



PLAN CINCINNATI

a comprehensive plan for the future

Transportation Existing Conditions Report Supplement October 4, 2010

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Purpose

To our Working Group Members, and others interested in Plan Cincinnati:

This document is the second in a series of Existing Conditions Reports for Plan Cincinnati.

The information in this document is provided to give basic background information that is appropriate for use by the **Transportation Working Group**.

On September 2, 2010, we released the first Existing Conditions report, which was appropriate for use by all 12 Working Groups. This document is a supplement to that report, and others will be released that will focus on information and data that is needed for each Working Group.

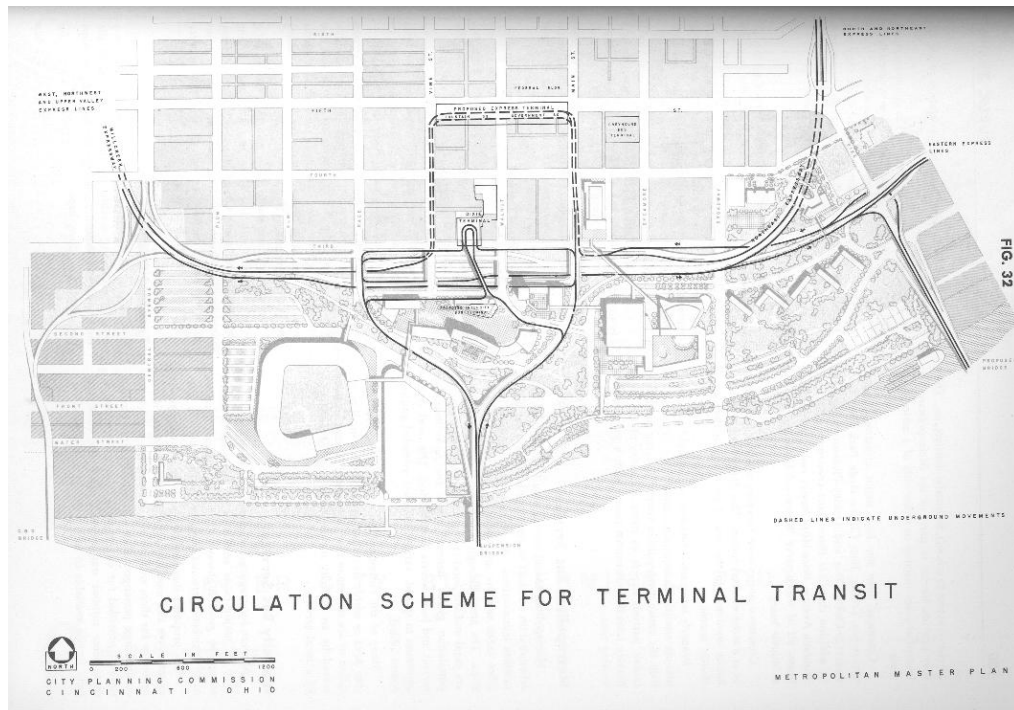
All of the information and data provided is based not only on what was requested by individual Working Groups, but also the information that Planning Staff felt was necessary to provide so that

Working Group members were armed with the background necessary to make good decisions. For that reason, not all pieces of information or data requested will be contained in these documents, and not everything contained was requested by a Working Group.

All Existing Conditions Reports released will be available to the public on our website: www.plancincinnati.org and we encourage you to review all of the Reports, not only those that pertain to your particular Working Group.

The maps in this and future documents may be scaled to fit the document, and are not appropriate for detailed viewing. For this reason, all maps will be available in their original size on our website.

Thank you for your participation in Plan Cincinnati! We hope you enjoy this process of learning more about our City.



Source: Cincinnati Metropolitan Master Plan (1948)

Transportation in Past Comprehensive Plans

Cincinnati holds a prestigious position in the history of Planning in our nation. In 1925, Cincinnati was the first city in the United States to have a Comprehensive Plan approved by a City Council. Since that time, there have been only two other Comprehensive Plans - in 1948 and in 1980.

The following is an analysis of how each of these plans addresses Transportation.

Official Plan of the City of Cincinnati (1925)

The 1925 Comprehensive Plan was a very general plan, with visionary ideas. The scope of the plan aimed to coordinate with the region's needs, not only the needs of the City. Citizen involvement was stressed very heavily; the plan suggested including citizen groups, contests with prizes, exhibits of the plan in libraries and museums, and even cartoons about the plan to be deployed in the newspaper.

The 1925 Cincinnati focused heavily on transit. The plan explores ways to increase downtown traffic circulation by widening streets, dedicating certain lanes to fast/slow moving vehicles, prohibiting left hand turns (at certain places, or even all together), and creating more efficient bus/trolley routes. It also lays out a descriptive plan for developing main thoroughfare roads connected by smaller arterial roads. The system would resemble something like a spider web, with the main thoroughfares extending from the city and the smaller roads connecting them, getting further apart as the distance from the city increases.

In 1925, sidewalks were not a priority. The emergence of the automobile rendered automobile oriented development priority. It was suggested that sidewalks be reduced or removed to widen the streets. Skywalks, sub-surface walkways, and building arcade walkways were all discussed as displacement options. The 1925 plan did indicate that skywalks, as well as sub-surface walks were not ideal. Other ideas to widen roadways included overhead streets, sub-surface streets, limited

street-parking hours and limited street-side delivery hours.

Competition between the bus lines and trolley routes also posed a problem. The proposed solution was for buses to contribute to the cost of street upkeep since they contribute to street degradation so heavily. This would likely discourage bus companies from routing buses into the city where trolleys already served, instead routing buses to areas previously not served. In this way, bus routes would supplement already developing trolley routes. A Rapid Transit System (RTS) was also explored. The idea was to develop a loop to serve the outer neighborhoods of the region. It was concluded that the neighborhoods were already well served by trolley and bus, so the current generation would be less willing to allocate resources for such a project.

This plan also devoted a chapter to freight and passenger rail development. Studies were done to estimate how many more tracks should be installed in the next ten years, as well as where additional passenger terminals should be built in Cincinnati. Ultimately, it was recommended that a passenger station be built in the Mill Creek Valley. It was also recommended that freight and through-traffic be diverted away from the city and the Mill Creek Station. Joint freight stations between railroads, boats and motor vehicles were also supported in this plan.

Cincinnati Metropolitan Master Plan (1948)

The scope of the 1948 plan is the whole Metropolitan Area (defined in the plan as urbanized portions of Hamilton County in Ohio, and Kenton and Campbell counties in Kentucky). This plan aims to assess the existing conditions of all of these areas, and then, through intergovernmental cooperation, address the needs of the community to ensure healthful living conditions and the highest degree of economic well-being possible.

To accomplish this goal, the plan acts as a guide, showing relationships between different aspects of

the community, and it estimates conditions that will exist in the future. In doing this, the plan realizes goals that may be set very short-term, or for ten years in the future.

The 1948 Transportation Plan is outlined in two chapters: Motorways (7) and Public Transit (8). The scope of the plan seems to have expanded to include more outlying neighborhoods (because of extended transit routes) and Northern Kentucky. The plan proposed bus routes as a supplemental element to streetcar routes by expanding bus routes only to underserved areas of the city. One of the major problems of Public Transit in Cincinnati was the number of turning-movements in pedestrian-heavy areas of the city.

Due to the heavy influx of motor vehicles from the 1920s to the 1940s, Cincinnati's street layout had become outdated. "People want to get from everywhere to everywhere at all times by the shortest and quickest route." The solution to such a demand was to devise a system of motorways and highways to better connect the communities to the city and one another, and an east-west through highway. The plan also stated that freedom to move within the metropolis must be improved. In 1925, one-way streets were implemented, and parking time restrictions on many downtown streets were in effect in 1946. An attempt at widening streets was made in some areas; however there was concern that the cost would outweigh the benefits. Therefore, the basis of the Motorway Plan was built around the concept of the uninterrupted lateral traffic flow of the expressway.

The Motorway Plan was built around the proposed routes of the National Interregional Highway System that was approved in 1941. Two main expressway corridors were identified: The Mill Creek Expressway (U.S. 25) and the Northeast Expressway (Cincinnati-Columbus Regional Highway). The Norwood Lateral Expressway was also planned to connect the two. An interchange just north of the Ohio River and south of the CBD was constructed for the Mill Creek, Northeast and Dixie Expressways (Third Street Distributer). The described freeway system improved freedom of movement through and around Cincinnati, and also called for the introduction of more rubber tire

vehicles into a rapid Transit System. Modified expressways were also proposed as arterial routes to siphon off traffic overflow where expressways cannot (example: Columbia Parkway). Important cross-town routes such as William Howard Taft were included in the plan to be improved to "modified expressway status".

Expressways would only help the traffic flow of Cincinnati if there is adequate parking in the downtown area. Thoroughfares were to continue to act as feeder routes to communities and expressways. With operation speeds set to run as high as 50 mph, the expressways in Cincinnati would allow for the city to adopt a Rapid Transit System (RTS). The local public transit service (generally within 4 miles of Fountain Square) had three main goals set to become more efficient downtown: continue conversion to rubber tires, develop an off-street express terminal, and eliminate turning movements. The Cincinnati Street Railway Company and the Cincinnati, Newport and Covington Railway Company had already begun the process of converting streetcar lines to rubber tire routes.

Ultimately, the RTS project was suggested to be converted to other uses, and focus was shifted to expressways and express bus routes. As outer neighborhoods became more populated, demand for routes to the city increased. This increased traffic on arterial thoroughfares, slowing public transit and encouraging the use of personal automobiles (slowing traffic on these thoroughfares further). The express system hoped to help solve this issue. During rush hour periods, express buses would enter the expressway directly via the Third Street Distributer, making only a few stops for connections. Cross-town routes are important to supplement the express routes and serve the entire metropolitan area.

The 1948 plan suggested express bus terminals beneath Fountain Square and Government Square. These terminals were to consist of two levels: the loading and unloading level and a mezzanine level. The mezzanine level would reduce pedestrian congestion and provide direct access to the terminals from large buildings in the vicinity (see the photo on page 3 of this document). The pedestrian traffic on the mezzanine level would

also encourage retail to develop in this level of the terminals. An intercity bus terminal was also proposed to be part of the Riverfront redevelopment Plan, just south of the Third Street Distributor.

The Final Recommendations included:

1. Streetcars replaced with rubber-tired vehicles
2. Expressways built and used by express transit vehicles
3. An underground terminal beneath Fountain Square and Government Square
4. Rearrangement of downtown public transit routes to extend the loops, thereby providing relief to the congestion in the central core
5. Changes to the downtown street grid to convert more streets to one-way
6. Location of the Intercity Bus Terminal south of the Third Street Distributor and integration into the buildings on the riverfront

The Coordinated City Plan: Volumes I and II (1980)

The four primary objects of the Plan are to: plan to produce with our available limited assets; plan to develop the assets of a mature city; plan to conserve and rehabilitate in order to avoid costly replacement; and, plan to improve the quality of the physical environment rather than expand the quantity of physical facilities. During this plan's development, Cincinnati was facing decreased revenue. Because of this, redevelopment and seeking new sources of revenue became themes of the plan. This makes the plan seem like more of an analysis of existing conditions than anything else.

In 1948, the plan forecasted a rise in population and employment, and increases in development. In 1980, population was not projected to grow, and the City's revenue was no increasing. On top of that, the demand for services was increasing. Because long-range trends and conditions are impossible to predict accurately, the 1980 Coordinated Plan focuses on many short-range projects geared towards the realities of funding.

The second volume of the 1980 plan outlines "Strategies for Comprehensive Land Use." These strategies are structured around three basic concepts. The first is that the physical setting of

Cincinnati is that of a well-developed city with an established and easily recognizable urban form. The "form" of Cincinnati being that the residential areas are generally on the hilltops, the non-residential uses are generally in the valley corridors, and the two are separated by undeveloped hillside. The second concept characterizes Cincinnati as a "mature city" with a declining or stabilized population, limited tax revenue, and increasing demands for public services. This means that planners must look at the priorities of the city as a whole and recognize the economic constraints that shape its development. The third concept is that the plan is a process and a set of documents. The process follows a method whereby the plan map recommendations incorporate on a continuing basis all proposals adopted by City Council and all proposals from other sources that conform to the strategies and policies.

The transportation plans were based upon a regional concept. Prior to the 1980 plan, OKI had proposed a rapid transit system for the area, either in the form of light rail trolleys or buses moving in right-of-ways free from traffic. The system would travel to high capacity areas and draw upon federal funding.

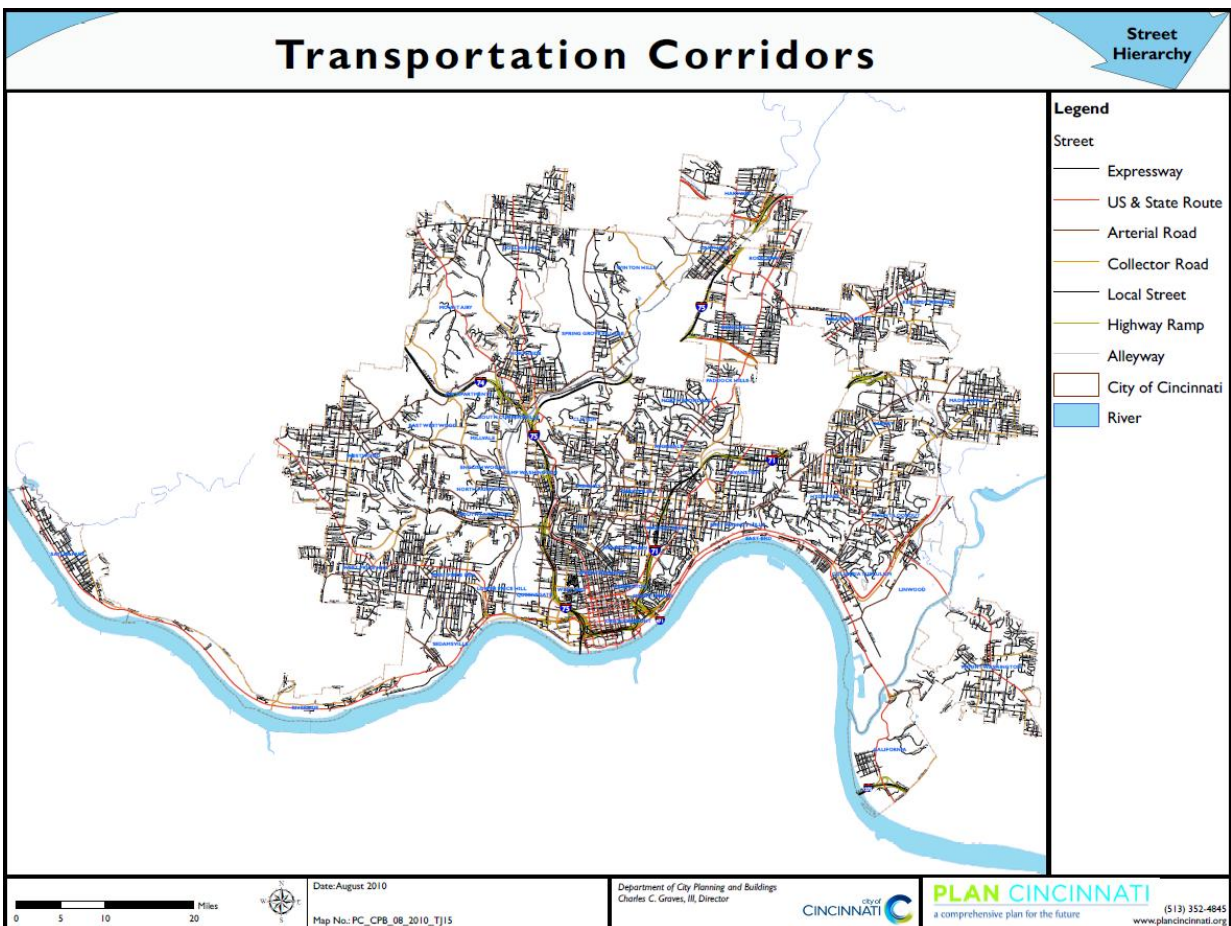
In 1977, as part of the Coordinated City Plan, the Planning Commission adopted the "Cincinnati Arterial Plan and Policies," which consisted of a four-level hierarchy of freeways, arterials, collectors and local streets. Seven traffic movement corridors had also been identified: Ohio River East and West, Western Hills, Northwest, Colerain, Millcreek, and Northeast. Expansion of the Freeway Surveillance and Control System on I-75 was explored in the 1980 Plan. Replacement lighting for viaducts, parkways, and selected streets over the next four years was also included.

In 1980, the fleet for Queen City Metro (QCM) the operating division of the Southwest Ohio Transit Authority (SORTA), was composed of 450 coaches. There were also a variety of capital projects underway, including the completion of Government Square, and the addition of 15 new passenger terminals and 50 new benches throughout the city.

The Division of Public Parking Facilities operated five parking garages and twelve parking lots at the time of the plan. The department also had one garage under construction by Fountain Square, and two lots under construction at Findlay Market.

Other enhancements in the transportation section of the plan include Lunken Airport and bikeways. The City was trying to attract additional private and corporate users to Lunken, as well as devising

a long-term development plan for Airport Road. Two million dollars of capital improvement projects, including the reconstruction and drainage of Airport Road, were scheduled to be completed for 1979. City funds had been used to enhance Lunken's bikeways and playfield, and the City planned to continue to maintain the bike routes elsewhere as well. Funds had also been requested to develop bikeways along Millcreek and the Riverfront.



Transportation and Transit

Cincinnati contains approximately 1,000 miles of streets, 132 bridges, 48 miles of retaining walls, 1,200 miles of sidewalks, and 400 hillside stairways. There are approximately 291 miles of railroad that are located within the City of Cincinnati (and run through Elmwood Place, Golf Manor, and Norwood).

Existing Transportation Plans

The City of Cincinnati, as the largest City in our metropolitan area, is also committed to the implementation of all local and regional plans approved or recognized by City Planning Commission or City Council. The creation of Plan Cincinnati is one way that the City fulfills its responsibility to these other planning efforts. The Goals and Action Steps created through Plan Cincinnati aim to be consistent with the overall goals and recommendations of these existing local and regional plans.

OKI 2030 Transportation Plan (2008 Update)

Ohio-Kentucky-Indiana (OKI) Regional Council of Governments updates their 2030 Regional Transportation Plan every four years. The last update was performed in 2008. The region includes eight counties in the three states, including Hamilton, Clermont, Butler, and Warren Counties in Ohio; Kenton, Campbell, and Boone Counties in Kentucky; and Dearborn County in Indiana. The OKI 2030 Transportation Plan is a long-range plan focused on nine overarching goals to improve the existing and future transportation needs of our region:

- Improve travel safety
- Improve accessibility and mobility options for people and goods
- Protect and enhance the environment
- Enhance the integration and connectivity of the transportation system
- Promote efficient system management and operation

- Emphasize the preservation of the existing transportation system
- Support economic vitality
- Consider regional security
- Strengthen the connection between infrastructure and land use

The plan includes specific objectives to reach each goal. Other considerations in the plan include public participation, demographics of the region, safety, regional security, congestion management, roadways, bus and rail transit, Intelligent Transportation System (ITS), freight, bicycle and pedestrian travel, other travel mode alternatives, corridor and planning studies, transportation improvements financing, and an economic, social, and environmental impacts assessment.

Additional information can be found at:
<http://www.oki.org/transportation/2030plan.html>

Eastern Corridor Major Investment Study

This project is being conducted in order to identify and evaluate long-term transportation solutions necessary to meet growing usage patterns in the region extending from downtown Cincinnati and eastern Hamilton County to western Clermont County. It was initiated in 1995 and approved by the Ohio-Kentucky-Indiana (OKI) Regional Council of Governments Board in 2000. The major recommendations of the study were to upgrade and relocate State Route 32, which would include a new crossing of the Little Miami River and rail transit that would link Cincinnati's eastern suburbs with downtown Cincinnati. The Eastern Corridor Project considered a series of transportation improvement options including highway improvements, establishment of rail transit and new bus routes, Transportation Systems Management, and the creation of new bicycle facilities. By 2020, employment projections estimate that roughly 87,000 people will work in the Eastern Corridor and transportation improvements must be made now to meet these increasing growth patterns.

Source: www.easterncorridor.org/

Western Hamilton County Transportation Study

The Western Hamilton County Transportation Study (Study) began work in June, 2005. The Study process was administered and managed by the Ohio-Kentucky-Indiana Regional Council of Government (OKI) with federal funding. The overall goal of the Study was to develop a strategic plan that will improve the transportation mobility and safety of residents, commuters, visitors and freight movement throughout Western Hamilton County. The Study Area consists of about 178 square miles and 253,000 people or one-third of the population for Hamilton County (2000 U.S. Census).

The strategic plan for the Study includes documentation of all community involvement, data collection and research, cost estimation, identification and analysis of conceptual alternative solutions and the alternative evaluation process. The result is a set of conceptual planning recommendations for transportation improvements in Western Hamilton County. To view the strategic plan, please visit www.oki.org.

The essence of effective strategic planning is to clearly attain four benchmarks:

An analysis of existing conditions related to transportation strengths and weaknesses;

- A comprehensive and coordinated vision for the future with specific and measurable transportation goals;
- An understanding of the present and future gaps in transportation resources which are necessary to achieve the stated vision and
- Widely supported conceptual planning recommendations to address the transportation gaps and fulfill the vision.

The Study took a comprehensive multi-modal approach in order to understand the transportation needs of the area. The approach reviewed and considered all aspects of the

transportation system that affect Western Hamilton County including:

- Regional access including connectivity with Dearborn and Butler counties and the eastern portions of Hamilton County;
- Internal circulation systems in the various townships, villages and cities;
- Transit systems with accessibility and circulation and
- Pedestrian and bicycle travel.

There are four predominant land uses in the Study Area. These are residential (41%), agricultural (17%), vacant (16%), and parks/recreation (13%). It is expected that land use changes and growth will occur in specific targeted areas as utility infrastructure extensions are constructed. Utility infrastructure, land use patterns, economic vitality and environmental resources and concerns such as waterways and hillside stabilization were also taken into consideration as important components that affect the transportation system.

An analysis of 34 major developments showed that about 2,700 acres (about 3% of total land in the Study Area) are in the advanced planning stages. Most, 2,200 acres, are planned as residential subdivisions. The impact of new vehicles attributed to these new land uses will be dramatic; potentially adding an additional 140,200 vehicle trips to the road network on a daily basis. Green Township, Crosby Township and the Village of North Bend are projected to absorb most of the new growth.

Key intersections and roadway segments in major corridors were evaluated based on traffic volumes, capacity, Level of Service and safety. Each of these transportation segments were analyzed based on transportation standards. Deficiencies were listed and compared to all other intersections and roadways. Transit service, railroads, river terminals, hiking trails, pedestrians and bicycle service was also analyzed.

Specific characteristics considered in the analysis included:

- Transportation system continuity;
- Capacity of the system and ability to absorb future growth;

- Safety of system users;
- Impact on the environment and
- Integration of alternate forms of travel.

As a part of the strategic planning process for this Study, a thorough investigation of previous studies and plans was undertaken to assess the gaps and deficiencies and to serve as a starting point for identifying potential improvement recommendations. The result of this research identified 74 studies and other projects that are underway, moving toward implementation or awaiting program approval. A careful consideration of the 74 studies and projects, existing and future conditions data and the Study's Purpose and Needs Statement provided the basis for understanding the transportation gaps between present deficiencies and future needs. This understanding led to the final step in the strategic plan, the development of conceptual planning improvement recommendations to address Western Hamilton County's present and future transportation needs.

OKI North South Study

In 2000, the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and the Miami Valley Regional Planning Commission (MVRPC) undertook a major planning effort, known as the North South Transportation Initiative (Initiative), to study the multimodal transportation system of their regions. The major focus of the Initiative is to improve the safety, efficiency, and reliability of the system. In effect the Initiative's primary goal was to keep the OKI and MVRPC regions moving.

The economic health of both the region and the nation depends on this transportation system to function properly and move people and efficiently into and out of the general area. Since the roadways carry a high volume of international trade and connect many high-profile industries, the importance of the interstate to commerce, and especially to trucking, cannot be overstated. Interstate 75 (I-75) and its parallel railroads are among the busiest in the nation and serves as the major transportation artery that connects communities and businesses in six states. From the Port of Miami, Florida to Detroit, Michigan where I-75 connects with Canadian Highway 401, the highway serves as one of the longest and busiest continuous interstate trade corridors in North

America at approximately 2,200 miles (Public Roads, Fall 1995).

A critical point in this corridor occurs in northeastern Kentucky and southwest Ohio starting from Northern Kentucky, continuing across the Ohio River northward through the major metropolitan areas of Cincinnati and Dayton up to the City of Piqua, Ohio. This stretch of interstate connects two states, six counties, 26 cities, 14 townships, and six villages and occurs within the jurisdictions of the two Metropolitan Planning Organizations (MPOs).

The region's multimodal transportation system is comprised of many components including: interstates, regional roadways, local streets, transit systems, rail lines, and bicycle and pedestrian facilities. The "backbone" of the system, however, is I-75 and its parallel roadways and railroads. The poor safety performance of I-75 is well known to transportation planners in the region, police and emergency service agencies and those who drive it daily. As an example, over the four-year period from 1995 to 1998, nearly 2,400 vehicle accidents occurred in an 11-mile section through central Dayton between the Dixie / Central and Needmore Road interchanges, according to the Traffic Operations and Safety Study. As evidenced by this survey, much of this poor safety history can be attributed to the outdated design standards to which I-75 was built. Since the 1950s, highway engineers and safety researchers have learned that many of the features drivers encounter along I-75 produce operational and safety problems, particularly as traffic volumes increase and begin to tax the roadway capacity limits. Such features include left-hand exit and entrance ramps, ramp tapers and merge / weave lengths that are too short for safe vehicle entry, close spacing between successive entrance and exit ramps, lane discontinuity (lane drop) on the mainline freeway, lack of shoulders for disabled vehicles, and insufficient vertical and horizontal sight distances. Similarly, congestion, lack of adequate shoulders and other problems lower emergency vehicle response time.

In addition to the highway, the region is connected by five major transit systems:

- Transit Authority of Northern Kentucky (TANK)

- Southwest Ohio Regional Transit Authority (SORTA)
- Butler County Regional Transit Authority (BCRTA) 2
- Middletown Transit System (MTS)
- Miami Valley Regional Transit Authority (MVRTA)

Together in 1999, these systems carried over 154,000 independent passenger trips each day according to the Federal Transit Administration (FTA). Currently, the designs of the transit systems in the regions are “point focused” meaning that passengers must be transported to a central point, often a downtown transfer point, in order to complete their journey. Many routes of the transit systems function in this manner, which is like a hub and spoke – the hub being the downtown transfer point. Unfortunately, this type of trip is no longer conducive to what many customers want and need. As a result, transit travel times are often longer than they would be for other forms of travel.

TANK operates a traditional bus-only service with regular fixed routes and express service primarily from Northern Kentucky suburbs to downtown Cincinnati. The service is focused on the morning and afternoon peak period and operates primarily Monday through Friday. The TANK system has good ridership for the service levels provided. SORTA, also known as METRO, operates regular fixed route and express service from park and ride lots and other locations in the greater Cincinnati area including Hamilton, Clermont, Butler and Warren counties. They are currently in the process of implementing a strategic plan to enhance their system in order to promote regional connections. SORTA’s “MetroMoves” plan proposes the development of 25 regional hubs throughout the system. Each hub will become a focal point of transit operations allowing seamless transfers between routes. In addition to regular fixed routes, SORTA also offers special routes for sporting and other special events and access paratransit services. A new initiative begun in 1999 created a job access service. This service called the JobBus is a new type of service designed to link unemployed and under-employed area residents to jobs in Warren County, Fairfield and Sharonville.

BCRTA operated a fixed route system, the Butler Blast, serving south central Butler County and the surrounding areas. The system ran seven fixed routes in Hamilton, demand response service, an employment express route from Hamilton to Fairfield, an employment circulator in Fairfield and a Fairfield route with a connection to Forest Fair Mall. The system operated 60 smaller vehicles consisting of airport shuttle type vehicles (cutaways), smaller transit buses (Orion IIs) and minivans. Unfortunately, service was disconnected in 2003 due to a lack of local funding.

The MTS is operated by the City of Middletown, Ohio and provides transit service within the limits of Middletown, Ohio, adjacent to the former BCRTA service. The service provides limited fixed-route transit service primarily along four routes during weekdays only in the municipal limits. Curb-to-curb paratransit service is available to eligible persons with disabilities during similar hours of operation.

The MVRTA serves the greater Dayton region. In addition to regular fixed route service, MVRTA also offers a curb-to-curb paratransit service to individuals with disabilities and a special bus service designed to fit the needs of senior citizens. They also provide a Hop (Dash) Service, which offers free rides during off-peak hours within the Central Business District in Dayton and Oakwood. There are currently no plans to significantly increase transit service to Miami County.

Trucks and rail provide the primary means of shipping goods cost effectively throughout the region, the United States, and into Canada. Truck traffic alone is a large percentage of the traffic volume on I-75, ranging on average between 10 and 30 percent. As estimated by the Federal Highway Administration (FHWA), truck miles nationally on I-75 exceed five billion annually and the volume of trucks approaches almost six million annually. Truck operating expenditures in the Ohio corridor are approaching \$7 billion annually (Public Roads, Autumn 1995). Today’s competitive marketplace demands fast and efficient transportation linkages. These often occur through common carrier or private carrier motor freight (trucks), and bridge the chain of goods and materials from suppliers, producers, and finally consumers. Many industries currently rely on “just-

in-time” plant operations to manage inventory and production. Just-in-time delivery is based on businesses keeping only enough inventory, spare parts and/or raw materials on hand to satisfy daily orders or to sustain minimal amounts of production. Increasingly, businesses are no longer stockpiling huge quantities of goods and raw materials in anticipation of orders.

Timely and reliable freight flow logistics are critically important to highly price-competitive businesses, including the automobile industry, which plays a major role in the regional economy. Across Michigan, Ohio, Kentucky, and into Tennessee and Georgia, I 75 is widely known as “Auto Alley” because of the large volumes of automobile related goods shipped between component facilities, assembly plants, suppliers and distributors. Rail transportation is also equally important to the multimodal transportation system in the corridor. The Queensgate Rail Classification Yard in northwest Cincinnati has the capacity for 4,000 train cars, and is one of the busiest freight rail yards in the Midwest. The ability to shift freight from highway to rail will continue to play a large role in increasing rail capacity in the region.

Several of the existing rail lines parallel I-75. The existing rail lines in the project area include:

- CSX
- Norfolk Southern
- Indiana and Ohio (I&O)
- Amtrak (passenger rail)

According to the Ohio Rail Development Commission, more than 250 freight trains per day pass through or have destinations within the Initiative’s study area. The amount of freight that rail has the ability to carry is substantial. One fully loaded train car carries the same load as three semi-trucks. Intermodal traffic has been the fastest growing segment of the rail industry over the past 20 years. This segment of the market is anticipated to continue to grow (Access Ohio, ODOT, 1995). However, the heavy traffic volume along the existing rail lines limits this growth. For example, a CSX freight line operating in this corridor carries over 21 million gross tons per mile per year (most of this cargo is grain).

However, significant diversion of highway freight movements to rail is not expected or economically feasible (2025 Long Range Transportation Plan, MVRPC). Regionally, average daily truck traffic on I-75 exceeds 15,000 trucks per day within the I-275 beltway of Northern Kentucky and Cincinnati (Freight Transportation Study, OKI). In downtown Dayton, truck traffic approaches 15,000 per day (Freight Movement Study, MVRPC). Truck travel on I-75 is about double the average level observed on other comparable freeways in the United States. Truck volumes are expected to increase. The OKI Metropolitan Transportation Plan notes that trucks are used extensively for carrying goods produced both inside and outside the region to local destinations or for moving them to other markets. An increase in future truck traffic has potential implications on the existing highway system. Daily traffic operations, safety, and pavement, as well as bridge life and costs, are key issues of concern because of the high volume of truck traffic in the region.

Air transportation plays a large role within the multimodal transportation system. The Greater Cincinnati / Northern Kentucky International Airport is a regional and national hub for many large airlines, most notably Delta and its regional connection partner (ComAir) for passengers and primarily DHL Worldwide Express for freight. The Dayton International Airport, in addition to serving many passenger airlines, serves as a hub for Emery Worldwide Express, a multi-modal transportation and logistics company. Between 1981 and 1998, processing goods at Dayton International rose from approximately 450 tons of freight per year to over 621,000 tons per year (MVRPC Freight Movement Study, 1999). According to the National Planning Data Corporation, the Dayton International Airport is the best 90-minute air market in the nation. Other major express parcel delivery services located in the study area include Airborne Express, United Parcel Service, and Federal Express. Both truck and rail services, which depend on I-75, feed these airfreight sorting facilities. In addition to these two major international airports, there are several other regional airports in the Initiative’s study area.

Barge is the primary mover of goods produced in the OKI region for market areas between 500 and

700 miles away (Freight Transportation Study, OKI, 1996). Nearly 14 million tons of cargo was shipped through water ports in Cincinnati in 1999, ranking it third in the amount of cargo handled on the Ohio River (Freight Transportation Study, 1996). The first task undertaken as part of the Initiative was to determine the issues in the corridor and the goals of the study. Several public involvement techniques were employed to provide a forum to gather input and comments regarding the issues and concerns of the multimodal transportation system. The public involvement activities solicited input from stakeholders including state representatives, county officials, city officials, village officials, township officials, other agencies and groups who have an interest in the multimodal transportation system and the general public.

Issues that arose from those public involvement activities included:

- Infrastructure conditions and design constraints
- Travel growth/congestion
- Land use and environment
- Existing resources
- Need for alternatives (route/modes)
- Safety

Based on discussion ideas and comments gathered throughout the project scoping and public involvement processes, the following Goals and Objectives were developed to help guide the Initiative through the development and evaluation of potential alternatives to address the issues and concerns associated with the multimodal system:

Goal 1: Promote a balance between sustaining the operational condition of the existing system and maximizing its safety, efficiency and cost-effectiveness.

- Identify regional alternatives that are compatible with and maximize the investment in the current transportation system.
 - Identify alternatives that are fiscally feasible.
 - Demonstrate that the overall benefits of improvements are reasonable given life cycle costs (capital, operations and maintenance (O&M)).

Goal 2: Cooperatively address transportation system design, safety, congestion and mobility problems that affect both local residents and through travelers, including trucks.

- Improve system safety.
 - Reduce delay and travel times.
 - Increase modal choices.
 - Improve connectivity between modes.
 - Improve levels of service (i.e. highway, transit, other modes).

Goal 3: Support opportunities for economic development through transportation system improvement projects that incorporate sustainable design and funding options and that promote a balanced approach to keeping people and the economy moving.

- Improve accessibility and mobility to freight and distribution centers.
 - Enhance access to employment centers.
 - Provide greater mobility options including reverse commute, cross-town and other opportunities / services.
 - Enhance access to major activity centers. (i.e. airports, job centers, shopping areas, universities/colleges, hospitals, etc.)
 - Promote land use policies and transportation investments that are compatible and concentrate development along existing transportation corridors.
 - Promote opportunities for joint development and private participation in transportation investments to leverage existing resources and accommodate the development of more projects.

Goal 4: Maintain and improve community-wide / regional quality of life with respect to the natural and built environments by fostering supportable investments that are sensitive to community preservation and equity.

- Preserve/improve air quality.

- Minimize adverse environmental impacts including neighborhood and community disruption.
- Protect sensitive areas. (i.e. neighborhoods, habitat areas, etc.)
- Support transportation investments that promote community cohesion including non-motorized travel (pedestrian, bicycle, etc.)
- Promote investments that seek to equalize the distribution of impacts and benefits to the community
- Explore impacts of proposed alternatives / projects on different socio-economic groups

Goal 5: Reach consensus on a Preferred Program of Projects that support a shared future vision for both the Cincinnati and Dayton regions respectively over the intermediate and longer term(s).

- Promote projects that benefit both regions and minimize competing interests.
 - Produce a Preferred Program of Projects that is supported by the public, elected officials, and implementing agencies

Uptown Transportation Study

OKI conducted the Uptown Transportation Study for the purpose of developing a comprehensive transportation plan for the Uptown area that serves the needs of the area's diverse population, responds to existing transportation deficiencies, and supports continuing growth, development, and economic vitality. The project was divided into two elements: Part A and Part B. Part A included a broad study area with the focus on the local transportation system. The Part B study area focused on the I-71 Corridor. The purpose was to identify and evaluate alternatives for improving access between Uptown and I-71.

Uptown is the section of Cincinnati that includes the communities of Avondale, Clifton, Corryville, East Walnut Hills, Evanston, Mt. Auburn, North Avondale, Walnut Hills and Clifton Heights, University Heights and Fairview (CUF). The Uptown Transportation Study was jointly managed

by the project Implementation Partners (IP). The IP was composed of the following entities: OKI, the City of Cincinnati, the Southwest Ohio Regional Transit Authority (SORTA), the Uptown Consortium, the Ohio Department of Transportation (ODOT), and the AMOS Project.

An aggressive community involvement effort was undertaken to ensure that the community provided input throughout the process. The study recommendations were presented to the study Advisory Committee and the public on October 17, 2006.

Based on the community's input and consideration of each alternative's ability to address the project goals, the Implementation Partners made a number of multi-modal recommendations.

The Part B study area lies completely within the City of Cincinnati paralleling I-71 from Liberty Street on the south to the Dana Avenue Interchange on the north and is generally bounded on the west by US-42 (Reading Road) and Dana Avenue, and on the east by US-22/SR-3 (Gilbert Avenue) and Duck Creek Road. It includes the Cincinnati neighborhoods of Avondale, Evanston, Mt. Auburn, and Walnut Hills. It is home to several major institutions and employers including the University of Cincinnati, the Cincinnati Zoo and Botanical Garden, several major hospitals, and related medical employers.

A thorough evaluation of existing conditions was conducted through data collection and field studies including traffic volume counts, recent crash data, environmental conditions, cultural resources, environmental justice communities, wayfinding audit, and physical conditions of the existing transportation infrastructure.

This information is fully documented in the Uptown Transportation Study-Part B, I-71 Access Improvement Study: Red Flag Summary Report (August 2006), and the Uptown

Transportation Study-Part B, I-71 Access Improvement Study: Existing and Future Conditions Report (July 2006).

The study area is expected to experience a moderate population decline and a slight increase in employment overall. The dynamics of travel demand and transient populations are influenced

significantly by the presence of the University of Cincinnati.

As would be expected in a highly urbanized area, the study area includes several environmental justice communities, and red flags primarily associated with cultural resources and hazardous materials. Ecological and recreational resources are not a major factor in the study area.

The I-71 mainline generally operates at acceptable level of service today and is forecast to operate at an acceptable level of service in the future with the exception of the mainline segments immediately north of the existing partial interchange located at William Howard Taft (WH Taft) Road and McMillan Street. Congestion is significant at this interchange as well as along portions of the adjoining arterial network. This congestion is expected to worsen in the 2030 plan year. In general, the existing at-grade intersections within the Part B study area are operating at an acceptable level of service.

An analysis of recent crash data indicates that the accident rates on I-71 are slightly better than average for an urban interstate. Accident rates are higher on the arterial network with US-42 (Reading Road) experiencing accident rates higher than the citywide average at some locations.

Way finding to and from I-71 to the Uptown area is complex. Interstate 71 exhibits a lack of uniformity in interchange patterns. Drivers from I-71 must utilize two different interchanges depending on direction. East-west access is currently provided by the one-way couplet of WH Taft Road and McMillan Street. McMillan Street is grade separated from Reading Road and Burnet Avenue, the predominate north-south corridor in the vicinity. The one-way operation and grade separation pose challenges accessing the interstate from locations east of I-71 and north of WH Taft Road.

For the institutions and neighborhood business districts to remain competitive on a regional level, interstate access must be perceived to be at least adequate when compared to suburban locations

with higher visibility and more direct egress. The lack of direct full service interstate access to serve the study area is viewed as a limiting factor on the scale and desirability of potential development.

In addition to a no-build alternative and a transportation system management (TSM) alternative, which would modify the existing WH Taft Road/McMillan Street (Taft/McMillan) ramps to accommodate forecast peak hour volumes, a comprehensive array of over 40 build alternatives for access improvements on I-71 were developed as part of the study. These alternatives provided full interstate access at the existing partial interchange at Taft/McMillan and/or at Martin Luther King Jr. (ML King) Drive. These alternatives were reviewed with the IP over several meetings during the spring of 2006. The original array was gradually reduced to six alternatives to be advanced for more detailed evaluation. The majority of the original array of alternatives was eliminated due to geometric or operational design exceptions. Some alternatives, while technically feasible, did not address the project's adopted purpose and need statement or were felt to have disproportionately high environmental impacts and costs.

Secondary recommendations include the following:

- City of Cincinnati review of current zoning classifications for parcels within the study area to better take advantage of the improved interstate access by allowing for higher density land uses
- Preservation of publicly owned rights-of-way within the study area
- An audit of existing guide and regulatory signs on I-71 within the study area
- Coordination with planned utility improvements within the study area
- Accommodation of potential transit corridor if access modifications are implemented
- Conduct an Economic Impact Analysis to provide information on how improved interstate access may influence economic conditions within the study area.

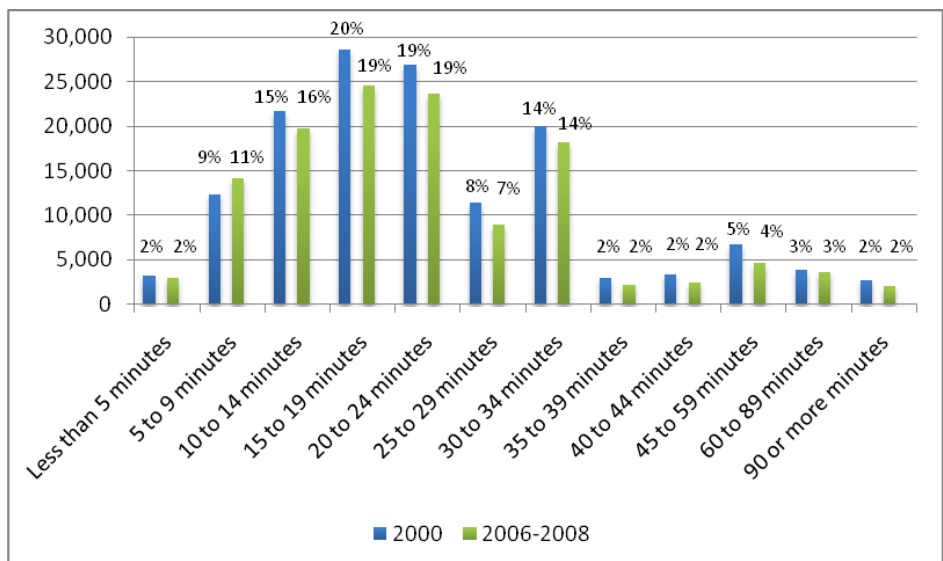
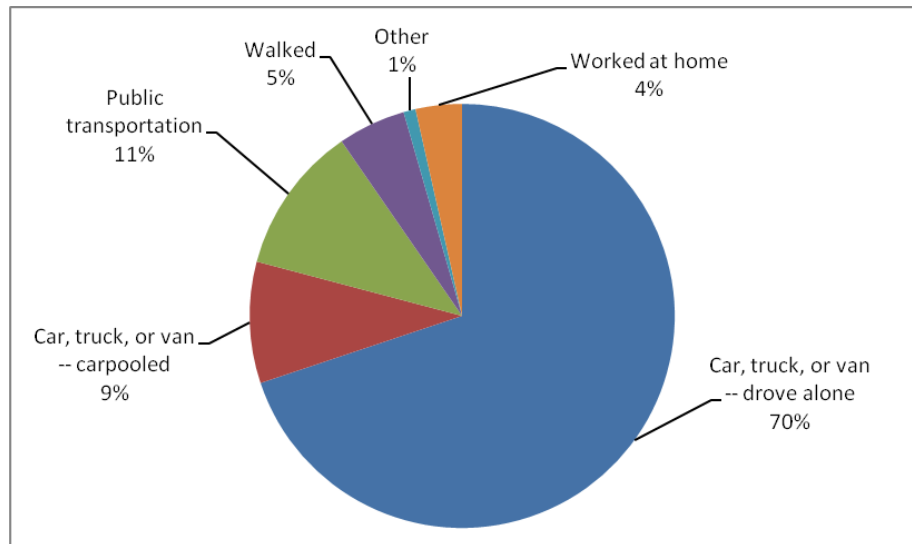
Motorized Vehicular Transportation

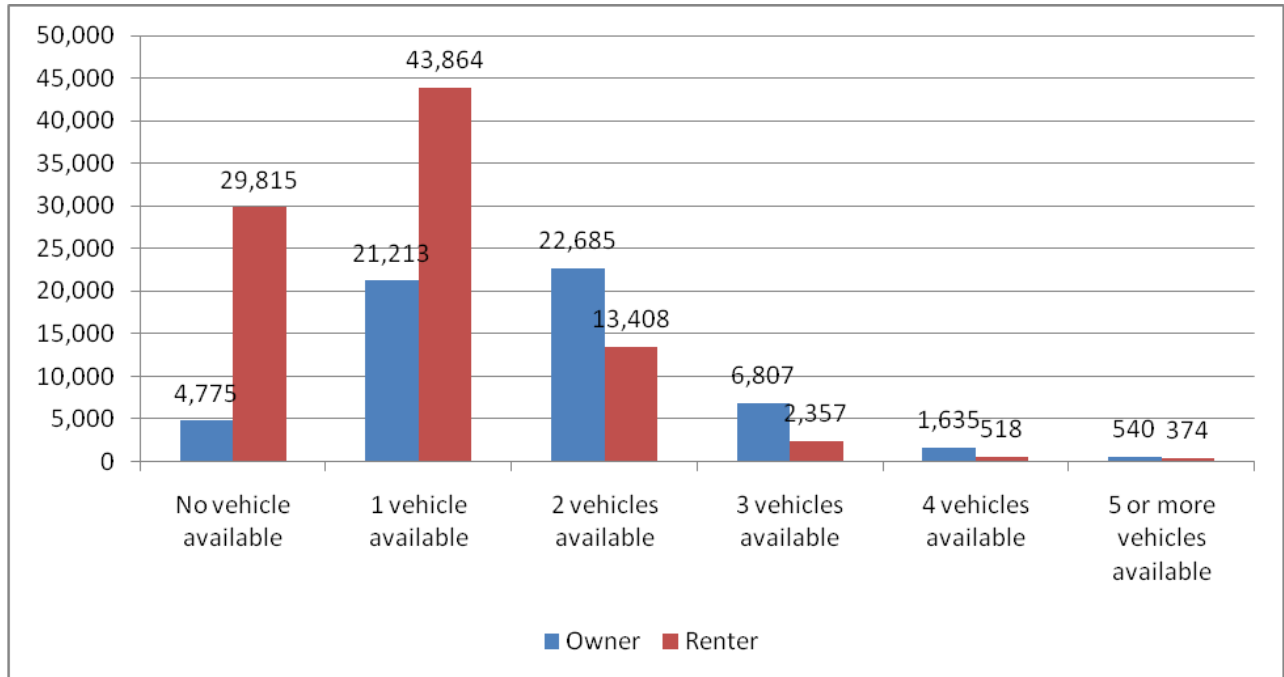
Automobiles are the common form of personal transportation. To ensure that cars are able to safely and efficiently navigate the City, it is the city's responsibility to manage and maintain much of Cincinnati's transportation infrastructure, including its roadways, bridges, viaducts.

The automobile is the most common form of transportation to work in Cincinnati. According to the 2006 – 2008 American Community Survey (ACS) nearly 70% of all workers aged 16 years or

older drove to work alone in a car, truck or van. Only about 11% used public transportation, and only 9% carpooled. Approximately 5% walked to work.

Approximately 54% of Cincinnatians have a journey to work that lasts between 10 and 24 minutes in length. Between the year 2000 and the years 2006-2008 that percentage did not change. The mean travel time to work is approximately 21.7 minutes.





Of Cincinnatians that own their home, nearly 92% have access to at least one vehicle, with 55% having access to two or more vehicles. Of those who rent, 67% have access to at least one vehicle, with only 19% having access to two or more.

Street Classifications

The through street system in the City of Cincinnati has been subdivided by the Department of Transportation and Engineering into the following City Classifications:

Class 1 – Expressways/Freeways

- A divided arterial highway for through traffic, with full or partial control of access, generally with grade separations at major intersections

Class 2 – Arterial State and Federal Highways

- Any road bearing a state or federal route number

Class 3 – Principal Arterial Streets

- A roadway used primarily for through traffic, usually on a continuous route, not having access control.

- Any roadway carrying over 13,000 VPD (vehicles per day) throughout a length of at least three miles.
- Any roadway fitting into the principal arterial pattern and carrying over 8000 VPD.
- Any roadway carrying less than 8,000 VPD but essential to the continuity of the principal arterial pattern

Class 4 – Minor Arterial Streets

- Any roadway carrying over 8,000 VPD.
- Any roadway carrying fitting into the minor arterial pattern and carrying over 3,000 VPD.
- Any roadway carrying less than 3,000 VPD but essential to the continuity of the minor arterial pattern.

Class 5 – Collector Streets

- Any roadway carrying over 3,000 VPD.
- Any roadway carrying between 1,500 and 3,000 VPD and is essential in the collector pattern.
- Any roadway on the federal aid system not included above.

Bridges

A bridge is defined as “Any structure, including supports, of 10 feet or more clear span or 10 feet or more in diameter on, above, or below a highway.”

There are a total of 225 bridges in the City of Cincinnati, which can be divided into the following seven categories:

1. City (DOTe) Bridges (61 bridges): Vehicular and pedestrian bridges owned by the City and maintained by DOTe.
2. County Bridges (26 bridges): Vehicular bridges within City limits that support improved roads which are of general and public utility running into or through Cincinnati. By contractual agreement with Hamilton County, DOTe maintains these bridges. Hamilton County funds work performed on these bridges.
3. Ft. Washington Way Bridges (5 bridges): Bridges over Ft. Washington Way constructed with the Ft. Washington Way reconstruction project. DOTe shares maintenance responsibility for these bridges with ODOT.
4. City (Skywalk) Bridges (20 bridges): Central Business District pedestrian bridges on the skywalk system owned by the City. The Department of Public Services and property owners adjacent to the bridges maintain these bridges. Generally, DOTe is responsible for the major rehabilitation of these bridges.
5. City (Other) Bridges (11 bridges): Unique City owned structures located on, over, or under a roadway that technically qualify as bridges. Various City agencies including: Stormwater Management Utility, the Park Board, and the Recreation Commission maintain these bridges.
6. Railroad Bridges (51 bridges): Railroad bridges that cross over or under public roadways. CSXT, RailAmerica, Norfolk-Southern, and SORTA own and maintain these bridges.
7. Private Bridges (51 bridges): Privately owned vehicular, pedestrian, and utility bridges that cross over or under public roadways. The applicable private owners maintain these bridges.

The Department of Transportation and Engineering (DOTe) is the city agency primarily

responsible for inspecting, maintaining, and improving the transportation system within the City of Cincinnati. The Bridge Program is the specific program within DOTe charged with the responsibility of maintaining the bridges within this transportation system.

In conformance with state law, every bridge in Cincinnati is inspected on an annual basis. Following the completion of each annual bridge inspection cycle, a report is issued by DOTe to inform City Council of the condition of the bridges in Cincinnati.

Parking

The City’s Zoning Code regulates parking for all uses that are established, enlarged, extended, or moved. The Code regulates not only the number of parking spaces that must be provided, but also the location of parking. For instance, front yard parking is prohibited in certain residential districts. The number of parking spaces required is generally based on either the number of dwelling units (for a residential use), the number of classroom seats (for educational uses), the number of beds (for medical uses) or the square footage of the facility, for most other types of uses.

Public parking is also provided throughout the City. The City of Cincinnati maintains and manages:

- Approximately 1,800 single space parking meters downtown
- Approximately 3,900 single space parking meters in other parts of the city including neighborhood business districts
- Seven City-owned parking garages and five surface lots with approximately 4,900 parking spaces
- Twelve multi-space pay-and-display units

Neighborhood Street Calming Program (NSCP)

The Neighborhood Street Calming Program (NSCP) was established in 1995 in an effort to reduce speeding and cut-through traffic on residential streets within the City of Cincinnati. While the NSCP considers several options for street calming, speed humps have been the most common device used. Speed humps have

generally been effective at reducing speeds and enhancing the livability for residents of the street.

The NSCP includes a process for accepting requests for street calming, analysis of existing conditions, and requirements for documenting community support, to ensure that speed humps will improve an actual speeding problem without adversely impacting other activities.

The analysis includes a process to determine suitability and rank the streets based on volume of traffic, percentage of vehicles traveling 5 mph over the speed limit, accident history, emergency vehicle use, and proximity to pedestrian-generating facilities such as schools and parks. The physical configuration of the street such as its grade (steepness), width, curvature, and parking placement is also a key consideration.

All street calming projects are subject to a consensus building process that includes input from the Fire Department, the Community Council, a

post card survey of the directly affected residents and businesses, and a review/approval by City Council.

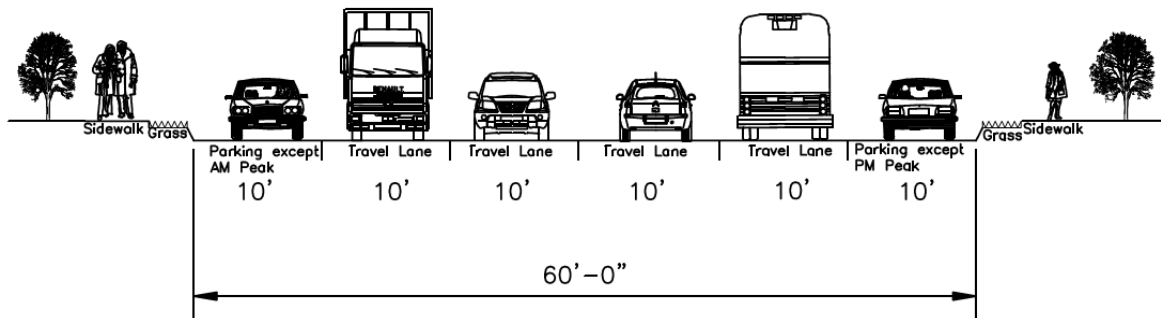
Complete Streets Policy

A *Complete Street* is a street that is safe and accessible for all. A complete street allows pedestrians, bicyclists, motorists and transit riders of all ages and abilities to share the road safely.

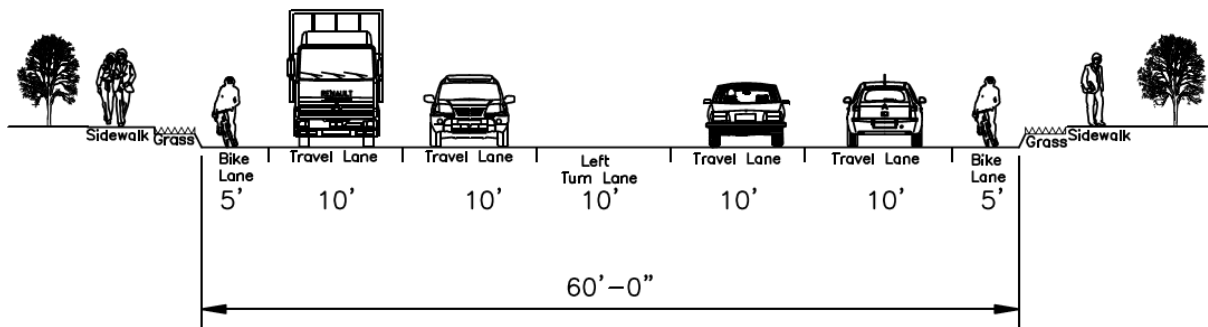
One way to convert a street to a Complete Street is to propose a road diet, which is a term used for projects that reduce the number of lanes on a street. For example, the street might go from having two travel lanes in each direction with an additional travel lane during peak hours, to having two travel lanes in each direction with a center turn lane and bicycle lanes. This type of design is considered to calm traffic and improve the road for motorists, pedestrians and bicyclists.

Example:

Existing Striping



Proposed Striping



Transit

Metro/SORTA

The Southwest Ohio Regional Transit Authority (SORTA) is a tax-supported, independent political subdivision of the State of Ohio and is a government entity. SORTA operates Metro fixed-route bus service and Access paratransit service for people whose disabilities prevent their riding Metro buses.

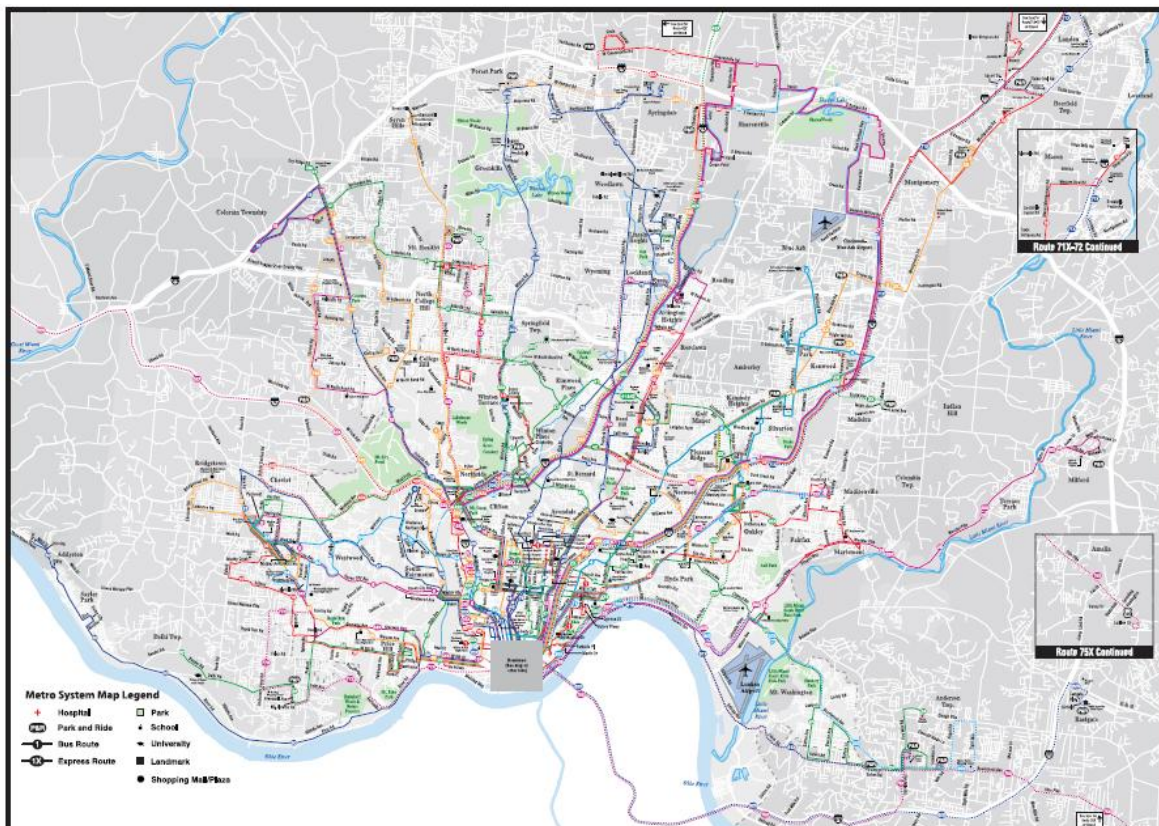
Metro is Southwest Ohio's fixed route bus service. Providing more than 22 million rides per year, Metro brings approximately 20% of downtown Cincinnati's workforce into the city. Metro service operates 365 days a year and serves Hamilton County residents along with some commuter trips from Clermont, Warren and Butler counties into Cincinnati.

Metro operates from approximately 4 a.m. to 1:30 a.m. each and every day out of two operating garages (Bond Hill and Queensgate).

Metro's fleet includes 390, 40-ft. buses. All buses have bike racks on the front and almost all have wheelchair lifts or ramps and security camera systems.

There are about 6,000-7,000 Metro bus stops. Metro looks for locations that offer safety and customer convenience. However, within the City of Cincinnati, the city's traffic engineers make the final decision about bus stop location, in consultation with Metro. The bus stop shelters are owned and maintained by a private company that works with Metro. Metro is not affiliated with companies that install benches or newspaper boxes at bus stops.

Government Square, which is located on Fifth Street between Walnut and Main, serves as Metro's downtown transit hub. The Government Square area serves 15,000-20,000 customers per day. The Ohio Chapter of the American Institute



of Architects awarded Michael Schuster Associates, Inc., a Cincinnati-based architectural design firm, the high-level Honor Award for Urban Design and Planning for the design of the 2006 renovation of the Government Square transit center.

Residents of Hamilton County who are unable to ride Metro's fixed route service because of physical or mental disability have the option of riding ACCESS, Metro's paratransit service. Access is a shared-ride public transportation service, providing curb-to-curb transportation for people whose disabilities prevent them from riding Metro buses.

The Americans with Disabilities Act of 1990 (ADA) was passed to remove the physical barriers that have kept persons with disabilities from fully using Metro. The ADA states that Metro's regular bus service should be the primary means of public transportation for everyone, including people with disabilities. Under the ADA, Access serves as a "safety-net" for only those persons who do not have the functional capability to ride Metro buses.

Metro does not operate in Northern Kentucky, where transit services are provided by the Transit Authority of Northern Kentucky (TANK). Metro and TANK work cooperatively to provide regional transportation and transfers between the two systems occur in downtown Cincinnati.

Source: www.go-metro.com

Streetcars

Streetcars are a mode of public transit that operate along a fixed rail guideway embedded within the surface of the roadway. Streetcars run with traffic and utilize a single overhead catenary wire.

The streetcar is proposed to complement Cincinnati's bus system. Light rail and other traditional modes of transit primarily serve long commuter trips, but the Cincinnati streetcar will function as a local urban circulator expanding the "walkability" of an area. Streetcars are also smaller, lighter, and less expensive than light rail.

Phase I of the Streetcar Project includes 4.9 miles of one-way track with 7 cars consists of the Downtown circulator and connector to Uptown.

Downtown/OTR Alignment

This alignment will connect the Banks to Findlay Market and the Over-the-Rhine Historic District.

Uptown Alignment

The initial Uptown Connector will connect the downtown circulator with the area around the University of Cincinnati and future phases will allow the streetcar to extend further into the streets of Uptown. Additionally, development of a proposed transit facility in the Uptown area will connect both local and regional modes of public transportation.

Prohibitively steep grades on many of the potential alternatives have focused the decision on the alignment "up the hill" via Vine Street. Modern streetcars are generally limited to a maximum grade of 9%. Grades on the alternatives evaluated are as high as 11.9% in some cases.

Person-Powered Transportation

Pedestrian

Sidewalk Safety Program

The Cincinnati Municipal Code (CMC) §721-1-5 defines sidewalks as "...the portion of a street lying between the established or presumable curb line and the adjacent property line; the portion set aside for pedestrian use." Generally, sidewalks are made up of three elements: walk, driveway, and sod space. These components vary in width and location. Business districts normally do not have sod space and may have fewer driveways. Unimproved streets typically do not have walks.

The type of walk and driveway construction varies. For example, in the Central Business District, structural slabs cover basement areas extending into the public right-of-way; recent construction has placed a "topping" of clay pavers on these slabs. In neighborhood business districts, unistone pavers have recently been used in lieu of concrete. However, the vast majority of walks and driveways are of plain concrete construction.

While no comprehensive inventory currently exists, it is estimated there are 1,700 miles of improved sidewalk space (i.e., frontages with paved walk and driveway surfaces) within the City of Cincinnati. To bring the size of these facilities into perspective, it is estimated that there are 2,000 acres of walks, sod space, and driveways throughout the City. This compares with the 1,472 acres of Mt. Airy Forest, the City's largest park.

Based upon current replacement costs, the value of these improvements exceeds \$215 million. On average, it costs more than \$130,000 to construct one mile of walk and driveway on each side of a street. Due to many factors, these facilities must be periodically replaced to promote public safety.

Responsibility for constructing and maintaining sidewalk space is shared by property owners and the City. According to CMC §721-147, abutting property owners are responsible for maintaining the sidewalk space and keeping it free from nuisance. In cases where the sidewalk space is not

properly maintained, CMC §721-149 directs that abutting property owners be notified of necessary corrective action. CMC §721-163 makes owners of abutting property responsible for funding construction and maintenance relating to sidewalks. The City Engineer is responsible for supervising sidewalk construction, reconstruction or repair.

City Capital funding is used to repair walks at intersections, bus stops, and abutting property controlled by General Fund City agencies. Capital funding is also used to construct curb ramps to improve accessibility.

Hillside Steps

There are nearly 400 sets of City hillside stairways (not including those within the City Parks or Recreation properties) which serve the residents, visitors and commuters in the City of Cincinnati. The hillside steps are an integral part of our city's transportation system and provide a pedestrian-friendly connection to some areas of the City which are quite remote.

Besides the day-to-day use of the steps for the travelling public, the steps offer recreational uses as well. During the lunch hour and after work hours it is not unusual to see joggers and hikers utilizing the stairway system as part of their exercise routes. Also, the hillside steps are a point of destination for many visitors of the City. The public hillside stairways are recognized by many tourists as a unique feature of the City of Cincinnati.

The City of Cincinnati has developed the City Hillside Step Information System as a means of maintaining an inventory of each set of steps and also to track inspection and repair information. Also, as part of the City Hillside Step Information System, the type of facilities in the vicinity of the steps is documented. Facility types noted are: Business, Church, Metro Bus Stop, Park, Recreation, School, Residences or Other. One set of steps may serve several of the facility types.

Wheelchair

The Americans with Disabilities Act (ADA) states that no qualified person with a disability may be excluded from participating in, or denied the benefits of, the programs, services, and activities provided by state and local governments due to a disability. The ADA Standards for Accessible Design refer to the requirements necessary to make a building or other facility architecturally (physically) accessible to people with disabilities.

You may hear the acronym ADAAG used to refer to the ADA Standards. ADAAG stands for the Americans with Disabilities Act Accessibility Guidelines, which are issued by the United States Architectural and Transportation Barriers Compliance Board. ADAAG is not the same as the ADA Standards. The Department's regulations must be consistent with the ADAAG, but the ADAAG contains guidelines, not enforceable standards.

Curb ramps are a small but important part of making sidewalks, street crossings, and the other pedestrian routes that make up the public right-of-way accessible to people with disabilities. A curb ramp is a short ramp cutting through a curb or built up to it. If designed and constructed to be accessible, a curb ramp provides an accessible route that people with disabilities can use to safely transition from a roadway to a curbed sidewalk and vice versa. Where and when curb ramps are required depends on the location and the age of streets and sidewalks.

In Cincinnati, there are currently about 7,600 street-street intersections. There are approximately 15,000 existing curb ramps. A number of the streets do not have curb and/or concrete walks. As new streets are built, existing streets are improved and sidewalks installed, the number of curb ramps will grow.

Cincinnati's current policy is that sidewalks are required along both sides of each and every public street except for rare occasions, approved by the City Engineer. The cost of implementing ADAAG is to be paid for as a project cost. There are no

separate ADA funds or stand alone projects at this time.

Bicycle

Metro

Each Metro bus is equipped with a front-mounted bike rack. Each rack holds two bikes.

City of Cincinnati Bicycle Transportation Program

The mission of the City of Cincinnati Bicycle Transportation Program is to make bicycling an integral part of daily life in Cincinnati, so that persons of all ages and abilities utilize bicycles for all types of trips.

The Bicycle Program has implemented several projects, including striping 8 sets of bicycle lanes, installing over 250 bike racks, creating 11 miles of bicycle trails/paths, posting 23 miles of signed bicycle routes, upgrading 231 miles of streets with bike friendly stormwater inlets, and painting 45 shared lane markings, or "sharrows."

Bike Lanes

A bike lane is a portion of the roadway which has been designated by striping, signing and pavement markings for the exclusive use of bicyclists. Note the bicycle symbol, the arrow above, and the solid white line to the left of the lane.

Sharrows

Sharrows (shared lane markings) are pavement markings installed within shared travel lanes. The markings (a bike & chevron) remind motorists that they should expect to see and share the road with cyclists. In addition, the sharrows help cyclists position themselves within the lane so as to avoid being hit by suddenly opened car doors.

Wide Curb Lanes

A wide curb lane is a shared lane that is sufficiently wide for motor vehicles to pass bicycles in the same lane without needing to change lanes or crowd the cyclist. There are no pavement markings or striping used to designate wide curb lanes. The recommended travel lane width for shared use by motor vehicles and bicycles is 14 feet.

Bike Routes

A bike route is a shared roadway which has been designated with signing as a preferred route for cyclists. The green bike route signs provide directional information for cyclists and remind motorists that they may see cyclists on the roadway.

Unmarked Shared Roadways

Most streets in Cincinnati that do not include specific bicycle facilities like bike lanes or sharrows are considered "unmarked shared roadways." Such roadways are open to both bicycle and motor vehicle travel, but do not include special pavement markings for bicycles.

Off-street Paths or Trails

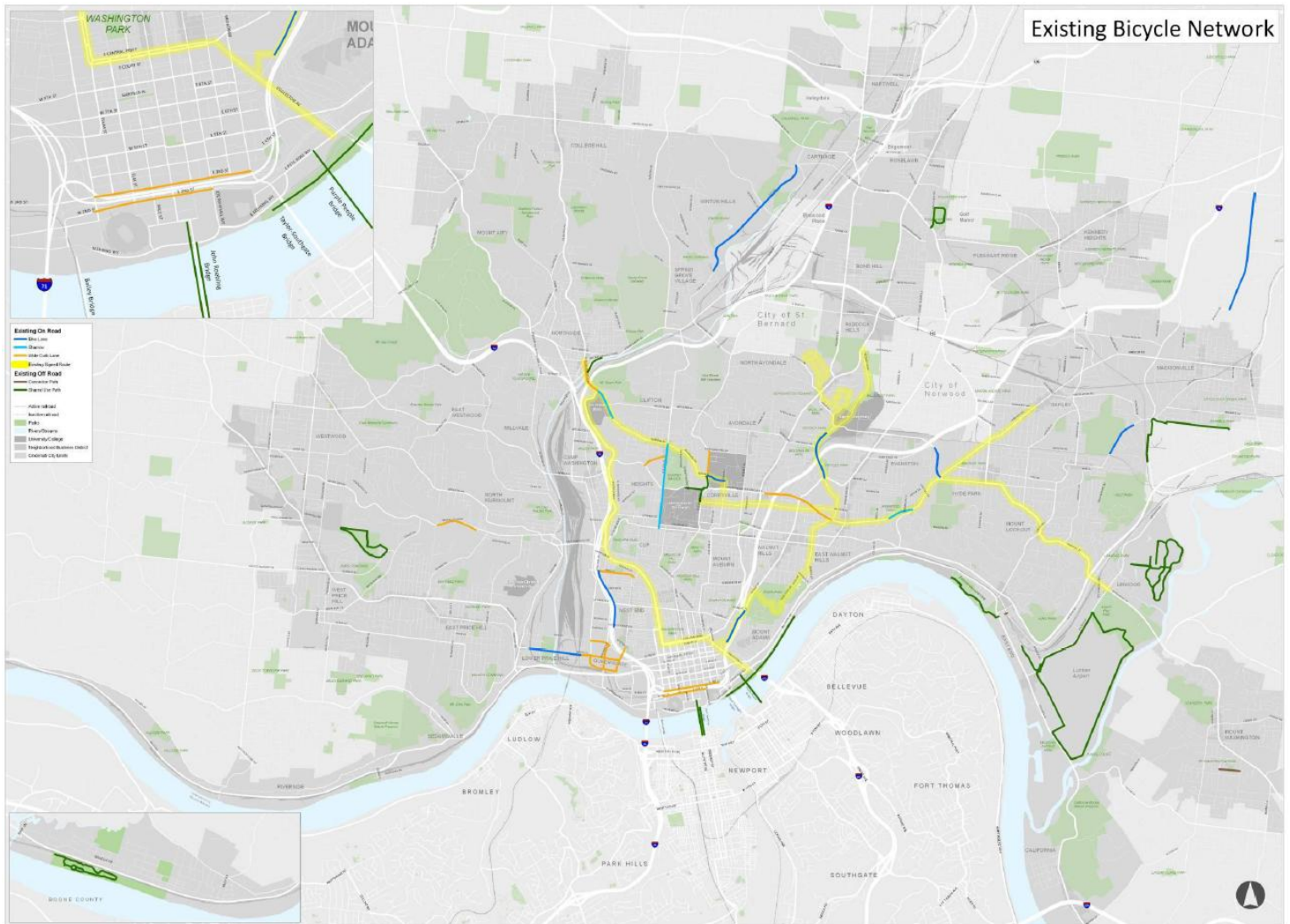
Off-street paths, or multi-use trails, are paved paths separated from the road for bicyclists, walkers, runners, and in-line skaters (i.e. the Ohio River Trail).

Share the Road Signage

Share the Road signs are installed on roadways that are preferred routes for cyclists. The signs remind motorists to expect to see cyclists on these roads, and remind both cyclists and motorists to be courteous to one another and share the roadway safely.

Bike Racks

Over 250 bike racks have been installed throughout the City at shops, schools, restaurants, libraries, pools, and in many business districts.



Cincinnati Bicycle Transportation Plan

The Cincinnati Bicycle Transportation Plan (CBTP) is a first step toward making Cincinnati a bicycle-friendly city. It assumes that current low bicycling rates are in part due to inadequate bicycle infrastructure, and a perception that the streets in the city are not comfortable for cyclists, especially for those who are novices or less-skilled. The CBTP not only identifies a network of recommended bicycle facilities and accommodations that will build on the facilities already in place, but addresses street management and maintenance issues. It also identifies needed

programs in the areas of bicycle safety education, encouragement and enforcement of traffic laws.

This plan will guide Cincinnati in creating an ongoing bicycle transportation program, by:

- mapping out an integrated on-street and off-street bikeway network,
- describing the bicycle facilities that will make up the network,
- addressing bicycle parking needs,
- stressing safety education for motorists, bicyclists and youth,
- providing an action plan for encouragement and enforcement,

- recommending transportation and development policy changes,
- identifying how bicycle use should be integrated into new rail transit systems that are being planned,
- providing guidance regarding street maintenance and management practices.

Over the next five years, an aggressive program of on-street bicycle transportation improvements (~90 miles) will create Phase I of a city-wide network of bicycle facilities. In the first 18 months, this will include 14 miles of high priority facilities on Spring Grove Avenue, Madison Road and Riverside Drive. The full scope of the plan calls for 343 miles of on-street bicycle facilities to be implemented in three phases, over a fifteen year period, including: 116 miles in Phase II (2016-2020) and 122 miles in Phase III.2

The *Near Term* phase totals 14 miles and includes a combination of bike lanes and sharrows on Spring Grove Avenue (3.7 mi.), Madison Road (6.1 mi.) and Riverside Drive (3.9 mi). Phase I overall, includes a wide variety of facilities that will create a continuous and usable network of improvements (see Map B on page 27).

The three implementation phases encompass the following timeframes:

- Phase I: 2010-2015
- Phase II: 2016-2020
- Phase III: 2021-2025, includes long term recommendations as well as projects for which the timing cannot now be accurately predicted.

Formal review of this plan should be conducted in 4 to 6 years, at which time an assessment of Phase I implementation can be made. Additionally, Phase II activities can be reviewed for continued relevance and be reprioritized as appropriate. By this time, new needs are likely to have emerged, and new strategies and initiatives can be formulated and adopted.

Implementation Policy

Due to current budgetary limitations, the City will first look to integrate bicycle improvements into roadway improvement projects that are already funded or in the design process. Opportunities

created by projects in the pipeline typically need a small increase in budget or minimal design modifications to integrate bicycle improvements.

However, exclusive use of this approach can result in a patchwork of improvements that are not very useful for cyclists because the limits of the improvement project have been defined by factors other than bike plan implementation. For this reason, the DOTE will also factor bicycle network needs into existing criteria that is used to prioritize and select future road improvement projects. Additionally, the city will begin to undertake projects whose sole purpose is to complete or extend existing or new bicycle facilities to provide an uninterrupted set of accommodations that make a route fully useable for cyclists.

Near Term Implementation (June 2010 – December 2011)

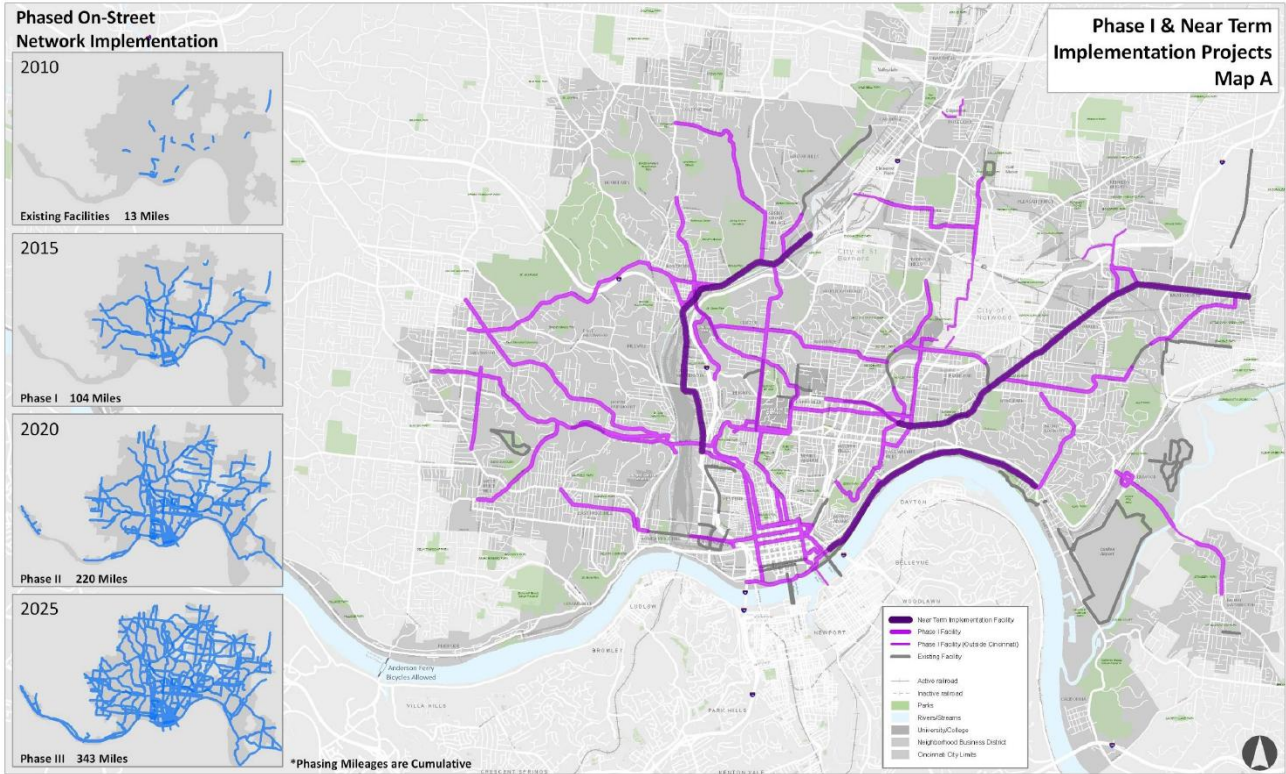
To further underscore the importance of putting this plan into action, the city will implement three key projects within the next eighteen months that will move plan implementation forward in a timely fashion; together they make up about 14 miles of the Phase I Actions:

- Spring Grove Avenue from Northside to the West End.
- Riverside Drive from the Purple People Bridge to Delta Avenue.
- Madison Road from Madisonville to East MLK Jr. Drive.

Route Implementation Priorities and Phasing

A primary purpose of phasing implementation is to identify a set of continuous improvements, such that when each phase is complete, a functional route system that serves a wide variety of bicyclists will be in place. Having each street segment in the Network assigned to a phase will also assist the Council and DOTE with budgeting and timing of funding proposals, which will be necessary for certain types of projects.

Source: www.cincinnati-oh.gov/bikes/bike_plan.html



Intercity Transportation

Intercity Passenger Rail

3C “Quick Start” Passenger Rail Plan

Ohio’s 3C “Quick Start” Passenger Rail Plan will connect Cleveland, Columbus, Springfield, Dayton, Riverside, Sharonville and Cincinnati with 79 mph service. Public input, as well as expert technical analysis, is helping the Ohio Rail Development Commission (ORDC) and the Ohio Department of Transportation (ODOT) progress toward the safest, most efficient and cost-effective route for start-up service.

ORDC/ODOT is working with local communities on creating convenient and timely “last mile” connections for travelers at station stops. Local transit systems have been at the planning table and have expressed their intention to coordinate local transit service with rail service. Other connections could include links to urban passenger rail systems, airports, taxis, rental cars, bicycles and bike trails. Where those connections do not currently exist, ORDC/ODOT is encouraging their development.

ODOT and ORDC will be working with both the freight carriers and/or Amtrak as well as the public to further discuss the most convenient schedule to maximize ridership.

Intercity Bus

Cincinnati is served by two intercity bus lines: Greyhound Lines, Inc. and Megabus.

Greyhound Lines, Inc.

There is a Greyhound Bus Station located at 1005 Gilbert Avenue in the neighborhood of Pendleton, near downtown Cincinnati. They are the largest provider of intercity bus service in North America, serving more than 2,300 destinations with roughly 13,000 daily departures. At this point in time, the Cincinnati Greyhound Bus Station is planning on staying at its current location with the Casino development occurring adjacent to it.

Megabus

Megabus is an Internet-based company that offers intercity travel for as low as \$1. They travel between 28 major cities in the Midwest and Northeast regions of the United States. There is a stop in Cincinnati at 4th and Race Streets in downtown. Departing from Cincinnati, passengers can travel to Columbus, Indianapolis, or Chicago, and take a transfer if necessary from those locations.

Airports

Lunken Airport

Lunken Airport was established in the 1920s in a location only about four miles from downtown Cincinnati. This airfield was used for lucrative airmail routes and military hangars for the reserve squadron. Lunken Airport was purchased by the City of Cincinnati in 1928 and began operating it with long-term plans to become the city’s main airport.

The early beginnings of American Airlines also started at Lunken in 1929 with passenger flights to Chicago. Lunken soon became the center of aviation in Cincinnati with increasing airline traffic and the periodic appearance of famous celebrities. 1929 saw 29,059 flights and 8,528-recorded passengers making their way through Lunken Airport.

The airfield's location in a flood plain was one geographical disadvantage and heavy fog and surrounding hilltops were others. All these factors put a damper on serious thought to expand Lunken airport into a major airport. Some civic leaders looked to the Blue Ash airfield location as the site of Cincinnati's major airport. Politicians and civic leaders engaged in internal feuding trying to decide where the main Cincinnati airport should be located. Meanwhile, politicians in Northern Kentucky, sensing a great opportunity at hand, met with Federal authorities and secured Federal funding to build an airfield in Northern Kentucky (CVG).

In 1946, the major airlines began to pull out of Lunken and started operations at the "Greater Cincinnati Airport" located in Northern Kentucky. Lunken continued expansion with corporations establishing their flight operations out of Lunken in 1951. To date, most Cincinnati Corporations base their flight departments at Lunken. Throughout the years, it became known as a "reliever" airport, handling most general aviation traffic operations in the Cincinnati area. Admittedly, a small airplane operating at CVG is like riding a bicycle on I-75. Lunken also had its fair share of celebrities over the years including The Beatles and most recent US presidents. Lunken airport is presently a 2000-acre airfield for general and corporate aviation, and attempts are made to bring in regional airlines and increase size limits for larger aircraft to land at the airport.

Source: www.cincinnati-oh.gov/transeng/pages/-7207/

Cincinnati/Northern Kentucky International Airport (CVG)

From a single terminal in 1947, CVG has grown into a major international gateway, serving as many passengers today in one year as it handled in its first two decades. CVG is also a major driver of the local economy, helping to support more than 50,000 tri-state jobs.

The airport's location in Boone County grew out of the need to find a flood-free location. Flooding and frequent fog had long plagued Cincinnati's Lunken Airport, which is located in the river valley east of Cincinnati. The new airfield in Boone County opened on Aug. 12, 1944. Three days later, B-17 bombers began making practice landings and takeoffs. By this time, WWII was winding to a close.

CVG saw modest growth from the late 1940s through the 1950s. With the dawn of the 1960s, jets brought air travel to the masses as planes grew larger, faster and more comfortable. Delta was the first to introduce commercial jet service at CVG. Over the next 10 years, annual traffic numbers would double to more than two million.

Comair started at CVG in 1977 with two small planes flying to Evansville, Indiana. After becoming a feeder carrier for Delta in 1984, Comair would grow to become one of the largest commuter airlines by the mid 1990s. Following airline deregulation in 1979, CVG began to experience growth unparalleled in its history. As a Delta hub, CVG would become a major international gateway -growing from 35 nonstop destinations to more than 120, including Europe and Canada.

In 1986, CVG underwent the largest single-day service increase in the history of aviation when Delta added 60 daily departures to its local schedule. Six months later, Delta added 21 more daily departures, pushing its CVG total to 126. CVG then became one of the nation's fastest-growing airports as the number of annual passengers doubled to more than 20 million. To minimize any negative impact from noise, CVG would spend more than \$100 million on airfield modifications, sound insulation and voluntary property acquisitions.

CVG peaked at a record 22.8 million passengers and 670 daily departures in 2005. 2006 brought many changes at CVG, as Delta began to down-size its hub. Today CVG offers nonstop service to more than 70 cities.

Source: www.cvgairport.com

Other

Public Vehicles

The City of Cincinnati Municipal Code regulates "Public vehicles" which are defined as a vehicle, other than a charitable non-profit transportation vehicle, by which individual service for compensation in the transportation of persons on the public streets is furnished or offered to be furnished. Public vehicles are classified as "taxicabs," "limousines," "handicapped livery vehicles," "tour vehicles," "animal-drawn carriages," and "pedicabs."

"Class A limousine" and "Class B limousine" mean any luxury type vehicle driven by a chauffeur.

A "Pedicab" is a three-wheeled public vehicle, used for securing passengers for compensation on the public streets, which is powered by a human being, and has separate seats for the operator and passengers.

A "Taxicab" is any public vehicle licensed to be used in securing or accepting any passenger or passengers for compensation, on the public streets, or on any public or quasi-public place, or accepts a passenger or passengers for compensation upon hail or request made on the public streets or on public or quasi-public places.

A "Handicapped livery vehicle" is a vehicle especially suited for transportation of handicapped persons who by reason of physical or mental infirmity cannot be transported on public mass transportation vehicles or in taxicabs, or who cannot drive their own automobile.

A "Tour Vehicle" is any vehicle, operating on a fixed route, with a fixed schedule, and charging a fee with the intent of providing passengers with a sightseeing tour or with the intent of providing passengers with the amusement of riding in a rare vehicle.

The Director of the Department of Transportation and Engineering is authorized to license and designate specific locations of place and time for

the use of stands for taxis, limousines, and animal-drawn carriages.

Other Tourism Vehicles

Duckboats board in Newport at Newport on the Levee and tours downtown Cincinnati and Northern Kentucky. This is primarily a form of tourism and entertainment, not a transportation function.

Recreational Boating

There are six marinas serving the Ohio River that are located in Cincinnati:

- Four Seasons Marina (East End)
- Rivertowne Marina (East End)
- Cincinnati Riverfront Marina (CBD)
- Riverview Landing Marina (Riverside)
- Mandy's Landing (Riverside)
- Mariner's Landing (Saylor Park)

Historical Modes of Transportation

Anderson Ferry

The Anderson Ferry has been in continuous operation since 1817 has three Ferries, Boone 7, Little Boone and Deborah A. It is located about 8 miles west of downtown Cincinnati, providing the only automobile crossing between the I-71/75 Brent Spence Bridge and the I-275 West Bridge. Anderson Ferry is located on River Road at the terminus of Anderson Ferry Road, which was once a dirt road leading to the ferry. The airport is located about three miles south of the ferry in Kentucky.

Source: www.andersonferry.org

Inclines

In the 19th Century, inclines were built to transport people from the basin area to the top of Cincinnati's hills. The inclines helped to develop some of Cincinnati's oldest, and earliest, suburbs, including, Mt. Adams, Mt. Auburn, Clifton, Coryville, and Price Hill. The inclines were "a combination of railway and elevator to ascend and

descend the slopes." The building of the inclines made the hilltops and the land beyond accessible to middle class residents. In addition there were elaborate houses at the tops of the Inclines so that those who lived in the basin could gain respite, even for an evening, from the pollution of the city.

There were five inclines built, the first opened in 1872 and the last one closed in 1948:

- Mt. Auburn (Main Street) 1872-1898
- Price Hill 1874-1943
- Mt. Adams 1874-1948
- Bellevue (Elm Street) 1876-1926
- Fairview 1892-1923

Source:

<http://www.nku.edu/~hisgeo/AtlasProject/#TheInclines>

Riverboats

Paddlewheel steamboats lined American rivers for over one hundred years from 1812 to the first decade of the Twentieth Century. The emergence

of the steamboat revolutionized river travel by allowing boats to carry cargo up-stream as well as down-stream. The steamboat's speed, grace and ability to oppose the river's current opened one most exciting and productive chapters in Cincinnati history. This change expedited the flow of goods up and down the Ohio River, making the Port of Cincinnati a principal center of river commerce. The Port of Cincinnati was a principal center of Ohio River steamboat operations in the 1850s. Boats brought imports into the Queen City with a value of almost \$65 million per year. Steamboat arrivals and departures in Cincinnati averaged more than 20 per day. The Ohio River has remained a working river, and the Port of Cincinnati is a point of comparative advantage over comparable cities in our region.

Three recreational riverboat companies still operate in the Cincinnati region. All three are located in Northern Kentucky.

Source: www.tallstacks.com;