

FROM GOOD TO GREAT
CHEROKEE SPECIAL AREA PLAN ... GREEN IDEAS FROM THE FRIENDS OF CHEROKEE MARSH

INTRODUCTION

The Cherokee Park Inc. lands proposed for development are adjacent to sensitive wetlands that are part of the largest remaining natural area in the City of Madison's environs.

Many Capital Region residents are eager to do what they can to preserve the environment, and those visiting or moving here are often drawn by the natural amenities and public infrastructure that have resulted from this ethic. The Cherokee lands are thus a perfect location for using green construction techniques and other strategies to create an environmentally friendly development in harmony with the natural areas nearby.

This plan describes such a development. We ask that the City staff and Plan Commission consider recommending these points as a part of the guidelines contained in the City's Special Area Plan.

GENERAL

- protect/restore/enhance the ecosystem of the Lower Rock watershed including Cherokee Marsh, the Upper Yahara River and Starkweather Creek, especially all wetlands (including fens, sedge marshes, and springs), adding eco-corridors to external lands where possible
- provide an option-to-purchase (a.k.a. first-right-of-refusal) for all properties within the buildable areas so that nongovernmental organizations (e.g., conservancies, etc.) or private citizens have the opportunity to protect additional upland by acquisition or other means (e.g., easements)
- build as ecologically soundly as possible
- protect or restore the public's sensory experience of the conservation area and the Yahara River, including:
 - sights (viewshed)
 - sounds
 - smells
 - vibrations

using strategies that include "dark skies" lighting techniques, undergrounded or camouflaged power/communication infrastructure, height restrictions on buildings, earth-tone colors, stringent decibel restrictions, etc.

- prevent or minimize additional demands on public or private services, including utilities and built infrastructure
- provide multimodal transportation infrastructure that connects with existing and planned systems, while emphasizing walking, bicycling, mass transportation, and carpooling, in that order

- incorporate built and natural features that promote community/neighborhood cohesion, while striving to maintain or enhance existing Northside diversity (e.g., age, class, race)

LAND USE

General Considerations

- ensure that all previous/historical uses of Special Area Plan and adjacent lands (e.g., dumps, landfills, etc.) will have no health impacts for residents of or visitors to any new DUs
- implement conservation area-appropriate standards throughout the privately owned built areas of the Special Area Plan, including naturalized plantings with species native to the Upper Yahara watershed
- plant municipal areas (islands, terraces, street trees, etc.) with species native to the Upper Yahara watershed
- avoid commercial or private use of pesticides and fertilizers on golf course (minimum: meet or exceed standards for Audubon certification) and surrounding areas

SubArea Considerations

- **SubArea 1**
 - consider preventing development of this area (north of Wheeler, south of the conservation area, east of St. Peter's, west of CV), which is not included in the existing Urban Service Area, instead acquiring for the City this land and all other properties to the east along CV, toward restoration and incorporation in the conservation park (would involve annexation or swap of Burke Township and Maple Bluff lands); if some development must be allowed: preserve western area (east of St. Peter's) as northern extension of Hornung Woods ecocorridor and provide funds/incentives for St. Peter's to naturalize its entire property, providing additional conservancy buffer west of the Hornung Woods eco-corridor and along the conservation area to the north
- **SubArea 2**
 - aim to orient non-neighborhood vehicular traffic toward CV rather than Sherman Avenue
 - SubArea 2/fields: locate low-density residential in SE portion (along Whitetail Ridge subdivision, but with green buffer) and higher density residential toward NE portion
 - SubArea 2/woods: preserve the all or most of the woods toward ecological restoration and incorporation into an eco-corridor connecting the existing Whitetail Ridge Park, northward over Wheeler Road with an eco-overpass (i.e., a wide bridge-like structure built over the road, to allow wildlife and persons safe and naturalized passage), along the east side of St. Peter's

property and north to newly acquired wetlands in the conservation park; relocate existing residential inholders to new Hornung Fields residential development

- **SubAreas 1 & 2**

- on eastern edge, within Hornung Woods eco-corridor, incorporate ecologically-appropriate trails for pedestrians and non-motorized bicyclists, looping along north border and then southward along western border; working with the Whitetail Ridge neighborhood association, plan and design to encourage responsible use while discouraging vandalism and other inappropriate activities.

- **SubArea 3**
 - consider adding DUs here, as transfer from Subareas 1 or 4
 - to maximize the use of already-developed space, all new structures will be built be over the existing parking lot, which will be maintained as an under-building lot
 - new construction will be equal to or less than existing condo building profiles, including height
 - greenroofs should be considered for all multi-family dwellings
 - as part of any new construction, all remaining surface parking lot will be rebuilt with porous surface materials and to meet or exceed BMP or better stormwater/infiltration standards
 - retail should be within current clubhouse footprint, and should be built to serve primarily neighborhood foot/bike users;
 - clay courts recently built in wetlands east of Sherman Avenue should be relocated to this SubArea or removed entirely

- **SubArea 4**
 - if at all possible, transfer these DUs to SubArea 2 or 3, creating open space (uplands) for addition to conservation area
 - if building in the *Wheeler/Comanche Triangle* is necessary/approved
 - build the minimum number of single family DUs, sited along Wheeler Road, with porous driveways exiting directly on Wheeler Road
 - design new DUs with consideration for the style of existing residential stock south of Wheeler Road while protecting public's viewshed from conservation area to the north and west (25-ft maximum height, one-story plus attic; naturalized with Upper Yahara plant species if possible)

- **SubArea 5 (5th Addition)**
 - restrict building to area along NW edge of golf course, below forested area, and as close as possible to Sherman Avenue;
 - create widest possible new conservation park corridor between existing conservation park and existing Cherokee Park subdivision (i.e., the three new lots at north end of Burning Wood (cul de sac);
 - design for least ecological impact, including minimal impervious surface additions from structures/driveway/roads;
 - create these dwellings to be LEED certifiable at the silver level or higher
 - create green buffer between new dwelling units and Sherman Avenue, for both ecological and aesthetic purposes; and,

- **SubArea 6 (High Hill)**
 - allow the fewest possible DUs, build with least ecological impact and least impervious surface;

- locate all new DUs away from the Cherokee Marsh conservation area, with buffers that preserve the ecological function and the public user experience, including viewshed protection
- create green buffer between new dwelling units and Sherman Avenue, for both ecological and aesthetic purposes; and,

WATER QUALITY/USE

- perform a study of the impacts of the development on the ecosystem of the Lower Rock watershed including Cherokee Marsh, the Upper Yahara River and Starkweather Creek
- develop a stormwater management plan that maintains or enhances infiltration by minimizing impervious surface and utilizing Best Management Practice (BMP) or better, while also meeting current state-mandated landfill sediment control measures:

NR 504.09(1)(e) Temporary and permanent sediment control measures shall be designed to settle 0.015 mm size particles for all storms up to and including the 25 year, 6-hour storm. The surface area for sediment basins shall be calculated using the rainfall intensity over the 25 year, 6-hour storm event for the landfill. Principal spillways, and outlet protection for sediment basins shall be designed to pass a 25 year, time of concentration storm event. Emergency spillways for sedimentation basins shall be designed to pass a 100 year, time of concentration storm event. The design of the dewatering structures for sediment basins shall be selected such that the basin is dewatered in no less than 3 days. An analysis shall be performed to document compliance with this requirement.

(<http://nxt.legis.state.wi.us/nxt/gateway.dll?f=templates&fn=default.htm&vid=WI:Default&d=code&jd=ch.%20nr%20504>)

and resulting in 100% infiltration, especially in areas adjacent to wetlands, i.e., permitting no runoff into wetland areas, either directly or via stormwater sewers

- implement BMP or better construction erosion control in all areas to be developed, allowing no sediment to escape to wetland areas, directly or indirectly, while also suppressing wind-driven erosion and particulate dispersal.
- protect wetlands/river/with a buffer \geq 300 ft that is fully owned and managed by the City
- rather than 100 gallons/day/per capita water use (as projected by the developer's consulting agency), aim for 75 g/d/p (San Francisco currently achieves 97ga/d/per, and NYC 136 g/p/d, despite having many more tourists than Madison's Northside)
- prohibit non-necessary features that use fossil fuel, such as pools, hot tubs, etc.
- require state of the art inside/outside plumbing to reduce demands on municipal wells, with technologies such as: on/off valves (step-activated in kitchen), aerators, self-generating hydro-power "EcoPower" faucets (w/auto turn off) lo-flow showerheads, lo-flo toilets, etc.
- require naturalized landscaping, with all plants native to the Upper Yahara region, to enhance conservation efforts and reduce invasive and exotic species
- require raingardens, to promote ecologically-appropriate enhancement of on-site surface water infiltration, for filtering by soils above aquifers
- require outdoor rainbarrels or indoor/outdoor cisterns with outdoor watering capabilities, to reduce demands on municipal wells, while providing decentralized emergency water supplies

WATER QUALITY/USE (continued)

- require organic management (or, when necessary, Integrated Pest Management), of all areas with plants, including in unbuilt spaces (e.g., naturalized plantings, turf, etc.) and on greenroofs, particularly in the northern section of SubArea 2, SubArea 4 (if no swap to other open space is achieved), SubArea 5, and SubArea 6.
- require individual energy and water utility meters for each dwelling unit, to promote individual consumer responsibility and to allow early identification of leaks
- incorporate grey water reuse to the maximum extent possible

ENERGY

- orient all buildings for passive gain or solar/photovoltaic energy arrays
- design/build for net zero energy use, utilizing renewable resources (e.g., wind, solar, geothermal, hydrogen fuel cells, waste wood heat/electrical co-generation, etc.)
- deploy distributed generation technology, while maintaining connection/access to existing grid/infrastructure to allow sale of surplus energy back to grid and for emergency backup
- require time-of-day heating/cooling controls, to mitigate contributions to community-wide peak energy use
- plan for low-maintenance practices, including minimal fossil fuel use, for public community spaces
- require carbon offsets for all trees removed and for fossil fuel energy expended during design/build process, as cash contributions for tree-plantings in Cherokee Marsh conservation area or other appropriate and publicly-owned Dane County natural areas).

TRANSPORTATION

- direct extra-neighborhood vehicular traffic to CV rather than Sherman Avenue; i.e., CV should be perceived by drivers as the clearly better main route to and from the land included in the Special Area Plan
- create recreational, neighborhood, and commuter trails, segregated from vehicular traffic whenever possible; commuter trails should be surfaced appropriately for safety, sweeping and snow removal
- provide for a Community Car operation, with hybrid vehicles (perhaps both cars and trucks) at one or more appropriate locations
- reduce or maintain Sherman Avenue north of Wheeler Road to club house entry as 2-lanes with center island/turn lane, and 25 mph with no street parking; convert to porous surface as part of this development or during next rebuild (also, prepare for Sherman Avenue Makeover from Wheeler south to

Johnson/Gorham, reducing all to 2-lanes w/center/turn lane and islands, undergrounded utilities, and signage controls, in overall effort to divert through traffic to CV/Northport/Packers, while also enhancing the community through better personal safety and commercial activities

TRANSPORTATION (continued)

- from existing club house's entry north to existing conservation parking lot, convert Sherman Avenue to one lane and 15 mph, with minimum width and all-porous surface, building the minimum number of "pull-overs" or "bumpouts" to allow safe vehicular bypasses, based on line-of-sight (e. g, as commonly employed in New Zealand)
- meander Sherman Avenue north of the Club House driveway entrance, with no net wetlands loss, toward enhancing the esthetic experience of entry into the conservation park, while also calming traffic and otherwise fostering better pedestrian/cyclist safety
- plan for additional development beyond the Special Area Plan area, to the south (from any further development of land south of Whitetail Ridge between Sherman Avenue and CV), to the northeast (in the proposed area of annexation), along the airport/rail corridor, and (at Northport/Sherman) from the North Mendota Parkway and Warner Park/ Community Recreation Center/Pool/Stadium additions or enhancements
- provide bike racks for both residential and non residential buildings
- create commuter/recreation trail/s that connects far Northside to planned Sherman Flyer and other surrounding Dane County trails
- create amphibian underpasses for all Special Area Plan roads (kill rate for seasonal amphibian crossings can be as high as 90%)

BUILDINGS/CONSTRUCTION

- ensure that all development in the Special Area Plan be certified to meet the highest standard (i.e., platinum) of the LEED for Neighborhood Development (LEED-ND) program, especially the Sustainable Sites and Water Efficiency sections (pilot program participation currently being invited; projected publication of refined, final details in 2008); delay building until publication or apply to participate in the LEED-ND pilot program
- for individual DUs, apply for participation in the forthcoming *LEED for Homes* pilot program, toward certification at the highest level (i.e., platinum)
- require all other (non-residential) structures to meet highest level of relevant LEED certification program
- restrict each Dwelling Unit (DU) to a maximum of 2000 SF, while maintaining overall average of maximum 1500 SF/DU overall
- place conservation/viewshed appropriate height restrictions
- use porous surfaces for all driveways, sidewalks and patios
- employ vernacular architectural style that creates a sense of place related to Wisconsin's built traditions

CONSERVATION AREA/SERVICES

- provide a fully-funded resident naturalist for education programs in the marsh, as well as housing for this person and his/her family members
- relocate the city's parking/restroom facility to the conservation park entrance
- relocate the existing Cherokee Marsh conservation area officer's housing to developed area closest to park entrance, providing housing for this person and any family members
- downsize vehicular internal road to single lane, with pullovers/bumpouts, and a dedicated/separated bike/pedestrian trail.
- add a recreation trail extending from existing commuter sidewalk/trail in Cherokee Park, from north of Burning Wood Way through 5th Addition to the existing trails southeast of the current conservation area parking lot

EDUCATION

- provide opportunities for children attending adjacent schools (e.g., Black Hawk MS and Gompers ES) or living on the Northside (e.g., Northport, Packers, and Kennedy Heights) to study and practice ecological principles or issues in natural spaces, gardening areas and so forth

OTHER

- incentivize EcoTeam membership by all residents for ten years, toward reducing garbage production, along with water/energy use, etc.
- request that the federal government build a Northside post office or substation (in either case, with postal boxes for businesses, etc.), perhaps at Wheeler/CV, to reduce daily trip generation