



CHAPTER 3 **FACILITY DEVELOPMENT**



FACILITY DEVELOPMENT

I. Facility Design/Best Practices

The *1994 Regional Bikeways Plan* devoted a considerable amount of text towards detailed design standards for bikeway development. For the *2005 Ped and Pedal Plan*, it was decided to approach these important issues more in terms of a general overview of the subject matter. For the 2010 update, the subcommittee focused not only on best practices from other areas, but on the best practices in presenting the plan itself as well. This chapter intends to be as comprehensive on best design practices without delving into detailed specifics on their construction. NIRPC encourages local officials to contact their planning and engineering departments for further details on their issues, and how they can be specifically applied to a community. In addition to a detailed trail cost analysis presented in *Appendix C*, there are four references to consult for the following information in this chapter:



- a) *AASHTO's 1999 Guide for the Development of Bicycle Facilities*
- b) *AASHTO's 2004 Guide for the Planning, Design, & Operation of Pedestrian Facilities*
- c) *The Indiana Manual on Uniform Traffic Control Devices*
- d) *The National Manual on Uniform Traffic Control Devices*

A. Off Road Trails

Off road trails funded with Transportation Enhancement funds must meet ADA requirements for grades, surfaces, etc. Note that a properly designed limestone trail is considered to meet ADA requirements. Loose surfaces such as pea gravel or bark chips are not considered to meet the ADA requirements.



B. Mid-Block Crossings

1. At Grade vs. Grade Separated

Mid-block crossings at low volume roadways may function properly when the crossing is adequately marked and signed. At higher volumes the designer should investigate alternatives to the mid-block location. If there is a public road crossing within a short distance, the trail should be routed to the public road crossing. If there are two nearby road crossings and one is signalized, it is preferred that the trail be routed to the sig-

nalized crossing. Grade separations for mid-block crossings are an alternative to routing the trail to a nearby road crossing.

Figure 3-1: Mid-Block Crossing Treatment

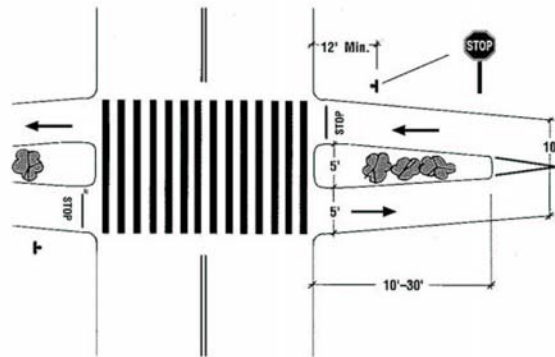
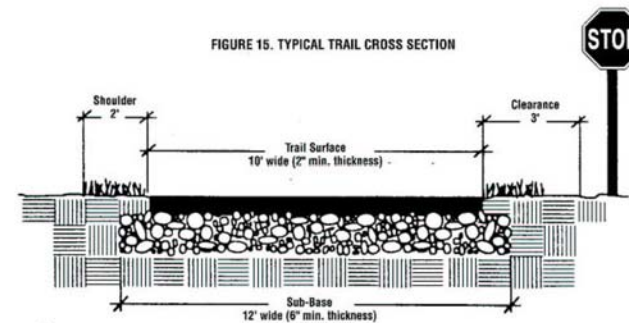


Figure 3-2: Typical Trail Cross Section



2. Type of Grade Separation

A grade separation can take the form of an underpass or an overpass. Underpasses can be accomplished with less grade change as compared to an overpass, but can be more problematic to drain. For personal security and safety reasons, underpass locations should be designed to assure the trail user can see the complete underpass area well in advance of actually entering the underpass. Lighting may be needed for long underpasses or if evening/morning use is anticipated. Because of their expense and natural impediment to use, overpasses should be the last alternative considered.



3. Markings and Signing

Markings and signing of mid-block crossing are very important to provide motorists ample warning of these types of crossings.



If possible, mid-block crossing should be made perpendicular to the roadway rather than skewed. It is also helpful if some feature is incorporated in the trail design to force the cyclists to slow substantially or even to physically stop at this point. This is especially important at high volume or high-speed roadways.

It is also very helpful to provide signage on the bike trail identifying the crossing public street. This is especially helpful to those less frequent users in orienting them along their ride.



C. Trail Width and Surface Type

There are a number of surface types to select from for a trail. Generally speaking, a hard surface such as asphalt or concrete works best for multi-purpose trails. Compacted crushed stone with fine aggregates will provide a suitable trail for cyclists and is an economical alternative, especially for longer trails. Stone trails will require more periodic maintenance than asphalt or concrete. Loose stone, bark chips, etc. are not suitable surfaces for cyclists.

The recommended trail cross-section is ten feet in width with two foot-wide shoulders (earth or paved). If heavy use of the trail is anticipated, the width may be increased to 12-14 feet. Three feet or more of clearance is recommended from the edge of the trail (i.e. the ten foot width) to fixed objects such as trees or poles. The minimum trail width is eight feet.



D. Intersection Crossings

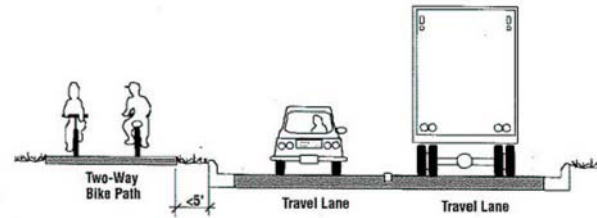
If a trail crosses a roadway at an intersection that is signalized, pedestrian signals should be provided to insure the users have adequate time to cross the street.

Proper signing and marking of these crossings at any intersection is important for the safety of both vehicular traffic and trail users.

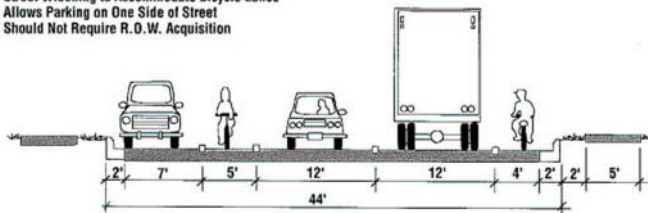
E. Bike Lanes (Adjacent to Traffic)

If bicycle lanes are provided, it is extremely important that they be adequately marked and signed. Care should be taken at signalized intersections to detect bicyclists (if the signal is

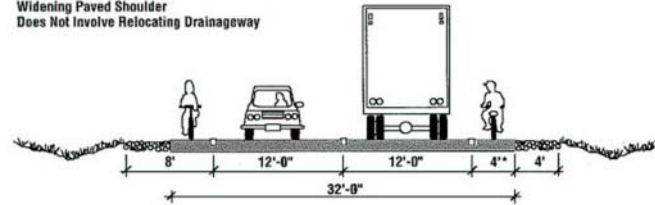
Figure 3-3: Various Cross-Sections



Street Widening to Accommodate Bicycle Lanes
Allows Parking on One Side of Street
Should Not Require R.O.W. Acquisition

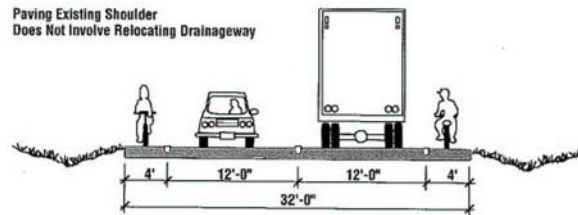


Widening Paved Shoulder
Does Not Involve Relocating Drainageway

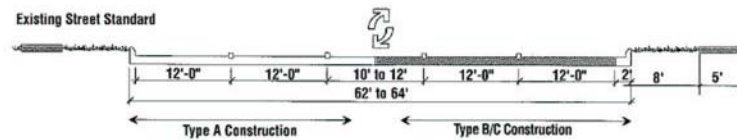


*If speeds are > 40 mph, shoulder widths > 4' are recommended. See FHWA manual for specific guidance.

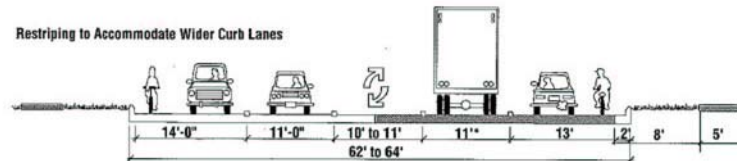
Paving Existing Shoulder
Does Not Involve Relocating Drainageway



Existing Street Standard



Restriping to Accommodate Wider Curb Lanes





traffic actuated) and to insure that the clearance interval (yellow) is adequate for the bicyclist.

The recommended width of the bike lane is five feet, with four feet as the minimum. Providing a bike lane where parking is permitted, especially parallel parking is very problematic. Alternative routes should be considered prior to choosing a route with parking for bike lane facilities. Care should also be taken to eliminate obstacles such as drainage structure castings with slots oriented in the direction of travel.

F. Trail Facility Designs

When considering a trail network for a community, a number of auxiliary facilities must be considered to ensure a pedestrian and bicycle-friendly environment. These include:

1. **Bicycle Parking:** In many communities, secure bicycle parking is recognized as one of the first and most important facility improvements necessary to improve the viability of bicycle transportation. The implementation of bicycle parking is not only the responsibility of the local government, but business, schools, and commercial establishments. Local governments can and should adopt regulations for the provision of bicycle parking, just as requirements for automobile parking are adopted. See Table 3-1 for a sample of space requirements.

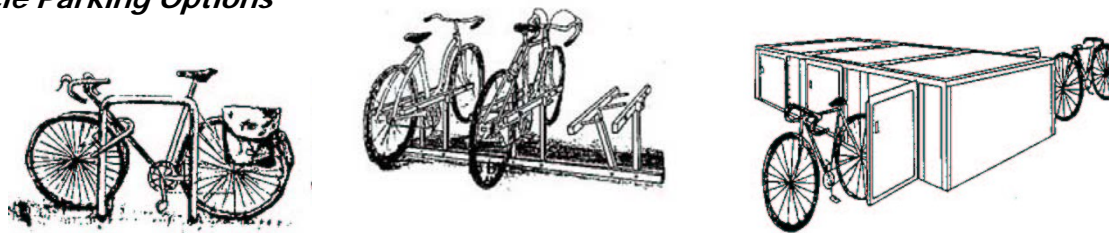


There are many useful types of facilities on the market, which fall generally into three categories which are generally recognized:

- Class I for high-security protection against theft and weather, typically provided by lockers or enclosed, locked, or guarded storage areas;
- Class II for racks that secure a frame and both wheels with a user-supplied padlock; and
- Class III for parking racks requiring user-supplied fastening devices, such as cables for high performance U-locks.

It is highly discouraged to install the traditional “school” rack designs since they generally support only the front wheel, and frequently fall over. Unfortunately, these designs are in abundance, and need to be removed to allow for the new-generation products as mentioned above.

Figure 3-4: Bicycle Parking Options



**Table 3-1:
Bicycle Parking
Space
Requirements**

Type of Establishment	Minimum Number of Bicycle Parking Spaces
Primary or Secondary School	10% of the number of students, plus 3% of the number of employees
College or University Classrooms	6% of the number of students, plus 3% of the number of employees
Dorms, Fraternities and Sororities	1 space per 3 students
Shopping Mall	5% of the number of automobile spaces
Commercial Street	1 space per 3,000 sq. ft. of commercial space
Sport and Recreation Center	12% of the number of automobile spaces
Office Building	10% of the number of automobile spaces
Government Building	10% of the number of automobile spaces
Movie Theater or Restaurant	5-10% of the number of automobile spaces
Manufacturing Plant	4% of the number of automobile spaces
Multi-Unit Housing	1 space per 2 apartments
Public Transit Station	20 spaces minimum
Other Land Uses	5-10% of the number of automobile spaces



2. **Site Furniture:** Along the trail or network, users will desire to rest and refresh. Facilities such as benches, shelters, and water fountains make for an attractive rest stop. Communities should investigate where they can employ these products to the greatest benefit to the traveling public.
3. **Automobile Parking:** Since many off-road trails are too far to access for many residents, even within the same community where they are located, providing adequate automobile parking is crucial. Although the best scenario remains creating non-motorized linkages to the larger trail systems, reality dictates otherwise. In addition, many trail users come in from out of the region to “test drive” a particular trail.
4. **Trailheads:** Adequate property should be sought for inclusion of trailheads along the route, primarily in high-density locations in urban areas. A typical trailhead incorporates all the facility elements mentioned above, plus other amenities such as informational kiosks, lighting, and restrooms.

G. Maintenance

While there is usually much excitement about the construction of a new trail, trail maintenance is also important. Periodic inspection of the surface and associated features (i.e. landscaping, signs, etc.) are necessary to maintain the trail in its originally intended condition.



When maintaining multi-use trails, tasks should include the following:

- Patching or re-grading the trail surface on a regular basis;
- Inspecting and repairing/replacing signs, traffic markings, bollards, gates, etc.;
- Mowing shoulders and other areas;
- Trimming vegetation to meet sight-distance requirements;
- Removing fallen trees, limbs, and debris;
- Repairing any damage from seasonal washouts;
- Cleaning culverts, catch basins, and other drainage structures;
- Sweeping the trail to keep it free from debris;

- Removing snow and ice – when not being used for winter activities (cross-country skiing, etc.);
 - Keeping lights clean and replacing fixtures as required;
 - Maintaining unique features such as bridges and tunnels;
 - Inspecting trail-related structures to ensure they are in good condition;
 - Picking up litter and emptying trashcans.
- When maintaining on-road facilities, tasks should include:
- Sweeping after major winter storms;
 - Sweeping in autumn for leaves and in spring for sand;
 - Keeping drains in operating condition;
 - Cutting back vegetation to provide adequate clearances and sight distances;
 - Cutting back intrusive tree roots;
 - Replacing and repairing signs;
 - Inspecting and replacing roadway striping and graphics;
 - Filling potholes and pavement cracks;
 - Inspecting pavement patches after underground utility work and other excavation activities that disrupt road and sidewalk surfaces;
 - Modifying or replacing non-standard drainage grates with bicycle-friendly grates.



Developing a budget towards proper maintenance is not an exact science, and costs can vary considerably between two identical facilities. To help aid with preparing a budget that adequately covers all maintenance and expenses, keep the following in mind:

- Obtain the current per-mile cost for maintaining a similar existing trail in a similar community;
- Find out how the managing agency assigns charges to various maintenance activities;
- Make a prioritized checklist of all possible maintenance activities and their frequency;
- Develop a tracking system that ensures the timely and systematic completion of all maintenance activities.





H. Trail Landscaping

Care should be taken when designing the landscaping treatment of the areas of the trail outside the trail surface. Grass is probably the most widely used treatment. However, it requires weekly maintenance, which may become quite expensive for the longer trails.

Alternatively, the trail designer should consider native plant communities along the trailside areas. This is especially applicable to the longer rails-to-trails corridor. These native plant communities can provide habitat for birds and other wildlife, provide historical opportunities for interpretation and education, cost less to maintain, and help with stormwater management. Additional information can be found in the Chicago Wilderness Biodiversity Recovery Plan, adopted by NIRPC on March 16, 2000.

I. Traffic Calming

A wide range of measures is available to local jurisdictions for controlling traffic movements and reducing motor vehicle speeds on local streets while providing safe and more pleasant conditions for pedestrians and bicyclists. Cities and towns throughout the United States have employed programs that manage traffic to improve neighborhood quality of life and safety.

The major objectives of traffic calming include:

- Promoting safe and pleasant conditions for motorists, cyclists, pedestrians, and residents on neighborhood streets;
- Mitigating the impacts of vehicular traffic, including air pollution, accidents, and noise;
- Offering more equal status to all road users; and
- Increased landscaping/aesthetic opportunities and play space on public rights of way.

Figure 3.5 graphically portrays a number of traffic calming techniques that can be employed. Local entities should strive not only to retrofit these, but mandate them on the front-end of all new development planning, whether it be residential, commercial, or industrial land uses.



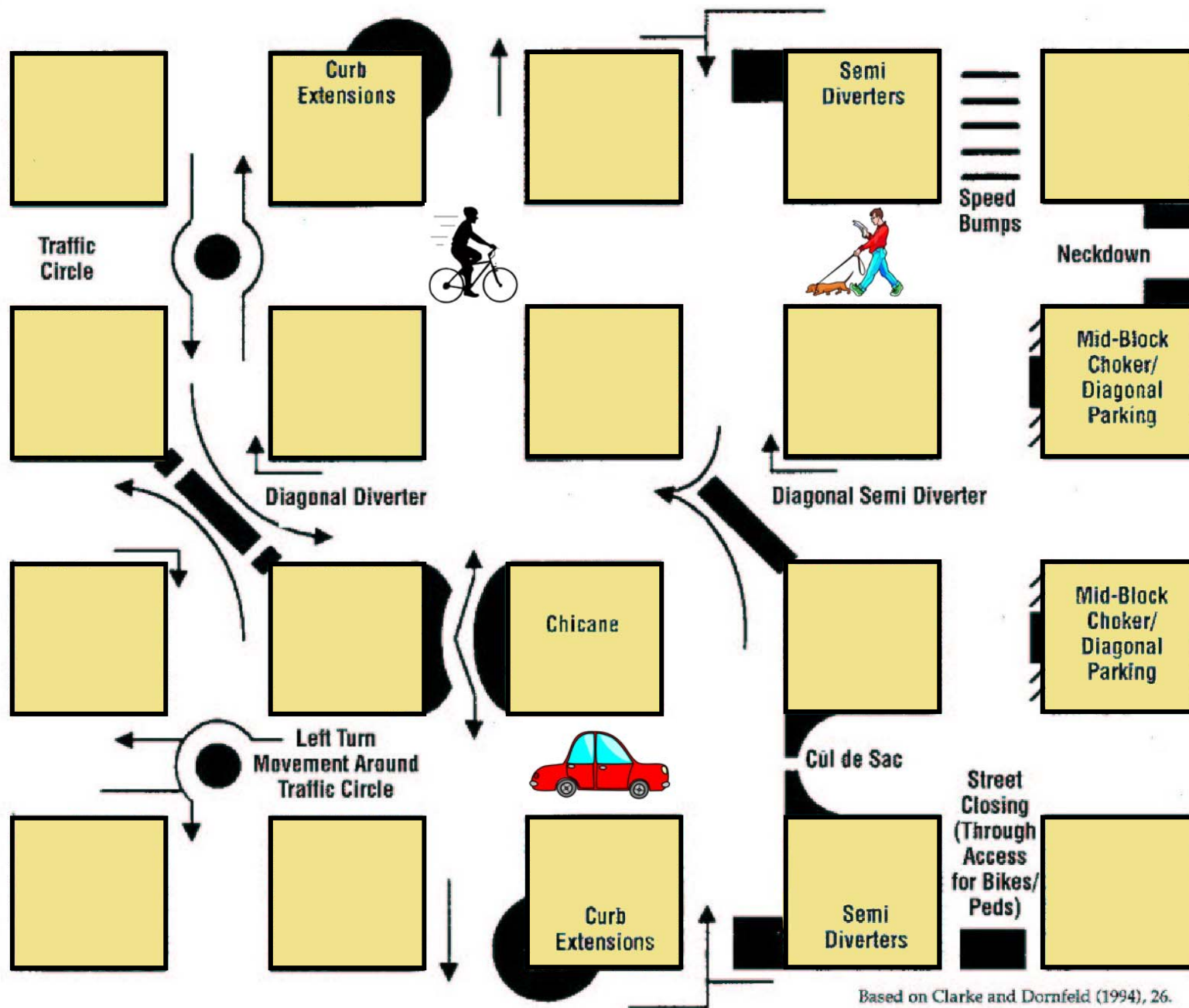


Figure 3-5:
Traffic Calming
Techniques



J. Rails-with-Trails

A growing movement which has gained acceptance by trail planners and the railroad industry is the concept of shared use trails located adjacent to active rail lines, or rails-with-trails (RWT's). Most RWT's are situated next to low-traffic or low-speed rail lines. Many lessons learned throughout the U.S. found a high correlation between RWT projects and reduced trespassing, dumping, and vandalism, particularly in areas with a history of such problems. This is because people who used to walk along the tracks now chose to walk on the trail, and be channeled to safe crossings. In the NIRPC region, an example of a successful RWT project is the Calumet Trail running parallel with the South Shore Line.

K. Way-finding

As important as directional signage is on roadways, equal consideration must be afforded regarding the placement of signage, or way-finding, on trails throughout the region. Currently, there are very few examples that exist on the region's many miles of trails, leading to what could be described as an "identity crisis" for users. Directional signage represents an important element that requires careful thought to help ensure a comfortable experience for the trail and non-motorized network user.

Way-finding signage can achieve public objectives, such as promotion of community attractions, education, mile marking, and directional guidance. A good way-finding system functions to achieve the following purposes:

- Help people find destinations from all travel modes (such as driving, Metra trains, Pace buses, walking, and biking).
- Establish clear pathways through the use of signs, maps and other landmarks to direct the user from one point to another.
- Carry messages that are user-friendly and understandable, such as safety messages, welcoming people to a location, identifying nearby services, and measuring distances. If signs are poorly designed, users may get lost.

Way-finding strategies should be formulated based on location priorities along a route. **Table 3-2** outlines a number of these options.

Table 3-2: Types of Way-finding

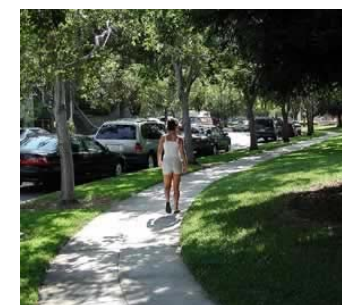
Sign Type	Brief Description	Idea Application / Location
Primary Map /Directional Graphics	Large display to orient user through maps and location information.	At trailheads or near major destinations.
Primary Route Directional	Guide users. Destination information - name, distance & direction	At decision points or intersections.
Secondary Route Directional	Identify bike routes and warn motorists of presence of bicyclists on streets	On-street routes to regional paths.
Welcome signs	Introduce destination and describe amenities with symbols.	Trail heads, parks, & recreational facilities.
Interpretive Kiosks	Educational information. Guidance information.	High visibility areas & destinations.
Cautionary & Regulatory Sign	Warn of hazards; describe trail conditions, rules of trail.	Intersections & trailheads.



The Manual on Uniform Traffic Control Devices (MUTCD) is recognized as the guideline for the placement of signage for both roadways and trails. MUTCD details rules for bikeway signage setbacks from roadways and trails, horizontal clearance, and sign posting heights.

L. Pedestrian Facility Focus

Everyone is a pedestrian at some point during a trip, whether it is from home to a parking lot, to a work site, or for an entire trip. It is not always easy being a pedestrian. Obstacles posed by facilities designed primarily for the automobile and sprawling land use development often act as hazardous barriers to safe walking. These barriers can severely limit the lives of those dependent on walking because they are cut off from large sections of their community. All pedestrians are extremely vulnerable to traffic, especially the elderly, children, and people with disabilities.



Local governments should address pedestrian-specific needs in their comprehensive land use plans. Local community planning criteria include:



- Encouraging compact and mixed use development that facilitates walking;
- Promoting school and residential siting so as to accommodate walking as the primary mode; and
- Providing for continuous sidewalk connectivity.

This last point is of urgent nature due to the increasing of siting new development far from established community centers and destinations (parks, schools, etc.), and plan commission approvals for waiving sidewalk requirements along major collector or arterial routes. This has left many growing communities with disconnected neighborhoods, which in turn encourages unhealthy sedentary lifestyles.



As for specific measures that can greatly improve a community's standing as truly pedestrian-friendly, the following should be considered:

- Filling in existing "gaps" where sidewalks, for no apparent reason, stop. Numerous examples can be seen most prevalently at street corners;
- Conducting a "sidewalk survey" of all existing walks, detailing their condition, and formulating a multi-year improvement plan to restore the most seriously damaged sidewalks immediately;
- Making sure ramps exist *everywhere* sidewalks meet either intersections or commercial driveway entrances. Although this is a requirement of all new sidewalks per ADA regulations, in most communities sidewalks are very old and extremely hazardous where they end. A prime fiscal tool to help conform older sidewalks is the federally administered Community Development Block Grant (CDBG) program. CDBG guidelines allow communities to use their yearly proportion of funds to install ADA-conforming ramps anywhere a need exists, which bypass standard guidelines.
- Providing crosswalks at all high-traffic intersections, and near popular destinations, as an important safety guide for automobile traffic.
- Testing existing crossing signals for adequate timing, and replacing those in higher-volume areas with pedestrian countdown signals.



- a. Sidewalks 1-2-3: When considering installation or rehabilitation of sidewalks, there are several standards to keep in mind in order to ensure a safe and comfortable walking experience. The following represent basic strategies when planning for new and existing sidewalks:
- Sidewalk width should be at least five feet in residential districts, eight to twelve feet in school and commercial districts, and between twenty and thirty feet in downtown districts.
 - Planted buffers of four to six feet should be required to provide for street trees, shrubbery or fencing. This also provides a physiological barrier between pedestrians and motorists.
 - Treat sidewalks as you would streets. Establish a regular maintenance schedule for snow removal and repairs, such as resettling of heaved slabs due to tree roots.
 - Retrofit older sidewalks with curb ramps yearly.



M. ADA Accessibility

As part of complying with the Americans with Disabilities Act (ADA) of 1990 and the ADA Amendments Act of 2008, local public agencies (LPAs) are required to have in place an approved ADA Transition Plan that is in compliance with ADA requirements. Without this plan, the LPA may not be able to get a project authorized through the Federal Highway Administration (FHWA).

When designing sidewalks for users with disabilities, several factors must be considered. These include slopes, the placement and design of facilities and elements, and a variety of indicators that allow all users to be able to safely use the sidewalk. This includes everything from detectable warning systems to audible signals, to properly placed and separated ramps. Every effort must also be made to provide sidewalks that allow enough room to pass along them safely without being forced too close or even into traffic. This means not only wide enough sidewalks, but also placing street furni-





ture in such a way that it is accessible while not interfering with the ability to easily move down the sidewalk.

Sidewalks should also have slopes and cross slopes that allow safe and controlled movement along the street. When a sidewalk must cross and ramps must be installed, they must meet the road and cross at a point that is perpendicular to the road to prevent accidents caused by wheelchairs being forced to negotiate an uneven surface, increasing the danger of wheels leaving the ground. Finally, all signal buttons must be easily accessible and close to the crossing point, even if it means the placement of a separate post for the buttons. The United States Access Board's website, which can be found in the links section, provides more detailed guidelines on proper accessible sidewalk design.

II. Financial Strategies

The Financial Strategies subcommittee was formed to help bring some understanding to the vast array of funding opportunities for government and private entities alike towards the development of trails. The committee at the onset of their work established three major areas of focus:

1. Identify and provide information on all pertinent funding sources, with lists of contact persons, required documentation, and application schedules.
2. Calculate costs for implementation across the entire three-county planning area.
3. Provide assistance provisions to municipalities for preparing applications to funding sources.

The following represents an exhaustive overview of the funding strategies that address the three main focuses of the subcommittee. This section represents the bulk of the updated plan and provides for the user a valuable resource in understanding the funding dynamics behind the design and construction of a bike trail.

A. Funding and Other Resources

Your planning efforts are constrained by limited implementation resources; a "grand plan" can become your tool for attracting them. For example, in competitive project selection processes, projects included in comprehensive plans often have an edge over stand-alone pro-

jects. A strategy of combining funding and other resources can be used to enlarge the pool of available resources. Whether you are trying to implement a comprehensive multi-year bicycle plan or complete a specific project, the strategies and programs described below can help you secure the resources you need.

1. Piggybacking

It is more cost effective to include bicycle and pedestrian accommodations into a larger scale transportation project than it is to retrofit. Seek out opportunities to get involved in the early planning stages. Refer to the policies and bikeway network in your bicycle plan to help justify the accommodation of cyclists in local road projects. If a road is being resurfaced, work with the implementation agency to restripe it to include bike lanes or wide curb lanes. If a bridge is being reconstructed, make sure cyclists and pedestrians have a way to safely and comfortably get across it. If a train station is being built, make sure pedestrians and cyclists have a way to easily access it. These processes don't necessarily require special money for County DOTs and local public works departments. Participating in the early design stages of a project is highly recommended.

Another no-cost implementation strategy is to pass ordinances that require new developments to be designed in accordance with bicycle and pedestrian plans. For example, ordinances and zoning can mandate standards including sidewalks, providing bicycle parking, designing streets that discourage speeding, and building car parking facilities that minimize pedestrian conflicts at entrance and exit points.

Local Funds

Work with your city council or town board to allocate resources for planning, engineering studies, and specific projects. Outside agencies are often more willing to fund projects that have already begun. Another source might include Tax Incremental Financing, or TIF districts, where





revenues can be used to improve conditions for walkers and cyclists as part of larger development projects. Arlington Heights, Illinois used TIF money to help pay for the reconstruction of its pedestrian and bicycle friendly Metra station.

B. State and Regional Resources

The Indiana Department of Natural Resources (IDNR) administers Outdoor Recreation Grants -in-Aid programs. The ones most relevant for bicycle and pedestrian planning include:

DNR



- *Bicycle Path Programs* – Helps with the acquisition, construction, and rehabilitation of public, non-motorized bicycle paths and directly related support facilities. Applications are accepted between January 1 and March 1 of the calendar year.
- *Recreational Trails Program* – Provides up to 80% funding assistance for acquisition, development, rehabilitation, and maintenance of motorized and non-motorized recreation trails. Applications are due March 1.
- *Open Land Trust Grant Program* – Provides grants to eligible local governments to protect open space and provide enhanced outdoor recreational opportunities. Land acquired from the program must be maintained in perpetuity for public open space and natural resource recreational purposes. The deadline for submitting applications is publicly announced each year.
- *Open Space Lands Acquisition and Development* – Assists local government agencies in the acquisition and development of land for public parks and open space. Applications are accepted between May 1st and July 1st of the calendar year. Another state source would include Member Initiative Money. State legislators have discretionary funds that can be used for projects of their choice. They can be powerful allies for pulling together and providing resources for projects that span municipalities.

C. Federal Funds and Programs

TEA-21 included policies and funding categories that made it easier to plan and build for non-motorized users of roadways. The following policies are from TEA-21 and still currently in effect:

- *Local and State Programmed Surface Transportation (STP) Funds* – At the NIRPC level, this source of funding has been used for pedestrian and bicycle projects from time to time. The average is about one to two projects per fiscal year.
- *Congestion Mitigation and Air Quality Improvement Program (CMAQ)* – This program funds projects designed to reduce congestion and air quality problems in the region and is administered at NIRPC. Projects have included bottleneck reductions, transit station improvements, bicycle racks, bicycle lanes, pedestrian overpasses, and promotion programs.
- *Transportation Enhancements (TE)* – Ten percent of a state's STP program is set aside for transportation projects that enhance and preserve communities. These funds can be used for bicycle and pedestrian projects. The NIRPC TE Committee oversees the yearly applications for the program, which allocates up to \$3 million per year to Northwest Indiana projects. From 1993 to 2009, the NIRPC region has been awarded \$37.5 million for TE projects. It remains by far the best federal or state funding source for non-motorized facilities in the country.
- *Hazard Elimination Program* – Another 10% of the state's STP program is set aside for projects designed to address safety problem areas. TEA-21 made bicycle and pedestrian projects eligible for these funds, and California has passed a bill setting aside 25% of its hazard elimination funds to improve safety around schools.
- *Transportation and Community and System Preservation Pilot Program (TCSP)* – The TCSP Program is a comprehensive initiative of research and grants to investigate the relationships between transportation, community, system preservation, and private-sector based initiatives. States, local governments, and metropolitan planning organizations are eligible for discretionary grants to plan and





implement strategies that improve the efficiency of the transportation system and reduce environmental impacts of transportation. Further information on this unique program can be obtained from the NIRPC staff.

SAFETEA-LU featured new programs and policies that further expanded upon TEA-21, including:

- *Safe Routes to School* – SAFETEA-LU provides federal funding for this program for the first time.
- *Provisions for bicycle and pedestrian safety* – As part of provisions aimed at improving safety, SAFETEA-LU specifies addressing bicycle and pedestrian safety.
- *Recreational Trails funding* – SAFETEA-LU provided funding for the development and maintenance of trails for a variety of users, including pedestrians, bicyclists, and horse-back riders.

NIRPC staff can work with your community to help you identify these and other federal funding opportunities.



D. Partnerships

The following highlights other avenues to help with the funding and planning of non-motorized facilities:

1. Chambers of commerce and tourism can promote shopping and visiting by foot and bike. County Convention and Visitors Bureaus can also play an instrumental role towards the development of materials educating the public on trails.
2. Law enforcement officials can promote bicycle safety as part of their school outreach efforts. Safe Routes to School is a program that emphasizes this relationship.
3. Healthcare providers can promote walking and biking as ways to avoid a physically inactive lifestyle and help to stem the current obesity epidemic. The Indiana State Department of Health is promoting the value of walking and biking for purposeful trips, like errands and work commutes.



4. Employers can create incentives for employees to walk or cycle by providing showers, bike parking, a guaranteed ride home in an emergency, flex time, transit subsidies, and the cash equivalent of free parking benefits. Visit <http://www.mwcog.org/commuter2> (a resource in Washington, DC with good advice for employers on promoting bike commuting).
5. Schools can promote the benefits of cycling and walking.
6. Community groups can contribute time and labor to the planning and construction of facilities.
7. Cycling and walking groups are a source of vocal and knowledgeable advocates willing to assist in planning and lobbying for improvements. Bicycle Indiana (formerly the Indiana Bicycle Coalition) maintains a list of local bicycle clubs. The Active Transportation Alliance is also a solid resource.
8. Advocacy organizations can provide lobbying support, technical assistance, and funding. The chief advocacy group in the NIRPC region is Calumet Citizens for Connecting Communities (C4).
9. The media can help promote your facilities and programs.
10. The private sector can donate money, land, and other resources
11. Social media holds great potential for getting information out about events and projects. Websites like Facebook and Twitter are free, easy, and widely-known.



III. Bicycle & Pedestrian Program Links

The advent of the internet has created a wealth of information regarding planning and funding avenues for bike and pedestrian networks. Great trails usually require a great amount of research to help get the project moving. **Appendix E** represents a list of websites that can aid in this endeavor. Although not exhaustive by any means, these sites do represent a solid start for those interested in creating a bike-friendly atmosphere in their communities. It must be noted that any documents referencing websites run the risk of printing "dead links," or pages that have expired. As of this plan's publication, these sites have been shown to be fully operational, but this constitutes no guarantee.





IV. Local Planning Direction

The standards and strategies presented in this chapter can only be achieved with help from local planning and engineering departments, and their review boards. To this end, the following table is provided as a checklist for local officials when deciding upon integrating pedestrian and bicycle facility development into their broad decision-making processes.



Planning	Strategies	Implementer
Local Bicycle Plan	Make bicycle plan an interdepartmental effort; establish mechanism to ensure coordination.	Local government: multiple departments
	Basic plan elements include: needs assessment; facility projects and a hazard removal program; education and enforcement programs; and a funding and implementation strategy.	
	Refer to the AASHTO Guide for Development for Bicycle Facilities for approach and standards, or to equivalent state guidelines.	



Planning	Strategies	Implementer
Interlocal Agreements	Develop interjurisdictional agreements as needed for acquisition, development and maintenance.	Local Government
Master/ Comprehensive Plans	Incorporate affirmative policies for bicycle use.	Local government: planning department
	Adopt a local bicycle plan or element, including policies and programmed projects.	
	Modify local street standard to accommodate shared bicycle/ motor vehicle use.	
	Include ordinances that encourage; mixed use; cluster zoning combined with more open space; dedication of rights-of-way for trails; and interconnected street patterns.	
Transportation/ Highway Plans	Identify roads in local jurisdiction for preferential development of bicycle facilities.	Local government: public works department
	Adopt policy to make all roads safer for shared use.	
	Tie in bicycle improvements with highway or city street capital improvement plan.	
	Review all proposed road maintenance and improvement plans or opportunities to incorporate bicycle-friendly design.	
	Develop uniform signage to identify bicycle facilities and educate motorists of potential bicycle use on road.	
Parks, Open Space, and Recreation Plans	Incorporate trails and greenway plans as part of Master Plan.	Local government: parks and recreation departments.
	Encourage and use alternative methods of open space, greenway acquisition, including nonprofit purchase and financing options, conservation easements, transfer of title options.	



Planning	Strategies	Implementer
	Consider using payments in lieu of parkland dedication for bicycle facilities.	
	Adopt a corridor/greenway element that includes bicycle access.	
	Work with adjoining parks and recreation agencies and communities to plan coordinated facilities.	
Zoning	Zone for cluster development, mixed use and open space preservation.	Local government: planning department
	For strip development, consolidate road access but encourage interconnections between developments to encourage pedestrian and bicycle access.	
	Develop a bicycle parking ordinance.	
	Examine roadway standards and change to allow traffic calming and interconnected, narrower, slower roads and paths.	
	Review ordinances that ban bicycles from roadway or shoulder areas – most are not warranted.	



Planning	Strategies	Implementer
Site Design Review	Establish a method to amend site designs to improve non-motorized access to between sites.	Local government: planning department
	Consider traffic-free zones as well as bicycle boulevards and other preferential treatments.	
	Establish a hazard reporting system for bicyclists and pedestrians.	
	Establish a regular maintenance program for bicycle facilities and shoulders used by bicycles.	
	Allow bicycle access to shopping centers.	
School Access Plans	Ensure safe routes for bicycle and pedestrians.	Local government: planning department; school officials and parents.
	Provide adequate bicycle parking.	
	Provide bicycle safety education.	
Private Development	Consider bicycle access incentives such as showers and lockers at employment locations.	Development companies; private businesses.
	Provide bicycle access and parking.	
	Provide public access to bicycle facilities whenever possible.	
	Connect bicycle facilities to adjacent developments.	