

Appendix B:

PARK & OPEN SPACE, CLASSIFICATIONS/ FACILITY GUIDELINES

Definitions used in this plan are modifications of definitions found in the Wisconsin Statewide Comprehensive Outdoor Recreation Plan, 2011-2016, Appendix E. They are used to classify the existing parks and recreation system and to guide plans for its future development.

B.1 PARK & OPEN SPACE CLASSIFICATIONS

MINI-PARK

Also sometimes referred to as a “Tot Lot” or “Pocket Park” typically located on a small lot, generally a $\frac{1}{4}$ acre or less, within a residential neighborhood or commercial business district. Often these sites were originally intended for residential use, but due to various factors (e.g. poor lot design, environmental concerns, etc.), have been converted to a park. Mini-parks generally lack any active recreational facilities and may be limited to gardens, benches, gazebos, fountains, or other small social gathering facilities. Mini-parks typically do not have off-street parking or restroom facilities. Over time they may develop into neighborhood playgrounds.

Desirable size: 1.5 acres or less

Acres / 1,000 population: 0.25 to 0.5 acres

Service Area: $\frac{1}{8}$ to $\frac{1}{4}$ mile radius

NEIGHBORHOOD PLAYGROUNDS

A neighborhood playground mainly serves the active recreational needs of children from 5 to 15 years of age, and it may offer passive recreation opportunities to adults. Neighborhood playgrounds typically consist of one or more playground apparatus, small green space/general purpose fields, and associated benches. Some neighborhood playgrounds may develop over time to include additional amenities to become neighborhood parks. Neighborhood playgrounds typically do not have off-street parking, shelters, or restroom facilities.

Desirable size: 1 to 3 acres
Acres / 1,000 population: 0.5 to 1.5 acres
Service Area: 1/4 to 1/2 mile radius

NEIGHBORHOOD PARKS

In addition to neighborhood playground facilities, neighborhood parks often include shelter facilities, grills, basketball courts, ball diamonds, lighting, and toilet facilities. In general, neighborhood parks offer a more complete range of recreational facilities, for a wider range of age groups, in a larger setting than neighborhood playgrounds. Off-street parking and permanent restroom facilities are not as commonly found as within community parks.

Desirable size: 3 to 10 acres
Acres / 1,000 population: 1.0 to 2.0 acres
Service Area: 1/2 to 1 mile radius

COMMUNITY PLAYFIELDS

The community playfield provides for the active recreational needs of several neighborhoods. It provides more unique facilities than a neighborhood park but less facilities as compared to a community park. Examples include parks designed specifically for court games (tennis, basketball, pickleball, etc.), field games (soccer, football, ultimate frisbee) or ball games (softball, baseball). A community playfield might adjoin a public junior or senior high school. Community playfields usually include off-street parking for vehicles and bicycles, concessions and restroom facilities.

Desirable size: 5 or more acres with 10 to 40 acres being most common, but will vary depending on function
Acres / 1,000 population: 5.0 to 8.0 acres
Service Area: 1 to 2 mile radius

COMMUNITY PARKS

The community park is intended to serve the active and passive recreational needs of a number of neighborhoods or a medium-sized municipality. Community parks can be thought of as a combination of a neighborhood park and community playfield. However, community parks usually also offer areas for passive recreation use such as wood areas and walking trails, scenic lookouts, botanical gardens, multiple shelters, grills, and picnic areas. Unique active use facilities may include band

shells and aquatic facilities. Off-street parking areas for vehicles and bicycles, permanent restroom facilities, shower facilities, and lighting are common.

Desirable size: 25 or more acres
Acres / 1,000 population: 5.0 to 8.0 acres
Service Area: 2 to 5 mile radius

SPECIAL USE PARKS

A special use park is often designed as a revenue-generating enterprise created to satisfy demand for a particular sport, recreational activity, or special event. A special use park may also be a sports park combined with enterprise activities and administered as a community recreation resource. Certain recreational facilities such as disc golf courses, golf courses, race tracks, municipal pools and waterparks, fishing areas and marinas might be considered special purpose parks. Less active uses may include community gardens or veteran memorials. Special use parks may be combined with community parks. Supporting facilities (off-street parking, restrooms, etc.) will vary based on the user needs.

Desirable size: Varies - depends on function
Acres / 1,000 population: Varies - depends on function
Service Area: Varies - depends on function

NATURE PRESERVES

Nature preserves may be established to conserve forest lands, marshlands, floodplains, prairies, wildlife habitats, and other areas having cultural, scenic, or natural values. Such areas are usually provided by county, state, or federal governments and have the primary function of wildlife and resource protection. Nature preserves usually include large tracts of land that are undeveloped or have limited development, although some improvements may be provided which are incidental to the enjoyment of the property. Improvements are usually located in one section on the property so that the area remains largely undeveloped. Improvements may include parking areas, interpretive centers, and restrooms. Hunting may be a primary recreational activity in such areas. Other recreational uses might include backpacking, camping, trail use, picnicking, and bird watching.

Desirable size: Varies - depends on function
Acres / 1,000 population: Varies - depends on function
Service Area: Varies - depends on function

GREENBELTS

The greenbelt has basically the same characteristics and functions as the reservation or preserve; however, a greenbelt may be used to shape urban development. It may be a buffer between an urban area and surrounding rural areas and may connect parks within an urban area.

Desirable size: Varies - depends on function
Acres / 1,000 population: Varies - depends on function
Service Area: Varies - depends on function

WAYSIDES, WELCOME CENTERS, AND HISTORIC MARKERS

These are special purpose parks designed to serve motorists. They are important to a tourist industry as a means of providing rest and information. They may include restrooms, picnic areas, shelters, or other facilities needed by motorists. The size and location of special purpose parks depends upon natural features and the functions they are intended to serve. If oriented to motorists, traffic volumes must be considered.

Desirable size: Varies - depends on function
Acres / 1,000 population: Varies - depends on function
Service Area: Varies - depends on function

B.2 PARK FACILITY GUIDELINES

The National Recreation and Park Association (NRPA) recognizes the importance of establishing and using park and recreation guidelines. The guidelines on the following pages are from *Lancaster, R.A. (Ed.). (1990). Recreation, Park, and Open Space Standards and Guidelines*. The data from Lancaster should be used as a rule of thumb to guide future park facility development rather than City policy. For example, while the guideline identifies a community should have one tennis court per 2,000 residents logic would dictate

that facility supply be based on demand or locational needs. For example, placing eight tennis courts in one park to meet the one per 2,000 standard may not be as effective as dispersing 4 tennis courts in parks across the City. In addition, local demand may dictate higher or lower service standards depending on the popularity of tennis in the community.

In addition, the Lancaster publication does not include guidelines for all types of park facilities. For example, the guidelines for soccer facilities listed in the table are for regulation sized fields for high school or adult play and do not address youth soccer needs.

The information in the table may be more useful as guidelines for facility sizes and desired orientations than those sections addressing units per population or service radius.

B.3 DETAILED FACILITY GUIDELINES

Several types of facilities are recommended in this Plan. This section includes an explanation of how each facility type functions within the bike and pedestrian system as a whole, as well as recommended locational and design criteria. Note: This plan does not advocate specific auto-only travel lane widths. These recommendations are intended to guide the dimensions of bicycle facilities.

BICYCLE LANES

Overview

Bicycle lanes are areas of the road striped off for exclusive use by bicyclists. They are the preferred bicycle facility for urban arterial and higher volume collector streets (generally more than 2,000 vehicles per day). The bicycle lane on Woodland Drive, east of Division Street, has been popular in the Village of Waunakee.

Function

Striping bicycle lanes establishes designated traffic channels that promote an orderly flow by both cyclists and motorists. Bicycle lanes have great potential for attracting new bicyclists, in part because of the psychological effect of having space reserved for them. Unlike off-street paths, bike lanes can be integrated into

ACTIVITY/ FACILITY	SPACE NEEDED	SIZE AND DIMENSIONS	RECOMMENDED ORIENTATION	UNITS PER POP.	SERVICE RADIUS	LOCATION NOTES
Basketball						
1. Youth	2400-3036 sq. ft.	46-50'x84'	Long axis north-south	1 per 1,000	¼ - ½ mile	Outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings.
2. High School	5040-7280 sq. ft.	50'x84'				
Ice Hockey	22,000 sq. ft. including support area	Rink 85'x200' (minimum 85'x185') Additional 5000 sq. ft. support area	Long axis north-south if outdoor	Indoor – 1 per 100,000 Outdoor – depends on climate	½ - 1 hour travel time	Climate important consideration affecting no. of units. Best as part of multi-purpose facility.
Tennis	Min. of 7,200 sq. ft. single court (2 acres for complex)	36'x78'. 12' clearance on both sides; 21' clearance on both ends.	Long axis north –south	1 court per 2,000	¼ - ½ mile	Best in batteries of 2-4. Located in neighborhood/community park or adjacent to school.
Badminton	1,620 sq. ft.	Singles - 17'x44' Doubles - 20'x44'	Long axis north-south	1 per 5,000	¼ - ½ mile	Usually in school, recreation center or church facility. Safe walking or bike access.
Handball (3-4 wall)	800 sq. ft. for 4-wall. 1,000 sq. ft. for 3-wall.	20'x40' - maximum of 10' to rear of 3-wall court. Minimum 20' overhead clearance.	Long axis north-south. Front wall at north end.	1 per 20,000	15-30 minute travel time	4-wall usually indoor as part of multi-purpose facility. 3-wall usually outdoor in park or school setting.
Archery Range	Minimum of 0.65 A	300' length x minimum 10' wide between targets. Roped clear space on sides of range minimum 30', clear space behind targets minimum of 90'x45' with bunker.	Archer facing north= or - 45 degrees.	1 per 50,000	30 minutes travel time	Part of regional or metro park complex.
Combination Skeet and Trap Field (8 Stations)	Minimum 30 A	All walks and structures occur within an area approximately 130' wide by 115' deep. Minimum cleared area is contained within 2 superimposed segments with 100-yard radii (4 acres). Shot fall danger zone is contained within 2 superimposed segments with 300-yard radii (36 acres).	Center line of length runs northeast-southwest with shooter facing northeast.	1 per 50,000	30 minutes travel time	Part of regional or metro park complex.
Volleyball	Minimum of 4,000 sq. ft.	30'X60'. Minimum 6' clearance on all sides	Long axis north-south	1 per 5,000	¼ - ½ mile	Same as other court activities (e.g. badminton)
Baseball						
1. Official	3.0-3.85 A minimum	Baselines – 90' Pitching distance 60 ½' foul lines – min. 320' Center field – 400'+	Locate home plate to pitcher throwing across sun and batter not facing it. Line from home plate through pitchers mound run east-north-east.	1 per 5,000	¼ - ½ mile	Part of neighborhood complex. Lighted fields part of community complex.
2. Little League	1.2 A minimum	Baselines – 60' Pitching distance – 46' Foul lines – 200' Center field – 200' – 250'		Lighted 1 per 30,000		
Softball	1.5 to 2.0 A	Baselines – 60' Pitching distance- 46' (min. 40') Women -Fast pitch Radius from Plate – 225' between foul lines Slow Pitch – 275' (men) 250'	Same as baseball	1 per 5,000 (if also used for youth baseball)	¼ - ½ mile	Slight differences in dimensions for 16" slow pitch. May also be used for youth baseball.
Field Hockey	Minimum 1.5 A	180' x 300' with a minimum of 6' clearance on all sides.	Fall season – long axis northwest to southwest. For longer periods north-south.	1 per 20,000	15-30 minutes travel time	Usually part of baseball, football, soccer complex in community park or adjacent to high school.

ACTIVITY/ FACILITY	SPACE NEEDED	SIZE AND DIMENSIONS	RECOMMENDED ORIENTATION	UNITS PER POP.	SERVICE RADIUS	LOCATION NOTES
Football	Minimum 1.5 A	160' x 360' with a minimum of 6' clearance on all sides.	Same as field hockey.	1 per 20,000	15-30 minutes travel time	Same as field hockey.
Soccer	1.7 – 2.1 A	195' to 225'x330' to 360' with a minimum 10' clearance all sides.	Same as field hockey.	1 per 10,000	1-2 miles	Number of units depends on popularity. Youth soccer on smaller fields adjacent to schools or neighborhood parks.
Swimming Pools	Varies on size of pool and amenities. Usually ½ to 2 A site.	<i>Teaching</i> - minimum of 25 yards x 45' even depth of 3-4 ft.	None-although care must be taken in siting of lifeguard stations in relation to afternoon sun.	1 per 20,000	15 to 30 minutes travel time	Pools for general community use should be planned for teaching, competitive and recreational purposes with enough depth (3.4m) to accommodate 1m and 3m diving boards. Located in community park or school site.
		<i>Competitive</i> – minimum of 25 m x 16 m. Minimum of 27 square feet of water surface per swimmer. Ratios of 2:1 deck vs. water.		(Pools should accommodate 3 to 5% of total population at a time.)		
Beach Areas	N/A	Beach area should have 50 sq. ft. of land and 50 sq. ft. of water per user. Turnover rate is 3. There should be 3-4 A supporting land per A of beach.	N/A	N/A	N/A	Should have sand bottom with slope maximum of 5% (flat preferable). Boating areas completely segregated from swimming areas.
¼ Mile Running Track	4.3 A	Overall width – 276' Length – 600.02' Track width for 8 to 4 lanes is 32'.	Long axis in sector from north to south to north-west-south-east with finish line at northerly end.	1 per 20,000	15-30 minutes travel time	Usually part of high school, or in community park complex in combination with football, soccer, etc.
Trails	N/A	Well defined trailhead maximum 10' width, maximum average grade is 5% not to exceed 15%. Capacity rural trails - 40 hikers/day/mile. Urban trails - 90 hikers/day/mile.	N/A	1 system per region	N/A	
Golf						
1. Par 3 (18 hole)	50-60 A	Average length vary 600-2,700 yd.	Majority of holes on north-south axis	--	½ to 1 hour travel time	18 hole course can accommodate 500-550 people/day.
2. 9-hole standard	Minimum 50 A	Average length –2,250 yards		1 per 25,000		9 hole course can accommodate 350 people/day.
3. 18-hole standard	Minimum 110 A	Average length 6,500 yards		1 per 50,000		Course may be located in community or district park, but should not be over 20 miles from population center.
Golf-driving Range	13.5 A for minimum of 25 tees	900'x690' wide. Add 12' width for each additional tee.	Long axis south-west-northeast with golfer driving toward northeast.	1 per 50,000	30 minutes travel time.	Part of a golf course complex. As separate unit may be privately owned.
Disc Golf*	One acre per 2-3 holes.	Vary hole configurations for multiple skill levels.	N/A	N/A	N/A	Fairways should not cross or be too close to public streets, sidewalks or too near private property or other busy areas where non-players congregate.
	Championship courses can require more than one acre per hole depending on foliage density.	Fairways in the woods typically range from 15 ft wide pinch points up to 40 ft wide.				
		Most holes contain at least two sets of tees.				
Skate Park**						
1. Concrete	1,500 square feet per 10 skateboarders.	N/A	N/A	N/A	N/A	
2. Steel Frame	Average size in region is approx. 11,000 sq. ft.					
3. Portable & Wood						

Source: Lancaster, R.A. (Ed.). (1990). *Recreation, Park, and Open Space Standards and Guidelines*. Ashburn, VA: National Recreation and Park Association. [militaryridgemap.pdf](#)

*taken from Professional Disc Golf Association Design Guidelines: <http://www.pdga.com/files/PDGA%20Course%20Design%20Guides%20March%202014.pdf>

** taken from Public Skate Park Guide: <http://publicskateparkguide.org/design-and-construction/factors-of-skatepark-design/>

the street network. They can therefore serve important destinations and take advantage of existing travel patterns.

Locational Criteria

Typically, bicycle lanes are established on roadways that are 32 feet or wider with no on-street parking. Shared parking/bicycle lanes generally function well where sufficient space is provided and the parking turnover rate is not too high. Shared parking/bike lanes are generally not recommended on streets with little parking, because they tend to get used as an additional travel lane. Section B.5 shows minimum street design requirements.

Signage

Bicycle facilities should be signed and marked in accordance with the AASHTO standards. Appropriately spaced pavement markings and street signs should be used to identify bicycle lanes. Signs and pavement markings are especially important at approaches to intersections and at the ends of bicycle lanes.

Below are a couple of examples of signs that may be used in conjunction with bike lanes:



Treatment in Plan

Bicycle lanes are recommended in Waunakee and Westport primarily on higher volume roads that serve as arterial roads, to provide good commuting routes for inter-community and regional travel (see Proposed Trails map in Appendix C). Combined parking/bicycle lanes are recommended on Main Street in downtown Waunakee.

PAVED SHOULDERS

Overview

Paved shoulders are not a “bicycle facility” per se, but rather a roadway condition that improves bicycle travel and bicyclist safety.

Bicycle Lane Design Criteria:

- Minimum width: 4 feet; 5 feet along arterial street.
- When used alongside a parking lane, should be at least 5 feet wide and located to the traffic side of parking lane.
- Where combined bike lane and on-street parking is provided, minimum combined width should be 11 feet (13 feet where there is substantial parking or turnover of parked cars is high, such as Main St.).
- Lanes painted with a “bicycle” pavement symbol or the words “bike lane” according to AASHTO standards.
- Lanes maintained on a regular basis to remove any sand, gravel and/or debris.

Function

Paved shoulders function much like a bicycle lane to separate the motor vehicle travel from bikes. The use of paved shoulders benefits motorists as well by providing space in an emergency, improving drainage, and supporting the traveled portion of the roadway.

Locational Criteria

For higher volume streets or highways (generally more than 1,000 vehicles per day) with rural cross-sections (i.e. no curb and gutter), the addition or improvement of paved shoulders is generally the most effective way to

Paved Shoulder Design Criteria:

- Minimum width: 4 feet, or 5 feet where traffic speeds exceed 50 mph.
- Stripe separating shoulder from roadway recommended.
- Generally not marked as exclusive bicycle facility.
- Lanes should be maintained on a regular basis to remove any sand, gravel and/or debris.

accommodate bicyclists. On rural roadways with lower traffic volumes, cyclists can “share” the roadway with motorists without widened shoulders.

Treatment in Plan

This Plan recommends paved shoulders on many roadways in Waunakee and Westport, including Wimbleton Way, CTH K, HWY 113, and others.

SIGNED BICYCLE ROUTES

Overview

Establishing signed bicycle route designations is a relatively inexpensive and efficient way to guide bicyclists through the existing street network.

Function

The purpose of a signed route system is to provide reasonably direct major routes through a community on streets that most bicyclists will feel comfortable using. Roads that are signed as bike routes may or may not include bicycle lanes or paved shoulders. Off-street paths may also serve as designated routes.

Locational Criteria

Bike routes are located so as to provide access to frequent bicyclist destinations, such as schools, parks, and employment centers. However, the routes are not designed to link all of these possible destinations. Many other

Signed Bicycle Route Design Criteria:

- Routes are best located on low-stress streets or designated bicycle facilities. Low-stress streets typically are those with traffic volumes less than 2,000 vehicles per day, speed limits less than 30 mph.
- Remove all hazards to bicycle travel, such as unsafe drainage grates, rough railroad crossings, potholes, gravel and debris.
- Direct riders to key destinations, such as schools, parks, and employment centers, and provide distances
- Help riders identify their location along the route.

local streets are suitable for safe bicycle travel. Therefore actual route selection is determined more by directness, continuity, aesthetics and personal preference.

Signage

“Share the Road” signs may be used along some routes to warn vehicles of bicycle traffic without necessarily designating the signed roadway as a preferred route. This type of sign is sometimes used on roadways with high levels of bicycle traffic, but relatively hazardous conditions for bicyclists. Caution must be exercised when using “Bike Route” signage along rural roadways, as this may encourage inexperienced riders to travel along routes that are not necessarily suitable for their skill level. Except in rare cases where other alternatives are not available, signs should not be used to designate sidewalks as bikeways.



Treatment in Plan

This Plan advises signed bicycle routes in central Waunakee, to facilitate safe movement between existing and planned major destinations, particularly schools. The Village and Town may in the future wish to designate additional bike routes over other roads and paths shown on the Proposed Trails Map in Appendix C.

OFF-STREET MULTI-USE PATHS

Bicycle facilities separated from the roadway are often referred to as bike paths or trails. In reality, these paths are typically also open to walkers, runners, and in-line skaters (where paved). Therefore, “multi-use path” is the proper term for such facilities, and they need to be designed with these various user groups in mind.

Function

Multi-use paths can be significant generators of bicycle use, particularly for less experienced cyclists, for which they provide a safe environment. They provide enjoyable recreation opportunities and, in many cases, desirable commuter routes.



Locational Criteria

A community's road and sidewalk system provides the best means of accessing various destinations within a community, but multi-use paths can enhance the primary on-road bikeway system. Multiuse paths are most effective when used to provide regional recreational loops, bikeway system continuity, linkages to on-street routes, and/or short cuts where no adequate on-street facilities are available. Railroad rights-of-way, linear parks, river and creek corridors, lakes and dead-end streets (if planned in advance) provide good opportunities for construction of paths.

Signage

Signs placed at high-traffic trail crossings or trailheads that identify and draw attention to the path help to promote trail use. System maps at trailheads and smaller signs placed along the path identifying destinations to be reached by the path and their distances are extremely helpful for path users.

On lengthy off-street paths, quarter-mile markers assist users in identifying their exact location on the trails, particularly helpful in emergency situations. In areas with heavy use, it may be appropriate to include signage to separate pedestrians and bicycle traffic.



Treatment in Plan

This Plan recommends off-street multi-use paths in many locations. Waunakee has actively promoted multi-use paths in new developments, and existing paths are located throughout the Village. The paths are used in this Plan to

provide access between major destinations for riders of all abilities. Trailheads can be an important component of the path system as well.

TRAILHEADS

Overview and Function

Trailheads can provide visible access points to major off-street paths in the community's system. They generally provide a parking area, locational and directional maps or other information about the trail system. Some might contain restroom facilities, picnic tables or benches for snacks or breaks.

Locational Criteria

Trailheads should be sited with easy and direct access to the trail system. The trailhead should be located on a good road system, to provide easy access. Trailheads can be a benefit to the local economy, bringing visitors into areas that the community wishes to promote. Therefore, they should be located in areas that have easy access to services for trail users, such as food, drinks, and bike rentals or repairs.

Treatment in Plan

This Plan recommends trailheads in Tierney Park, Castle Creek Conservancy, Montondon Park, and Village Center Pond Conservancy.

RURAL WALKWAYS

Overview and Function

Walkways in rural areas provide connections between urbanized areas, and access to parks and open space areas. Walkways may be restricted to pedestrian use because of environmental conditions. In certain locations, they may also be suitable for equestrian and/or bicycle use.

Locational Criteria

Rural walkways are often sited along creeks, streams, rivers, field boundaries and fence lines, or other natural linear systems. Because they generally travel through sensitive environmental areas, they are generally not paved. Instead, they are surfaced with crushed limestone, wood chips, hard-packed earth, or mowed grass.

Treatment in Plan

Walkways are shown in the Plan along Castle Creek.

SIDEWALKS AND URBAN WALKWAYS

Overview

A continuous pedestrian network connects neighborhoods and makes it possible for pedestrians to get from place to place. Sidewalks and urban walkways are key components that connect new and existing development, and provide pedestrian access to community amenities.

Sidewalk and Urban Walkway Design Criteria:

- Sidewalks should be:
 - Minimum 5 feet in width;
 - Surfaced with concrete;
 - Separated from the road by a landscaped terrace.
- Sidewalks wider than 5 feet are warranted in areas with higher volumes of pedestrian traffic, including commercial areas, near schools, and higher density residential areas, and on collector and arterial streets with higher traffic volumes and speeds. In this case, the combined width of the sidewalk and the terrace should be wider. This can be achieved by widening the terrace and/or widening the sidewalk.
- Parking meters, planters, mail boxes, light poles, signs and other street furniture should be located in the terrace adjacent to the sidewalk so that these potential obstructions do not narrow the width of the sidewalk. Where there are extreme right-of-way constraints and an obstruction of the sidewalk cannot be avoided, the sidewalk should have a minimum clear usable width of at least 36 inches at every point along its length.
- Walkways through parks, at the end of cul-de-sacs, between blocks, and on private development sites may be developed to different width and surfacing standards, based on expected use, context, and ADA requirements. It is to remove any sand, gravel and/or debris.

Function

Sidewalks and urban walkways provide safe places for people to walk to school, to the park, to shop, or for recreation. They also facilitate safe neighborhoods by encouraging self-surveillance as people commute, exercise, socialize and play.

Locational Criteria

In addition to their placement along streets, sidewalks and walkways provide important connectivity for between streets, buildings, and community facilities such as parks. Short walkways often serve the purpose of making a direct connection between the public sidewalk and a building, serving a valuable role in enhancing pedestrian access to destinations. Short walkways can also be used in the public right-of-way or easements to maintain pedestrian access through cul-de-sacs or long blocks. Longer pedestrian walkways are valuable for enhancing pedestrian mobility, especially where they provide the pedestrian with short cuts, such as through parks.

Treatment in Plan

This Plan advises the installation of sidewalks on new streets per the policies in Chapter Five, and the addition of sidewalks along both sides of Century Avenue, where currently missing. Sidewalks should be installed to fill gaps in other areas when opportunities present themselves.

INTERSECTION IMPROVEMENTS

Overview and Function

Adding improvements such as crosswalk striping or other visible markings (e.g. different surface textures or colors or integrated lighting), bike lanes, refuge medians, lights, pedestrian signals, and bulb-outs to intersections results in a more bicycle and pedestrian friendly intersection. In some situations where there are wide, high traffic volume, high traffic speed streets, overpasses and underpasses can obviate the need for an intersection improvement and serve an important role in maintaining continuity of the pedestrian/bikeway network by providing safe access across a street, river, or railroad that would otherwise pose a significant barrier to travel.

Signage

This Plan recommends pedestrian crossing signs like the one below for uncontrolled intersections. A flashing light used in conjunction with this sign could be used at high volume areas. Signage at controlled intersections should specifically notify all users of the presence and desired locations for bicyclists.



Locational Criteria and Treatment in Plan

Certain intersections need improvements to safely serve bikes and pedestrians. Retrofitting these intersections with new improvements such as bike lane and crosswalk striping, refuge medians and bulb outs will provide much more user-friendly intersections for pedestrians, bikers and automobiles. New intersections should be designed with bicycles and pedestrians in mind.

The Proposed Trails map in Appendix C shows the locations of intersections with proposed improvements. The improvements are described further in the tables in Chapter 6.

Several bridges will be needed to provide passage over creeks for rural paths. An underpass is recommended on CTH K near CTH M to provide a link from north to south.

B.4 COMMUNITY AND NEIGHBORHOOD DESIGN RECOMMENDATIONS

A plan that advised only bike and pedestrian facility construction would be incomplete. When designing community growth and individual neighborhoods, the needs of pedestrians

and bicyclists. A mix of land uses in close proximity, including residential, commercial, and recreational, allows residents to fulfill their daily needs within or near the neighborhood. There are several principles of site, neighborhood, and transportation facility design that the Village and Town should use when preparing, evaluating, reviewing, approving, and adopting community plans, transportation facility improvements, subdivision plats, and other development proposals. Detailed neighborhood plans for developing areas should incorporate these principles. Also, local subdivision regulations should be amended to incorporate these principles in review of development.

GENERAL DESIGN PRINCIPLES

- Encourage an integrated mix of uses to provide basic needs and services to minimize vehicle miles traveled.
- Provide public space within the neighborhood (e.g. parks, pathways).
- In and at the edge of larger neighborhoods, provide opportunities for retail, office, entertainment, civic, and recreational land uses.
- Design the neighborhood at a human scale, providing easy pedestrian access and wayfinding opportunities.

NATURAL SYSTEMS, OPEN SPACE, AND LANDSCAPING PRINCIPLES

- Integrate natural resources into the neighborhood for conservation and quality of life purposes.
- Require conservation easements or public dedication for all ecological resources, buffers, trails, and other areas proposed for preservation.
- Provide wide areas for public access to parks and open space lands. Do not hide open space behind private lots.
- Maximize preservation of common open space in each neighborhood through public dedication and/or private management of open space through a homeowner's association.

PEDESTRIAN - FRIENDLY NEIGHBORHOOD DESIGN PRINCIPLES

- Design a network of streets that connects within the subdivision, and to existing and future subdivisions.
- Minimize use of cul-de-sacs.
- Require walkway connectors at cul-de-sac ends and through the middle of long blocks.
- Provide sidewalks on all public streets within the Village, with the possible exception of very short cul-de-sacs.
- Create looped internal pedestrian trails within neighborhoods, and connect to nearby parks and schools and the community-wide path system.
- Provide landscaping along pedestrian walkways and sidewalks.
- Provide street trees at regular intervals in terrace areas in the Village.
- Design streets to correspond to traffic volumes and adjacent use or density. Do not over design streets.

Reduce front yard building setbacks and orient entries and porches of buildings to streets and sidewalks. These steps will encourage walking by providing easy pedestrian connections, bring activities and visually interesting features to the street, and provide safety through watchful eyes.

Pay special attention to garage placement. Ideally, garages should be set back from or, at a minimum, flush with the front façade of the house. An overabundance of houses with garages thrust towards the street contributes to an environment that is not friendly to the pedestrian.

TRAFFIC CALMING MEASURES

Neighborhood traffic management goes hand in hand with making the Waunakee and Westport area a better place to bike and walk. This section discusses some traffic calming measures that can be used to manage neighborhood traffic. These measures can be implemented for a number of reasons, including as a neighborhood design feature or focal point, as a measure to slow vehicular traffic speeds, and/or as a mechanism to enhance bicycle and pedestrian travel. Traffic calming measures enhance pedestrian travel by

slowing vehicular traffic, shortening pedestrian crossing distances, and/or drawing attention to a pedestrian crossing.

Curb Extensions

Curb extensions are also known as bulb outs, bump outs, or neck downs. Just as the name implies, the curb is extended into the street from its usual position to create a bulbed out sidewalk/terrace area that narrows the street. As such, curb extensions can be an effective tool for reducing the crossing distance for pedestrians. Curb extensions can be applied to one or more corners of an intersection, and therefore can impact one or both sides of a crossing on one or more legs of an intersection. Curb extensions are beneficial in that they:

- shorten the pedestrian crossing distance;
- provide better visibility for pedestrians to see and be seen;
- provide space for benches and other street furniture; and
- may reduce vehicle speeds.

This Plan recommends that these extensions be used on new or upgraded streets, where significant pedestrian traffic is expected, such as in Downtown Waunakee.

Refuge Medians

Refuge medians allow pedestrian to cross traffic in each direction of travel separately. Therefore, where refuge medians are provided, pedestrians only have to find an adequate gap in traffic in one direction of travel at a time. This can significantly reduce pedestrian delay and chances of conflict with motorists. This Plan recommends the installation of refuge medians on new or upgraded arterial and collector roads, at pedestrian crossing points.

Traffic Circles

Traffic circles are circles of varying diameter formed by curbs placed in intersections that are usually classified as local streets. Motorists must drive around the circle. Traffic circles reduce motor vehicle speeds through the intersection, depending on the current intersection controls in place. They may be an appropriate at certain locations in Waunakee.

Special Crosswalk Treatments

Special treatments, such as colored and/or textured surfaces, extra-wide striping or outlining, lights embedded in roadway surfaces, countdown pedestrian crossing signals, pedestrian actuated signals, and extra large or flashing signs draw the attention of the motorist and help to make crosswalks safer. The Village of Waunakee has installed colored surface and embedded lighting crosswalks in several key locations. Additional treatments are recommended at quite a few additional crossings of busy streets.

PEDESTRIAN-ORIENTED SITE DESIGN PRINCIPLES

Commercial areas, industrial parks, and major institutions are often destinations for pedestrians and bicyclists, and multifamily housing developments are often key generators. It is important to consider the needs of pedestrians and cyclists when reviewing site plans for these developments.

Each development project should provide for safe pedestrian and bicycle access to all uses within it, connections to existing and planned public pedestrian and bicycle facilities, and connections to adjacent properties. Walkways should be provided from all building entrances to existing and planned public sidewalks or pedestrian/bike facilities. Internal pedestrian walkways should be distinguished from driving surfaces. Walkways should also be provided

along the entire length of any building façade containing a public entrance, leaving room for foundation planting beds. The buildings should provide awnings or other weather protection features over all entrances. Site design should allow pedestrians to walk parallel to moving cars wherever possible. The following are examples of undesirable and desirable commercial site design features:

Undesirable Design

- All buildings a great distance from primary street
- Large unbroken expanse of parking

Desirable Design

- Pedestrian link to neighborhood
- Integrated pedestrian circulation and bike parking
- Pedestrian Plaza; buildings close to primary street
- Parking divided into smaller pods

The development should also provide secure, integrated bicycle parking and pedestrian furniture in appropriate quantities and locations.

B.5 STREET DESIGN RECOMMENDATIONS

Minimum street design standards should be in accordance with the table below:

Table B.1 Street Design Recommendations

Type of Street	Right-of-way (feet)	Street Width, curb-face to curb-face (feet)	Curb & Gutter	Street Terrace	Sidewalks	Bicycle Lanes
Arterial Street	80+	52+	Both sides, 2 feet wide	Both sides, min. 8 feet wide	Both sides, min. 5 feet wide	Where required, add 5 foot wide lanes
Collector Street	60-80	36 (2-sided parking) 30 (1-sided parking) 24 (no parking)	Both sides, 2 feet wide	Both sides, min. 8 feet wide	Both sides, min. 5 feet wide	Where required, add 4 foot wide lanes
Subcollector Street	50-70	32 (2-sided parking) 28 (1-sided parking) 22 (no parking)	Both sides, 2 feet wide	Both sides, min. 8 feet wide	Both sides, min. 5 feet wide	Where required, add 4 foot wide lanes
Minor Street or Cul-de-sac	50-60	28 (2-sided parking) 26 (1-sided parking) 20 (no parking)	Both sides, 2 feet wide	Both sides, min. 6 feet wide	Both sides, min. 5 feet wide	None
Alley	20.0	14 (no parking)	None	None	None	None