



WESTERN MICHIGAN UNIVERSITY



Facilities Management Landscape Services Master Plan

December 8, 2011

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Overview/Purpose

The purpose of this Landscape Services Master Plan is to provide guidance for future campus landscape planning and design which will ultimately enhance the quality of life on campus and in adjacent communities, increase the sustainability and ecological health of the campus landscape, and create a more uniquely defined image for Western Michigan University. This master plan aims to identify specific recommendations for principles of land use, access, image, and environment, and to provide direction to better maintain, preserve, and enhance university facilities. Building off of the University Master Plan, the Landscape Services Master Plan will provide guidance for a landscape that is more sustainable and integrated with the University's mission. This plan takes an ecological approach, looking at campus as an ecosystem with both human and physical elements.

Mission Statement

WMU Landscape Services mission is to enhance the educational, extracurricular, and working atmosphere by providing a safe, clean, and aesthetically pleasing exterior environment for the Western Michigan University community. All of this is provided with an emphasis on responsible environmental and fiscal stewardship.



History of the Landscape

Since the establishment of Western Michigan University in 1903, the University has dealt with various planning issues, many of which resulted from the original site selection of “Prospect Hill.” Donated by the city of Kalamazoo, Prospect Hill seemed to be an ideal location at the time, with a view overlooking the city and easy access from both Davis Street and Asylum Road (now Oakland Drive.) However, because the University was situated on a steep hill near the intersection of major roads and railways, opportunities for physical expansion were limited.

Upon finalizing the location of the University, the Olmstead Brothers of Massachusetts were hired to prepare a landscape plan. A modified plan was eventually used, as the complete plan proved to be too expensive. The first building, the Administration Building, was completed and occupied on September 1, 1905.

By 1923, enrollment grew to a point where expansion had become necessary, and there was no option but to segregate the campus. President Waldo purchased all the land bound by Oakland Drive, the Michigan Central Railroad, and the State Psychiatric Hospital, plus additional land just south of the original buildings. The newly purchased land had its own obstacles. Not only was the land very hilly, but there were serious drainage issues as the WMU campus sits on two major county watersheds. Waldo stadium was constructed on drained swampland.

Among the first permanent facilities built on the new “West Campus,” were the Burnham Residence Halls in 1948, followed by the first classroom building, McCracken Hall, in 1949, Kanelly Memorial Chapel in 1951, and Seibert Administration Building in 1952. WMU experienced tremendous increases in enrollment during the 1960s. This created a severe housing shortage, and thus came about the Goldsworth Valley housing units. Miller Auditorium, Shaw Theatre, and Sangren Hall were also constructed during this time.

As the University continued to grow, the need for a formal development plan became apparent. The first Campus Development Plan was drafted in 1970, outlining University growth and planning issues. The main campus as it exists today is the result of the 1970 plan which was based on the following guidelines:

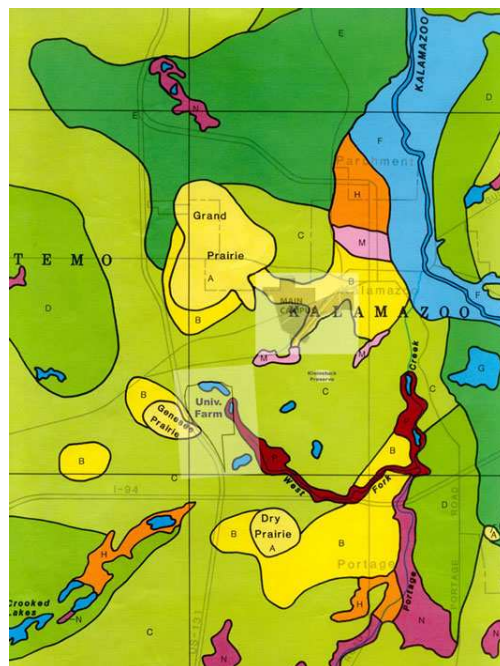
1. Make this a pedestrian campus by eliminating from the academic core all vehicles other than those of a service nature. Maintain a ten-minute walking time between extreme points within the academic core on campus.

2. Locate all main service driveways and parking facilities outside the academic core of the campus.
3. Locate all non-academic facilities on the periphery of the campus.
4. Designate specific areas that must remain vacant for controlled density purposes.
5. Those responsible for the long-range plan must be urged to give at least as much attention to vistas and to the outdoor spaces formed by the location of buildings as to the shape and location of the structures themselves.

A very basic landscape plan was also included in the Campus Development Plan. It was suggested that buffer plantings between the campus and adjoining road be established as early as possible. The plan also initiated the closure of part of Michigan Avenue which was bisecting campus. It wasn't until 1998 that the Department of Campus Planning took a collaborative approach involving faculty, staff, students, and community members to further examine campus facilities, land use, and development issues. These became the preliminary studies for the 2000 Campus Master Plan.

Though today's campus is vastly altered from previous conditions (drained swampland, constructed buildings and roads), it is still important to note pre-settlement conditions. The land which the University's main campus now occupies was primarily oak savanna, dry prairie, and wet prairie in the 1800s. Though this Landscape Master Plan is in no way aiming to recreate pre-settlement conditions, understanding the prior landscape helps to guide future decisions regarding vegetation and microclimates.

Campus Pre-settlement Vegetation Map



Goals

Provide Educational Opportunity

- Improve Public Relations
- Promote Professional Development
- Encourage Educational Opportunities

Create a Campus Image

- Create a Sense of Place
- Plan a Four Season Campus
- Develop Landscape Features
- Develop Campus Edges and Entrances
- Protect the Valleys

Increase Environmental Stewardship

- Restore Ecosystem Health, Structure, and Function
- Increase Awareness Concerning Road Salt
- Manage Campus Woodlots
- Implement Storm Water BMPs
- Reduce Pesticide and Fertilizer Usage
- Increase Sustainability of Campus Landscape

Promote Safety and Enhance Community

- Improve Visibility
- Retain Integrity of Open Spaces
- Create Community Destinations

Objectives

Provide Educational Opportunity

Improve Public Relations

- Increase interpretive signage throughout campus, emphasizing unique trees, native plants, wildlife habitats, and Landscape Services sustainable practices (storm water, compost tea.)
- Continue to update publicly available GIS database indentifying campus landscape trees.
- Continue to improve and maintain the Landscape Services website providing information on special projects, educational events, etc.
- Promote positive publicity by informing PR representatives of special projects occurring on WMU property (seminars, tree tours, events at Kleinstuck & Asylum Lake.)

Promote Professional Development

- Encourage Landscape Services staff to continually develop and grow as professionals through coursework, in-house seminars, and certifications.
- Become a model for other universities and industries through the use of cutting-edge technology and sustainable practices (veggie mowers, green roofs, compost tea.)

Encourage Educational Opportunities

- Provide educational events such as seminars, tours, and presentations geared towards the campus community as well as the public, promoting recruitment and retention of students, faculty, and staff, and enhancing the reputation of the University.

Create a Campus Image

Create a Sense of Place

- Create a clear identity for the University. Develop a more cohesive appearance through landscaping elements, focusing on distinct campus districts such as visitor venues, student housing, academics, and athletics.
- Develop creative signage which embodies a consistent appearance and overall uniform look representative of Western Michigan University.

Plan a Four Season Campus

- Aim for a friendly, year-around campus that imparts a different vital spirit with each season change.
- Choose plants which provide color and interest in all seasons to beautify campus.
- Always take into account snow storage when making landscaping decisions.

Develop Landscape Features

- Continue to enhance tree tours and create formal gardens (such as Haenicke Memorial Garden.)

Develop Campus Edges and Entrances

- Create clear and inviting entrances, invoking a strong sense of place and making visitors feel welcome to the University.
- Design the campus edges to be easily identifiable, yet friendly and sensitive to the urban fabric.
- Collaborate with Kalamazoo municipality on shared landscape.

Protect the Valleys

- Preserve and enhance the open space character of Goldsworth Valley.
- Introduce special landscape elements and encourage native plantings to enhance the valley ecosystem.
- Maintain Goldsworth Valley as an active and passive recreation area.

Increase Environmental Stewardship

Restore Ecosystem Health, Structure, and Function

Reduce water usage, improve air and soil quality, and increase wildlife habitat. (Follow LEED standards. Basic guidelines listed below.)

For a complete listing of applicable LEED standards, see Appendix A.

I. Water

- Reduce overall water usage (addition of native plants, reduction in grass cover, etc.)
- Continue to investigate and implement the use of alternate water sources. (Example: Substitute captured rain water for municipal water.)

- Return storm water runoff to pre-development volume, quality, timing (See WMU Storm Water Master Plan.)
- Filter storm water passing through campus.

II. Air

- Use plantings to offset carbon emissions.
- Reduce emissions by using cleaner, more energy efficient vehicles and equipment.

III. Soil

- Set and enforce soil standards for new and existing outdoor development. (Follow Landscape Services Specifications.)

IV. Biota

- Manage invasive plants and use native plantings where feasible/appropriate.
- Preserve existing natural sites and restore damaged sites to provide wildlife habitat and promote biodiversity.

Increase Awareness Concerning Road Salt

- Increase awareness of negative impacts of road salt on water bodies, vegetation, etc.
- Expand the use of all eco-friendly tools and products for de-icing to minimize the use of road salt. Beet juice is one option currently being used on campus.

Manage Campus Woodlots

- Remove invasive plants and enhance habitats with native vegetation. (For more detailed information see Campus Woodlot Management Plan.)
- Maintain woodlot understory to improve campus safety.

Implement Storm Water Best Management Practices (BMPs)

- Install and implement green infrastructure (rain gardens, green roofs, etc.)
- Create and/or maintain permanent 25-foot-wide buffer zones around all detention basins, retention ponds, and waterways when possible.
- Follow WMU Storm Water Master Plan guidelines.

Reduce Pesticide and Fertilizer Usage

- Use Integrated Pest Management (IMP) principles to develop BMPs for fertilizer and pesticide usage.
- Continue to research and implement safer alternatives (all natural herbicides, compost tea.)

Increase Sustainability of Campus Landscape

- Long-term maintenance requirements shall be a consideration for plant selection. In most cases, plants which require an exceptional amount of pruning, irrigation, or fertilizer should be discouraged.
- Choose native plants when possible, as they are more adapted to Michigan soils and climate and require less care.
- Continue to investigate landscape recycling opportunities.

Promote Safety and Enhance Community

Improve Visibility

- Clear brush and debris from under trees.
- Manage understory in campus woodlots.

Retain Integrity of Open Spaces

- Enhance open spaces by utilizing landscape features (shade trees, birdhouses, benches, water features, formal gardens) which promote campus community gathering.
- Maintain open spaces for passive recreation.
- Connect open spaces through landscape corridors when possible.

Create Community Destinations

- Develop more educational components highlighting campus landscape features (Haenicke Garden, tree tours, storm water tours, etc.)
- Beautify the campus landscape, creating a public destination for passive recreation.

Support and Collaboration

Encouraging discussion between university departments is imperative in achieving Western Michigan University's Master Plan goals. Landscapes Services management plays an integral role in campus planning, and should be consulted whenever a construction project occurs on campus, ensuring proper vegetation is selected for the site. Landscape professionals have knowledge and expertise that will aid architects and campus planners in decision making. It is also important to continue utilizing existing University resources such as the Finch Plant Science Greenhouse.

This plan aims to build an effective communication network between all stakeholders including:

- ❖ Campus Planning
- ❖ Maintenance
- ❖ Athletics
- ❖ Finch Plant Science Greenhouse
- ❖ Office for Sustainability
- ❖ Department of Public Safety
- ❖ Res Life
- ❖ Admissions



Appendix A: Resources

Landscape Services Best Management Practices

(http://www.fm.wmich.edu/lss/governing_documents)

- Irrigation
- Pesticides
- Fertilizer
- Mowers

Landscape Specifications (currently a work in progress)

- Planting
- Irrigation
- Tree Protection
- Concrete

Geographical Regions

Main Campus Map (see Appendix B)

- East Region
- Central Region
- West Region
- Athletics

Natural Areas

- Kleinstuck Preserve Map
<http://www.wmich.edu/kleinstuck/photosmaps.html>
- Asylum Lake Preserve Map
<http://www.wmich.edu/asylumlake/photos/maps.html>

Landscape Services Website

<http://www.fm.wmich.edu/operations/landscaping/>

LEED Standards

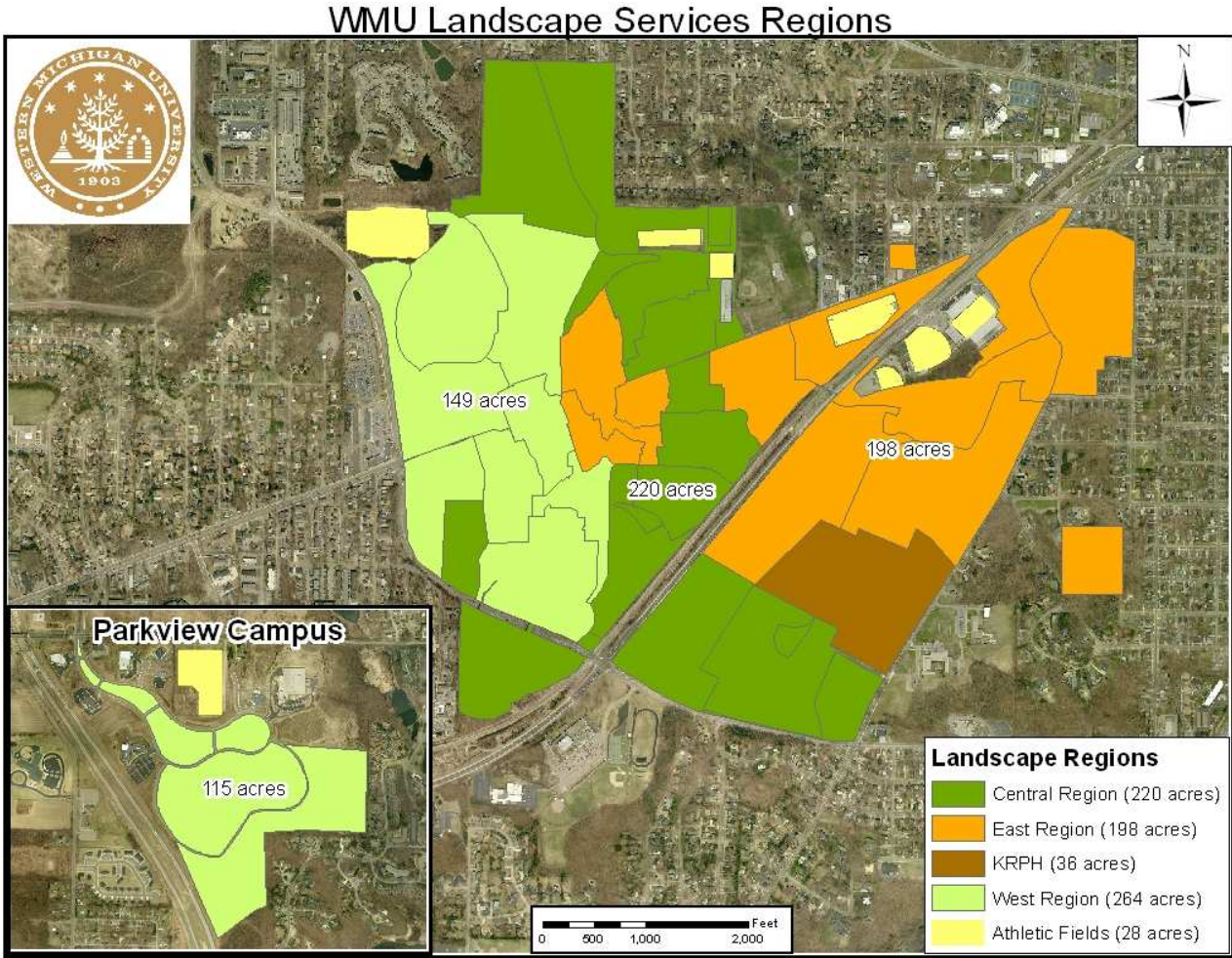
Go to website: www.usgbc.org/DisplayPage.aspx?CMSPageID=220

Click on “Rating System” located under “Quick Links” for full PDF version.

Campus Woodlot Management Plan (currently a work in progress)

Storm Water Master Plan (currently a work in progress)

Appendix B: Landscape Regions Map



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