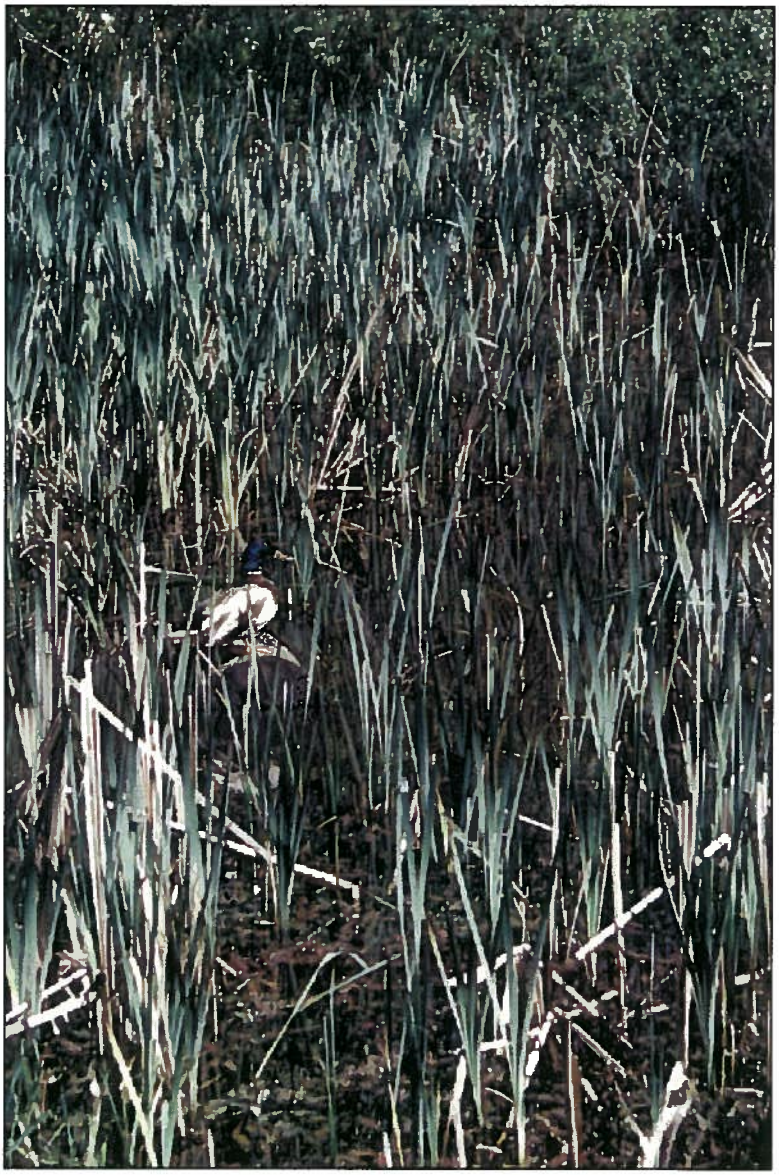
Comprehensive Plan

Ancillary Document

Furnberg Park Master Plan

Adopted March 4, 1997—Ord. 1816



FURNBERG PARK

DEVELOPMENT MASTER PLAN REPORT

NORTH CLACKAMAS PARKS & RECREATION DISTRICT

NOVEMBER 1996

WALKER·MACY

Project Advisory & Approval Boards

- North Clackamas Parks and Recreation District Advisory Board
- Milwaukie City Council
- City of Milwaukie Parks and Recreation Board

District Staff

- Roger Brown, Director
- Thomas Kaffun, Parks Services Manager
- Diane Campbell, Administrative Analyst, Project Manager
- Don Robertson, Program Services Manager

Project Team

Walker & Macy

- Michael W. Zilis, Principal in Charge
- Laura Herbon, Project Manager / Environmental Designer

Maurita Smythe

- Wildlife Biologist/Environmental Consultant

Geotechnical Resources, Inc.

- Dwight Hardin, Principal

Fall 1996

Table of Contents

Introduction

The North Clackamas Parks and Recreation District (NCPRD) is committed to providing high quality recreation in neighborhood settings through the development of neighborhood parks within the District. Each park is individually planned and designed to capture the unique qualities and characteristics of the site. The goal of the planning process is to develop facilities that are of high quality, that meet the specific needs of the neighborhood park users, and that are affordable to construct and maintain.

Furnberg Park is within the City of Milwaukie and is operated and maintained by the NCPRD. In early 1996, the City of Milwaukie City Council made a request that the North Clackamas Parks and Recreation District begin master planning the redevelopment of Furnberg Park. This report summarizes the efforts undertaken on behalf of the NCPRD in formulating a Master Plan for the park.

The Planning Process

The master planning approach for Furnberg Park involved an open and interactive public process which solicited input from the public, the Linwood Neighborhood District Association, the City of Milwaukie Parks and Recreation Board, the City Council, the Planning Commission, and the District Advisory Board. Public meetings and workshops were conducted at critical points throughout the planning process for information gathering purposes, to facilitate discussion of the neighborhood park's potential and for the design team to gain valuable feedback. By utilizing this process, the team arrived at a master plan for a neighborhood park facility that responded to the public's needs, the unique site features at Furnberg Park and met the District's goals and objectives.
The master planning process for Furnberg Park involved four steps: Site Assessment; Programming and Preliminary Design; Preliminary Master Planning and Cost Estimating; and Final Master Plan Development. The following report describes this process.

The District Development Program

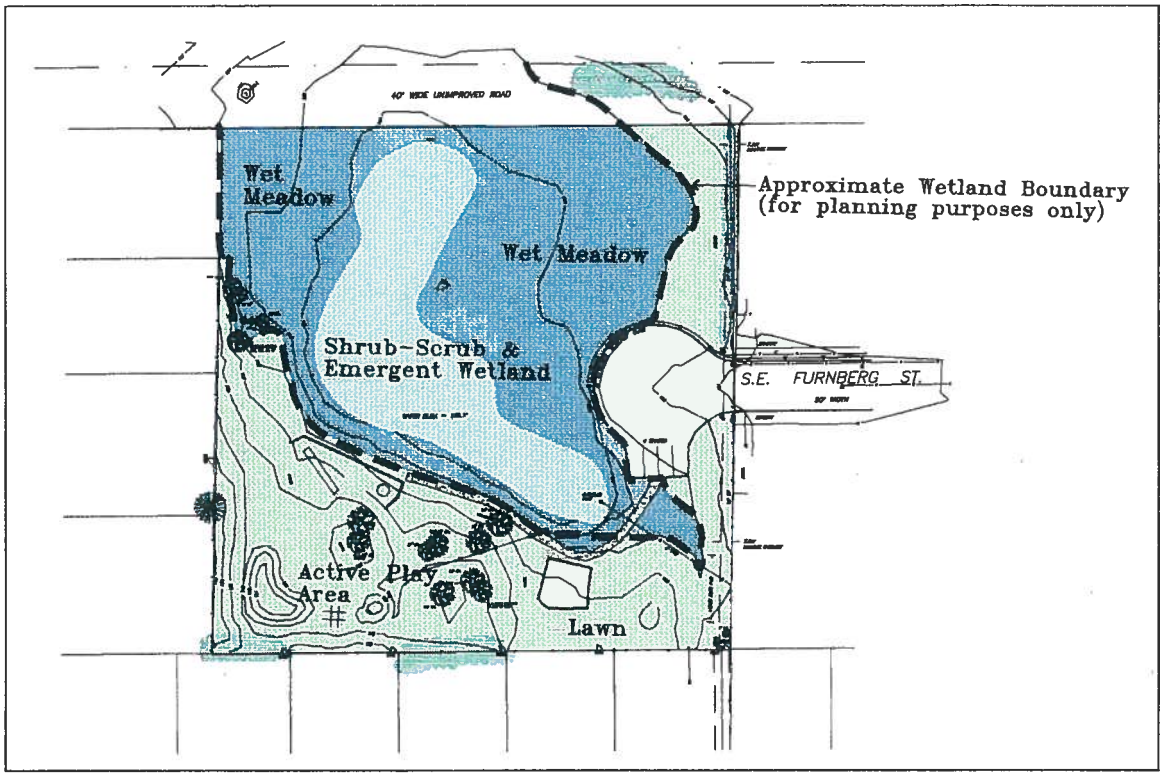
Furnberg Park is considered a neighborhood park within the established North Clackamas Parks and Recreation District system. Neighborhood parks are typically 1 to 5 acres in size. They generally include walking paths, picnic areas, sports courts, and open lawn areas. The types of recreational experiences offered in each neighborhood park depend upon the size, available facilities in the area, and the local preferences for recreational opportunities. These facilities are intended to service primarily those living within the adjacent neighborhoods. The parks are intentionally designed to accommodate pedestrian access and to discourage users from outside the immediate area. Neighborhood parks do not typically include parking lots.

Site Location and Context

Furnberg Park is a 2.64 acre site located within the Cedar Crest Subdivision north of Harmony Road and east of Linwood Avenue. The site is surrounded on the east, south and west sides by single family residences. Directly north of the park site is a farm in active agricultural production. The northern property boundary also forms the boundary between the north urban area of Clackamas County and the City of Milwaukie. The farm and the adjacent residential neighborhoods are currently zoned Low Density Residential.

The site has been a City of Milwaukie Park since the 1960's, when Mr. Furnberg donated it to the City. The site has always been a local low spot which collected water from the adjacent areas, especially from the land to the north. Approximately one half of the land area within the park site is considered jurisdictional wetland. The wetland provides a local haven for wildlife and offers the residents of Cedar Crest subdivision a unique recreational opportunity. The master planning effort for Furnberg Park was greatly influenced by the site's wetland character and configuration.

In the event that the site to the north gets developed into single family residences, the Furnberg Park site will be completely surrounded by residential land uses and a large portion of the site's watershed will be changed. This kind of a change within the watershed may have an impact upon the amount and frequency of water draining to the wetland on the park site, depending upon how the developing site drainage is manipulated. Clackamas County stormwater regulations currently provide for the consideration of the impact of development on adjacent natural resources.



Site Assessment

Data was gathered and analyzed, including: topography, soils, vegetation, wetland extent and site hydrology, wildlife habitat, existing infrastructure and play equipment condition. The site parameters were assessed to determine both physical and regulatory opportunities and constraints. Following the analysis, conclusions about the site parameters were synthesized to determine the site's suitability for development. Since the site has a wetland complex occupying approximately one half of the area, it was important to initiate discussion with jurisdictional agencies. Specific codes and requirements that were relevant to the project site development were identified.

Vegetation and Wetlands

The site has been disturbed by past development activities and adjacent land use changes. The area was graded in 1972 to form the current "pond" configuration and to install various park features such as the cul-de-sac parking, the walkway and mounded play areas at the southern end of the site. Historically the wetland area was probably larger, and extended east onto the land where the two adjacent homes are now found. This was indicated on a historic topographic map (1967) made available by Paul Roeger with the City of Milwaukie Engineering Department. There may have also been some excavation to form the open water zones, but the adjacent neighbors report that no excavation has ever occurred.

There are three basic zones or plant community types on the site: a shrub/scrub and emergent wetland complex that includes an open water component and four islands; a seasonally inundated wet meadow surrounding the shrub/scrub and emergent complex; and an upland grassy area which provides area for a small playground. Together, the shrub/scrub and emergent wetland complex, and wet meadow meet the Federal criteria of a jurisdictional wetland. The total wetland area on the site is 1.30 acres with an estimated 0.6 acres supporting the shrub/scrub and emergent wetland plant community and approximately 0.7 acres supporting a wet meadow plant community.

Shrub-scrub plant communities are found at the pond edge and are associated with the islands. Within the shrub-scrub community, the canopy dominants are black cottonwood, Hooker's willow and pacific willow and the ground cover species include, roughstalk bluestem, reed canary grass, creeping bentgrass and Himalayan blackberry. The emergent communities within the ponded area are dominated by soft rush, cattails, water smartweed, duckweed, American brooklime and horsetails. There are two small islands within the complex which support black cottonwood, soft rush, Hooker's willow, and various grasses. One small snag was located within the complex. A list of plant species observed on the site is included in Appendix A attached to this report.

The wet meadow surrounds the shrub/scrub and emergent wetland complex on the west, north, and east sides. The predominant plant species observed in the wet meadow community include: roughstalk bluegrass, Kentucky bluegrass, water foxtail, reed canary grass and creeping buttercup. Early in the growing season, there are patches of standing water under the herbaceous vegetation. The wet meadow usually dries out by mid to late June, depending upon the amount of precipitation each year.

South of the wetland area, is an upland lawn area in which a playground, an asphalt pathway and some hilly landforms created for play are located. The lawn and playground area supports some large black cottonwoods, a cherry and a few small hawthorns which provide shade and canopy coverage for the southern portion of the park. The large cottonwoods may be a potential liability to the park users given the trees' habit of dropping branches throughout the year.

The U.S. Army Corps of Engineers and the Oregon Division of State Lands regulate certain activities, such as grading and installation of structures, within wetlands. The City of Milwaukie also regulates activities within the wetland and some of the adjacent uplands through its Natural Resources Overlay Zone regulations. This zone is generally located north of the existing asphalt pathway in the park. The Natural Resources Zone constitutes the portion of the site most valuable to wildlife and encompasses most of the jurisdictional wetland area as well as two areas of associated uplands. The small portion of wetland east of the asphalt pathway has been excluded from the Natural Resources Zone because it is currently managed as a lawn area and this landscape management practice is likely to continue in this part of the wetland in the future.

Wildlife Habitat

The shrub/scrub and emergent wetland complex provides nesting and foraging habitat for a number of birds, small mammals, and herptofauna (snakes, turtles, frogs, etc.). Neighbors to the park say that fish have historically been caught in the pond, which was apparently mostly open water many years ago. No fish were observed during the site visit but pacific chorus frog tadpoles, springtail, small bivalve (clam like species), and other small invertebrates were observed in the emergent wetland. The wet meadow provides foraging for birds, such as violet green swallows, and nesting habitat for small mammals.

Other wildlife species, or their sign, observed during the site visit include: red-winged blackbird, mallard (nesting pairs in wetland), house finch, unidentified hawk, red-tailed hawk, northern flicker, western wood pewee, killdeer, American robin (nesting), violet green swallow, yellow warbler, brown-headed cowbird, black-capped chickadee, and mourning dove (flock of 30). Eastern gray squirrel and cabbage white butterfly were also observed in the open areas.

Habitat value on the site has been diminished from the likely historic value through grading, the development of adjacent housing, and agricultural land use practices. Habitat value at this time would be considered moderate to moderately high. Limiting factors contributing to this value include a high level of disturbance from human activities and domestic animals and the frequent occurrence of non-native plants. The wet meadow portion of the site is also maintained as a semi-manicured lawn through mowing as soon as the ground is dry enough to support a vehicle. However, native plants still exist on the site and the wetland continues to function ecologically by providing suitable habitat for several species of birds and mammals. Although not well connected to other habitats, the site lies adjacent to an agricultural cropland that provides forages for birds and likely for small mammals.

The site serves as a repository for native wetland plants within the general area where this habitat type is lacking. Improving the vegetation and vegetation management practices, and possibly the hydrology and water quality on the site in addition to protecting the area from further disturbance would raise the overall habitat value.

Soils and Hydrology

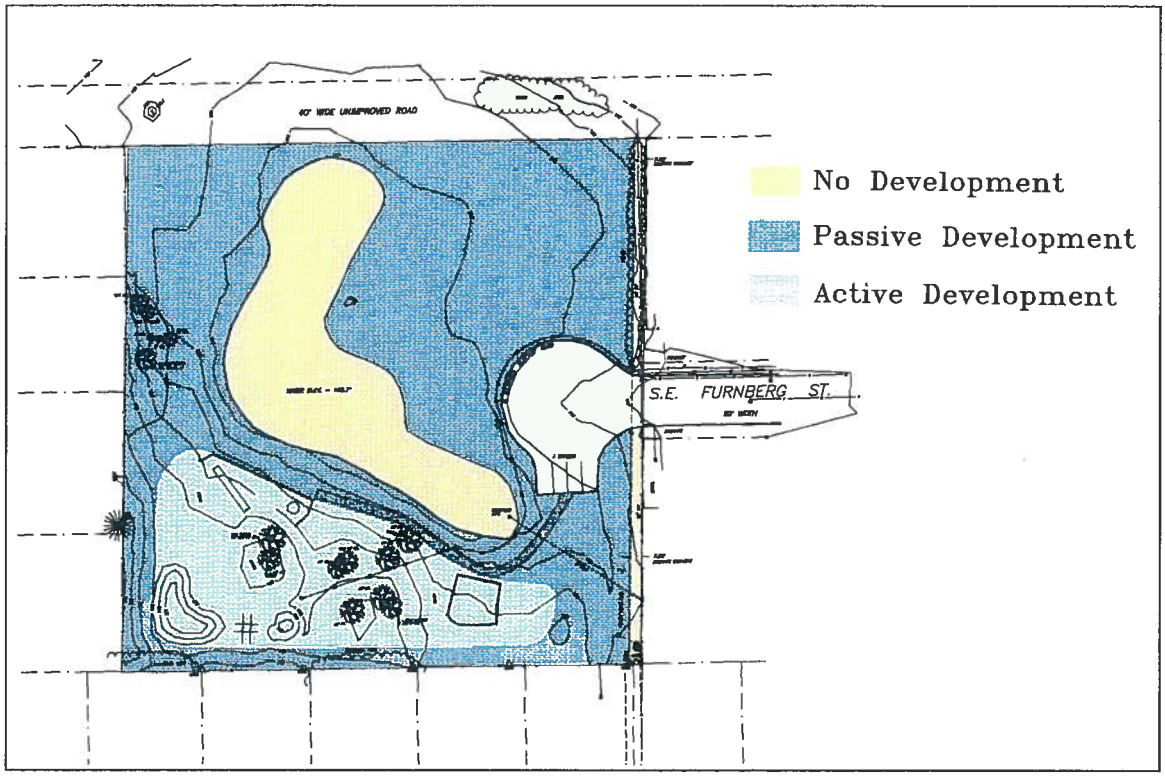
The site is the low spot within the local topography. It receives surface runoff and possibly subsurface drainage from the agricultural field to the north and negligible drainage from the adjacent residential lots. Saturated to ponded site conditions usually exist in the wetland portions of the site until the spring and early summer rains subside. The water level within the wetland is regulated by a stand pipe outlet at the southeast end. The wet meadow portions of the wetland then dry out while the shrub/scrub and emergent portions of the wetland continue to hold water. From July until late October when the precipitation rate lessens, the water in the wettest part of the wetland continues to evaporate. Some years, the entire wetland completely dries out, although neighbors have reported that this is an infrequent occurrence.

The Soil Survey of Clackamas County (SCS, 1985) indicates that Wapato silty clay loam is the predominant soil type found on the site. Latourell Loam is also present. Wapato is considered a hydric soil and is poorly drained. Field inspection of the soils revealed that the surface soils have been moved around and natural profiles are not evident in many areas of the site. Surface soils throughout the site have been disturbed by past development activities, including the grading in 1972 to form the current "pond" configuration.

Existing Infrastructure

Some of the existing park facilities are in a state of disrepair or don't meet present codes for safety and accessibility. There are plenty of parking spaces on site adjacent to the cul-de-sac. The asphalt trail leading from the parking is narrow and in poor condition and does not interconnect all of the park facilities. The play equipment and surfacing, if constructed today, would not meet current codes for safety and accessibility. Many of the park facilities are not handicap accessible including the picnic tables and benches.

The site is served with electrical power, water and storm sewer.



Site Suitability

Based upon the analysis of the site's vegetation patterns, soils, hydrology and zoning codes that affect development, the site's development suitability was determined and presented in the first public meeting. The site's development potential was divided into three categories: areas that cannot be developed; areas that can accommodate passive recreation only; and areas that can accommodate a mixture of passive and active recreation.

The configuration of the wetland on the Furnberg Park site naturally organizes the site and dictates how circulation will occur on the site. The site hydrology and wetland character limit certain kinds of development activities, but offer unique recreational experiences for a neighborhood park. The site is best suited to support passive recreational experiences such as nature and wildlife observation, walking, picnicking with limited active recreational spaces.
The centrally located shrub/scrub and emergent wetland complex with the controlled water elevation is essentially undevelopable because of the persistent wetness and the value of this portion of the site to wildlife. The seasonally inundated wet meadow zone which surrounds the shrub/scrub and emergent wetland can support some passive recreation such as walking trails or wildlife observation points. This area has been characterized as a zone which can accommodate passive recreation only. Preliminary soil investigations indicated that draining this portion of the site would probably not be possible in order to accommodate more active recreation. Substantial filling to support active development in the wet meadow zone would likely not be permittable and is not be in keeping with the best use for this portion of the site.

The drainage easement along the eastern property boundary and the 20' setback areas along the southern and western property lines were designated passive development zones because development potential within these areas would be limited by established local regulations.
A combination of active and passive recreation is most suitable in the upland lawn area south of the wetland. This area is already used for active play and can accommodate the desired program elements.

Program Development

Program elements for Furnberg Park were developed through examining the District's guidelines for neighborhood park facilities and by getting public input about the desired park facilities. Park program elements that were appropriate to the location and met the District's criteria for viability were incorporated into the design concepts.

The first public meeting began with a presentation of the site's opportunities and constraints for recreation development and moved into program development. During this meeting, the public offered information about the history and character of the site and their ideas for future directions for the development of Furnberg Park. A summary of public input can be found in the Appendix B attached to this report.

Program development for the Furnberg Park site is greatly influenced by the wetland's configuration and location within the park site. The usable upland space on the site is limited by the size of the wetland and its central location within the park site. Site circulation is also predetermined by the wetland configuration. While the wetland feature may preclude the addition of recreational uses such as field or court games because of their size requirements, the natural setting at Furnberg Park offers other unique recreational opportunities for a neighborhood park such as wildlife observation, wetland interpretation and nature appreciation.

Many of the neighborhood participants echoed this sentiment. They enjoy the natural character and inherent opportunities for wildlife observation and want to see a development plan that enhances these qualities. Many ideas about how to restore the wetland and wildlife habitat were brought forth, including: grading around the pond, selective clearing of vegetation, cleaning up the wetland and the park. Related to the idea of habitat restoration, concerns were raised about the current use of the site and the wetland by local children and teenagers.

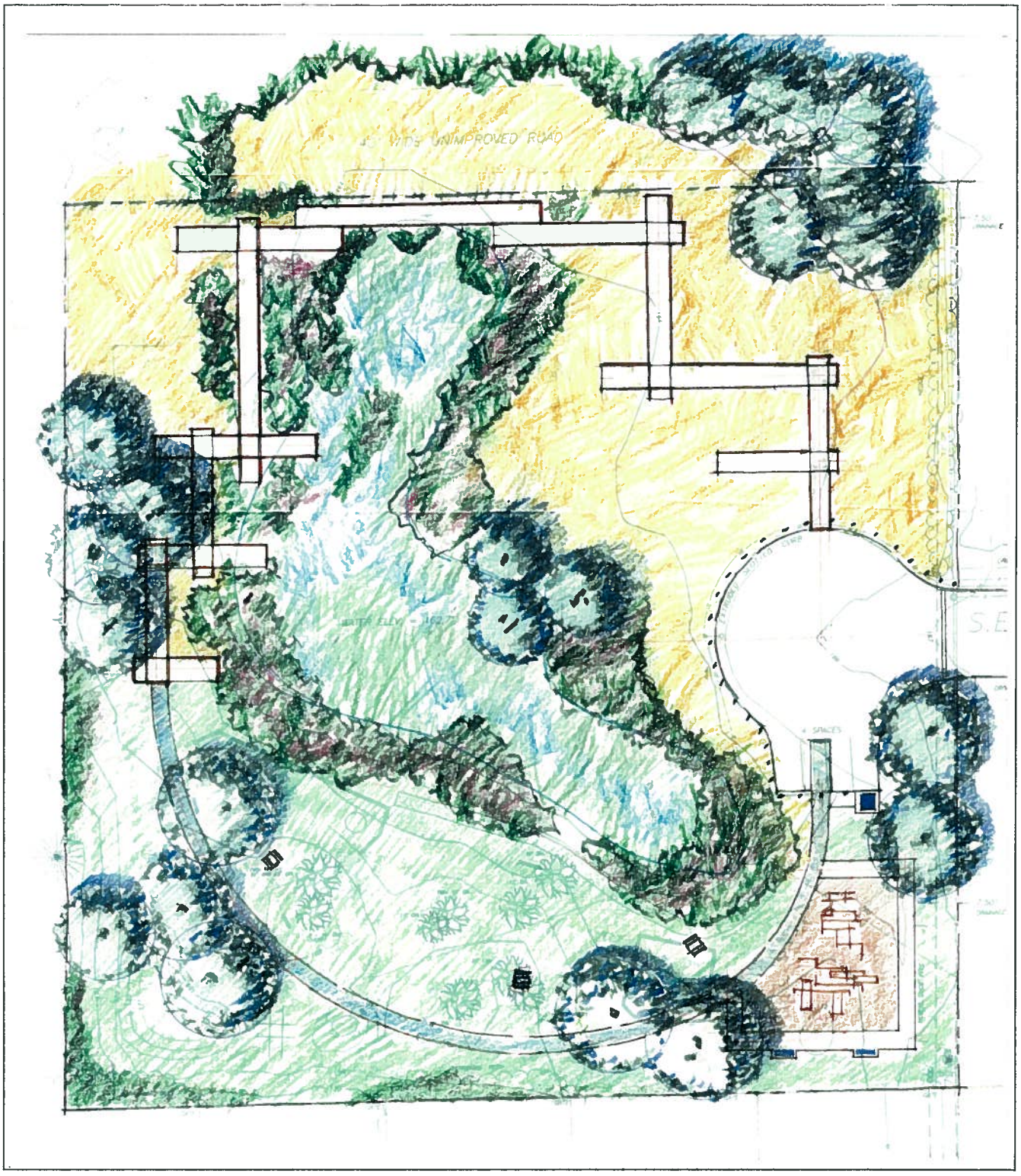
In general, the program direction established for Furnberg Park centered around developing a park with a primarily passive uses with some active uses. Passive activities include a trail all the way around the wetland, picnic areas, and opportunities for wildlife observation and interpretation. Active use areas include a playground with a 'tot-lot' component and open grass areas for play.

Preliminary Design

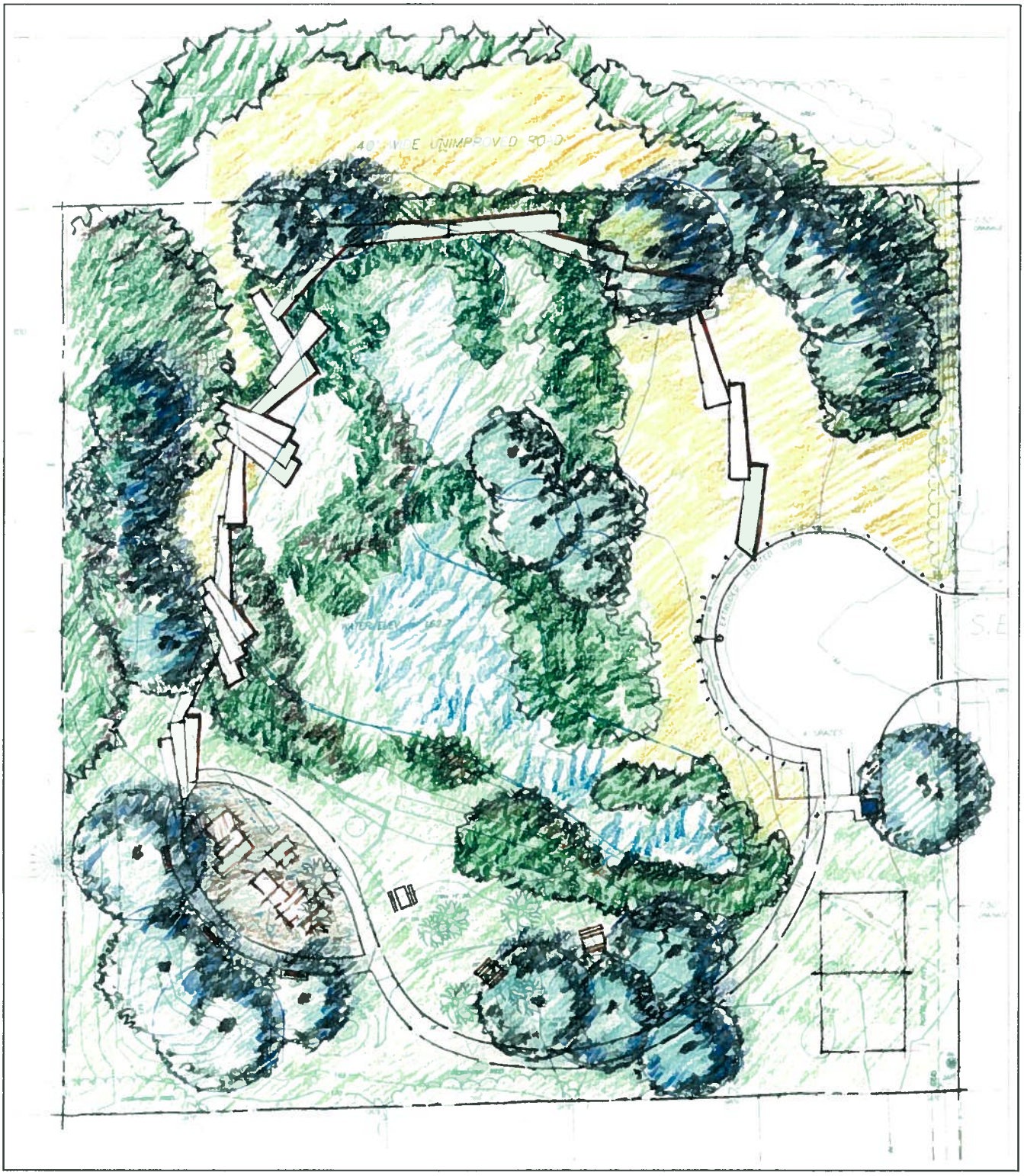
Based upon an approved program and known site characteristics, three design concepts were developed for the site. Each concept explored various ways of locating the desired program elements on the site in ways that would insure park safety, and would result in a park design that could be constructed and maintained by a reasonable level of future effort. All three concepts incorporated all of the program elements developed earlier including, methods of enhancing and restoring the wetland, a trail all the way around the site, and a playground area. Plans were presented to the public and to the District for input.

In Concept Plan A, the playground area is located in the southeast portion of the active recreation zone where it can be readily viewed from the cul-de-sac. A trail provides circulation around the park on the southern end and this connects to a boardwalk with a "pier" form. The ends of the piers function as wetland interpretive and wildlife observation points. In Concept Plan B, the playground area is shifted to the southwest portion of the active recreation zone and vegetation around the wetland would be selectively cleared to provide views from the cul-de-sac to the playground. The boardwalk configuration is more naturalistic and is inspired by the idea of driftwood around the edge of a lake or pond. The random arrangement of deck pieces allows for established observation points to occur around the wetland. In Concept Plan C, the playground is again located in the southwest portion of the site. The trail and boardwalk configuration are deliberately more curvilinear. At the north end, where the trail becomes a boardwalk, it is located as far away from the wetland as possible to minimize disturbance to wildlife while providing access to this portion of the site.

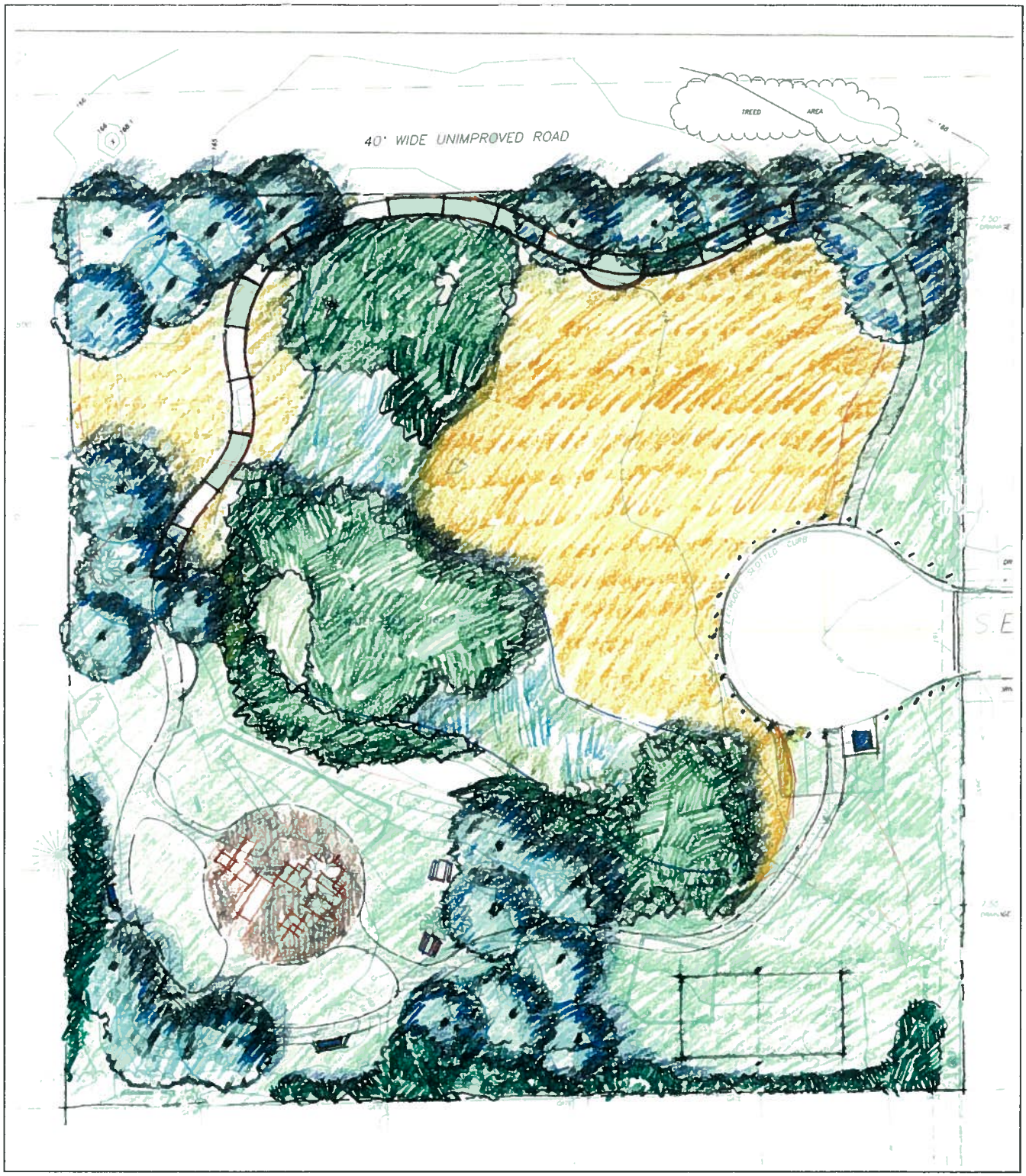
All three schemes illustrate various patterns of selective vegetation clearing and planting zones. The restroom pad is located near the cul-de-sac for easy access and maintenance. Picnic areas are proposed at the south end in conjunction with a cottonwood replacement planting, and would provide seating and observation of the adjacent playground area.



Concept Plan A



Concept Plan B



Concept Plan C

Site Development Master Plan

Given the public and the District's response, a single plan was generated which incorporated the preferred components of the three initial concepts. All development costs associated with the preliminary master plan were estimated and the plan was presented to the public and the District for review and comment. Minor revisions were made to the preliminary master plan as a result of these discussions before presenting the master plan to the City of Milwaukie reviewing bodies. A summary of the estimated costs for future development can be found in Appendix C attached to this report.

Following preliminary approvals within the City process, the final master plan was then prepared. It was presented to the North Clackamas Parks and Recreation District Advisory Board and to the City of Milwaukie Planning Commission for final approvals. The final site development Master Plan provides the framework to guide future redevelopment in Furnberg Park over the coming years, as funding becomes available.

In general, because the public preferred the patterns and spatial arrangement of Concept Plan B, this plan was developed further into the site development Master Plan. Continuous circulation around the site is provided by installing a new (realigned) paved walkway on the southern portions of the site and a boardwalk through the wetland portions of the site. The wetland boardwalk configuration is the naturalistic concept from Concept Plan B. The boardwalk incorporates observation deck modules in designated places which will provide stop-off points along the trail to observe wildlife and the natural wetland habitat.

Bollards are proposed around the cul-de-sac to prevent people in cars from driving up onto adjacent areas. The four existing parking spaces are proposed to be converted into two parking spaces: one accessible, one standard; a permanent concrete pad for the restroom facility and trash container; and the beginning of the paved walkway into the park. The concrete pad for the temporary restroom facility must be located on the cul-de-sac to accommodate maintenance. It is positioned to minimize impacts on adjacent neighbors. A speed bump is proposed at the park entrance to slow vehicles upon arrival into the park.

Integral to the Master Plan is a strategy for enhancing the wetland. The plan includes native tree, shrub and wetland plug planting, and seeding to increase native plant species diversity. The site will be graded to pull the previously filled pond edges back to a more gently sloped condition. This action will increase the width of the emergent and shrub/scrub edge zone and will encourage a more diverse and higher quality wetland plant community along the edge. Grading around some of the edges will also promote the selective clearing of vegetation in certain areas, opening up views across the site and facilitating the removal of non-native, invasive plant species like Himalayan Blackberry. The new edge configuration will also tend to make it more difficult for children to reach the interior islands by providing a greater (wetter) separation between the islands and the wetland edge.

By the neighbors request, no screen planting is proposed around the park property lines which abut the residences. Some shrub and tree planting is proposed at the north end to buffer the site from northern winds and to promote habitat connectivity with the small wooded area just north of the site. To the south, a grove of trees is planned, replacing the existing cottonwoods. The cherry at south end, the white birch on the southern most island and the large willows in northwest corner will remain in place.

A playground area is planned for the southwest portion of the active recreation zone. Tentatively, the equipment planned for the playground includes: a tire swing, ring bars, a spring platform, a slide, tunnels, a talk tube and a fire pole. The playground will be a designed primarily for young children. The southwest corner of the site will be regraded to partially enclose the playground and to accept excess cut material from other parts of the site. Vegetation around certain areas of the wetland edge are proposed to be selectively cleared to open up views from the cul-de-sac to the playground.

Other recreational opportunities provided for in the site development Master Plan include re-establishing the horse shoe pits in the southeast corner and establishing an open grass area next to the horse shoe pits. The potential for future educational and interpretive observation points exist along the boardwalk, primarily at the observation points. Benches for observing playground activities and wetland/ wildlife are planned throughout the park. Picnic areas are proposed under the southern grove of trees near the playground where wildlife or playground activity can

be readily observed. Bike racks and a drinking fountain are also included.

Vegetation Management

After the proposed earthwork is completed and the planting improvements are implemented, the vegetation within the wetland zones on the site will have to be managed specifically in order to maintain the proposed plant communities. This means that the wet meadow will no longer be maintained as a traditional lawn. Instead, it will be mowed less frequently (once or twice a year) to provide a taller vegetative cover for wildlife and to encourage native species to become established within the plant community and keep shrub growth to a minimum. Edge zones that have been cleared and graded to establish emergent wetland benches will have to be mowed periodically to prevent shrub growth from becoming dominant. Selective clearing of woody plant material at edges that are important to keep open for safety reasons may also be an ongoing activity within the park.

Master Plan

Appendix A

Plants Observed on the Site

Plant Species Observed on the Furnberg Park Site

Shrub/Scrub and Emergent Complex with Open Water:

Common Name	Botanical Name
Soft Brome	*Bromus mollis*
Spikerush	*Eleocharis sp.*
Horsetail	*Equisetum sp. pos. fluviatele*
Oregon Ash	*Fraxinus latifolia*
Soft Rush	*Juncus effusus*
Duckweed	*Lemna sp.*
Roughstalk Bluegrass	*Poa trivialis*
Water Smartweed	*Polygonum sp. pos. lapathifolium*
Black Cottonwood	*Populus balsamifera var. trichocarpa*
Himalayan Blackberry	*Rubus discolor*
Hooker's Willow	*Salix hookeriana*
Pacific Willow	*S. lasiandra*
Willow	*S. sitchensis*
Cattails	*Typha sp.*
American Brooklime	*Veronica americana*

Wet Meadow:

Creeping Bentgrass	*Agrostis stolonifera*
Meadow Foxtail	*Alopecurus geniculatus*
Orchard Grass	*Dactylis glomerata*
Fescue	*Festuca sp.*
Tall Fescue	*Festuca arundinacea*
Bird's Foot Trefoil	*Lotus corniculatus*
Reed Canarygrass	*Phalarus arundinacea*
Kentucky Bluegrass	*Poa pratensis*
Roughstalk Bluegrass	*Poa trivialis*
Creeping Buttercup	*Ranunculus repens*
Celery-leaf Buttercup	*Ranunculus sceleratus*
Curly Dock	*Rumex crispus*

Lawn and Upland Areas (not a complete survey):

Annual Lobelia	*Lobelia sp. (cultivated)*
Common Willow-herb	*Epilobium glandulosum*
Fescue	*Festuca sp.*
Annual Bluegrass	*Poa annua*
Kentucky Bluegrass	*Poa pratensis*
Cherry	*Prunus sp.*
Hawthorne	*Crataegus pos. monogyna*
Black Cottonwood	*Populus balsamifera var. trichocarpa*
Climbing Nightshade	*Solanum dulcumara*

Appendix B

Summary of Public Input

FURNBERG PARK
FIRST PUBLIC MEETING
4 June 1996

The following items were offered by the public during the meeting:

- North winds may limit activities at the north end of the park - buffer planting may help
- It may not be appropriate to mow the 'wet meadow'
- Cottonwoods are a problem - some are rotten - would like to see them go away
- Don't take out cottonwoods without replacing them with other trees
- The focus of Furnberg could be a 'Tot Park'
- Discourage Teen Use - 3:00 p.m. regular problem
- Consider putting a speed bump in the cul-de-sac
- There should be a path all the way around the park
- More benches are needed
- The neighbors enjoy wildlife observation
- The neighbors would like an area to feed the ducks
- No baseball, basketball or tennis
- Develop play areas similar to Lentz Park
- Provide regular swings as well as 'kiddie' swings
- Path may have some parts that are raised walkways
- Pond edge was filled - pull the grades back
- Selective clearing of wetland vegetation is desirable, to open-up the canopy and provide views to the back of the park
- Teenagers use of the islands is a problem
- Night lighting may be needed
- Add bollards around the cul-de-sac
- Drainage is a problem at the south end - should not be increased
- Install a permanent base for the temporary restroom
- Consider dredging in the pond to provide open water
- Provide a comfortable place for adults to watch children
- Additional picnic areas would be appropriate
- Establish an educational facility for young kids
- Wetland character provides opportunity for interpretive education
- Local neighborhood work groups would be interested in park clean-up and other projects

FURNBERG PARK
SECOND PUBLIC MEETING
19 June 1996

During the second public meeting, the master planning process was described, the analysis conclusions were reviewed and the three preliminary design concepts were presented to the neighborhood participants. The following response was given by the public to the presentation of the three conceptual design alternatives:

General Input - All Concepts:

- The location of the restroom pad is not desirable. Locate the restroom further away from the property line.
- Save the Cherry and Hawthorne near the Cottonwoods south of the walkway and save the White Birch on the southernmost island. There is also a really nice Willow in the northwest corner of the ponded zone.
- Extensive planting around the edges (for screening) that abut the residential lots is not desirable. Planting along the north park edge is preferred.
- An open edge treatment around the wetland is preferred. Clear the "junk" trees out around the edges, so the limbs are not so easily accessible to children.
- If planting occurs along the edge, don't limit access to the wetland.
- Deepening the pond and removing the muck and debri is desirable.
- The neighbors would like an ash tray and a heavy-duty trash can located on the cul-de-sac.
- Add bicycle parking and a drinking fountain.
- Add benches along the boardwalk.
- Consider a gravel path through the wetland instead of a wooden boardwalk.
- Consider reestablishing horseshoe pits.
- One resident expressed an opinion that the hills at the south end should be graded out (i.e. flatter), while another disagreed and thought that children enjoyed playing upon them.
- It was suggested that we talk to the farmer to the north about planting trees at the north end.

Concept A:

- The location of the play area in Concept A may encourage teenager destructiveness.
- Pulling the boardwalk out towards the eastern property line is not desirable.

Concept B:

- Concept B is definitely the preferred concept. The boardwalk configuration is preferred because it accommodates circulation around the site and the random configuration may tend to discourage skateboard and bicycle use.

Concept C: No distinct comments were made about Concept C.

Second Public Meeting, continued

Playground Equipment Discussion:

There was much discussion about playground equipment choices for an updated and improved playground facility at Furnberg Park. Diane Campbell of NCPRD spoke about ideas that were brought forth by the children at the Linwood School meeting. Out of this meeting, the most unique play idea for Furnberg Park was a proposed bridge over the wetland, where one could experience the wetland habitat from above. Other ideas from the children focused upon elaborate play structures. It was mentioned that the Linwood School playground will have an elaborate play structure and children will have access to that. Equipment selection for Furnberg should add diversity to the neighborhood play opportunities, not replicate them. All age groups should be considered, not just one age group. The following items were mentioned by the neighbors as desirable additions.

- Square springboard
- A series of platforms with a steering wheel
- Simple structures or separate pieces of equipment
- Swings, slides and something to climb on

Other Information:

- The big island supports green-backed herons.
- Boy/Girl Scouts groups may be interested in building houses for birds.
- There was a question about whether it was possible to reestablish "Gambusia" fish in the pond.

FURNBERG PARK
THIRD PUBLIC MEETING -
LINWOOD NEIGHBORHOOD DISTRICT ASSOCIATION
27 June 1996

This third public meeting was basically a repeat of the second public meeting, only with the Linwood Neighborhood District Association. At least three members of the Land Use Committee were present as well as two City of Milwaukie Council members. As in the second public meeting, the master planning process was discussed, the analysis conclusions were reviewed and the three preliminary design concepts were presented to the group. The following comments were offered by the public during the meeting:

- Consider plastic materials for construction of the boardwalks.
- Limb up trees for safety.
- The City of Milwaukie has a new safety program that was just established. Get a copy of the recommended policies from the City of Milwaukie and review them in conjunction with refining the Master Plan.
- Consider a light weight pre-cast concrete product for construction of the boardwalks.
- Pull the boardwalk away from the wetland to minimize impacts to wildlfe.

FURNBERG PARK
FOURTH PUBLIC MEETING -
LINWOOD NEIGHBORHOOD DISTRICT ASSOCIATION and
FURNBERG PARK NEIGHBORS
25 July 1996

This fourth public meeting was held in conjunction with the regularily scheduled Linwood Neighborhood District Association monthly meeting. At least two members of the Land Use Committee were present. As in the second and third public meetings, the master planning process was discussed, the analysis conclusions were reviewed. Then the Preliminary Master Plan was presented to the group. The following comments were offered by the public during the meeting:

- Re-introduce cattails in the wetland.
- Include Oregon Ash species in the planting scheme.
- Add conifer trees to the planting scheme.
- Fill bollards with concrete to prevent vandalism and theft.
- Remove bamboo plants from western property line.
- Plant shrubs near the property line southeast of the cul-de-sac (where large dip is).

Appendix C

Cost Estimate

Furnberg Park Master Plan Development Cost Estimate

Site Preparation

Item	Quantity	Unit	Unit Cost	Subtotal	Total
Clear and grub grass	41,480	sf	$ 0.12	$ 4,980.00	
Asphalt removal	1,355	sf	0.50	680.00	
Tree removal	11	each	200.00	2,200.00	
Lighting removal	1	each	300.00	300.00	
Clear and grub edge	3,850	sf	0.15	580.00	**$ 8,740.00**
Earthwork					
Cut and fill	1,265	cy	$ 4.00	$ 5,060.00	
Fine grading	41,480	sf	0.15	6,222.00	
Haul excess	30	cy	20.00	600.00	**$ 11,882.00**
Landscape Construction					
Concrete area	850	sf	$ 3.00	$ 2,550.00	
Bollards	25	each	100.00	2,500.00	
New walkway	4,240	sf	1.50	6,360.00	
Boardwalk	3,800	sf	30.00	114,000.00	
Speedbump	170	sf	3.00	510.00	**$ 125,920.00**
Planting					
Install logs		lump sum		$ 500.00	
Trees - large	16	each	250.00	4,000.00	
Trees - small	12	each	100.00	1,200.00	
Shrubs (4' o.c.)	675	each	22.00	14,850.00	
Wetland plugs (2' o.c.)	1,650	each	2.00	3,300.00	
Lawn (not irrigated)	33,500	sf	0.35	11,725.00	
Seeded meadow	4,720	sy	1.00	4,720.00	**$ 40,295.00**
Playground	1	lump sum			**$ 30,000.00**
Miscellaneous					
Barrier fence	360	lf	$ 2.50	$ 900.00	
Horsehoe pit	1	lump sum		600.00	
Picnic tables (no labor)	3	each	200.00	600.00	
Benches (no labor)	6	each	350.00	2,100.00	
Trash cans	2	each	500.00	1,000.00	
Interpretive panels	2	lump sum		3,000.00	
Ash urn	1	each	200.00	200.00	
Bike rack	3	each	100.00	300.00	
Drinking fountain		lump sum		1,200.00	
" piping	330	lf	2.00	660.00	**$ 10,560.00**
Fees/Permitting		lump sum			**$ 5,000.00**

Subtotal	**$ 232,397.00**
20% Contingency:	**46,480.00**
GRAND TOTAL:	**$ 278,877.00**