

**Dairyland Park**

COPY 1

**Park Site Master Plan**

*Village of Cleveland, Wisconsin*

*February, 1997*



*Prepared by: BAY-LAKE Regional Planning Commission, 1997*

## Village of Cleveland

**Village Board Trustees:** Kurt Kaiser, President  
Nila Born  
George DeNardis  
Mark Johnson  
John Kirsch  
Cheryl Kohl  
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**Village Park Committee:** John Kirsch, Chair  
Kurt Kaiser, Village President  
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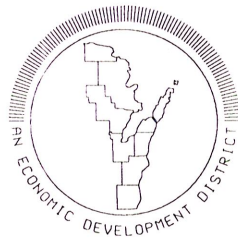
**Village Clerk:** Pam Gordon



# Dairyland Park Master Plan

Village of Cleveland, WI

February, 1997



**Prepared by:**

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*This report was funded through contract #55050 between the Village of Cleveland and the Bay-Lake Regional Planning Commission.*





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Martin W. Holden, Executive Director

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June 1, 1997

Mr. Kurt Kaiser  
Village of Cleveland President  
and Members of the Village Board  
and Village Park Committee  
Cleveland, WI

Ladies and Gentlemen:

The Bay-Lake Regional Planning Commission is pleased to present this *Dairyland Park Master Plan* to the Cleveland Village Board and the Village Park Committee. This park site master plan was prepared by Bay-Lake Commission staff in accordance with contract #55050.

This park site master plan represents the Village's continued commitment to the long-term planning needs of the community. The information contained in the *Dairyland Park Master Plan* provides the Village a framework for which to guide future improvements in an orderly manner.

The delivery of this report constitutes the completion of Bay-Lake Regional Planning Commission's obligation regarding the Village of Cleveland's request for assistance in developing the *Dairyland Park Master Plan*. However, the Commission and Commission staff stand ready to assist the Village in additional planning activities.

We trust the information contained in this report will be helpful to the Village Board, and Village Park Committee in determining the future appearance and function of the Village of Cleveland.

Sincerely,

Martin W. Holden  
Executive Director



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## SCOPE AND PURPOSE OF PARK MASTER PLAN

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The village of Cleveland, being aware of private and public concerns relating to the future development of public recreational sites, elected to prepare a "Park Site Master Plan" for Dairyland Park. This document was prepared over an eight month process by Bay-Lake Regional Planning Commission with input from the village of Cleveland. In preparing this *Park Site Master Plan*, the Bay-Lake Regional Planning Commission set forth the following objectives:

- To work with the Village Park Committee and public and private organizations on the development of the master plan for Dairyland Park.
- To encourage citizen participation in the planning process by attending Park Committee meetings and scheduling and attending citizen participation meetings.
- To conduct an inventory and analysis of the existing outdoor recreation facilities at Dairyland Park.
- To determine the needs for new park facilities at Dairyland Park.
- To incorporate existing planning studies into the park master plans, such as the *Manitowoc County Park and Open Space Plan*, and the results of the UWEX community visioning surveys.
- To provide recommendations and implementation activities for the park master plans.
- To encourage adoption of the individual park master plans by the village Board.
- To provide a final printed document of the park master plan based on the material prepared by the village and Commission.
- To establish a computerized database and related maps of the outdoor recreation facilities and natural resource features at Dairyland Park, using the Commission's Geographic Information System (GIS).

The *Dairyland Park Master Plan* was prepared to address the needs of the village's residents for improvements to existing recreational facilities within the park and also to examine the future recreational usage of the site. This plan was developed as: 1) a sound working guide that will direct the acquisition and development of parks and recreation facilities needed or desired to satisfy the demand of the village's residents, and; 2) a "vision" for the future development which should be referenced by village officials and individuals as decisions are made regarding this park site.

## PUBLIC PARTICIPATION PROCESS

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The Bay-Lake Regional Planning Commission regards public participation as an essential part of the planning process for any project. Each meeting held with the Park Committee was done so in a public forum with posted agendas and time allowed for citizen input. Below is a summary of the meetings which Commission staff attended during the planning of Dairyland Park:

**February 29, 1996** Commission staff met with the Park Committee to “kick-off” the planning process and to gather information related to the existing park areas within the village.

**March 21, 1996** Commission staff conducted a “nominal group” exercise to identify current issues related to outdoor recreation facilities within the village of Cleveland. This exercise was conducted by Commission at 6:30 p.m. at the Village Hall facility. The village of Cleveland Park Committee members invited approximately 30 persons from the community which represented various organizations, businesses, property owners and other interested parties. Of these thirty people, 17 attended the exercise. The attendees were split into two groups and were led through a process which identified issues and then prioritized them. The two groups were then brought together to form a consensus of opinion on the most prevalent issues. The following items were ranked as the top issues concerning future park development in the village of Cleveland. The complete results of the exercise are contained in Appendix B.

1. Develop ponds, trails, and wildlife areas at all parks (23 points)
2. Interconnection of parks (19 points)
3. Unattractiveness of dam area (12 points)
4. Upgrade electrical services at Dairyland park (8 points)
5. Better play area for children at Hika Bay (7 points)

**April 10, 1996** Commission staff presented the results of the nominal group survey exercise to the Park Committee. Although the meeting focused on Veteran’s Memorial Park, several items related to utility needs were discussed for Dairyland Park.

**October 10, 1996** The Park Committee met to discuss and approve both the Hika Bay Park and Veteran’s Park Master Plans in draft form for public review beginning in late November. It was decided that a public presentation and formal Park Committee approval would occur at a December, 1996 meeting. Draft plans and display maps will be available for review at the Village Hall and other public institutions throughout the village.

Commission staff also presented preliminary maps and concepts regarding Dairyland Park to the Park Committee. This information was discussed and consensus was developed on several points, including: keeping the northern portion of the park “active” in nature; examine possibilities for a pond and natural area; coordinate physical layout with the Lion’s Club’s current facilities and layout for Dairyland Festival; add a new bathroom facility, and; develop a trail system throughout the park.

**October 31, 1996** Commission staff presented three draft park design alternatives for Dairyland Park to the Park Committee for review and discussion. After review, the Park Committee unanimously chose Alternative 1 for the park design with minor alterations. The draft document will be developed for initial review by the Park Committee prior to being released for public review in late November.



## GENERAL SITE LOCATION AND CONTEXT

The village of Cleveland is located in the southern most portion of Manitowoc County along the shores of Lake Michigan. (Map 1) The village itself is located between two major urban areas, the cities of Manitowoc and Sheboygan, and is easily accessible by Interstate 43 situated along its western boundary. Dairyland Park is located in the northwestern portion of the village in both the NE 1/4 and NW 1/4 of Section 28 in T17N, R23E, and encompasses approximately 6.5 total acres.

Specifically, Dairyland Park is located just south of North Avenue at the intersection of Dairyland Drive (CTH "XX") and services the recreational needs of residents in the northwestern portions of the village, as well as the surrounding township. (Map 2). The park site was previously a Wisconsin Department of Transportation (WisDOT) owned wayside facility. This facility serviced the old USH 141 corridor prior to the construction of Interstate 43 and was donated to the village around 1975. Dairyland Park is easily accessible from Interstate 43 and is utilized during the summer by the local Lion's Club as the location for its annual "Dairyland Festival".

The entire site is relatively open and bounded by transportation corridors on the west, and residential land uses (mobile homes) to the north and northeast; privately owned woodlands to the east; and agricultural land to the south. The village noted that it may own a small triangular strip of woodlands extending eastward from the southeastern corner of the park (this needs to be researched in more detail). The agricultural land to the south has recently been included in a Tax Increment Finance District for future commercial and industrial development and the agricultural land across Dairyland Drive is zoned for future multi-family residential development. Access to the site is obtained from two entrances off of Dairyland Drive (See Map 2).

### EXISTING SITE CHARACTERISTICS

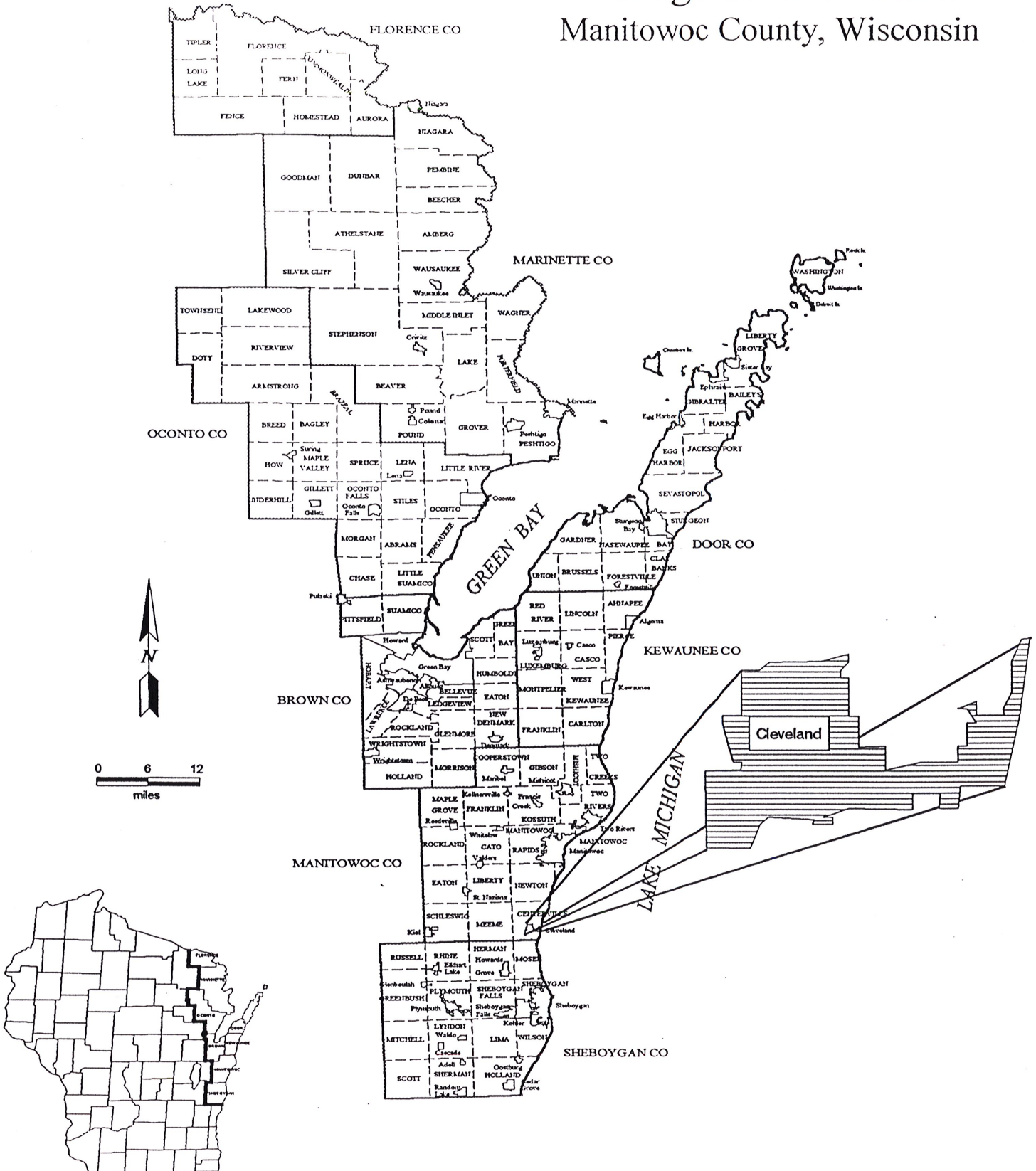
Dairyland Park is comprised of a variety of physical characteristics which relate well to recreational development. In general, the northern portion is moderately wooded and well drained and is suitable for active recreational facilities. The southern areas are comprised of wetter soils and open areas which lend themselves well to the development of passive recreational facilities, natural landscaping improvements, or open play fields. As with any site specific development plan, a detailed analysis of the existing physical characteristics proves to be invaluable in determining the final outcome of the site and its future usage.

### TOPOGRAPHY AND SURFACE DRAINAGE

The park site can generally be described as being flat to gently rolling. Natural drainage occurs in two different directions. The central and southern portions of the park drain southeasterly into an adjacent wooded area. The northern portion drains from east to west and then northward into a drainage ditch adjacent to the mobile home park. The northern portion contains the highest elevations and a few gently rolling slopes, particularly near the mobile home park. The southern portion has several high areas near Dairyland Drive. No detailed topography map could be found for the purpose of describing these features, however they are noted in a general sense on Map 3.

There are no areas of the park site within the Federal Emergency Management Agency (FEMA) identified 100 year floodplain boundary.

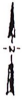
Map 1  
 Location Map  
 Village of Cleveland  
 Manitowoc County, Wisconsin





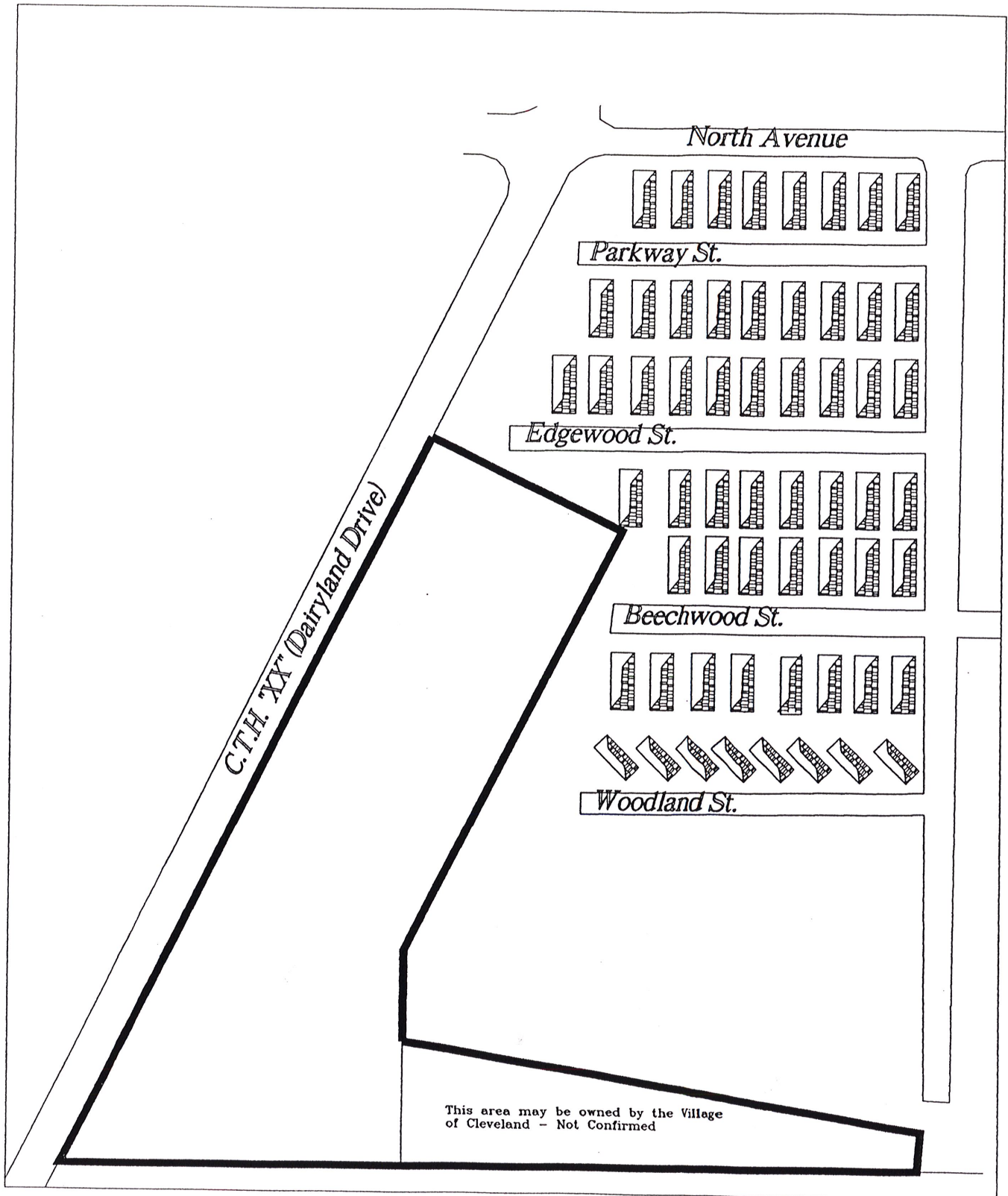
# Village of Cleveland Dairyland Park

Map 2  
Study Area



Not to Scale

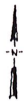
— Study Area Boundary



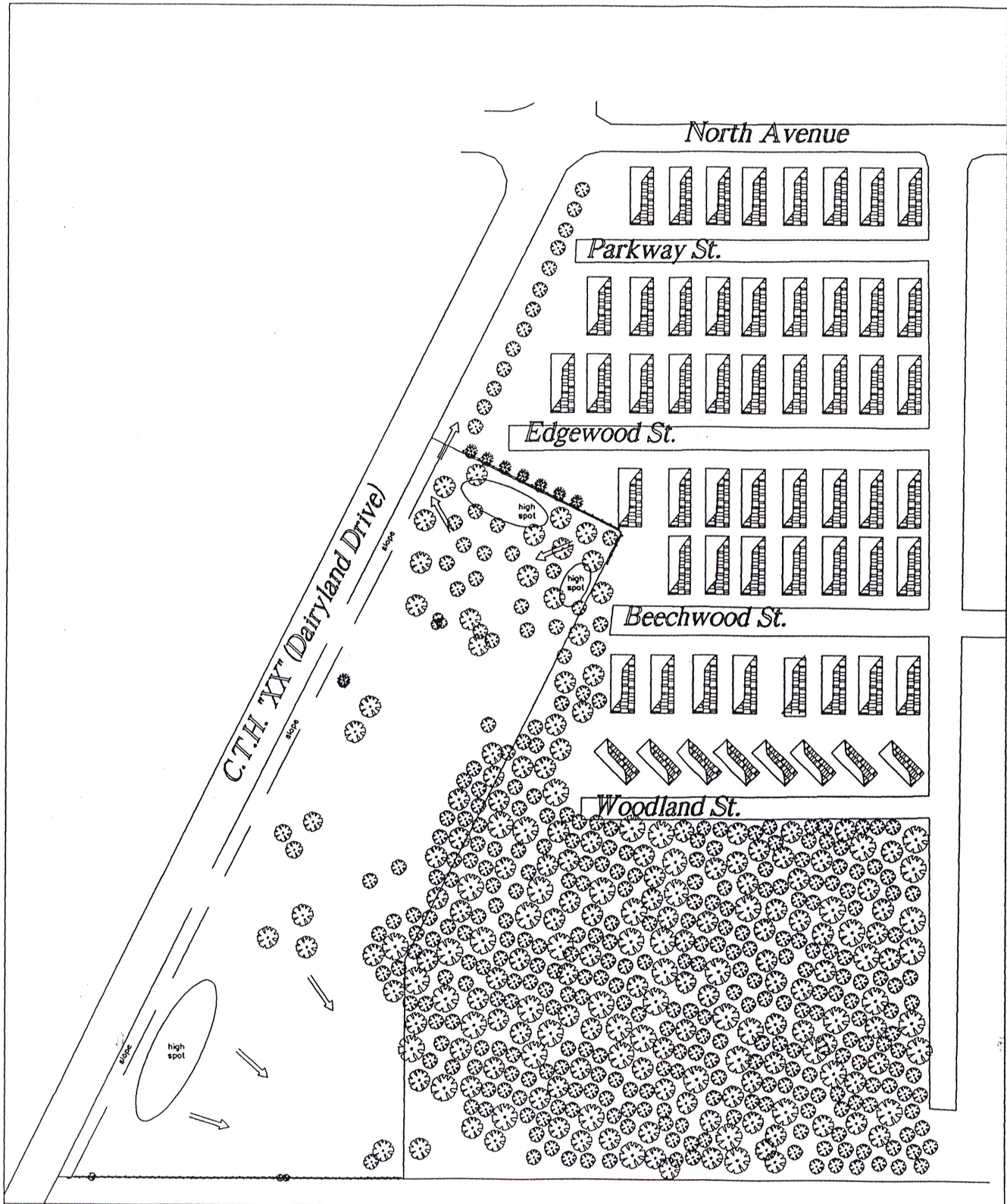
# Village of Cleveland Dairyland Park

## Map 3 Existing Physical Features

Study Area Boundary



Not to Scale





## SOILS

The 6.5 acre park site is comprised of a wide variety of soil types, according to the United States Department of Agriculture, Soil Conservation Service, *Soil Survey of Calumet and Manitowoc Counties* (See Map 3). In general terms, the site can be described as having soils which formed in glacial drift and are predominantly gently sloping to steep, well drained to poorly drained, which are characteristic of the Kewaunee-Boyer-Nichols Association. Table 1 lists the soil types found on the site and contains information regarding the various properties for activities and uses of these lands. It should be noted that this information is based on general soils information and is not the result of any certified soil tests on the site. The following text contains a brief description of each soil series:

**Boyer (BrB)** - Consists of well drained soils on moraines, outwash plains, and terraces. These soils are rapidly permeable in the subsoil and very rapidly permeable in the substratum. They formed in loamy deposits underlain by outwash sand and gravel. Slopes range from 2 to 6 percent.

**Hortonville (HrB)** - Consists of well drained, moderately slowly permeable soils on till plains and moraines. These soils formed in silty deposits and in the underlying glacial till. Slopes range from 2 to 6 percent.

**Plainfield (PIB)** - The Plainfield series consists of excessively drained, rapidly permeable soils on stream terraces, escarpments, and sides of moraines. These soils formed in sandy drift. Slopes range from 2 to 6 percent.

**Symco (SyA)** - The Symco series consist of poorly drained, moderately permeable soils with high water capacity along drainageways on till plains and ground moraines. Slopes range from 0 to 3 percent.

**Wauseon (We)** - The Wauseon series consists of very poorly drained soils in depressions on till plains and in lacustrine basins. These soils are rapidly permeable in the solum and very slowly permeable in the substratum. They formed in loamy and sandy deposits over clayey till or lacustrine deposits. Slopes range from 0 to 2 percent.

## WETLANDS AND WATER FEATURES

There are no WDNR identified wetlands, nor any water features within the park boundaries.

## EXISTING VEGETATION AND WILDLIFE HABITAT

Dairyland Park consists mainly of open grassed areas, however; the northern portion is moderately wooded and contains a mixture of deciduous trees such as black ash, green ash, and red oak. A much denser wooded area lies to the immediate east of the park and penetrates into the eastern boundary. Several mature trees have been planted in the central portion of the park and a few red cedars exist near the parks entrances. Small shrubs and immature trees define the southern boundary of the site near the agricultural field. Map 3 illustrates the generalized locations of the vegetative features on the property.

Due to its location in an urban area, the park supports minimal wildlife. Squirrels, rabbits, various bird species and deer often frequent the park and its adjacent woodlands.

Table 1: General Soil Types and Characteristics

Soil Type	Soil Name	Slope	Permeability	Water Capacity	Runoff	Building Suitability	Potential for Trees	On-Site Sanitary Suitability
BrB	Boyer sandy loam	2-6%	moderately rapid	low	slow	good	fair	good
HrB	Hortonville silt loam	2-6%	moderately slow	high	medium	fair	good	fair
PIB	Plainfield loamy sand	2-6%	rapid	low	slow	good	poor	good
SyA	Symco silt loam	0-3%	moderately slow	high	slow	poor	good	poor
We	Wauseon sandy loam	0-2%	rapid	moderate	slow	poor	good	poor

Source: Soil Survey of Calumet and Manitowoc Counties, Wisconsin, USDA, Soil Conservation Service, 1980; and BLRPC, 1996.

## EXISTING MAN-MADE FEATURES AND FACILITIES

### Recreational Facilities

In order to determine the current supply of recreation facilities at Dairyland Park, it was necessary to inventory the existing facilities (Map 4). This inventory was conducted through a field survey in June, 1996. The following is a detailed listing of the park's facilities:

- |   |   |
|---|---|
| 1 paved off street parking lot (approx. 41 regular spaces & 1 handicapped space with lighting)            | 1 swing set   |
| 1 wooden identification sign  | 1 large metal slide   |
| 1 wooden park regulation sign on a 4'x6' concrete pad   | 1 metal climber   |
| 1 18'x28' covered wooden picnic area w/ concrete floor, water & electrical service, and concession stand. | 5 picnic tables   |
| 1 restroom facility (men's & women's) w/ asphalt path.  | 5 grills  |
|   | 1 wooden covered well pump building (10'x8') with two benches and asphalt pathway |

### Public Utilities

Dairyland Park is serviced with minimal public utilities. The existing restrooms are not hooked up to the village's sanitary sewer system and there is no municipal water available. An existing hand-pump well is located in the northern portion of the site; however, it is not operational and the village has plans to abandon this well and a nearby test well. An existing transformer supplies 400 amp electrical service, which is distributed to several areas of the park for equipment power sources and lighting. An upgrade in electrical services was noted as a primary concern for this park by the nominal group survey. Map 4 illustrates the locations of these various electrical service lines. This information was gathered from various village maps and discussions with the Public Works Director and is provided as a general location guide only. Local utility companies should be requested to specifically identify locations on-site for any future construction activities.





# SITE SUITABILITY ANALYSIS FOR RECREATIONAL USES

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Developing a site requires thorough knowledge of natural resource elements and systems, man-made features and other relevant data. Only when this data has been collected and analyzed can possible end uses be determined. As part of the planning process Dairyland Park was evaluated for limitations to recreational use. The analysis was undertaken for each physical characteristic previously discussed.

## TOPOGRAPHY AND SURFACE DRAINAGE

The topographic structure of a site is a visual resource that can strongly influence the location of various structures, facilities and recreational functions. Topography can be an asset or a limitation, depending on the type of recreational opportunity for which the site is being designed. For example, intensive play facilities, such as ballfields and court areas, require sites of generally flat topography, preferably less than a three percent slope and should not exceed a six percent slope. On the other hand, passive type recreational uses, such as hiking or nature trails, can utilize a changing topography to add variety to the hiking experience.

The entire site is relatively flat and will require minimal site preparation costs to accommodate intensive recreational uses. There are no areas of great topographic relief that pose severe limitations to intensive-type uses. The southern and southeastern portions of the park contain areas which collect natural drainage and can stay consistently wet throughout much of the year. However, these areas can accommodate certain passive uses, such as trails and picnicking, if properly designed and maintained.

## SOILS

One of the primary considerations of any site analysis is soil types. A basic knowledge of soils is important in understanding engineering capabilities of a site to support buildings, roads, parking areas, etc. In addition, soil types provide insight to plant communities which can be supported on-site. The primary soil properties that affect recreational uses are depth, slope, texture, stoniness, natural drainage, percolation rate (permeability), hazard of overflow, and the ability of the soil to sustain weight. Intensive play areas, as defined by the USDA, are those areas suitable for use as playgrounds, athletic fields, or tennis courts, etc. Such uses require a level playing surface, good drainage, and good foot trafficability. Extensive play areas are defined as being suitable for picnic sites, parks, nature study and conservation education areas, and for other non-intensive uses that allow for the random movement of people. These uses require fair drainage, good trafficability, and good ground cover. These areas, as well as some severely limited areas may also be suitable for the development of hiking trails.

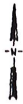
Utilizing the soils data obtained from the USDA, Soil Conservation Service, *Soil Survey of Calumet and Manitowoc Counties*, individual soil types were delineated (See Map 3) and categorized by the estimated amount of limitation each soil contained for development and recreational uses. These categories are listed on Tables 2 through 6. Map 5 contains a description of the best uses associated with each soil type on the site.

Overall, the most severe limitations for recreational development lie within the southern portion of the site. These areas would be best suited for natural areas or trail development. The existing active recreational area in the northern portion of the site are not best suited for these types of activities, however there have been no problems in the past, therefore it is not a great concern in the overall design of the park. Pond construction to enhance wildlife opportunities may be best suited in the southeastern portion of the park.

**WETLAND/WATER FEATURES**

As stated previously, there are no wetland or water features present on the site, therefore the park design does not have any limitations regarding these types of features.

# Village of Cleveland Dairyland Park



Not to Scale

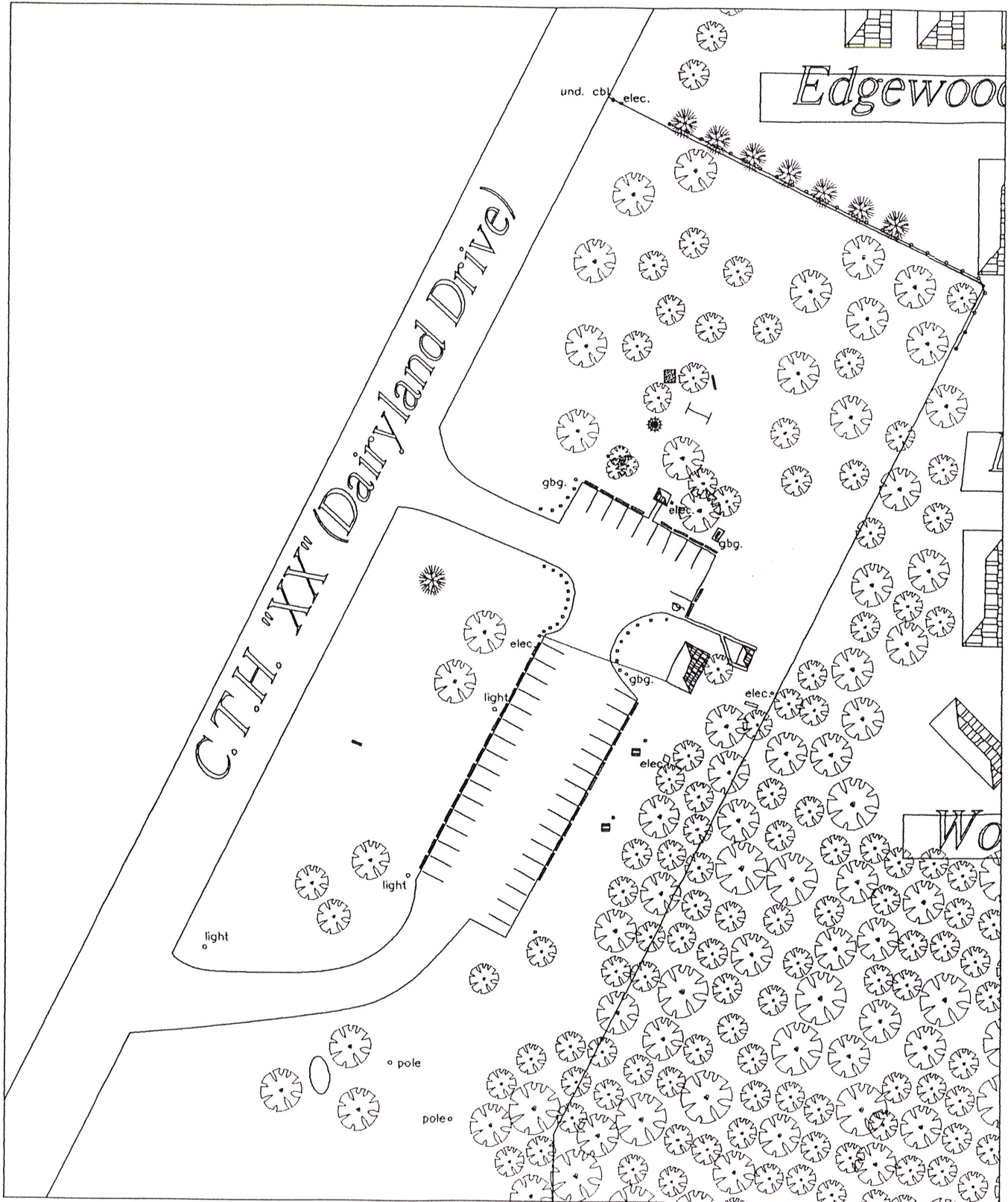




Table 2: Soil Types and Woodland Management

Soil Type	Soil Name	Management Concerns				Potential Productivity	
		Equipment Limitation	Seedling Mortality	Windthrow Hazard	Plant Competition	Important Trees	Trees to Plant
BrB	Boyer sandy loam	slight	slight	slight	slight	N. Red Oak, White Oak	E. White Pine, Red Pine
HrB	Hortonville silt loam	slight	slight	slight	moderate	N. Red Oak, Sugar Maple, American Bass.	E. White Pine, Red Pine, White Spruce
PIB	Plainfield loamy sand	slight	severe	slight	moderate	Red / E. White / Jack Pine, N. Pin Oak	Red / E. White / Jack Pine
SyA	Symco silt loam	slight	slight	slight	moderate	N. Red Oak, Red/Silver Maple, White/Green Ash, E. White Pine	Red/Silver Maple, White/Green Ash
We	Wauseon sandy loam	severe	severe	severe	severe	White Ash, Swamp Oak, Silver Maple	White Spruce, Silver Maple, White Ash

Source: *Soil Survey of Calumet and Manitowoc Counties, Wisconsin*, USDA, Soil Conservation Service, 1980; and BLRPC, 1996.

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Table 3: Soil Types, Windbreaks and Environmental Plantings

Soil Type	Soil Name	Trees Having Predicted 20-Year Average Heights (feet)					
		< 8	8-15	16-25	26-35	>35	
BrB	Boyer sandy loam	Silky Dogwood	Common Ninebark, Lilac	Norway Spruce	Easter White Pine, Red Pine	-	
HrB	Hortonville silt loam	-	N. White Cedar, Common Ninebark, Silky Dogwood, Lilac	White / Norway Spruce	E. White Pine, Red Pine	-	
PIB	Plainfield loamy sand	-	Lilac, Silky Dogwood, Peashrub	Norway Spruce	Eastern White / Red / Jack Pine	-	
SyA	Symco silt loam	-	N. White Cedar, Red Osier Dogwood, Nannyberry, Viburnum	White Spruce, Green Ash	E. White Pine, Red Pine, Silver Maple	-	
We	Wauseon sandy loam	-	Silky dogwood	Northern White Cedar	Eastern White Pine	-	

Source: *Soil Survey of Calumet and Manitowoc Counties, Wisconsin*, USDA, Soil Conservation Service, 1980; and BLRPC, 1996.

Table 4: Soil Types and Water Management

Soil Type	Soil Name	Pond Reservoir Areas	Embankments, Dikes, and Levees	Aquifer-fed Excavated Ponds	Drainage	Terraces and Diversions	Grassed Waterways
BrB	Boyer sandy loam	seepage	seepage	no water	not needed	complex slope, soil blowing, too sandy	droughty
HrB	Hortonville silt loam	seepage, slope	low strength, shrink - swell	no water	not needed	complex slope	erodes easily
PIB	Plainfield loamy sand	seepage	seepage	no water	not needed	too sandy, soil blowing	droughty
SyA	Symco silt loam	favorable	wetness	slow refill	frost action	not needed	favorable
We	Wauseon sandy loam	seepage	wetness	slow intake	percs slowly	not needed	wetness, percs slowly

Source: *Soil Survey of Calumet and Manitowoc Counties, Wisconsin*, USDA, Soil Conservation Service, 1980; and BLRPC, 1996.

Table 5: Soil Types / Recreational Development Suitability

Soil Type	Soil Name	Camp Areas	Picnic Areas	Playgrounds	Paths and Trails
BrB	Boyer sandy loam	slight	slight	moderate, slope	slight
HrB	Hortonville silt loam	slight	slight	moderate: slope	slight
PIB	Plainfield loamy sand	moderate: sandy	moderate: sandy	moderate: sandy, slope	moderate: sandy
SyA	Symco silt loam	severe: floods	moderate: wetness	severe: wetness	moderate: wetness
We	Wauseon sandy loam	severe: wetness	severe: wetness	severe: wetness	severe: wetness

Source: *Soil Survey of Calumet and Manitowoc Counties, Wisconsin*, USDA, Soil Conservation Service, 1980; and BLRPC, 1996.

Table 6: Soil Types and Wildlife Habitat Potential

Soil Type	Potential for Habitat Elements							Potential as Habitat For:			
	Soil Name	Wild Herbaceous plants	Hardwood Trees	Coniferous Plants	Wetland Plants	Shallow Water Areas	Open Wildlife	Land Wildlife	Woodland Wildlife	Wetland Wildlife	
BrB	Boyer sandy loam	good	good	good	poor	very poor	good	good	good	very poor	
HrB	Hortonville silt loam	good	good	good	poor	very poor	good	good	good	very poor	
PIB	Plainfield loamy sand	fair	poor	poor	very poor	very poor	poor	poor	poor	very poor	
SyA	Symco silt loam	good	good	good	good	good	good	good	good	good	
We	Wauseon sandy loam (drained / undrained)	poor / fair	poor / fair	poor / fair	good / fair	good / poor	poor / fair	poor / fair	poor / fair	good / poor	

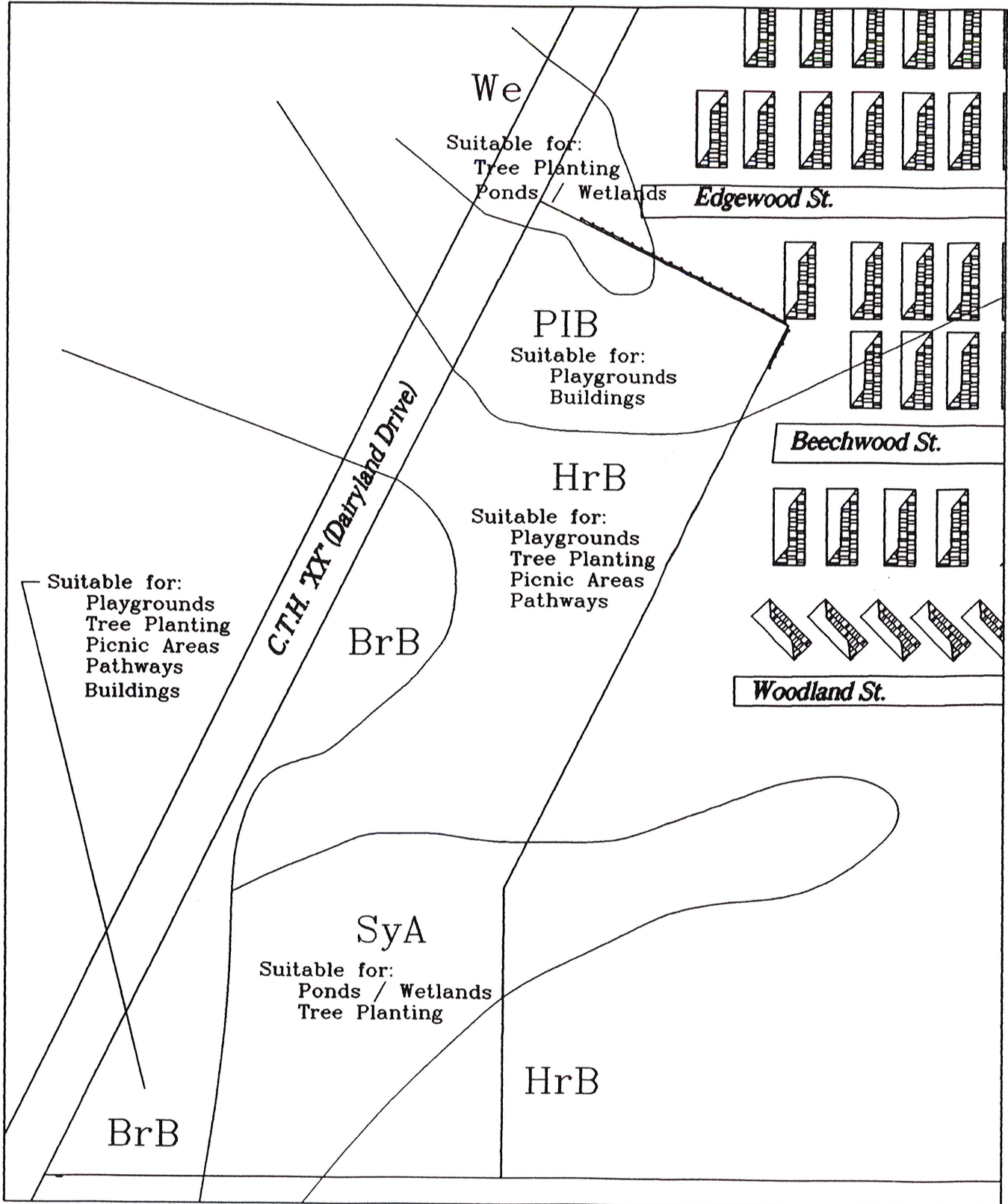
Source: *Soil Survey of Calumet and Manitowoc Counties, Wisconsin*, USDA, Soil Conservation Service, 1980; and BLRPC, 1996.

# Village of Cleveland Dairyland Park

## Map 5 Soil Types and Limitations



Not to Scale





## VEGETATION AND WILDLIFE HABITAT

Dairyland Park has minimal existing vegetation and wildlife habitat. However the southern portion of the park lends itself well for the development of enhanced natural areas, including the construction of a wildlife pond. The existing deciduous woodlands located to the east of the sit are very well suited for passive natural recreational development and possibly the expansion of a trail system.

New vegetation should be planted in various areas of the park to enhance the visual quality. The park is located along a major entrance to the village and should be treated as a visual identification marker to both residents and visitors. Additional plantings should be considered to function as windbreaks, particularly along the western perimeter of the site.



# IDENTIFICATION OF PARK FACILITY NEEDS

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Dairyland Park was initially developed as both a “Neighborhood Park” and a “Community Park”. Though community parks are designed to accommodate all age groups, most activities cater to the active recreational needs of junior/senior high school students and adults. Community parks provide a combination of intensive and non-intensive (passive) facilities ranging from play apparatus to trail systems. Facilities commonly provided in community parks include picnic areas, elaborate playfields, game courts, skating rinks, shelters, sanitary facilities and ample off-street parking.

## ADDITIONAL RECREATIONAL FACILITIES

In order to determine the type of facilities Dairyland Park should provide, the previous nominal group survey results, as well as the Cleveland Park Committee’s and citizen’s input was utilized. Again, Appendix B contains the results of this exercise. The park committee noted that the main facility needs included a new restroom building and a basketball court.

## PARK ACCESSIBILITY

The Americans with Disabilities Act (ADA) of 1990 requires that “reasonable accommodation” be made to the needs of the estimated one in five people in this country who are disabled. That is, all public and private goods and service providers and employers must remove all structural and communication barriers from facilities, or that they provide alternative access where feasible. Currently, there are no “official” guidelines on making playgrounds and other outdoor recreation activities accessible to physically disadvantaged persons. However, precise guidelines have been developed for all public structures such as restrooms, information centers, and other public and private buildings.

Dairyland Park is not completely accessible according to the ADA standards. Restrooms, pathways, parking, and general accessibility of all amenities should be addressed over the next few years to ensure that all people are given the same opportunities within the community. The following are basic issues which should be addressed in terms of park accessibility. Appendix C contains more detailed accessibility guidelines and definitions:

- All restroom facilities should be accessible by persons with disabilities. In some cases, this would require minimal remodeling, in others, it could require substantial modifications.
- At least one picnic table and one grill designed to accommodate persons in wheelchairs should be available at each park (if these types of facilities are not currently available).
- One in 25 parking stalls should be designated for disabled parking. These stalls should be the closest spaces to the park or facility entrance and have a direct route to and from the stall to a marked adjacent access aisle of 60 inches and must have an unobscured vertical sign that shows the universal symbol of accessibility. Slope of these spaces and aisles cannot exceed 1:50.
- Firm, slip resistant, barrier-free pathways linking park facilities within each park is recommended. They should be at least 36 inches wide, with a 60 by 60 inch passing space or turnaround provided every 200 feet. If a pathway level change more than 1/2 inch, the pathway should be ramped. If the level change is between 1/2 inch and 1/4 inch, the levels should be beveled.
- Where water fountains are available, spouts should be no more than 36 inches above the finished floor. If the fountain is freestanding or built-in and does not have a clear space underneath, a clear floor space of 30 to 48 inches alongside the fountain for a parallel approach should be provided. A wall or post of at least 27 inches high by 17 to 19 inches deep by 30 inches wide should be provided. Controls should be located at the front edge of the fountain and operable with one hand without twisting the wrist.

### ADA Compliance Deadlines

The Americans with Disabilities Act has set specific deadline dates for being in compliance. Those dates are as follows:

- Program Accessibility - as of January 26, 1992, all local government programs were to be accessible to individuals with disabilities;
- Existing Buildings and Facilities - Non-structural changes were to be made as soon as practical, but no later than January 26, 1992;
- Structural changes are to be made as soon as possible, but no later than January 26, 1995;
- New Construction - Any new construction or remodeling to buildings or facilities begun after January 26, 1992, must provide access for individual with disabilities.

### ADA Accessibility Recommendations

The following specific recommendations related to improving ADA accessibility were made by the Bay-Lake Regional Planning Commission during the on-site inventory of Dairyland Park's facilities:

- Identify additional ADA parking close to existing bathrooms / shelter;
- Install a wider, fully ADA accessible path from parking area to bathroom;
- If a new, fully accessible restroom is not constructed, then the following changes should be made to the existing facility:
  - Increase bathroom doorway widths to 36”;
  - Increase bathroom stall widths to 60” and depth to minimum of 59”;
  - Install grab bars in stalls 33” to 36” above floor;
  - install square or lever type sink faucet handles;
  - Increase height of sink aprons to 30”;
  - Increase height of toilet seats to 17-19” above floor.

### ADA Transition Plan

The Americans with Disabilities Act also requires that an ADA Transition Plan be prepared which outlines the costs, priorities, timeframes, and responsibilities for ADA improvements necessary to all public recreation facilities. The information is contained in the last portion of this plan regarding phased development of the entire park area and contains all the necessary information to meet the requirements of an ADA Transition Plan. The village Park Committee will be the responsible party for implementing the projects listed in the capital improvements budget.



## RECOMMENDED MASTER PLAN

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Map 6 reveals the recommended development plan, or “Master Plan”, for Dairyland Park. The master plan is a culmination of committee ideas, research, and professional recommendations. The plan represents a desired vision of the park which includes areas for both passive and active forms of recreation which remain in concert with existing local festival plans (see Map 7 for an overlay of the proposed tent locations for the Dairyland Festival). The plan has met the major objectives of the committee which were outlined early in the process. In general, the recommended master plan contains all active forms of recreation on the northern one-third of the site, while recommending passive uses within the southern two-thirds. The layout conforms to the suitability analysis conducted as part of the Master Plan process which took into account soils, topography, vegetation and drainage as key components. The recommended Master Plan utilized the amenity and natural character of the site as the foundation while incorporating recreation facilities which are harmonious to the landscape.

### ACTIVE AREAS

The recommended development plan calls for the continued use of the northern one-third of the park site for active recreation purposes. This area is most suitable for such activities due to its location near the existing mobile home park and other existing facilities such as the bathrooms and shelter.

The most obvious improvement in this section is the removal of the northern entrance road to the parking area, as well as the northern parking lot itself. By removing this section, additional land area would be freed up for other uses (a regulation basketball court) while providing for improved traffic flow and safety in the balance of the parking areas. The re-designed parking area would implement one-way traffic flows. The proposed basketball court could utilize the north parking lot’s gravel base, thereby reducing overall construction costs. Additionally, the basketball court can be utilized as an improved “dance floor” underneath one of the tents which is typically erected in the southern parking area for this purpose as part of the annual Dairyland Festival (see Map 7). It is recommended that the soils within the existing north entrance be graded and reinforced in such a manner that allows festival vehicles to use it as a temporary access road. Additionally, permanent hardware and removable goal posts should be placed in the asphalt surface of the basketball court to facilitate the erection and removal of the tent.

By removing the north entrance to the park, the western portion is “re-connected” to the active play area and has been designated as an “open play area”. This area is to be kept as open, mowed grass to allow for more space dependent activities (i.e., Frisbee, baseball throwing/catching, etc.). In order to facilitate this design, the existing wooden identification sign is recommended to be re-located closer to the southern entrance. A second “open play area” is located in the southern one-third of the park along CTH “XX” which is also designated as a seasonal parking area.

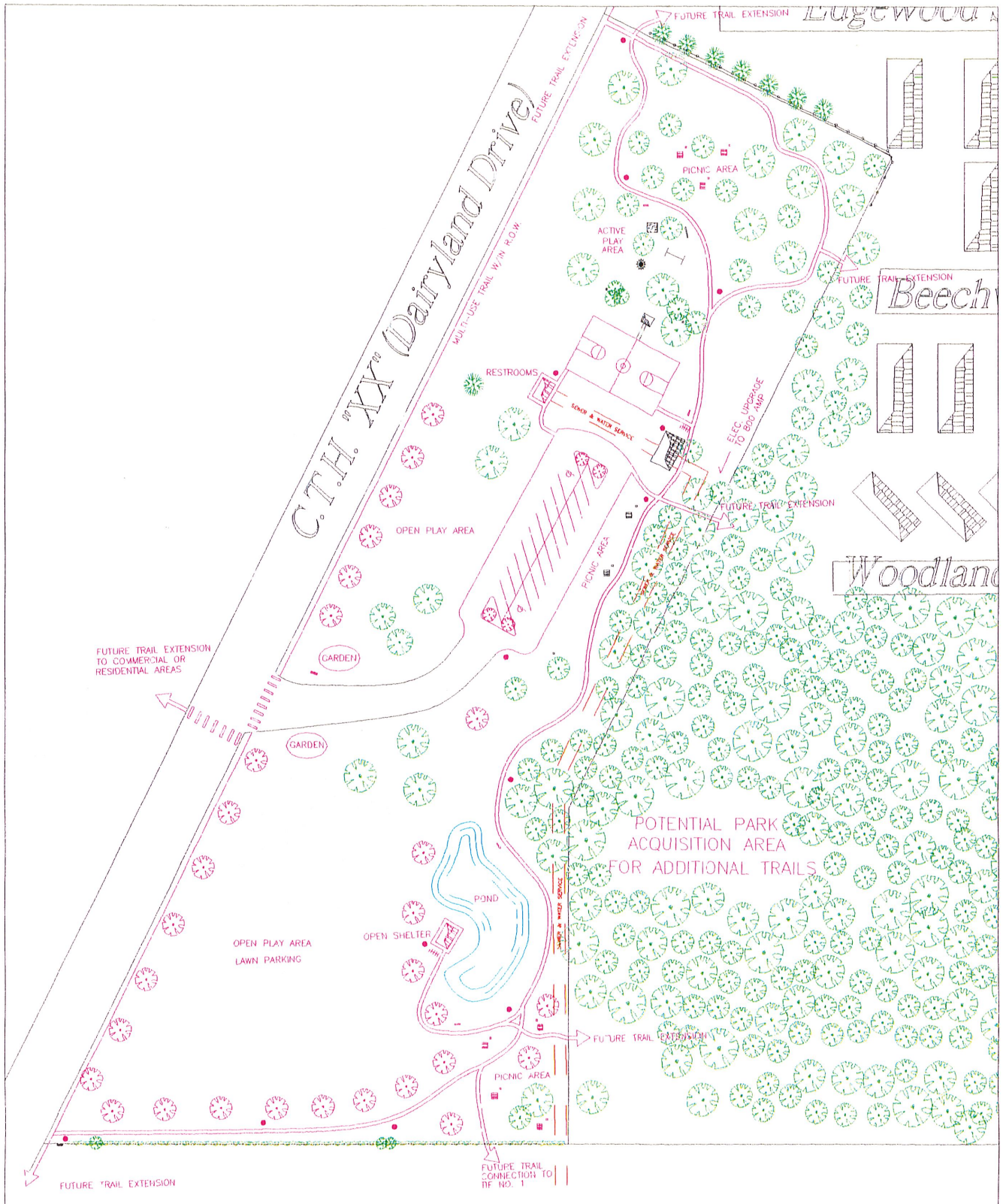
# Village of Cleveland Dairyland Park

# Map 6 Recommended Development Plan



0 60 120  
Approx. Scale in Feet

- NEW FACILITIES
- BICYCLE RACK
- LIGHT POST
- BENCH





Additional improvements in the northern active area include the installation of more small scale equipment such as a merry-go-round, swings, etc. This equipment should be decided upon by the park committee with input from the citizens of the village. The existing well building will remain, however; the park regulation sign will be removed and placed at Veteran's Memorial Park in the spring of 1997. New bicycle racks should also be placed near this portion of the site.

Other major additions to this portion of the park include the construction of a new, fully ADA accessible, bathroom facility which is located closer the CTH "XX" to decrease the risk of vandalism to the structure, and; the potential expansion of the existing park shelter to accommodate additional festival users. Existing electrical lines installed by the Lion's Club are present near this location, therefore; the village should coordinate this activity with the club to avoid removal of useable utilities.

## PASSIVE AREAS

An interior, ADA accessible trail system will provide pedestrian and emergency access throughout the active and passive areas of the site. This interior system should be of a paved or hard pack material with appropriate benches and lighting placed along it as needed. A designated, paved "multi-purpose" (bike, pedestrian, x-country skiing, snowmobile) trail is located along the western perimeter of the site in the existing right-of-way of CTH "XX". The balance of the passive recreational trail system maximizes accessibility and connectivity of various site features. The trail system will be developed in two phases (3,606 total feet, or 0.7 miles) throughout the 20 year planning period and address three different "challenge" levels (See Map 8):

- Challenge Level 1 (Fully Accessible): approximately 2,481 feet of paved/hard surface trail which can be utilized by wheelchairs (including 1,400 feet of multi-use trail up to North Avenue).
- Challenge Level 2: approximately 1,020 feet of hard pack (gravel) trails along steeper slopes (still accessible by wheelchairs)
- Challenge Level 3: approximately 105 feet of trails made of wood chips or other soft material.

Trail heads located on all sides of the site provide access from various areas which could eventually link up with other village owned recreational sites and other existing nodes of development. Picnic areas are interspersed throughout the trail system to offer resting spots and views of the surrounding landscape. Consistent signage is placed throughout the trail system to both guide users, and to offer educational information about some of the sites natural features. Appendix D contains additional information, recommendations, and standards for accessible trail development.

## WILDLIFE / HABITAT / VEGETATION ENHANCEMENTS

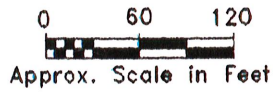
The Master Plan calls for the potential development of one wildlife pond in the southeast corner of the park site. Necessary permit requirements should be investigated and professional engineering services should be acquired to assist in this portion of the project. A designated picnic area and a new open park shelter are located adjacent to the pond. Safety issues regarding the pond should be reviewed and addressed in more detail if construction is to occur.

The village is also encouraged to examine the feasibility of acquiring the adjacent woodland area for future pathway and nature area developments. Additional tree plantings are designated along the western perimeter of the site to serve as a windbreak from the open fields across CTH "XX". Additional tree plantings are noted near the pond area. The village should encourage additional landscaping and gardens near the entrances of the park to soften the look of the large parking area. Again, it should be noted that this park serves as a "gateway" to the community and should reflect the friendly image of the village.

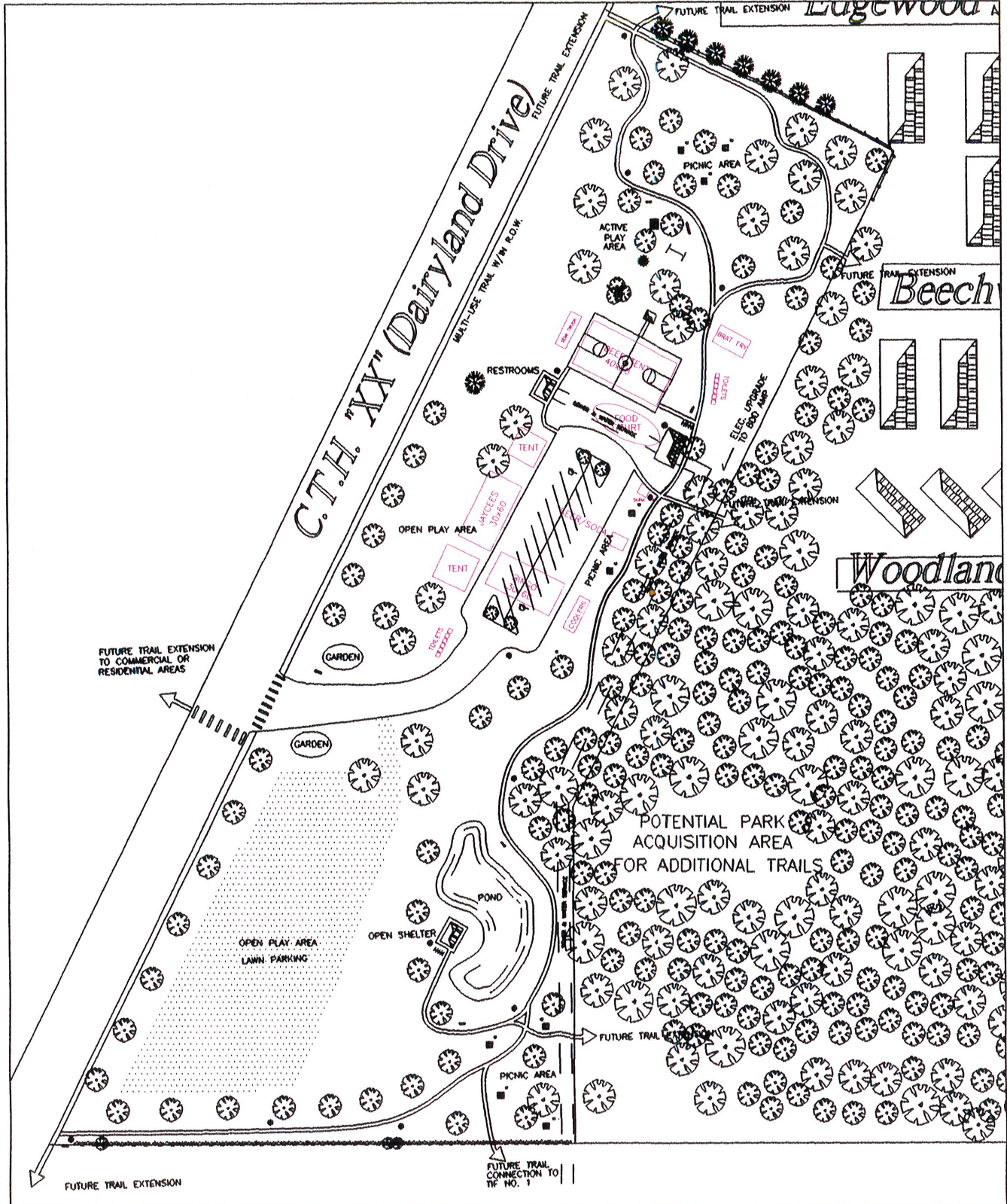


# Village of Cleveland Dairyland Park

## Map 7 Dairyland Festival Facility Overlay



- NEW FACILITIES
- BICYCLE RACK
- LIGHT POST
- BENCH

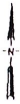




# Village of Cleveland Dairyland Park

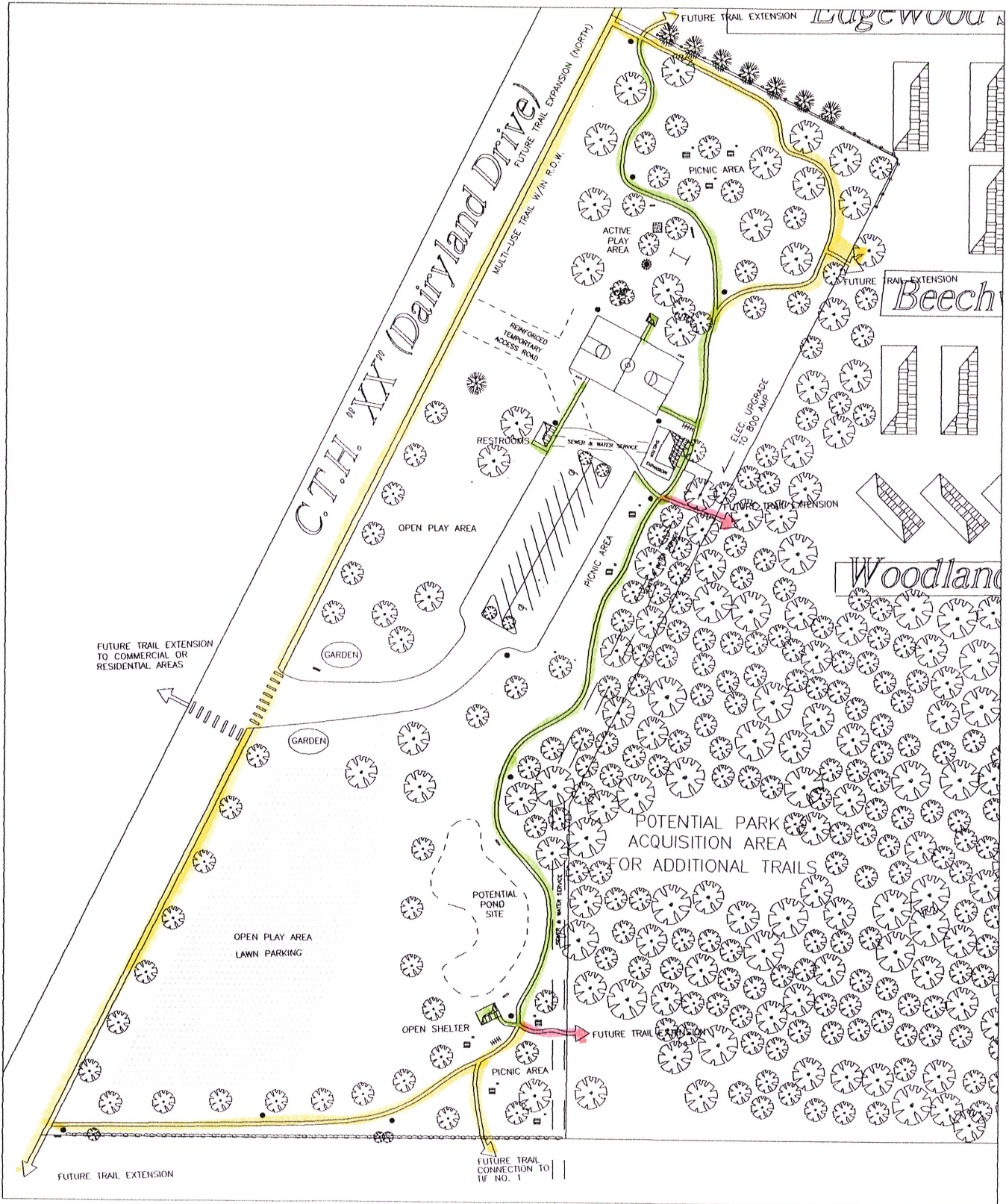
Map 8

## ADA Trail Accessibility Levels



0 60 120  
Approx. Scale in Feet

- Challenge Level 1 (fully accessible)
- Challenge Level 2 (moderately accessible)
- Challenge Level 3 (not accessible)



## UTILITY AND LIGHTING IMPROVEMENTS

Dairyland Park is in need of several major utility improvements which will maximize the recreational opportunities of this site. It is recommended that the main electrical service be upgraded from 400 amp service to 800 amp service. This upgrade will allow for existing festivals to have improved service for displays and other tents. It would also increase the opportunities for the village to draw in other activities such as a circus, or make the park more suitable for larger “family gatherings”. Additional power outlets should be placed in areas suitable for such uses. The village should coordinate all utility improvements with the Lion’s Club so that duplicate services are not installed.

The development plan also calls for additional lighting to be installed in various areas of the park. Security lighting should be installed on all structures within the park and in the parking areas. Smaller scale, decorative lighting should be placed throughout the trail system.

The village intends to service the new bathroom facility and the existing shelter with both public water and sewer service. Sanitary sewer mains located in the mobile home park are not in suitable condition for extension into the park, therefore; it is recommended that all utility extensions originate from the new TIF District located to the immediate south of the park. A corridor is defined along this proposed route. The village should examine and address the service needs of the entire northwestern portion of the village prior to initiating site specific plans such as this.

The plan also calls for the removal and abandonment of the existing hand-pump well and a nearby test well according to Wisconsin Administrative Code NR 812. The existing structure surrounding the well should be kept.



## PHASED DEVELOPMENT ACTION PLAN

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Capital improvements to a recreation facility are the non-routine improvements or the new additions to the facility that would improve the overall value and usefulness of the park. For example, remodeling a restroom to meet ADA standards or buying a new jungle gym are both capital improvements. These improvements are identified and usually funded individually through municipal funds. Capital improvements come about for several reasons. A community may need to make improvements to modernize outdated facilities, upgrade deficient facilities to correct health and safety hazards, or to be in compliance with certain standards such as those set forth in the Americans with Disabilities Act of 1990.

Routine maintenance of existing facilities does not increase the facility's value or usefulness, therefore, routine maintenance expenses are usually funded through the city's recreation department operating and maintenance budget. When a project is considered both a major improvement and a form of maintenance, the cost will become the determinant of whether the project is a capital improvement or not.

Table 7 is a listing and cost estimate of the proposed capital improvements and annual park maintenance costs that were put together by the village of Cleveland Park Committee and the Bay-Lake Regional Planning Commission based on the previous inventory, assessment, and recommended development plan. As shown, the majority of capital improvements for the next several years consists of many utility and accessibility improvements, new restroom construction and Phase I Trail construction. This is due to the fact that the deadline for such improvements was to be January 26, 1995. It is assumed, at this point, that efforts would be made to acquire additional funding from other public and private sources to cover the balance of the project costs.

TABLE 7: DAIRYLAND PARK MASTER DEVELOPMENT PLAN COST ESTIMATE

Timeframe / Prioritization	Proposed Project	Unit Cost	Unit	Total Cost Estimate
Annual	Maintainance	\$5,000.00	1 year	\$5,000.00
Annual	Utilities	\$500.00	1 year	\$500.00
1997	ADA Accessibility Improvements	\$1,000.00		\$1,000.00
	Well Abandonments	\$3,500.00	2 each	\$7,000.00
	Trail Development (Phase 1)			
	Clearing/Grubbing	\$1.75	2481 lineal feet	\$4,341.75
	Trail Construction	\$15.00	2481 lineal feet	\$37,215.00
	Trail Enhancements (Phase 1)	\$1,500.00		\$1,500.00
	Access Road Removal / Landscaping	\$2,500.00		\$2,500.00
	Park Sign Removal / Relocation	\$250.00		\$250.00
	Electric Improvements	\$14,000.00		\$14,000.00
	Lighting Improvements	\$5,000.00		\$5,000.00
	Utility Improvements (Sewer / Water)	\$25,000.00		\$25,000.00
	Parking Lot Improvements	\$5.00	2164 square yards	\$10,820.00
	Basketball Court	\$7,000.00		\$7,000.00
	Bicycle Racks	\$200.00	3 each	\$600.00
	New Restrooms	\$20,000.00		\$20,000.00
	Wildlife Habitat Enhacements	\$5,000.00		\$5,000.00
	Trail Development (Phase 2)			
	Clearing/Grubbing	\$1.75	1125 lineal feet	\$1,968.75
	Trail Construction	\$12.00	1125 lineal feet	\$13,500.00
	Trail Enhancements (Phase 2)	\$1,000.00		\$1,000.00
2015	New Park Shelter (near pond)	\$5,000.00	1 each	\$5,000.00
<b>TOTAL CAPITAL IMPROVEMENT COST</b>				<b>\$162,695.50</b>
<b>TOTAL ANNUAL MAINTAINANCE COST</b>				<b>\$5,500.00</b>
<b>Average annual cost over 15 year time-period</b>				<b>\$16,346.37</b>
<b>Average annual cost over 20 year time-period</b>				<b>\$12,259.78</b>
<b>Average annual cost over 25 year time-period</b>				<b>\$9,807.82</b>

Sources: Foth & VanDyke, 1994; and BLRPC, 1996

Note: These estimates reflect true costs in 1994-1995 dollars and do not account for any donated materials or labor.



## POTENTIAL RECREATIONAL FUNDING SOURCES

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Funding for recreational development can come from a number of sources both public and private. Most funding for this type of development, however, comes from public local funds. Primarily, local funds come from a number of sources including the sale of bonds, allocations from the local tax base, and donations from individuals and organizations. Non-local funding can come from a number of sources, either in the form of a grant or a loan.

### WISCONSIN DEPARTMENT OF NATURAL RESOURCES PROGRAMS

The Wisconsin Department of Natural Resources is probably the main source of funds for outdoor recreation facilities. As a prerequisite to the following WDNR funding programs, applicants must first submit a comprehensive outdoor recreation plan such as this plan or a master plan which has been approved by resolution by a local governing unit or a plan of a higher unit of government. Applicants submitting qualifying comprehensive outdoor recreation plans or master plans may receive eligibility to apply for funding for up to five years. There are four major funding programs and one foundation established that help support the outdoor recreation needs and improvements in the state of Wisconsin. Administered by the Wisconsin Department of Natural Resources those programs include; 1) Land and Water Conservation Fund Act Program (LAWCON); 2) Aids for Acquisition and Development of Local Parks (ADLP); Urban Green Space Program (UGS); 4) Urban River Grants Program; and 5) The Natural Resources Foundation of Wisconsin (NRF). The first four programs have an annual application deadline of May 1, while the last has an annual deadline of February 2.

#### Land and Water Conservation Fund Act Program

LAWCON provides financial assistance to state agencies, counties, villages, towns, school districts, cities and Indian tribes for the acquisition and the development of public outdoor recreation areas and facilities. The program provides up to 50 percent reimbursement grants for approved state and local projects. Competition for LAWCON funds is on a statewide basis.

#### Aids for the Acquisition and Development of Local Parks (ADLP)

ADLP provides up to 50 percent matching grants to towns, villages, cities, counties or Indian tribes to acquire or develop public outdoor recreation areas. Funds are apportioned on a department district allocation system, with 70 percent of the funds distributed on the basis of each county's proportionate share of the state population and 30 percent distributed equally to each county. Qualified nonprofit conservation organizations may also be eligible for land acquisition grants through the ADLP program.

#### Urban Green Space Program (UGS)

UGS provides 50 percent matching grants to cities, villages, towns, counties, public inland lake protection and rehabilitation districts, and qualified nonprofit conservation organizations for the acquisition of land. The intent of the program is to provide natural space within or near urban areas, protect scenic or ecological features, and provide land for non-commercial gardening.

#### Urban River Grants Program

The Urban River Grants Program provides up to 50 percent of matching funds to towns, cities, villages, counties, and Indian tribes for the acquisition of land or rights in land on or adjacent to rivers that flow through urban areas that preserves or restores urban rivers or riverfronts for the purposes of economic revitalization and encouraging outdoor recreation activities.

#### Natural Resources Foundation

This small matching grants program provided six grants for trail projects in 1995 between \$125 and \$500 each. For an application, write to the Natural Resources Foundation, PO Box 129 Madison, WI 53701 or phone (608) 266-1430.



#### WISCONSIN DEPARTMENT OF COMMERCE

In addition to Wisconsin Department of Natural Resources programs, the following WDOC grant program may also provide a source of funding for recreational projects:

#### Community Development Block Grant (CDBG) - Public Facilities Grant Program

The Wisconsin Department of Commerce administers a program known as the Community Development Block Grant program. Under this program, up to 100 percent funding may be obtained in the form of a grant for improvements of recreational and open space projects when the projects are a part of an overall community development program for public facilities construction or housing improvements. Award of this grant is based on strong competition with other applicants.

#### WISCONSIN COASTAL MANAGEMENT PROGRAM

The Wisconsin Department of Administration, under its Coastal Management Program, has funds available for waterfront redevelopment or public access low cost construction grants. These funds are aimed at stimulating renovation of under used or deteriorated waterfronts (lakes and rivers) along the Great Lakes, to help boost the local economy and make waterfronts more accessible and enjoyable to the public. Examples of eligible projects include walkway construction, piers, viewing decks, and restoration of historic buildings. Funds may be used for land acquisition, labor costs, and material costs.

#### NATIONAL RECREATIONAL TRAILS FUND

The National Recreational Trails Fund (NRTF) was renewed as part of a highway bill by President Clinton. The bill provides \$15 million a year for the next two years for the NRTF. The original NRTF "Symms Act" authorized up to \$30 million a year, but only \$7.5 million was appropriated the first year, and nothing since then. Although total NRTF funding is twice what it was, Wisconsin's share is expected to be only slightly more than the \$237,503 it received in 1993. Local governments, counties, tribes, school districts, state and federal agencies, and incorporated organizations may apply for grants under the program in Wisconsin. The grants may be used for developing urban trail linkages, maintaining trails, restoring damaged areas of trails, developing trailside and trail head facilities, improving access to trails for people with disabilities, acquiring easements or corridors, or construction of new trails. Cash payments of donations of labor, material, service, or land may be used as the 50 percent non-federal share of the project costs. May 1 is the application deadline. For a copy of the program guidelines, application form or for more information, contact the WDNR regional office.

#### INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT - ENHANCEMENTS PROGRAM

In the 1995-97 state transportation budget, the Legislature cut funding for the ISTEA program from \$4.4 to \$3.0 million a year. The budget cut means that no new projects will be approved for federal fiscal years 1996-98. The Wisconsin Department of Transportation will use the funds approved this year to honor commitments made to Enhancement Program projects approved in previous years. There is no funding to pay for any new projects. The DOT will not solicit applications for the Enhancements Program again until the next federal transportation bill is passed in the fall of 1997 and it's known whether funding for the program is renewed. Because the federal government will not fully fund ISTEA, states are going to receive less federal money than originally expected.

#### ALTERNATIVE REVENUE SOURCES

Numerous community groups and organizations may be able to assist the village in providing funds, materials, or labor and reduced costs for enhancements at Hika Bay Park or the impoundment area. These types of activities often assist in fostering community spirit and pride. Organizations present within the village include the: VFW Post, Cleveland Auxiliary Post 8974, the Cleveland PTA, Jaycee's, Fish & Game, Athletic Club, Lions Club, Chamber of Commerce, Boy/Girl Scouts, 4-H, and the East Wind Garden Club. Many of these activities could be expanded to become "family" events or fundraisers. Another more non-traditional source of funding could include a user fee, or "usage tax" imposed by the village (this idea had somewhat favorable responses in the UW-Extension survey).

## **INCLUSION IN COUNTY COMPREHENSIVE RECREATION PLAN**

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This plan, once approved at the local level should be sent to the Manitowoc County Planning and Parks Department for its inclusion, or reference to, the *Manitowoc County Comprehensive Outdoor Recreation Plan* which is currently being updated. By doing so, it will improve the overall communication and coordination between the village and the county concerning recreational activities as well as keeping the village eligible for future funding opportunities through the Wisconsin Department of Natural Resources.





## APPENDIX A - PLAN ADOPTION RESOLUTIONS

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RESOLUTION No. 2

A RESOLUTION ADOPTING A PARK SITE DEVELOPMENT PLAN  
FOR THE VILLAGE OF CLEVELAND  
(DAIRYLAND PARK)

WHEREAS, the Village of Cleveland Park Committee has prepared a plan with the intent of guiding and accomplishing the coordinated, adjusted, and harmonious development of Dairyland Park.

AND WHEREAS, a Park Site Master Plan for Dairyland Park has been prepared that contains maps, tables and descriptive material;

AND WHEREAS, the Park Site Master Plan has been reviewed by the public and recommended for approval by the Park Committee and Plan Commission;

NOW, THEREFORE BE IT RESOLVED that the Village of Cleveland Board hereby adopts a recreational development plan entitled: *Village of Cleveland Park Site Master Plan - Dairyland Park.*

Dated this 13<sup>th</sup> day of May, 1997.

Resolution introduced and adoption moved by Justice Kirsch

Motion for adoption seconded by Justice Born

Voting Aye: 7 Nay: 0

APPROVED:

Kurt R. Kaiser

Chairperson

ATTEST:

Pamela L. Klabecek

Secretary





## APPENDIX B - NOMINAL GROUP SURVEY RESULTS

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### Nominal Group Exercise, Village of Cleveland, March 21, 1996

#### PARTICIPANTS

<u>Name</u>	<u>Representing</u>
Ray Gordon Jr.	Citizen
Cletus Wagner	Citizen
Andrew Deehr	Citizen
Mac Scroggins	Citizen
Nila Born	Village
Cheryl Kohl	Village
Steve Simons	Village
Ken Schnell	Citizen
John M. Kirsch	Village (Park Cmte. Chair)
Judith Perlman	East Wind Garden Club
Cindy J. Huhn	Citizen
Larry Huhn	Citizen
Dale Wagner	Cleveland Athletic Club
Dorothy Anderson	Citizen
Wally Leonhard	Cleveland Athletic Club
Linda Dassler	Citizen
Larry Dassler	Citizen
	Citizen

STEP 1: The following issues and concerns, regarding the future recreational development of the village of Cleveland, were identified from the nominal group process.

STEP 2: After the issues and concerns were generated, each person in the group chose the five issues which were deemed most important (in rank order) to them. The most important issue was given a score of five points, the second most important, four points and so on, with the least important issue scoring 1 point. These scores were tallied with the following results:

<u>Score</u>	<u>Issue</u>
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#### Group 1

41	Interconnection of parks
24	Create teen center
15	Restrooms at Dairyland
14	Ice-skating (Hika)
9	Soccer field at Dairyland
9	Play equipment at all parks (safety)
8	Improved lighting and security
8	Possibility for alternative rec activities (skateboards\roller blades, etc.)
8	Central concession stand at V.M.
7	Beach maintenance and swimming
7	Walkway restored at Hika - Lincoln & Franklin
7	Ski \ hiking trails at Henley
5	Nature trail signs on Henley, Flora, and Fauna

- 5        Roller hockey in tennis courts (V.M.)
  - 5        New volleyball court at Hika
  - 5        Tree planting (landscaping at dairy. & Hika)
  - 4        Manmade pond at Hika (no dam)
  - 4        New seating for softball at V.M.
  - 3        Expand parking (West lot) at VM
  - 3        Develop wetlands at Henley
  - 3        Uniform signage at all parks
  - 3        Bike racks
  - 2        Improve Dam Area (Visually)
  - 1        Creation or redesign of basketball courts (V.M.)
  - 1        Consistent dredging at boat landing
  - Plant hardwood trees on Henley
  - Enhancement of picnic areas
  - Shelters are good & used a lot
  - Fish cleaning station at Hika
  - ATV trails
  - Improve parking surface at Hika
  - Henley memorial (per agreement)
  - More days for summer rec program
  - Buffering of adj. land uses (noise \ lights)
  - Band shelter
  - Bench type seating at Hika (lake)
  - Alt. baseball diamond at Dairyland
  - Swimming pool site
  - Racquetball courts
  - Lights on new baseball field (V.M.)
- 

Score	Issue
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Group 2

- 30        Electrical upgrade at Dairyland Park
- 21        Preserve natural qualities of dam area
- 21        Better tree care (planting and maintenance)
- 17        Develop trails and wildlife areas at all parks-with trails connecting the parks
- 15        Control vandalism at all parks
- 14        H.B. - Better area for children (bugs, multiple use)
- 14        D.P. - Toilets and shelter
- 11        D.P. - Develop more recreational facilities
- 11        Modern playground equipment at any of the parks
- 11        Improve night lighting at Hika Park
- 10        Develop a pond at dam area
- 8        Develop a forestry plan at Henley area
- 7        Improve parking and access at Hika Bay Park
- 7        Remove v. maintenance shop from lake front
- 6        Develop a rec. trail system at Hika Bay



- 6 Permanent steel or fiberglass tables & benches at Hika & dam area
  - 6 Landscaping stones removed from pavilion area at Hika Bay
  - 6 Improve lighting and walking path at the dam area
  - 6 Develop a decent ice skating area
  - 5 Need more benches at Hika Bay Park and other parks
  - 5 Develop a roller hockey - ice hockey area
  - 5 Improve security at Hika Park
  - 4 Improve east parking area at Vet. Park
  - 4 Develop a pond at Veterans Park
  - 4 Develop basketball court(s) at parks
  - 3 Better snowmobile access to the county trail at Hika Bay
  - 2 Develop a dog run area - encourage people to clean up after their dog
  - Build permanent feeding stations and bird houses at D.P.
  - Remove dam at Hika Bay
  - Safer area for sledding at Vets Park
  - New bleachers at the softball diamond
  - Improve traffic control at Hika Bay - slow traffic speed
  - Develop foot bridge at Hika Bay across Centerville creek
  - Naturalized landscape at all parks
  - Grandstand improvement at Vets. Park (safety)
  - Another volleyball court at Hika Bay
  - New concession stand by the volleyball courts at Vets Park
- 

**STEP 3:** The top seven issues from each group were combined into one set and fleshed out to remove issues which were similar. Then, all of the participants were asked to choose the top five issues, in order of importance. These issues were ranked with a score of 5, 4, 3, 2, or 1 depending on their relative importance. The scores were tallied with the following results:

Score	Issue
23	Develop a pond, trails, and wildlife areas at all parks
19	Interconnection of parks
12	Unattractiveness of dam area
8	Upgrade electrical services at Dairyland Park
7	Better play area for children at Hika Bay
7	Restrooms at Dairyland
6	Control vandalism at all parks
6	Manmade pond at Hika
4	Create teen center
3	Shelter at Dairyland Park
3	Develop more modern recreational facilities-playground equipment at all parks particularly Dairyland Park
3	Walkway at Hika (Lincoln \ Franklin)
1	Need electric \ water at V.M.

**RESULTS:** As can be seen from the final rankings, the most important issues related to the future development of a village wide trail system which connects most of, or all of the park facilities. Other concerns of importance relate to general physical or equipment improvements at Hika Bay and Dairyland Park. These issues and concerns will be utilized in alternative park site plan designs to express the future recreational development needs for the village of Cleveland. A separate "community visioning" and needs analysis survey conducted by the Manitowoc County UW-Extension office in March, 1996 portrayed similar results. Issues identified in this survey as needing improvement included: park maintenance, additional youth activities, and additional hiking and biking trails.

# APPENDIX C - ACCESSIBILITY DEFINITIONS / GUIDELINES

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The guidelines and definitions in this appendix are based on the federal requirements for the compliance with ADA. Local codes may vary and should be reviewed before any new construction or remodeling is undertaken. They contain only a portion of the accessibility guidelines necessary to be in compliance with ADA, and should not be used as the only source when analyzing accessibility needs. (Source: Accessible Design Handbook, Cash-Callahan & Company, 1991).

## DEFINITIONS

### Access Aisle

An accessible pedestrian space between elements such as parking spaces, seating, and desks that provides proper clearance to use the elements.

### Accessible

Describes a site, building, facility or portion thereof that complies with these standards and that can be approached, entered and used by physically disabled people.

### Accessible Route

A continuous unobstructed path connecting all accessible elements and spaces in a building or facility. Interior accessible routes may include corridors, floors, ramps, elevators, lifts and clear floor space at fixtures. Exterior accessible routes may include parking access aisles, curb ramps, walks, ramps and lifts.

### Administrative Authority

A governmental agency that adopts or enforces regulations and standards for the design, construction, and alteration of buildings and facilities.

### Area of Rescue Assistance

An area with direct access to an exit where people who are unable to use stairs may remain temporarily in safety to await instructions or assistance in an emergency. Such areas must meet all applicable code specifications of the regulatory building agency having jurisdiction over the building or facility.

### Assembly Area

A room or space accommodating a group of individuals for recreational, educational, political, social, or amusement purposes, or for the consumption of food and drink.

### Bevel (Threshold)

The slope between the floor surface and the top of the threshold.

### Clear

Unobstructed.

### Cross Slope

The slope that is perpendicular to the direction of travel.

### Curb Ramp

A short ramp cutting through a curb or built up to it.

### Egress, Means of

A continuous exit route from any point in a building or facility to a public way. An accessible means of egress must comply with all regulations regarding accessibility. Areas of rescue assistance may be included as part of an accessible means of egress.

### Element

An architectural or mechanical component of a building, facility, space, or site, e.g., telephone, curb ramp, door, drinking fountain, seating, water closet.

### Entrance

An access point to a building or portion of a building or facility used for the purpose of entering. An entrance includes the approach walk; the vertical access leading to the entrance platform; vestibules, if provided; the entry door(s) or gate(s); and the hardware of the entry door(s) or gate(s). The principal entrance of a building or facility is the main door through which most people enter.

### Facility

All or any portion of a building, structure, or area including the site on which such building, structure or area is located, where specific services are provided or activities performed.

### Forward Approach

Where the approach to an object or element can be made from a forward position.

### Nosing (Stair)



The prominent, usually rounded, horizontal edge which extends beyond the riser.

Parallel Approach

Where the approach to an object or element is from the side.

Physically Handicapped

An individual who has a physical impairment, including impaired sensory, manual, or speaking abilities, which results in a functional limitation in access to and use of a building or facility.

Ramp

A walking surface in an accessible space that has a running slope greater than 1:20.

Ramp Slope

The ratio of the rise to the run of the ramp.

Rise

The vertical distance measurement from top to bottom of a ramp.

Riser (Stair)

The vertical face of a stair step.

Run

The sloped horizontal distance covered by a ramp or flight of steps. See Ramp Slope.

Signage

Verbal, symbolic, tactile and pictorial information.

Site

A parcel of land bounded by a property line or a designated portion of a right-of-way.

Space

A definable area, e.g., toilet room, hall, assembly area, entrance, storage room, alcove, courtyard or lobby.

Tactile

Something that can be perceived using the sense of touch.

Tread (Stair)

The horizontal part of a step that also includes the nosing.

Walk

An exterior pathway with a prepared surface intended for pedestrian use, including general pedestrian areas such as plazas and courts.

## GUIDELINES

### SPACE ALLOWANCES & REACH RANGES

- The minimum clear width for single wheelchair passage must be 36 inches continuously and 32 inches at any one point (e.g., doorways).
- The minimum width required for two wheelchairs to pass each other is 60 inches.
- A wheelchair requires a 60 inch diameter space in order to make a 180 degree turn.
- Where the floor space allows only forward approach to an object, the maximum high forward reach allowed is 48 inches above the finished floor and the minimum low forward reach must be no less than 15 inches above the finished floor. There must be no obstructions.
- Where the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed is 54 inches above the finished floor and the low side reach must be no less than 9 inches above the finished floor. There must be no obstructions.
- Although people with walking aids (e.g., canes, crutches, walkers, guide dogs) can maneuver through a clear width opening of 32 inches, they require 36 inch wide passageways for comfortable gaits.
- Crutch tips extending down at a wide angle are a hazard in narrow passageways where they might not be seen by other pedestrians. A width of 36 inches provides a safety allowance for both the disabled person and for others.
- A person with a seeing eye dog or a semi-ambulatory person requires the same passing widths as a person in a wheelchair.

## ACCESSIBLE ROUTES

- Accessible routes within the boundary of the site must be provided from public transportation stops, accessible parking, accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance they serve.
- Accessible route(s) must connect buildings, facilities, and spaces that are on the same site.
- The minimum clear width of an accessible route must be 36 inches except at doors where the minimum clear width must be at least 32 inches.
- Where an accessible route has less than 60 inches clear width, passing spaces of at least 60 by 60 inches must be located at reasonable intervals that do not exceed 200 feet. The intersection of two corridors or walks is considered a passing space.
- Accessible routes serving any accessible space or element must also serve as a means of egress for emergencies or connect to an accessible place of rescue. These areas of rescue must comply with the requirements established by the administrative authority having local jurisdiction.
- Changes in levels along an accessible route which are greater than 1/2 inch must be ramped.
- Changes in levels along an accessible route which are between 1/4 and 1/2 inch must be sloped 1:2.
- Changes in levels along an accessible route 1/4 inch or less can remain.

## PROTRUDING OBJECTS

- Protruding objects must not reduce the clear width required for an accessible route or maneuvering space.
- Objects protruding from walls (telephones, etc.) with their edges between 27 and 80 inches above the finished floor must protrude no more than 4 inches into walks, halls, corridors, passageways, or aisles.
- Objects protruding from walls with their leading edges at or below 27 inches above the finished floor may protrude any amount; provided the minimum requirements for accessible routes are met.
- Free standing objects mounted on posts between 27 and 80 inches above the finished floor may overhang a maximum of 12 inches.
- All walks, halls, corridors, passageways, aisles, or other circulation paths must have 80 inches clear headroom.
- Where vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches, a guardrail or other barrier must be provided.

## PARKING

- Each parking lot provided for employees or visitors is required to have accessible parking spaces.
- Accessible parking spaces must be the closest spaces to the building's accessible entrance.
- Check with the municipal zoning department for the total number of parking spaces required in your lot. The rule of thumb is as follows:

<u>Total Parking in Lot</u>	<u>Minimum # of Accessible Spaces</u>
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 and above	2 percent of total spaces
1001 and above	20 plus 1 for each 100 over 1000

- Accessible parking spaces must be at least 96 inches wide with a clearly marked adjacent access aisle of 60 inches. Two spaces may share a common aisle.
- The access aisle must connect directly to the accessible route.

- Spaces and aisles must be level with no slope greater than 1:50.
- All accessible parking spaces must have an unobscured vertical sign that shows the universal symbol of accessibility.
- Provide one in every eight accessible spaces, but not less than one, for van parking. This space(s) must have a minimum of a 96 inch wide access aisle and a minimum of 98 inches vertical clearance. Signage designating the space as "van accessible" must be provided.

#### PASSENGER LOADING ZONES

- Where passenger loading zones are provided, at least one must be accessible.
- The accessible passenger loading zone should be the closest to the accessible entrance and have a minimum vertical clearance of 114 inches.
- The international symbol of accessibility must be displayed at the passenger loading zone.
- The pull up space must be level with a slope no greater than 1:50.
- A pedestrian aisle must be adjacent to the passenger loading zone and it must be at least 5 feet wide and 20 feet long.
- A curb ramp must be provided where a curb occurs at the passenger loading zone.
- The pedestrian aisle and parking surface must be firm and slip resistant.
- The slope of the accessible route adjoining the ramp must be no greater than 1:20.
- The width of the curb ramp, not including the flared sides, must be at least 36 inches.
- The slope of the flared sides of the curb ramp must be 1:10 or less.
- Curb ramps must have flared sides or must be protected by a hand rail.
- Provide detectable warnings on curb ramps that contrast with the walkway. Material used must be an integral part of the surface and consist of raised domes with a diameter of 0.9 inches, a height of 0.2 inches and center to center nominal spacing of 2.36 inches.
- Where grate openings occur, openings must be 1/2 inch or less and openings must be placed perpendicular to the usual direction of travel.

#### RAMPS

- Any part of an accessible route with a slope greater than 1:20 will be considered a ramp.
- The maximum slope of a ramp in new construction should be 1:12 or less.
- The maximum rise of any run should be 30 inches or less.
- The cross slope of the ramp should be no greater than 1:50.
- The ramp surface must be non-slip.
- All grating openings must be 1/2 inch or smaller and must be placed perpendicular to the usual direction of travel.
- The clear width of the ramp must be at least 36 inches.
- A level landing must be provided at the top and bottom of each run.
- The landing must be at least as wide as the ramp and at least 60 inches long.
- Where ramps change direction, the landing must be at least 60 by 60 inches.
- A handrail on either side must be provided if the ramp rises more than 6 inches or is longer than 72 inches.
- The handrails must be continuous and fixed so they do not rotate or rack.
- The top of the handrails must be between 34 and 38 inches above the ramp surface.
- At the end of the handrails there must be at least 12 inches of level handrail beyond the top and bottom of the ramp segment.
- All handrail ends must be rounded and returned smoothly to the floor, wall or post.



- The diameter of the handrail must be between 1-1/4 and 1-1/2 inches.
- All wall-mounted handrails must be mounted with exactly 1-1/2 inches between handrail and wall.
- Where ramps or landings have drop-offs, provide a 2 inch curb, wall, railing or projecting surface to prevent people from falling off ramp.
- Design ramps with proper drainage so that water will not accumulate on surfaces.

## STAIRS

- All steps must have uniform height and tread width in any one flight.
- All risers in accessible routes must be closed.
- Treads should be a minimum of 11 inches measured from nosing to nosing.
- Nosings must not project more than 1-1/2 inches.
- Where nosings project, bevel undersides to prevent tripping.
- Stairways must have continuous handrails on both sides of all steps.
- Handrails should continue at the top and bottom of stairs. At the top, the handrail must continue on a level for a minimum of 12 inches; at the bottom, the handrail must slope for a distance of at least the tread width and then continue on a level plane for a minimum of 12 inches.
- All wall-mounted handrails must be mounted with exactly 1-1/2 inches between the handrail and the wall.
- Gripping surfaces must be uninterrupted by posts or other obstructions.
- Mount top of handrails between 34 and 38 inches above nosing.
- All handrail ends must be rounded and returned smoothly to the floor, wall or post.
- Handrails must be secure and not rotate.
- The diameter of the handrail must be between 1-1/4 and 1-1/2 inches.
- Outdoor stairs must be designed so that water does not accumulate on walking surfaces.

## DOORS AND GATES

- Where revolving doors occur along the accessible route, provide an accessible door or gate.
- A doorway with two independently operated door panels must have at least one active door panel with 32 inches clear opening maneuvering space.
- An accessible door must have a 32 inch clear opening measured between the face of the door and the door stop on the latch side.
- Provide 18 inches or more of clear space on the operable side of the door.
- Floor must be level at all doors in the accessible route.
- Where two doors occur in a series, provide a vestibule of at least 48 inches plus the width of the opened door swinging into the space.
- All thresholds should be level or have a bevel of not more than 1:2.
- All door handles, locks and latches must be operable with one hand and without twisting the wrist.
- Hardware should be mounted no higher than 48 inches above the finished floor.
- The door closer must take at least three seconds to move from 70 degrees open to a point 3 inches from the latch.
- Interior doors must have an opening force of 5 pounds or less.
- The opening force of exterior doors must be determined by the appropriate administrative authority.

## ENTRANCES

- The accessible entrance must not be a service entrance unless the service entrance is the only entrance.
- The accessible entrance must be connected to accessible parking, passenger loading zones, and public streets or sidewalks.
- The accessible entrance should connect to an accessible route to all accessible elements or spaces within the building or facility.
- Where vertical level changes between 1/4 and 1/2 inches occur along the route, the edge must be beveled with a slope of 1:2 or less.
- Where vertical level changes at the entrance are greater than 1/2 inch, provide a ramp, curb ramp, or platform lift.

## DRINKING FOUNTAINS

- Fountains that are free standing or built-in and do not have clear space underneath must have a clear floor space alongside the fountain for a parallel approach of at least 30 by 48 inches.
- Fountains that are wall or post mounted must have a clear knee space under the fountain apron of at least 27 inches high by 17 to 19 inches deep by 30 inches wide.
- The spout of the fountain must be no higher than 36 inches above the finished floor.
- The water stream must be at least 4 inches high to allow the insertion of a cup under the stream.
- Spout must be at the front of the unit with the water flow parallel or nearly parallel to the front edge of the fountain.
- Controls must be located at the front edge of the fountain.
- Controls must be operable with one hand and without twisting the wrist.

## RESTROOMS

### Toilet Stalls

- Accessible toilet stalls must be on an accessible route.
- The stall must be at least 60 inches wide.
- Where toilets are wall mounted, stall must be at least 56 inches deep.
- Where toilet stalls are floor mounted, stall must be at least 59 inches deep.
- A clear opening of 32 inches measured between the face of the door and the edge of the partition on the latch side must be provided when the stall door is open 90 degrees.
- Where the door swings into the stall, provide at least 36 additional inches in the depth of the stall.
- Where stall door opens out and at the end of an aisle, provide at least 18 inches of maneuvering space at the latch side of the stall door.
- Install grab bars 33 to 36 inches above the finished floor. Grab bars must be secure and not rotate in their fittings.
- Mount toilet paper dispenser no more than 36 inches from the back wall and at least 19 inches above the finished floor.
- Toilet paper dispenser must allow continuous paper delivery.
- The centerline of the toilet must be 18 inches from the wall or partition which has the grab bar location.
- The top of the toilet seat must be between 17 and 19 inches above the finished floor.
- Flush controls must be mounted no higher than 44 inches above the finished floor and on the wide side of the toilet area and be automatic or operable with one hand.

### Urinals

- Urinals must have elongated rims mounted no more than 17 inches above the finished floor.
- Provide 30 by 48 inch clear space for forward approach to the urinal.

- Urinal shields which do not extend beyond the front of the urinal rim may be provided by 29 inches clearance between the two panels.
- Flush controls must be automatic or operable with one hand.
- Controls must not be mounted higher than 44 inches above the finished floor.

#### Lavatory

- The lavatory rim or counter surface must be no higher than 34 inches above the finished floor.
- A clearance of at least 29 inches from the finished floor to the bottom of the apron must be provided.
- Provide a clear floor space of at least 30 by 48 inches in front of the lavatory for a forward approach.
- Provide a clear floor space of at least 17 inches under the lavatory.
- Hot water and drain pipes must be insulated or covered.
- The faucet must be operable with one hand and without twisting the wrist; self closing type valves must remain open at least ten seconds.
- Where valves are self closing, provide that the valve remain open for at least 10 seconds.

#### Mirrors

- Provide at least one mirror with the bottom edge of the reflecting surface no higher than 40 inches above the finished floor.

#### Dispensers

- Provide at least one of each dispenser type on an accessible route.
- Provide at least 30 by 48 inch clear space to allow either a forward or a parallel approach to the dispensers.
- Where a forward approach is provided, the highest operable part must be no higher than 48 inches above the finished floor.
- Where a side approach is provided, the highest operable part must be no higher than 54 inches above the finished floor.
- All dispensers must be operated with one hand and without twisting of the wrist.

#### Showers

- Provide a clear floor space of 36 by 48 inches outside the stall.
- Mount a seat between 17 and 19 inches above the finished floor.
- The seat should extend the full depth of the stall.
- The seat should be on the wall opposite the controls.
- Provide grab bars along the control wall and half of the return wall. Do not install grab bars behind seat.
- Curbs into shower should be no higher than 1/2 inch.
- Provide grab bars between 1-1/4 and 1-1/2 inches diameter.
- Mount grab bars exactly 1-1/2 inches from wall.
- Grab bars must be secure and not rotate within the fittings.
- Controls must be operable with one hand and without twisting the wrist.
- Shower spray unit should have a hose at least 60 inches long.
- Roll in shower must be at least 30 by 60 inches.
- Provide a clear space of 36 by 60 inches alongside the shower.
- Grab bar must extend around three sides of the shower.
- Provide grab bars between 1-1/4 and 1-1/2 inches in diameter.



- Mount grab bars exactly 1-1/2 inches from wall.
- Grab bars must be secure and not rotate within the fittings.
- Controls must be operable with one hand and without twisting the wrist.
- Shower spray unit should have a hose at least 60 inches long.
- If a seat is provided, it shall be a folding type and mounted on the wall adjacent to the controls.

## ALARMS

### Audible Alarms

- Audible emergency alarms must produce a sound that exceeds the prevailing equivalent sound level in the room by at least 15 decibels or exceeds any maximum sound level with a duration of 60 seconds by 5 decibels, whichever is louder. Sound levels shall not exceed 120 decibels.

### Visual Alarms

- Visual alarms are electrically powered internally illuminated emergency exit signs that must flash as a visual emergency alarm in conjunction with the audible emergency alarms. The flash rate of the visual alarm devices must be a minimum of 1 hertz (Hz) and a maximum of 3 Hz. If alarms use electricity from the building as a power source, then they must be installed on the same system as the audible emergency alarms.
- Visual alarms must be installed in restrooms, hallways, lobbies and general usage areas (e.g., meeting rooms) and where deaf individuals may work to ensure they are warned when an emergency alarm is activated.
- Devices must be located and oriented so they can spread signals and reflections throughout a space or raise the overall light level sharply.

## TELEPHONES

- Provide for at least one accessible phone in each bank of phones.
- Wall mounted phones with bottom edges between 27 and 80 inches from the floor must not project more than 4 inches into the pathway. An accessible pathway of at least 36 inches must be maintained.
- The accessible phone should have a 30 by 48 inch clear ground space around the phone that allows either a forward or parallel approach for a wheelchair.
- For areas with only a forward approach, the highest operable part of the phone must not be higher than 48 inches.
- For areas which only allow a parallel approach to the telephone, the highest operable part must be no higher than 54 inches.
- Telephone book must always be within reach ranges.
- Provide a volume control on the accessible phone.
- Push button controls must be provided unless such service is unavailable.
- The cord for the telephone handset should be at least 29 inches long.
- Text telephones (e.g., Telecommunications Devices for the Deaf (TDDs)) must be provided upon request.

## PATHWAYS

- There must be an accessible route linking accessible parking and passenger loading zones with the accessible building entrance.
- The accessible pathway must be free of steps and stairs.
- The accessible pathway must be at least 36 inches wide.
- If the pathway is less than 60 inches wide, provide passing spaces at least 60 inches wide and 60 inches long at intervals not exceeding 200 feet.
- Provide at least 80 inches of clear head room along pathway.

- **Objects mounted to the wall between 27 inches and 80 inches must not protrude more than 4 inches into the space. The accessible pathway must be 36 inches wide alongside the protruding object.**
- **Accessible pathways must be firm and slip resistant.**
- **The slope of the accessible pathway must be no greater than 1:20.**
- **Where walkway levels change, the vertical difference between them must be less than 1/4 inch.**
- **Changes in level between 1/4 inch and 1/2 inch anywhere on the accessible route must be beveled with a slope of 1:2.**
- **Changes greater than 1/2 inch must be ramped.**
- **The transition from the curb ramp to the walkway, road and gutter must be flush and free of abrupt changes.**









DRAFT

## HIKING TRAILS

Hiking trails, like all recreation facilities, should accommodate a wide range of user preferences and abilities.

Accessibility guidelines being developed under the Americans with Disabilities Act of 1990 will require that newly constructed or altered recreation facilities be accessible and usable by individuals with disabilities. If "practicable and feasible", all new hiking trails constructed on Department properties will be accessible. The "highest degree of access practicable and feasible" is determined through a two-step process. The first step is identifying the recreation setting, analyzing the natural features, evaluating the amount of structural modification, describing the expected or desired recreation experience at a recreation site or facility, and consulting with interested persons with disabilities.

The second step is confirmation of the initial assessment by making sure that the project would not "threaten or destroy" the unique natural, cultural or religious character of the setting, or historic significance of the site.

For consideration of accessibility exceptions on a case-by-case basis, the federal guidelines provide options, alternatives, and methods of evaluating.

The following design specifications for constructing accessible hiking trails may be revised pending final approval of the federal accessibility guidelines.

### Clearing and Grubbing

For trails to be accessible, objects should be removed from the trail tread to create a smooth level trail surface. Roots and rocks should be removed or filled around. Subsurface materials should be compacted to prevent settling.

### Drainage

To assist drainage, the trail tread should be slightly crowned. If the tread can't be crowned and cross slope drainage is necessary, the cross slope may not exceed 2%.

### Bridges

If pedestrian bridges are required, the width of the bridge must be compatible with the width of the trail tread. If maintenance or emergency vehicles have potential to use the pedestrian bridge, greater bridge widths and load capacity may be considered.

Railings shall be installed and have a minimum height of 42 inches. Tread materials on bridges should be wood decking, asphalt or concrete. Deck boards should run perpendicular or diagonally to the direction of travel and provide a smooth, level surface. Spacing of deck boards should not exceed 1/4 inch at construction and be no greater than 1/2 inch after full shrinkage. The elevation difference between the trail tread and the bridge deck should not exceed 1/2 inch.

### Underpasses

An underpass must be compatible with the width of the trail tread and the height must be at least 8 feet. If maintenance or emergency vehicles have to use the underpass, it will be constructed at a minimum width of 12 feet with 12 feet of height.

The floor of the underpass may be concrete or asphalt, but may also be materials compatible with the trail tread surface. Slope requirements for the trail should also apply to the underpass floor.

### Boardwalks and Cordwalks

Boardwalks or cordwalks may be appropriate to protect fragile areas, to control access, to cross wet areas, or to minimize environmental damage. The decking boards should run perpendicular or diagonally to the direction of travel and provide a smooth, level surface. Spacing of boards should not exceed 1/4 inch at construction and be



no greater than 1/2 inch after full shrinkage. The elevation difference between the trail tread and the decking may not exceed 1/2 inch. State (Water Regulation and Zoning) and Federal permits may be required.

### Steps

Steps should not be used unless there are no other reasonable alternatives. If needed, they should have a handrail with a top rail 34 to 38 inches above the ground, with an intermediate rail not less than 27 inches. Railings should be provided on steps or stairs that exceed three steps. Steps should have not less than a 4 inch or more than a 7 inch rise and not less than a 11 inch tread. If an extended run of steps is necessary, no single run may exceed 22 steps. A smooth, level rest area must be provided between runs of 22 steps. The rest area must be at least as wide as the steps and at least 36 inches long.

### Retaining Walls

Retaining walls may be used on steep bank cuts as an erosion control to prevent soil from washing onto the trail.

### Surface Materials

The trail tread for accessible trails should be a smooth, level, slip-resistant, all-weather surface. Various bonded aggregates or finely crushed limestone are acceptable if all other design criteria is met. Materials which are not acceptable include: coarse gravel, wood chips, pea gravel, sand and mortared stone.

### Grades or Slopes

To be accessible, the grade or slope of any segment of a hiking trail shall not exceed 1:20 (5%) end-to-end or 1:50 (2%) side-to-side. If it is essential to achieve an elevation greater than what 5% will gain, a ramp or series of ramps may be used. A ramp should not exceed 1:12 (8.33%) slope, may not exceed 30 feet in length and must have a five (5) feet long level rest area at the end of each 30 feet of ramp.

A series of ramps may be of any total length, but must have a five (5) feet long level rest area at the end of each 30 feet of ramp.

### Difficulty

A trail difficulty information system is recommended so that trail users will know what to expect and can choose a trail based upon their own desire and ability.

Material posted at information areas and signage at trailheads should include data on average and maximum grade, maximum cross slope, minimum trail width, length, type of surface, and magnitude of obstacles such as rocks, roots, and ruts. A route map should also be provided when possible. The map should show the most demanding sections of trail so users with limited mobility or endurance can determine the direction and distance they wish to travel.

### Length

A hiking trail can be of any length to link various park facilities and points of interest, or may be an abandoned rail corridor many miles in length.

### Configuration

Hiking trails should be designed in loops, except for trail links, rail corridor trails, and the Ice Age trail, so that the hiker always returns to the point of beginning. Shorter trail loops of 1/4 to 1/2 mile should be designed into the trail system to provide options for either shorter or longer hiking distances. Intersections should be well marked.

The trail configuration should attempt to visit as wide a range of environmental communities as possible, but should be laid out in such a way as to minimize environmental damage or disturbance.

## Department Design Standards Handbook

Unless the trail is a short, direct route between facilities, trail planners are encouraged to design trails to take advantage of and to emphasize the views and vistas of the property. Variety will also pique the interest of the user. Planners should also consider change in topography, diversity of vegetation, sounds, smells, sight sensations, sun and shade, seasonal factors, etc. when locating a trail. Archaeological, geological, historical and cultural interests should be integrated into the trail route.

### Width

Tread width on abandoned rail corridor trails will be 10 feet.

The minimum tread width on all other trails will depend on the degree of access (difficulty). For easier trails in a highly developed setting, a 48" width is required. Moderate trails in a more natural setting will have a 36" tread width. The tread of more difficult trails in a minimally developed back country setting will be 28" wide.

### Clearing Height

Vegetation shall be cleared to a minimum height of 10 feet from tread level. This will ensure that in wet or snowy conditions the trail will remain free of hanging branches.

### Clearing Width

Trails shall be cleared of noxious weeds and woody vegetation two (2) feet on either side of the tread.

### Road Crossings

Road crossings should be avoided if possible. If needed, the crossing should be at a right angle to the road and signed for both vehicular and pedestrian travel.

Sight distance requirements are in relation to the design speed of the road and should be measured from the point of intersection to a point on the road. The following are recommended sight distances based on the design speed of the road.

<u>Design Speed</u>	<u>Minimum Sight Distance</u>
15 mph	150 feet
25 mph	250 feet
35 mph	350 feet
45 mph	450 feet
55 mph	550 feet

### Access Locations

Access locations depend on the type of trail. For the state trails on abandoned rail corridors, the developed access points are usually at each end of the trail and in various communities along the route. Access locations within the boundary of most state properties will vary greatly and will generally depend on facilities developed for other use areas (picnic area, campground, nature center, etc.)

Trail access locations should provide reserved accessible parking stalls at a rate of 4% of the first 100 stalls, plus 2% of those over 100 (see Chapter 90 (Roads and Parking) of this Handbook).

At major access points, picnic areas should be provided. If natural shade is not present, shelters should be provided.

Toilets may be provided and should be within 400 feet of the parking area. Drinking water and trash disposal may be considered at three to five mile increments along the length of the trail.

### Signs

At a minimum, signing at trail access points should indicate trail length, slope, surface, and width.

Other sign categories are directional, informational, interpretive, and regulatory. Major access points should include a sign(s) of each category.

For additional sign specifications refer to Chapter 30 (Interpretive Handbook) and to Chapter 70 (Signing Standards).

### Rest Area

Rest areas, which also serve as passing spaces, should be provided at 400-foot intervals. Each rest/passing area must be at least 5 feet by 5 feet in size. An accessible bench or other type of fixed seating should be provided as a matter of convenience and accommodation. These areas will be used by some to rest, but as important, many will use the area to observe wildlife, take photos, and simply reflect upon and enjoy nature.

The abandoned rail corridor trails typically have 10 feet of surfaced tread and would not require rest/passing areas.

### Visitor Safety

Trail routes should avoid proximity to steep side grades, drop-offs, or to areas where potential hazards exist. Where there is potential for a pedestrian to inadvertently or accidentally leave the trail and be confronted with a hazard, safety barriers, rails, fences or vegetation should be installed.

### Vehicle Access

Motorized vehicles, except those permitted for use by people with disabilities, are prohibited from most pedestrian trails. Where it is necessary to place restrictive barriers to prevent access by motor vehicles, a permanent opening of at least 32" must be provided.

The restrictive barrier must be capable of temporarily opening to the full width of the pedestrian trail to permit emergency vehicles or other permitted vehicles to access the trail.

v:\9504\pr9hadtn.djk



# PLAY FOR ALL

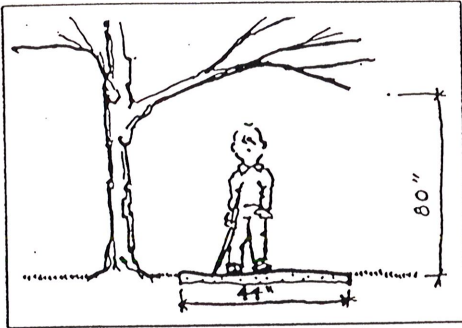
## Guidelines

Planning, Design and Management  
of Outdoor Play Settings for All Children

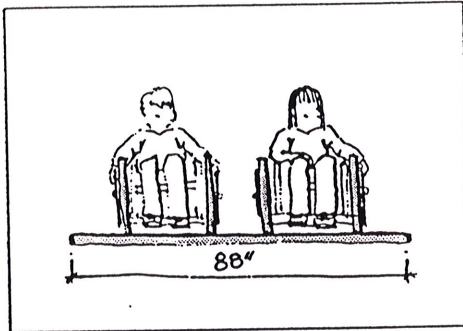
Second Edition



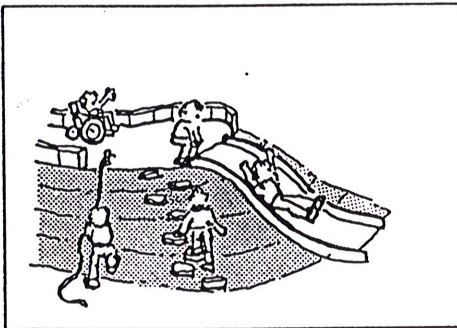
Responds to the  
Americans With Disabilities Act  
and the new Consumer Product Safety  
Commission Guidelines



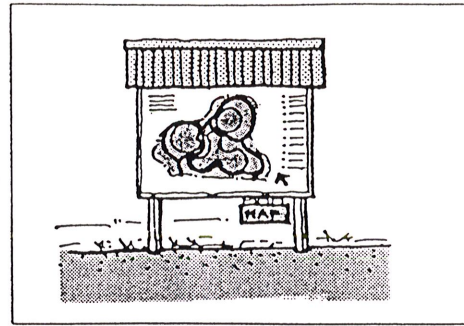
44 Paths must be 44 inches wide minimum, though wider paths are preferred.



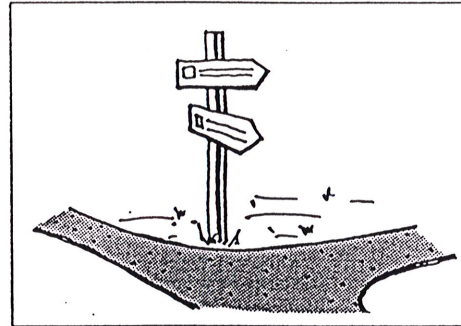
45 Paths that are 88 inches wide allow two children in wheelchairs to pass.



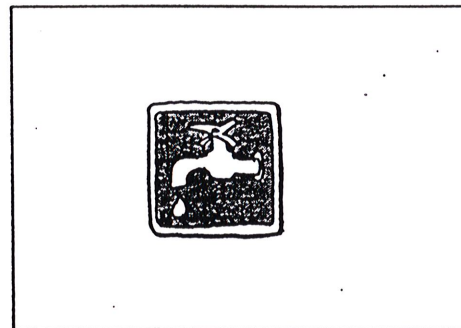
187 A slide can be incorporated into a slope to prevent injuries from falls and make the slide more accessible. Sand at the bottom cushions the landing.



81 Informational signs.



82 Directional signs.



83 Identification signs.



United States  
Department of  
Agriculture

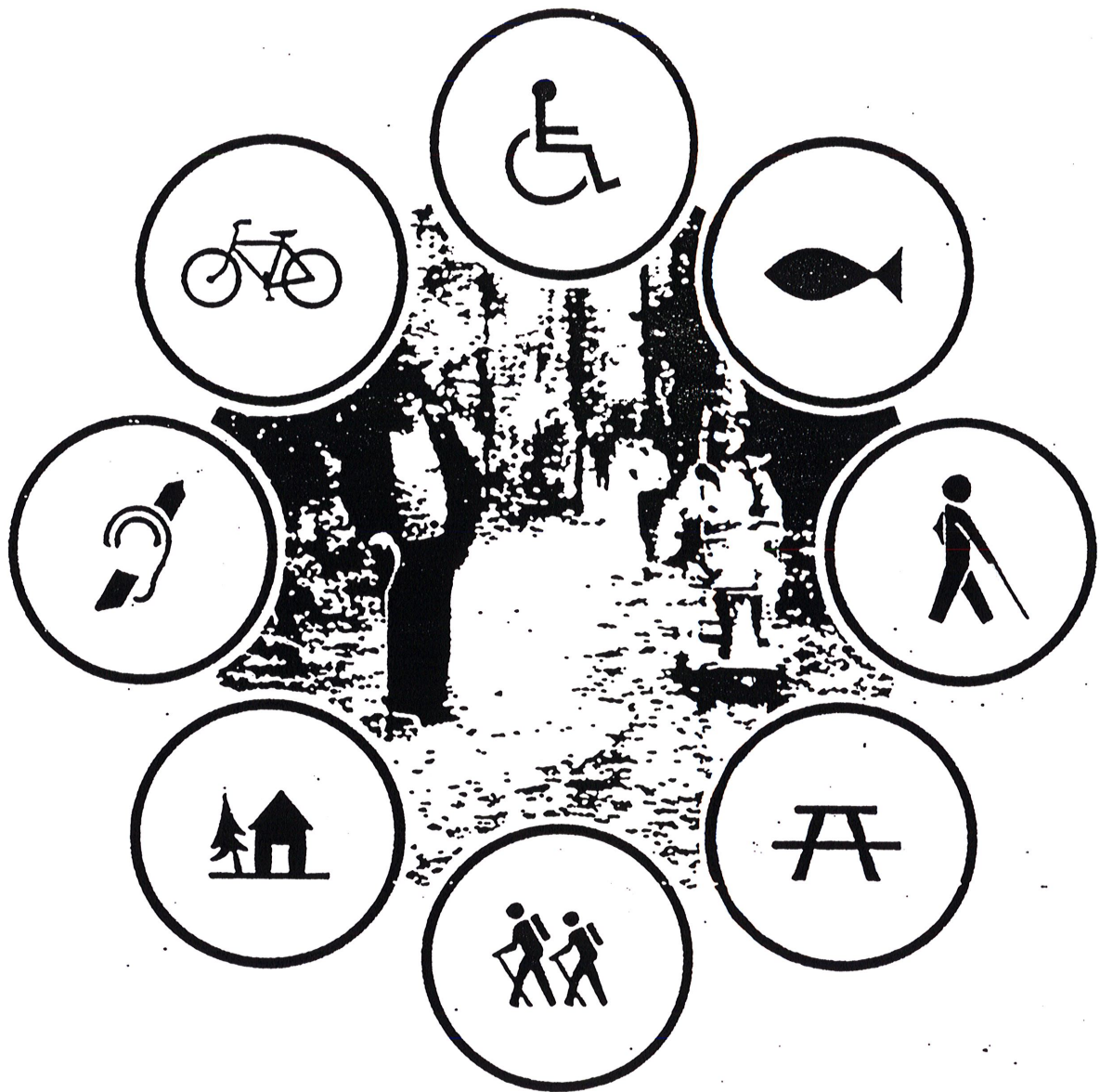


United States  
Department of  
Interior

2300—Recreation  
September 1990  
9023 1803

# DESIGN GUIDE

for Accessible Outdoor  
Recreation



*Interim Draft for Review*

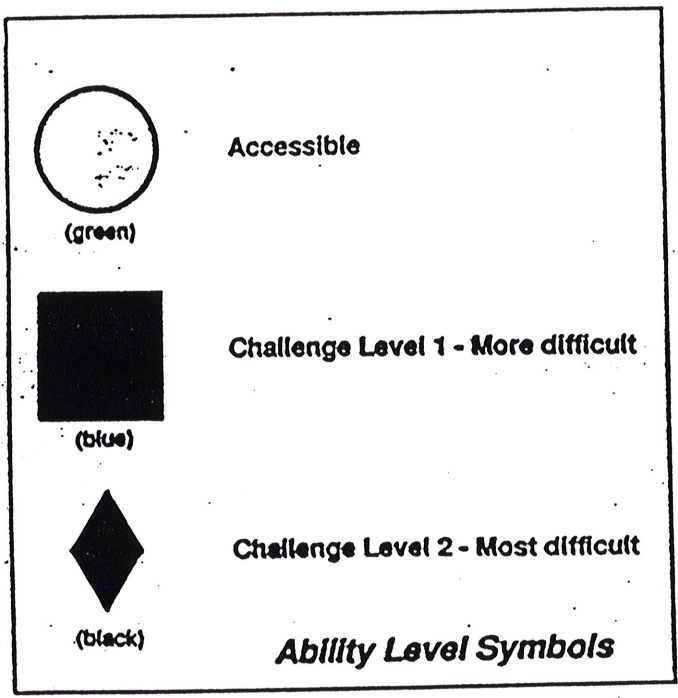


hearing  
handicapped

# LEVELS OF ACCESSIBILITY

The concept of different ability levels can be understood within the context of the following guiding principle: We want to offer persons with disabilities the chance to experience a full range and variety of recreation opportunities. The variety of people's preferences and abilities can best be accommodated if a range of opportunities is available. Individuals who enjoy challenge should be accommodated, as well as those who prefer easier, non-strenuous outdoor recreation. This Design Guide uses three accessibility levels for outdoor recreation:

- **Accessible**—Meets or exceeds UFAS requirements.
- **Challenge Level 1**—More difficult than "Accessible;" generally meets UFAS requirements.
- **Challenge Level 2**—Most difficult; does not meet UFAS, but has safety features.



Persons with disabilities who are more venturesome should have the opportunity for a challenging recreational experience. This approach will increase outdoor recreational opportunities for *all people*, including those

who are not traditionally classified as disabled—such as elderly people, parents with small children, very large or very small people, or those with temporary disabilities.

The ability levels for accessibility are briefly described below. *The most difficult component determines the level of ability for the entire network.*

## **ACCESSIBLE (Easy)**

All programs, services, and facilities that are provided are fully accessible. These sites are designed for the most independent and easy use feasible for the majority of persons with disabilities. Generally, these sites are usable without assistance by all but the most severely disabled persons, and are in full compliance with all applicable UFAS provisions.

## **CHALLENGE LEVEL 1 (More Difficult)**

These sites have a greater degree of difficulty and are a more challenging experience than an Accessible site. Parking, restrooms, visitor centers, and interpretive exhibits are all fully accessible. Grades and surface materials may be more challenging to persons with limited mobility. Some disabled users may need assistance.

## **CHALLENGE LEVEL 2 (Most Difficult)**

These sites are indeed most difficult and offer a higher level of risk and challenging experience to all those seeking such. They are usable by the more athletic person with a disability without assistance but, generally, a person with limited mobility would probably need assistance. Severely disabled users would not be encouraged to use these sites without assistance. Physical improvements such as the grades and surfacing materials on trails are limited to preserve the natural surroundings, but with safety considerations designed into the site. Buildings, such as restrooms, are accessible.

Surfacing Material	Ability Level		
	Accessible	Challenge Level 1	Challenge Level 2
Concrete	██████████	██████████	██████████
Pavers on Conc.	██████████	██████████	██████████
Asphalt	██████████	██████████	██████████
Crushed Stone	██████████	██████████	██████████
Wood Decking	██████████	██████████	██████████
Soil Cement	██████████	██████████	██████████
Wood Chips		██████████	██████████
Untreated Soil		██████████	██████████
Grass		██████████	██████████
Packed Gravel			██████████



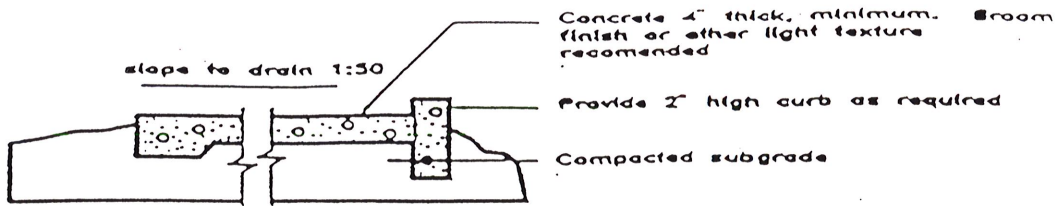
Materials which are appropriate for a given ability level



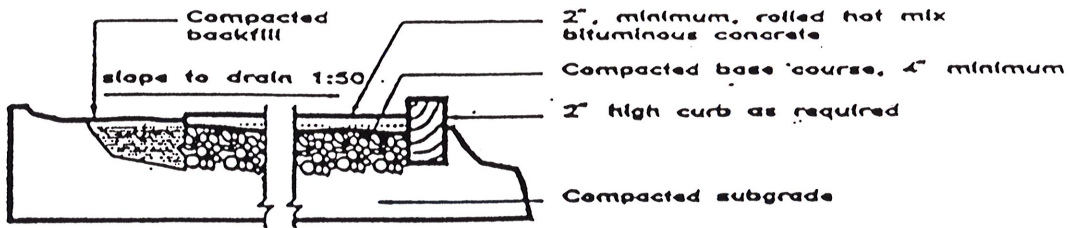
Materials which may be used for a given ability level if designed and constructed properly

*Pathway Materials*

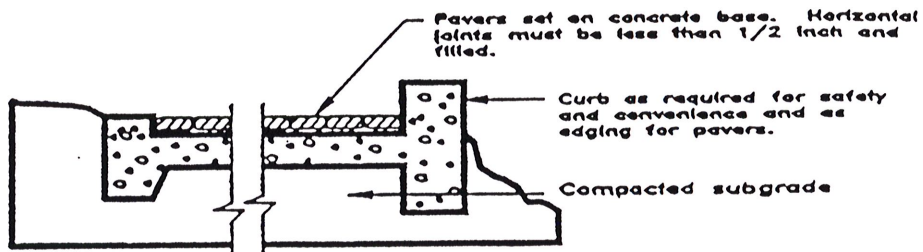




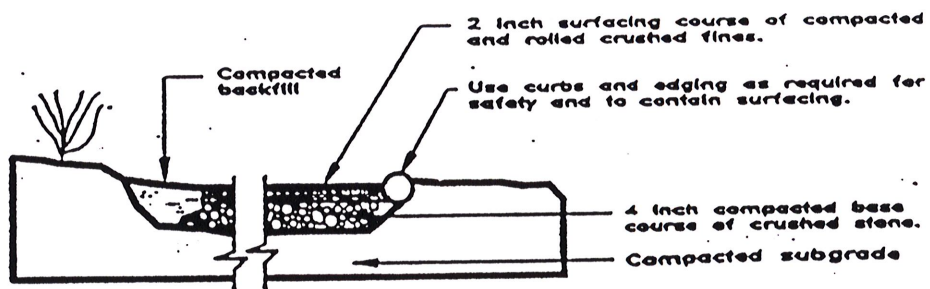
CONCRETE SURFACING



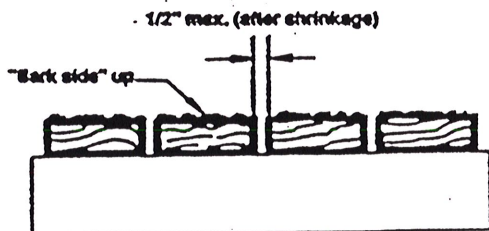
ASPHALT SURFACING



PAVERS SET ON CONCRETE



CRUSHED STONE



Wood planking may be used as a surfacing material, but joints between planks must not be more than 1/2 inch and planks must be securely fastened so they do not warp. Wood must be maintained and treated with an appropriate preservative to avoid decay or drying.

WOOD DECKING



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