

CHAPTER VIII

REGIONAL PLANNING EFFORTS

A. OVERVIEW

This chapter documents other relevant planning efforts undertaken as part of the on-going transportation planning processes at MVRPC, such as the periodic update of the Functional Classification System, the Dayton Regional Safety Initiative, the status of the Freight Transportation program, and the findings of recently completed or currently active Regional Transportation Studies and Projects.

B. FUNCTIONAL CLASSIFICATION

Approximately every ten years, MVRPC, in cooperation with ODOT, conducts a major review of the existing Functional Classification System following the urbanized area changes made by the Decennial Census.

According to FHWA, Functional Classification is the grouping of roads, streets, and highways in a hierarchy based on the type of service they provide. Type of service is defined by combinations of mobility and land access as follows:

- *Arterials* include those classes of highway emphasizing a **high level of mobility** for the through movement of traffic, with land access being a secondary function. Interstates and freeways represent the highest class of arterials.
- As their name indicates, *collectors* collect traffic from the lower class facilities and distribute it to the higher class facilities. Their function is divided **equally** between **mobility and land access**.
- *Local* streets are located at the bottom of the hierarchy, their **primary** function being to provide **access to adjacent land uses**.

Using these three major categories as the base, roads are then subdivided into rural or urban, for a total of 12 categories as shown in Table 8.1.

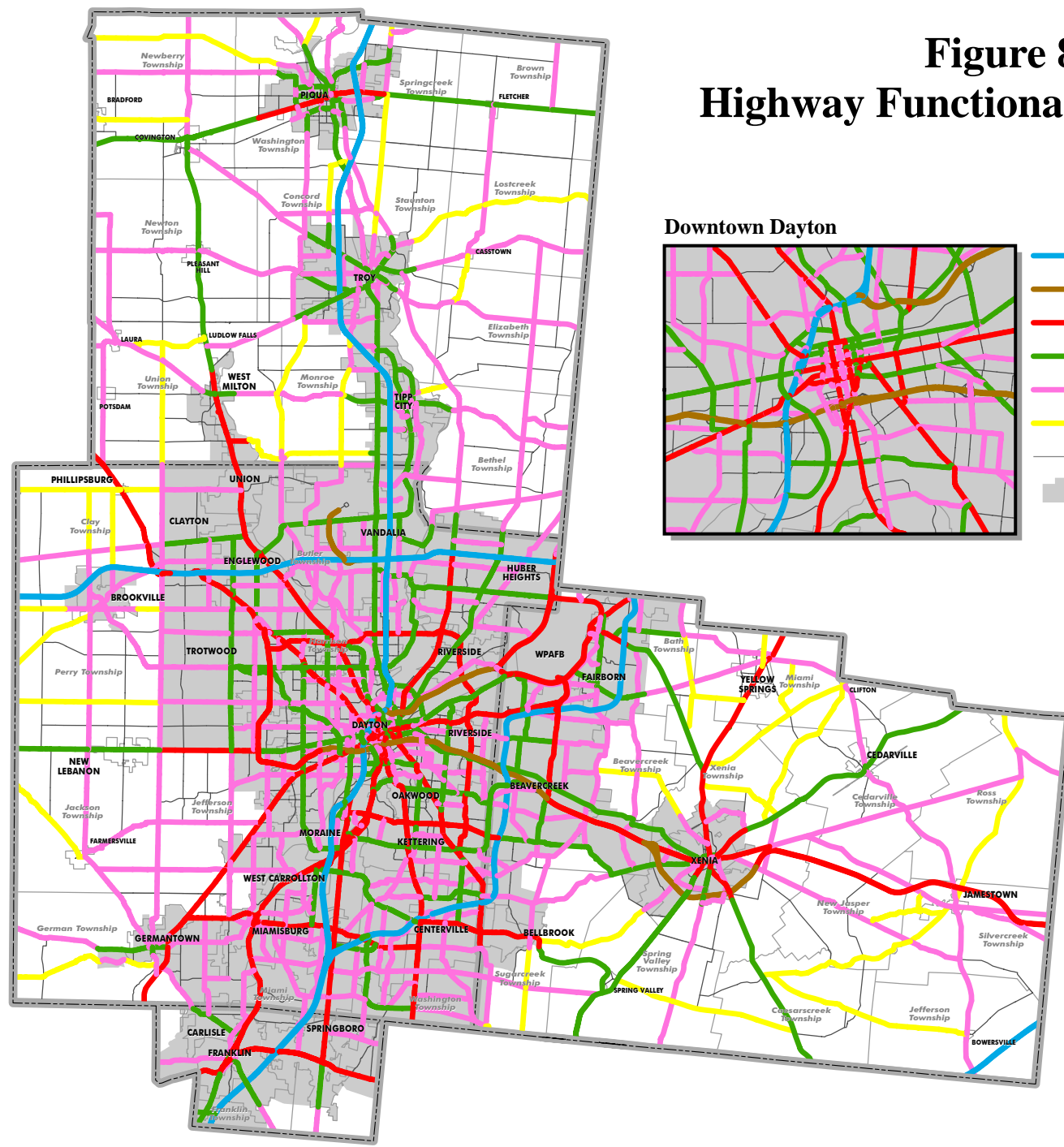
Table 8.1 — Functional Classification System

Rural	Urban
• Principal Arterial (Interstate)	• Principal Arterial (Interstate)
• Principal Arterial (Other)	• Principal Arterial (Freeway/Expressway)
• Minor Arterial	• Principal Arterial (Other)
• Major Collector	• Minor Arterial
• Minor Collector	• Collector
• Local	• Local

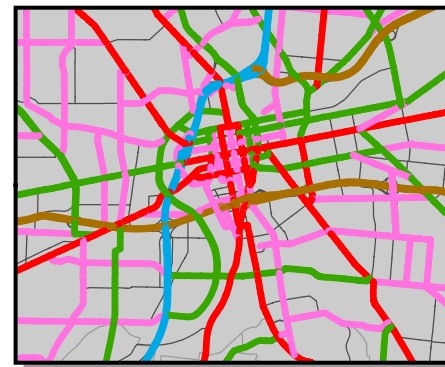
Source: FHWA

It should also be noted that only roadways that are functionally classified above the Minor Collector category are eligible to use federal funds, the exception being bridges on non-classified roads. MVRPC's regional functional classification system can be seen in Figure 8.1.

Figure 8.1 Highway Functional Classification



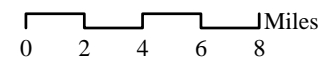
Downtown Dayton



- Principal Arterial - Interstate
- Principal Arterial - Freeway and Expressway
- Principal Arterial - Other Urban and Rural
- Minor Arterial
- Collector - Urban and Major Rural
- Collector - Minor Rural
- Local Roads
- Transportation Urbanized Area

Source: FHWA,
ODOT & MVRPC

May 2008



C. FREIGHT TRANSPORTATION

MVRPC recognizes the importance of freight transportation in contributing to the economic vitality of the Region. As such, MVRPC is committed to the integration of freight into the planning process and the Long Range Transportation Plan. One of the LRTP's transportation goals under the heading of Transportation Choices speaks to the importance of freight: "We will encourage a stronger multi-modal network in the Region to ensure that people and goods reach their destination safely, efficiently, and conveniently." In an effort towards achieving this goal, MVRPC invited freight representatives to the 2030 LRTP Update Work Group Meetings to encourage discussion and cooperation during the LRTP Projects and Programs development process. The remainder of this section highlights other freight-related planning efforts.

1. *Miami Valley Freight Movement Study*

Completed in May 2006, the Miami Valley Freight Movement Study was conducted to identify trends in the freight industry, develop a regional freight transportation system profile, and analyze regional freight movement. The Study took an in-depth look at freight movement in the Region by focusing on existing freight transportation modes (truck, rail, air, pipeline and intermodal connections), using capacity, performance, and usage data. Research was conducted through a review and synthesis of literature and available data at the local, state and national level; data analysis; and interpretation.

Study Findings

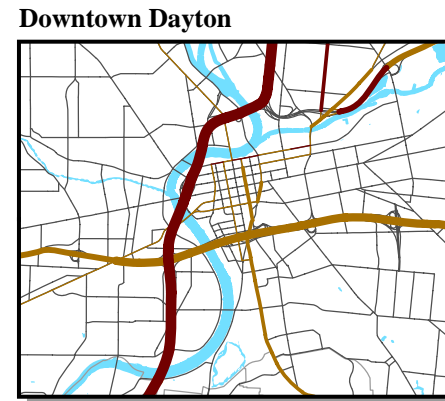
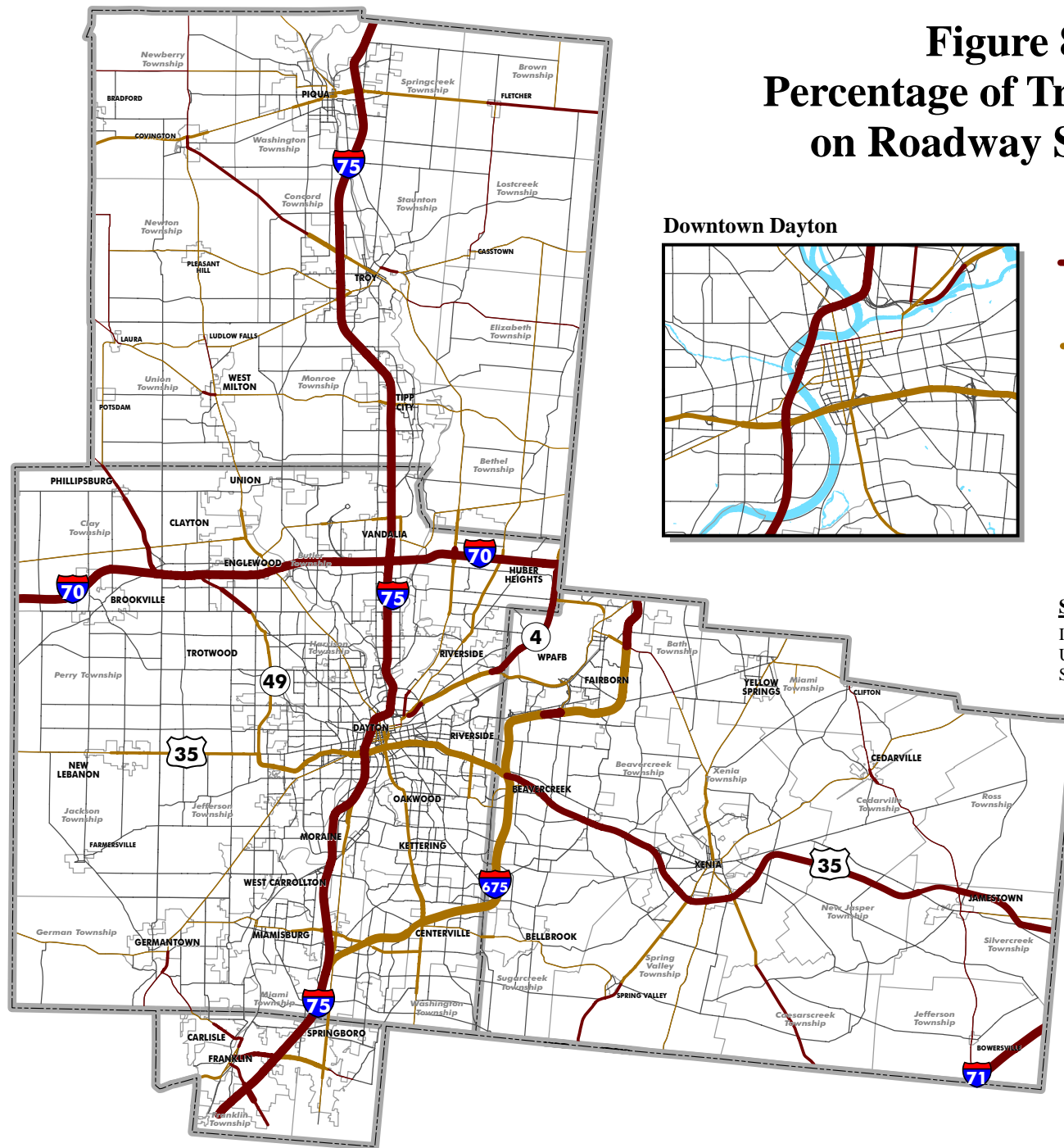
The Study identified the service sector as the largest economic sector in the Miami Valley both in terms of the number of establishments and employment, primarily generating small-truck local freight rather than large inter-city shipments. Despite a 52% decline in employment between 1970 and 2000, manufacturing continues to be one of the primary economic sectors of the Region. Most industrial establishments in the Region are located along rail and freeway corridors – particularly I-75 – and generate heavy freight activity.



Trucking was by far the dominant mode of freight transportation in the Miami Valley accounting for 94% of freight moving in, out, and within the Region. Additionally, trucks link the Region's rail and air facilities to most of the Region's individual companies and all of its consumers. Trucks also provide the only link to water freight services located in Cincinnati at the Ohio River. The trucking industry relies on the Region's highway and road infrastructure to safely and efficiently deliver its cargo and serve its customers.

An analysis of the volume of annual average daily truck traffic (2002-2004) on the Region's roadways, as shown in Figure 8.2 affirmed that the Region's two major highway corridors, I-75 and I-70, carry the largest amount of truck traffic in the Region. Most retailers have switched to 'just-in-time' stocking procedures, which eliminates in-store inventory, and demands reliable freight delivery (usually by truck). There are more than 300 major trucking, warehouse, and distribution facilities in the Region, the majority of which are located long the I-75 corridor, which also has the highest concentration of industrial zoning in the Region.






The Miami Valley Region is well served by other freight modes such as rail, air, and pipelines (see Figure 3.6). Two US Class I rail companies, CSXT and Norfolk Southern, operate in the Miami Valley area. The Region's supply of gas and oil is primarily met through the extensive underground pipeline network that links the Region to the entire nation. Dayton International Airport is the focal point of the Region's air transportation which until 2006 had a large air cargo presence that included a UPS hub as well as Federal Express and USPS cargo facilities.

Figure 8.2 Percentage of Truck Traffic on Roadway Segments



 Roadway segments with above state average truck volume percentage, by road type
 Roadway segments with below state average truck volume percentage, by road type

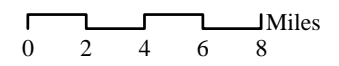
Truck Volume on Road Segments

-  0 - 500
-  500 - 1,000
-  1,000 - 2,500
-  2,500 - 5,000
-  5,000 - 21,000

State Averages - Percent Truck Volume

Interstates:	17.11%
US Routes:	10.48%
State Routes:	6.14%

Source: ODOT and MVRPC
May 2008



Intermodal traffic (rail-truck) is the fastest growing sector of the national rail industry. The Miami Valley is currently served from rail intermodal terminals in Cincinnati and Columbus. Some attendees at the Miami Valley Freight Workshop indicated that local truck-rail intermodal facilities were needed.

The application of intelligent transportation system (ITS) applications related to commercial vehicle operations holds the promise of greater efficiency for trucking in the Region. Consult Chapter IV for more information on ITS applications in the MVRPC Region.

A commodity flow analysis was conducted for the Miami Valley Region based on the TRANSEARCH database obtained from Reebie Associates through the Ohio Department of Transportation. The data was used to study internal, inbound, and outbound movements of freight in the Region by mode and origin/destination pair. The commodity flow analysis also included a comparison of weight and value for freight commodities.

The following points summarize the commodity flow analysis results:

- In 2003, over 48 million tons of freight, worth over \$136 billion was moved in, out, and within the Miami Valley Region.
- The Miami Valley area was a net exporter by both weight (12.2 million tons) and value (\$24.2 billion). In other words, the Region ships more goods than it receives annually (61% outbound versus 36% inbound).
- Truck is the dominant mode of transportation for all freight flows in the Miami Valley, representing 94% by weight and 84% by value. Rail freight was only 5% by tonnage but 13% in value, primarily due to transporting a significant volume of transportation equipment from and to the Region.
- The top commodity groups by weight that the Region imports include warehousing, agricultural, clay-concrete-glass, and food products. The top commodity groups that the Region exports include non metallic minerals, food, and warehousing products. Durable manufacturing, transportation equipment and machinery constituted the bulk of the tonnage value for goods traded in the Region.
- Intra-regional freight traffic is strongly dominated by three categories: clay-concrete-glass, warehousing, and other minerals, i.e., rock, aggregate and gravel.
- The Miami Valley Region's number one trading partner is collectively other counties in Ohio for both inbound as well as outbound commodities.

MVRPC's truck model was used to estimate intra-regional truck flows for years 2000 and 2030. Both estimates show that truck origins and destinations are concentrated along the I-75 corridor as well as the urbanized areas of the Region. By 2030, increased commercial vehicle activity is expected to follow the regional population and employments trends of out-migration away from the Region's central core to the outlying areas of Montgomery, Greene, and Miami Counties.

Miami Valley Freight Movement Workshop

Associated with the Freight Movement Study, MVRPC conducted a freight workshop in November 2005 composed of representatives of public and private stakeholders involved in the freight and goods movement industry in the Miami Valley Region. The purpose of the freight workshop was to solicit input from these stakeholders on regional freight challenges and opportunities, to begin the process of prioritizing those challenges and opportunities, and to identify ways to keep stakeholders informed of the status of major projects in the Region. The freight workshop intended to identify potential improvements to MVRPC's roadway and freight infrastructure.



The workshop participants were surveyed regarding their experience in moving freight within the Miami Valley. Participants were asked to identify critical challenges that arose while moving freight for each freight mode as well as intermodal connections. Each of the groups was asked to repeat the above exercise to identify freight transport issues that constrain economic development in the Region as well as challenges faced by large businesses (such as construction companies, manufacturing companies, wholesale producers and distributors) that rely on efficient freight movement for receiving and supplying goods. Public officials, chambers of commerce, and private industry members were all asked to

discuss and identify critical freight transportation constraints that hinder economic development and business location and operations in the Miami Valley area.

The respondents suggested various transportation system improvements to relieve congestion and to improve access. The majority of the improvements were suggested on large volume truck corridors in the Region including I-75, I-70, and US 35 as well as some secondary roads with large truck volumes such as Valley Street. Participants also recommended a coordinated effort by the airport authorities and regional leaders to fill the former UPS facility at the Dayton International Airport. Several workshop participants recommended implementation of ITS in the Region to improve traffic flow and manage the logistics of urban goods movement, and providing access to rail intermodal facilities in the Region.



Other miscellaneous recommendations included: developing a suitable high-volume cross-dock facility in the Region, providing adequate truck facilities such as rest areas and truck stops in Montgomery County, improving cooperation and partnering between the government and private sector, investing in large scale industrial sites in the Region, examining the impact of “hours of service” rules on the trucking industry specifically with respect to rest areas and parking, improving driver public education, increasing railroad capacity, and addressing residential encroachment on the Greene County airport through easements.

2. Study Conclusions

Empirical data analysis confirmed that, given existing freight levels and consumption patterns, trucks are moving smoothly and safely through intersections and interchanges on Miami Valley’s highways. A large contributor to this is the continued upgrade of design elements of older problem locations such as the I-70/I-75 interchange and the addition of a few key new highway facilities (Trotwood Connector, US 35 corridor extension in Greene County). While both freight and personal travel are projected to grow moderately in the future, proposed transportation improvements, including the I-75 corridor reconstruction in downtown Dayton and on-going I-70 widening, are expected to keep traffic flowing near the existing levels of service on the Region’s major freight corridors.

Discussions with regional freight stakeholders, coupled with review of existing data, suggest the potential for growth in certain freight movement categories, including development of an intermodal facility in the Region, as well as the integration of rail freight and passenger movement to leverage support, funds, and increased capacity.

D. AIRPORTS

The Miami Valley has a long aviation history since the ideas of two young bicycle shop owners became a reality with the first flight of the Wright-B Flyer in 1903. This tradition is continued today at Wright-Patterson Air Force Base, one of the premier aviation research and development centers in the world, and also at the Dayton International Airport, the United States' top 90-minute air market. In addition to the Dayton International Airport, the Region is served by four general aviation airports eligible for funding by the ODOT (see Figure 3.5). The Dayton International Airport is the focal point of the Region's air transportation network, including freight. The other airports in the Region are mainly general aviation airports that serve small private planes for personal and agricultural uses.

1. James M. Cox Dayton International Airport

Overview

The James M. Cox Dayton International Airport (DAY) serves as the primary commercial service airport for the MVRPC Region. The Dayton Airport is located approximately 11 miles north of downtown Dayton in Northern Montgomery County on 3,870 acres. The Dayton Airport is less than five minutes from the I-70/I-75 interchange and has three runways: a 10,900 foot primary, a 7,000 foot parallel with operations on a parallel runway when necessary, and an 8,500 foot crosswind runway. The dual runway system allows simultaneous operations on parallel runways with landings and departures on the crosswind runway.

There were ten airlines serving the airport in 2007, with Delta Airlines as the single largest passenger carrier. There are more than 85 passenger flights a day with nonstop service to 17 major domestic markets carrying 2 million passengers annually. In 2006, total passenger enplanements at the Dayton International Airport was 1,306,237. That is an increase of approximately 6.9 percent from total passenger enplanements in 2005. Chicago, Orlando, and Washington, DC, respectively, are the three largest origin and destination markets for the airport.

Airport Improvement Program

The Environmental Impact Statement Study (EIS), which was reviewing the runway extensions at Dayton International Airport (DAY), has been terminated due to the UPS (previously Emery/Menlo Logistics) cargo hub relocation and the resultant lowering of aircraft operations. The City of Dayton continues to pursue a strategy for re-use of the UPS Cargo Hub at Dayton International Airport. The empty passenger Concourse D in the Terminal Building is also being considered for re-use once a tenant signs a contract to utilize the facility. The new Air Traffic Control Tower has been designed by the Federal Aviation Administration (FAA) and began construction in 2007. Terminal Drive is being considered for an image improvement project which is to include new wayfinding, landscaping, lighting and pavement rehabilitation.

The City of Dayton recently submitted to the Federal Aviation Administration a revised Airport Layout Plan (ALP) schedule for Dayton International Airport. The plan's package, presented at flydayton.com, depicts three runway extensions for the long-term future. The runways will not be proposed for extension until passenger and/or cargo activity at the airport reach levels which justify the extension(s). The short parallel runway safety-area compliance project, which stays on the airport grounds, is being planned for construction in 2008.

2. *Greene County Lewis A. Jackson Regional Airport*

The Greene County Lewis A. Jackson Regional Airport (I19), situated 8 miles east of Dayton in Beavercreek, is undergoing numerous improvements to support increasing general aviation needs in eastern Montgomery County and Greene County. The airport underwent a significant expansion in 2005, adding runway and taxi length as well as service buildings and roads.

The 3,975 feet of paved runway at the airport was extended to 4,500 feet with FAA and local funding. Also recently completed is the lowering of one of 3 sets of DP&L powerlines on the west end, funded by the FAA and local monies. For the 12-month period ending December 15, 2006, the airport had 38,900 aircraft operations, an average of 106 per day, 100% of which were general aviation. There are 70 aircrafts based at this airport. Space is available for parking up to 60 transient aircraft during fly-ins in addition to the 68 based aircraft on the field.

As part of the airport's capital improvement program, a localizer and MALSAR will be installed in 2008 to improve the safety of the airport. To safely handle B-II aircraft, the airport's taxiway (including connectors) will be relocated in 2009. Other miscellaneous capital improvement programs at the airport, scheduled between 2008 and 2012, include updating the airport master plan, a runway length justification study, an environmental assessment for runway extension and subsequent runway and taxiway extension, and procurement of additional commercial facilities. These improvements will provide a facility that can service corporate turbo-prop and light jets and allow the airport to relieve traffic from the Dayton International Airport.

The Greene County Regional Airport Authority owns the airport and is comprised of seven members of the community. Though currently operating as a general aviation airport, the Airport Authority is planning to introduce specialized freight handling at the airport (primarily medical and pharmaceutical cargo) in the near future, contingent upon the availability of funds. The Airport Authority believes there is demand for such cargo handling, with several medical and pharmaceutical facilities located near the airport.

3. *Dayton Wright Brothers Airport*

The Dayton-Wright Brothers Airport (MGY) is a general aviation airport located approximately 12 miles south of the City of Dayton, on State Route 741. I-75 allows easy access to and from the airport. The Dayton-Wright Brothers Airport covers an area of 541 acres which contains one asphalt paved runway (2/20) measuring 5,000 feet.

For the 12-month period ending February 11, 2005, the airport had 89,045 aircraft operations, an average of 243 per day: 93% general aviation, 7% air taxi and <1% military. There are 90 aircrafts based at this airport.

Scheduled capital improvements at the airport include improvements to the airfield infrastructure, land acquisition for improving the runway approach, navigation easements and master plan implementation between 2008 and 2011.

4. *Piqua Hartzell Field Airport*

The Piqua Airport — Hartzell Field (I17), home to 26 aircrafts, is located approximately 3 miles from downtown Piqua. The airport has a 4,000-foot runway and is the home of the Hartzell Propeller Factory Service Center. For the 12-month period ending November 28, 2006, the airport had an average of 28 aircraft operations per day: 59% transient general aviation, 39% local general aviation and 2% air taxi.

E. DAYTON REGIONAL SAFETY INITIATIVE



As one of the targeted investment emphases outlined in the August 2005 SAFETEA-LU transportation bill, roadway safety is of paramount importance both locally and nationally. Each year, thousands of motorists, passengers, bicyclists, and pedestrians are injured or killed in traffic crashes. Officials at all levels of government are coordinating efforts to reduce crash-related injuries and fatalities through state-level Strategic Highway Safety Plans (SHSP). The SHSP involves a comprehensive, data-driven approach to roadway safety for the identification of critical highway safety issues and opportunities within the State. Collectively known as the “four E’s of safety” — engineering, education, enforcement, and emergency services solutions — are

integrated into state, regional, and local roadway safety efforts via the SHSP. Regional, county, and local governments have been encouraged to address roadway safety within their borders in support of the goals and objectives outlined in the SHSP.

During SFY 2006, MVRPC initiated the Dayton Regional Safety Initiative to meet the roadway safety planning requirements set forth by SAFETEA-LU, FHWA, and ODOT. The analysis was intended to identify ‘high crash locations’ in order to bring attention to issues of roadway safety in the Region. The results were later shared with local governments and public service agencies at the Dayton Region Roadway Safety Workshop in April 2006. MVRPC has also partnered with ODOT and the Governor’s Highway Safety Office to conduct a number of roadway safety studies. To date, efforts through the Dayton Regional Safety Initiative have led to over \$275,000 of state and federal funding for safety project implementation in the Region.

1. Regional Crash Analysis

The regional crash analysis was the first step towards understanding the state of roadway safety in the Dayton Region. The analysis focused on identifying regional trends in traffic crashes by performing a number of statistical and comparative analyses. To perform the analyses, regional crash data was collected from the Ohio Departments of Transportation and Public Safety (ODPS) for the years 2002-2004. For comparison, statewide crash statistics were compiled from the *Ohio Traffic Crash Facts* books, published yearly by the ODPS. In total, over 72,000 crashes were reported on the Region’s roadway network during the studied time period. Crash data was aggregated to identify regional patterns in the total number of crashes, crash rates, crashes involving fatalities or injuries, and crashes involving a number of factors, including alcohol, age, speed, school buses, and semi-trucks. In addition, several characteristics of the units and people involved in traffic crashes were evaluated and included in the final report — *Dayton Region Crash Analysis: Statistics and Trends, 2002-2004* — available on the MVRPC website at <http://www.mvrpc.org/lrp/safety.php>.

2. Roadway Safety Workshop

In the fall of 2005, a joint team of FHWA and FTA officials recommended that MVRPC work cooperatively with the ODOT Central Office of Safety to conduct a Safety Conscious Planning Forum. With this directive in hand, MVRPC expanded the scope of the regional crash analysis to analyze crashes in more detail.

Using geographic information systems, MVRPC staff accurately pinpointed the location of 70,000 crashes (97%) based on reference points provided for each crash record. However, since the vast majority of crashes occur on high volume surface streets, as opposed to local roads (e.g. residential streets and

alleys), MVRPC's analysis included only those crashes which occurred on the regional roadway network (i.e. functionally classified as urban or rural arterial and collector roadways).¹ The final dataset consisted of approximately 53,000 crashes. Each crash was assigned to one of two locations: intersections or segments. Approximately 65 percent of crashes were labeled segment crashes, although some did occur at intersections with local roads. The remaining 35 percent occurred within 125 feet of a network road intersection, and thus were considered intersection crashes. Ultimately, MVRPC analyzed 823 intersections and over 5,000 segments on the regional roadway network using a variety of spreadsheets, charts, and graphs. Data maps were generated using GIS (See Figure 8.3).



A final list of 231 segments and 41 intersections were identified as regional 'high crash locations'. Each location registered a significantly higher frequency of crashes, frequency of injuries/fatalities, crash rate, and severity index compared to similar locations around the Region. MVRPC and ODOT conducted the Dayton Region Roadway Safety Workshop on April 18, 2006 to report these findings.



The half-day workshop consisted of both presentations from state and local officials, and group discussion among the 45 attendees. State and regional crash trends were reported by ODOT and MVRPC staff. Informational presentations on roadway safety and data collection were given by the Governor's Highway Safety Office and Ohio State Highway Patrol. The remainder of the workshop was dedicated to breakout group discussion and workshop evaluation. Attendees were divided into three workgroups each assigned with the task of identifying high crash locations and recommending countermeasures to address the perceived safety issue in their communities. This list was then compiled

by MVRPC staff and compared to the list of data-driven 'high crash locations' to identify commonalities between both lists for future analysis.

Based on the findings from the Regional Crash Analysis, the list of 'high crash locations' identified at the Dayton Region Roadway Safety Workshop, and the workgroup discussions, MVRPC compiled a list of the 50 locations where low-cost safety countermeasures could have a significant positive impact on roadway safety. From this initial inventory, MVRPC staff submitted a list of the Top 10 Priority Locations for roadway safety improvements to the ODOT Central Office of Systems Planning and Program Management for funding consideration. Of these ten locations, five were selected for low-cost, short-term safety countermeasures based on input from MVRPC, ODOT, and the local jurisdictions. One location was chosen to receive funding for a more detailed safety study. In total, ODOT awarded over \$128,000 for project implementation.

3. ODOT HSP Safety Studies

As part of its Highway Safety Program (HSP), ODOT annually studies the top high crash and congested intersections and segments around the state. The studies include a review of existing roadway conditions and crash reports, resulting in a list of recommended safety countermeasures which are then forwarded to ODOT Central Office for funding consideration.

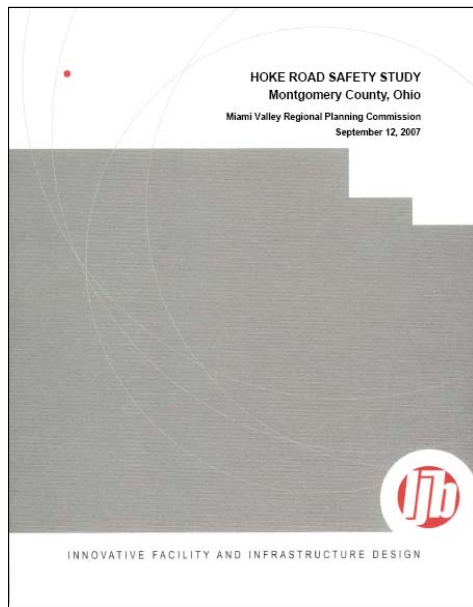
¹ Freeway crashes were not part of the final analysis.

Figure 8.3 — 2002-2004 Crash Rate by Network Intersection/Segment (11x17)

As part of this effort, MVRPC, in cooperation with ODOT Districts 7 and 8, has conducted seven safety studies in the Region over the past three years as part of the Dayton Regional Safety Initiative. The culmination of one such study is highlighted here. In 2007, on behalf of the Village of Covington, MVRPC submitted an application for the US 36/SR 48 study to the ODOT Central Office HSP committee for funding consideration. Ultimately, the Village of Covington was awarded \$122,400 to implement a number of intersection countermeasures, including a new traffic signal system and updated roadway signage.

Coordinating with Districts 7 and 8 to perform roadway safety studies remains a top priority for MVRPC. MVRPC staff will continue to evaluate HSP high crash locations in the Region and assist jurisdictions in applying for HSP funds.

4. Governor's Highway Safety Office Engineering Grant



In FFY 2007, the Governor's Highway Safety Office offered engineering grants to hire consultants for comprehensive safety studies at locally-identified high crash locations around the state. The grants were awarded to several MPO's on a competitive basis where data analyses indicated a roadway safety issue. MVRPC was awarded an engineering grant for the Hoke Road corridor from SR 49 to Westbrook Road along the border between the Cities of Clayton and Englewood. Identified as a high crash location at the Roadway Safety Workshop, the Hoke Road corridor was one of 18 locations statewide chosen to receive funding. The location was selected by MVRPC staff for its recent crash history, proximity to the Miami Valley Career Technical Center (MVCTC), and the potential for additional crashes due to nearby residential and commercial growth.

The Hoke Road Safety Study, indicated safety issues related to sight distance, road signage, traffic signal visibility, excessive speed, and traffic congestion during school dismissal, as well as the lack of appropriate demarcation for the school zone in front of MVCTC. Multiple low- to medium-cost countermeasures were recommended to address these safety issues, including post-mounted school zone flashers, supplemental road signage, traffic signal improvements, and increased speed enforcement. MVRPC assisted the City of Clayton in applying to ODOT for funding through the HSP program, for which the City was awarded \$27,324 for implementation.

5. Next Steps

In accordance with the goals and objectives of the 2030 LRTP, MVRPC will continue to work with regional partners to improve roadway safety in the Region. MVRPC will also attend workshops and seminars to expand their knowledge of roadway safety study techniques and countermeasures. To date, MVRPC staff has attended multiple roadway safety workshops covering topics such as intersection safety, low-cost safety countermeasures, ODOT safety studies, and roadway safety audits. MVRPC will also continue to work with ODOT Districts 7 and 8 to conduct roadway safety studies around the Region. In addition, during SFY 2009, MVRPC is updating the Regional Crash Analysis using the latest three year crash data provided by ODOT. The updated analysis will, in turn, be used during the project evaluation process in future funding cycles and as input to other transportation planning initiatives.

F. TRANSPORTATION SECURITY / EMERGENCY MANAGEMENT

Past iterations of the national transportation authorization bill defined safety and security as a single MPO planning directive. However, security in the transportation system became a separate point of emphasis for metropolitan planning organizations as a result of the 2005 SAFETEA-LU legislation. To reflect the new national emphasis on transportation security, MVRPC has begun a dialogue with other local and county agencies with an interest in transportation security and emergency management (TS/EM), including GDRTA, county engineer's offices, and county offices of emergency management. MVRPC has also added transportation security as a distinct component of the Project Evaluation System, awarding points to projects that improve or expand planned evacuation routes (as defined by the county Office of Emergency Management).

MVRPC sees its role in transportation security somewhere between the traditional (focus on transportation planning activities) and the convener model (serve as forum where regional plans can be discussed and coordinated). Little guidance has been provided by state and federal agencies as to the role MPO's are to play in regional TS/EM. Therefore, MVRPC's efforts have centered on coordinating transportation needs for emergency management. MVRPC has collected available evacuation plans in order to coordinate evacuation routes that cross county borders. Available emergency and security plans or procedures have also been collected from the regional transit agencies. In addition to the needs identified by MVRPC staff, several county agencies expressed a need for multi-county coordination and planning efforts among the Region's TS/EM stakeholders during separate meetings of the MVRPC Transportation Security Committee.

The Transportation Security Committee was convened to review the TS/EM efforts currently underway within the Region and to discuss the role MVRPC could play in multi-county planning efforts. MVRPC staff presented transportation planning data and modeling capabilities available to regional TS/EM partners and offered its services in improving security and emergency management on the Region's roadway network. In addition, attendees were urged to discuss their agency's role with regards to TS/EM and recommend next steps for MVRPC.

As a result of the dialogue presented at the Committee meetings, discussions are underway between the Miami County and Montgomery County Offices of Emergency Management to rectify differences between evacuation routes at the county border. MVRPC plans to continue its TS/EM planning activities through further meetings with the Transportation Security Committee and collaborations with individual regional TS/EM stakeholders as needed. MVRPC will continue to work with regional partners in providing for TS/EM through regional collaboration, transportation modeling, and data sharing.

G. STATUS OF ON-GOING OR RECENTLY COMPLETED REGIONAL STUDIES

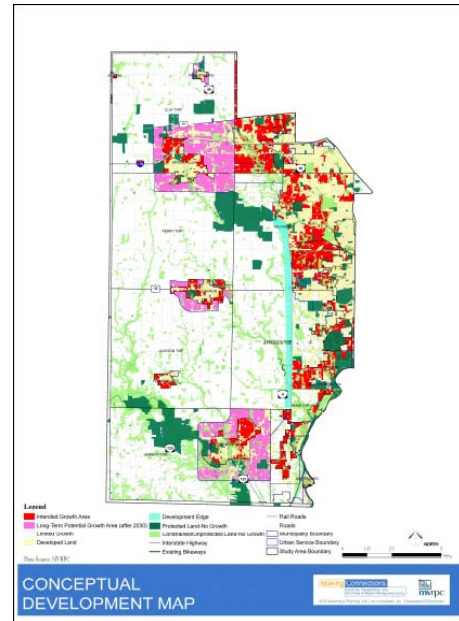
1. Planning Studies

Dayton Aviation Heritage Corridor

This project is developing transit alternatives to connect the scattered park sites. The sites include the Paul Lawrence Dunbar House State Memorial, The Wright Cycle Co. Complex, Wright Brothers Aviation Center at Carillon Park, Huffman Prairie Flying Field, and two other nearby historical aviation sites: the US Air Force Museum and the Wright Brothers Memorial. In addition to connecting the park sites, other goals of the study include: maintaining historical and environmental integrity; reinforcing Downtown Dayton as a center for employment, entertainment, and cultural activities; providing a linkage between Wright State University and Sinclair Community College; and improving access to employment centers and jobs.

Western Montgomery County Transportation and Land Use Study

This Study was initiated in 2005 to assess the needs of the western Montgomery County's local roadway system as a result of the recommendations of the Austin Pike Area Transportation Study – further discussed in this chapter – which stated a need for the “performance of a comprehensive needs analysis of the western Montgomery County local roadway system as input into MVRPC's Long Range Transportation Plan update”. Realizing the need for a coordinated land use–transportation effort within the multi-jurisdictional study area, MVRPC added a land use element to the study requirement. Preliminary meetings held during the scoping process showed the involved jurisdictions open to a cooperative effort to develop an overall consensus framework land use plan. Thus, the resulting Study — Making Connections — was designed to create a consensus framework to ensure compatibility between transportation infrastructure improvements, utility services, and desired land use patterns in western Montgomery County.



Extensive data collection, technical analysis and public outreach efforts were conducted as part of this rigorous and inclusive planning process that culminated in the following:

- Identification of shared principles for development and redevelopment;
- Formation of a Conceptual Development Plan;
- Identification of a set of prioritized transportation projects for further investigation/study and inclusion in the 2030 LRTP Update; and
- Development of an implementation framework for local action that has regional benefit and regional action that has local benefit.

The recently completed Strategic Plan documents the study process, conceptual land use plan, recommended transportation improvements and implementation strategies. The recommended transportation improvements are included in the LRTP (See Figure 5.6).

US 42 in Greene County

This federally-funded study conducted the necessary planning, environmental analyses and preliminary engineering to address safety concerns for motorists, pedestrians and bicyclists as well as a general concern about access to US 42 within the Wilberforce/Central State communities in Greene County. Following Steps 1-4 of ODOT's 10-Step Project Development Process for Minor Projects, the study recommended a package of solutions that will provide safety, access, and utility for the needs of motorists, communities, and other interested parties. Recommendations include:

- Widening US 42 for a two-way left-turn lane between Stevenson and Hickman Roads (10A); and
- Relocating Bickett Road from just north of the Little Miami Scenic Trail to just north of Wilberforce-Switch Road (32A).

Downtown Dayton Two-Way Street Conversion Planning Study

A feasibility study completed in 2003 assessed the preliminary feasibility and traffic related impacts of converting the existing one-way street grid system in downtown Dayton to a two-way street grid system,

concluding that the proposed two-way grid system would operate at acceptable levels of service. In the fall of 2006, MVRPC initiated a follow-up contract (Phase II) which was completed in 2007 and focused on the preliminary engineering phases to convert selected streets to two-way.

The recommended alternative includes changing sections of the following streets to two-way traffic — Second Street, Monument Avenue, First Street, Patterson Boulevard, Fourth Street, Jefferson Street and St. Clair Street – in support of on-going redevelopment efforts and the I-75 modernization project. As part of the recommended alternative, four of the eleven mid-block crosswalks are proposed for elimination and left turns will be allowed at the intersections that are being changed to two-way operations. The recommended plan retains parking, which was the most voiced concern from public meetings, while improving the mobility and enhancing the economic potential of downtown Dayton. This project (691) is slated for construction in FY 2009.

2. *Projects Under or Near Construction*

Local Bridge Replacements

The City of Dayton is in the process of repairing or replacing many of the bridges crossing the Great Miami, Mad, and Stillwater Rivers. Over the past few years, new bridges have been constructed over Findlay and Washington Streets and work has already begun on the Dayton Expressway and the Paul Laurence Dunbar Street Bridges. Other projects set to begin during 2008 include the Monument Avenue, Stewart Street, and Edwin C. Moses Boulevard Bridges. Future bridge replacement or repairs will be made to the Bridge Street Bridge, the Philadelphia Drive Bridge, and the Rosedale Drive Bridge.

Miami County is also in the process of repairing or replacing its bridges. Of note, the Eldean Railroad Bridge near Troy is being replaced to allow truck traffic to safely pass beneath, improving connectivity to I-75 for nearby commercial and industrial users.

Austin Road Major Investment Study/Interchange Justification Study

The MVRPC Transportation Committee endorsed the draft Major Investment Study (MIS) and Recommendations on April 3, 2003.

The purpose of the MIS was to identify and evaluate transportation issues and potential alternative solutions for I-75 in southern Montgomery and northern Warren counties, including the possibility of an additional interchange. The study recommendations included:

- Improve east-west access to and from I-75 by constructing an additional interchange in the vicinity of Austin Pike (338A);
- Improve east-west access in southern Montgomery County, including better access to the Miamisburg Mound Advanced Technology Center (338B-F);
- Continue access management efforts on the SR 741 corridor;
- Improve the operation of SR 73/SR 741, SR 73/I-75, and SR 725/I-75 intersections;
- Reconstruct the SR 73/I-75 interchange by adding a northbound entrance ramp (710B-D);
- Improve access to I-75 from planned developments west of I-75 by widening and realigning local roads (213A);
- Perform a comprehensive study of local roads in western Montgomery County (Completed); and
- Evaluate widening Austin Pike/Social Row Road between SR 741 and SR 48 (202A,C,E).

An Interchange Justification Study (IJS) has been completed to address the first two recommendations of the MIS. The alternative recommended by the IJS included the construction of a tight diamond interchange at Austin Pike and an additional lane on I-75 between Pennyroyal Road and I-675.

Other improvements are also planned near the interchange to improve traffic flow and reduce congestion. A continuous flow intersection (CFI) is planned for the SR 741/Austin Road intersection just east of the planned interchange. A CFI has the unique characteristic of reducing the conflicts between turning and through traffic, increasing intersection efficiency and improving safety. In addition, Montgomery County is planning to widen Austin Road east of SR 741 (202A, 202C, & 202E) to increase access to the planned interchange.

I-70/I-75 Interchange

This \$145 million project involves the reconstruction of the I-70/I-75 interchange near Dayton for providing efficient, statewide transportation by relieving current bottlenecks in Ohio's highway network. This project is currently in its third and last phase of construction.

- **Phase 1:** Construction of a new interchange at Benchwood/Wyse Roads and removal of the ramps at Little York Road. (February 2002 – May 2004)
- **Phase 2:** Reconstruction of various ramps and bridges on both I-70 and I-75; new bridge constructed at Ramp C over the I-70/I-75 interchange. (March 2003 – May 2006)
- **Phase 3:** Construction of the remaining ramps and a new railroad bridge over I-70, just east of the interchange, and landscaping of the infield areas. (Spring 2005 – September 2009)

I-70 Widening and Interchange Modification in Montgomery County

The I-70 Corridor Major Investment Study (MIS) was completed in 1998 to address congested travel conditions on the I-70 corridor in Montgomery County and to accommodate capacity needs resulting from the proposed redesign of the I-70/I-75 interchange. The addition of a third lane was recommended as the preferred alternative due to the large percentage of through trips within the corridor. The final \$63.6 million project includes the widening of I-70 from the I-70/I-75 interchange east to the Clark County border, and modifications to the SR 201 and SR 202 interchanges. The project, currently under construction, is scheduled for completion in July 2008.

Downtown Dayton Sub-Corridor

Originally developed as part of the North South Transportation Initiative, this project will improve I-75 between Keowee Street and Edwin C. Moses Boulevard in Downtown Dayton to address safety and capacity concerns by adding continuous through lanes, eliminating left entrance and exit ramps, and increasing the spacing between interchanges. The project is divided into three phases — Phase 1A was initiated in November 2007.

- **Phase 1A:** Interchange upgrades at SR 4 and Main Street-Grand Avenue;
- **Phase 1B:** Addition of third lane on I-75 at the US 35 interchange; and
- **Phase 2:** Re-design of the I-75 and ramps in Downtown Dayton.



The second phase of the corridor improvement, project 147C, is currently being designed and is included in the TIP for construction starting in year 2010. The final phase, project 147D, is also under design and expected to go to construction in 2013.

3. Projects Under Design

I-75 Interchange at Exit 47 (Central Avenue/Dixie Drive)

The I-75 Interchange at Central Avenue/Dixie Drive is located within a critical north-south transportation corridor. The interchange was originally designed as the northern termini of a north-south limited access highway from Cincinnati to Dayton. When I-75 was later extended to the north, the current partial interchange at Central Avenue/Dixie Drive remained. The current configuration of the I-75 interchange with Central Avenue/Dixie Drive and Dryden Road is missing left turn movements. These configurations require existing traffic to use complex and circuitous routes to reach businesses and residential areas. The goal of this project is to dramatically reduce the number of circuitous miles traveled by the public.

ODOT is proposing to construct a traditional urban diamond interchange that will provide for all traffic movements. The project also includes improvements to the local roads. Additional elements included in the project are:

- Improving the nearby intersection of Central Avenue/Dixie Drive and Dryden Road to provide left-turn movements with a new signal;
- Modifying Central Avenue to operate as a traditional two-way arterial roadway;
- Maintaining Dixie Drive to provide access to the residential neighborhood located on the north side of the railroad; and
- Widening the eastbound bridge carrying Dixie Drive over Holes Creek to the inside to create a left turn lane for Dryden Road.

The project is currently in the environmental analysis and preliminary engineering phases and is represented by Project 367B in the Plan.

US 35 in Montgomery County

In 2004, MVRPC in cooperation with ODOT, conducted the US 35 Corridor Major Investment Study (MIS), to identify improvements to the US 35 corridor from I-75 to I-675. This section of US 35 is one of the oldest sections of freeway in Ohio and needs geometric improvements to address safety, congestion, and accessibility issues resulting from increased traffic and changing traffic characteristics over the last 50 years. The goal of the study was to address these issues while meeting the economic and environmental constraints of the implementing agencies and neighborhoods.

The recommended alternative included widening the US 35 corridor to a total of up to four lanes, the reconfiguration and/or consolidation of the downtown and Wayne/Keowee interchanges with a collector-distributor road, and interchange improvements at Smithville Road, Woodman Drive, Dayton-Xenia Road, and I-675.

In addition to the alternatives that were developed as a result of the study, ODOT has two complimentary projects in the corridor. The first, which was completed in 2007, was a pavement reconstruction and bridge rehabilitation project from I-75 to Steve Whalen Boulevard, including the modification of the Steve Whalen interchange.

The second, currently in the project development phase, is a reconstruction and widening project on US 35 between Steve Whalen Boulevard and I-675 to add a lane in each direction, and address design deficiencies at the Smithville Road and Woodman Drive interchanges. When completed, the project (154A in the Plan) will reduce peak hour congestion and improve safety throughout the corridor by correcting geometric deficiencies, improving lane continuity, and reducing crashes.

US 35 in Greene County

Completed in 2004, this study evaluated the conversion of US 35 from North Fairfield Road to the Xenia Bypass to a limited access facility by eliminating the at-grade intersections at Shakertown Road, Factory Road, Alpha Road, Orchard Lane, and Valley Road.

Based on concerns and goals identified by the Steering Committee, the purpose of the study was outlined as:

- Recommending an acceptable strategy for converting this section of US 35 to a limited-access facility;
- Addressing impacts to regional mobility, the local road network, and the environment; and
- Identifying a comprehensive, cost-effective package of transportation solutions consistent with public need and the area's long-term transportation planning goals.

The study evaluated alternatives for substitute interchange configurations along with necessary improvements to the local roadway system. The preferred alternative combined interchanges at Factory and Valley Roads with modified local access for Shakertown, Alpha, and Orchard.

The project is currently in the environmental analysis and preliminary engineering phases and is represented by Project 9A in the Plan.

Renaissance Plan

MVRPC commissioned this study in April 2004 to develop a functionally efficient roadway system that accommodates traffic, access, and circulation needs in the area surrounding the Great Miami Boulevard due to the changes associated with the I-75 Modernization Project through Downtown Dayton. Four conceptual alternatives were examined as part of the Study including: No Build, Through the Park, Around the Park, and Edge of the Park (Preferred Alternative). Through technical analyses and public input gathering, the study recommended:

- Improving the existing Great Miami Boulevard between Main Street and Grand Avenue;
- Extending Great Miami Boulevard from Grand Avenue to Riverview Avenue;
- Realigning Grand Avenue east of Forest Avenue to improve intersection geometry with the proposed I-75 exit ramp;
- Closure of Shaw Avenue; and
- Creating a new park southwest of Shaw Avenue and Main Street that connects to the existing McKinley Park through pedestrian paths along the proposed Great Miami Boulevard extension.

With the environmental clearance granted, the City of Dayton is moving forward on implementing the study recommendations. Construction is estimated to begin in Spring of 2010 (refer project 659 in Table 5.5).

H. STATEWIDE PLANNING EFFORTS — PASSENGER RAIL

The Ohio Rail Development Commission (ORDC) and ODOT have studied the feasibility of expanding transportation capacity by improving the regional railroad system for both passenger and freight trains. These efforts have resulted in the Ohio Hub Plan — a 1,244-mile interstate rail network with 46 passenger stations serving 22 million people in five states and southern Ontario, Canada. The objective in planning the Ohio Hub is to provide additional rail capacity for passenger trains while improving safety and removing impediments to efficient freight and passenger rail operations.

The Ohio Hub rail corridors would interconnect with the proposed Midwest Regional Rail System, New York's Empire corridor, Pennsylvania's Keystone corridor, and VIA Rail Canada. The system would be integrated into the region's air, highway, and local transit networks.

The ORDC has requested federal funding to advance four program-level, first tier Environmental Impact Statements for the following Ohio Hub rail corridors:

- Cleveland-Toledo-Detroit;
- Cleveland-Pittsburgh;
- Cleveland-Columbus; and
- Columbus-Dayton-Cincinnati.

If the Ohio Hub rail corridors were fully funded through construction, it would take approximately seven years to plan, design, and construct the improvements needed in each corridor to operate a fast, reliable, and frequent passenger service with train speeds up to 110 mph as defined in the Ohio Hub Plan.

I. ANTICIPATED PLANNING EFFORTS

The following is a list of planning efforts and regional studies that are currently in the early stages of development or are anticipated to begin in the near future:

- I-75/Wagner Ford Interchange Improvements;
- SR 444 Relocation;
- Travel Demand Model improvements in conjunction with the 2010 Census and OKI GPS Household Interview Survey;
- Going Places Regional Land Use Planning Initiative (See Chapter VII); and
- Development of Local Bikeway Plans for 10 communities throughout the MVRPC Region (See Chapter VII).