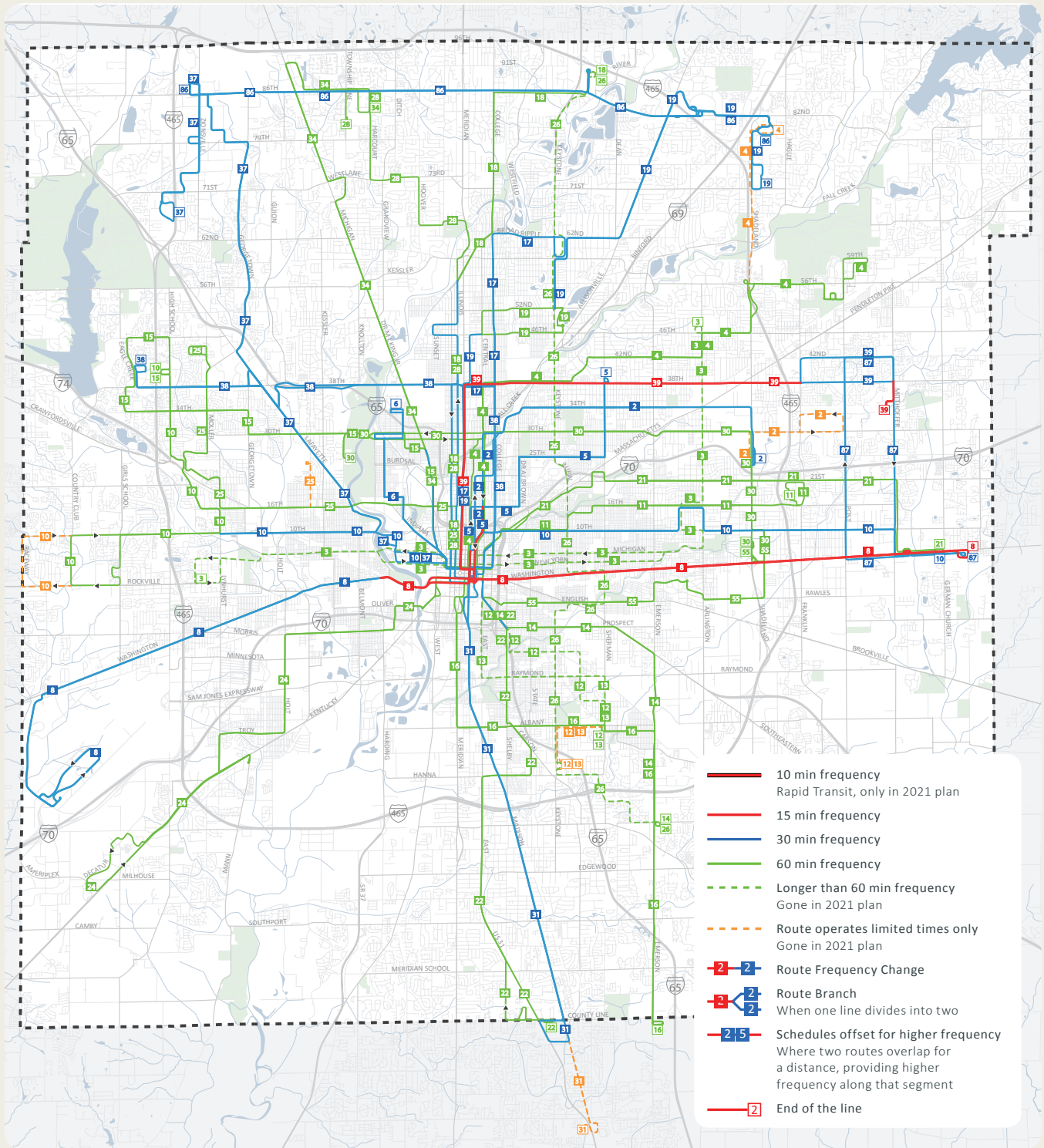
even when they live in remote locations. This led to a goal of devoting 80% of resources to efficient ridership-based service and 20% of resources to reach those that do not live in transit-friendly environments.

The public has had significant input into—and significant impact on—the Marion County Transit Plan. IndyGo Forward, the transit planning process, recommended improvements for Marion County transit through 2021. It laid out a vision to increase the frequency of service along the busiest routes to provide better ridership on the IndyGo system, creating a more useful service.

IndyGo engaged Indianapolis residents in a six-month public comment process with several public open houses and more than 80 community meetings reaching more than 4,300 Indianapolis residents. Those comments were reviewed and tweaks to the plan made, resulting in a final proposal which was adopted by the IndyGo Board of Directors in March 2016. Some changes will take effect when the Downtown Transit Center opens in Summer 2016.

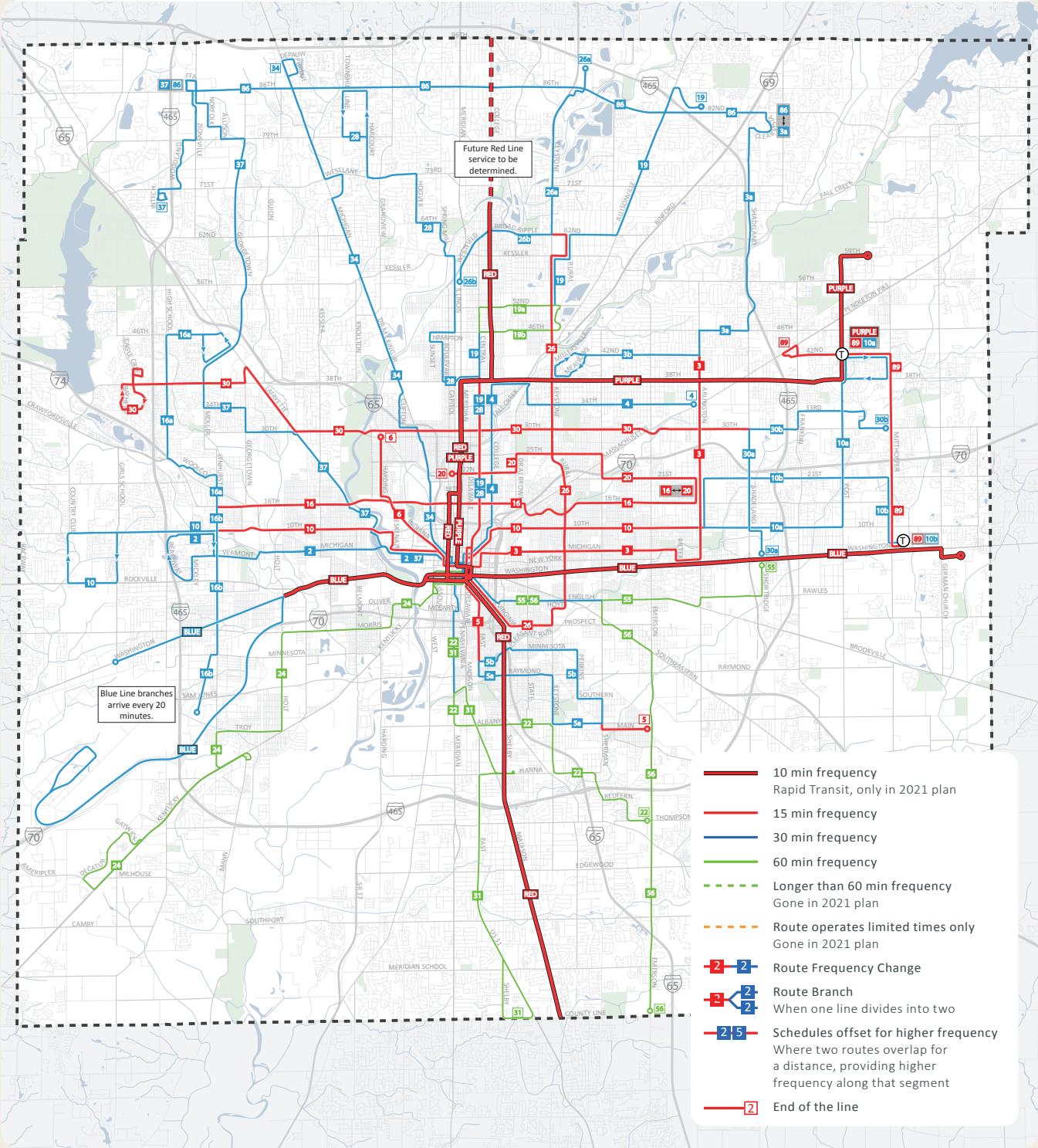


2016 TRANSIT NETWORK



- 10 min frequency
Rapid Transit, only in 2021 plan
- 15 min frequency
- 30 min frequency
- 60 min frequency
- - - Longer than 60 min frequency
Gone in 2021 plan
- - - Route operates limited times only
Gone in 2021 plan
- 2 - 2 Route Frequency Change
- 1 - 2 Route Branch
When one line divides into two
- 2 - 5 Schedules offset for higher frequency
Where two routes overlap for a distance, providing higher frequency along that segment
- 2 End of the line

2021 TRANSIT NETWORK



Who will have access to transit in Marion County?

The Marion County Transit Plan, when fully implemented, will provide transit access within walking distance (1/2 mile, generally a 10-minute walk) of the following Marion County populations:

- **65.5%** of people*
- **75.8%** of minority people*
- **86.8%** of households without a car**
- **84.6%** of households with incomes below the poverty level**
- **72.2%** of households that have at least one person with a disability**
- **65.0%** of seniors, age 65 or over*
- **83.8%** of jobs*

Along the frequent transit network (routes with buses coming every 15 minutes or sooner), the following populations would be within walking distance of transit:

- **29.8%** of people*
- **38.2%** of minority people*
- **51.1%** of households without a car**
- **45.6%** of households with incomes below the poverty level**
- **34.8%** of households that have at least one person with a disability**
- **28.0%** of seniors, age 65 or over*
- **45.1%** of jobs*

*2015 ESRI Estimate

**2009-2013 American Community Survey Estimate

Who will be the service provider?

As the existing, well-established transit operator, IndyGo will operate local and on-demand bus service in Marion County, as well as the rapid transit lines throughout Central Indiana.

Why do we need a referendum?

In Marion County, transit is currently underfunded when compared with other major cities and regions (see page 12 to see how we compare). In other counties, no stable funding sources currently exist. Therefore a new source of funds, dedicated to transit, must be identified if the recommendations in this plan to improve Central Indiana transit are to be implemented.

Central Indiana leaders have for years known that there is a need to increase transit options. In 2010 efforts intensified with business leaders and state legislators discussing ways to develop a stable transit funding source. These conversations led to state legislation in 2014 which created a referendum process to seek transit investment dollars via an income tax in six Central Indiana counties.⁶⁷

What happens if the referendum fails?

IndyGo still has a system to run, and it will continue to do the best job it can with the limited resources it has, but improvements to **hours, service, connections, and wait times** are not likely to occur anytime soon. IndyGo's costs continue to grow nominally as revenues remain fairly flat. Without a dedicated funding source or growth in Marion County's tax base, service cuts will eventually occur.

The Downtown Transit Center will still open in Summer 2016, and Phase 1 of the Red Line (From Broad Ripple through Downtown to University of Indianapolis) will remain a priority, and will still move forward using the recently awarded federal funding.

Other rapid transit lines will either be slow to construct, or will be put off until a reliable funding source can be identified. Routes 8 (Washington Street) and 39 (east 38th Street) will continue to operate with buses coming frequently, but both are at the upper limits of their capacity.

As far as the remainder of the Plan, next steps would be up to local elected officials. The enabling legislation allows for a second referendum in a seven-year span, or local leadership could pursue alternative dedicated funding sources. Many referendums like this do fail the first time, and the problems they were intended to solve don't go away. In many cases, those regions revisit their plans, continue their public engagement, and come back to the public with a revised (and often successful) proposal.

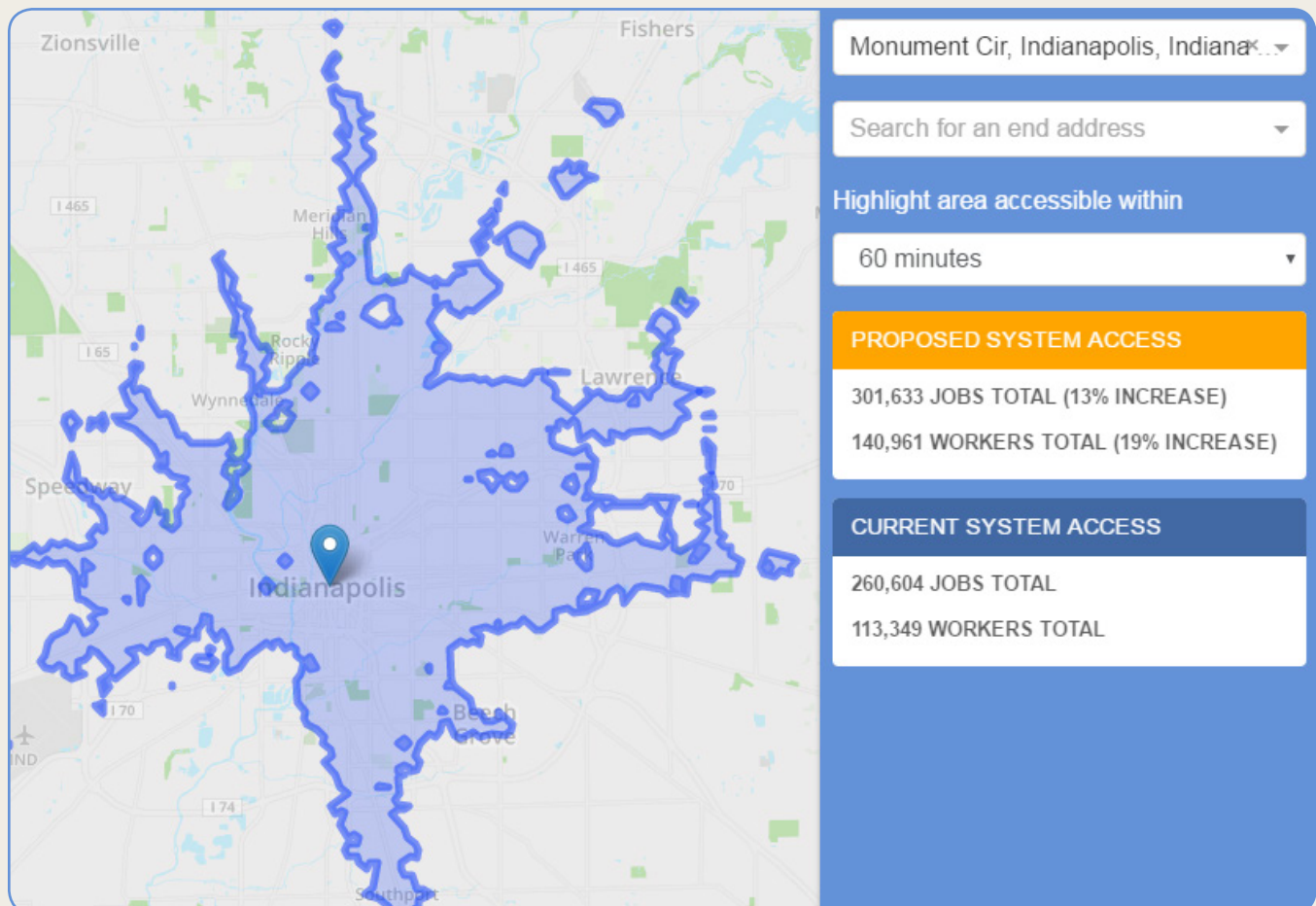
It's important to note that the failure of a referendum would not represent the wholesale end of all projects in the Plan. IndyGo still has a responsibility to its riders, and they will pursue individual projects as funding opportunities become available.

What will my transit trip look like if a referendum passes?

To compare your trip in 2016 to what your trip could be in 2021, visit the interactive maps section of IndyConnect.org.

Most residents will see faster, more reliable, and more efficient services, but a small number of people will have a longer walk to access a route. Connections within Marion County will be greatly enhanced, and eventually Marion County could connect to jobs and people in Hamilton and Johnson Counties.

INTERACTIVE TRANSIT MAPPING ON INDYCONNECT.ORG



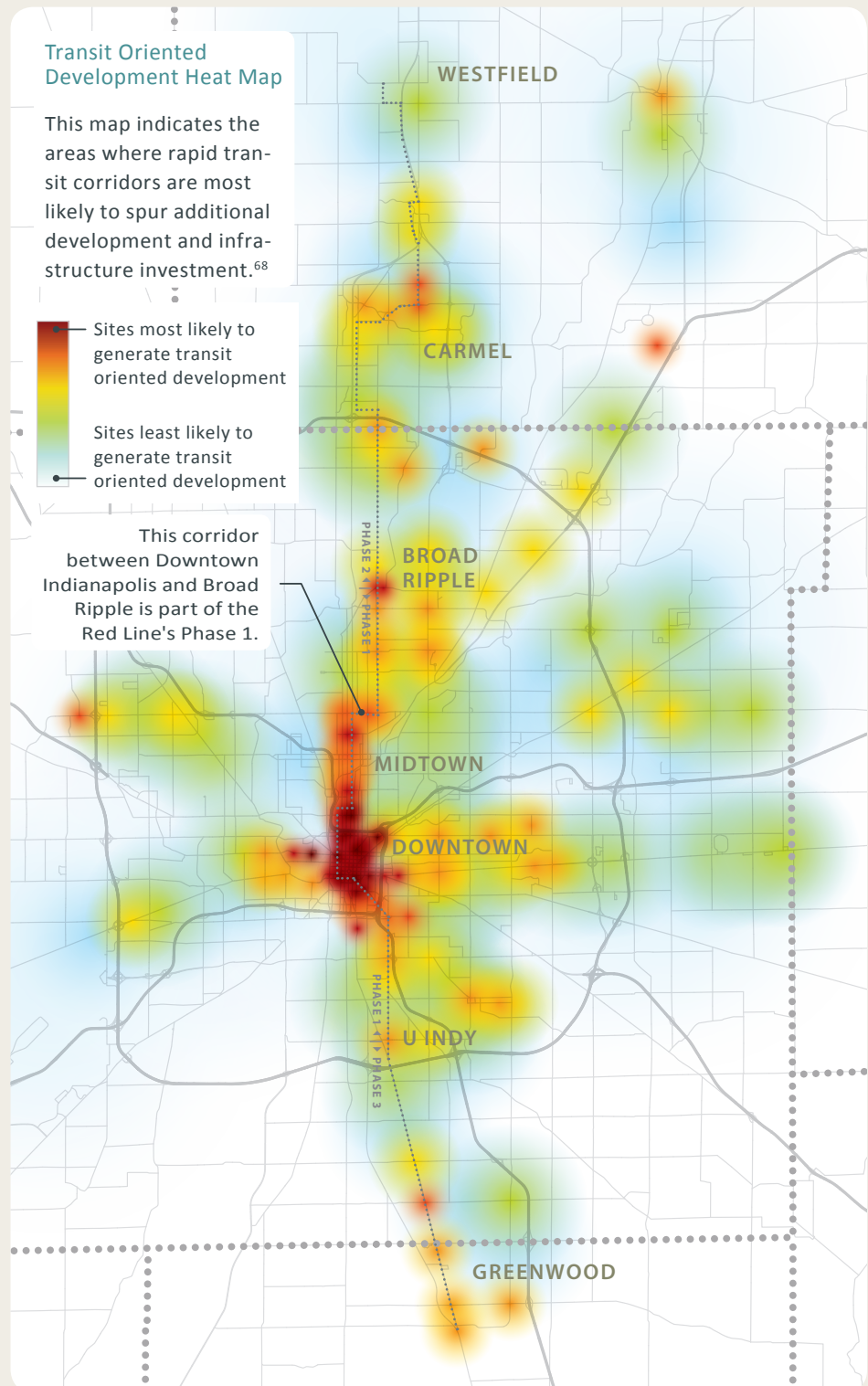
Why is the Red Line going first?

Phase 1 of the Red Line has been awarded a \$75M grant from the Federal Transit Administration, so it is moving faster than other components of the Marion Indiana Transit Plan. Phase 1 runs from the University of Indianapolis to Broad Ripple.

The Red Line was selected to be constructed first because data proves it has the best potential for immediate success from a ridership, economic development, and federal funding standpoint. Consider the following, based on projections:

- With job connections considered the most vital indicator of ridership and economic development, the first phase of **the Red Line will connect to more jobs than any other rapid transit line under consideration**, and more than any other corridor in Indiana.
- The Red Line corridor has a daytime population of 250,000+, making it **the state's densest and most diverse workforce**.

Phase 2 of the Red Line continues the line north from Broad Ripple through Carmel and ending near Grand Park in Westfield. Phase 3 continues the line south into Greenwood. The only current possible funding source for Phases 2 and 3 is the transit income tax via successful referendums in Hamilton and Johnson counties.

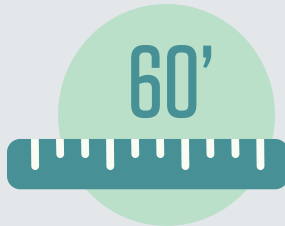


RECENT INVESTMENTS IN TRANSIT



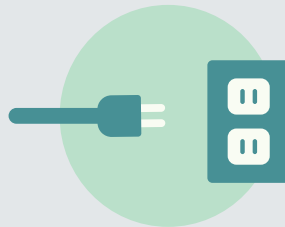
2013 CITY-COUNTY COUNCIL INVESTMENT

In 2013, the City-County Council invested an additional \$6 million for IndyGo's annual budget to improve frequency and extend hours on the system's three busiest lines (8, 10, and 39), which accounted for more than 40% of all trips in 2013. The funding also enabled IndyGo to establish a new crosstown route along 86th Street. Combined, these investments helped push IndyGo's passenger trips to 10.2 million—its highest number since 1991.



ARTICULATED BUSES

In 2013, IndyGo introduced articulated buses, which are 20 feet longer than a traditional city bus and increase each bus's ridership capacity by 20%.



22 ELECTRIC BUSES

In 2013, the U.S. Department of Transportation awarded IndyGo a \$10 million TIGER (Transportation Investment Generating Economic Recovery) grant to purchase 22 electric buses, employing a quiet, zero-emissions propulsion system.



DOWNTOWN TRANSIT CENTER

IndyGo's Downtown Transit Center is set to open in 2016. It will provide a central location for transfers between routes, as well as conveniences like an indoor waiting area, public restrooms, public Wi-Fi, real-time travel information, a small retail space, and a customer service center.



RED LINE PHASE 1

Phase 1 of the Red Line—a rapid transit line from Broad Ripple to the University of Indianapolis—has been awarded federal funding for construction, and could open to the public as soon as 2018.



REAL-TIME TRAVEL INFORMATION

IndyGo is developing technology that will enable riders to know the locations of buses in real time. Some locations, including the Downtown Transit Center, will have screens displaying next bus arrival times. For locations without screens, riders will be able to call, text, or go online to find out when their next bus will arrive.

SECTION 4. HAMILTON COUNTY TRANSIT RECOMMENDATIONS

How were the recommendations developed?

Hamilton County's population is booming; it has been one of Indiana's fastest growing counties since 1990. Already home to nearly 320,000 residents, Hamilton County is projected to grow by an additional 230,000 residents by 2050.

In July, 2014, the Hamilton County Transit Forum (HCTF) brought together county stakeholders from the government, business, and non-profit communities, and transit experts to explore whether the proposed funding (25¢ per \$100 income) was sufficient to create a useful Hamilton County transit network. This began an 18-month process to develop recommendations. The HCTF learned about the basics of transit planning and national best practices, and formed recommendations for governance, routing, and educational programming. They concluded that for Hamilton County to remain economically competitive, recruit and retain a diverse workforce, and meet future population growth, the proposed income tax at 0.25% would be sufficient to provide a useful transit system.

The HCTF agreed that the plan should:

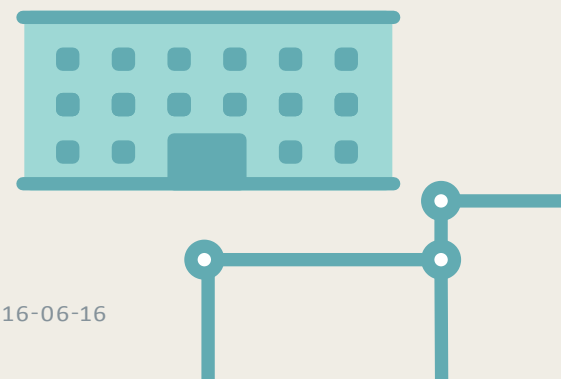
- Connect the community with mobility options (car, bus, rideshare, bicycles, trails, etc.)
- Promote collaboration and cooperation
- Engage as many as possible in planning
- Manage complications of having many jurisdictions
- Plan for resident and business needs

- Learn from other communities and use best practices
- Implement a supportive and flexible plan that can adjust as needed

What are the recommendations of the Hamilton County Transit Forum?

The recommendations closely align with the conclusions of the 2010 Central Indiana Transit Task Force report:

- **Meet the need for transit in Hamilton County.**
 - » By 2050, Hamilton County will have the state's second largest population. Two large consumers of transit, millennials and seniors, are the fastest growing segments of that population, and both want more transit.
 - » Every single national competitor region invests in transit.
 - » Strong national data indicates that transit spurs economic growth. A Ball State study indicates that \$1 of transit spending generates \$3 of economic benefit.
 - » Service and health care sectors, especially in a growing region, require steady access to employees. Increasingly that workforce comes from other counties, who need transportation options.



- **Don't wait too long to create a transit system.**

- » The longer Hamilton County waits to implement transit plans, the greater the competitive gap will become with other regions, and the greater the burden to link people with Hamilton County jobs.

- **Provide an excellent customer experience.**

- » Adopt a minimum 75% ridership / 25% coverage model to provide frequent service in key corridors.
- » Have clean, well maintained, environmentally friendly buses, kiosks, and bus stops.
- » Insist on seamless integration with IndyGo services so that transfers and passes work in both counties for customers.

- **Plan regionally.**

- » Best practices indicate that the most effective and efficient use of transit investment dollars is at the regional level. State law requires that transit be planned and funded locally. The HCTF recommends planning with a regional perspective, implementing at the local level. Careful planning is needed to provide easy transitions at township and county borders.

- **Implement Locally.**

- » Continue to develop a county-wide vision for integrated transit, linking rapid transit lines with major job, retail, recreation, and health centers.
- » Increase funding for Hamilton County Express to improve services for the northern portion of the county (not be served by fixed bus routes).

- » Continue to evaluate opportunities for the Green Line.

- » Clay (Carmel) and Washington (Westfield) townships are in a better position to begin transit implementation because the Red Line is farther along in planning than the Green Line. Therefore:

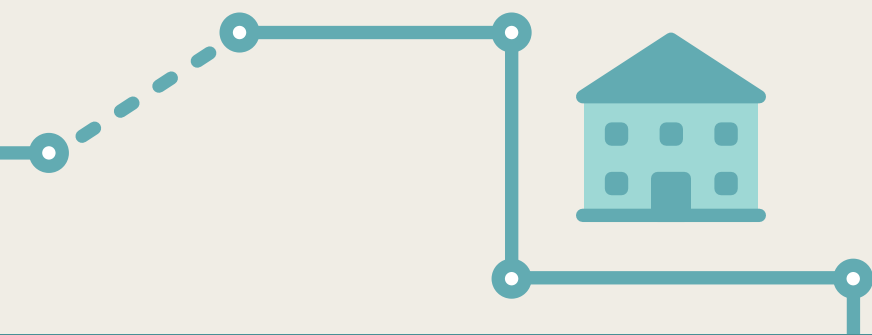
- Work with township trustees and advisory boards to certify a referendum for 2016.
- Gather community input on transit priorities and develop specific bus routes within those townships.
- Prioritize completion of the Red Line as the backbone for the transit infrastructure.

- **Educate and engage the community.**

- » Implement a robust educational effort to explain the recommendations, solicit feedback and develop transit priorities.
- » Give this information to the Transit Board to create final routes.

- **Create a local Transit Board.**

- » The board, made up of township, municipal and county-wide appointees, will develop routes and monitor a management contract with CIRT, who will manage a competitive bid process for a service provider for local routes and hold the provider to performance standards. To provide a seamless rider experience, the Red Line's service operator will be IndyGo, as most of the Red Line runs through Marion County.
- » As other townships join the transit network, they will have appointees to the Transit Board.
- » HCTF looked at seven different management models, interviewed several turn-key operators, and visited the IndyGo maintenance facility to develop this recommendation.



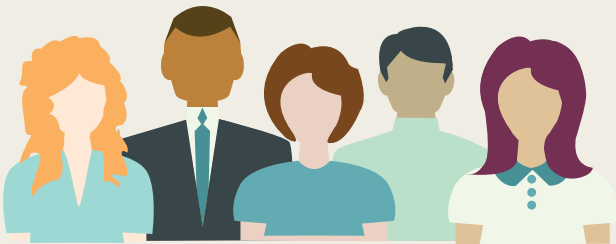
Who are the members of the Hamilton County Transit Forum?

- City of Carmel
- City of Fishers
- City of Noblesville
- City of Westfield
- BMO Harris Bank
- Capitol Assets
- CIRT A
- Community Health Network
- Hamilton County Business Journal
- Hamilton County Government
- HAND, Inc.
- Health by Design
- MPO
- IndyGo
- Invest Hamilton County
- IU Health North/Saxony
- Ivy Tech Community College
- Janus Developmental Services
- MIBOR Realtor Association
- Noblesville Chamber of Commerce
- OneZone
- Partnership for a Healthy Hamilton County
- PrimeLife Enrichment, Inc.
- Riverview Health
- St. Vincent Health
- United Way of Central Indiana

Will there be public input on the transit plan?

Absolutely. Hamilton County is several years behind Marion County in public transportation and hasn't had time for the same level of public input that IndyGo has conducted on the Marion County plan. While a wide-range of stakeholders developed the Plan, there will be many opportunities for public comment on the overall transit vision, and specific routes, before implementation.

In addition, as each line is developed (local or rapid), there will be opportunities for those directly affected along that route to comment and help improve the Plan. A number of open houses are planned in 2016 and 2017 to discuss the Red Line and local transit routes in Hamilton County.



Who will be the service provider?

The Hamilton County Transit Forum recommends that a service provider be selected through a competitive bid process with the Central Indiana Regional Transportation Authority (CIRT A) serving as the contract management agency. There are a number of turn-key operators, as well as IndyGo, that can provide excellent service. Contracts typically last 10-12 years (the lifespan of most buses).

How will this effect Hamilton County Express Riders?

Hamilton County Express will still be fully operational, and will probably even increase services in the northern section of the county. Riders will have more options with a transit network, but Hamilton County Express will continue as an on-demand service, as it is today.

Who makes decisions on how to spend the transit funds?

The Hamilton County Commissioners and County Council will be responsible for setting transit spending priorities if a county-wide referendum is held. If a township referendum is held, the township board would make spending decisions. In either case, the Hamilton County Transit Forum recommends the establishment of an appointed transit advisory board to assist them. This board would include a mix of transit experts, representatives from the municipalities, and others committed to provide excellent mobility options in the county, to ensure that transit planning is eventually county-wide and regional.

Why do we need a referendum?

The population of Hamilton County is growing, and by 2050 Hamilton County will have the state's second largest population. Hamilton County has no fixed-route transit, and very limited on-demand transit. Investing in transit will allow Hamilton County to remain competitive regionally and nationally in attracting employers and supporting the workforce.

A new source of funds, dedicated to transit, must be identified if the recommendations in this plan to expand Central Indiana transit are to be implemented.

Central Indiana leaders have known for years that there is a need to increase transit options. In 2010 efforts intensified with business leaders and state legislators discussing ways to develop a stable transit funding source. These conversations led to state legislation in 2014 which created a referendum process to seek transit investment dollars via an income tax in six Central Indiana counties.

What happens if the referendum fails?

Currently the county has no transit network and, without a successful referendum, no network will be developed. Hamilton County Express will continue services, probably at the same level they can provide today, but facing increasing demand. Even now Hamilton County Express has to refuse some trips due to a higher demand than can currently be met. State law allows a referendum to be brought before voters twice within a seven-year period, and only during a general election (every two years). It is very common for such measures to fail the first time, with success on the second voting opportunity.

Didn't we try this before with the express buses?

The express buses in Hamilton County were non-stop services from park-and-ride locations in Carmel and Fishers to downtown Indianapolis during weekday morning and afternoon hours. Their funding came from federal Congestion Mitigation and Air Quality (CMAQ) grants. These types of grants last for three years and are meant to demonstrate if there is sufficient demand for transit services on lines that are outside the normal service territory for urban transit systems. At its peak, the Carmel express bus had more than 8,000 trips in a month, and averaged nearly 5,000 trips per month.

When the grants expired, they left gaps in operational funding. Had an alternate funding source been readily available, the routes would have continued as they were. Lacking a funding source, the options were to discontinue the line, reduce service, and/or raise fares to offset the cost to operate the route. Over the next few years the number of pick-up times

was reduced and fares were raised in an attempt to continue operating the route. Due to these changes, ridership on the Carmel Express Bus steadily declined to a low of 1,500 trips in a month, until it was infeasible to continue operating the route.

These routes proved that having a dedicated funding source and providing frequent, convenient service to riders results in higher ridership, and that uncertain funding and inconvenient service lowers ridership.



What we learned from the Indy Express Bus Service

- » Demand exists
- » Riders are sensitive to costs, with costs no more than \$2-3 per trip being optimal
- » Hamilton County riders want high frequency, reliable service
- » A system needs permanent, stable funding

When will the Green Line be built?

The Green Line is a rapid transit route that would use the existing Hoosier Port Authority corridor (the “Fair Train” corridor) to connect the region’s two fastest growing areas—southeast Hamilton County (Fishers and Noblesville) and downtown Indianapolis. It is different from other proposed rapid transit lines because it would use a historic, off-roadway railroad corridor, resulting in legally mandated review processes and ultimately extensive construction time. The Green Line could potentially be operational

within ten years of a referendum passing (therefore creating a funding source) in Hamilton County.

As a dedicated corridor, the Green Line would be very fast if either light rail or bus rapid transit (BRT) vehicles are used (decision on vehicle type to be made in 2017). However, as a historical line, there are a number of challenges in preparing it for new service:

- The entire corridor is being reviewed to identify historically significant features that must be protected
- Some of the rail bridges are very old, are not likely to meet the standards necessary to use them, and will probably need to be replaced
- Long sections of the route are in poor condition. To use the corridor with light rail vehicles, the rail beds would need to be dug up and reset, with all new track laid (the existing track could not be used). If BRT vehicles are used for the Green Line, the existing rails would be removed and the entire corridor would need to be leveled for a two-way paved bus-only road.
- If a referendum was approved, Indiana State Law currently prohibits the use of those dollars for light rail service.
- The Green Line is involved in a federal environmental review, which requires the evaluation of multiple vehicle types and eventual selection of one type before moving forward.

Open houses will be held in 2017 to assess public priorities on the Green Line.



Why is the Red Line going first?

Phase 1 of the Red Line has been awarded a \$75M grant from the Federal Transit Administration, so it is moving faster than other components of the Transit Plan. Phase 1 runs from the University of Indianapolis to Broad Ripple.

The Red Line was selected to be constructed first because data proves it has the best potential for immediate success from a ridership, economic development, and federal funding standpoint. Consider the following, based on projections:

- With job connections considered the most vital indicator of ridership and economic development, the first phase of **the Red Line will connect to more jobs than any other rapid transit line under consideration**, and more than any other corridor in Indiana.
- The Red Line corridor has a daytime population of 250,000+, making it **the state's densest and most diverse workforce**.

Phase 2 of the Red Line continues the line north from Broad Ripple through Carmel and ending near Grand Park in Westfield. Phase 3 continues the line south into Greenwood. The only current possible funding source for Phases 2 and 3 is the transit income tax via successful referendums in Clay (Carmel), Washington (Westfield), and Pleasant (Greenwood) townships.

Who in Hamilton County would be served by the Red Line?

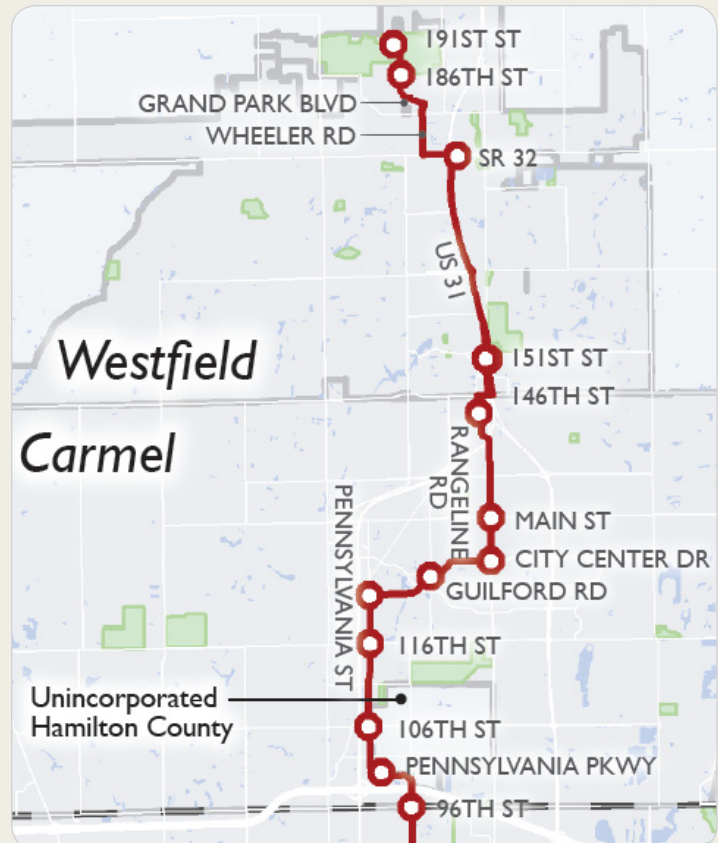
If referendums pass in Clay and Washington townships, the Red Line as currently proposed would provide transit access within walking distance (1/2 mile, generally a 10-minute walk) of the following Clay and Washington Township populations:

- **13.3%** of people*
- **54.8%** of jobs***
- **15.8%** of minority people*
- **28.9%** of households with incomes below the poverty level**
- **22.0%** of households that have at least one person with a disability**
- **18.0%** of seniors, age 65 or over*
- **43.7%** of households without a car**

*2015 ESRI Estimate

**2009-2013 American Community Survey Estimate

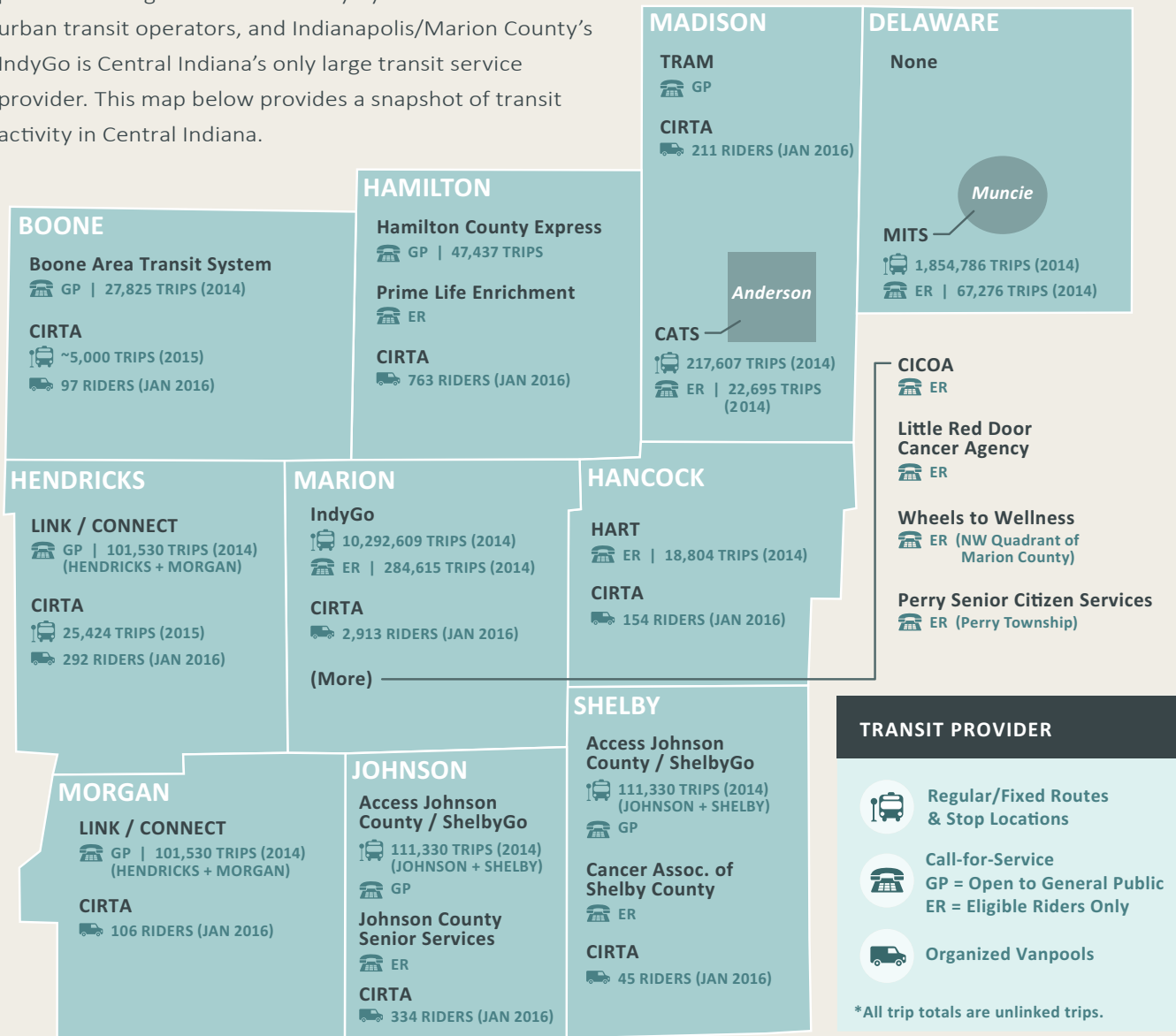
***2015 SIC Codes



SECTION 5. OTHER CENTRAL INDIANA COUNTIES

What is the current state of transit in Central Indiana?

Central Indiana holds a significant competitive advantage when it comes to moving goods and raw materials around the nation and across the globe. Though some inter-city transit services exist (e.g. Megabus or Amtrak), the capacity to move people within the Central Indiana region via transit is comparatively underdeveloped.⁶⁹ Several parts of the region are served only by small rural and sub-urban transit operators, and Indianapolis/Marion County's IndyGo is Central Indiana's only large transit service provider. This map below provides a snapshot of transit activity in Central Indiana.



How can other counties participate in regional transit?

The Indy Connect partnership is ready to assist Central Indiana counties that are considering adding or expanding transit services. Central Indiana Regional Transportation Authority (CIRTA) staff can meet with key stakeholders to discuss opportunities and describe the transit planning processes used in Hamilton and Marion counties. Currently, several counties and a few cities are looking into transit expansion.

It is noteworthy that many counties within Central Indiana offer some form of transit service. In most cases this service consists of on-demand transit that is available only to seniors and people with mobility issues and/or medical needs, but on-demand transit in some areas is available to the general public. A few cities, however, like Anderson (Madison County) and Greenwood (Johnson County) offer fixed-route service. In addition, there are a few short-route workforce connectors that connect IndyGo's service to job sites in Plainfield and Whitestown.

How do I get transit service to my neighborhood or business location?

Transit service areas generally do not overlap; if your community already has a bus system, then you can contact your transit agency and let them assess their ability to accommodate your request. Transit agencies are required by law to have a public outreach process that considers citizen input, including requests for expanded service. Input carries more weight when a number of like-minded individuals are making the same request, so working with your neighbors and finding community groups (like homeowner or business associations) to partner with will improve your effectiveness. Decisions made by transit agencies to expand or institute service follow an assessment of whether the proposal's benefits



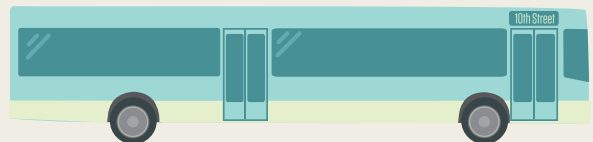
(to riders and businesses) exceed the costs to the agency, so that limited resources are put to their highest and best use.

If the transit agency cannot feasibly accommodate your request, or if there is no transit agency to talk to, then here are some options:

- Ask your neighbors about their travel habits, particularly for work trips, and assess the interest for consolidating these trips into carpools or vanpools. Vanpools organized for the the purpose of commuting to and from work may be eligible for limited subsidies through CIRTA. If you are able to get your employer(s) to participate (at no cost to them), CIRTA's free emergency ride home program (available for registered carpools, vanpools, transit riders, and bicycle riders) can prevent you from being stranded at work if an emergency occurs.
- If transit service is available nearby or in an adjacent community, a short transit route to and from that community may be an option. Your city or town would need to be willing to chip in at least part of the costs in order for this to be an option. CIRTA has implemented several shuttles of this type, and is willing to assess requests from communities on a case-by-case basis.
- Talk to local elected representatives about any transit initiatives that may be in progress. Several counties in Central Indiana have started to plan for local transit systems, and CIRTA is available to share those experiences with your community.

Central Indiana Regional Transportation Authority (CIRTA)

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Who should I talk to in order to start new transit service?

Your local transit agency, if it exists, would be the first place to start. In the event that one does not exist, CIRTAs can have a discussion with your community about what kind of transit options might be available in the short- and long-term. Eventually, the local elected leadership would be responsible for funding any such system, and would therefore have a large influence on what moves forward.

What technical assistance is offered for communities wanting to start transit systems?

CIRTA can help sort through what providers already exist within or nearby your community, and talk through the options available. CIRTA can also provide you with information that other counties have used to plan for and implement their local transit systems. Various metropolitan planning organizations, including the Indianapolis MPO, the Anderson MPO, and the Muncie MPO, collect transportation and travel data for their respective service areas, and administer regional planning processes that guide the allocation of federal transportation funds.



How do I get more information?

Detailed plans, studies, and documents are posted on IndyConnect.org.

You may reach us at info@IndyConnect.org, and we're always willing to present to groups, host discussions, or have smaller group conversations about the plan.

How can my community get ready for a regional transit system?

There are plenty of things you and your community can do to prepare for the implementation of integrated and well-functioning regional transit.

- Just like interstates need local streets, regional transit systems rely upon local routes and infrastructure. See above for suggestions on how to talk to your local elected leadership about planning for shuttles and bus routes that feed into the regional transit system.
- Most transit trips begin or end with walking or biking. Assessing the sidewalk and trail network within your community, and making sure that suitable policies are enacted to maintain and expand these networks (such as in the local planning and zoning codes) will help support your future system, as well as improve the quality of life in your neighborhood.
- Educate yourself on transit in general. If you are so inclined, visit a transit route near you to get the feel of it. Visit IndyConnect.org to see what transit routes and technologies are under consideration, and what is planned short- and long-term.

Which counties/townships are authorized to certify referendums?

In 2014, the Indiana state legislature enabled Marion, Hamilton, Hancock, Johnson, Delaware, and Madison counties to certify referendums (**IC 8-25-2**), and in 2016 it authorized townships in those counties that are adjacent to Marion County to hold referendums. However, Marion County must pass a referendum before any other successful referendums, whether township or county-wide, can move into implementation.

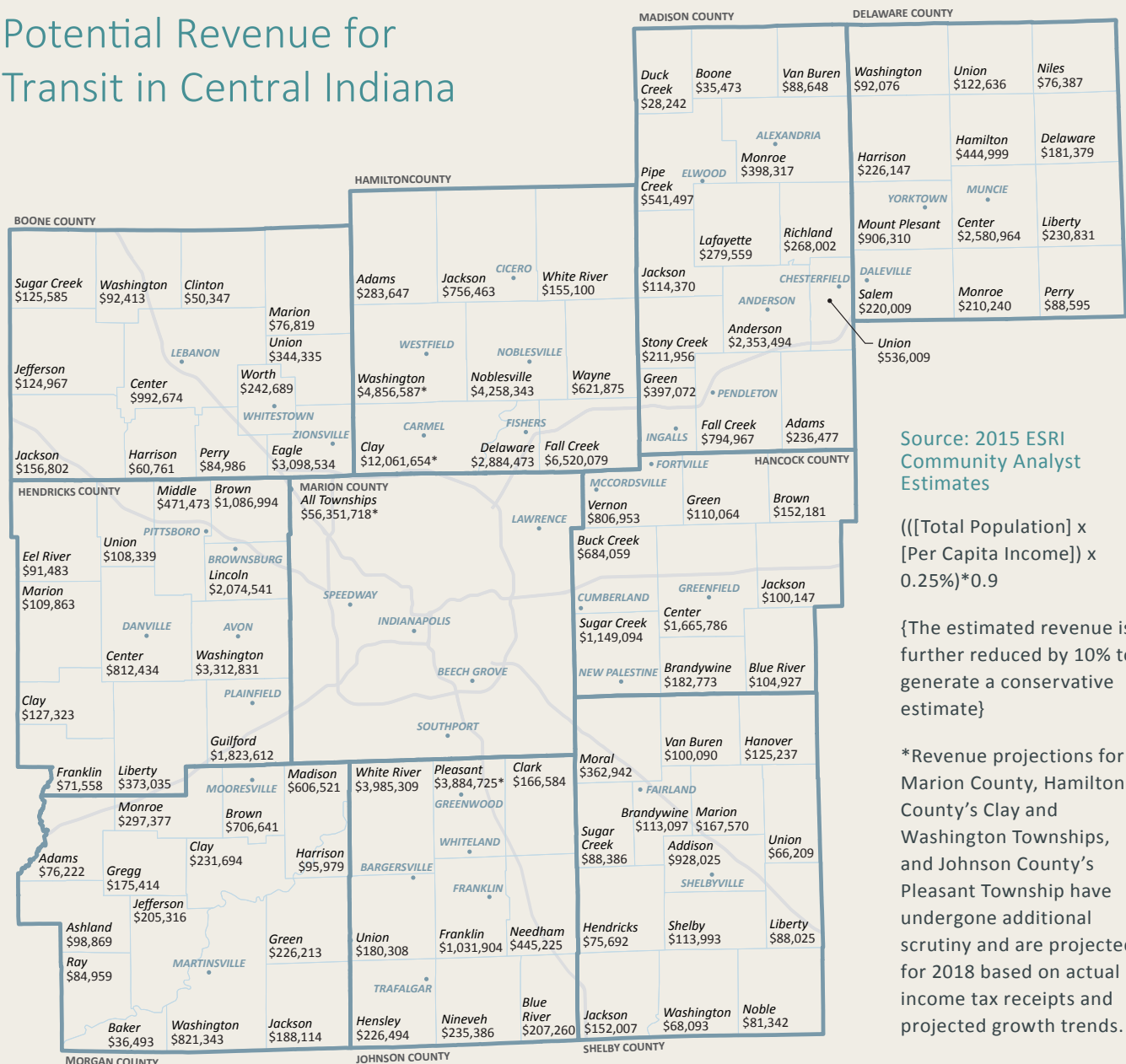
My county/township isn't authorized, so what does that mean?

Boone, Hendricks, Morgan, and Shelby counties are not enabled via **IC 8-25-2** to hold referendums to provide stable funding for transit service. In order for those counties or their townships to hold referendums for transit funding, the law would need to be modified by the state legislature.

How much revenue would be collected if Central Indiana townships/counties passed referendums?

If referendums passed with 0.25% income tax being collected, the graphic below indicates how much might be collected per year in each township, according to 2015 ESRI Community Analyst population and per capita income estimates. (Estimates based on US Census data.)

Potential Revenue for Transit in Central Indiana



Source: 2015 ESRI Community Analyst Estimates

$$([\text{Total Population}] \times [\text{Per Capita Income}] \times 0.25\%) \times 0.9$$

{The estimated revenue is further reduced by 10% to generate a conservative estimate}

*Revenue projections for Marion County, Hamilton County's Clay and Washington Townships, and Johnson County's Pleasant Township have undergone additional scrutiny and are projected for 2018 based on actual income tax receipts and projected growth trends.

SECTION 6. MONEY & REAL ESTATE



48% | Property & Excise Tax
\$31,729,423

18% | Operating Revenue
\$12,136,882

18% | FTA Assistance
\$11,855,317

16% | Municipalities
\$10,877,058

Despite challenges in funding and underinvestment, IndyGo continues to increase ridership and make steady improvements to service offerings and customer experience. Check out the projects highlighted on page 39 to see how they're improving local transit.

What makes up IndyGo's current budget?

IndyGo's operating budget is primarily funded by:

- **Property & Excise Tax:** Property taxes collected within IndyGo's service area, contributions from the state's Public Mass Transit Fund (from state sales taxes)
- **Operating Revenue:** Fares paid by passengers, advertising, and other small sources
- **FTA Assistance:** Grants from the Federal Transit Administration
- **Municipalities:** Inter-local agreements between IndyGo and communities that do not pay the property tax, like Beech Grove, Speedway, and Greenwood.

How much would the Central Indiana Transit Plan cost?

Referendums will be held at the county or township level, and a coordinated plan and financial model will be developed for each unit of government interested in becoming part of the Central Indiana Transit Plan.

For example, in Marion County it will cost approximately \$390 Million to buy all the new equipment and build all the new infrastructure necessary to implement the 2021 transit network (page 35). It will cost approximately \$108 Million / year to operate the 2021 network.

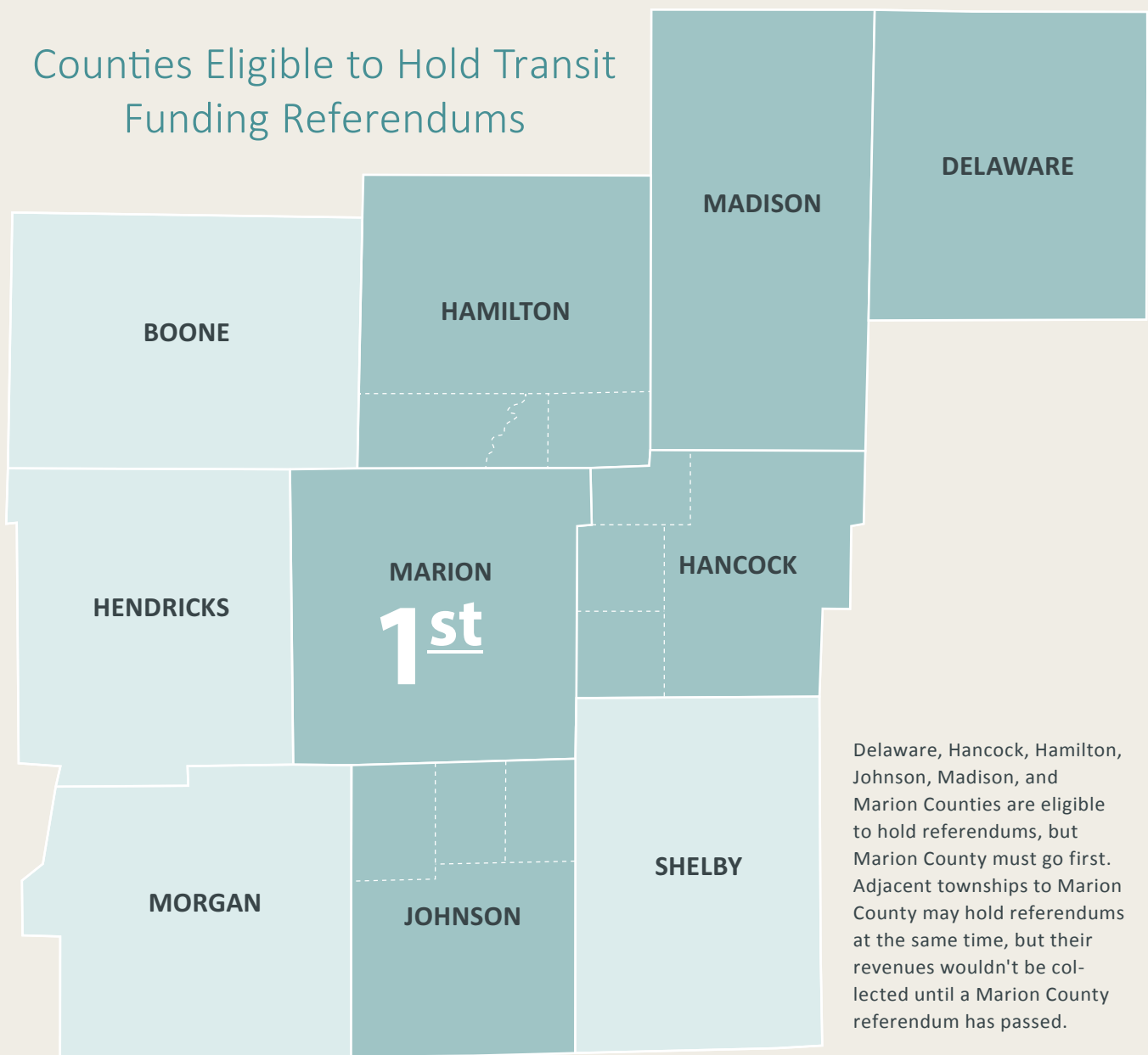
How would the Plan be funded?

Transit service in Central Indiana is currently funded by a combination of property taxes, federal grants, and rider fares. For any expansion to take place, the region would need to tap into other revenue sources.

Various dedicated funding sources were evaluated by the Central Indiana Transit Task Force, the Indy

Connect planning team, and the Indiana General Assembly in their consideration of transit-enabling legislation. In 2014, the General Assembly authorized **IC 8-25-2**, which enables the dedication of a local option income tax for transit, if approved through public referendums. To bring Central Indiana's transit investments in line with peer regions, the Central Indiana Transit Plan proposes to maintain existing funding sources and add a dedicated income tax through the county-specific referendums.

Counties Eligible to Hold Transit Funding Referendums



Delaware, Hancock, Hamilton, Johnson, Madison, and Marion Counties are eligible to hold referendums, but Marion County must go first. Adjacent townships to Marion County may hold referendums at the same time, but their revenues wouldn't be collected until a Marion County referendum has passed.

What is the process for getting referendums scheduled?

As written, the enabling legislation (**IC 8-25-2**) creates a three-step process by which:

1. the fiscal body certifies a non-binding referendum,
2. the public votes in a general election, and then
3. the fiscal body has final approval or denial of the referendum vote.

The legislation enables Delaware, Hamilton, Hancock, Johnson, Madison, and Marion counties to hold a public referendum when the public and local leaders are ready. In addition, certain townships in those counties that are adjacent to Marion County may also hold public referendums independent from the rest of their county. Other Central Indiana counties were not included in the enabling legislation.

In May 2016, Marion County certified a referendum on transit for the November 2016 ballot. Other counties may also choose to certify transit referendums for November 2016, or they can wait until later dates. The next opportunity for a referendum after 2016 would be in 2018, during the next general election.

Without a dedicated funding source, building out the system could take decades of very difficult and expensive incremental growth, whereas this plan has been structured to build out in a single decade if a referendum passes, realizing significant cost savings through efficiencies in planning and construction.

Why are taxes needed to help fund transit?

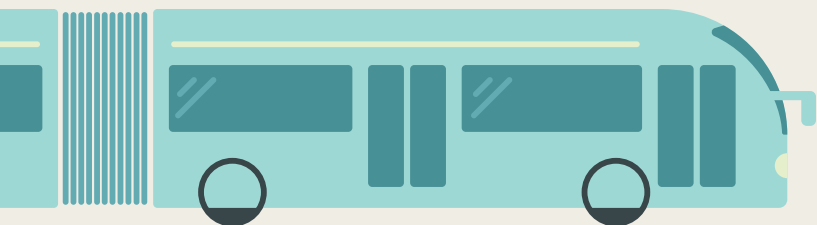
Like other transportation infrastructure, transit is publicly funded because it provides a public benefit. As with roads and highways, which rely on property taxes, bonds, and general revenues, fares generally cover only up to 25% of the cost of operation and maintenance of transit.⁷¹

In addition to the direct public benefit of connecting people with jobs, healthcare, and education, transit also sparks economic development, which is especially measurable when it occurs within walking distance of a rapid transit station. A recent study supported by the Institute for Transportation and Development Policy concluded that, as long as other factors are the same, the type of transit (BRT, light rail, streetcar) is not a factor in how successful the development is.⁷² Such transit-oriented development helps revitalize neighborhoods and, over time, helps to increase tax bases, as well as public and private community investment.

I doubt I'll ever use transit – why should I help pay for it?

While you might not use transit, it is likely that people you count on every day, to provide a variety of services, do need it. For example, more than 70 employees who work for the City of Indianapolis use transit for daily work trips.⁷³ Add to that the number of industry, restaurant, shop, and other service workers who rely on transit to get to work.

In addition, research by Ball State indicates that every \$1 of transit investment typically generates \$3 in economic benefit,⁷⁴ meaning that Central Indiana will likely see an economic return on the investment in many workforce and development sectors.



How much would the proposed income tax cost a typical household?

The proposed tax rate is 0.25% of a resident's income. This equates to 25¢ for every \$100 earned.

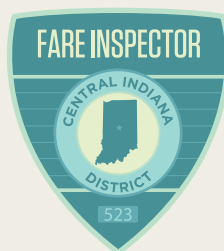


How much will a trip cost on the local or rapid transit routes?

In 2016, IndyGo will conduct a study to determine the cost per trip on both local transit and rapid transit routes. The current fare for IndyGo's regular bus routes is \$1.75/trip. This study will investigate reloadable fare card options for greater rider convenience and the opportunity to institute discounted or free transfer options. As a result of the study, the cost per trip may or may not increase, but it is unlikely to cost more per trip than in peer communities like Cleveland (\$2.25/trip), Charlotte (\$2.20/trip), or Columbus, OH (\$2.00/trip).

How will you make sure people are paying for their rapid transit trips if they buy tickets at the station?

The stations will not have turnstiles or other equipment to ensure that people pay their fare before boarding the vehicles, so fare inspectors will be used to verify riders have purchased a



ESTIMATED COST PER TYPICAL HOUSEHOLD

County	2015 Median Annual Household Income	Annual Tax Revenue for Transit per Household
MARION	\$39,979	\$99.95
HAMILTON	\$86,760	\$216.90
JOHNSON	\$61,851	\$154.63

Source: 2015 ESRI Estimates. Community Analyst.

ticket. In a system used successfully across the U.S., inspectors, in recognizable uniforms, ride vehicles randomly, checking that people have tickets. Riders without tickets are fined and asked to get off at the next station to buy tickets. Inspection allows for a much faster boarding process.

Will eminent domain be used, or any homes taken to accommodate new bus lines?

No condemnation or eminent domain will occur. None of the proposed changes to the local bus routes will require property acquisition, nor will the construction of the rapid transit lines. It's less expensive and faster to design and build rapid transit lines within existing curbs.

The Green Line could require some minor property acquisition, depending on whether it uses light rail or BRT, a question that will be decided by a regional group of elected officials in 2017 (the Indianapolis Regional Transportation Council). If the group feels that light rail is essential, they will need to seek an amendment to the enabling legislation from the State of Indiana.

Will transit be accessible to affordable housing?

The Indianapolis Department of Metropolitan Development (DMD) already has a policy that all federal affordable housing subsidies (Community Development Block Grant and the HOME Investment Partnership Program) must be spent on projects within a ½-mile of an existing or proposed transit line. Local program officers are also working with the U.S. Department of Housing and Urban Development to identify properties that could serve as future affordable housing sites.

In Indianapolis, the addition of a transit stop to a neighborhood does not mean that affordable housing will become a requirement in that neighborhood. However, location near a transit stop is a prerequisite for the City's affordable housing subsidies. DMD will continue to work with neighborhoods on rapid transit station planning, and any zoning changes will be subject to the existing Metropolitan Development Committee approval process. Other communities will also maintain their approved land use procedures, though they generally do not have affordable housing policies or subsidies like Indianapolis does.

How would real estate along transit lines be affected?

Transit lines can greatly influence real estate development near transit, especially along frequent transit lines and at rapid transit stations. Companies looking for places to locate their businesses, whether retail, office, or industrial, are increasingly considering the locations of transit services in their decisions.

- Manufacturing, assembly, or distribution businesses might choose sites near transit as they become increasingly aware that transit may be the only transportation option for some employees.
- Opportunities will increase to meet the growing demand for transit oriented development (TOD), defined as developments within a half-mile of transit stations that mix business, entertainment, retail, and residential uses in walkable areas.

A 2012 community preference study by the MIBOR Realtor Association and the Indianapolis Metropolitan Planning Organization suggests that people are increasingly interested in living in walkable, mixed-use, and urban neighborhoods.⁷⁵ TOD around regional rapid transit stations will likely cause a shift in the current construction pipeline to favor these preferences.

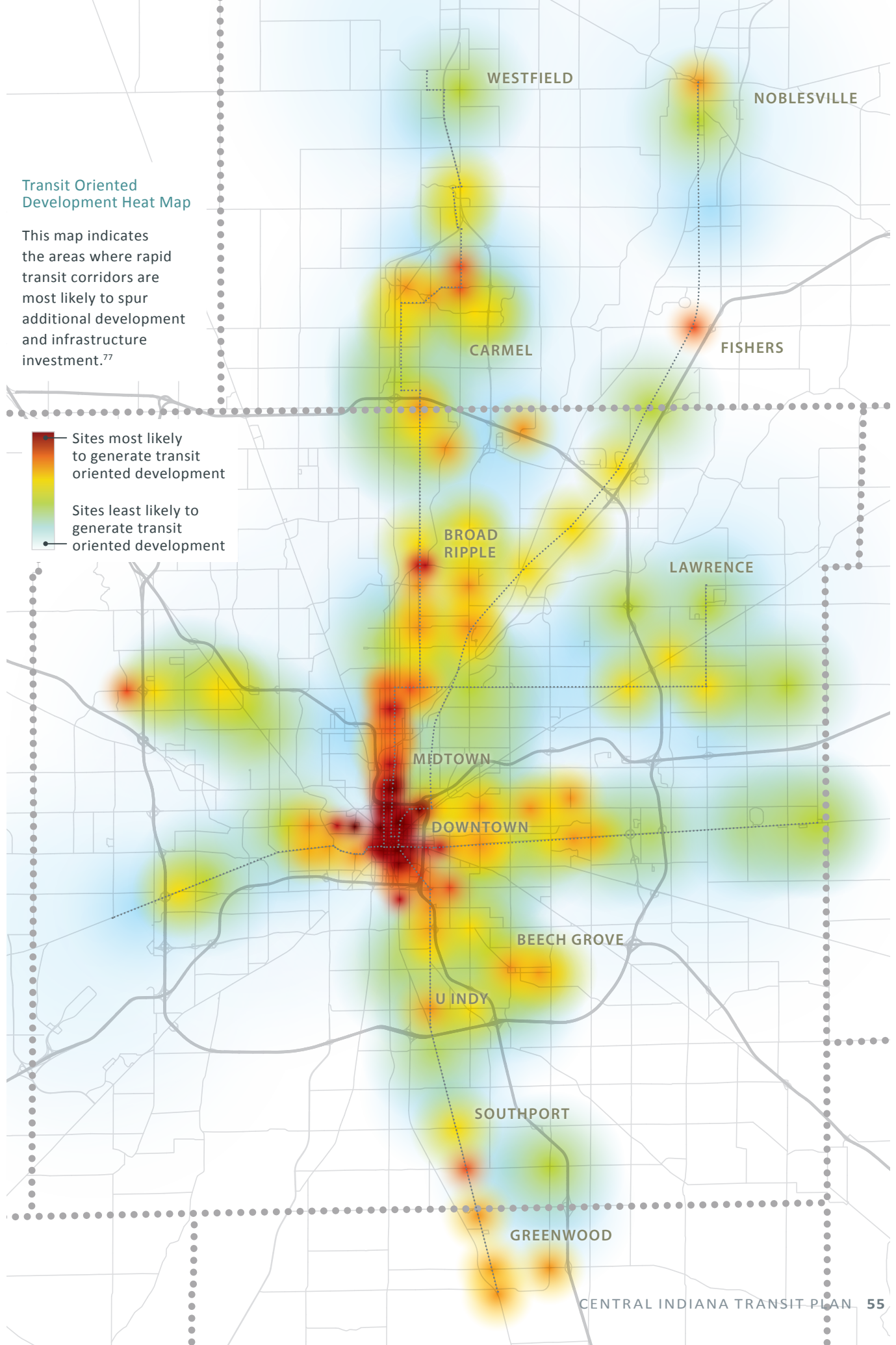
The Indy Connect TOD Strategic Plan⁷⁶ was created to determine the potential for developing successful TOD along rapid transit corridors in Central Indiana. This work helps inform which rapid transit corridors have the greatest TOD potential. The study is available for further review at IndyConnect.org.



Transit Oriented Development Heat Map

This map indicates the areas where rapid transit corridors are most likely to spur additional development and infrastructure investment.⁷⁷

- Sites most likely to generate transit oriented development
- Sites least likely to generate transit oriented development



APPENDIX A. GLOSSARY OF TERMS

AJC:

Access Johnson County is an on-demand transit provider in Johnson County.

Alternatives Analysis:

Studies that (1) define a problem and present multiple solution options, (2) present the pros and cons of the various options, (3) determine which option has the most benefits and the fewest negative impacts, and (4) recommend a preferred alternative.

BRT:

Bus Rapid Transit service is a relatively new technology in the United States that provides faster and more efficient transit for a select number of corridors within a community, and often connects multiple communities.

CIRTA:

The Central Indiana Regional Transportation Authority is a quasi-governmental organization, established by Indiana Code (IC 36-9-3), focused on bringing more transportation options to Central Indiana.

CITTF:

The Central Indiana Transit Task Force was a group of business leaders who created strategic recommendations for improving regional access, including recommendations for transit enhancements, for Central Indiana. The CITTF Plan was the precursor to Indy Connect's Central Indiana Transit Plan.

City-County Council:

As part of Unigov, Marion County and the City of Indianapolis have a joint council, called the City-County Council. Other municipalities and counties have a city council, a town council, or a county board of commissioners.

Coverage:

The (1) amount of geographic space, (2) proportion of people, or (3) the proportion of jobs that are within a certain distance of transit service. A "coverage ratio" can be calculated for an entire transit system, or for certain types of transit. An assumption about how far people will walk to a given transit service—often ranging from 1/4 to 3/4 mile—must be made to calculate a coverage ratio.

Farebox recovery:

Farebox recovery is a measure of how much of a transit system, network, or route's operating cost is recovered through rider fares.

Fixed Route:

A regularly scheduled transit service with a set fare that operates on a specific route, stopping regularly at sites marked by signs or fitted with seats or shelters.

Frequency:

How often a transit vehicle will arrive, for example a "frequent transit route" will arrive every 15 minutes or less.

FTA:

The United States Federal Transit Agency.

HCE:

Hamilton County Express is an on-demand transit provider in Hamilton County.

HCTF:

The Hamilton County Transit Forum is a group of government and business leaders who banded together to discuss and make recommendations for establishing transit services in Hamilton County, as part of the larger Indy Connect Central Indiana Transit Plan.

HHPA:

The Hoosier Heritage Port Authority was established in 1994 to purchase and manage the abandoned Norfolk Southern railroad corridor and reserve it for future construction of rapid transit service. It owns the railroad corridor proposed to be used by the Green Line.

IndyGo:

Indianapolis Public Transportation Corporation (a.k.a. “IndyGo”) is the transit operator in Marion County.

IRTC:

The Indianapolis Regional Transportation Council is a board of representatives from local government and governmental transportation authorities around Central Indiana. It meets quarterly and approves plans and policies for transportation development. The Indianapolis MPO is the staff for the IRTC.

Land Use:

A term for describing the type of development that either exists or is planned to be constructed. For example, “residential land use” refers to housing, but not necessarily any type of housing in particular (e.g., single family houses, townhomes, duplexes, apartments, condos, etc.).

MPO:

The Indianapolis Metropolitan Planning Organization is a federally mandated and federally funded transportation policy-making organization made up of representatives from local government and governmental transportation authorities.

New Starts / Small Starts:

Capital Investment Grant funding categories that primarily apply to implementing new, or expansions of, rapid transit projects.

On-Demand / Para-transit:

A form of transit service that does not operate on regular routes. Sometimes open to the public and sometimes only to qualified riders (based on age, medical issue, mobility limitations, etc.). A rider calls in advance to request a ride. Fares are often higher than for fixed-transit routes, but riders often receive door-to-door service trips.

Ridership:

An evaluation measurement for a transit service. Though “rider” is in the name, ridership more accurately references how many trips are taken on that service during a specific time period, often more than one trip being taken by the same rider (to and from trips).

TIGER:

Transportation Investment Generating Economic Recovery grants are federal competitive grants for planning, designing, and constructing innovative transportation projects.

Transit:

(a.k.a. public transportation, mass transportation, mass transit, public transit) A form of transportation that accommodates the movement of multiple people at once in a vehicle operated by a professional driver.

Transit-Oriented Development (TOD):

Developments within a half-mile of transit stations that include business, entertainment, retail, and residential uses in walkable areas.

APPENDIX B. REFERENCES

- 1 Indiana Code (IC) 8-25. <http://iga.in.gov/legislative/laws/2015/ic/titles/008/articles/025>
- 2 Hicks, Michael J., Dagney Faulk, and Kevin Kroll. Center for Business and Economic Research, Ball State University. "Fixed-Route and Demand-Response Bus Systems: Financing Methods, Benefits, and Costs in Indiana." January 2013. <http://www.indianatransportationassociation.com/documents/ITA%20-%20Finance,%20Benefits,%20&%20Costs%20-%20%20Final%20010713.pdf>
- 3 Walker, Jarrett. "Human Transit." 2012. p. 24
- 4 Jarrett Walker & Associates.
- 5 Henchman, Joseph. "Road Spending by State Funded by User Taxes and Fees, Including Federal Gas Tax Revenues." 2013. <http://taxfoundation.org/blog/road-spending-state-funded-user-taxes-and-fees-including-federal-gas-tax-revenues>
- 6 Dutzik, Tony and Gideon Weissman, Frontier Group. Phineas Baxandall, Ph.D., U.S. PIRG Education Fund. Spring 2015. "Who Pays for Roads?" <http://www.uspirg.org/sites/pirg/files/reports/Who%20Pays%20for%20Roads%20vUS.pdf>
- 7 National Transit Database, 2014. <http://www.ntdprogram.gov/ntdprogram/data.htm>
- 8 Metro Transit Authority of Harris County. "Slow but Steady Climb in Riders Shows METRO is on Right Track." December 2015. <http://content.govdelivery.com/accounts/TXMETRO/bulletins/129f76f?hootPostID=df2f4a7c-59b0e4f36f119d07290ed458>
- 9 Metropolitan Council. "Development Along Green Line Soars to More Than \$4 Billion." 2016. [http://www.metrocouncil.org/News-Events/Transportation/News-Articles/Development-along-Green-Line-soars-to-more-than-\\$4.aspx](http://www.metrocouncil.org/News-Events/Transportation/News-Articles/Development-along-Green-Line-soars-to-more-than-$4.aspx)
- 10 Nelson, Tim. MPR News. November 2015. "Green Line ridership surges past expectations." <http://www.mprnews.org/story/2015/11/12/green-line-ridership>
- 11 Utah Transit Authority. "2012 Performance Report." 2012. <https://www.rideuta.com/uploads/UTAPerformanceReport2012.pdf>
- 12 Zeiler, Peter, City of Charlotte. "Charlotte LYNX Blue Line Economic Development Impact and Land Use Patterns." <http://www.nga.org/files/live/sites/NGA/files/pdf/1012TRANSPORTZEILER.PDF>
- 13 Central Ohio Transit Authority. "COTA History." <http://www.cota.com/Company/About-COTA/COTA-History.aspx>
- 14 Rouan, Rick. The Columbus Dispatch. "COTA ridership slips as gas prices fall." <http://www.dispatch.com/content/stories/local/2016/01/31/1-ridership-number-slips-for-cotas-bus-routes.html>
- 15 Central Ohio Transit Authority. <http://www.cota.com/Projects/NextGen.aspx>
- 16 Regional Transportation District. "RTD FasTracks 2014 Fact Sheet." http://www.rtd-fastracks.com/media/uploads/main/FT_Gen_Fact_Sheet_2014.pdf
- 17 Kanter, Rosabeth Moss. "Move: Putting America's Infrastructure Back in the Lead." p.177

- 18 Center for Transportation Excellence. "Transportation Ballot Measures." <http://www.cfte.org/elections/past>
- 19 IndyGo.
- 20 National Association of Realtors. "The New Real-Estate Mantra: Location near Public Transportation." 2013. <http://www.apta.com/resources/statistics/Documents/NewRealEstateMantra.pdf>
- 21 MIBOR Realtor Association and Indianapolis Metropolitan Planning Organization. "Community Preference Survey." 2012. <http://www.mibor.com/membersinfo/community-preference-survey/>
- 22 Metrostudy. "Market Summary Report." 4Q2012.
- 23 Indyhub. "Millennial Voices, The 2015 Indy Report." 2015. <http://indyhub.org/wordpress/wp-content/uploads/2015/09/MillennialVoices-Report-final.pdf>
- 24 Indy Chamber. "Comprehensive Economic Development Strategy (CEDS), Indianapolis Region, Indiana." September 2015. <http://www.indychamber.com/economic-development/major-initiatives/comprehensive-economic-development-strategy>
- 25 Guillig LLC. 2013.
- 26 Reconnecting America and the Center for Transit-Oriented Development. "TOD 202: Transit + Employment." 2008. <http://www.reconnectingamerica.org/assets/Uploads/employment202.pdf>
- 27 Faulk, Dagney, Ph.D. and Michael Hicks, Ph.D. Ball State University, Center for Business and Economic Research. "The impact of bus transit on employee turnover." 2013. <https://www.frbatlanta.org/-/media/Documents/news/conferences/2013/resilience-rebuilding/13resiliencerebuildingpaperFaulk.pdf>
- 28 Brookings Institute. "Missed Opportunity: Transit and Jobs in Metropolitan America." 2010. <http://www.brookings.edu/~media/Series/jobsandtransit/IndianapolisIN.pdf>
- 29 Aasen, Adam. Current in Carmel. "Lichti: Workers Need Mass Transit." 2016. <http://currentincarmel.com/lichti-workers-need-mass-transit>
- 30 Hicks, Michael J., Dagney Faulk, and Kevin Kroll. Center for Business and Economic Research, Ball State University. "Fixed-Route and Demand-Response Bus Systems: Financing Methods, Benefits, and Costs in Indiana." January 2013. <http://www.indianatransportationassociation.com/documents/ITA%20-%20Finance,%20Benefits,%20&%20Costs%20-%20%20Final%20010713.pdf>
- 31 Leinberger, Christopher B. and Patrick Lynch. The George Washington University School of Business. "Foot Traffic Ahead: Ranking Walkable Urbanism in America's Largest Metros." 2014. <http://www.smartgrowthamerica.org/documents/foot-traffic-ahead.pdf>
- 32 Transportation for America. "Aging in Place, Stuck Without Options." 2011. <http://t4america.org/docs/SeniorsMobilityCrisis.pdf>
- 33 Transportation for America. "Aging in Place, Stuck Without Options." 2011. <http://t4america.org/docs/SeniorsMobilityCrisis.pdf>

- 34 AAA. "Annual Cost to Own and Operate a Vehicle Falls to \$8,698, Finds AAA." 2015. <http://newsroom.aaa.com/2015/04/annual-cost-operate-vehicle-falls-8698-finds-aaa>
- 35 Center for Neighborhood Technology. "Housing plus Transportation (H+T) Fact Sheet for Indianapolis region." 2015. <http://htaindex.cnt.org/fact-sheets/?focus=place&gid=11097>
- 36 Vallianatos, Mark, Amanda Shaffer, Robert Gottlieb. Center for Food and Justice, Urban and Environmental Policy Institute. "Transportation and Food: The Importance of Access." October 2002. http://eatbettermovemore.org/sa/pdf/transportation_and_food.pdf
- 37 Marshall, Aarian. The Atlantic Citylab. "U.S. Drivers Are Distracted More Than Half the Time They're Behind the Wheel." 2016. http://www.citylab.com/commute/2016/03/major-distractions-for-drivers/472656/?utm_source=nl__link4_030916
- 38 Sivak, Michael and Brandon Schoettle. "Percentage of Young Persons With a Driver's License Continues to Drop." 2013.
- 39 U.S. Department of Transportation, Federal Highway Administration. 2014. http://www.fhwa.dot.gov/policyinformation/travel_monitoring/14dectvt/figure1.cfm
- 40 Zwald ML, Hipp JA, Corseuil MW, Dodson EA. "Correlates of Walking for Transportation and Use of Public Transportation Among Adults in St Louis, Missouri, 2012." Preventing Chronic Disease. 2014. <http://dx.doi.org/10.5888/pcd11.140125>
- 41 Redlener, Irwin, MD, Arturo Brito, MD, Dennis Johnson, MPS, Roy Grant, MA. The Children's Health Fund. "The Growing Health Care Access Crisis for American Children: One in Four at Risk." 2006. <http://www.childrenshealthfund.org/sites/default/files/WhitePaper-May2007-FINAL.pdf>
- 42 Harvard University. "The Equal Opportunity Project." 2012. <http://www.equality-of-opportunity.org>
- 43 Harvard University. "The Equal Opportunity Project." 2012. <http://www.equality-of-opportunity.org>
- 44 Indy Chamber. "Comprehensive Economic Development Strategy (CEDS), Indianapolis Region, Indiana." September 2015. <http://www.indychamber.com/economic-development/major-initiatives/comprehensive-economic-development-strategy>
- 45 Indyhub. "Millennial Voices, The 2015 Indy Report." 2015. <http://indyhub.org/wordpress/wp-content/uploads/2015/09/MillennialVoices-Report-final.pdf>
- 46 Indianapolis Downtown, Inc. "Velocity: Accelerating Downtown's Vision." 2014. <http://www.indyvelocity.com>
- 47 St. Vincent Heart Center of Indiana. "Community Health Needs Assessment Report." Fiscal Year 2013-2015. https://www.stvincent.org/uploadedFiles/SV_Health/How_Were_Different_In_Your_Community/Community_Programs/sv-heart-center-of-in-2013-chna-report.pdf
- 48 Central Indiana Transit Task Force. "Summary Report on Transportation Alternatives in Central Indiana." 2010. <http://indyconnect.org/planning-studies>

- 49 Community Analyst. 2015 ESRI Demographic Projections.
- 50 U.S. Department of Transportation, Federal Highway Administration. "Average Annual Miles per Driver by Age Group." February 2015. <https://www.fhwa.dot.gov/ohim/onh00/bar8.htm>
- 51 Community Analyst. 2015 ESRI Demographic Projections.
- 52 Sivak, Michael and Brandon Schoettle. "Percentage of Young Persons With a Driver's License Continues to Drop." 2013.
- 53 Indy Chamber. "Comprehensive Economic Development Strategy (CEDS), Indianapolis Region, Indiana." September 2015. <http://www.indychamber.com/economic-development/major-initiatives/comprehensive-economic-development-strategy>
- 54 Urban Land Institute. "America in 2015: A ULI Survey of Views on Housing, Transportation and Community." 2015. <http://uli.org/research/centers-initiatives/terwilliger-center-for-housing/research/community-survey>
- 55 American Planning Association. "Investing in Place for Economic Growth and Competitiveness, A Research Summary." May 2014. https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/policy/polls/investing/pdf/pollinvestingreport.pdf
- 56 MIBOR Realtor Association and Indianapolis Metropolitan Planning Association. "Community Preference Survey." 2012. <http://www.mibor.com/membersinfo/community-preference-survey/>
- 57 Metrostudy. "Market Summary Report." 4Q2012.
- 58 Russell, John. Indy Star. "Report: Downtown apartment market booming, with more units on the way." 2015. <http://www.indystar.com/story/money/2015/02/25/report-downtown-apartment-market-booming-units-way/24000905/>
- 59 Central Indiana Transit Task Force. "Summary Report on Transportation Alternatives in Central Indiana." 2010. <http://indyconnect.org/planning-studies>
- 60 SEA 175, now codified as IC 8-25-2. <http://iga.in.gov/legislative/laws/2015/ic/titles/008/articles/025>
- 61 Duncan, Mallory. Butler University. "Electric buses may save IndyGo thousands of dollars annually." 2014. <http://blogs.butler.edu/multimedia-journalism/2014/11/03/buses>
- 62 Proterra. "Battery Electric transit vehicle facts." <http://www.proterra.com/advantages/overview>
- 63 Duncan, Mallory. Butler University. "Electric buses may save IndyGo thousands of dollars annually." 2014. <http://blogs.butler.edu/multimedia-journalism/2014/11/03/buses>
- 64 Proterra. "Battery Electric transit vehicle facts." <http://www.proterra.com/advantages/overview>
- 65 Duncan, Mallory. Butler University. "Electric buses may save IndyGo thousands of dollars annually." 2014. <http://blogs.butler.edu/multimedia-journalism/2014/11/03/buses>
- 66 IndyGo.
- 67 Indiana Code (IC) 8-25. <http://iga.in.gov/legislative/laws/2015/ic/titles/008/articles/025>
- 68 Greenstreet LTD, Anderson Bohlander LLC. "Transit Oriented Development (TOD) Strategic Plan." April 2015. <http://indyconnect.org/planning-studies>

- 69 Indy Chamber. "Comprehensive Economic Development Strategy (CEDs), Indianapolis Region, Indiana." September 2015. <http://www.indychamber.com/economic-development/major-initiatives/comprehensive-economic-development-strategy>
- 70 IndyGo. "2014 Comprehensive Annual Financial Report for IndyGo." <http://www.indygo.net/wp-content/uploads/2015/01/CAFR-2014-FINAL-1a.pdf>
- 71 DeGood, Kevin and Andrew Schwartz. "Advancing a Multimodal Transportation System by Eliminating Funding Restrictions." January 2015. https://cdn.americanprogress.org/wp-content/uploads/2015/01/DeGood_Highways_reportUPDATE.pdf
- 72 Hook, Walter, Stephanie Lotshaw, and Annie Weinstock. "More Development For Your Transit Dollar: An Analysis of 21 North American Transit Corridors." September 2013. http://www.ssti.us/wp/wp-content/uploads/2013/09/ITDP_MORE_DEVELOPMENT_924.pdf
- 73 City of Indianapolis Office of Finance and Management. Based on transit passes distributed for the second quarter of 2016.
- 74 Hicks, Michael J., Dagny Faulk, and Kevin Kroll. Center for Business and Economic Research, Ball State University. "Fixed-Route and Demand-Response Bus Systems: Financing Methods, Benefits, and Costs in Indiana." January 2013. <http://www.indianatransportationassociation.com/documents/ITA%20-%20Finance,%20Benefits,%20&%20Costs%20-%20%20Final%20010713.pdf>
- 75 MIBOR Realtor Association and Indianapolis Metropolitan Planning Organization. "Community Preference Survey." 2012. <http://www.mibor.com/membersinfo/community-preference-survey/>
- 76 Greenstreet LTD, Anderson Bohlander LLC. "Transit Oriented Development (TOD) Strategic Plan." April 2015. <http://indyconnect.org/planning-studies>
- 77 Greenstreet LTD, Anderson Bohlander LLC. "Transit Oriented Development (TOD) Strategic Plan." April 2015. <http://indyconnect.org/planning-studies>



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