CHAPTER IV. PLAN IMPLEMENTATION

During tight budget times, successful implementation of the plan will depend on every department of the City playing a role. Moreover, it will require ongoing leadership and support from local bicycle advocacy organizations and engagement of other key institutions in the community such as large corporations, small businesses, neighborhood organizations, health professionals, university leaders and others.

Each of the following aspects of plan implementation is addressed in this chapter:

- Leadership and Coordination
- Roles & Responsibilities
- Timeframes
- Implementing the Physical Network
- Implementing Encouragement, Education, & Enforcement Programs
- Cost Estimates
- Funding
- Acknowledging Achievements

LEADERSHIP AND COORDINATION

Because the goals of this plan are fundamentally transportation goals, the Department of Transportation and Engineering will provide overall coordination of plan implementation. DOTE will also be responsible for the aspects of this plan that relate to bicycle facility design and construction.

To support overall coordination, most cities have found it essential to have a bicycle advisory committee. It is recommended that Cincinnati formalize such a committee and ensure representation from bicycle advocacy organizations as well as key city agencies.

ROLES & RESPONSIBILITIES

Roles and responsibilities need to be distributed to various City agencies. The private sector (both non-profit and for profit) will also need to be involved.

City Agency Roles and Responsibilities

Because something about bicycling touches the existing assignments of almost every city department, each will have an opportunity to participate in plan implementation. Following is a list of key city agencies and a brief description of the area where each may be most able to make a contribution.

- Department of Transportation and Engineering—overall coordination and facility design and construction.
- Department of Public Services—on-street bikeway maintenance.
- Department of Parks and the Park Board—construction and funding of bikeways on parkways and trails in park lands, also trail maintenance.
- Department of Planning and Buildings—coordination with other planning efforts, zoning and development regulations.

- Recreation Commission—youth education and involvement and bike safety education.
- Economic Development—coordination with the corporate business community and support of large scale events.
- Community Development—coordination with small businesses and neighborhood development.
- Cincinnati Police Department—traffic law enforcement, safety education, community relations.
- Health Department—encouragement programs and child safety education, especially on helmet use.
- Office of Environmental Quality—community communications and event organizing.
- CitiCable—bike safety education, PSA production, communications and support for encouragement programs.
- Parking Facilities—bicycle parking in garages.
- Fleet Services—bicycles for city employees to use.
- Office of the Mayor—leadership and generating civic engagement.
- City Council—leadership, providing funding, setting priorities, maintaining public involvement.
- Office of the City Manager—ensuring department coordination.

Other Public Agencies

Cincinnati Public Schools—child safety education and Safe Routes to School programs.

Private Sector

The primary role for private sector organizations and institutions is with education, encouragement, safety education, event organizing, publicity, fundraising, and advocacy.

TIMEFRAMES: PHASED IMPLEMENTATION

As noted previously, this plan is intended to be implemented over a fifteen-year period. Much of the on-street Network will be achieved through routine road resurfacing conducted during this timeframe. Other improvements will be made as a part of major road rehabilitation projects, new road construction, routine traffic management and maintenance projects, major land developments and stand alone bicycle facility projects.

In the previous chapter a variety of bicycle facility types and accommodations were described. Map C Preliminary Bicycle Network Recommendations indicates, for all three Phases, where the technical analysis suggests that these facilities will be feasible. While the facility recommendations are preliminary, the analysis undertaken during this planning process was detailed enough to also develop recommendations for how to achieve each bicycle facility. These recommendations are location specific and based on existing roadway and lane widths, among other factors.

In this plan the term *Action* is used to describe the type of transportation improvement project that is required to provide the bicycle accommodation. Table 5 lists each of the basic Actions by mileage, by phase. Appendix C provides a detailed definition of each Action term.

It is important to note the following:

- Some facilities do not require any action to implement—*No Action Required.*
- Some Network streets do not require any action other than installing Bike Route signs.
- Some Network streets were already under study or "in-design" by the City and the action to implement the recommended facility is still being studied.
- Some Network streets could not be sufficiently evaluated during this planning process for the consulting team to make an action recommendation. Many of these street segments also do not have a preliminary recommendation for Facility Type. As a result they are categorized as needing *Further Study*.

For the reader's reference the three implementation phases encompass the following timeframes:

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

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

Recommended Street Improvement Actions to Implement the Bicycle Network

	Miles			
Recommended Actions	**Phase I**	**Phase II**	**Phase III**	**Grand Total**
No Action Required	5.4	21.4	18.9	45.7
Add Striping/Marking	22.1	36.8	33.2	92.1
Grind Markings	8.3	4.4	6.0	18.7
Allow Full Time Parking One Side	0.6	3.1	0.0	3.7
Allow Full Time Parking Both Sides	3.3	2.0	1.2	6.4
Lane Diet	6.4	7.6	12.8	26.8
Resurface, Stripe & Mark	3.7	7.5	9.6	20.8
Remove Parking One Side	11.4	17.0	6.9	35.3
Road Diet	20.1	3.4	14.5	38.1
Remove Parking Both Sides	0.5	0.9	0.0	1.4
Add Bikeway with Road Reconstruction	1.3	2.6	0.3	4.3
Construct New	0.7	5.0	1.0	6.7
Under Study	4.0	0.9	0.0	4.9
Further Study	3.2	3.3	17.9	24.4
GRAND TOTAL:	**91.0**	**116.0**	**122.3**	**329.3**

Recommended Off-Road Improvement Actions to Implement the Bicycle Network

	Miles			
Recommended Actions	**Phase I**	**Phase II**	**Phase III**	**Grand Total**
Clean/Repair/Sign Sidewalks	5.2	2.4	0.3	7.9
Construct New	6.3	14.2	32.8	53.3
Resurface Path	0.3	0.0	0.0	0.3
Other Connector Path Improvements	0.6	0.6	1.1	2.3
Trail Construction Timing Unknown			19.0	19.0
GRAND TOTAL:	**12.4**	**17.2**	**53.2**	**82.8**

Table 5: Recommended Actions to Achieve Facilities in the Bicycle Network

Implementation is Underway

It should be noted that concurrent with the development of the plan, the DOTE initiated a number of on-street facility improvements, including installation of sharrows and SHARE THE ROAD signs on Clifton and Ludlow Avenues and Madison Road.

Moreover, the City has remained active on a number of other bicycling initiatives, including the following:

1) continued installation of bicycle lanes where excess roadway width is available,
2) continued implementation of the Ohio River Trail and the Mill Creek Greenway Trail,
3) establishment of a bicycle station on the riverfront,
4) zoning ordinance changes for requiring bicycle parking in new parking garages, and
5) supporting community led events that promote cycling.

Implementation Policy

Due to current budgetary limitations, the City will first look to integrate bicycle improvements into roadway improvement projects that are already funded or in the design process. Opportunities created by projects in the pipeline typically need a small increase in budget or minimal design modifications to integrate bicycle improvements.

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

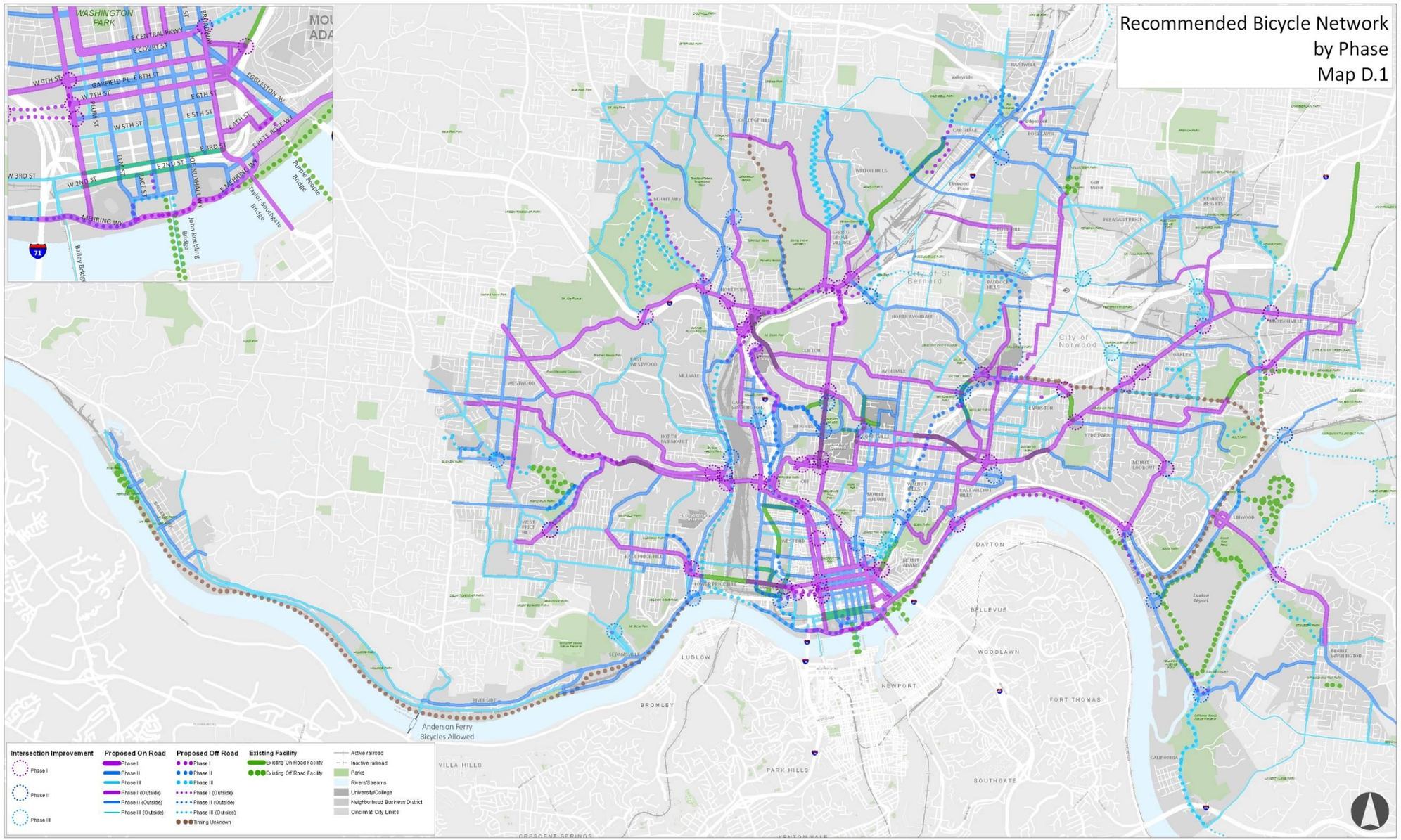
Near Term Implementation (June 2010 – December 2011)

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

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

Route Implementation Priorities and Phasing

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



city of CINCINNATI

Cincinnati Bicycle Transportation Plan

July 2010

0 1 2 4 Miles

ToolDesignGroup BOSTON MA • WASHINGTON DC • SEATTLE WA

KZFDESIGN

Map D.1: Recommended Bicycle Network by Phase

Map D.1, (also available in poster size as D.2), shows the entire Bicycle Network, and indicates phasing for each segment.[1] The following criteria were used to phase the Bike Network routes:

- Relative ease of implementation;
- Service to popular destinations;
- Contribution to city-wide coverage;
- Need to maintain continuity and create a complete route;
- Opportunity to integrate on-street improvements into other roadway improvement projects;
- Need to coordinate bicycle improvements with known infrastructure projects already planned for the future, and;
- Need to serve a variety of bicycling styles, trip purposes and skill levels.

IMPLEMENTING THE PLAN

The Executive Summary provided a brief description of the goals and objectives established by the Plan, and strategies for achieving them. The next two sections of this chapter provide greater detail about the strategies by including additional action recommendations and timeframes.[2]

IMPLEMENTING THE BICYCLE NETWORK

Objectives 1 and 5 are presented first because they both address the strategies related to implementation of the physical Bicycle Network. Each action is assigned to Phase I (2015) or Phase II (2020), meaning that it should be undertaken within the timeframe of that Phase. Some actions have already begun and may be referred to as ongoing. None of the following actions have been assigned to Phase III because it is expected that within 4-6 years the plan will be revisited and updated. Exactly what needs to be undertaken in the 2021-2025 timeframe will depend on the progress made and results achieved in Phases I and II.

Objective 1: Provide an attractive and functional network of bicycle infrastructure.

- Strategy 1: In phases, implement a comprehensive and continuous network of facilities and services for bicycle transportation and recreation.
    - Maximize implementation of Phase I & II facilities by using the ongoing street resurfacing program.
    - Sign at least 10 miles of new bicycle routes using standard wayfinding guide signs (Phases I & II).

[1] Map D.2 and other maps in poster-size can be viewed on the DOTE website or at the offices of the Department of Transportation and Engineering.

[2] This section addresses the same set of objectives and strategies presented in the Executive Summary.

- Implement recommended facilities for streets that were concurrently under study or “in-design” during development of this plan (Phase I).
- Using projects identified for Phase I or II implementation, carry out demonstration projects to test implementation of lane and road diets, parking consolidation, allowing full-time parking and buffered bike lanes (Phase I & II).
- Complete study of roadway segments identified for further study in Phase I and II.
- Retrofit key public stairways with bicycle rolling trays and make it City policy to provide bicycle rolling trays on all public stairways, unless a better route for bicyclists avoids use of the stairs. (Phase I)
- For Phase I and II projects outside the City limits or related to Ohio DOT lead roadway work, coordinate planning, design, and implementation of bicycle improvements with neighboring jurisdictions, the Ohio DOT and OKI.

- Strategy 2: Increase the availability of short-term, long-term, and high-security, on-demand bicycle parking and related support facilities at key destinations across the city.
  - Launch a bicycle parking improvement initiative geared to installation of 50 bicycle racks per year at public facilities and in neighborhood business districts; also develop higher grade bike parking options especially for Downtown and Uptown areas. (Phase I)
  - Ensure that adequate bicycle parking is installed as a part of neighborhood or arterial streetscape projects, or other public or private improvements to neighborhood, Downtown or riverfront commercial districts. (Phase I)
  - Develop bicycle commuting/rental centers to provide focal points for bicycle transportation services and promotion. (One center by end of Phase I)
  - Require existing parking garages, and all new development to provide amounts and types of bicycle parking appropriate for the size and uses planned for the development. Develop appropriate zoning codes and ordinances and provide property managers and developers standards and guidance. (Phase I)
  - Improve bicycle parking at transit stations in support of a multi-modal transit system. (Phase II)
- Strategy 3: Continue development of off-street shared-use paths to create a connected trail system and to augment and support the on-street bicycle network.
  - Complete trail development projects slated for Phase I and II of this plan, including portions of the Ohio River Trail, the Mill Creek Greenway Trail, and various connector paths.
  - Coordinate with the Department of Parks and the Park Board regarding shared-use path development in City parks. (Ongoing)
  - Initiate a master plan for the Cincinnati Industrial Heritage Trail which would facilitate development of high quality on and off-road bikeways that can be used for both transportation and recreation. The trail would support the City’s tourism development efforts and provide an opportunity to draw new partners into the constituencies that support bikeways, such as the historic preservation community, the city’s northern municipal neighbors and the health community. (Phase I)

Figure 5: Potential Route for a Cincinnati Industrial Heritage Trail

- Vigilantly watch for abandonment proceedings of lightly-used rail lines, and consider all railroad corridors for potential use as trails where it is found that the corridor does not need to be reserved for future rail or bus transit. Also consider railbanking and interim trail use for useful portions of abandoned rail corridors that would not be returned to rail service for at least twenty years. (Ongoing)

Objective 5: Adopt city policies and create institutional structure to implement the Bike Plan goals and objectives and evaluate progress toward achieving its goals.

- Strategy 1: As a matter of policy, integrate recommended bikeway improvements into street improvement and safety projects and include bicycle quality of service and CBTP implementation among the various criteria used to prioritize all street improvement projects.
  - Adopt a Complete Streets Policy that fully supports the recommendations of the CBTP. (Phase 1)
  - Where timely implementation of the CBTP cannot be accomplished by integrating bicycle facilities into other roadway projects, use stand-alone bicycle improvement projects. (Ongoing)
- Strategy 2: Provide sufficient funding through the city Capital Improvement Program (CIP), federal and state transportation grant funding, and other sources for implementation of the CBTP (including non-infrastructure programming) (Ongoing).
- Strategy 3: Ensure that the Department of Transportation and Engineering and other key departments have sufficient staff and training to lead and coordinate CBTP implementation.
  - Establish a Bike Team among DOTE and Public Services Department staff, with representatives from each division: planning, traffic, design, construction and maintenance, to coordinate CBTP implementation. (Phase I)
- Strategy 4: Develop procedures for prioritizing the maintenance routines for streets in the adopted bicycle network and provide sufficient funding for network maintenance.
  - Address issues such as the frequency of street sweeping, pothole repair, replacement of non-bike-safe drainage grates, enforcement of repair by utility agencies, and maintenance of signs and striping. (Phase I)
  - Establish a bicycle related improvement request system through the 591-6000 call center and website. Consider using the new website Click It and Fix It as well. (Phase II)
  - Update requirements for maintenance of traffic plans to include maintenance of bicycle traffic during: a) roadway improvement projects, b) private developments or building rehabilitations, c) utility maintenance and repair projects, and d) other activities that require temporary changes in traffic operations. (Phase I)
  - Ensure that temporary repair and replacement standards are adequate to ensure comfortable roadway surfaces after utility work, and communicate new standards to all appropriate public and private utilities. (Phase I)
- Strategy 5: Coordinate planning, design, and implementation of bicycle facilities with other City plans and major developments and neighboring communities.
  - Ensure that all planning and design of future rail transit or bus transit services provide capacity and equipment sufficient to accommodate significant numbers of bicycles both on board and parked at stations. (Ongoing)
  - Continue to support provision of bicycle racks on all Metro buses and TANK buses; encourage new forms of integrating bicycling with public transit. (Ongoing)
- Strategy 6: Adopt zoning ordinances and/or development regulations that 1) provide an option for new developments to mitigate all or part of motor vehicle traffic impacts by instead providing bicycle facilities identified in the CTBP, and 2) require new commercial and multi-family developments to provide appropriate

amounts of high quality short term and long-term (high security) bicycle parking. (Phase I)

- Strategy 7: Establish a formal citizen advisory committee to the City Manager, Mayor and Council.
    - Formalize staff representation from all key city departments and commissions and retain broad representation from community groups involved in bicycling. (Phase I)
- Strategy 8: Evaluate progress annually and publish a Report Card that will quantify the number/mileage of facilities installed, bike counts on select corridors, progress in the areas of education, encouragement, enforcement, and the results of a citizen survey to gage public sentiment. (Ongoing.)
- Strategy 9: Review and update the Bicycle Master Plan approximately every 5 years.

IMPLEMENTING ENCOURAGEMENT, EDUCATION & ENFORCEMENT PROGRAMS

Implementing the plan strategies and actions for Objectives 2, 3 and 4, will require significant levels of support from city agencies outside of the DOTE, as well as from community-based groups and the private sector. The DOTE is fundamentally an engineering agency, whereas other city agencies and institutions have missions within which encouragement, education and/or law enforcement activities fit more neatly.

Plan Objectives 2-4 and the related strategies are restated here with the addition of specific implementation actions that are recommended to be achieved by the close of either Phase I (2015) or Phase II (2020).

Objective 2: Support programs and initiatives that encourage bicycling for its health, recreation, transportation, economic and environmental benefits.

- Strategy 1: Collaborate with bicycle advocacy groups to support encouragement initiatives and events throughout the year, including National Bicycle Month activities in May.
    - Support local initiatives to organize adult social rides such as the Friday Night Urban Tour, Bike and Dine, and Cincy Bike Abouts, by encouraging elected officials and city employees to participate in these events. (Ongoing)
- Strategy 2: Establish partnerships with community organizations to develop programs to promote bicycling as a part of green and active lifestyles, chronic disease prevention, and youth recreation. (Phase II)
- Strategy 3: Establish new partnerships with the business community to develop encouragement programs that target employees and customers.
    - Establish a Bicycle Friendly Business program to encourage development of employer-provided support for bicycling to work. (Phase I)
    - Work with the business community to create and promote a large scale bicycling event that promotes the City, its neighborhoods, its heritage and civic pride. (Phase II)

Objective 3: Improve bicycle safety through enforcement, education and engineering initiatives:

- Strategy 1: Enable the Cincinnati Police Department (CPD) to more effectively enforce traffic laws that affect the safety of bicyclists.
    - Publish a booklet about bicycle laws and potential errors in fault-finding that may be typical in crashes involving bicyclists. (Phase I)
    - Provide training for Cincinnati police officers regarding bicycle safety laws and issues faced by on-street bicyclists, including use of roll call videos, use of officers already trained for bicycle mounted patrol and supplementation of the police academy curriculum. (Phase I)
    - Collaborate with CPD to develop an incident report/letter generation program for cycling incidents involving motor vehicles. (Phase II)
- Strategy 2: Encourage the public and private school systems to teach Cincinnati's children safe bicycling skills and practices, and reach adult parents through child involvement.
    - Encourage and support the involvement of Cincinnati public schools in the Federally-funded Safe Routes to School program. (Ongoing)
    - Encourage development of bicycle helmet use, promotion and education initiatives, especially among children and youth. (Phase I)
- Strategy 3: Build internal capacity within the DOTE to understand, design and implement high quality bicycle facilities that will increase bicyclists' safety in traffic.
    - Conduct a bicycle facility design and safety course for planning and engineering staff and CPD officers. (Phase I)
- Strategy 4: Adopt a City ordinance (traffic law) to require motorists that are passing bicyclists to provide a minimum of 3 feet of clear space between the motor vehicle and the cyclist. (Phase I)

Objective 4: Foster public attitudes toward bicycling to include mutual respect among motorists and bicyclists and a general perception of bicycling as a safe mode of transportation and recreation.

- Strategy 1: Using a variety of low cost communication mediums, educate the general public (motorists, bicyclists, and pedestrians) about appropriate etiquette and safe bicycle and vehicle operation in urban traffic conditions.
    - Educate and inform motorists about bicycle facilities as they are installed using signs at installation locations, information on city websites and distribution of information to affected neighborhoods. (Phase I)
    - Establish a bicycle ambassadors program that uses youth and committed cyclists to represent cycling and educate about safe bicycling at neighborhood, community and city-wide events. (Phase II)
- Strategy 2: Seek institutional and corporate partners and funding for a region-wide media campaign designed to address etiquette and safety issues related to potential conflicts among bicyclist, motorist and pedestrians. (Phase II)
- Strategy 3: Advocate with state government to prioritize bicycle laws and safety in: a) driver's licensing study materials, b) test questions, and c) public and private driver education curriculums. (Phase I)

COSTS

Planning level cost estimates were developed for ~340 miles of the Recommended Bicycle Network. Implementation costs did not need to be estimated for ~110 miles of the Network which consists of streets that a) need further study, b) are classified as connecting streets that require no future improvement, or c) have existing bicycle facilities.

The estimates are based on fairly detailed cost items such as: installation of travel lane and bike lane lines and bicycle symbol pavement markings, eradication of existing lane lines and other specific costs that can be identified for each *facility type* and *action* combination that is recommended in the plan. For example, bicycle lanes that can be added to a street by narrowing the two outside travel lanes and restriping a portion of the street (a lane diet) are estimated at a lower price per mile than those that will require a road diet (elimination of travel lanes and installation of a center turn lane) and thus replacement of all the lane lines and center line. To address standard transportation project costs such as design, mobilization, maintenance of traffic, utility adjustments and contingency, 25 percent was added to each facility-specific estimate.

To assist City officials responsible for developing transportation budgets and allocating funds, cost estimates have been broken out by implementation phase. Every recommended bikeway in the plan has been assigned to one of three phases.[3] Each phase is a five-year time period beginning in 2010.

On-street facilities make up the core of the Plan. Based on these estimates, it may cost up to $1.5 million annually to build out the on-street component of the Plan (see Table 6 for details). However, it is expected that the amount that the City will contribute from the capital budget will be significantly less than this. There are two factors that will greatly reduce the cost of the plan, likely to less than $1 million annually: 1) coordination with routine street rehabilitation projects; and 2) use of available grant funding. Grant funding will be discussed in the Funding section to follow (page 53).

Coordination with Routine Street Rehabilitation Projects

Many of the facilities recommended in this plan can be implemented in conjunction with already scheduled street rehabilitation projects. When this coordination occurs, costs for implementing the bicycle facilities may be reduced by over 75 percent. These cost savings can be realized for a variety of reasons, for example:

- eradication of existing lane lines is not required because the entire roadway is slated for resurfacing;
- the cost of replacement lane lines has already been budgeted as part of the resurfacing project;
- project mobilization, traffic management and other general costs are already born by the resurfacing project budget.

The City administration will be opportunistic and take advantage of every occasion where bicycle facilities can be included with street rehabilitation projects or other capital projects. The approach of adding bicycle facilities to routine projects will reduce costs to the lowest levels possible.

[3] Nineteen miles of potential rail-with trail were not assigned a phase, due to their unpredictability in timing; they are accounted for under Phase III.

Cost Estimates for Recommended Improvements				
Based on Preliminary Bicycle Facility Recommendations				
	Cost (in thousands of $)			
On-Street Facilities	**Phase I**	**Phase II**	**Phase III**	**Total**
Bike Lanes	$4,594	$2,948	$3,421	$10,963
Bike Lane One Way	$300	$91	$75	$464
Buffered Bike Lanes	$314	$250	$0	$563
Bike Lane & Marked Shared Lane	$58	$24	$0	$82
Floating Bike Lanes	$27	$118	$86	$230
Sharrow	$670	$790	$1,162	$2,621
Sharrow One Way	$49	$62	$55	$164
Climbing Lane	$681	$690	$144	$1,514
Wide Outside Lane	$0	$14	$0	$14
Paved Shoulder	$222	$135	$1,437	$1,794
Cycletrack	$897	$1,082	$324	$2,302
Cycletrack One Way	$0	$973	$217	$1,189
Bike Boulevard	$0	$195	$282	$477
TOTAL:	**$7,807**	**$7,365**	**$7,198**	**$22,370**
Off-Street Facilities	**Phase I**	**Phase II**	**Phase III**	**Total**
Sidewalk Shared Bike	$505	$235	$27	$766
Connector Path	$121	$120	$61	$301
Shared Use Path	$1,990	$3,403	$9,382	$14,774
Rail with Trail	$233	$2,269	$14,280	$16,780
TOTAL:	**$2,849**	**$6,027**	**$23,750**	**$32,621**
GRAND TOTAL:	**$10,656**	**$13,392**	**$30,948**	**$54,991**
*Nineteen miles of potential rail-with-trail were not assigned a phase due to their unpredictability in timing; they are accounted for under Phase III.				

Table 6: Cost Estimates for Recommended Improvements

Near Term Implementation Projects

Within Phase I, this plan calls for completion of three key, Near-Term facilities (by the end of 2011). This includes bikeways on Spring Grove Avenue (3.7 mi.), Riverside Drive (4 mi.) and Madison Road (6 mi.). These facilities may cost between $1 million and $2 million depending on opportunities to partner with other agencies, opportunities to cost share between programs, and outside grant possibilities.

Maintenance

Both the on-street and off-street bicycle network will need routine maintenance, including surface repair, sweeping and trimming/removal of vegetation and overgrowth.

Streets: The primary street maintenance activity important to bicyclists is street sweeping and pavement repair. Bicyclists are much more vulnerable than motorists to roadway hazards such as pot holes, cracked pavement, broken glass, motor vehicle crash debris and leaf litter. Street sweeping in particular is critically important in terms of keeping the roadway safe for cyclists. The most important streets in the Bicycle Network to sweep are those with bicycle lanes or sharrows adjacent to the curb, wide outside lanes or paved shoulders. The most important time of year to sweep frequently is in the early spring to remove salt and debris that builds up during snow season, and in the fall when deciduous trees lose their leaves. The City should evaluate its current policies and ensure that sweeping is scheduled effectively throughout the high bicycling season and to address the seasonal needs described above. The Public Services Department reports that the current cost for street sweeping is $30 per mile.

Shared Use Paths: The primary trail maintenance needs are vegetation trimming in the spring and early summer, debris removal after storms, and regular trail surface sweeping and repair. Trails adjacent to lawn areas should be swept after every mowing in the spring. Whenever vegetation is trimmed it should be removed and the trail surface swept. During the heaviest portion of leaf season, sweeping and leaf pick up should be done weekly. In general, trails do not need to be swept as frequently as Bicycle Network streets. Snow removal in the winter should be carried out on the trails most heavily used for transportation.

The Bicycle Transportation Program

Finally, the City has historically budgeted small amounts of funding ($110,000 - $150,000) annually to the Bicycle Transportation Program for bicycle racks, signage, and sewer grate replacement etc. It is recommended that the City begin budgeting a base amount of $500,000 annually in order to expand the program to include the encouragement, education, and enforcement initiatives outlined in the plan. This amount would also enable the program to continue addressing the low-cost infrastructure needs noted above.

FUNDING

It has been noted that this plan is being developed during a period of declining city tax revenue and considerable budget constraints. However, the state and federal-aid funds that the City can request for transportation projects have not been reduced as severely as local revenues, in part due to the federal government's commitment to stimulus spending in the area of infrastructure rehabilitation and modernization. There are a number of funding sources that could be drawn upon to fund the Bicycle Network.

State and Federal Grants

To fund implementation of this plan the City will look to use small but growing portions of the following funding streams within the transportation arena:

- Approximately $2 million in Transportation Enhancements funding is available through OKI annually.
- The City can apply to OKI annually for up to $4 million in Congestion Mitigation and Air Quality Improvement (CMAQ) funds for projects that will reduce vehicle emissions.
- A number of bicycle facilities can be implemented and paid for by the Ohio Department of Transportation (ODOT) due to the facility's relationship to

roadway improvements planned to take place within the next fifteen years. Some of these projects are already being included in ODOT design projects, such as for the I-71 interchange at Hopple Street.

- The State provides funds for rehabilitation of state routes within the City.
- Federal Safe Routes to School funds are available through ODOT.
- Federal Surface Transportation Program (STP) funds are available for general transportation needs.
- The Ohio Public Works Commission (OPWC) oversees the State Capital Improvement Program (SCIP) and the Local Transportation Improvement Program (LTIP), which award grants for rehabilitation and safety/capacity projects.

To implement this plan, the City needs greater support from and access to the federal programs that have been established to assist communities with development of bicycle and pedestrian facilities and safety education programs.

Funding Shared Use Paths and Trails

Historically, the City has had great success in acquiring non-City funds for trail development. It is expected that this will continue, and many of the trail and shared use path projects within this plan will be implemented using state or federal trail funds, capital funds that will appear in the Parks Department's budget (such as for Mt. Airy Forest), funding from the business and philanthropic community, or special appropriations from Congress. Much of the Ohio River Trail and the Mill Creek Greenway Trail are already using this approach to financing these multi-million dollar investments.

Non-Governmental Funding

Private sector funding and contributions from developers is also critical. Cincinnati is home to a number of Fortune 500 companies, such as Proctor and Gamble and Kroger, as well as two major league sports teams, the Reds and the Bengals. The city is also home to the University of Cincinnati and Xavier University, as well as a number of smaller schools. A number of large hospitals and health care institutions are located in the city. The city's leading corporations and business interest groups are needed as partners in the city's efforts to improve the livability of the city and make Cincinnati a bicycle-friendly community. There are many business interests and other large institutions that have common cause with the City and local bicycle advocacy organizations in the effort to make cycling Cincinnati a safe and enjoyable experience.

ACKNOWLEDGING ACHIEVEMENTS

As this program gets underway, it is important to remember to celebrate the achievements that are made. Before the end of Phase I, the City and community will have made significant progress. The City will acknowledge the individuals, departments and organizations that provided the most effective leadership toward achieving this plan's goals and objectives.

CONCLUSION

It is clear that it will take a team effort to increase the levels of bicycling and its safety in the city. Based on the experience of many U.S. cities that have adopted city-wide plans and implemented them, it is important to remember that becoming a bicycle-friendly city is not something that happens overnight. Typically, communities start with simple steps.

Some transportation officials and motorists may be skeptical at first. It is critical early on to select projects strategically, and design and build them well, as this will typically generate more public support than opposition. As experience and momentum are gained, more bicyclists will take to the streets. This will ripple into more support for additional facilities to be installed, and in time a recognizable network will be created. By such a time, approaches to engineering, education and encouragement will become more sophisticated and ultimately an ever widening range of activities will be embraced. In fifteen years, transportation professionals and residents alike will not remember how things were done before awareness for bicycle transportation and safety was not business as usual.