SECTION 5 – PROBLEM AREAS – THE STRATEGIC PLAN GAPS

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

- 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 related resources which are necessary to achieve the stated vision and
- Widely supported conceptual planning recommendations to address the transportation gaps and fulfill the vision.

As a part of the strategic planning process for this Study, a thorough investigation of previous studies and plans was undertaken to inventory Western Hamilton County’s known transportation deficiencies and any prior established improvement recommendations (Section 3, Chapter 5). This research resulted in identifying 74 studies and other projects that are actively under review, moving forward toward implementation or awaiting program approval (See Appendix B). These 74 studies are located on Map 5-1 in combination with the “Western 26” which is further described on page 5-3.

A careful consideration of the 74 studies and projects, existing and future conditions data (Section 4) and the Study’s Purpose and Needs Statement (Section 1, Chapter 7) provided a clear understanding of the transportation gaps between present deficiencies and future needs that remained to be addressed in this Study. This understanding led to the final step in the strategic plan, the development of improvement recommendations to address Western Hamilton County’s present and future transportation needs.
Legend
- Roadway Segment
- Intersection/Interchange

Western Hamilton County
- Pedestrian Connectivity - Best Practices Apply Throughout Study Area
- Bicycle Connectivity - Best Practices Apply Throughout Study Area
- Statewide Trails Project - Best Practices Apply Throughout Study Area
- New Ohio River Crossing Study - Does Not Have a Site Location
- Dearborn County / Whitewater Township Transportation Study - Does Not Have a Site Location
- U.S. 50 Passenger Rail Corridor Study

City of Cincinnati
- MetroMoves - Enhanced Bus Route, Crosstown Bus Route, Transit Hub
- MetroMoves - Bus/Rail Hub, Enhanced Bus Route

Colerain Township
- MetroMoves - Crosstown Bus Route, Uptown/Downtown Direct Bus Route, Northgate (Transit Hub)

City of Harrison
- MetroMoves - Enhanced Bus Route, Crosstown Bus Route, Transit Hub

Delhi Township
- MetroMoves - Crosstown Bus Route

Village of Cleves
- MetroMoves - Bus/Rail Hub, Enhanced Bus Route

Green Township
- MetroMoves - Enhanced Bus Route, Dent (Bus/Rail Hub)

SORTA
- Transit Facility

Map 5-1: Combined Recommended Projects
THE “WESTERN 26”

This Study identifies 26 new projects that serve to establish roadway, intersection, interstate, transit, pedestrian and bicycle recommendations for transportation problem areas that have not previously been studied. During the course of the Study, these newly identified problem or project areas were collectively referred to as the “Western 26.” These projects were recognized as high level projects that need attention based on existing safety, connection and capacity issues. These projects are comprehensive in scope and reflect the issues and discussions resulting from public involvement and input from the Oversight Team, the Advisory Committee and the public at large. These 26 projects complement the 74 projects previously or currently under study outside of the Western Hamilton County Transportation Study.

One corridor that was not advanced forward was the S.R. 128 corridor. This corridor should be monitored by state, township and county officials. Presently, the roadway operates satisfactorily in terms of Level of Service, traffic operations and safety. It is anticipated that growth and land use changes will continue to impact the area served by the roadway. It is critical that governmental jurisdictions exercise control over issues related to driveways, intersections, type of land use development, density and public right-of-way. The Ohio Department of Transportation and Hamilton County Engineer's Office have adopted a comprehensive guideline which describes how to preserve the capacity and safety of public roadways in growth areas. The Hamilton County Access Management Plan is strongly recommended to be used as a tool for the preservation and integrity of not only S.R. 128, but all roadways in the Study Area.

The “Western 26” was compiled from a much larger list of potential roadway, intersection, transit, rail and pedestrian/bicycle projects which were presented to the Oversight Team and the Advisory Committee for review and assessment. For example, 35 intersections were originally identified for review and were narrowed down to four key intersections for further analysis.
The “Western 26” problem areas that were identified and addressed by this Study are listed below. They are listed by their geographic location as one travels from the northernmost problem areas to the southeastern-most problem areas of the Study Area. The numbers reflect the corresponding map number. Map 5-2 identifies the “Western 26” projects collectively.

1. Pedestrian Connectivity – Best Practices for all of Western Hamilton County
2. Bicycle Connectivity – Best Practices for all of Western Hamilton County
3. Transit in general including SORTA’s Western Hills Plaza Transit Facility
4. Harrison Avenue – within the City of Harrison jurisdictional limits
5. Colerain Avenue – from Springdale Road to Raeann Drive
6. Colerain Avenue – from Springdale Road to Kirby Road
7. Cheviot Road – from Jessup Road to Poole Road
8. North Bend Road – from I-74 to West Fork Road (now funded and under Study)
9. North Bend Road – from Reemelin Road to Edgewood Drive
10. Harrison/Race Intersection – Green Township
11. Bridgetown/Taylor/Ebenezer/Hutchinson Intersection – Green Township
12. Bridgetown Road – from Moonridge Drive to Harrison Avenue
13. Bridgetown/Glenway/Race Intersection – Green Township
14. Harrison Avenue – from Bridgetown Road to Boudinot Avenue
15. Glenway Avenue – from Bridgetown Road to Werk Road
16. Boudinot Avenue – from Glenway Avenue to Harrison Avenue
17. Werk Road – from Westbourne Drive to Glenmore Avenue
18. Werk Road – from Queen City Avenue to Harrison Avenue
19. Ebenezer Road – from Werk Road to Rapid Run Road
20. Glenway Avenue – from Boudinot/Crookshank Avenue to Cleves Warsaw Avenue
21. Queen City Avenue – from Western Hills Viaduct to White Street
22. Glenway/Cleves Warsaw/Gurley Intersection – City of Cincinnati
23. Anderson Ferry Road – from Delhi Pike to Cleves Warsaw Avenue
24. Delhi Pike – from Fairbanks Avenue to Greenwell Avenue
25. U.S. 50 – from 6th Street Viaduct to the Village of Addyston
26. North/South and East/West Connectivity – within and without the entire Western Hamilton County Study Area including consideration of a future Ohio River Crossing Study and Whitewater Township/Dearborn County Connectivity Study

Each of the “Western 26” projects was analyzed in detail with regards to critical transportation criteria. This included, but was not limited to: traffic volumes, accidents and fatalities, level of service, existing and future land uses and access management. Both short- and long-term improvements were identified.
Figures 5-1 through 5-26 identify, in detail, the transportation problems and conceptual planning recommendations for each of the “Western 26” projects. The recommendations include extensive input and final approval received from the Study’s Oversight Team, Advisory Committee and the public at large.
**Best Practices / Conceptual Alternative Solutions:**

Best practices and conceptual alternative solutions are identified for consideration by local jurisdictions on a case by case basis.

1. **Provide sidewalks – minimum 5 ft wide (Image 1)**
   a) Require in all new residential development
   b) Require with reconstruction of urban arterial and collector streets
   c) Inventory sidewalk gaps:
      • Along bus routes
      • Along streets within ¼ mile of schools and/or community centers
      • Along streets with commercial development (Image 2)
      • Along residential neighborhood streets

2. Apply “Access Management Principles” to create shared access to properties, reduce the number of driveway intersections and increase connections between properties

3. Improve safety at intersections
   a) Mark crosswalks at all signalized intersections
   b) Mark crosswalks at unsignalized intersections and where midblock crossings are warranted (Image 3)
   c) Provide median refuge islands for streets wider than 5 lanes and near concentrations of elderly population (Image 4)

These pedestrian connectivity best practices were assessed as a collective alongside other transportation needs by the individual jurisdictions. The results are as follows:

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Cincinnati</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>City of Harrison</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Township</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>City of Cheviot</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Colerain Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delhi Township</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Crosby Township</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Harrison Township</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Village of Cleves</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miami Township*</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Village of North Bend*</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village of Addyston*</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitewater Township</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*Assessment was made by the Study Team due to small number of transportation-related needs for this jurisdiction or lack of jurisdiction response.
Existing Conditions / Problems

- Bicyclists use all streets (except freeways) with or without special facilities including the primary bicycle arterials (Map).
- Lack of Safety: bike related collisions (Map).
- Lack of Space: inadequate roadway width for bicycles and motor vehicles to share the road on shared use paths.
- Lack of Coordination: roadways are improved without consideration of bicycle usage and facilities.
- Lack of Knowledge: motorists and bicyclists do not understand how to share the road.

General Recommendation

- Due to the conversion of a majority of the former CSX railroad right-of-way to private ownership, the Western Corridor Trail should be removed from further consideration as an option for a shared-use trail corridor.

Best Practices / Conceptual Alternative Solutions

Best practices and conceptual alternative solutions are identified for consideration by local jurisdictions on a case by case basis.

1. Construct appropriate bicycle facilities when existing roads are upgraded and when new road improvements are made by:
   a) Creating shared roads that include;
      - Right travel lanes of a 14 ft minimum width (Image 1)
      - Striped bike lanes (Images 2)
      - Shoulders (rural roads)
      - Signed bike routes to specific destinations (Image 3)
      - Bicycle-safe stormwater inlets (Image 4)
   b) Creating separate shared use paths as part of the regional trails plan (Map and Image 5).
   c) Providing secure bicycle parking facilities for customers and employees.
2) Apply Access Management practices to reduce the number of driveway intersections (conflict points).
3. Encourage bicycle use for utilitarian trips (i.e.: work, shopping, school, and social destinations).
4. Increase motorists’ awareness of cyclists with “Share the Road” signs (Image 6).
5. Increase cyclists’ awareness of the traffic laws.
6. Enforce traffic laws for motorists and cyclists consistently.

These bicycle connectivity best practices were assessed as a collective alongside other transportation needs by the individual jurisdictions. The results are as follows:

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Cincinnati</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Harrison</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City of Cheviot</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colerain Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delhi Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crosby Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harrison Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village of Cleves</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village of North Bend*</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village of Addyston*</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whitewater Township</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Assessment was made by the Study Team due to small number of transportation-related needs for this jurisdiction or lack of jurisdiction response.
Existing Conditions/Problems

- Western Hills Plaza Transit Facility closing end of 2006 due to loss of lease.
- Inadequate or potentially unsafe facilities at stops (e.g. U.S. 50 pedestrian areas are narrow, lack adequate access and are not set back from street).
- Signage is not easy to see.

Transit Recommendations

- Explore alternative locations for the current transit facility located at Western Hills Plaza.
- Explore improvements to bus stops in the vicinity of 8th & State Street.
- Park and Ride facilities should be encouraged by SORTA where appropriate.
- Consider improved signage, seating, sidewalks and potential shelters to increase safety and comfort for users throughout the existing route network.

Other Transit Considerations: Connectivity

- There is a demand or desire for more direct suburban to suburban transit service. However after analysis of the data, it appears that such demand is limited in nature to less than 1,000 daily riders. Therefore, implementation of a specific route is not recommended at this time.
- SORTA is encouraged to evaluate the potential for enhanced north/south transit services over the long term including possible modifications to existing routes and services such as:
  - Potential of express limited stop service in the Colerain Ave. corridor served by multiple routes.
  - Extension of the route “50” along US 50 from Addyston to SR 128 in Cleves.
  - Right-of-way preservation along I-74 and U.S. 50 for transit use.
Existing Conditions / Problems:
• 14,500 vehicles daily. Volumes are expected to significantly increase to 25,300 by 2030.
• 55 accidents between 2003/2004 (7.4 per million vehicles).
• Level of Service (LOS) – “F”; High levels of congestion during Peak Hours. LOS Expected to remain at “F” by 2030.
• Safety concerns for vehicles.
• Multiple commercial driveway curb cuts at New Haven.
• Deficiencies in horizontal and vertical curvature at Sandusky and Broadway.
• Multiple residential driveway curb cuts west of North Jefferson.

Best Practices / Conceptual Alternative Solutions:
• Review traffic signal operations.
• Consider access management principles.
• Enforce traffic regulations.
• Upgrade roadway alignment to modern standards.
• Simplify/realign intersections.

General Recommendations – Short Term:
• Study potential benefit and impact of removing on-street parking between North Jefferson and Hill Street during peak hours. Any future study regarding on street parking must include all stakeholders including property owners and businesses.
• Evaluate signal timing.
• Install progressive signal system.
• Simplify Washington Avenue intersection.

General Recommendations – Long Term:
• Implement findings of on-street parking study.
• Widen roadway from New Haven to Broadway.
**Existing Conditions / Problems:**
- 34,000 vehicles daily. Volumes expected to increase significantly to 56,290 by 2030.
- 281 accidents between 2003/2004 (10.6 per million vehicles).
- Level of Service (LOS) – “F”; Levels of congestion during Peak Hours. LOS Expected to remain “F” by 2030.
- Southbound interstate ramp currently exceeding design capacity.

**Best Practices / Conceptual Alternative Solutions:**
- Consider signal timing.
- Consider new roadway design standards for arterial roadway.

**General Recommendations – Short Term:**
- Review/adjust signal timing of all intersections between Springdale and Raeann Dr. Conduct in depth analysis of signal phasing and intersection capacity at I-275 SB exit ramp terminus.
- Install emergency preemption system where center medians are constructed.

**General Recommendations – Long Term:**
- Consider adding lane to I-275 SB exit ramp to U.S. 27.
- Add signal warning signage to SB I-275 north of U.S. 27 to alert motorist to potentially stopped traffic on exit ramp.
- Add capacity to Colerain Ave between Springdale and Raeann through additional lanes, particularly at cemetery location.
- Review condition of I-275 right of way fencing in vicinity to prohibit deer crossings of I-275.
- Consider service roads or shared parking arrangements among retail establishments on Colerain to allow for internal circulation between adjacent retail/commercial sites without having to use arterial network.
**Existing Conditions / Problems:**
- 37,600 vehicles daily. Volumes are expected to remain at 38,000 by 2030.
- 525 accidents between 2003/2004 (4.0 per million vehicles).
- Level of Service (LOS) – “D/F”; High levels of congestion during Peak Hours. LOS Expected to remain at “D/F” by 2030.
- Safety concerns for pedestrians, bicyclists and vehicles.
- Multiple commercial driveway curb cuts.
- Conflicting turning movements.
- Constrained right-of-way.
- Recent reconfiguration of several areas along Colerain Avenue in northern portions near I-275 have increased safety and traffic flow.

**Best Practices / Conceptual Alternative Solutions:**
- Continue implementation of the Access Management Study (1995 Colerain Avenue Corridor Planning Study) previously completed for Colerain Avenue from Galbraith to Springdale Road.
- Restrict left turns.

**General Recommendations – Short Term:**
- Conduct detailed Access Management Study (similar to the 1995 Colerain Avenue Corridor Planning Study) for the segment from Kirby to Galbraith Road.
- Monitor traffic operations for efficiency at key intersections and from Galbraith Road to Springdale Road.
- Install emergency preemption system where center medians are constructed.

**General Recommendations – Long Term:**
- Coordinate across jurisdictions when implementing the recommendations of new Access Management Study from Kirby to Galbraith.
- Continue to implement results of the Colerain Avenue Corridor Planning Study and the Access Management Study to be conducted for Colerain Avenue from Kirby to Galbraith Road.
Existing Conditions / Problems:
- 25,600 vehicles daily. Expected to increase to 32,300 vehicles in 2030.
- 167 accidents between 2003/2004 (9.5 per million vehicles).
- Level of Service (LOS) — “D” near Jessup and “F” near Hanley; High levels of congestion during Peak Hours. LOS Expected to decrease to “E” near Jessup and “F” near Hanley by 2030.
- Safety concerns for pedestrians near St. James School, residential developments and commercial driveways.

Best Practices / Conceptual Alternative Solutions:
- Consider access management principles.
- Coordinate traffic signal systems along Cheviot.
- Improve traffic operations at key intersections.
- Consider roadway urban design standards.

General Recommendations – Short Term:
- Implement access management principles (e.g. shared driveways, high visibility signage).
- Evaluate existing signal warrants and install progressive signal system.
- Install street lighting.
- Reconstruct intersection at Cheviot and Blue Rock Roads. Cul-de-Sac Blue Rock Road at Cheviot Road. Construct connector road from Blue Rock Road to Benhill Dr.
- Improve key intersection at Hubble with left and/or right turn lanes as necessary.

General Recommendations – Long Term:
- Widen roadway to 4 lanes where redevelopment occurs, and where right-of-way is or becomes available.
- Provide sidewalks on west side of Cheviot Road with frequent crosswalks.
- Improve key intersection at Jessup with left and/or right turn lanes as necessary.
- Widen roadway and maintain residential character of segment between Hanley and Poole.
**Recommendations and Alternatives - Roadway Segments**

**North Bend Road - Monfort Heights Drive to West Fork Road**

**Existing Conditions / Problems:**
- 36,400 vehicles daily. Expected to increase to 51,700 vehicles in 2030.
- 33 accidents between 2003/2004 (6.9 per million vehicles).
- Level of Service (LOS) – “F”; High levels of congestion during Peak Hours.
- Recent improvement in traffic operations implemented within existing right-of-way.
- ODOT currently conducting Safety Study and Interchange Modification Study for I-74 interchange. Study results will identify final improvements to be made.

**Best Practices / Conceptual Alternative Solutions:**
- Continue to monitor traffic flow and adjust signal system.
- Install center median to control turns at driveways.
- Adopt access management principles.
- Widen roadway, urban design standard.

**General Recommendations – Short Term:**
- Conduct access management study.
- Monitor traffic flow and adjust signal system.
- Install center median.

**General Recommendations – Long Term:**
- Widen roadway to provide three lanes of travel in each direction.
- Widen bridge over I-74.
- Align St. Ignatius driveway with Monfort Heights Drive at signalized intersection.
- Widen Monfort Heights Drive to adequately serve commercial properties to north.
Existing Conditions / Problems:
- 21,800 vehicles daily. Volumes are expected to increase to 25,000 by 2030.
- 12 accidents between 2003/2004 (1.8 per million vehicles).
- Level of Service (LOS) – “E”; High levels of congestion during Peak Hours. LOS Expected to decrease to “F” by 2030.
- Safety concerns for pedestrians and bicyclists operations.
- New residential developments on North Bend Road have recently caused an increase in traffic volumes (e.g., Lake Emerald). Opportunity for additional high density developments along this corridor.

Best Practices / Conceptual Alternative Solutions:
- Adopt access management principles.
- Improve Key Intersections to improve traffic flow.

General Recommendations – Short Term:
- Implement access management principles (e.g., shared driveways, high visibility signage).
- Construct sidewalk on east side of North Bend Road with crosswalks.
- Provide street lighting.

General Recommendations – Long Term:
- Reevaluate traffic conditions to determine possible need for widening North Bend Road.
- Improve intersection at Reemelin Road with left and/or right turn lanes as necessary.
Existing Conditions / Problems:
• 28,000 vehicles daily.
• 1 fatality and 50 accidents between 2003/2004 (2.4 per million vehicles).
• Level of Service (LOS) – “E”; Failure of Traffic Flow is Frequent.
• Adjustment/modification of signal timing will be LOS “F”; unacceptable by year 2030.

Best Practices / Conceptual Alternative Solutions:
• Adjust and modify signal timing for better traffic movement.
• Consideration of additional lanes in future.

General Recommendations – Short Term:
• Adjust and modify signal timing to 95 seconds and adjusting split times for individual movements to achieve an acceptable LOS “C”. LOS “C” may decrease by 2030 to LOS “F”.

General Recommendations – Long Term:
• The following long term recommendations will provide a LOS of “D” by 2030:
  • Adjust/modify signal timing to 125 seconds.
  • EB Add 1 left turn lane 1 additional right turn lane.
  • WB Add 1 left turn lane.
  • NB Add 1 additional through lane and 1 right turn lane.
  • SB Add 1 additional through lane and 1 right turn lane.
  • Realign intersection approaches.

Figure 5-10: Harrison Avenue and Race Road
Existing Conditions / Problems:
- 28,500 vehicles daily.
- 37 accidents between 2003/2004 (1.7 per million vehicles).
- Level of Service (LOS) – “F”; Failure of Traffic Flow is Frequent.
- Five way intersection.
- Significant deterioration in traffic flow and continued LOS “F” through 2030 even with signal timing adjustment.

Best Practices / Conceptual Alternative Solutions:
- Adjust and modify signal timing for minor increase in traffic movement.
- Consideration of additional lanes and street closure in future.

General Recommendations – Short Term:
- Adjust/modify signal timing to 90 seconds.

General Recommendations – Long Term:
- The following long term recommendations may maintain a LOS of “C” by 2030:
  - EB Add 1 right turn lane and 1 through lane.
  - WB Add 1 through lane.
  - SB Add 1 left turn lane.
  - Conduct study to identify potential realignment of Taylor Road with Bridgetown and Ebenezer Roads.
  - Conduct study to realign Ebenezer/Hutchinson intersection and identify potential lane additions along Ebenezer Road.
Existing Conditions / Problems:
- 23,000 vehicles daily. Volumes are expected to increase significantly to 40,200 by 2030.
- 81 accidents between 2003/2004 (6.2 per million vehicles).
- Level of Service (LOS) – “E/F”; High levels of congestion during Peak Hours. LOS Expected to decrease to “F” by 2030.
- Safety concerns for pedestrians and vehicles.
- Multiple commercial driveway curb cuts.
- Constrained right-of-way.
- Key intersections at Harrison Avenue and Glenway Avenue/Race Road.

Best Practices / Conceptual Alternative Solutions:
- Consider access management principles.
- Consider signal system upgrade/progressive signal system.
- Consider roadway widening and intersection improvements at key locations.
- Consider environmental and social justice impact on adjacent land uses.

General Recommendations – Short Term:
- Conduct preliminary engineering study to determine specific design requirements and access management principles.

General Recommendations – Long Term:
- Widen roadway as based on the engineering study recommended in the Short Term.
- Improve intersections at Harrison Avenue and Glenway Avenue/Race Road.

Figure 5-12: Bridgetown Road - Moonridge Drive to Harrison Avenue
Existing Conditions / Problems:

- 36,500 vehicles daily.
- 1 fatality and 84 accidents between 2003/2004 (3.2 per million vehicles).
- Level of Service (LOS) – “E”; Failure of Traffic Flow is Frequent.
- Adjustment/modification of signal timing will be LOS “F”; unacceptable by year 2030.
- Bus stop located on traffic island on Race Road.

Best Practices / Conceptual Alternative Solutions:

- Adjust and modify signal timing for better traffic movement.
- Consider additional lanes in future.
- Consider Continuous Flow Intersection (CFI).

General Recommendations – Short Term:

- Consider additional lanes and/or adjusting/modifying signal timing from 70 to 150 seconds and adjusting split times for individual movements did not achieve an acceptable LOS. Remains LOS “F” in 2030.
- Relocate bus stop on Race Road leg of intersection away from traffic island.

General Recommendations – Long Term:

- Study the potential of implementing one of the following:
  1. Substantially widen intersection with conventional lane additions.
  2. Consider a Continuous Flow Intersection (CFI), which may be the best alternative outside of acquiring substantial right-of-way for additional lanes.
  3. Consider grade separation for through traffic.
Recommendations and Alternatives - Roadway Segments

**Harrison Avenue - Bridgetown Road to Boudinot Avenue**

**Existing Conditions / Problems:**
- 15,400 vehicles daily. Volumes are expected to increase to 29,500 by 2030.
- 102 accidents between 2003/2004 (12.6 per million vehicles).
- Level of Service (LOS) – “E/F”; High levels of congestion during Peak Hours. LOS Expected to remain at “E/F” by 2030.
- Multiple access points and retail activity with two moving lanes of traffic.
- Active on-street parking in business district.
- Restricted right-of-way due to development. Not conducive to widening existing roadway.
- Signal system not progressive.
- Lack of signage and wayfinding.

**Best Practices / Conceptual Alternative Solutions:**
- Adopt traffic operations and access management principles.
- Utilize existing roadway width for movement of traffic instead of on-street parking.
- Establish policy to introduce public off-street parking facilities.
- Provide pedestrian and customer friendly environment with signage and wayfinding.

**General Recommendations – Short Term:**
- Study potential benefit and impact of establishing on-street parking restrictions during peak hours. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.
- Work with businesses to develop an agreement on public off-street parking facilities to replace spaces removed or restricted on Harrison Avenue.
- Provide high visibility signage (e.g. large letter cross street signage, addresses, etc.).
- Develop a progressive signal system.
- Provide mid block crosswalks.
- Restrict mid block left turns.
- Provide left turn lanes at key intersections.
- Engage in public input to consider eliminating access to Harrison at Frances Ave and Everett Avenue.

**General Recommendations – Long Term:**
- Study the benefit of removing all on-street parking and maintain two way operation on Harrison Avenue by providing adequate off-street public parking lots.
- Develop a streetscape program and business district revitalization program.
- Improve intersections at North Bend, Boudinot and Bridgetown Roads with left and/or right turn lanes as redevelopment occurs and right-of-way is or becomes available.

**Figure 5-14: Harrison Avenue - Bridgetown Road to Boudinot Avenue**

- August 29, 2006
- 0 100 200 400 600 Feet

- Location within Western Hamilton County
**General Recommendations – Short Term:**
- Conduct a comprehensive and detailed access management study similar to the 1995 Colerain Avenue study.
- Provide high visibility signage (e.g. large letter cross street signage, addresses, etc.).
- Limit left turns at selected commercial driveways.
- Provide for bus service.
- Improve pedestrian walkways and crosswalks.

**General Recommendations – Long Term:**
- Review Short Term findings and the access management study to identify long term actions.
- Improve intersections of Bridgetown, Lawrence, Westbourne and Werk with left or right turn lanes as needed.
- Eliminate selected residential street access on west side of Bridgetown such as Surrey, Karen and Childs.
- Widen Glenway from Lawrence to Parkcrest.
- Reconfigure off-set driveway on south side of Glenway with Parkcrest.

**Existing Conditions / Problems:**
- 37,000 vehicles daily. Volumes not expected to increase by 2030.
- 437 accidents between 2003/2004 (11.5 per million vehicles).
- Level of Service (LOS) – “D/E”; High levels of congestion during Peak Hours. LOS Expected to decrease to “E/F” by 2030.
- Safety concerns for pedestrians and vehicles as identified by high accident rate.
- Multiple commercial driveways creating numerous turning conflicts.
- Highly congested area with complex access, rush hour bus stop and through traffic flow issues.

**Best Practices / Conceptual Alternative Solutions:**
- Consider access management principles.
- Avoid major widening due to impact on adjacent land uses.
- Provide for mass transit services.
- Improve traffic operations at key intersections.
**Existing Conditions / Problems:**
- 16,000 vehicles daily. Volumes are expected to increase to 20,200 by 2030.
- Level of Service (LOS) – “D/F”; High levels of congestion during Peak Hours. LOS Expected to decrease to “E/F” by 2030.
- Safety concerns for pedestrians and bicyclists.
- Primarily a residential area with approximately 180 driveway curb cuts.
- Areas of high activity commercial/institutional uses.
- On-street parking with few restrictions.

**Best Practices / Conceptual Alternative Solutions:**
- Enforce traffic regulations (e.g. speeding).
- Improve traffic operations and signal system.
- Focus efforts on intersection improvements.

**General Recommendations – Short Term:**
- Conduct a study to determine appropriate on-street parking restrictions during peak hours. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.
- Monitor key intersections of Harrison, Montana, Queen City, Glenway and Werk for traffic and signal operations.

**General Recommendations – Long Term:**
- Improve key intersections of Harrison, Montana, and Werk.

---

**Figure 5-16: Boudinot Avenue - Glenway Avenue to Harrison Avenue**
Existing Conditions / Problems:
• 18,200 vehicles daily. Volumes are not expected to increase significantly by 2030.
• 41 accidents between 2003/2004 (3.7 per million vehicles).
• Level of Service (LOS) – “E”; High levels of congestion during Peak Hours. LOS Expected to remain at “E” by 2030.
• Safety concerns for pedestrians and public transit operations.
• Multiple residential driveway curb cuts with turns and vehicles backing out on Werk Road west of Glenway Avenue.

Best Practices / Conceptual Alternative Solutions:
• Enforcement of traffic regulations (e.g. speed).
• Monitor traffic operations, flow and signal timing.

General Recommendations – Short Term:
• Monitor traffic signal operations at Westbourne, Glenway and Glenmore intersections to determine need for adjustments in timing.
• Enforce traffic regulations, particularly speed.
• Provide for public transit operations at or near Glenway Avenue.
• Consolidate shopping center driveways on Werk between Glenway and Westbourne.
• Reconfigure marked pavement (stop bars) farther back at approaches to enable more efficient left turn movements.

General Recommendations – Long Term:
• Improve intersection at Werk and Glenway and at Werk and Westbourne with left or right turn lanes as needed.
• Eliminate bridge over abandoned railroad right-of-way.

Figure 5-17: Werk Road - Westbourne Drive to Glenmore Avenue
LONG TERM: IMPROVE INTERSECTION

Werk Road - Queen City Avenue to Harrison Avenue

Best Practices / Conceptual Alternative Solutions:

- Monitor traffic operations and signal timing.

General Recommendations – Short Term:

- Monitor traffic operations to determine need for adjustments in timing.

General Recommendations – Long Term:

- Improve intersection at Queen City and Werk with left or right turn lanes as needed.

Existing Conditions / Problems:

- 10,800 vehicles daily. Volumes expected to decrease to 8,500 by 2030.
- 65 accidents between 2003/2004 (5.8 per million vehicles).
- Level of Service (LOS) – “D/E/F”; High levels of congestion during Peak Hours. LOS Expected to remain at “D/E” by 2030.
- Safety concerns for pedestrians and vehicles.
- Primarily a residential neighborhood with multiple driveway cuts.
- Two moving traffic lanes with limited on-street parking.

Figure 5-18: Werk Road - Queen City Avenue to Harrison Avenue
Existing Conditions / Problems:
• 5,500 vehicles daily. Volumes are expected to increase to 8,600 by 2030.
• 48 accidents between 2003/2004 (5.7 per million vehicles).
• Level of Service (LOS) – “D/F”; High levels of congestion during Peak Hours. LOS Expected to remain the same by 2030.
• Safety concerns for pedestrians, bicyclists and vehicles.
• Two lane roadway serving a growing area in population.
• Deficiencies in horizontal and vertical curvature.
• Sight distance restrictions.

Best Practices / Conceptual Alternative Solutions:
• Consider access management principles.
• Enforce traffic regulations (e.g. speeding).
• Consider new roadway design standards for arterial roadway.

General Recommendations – Short Term:
• Enforce traffic regulations (e.g. speeding).
• Conduct study to determine potential intersection improvements at Werk, Devils Backbone, Cleves Warsaw and Rapid Run with left and right turn lanes as needed.
• Conduct preliminary engineering study for Muddy Creek realignment including public input.

General Recommendations – Long Term:
If substantiated by engineering study conducted in the Short Term:
• Widen roadway from Werk to Rapid Run
• Realign roadway over Muddy Creek and reconstruct Muddy Creek intersection.
Existing Conditions / Problems:
- 30,500 vehicles daily. Volumes are expected to increase to 36,000 by 2030.
- 478 accidents between 2003/2004 (57.6 per million vehicles).
- Level of Service (LOS) – “D/E”; High levels of congestion during Peak Hours. LOS Expected to decrease to “E” by 2030.
- Safety concerns for pedestrians and bicyclists.
- Multiple commercial driveway curb cuts.
- Skewed intersections at Boudinot Avenue and at Ferguson Place.

Best Practices / Conceptual Alternative Solutions:
- Consider access management principles.
- Enforce traffic controls (e.g. speeding, restricted left turns, etc.).
- Consider implementing roadway urban design standards.

General Recommendations – Short Term:
- Study potential benefit and impact of removing on-street parking as needed. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.
- Restrict left turns.
- Monitor traffic operations for efficiency.

General Recommendations – Long Term:
- Widen roadway.
- Improve key intersections at Sidney Avenue/Prosperity Place with realignment of intersection.

Figure 5-20: Glenway Avenue - Boudinot/Crookshank to Cleves Warsaw
Recommendations and Alternatives - Roadway Segments  
Queen City Avenue - Western Hills Viaduct to White Street

Existing Conditions / Problems:
- 24,300 vehicles daily. Volumes expected to increase slightly to 26,270 by 2030.
- 221 accidents between 2003/2004 (11.2 per million vehicles).
- Level of Service (LOS) – “E/F”; High Levels of congestion during Peak Hours. LOS Expected to remain “E/F” by 2030.
- Narrow travel lanes.
- Narrow right-of-way with walls and buildings in close proximity to street.
- Safety concerns for vehicles and pedestrians primarily at Beekman, Harrison, Grand, Quebec and White.

Best Practices / Conceptual Alternative Solutions:
- Consider new roadway design standards for arterial roadway.
- Consider access management principles.

General Recommendations – Short Term:
- Study potential benefit and impact of removing on-street parking as needed. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.

General Recommendations – Long Term:
- Address the turn radius from Queen City Avenue onto numerous side streets especially on the north side of Queen City Avenue.

Figure 5-21: Queen City Avenue - Western Hills Viaduct to White Street
Existing Conditions / Problems:

- 41,844 vehicles daily.
- 128 accidents between 2003/2004 (4.2 per million vehicles).
- Level of Service (LOS) – “C”; most waiting vehicles able to pass through intersection under green light cycle.
- No significant deterioration in LOS through 2030.

Best Practices / Conceptual Alternative Solutions:

- Adjust and modify signal timing for better traffic movement.
- Consider additional lanes in future.

General Recommendations – Short Term:

- Adjust and modify signal timing as needed.
- Study potential benefit and impact of removing on-street parking as needed. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.

General Recommendations – Long Term:

- Consider geometric improvements as properties become available.
**Existing Conditions / Problems:**
- 16,900 vehicles daily. Volumes expected to remain the same by 2030.
- Level of Service (LOS) – “D/E/F”; Levels of congestion during Peak Hours, higher congestion on northern segment between Rapid Run and Cleves Warsaw Road. LOS Expected to remain “D/E/F” by 2030.
- Safety concerns for vehicles and pedestrians in particular at intersections with Delhi Pike, Foley, Rapid Run and Cleves Warsaw.
- Frequent school bus stops increase potential for traffic accidents.
- Portions of segment lack sidewalks.
- Lack of left turn lanes.

**Best Practices / Conceptual Alternative Solutions:**
- Consider access management principles.
- Consider new roadway design standards for arterial roadway.

**General Recommendations – Short Term:**
- Work with the local schools to strategically locate bus stops between Rapid Run and Cleves Warsaw.
- Eliminate the north entrance/exit of the Speedway gas station onto Anderson Ferry.

**General Recommendations – Long Term:**
- Add curb from Delhi Pike to Foley and from Edfel Way to just south of Rapid Run.
- Provide sidewalk on both sides of Anderson Ferry where necessary.
- Add a Center Left Turn Only Lane from Delhi Pike to Cleves Warsaw. Consider adding a lane in each direction from Rapid Run north to Cleves Warsaw. Such action would require detailed study, public involvement and a cost-benefit analysis.
- Improve intersection to include left turn lane on northbound Anderson Ferry at Julmar Drive.
**Existing Conditions / Problems:**
- 17,800 vehicles daily. Volumes expected to increase slightly to 18,890 by 2030.
- 104 accidents between 2003/2004 (4.2 per million vehicles).
- Level of Service (LOS) – “F”; High levels of congestion during Peak Hours. LOS Expected to remain “F” by 2030.
- Safety concerns for vehicles backing out of driveways.
- Deficiencies in horizontal and vertical curvature.
- On-street parking along portions of segment impacting traffic flow from Fairbanks to Pedretti.

**Best Practices / Conceptual Alternative Solutions:**
- Enforce traffic regulations as applicable (e.g. on street parking hours, speed, etc.).
- Consider access management principles.
- Consider new roadway design standards for arterial roadway.

**General Recommendations – Short Term:**
- Study potential benefit and impact of restricting on-street parking in both directions or removal on one side to permit better traffic flow. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.

**General Recommendations – Long Term:**
- Reconstruct the Delhi Pike/Fairbanks intersection.
- Implement findings of on-street parking study.
- Add a lane in each direction and widen existing lanes.
- Address road geometry issues including sight distance along the length of the road segment.
- Reconstruct the Greenwell/Delhi Pike intersection to include Left Turn Only Lanes in both directions on Delhi Pike and both directions on Greenwell. Include a dedicated left turn phase for all 4 directions of traffic entering the intersection.
- Reconfigure the curb lane at the Delhi Pike/Greenwell intersection to facilitate a Right Turn Only.

*Figure 5-24: Delhi Pike - Fairbanks Avenue to Greenwell Avenue*
**Recommendations and Alternatives - Roadway Segments**

**U.S. 50 - 6th Street Viaduct to Village of Addyston**

**Existing Conditions / Problems:**
- 28,340 vehicles daily. Volumes expected to increase to 32,310 by 2030.
- Level of Service (LOS) – “D”; High levels of congestion during Peak Hours. LOS Expected to decrease to “D/E” by 2030.
- Safety concerns for pedestrians, bicyclists and vehicles.
- Deficiencies in horizontal curvature.
- Traffic lane striping inadequate on portions of U.S. 50.
- Intersections at U.S. 50 and Neave Street, State Street and Mt. Hope.

**Best Practices / Conceptual Alternative Solutions:**
- Enforce traffic regulations (e.g. on-street parking hours, speed, etc.).
- Consider access management principles.
- Consider new roadway design standards for arterial roadway.

**General Recommendations – Short Term:**
- Study potential benefit and impact of restricting on-street parking in both directions from 6AM to 6PM Monday-Friday or as needed. Any future study regarding on-street parking must include all stakeholders including property owners and businesses.
- Enforce traffic regulations (e.g. speeding).

**General Recommendations – Long Term:**
- Add a lane in each direction, or widen all 4 lanes and add a center turn lane. Improve the turn radius at a number of side streets.
- Coordinate any work on U.S. 50 with the proposal to install future bicycle/pedestrian path between US 50 and the railroad tracks.
- Eliminate the Neave Street intersection with U.S. 50. Coordinate this with the study involving replacement of the viaduct itself.
- Straighten curves in 6th Street Viaduct area. Coordinate work in the area of the Waldvogel Viaduct with the replacement of the viaduct itself.

August 29, 2006

*Figure 5-25: U.S. 50 - 6th Street Viaduct to Village of Addyston*
**Existing Conditions/Problems**

- Perceived lack of physical direct north/south or east/west roadway network.
- Lack of appropriate wayfinding signage to provide north/south direction to the motorists public.
- Travel times are too long.
- Roadways often change names several times along a travel route, creating driver confusion and frustration.
- A majority of the trips on study area roadways are between destinations in Hamilton County. The next largest group of trips is between Hamilton County and Butler County. Trips to and from Northern Kentucky, Dearborn County and downtown Cincinnati are third. Warren and Clermont Counties are the least frequent destinations.

**Analysis Conducted**

- Future trips were generated using 2030 OKI Regional Travel Demand Model to determine future traffic on existing and future roadway network (vehicular capacity analysis).
- Travel Time study was conducted to determine operational characteristics of existing roadway network in terms of travel speed and delay. Six conceptual travel corridors were observed. They are noted on the map and as follows: S.R. 128, Van Buren/Bryant Roads, Ebenizer Road, Neeb/Race Roads, Harrison/Race/Glenway, and Anderson Ferry/Boudinot/North Bend/Cheviot Roads.

**Results of Vehicular Capacity Connectivity Analysis**

- Existing roadway travel capacity will be sufficiently available to meet future travel demand, if other recommended improvements in the Western Hamilton County Transportation Study are implemented.
- Further study of the existing capacity of the roadway network is recommended in the vicinity of the Whitewater Township at its border with Dearborn County to identify potential areas for improved east/west connectivity.
- The travel demand north of I-74/I-275 is such that investments in any major new north/south facilities are not warranted at this time, if other recommended improvements in the Western Hamilton County Transportation Study are implemented.
- Travel demand on I-75 is poor and committed improvements will minimally address current conditions. Consideration of S.R. 128 as a potential new alternative for carrying regional southwest/northeast traffic should be anticipated.

**Results of Travel Time Connectivity Analysis**

- Observed speeds are indicative of urban/suburban conditions and consistent with customary traffic flow conditions.
- Signage for wayfinding should be improved.
- Implement consistency in roadway segment names.
- Access management should be addressed along each corridor, in particular, S.R. 128.
- Widening or substantially upgrading existing roads will produce marginal increases in travel time savings as it relates to north/south, east/west connectivity and therefore no short term improvements are warranted, if other recommended improvements in the Western Hamilton County Transportation Study are implemented.

**Recommendation for Further Study of a New Ohio River Crossing**

- A new Ohio River crossing having six travel lanes is projected to carry an average daily traffic volume of 50,000 vehicles. Based on this usage forecast, it is recommended that a future study of a potential new river crossing be conducted.
- The projected volume of such a crossing would severely impact the existing roadway network, established commercial and residential neighborhoods, the environment, and potentially lead to an increase in vehicle miles traveled (VMT) and vehicle hours traveled (VHT). Such an impact would negate the analysis results reported above which recommend no further widening or substantial upgrade to existing roadways beyond the standing recommendations made by the Western Hamilton County Transportation Study. For these reasons, any future study should encompass the entire area north to south between I-74 and the Greater Cincinnati/Northern Kentucky International Airport and east to west between the I-71/75 Brent Spence Bridge and I-275 Carroll C. Crew Bridge to assess all impacts and transportation improvements that may become necessary by a new crossing.
- It is recommended that an evaluation of a new Ohio River crossing be considered after planning is completed and financing is identified for the I-71/75 Brent Spence Bridge improvements.

**Evaluation of Potential Demand for North-South Transit Service**

- There is a demand or desire for more direct suburban to suburban transit service. However after analysis of the data, it appears that such demand is limited in nature to less than 1,000 daily riders. Therefore, implementation of a specific route is not recommended at this time.
- SORTA is encouraged to evaluate the potential for enhanced north/south transit services over the long term including possible modifications to existing routes and services.

August 17, 2006