Chapter 3: System Development

The transportation system's role is to accommodate the transportation needs of the region. The entire transportation system, however, is made up of several components or sub-systems that should be seamlessly connected to provide fluid movement across the system. These include the roadway piece, the transit piece, the bikeway piece, the pedestrian piece, and the unique intermodal pieces which interface these with ground and air freight. These components each serve their own particular and equally important role in providing for mobility for all persons throughout the region.

This chapter describes these individual systems and intermodal connections that make up the entire surface transportation system. Within each system the individual MTP strategies and projects are outlined that will expand these systems to accommodate the growing travel demand resulting from the growth described in Chapter 2.

3.1 Roadway System

The roadway system is the primary component of the transportation system in central Ohio. Nearly all of the transportation systems described later in this chapter require access to the roadway system in order to function. To accommodate growth in travel, the capacity of the roadway system continues to expand through the widening of existing roads and the construction of new roads. Other physical improvements improve safety and access along existing roadways and intersections.

Key Goals

- 3 Economic Opportunity
- 4 Sustainable Neighborhoods
- 5 Collaboration
- 6 Health, Safety and Welfare

BACKGROUND

For the purposes of the MTP, MORPC focuses on roads classified as "collectors" or higher. As of 2010, this includes 5,044 lane miles of roadways in the MPO planning area. This "lane mile" figure includes the length of each roadway (in miles), multiplied by the number of lanes in each roadway. That is, a mile of road with four lanes contributes four lane miles in the calculation. Figure 3.1 breaks down the 5,044 lane miles by roadway classification.

The roadway system is the primary component of the transportation system in central Ohio.

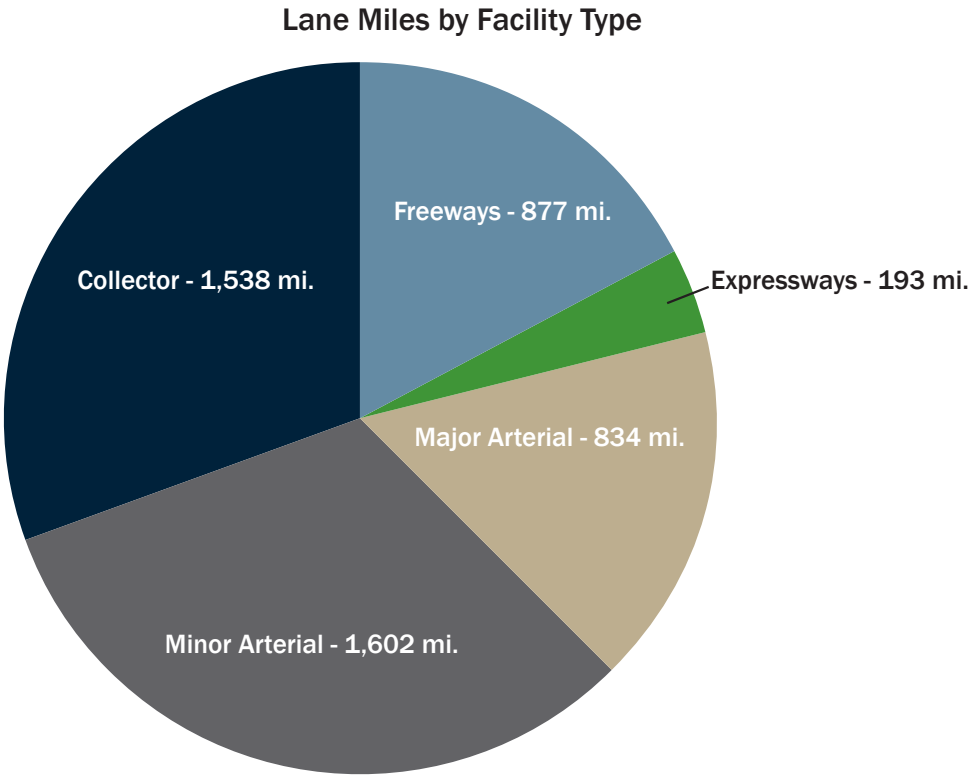


Figure 3.1 2010 Lane Miles by Facility Type

Local streets, such as this residential one in Westerville are not the promary focus of the MTP.
Source: (cc) Jinjian Liang

High Street is a major arterial running through the planning area. Source: MORPC

Freeways and expressways allow limited access from adjacent roads. Source: MORPC

Where lane miles illustrates the extent of the roadway system, "vehicle miles traveled" (VMT) depicts the use of the roadway system. Mathematically, VMT is a combination of the distance traveled by all vehicles in a given area over a specific period, which is usually a day. VMT within the MPO planning area has shown an average annual growth of 2.1 percent since 2000. Figure 3.2 shows daily VMT by roadway classification type from 2000 to 2010. Although VMT declined in 2005, 2007 and 2008 due to high gas prices and economic recession, VMT continued to rise after 2008.

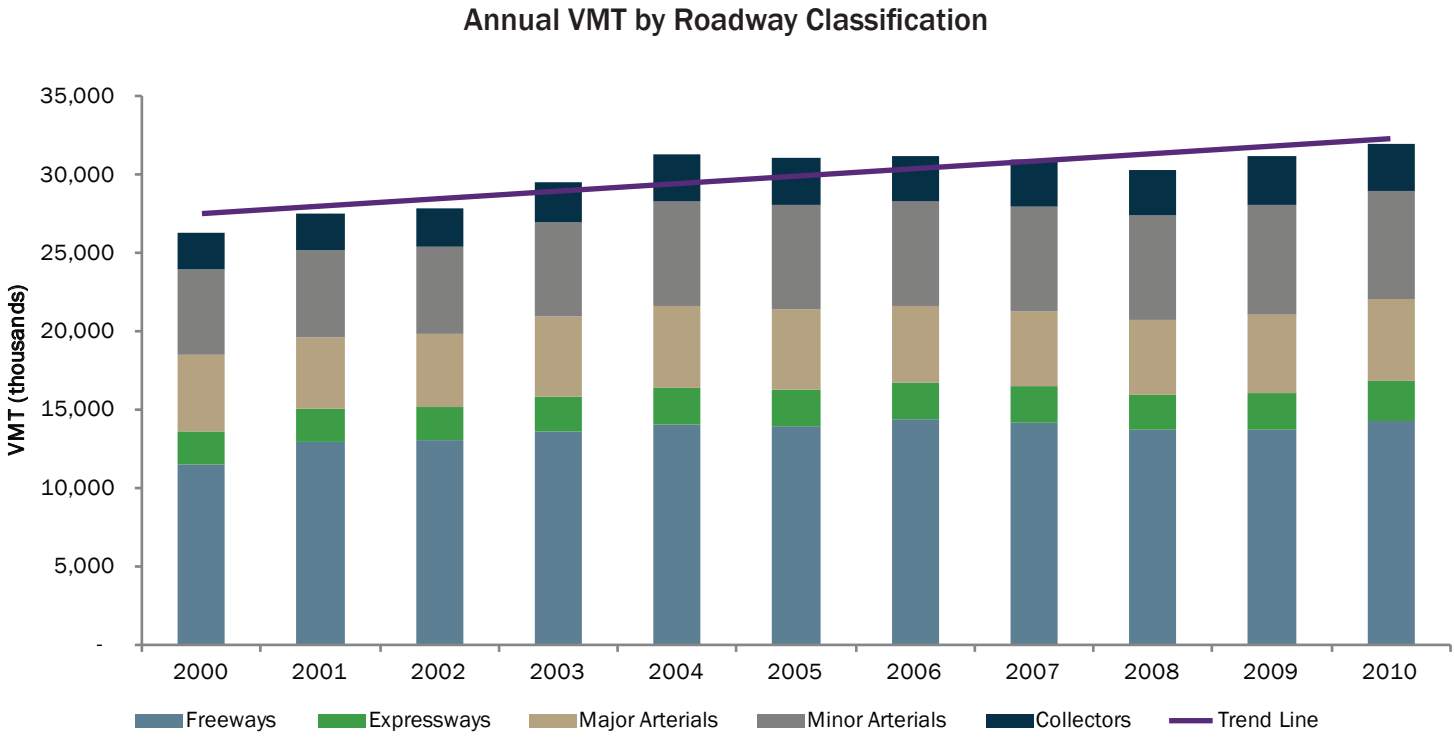


Figure 3.2. Annual VMT by Roadway Classification in the MPO Planning Area from 2000 to 2010 with Trend Line

While VMT depicts overall use of the roadway system, it alone cannot demonstrate where roadway capacity adversely affects traffic congestion. Growth and development of the region over the past several decades has lead to congestion on the roadway system in central Ohio. Figure 3.3 shows average traffic conditions during peak periods on major roadways in the MPO planning area in 2010. Roadway segments in green (no congestion), yellow (moderate congestion), and red (severe congestion) portray how traffic puts stress on central Ohio's roadway system. MORPC's Travel Demand Model helps estimate the level of congestion shown.

Combining VMT and congestion provides insight into the impact of congestion on overall roadway travel. Figure 3.4 illustrates the amount of VMT at different levels of congestion. The three bars on the left illustrate this during a 24-hour time period; the three bars on the right illustrate this during the combined a.m. and p.m. "peak periods" when system traffic is highest. Each 3-bar set illustrates this combined measure on all roadways, all freeways and all arterials and collector streets, respectively.

The MTP targets that less than five percent of the system should operate under congested conditions daily; less than ten percent during peak periods.

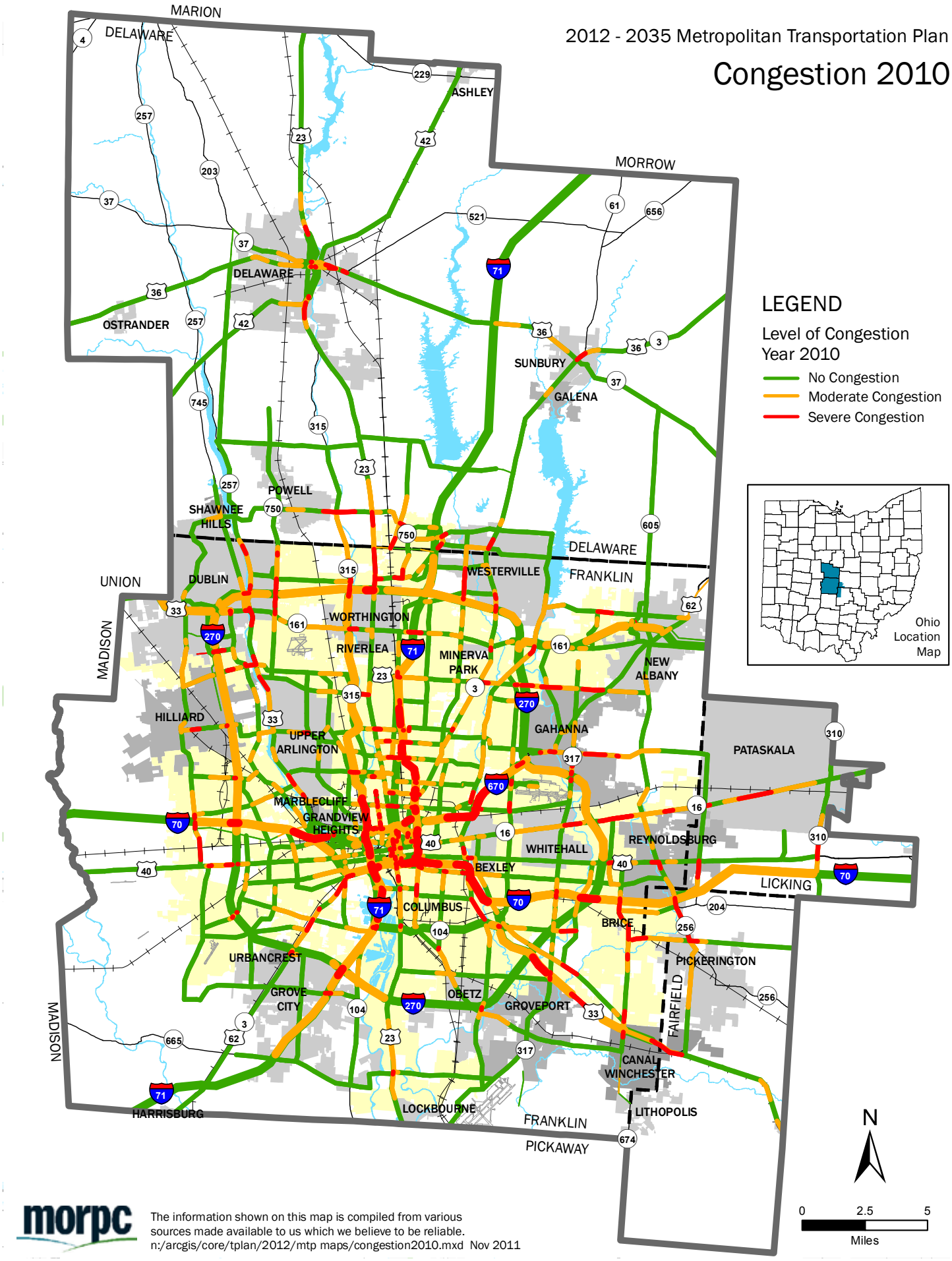


Figure 3.3 Map of Level of Congestion, Year 2010

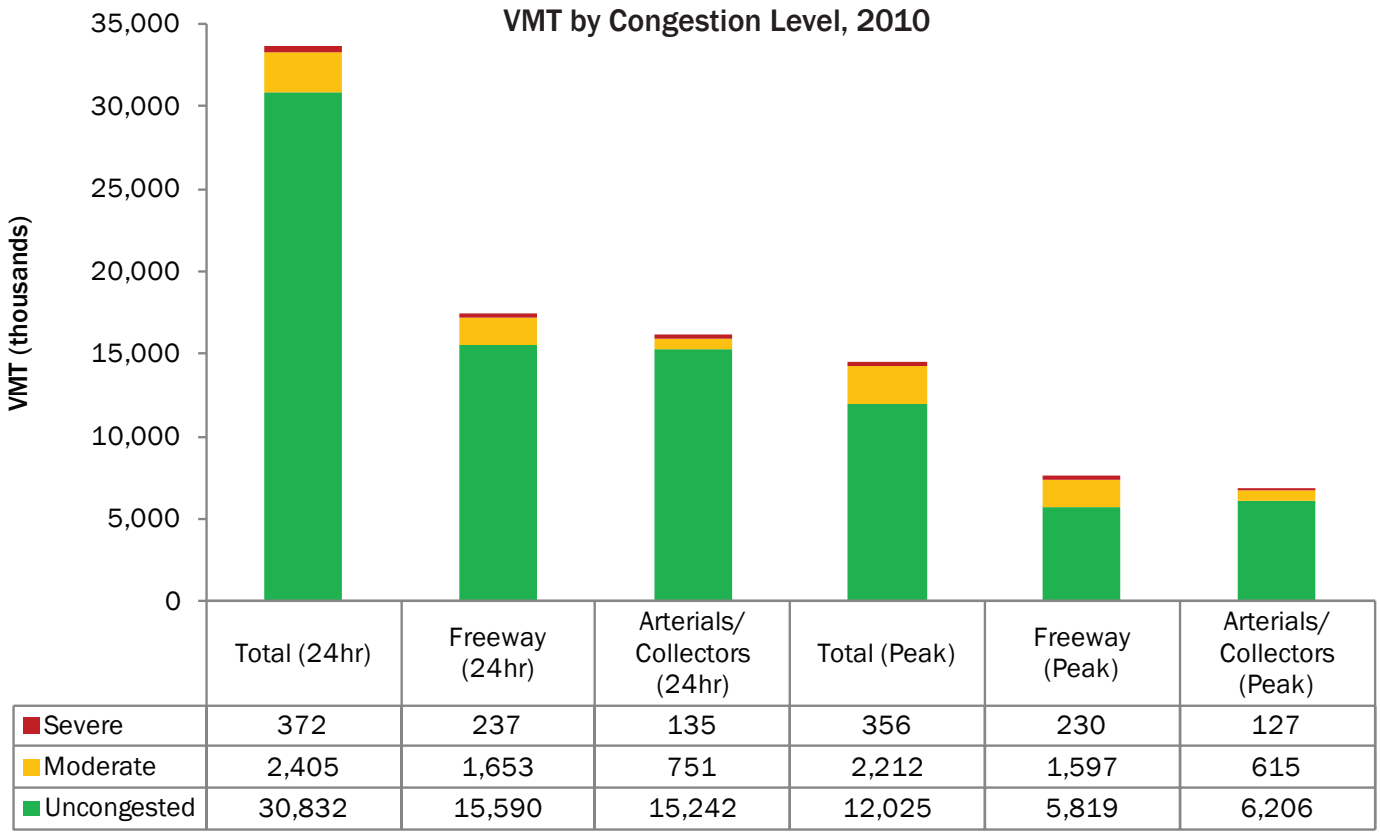


Figure 3.4 VMT by Congestion Level in MORPC MPO Planning Area, 2010

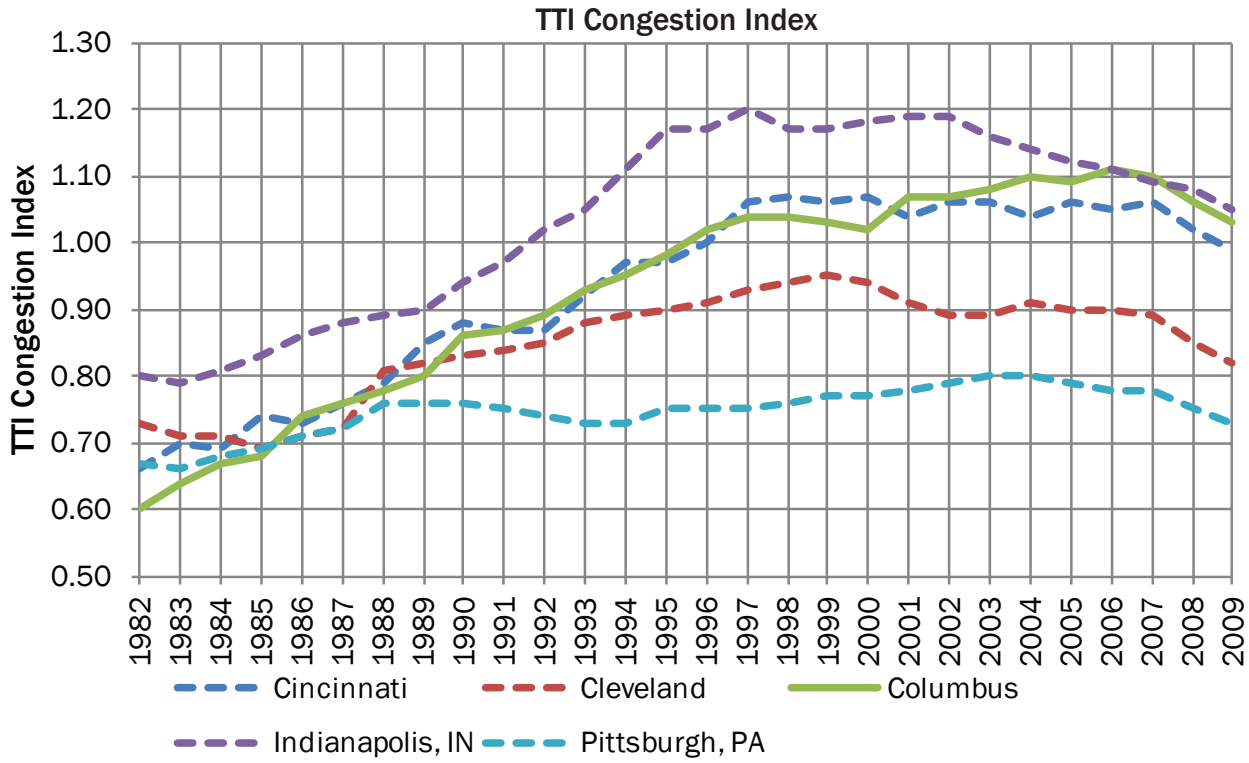


Figure 3.5 TTI Congestion Index for Columbus and Other Regions

Texas Transportation Institute (TTI) publishes an alternative measure of congestion for urban areas across the nation every year. Figure 3.5 shows the TTI Congestion Index since 1982 for Columbus and comparable metropolitan areas. According to this measure, congestion has declined over the period from 2006 to 2009. This corresponds with the VMT decreases reported above, along with the impact of system capacity improvements. Please note that TTI's geographic coverage area for Columbus is different from the MPO planning area.

INRIX is an independent provider of traffic information. It produces a National Traffic Scorecard, which uses another congestion measure called the "travel time tax" (T3). INRIX relies on GPS-enabled probe vehicle reports from vehicles traveling many of the nation's roads. T3 is:

$$\text{Travel Time Tax (T3)} = \frac{\text{Congested Travel Time - Free Flow Travel Time}}{\text{Free Flow Travel Time}}$$

Figure 3.6 shows T3 for Columbus and other comparable metropolitan areas. Again, please note that the geographical definition of Columbus by INRIX is different from the MPO planning area.

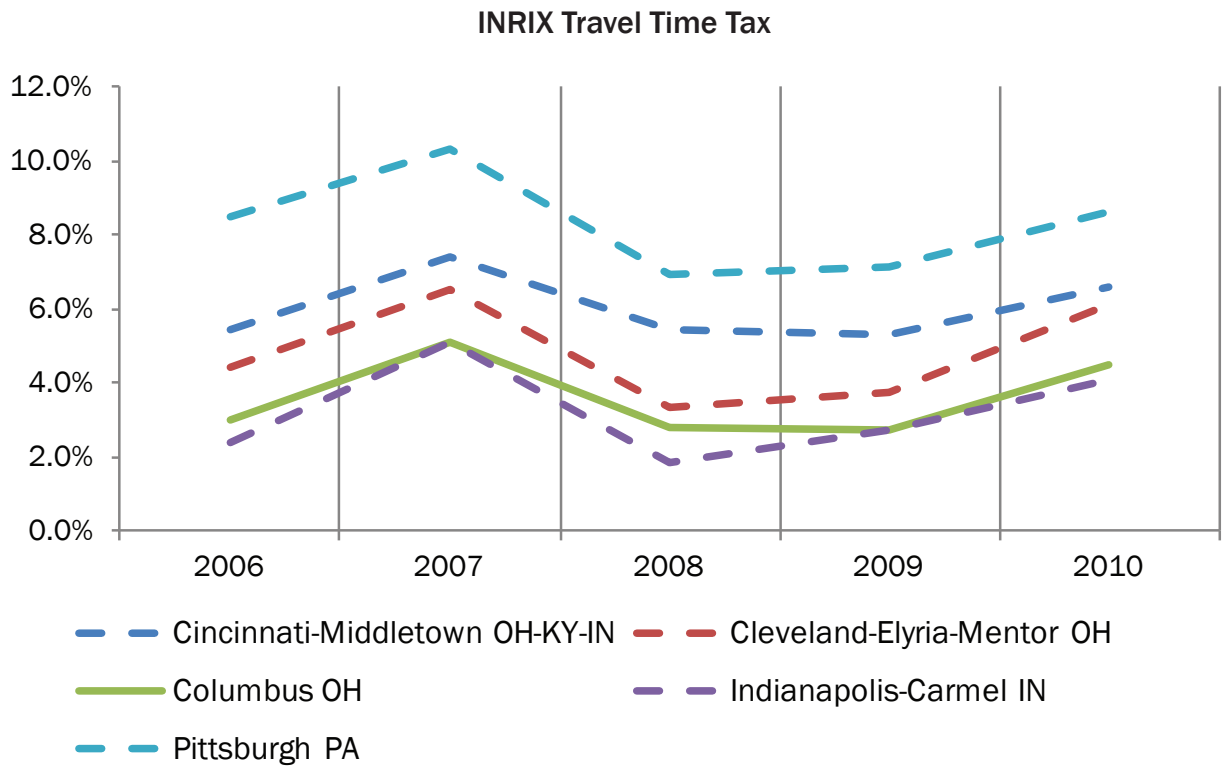
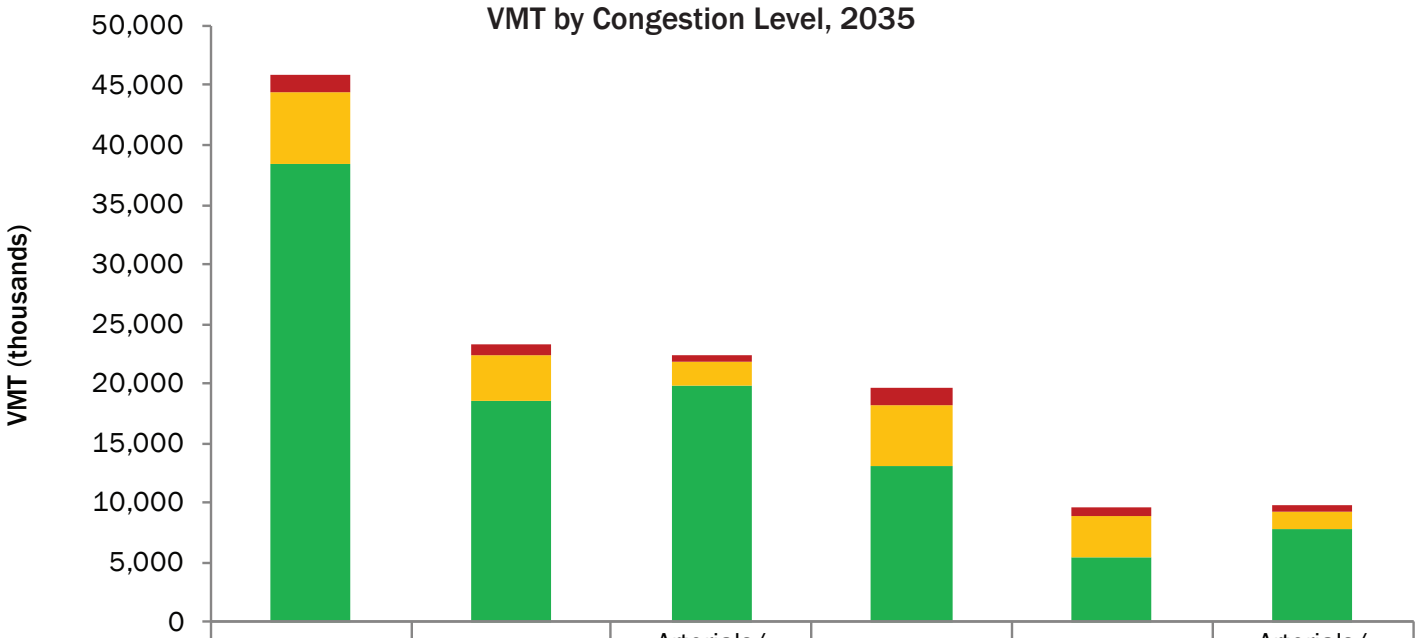


Figure 3.6 INRIX's Travel Time Tax for Columbus and Other Regions

With continued growth and development as forecast in Chapter 2, the region will experience increased congestion. Figure 3.7 displays the forecasted average traffic conditions during peak periods on major roadways in the MPO planning area in 2035. Similar to Figure 3.3, roadway segments in green (no congestion), yellow (moderate congestion), and red (severe congestion) portray how traffic puts stress on central Ohio's roadway system. The 2035 level of congestion forecast assumes no roadway expansion or other transportation system improvements, and travel behavior remains the same as today.

Again combining congestion and VMT measures, Figure 3.8 illustrates the composition of 2035 VMT at different levels of congestion as used previously. The three bars on the left illustrate this during a 24-hour time period; the three bars on the right illustrate this during the combined a.m. and p.m. peak periods. Each 3-bar set illustrates this combined measure on all roadways, all freeways and all arterials and collector streets, respectively.



	Total (24hr)	Freeway (24hr)	Arterials/ Collectors (24hr)	Total (Peak)	Freeway (Peak)	Arterials/ Collectors (Peak)
Severe	1,407	885	522	1,350	857	493
Moderate	5,894	3,960	1,935	5,065	3,489	1,576
Uncongested	38,450	18,506	19,944	13,210	5,425	7,785

Figure 3.8 VMT by Congestion Level in MORPC MPO Planning Area, 2035

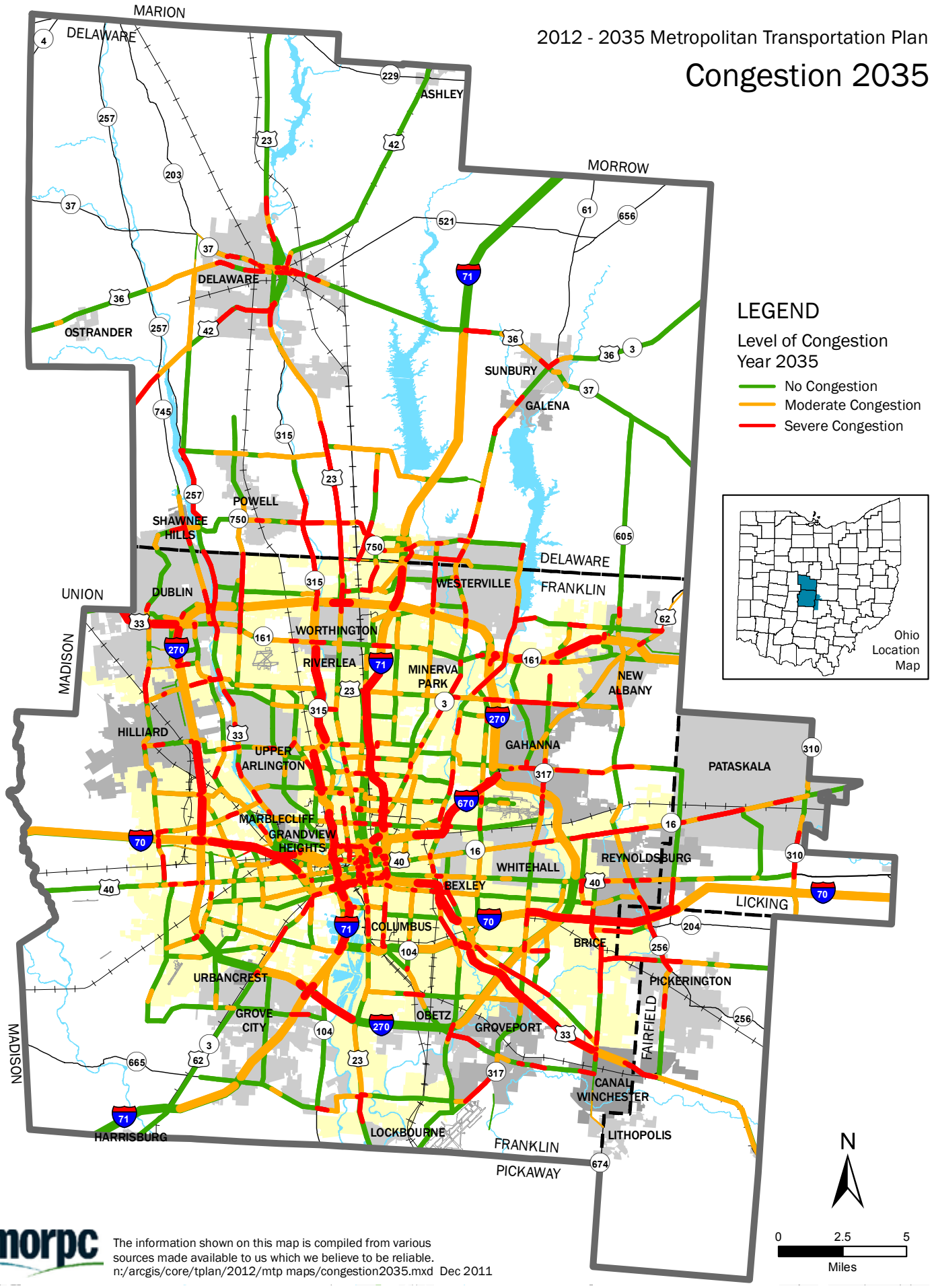


Figure 3.7 Map of Level of Congestion, Year 2035

ROADWAY STRATEGIES AND PROJECTS

Recommendations presented throughout the MTP will help improve conditions on the roadway system. For instance, strategies and projects that will address travel demand will also improve roadway congestion levels. One can make the same connection for any strategies and projects that improve alternative modes of transportation. However, the following strategies and projects specifically address roadway system development.

All project references in this section remain general. One can find detailed information in Chapter 6. While these primarily relate to expanding the roadway system to deal with congestion and growth, Chapter 4 addresses the importance of maintaining and managing the existing system.

1. Advance projects that add roadway capacity through new roadways, major widening projects, intersection improvements and new or expanded freeway interchanges to alleviate existing or anticipated congestion. 3 5 6

MORPC continuously monitors the plans of jurisdictions in and near the MPO planning area for potential capacity-adding projects. MORPC uses its Travel Demand Model to identify any additional roadway system deficiencies. Chapter 6 details the evaluation and selection process to trim this list of over 700 candidate roadway projects to the funding forecast to be available through 2035. The project list in Chapter 6 includes approximately 250 expansion projects totalling $5.8 billion.

2. Advance projects that improve access to sites with expanded roadway capacity, new turning lanes (in minor widening projects) and intersection improvements. 3 4 6

As above, MORPC continuously monitors the plans of jurisdictions in and near the MPO planning area for potential projects that improve safety or roadway access. For example, many projects in this category widen the roadway without adding extra capacity to bring the travel lanes to a standard width and/or add turning lanes. As stated above, Chapter 6 provides additional information on specific projects.

3. Collaborate on a selection process that advances short-term project priorities through the Transportation Improvement Program (TIP) 3 5 6

MORPC maintains a Federal Funding Committee that helps decide what transportation projects receive MORPC's federal funding in the short-term. The committee will derive decision criteria for the next rounds of funding from the MTP. Additionally, MORPC monitors local capital improvement plans (CIPs) as well as ODOT's plans to ensure the TIP reflects all short-term project priorities.

4 6

4. Work to ensure environmental justice with system expansion.

Transportation investments have both positive and negative impacts that may be localized in a particular community or portion of a community. Environmental justice requires that these impacts be distributed fairly among population groups especially focusing on minorities, Hispanics, senior citizens, people with disabilities, people in poverty, and households without cars. The process to address these impacts includes:

- Adequate public involvement of target populations in regional transportation decision making.
- Assess whether there were disproportionately high and adverse impacts on the target populations resulting from federal programs.
- Ensure that the target populations receive a proportionate share of benefits of federal transportation investments.

More information on this process can be found in Appendix D.

VISUALIZATIONS

The illustrations on the following pages are meant to provide an easy and non-technical understanding of what different roadway projects might accomplish:

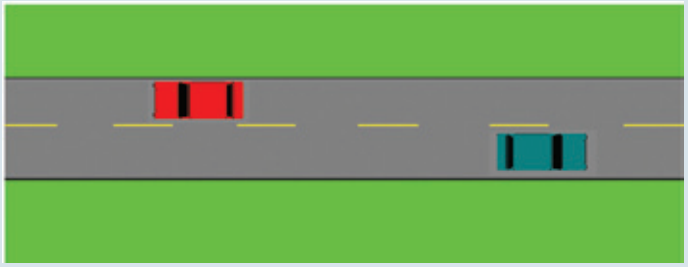
1. Minor widening and improving safety of arterials
2. Major widening of arterials (through lane additions)
3. Intersection improvements
4. Major widening of freeways (through lane additions)
5. Upgrading arterials to freeways
6. New interchanges
7. Interchange upgrades

Please note that all transportation projects using MORPC-attributable funding must accomodate all users along project roadway corridors under the Complete Streets Policy. Complete Streets are roadways designed to safely and comfortably accommodate all users, including, but not limited to motorists, cyclists, pedestrians, transit and school bus riders, delivery and service personnel, freight haulers, and emergency responders. “All users” includes people of all ages and abilities.

For more details on the types of accomodations that may be necessary please see the remaining sections in this chapter or refer to the MORPC Complete Streets Policy. For more information about Complete Streets in general, please refer to Sections 1.2 and 3.4.

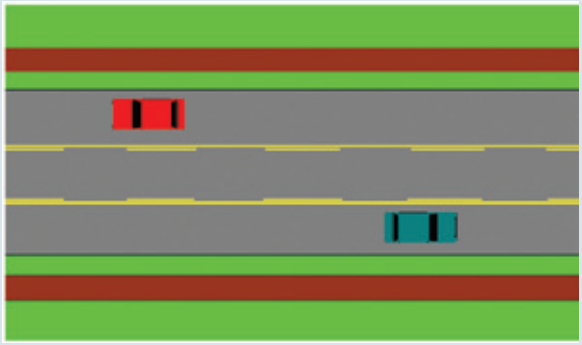
1. MINOR WIDENING AND IMPROVING SAFETY OF ARTERIALS

This type of project typically involves the addition of one travel lane to the existing street. It could be the conversion of an existing two-lane arterial street without pedestrian infrastructure to a three-lane arterial street with pedestrian infrastructure, as shown below. In this case, the new lane is a center turn lane. In other cases, a minor widening may be very similar with the conversion of a four-lane street to five lanes, for example. Such an improvement type may also indicate the widening of the existing lanes to a standard width.



EXISTING SCENARIO:

2-lane street without pedestrian infrastructure

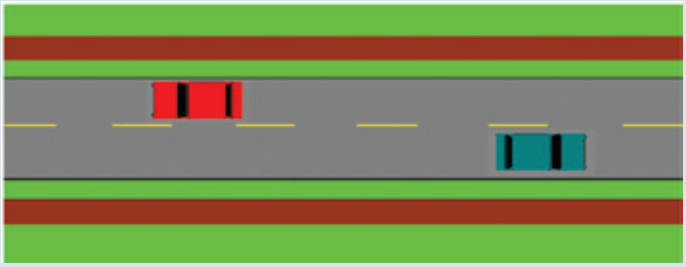


PROPOSED SCENARIO:

3-lane street (2 lanes with center turn lane) with pedestrian infrastructure

2. MAJOR WIDENING OF ARTERIALS

This type of project involves the addition of more than one lane to an existing street. It could be the conversion of an existing two-lane arterial street with pedestrian infrastructure to a four-lane divided arterial street, still including pedestrian infrastructure, as shown in "Proposed Scenario #1" below. "Proposed Scenario #2" shows an alternate version, where the dividing median is instead a center turning lane. Such an improvement type adds roadway capacity. Under Complete Streets, the improvement must accomodate bicycles, transit and other potential users (see Section 3.5 for more details).

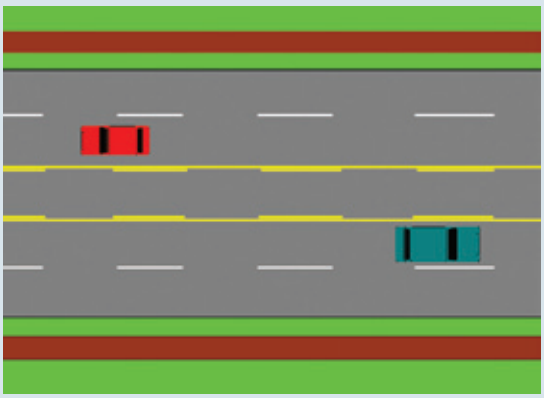


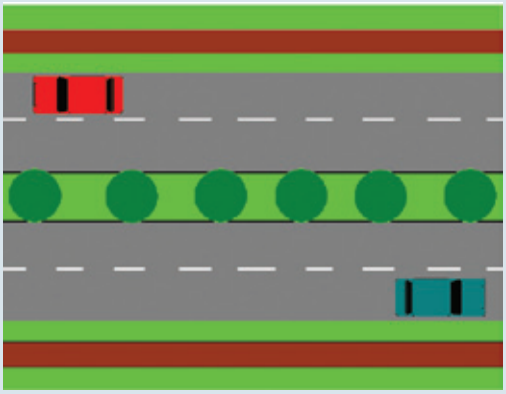
EXISTING SCENARIO:

2-lane street with pedestrian infrastructure

PROPOSED SCENARIO #2:

5-lane street with pedestrian infrastructure





PROPOSED SCENARIO #1:

4-lane divided arterial street with pedestrian infrastructure

3. INTERSECTION IMPROVEMENTS

This type of project involves the modification of existing isolated intersections. If a segment of road is being improved, it should be identified as a minor widening/safety improvement. The intersection improvements could be the addition of turn lanes, both left and/or right and provision of traffic signals, as shown below in the first set of scenarios. Roundabouts are another example of intersection improvements, as shown below in the second set of scenarios.

EXISTING SCENARIO (SET 1):

2-lane intersection with no turn lanes, or traffic controls

PROPOSED SCENARIO (SET 1):

Multi-lane intersection with new turn lanes and signals

EXISTING SCENARIO (SET 2):

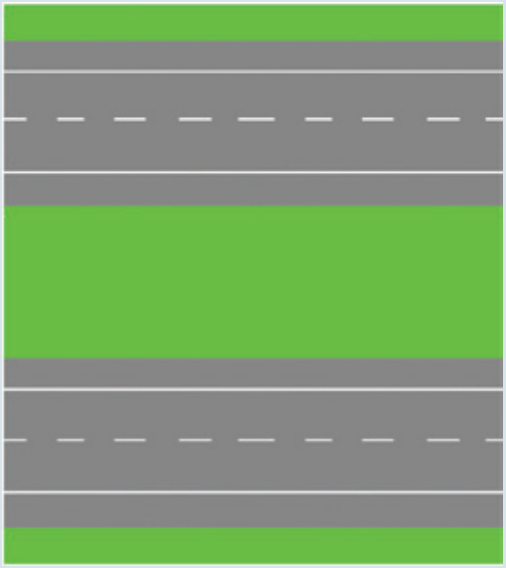
Complex signalized intersection

PROPOSED SCENARIO (SET 2):

Modified intersection with roundabout

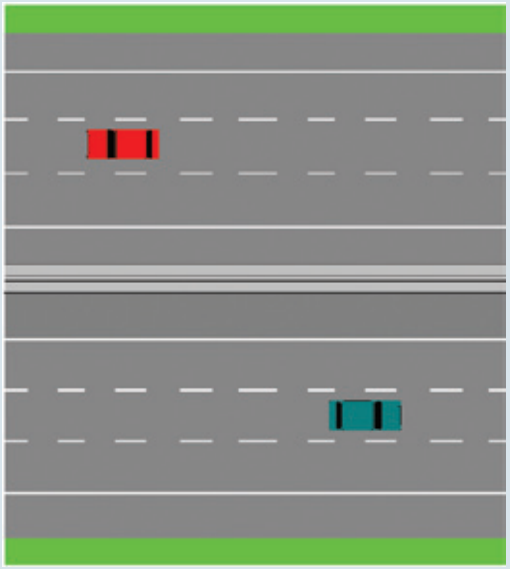
4. MAJOR WIDENING OF FREEWAYS

This type of project involves the addition of one or more lanes to an existing freeway. It could be the conversion of an existing four-lane freeway to a six-lane freeway, as shown below. Such an improvement type adds freeway capacity.



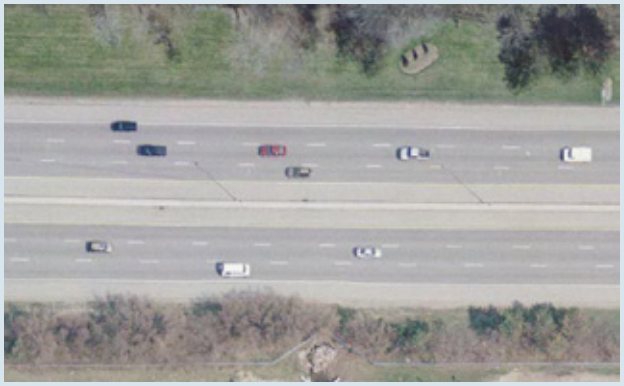
EXISTING SCENARIO:

4-lane freeway with shoulders and landscaped median



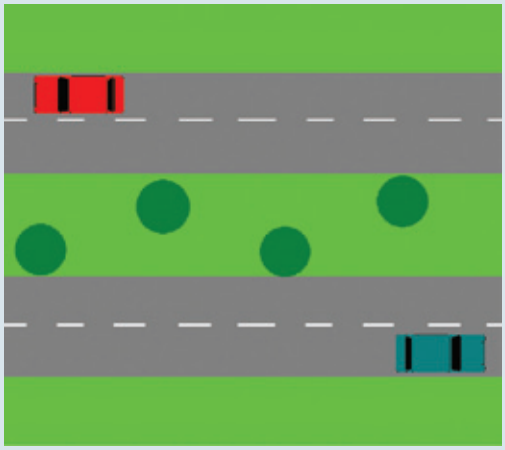
PROPOSED SCENARIO:

6-lane freeway with shoulders and concrete barrier median



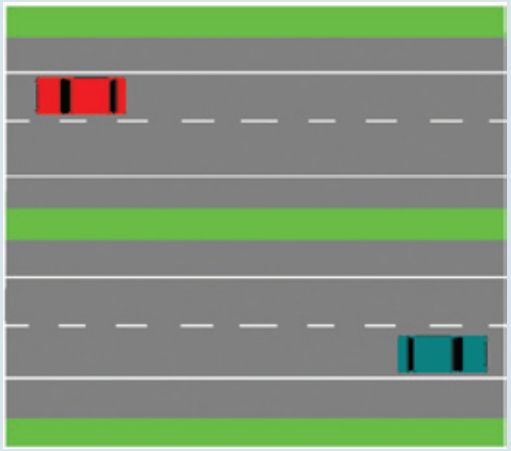
5. UPGRADING ARTERIALS TO FREEWAYS

This type of project involves the upgrade of an existing arterial street to a freeway. It could be the conversion of existing four-lane divided arterial street without pedestrian infrastructure to a restricted access four-lane freeway with standard 12-foot lanes and shoulders with no pedestrian infrastructure, as shown below. Such improvements may be reliant on the addition of new interchanges to restrict access (see improvement type 6).



EXISTING SCENARIO:

4-lane divided arterial street without pedestrian infrastructure and landscaped median



PROPOSED SCENARIO:

4-lane restricted access freeway with standard 12-foot lanes without pedestrian infrastructure

6. NEW INTERCHANGES

This type of project involves the construction of a new interchange where none existed before. The new interchange could be the construction of a basic diamond interchange connecting an arterial street with a freeway with pedestrians prohibited, as shown below in "Proposed Scenario #1." There are a variety of interchange types that can accomplish this same function. "Proposed Scenario #2" illustrates the construction of a partial cloverleaf interchange.

EXISTING SCENARIO:

No existing interchange (intersection at grade)

PROPOSED SCENARIO #1:

Basic diamond service interchange

PROPOSED SCENARIO #2:

Partial cloverleaf service interchange

7. INTERCHANGE UPGRADES

This type of project involves the modification of existing interchanges to accommodate newer requirements and/or additional capacity. This could also include widening of the bridge over the freeway and turn lanes at the intersections and other improvements, as shown in the example below. Other examples of interchange improvements involve the upgrade of an existing interchange between two freeways to improve operations and capacity through, for example, new directional ramps.

EXISTING SCENARIO:

Existing basic diamond interchange inadequate to meet new demands

PROPOSED SCENARIO:

Upgraded single point interchange designed to meet new demands

3.2 Transit Systems

Key Goals

1. Energy
2. Natural Resources
3. Economic Opportunity
4. Sustainable Neighborhoods
5. Collaboration
6. Health, Safety and Welfare

Public transit serves the transportation needs of many central Ohio residents. Transit dependent individuals may be unable or unwilling to drive. Whether an individual is unable to afford personal transportation or lacks the ability or interest to drive, public transit may provide the only independent means of mobility. It preserves the connection to work, daily living needs, medical appointments and other destinations.

For other riders, public transit may offer a more convenient, economical and/or environmentally prudent choice over other modes of transportation. The very presence of a convenient and accessible transit system may help attract and retain a skilled workforce.

The growth of the region cannot be accommodated by expansion of the highway system alone. As the costs of automobile ownership and fuel continue to grow, there is a need to provide alternative means of transportation to sustain the social and economic well-being of central Ohio. Investment in new and expanded transit services can ease growing congestion while reducing harmful emissions and providing an equitable transportation system.

The very presence of a convenient and accessible transit system may help attract and retain a skilled workforce.

BACKGROUND

Three types of transit systems operate within the boundaries of the planning area. These system classifications relate to the size of the urbanized area or cluster they serve, which, in turn, determines eligibility for different sections of federal funding. Large Urban Transit Systems serve an urbanized area with a population of 200,000 or more. The Central Ohio Transit Authority (COTA) is the only large urban system in the planning area. Small Urban Transit Systems serve urbanized clusters with a population of 50,000 or more. Licking County Transit Services (LCT) is the only small urban system in the area. Rural Transit Systems serve areas that do not meet the above population thresholds. Two such systems operate in the planning area: Delaware Area Transit Agency (DATA) and Lancaster Public Transit System (LPTS). System service areas are shown in Figure 3.9. Table 3.1 and 3.2 display statistics for each system.

Other adjacent systems include Pickaway Area Rural Transit (Rural) and Newark-Heath Earthworks (Small Urban). Madison and Union counties participate in the ODOT Office of Transit's Coordination Program.

COTA serves all of Franklin County. The service area extends into portions of adjacent counties covered by charter municipalities, including the cities of Columbus, Dublin, Reynoldsburg and Westerville. COTA's taxing authority covers all of Franklin County. Only charter municipalities, those that are a part of COTA's operating agreement, carry that sales tax authority into adjacent counties. Cities not a part of the original agreement can work with COTA and the other charter municipalities to join, as the city of Dublin did in 2008.

COTA provides four types of fixed route service:

1. Local service, which makes frequent stops along routes that run into or through Downtown.
2. Crosstown service, which is similar to local, but does not run Downtown.
3. Express service, which makes infrequent stops. These routes typically run one direction in the morning and the reverse in early evening.
4. One circulator or LINK route covers Columbus' Linden area.

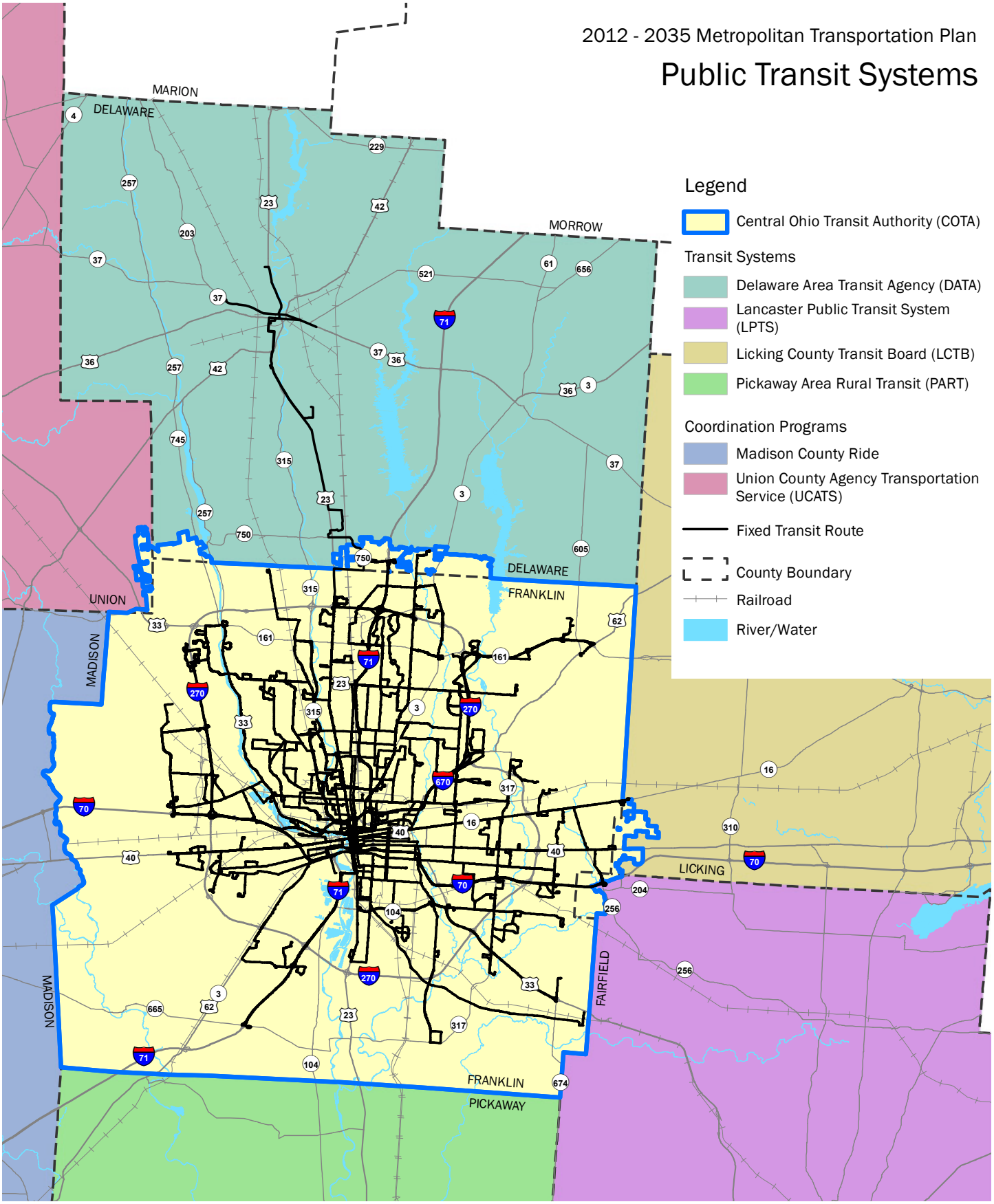
COTA's Mainstream paratransit service provides demand response service within three-quarters of a mile of fixed route service for qualifying customers as required by the Americans with Disabilities Act (ADA). "Demand response" refers to a system that dispatches transit vehicles to a destination upon request instead of a fixed schedule. Such a system requires users to call ahead of time for scheduling. At a higher cost, COTA offers the "Will Call" service that only requires an hour's notice and another service for trips beyond three-quarters of a mile of a fixed route line.

In addition to farebox revenue, local funding for COTA comes from a permanent 0.25 percent sales tax levy and a temporary 0.25 percent sales tax levy. COTA is also the FTA (Federal Transit Administration) Section 5307 designated recipient for the Columbus Urbanized Area. COTA uses local funds and a small amount of state funding via ODOT to match these federal formula funds and apply for other discretionary funding. In addition to system operation, COTA uses these funds to maintain and upgrade equipment, vehicles and facilities.

LCT provides demand response service in almost all of Licking County. Their service area includes the city of Pataskala and Etna Township, which are both in the planning area. LCT coordinates its service area with Earthworks Transit of the cities of Newark and Heath. In addition to its fares, LCT receives local funding from Licking County general revenue funds and local service contracts. LCT receives state and federal funding through the ODOT Office of Transit.

DATA serves all of Delaware County with its demand response system. It has two regular routes. One loop serves points in and near the city of Delaware. The other

40-foot coaches frequently serve COTA's fixed routes. Source: COTA



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The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
n:/arcgis/core/tplan/2012/mtp maps/transit.mxd March 2012

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Miles

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Figure 3.9 Public Transit Systems

route travels down US Route 23 where users can connect to the COTA system at COTA's Crosswoods Park-and-Ride location. DATA receives no county sales tax levy funds. Instead, local funding comes directly from the budgets of participating jurisdictions in Delaware County. Like LCT, DATA receives state and federal funding through the ODOT Office of Transit.

LPTS provides curb-to-curb demand response service in Fairfield County. Unlike the other transit agencies in the MPO planning area, a countywide board does not govern LPTS. At present, it remains a department of the city of Lancaster. Like DATA, it receives no county sales tax levy funds. With local support, it began serving Violet Township and the city of Pickerington in 2010. With the financial support of jurisdictions across Fairfield County, in 2011, the service went countywide. LPTS receives state and federal funding through the ODOT Office of Transit.

Each transit system in the counties surrounding Franklin receives requests for transportation into Franklin County and the City of Columbus. Employment opportunities, specialized medical treatment, shopping and entertainment all draw passengers beyond their county of origin. However, the distance that transit providers must travel beyond their normal service area can be cost prohibitive. It also deprives that transit system from a fleet vehicle for a long period when it could be serving other customers instead. Systems that do provide such trips add a significant premium to the fare.

In addition to the local transit systems, three companies provide intercity motor coach service in the planning area.

Greyhound operates the largest intercity bus system in the nation. They offer service to over 2,300 destinations and maintain interline partnerships to facilitate transfers to destinations beyond their network. Greyhound also offers passengers the opportunity to connect with Amtrak service in Cleveland or Cincinnati. The company maintains a station in Downtown Columbus.

MegaBus offers service to Chicago through Indianapolis and direct service to Cincinnati. They run from two posted on-street stops in Columbus' Arena District and at the OSU Student Union. MegaBus offers low-cost, limited stop service. Others nationally are using this same model, replacing old amenities, such as centralized stations, with on-board Wi-Fi internet access and electrical outlets. These services also appeal to new generations of riders in terms of speed, by minimizing the number of stops, and cost.

GoBus runs a line between Columbus and Athens, Ohio, facilitating transfers at Port Columbus International Airport and the Greyhound Station in Downtown Columbus. Service receives partial funding with a grant under FTA Section 5311(f), administered by the ODOT to Hocking Athens Perry Community Action in collaboration with the city of Athens. Buses are equipped with amenities, such as wireless internet and electrical outlets, in order to offer service at similar levels to that found on MegaBus and others taking part in the new wave of low-cost, express intercity bus service. Lakefront Lines operates this service.

Transportation needs that go unmet by transit systems may sometimes be fulfilled through other government departments, non-profit organizations and private companies. Federal, state and local funding programs beyond those specifically designated for public transit can generate alternate transportation service

Table 3.1 Transit System Trip Statistics, 2007-2010

Provider		Annual Data	2007	2008	2009	2010
COTA	Fixed Route	Passenger Trips	14,787,666	16,502,404	17,208,787	17,034,878
		Elderly & Disabled Passengers	2,081,662	2,298,317	2,189,672	2,299,823
		Vehicle Miles	7,174,180	7,861,593	8,304,821	8,897,559
		Vehicle Hours	574,335	624,225	674,558	773,685
	Demand Response	Passenger Trips	182,302	216,489	237,949	237,949
		Elderly & Disabled Passengers	182,302	216,489	237,949	237,949
		Vehicle Miles	2,252,960	2,567,604	2,803,997	2,875,824
		Vehicle Hours	116,210	133,897	138,820	142,956
DATA		Passenger Trips	44,189	43,869	42,125	65,088
		Elderly & Disabled Passengers	17,357	17,222	15,250	20,448
		Vehicle Miles	366,093	355,337	359,245	285,595
		Vehicle Hours	20,589	17,290	17,851	19,425
LCT		Passenger Trips	52,774	54,867	63,964	77,302
		Elderly & Disabled Passengers	31,617	35,992	39,246	51,848
		Vehicle Miles	484,277	560,877	655,518	778,565
		Vehicle Hours	21,567	25,968	29,294	34,655

Sources: COTA; ODOT Status of Public Transit 2008, 2009, 2010, 2011

COTA Mainstream demand response, paratransit service uses light transit vehicles, as do many of the other demand response services in the region. Source: COTA

Table 3.2 Lancaster Public Transit System (LPTS) Trip Statistics

	Trip Origins	
Month	Bloom Township	Violet Township
January	6	460
February	4	457
March	8	508
April	46	555
May	133	573
June	20	520
July	33	493
August	31	566
September	28	547

Source: LPTS

offerings. Coordination of these programs offers the chance to better use these funds so that fewer needs go unmet.

All four counties covered or partially covered by MORPC's MPO area maintain their own Public Transit-Human Services Transportation Coordination Plan, or Coordinated Plan. Local coordinating councils or boards typically carry the responsibility for implementing these plans. These boards include representatives from the transit system and human service agencies, such as county boards of developmental disabilities, groups focused on senior transportation, and county departments of job and family services. The funding and operating picture behind human services transportation remains as diverse as the needs of the populations served. Coordinated plans and these boards seek to find opportunities to coordinate services and meet the transportation needs of the elderly, low income and persons with disabilities.

All four counties covered or partially covered by MORPC's MPO area maintain their own Coordinated Plan.

Three US Department of Transportation (USDOT) programs are available to transit providers, local jurisdictions, non-profits and private for-profit companies to help implement a county's Coordinated Plan. COTA serves as the designated recipient for FTA Section 5316 (New Freedom) and Section 5317 (Job Access Reverse Commute, or JARC) for the Columbus Urbanized Area. ODOT Office of Transit serves as the designated recipient for the same programs outside the urbanized area; it also serves the same role statewide for the FTA Section 5310, Elderly and Persons with Disabilities program (also known as Specialized Transportation).

There has been extensive work in the recent past to study light rail or other fixed guideway transit options. In the early 2000's COTA and MORPC assessed the feasibility of initiating new rail service in the 13-mile "North Corridor" from downtown Columbus to Polaris. The project aimed to improve mobility and reduce adverse environmental impacts of private automobiles by attracting travelers to transit. The analysis of alternatives for this corridor ranked none well enough to be eligible for federal funding.

In 2006, the City of Columbus convened the Downtown Columbus Streetcar Project Working Group to study the feasibility of returning streetcars to Downtown Columbus. Streetcars were a significant form of urban transportation in the late 19th century. The Working Group determined that streetcars would provide substantial economic benefit as well as improve the character and vitality of Downtown Columbus. The process identified three alternatives connecting German Village to the Short North along High Street. Variants of this route extended to OSU or the Arena District and Grant Hospital. The City of Columbus began to prepare a detailed financing plan to take into account construction phasing, federal financing possibilities and potential private and local funding. However, an acceptable financing plan could not be put together.

MORPC'S TRANSIT PROGRAM

MORPC provides technical support for ongoing planning activities of transit providers through direct assistance, coordination and data. Other programs, such as its pedestrian programs, bicycle programs and complete streets policy initiatives help remove barriers to transit. Travel demand management (TDM) programs actively encourage transit among other alternatives to single-occupant vehicle travel (see Chapter 5).

Though often advisory, MORPC also plays a role in funding improvements to transit systems through MORPC-attributable funds, such as CMAQ (Congestion Mitigation and Air Quality) funding for bus replacement. A small amount of STP (Surface Transportation Program) is helping fund five morning and five evening express bus trips, in collaboration with ODOT and COTA, to help alleviate congestion resulting from the reconstruction of the I-71/I-670 interchange.

MORPC hosts a dialogue among the region's transit providers to develop a better understanding of common issues and needs. Since 2006, MORPC has hosted the Regional Transit Forum. It provides the opportunity for participating agencies to connect with each other and MORPC. The forum allows participants to address current issues and share information about planning and operational changes.

TRANSIT STRATEGIES AND PROJECTS

While the plans of the transit providers vary, these agencies plan for strategies and projects that will help achieve the goals and objectives of the MTP. These activities fall into six categories:

1 2 3 4 6

1. Improve fixed route and demand response transit service.

As shown in Figure 3.10, COTA plans a 15 percent increase in fixed route service hours between 2012 and 2016, with no increases after 2016. To facilitate these service hours, COTA will increase its fleet size with 57 new buses by 2016. To maintain a modernized fleet, COTA plans to replace approximately one-twelfth of the fleet each year.

This increase in fixed route service hours will translate into increases in bus frequency on existing routes, as well as new or extended routes (see Figure 3.11). Among the possibilities, COTA is investigating the addition of one or more "bus rapid transit" (BRT) corridors to its fixed route system. BRT is characterized by technological and functional improvements along a corridor that decrease transit travel time, which may or may not involve traffic signal priority, off-board fare collection, increased distance between stops, and dedicated right-of-way. One can find details about potential long-term service changes in COTA's *Long Range Transit Plan*.

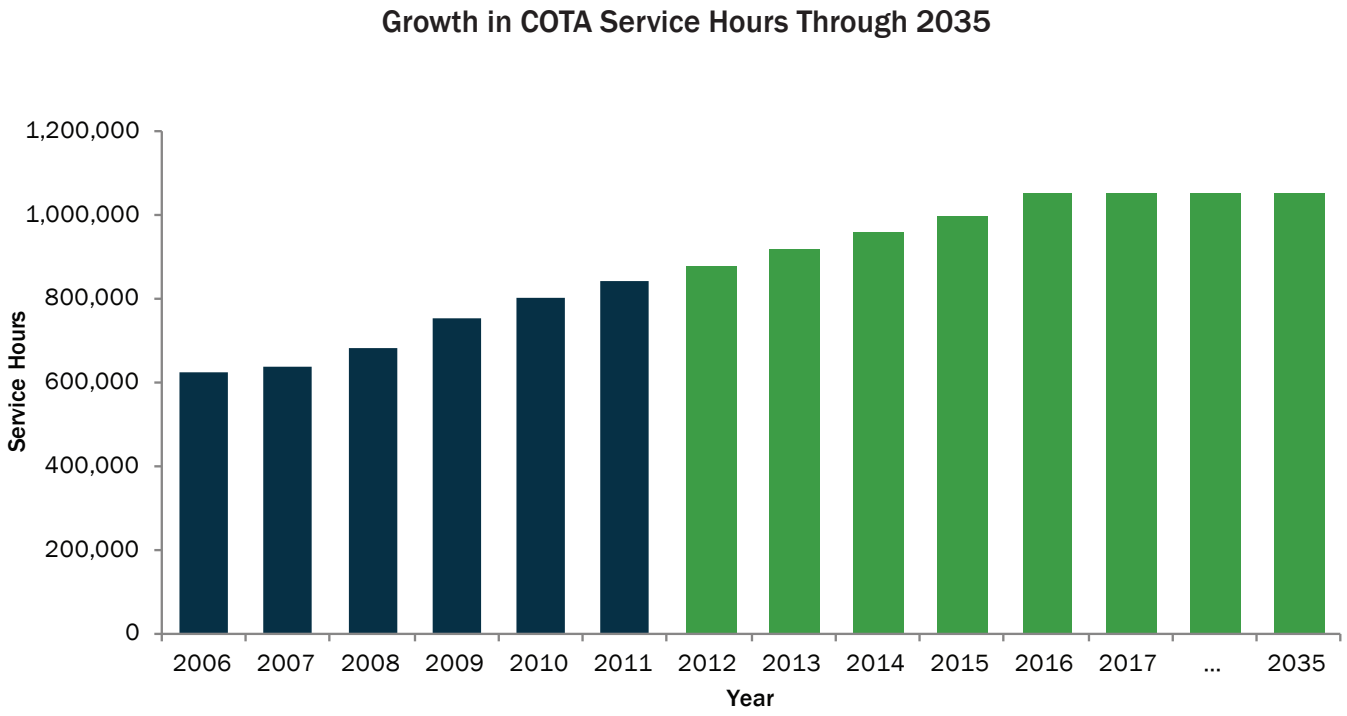


Figure 3.10 Growth in COTA Service Hours Through 2035

COTA will expand its ADA Mainstream service in conjunction with the growth of fixed route service. COTA maintains a separate fleet of light transit vehicles for this service. It plans to expand the fleet by two vehicles per year between 2012 and 2020, and one vehicle per year between 2021 and 2035. To maintain the fleet, COTA plans to replace 15 to 20 Mainstream vehicles a year through 2035.

DATA adopted a new "Service & Operations Policy" in August 2011 that sets standards for developing new fixed routes. The agency is currently evaluating six potential routes with no definite plans to add such service. DATA's focus is on increasing capacity to reduce trip denials in its demand response service. Without a fixed funding source, plans for fixed-route service remain indefinite.

LPTS remains committed to one of the few strategies left unaccomplished from the *Fairfield County Coordinated Plan*: to increase service hours such that the service window would expand to include service on Sundays, as well as additional morning and late night service Monday through Friday. However, budget cuts in the short-term may result in a reduction of service hours before such increases can be realized. LPTS would also like to add fixed route service connecting major trip generators, such as the Ohio University branches in Pickerington and Lancaster. Such fixed route service is a long-term goal, and not likely to occur within the next ten years.

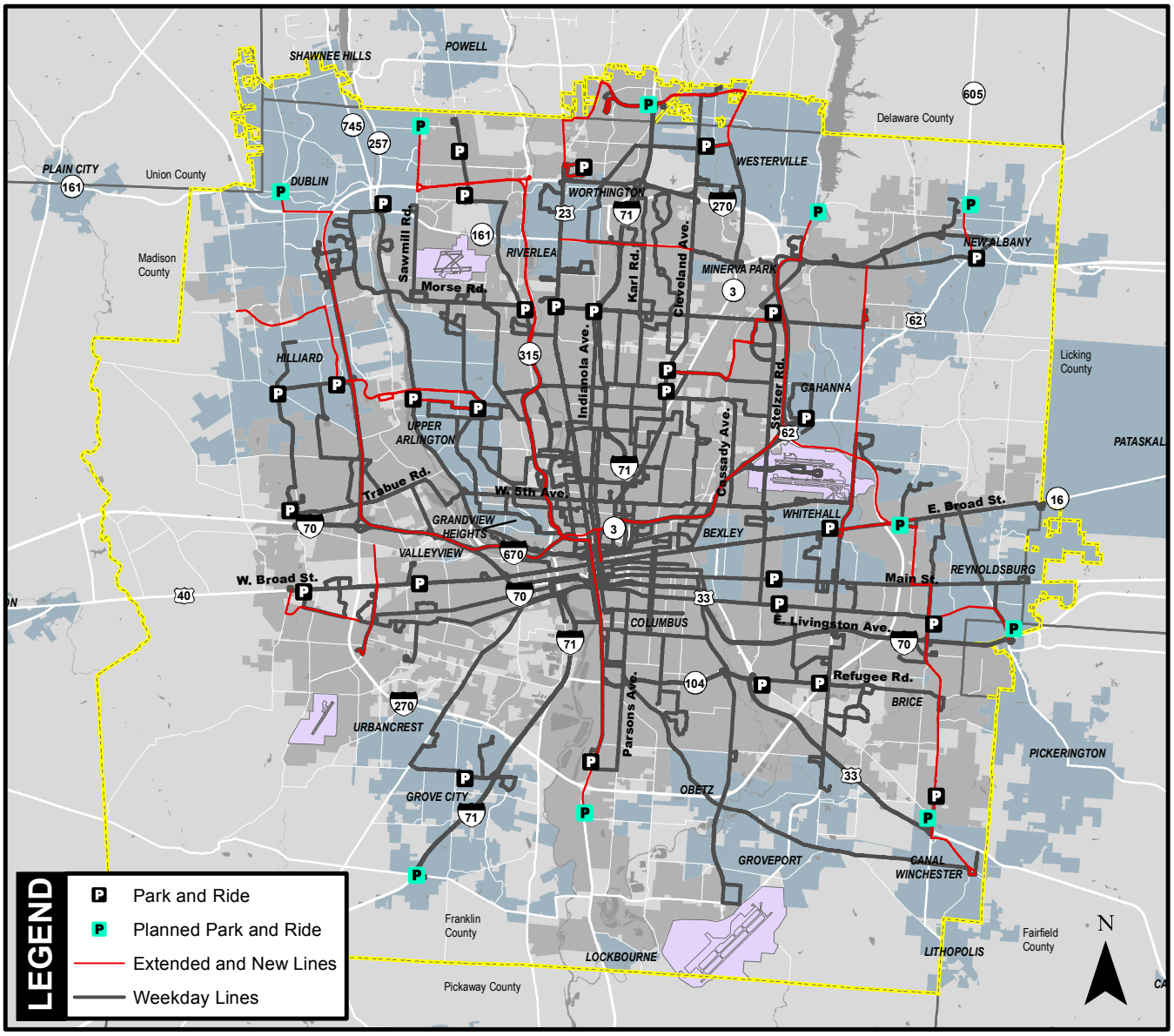


Figure 3.11 Proposed and Existing Weekday Route System

The MTP targets that 80 percent of population and jobs (within census-defined urbanized area) are within 3/4 mile of a transit stop.

2. Improve connections between transit system operators.

5 6

Participants in MORPC's Regional Transit Forum continue to seek opportunities to improve connections between transit providers to minimize the distance each must travel outside its service area. DATA maintains the best of all these connections to Franklin County, crossing the county border on US Route 23 to connect into COTA's express and local service at the Crosswoods Park-and-Ride. DATA and COTA accept each other's transfers. As development occurs along this boundary and DATA considers potential fixed routes, COTA and DATA may consider other transfer points.

DATA and COTA connect at the Crosswoods Park-and-Ride in northern Franklin County. Source: DATA

LCT has difficulty crossing into any portion of COTA's service area. As a small urban system, LCT must seek additional approvals before doing so. Likewise, COTA cannot justify trips outside its taxing district. Both agencies should consider future connections along State Route 161 should conditions change, such as the park-and-ride at the Beech Road interchange, constructed as a part of the State Route 161 conversion to expressway. East Broad Street (State Route 16) is another possibility as a local COTA route already extends to the county line.

LPTS sometimes drops off passengers at COTA's Gender Road Park-and-Ride near US Route 33. This location receives only express service early in the morning and return service in the evening. Another option is for passengers to connect to COTA's local service on Refugee Road or Brice Road and crosstown service on Hamilton Road.

LPTS customers can connect to the GoBus intercity service originating in Athens off US Route 33 near the city of Lancaster, offering a stop at Port Columbus International Airport before the end of the line at the Greyhound station in Downtown Columbus. ODOT Office of Transit identified two other corridors for potential funding under FTA Section 5311(f): Wooster to Columbus and Mt. Vernon to Columbus. No group offered proposals to run the lines. Should either line ever commence, it could make alternate connections to/from Columbus possible for LCT and DATA customers.

3. Improve connections between transit and other modes of transportation.

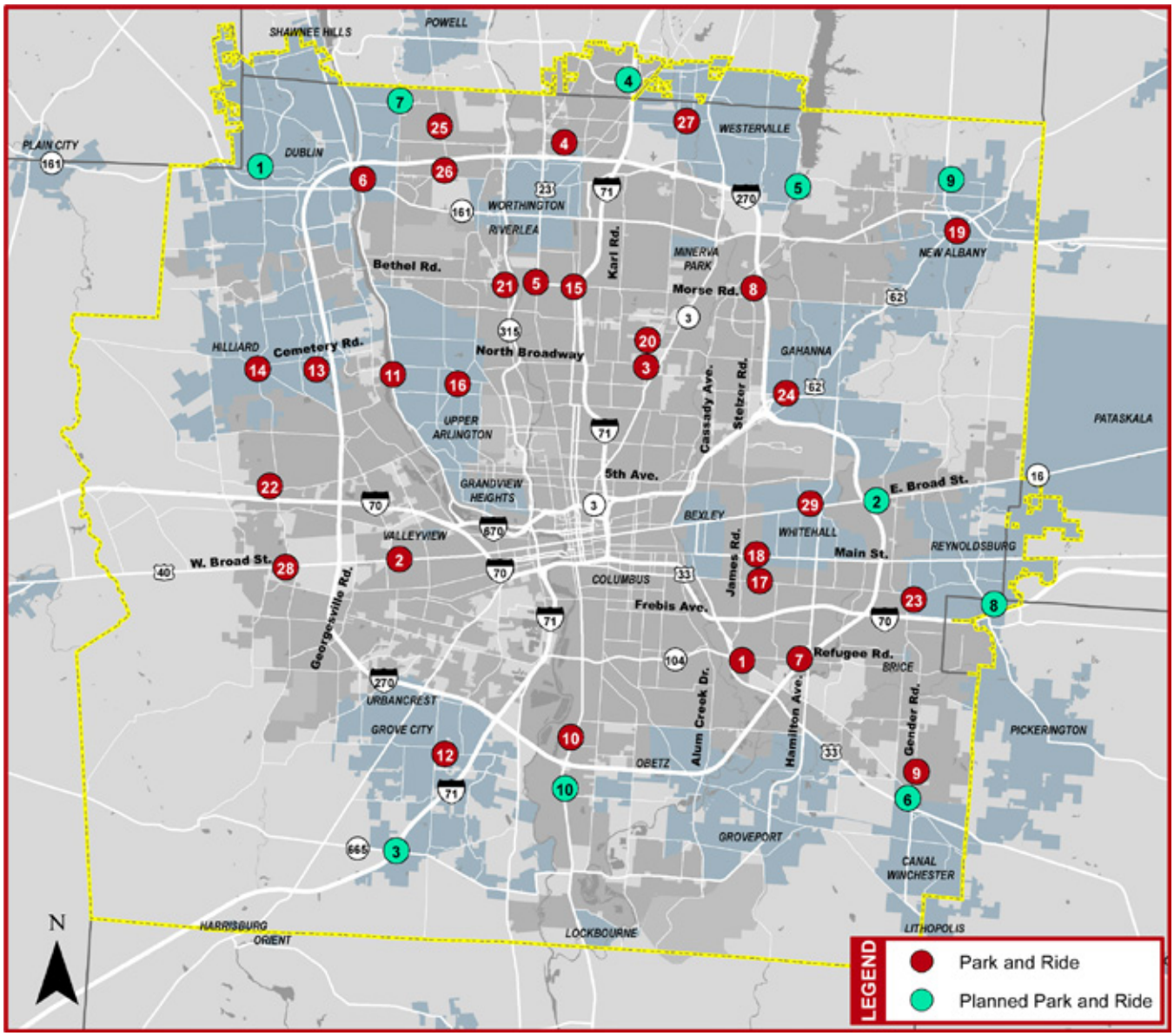
3 4 6

COTA's *Long-Range Transit Plan* identifies future strategic investments. These include the expansion of, improvement to, and addition of Park-and-Ride locations and Transit Centers (see Figure 3.12). Such investments help make the transfer out of personal automobiles to transit more attractive and convenient.

COTA fixed route fleet and DATA's fleet offers bike racks mounted on the front of their vehicles, enabling bicyclists to complete a part of their trip with transit. LPTS plans to add this capacity within the next few years. This bike-bus combination helps transit riders when their origin or destination remains far from a transit stop. COTA plans the addition of other bicycle amenities, such as racks, near transit stops to improve this modal connection.

COTA offers bike racks on the front of their fixed route vehicles. Source: MORPC

COTA's plans also include the improvement of sidewalk connections that improve accessibility to passenger shelters and stops. The *Franklin County Coordinated Plan* also identifies these sidewalk deficiencies as a barrier to fixed route transit, especially for the elderly and persons with disabilities. In response, COTA's Mobility Advisory Board convenes a subcommittee that advocates for sidewalk improvements, and funds limited improvements through FTA Section 5317 (New



Current Park & Ride	Num.
Berwick Plaza	1
Broad & Southampton	2
Cleveland & Mecca Loop	3
Crosswoods	4
Delawanda	5
Dublin Dale Dr	6
Eastland Mall	7
Easton Transit	8
Gender Rd	9
Great Southern	10
Griggs Dam	11
Grove City	12
Hilliard Cemetery Rd	13
Hilliard United Methodist Church	14
Indianola & Morse	15

Current Park & Ride	Num.
Kingsdale	16
Livingston & Barnett	17
Main & Weyant Loop	18
New Albany	19
Northern Lights	20
Olentangy & Bethel	21
Renner Rd	22
Reynoldsburg	23
Royal Plaza (Gahanna)	24
St Andrew	25
St Peters	26
Westerville	27
Westwoods	28
Whitehall	29

Planned Park & Ride	Num.
Dublin (Avery Rd and US 33)	1
E Broad St & I-270	2
I-71 & SR 665	3
Polaris Area	4
Sunbury Rd N of SR 161	5
Canal Winchester	6
Sawmill and Summit View	7
SR 256/I-70	8
New Albany	9
US 23 and Rathmell	10

Map courtesy of COTA

Figure 3.12 COTA Park & Ride Locations

Freedom). MORPC's Complete Streets Policy also encourages and, in some cases, requires the completion of such connections to transit.

4. Improve human services transportation and public transit coordination. 5 6

COTA, DATA, LPTS and LCT participate on or host the coordinating councils or boards for their counties. Such forums provide an opportunity to identify, maintain and expand human services and public transit coordination. Each seeks to implement its county's coordinated plan.

DATA, LPTS and LCT continue to contract with human services agencies to provide transportation for human service agency clients. Such coordination eliminates potentially overlapping service and provides the transit agencies an additional source of revenue to maintain and operate their fleets.

5. Improve transit operations by increasing in efficiency while investing in technology and facilities. 1 2 5 6

In 2011, COTA completed its "Downtown Operations Analysis," evaluating the cost of various alternatives to long-standing Downtown transit operations and route alignments. COTA will continue to consider the alternatives for future service changes.

In 2010, DATA moved from a leased facility by purchasing a permanent facility. With a permanent facility, DATA can continue to improve operations and is considering additional strategic investments, including compressed natural gas (CNG). COTA has led a successful round of facility improvements since the passage of its temporary sales tax levy in 2006. COTA continues to seek funding for additional facility improvements and upgrades, and plans to maintain all facilities in a new, or like-new manner.

COTA, ODOT and MORPC collaborated on the first "Bus on Shoulder" project along Interstate 70 east from Downtown. By allowing an express route public transit bus to travel some portion of its journey on a shoulder, it can bypass congested freeway lanes for a faster, more efficient trip. COTA and MORPC continue to evaluate other potential corridors to receive similar treatment.

Interstate 70, east from downtown, allows COTA "Bus on Shoulder" during congested conditions. Source: COTA

COTA's Bus Stop Service Improvement Project seeks to standardize the distance between bus stops in various settings. The removal of unnecessary or redundant stops improves operations by improving transit travel time and reducing maintenance costs. The transit authority has implemented these standards on several routes, and will continue to make similar improvements on other routes. At the same time, COTA plans the purchase of approximately 60 passenger shelters a year to replace existing shelters and expand the number of stops with shelters.

After investigating various alternative fuel options, COTA plans to convert to CNG. Beginning as soon as 2013, COTA will begin to integrate CNG buses into its fleet, eventually replacing the standard diesel buses. CNG is a cleaner burning alternative fuel that costs substantially less than diesel. Plans include renovations to the McKinley Avenue facility necessary to service and fuel CNG vehicles.

COTA plans technology initiatives that could be a part of regional intelligent transportation systems (ITS), as discussed in Section 4.2. Traffic signal priority gives approaching buses an extended signal under certain conditions. This requires more than on-board technology. It also requires regional signal upgrades that use a common architecture, such as the ongoing work to improve the Columbus Traffic Signal System (CTSS). Automated vehicle location (AVL) systems and the resulting real-time traveler information can be displayed at major stops, but can also be a part of MORPC's planned Advanced Traveler Information System (ATIS). Additional COTA technology initiatives include those that enhance vehicle maintenance, such as vehicle component monitoring, and maintaining Automatic Passenger Counters (APCs) on a portion of its fleet to assist with service planning.

3 4 5

6. Support efforts to introduce fixed guideway transit service

Without federal funding for a share of construction, the North Corridor Light Rail Project is beyond COTA's financial capacity. While COTA is currently focusing on the bus expansion, MORPC recognizes that the light rail option needs to be revisited if the circumstances change. Similarly, should the feasibility of the Downtown Columbus Streetcar Project improve, that option would need to be revisited.

MORPC will continue to play a role and support seeking funding for new transit services, such as fixed-guideway modes including light-rail and streetcar, and will plan for their interaction with each other as well as other conventional transit modes. The FTA is working towards a methodology with corridor specific characteristics that could position COTA and others to compete in the near future for a fixed-guideway project.

3.3 Freight and Intermodal Facilities

From the MPO planning area, goods are moved, transferred and distributed to destinations around the world via truck, rail and air. The nation's security, economic competitiveness, trade and commodity flow depend on the efficient movement of goods through the area. Furthermore, as shown in Figure 1.3 of Chapter 1, freight is highlighted in two of the eight federally-required planning factors. For these reasons, MORPC is involved in goods movement planning.

Key Goals

1. Energy
2. Natural Resources
3. Economic Opportunity
5. Collaboration
6. Health, Safety and Welfare

The movement of freight is an important aspect of regional planning. Freight transport is integrally linked to economic growth, prosperity and quality of life. The MPO planning area and surrounding region is highly prominent in the global supply chain, primarily in the areas of logistics and distribution. Maintaining and improving the movement of freight is important to nearly all the goals of the MTP. This includes making the efficient movement of commercial goods a priority for ongoing transportation system development.

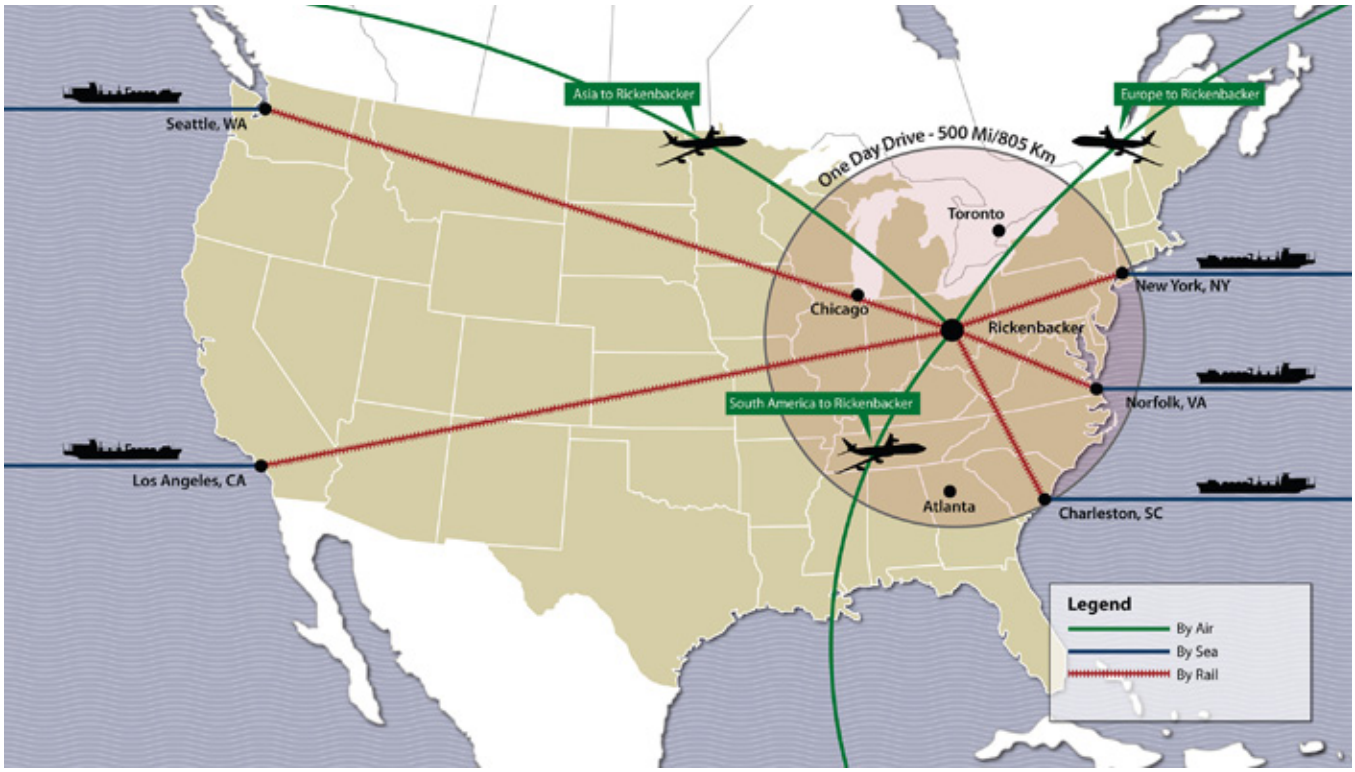
However, unlike many other components of the transportation system, commerce is regulated, and the freight system employs fee and financing methods different from the transportation system at large. Most of the region's freight facilities are privately owned. Goods movement planning requires consistent and ongoing efforts to improve coordination among freight system owners and operators and those concerned with the economic benefits an efficient freight system can provide.

BACKGROUND

Ohio is a crossroads for transportation, especially freight. According to IMS Worldwide, Inc., the MPO planning area is within a one-day truck drive of 46 percent of the United States' population. Because of this strategic proximity, the region continues to develop as a center for the logistical industry. The Columbus Chamber attributes over 14 percent of private sector jobs in the region to logistics.

The MPO planning area and surrounding central Ohio region is poised for growth in the logistics industry as the global supply chain shifts. One of these shifts will occur with the expansion of the Panama Canal. Currently, most container traffic enters the United States at the Port of Los Angeles/Long Beach, requiring travel across many states to arrive at population centers beyond the west coast. The expansion of the Panama Canal will allow larger container ships, carrying more freight, to bypass west coast ports and their capacity limitations.

As ports on the east coast began to prepare for the potential influx of container traffic, Norfolk Southern (NS) railroad worked with multiple jurisdictions, including MORPC, to complete its Heartland Corridor project linking the Port of Virginia to Columbus and on to Chicago. This public-private partnership involved funding, the development of facilities (such as the Rickenbacker Intermodal Facility) and infrastructure to serve new facilities. MORPC has been at the forefront of facilitating these partnerships and securing funding for such projects. MORPC helped ensure



Central Ohio is within a one-day truck drive of 46 percent of the United States' population. Source: Columbus Chamber

that these investments made sense from a long-term, regional perspective. These partnerships have resulted in major economic development in the region.

While NS has been at work on the Heartland Corridor, another Class 1 rail operator, CSX, has been at work on its National Gateway, which connects points along the east coast to Ohio. As a part of this project, CSX is expanding its Columbus Intermodal Terminal at Buckeye Yard on the west side of the City of Columbus.

Central Ohio benefits from its location, which is enhanced by its infrastructure and the companies that take advantage of both. Central Ohio has:

- Two intermodal facilities
- One of the only freight-dedicated airports in the United States
- The longest runway in the United States
- Crossroads of two interstates important to freight movement
- Over 100 trucking companies
- Two Class 1 rail service providers
- 15 Fortune 1000 companies
- 270 international companies
- Companies that produce everything from diapers to beer to salad dressing to fire trucks

Some of these assets are displayed in Figure 3.13.

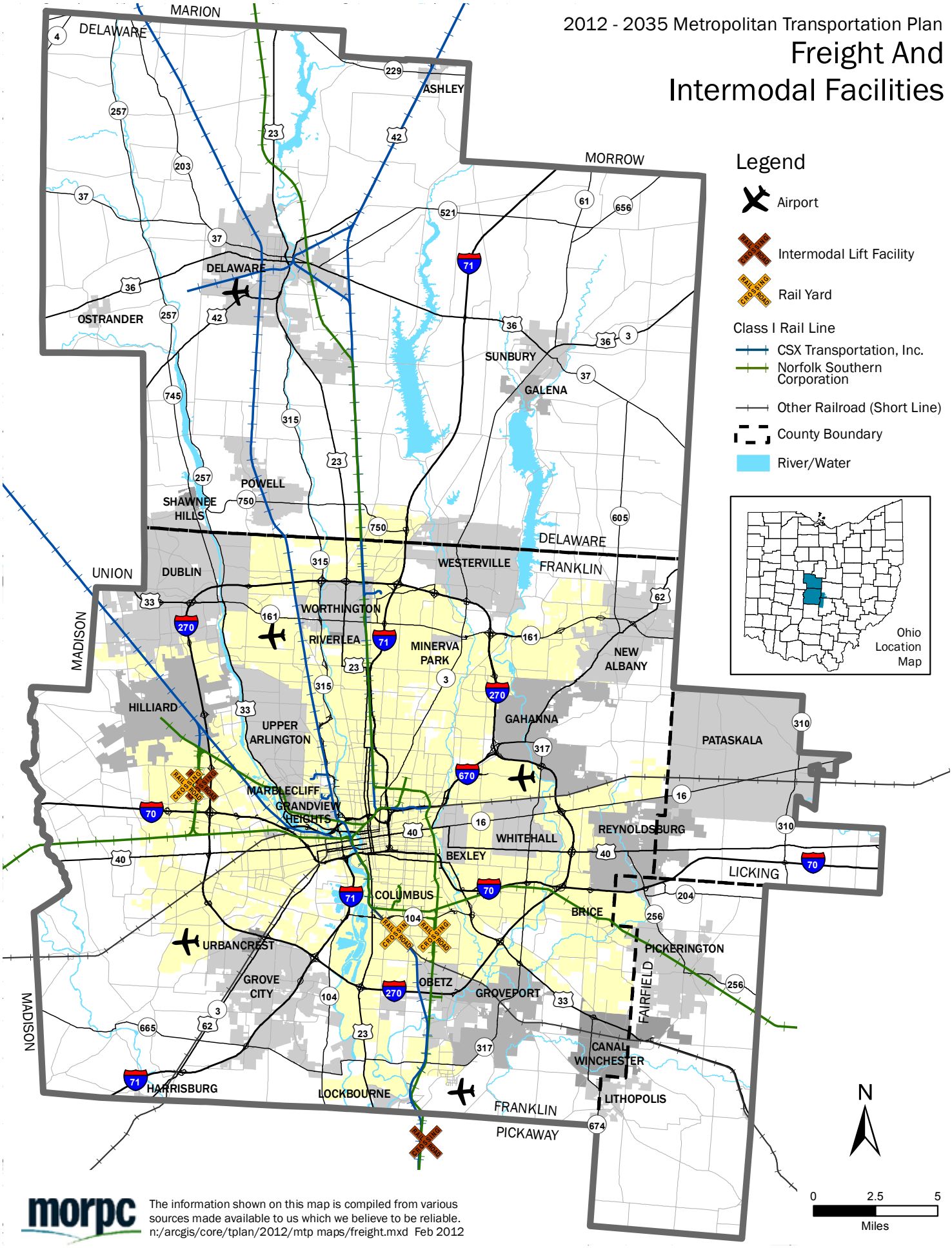


Figure 3.13 Map of Freight and Intermodal Facilities

These assets translate into more higher-paying jobs, a greater tax base and an improved quality of life for central Ohio residents. However, even as central Ohio's success grows, the region must plan for the future. Challenges exist to maintain the region's competitive advantage. Bottlenecks threaten the efficiency and productivity of this sector of our economy. Goods movement by a single mode – truck, rail and air – no longer dominate. Today's economy requires these modes to work together to provide the best value. The region must continue within this new multi/intermodal framework to develop its freight network.

MORPC'S FREIGHT PROGRAM

MORPC's nationally recognized freight planning program is built around a solid vision and mission.

Mission: To engage leaders in the central Ohio region in a public/private partnership for our economy and for the mobility of freight and goods, in order to advance the region's freight movement in a reliable, multimodal, intermodal, efficient, cost-effective, safe and environmentally responsible manner.

Vision: Economic development will be advanced through freight transportation infrastructure, investment and policies. The planning process will place emphasis on economic development. Transportation policies, regulations and projects will support the needs of the global supply chain. The freight network is recognized as the cornerstone of efforts to foster a flourishing regional economy.

To accomplish this mission and vision, MORPC works in a variety of settings with public and private stakeholders in the freight transportation system. The program works to update and analyze information about the freight network and freight flows. It also works to coordinate and collaborate with those seeking to improve the system. MORPC has a long history of bringing together these public and private stakeholders to create a common set of priorities.

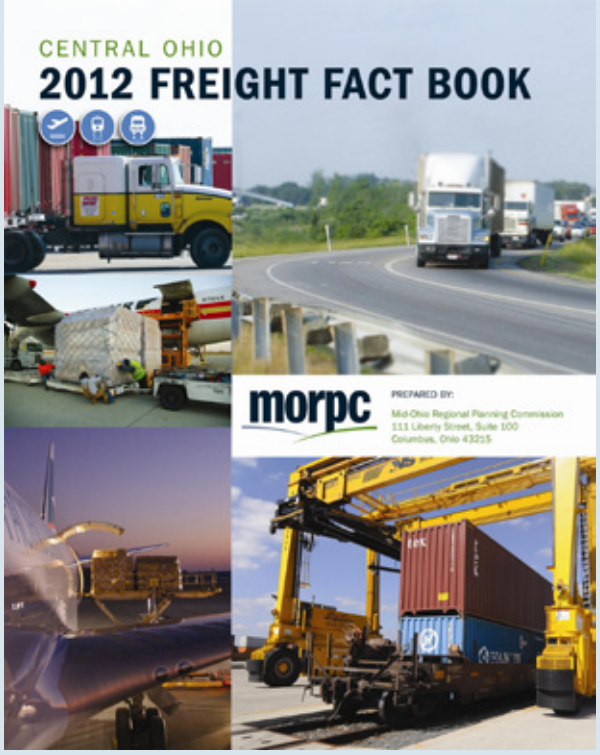
For example, MORPC maintains a Freight-Transportation Improvement Program, or Freight-TIP. While many projects in MORPC's overall TIP will have a positive impact on freight movement, the projects placed on the Freight-TIP are those that hold the greatest potential benefit for freight movement.

In order to create the most effective freight planning program, MORPC recognizes that freight touches all parts of the transportation planning program. Freight and goods movement are factors when talking about thoroughfare plans, traffic impact studies, major investment studies, land use scenarios and safety. Thus far, MORPC has incorporated freight into a number of "traditional" planning studies. MORPC continues to incorporate freight aspects into the transportation planning program and to think of freight holistically—not as a separate, parallel planning initiative.

Recognizing the importance that goods movement plays in the regional, state and national economies, MORPC maintains this freight program in order to help the agency and its partners achieve this vision, as well as this plan's goals and objectives, through the activities described below.

FREIGHT FACT BOOK

The MORPC *Freight Fact Book* presents an overview of the freight system/environment in the central Ohio region. Each section of the *Fact Book* consists of a compilation of one sheet "Fact Sheets," which provide a quick reference to statistics and trends relevant to central Ohio freight. This layout allows users to choose individual topics of interest and presents the information in a format that is easy to reproduce and distribute if desired. The goal of the *Fact Book* is not only to educate, but also to provide a factual common message about freight transportation projects/issues throughout the region. MORPC compiled and updated the *Freight Fact Book* in 1999, 2002, 2004 and 2012.



FREIGHT AND INTERMODAL FACILITIES STRATEGIES AND PROJECTS

Many recommendations presented throughout the MTP will improve goods movement. For instance, strategies and projects that will address congestion to help individual commuters will also improve the movement of goods. However, the following strategies and projects specifically address goods movement, working to address both challenges and opportunities that the region faces as it seeks to retain and expand its strategic freight advantage:

3 5

1. Collect information on and analyze freight activity to identify developing trends.

Freight Trends Study

The *Central Ohio Freight Trends Study* focuses on the impact the freight industry has, globally and locally, on the region's infrastructure, with particular attention paid to the Rickenbacker area. The study demonstrates the need for infrastructure improvements and, in doing so, helps justify future private and public funding. This study is currently underway and is expected to be complete by late 2012.

Freight Performance Measures

The development of "Freight Performance Measures" for the region will allow MORPC and its partners to gauge the effectiveness of the region's work to improve the freight transportation system. This system will build upon an already established freight indicator profile, updated annually as part of MORPC's State of the Region. It will complement performance measurement for the MTP (see Chapter 7).

Inventory of Railroad Operations and Right-of-Way in Central Ohio

MORPC will update the *Inventory of Railroad Operations and Right-of Way in Central Ohio*. The *2007 Rail Inventory* is the third update to the report, originally released in 1968, and previously updated in 1985 and 1995. MORPC releases the results of the *Railroad Inventory* every 10 years. The purpose of this study is to examine the rail lines within central Ohio in order to identify physical constraints and operating parameters that affect the potential use of excess right-of-way for other transportation purposes. This inventory is a planning tool to assist in an objective analysis of a rail line's potential in other uses, such as trails or environmental buffers, as well as assist in intermodal planning, rail crossing studies, and potential infrastructure improvements.

Freight Fact Book

MORPC will update the *Freight Fact Book*, including information from the Federal Highway Administration (FHWA) updates to the "Freight Analysis Framework." This update will become a more interactive web experience.

Freight Scanning Tours

Previous freight-scanning tours have provided policy makers opportunities to get behind-the-scenes glimpses of major companies doing business in the region. In addition, it allows business leaders to ask questions of the group of policy makers with respect to future transportation plans and funding in the region. These will continue into the future.

Freight and Goods Movement Safety

MORPC summarizes large truck and railroad accidents and crashes through several documents, including the *Freight Fact Book* and *Railroad Inventory*. As the next step, MORPC will work to identify high-crash rail crossings and intersections in the region. Through this work, key intersections will be identified and

prioritized, and together with stakeholders, priority areas for improvement will be noted as they relate to safety and the logistics industry in central Ohio.

FHWA's Freight Professional Development Program

MORPC will continue to work with FHWA and other U.S. Department of Transportation (USDOT) partners to help build freight planning staff capacity to ensure the long-term integration of the subject into all transportation planning initiatives.

2. Support and advance transportation decisions that positively impact freight movement in the region; address transportation decisions that negatively impact freight movement in the region. 3

Regional Policy Roundtable

The role of the Roundtable is to evaluate all recommendations from its four committees (Economic Prosperity, Transportation, Regionalism & Local Control Group, and Environment and Energy) and from those recommendations develop MORPC's policy agenda/legislative platform. Each committee develops a list of the three to five top-priority issues within their areas of responsibility. The Roundtable then agrees on the public policy initiatives that MORPC staff pursues. MORPC monitors the recommendations of the Roundtable, and, as required, will pursue the identified freight-related priorities.

SAFETEA-LU Reauthorization

SAFETEA-LU authorizes the federal surface transportation programs for highways, highway safety and transit for the five-year period 2005-2009. Congress continues to extend SAFETEA-LU pending a long-term reauthorization. MORPC staff continues to monitor the reauthorization process, particularly as it pertains to freight-related and intermodal funding and activities.

Freight Policy Monitoring

MORPC will continue to monitor state and federal legislation for its impact on central Ohio's freight transportation system. In the past, MORPC's Policy Committee has passed resolutions reacting to potential legislative and administrative decisions. Other resolutions have supported local partners' applications for funding under various programs, such as the Alum Creek Drive/Groveport Road Intersection and I-270 Interchange project to address congestion issues at this bottleneck, which serves the Rickenbacker area.

3. Forge public/private partnerships to provide resources to maintain and expand the region's freight transportation advantage. 3 5

Central Ohio's Logistics Roadmap

Following an intensive study of the region's assets and in an effort to enhance the region's competitive position, the Columbus Chamber and The Columbus Partnership organized CompeteColumbus. As part of this effort, the group completed the *Central Ohio Logistics Roadmap*. This document currently provides

the guiding principles for the operation of the Columbus Region Logistics Council.

The Columbus Region Logistics Council is an industry-led group, which is an initiative of the Columbus Chamber. The group also serves as MORPC's Freight Advisory Committee. Likewise, MORPC serves as the Logistics Council's government liaison. This relationship has led to several tactical and strategic successes for the region's freight transportation system. This close partnership will continue into the future.

Non-Traditional Funding Sources

Over the past few years, several non-traditional funding sources have emerged that can address freight issues, such as TIGER I, II, III, IV (Transportation Investment Generating Economic Recovery), and the Ohio State Stimulus Logistics and Distribution program. MORPC will continue to support and provide technical assistance for funding applications for area projects.

Innovative Financing Initiatives

Traditional funding for transportation projects, including rail and roadway, are increasingly becoming more and more challenging. MORPC will work with transportation funding stakeholders, such as ODOT, counties, local agencies, and the private sector to increase knowledge and use of new innovative financing strategies for central Ohio, such as Transportation Improvement Districts (TIDs), toll financing, dedicated truck corridors and other public-private partnership (P3) opportunities.

Rickenbacker Intermodal Yard

The Rickenbacker Intermodal Yard is central Ohio's connection to the NS Heartland Corridor. Infrastructure connections are still necessary to maximize the value of this asset. MORPC will assist stakeholders in the area to prioritize infrastructure projects through the Rickenbacker Infrastructure Coordination Committee (RICC). Through the RICC, projects will continue to be prioritized, and financing opportunities will continue to be identified and discussed.

The Rickenbacker Intermodal Yard facilitates the transfer of containerized freight from the Heartland Corridor. Source: MORPC

CSX Intermodal Terminal Expansion

Construction of the CSX Intermodal Terminal Expansion at Buckeye Yard is underway. MORPC will assist the City of Columbus and CSX as the expansion continues.

OARC Freight Council

Through the Ohio Association of Regional Councils (OARC), MORPC will continue to coordinate and lead the state's metropolitan areas to form and develop a statewide freight group. This group will allow the state's MPOs to assist each other on freight-related issues when needed.

Ohio Freight Conference

Another Ohio MPO, TMACOG (Toledo Metropolitan Area Council of Governments), organizes the Ohio Freight Conference. MORPC will continue to support TMACOG's efforts. MORPC will help represent central Ohio's freight transportation system, and will make sure the region benefits from the event.

4. Advance transportation improvements that will maximize the effectiveness of the region's integrated freight transportation system.

1 2 3 6

Advance Projects in the Rickenbacker Area Road Network Assessment Study

The "Rickenbacker Area Road Network Assessment" is a conceptual document showing an overall transportation network intended for use as a planning tool. It provides a functional network of roadways in the study area to accommodate the traffic projected to occur between today and the 2030 study horizon year.

Freight-TIP

MORPC will continue to refine the Freight-TIP and the evaluation criteria used to identify priority freight projects—incorporating such elements as Truck ADT (Average Daily Traffic) ratings and access to intermodal centers—while evaluating the conditions and performance of the NHS (National Highway System) connectors for moving freight more effectively and efficiently through Ohio.

Connector between US Route 23 and Rickenbacker Intermodal Yard

MORPC will continue to work with stakeholders in the area to secure funding for the construction of an east-west connector between the Rickenbacker Intermodal Yard and US 23. The Rickenbacker Road Network Assessment identified the need for an east-west corridor in order to relieve potential truck and traffic congestion throughout the area due to the opening of the Rickenbacker Intermodal Yard.

CSX Intermodal Expansion Traffic Study

MORPC will continue to assist the City of Columbus and CSX as they evaluate the impacts of the CSX Intermodal Terminal Expansion at Buckeye Yard on the west side.

Intermodal Assistance and Analysis

MORPC will continue to assist the region in identifying activities that will improve intermodal freight projects in its planning area. This includes participating in ongoing activities in the Rickenbacker area, the CSX intermodal terminal and future initiatives.

Freight Impact on Air Quality

MORPC will begin to analyze the impact of freight activities in the central Ohio region, including large truck, rail and other logistics-based activity that affects air quality in the region. The goal is to identify those activities that minimize negative air quality in the region, and provide recommendations on the impact freight makes to regional air quality.

3.4 Aviation and Ground Access

Key Goals

3 Economic Opportunity

5 Collaboration

6 Health, Safety and Welfare

The region has two major airports. The freight-dedicated Rickenbacker International Airport has the longest runway in the US. The previous section noted the importance of these facilities to freight and goods movement. They are also important to the movement of passengers in and out of the region. While air transportation is not directly within the purview of MPO planning activities, surface transportation access to these facilities is a part of the MTP, and it is important to plan for the continued success of this relationship.

BACKGROUND

Five airports in the MPO planning area are part of the Federal Aviation Administration (FAA) National Plan of Integrated Airport Systems (NPIAS). NPIAS airports are significant to national air transportation and eligible to receive federal funding under the Air Improvement Program. As shown in Table 3.3, the Columbus Regional Airport Authority (CRAA) owns and operates three of the five.

Table 3.3 Central Ohio Airports

Airport	Operator	NPIAS Category
Port Columbus International	Columbus Regional Airport Authority	Primary
Rickenbacker International	Columbus Regional Airport Authority	Primary
Bolton Field	Columbus Regional Airport Authority	Reliever
Ohio State University (Don Scott)	Ohio State University	Reliever
Delaware Municipal Airport Colonel James E. Moore Field	City of Delaware	General Aviation

Port Columbus International Airport is the primary passenger airport in central Ohio for national and international travel. In addition to Port Columbus, Rickenbacker International Airport also carries the “primary” designation under NPIAS. It remains one of the only freight-dedicated airports in the United States. Because of their proximity to these primary airports and size, Bolton Field and The Ohio State University Airport carry the designation of “reliever,” which function

similar to “general aviation” airports, such as Delaware Municipal Airport Colonel James E. Moore Field.

Rickenbacker International Airport is a former US Air Force Base. While the Air National Guard maintains a presence there, Rickenbacker now focuses on private sector freight movement. The previous section detailed the ongoing work to improve the intermodal connections between the airport, the intermodal lift (rail) facility, the nearby cluster of logistics and distribution facilities and the region’s roadway network. These connections are critical for the continued success of this facility.

Passengers at Port Columbus International Airport have seen recent improvements to the roadway network that improve the connection between Interstate 670 and the passenger terminal. MORPC successfully worked with CRAA, ODOT and many other regional partners to develop a solution to congestion issues on that main road.

However, transit access to the airport remains limited. COTA maintains a regular crosstown route that serves the airport. It also offers an express route between The Ohio State University and the terminal, limited to the beginning and end of each academic term. Passengers on the intercity transit service between Athens and Columbus, GoBus, have the opportunity to access the airport before the line terminates Downtown.

MORPC AND AVIATION

MORPC has a strong collaborative relationship with CRAA and the other airport operators in the MPO planning area. The previous section detailed the role of MORPC’s freight program, which has a direct relationship with ground access to many area aviation-related facilities. For example, information about such facilities is included in MORPC’s *Freight Fact Book*.

AVIATION AND GROUND ACCESS STRATEGIES AND PROJECTS

Recommendations presented throughout the MTP will improve aviation access. For instance, strategies and projects that will address congestion to help individual commuters may also improve this access. However, the following strategies and projects specifically address aviation and ground access, working to address both challenges and opportunities that the region faces as it seeks to take advantage of its aviation assets:

The Rickenbacker International Airport focuses on private sector freight movement. Source: CRAA

3 5 **1. Collect information on and analyze the relationship between air and surface transportation systems; work to disseminate that information among partners and peers.**

Freight Trends Study

The *Central Ohio Freight Trends Study* focuses on the impact the freight industry, globally and locally, has on the region's infrastructure, with particular attention paid to the Rickenbacker area. The study demonstrates the need for infrastructure improvements and, in doing so, helps justify future private and public funding. This study is currently underway and is expected to be complete by late 2012.

Freight Fact Book

MORPC will update the *Freight Fact Book*, including information from the Federal Highway Administration (FHWA) updates to the "Freight Analysis Framework." This update will become a more interactive web experience.

State of the Region

MORPC's annual State of the Region will continue to report on indicators such as air cargo volumes at the region's airports.

3 5 **2. Forge public/private partnerships to provide resources to maintain and expand key linkages between air and surface transportation modes.**

Central Ohio's Logistics Roadmap

Following an intensive study of the region's assets and in an effort to enhance the region's competitive position, the Columbus Chamber and The Columbus Partnership organized CompeteColumbus. As part of this effort, the group completed the *Central Ohio Logistics Roadmap*. This document currently provides the guiding principles for the operation of the Columbus Region Logistics Council.

The Columbus Region Logistics Council is an industry-led group, which is an initiative of the Columbus Chamber. The group also serves as MORPC's Freight

Advisory Committee. Likewise, MORPC serves as the Logistics Council's government liaison. The group is an important connection between the industry, MORPC and the CRAA. This relationship has led to several tactical and strategic successes for the region's freight transportation system, including Rickenbacker. This close partnership will continue into the future.

Non-Traditional Funding Sources

Over the past few years, several non-traditional funding sources have emerged that can address issues with regards to access to airports, such as TIGER I, II, III, IV (Transportation Investment Generating Economic Recovery), and the Ohio State Stimulus Logistics and Distribution program. MORPC will continue to support and provide technical assistance for funding applications for area projects.

Rickenbacker Infrastructure Coordinating Committee

MORPC will continue to monitor progress at Rickenbacker. Additionally, MORPC will assist stakeholders in the area to prioritize infrastructure projects through the Rickenbacker Infrastructure Coordination Committee (RICC). Through the RICC, projects will continue to be prioritized, and financing opportunities will continue to be identified and discussed.

3. Advance surface transportation improvements that will maximize the effectiveness of the region's air transportation system. 3 6

Advance Projects in the Rickenbacker Area Road Network Assessment Study

The "Rickenbacker Area Road Network Assessment" is a conceptual document showing an overall transportation network intended for use as a planning tool. It provides a functional network of roadways in the study area to accommodate the traffic projected to occur between today and the 2030 study horizon year.

Connector between US Route 23 and Rickenbacker Intermodal Yard

MORPC will continue to work with stakeholders in the area to secure funding for the construction of an east-west connector between the Rickenbacker Intermodal Yard and US 23. The Rickenbacker Road Network Assessment identified the need for an east-west corridor in order to relieve potential truck and traffic congestion through the area due to the opening of the Rickenbacker Intermodal Yard near the Rickenbacker Airport.

Intermodal Assistance and Analysis

MORPC will continue to assist the region in identifying activities that will improve intermodal projects in its planning area. This includes participating in ongoing activities in the Rickenbacker and Port Columbus areas and future initiatives.

Monitor Airport Expansion Plans

MORPC will continue to monitor the long range expansion plans for Port Columbus and other airports in the MPO planning area to anticipate necessary surface transportation system improvements.

3.5 Bikeway System

Key Goals

1. Energy
2. Natural Resources
3. Economic Opportunity
4. Sustainable Neighborhoods
5. Collaboration
6. Health, Safety and Welfare

The MTP targets an 800-mile bikeway system by 2035, requiring the addition of ten miles of bikeway per year, on average.

Bicycling is a viable transportation option, especially for trips that are two miles or less. At least one-third of the region's population does not drive because they are unable due to age, economics, health or simply choose not to. A convenient and safe bikeway network could serve those who choose not to drive or cannot drive, and attract others to make short trips by bike, rather than automobile. Expanding and enhancing bicycling facilities and programs is part of the regional transportation system.

To date, the MPO planning area has 564 existing miles of bikeways (see Figure 3.14). The 2006 *Regional Bikeway Plan* proposes to expand this into a 1,438-mile regional bikeway network utilizing corridors along rivers, railroads, utility easements and roadways to provide for direct and convenient bicycle travel within and between residential areas, places of employment, neighborhood activity centers and other destinations. The MTP targets an 800-mile bikeway system by 2035, requiring the addition of ten miles of bikeway per year, on average.

BACKGROUND

The bikeway system includes a diverse set of facilities. It includes "shared-use paths," which are facilities physically separated from the roadway and intended for multiple, non-automotive uses including biking. It also includes on-road facilities, such as bike lanes, paved shoulders and shared lanes.

A skeletal system of north-south shared-use paths is developing along the region's six rivers and major streams. While some local communities are building more east-west bikeways, such as the bike lanes on Morse Road and Broad Street, as well as the wide shoulders on State Route 161, such east-west access across the region remains limited. Issues with the network include:

- Lack of east-west roadway connections
- Crossing wide, heavily traveled arterials, rivers and freeways
- Lack of continuity between jurisdictions
- Lack of complete bicycle facilities
- Inadequate signage
- Lack of driver awareness and respect for cyclist use of the roadway

MORPC'S BICYCLE PROGRAM

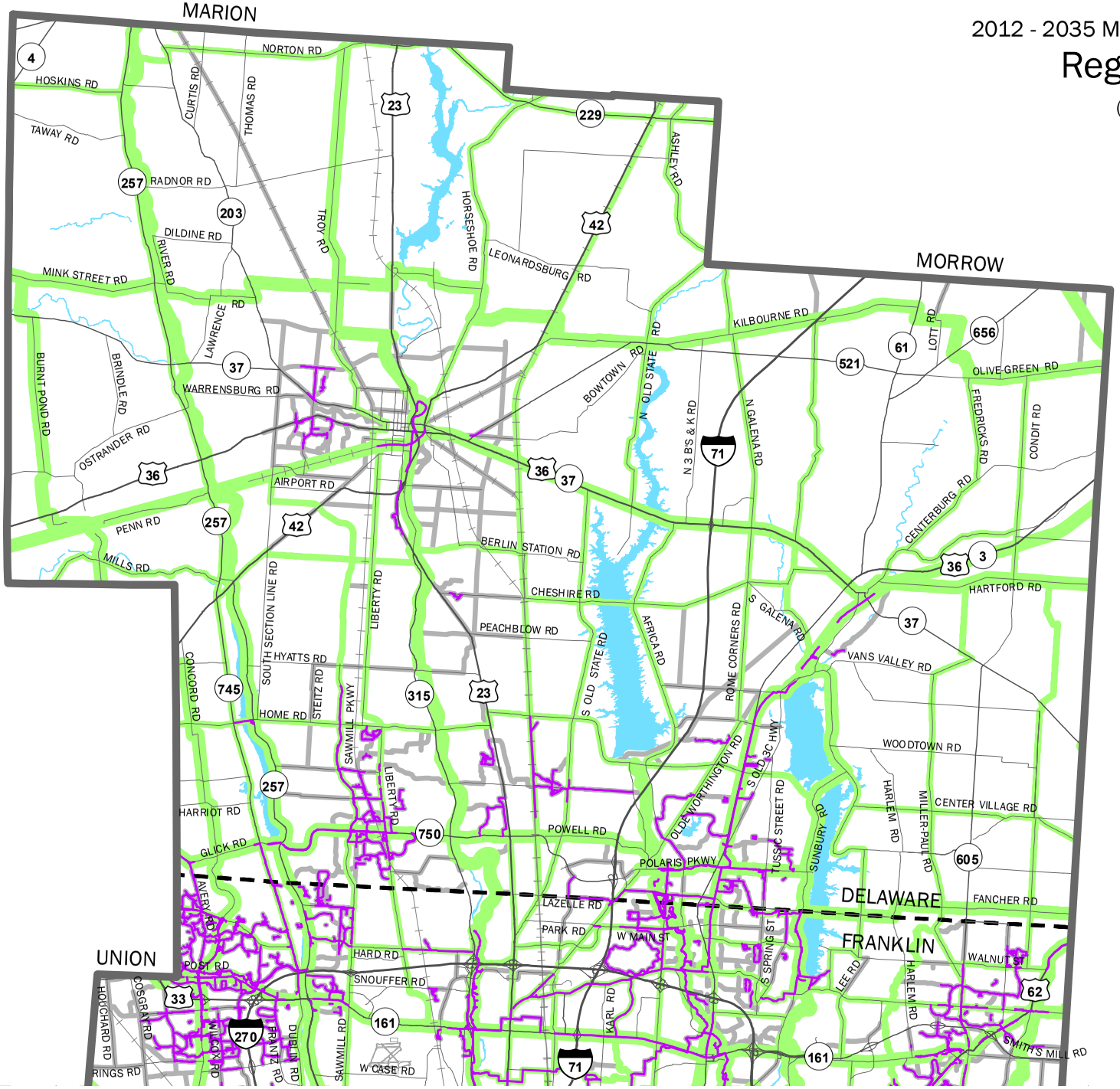
Over the past decade, bicycling has received more attention as a mode of transportation. MORPC has funded a variety of bicycle facilities and is increasingly doing so through its 2010 Complete Streets Policy. The region is working not only to build these facilities but also to ensure that educational, enforcement and encouragement programs are available to encourage biking.

For example, in 2009, MORPC and local partners created a Bike User Map for the region that is available both as a printed map and as an interactive online map.

2012 - 2035 Metropolitan Transportation Plan

Regional Bikeway Plan

(This reflects minor updates that have occured since 2006 Bikeway Plan)



Legend

- Existing Bikeway

Bikeway Functional Classification

- Regional Connector
- Short Connector
- Local Connector
- Railroad
- River/Water
- County Boundary

0 2 4
Miles

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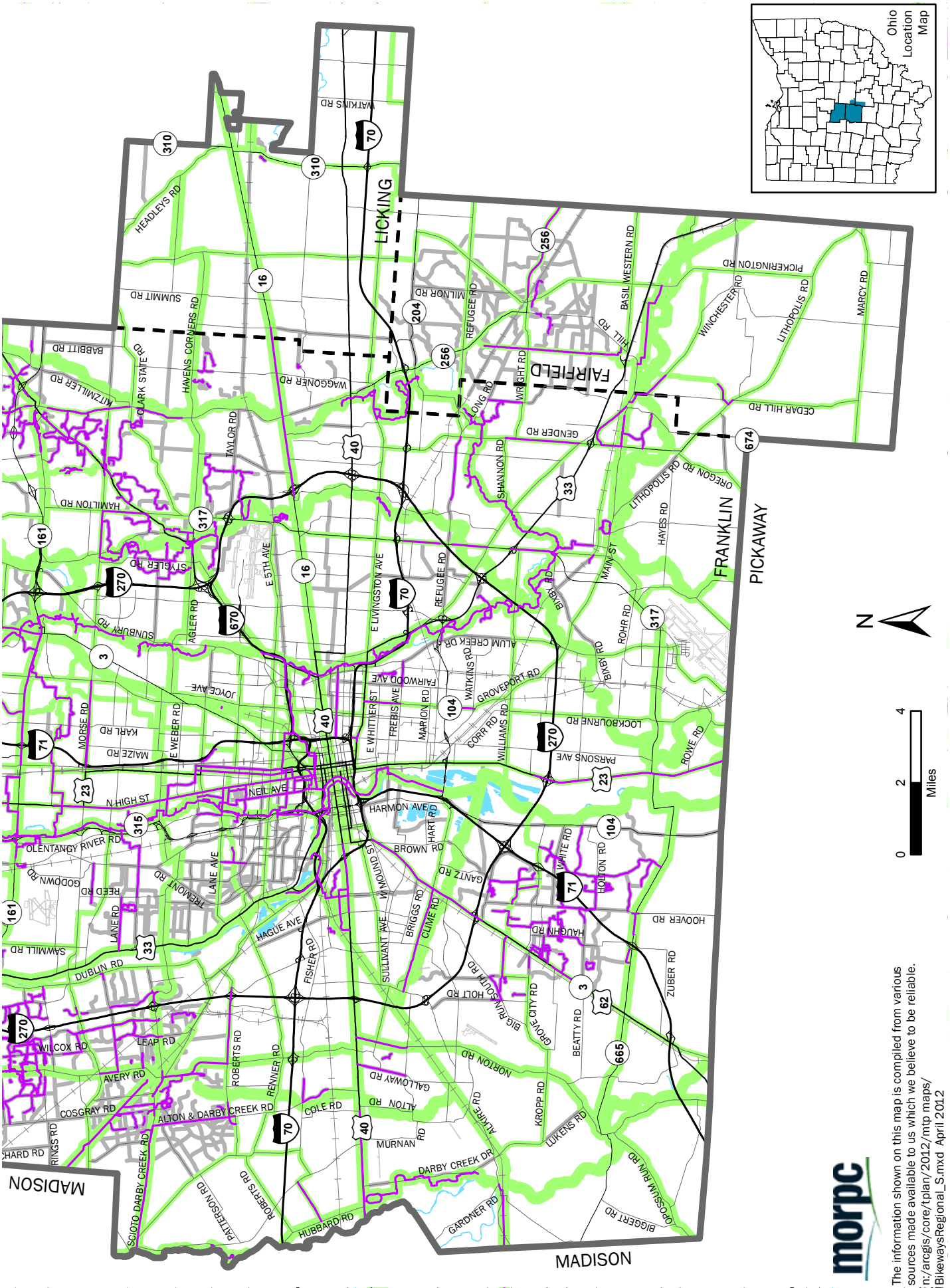


The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
n:/arcgis/core/tplan/2012/mtp maps/BikewaysRegional_S.mxd April 2012

Figure 3.14 Map of Regional Bikeway Plan

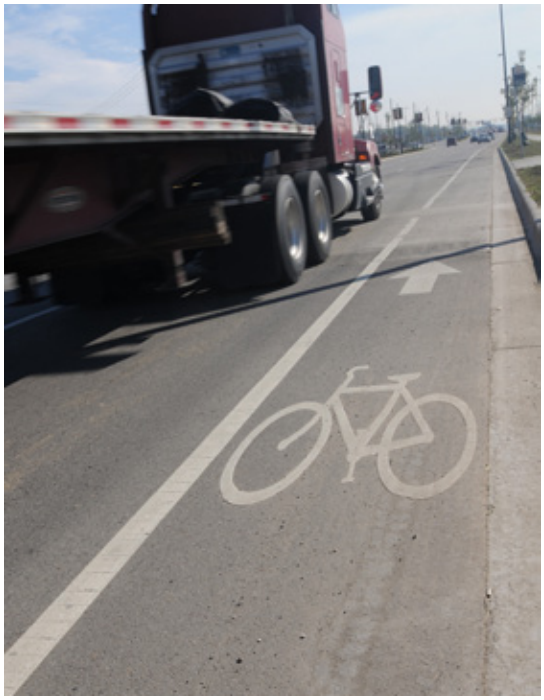
REGIONAL BIKEWAY PLAN

In 2006, MORPC facilitated the *Regional Bicycle Transportation Facilities Plan*, also known as the *Regional Bikeway Plan*. This plan was incorporated into the *2008-2030 Capitalways Transportation Plan.* It identified a future 1,438-mile regional bikeway network for the MPO planning area. A functional hierarchy helped prioritize the bikeway corridors.

This bikeway plan is reaffirmed through the *2012-2035 Metropolitan Transportation Plan*, as shown in Figure 3.14. In some cases, specific alignments for committed or constructed bikeways have replaced the originally proposed, non-specific corridor. In this process, some local connectors were found to be of sufficient length to be categorized as short connectors.

This hierarchy has facilitated the construction of bikeway facilities in the planning area:

- Regional connectors: long-distance routes along major waterways, railroads, utility easements and major roadways
- Short connectors: routes shorter than regional connectors, but still have regional significance
- Local connectors: routes that are primarily of local significance



On-road bike facilities include bike lanes, which reserve a portion of the roadway for biking (upper left), and shared road facilities, which are identified with signage (upper right) and pavement markings (right). Source: MORPC

The base for this map was Bicycle Level-of-Service (LOS) data, which illustrate the usability of roads for bicycling. It was created with public input.

In 2010, MORPC adopted a Complete Streets Policy, which replaced its 2004 Routine Accommodations Policy. The policy requires all transportation project sponsors using MORPC-attributable funding to accommodate all users along project roadway corridors. In 2011, the National Complete Streets Coalition recognized MORPC's policy as the best among large MPOs.

Also in 2010, MORPC was awarded a grant from the Ohio Department of Health (ODH) to create a Complete Streets Toolkit. This toolkit contains factsheets related to engineering, education, enforcement, encouragement and evaluation. An online supplement to the toolkit provides model policies for different types of communities. The supplement also addresses a variety of additional topics. MORPC developed a video that discusses Complete Streets in the context of creating Lifelong Communities. Each community in the MPO planning area is receiving a hard copy of the final toolkit document. In conjunction with the toolkit efforts, MORPC held several workshops to educate local leaders and developers on the importance of Complete Streets and the overarching concept of Lifelong Communities.

MORPC has collaborated with a variety of bicycle advocacy groups, local bikeway planning efforts and other events and activities to provide data, technical analysis and expertise, as well as a forum for regional collaboration and communication.

BIKEWAY STRATEGIES AND PROJECTS

ODOT, local communities and bicycle advocacy groups have helped identify five categories of strategies and projects for bicycle planning that will help achieve the goals and objectives of the MTP:

1 2 3 4 6

1. Advance projects that increase bicycle facilities throughout the region.

Projects that help complete the regional bikeway network will increase the percent of people within three-quarters of a mile of a bikeway from 62 percent to 80 percent by 2035 - a target to expand the availablity of opportunities for bicycle travel.

Increase the percent of people within 3/4 mile of a bikeway in the urbanized area from 62 percent to 80 percent by 2035.

Implementation of Regional Bikeway Corridors

Local jurisdictions are encouraged to incorporate their elements of the *Regional Bikeway Plan* (see Figure 3.14) into their comprehensive, planning or capital improvement programs. This will increase continuity, expansion and extension of the regional bikeway system.

Encourage Complete Streets

Local governments are encouraged to develop and adopt complete streets or similar policies so that pedestrian and bicycle facilities will be routinely incorporated into any roadway project.

2. Increase the quantity and quality of data on bicycle travel behavior. 4 5

Having a comprehensive and accurate inventory of bicycle-related information available is helpful in developing measurable standards for evaluating roadside facility conditions for bicycle travel. It also helps in identifying gaps and needs for facilities and programs.

Update Columbus Metro Bike User Map

In 2012, a revised Bike User Map will be distributed throughout the region. This will include updates to the current map based on the new information from local jurisdictions, advocacy groups and the public. Additional periodic updates to the map will take place after 2012.

Complete Streets Equipment Library

In 2010, using grant funding from ODH, MORPC acquired two automatic bicycle tube counters and eight infrared beam counters. These are available to local jurisdictions interested in collecting data on pedestrian and bicycle traffic.

Bikeway Inventory

MORPC continuously updates bikeway data based on information from local jurisdictions. The updates track both regionally significant bikeways and smaller, local bikeways. These data are available to the public using an interactive online map. MORPC will investigate using online tools to streamline the data sharing process. In addition, MORPC shares data with the ODOT along with other MPOs in Ohio. This will lead to the creation of a statewide bikeway map, produced by ODOT.

Bicycle Counting

Since 2005, MORPC, together with many different volunteers and in concert with the National Documentation Project, conducts manual counts of bicyclists and pedestrians. Such counts occur twice a year at selected locations throughout the region. Some of these counts are now supplemented through automated counters. This effort allows MORPC to create a regional inventory of non-motorist activity and to observe trends over several years.

Bicycle Crash Safety Data

Every year, MORPC identifies pedestrian and bicycle high-crash locations in the region as well as crash fact sheets with more detailed statistics related to bicycle crashes. This information helps identify areas in need of physical safety improvements as well as safety education programs.

Evaluate Roadside Facility Conditions

MORPC plans to review the Bicycle Level-of-Service (LOS) data to develop better measurable standards for evaluating roadside facility conditions for bicycle travel. This dataset helps users plan on-road bike travel commensurate with their skill and comfort level.

Bicycle Trip Data

The MORPC Travel Demand Model and data from COTA will be used to identify and forecast bicycle activity.

5 6 **3. Increase engagement of bicycle interests throughout the region.**

MORPC and local governments will engage advocacy groups and other organizations working to promote bicycling as a viable alternative to automobile travel. There are many groups working on bicycle planning. MORPC's involvement with them, either as the coordinating agency or as a peer participant allows them to have access to a variety of information. In this capacity, MORPC can be a bridge to connect outcomes from these various groups toward a connected regional bikeway system.

Assist in Community Bicycle Plans and Committees

MORPC will participate in the development of local bicycle plans to assure regional consistency and continuity.

Host Local Bicycle Advisory Committees

Many local jurisdictions, including Gahanna, Westerville, Dublin and the City of Columbus, maintain a bicycle advisory committee. Such groups help planning/engineering staff connect with local bicyclists.

Host Regional Pedestrian and Bicycle Staff Meetings

Since 2011, MORPC has held a quarterly forum for bicycle and pedestrian staff of local communities, such as planners and engineers. This forum provides an opportunity for sharing best practices, successes and challenges among a group of peers.

Coordinate Safe Routes to School (SRTS)

MORPC encourages and supports efforts to increase walking and bicycling to school among students in grades K-8. As part of this initiative, MORPC hosts bi-monthly SRTS workshops that provide an opportunity for practitioners to exchange ideas with their peers in the region. Funding for all aspects of Safe Routes to School, including infrastructure, education, encouragement, enforcement, and evaluation, is available through federal Safe Routes to School grants, administered by ODOT.

Host Central Ohio Greenways & Trails Forum

Since 2005, MORPC has held a quarterly forum related to greenways and trails development in the region. This forum is suited for local governments, parks and recreation groups and bicycle advocacy groups. The goals are to develop a united regional trail system, raise awareness of the importance of the greenway trails and increase the usability of the greenway trail system.

Bicycle and Pedestrian Professional Training Opportunities

MORPC continues to work with partners such as FHWA, the American Association of State Highway and Transportation Officials, the Institute of Transportation Engineers and the Association of Pedestrian and Bicycle Professionals to educate local engineers, planners and residents on bicycle-related topics through a variety of webinars and trainings. Additional opportunities for training are provided at conferences, such as ODOT's Ohio Transportation Engineering Conference and Healthy Communities Active Transportation conference.

Encourage Bicycle Friendly America Applicants

The League of American Bicyclists issues Bicycle Friendly America designations. The designation recognizes municipalities, universities and businesses for actively supporting bicycling. The League has awarded the City of Columbus (Bronze 2009), city of Gahanna (Honorable Mention 2010) and The Ohio State University (Bronze 2011). The League has recognized a number of Bicycle Friendly Businesses in the region, including Trek Bicycle (Silver 2010), the Gahanna YMCA of Central Ohio (Bronze 2010), Betty's Family of Restaurants (Bronze 2011) and Jeni's Ice Cream (Honorable Mention in 2011).

4. Promote complete streets policy development throughout the region.

3 4 5 6

In order to create a truly multi-modal transportation network, complete streets policies or other similar policies should be adopted by local communities.

Complete Streets Outreach

MORPC staff will continue to hold workshops and give presentations to local governments and city councils on the concepts of Lifelong Communities and Complete Streets. The goal of these presentations is to encourage local communities to think differently about their community development and adopt complete streets policies and other policies that support their implementation.

All communities in the MPO planning area should adopt complete streets policies or policies that contain those elements.

Review Projects Under Complete Streets Policy

MORPC continues to review projects using the checklists developed as part of the Complete Streets Policy. Projects using MORPC-attributable federal funding must comply with MORPC's Complete Streets Policy.

5. Promote non-infrastructure bicycle programs in the region.

1 2 4 5 6

Both encouragement and education programs are critical in increasing awareness, usage and safety for bicycling.

Bike Valet Parking Program

Since 2006, the Pedal Instead program has provided secure bike parking at various community events at no charge to cyclists. Pedal Instead also provides bicycle information at these events, which include summer festivals and Ohio State (OSU) home football games. Pedal Instead is managed by the University Area Enrichment Association and Yay Bikes! This program encourages people to travel by bicycle and educates them on bicycling topics.

Share the Road Campaigns

A Share the Road campaign can educate pedestrians, bicyclists and motorists on how to coexist safely on the roadways. Current campaign efforts include the City of Columbus and ODOT, as well as The Ohio State University.

How We Roll Campaign

In 2011, the student organization Bike OSU started the campaign, How We Roll, with the goal to foster a positive bike culture on campus, to ensure that everyone can ride with confidence, and to eliminate bike/car crashes in the university area. How We Roll is a peer-based outreach campaign, managed by Yay Bikes!, and funded by ODOT and the Ohio Department of Public Safety (ODPS).

2 BY 2012 Program

Consider Biking, with funding from The Columbus Foundation, encourages bicycling through the program 2 BY 2012 by working directly with local businesses. Its goal is for each resident to use a bicycle, instead of a motor vehicle, as transportation to work, school, or for local errands twice a month by the Columbus Bicentennial in 2012.

Local Bike-Sharing Programs

Bike sharing programs in central Ohio have been local and small scale. Most have been grassroots in nature, typically organized by university students. Examples are Buckeye Bikes (at OSU since 2008), Otterbikes (at Otterbein University since 2009), The Bike Movement (at Ohio Wesleyan University since 2009), and EveryoneBikes (at Paradise Garage since 2009). MORPC will coordinate with the City of Columbus and other communities to investigate creating a comprehensive bike sharing program in the future.

League of American Bicyclists Training

League of American Bicyclists (LAB) training is available at various times throughout the year. Certified League Cycling Instructors offer classes for bicyclists. Traffic Skills 101 is the most common LAB course offered. It includes classroom instruction, on-road riding and emergency maneuver drills. This program encourages people to travel by bicycle and educates them on bicycling topics.

Bike Events

Bike to Work Week, Bike Month, Columbus Bike Festival and Pelotonia are among the variety of bike events happening in the region. The goal of these events is to encourage more commuters and residents to bike.

Support Non-Infrastructure Program Funding Through MORPC

MORPC is considering actively soliciting pilot projects for non-infrastructure programs, including those that promote bicycling, eligible for Transportation Enhancement (TE) funds. These programs can have a positive impact on the region, at a fraction of the cost of infrastructure projects.

3.6 Pedestrian Facilities

Pedestrian facilities are an important link in the transportation network. Every trip, whether it involves travel by car, bus, bike, rail or air, begins and ends with a pedestrian trip. Consider that at least one-third of the region's population does not drive. Many in this third may be too young or too old to depend on driving. A convenient, safe and complete pedestrian system could serve those who choose not to drive or cannot drive. It provides opportunity for exercise and remains an economical choice. To improve this alternative, it is necessary to expand and enhance pedestrian facilities and programs as part of the regional transportation system.

Key Goals

1. Energy
2. Natural Resources
3. Economic Opportunity
4. Sustainable Neighborhoods
5. Collaboration
6. Health, Safety and Welfare

BACKGROUND

The MPO planning area lacks a comprehensive system of pedestrian facilities. Past construction of components of the roadway system did not always include consideration for pedestrian facilities. The data to help identify these gaps in the pedestrian network also lacks consistency and currency.

A pedestrian network should provide comfortable and safe walking conditions for everyone. To provide such conditions, one must consider street widths, travel lanes, traffic volumes, travel speeds and roadside conditions, which include sidewalk width and separation from moving traffic. A comprehensive network of pedestrian facilities provides for direct and convenient pedestrian travel within and between residential areas, places of employment, neighborhood activity centers and other destinations. In very rural areas, a paved shoulder may be an appropriate pedestrian facility; in more urban areas, a sidewalk is most appropriate. Shared-use paths, discussed in the previous bikeways section, are important components of a pedestrian network as well.

Every trip, whether it involves travel by car, bus, bike, rail or air, begins and ends with a pedestrian trip. Source: MORPC

MORPC'S PEDESTRIAN PLANNING PROGRAM

More communities are realizing that building sidewalks as part of their developments makes neighborhoods more attractive and provides important non-motorist connectivity. MORPC has funded a variety of pedestrian facilities, especially trails, and is increasingly doing so through its 2010 Complete Streets Policy. MORPC is working with others in the MPO planning area not only to build these facilities but also to ensure that educational, enforcement and encouragement programs are available. MORPC has worked to collect important data on pedestrian facilities to help justify their importance and identify gaps that limit individual mobility.

For example, in 2005, MORPC inventoried sidewalk facilities in Franklin County. The inventory focused on facilities along major roads using aerial photos and field verification. MORPC then added Delaware County, increasing the inventory of sidewalks along major roadways to almost 2,000 miles. With the 2008 addition of data for portions of Licking and Fairfield counties, the inventory covers the entire MPO planning area. At present, much of the inventory needs updates, and lacks a mechanism for ongoing maintenance at the local level.

Using much of this data MORPC was able to assist the City of Columbus in Operation Safewalks. The project identified gaps in sidewalk connections. It helped prioritize investment in sidewalks and other aging infrastructure along arterial streets and near neighborhood schools. MORPC assisted the city with its public involvement and GIS analysis. The program resulted in $50 million in capital funding commitment to construct pedestrian facilities throughout the city.

Many programs and projects referenced in the previous section regarding the bikeway system, section 3.5 of this plan, are applicable to the pedestrian system as well.

PEDESTRIAN STRATEGIES AND PROJECTS

Based on MORPC's pedestrian planning, work with stakeholders throughout the region, and given the restraints on resources, the following five categories of strategies and projects for pedestrian planning will help achieve the goals and objectives of the MTP:

1 2 3 4 6

1. Advance projects that increase pedestrian facilities throughout the region.

Projects that help create a comprehensive system of pedestrian facilities throughout the region provide more opportunities for pedestrian travel.

Pedestrian Facility Priority Map

Through the review of best practices and the analysis of existing pedestrian activity data, MORPC staff will work on creating a methodology to help prioritize pedestrian facilities development. MORPC will develop the methodology in partnership with its members.

Encourage Complete Streets Policy Adoption

MORPC encourages local governments to develop and adopt complete streets or similar policies so that pedestrian and bicycle facilities will be routinely incorporated into any roadway project.

4 5

2. Increase the quantity and quality of data on pedestrian travel behavior.

Having a comprehensive and accurate inventory of pedestrian-related information available is helpful in developing measurable standards for evaluating roadside facility conditions for pedestrian travel. It also helps in identifying gaps and needs for facilities and programs.

Complete Streets Equipment Library

In 2010, using grant funding from ODH, MORPC acquired two automatic bicycle tube counters and eight infrared beam counters. These are available to local jurisdictions interested in collecting data on pedestrian and bicycle traffic.

Regional Sidewalk Inventory Update

While many communities have some sort of sidewalk inventory, it is often not complete or unavailable in a standard format that one can easily map. MORPC's regional sidewalk inventory needs updates and additional verification. MORPC will look into finding funding to create a regional GIS-based sidewalk inventory

that communities can update as they construct new facilities. In the meantime, MORPC will update sidewalk and other pedestrian facility data as they are received from local jurisdictions.

Pedestrian Counting

Since 2005, MORPC, together with many different volunteers and in concert with the National Documentation Project, conducts manual counts of bicyclists and pedestrians. Such counts occur twice a year at selected locations throughout the region. Some of these counts are now supplemented through automated counters. This effort allows MORPC to create a regional inventory of non-motorist activity and to observe trends over several years.

Pedestrian Crash Safety Data

Every year, MORPC identifies pedestrian and bicycle high-crash locations in the region as well as crash fact sheets with more detailed statistics. This information helps identify areas in need of physical safety improvements as well as safety education programs.

Improve Evaluation of the Walking Environment

Pedestrian quality of service (QOS) describes the degree of comfort that pedestrians feel on any given roadside environment. Unlike vehicular LOS, which primarily reflects the roadway infrastructure, pedestrian QOS reflects a combination of factors: pedestrian facilities, environmental conditions and other user-specific criteria. MORPC will continue to identify and adapt techniques to model these criteria to help establish context-appropriate pedestrian facility standards across the MPO planning area.

Pedestrian Trip Data

The MORPC Travel Demand Model and data from COTA will be used to identify and forecast pedestrian activity.

Update Pedestrian Latent Demand Model

In 2005, MORPC developed a pedestrian thoroughfare plan for the City of Columbus. MORPC expanded the approach used in this project and applied it to the entire MPO area. The approach uses a pedestrian latent demand model, intended to identify the amount of pedestrian travel likely to occur (latent demand) along existing street segments based on surrounding population, employment and selected land uses. The result is a scoring of pedestrian demand along major roadways across the MPO area. The scores help identify locations where pedestrian facilities are most needed.

MORPC will evaluate the current model methodology to identify improvements and validate the results. This activity will include developing classifications for pedestrian environments throughout the region as well as customizing the model results for use by individual communities.

5 6

3. Increase engagement of pedestrian interests throughout the region.

Walking is a viable travel option, which local governments, advocacy groups and other organizations are working together to promote. Example activities that will further this strategy are referenced in the previous section. For more details, please see Section 3.5.

Encourage Walk Friendly Community Applicants

The Pedestrian and Bicycle Information Center's (PBIC) Walk Friendly Community designation recognizes municipalities for actively supporting walking. Winning communities are working to improve a wide range of conditions related to walking, including safety, mobility, access and comfort.

3 4 5 6

4. Promote complete streets policy development throughout the region.

Strategies associated with Complete Streets, detailed in the previous section, also apply to the pedestrian system. For more details, please see Section 3.5.

1 2 4 5 6

5. Promote non-infrastructure pedestrian programs in the region.

Both encouragement and education programs are critical in increasing awareness, usage and safety for walking.

All communities in the MPO planning area should adopt complete streets policies or policies that contain those elements.

Pedestrian Safety

As detailed in Section 4.3, MORPC continues to facilitate activities aimed at improving pedestrian safety. Recent examples include pedestrian safety stings and the distribution of reflective wristbands.

Support Non-Infrastructure Program Funding Through MORPC

MORPC is looking into the possibility of actively soliciting pilot projects for non-infrastructure programs, including those that promote walking, eligible for Transportation Enhancement (TE) funds. These programs can have a positive impact on the region, at a fraction of the cost of infrastructure projects.