



7. STRATEGIC PLAN

7.1. Introduction

The Uptown Transportation Study was conducted under the auspices of the ODOT Major PDP. This study completed steps 1 through 4 of a total of 14 that comprise the PDP. Tasks performed during PDP steps 1 through 4 are documented in the other sections of this Planning Study Report. The Strategic Plan provides documentation of the Implementation Partners' concurrence to advance the recommendations through succeeding steps of the PDP. It will serve as an implementation plan that will be continuously updated following the completion of each subsequent step of the PDP.

Several projects and policies are recommended to improve I-71 access in the Uptown area to reduce travel time, simplify wayfinding and support economic vitality. Some recommendations do not deal directly with physical changes to the existing interstate access, but with policies that will support future modifications to that access. The implementation of the recommended projects and policies should begin immediately and be carried out in specific actions over the next 10 to 15 years.

7.2. Uptown Transportation Study - Part A Recommendations

The Uptown Transportation Study-"Part A" includes recommendations for a number of strategies and projects to improve transportation in the Uptown area. These strategies and projects will help to attain the goals of the "Part B" I-71 Access Improvement Study, but alone will not fully meet the project's purpose and need. The "Part A" recommendations are summarized as follows:

- **Travel Demand Management** – A coordinated program of information and incentives adopted by Uptown area employers to promote alternatives to driving alone.
- **Signage and Wayfinding** – A comprehensive package of new directional signage to improve wayfinding, help to establish the Uptown identity, and improve the visual streetscape.
- **Traffic Signal Optimization** – Optimization and coordination of the traffic signal operations throughout the Uptown area is forecast to result in a significant decrease in traffic delays.
- **Parking** – Potential shared development and operation of off-street parking facilities. A potential shortfall of 5,000 off-street spaces is forecast with a recommendation for two new parking facilities.
- **Bus System Enhancements** – Bus service through the Uptown area will be enhanced by reducing headways on selected routes, adding bus shelters at high activity locations, improving bus signage and information, and by establishing transit hubs to ease transfers and support transit oriented development opportunities.
- **Limited Stop Bus Routes** – On selected bus routes through Uptown, bus stops will be consolidated to improve bus travel times between Uptown and Downtown.



- **Uptown Shuttle** – A new public Uptown Shuttle will be established to connect major destinations and parking facilities and to provide improved internal circulation opportunities.
- **Pedestrian/Bicycle Improvements** – The design of all roadway improvements will include provisions for pedestrian and bicycle circulation and will seek to enhance the pedestrian environment.
- **Roadway Improvements** – A number of roadway improvement projects are recommended to address specific areas of congestion and to improve the connectivity of the local street system.

The recommended roadway improvements result in additional capacity and operational efficiency on the arterial network in the Uptown area, in part, to support improved I-71 access at Taft/McMillan, as well as new access at ML King Drive. While the final location and nature of interstate access remains to be determined, the implementation of the Part A recommendations are a necessary step preceding modification of the existing I-71 access. There are several improvements recommended for corridors along WH Taft Road, McMillan Street, ML King Drive, Reading Road and Burnet Avenue. Additionally, operational improvements such as signal optimization and parking restrictions will serve as a basis to allow for sufficient arterial capacity to effectively distribute the traffic volumes resulting from changes in the I-71 access in Uptown. See Section 9 for the location and description of the Part A recommendations.

Of particular importance is the recommendation for a comprehensive study of the ML King Drive corridor to ascertain the need for capacity improvements to accommodate new access at I-71 and improved access at I-75. This study is estimated to cost approximately \$1.5 million and should be conducted concurrently with, the following recommendations.

7.3. Primary Recommendations

The following alternatives for improving I-71 access in the Uptown area have been developed by the consultant team in coordination with the Implementation Partners for refinement during future steps of ODOT's PDP.

7.3.1. No Build Alternative

This alternative would not make any significant capacity revisions to the existing I-71 access points within the study area. Traffic signal optimization, parking restrictions, and other roadway, wayfinding, travel demand management, transit and parking recommendations incorporated into the Part A recommendations of the Uptown Study would be implemented. Proposed improvements include revisions to interstate guide signs and alteration to the pavement markings for the I-71 southbound ramp to WH Taft Road to provide two lanes or one standard-width lane so that lane positioning is less confusing to divers approaching the Taft/Essex intersection. Additionally, consideration could be given for elimination of the pedestrian walk and bus stop located at Taft/Essex along with revised signal phasing. These improvements will provide some benefit by simplifying wayfinding and marginally reducing congestion in the vicinity of the I-71 southbound ramp to WH Taft Road.



7.3.2. TSM Alternative

This alternative includes all recommendations the “no build” alternative with additional improvements as follows that address forecasted congestion in the 2030 plan year but do not alter the existing I-71 access in the Uptown area.

- Potential closing of Essex Place at WH Taft Road with elimination of the traffic signal, pedestrian cross walk and bus stop at this intersection. Traffic to Walnut Hills would be rerouted via Reading Road to Oak Street or Minnesota Street and Essex Place.
- Modification of Ramp ME (ramp from Montgomery Road to southbound I-71) to eliminate circuitous alignment and merge on mainline curve to improve safety and return excess rights-of-way to alternative uses.
- Potential widening of I-71 southbound ramp to WH Taft Road to provide two lanes.
- Potential lane addition to the I-71 southbound mainline from the Dana Avenue entrance ramp to WH Taft Road exit in order to provide a continuous 5-lane cross-section.

Modification to Dana Avenue interchange to provide access to southbound I-71 from eastbound Dana Avenue. This is being evaluated by a separate Interchange Modification Study being performed in conjunction with a new office/commercial development in the vicinity. See secondary recommendations for additional information.

7.3.3. Build Alternatives

The Uptown Transportation Study Implementation Partners stated the following at their March 2006 project management meeting: *“Interstate Access at WH Taft Road & McMillan should be retained, at a minimum, in its current form and preferably with full access. At the same time a new full service interchange at ML King Drive should be included in all alternatives.”*

As described in Section 6, a series of conceptual alternatives for access improvements at Taft/McMillan and/or ML King Drive were developed that could be implemented in various combinations.

Full-Service Interchange at Taft/McMillan (TM-7)

A conceptual alternative was developed to add access to and from the south at WH Taft Road, as well as provide capacity and geometric improvements to the access ramps to and from the north and new connector roads between WH Taft Road and McMillan Street to improve access. This alternative does not include any interstate access to ML King Drive.

Conceptual alternatives that provide access at both Taft/McMillan and ML King Drive have the benefit of distributing traffic to the arterial network at multiple locations such that the volumes at any one location are not as great as would be the case with a single interchange.

The new interchange configuration would result in increased volumes on WH Taft Road and McMillan Street, as well other arterial streets in the vicinity. The current traffic pattern would



in large part remain. The primary exception would be that volumes on Burnet Avenue and Reading Road south of WH Taft Road would be reduced. The City of Cincinnati has expressed concerns about the ability of WH Taft Road and McMillan Street to accommodate the additional volumes.

Interstate congestion, overall travel times, and complexity of wayfinding would be improved to and from the south but not to and from the north. One could make the case that by not implementing a new interstate access point north of WH Taft Road that the potential redevelopment of vacant or underutilized parcels which are prevalent in the ML King Drive corridor would be hampered. However, by not including new access at ML King Drive, the costs associated with construction and right-of-way acquisition as well as environmental impacts would likely be significantly less than the three alternatives described below that provide access at both locations.

***Interstate Access at Taft/McMillan and ML King Drive
(BR-1, S2a, S-3)***

During the development of the conceptual alternatives, it was determined that two independent full service interchanges located at Taft/McMillan and ML King Drive are not feasible due to the lack of sufficient interchange spacing per Section 502.3 of the Ohio Department of Transportation's *Location and Design Manual (L&D), Volume 1- Roadway Design* which states that the absolute minimum spacing between interchanges should not be less than one mile.

The distance between East ML King Drive and WH Taft Road along the centerline of I-71 is approximately 2,626 feet. The same distance between the overpasses for East ML King Drive and McMillan Street is 3,241 feet.

The required minimum one mile spacing between interchanges stated Section 502.3 of the ODOT L&D Manual will be difficult, if not impossible, to achieve if a full service interchange is constructed vicinity of East ML King Drive, while at the same time, attempting to maintain the existing partial interchange configuration at WH Taft Road and McMillan Street or replace it with a new full service interchange.

Three conceptual alternatives have been developed in response to this constraint which provides at least partial access at both Taft/McMillan and ML King Drive.

Braided Ramp Alternative (BR-1)

Alternative, BR-1, "braids" the access ramps. This "braiding" separates the ramps horizontally and vertically such that they pass each other eliminating the need for a short weaving movement between successive entrances and exits. The disadvantage of this alternative is that it is relatively expensive to construct and not intuitive for the driver and impacts several properties both east and west of the I-71 mainline including the 660 Lincoln Building and portions of the Cincinnati Children's Hospital Medical Center Oak Campus. It does function satisfactorily from a traffic operations perspective.



Service Road Alternatives (S-2a or S-3)

The service road alternatives, S-2a and S-3, feature partial access at Taft/McMillan (to and from the south) and ML King Drive (access to and from the north). ML King Drive and WH Taft Road would be directly linked with a grade-separated, limited access service road on one (S-2a) or both (S-3) sides of I-71. These alternatives are not as operationally efficient at the braided ramps but are somewhat less costly to construct and have somewhat less impact, especially S-2a where the impacts will be primarily isolated to the west side of I-71 where a single two way service road would be located. Since the access is segregated at two individual locations weaving between the interchange access points is not a concern.

Full Service Interchange at ML King Drive (MLK-2, MLK 6a)

Two conceptual interchange alternatives (MLK-2 and MLK-6a) were developed for full service access at ML King Drive in combination with improved access at Taft/McMillan. Adhering to the directive of the Implementation Partners, these alternatives were not considered as stand alone interchanges in combination with elimination of the existing access at Taft/McMillan. It appears that they could be functional and have significantly less construction and right-of-way costs and environmental impacts than the other alternatives. The primary concern with these alternatives is the insufficient capacity of ML King Drive to accommodate the additional traffic volumes associated with new I-71 access and redistribution of traffic volumes associated with removal of access at Taft/McMillan as well as the loss of access itself at Taft/McMillan.

7.3.4. Estimated Costs and Implementation

The estimated construction costs for the conceptual alternatives are based on basic construction unit costs using the ODOT Transport Estimator, Version 2.3a combined with a 30% design contingency. Preliminary unit quantities were calculated by performing manual take-offs for each of the alternatives and used to develop the conceptual cost estimates. The unit prices and quantities for each alternative are shown in Appendix H. Right-of-way costs are based on the valuation of the affected parcels by the Hamilton County Auditor as of May 2006. These costs do not include any allowance for potential relocation of residential or commercial properties nor demolition or mitigation of environmental impacts.

Table 23: 2006 Estimated Costs for Conceptual Access Improvements at Taft/McMillan and/or ML King Drive

Alternative	Estimated Cost (millions)					
	BR-1	S-2a	S-3	TM-7*	MLK-2**	MLK-6a**
Right of Way Valuation 2005	\$33	\$31	\$37	\$36	\$11	\$4
Construction Cost 2006	\$33	\$40	\$47	\$22	\$8	\$22
Totals	\$66	\$71	\$84	\$58	\$19	\$26

* TM-7 alternative provides full access at William Howard Taft Road & McMillan Street only

** MLK-2 & MLK 6a alternatives provide full access at Martin Luther King Jr. Drive only

The 2006 construction cost estimates and right-of-way valuation have been adjusted for inflation through use of the ODOT Office of Estimating's Inflation Calculator using default inflation ranges of high, medium and low internal to the program. A 3.5% annual inflation rate was used to account for appreciation of the affected parcels at ODOT's direction.

Table 24: Estimated Inflated Costs for Conceptual Access Improvements at Taft/McMillan and/or ML King Drive

Alternative	Estimated Cost (millions)					
	BR-1	S-2a	S-3	TM-7*	MLK-2**	MLK-6a**
Right of Way Valuation 2014	\$43	\$41	\$49	\$47	\$14	\$5
Construction Cost 2015 (high)	\$73	\$70	\$82	\$38	\$14	\$38
Construction Cost 2015 (med)	\$66	\$63	\$73	\$34	\$13	\$34
Construction Cost 2015 (low)	\$58	\$56	\$65	\$31	\$11	\$31
Total (high)	\$116	\$111	\$131	\$85	\$28	\$43
Total (med)	\$109	\$104	\$122	\$81	\$27	\$39
Total (low)	\$101	\$97	\$114	\$78	\$25	\$36

* TM-7 alternative provides full access at William Howard Taft Road & McMillan Street only

** MLK-2 & MLK 6a alternatives provide full access at Martin Luther King Jr. Drive only

The estimated costs range from \$25 million for the ML King Drive stand-alone alternative (MLK-2) to \$131 million for the S-3 service road alternative. These costs do not include modifications to the local street network which are not physically impacted by the respective interchange alternatives nor do they include costs associated with the potential modification of the Reading Road/Gilbert Avenue interchange, realignment of the Montgomery Road entrance ramp to I-71 southbound or additional mainline capacity on I-71 between Taft/McMillan and the Dana Avenue described below.

The conceptual alternatives developed to modify the existing Taft/McMillan interchange and/or provide access at ML King Drive as well as potential alternatives for a stand-alone interchange at ML King Drive should be advanced to steps 5 through 7 of the PDP. This will allow for the selection of a preferred alternative and completion of a formal interchange modification/justification study, refinement of cost estimates and preparation of the project environmental document, which based on the analysis conducted thus far, will likely be an environmental impact statement.

Completing the tasks in these three steps will require an estimated expenditure of \$2.5 to 4.5 million. If a comprehensive study of the ML King Drive corridor is conducted as part of this analysis the costs will be nearer to the high end of the estimated cost to conduct these steps. While there is a large range in the forecasted construction costs it should be anticipated that improved access at Taft/McMillan and ML King Drive will likely be in order of magnitude of \$100 million dollars in 2015. Providing full access at a single location will be somewhat less.

7.3.5. Modification of Reading Road/Gilbert Avenue Interchange

To accommodate a new entrance ramp from WH Taft Road to southbound I-71, the existing two lane exit from southbound I-71 to Reading Road and Gilbert Avenue (Ramp RA) must be reduced to a single lane exit in order to provide sufficient weaving distance between this



exit and the potential new entrance ramp. Based on the forecasted design hour volumes, the existing pavement markings could be reconfigured as a single lane exit with a split of the traffic bound for Reading Road or Gilbert Avenue located south of the current exit gore. This solution appears to be feasible but would result in a design exception for lane continuity since a through lane drop would be required. If the design hour volumes are such that a single lane exit serving both Reading Road and Gilbert Avenue is not feasible, then the existing exit could be reconstructed to serve Reading Road only and a new exit serving only Gilbert Avenue could be constructed south of the current exit gore for Ramp RA. The latter scenario would require extensive modifications to the existing bridge structures carrying I-71 over the northbound exit ramps to Reading Road (HAM 71-0248 left/right). These bridge structures have integral steel pier caps which make any modification to the existing superstructure impractical. It is likely that these two bridges would have to be replaced if a newly constructed Gilbert Avenue exit is needed.

The northbound side of this interchange features a left-hand exit from northbound I-71 to northbound Reading Road and Dorchester Avenue (Ramp RC). This left-hand exit does not conform to Section 502.5.2 of ODOT's *Location and Design Manual, Volume 1- Roadway Design*. While replacement of this design exception would be beneficial, it is not directly attributable to improving access to the Uptown area.

The Reading Road interchange is currently signed to prohibit a weaving movement from the I-471 northbound entrance ramp on the right to the northbound Reading Road exit on the left. Despite the current signage, this movement does occur since it is the most direct connection between I-471 and the Uptown area. By utilizing the prohibited weaving movement, drivers can bypass two signalized intersections on Reading Road (Liberty Street and Elsinore Avenue) shortening the overall distance traveled by approximately $\frac{1}{4}$ mile. This translates into a time savings of slightly over a minute in uncongested conditions and longer during congested periods.

By using the Liberty Street exit, travel time between the Daniel Carter Beard Bridge and Reading Road north of Dorchester Avenue is approximately 75% longer than would be the case using the I-71 exit and the prohibited weave. It should be noted that similar travel time savings can also be realized by using the ramp from Dorchester Avenue to I-71 southbound and then to I-471 southbound in lieu of the signed route to the I-471 entrance ramp at Liberty Street.

To physically eliminate the possibility of the weave, relocation of the I-471 entrance ramp gore would be necessary. Extensive modifications to the existing bridge structures at this location would be required, which may result in this option being cost prohibitive. These bridge structures are also supported by integral steel pier caps and total replacement of the bridges may be required.

Given the complexity and potential cost to implement the geometric modifications to address the issues noted above, it is recommended that a comprehensive study be made of the Reading/Gilbert interchange to determine the costs, feasibility and constructability of reconfiguring the southbound Reading and Gilbert exits and eliminating the current left-hand exit ramp from northbound I-71 to Reading Road or alternatively, relocating the I-471 northbound entrance gore to prevent the weaving movement at this location.



Estimated Costs and Implementation

The Ohio Department of Transportation has allocated \$1,428,000 to paint the superstructure of Bridges HAM 71-0248 left and right which carry I-71 over Eden Park Drive and Florence Avenue in FY 2008. Some consideration could be given to deferring this major painting project until the long-term dispositions of these bridges are evaluated by this recommended study.

The OKI 2030 Long Range Transportation Plan includes a project to “Restrict I-471 northbound from the Reading Road exit; evaluate freeway management system, eliminate left entrance/exits.” It is estimated that an interchange modification study at this location will require an expenditure of approximately \$600,000.

If it is determined that new access to and from Taft/McMillan to the south is not necessary then modifications at the Reading/Gilbert interchange would not be required except to mitigate the left hand exit and prohibited weaving movements.

7.3.6. Realignment of Ramp ME (Montgomery Road to I-71 Southbound)

The entrance ramp from Montgomery Road at Brewster Avenue to I-71 southbound was originally designed in conjunction with a full service interchange located at Victory Parkway. The ramp has a long and circuitous alignment approximately 3,500 ft in length that allowed for a grade separation of with the proposed exit ramp from southbound I-71 to Victory Parkway. The proposed Victory Parkway interchange was not constructed and is not recommended for future implementation. The ramp currently merges with the I-71 mainline on a horizontal curve and has experienced a higher concentration of accidents than the average for I-71 throughout the study area.

Xavier University has expressed interest in the rights-of-way currently occupied by Ramp ME for expansion of its adjacent campus. It is anticipated that excess rights-of-way could be utilized for recreational and athletic facilities.

If a new interchange were to be constructed at ML King Drive, realignment of this ramp would provide additional weaving distance to the new downstream southbound exit ramp.

It is recommended that this ramp be reconstructed with a standard entrance gore that would be located north of the Woodburn overpass (HAM 71-0505) if possible. The location of Pier No. 1 of the Woodburn Avenue overpass may interfere with this recommended realignment. If this is the case two alternatives could be studied as follows:

The entrance gore could be located such that it is immediately south of the Woodburn Avenue overpass but at least partially located in a horizontal curve. This would allow the existing bridge to remain as is.

The entrance gore could be shorted such that it is located in a tangent section and provided the shortest ramps length and maximum spacing with ML King Drive. This may require modification or replacement of the existing Woodburn Avenue overpass structure.

Estimated Costs and Implementation



In both cases the length of the ramp could be reduced to approximately one third its current length and the excess rights-of-way returned to other uses. Travel time, safety would be improved and future maintenance cost would be reduced. Costs associated with this recommendation would be estimated to be \$1.5 to \$3.5 million in 2006 dollars.

Responsibility for administering the realignment of Ramp ME rest with ODOT, however, benefits would be realized by the City of Cincinnati and Xavier University or other adjacent property owners which could contribute some funding for planning and design.

7.3.7. Dana Avenue Interchange

The entrance ramp from westbound Dana Avenue to southbound I-71(Ramp DB) is forecast to operate at a failing level of service in 2030. Future growth of traffic volumes at this interchange ramp can be largely be attributed to the planned redevelopment of the adjacent parcels west of I-71 from a medium density single family residential neighborhood to a major office development. This project is in the design stage as of 2006 and will have a significant impact on the design hour volumes of the Dana Avenue interchange. The developer has requested that the existing configuration of Ramp DB be altered to allow access from eastbound Dana Avenue and has begun work on an interchange modification study.

Future development of improved access at Taft/McMillan and/or ML King Drive should incorporate the recommendations and most recent traffic data that result from this interchange medication study.

7.3.8. I-71 Mainline Capacity

The planning level traffic forecast for the plan year indicates that the I-71 mainline southbound between the Dana Avenue entrance ramp and the WH Taft Road exit will operate at a level of service "E". The same condition is predicted to exist northbound between the McMillan Street entrance and the Duck Creek exit. Based on this analysis, an additional lane may be required in each direction within the limits noted or beyond to adhere to lane continuity provisions in ODOT's *Location and Design Manual, Volume 1- Roadway Design*.

This additional mainline capacity would be required regardless of any interchange access modifications and is not included in the cost estimates for the conceptual access improvements. It is anticipated that there is sufficient right-of-way to accommodate an additional lane in both directions resulting in a 5-lane cross section. This is partially due to additional shoulder width constructed in anticipation of the proposed but never constructed interchange at Victory Parkway. The impact to the existing bridge structures has not been ascertained at this stage, but it would appear that the overpass structures could accommodate this potential widening. The mainline bridge structures HAM 71-0450 L/R carrying I-71 over Victory Parkway would need to be widened. Depending on whether new access is added at ML King Drive, the southern terminus of this additional lane be located either at this new access or alternatively at Taft/McMillan.



Estimated Costs and Implementation

Responsibility for providing sufficient mainline capacity within the study area based on the existing access lies with the ODOT. Further analysis of the need and configuration of additional mainline capacity would be undertaken as part of the recommended PDP steps 5 through 7 for the conceptual alternatives developed to modify the existing Taft/McMillan interchange and/or provide access at ML King Drive. If future steps of the PDP determine that additional mainline capacity is required only to support modified interstate access, then the costs for adding such capacity will be included in the overall project costs for the access modifications.

It is estimated that the construction costs for the recommended mainline capacity would be approximately \$8.5 million in 2006 dollars. This reflects the assumptions noted above, namely no additional rights-of-way required and no major impacts to the existing overpass bridges.

7.4. Secondary Recommendations

7.4.1. City of Cincinnati Zoning Classification Review

The current zoning classifications for the land within the study area generally reflect the existing light industrial and residential land uses. It is assumed that in order to fully capitalize on improved access to I-71, future land uses would be significantly different from their present use. Existing light industrial and residential uses would be likely be replaced by office, institutional and mixed use development as has been the case in the vicinity of other interchanges located along the I-71 corridor from the Grand Baldwin development in the southern portion of the study area to the Keystone Parke office complex now in the preliminary stages of development near the Dana Avenue interchange at the northern edge of the study area. It is recommended that a comprehensive review of the existing municipal zoning classifications be performed with the intent to revise the classifications as necessary to reflect the desired future land uses that could be supported by improved interstate access. This process would be lead by the City of Cincinnati in conjunction with Uptown and neighborhood stakeholders.

The City of Cincinnati has formed a task force that will discuss the reestablishment of the Department of City Planning, which was eliminated in 2003. If the City Planning Department is reestablished, or if the planning functions continue to be administered by other departments, this task should be a priority for the City of Cincinnati.

7.4.2. Preservation of Public Right-of-Way

During the past several years, publicly-owned parcels within the study area have been sold by the City of Cincinnati and/or the State of Ohio to private interests. All publicly-owned property within the immediate vicinity of the I-71 limited access rights-of-way should be held until such time that the nature of future access improvements and/or additional needs for mainline capacity is more fully defined. Transferring public property to the private sector can lead to increased costs for right-of-way acquisition and potential residential or commercial displacements that could otherwise be avoided. This moratorium on vacating or selling



publicly owned rights-of-way would need to be developed and implemented by both the City of Cincinnati and ODOT.

A new interchange or interchange modifications may result in surplus publicly-owned rights-of-way that could be returned to the private sector in future years. This is particularly true if portions of the existing interchanges are eliminated. The recommended realignment of Ramp ME (Montgomery Road to I-71 southbound) is a case in point which would result in several acres of land that could be returned to the private sector and has been identified by Xavier University for future expansion of its athletic facilities.

It is also recommended that key stakeholders, which may have ownership interests in parcels that are potential acquisitions for future rights-of-way, plan accordingly and not implement significant improvements on the parcels in question until the potential need for property acquisition is more fully determined. Donation of, or at least a reduction in costs, to acquire this right-of-way could serve as local match to leverage additional public funds. This is particularly true for the portion of the Cincinnati Children's Hospital Medical Center Oak Campus between Winslow Avenue and I-71.

7.4.3. Sign Audit

Section 4511.11 of the Ohio Revised Code requires that all local authorities in their respective jurisdictions place and maintain traffic control devices in conformance with the OMUTCD. Based on field observations of the existing signage, it is recommended that a comprehensive inspection of the existing guide signs should be undertaken for I-71 within the study area. Several of the guide signs are outdated and several appear to be inappropriately located. Additionally, an inventory of the interstate trailblazer assemblies and hospital guide signs (D-9.2) should be performed. This work would be the responsibility of both the City of Cincinnati and ODOT for the signs that are their respective maintenance responsibilities. Some consideration should be given to referencing "Uptown" as a destination in the same nature as "downtown" or "riverfront."

This recommendation has been included as one of the Uptown Transportation Study's early action item recommendations. The respective signs should be updated, replaced and/or relocated as documented in the respective sign audit.

There are six hospital facilities that meet the criteria of OMUTCD Section 2D-45 regulating emergency medical guide signs within the study area. Consideration should be given to a supplemental guide sign system to identify each of the hospital facilities in the study area. A new system of wayfinding signage has been recommended for the Uptown area as part of this study and is currently in the planning stages. The City of Cincinnati has allocated \$250,000 in its 2006 capital budget for implementation of a new Uptown wayfinding sign system. Any revision to the existing interstate signage must be coordinated to the extent possible with implementation of this new wayfinding system.

Additionally, the disposition of the existing signage referring to hazardous cargo and the Lytle Tunnel should be reviewed to insure that any hazardous cargo ban is properly journalized by the Public Utility Commission of Ohio (PUCO) and the National Motor Carrier Safety Administration and that signage are in accordance with the OMUTCD.



OKI is planning to conduct a regional freight transportation study in the near future. The disposition of a hazardous cargo ban within the Lytle Tunnel should be included in the scope of work for this proposed study. Additionally, ODOT has programmed \$2,271,000 for the rehabilitation of the Lytle Tunnel in FY 2011. Funding for a risk assessment of hazardous cargo within the tunnel and for new regulatory signage as required could possibly be included in this project.

7.4.4. Utility Coordination

Duke Energy is planning routine replacement of natural gas distribution lines on several streets within the study area and in particular north and west of a potential interchange at East ML King Drive. Where possible, replacement of any major utility infrastructure within the study area should be deferred until such time that the nature of future access improvements and/or additional needs for mainline capacity are more fully defined.

The Metropolitan Sewer District is planning the Dellway Avenue sewer replacement project north and west of a potential interchange at East ML King Drive. Consideration may be given to delaying the timing of this sewer replacement project until the disposition of any new interchange has been more fully ascertained.

The City of Cincinnati Infrastructure Coordinating Committee should be informed of the areas that could be affected by access improvements within the study area and disseminate this information to the participating public agencies and private utilities.

7.4.5. Transit

SORTA has purchased several parcels of land that were formerly Conrail Railroad rights-of-way within the study area. This land was purchased with the intent that mass transit service could possibly be implemented along the former rail alignment which runs from the northern edge of the central business district to the northeast terminating in south western Warren County. Within the study area, the railroad alignment generally parallels I-71. The former rail alignment is west of I-71 from Dana Avenue south to Whittier Street where it turns eastward and crosses I-71 on bridge HAM 71-0392 located just north of ML King Drive. From this point the alignment runs along the east side of I-71 south to the vicinity of Ellsinore Place where it turns west again and recrosses I-71 on bridge HAM 71-0231.

The two overpass bridges are owned by ODOT and the City of Cincinnati respectively. The City of Cincinnati is responsible for maintenance of the superstructure on bridge HAM 71-0392. There are no tracks or operational rail services active at this time. Additionally the former rail alignment made use of two masonry arch tunnels located under Oak Street and McMillan Street east of I-71.

Use of this former railroad alignment for light rail transit was adopted as part of OKI's Regional Rail Plan in 2002.

The conceptual alternatives recommended for further development will impact the SORTA rights-of-way. If an interchange is implemented at ML King Drive, bridge HAM-0392 will likely be removed. If modifications are made at the Reading Road interchange bridge HAM 71-0231 could be removed. Any interchange modifications to the existing Taft/McMillan



interchange would likely require the removal of the existing railroad tunnel under McMillan Street.

Future project development of interstate access improvements should be undertaken such that the resulting preferred alternative is developed with provisions for accommodating a transit corridor from Dana Avenue south to Liberty Street. In exchange for this accommodation of transit, it is recommended that SORTA make available the portions of its rights-of-way necessary for construction of the preferred alternative subject to the review and approval of the Federal Transit Administration.

7.4.6. Economic Impact Analysis

Supporting economic vitality is one of the primary purposes of improved I-71 access. The members of the Uptown Consortium have expressed the importance of improved interstate access to the vitality of their respective institutions. These institutions should provide information concerning the economic impacts of improved interstate access will have on their respective operations and facilities as well as to support potential future economic development. It will be important to provide formal documentation of the economic development potential that is afforded by improved access in terms of employment gains, property values and public tax revenues when seeking public funds for construction or alternative financing.

Any economic impact analysis should be coordinated with the recommended zoning classification study.

7.5. Project Implementation

At this time it is anticipated that preparation of an EIS will be necessary to advance the recommended conceptual alternatives to improve I-71 access at Taft/McMillan and/or ML King Drive. Environmental Field Studies will commence during PDP Step 5 and continue through Step 7 and conclude with the preparation of a draft EIS or other environmental document. It is likely that the ODOT office of Environmental Services will file a notice of intent stating that it intends to prepare an EIS for this project.

The anticipated need for the preparation of an EIS is primarily based upon potential impacts to existing cultural resources within the study area. More specifically, the following issues will require investigation and documentation

- Need for additional rights-of-way which will displace residential populations and commercial businesses.
- Potential impacts to structures listed or eligible for the National Register for Historic Places.
- Potential impacts to the Peebles Corner National Historic District.
- Potential impacts to environmental justice populations which are prevalent throughout the study area.
- Potential impacts to several documented sites which may include hazardous materials.

- Presence of sensitive noise receptors within the study area that may be affected by the conceptual alternatives.

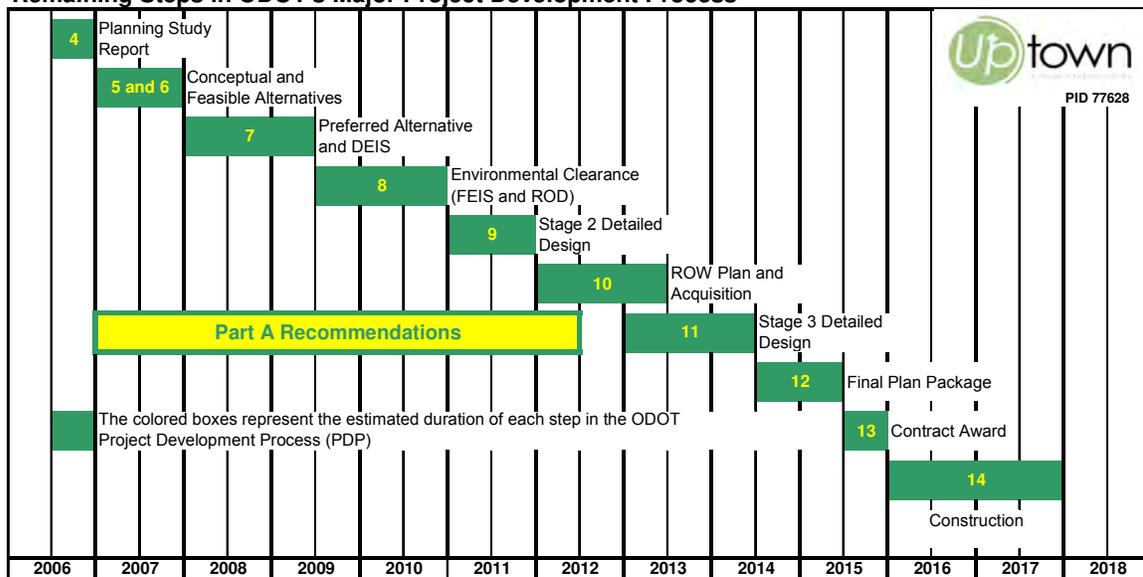
Please see the Red Flag Summary Report for additional information concerning environmental resources within the study area that may be potential affected by the conceptual alternatives recommended for further study.

7.5.1. Schedule

The time needed to complete all recommended access improvement is largely dependent on the availability of sufficient funding to complete the project development process without delay. Using conventional sources of funding, construction on mainline capacity additions and/or interchange modifications is not likely to begin prior to 2016. Please refer to Figure 5 for a conceptual time line. This figure assumes continued implementation of the recommendations following completion of the Uptown Transportation Study in 2006.

I-71 INTERSTATE ACCESS IMPROVEMENT STUDY

Remaining Steps in ODOT's Major Project Development Process



Notes: 1. Applications for TRAC funding submitted in 2007 will provide funding for 2014 Major New Construction Program
 2. I-71 construction activities will need to be coordinated with I-75 construction activities

Figure 5: Remaining Steps in the ODOT Project Development Process

Implementation of the Uptown Transportation Study Part A recommendations will generally precede modifications to I-71 access. It is imperative that the connecting arterial network have sufficient capacity to accommodate future improvements to interstate access at Taft/McMillan and/or ML King Drive. Detailed study of the ML King Drive corridor along with selected capacity improvements on Taft/McMillan, Reading Road, Burnet Avenue and ML King Drive must be an initial priority.

The policy recommendations concerning zoning, utility coordination and right-of-way preservation should be implemented immediately



The recommendations should be incorporated into OKI Long Range Transportation Plan (LRTP) at the earliest practical date and opportunities for funding continued planning and/or preliminary engineering should be explored and identified. Once funding is secured for additional project development the respective projects should be added to the OKI TIP and the State Transportation Improvement Program (STIP).

The City of Cincinnati must determine what resources can be allocated to fund the project recommendations in its 2007-2008 biennial budget.

If significant amounts of funding can be secured for the project during the planning and design phases, the timeline illustrated in Figure 5 could be shortened somewhat as the planning and design phases can be more comprehensive and rights-of-way acquisition could be undertaken at the earliest possible date.

There are limitations to the ability to shorten this schedule, however. This project will most likely require the publication of an environmental impact statement requiring coordination of several state and federal agencies as well as the public.

Another practical limitation on the ability to shorten the implementation schedule is that the ongoing reconstruction of I-75 including replacement of the Brent Spence Bridge will necessitate temporary reductions in capacity on I-75 for maintenance of traffic through work zones during construction. It is expected that construction on I-75 will take place from 2011 through 2014. Given this scenario any maintenance of traffic on I-71 would need to provide sufficient capacity to accommodate traffic volumes diverted from I-75 during this construction period.

Decisions regarding regional maintenance of traffic concerns are the responsibility of the Ohio Department of Transportation and will be a critical coordination issue for any significant construction projects that affect the capacity of I-71 while I-75 or other major regional facilities are under construction.

7.5.2. Project Delivery Strategy

Responsibility for implementation of these recommendations rests primarily with the ODOT and the City of Cincinnati. The City is certified with ODOT as fully capable to meet the requirements to administer federal aid projects as an LPA. If the City of Cincinnati administers continued project development for the conceptual alternatives to improve I-71 access at Taft/McMillan and/or ML King Drive, an LPA agreement will need to be executed between the City and ODOT specifying respective roles, funding commitments, scope of work and administrative duties.

Additionally the major private and public institutions located in Uptown that will be primary benefactors of improved access should be expected to play a supportive if not direct role in demonstrating need, garnering public consensus, providing rights-of-way, conducting economic impact analysis and securing funding for both design and construction.



Table 25: Implementation Agencies and Estimated Costs

Implementation and Estimated Cost		
Recommendation	Implementation Agency	Estimated Cost
Advance study of modified access at Taft/McMillan and/or new access at Martin Luther King Jr. Drive through ODOT PDP Steps 5-7	City of Cincinnati and Uptown Stakeholders	\$3,500,000
Study potential modifications to Gilbert Ave. /Reading Road Interchange	ODOT	\$600,000
Provide additional mainline capacity (5 lane cross-section) between Taft and Dana Entrance SB and McMillan Duck Creek exit NB) *	ODOT	\$8,500,000
Re-align Ramp from Montgomery Rd. to Southbound I-71 *	ODOT	\$3,500,000
Traffic Study of Martin Luther King Drive **	City of Cincinnati	\$1,500,000
Land Use Study of Zoning Classifications	City of Cincinnati and Uptown Stakeholders	\$150,000
Economic Impact Analysis	Uptown Stakeholders and City of Cincinnati	\$250,000
I-71 Sign Audit	ODOT	\$50,000
Preserve Public Rights of Way	City of Cincinnati, ODOT and Uptown Stakeholders	NA
Utility Coordination	City of Cincinnati and Uptown Stakeholders	NA
Transit - Preserve right-of-way for future transit corridor	City of Cincinnati, ODOT and SORTA	TBD

Unless otherwise noted estimated costs are 2006 dollars.

* Conceptual Cost estimate assuming no right of way acquisition or impact to overpass structures.

** If conducted as part of PDP Steps 5-7 for new access at MLK costs associated with this analysis would be partially offset by study of access modifications on I-71. Cost shown are for an independent analysis of MLK Corridor.

Formal acceptance of the project documents and recommendations from the Uptown Transportation Study will be the initial step in implementation of the project recommendations. The need for additional funds should be identified and if need be preparation of an application for Transportation Review Advisory Council (TRAC) funding in May 2007 could be undertaken at the conclusion of this Study.

The respective institutions in the Uptown area should undertake a review of their respective abilities to assist with project implementation from a policy and funding perspective.

7.6. Public Involvement Concerns and Issues

Three public meetings were conducted during the project with the Part B recommendations being presented at the last meeting during October 2006.

The issues and concerns gathered at the public meetings were varied. The complete written commentary collected is included in the separate Uptown Community Involvement Documentation binder. No real sentiments outweighed others but it is somewhat evident that the respondents understand that changes to the transportation system in Uptown would have significant impacts on the community.

7.7. Funding

At this time no funding has been committed for implementation of any of the recommendations of Uptown Transportation Study Part B Interstate 71 Access Improvement Study.

The individual implementation partners must answer these critical questions when seeking funds to carry out the aforementioned recommendations.

- What funds are realistically available?
- What timeframe restrictions apply?
- What approval process is required?
- What other restrictions apply?

The OKI 2030 LRTP includes two fiscally constrained capacity improvement projects within the study area. The plan allocates \$2 million “to restrict I-471 northbound from Reading Road exit; evaluate freeway management system, eliminate left entrance/exits” and \$35 million for “a new full service interchange at ML King Drive.”

The nature and estimated costs associated with these two projects should be updated to reflect the recommendations and cost estimates presented herein during the next revision or update to the LRTP and preferably prior to seeking funding.

Both ODOT and the City of Cincinnati are experiencing growth in documented needs for funding capital expenditures during the next 5 to 10 years with declining capacity to fully meet those needs. It is estimated that the total costs associated with the recommended access improvements will range from \$50 to \$100 million. Implementation of the recommendations will require a mix of public funding from federal, state and municipal sources as well as from the private and nongovernmental sectors.

See Figure 6 for a conceptual timeline of expected expenditures to implement the recommendations of the Uptown Transportation Study.

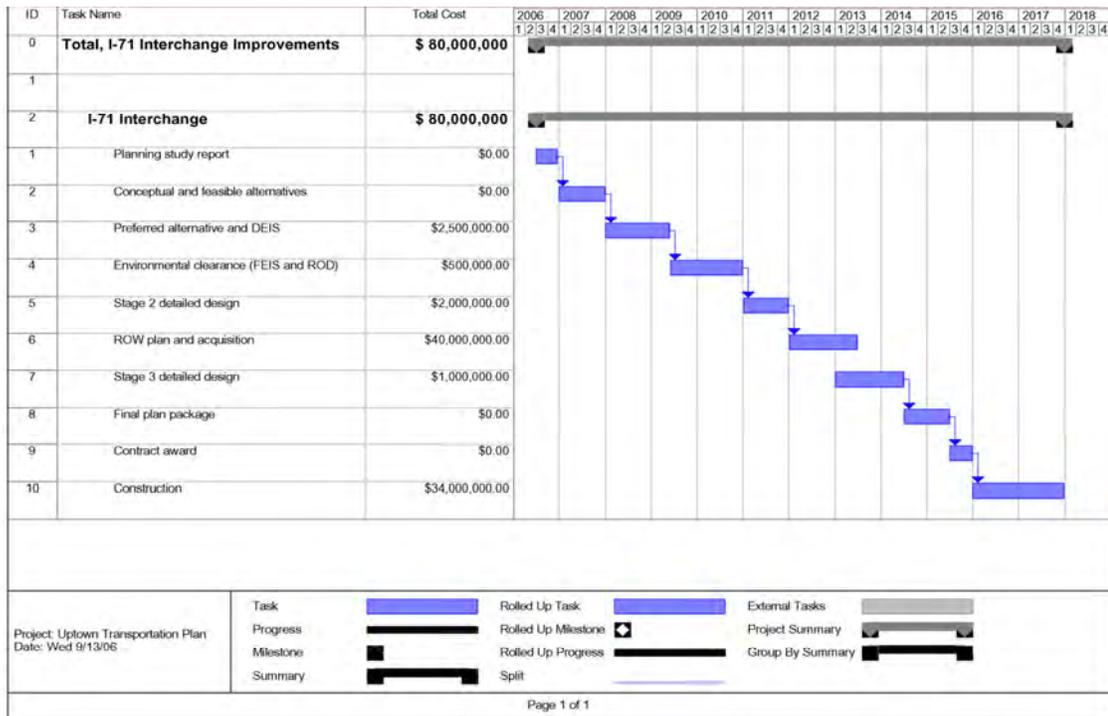


Figure 6: Estimated Expenditures by year (2006 dollars)

City of Cincinnati

The City of Cincinnati is currently developing its 2007/2008 biennial budget. Major issues for the 2007/2008 biennium include pending negotiated labor agreements, reestablishment of the Department of City Planning and the Office of Environmental Management. The capital budget is facing growing demands on its limited resources to fund the construction of several large projects including the Kennedy Avenue Connector just north of the Part B Study area as well as the new central riverfront park downtown. General capital resources have been reduced approximately 45% from \$106 million in 2003 to \$59 million in 2007.

The most significant declines in City resources for capital expenditures since 2003 have been from Tax-Supported Bonds and the Anthem Proceeds. The Anthem Proceeds represented a one-time windfall for the City and no additional resources are expected from this source. Tax-Supported Bonds are declining due to debt capacity projections.

As part of the City's development of its 2007-2008 biennial budget, the City's Department of Transportation and Engineering has requested an increase in its annual allocation for coordination with OKI corridor studies to potentially assist with future planning activities for this project. No dedicated City funding sources to advance the recommendations of this study have been identified to date.



ODOT

The Ohio Department of Transportation administers several funding programs that would be applicable to the recommended access improvements. These programs are primarily funded through Federal formula or discretionary programs and include the following:

- Congestion Mitigation and Air Quality (CMAQ) (20% minimum local match)
- Highway Safety Improvement Program, HSP (0-10% up to \$5.0 M)
- Surface Transportation Program, STP (20%)
- Transportation, Community and System Preservation Program, TCSP (20%)
- National Highway System, NHS (20%,)
- Interstate Maintenance Discretionary (IMD) (10%-20%)

A percentage of the CMAQ and STP funds are sub allocated by ODOT to OKI for the Cincinnati urbanized area.

Transportation Review Advisory Council

The primary source of ODOT funding for major capacity improvements is the TRAC. The TRAC is composed of appointed representatives throughout the state of Ohio that meet on an annual basis to allocate available funding for major new capacity projects to be constructed the succeeding six-year period.

TRAC applications are submitted in May of each year. Hearings are held August through October, and a draft list is released in December. The public comment period is January through April; in May, the final six-year program is published. During 2007, TRAC will be considering funding for the 2014 major construction program. The TRAC program is projecting future revenue shortfalls to meet the project funding commitments. It is unknown at this time how this structural imbalance in the funding program will be resolved. The City of Cincinnati has applied for TRAC funds to conduct planning and design for a new interchange at I-71 and ML King Drive in 2001 and 2003 but was not allocated funding. It should be noted that the TRAC funds allocated to the respective projects for the planned reconstruction of I-75 within Hamilton County are not sufficient to completely fund the estimated costs of these projects. Additional TRAC funds will likely be sought to secure additional funding for these projects thereby reducing the likelihood of additional large funding allocations for the remainder of the metropolitan area. While the individual projects are judged on their respective merits, the TRAC does consider equitable distribution of available funds on a geographic basis. It should be noted that TRAC policy requires a minimum of 50% match for new interchange construction. The characterization of whether the preferred alternative is a “new” interchange or an interchange modification remains to be determined.

See Figure 15 for a current listing of TRAC committed funding for ODOT District 8 projects. A total of \$786 million in TRAC funds has been pledged for District 8 projects through 2012.

Table 26: 2007-2012 TRAC Allocations for ODOT District 8

TRAC 2007-2012 Major New Construction Program List																
District	Project	PID	Project Cost	Local Funds	TRAC Commitment	Description	2007	2008	2009	2010	2011	2012	2013	2014	2015	
8	Butler/Warren I-75	24664, 10752, 24659, 79715	143.4	56.7	86.7	Add lanes from SR-129 and SR-122 and reconfiguration of SR-63 interchange	0.6	67.4								
8	Clermont I-275/SR-32	76289	90.2	3.3	86.9	Reconstruction of I-275 interchange at SR-32	1.0	19.0	0.5		61.3					
							2.0									
8	Clinton SR-73	16621, 78569, 78570, 78571	99.0	4.7	94.3	Wilmington Bypass	14.5	43.1	23.4							
							7.1	0.3	0.4							
8	Banks Intermodal	77164	27.1	16.1	11	Parking Structures on Cincinnati Riverfront	11.0									
8	Hamilton I-275	22386, 80990	134.7	102.2	32.5	Add lanes from Winton Rd to Reading Rd. US-42	30.9									
8	Hamilton I-75	76256, 80931	213.5	71.4	142.1	Improve I-75 and Reconstruction of Interchanges from SR-4 to Sharon Rd.	2.2	3.0				119.5				
								11.5	3.0							
8	Hamilton I-75	76257	254.9	60.2	194.7	Improve I-75 and Reconstruction of Interchanges from Western Hills Viaduct to SR-562 Norwood Lateral	3.7	5.0	4.4	11.6	166.8					
8	Warren I-75	10754	152.9	58.5	94.4	Add additional lanes from SR-122 to Montgomery County Line, Reconfigure SR-122 Interchange	7.4	2.0	78.4							
							2.2									
8	Butler SR-4 Bypass	76290	33.5		2.7	SR4 Bypass City of Fairfield Butler County	2.7									
8	Clermont/Hamilton SR-32	22970, 80261	450.0	3.1	4.8	Eastern Corridor Multimodal Study										
8	Hamilton I-75	75119	690.9	10.0	29	Reconfiguration of Ohio Approaches to the Brent Spence Bridge		1.9		25.0						
8	Hamilton I-75	77889	157.0		3.3	Reconstruction of I-75 Interchanges at Towne St. and SR 562 Norwood Lateral		3.3								
8	Hamilton 75/275	77278, 77890	69.4		4	Improvements to I-75/I-275 Interchange		4.0								
Totals			2,516.5	386.2	786.4		85.3	160.5	110.1	36.6	228.1	119.5	0.0	0.0	0.0	

■ Preliminary Engineering
■ Design
■ Right of Way
■ Construction

It is recommended that an application for TRAC funding be prepared prior to the May 2007 submittal deadline. This application could be limited to assistance with funding PDP steps 5-7 and placement in Tier II program listing. A Tier II project does not have a future commitment of construction funding but generally is for projects in the preliminary engineering phase of development prior to firm cost estimates and defined projects for construction.

Ohio State Infrastructure Bank

An alternative to receiving TRAC funding is seeking loan funds or bonding payments from Ohio's State Infrastructure Bank (SIB). This revolving loan fund was initially capitalized with \$137 million of federal and state funds. As of September 2005, \$43 million was available for disbursement. The maximum loan term is 10 years with an interest rate three fourths of the prime rate.

Loan Approval Process

All projects are subject to approval by the Director of ODOT. Projects using federal funds must be listed in the STIP. It should be noted that the recommendations for improving I-71 access in the Uptown area have not been incorporated into the STIP to date.

Project Requirements

- The Environmental Assessment and subsequent clearance process must be complete to the extent required to meet the funding source requirements;
- The preliminary engineering including any required studies such as, but not limited to, the Major Investment Study, Interchange Justification Analysis, Wetlands Analysis and Mitigation Plan, as well as any other funding source requirement must be completed prior to loan closing;



- The project must have an identifiable revenue stream or source that will likely amortize the debt. Such revenue sources may include: local government pledges, TIFs, property assessments, license plate and registration fees, Issue 2 local government funds, other user payments and/or fees, such as parking revenues, etc.

See <http://www.dot.state.oh.us/sib1/default.htm> for additional information

Federal Discretionary Programs

Federal discretionary programs have their own eligibility and selection criteria that are established by law, regulation, or administratively, resulting in a separate application process. These programs have been established by the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009. For more information on available programs, please view the FHWA Discretionary website at <http://www.fhwa.dot.gov/discretionary/index.htm>.

SAFETEA-LU has created several new discretionary programs including Projects of National and Regional Significance, High Priority Projects [1701, 1702, and 1703] and Transportation Improvements [1934]. These programs fund specifically designated projects contained in the legislation. There are no designated projects for I-71 access improvements included in these programs. The Uptown Crossings Multimodal Center and improvements to the interchanges on I-75 within the Uptown area have been designated to receive funding.

Federal funding varies between programs and is provided for in SAFETEA-LU and annual appropriations acts funding the Department of Transportation. The City of Cincinnati has requested that funding for implementation of the project recommendations for improving I-71 access be included in the FY 2007 Appropriations Bill for the Department of Transportation. At this time no designation of discretionary funding has been included in this pending legislation.

The successor legislation to SAFETEA-LU in 2010 could be a source for designated discretionary funding for latter stages of project development including final design and construction. At this time it is not possible to predict the nature of the discretionary funding programs and levels of funding available at that time.

The Federal Highway Administration has recently begun to promote non-traditional mechanisms for financing large transportation infrastructure needs. Several provisions of SAFETEA-LU expand and reinforce programs to foster public-private partnerships to fund the nation's transportation needs. See <http://www.fhwa.dot.gov/ppp> for additional information. Given the integral participation of major institutional and economic development stakeholders in this project, opportunities for leveraging private/public partnerships to creatively finance the recommendations should be fully explored.