UNIVERSITY of ROCHESTER

# 2011 LANDSCAPE MASTER PLAN

December 2011

Copyright © 2011 AYERS | SAINT | GROSS

All Rights Reserved.

# Contents


3 Introduction

5 Campus History

17 Observations

25 Campus Landscape Plan

77 Landscape Design Guidelines

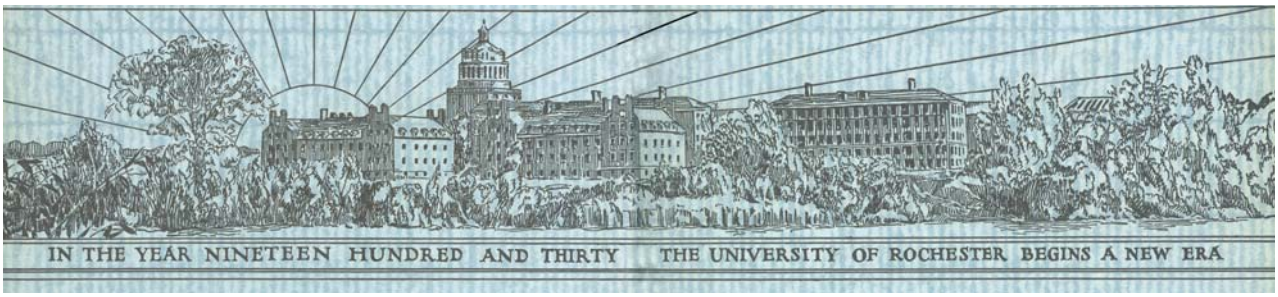
91 Campus Plantings

# Introduction

The following landscape master plan and design guidelines are intended to provide a framework for guiding the development of new and renovated landscapes on the University of Rochester's River Campus and at its Medical Center. Where the 2009 Campus Master Plan provides a blueprint for the overall growth of the campus, the current report is specifically aimed at providing detailed parameters for landscape development—a plan and guidelines that will help preserve and enhance the character of the campus' landscapes. This study builds upon the conditions assessment and design recommendations of EDR's 2010 reports on the River Campus and Medical Center and are meant to be used in conjunction with the University of Rochester's Design Standards (http://www.facilities.rochester.edu/ppm/designstandards). The landscape master plan and design guidelines were developed through a series of workshops at the University of Rochester between November 2010 and April 2011 and was presented during a joint meeting to the Board of Trustees Facilities Committee, and the Hospital Board Facilities Committee.

Workshop Participants included:
Jose Fernandez, Executive Director, Campus Planning, Design, & Construction Management
Paul Spaulding, Project Director, Campus Planning, Design, & Construction Management
Dan Schied, University Horticulturalist & Manager of Grounds
Jeff Foster, Director, River Campus Facilities & Properties
Patricia Beaumont, Director, Facilities Support Operations
Richard Pifer, Associate VP for Facilities & Services
Mary Ockenden, Associate VP and Director Medical Center Space & Strategic Planning
Juliette Goodwin, Assistant Director, Medical Center Space & Strategic Planning
Mark Schwartz, Director, Medical Center Facilities
Paul Way, Senior Engineer, City of Rochester
Marcia Barry, Associate City Planner, City of Rochester
Brian Liberti, City Forester, City of Rochester
JoAnne Beck, Senior Landscape Architect, City of Rochester
Mark Bayer, Principal, Bayer Associates
Margie Searl, Chief Curator, Memorial Art Gallery (MAG)
Mary Scipioni, Project Manager, edr
Kevin King, Associate Principal, Ayers Saint Gross Architects & Planners (ASG)
Jonathan Ceci, Director, Landscape Architecture Studio, ASG

# Campus History



Late 1920 Depiction of University of Rochester

## River Campus History

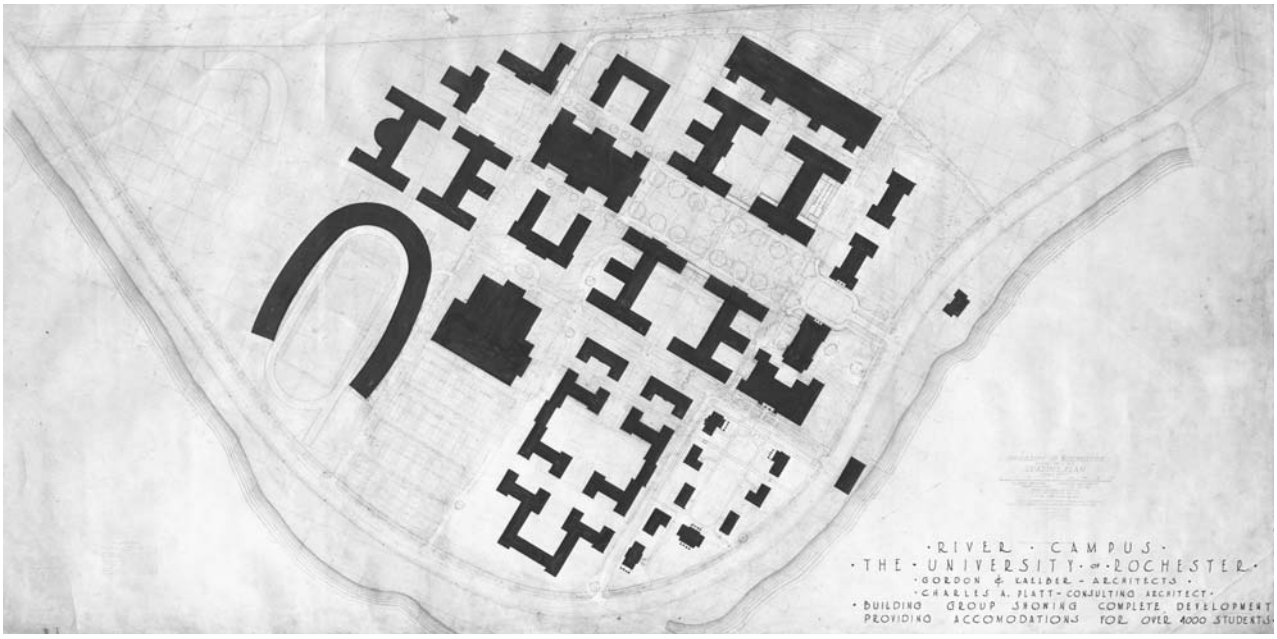
Although the University of Rochester was founded in 1850, it was not until the 1920's that the university began to develop the former lands of Oak Hill Country Club into today's River Campus. Before this time, the university was located closer to downtown Rochester in the vicinity of what is today the university's Memorial Art Gallery. Construction of Rush Rhees Library and the other buildings that frame Eastman Quadrangle started in 1927, and in 1930 these buildings first opened their doors to students. The campus was, from its very start, an integrated composition of architecture and landscape. The team that planned the original River Campus included such distinguished members as architect Charles A. Platt , Kaelber Architects, and the Olmsted Brothers.

While their master plan for the campus went through multiple iterations, the team's persistent intent was to plan a model academic community on the banks of the Genesee River. Removed from downtown Rochester, it was to be a sanctuary for learning and progress—and growth. This fully planned and highly ordered environment embodied the quest for enlightenment, broader access to education and the improvement of humanity that was characteristic of the post-"Great War" generation. This optimistic attitude, which is implicit in the University's motto Meliora, was also memorialized in inscriptions on the face of Rush Rhees Library:

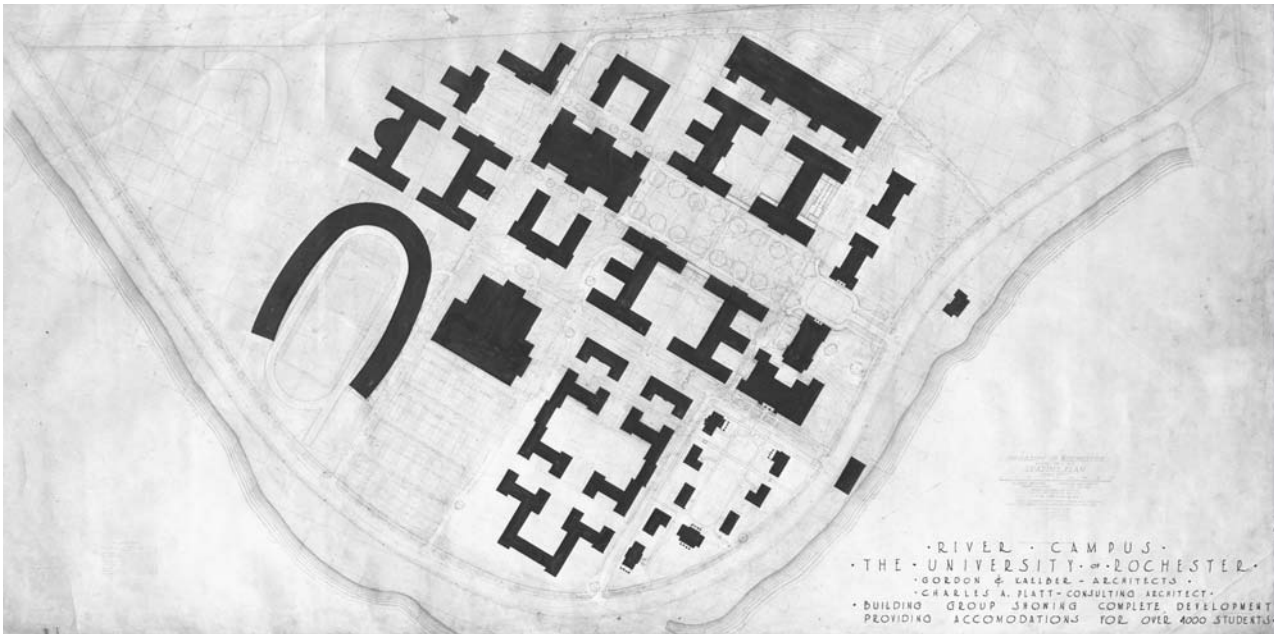
> "HERE IS THE HISTORY OF HUMAN IGNORANCE ERROR SUPERSTITION FOLLY WAR AND WASTE RECORDED BY HUMAN INTELLIGENCE FOR THE ADMONITION OF WISER AGES STILL TO COME"

> "HERE IS THE HISTORY OF MANS HUNGER FOR TRUTH GOODNESS AND BEAUTY LEADING HIM SLOWLY ON THROUGH FLESH TO SPIRIT FROM BONDAGE TO FREEDOM FROM WAR TO PEACE"

By the time that the River Campus was under construction, Rochester already had a strong local tradition of horticulture and plant collecting, with the unrivaled nurseries of Ellwanger and Barry then at the peak of their success. In keeping with this tradition, the campus' outlying landscapes were planted informally with tree specimens. The new landscapes also contributed to the city's legacy of important designed landscapes. Here at the River Campus, the Olmsted Brothers were treading in the footsteps of their father, Frederick Law Olmsted, whose adjacent Genesee Valley Park, with its pastoral landscapes, provided a convenient foil to the architectural character of the new campus environment.



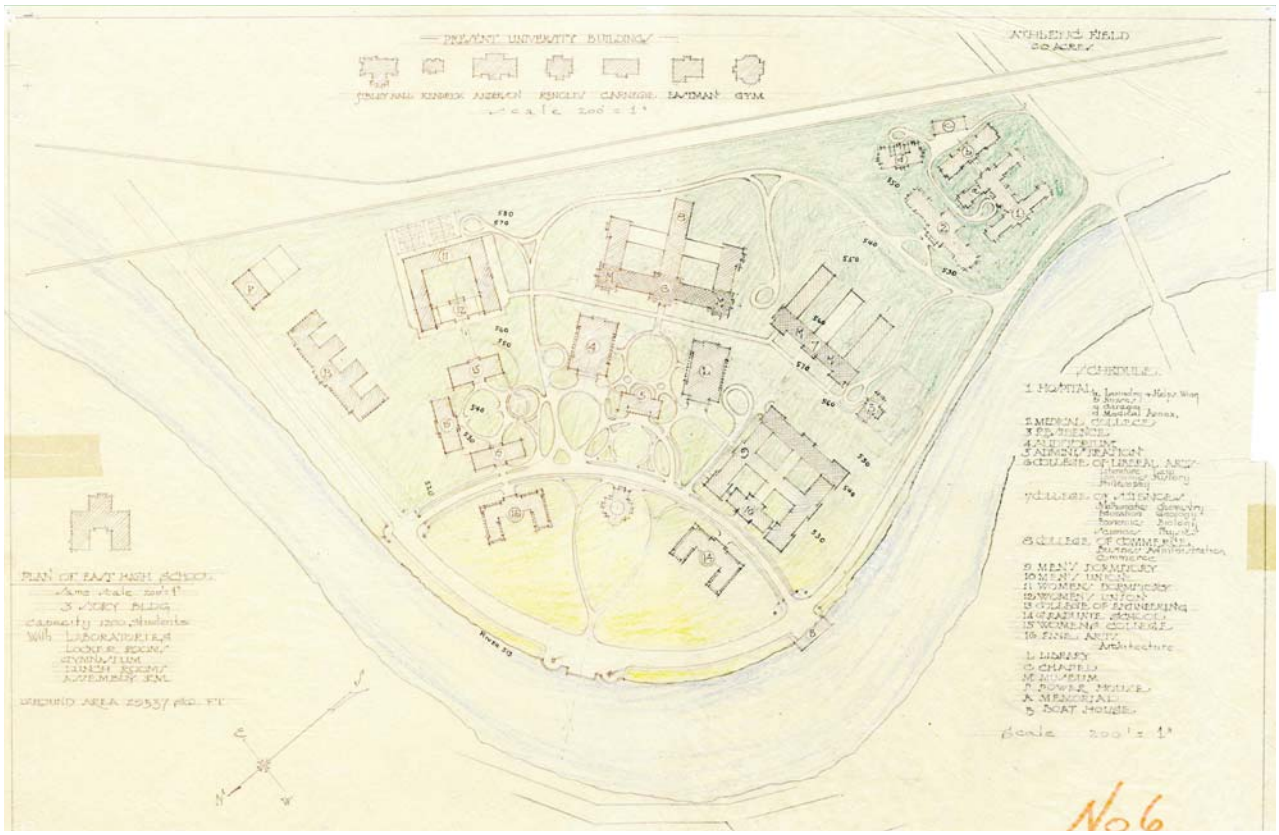

1926 Master Plan of River Campus at Full Buildout By: Olmstead Brothers



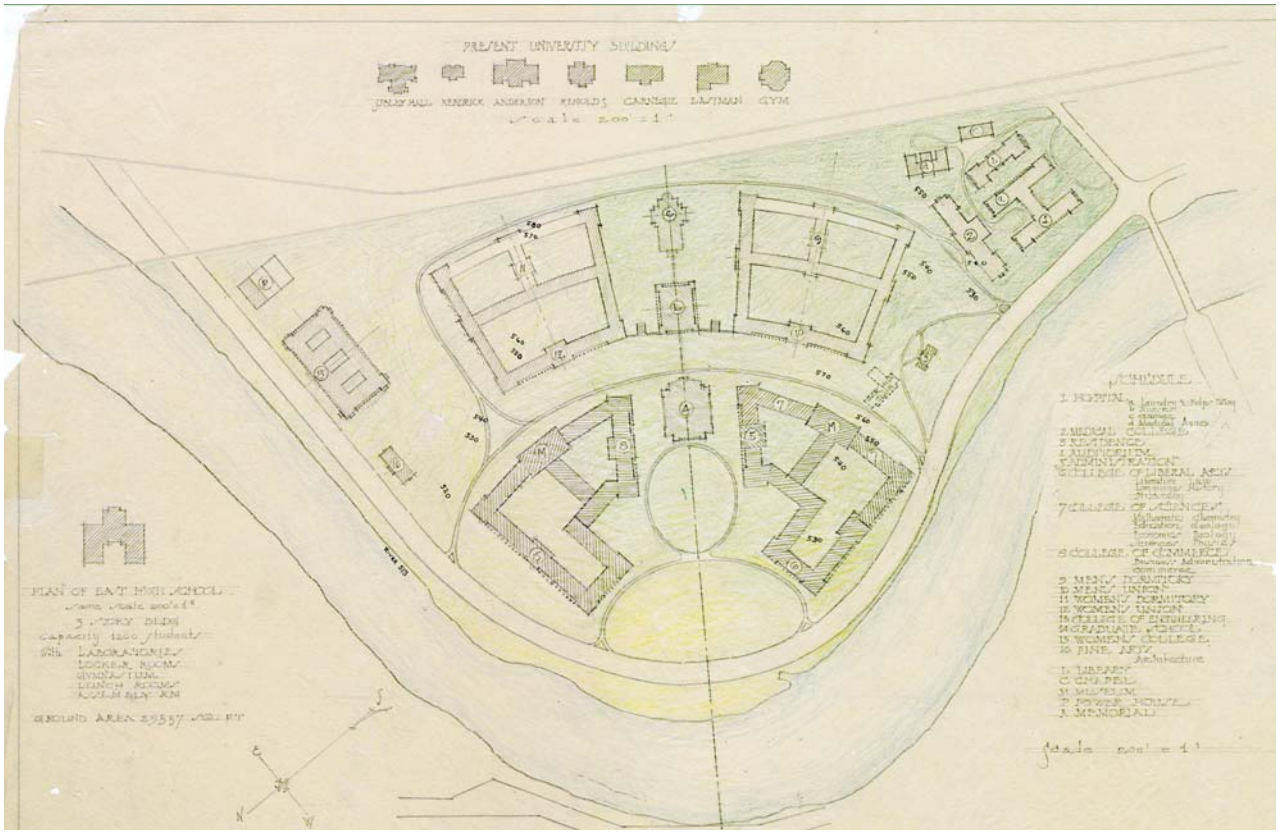

1926 Master Plan of River Campus at Full Buildout By: Olmstead Brothers

The Olmsted Brothers did significant design work on the River Campus starting in 1925 and continuing through to 1931. During this time they worked collaboratively with Charles A. Platt and Gordon & Kaelber Architects on both the layout of the campus and the design of particular building sites. Of the numerous names that appear on the Olmsted Brothers' plans and records related to the University, the two that appear most frequently are F. B. Smith and Frederick Law Olmsted, Jr., indicating their central role in guiding the design of the campus landscapes. One plan, for example, a topographic map of Oak Hill at the University of Rochester, includes the note "Plan No. 39 revised in accordance with suggestions made by Mr. Olmsted on June 26, 1926" (Item # 7588-28-sh2; dated 28-July-1926). On other drawings, the initials of these two frequently appear under the category "Draftsmen" in the titleblock.

Photograph of Frederick Law Olmstead, Jr.




Concept plan No 6 for River Campus by Olmsted Brothers

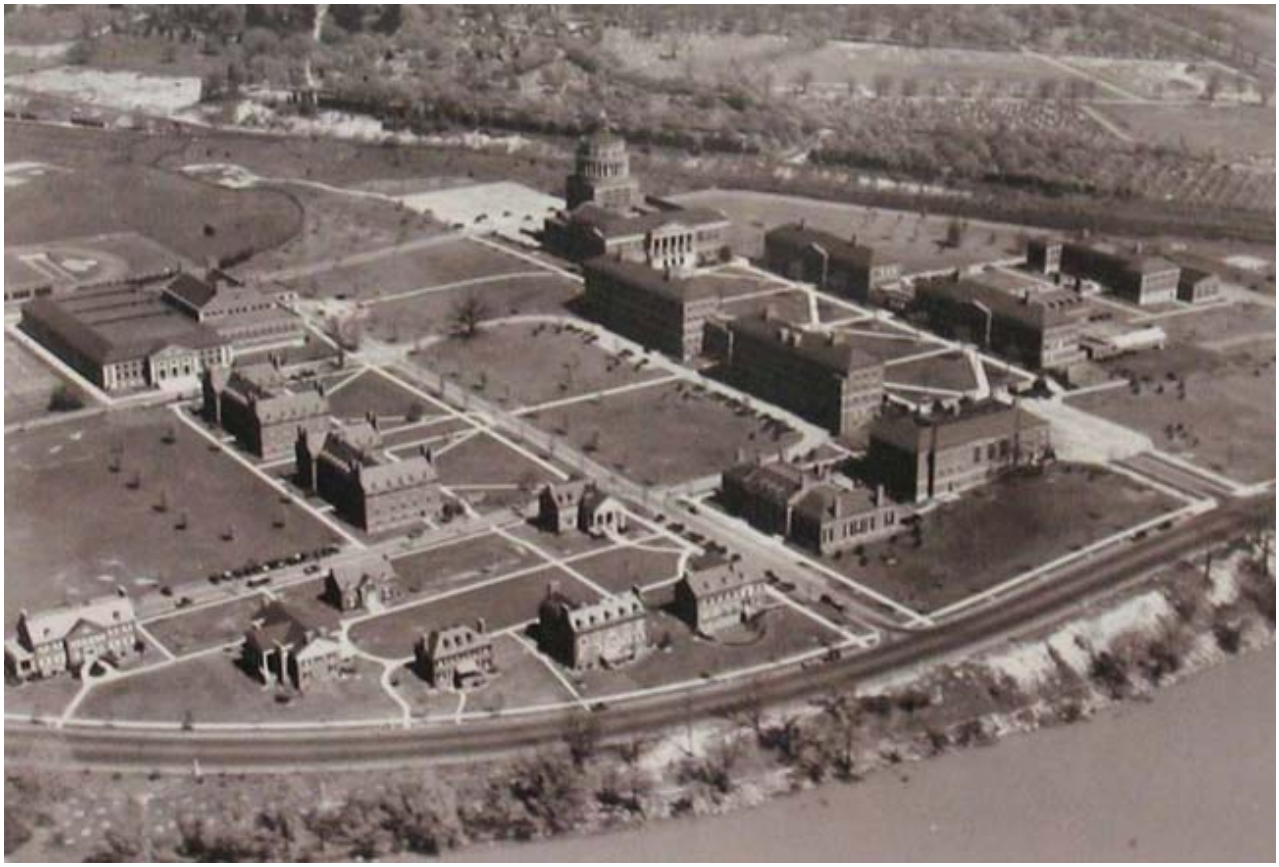



Concept plan No 3 for River Campus by Olmsted Brothers

Historic Postcard of Eastman Quad

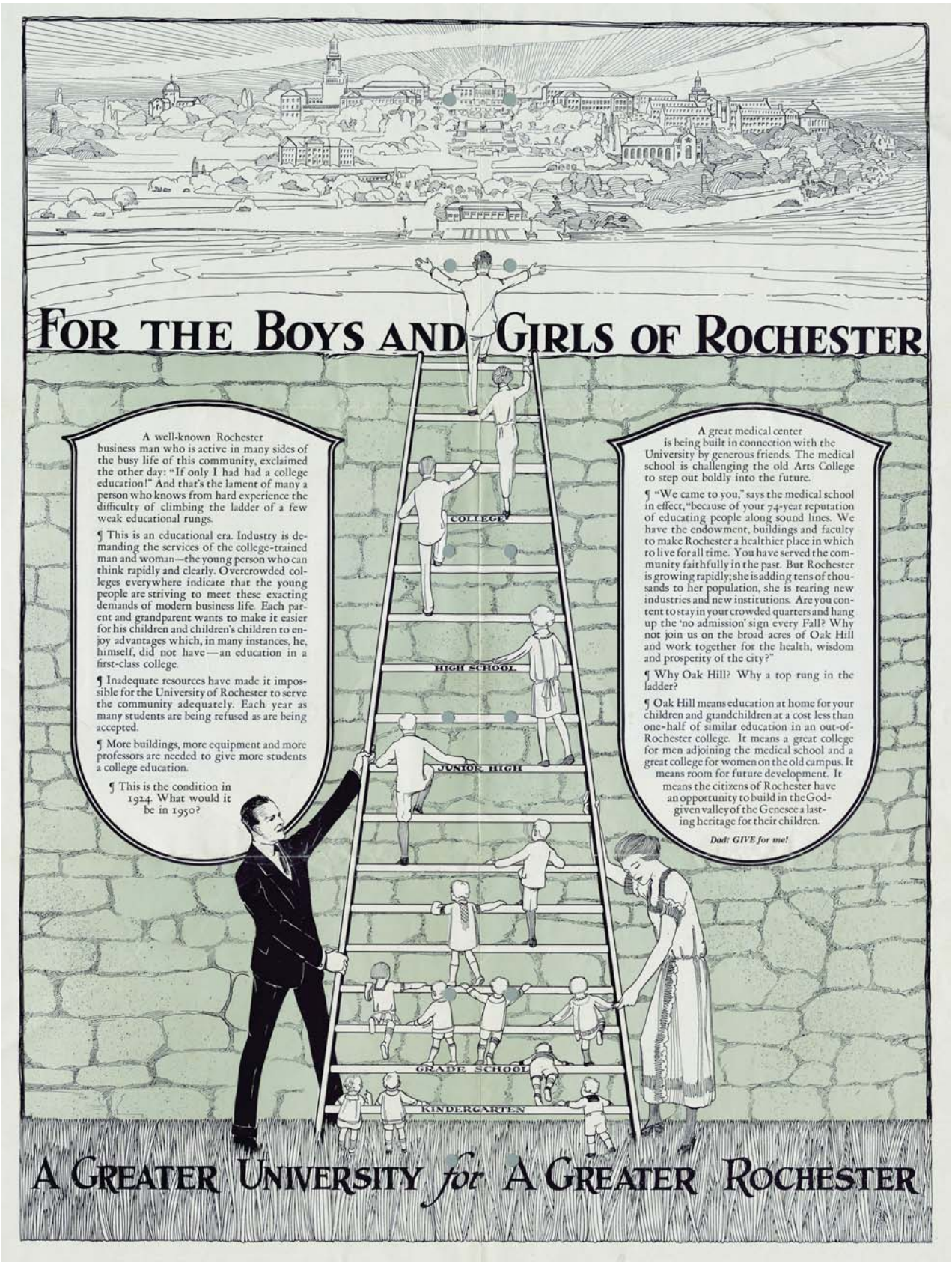
Eastman Quad, as it was constructed, consisted of a symmetrical pattern of concrete walkways stretching across a long terraced lawn area, with flanking rows of large elm trees. Walkways are aligned with major architectural features, such as colonnades and building entrances. Monumental granite stairs and carved limestone balustrades mark the end of the terrace with large flagpoles at the head of the lower terrace. Special cast bronze lanterns were created for exclusive use on the River Campus.

Historic photo of Commencement processional at Eastman Quad



River Campus Aerial 1926

Elmwood Avenue Aerial 1935




Promotional Literature from the Captial Campaign

# Medical Campus History

At the same time as the University was conducting its capital campaign to raise money for the creation of the River Campus, construction was underway for new medical, dental and nursing schools and the Strong Memorial Hospital. The medical school, as it was conceived by the University's president Dr. Benjamin Rush Rhees and Abraham Flexner of the Carnegie Foundation, was to pioneer new methods of medical education and would serve to better the population of Rochester. Contemporary promotional literature from the capital campaign conveys this positive outlook and the progressive intent behind the founding of the medical school and hospital. The first dean of the medical school, George Hoyt Whipple, oversaw the design and construction of the new Medical Center complex, which fronted on Crittenden. The medical school and Strong Memorial Hospital opened in 1925, and in 1949, the hospital's psychiatric wing was opened.

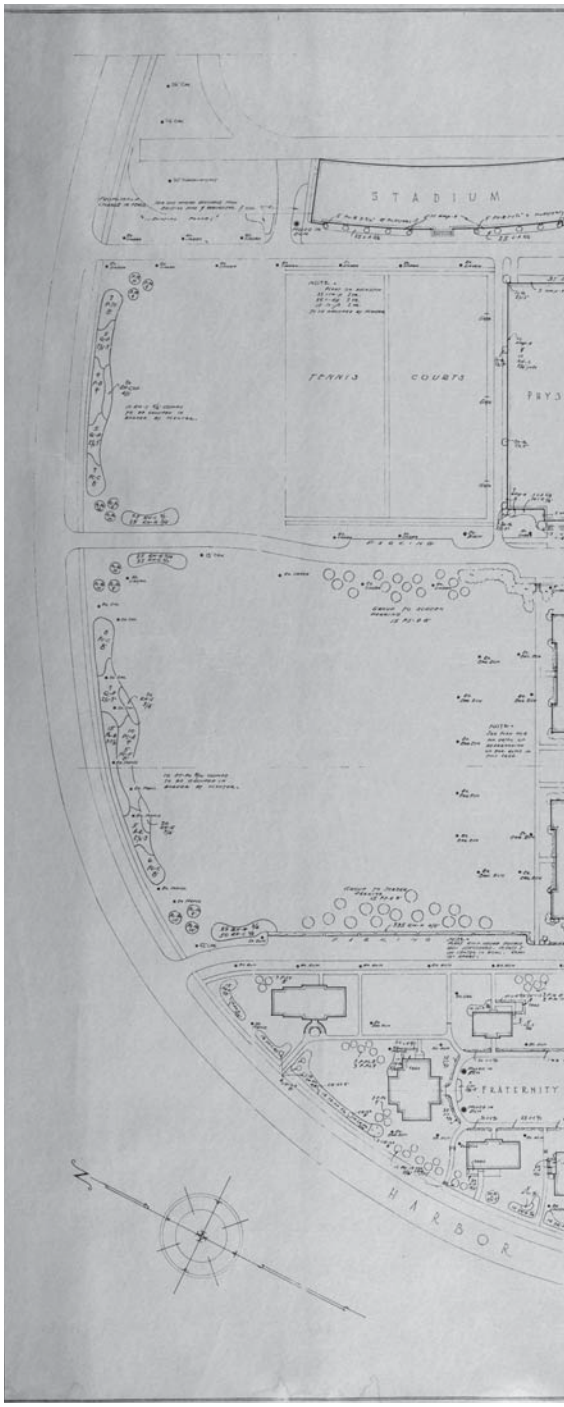
Within the hospital complex were regularly spaced outdoor courtyards, which provided patients and staff with access to fresh air, daylight and pleasant garden environments. The new landscapes surrounding the hospital buildings were, on the other hand, sparsely planted with widely spaced street trees, limited foundation plantings, occasional tree and shrub specimens and large expanses of turf--suggesting a clean (even sterile) environment appropriate for modern medical care. Also noteworthy is the vehicular infrastructure that is provided in these landscapes, with curbed roadways, parking areas and vehicular forecourts.

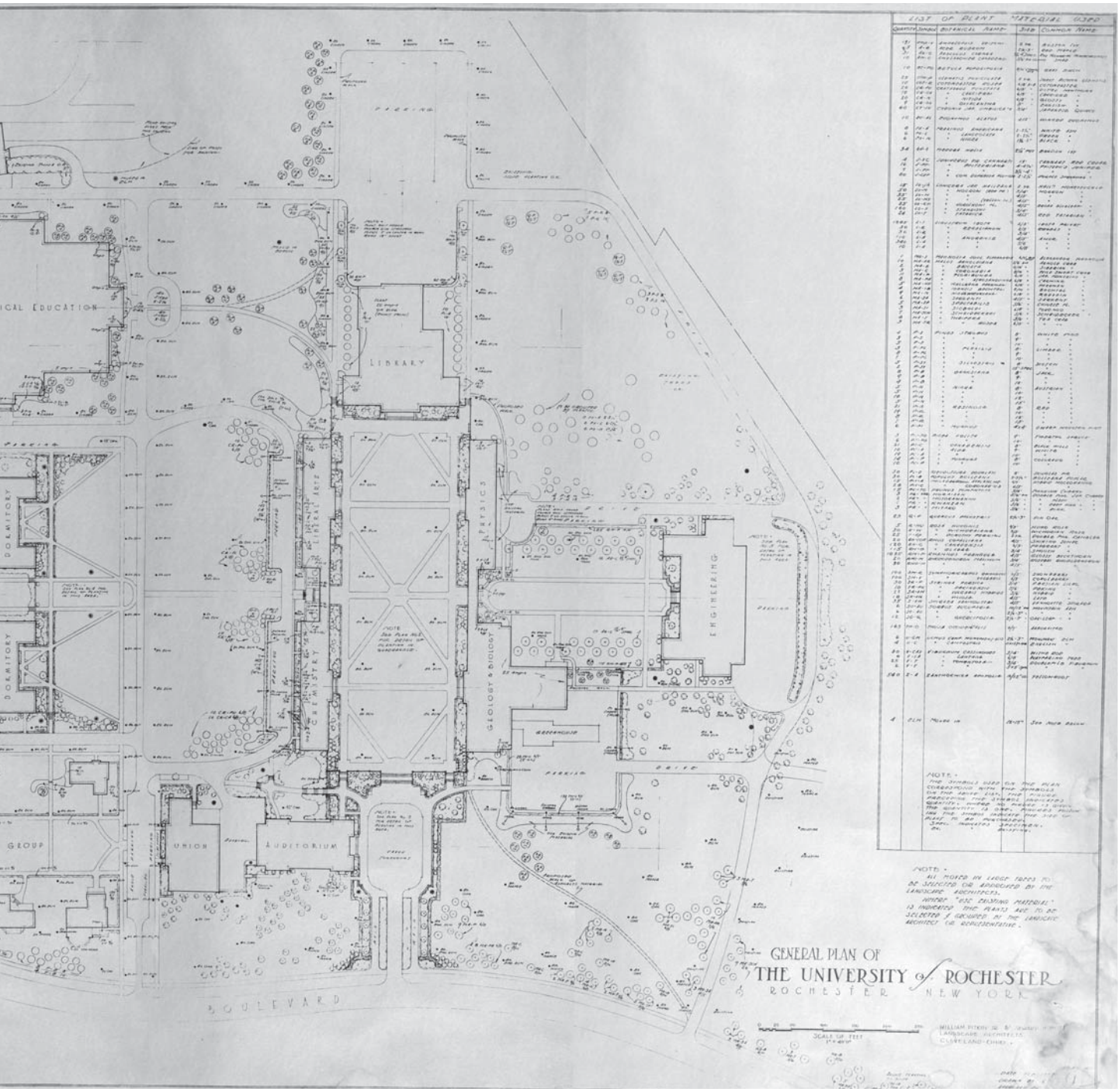
Historic Postcard

## Historic Landscape Preservation

Historic designed landscapes are an important part of the cultural legacy of the University. Not only do they convey a sense of character, but they provide a record of the history of the institution, its values and its people. It is inevitable that landscapes change over time. Plants grow and age. Materials weather. Uses of individual spaces change as the life of the University changes. Good historic landscape preservation strikes a balance between the sometimes conflicting goals of adapting to meet current user needs, preserving historic design intent (geometries, plant species, landscape maintenance practices) and conserving extant original materials. In order to maintain historic integrity, new improvements should not simply ape historic conditions; they should be distinguishably new yet sympathetic with the historic design.

The landscapes of the River Campus have particular historic significance: Eastman Quadrangle, Fraternity Quadrangle, Wilson Quadrangle, Hoyt Courtyard, the Residential Courtyards, and The Genesee Valley Park. They have ties to the local history of Rochester and are connected with historically significant designers, such as the Olmsted Brothers and Charles Platt. As the heart of the University, the River Campus will for the foreseeable future face pressures to change. Therefore, it is important that the University develop a proactive preservation strategy for its historic landscapes that will serve as a roadmap to guide future changes. Preservation planning involves extensive archival research, inventorying and assessment of existing conditions, analysis to determine relative historic importance and period-of-significance, as well as development of guidelines and policies for accommodating change while preserving historic materials, geometries and planting typologies




LIBRARY
PHYSICS
GEOLOGY & BIOLOGY
ENGINEERING
CHEMISTRY
UNION
AUDITORIUM
BOULEVARD
DORMITORY
DORMITORY
GROUP
GENERAL PLAN OF
THE UNIVERSITY of ROCHESTER
ROCHESTER NEW YORK

# Observations

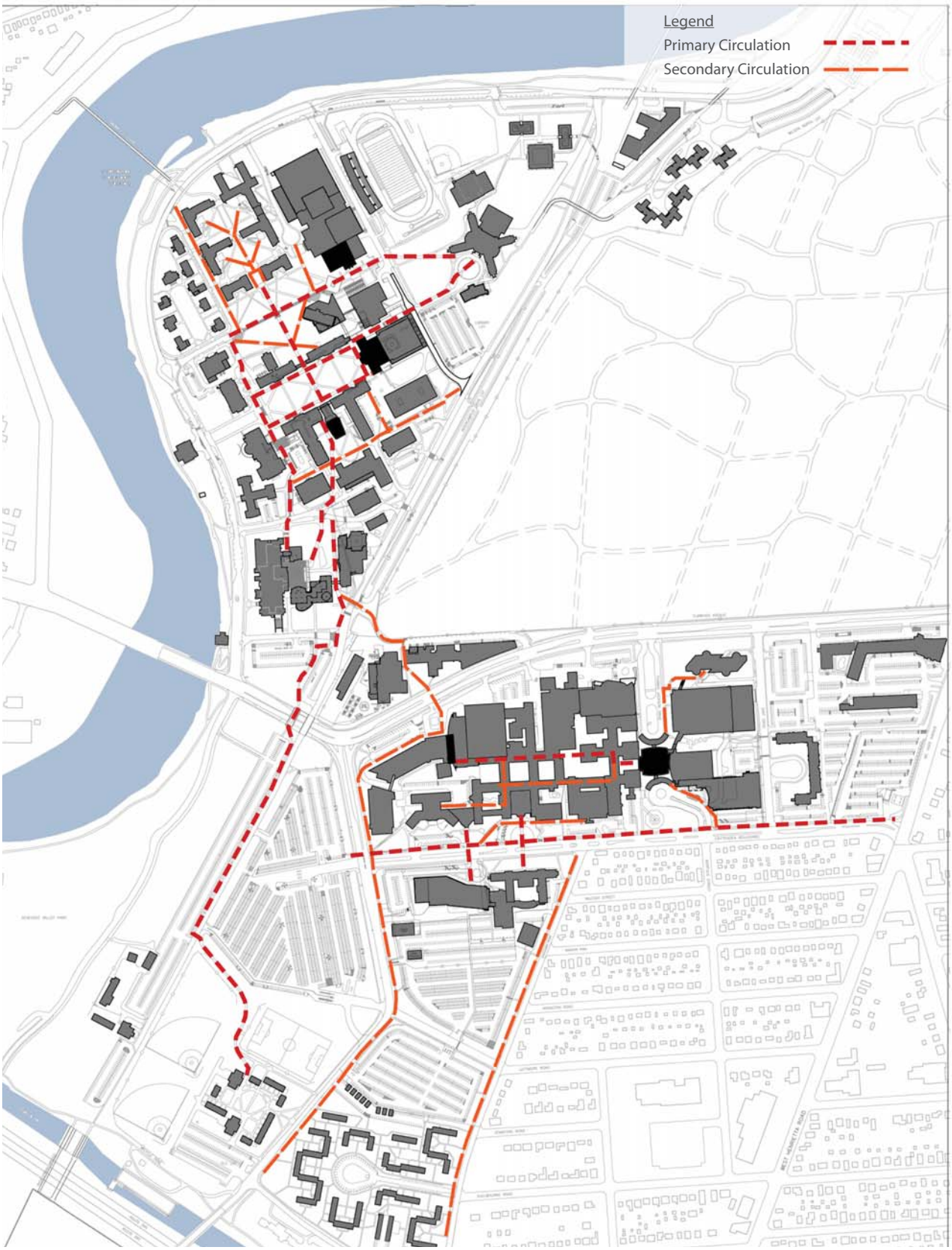
## EXISTING LANDSCAPE PALETTE

Some of the individual landscapes of the River Campus and the Medical Center have a well-defined and consistent palette of landscape materials in terms of paving and site furniture. However, across both campuses, there is a great deal of diversity of paving materials and site furniture, which takes away from any sense of consistency of landscape character. In terms of paving, walkways are paved with brick, concrete, stone and asphalt, in a variety of patterns. In terms of lighting, there are two predominate lighting standards on the River Campus, but none at the Medical Center; each project has tended to introduce a new set of site lighting products. In terms of benches, the River Campus uses a black metal bench as its standard, but earlier generations of benches are still found throughout its landscapes. The Medical Center does not have an identified standard, and there are many different products across the campus.

## EXISTING PEDESTRIAN CIRCULATION

In the decades since the River Campus and Medical Center were first created, the campus has grown outward from these two cores. Once the campus expanded beyond the capacity of its original master plan, new development was accommodated within the core River Campus as infill development (sometimes at the expense of campus landscapes) or as clustered development on outlying parcels. Much of this newer development is not well integrated into the campus pedestrian path network. In the case of infill development, new buildings often obstructed planned circulation routes. In the case of outlying construction, often the building was sited first and then the pedestrian connections were accommodated wherever they would fit. At the Medical Center, new wings were added onto the existing buildings, and new service areas and parking lots were developed along Crittenden and Elmwood, so that the pedestrian experience around the campus perimeter has been compromised. During the planning workshops, participants identified:

- a lack of identifiable cross-campus pedestrian routes on the River Campus and at the Medical Center
- a somewhat confusing path for pedestrians navigating through the Medical Center
- an inconsistent use of paving materials along primary pedestrian routes
- inadequate pedestrian connections between the River Campus and the Medical Center


Legend
Primary Circulation
Secondary Circulation

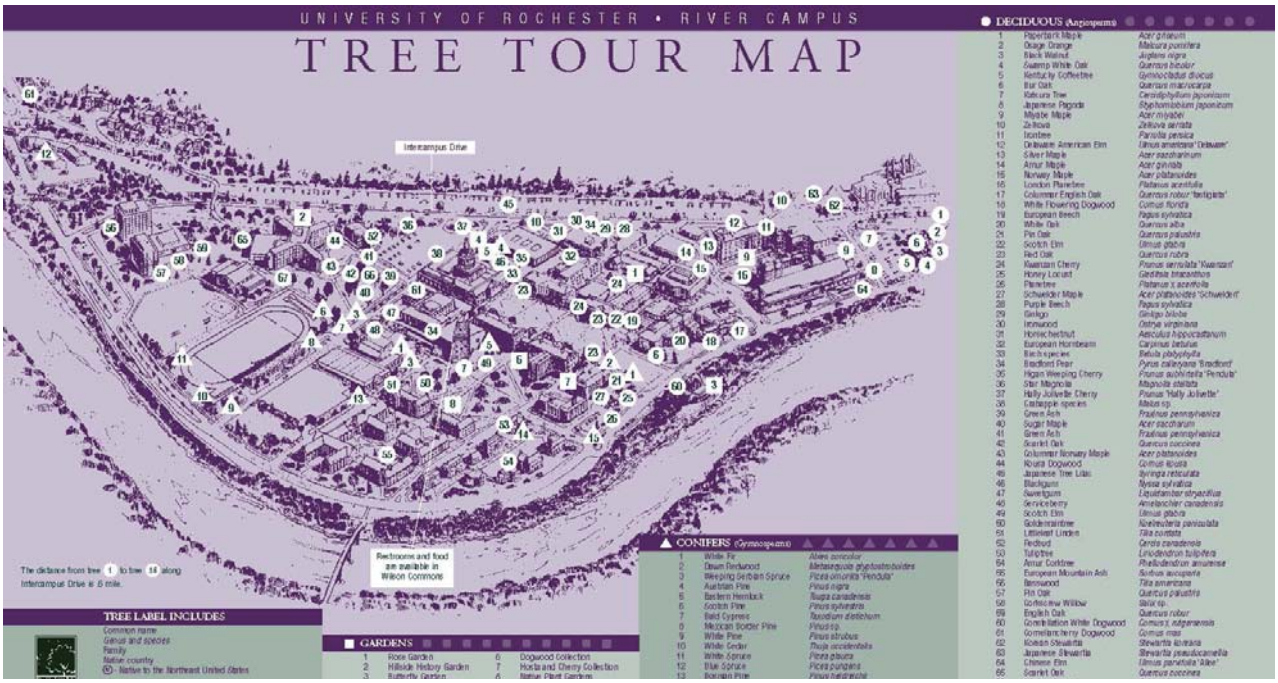
## THE CAMPUS ARBORETUM

While the campus has long contained a rich assortment of tree and shrub specimens, it has only been organized as an arboretum since the 1990s. At that time, the designation was sought after as a means of creating broader awareness of the campus' plant collections and as a way of establishing an entity that would help preserve and sustain the collection for future generations.

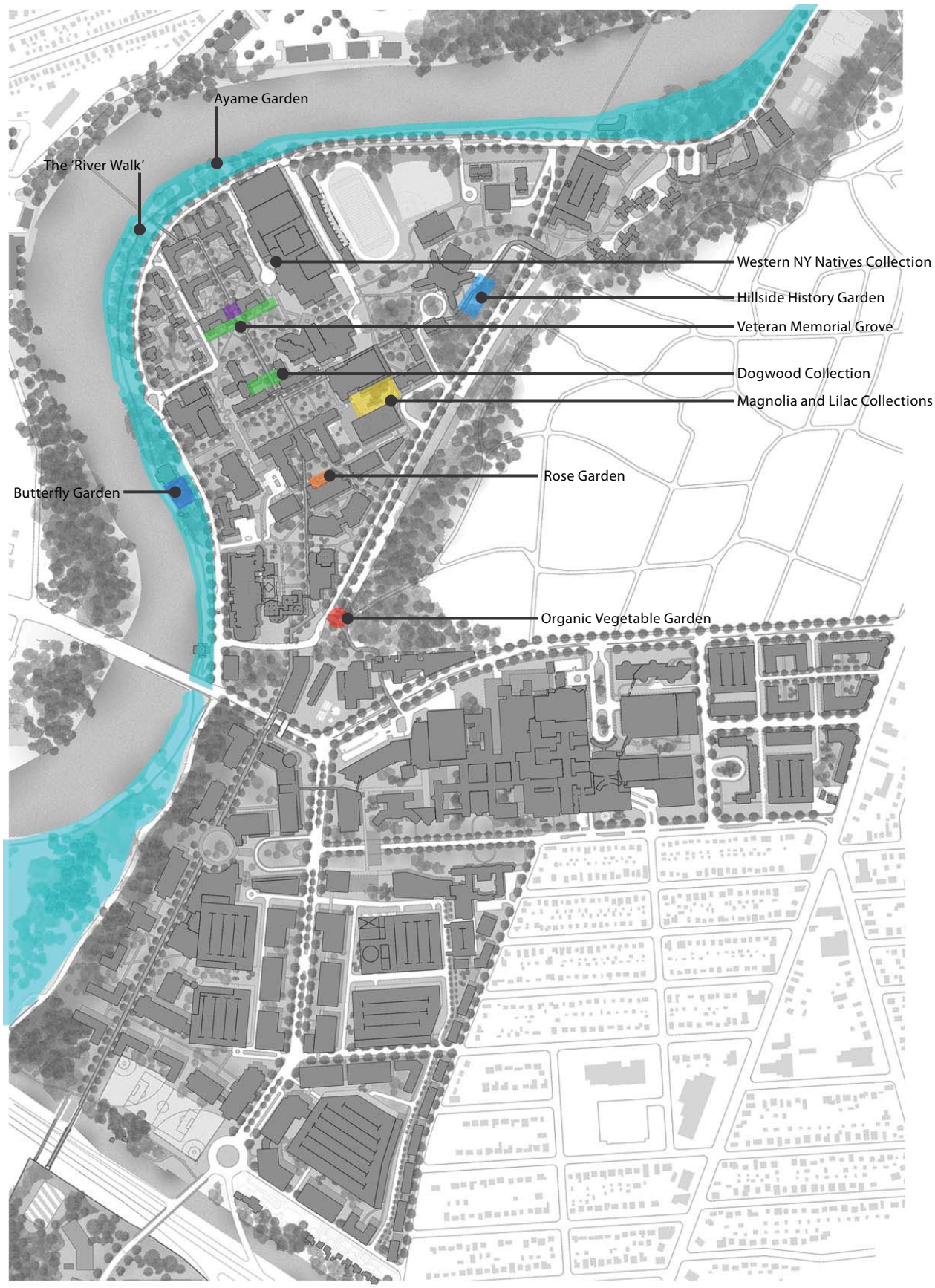
The stated mission of the arboretum is:

"To reinforce and maintain an environment that preserves the beauty of the campus through a progressive program of grounds management, while supporting the study of native plant materials and developing new plant collections. The Arboretum will create an opportunity for continuing education about the University and regional horticulture, celebrating their history while promoting interest and support for the University and the Arboretum."

During the 2011 planning workshops, several goals relating to the arboretum were identified. Firstly, there is a need a more comprehensive collections strategy and master plan for the arboretum. New plantings in individual areas (associated with building projects) should follow a 'blueprint' or broader vision for the campus as an arboretum. Secondly, the arboretum's collection of trees and shrubs (and gardens) is primarily aimed at enhancing the beauty of the campus and secondarily at providing a teaching collection for the University's academic programs. There is interest in supporting research and use of the collection for teaching, but currently there is not much use of the collection for these ends.




University of Rochester Arboretum, River Campus, Tree Tour Map, see pages 104-107 for full brochure


Ayame Garden
The 'River Walk'
Western NY Natives Collection
Hillside History Garden
Veteran Memorial Grove
Dogwood Collection
Magnolia and Lilac Collections
Rose Garden
Butterfly Garden
Organic Vegetable Garden

# Landscape Master Plan

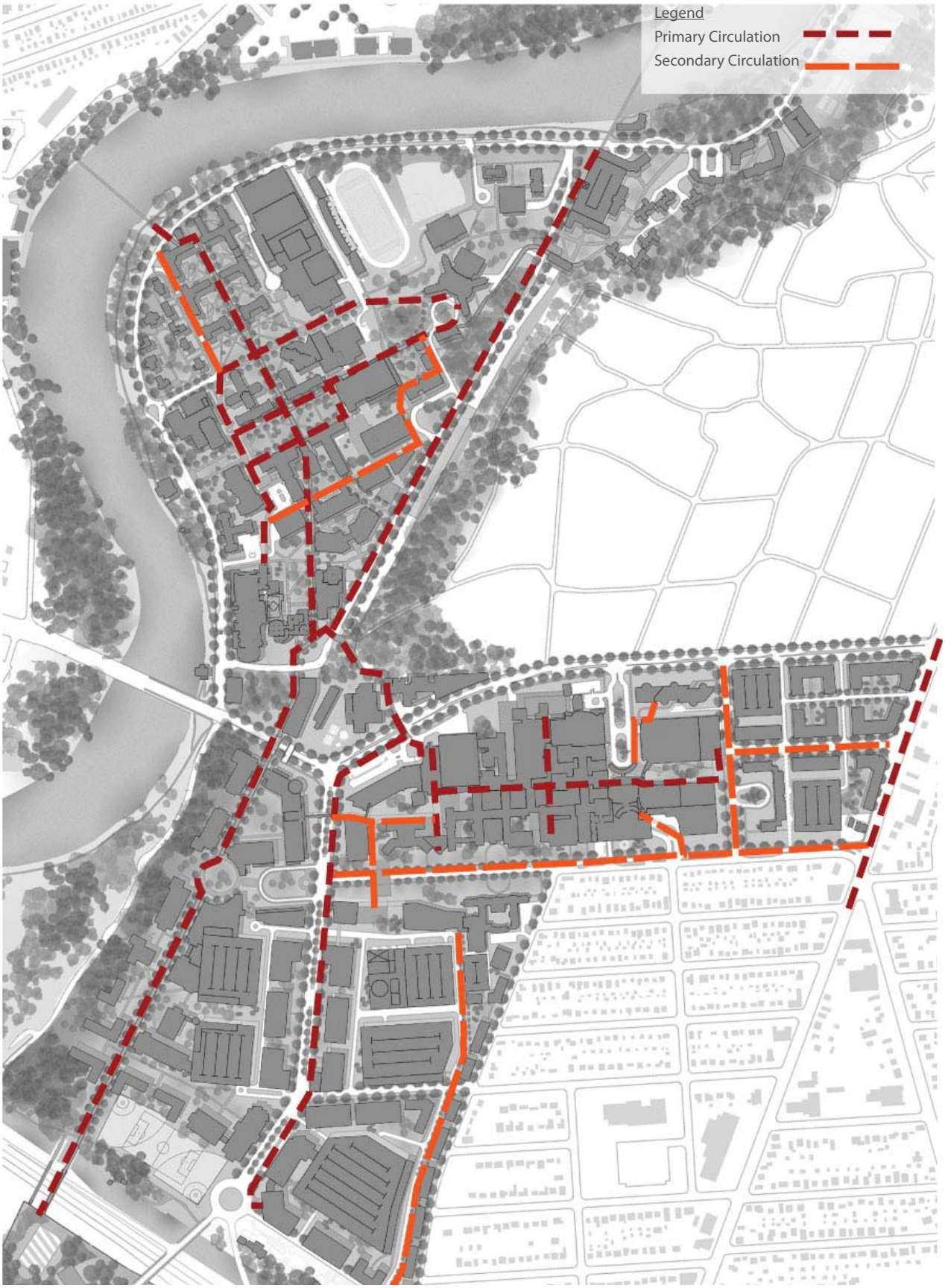
Landscape Master Plan

# Landscape Master Plan

Landscapes are of central importance at the University of Rochester. On the River Campus, the campus character is as much defined by its landscapes as by its buildings; Rush Rhees Library and Eastman Quad have a symbiotic relationship and each would be diminished without the other. At the Medical Center, landscapes are important for passive wayfinding and help to create a healing environment. While each of the two campuses has good examples of successful placemaking with landscape, the Landscape Master Plan identifies areas for improvement and recommends strategies for ensuring a continuation of this landscape legacy even as the campus continues evolving into the future.

## Summary of Recommendations:

- Improve the network of pedestrian paths across and between the campuses, while maintaining and improving fire and emergency access where needed
- Enhance existing campus landscapes using a repertoire of familiar landscape types as the guideline for design
- Create new campus landscapes that relate well to existing campus landscapes
- Strengthen the campus "brand" with a more consistent pallete of paving materials, site furnishings and lighting fixtures
- Develop a planting design and collections strategy for the arboretum that dovetails with the Landscape Master Plan approach to individual campus landscapes


Legend
Primary Circulation
Secondary Circulation

## PEDESTRIAN ACCESS

Walkways, promenades and corridors are the primary infrastructure for the movement of students, faculty, staff and patients around the River Campus and the Medical Center. As such, the campus pedestrian network needs to be convenient, rational and functional. It must also be attractive and consistent in terms of materials and alignments. The path network through Eastman Quad exemplifies the right combination of functional simplicity, elegant patterning and responsiveness to architecture that can be emulated throughout campus. While the Eastman layout was developed on a "clean slate," there are still opportunities to retrofit and manipulate the existing path network to foster similar success.

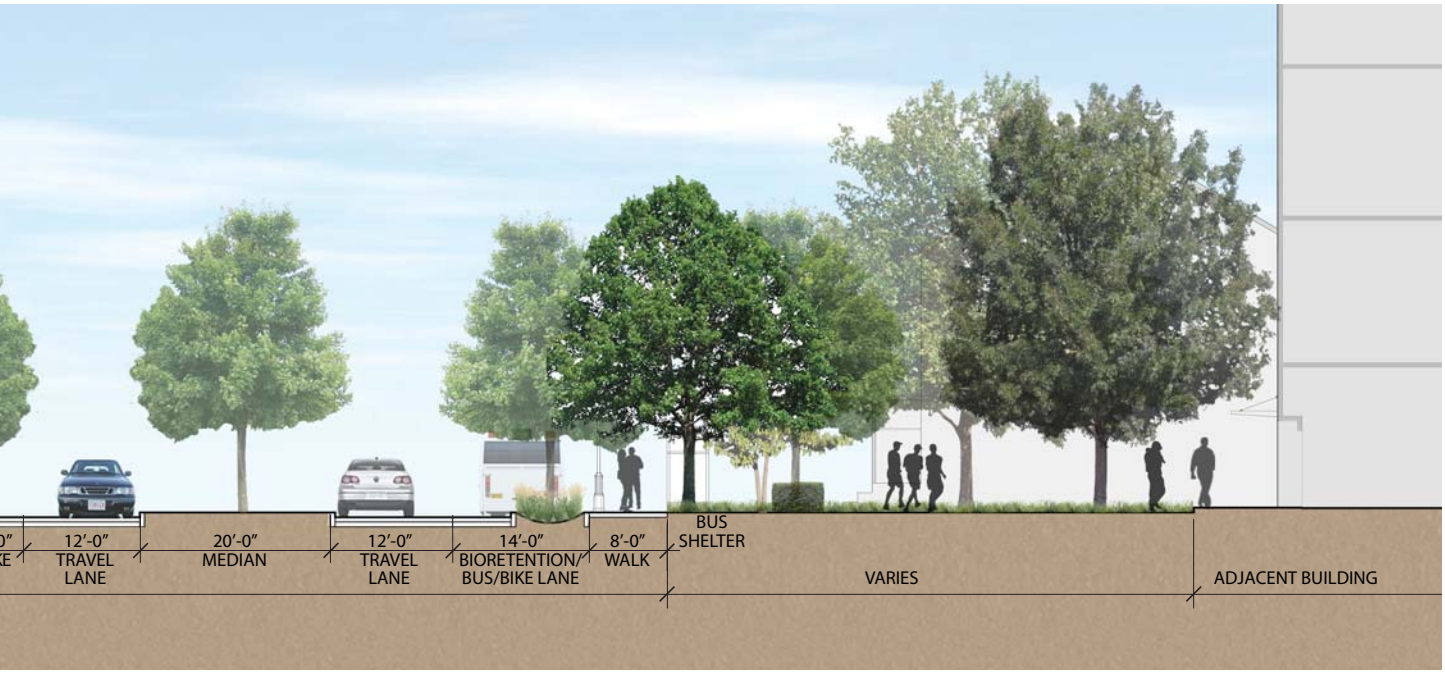
Legend

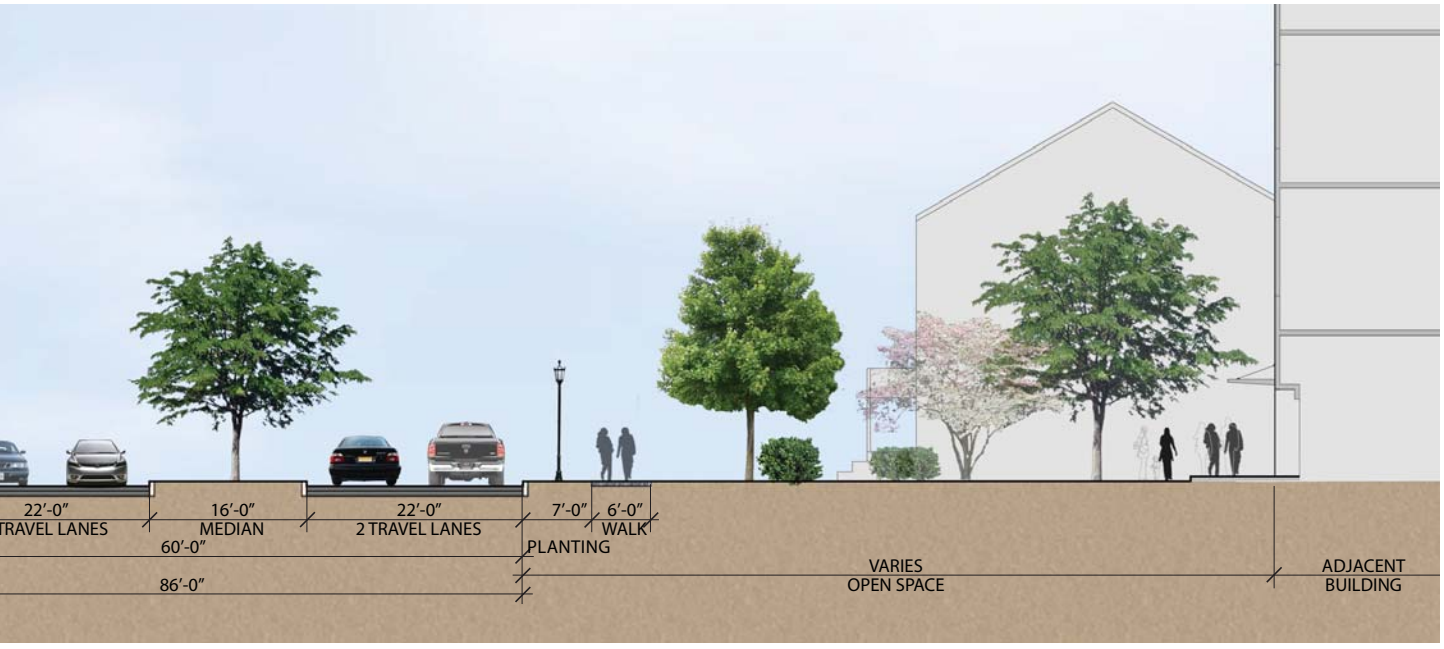
Primary Circulation

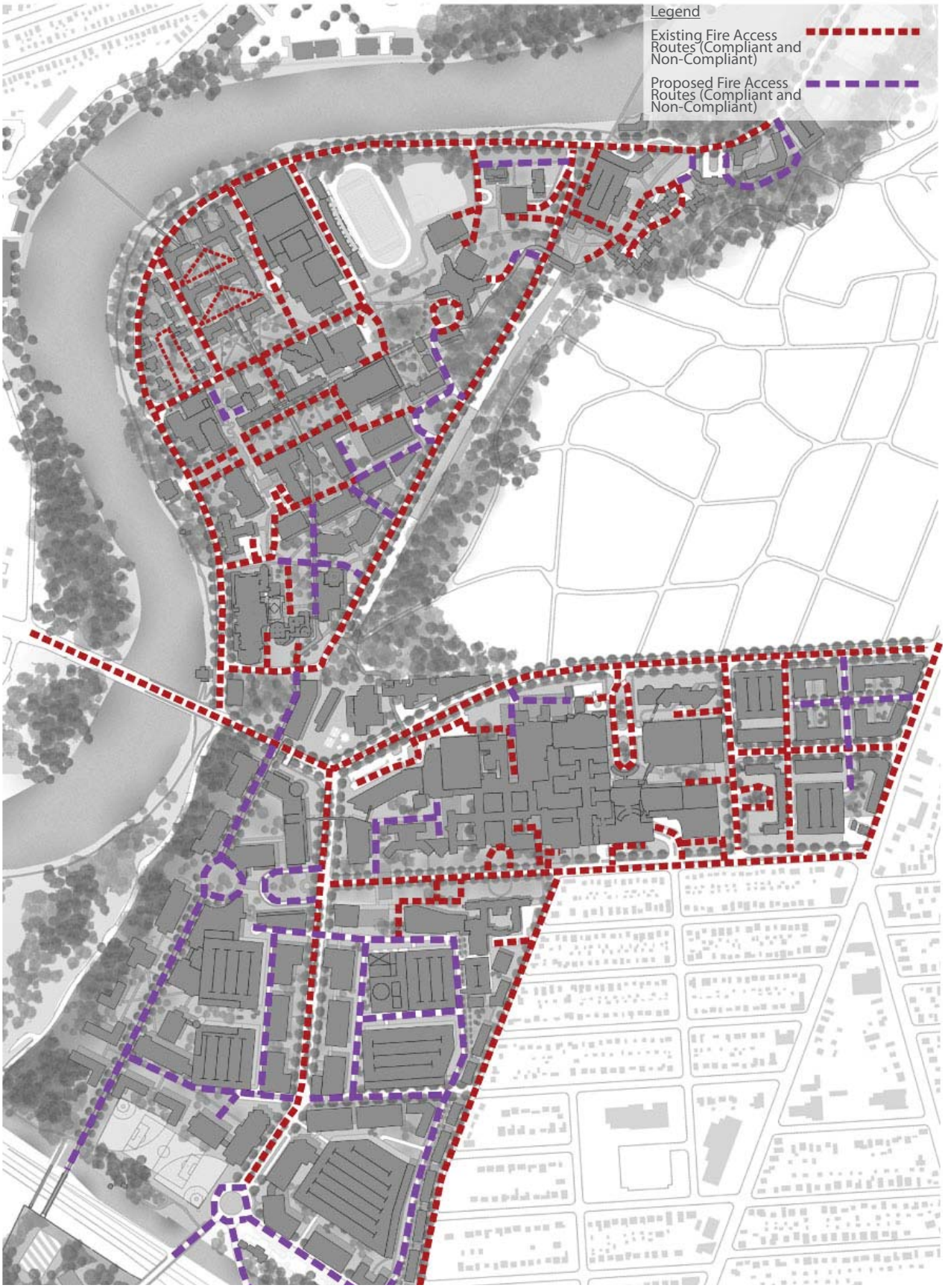
Secondary Circulation

Associated Landscapes

# Crittenden Boulevard



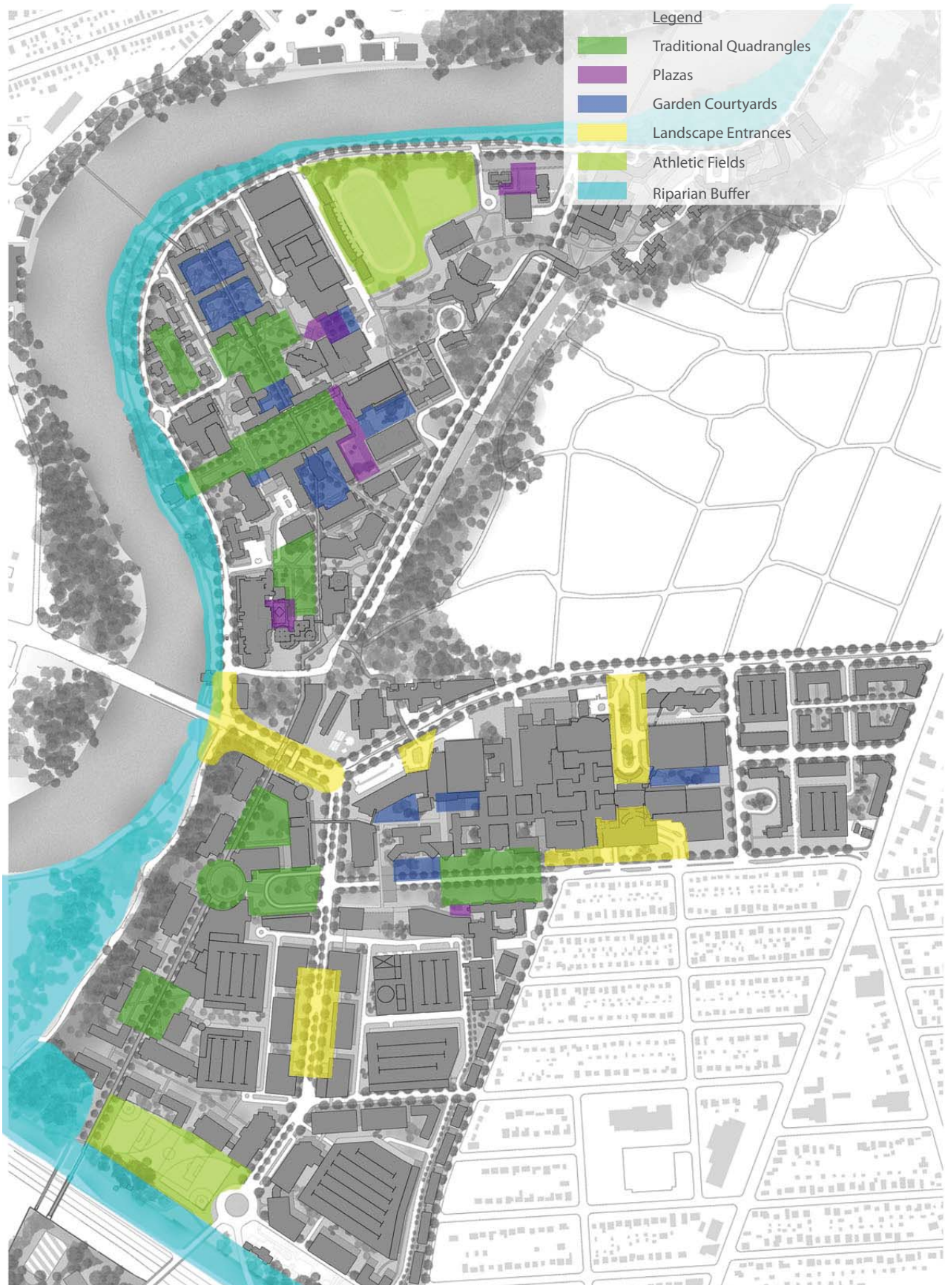




Legend
Existing Fire Access Routes (Compliant and Non-Compliant)
Proposed Fire Access Routes (Compliant and Non-Compliant)

## FIRE AND EMERGENCY ACCESS

As the University of Rochester's physical campus continues to evolve, planned routes for fire and emergency vehicles will also need to evolve in close coordination with the fire department. This is critical for the safety of students, personnel and patients. It is also critical for protecting the University's investment in its buildings. Not suprisingly, good communication in this area is very important to managing good town-gown relationships. Road closures and altered streetscapes and paths on campuses are routinely of interest to the fire department. And several such projects are proposed in the Campus Master Plan, so the University should take a proactive stance on initiating and guiding this dialogue.

This Fire & Emergency Access Diagram shows a rough framework for providing emergency access around the campus. As the River Campus grows southward, a new promenade is to be created in place of the Intercampus Drive. This shall be designed as an emergency access route. In general, existing fire access routes on campus drives shall be maintained where regular vehicular access is interrupted for the creation of pedestrian ways.


Legend
Traditional Quadrangles
Plazas
Garden Courtyards
Landscape Entrances
Athletic Fields
Riparian Buffer

## LANDSCAPE TYPOLOGIES

The University of Rochester offers a rich array of different landscape types, from traditional academic quadrangles to gardens and riparian greenways. This landscape diversity adds a special richness to the campus character and provides the university community with a wealth of educational, recreational and therapeutic opportunities. Thinking about existing and new campus open spaces in terms of their landscape typology will focus design thinking later and provide a point of departure for creative landscape architecture. What follows are descriptions of the individual types of landscapes that are existing or proposed at the University of Rochester.

Legend
Traditional Quadrangles

University of Rochester, Rochester, NY

University of Rochester, Rochester, NY

## ACADEMIC QUADRANGLES

Eastman Quad embodies many of the typical characteristics of this landscape type. It is large, monumental and centrally located on the River Campus. It is an iconic space that is, for many, synonymous with the institution. It serves as a gathering space for the university community, both for impromptu social gatherings and for important ceremonial events, such as commencement. Spatially, it is well-defined by its architectural envelope, with monumental structures at either end. The pedestrian network is a simple, elegant network of pedestrian paths. And the planting strategy is a minimalist composition of lawn, tall flanking tree rows and subdued foundation plantings.

If Eastman Quad is the university's best landscape specimen of this type, it is by no means its only example. There is also the Wilson Quadrangle, the Fraternity Quad, and the Science & Engineering Quad.

As the River Campus Expands southward, the proposed new open spaces punctuating the new south campus should continue the campus' pattern of developing around important quadrangle spaces and courtyards. The large new open spaces should be designed as quadrangles with a simple combination of shade trees, lawn areas, stormwater management and consistent materials.

# Quadrangle Precinct Study:

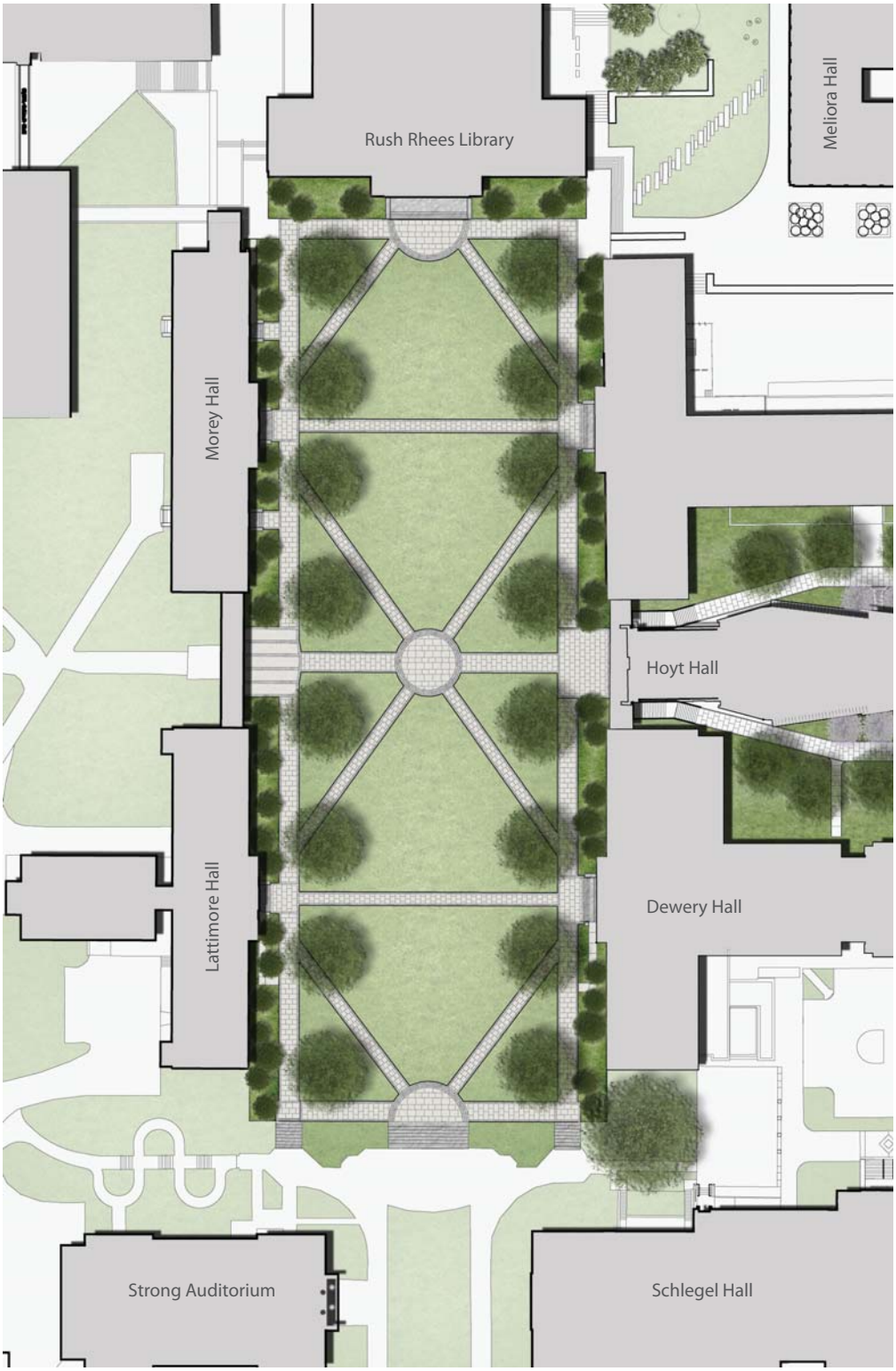
Eastman Quad is an important designed cultural landscape and has been designated by the University as a special "heritage" landscape. Future renovations to it must therefore be respectful of the historic character of the space and should preserve extant historic features as well as the historic geometries.

The plan on the facing page represents a renovated (or, in the disciplinary terms of the historic preservationist, rehabilitated) landscape. New walkways are to be installed in place of the asphalt paving that exists currently. Special scoring patterns as well as flush granite borders that match the historic stone stairs in the quad give the paving an elevated status appropriate to the importance of the space to the University. Buidling entrances and special landing areas shall be acknowledged within the pavement patterning

The existing red oak rows have reached a stature that is well proportioned relative to the open space of the quad and relative to the height of the building facades. They should therefore be preserved and assessed regularly by an arborist

At the base of the surrounding buildings, the existing foundation plantings should be replanted according to the historic planting strategy with a low groundcover around the perimeter (which may have been pachysandra), masses of flowering shrubs and specimen flowering trees.

# Eastman Quad



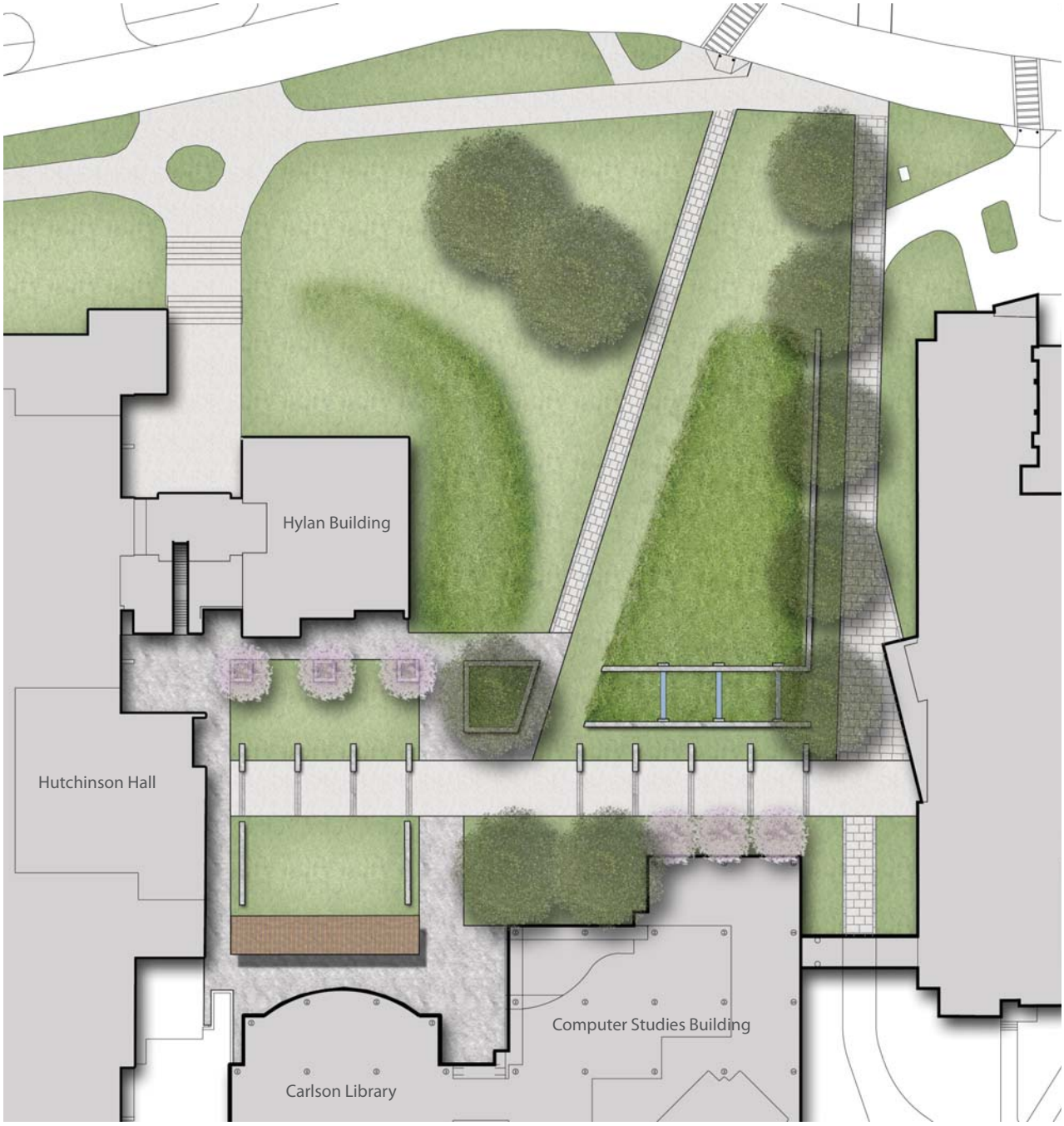
# Quadrangle Precinct Study:

Kroon Hall, Yale University

Alice Paul Residence Hall, Swarthmore College

This renovated landscape will help to define an engineering precinct on campus. The bioretention basin will be renovated with a more regularized shape and replanted with fewer species. Stormwater downspouts on adjacent buildings will be retrofitted with scuppers and weirs to celebrate run-off as a water feature and to demonstrate forward thinking in stormwater management and low-impact development. An outdoor collection of new plant hybrids with bold textures and colors will reinforce a focus on technological development and creative science.

# Engineering Quad



# Quadrangle Precinct Study:

As the Medical Center has developed over the years, its campus feel has been diminished as parking and access demands have increased the amount of vehicular paving and green spaces have been reduced to accomodate surface lots.

The Landscape Master Plan calls for the re-establishment of a distinct campus quandrangle spanning Crittenden Avenue between the old hospital wing and the Nursing school.

PROPOSED PLAN

# Crittenden Quad

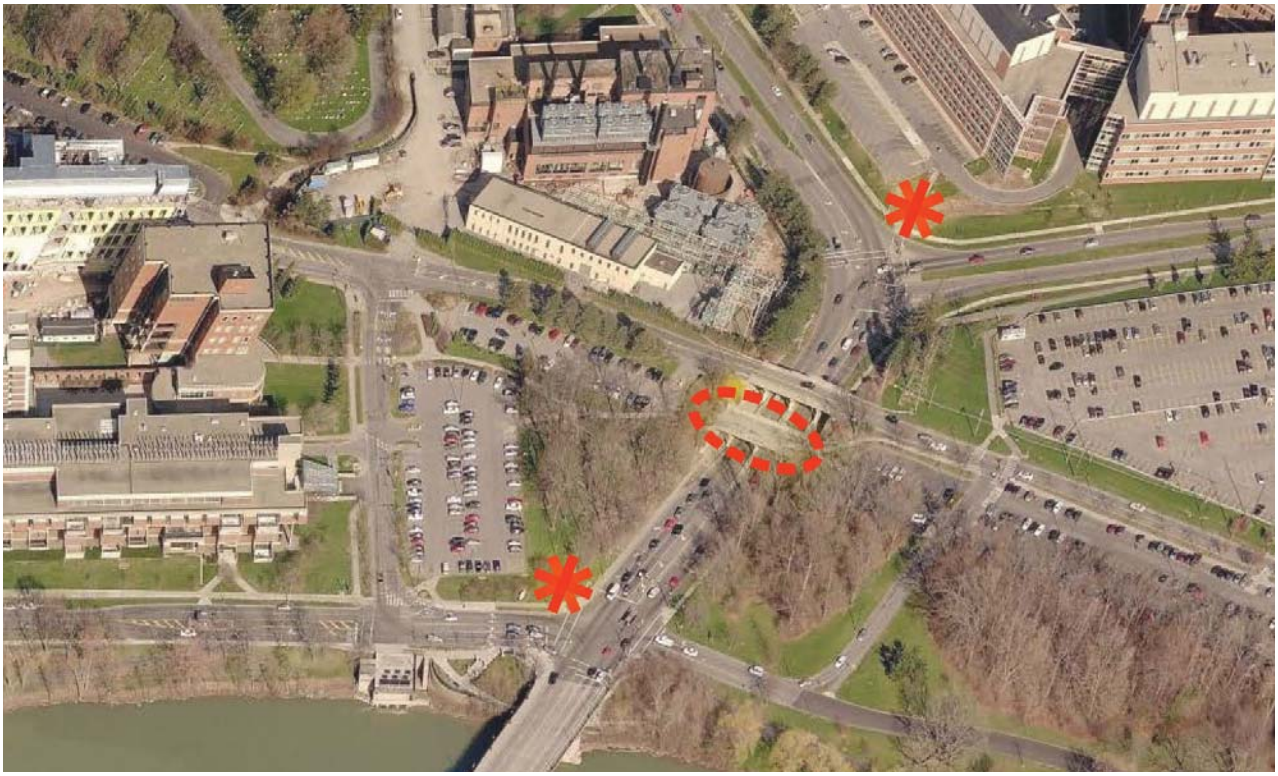
PROPOSED QUAD

ALTERNATE PROPOSED QUAD

# Arrival Landscape Precinct Study:

The intersection of Elmwood and Wilson is one of the primary gateways to the River Campus as well as to the Medical Campus. New signwalls at this intersection will create an identifiable sense of arrival and help to define the edge of the River Campus. New plantings added behind the signwall help to make the masonry a part of the pastoral landscape context, which is a historic Olmstead-designed greenway and park.

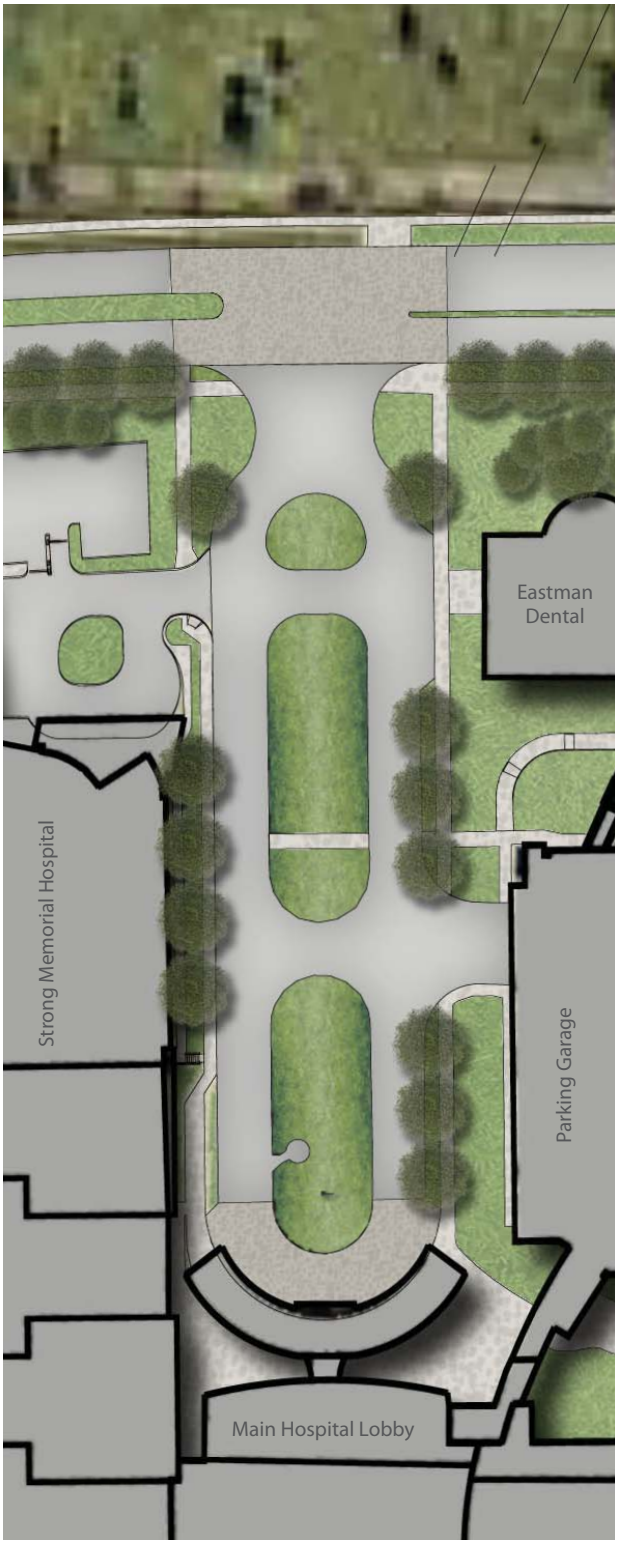
A reconstructed bridge over Elmwood for the Intercampus Drive creates a portal through which one passes. At the intersection of Elmwood and Kendrick a second monumental signwall provides a clear wayfinding marker for visitors to the Medical Center. A consistent masonry vocabulary conveys a consistency between the River Campus and the Medical Center, while allowing for subtle differences in the visual identity for each. With the bridge, there may be an opportunity for a more bold technological feature, with the structural design taking on a sculptural expression, which would help to convey the University's commitment to forward thinking, creativity.



# Elmwood Gateway

PROPOSED GATEWAY

# Arrival Landscape Precinct Study:




The hospital's main public entrance is off of Elmwood Avenue. This large forecourt provides access to the Emergency Room as well as to the main hospital lobby and is one of the main ways of accessing the hospital parking deck.

As a means of improving passive wayfinding, this landscape precinct plan suggests simplifying the existing landscape design in order to promote a clear comprehension of the overall space for visitors entering by car. Presently views across the entrance are denied by eye-level plantings.

The hospital also devotes a good deal of attention to horticultural display in this area. While the forecourt should be welcoming, well-maintained and attractive, the nature of the space as a large vehicular drop-off suggests a more abstracted and graphic planting composition than the current approach, which is more akin to a large garden. This would, in turn, free up labor resources for maintaining dedicated healing gardens that are better situated (away from highly trafficked circulation routes and noise sources).

# Hospital Entrance Forecourt

HOSPITAL ENTRY SEQUENCE

Legend
Garden Courtyards

Swarthmore College, Swarthmore, PA

Mercy Medical Center, Baltimore, MD-Mahan Rykiel Associates

## GARDEN COURTYARDS

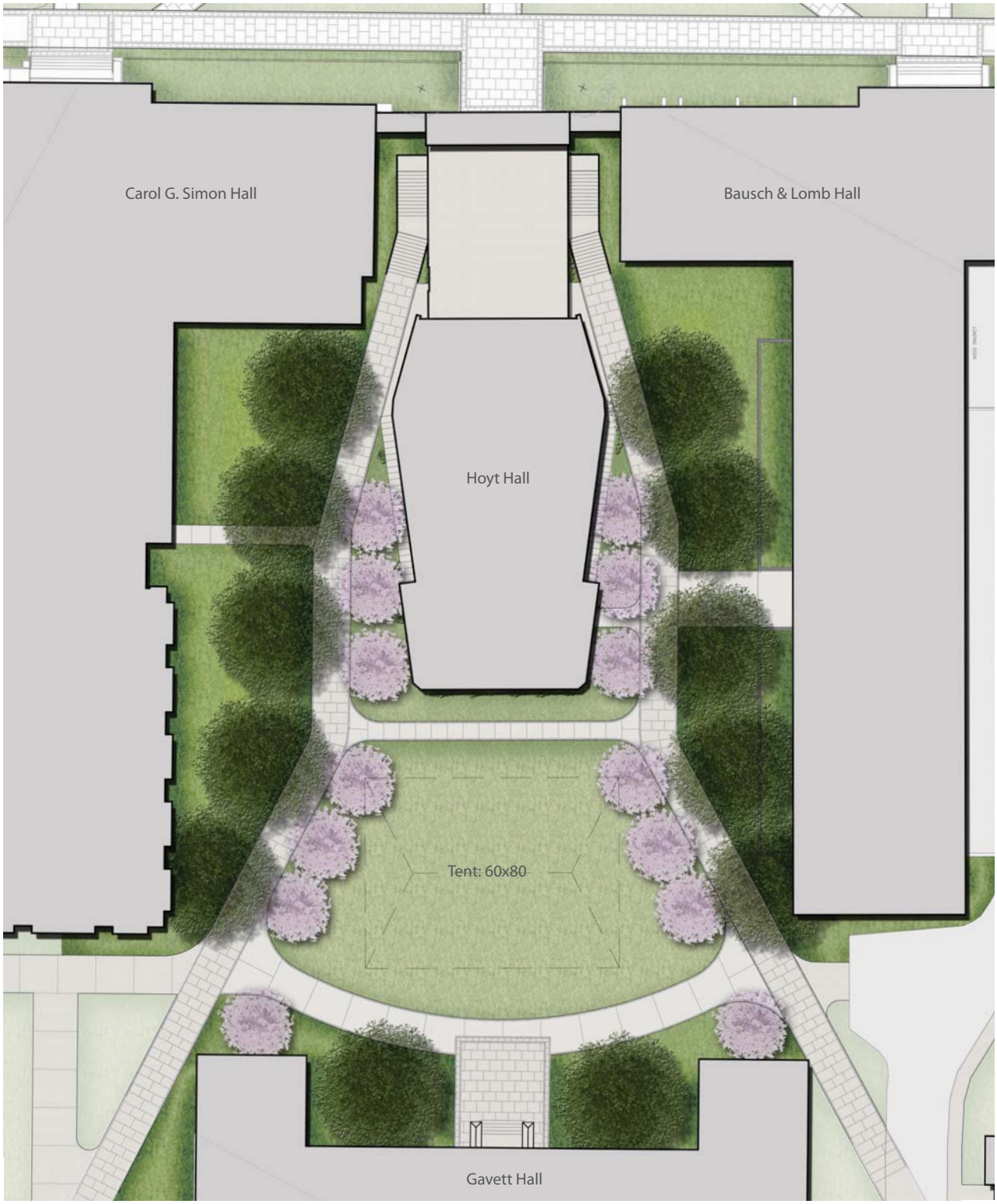
In contrast to the university's quadrangles, its courtyard landscapes provide a more intimate setting. The level of decorum that is typical of quads suggests a very simple palette of plants. Courtyards, on the other hand, provide opportunity for the development of gardens and for the display of plant collections. This should, of course, be balanced with the demand for open green space in some courtyards.

Hoyt Courtyard, the landscapes around Meliora and the residential courtyards all have courtyard proportions. Over time, as the University arboretum expands its plant collections, new plantings can be added to these spaces around the perimeter, better defining their central lawn areas.

At the Medical Center, existing and new courtyards, as well as occupiable rooftop gardens, can be developed as attractive courtyard gardens for use by patients, staff and visitors. The plantings in these areas can be themed collections that support therapeutic purposes (texture gardens, fragrant gardens, color themes), and landscape elements such as overhead shade structures, water features and seating can help to create restful retreats from the activity of the hospital. The University should consider enclosing some of these spaces as atriums in order to allow for year-round use.

# Garden Courtyard Precinct Study:

# Hoyt Courtyard



# Garden Courtyard Precinct Study:

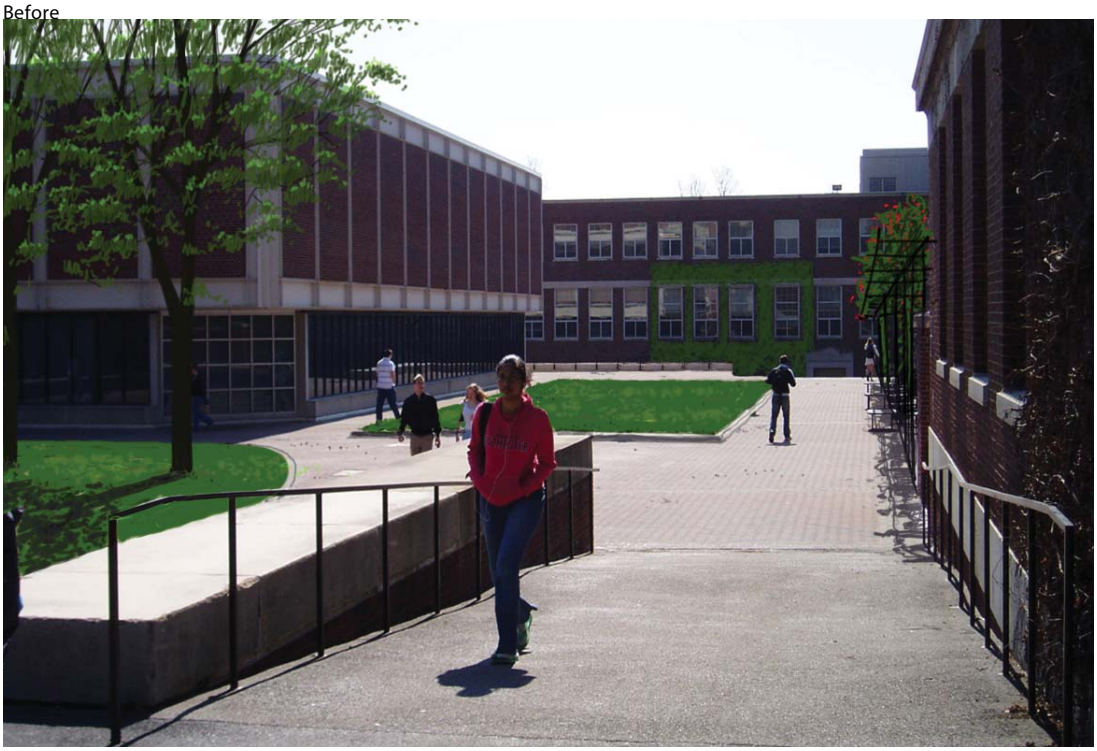
Before

After

# Meliora Garden

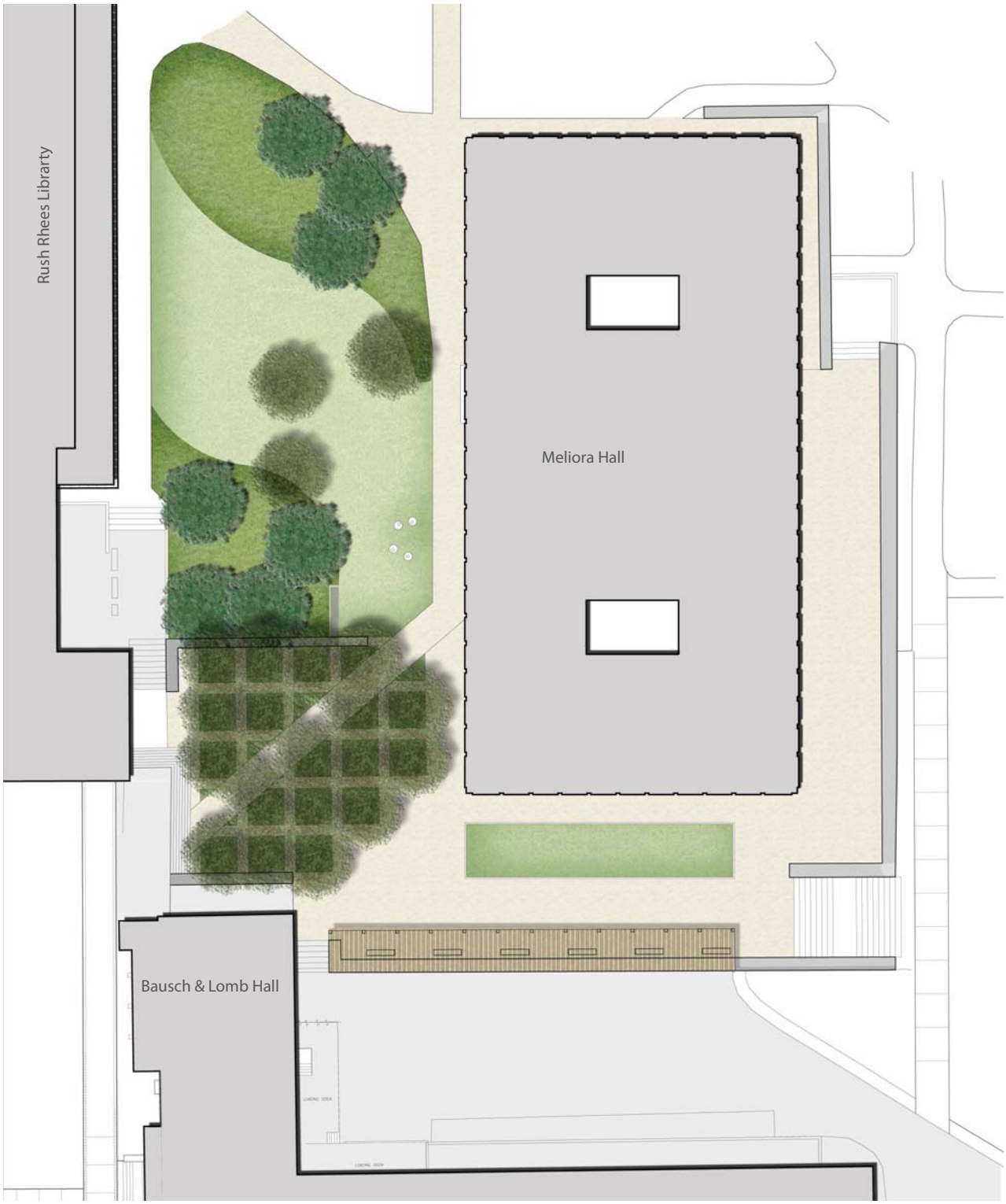
# Garden Courtyard Precinct Study:

Before



After

# Meliora Garden




Alternate Plan

# Medical Campus Garden Courtyard Precinct Study:

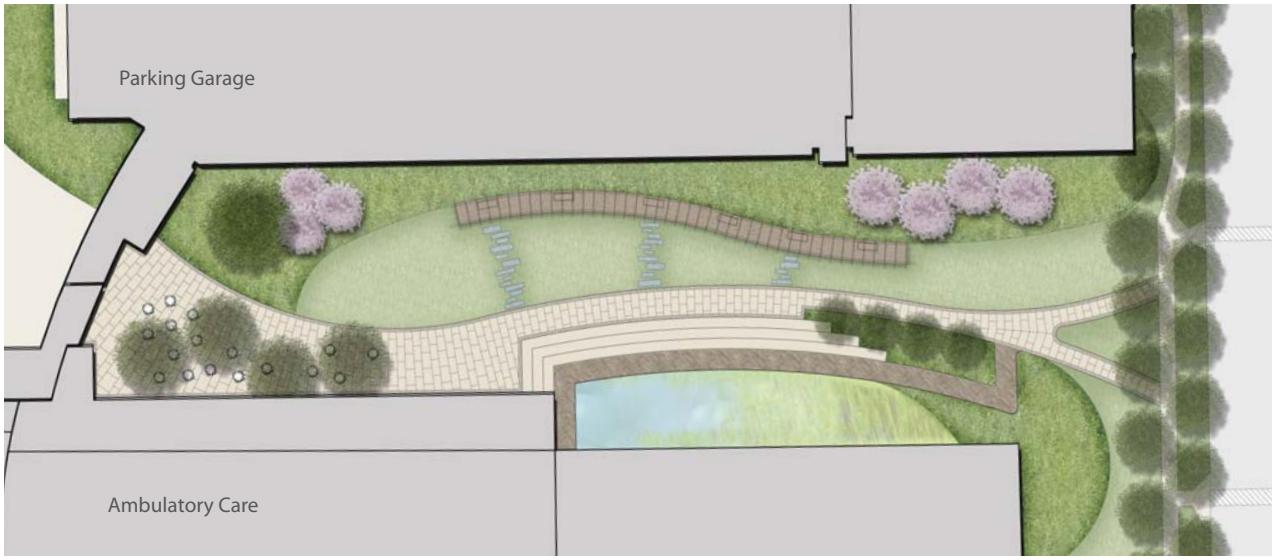
Institute for Child and Adolescent Development, Wellesley, MA

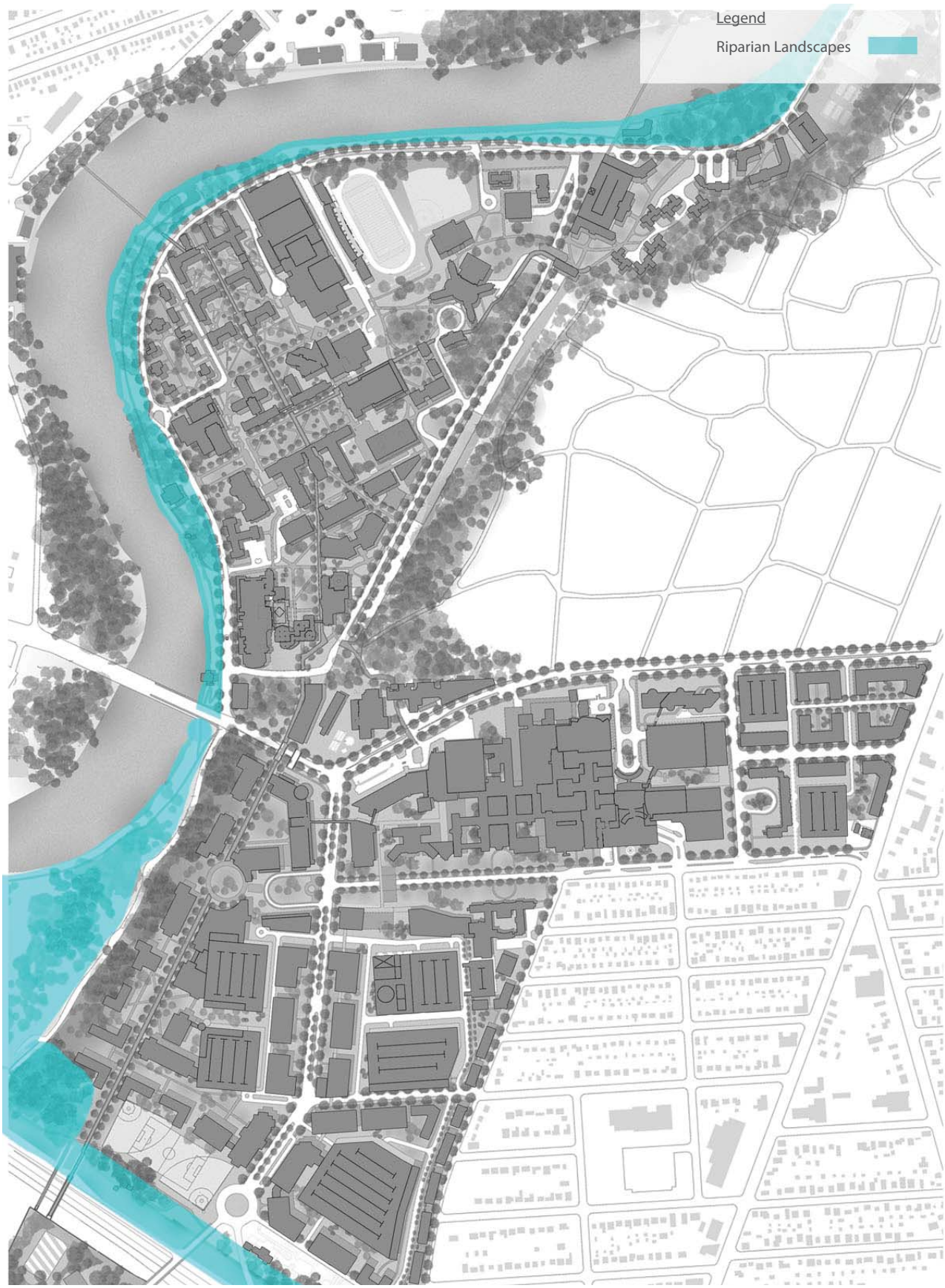
Loyola University, Baltimore, MD

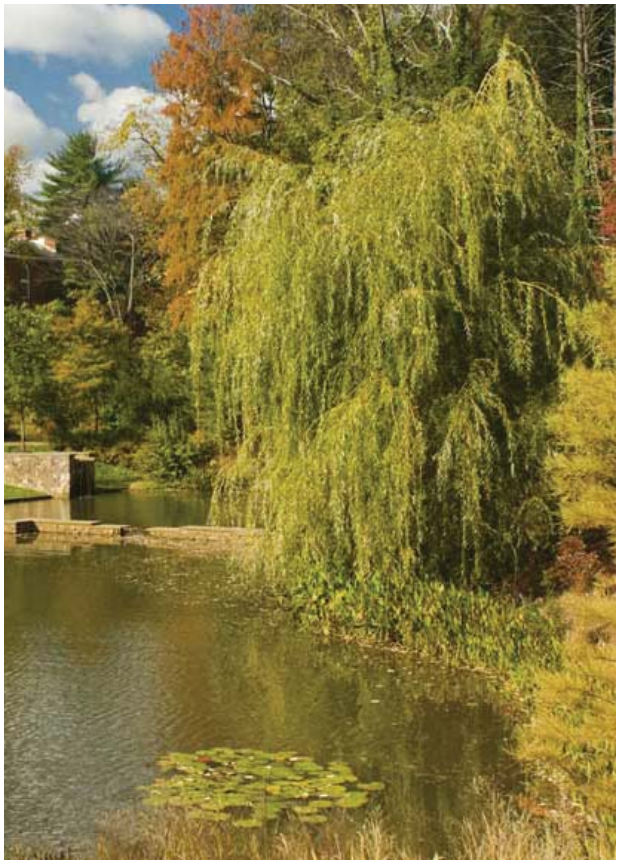
Well-designed healing gardens offer a range of experiences to patients and their visitors. They are quiet retreats as a respite from the sometimes stressful experience of diagnosis, treatment and therapy. They appeal to the senses with a diversity of conditions: calming white noise from water features, fragrant and colorful plantings, richly textured paving materials and furniture, shady areas and sunny areas, as well as variations from one season to another. A good healing garden design should also strive to balance the role of the garden as a visual amenity that is accessible to patients in their bedrooms with its role as a place of privacy and shelter for patient occupants using the garden itself, where they will not feel on-display or a sense of exposure.

As the Medical Center continues to evolve in the future, care should be taken to identify and preserve quality outdoor spaces for use as healing environments. This will mean both rehabilitating existing vestigial spaces, such as the space shown on the adjacent plan, as well as using new construction to create and frame new courtyards and roof gardens.

# Healing Garden Concept




Legend
Riparian Landscapes



The Dell, University of Virginia, Charlottesville, VA

## RIPARIAN LANDSCAPES

The River Walk along the Genesee River and the Canal trail along the Erie canal are unique landscapes for the University of Rochester campus and afford special opportunities for a more informal and ecological design expression. As landscapes bordering water bodies these are important riparian settings with a critical role in protecting water quality.

Proper care of these landscapes will demonstrate the University's commitment to stewardship of the natural environment. There are also opportunities to retrofit these landscapes with green infrastructure, such as regenerative stormwater conveyance or restored ecological corridors. Maintaining and improving trails with new bike lanes in partnership with the city will help make their landscape more accessible to the university community and encourage educational uses.

Genesee Valley Park, Rochester, NY

Legend
Athletic Fields

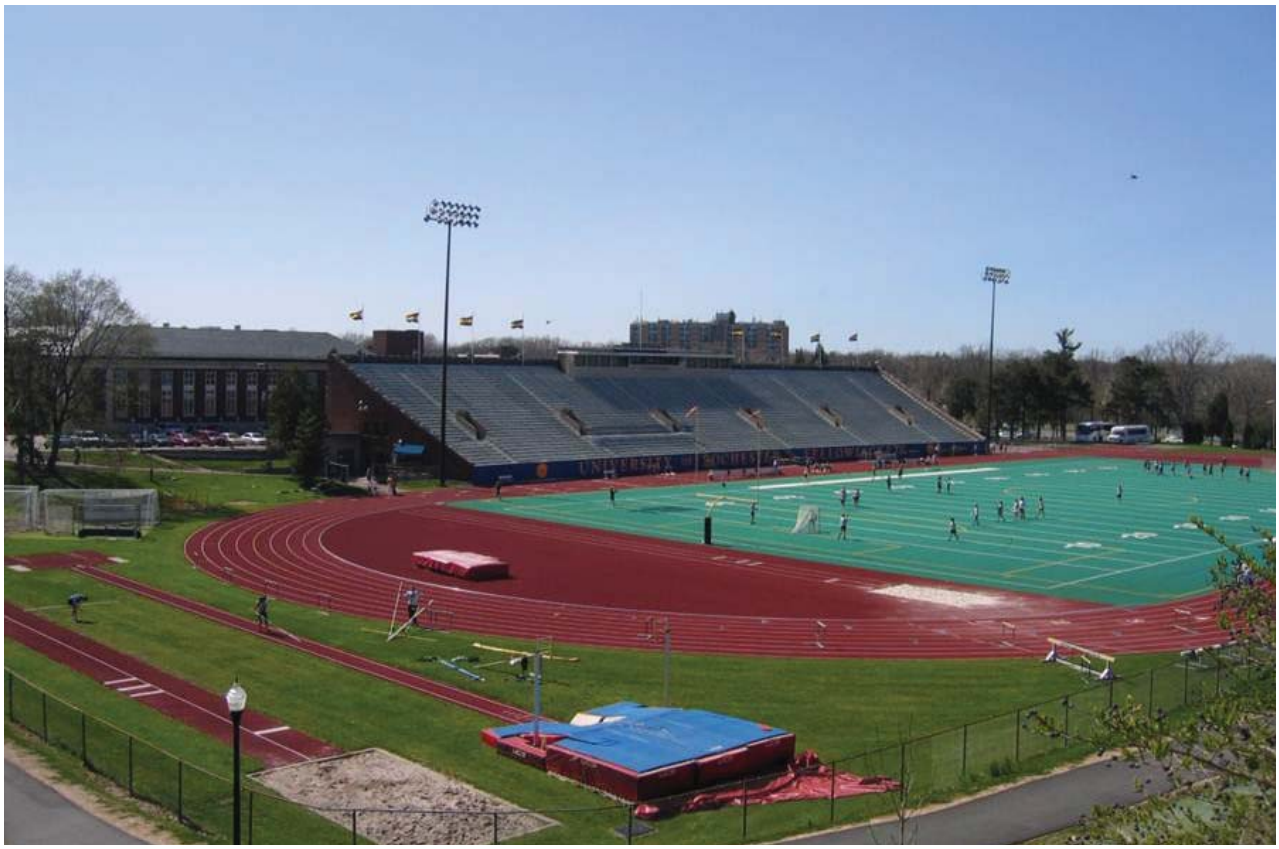
South Campus Practice Fields, Northern Arizona University, Flagstaff, AZ

## ATHLETIC & RECREATION

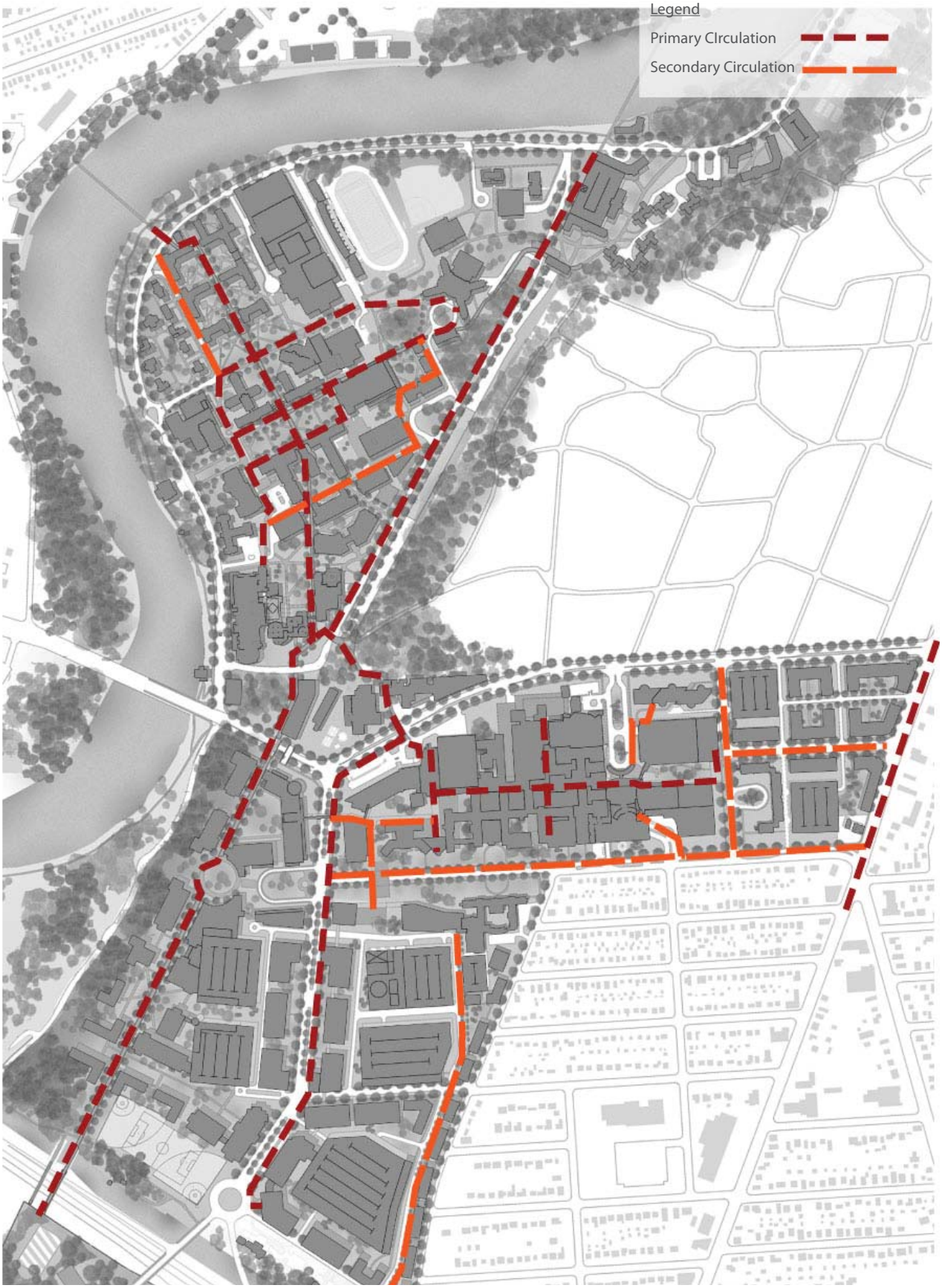
Athletics and recreational landscapes are important to student life and a figure into the University's holistic vision of education. These landscapes are highly used and receive a lot of wear.

The University would like to make the following improvements:

- Improve the seating capacity at the baseball field with the introduction of a seatwall along the toe of the slope
- Consider installing artificial turf on the outfield and infield of the baseball field which is used for summer camps
- Improve pedestrian linkage to the Genesee Valley Park fields in order to overcome the sense of their being off campus



University of Rochester Fauver Stadium, Rochester, NY


Legend
Primary CIrculation
Secondary Circulation

Swarthmore College, Swarthmore, PA

Emory University, Atlanta, GA

## PROMENADES AND PEDESTRIAN LINKAGES

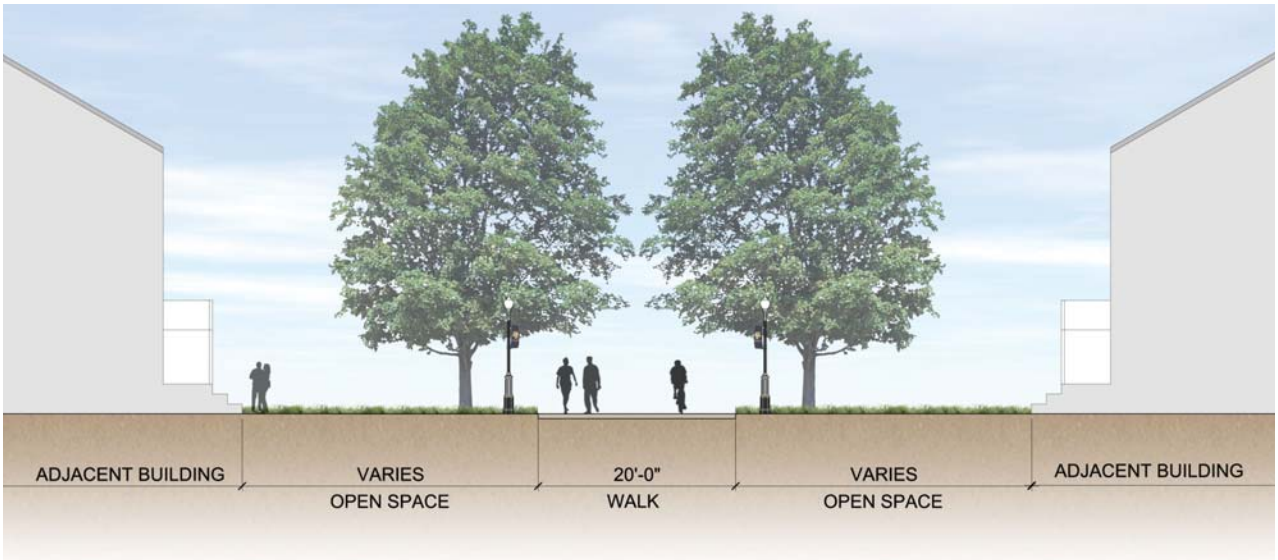
The historic design of the River Campus had well defined pedestrian corridors. As the River Campus expands southwards it will be very important to create a strong promenade to encourage a sense of connectedness and pedestrian movement.

The existing pedestirian connection between the River Campus and the Medical Center has a very back-of-house feel and should be improved through adjustments to fencelines and path alignments as well as with the addition of new plantings.

Pedestrian movement at the Medical Center is mostly along interior corridors. Some of these corridors are windowless and somewhat disorienting. Systemattic improvements can be made to foster easy navigation and to create a more pleasant experience for patients and staff. Landscape and interior plantings, such as green walls, are an important means of realising these goals.

# Promenade Precinct Study:

Promenade along 2 Lane Street




Pedestrian Promenade with Emergency Vehicular Access

# Intercampus Connector Drive

In the Campus master plan, this corridor has been identified as a major pedestrian linkage between the River Campus, its future extension to the south and the Medical Center. Owing to its history as a rail corridor, it currently has a back-of-house of house feel, but will be redeveloped with a consistent treatment of generous, realigned pedestrian walkways lined with large street trees. Seating and occasional plazas at nodes will create gathering opportunities for students and help to create a campus character. Vehicular access will be retained but with traffic calming measures.

# Promenade Precinct Study:

Hospital Greenspaces and Corridor Connections

# Hospital Corridor 'Landscape'

The quality of the interior environment can profoundly influence a patient's experience. Finding ones way easily through a hospital complex can contribute significantly to a positive impression and can reduce some of the inevitable stress of medical treatment. Artwork, interior landscapes and other architectural improvements to improve light quality and spatial clarity can help make the Medical Center more user friendly and intuitive for navigation.

University of Maryland Medical Center, Interior Healing Garden

Dell Children's Medical Center of Central Texas, Austin, TX

# Landscape Design Guidelines

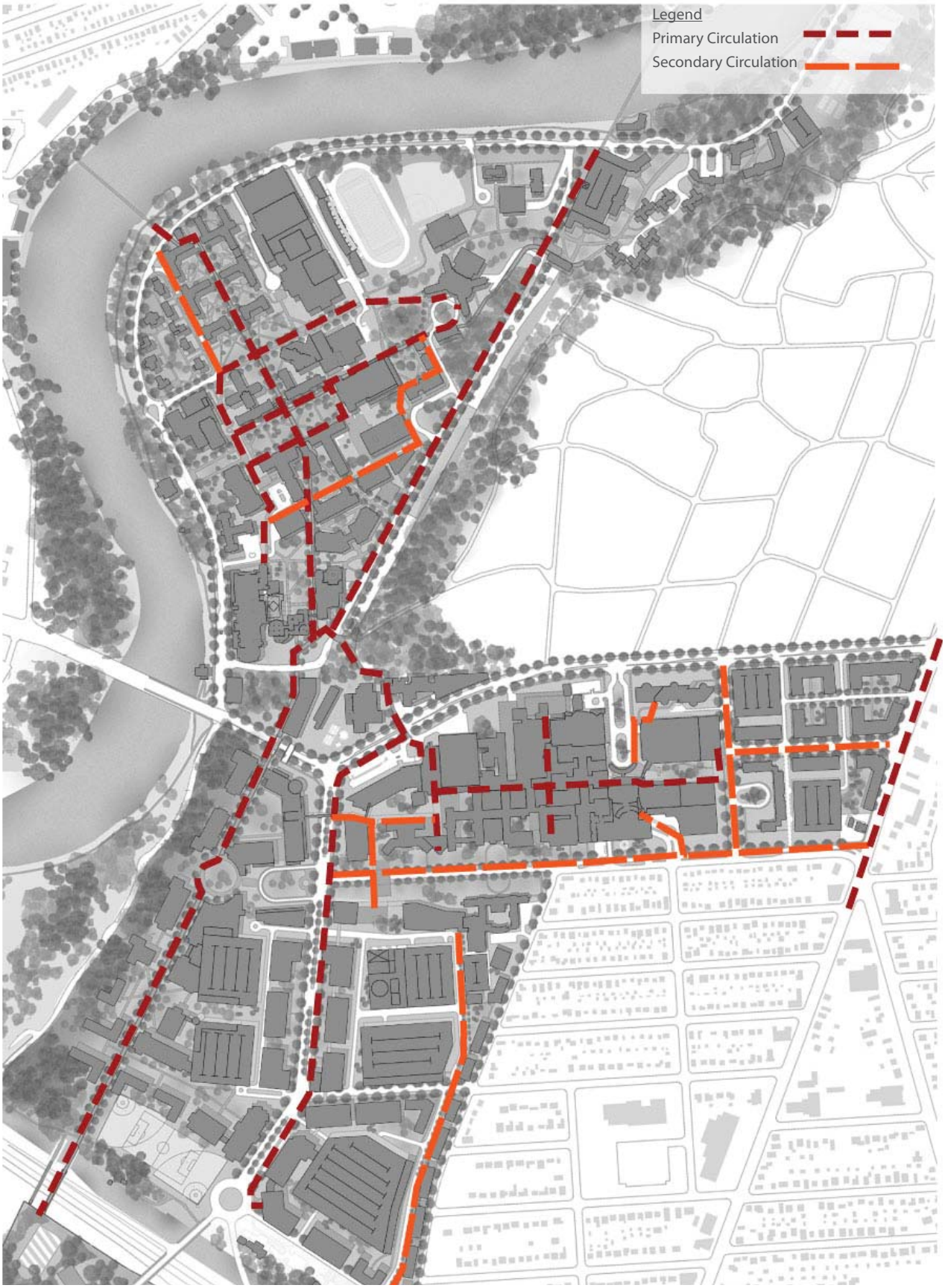
# Landscape Design Guidelines

These guidelines describe recommended paving, lighting and site furniture standards for use on the University of Rochester's River Campus and at the Medical Center. Applied consistently and comprehensively, these standards will help reinforce landscape's role as the connective tissue of the campus and help contribute to a sense of place or campus identity. Standardization will also help simplify grounds maintenance operations.

The standard site palette includes durable paving materials (capable of standing up to snow-removal regimes) and site furnishings that have been tested and used successfully on the campus.

Some of the other objectives behind these particular guidelines include:

- Exporting the successes of Eastman Quad and the historic River Campus landscapes into new areas of the campus
- Establishing a clear hierarchy of paths to make the campus more user friendly
- Standardizing the use of products that offer 'green' benefits
- Conserving potable water by using drought-tolerant native and adapted non-native species
- Enhancing the campus and buildings with plantings such as rain gardens, windbreaks and green roofs, which serve to clean runoff, reduce heating/cooling needs.


Legend
Primary Circulation
Secondary Circulation

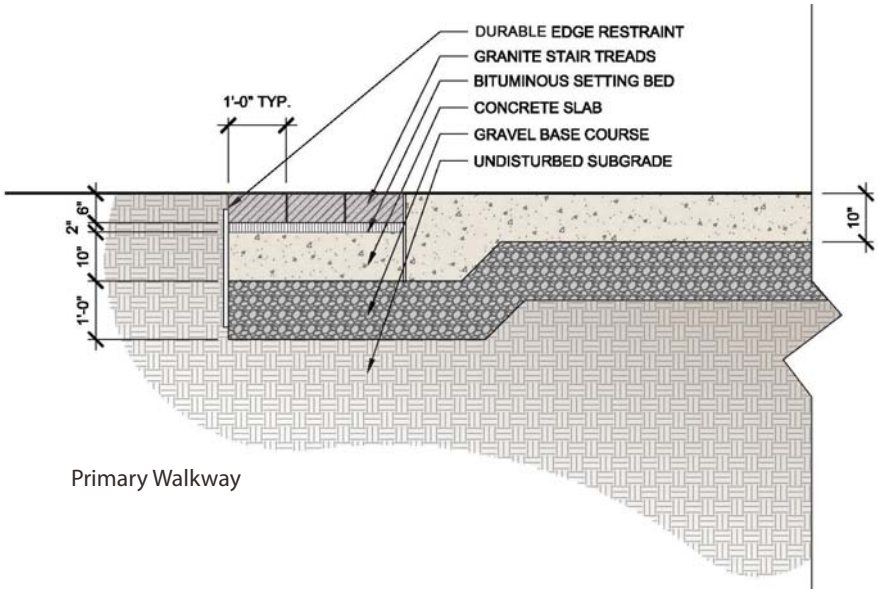
## PATH HEIRARCHY & PAVING MATERIALS:

As on most campuses, the University of Rochester's landscapes are constructed or renovated individually or piece-by-piece. Without a clear set of guidelines regarding path width and paving materials, each project is left to "reinvent the wheel" depending on the administration's direction, the project manager's interests or the design team's preferences. This has resulted in discontinuities between different generations of construction on the River Campus and at the Medical Center.

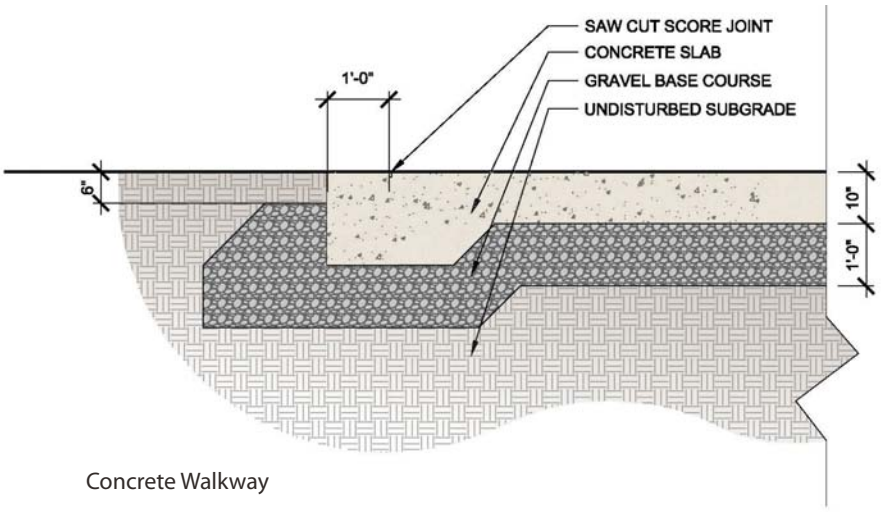
At the landscape master planning workshops, the following path heirarchy and paving palette was determined. The primary paving materials--scored cast-in-place concrete and accenting borders of cut granite--were both historically used within Eastman Quad and the original portions of campus. Primary walks have a more significant edge border, while secondary and tertiary walks have a smaller granite border or a scored concrete border. When applicable, the bench pad uses the same edge material seen on other path types. Pedestrian concrete walks shall be set on a compacted aggregate base and finished with saw-cut joints. The granite edge shall be set on a concrete, or compacted aggregate base, depending on application, with a bituminous setting bed and polymeric sand swept joints. All paths shall have a steel edge restraint to prevent movement of paving materials.

The path heirarchy was developed in response to anticipated pedestrian usage, service and emergency access demands and the dimensions of maintenance equipment. Path width varies from 8' to 20', depending on hierarchy in the pedestrian circulation network. In some instances a wider path width will be necessary to accommodate fire access.

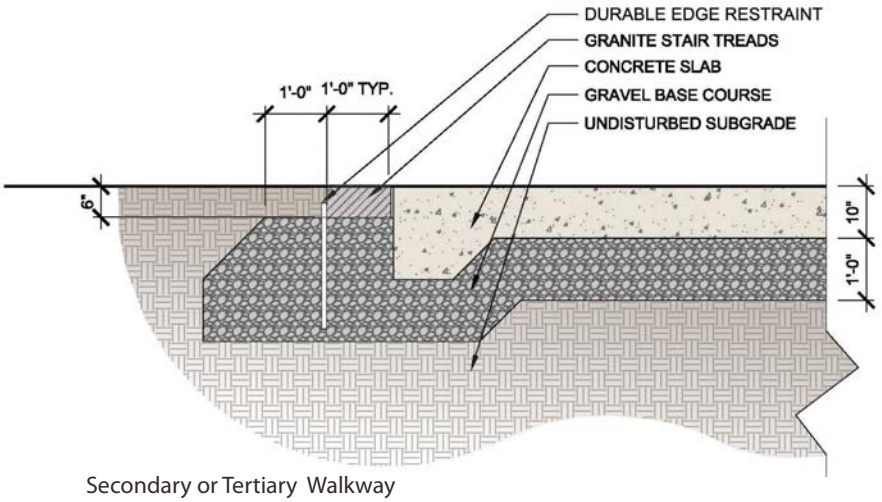
In terms of grading and accessibility, the campus network of pedestrian walkways should conform to the latest version of the US Access Board's ADA Accessibility Guidelines (ADAAG). Walks should be sloped at a maximum running slope of 1:20 or 5% and a maximum cross slope of 1:48 or 2%. Walks sloping in excess of 5% must be treated as ramps with handrails on both sides and cannot exceed a 1:12 slope (or 8.33%) or a cross slope above 1:48 (2%). Ramps must be limited to 30 feet in length with 5 feet deep landings (graded at 2%) at both top and bottom. Stairs shall conform to governing building codes with handrails provided per ADAAG.



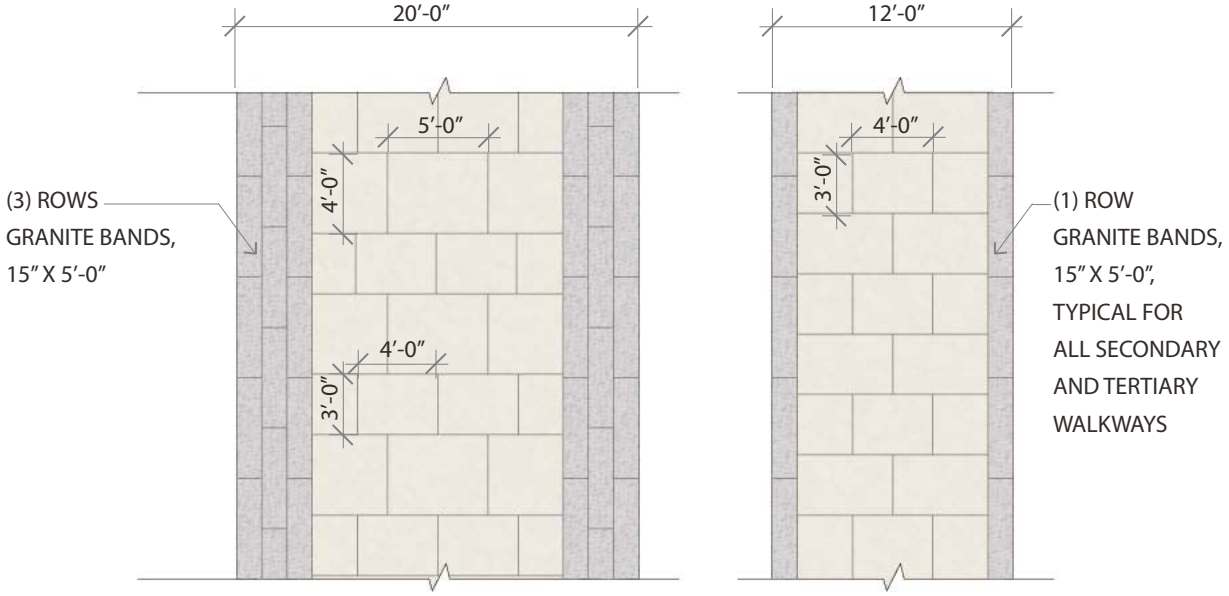

Primary Walkway

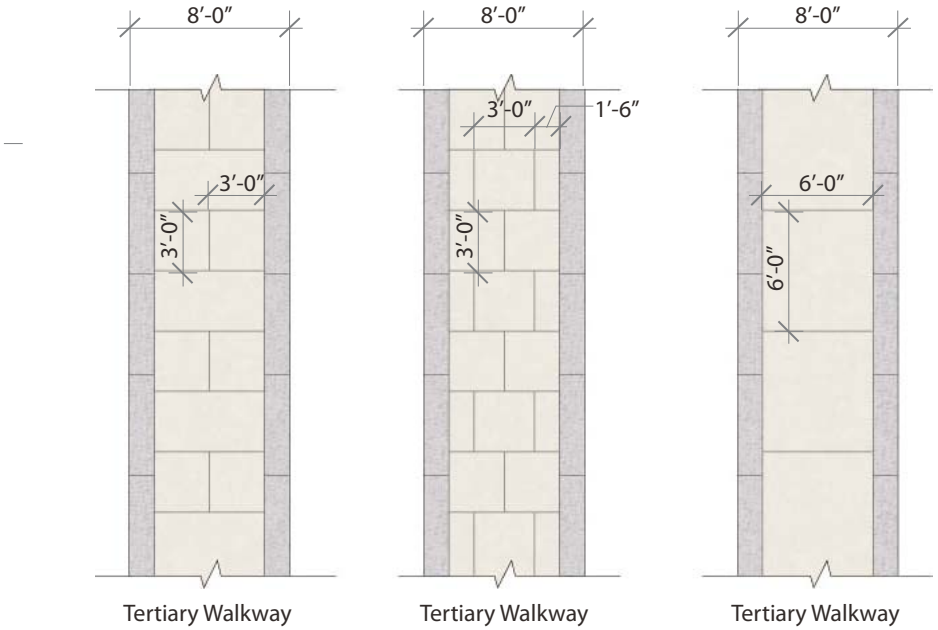



Concrete Walkway




Secondary or Tertiary Walkway


20′-0″
5′-0″
4′-0″
4′-0″
3′-0″
(3) ROWS
GRANITE BANDS,
15″ X 5′-0″
12′-0″
4′-0″
3′-0″
(1) ROW
GRANITE BANDS,
15″ X 5′-0″,
TYPICAL FOR
ALL SECONDARY
AND TERTIARY
WALKWAYS
Primary Walkway
Secondary Walkway


8′-0″
3′-0″
3′-0″
8′-0″
3′-0″
1′-6″
3′-0″
8′-0″
6′-0″
6′-0″
Tertiary Walkway
Tertiary Walkway
Tertiary Walkway

## Concrete Paving

Products:

- Scored cast-in-place concrete, broom finished
- Select mix for Solar Reflective Index of 29 or greater

Sustainability Benefits:

- High SRI helps to reduce heat island effect, moderating the microclimates on campus
- Locally produced
- Recycled content
- Recyclable material

## Granite Banding

Products: Granite tread-stock (Sunset beige, Cold Spring Granite available through RT Masters Stone Co., 975 Empire Blvd, Rochester NY 14609; Contact: Nick; Ph. 585-482-6560)

Sustainability Benefits:

- Locally produced

## Formal Site Walls

Products: Formal Site Walls can be comprised of either:

- Dimensional Indiana Limestone
- Masonry Brick with Natural stone or Precast coping.

## Informal Site Walls

Products: Informal Site Walls are inteded to be integrated with the natural landscape.

- The stone used to construct these walls should be from local sources.
- The dimensioned stone should consist of larger slabs with rough or natural cleft faces.

Sustainability Benefits:

- Locally produced

## Bike Racks

Products:

Standard:

- Expo Model by Cora
- Color: Comet Black

## Benches

Products:

River Campus:

- Manor Bench with armrests by TimberForm
- Finish:  Black powdercoat

Medical Campus

- Brittany Bench by Country Casual
- Finish:  Teak

## Tables and Chairs

Products:

River Campus:

- Parc Centre by Landscape Forms
- Finish: Steel

Medical Campus:

- Foxhall table and stackable chairs by Country Casual
- Finish: Teak

## Trash and Recycling Receptacles

The trash and recycling receptacles are consistent in character with other site furnishing products suggested in the design guidelines. They are not only aesthetically pleasing but resonant with the maintenance standards on campus.

Products:

- Ironsites Series, S42 By: Victor Stanley
- Finish: Black Powdercoat
- S2 Raised Dome Lid

## Handrails/Guardrails

Throughout campus, handrails and guardrails are used to maintain the campus aesthetic of clean simple lines. The guardrails should blend into the landscape when used away from buildings. When adjacent to buildings, the handrails shall follow suit with the architecture aesthetic.

Products:

- Custom aluminum guardrail and pipe handrail to match images below.

## Bollards

Decorative bollard to be used at River and Medical campuses.

Products:

- Columbia Series by Holophane (214 Oakwood Ave, Newark, Ohio 43055)

Materials:

- Cast aluminum-black if removable and installed with quick release base.
- Cast iron-black if static and installed without quick release base.

## Pedestrian Secondary Path Light

Light Bollard to be used at Medical Campus

Products:

- Columbia Series by Holophane (214 Oakwood Ave, Newark, Ohio 43055)
- Cast aluminum-black, anchor bolted in concrete footing
- Light component

## Vehicular Lighting

- Lighting along roadways is to remain consistent with the walkways throughout campus. This strategy will help to enforce the cohesiveness at the University.

Products:
Standard Campus-Wide Lighting:

- GranVille Metal Halide with 5 inch decorative finial by Holophane (214 Oakwood Ave, Newark, Ohio 43055)
- 12 foot black pole, height may vary throughout campus. Consult with Project Manager.

Parking Lot Lighting:

- 20 Series by McGraw Edison Design (214 Oakwood Ave, Newark, Ohio 43055)
- 30 foot dark bronze duranodic finish.

## Pedestrian Lighting

- The custom light fixture currently used at Eastman Quad is recommended to be reserved for Eastman Quad and other formal landscapes. The campus-wide fixture, found in the River Campus is suggested to be used in all other landscapes. It is recommended that an added dark sky component be installed on existing fixtures.

Products:
Formal Landscape Lighting:

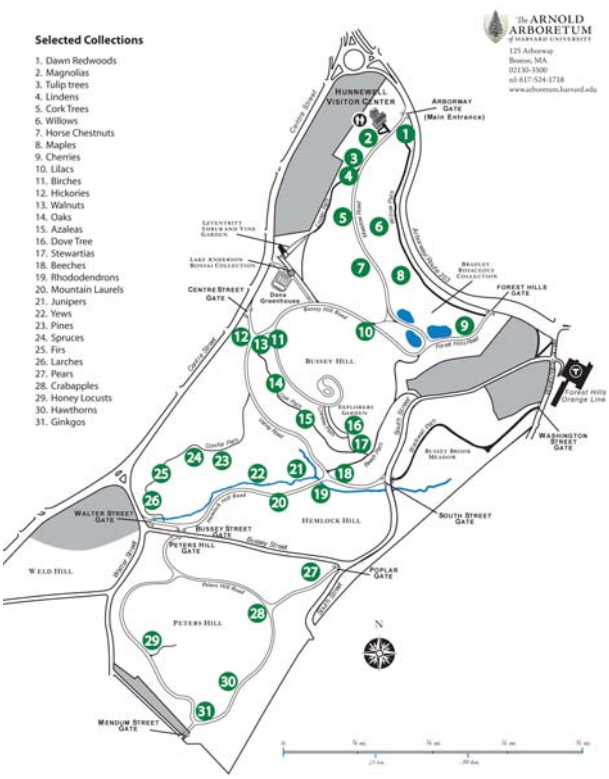
- Custom Historic Light Pole - Metal Halide

Standard Campus-Wide Lighting:

- GranVille Metal Halide with 5 inch decorative finial by Holophane (214 Oakwood Ave, Newark, Ohio 43055)
- 12 foot black pole, height may vary throughout campus. Consult with Project Manager.

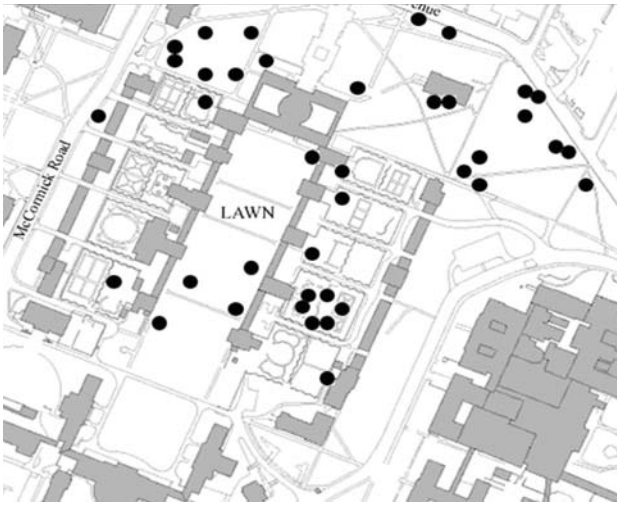
# Campus Plantings

# Campus Arboretum Precedents:




Arnold Arboretum, Harvard University (Left):

Arboretum with a strong emphasis on teaching and research:
COLLECTIONS: Organized by taxonomic categories as well as by growth habits (vine collection) and cultural practices (bonsai)




University of Virginia Arboretum (Left):

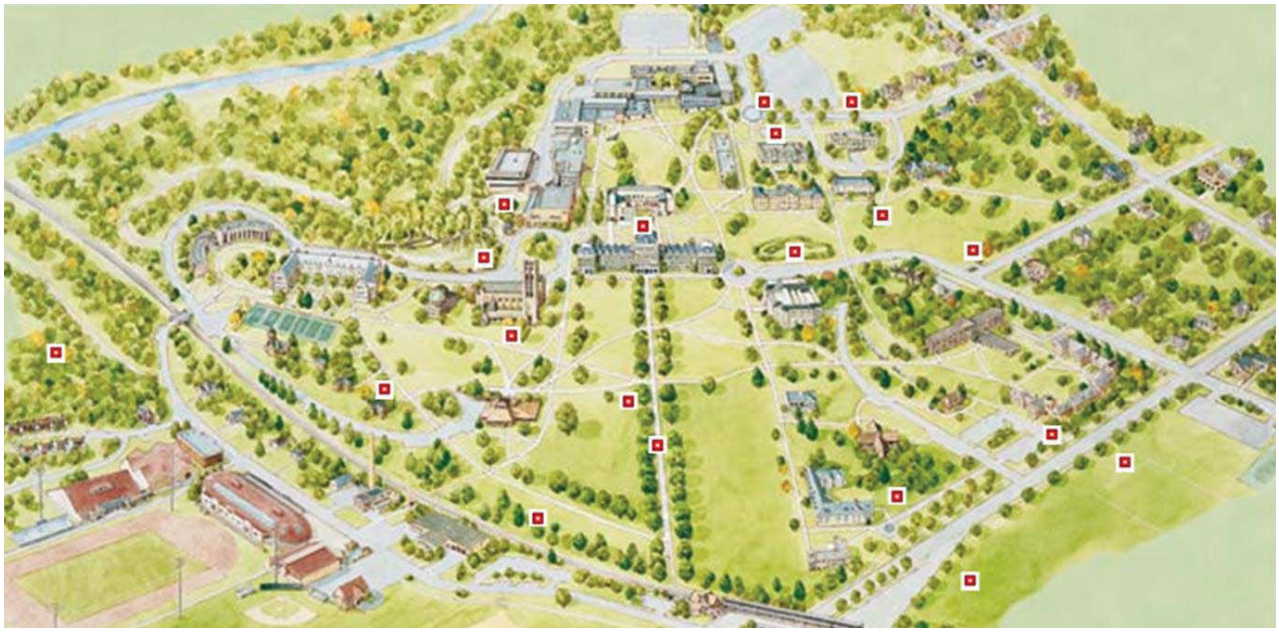
Arboretum developed through a long tradition of planting Commemorative and Memorial Trees. The campus as arboretum is really comprised of:
COMMEMORATIVE & MEMORIAL TREE COLLECTION: Through all precincts of the campus, includes many historic trees
HISTORIC/CULTURAL LANDSCAPES: Jefferson's Academical Village with its central green and courtyard gardens
NEW GREEN INFRASTRUCTURE: Daylighted Gilmer Gulch, the Dell (a daylighted stream and reflecting pool that serves as part of a stormwater management system). In these landscapes the plant collection is more about the community of plants than about the individual specimen

Cornell Plantations, Cornell University (Above):

Arboretum organized into 3 zones:
BOTANICAL GARDEN: Comstock Knoll (woodland/ rhododendron), Bowers Rhododendron Collection, Conifer Slope, Class of '53 Container Gardens, Deans Garden, Heasley Rock Garden, Robison York State Herb Garden, Groundcover Collection, Kienzle Overlook, Mullestein Winter Garden, Mundy Wildflower Garden, Poisonous Plants Garden, Pounder Heritage Vegetable Garden, Rockwell Azalea Garden, Young Flower Garden
F. R. NEWMAN ARBORETUM: Goldsworthy Holocaust Memorial, Allen Trail, Baird Field Flower Meadow, Beech Loop, Class of '01 Nut Tree Collection, Class of '23 Flowering Tree Collection, Flat Rock, Floriculture War Memorial, Grossman and Houston Ponds, Harris Lilac Collection, Jackson Grove, Jennings Crabapple Collection, Maple collection, Morgan-Smith Trail, Newman Meadow, Newman Overlook, Oak collection, Palmer-Kinne Dogwood collection, Sculpture Garden, Slim Jim Woods, Treman Woodland Walk, Urban Tree Collection, Zucker Shrub Collection
NATURAL LANDS: 4300 acres

Scott Arboretum, Swarthmore College (Below):

Arboretum organized into Collections and Gardens:
COLLECTIONS: Rhododendrons, Native Azaleas, Hollies, Tree Peonies, Witchhazels, Winterhazels, Conifers, Historic Trees, Daffodils, Magnolias, Crabapples, Vines, Quinces, Roses, Viburnums, Maples, Lilacs, Flowering Cherries, Quinces, Vines
GARDENS: Wister Woodland Garden, Lang Fragrance Garden, Woodland Amphitheater, Crum Woods, Metasequoia Allee, Winter Garden, Rose Garden, PHS Gold Medal Garden, Biostream, Terry Shane Teaching Garden, Susan Schmidt Spring Border, Nason texture garden, Harry Wood Pocono (Shade) Garden, Glad Garden, Pollinator Garden



## Collections Strategy

Along with a consistent use of materials and furnishings, developing a deliberate approach to plantings throughout the campus will help to create a sense of place that is distinct and recognizable. The University of Rochester consists of numerous landscape "types" and has designated its campus an arboretum. Therefore, the strategy for planting the campus should be responsive to landscape typology, microclimatic growing conditions and informed by a collections strategy. In the quadrangles, for instance, a more architectural planting design strategy will help reinforce the creation of an outdoor "room" a tall tree canopy.

Joseph C Wilson Blvd
Intercampus Rd
Elmwood Ave
Crittenden Blvd
Kendrick Rd

## Collections Strategy

| Corridor | Suggested Species | | |
|---|---|---|---|
| Joseph C Wilson Blvd | Platanus occidentalis | | |
| Intercampus Rd | Acer saccharum | | |
| Elmwood Ave | Large Street Tree:<br>Ulmus americana 'Princeton' | Medium Street Tree:<br>Ulmus parvifolia | Small Street Tree:<br>Prunus x incam 'Okame', Syringa reticulata |
| Crittenden Blvd | Ulmus americana 'Princeton' | | |
| Kendrick Rd | Ulmus americana 'Princeton' | | |

# Collections Strategy by Theme

| COLLECTIONS CONCEPTS | COLLECTIONS SPECIES |
|---|---|
| Aesculus Collection: | Aesculus hippocastanum, Aesculus octandra, Aesulus parviflora, Aesculus pavia, Aesculus glabra, Aesculus xcarnea |
| Azalea and Rhododendron Collection: | Azalea mollis, Azalea nudiflora, Azalea Pontica, R. periclymenoides, R. catawbiense |
| Beech Allee: | American Beech double allee along major pedestrian core, |
| Conifer Collection: | Chamaecyparis, Cedrus libani, Juniperus chinensis 'Hibernica' |
| Cool Garden: | (Plants with prominent blue or purple foliage or flowers): Cercis canadensis, Caryopteris, Lilac, Amsonia, Monkshood |
| Dogwood Collection: | Maintain existing Dogwoods, add Cornus sericea, Cornus kousa, Cornus mas, Disease resistant Cornus florida hybrids, |
| Fall / Winter Garden: | (Plants with notable fall or winter interest). Cornus sericea, Ginkgo, Ilex verticillata, |
| Fruit Garden: | (Plants with notable fruit and nuts): Cotoneaster, Crataegus, Celtis laevigata, Callicarpa, Aronia arbutifolia, Ilex verticillata, Amelanchier, Vaccinium angustifolium, |
| Hillside Garden: | Cotoneaster, Juniper, |
| Lilac Collection: | S. vulgaris 'Belle de Nancy' , S. josikea 'Rubra', S. vulgaris 'Madame Lemoine' , S. 'Frau Dammann', S. 'La Tour d'Auvergne', S. 'President Grevy' |
| Love Garden: | Plants with heart shaped foliage or flowers): Corylus corluna, Bleeding Heart, Cercis canadensis, Tilia cordata |
| Maple Collection: | Acer truncatum (Painted Maple), Acer tataricum, Acer saccharum, A. pensylvanicum, A. campestre |
| Magnolia collection: | M. acuminata, M. macrophylla, M. tripetela, M. conspicua, M. norbertiana, M. speciosa, M. lennel, M. stellata |
| Red Garden: | (Plants with prevalent red foliage or flowers). Ajuga, Begonia grandis, Cimicifuga ramose 'Brunette', Eupatorium 'Chocolate', Euphorbia dulcis 'Chameleon', Heuchera americana 'Montrose Ruby', Imperata cylindrical 'Red Baron', Ligularia dentata 'Othello', Panicum 'Shenandoah', Penstemon 'Husker Red', Persicaria 'Red Dragon', Cornus sericea, Campsis radicans 'Crimson Trumpet', Berberis 'Crimson Pygmy', Aesculus pavia, |
| Rain Garden: | Asclepias incarnata, Aster novae angliae, Astilbe spp., Eupatorium fistulosum, Iris versicolor, Liatris spicata, Lobelia cardinalis, Monarda didyma, Osmunda regalis, Panicum virgatum, Rudbeckia laciniata, Lindera benzoin, Cornus amomum, Clethra alnifolia, Itea virginica, Ilex verticillata, Viburnum dentatum, Nyssa sylvatica, Taxodium distichum, Betula nigra |

| | |
|---|---|
| Riparian Collection: | Amelanchier canadensis, Betula nigra, |
| Scent Garden: | (Plants with prevalent scented foliage or flowers). Agastache, Geranium, Lavendula, Lilium orientale,Nepeta, Origanum, Paeonia, Perovskia, Phlox, Rosmarinus, Salvia, Thymus, sarcococca, Viburnum carlesii, Syringa, Santolina, osmanthus, philadelphus, hamamelis, daphne, |
| Sculpture Garden: | Bamboo, Equisetum, Sambucus nigra 'Rotundifolia', Rhus typhina 'Tiger Eyes' |
| Silver/White Garden: | (Plants with prevalent white or silver foliage or flowers). Betula alba, Baptisia alba, Astilbe 'Bridal Veil', Artemisia, Lavandula, Oenothera Lemon Silver, Carex 'Silver Sceptre', Santolina, Sedum sieboldii, Stachys, Thymus, Veronica incana, Viburnums, Hydrangeas, Hostas, Macleaya, Athyrium nipponicum 'Ghost', Iberis, Boltonia, Elymus, Corydalis, Davidia, Dogwoods, Crataegus, Clethra alnifolia, Chionanthus virginicus, Calluna vulgaris 'Silver Knight', Nipponicum 'Snow Lady', Betula, Aesculus parviflora, Davidiana involucrata |
| Texture Garden: | (plants with notable texture). Cytissus scoparius, Panicum, Macleaya, Cotinus coggygria, Amsonia, Comptonia peregrina, Callicarpa japonica, Aesculus parviflora, Viburnum trilobum, Salix purpurea |
| Yellow Garden: | (Plants with prevalent yellow foliage or flowers). Hamamelis, Gleditsia 'Sunburst', Ginkgo, Genista tinctoria, Forsythia viridissima 'Bronxensis', Cytissus scoparius, Corylus avellana, Corylopsis spicata, Cornus serica 'Flaviramea', Cornus officinalis, Cornus mas, Campsis radicans 'Flava', Alchemilla miollis |

*Underlined plants are selections grown by Ellwanger & Barry's Nursery

# Collections by Theme

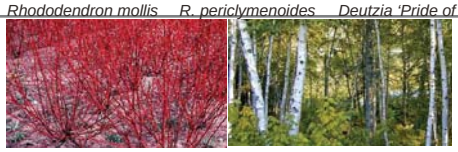
## Conifer Collection

abies nordmanniana | C.nootkatensis | Pinus nigra | Pinus cembra | Taxus baccata | Thuja o

## Ellwanger & Barry's Collection

Rhododendron mollis | R. periclymenoides | Deutzia 'Pride of Rochester' | Spiraea Van Houttei | Syringa cultivars

## Fall / Winter Garden



Cornus sericea 'Baileyi' | Betula alba

## Fruit Garden

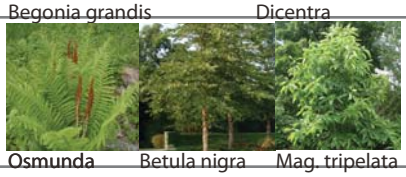
Aronia arbutifolia | Crataegus crus-galli | Celtis laevigata | Amelanchier laevigata | Vaccinium angustifolium

## Hillside Garden

## Love Garden

Begonia grandis | Dicentra | Cercis | Tilia cordata | Catalpa speciosa

## Rain Garden

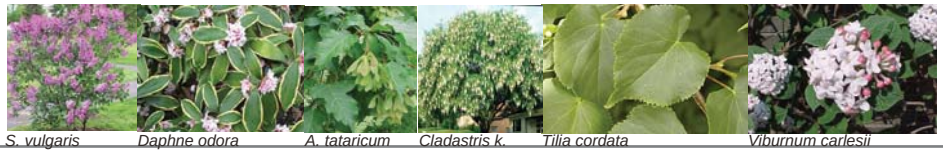


Osmunda | Betula nigra | Mag. tripelata

## Riparian Collection

Amelanchier amabilis

## Scent Garden



S. vulgaris | Daphne odora | A. tataricum | Cladastris k. | Tilia cordata | Viburnum carlesii

## Sculpture Garden

# Collections by Theme

## Texture Garden

Osmunda

## Northwestern New York Woodland Garden

Betula alba

*M. acuminata*

*Quercus bicolor*

# Collections by Genus

## Aesculus Collection

*A. hippocastanum* *A. octandra* *A. parviflora* *A. glabra* *A. x carnea*

## Azalea and Rhododendron Collection

*A. mollis* *R. periclymenoides* *R. ponticum*

## Beech Allee

*Fagus grandifolia*

## Dogwood Collection

*Cornus mas* *C. kousa cultivars* *C. florida cultivars*

## Honey Locust Row

*Gleditsia 'Sunburst'*

## Lilac Collection

*Syringa persica* *S. vulgaris* *S. vulgaris 'Alba'*

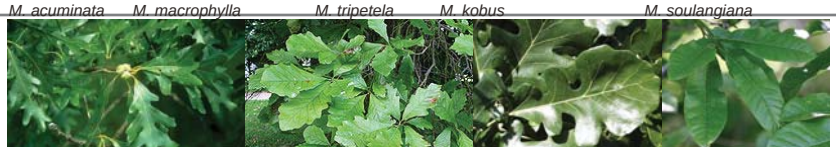
## Maple Collection

*A. truncatum* *A. tataricum* *A. pensylvanicum* *A. campestre* *A. monspessulanum*

## Magnolia Collection

*M. acuminata* *M. macrophylla* *M. tripetela* *M. kobus* *M. soulangiana*

## Oak Collection



*Quercus alba* *Quercus bicolor* *Quercus macrocarpa* *Quercus imbricaria*

## Sugar Maple Allee

*Acer saccharum*

# Collections by Color

## Cool Garden

*Purple Robe Locust*

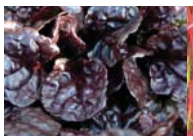
*Caryopteris*

*Amsonia*

*Aconitum*

*Cercis canadensis*

## Red Garden


*Ajuga 'Black Scallop'*

*Imperata 'Red Baron'*

*Cornus sericea 'Baileyi'*

*Persicaria 'Firetail'*

*Cotinus*

*Heuchera*

## Silver / White Garden

*Betula alba*

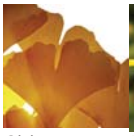
*Magnolia kobus*

*Hydrangea quercifolia*

*Davidiana*

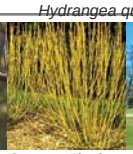
*Carex 'Silver Sceptre'*

## Yellow Garden


*Ginkgo*

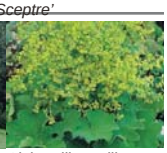
*Hamamelis*

*Corylopsis*


*Cornus 'Flaviramea'*

*Cornus mas*

*Gleditsia 'Sunburst'*


*Alchemilla mollis*

retained as designer and consultant to the architects. The Olmsted international fame stems from his father's design of such well-known areas as Central Park, the Arnold Arboretum, and Yosemite National Park. The University endorsed the River Campus in 1930 as the primary site of their men's college.

Frederick Law Olmsted, Sr. was responsible for the design of a "River Walk" of oak trees along the Genesee River. This portion of the campus was recently sold to the City of Rochester, with contributions from Bausch & Lomb, to establish more public parkland along the river corridor. Included along a three-quarter-mile stretch are 197 oak trees with more than 15 different species identified between Elmwood Avenue and Intercampus Drive.

Although they are not located on the River Campus, the University of Rochester also harbors two champion trees, a weeping willow and a ponderosa pine, which are the largest known examples of their species in the State of New York. These giants, along with the canopy of cover from trees on the rest of the campus, add tremendously to the aesthetic appeal of the grounds while complementing and softening the existing architecture. The visual impact that trees have on the University grounds as they add fall color, winter texture, and spring flowers is invaluable.

UNIVERSITY of ROCHESTER

Department of Horticulture and Grounds
271 East River Road
P.O. Box 270345
Rochester, New York 14627-0345
(585) 273-5627
www.facilities.rochester.edu/arboretum

UNIVERSITY PUBLICATIONS

6199-3M-910SV

UNIVERSITY OF ROCHESTER
ARBORETUM

RIVER CAMPUS

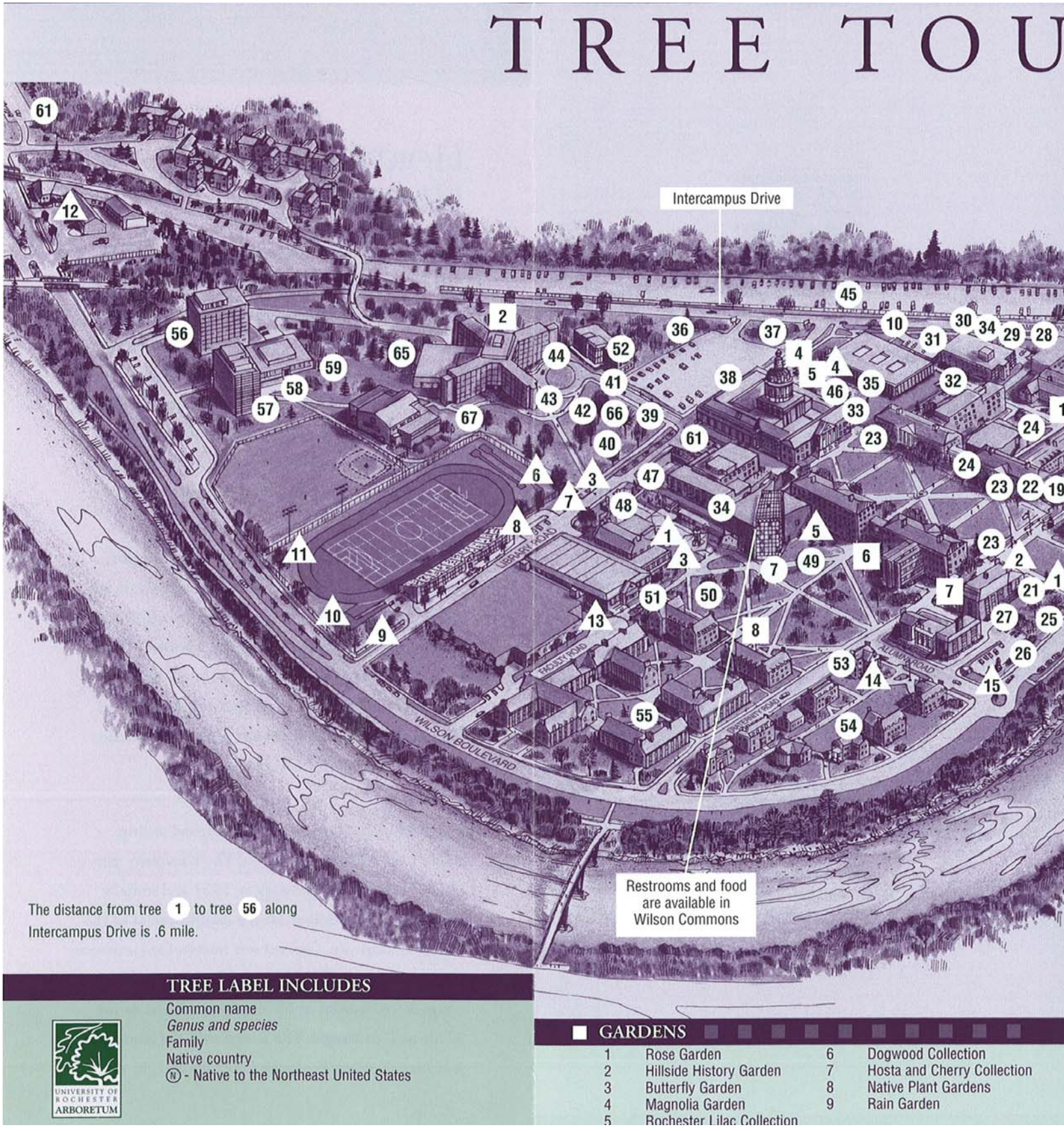
# TREE TOUR *Map*

## HORTICULTURAL HISTORY

The University of Rochester River Campus, located along the Genesee River in upstate New York, has a long tradition of using trees to enhance the beauty of this unique setting. Throughout the history of the University, founded in 1850, trees have been planted, maintained, and preserved. As further support of these efforts, in 1999, the president's planning group approved portions of the campus to be established as the University of Rochester Arboretum.

The tradition is an extension of the arboricultural legacy of the Rochester area. Portions of the city and the Mt. Hope Campus of the University still harbor remnants of the Ellwanger and Barry Nursery. The nursery trade that flourished in the late 1800s and early 1900s in Rochester was once the largest of its type in the country and has left a lasting impression on the city and campus.

The River Campus occupies the original setting of the Oak Hill Country Club. The University purchased the Oak Hill grounds in 1923 and initially raised 10 million dollars for the establishment of the college on this site. Ground was broken for Lattimore Hall in 1927, the first University building to be constructed, located in the northwest corner of the Eastman Quadrangle. The integrity of the landscape was ensured when Frederick Law Olmsted, Jr. was




## TREE LABEL INCLUDES

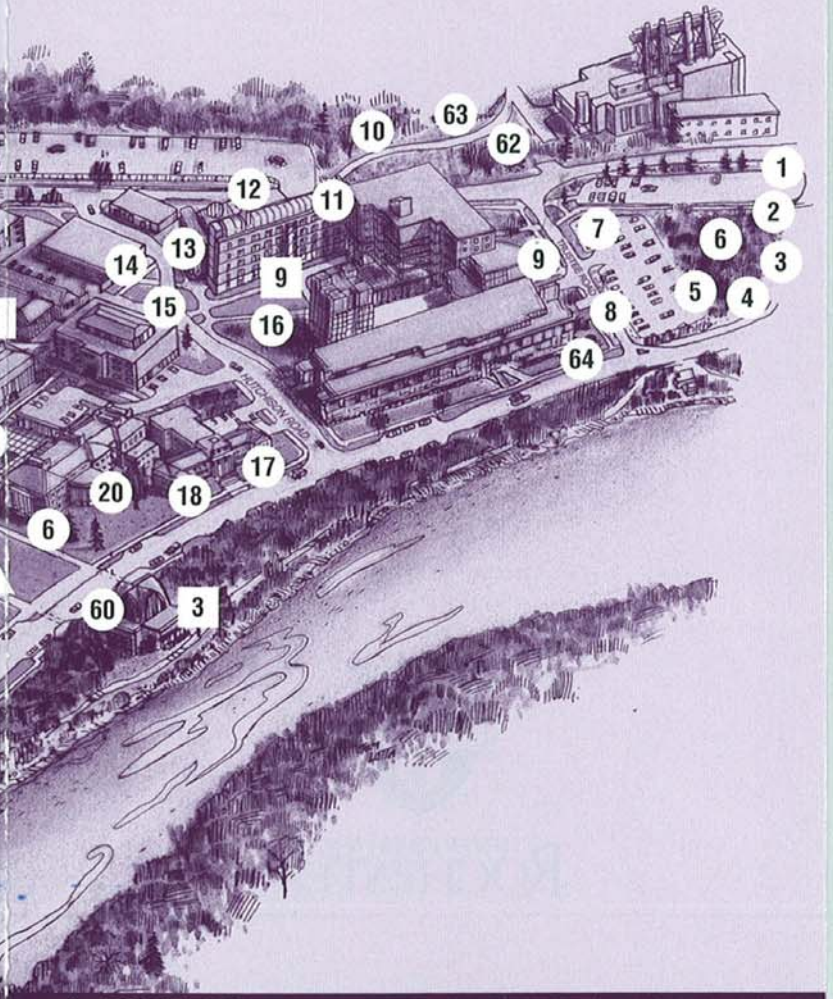
Common name
*Genus and species*
Family
Native country
Ⓝ - Native to the Northeast United States

UNIVERSITY OF ROCHESTER ARBORETUM

## GARDENS

| | | | |
|---|---|---|---|
| 1 | Rose Garden | 6 | Dogwood Collection |
| 2 | Hillside History Garden | 7 | Hosta and Cherry Collection |
| 3 | Butterfly Garden | 8 | Native Plant Gardens |
| 4 | Magnolia Garden | 9 | Rain Garden |
| 5 | Rochester Lilac Collection | | |

# R MAP




## ▲ CONIFERS (Gymnosperms)

| | | |
|---|---|---|
| 1 | White Fir | *Abies concolor* |
| 2 | Dawn Redwood | *Metasequoia glyptostroboides* |
| 3 | Weeping Serbian Spruce | *Picea omorika* 'Pendula' |
| 4 | Austrian Pine | *Pinus nigra* |
| 5 | Eastern Hemlock | *Tsuga canadensis* |
| 6 | Scotch Pine | *Pinus sylvestris* |
| 7 | Bald Cypress | *Taxodium distichum* |
| 8 | Mexican Border Pine | *Pinus* sp. |
| 9 | White Pine | *Pinus strobus* |
| 10 | White Cedar | *Thuja occidentalis* |
| 11 | White Spruce | *Picea glauca* |
| 12 | Blue Spruce | *Picea pungens* |
| 13 | Bosnian Pine | *Pinus heldreichii* |
| 14 | Columnar White Pine | *Pinus strobus* 'Fastigiata' |
| 15 | Douglas Fir | *Pseudotsuga menziesii* |

| | | |
|---|---|---|
| 1 | Paperbark Maple | *Acer griseum* |
| 2 | Osage Orange | *Malcura pomifera* |
| 3 | Black Walnut | *Juglans nigra* |
| 4 | Swamp White Oak | *Quercus bicolor* |
| 5 | Kentucky Coffeetree | *Gymnocladus dioicus* |
| 6 | Bur Oak | *Quercus macrocarpa* |
| 7 | Katsura Tree | *Cercidiphyllum japonicum* |
| 8 | Japanese Pagoda | *Styphomlobium japonicum* |
| 9 | Miyabe Maple | *Acer miyabei* |
| 10 | Zelkova | *Zelkova serrata* |
| 11 | Irontree | *Parrotia persica* |
| 12 | Delaware American Elm | *Ulmus americana* "Delaware" |
| 13 | Silver Maple | *Acer saccharinum* |
| 14 | Amur Maple | *Acer ginnala* |
| 15 | Norway Maple | *Acer platanoides* |
| 16 | London Planetree | *Platanus acerifolia* |
| 17 | Columnar English Oak | *Quercus robur* 'fastigiata' |
| 18 | White Flowering Dogwood | *Cornus florida* |
| 19 | European Beech | *Fagus sylvatica* |
| 20 | White Oak | *Quercus alba* |
| 21 | Pin Oak | *Quercus palustris* |
| 22 | Scotch Elm | *Ulmus glabra* |
| 23 | Red Oak | *Quercus rubra* |
| 24 | Kwanzan Cherry | *Prunus serrulata* 'Kwanzan' |
| 25 | Honey Locust | *Gleditsia triacanthos* |
| 26 | Planetree | *Platanus* x *acerifolia* |
| 27 | Schwelder Maple | *Acer platanoides* 'Schwelderi' |
| 28 | Purple Beech | *Fagus sylvatica* |
| 29 | Ginkgo | *Ginkgo biloba* |
| 30 | Ironwood | *Ostrya virginiana* |
| 31 | Horsechestnut | *Aesculus hippocastanum* |
| 32 | European Hornbeam | *Carpinus betulus* |
| 33 | Birch species | *Betula platyphylla* |
| 34 | Bradford Pear | *Pyrus calleryana* 'Bradford' |
| 35 | Higan Weeping Cherry | *Prunus subhirtella* 'Pendula' |
| 36 | Star Magnolia | *Magnolia stellata* |
| 37 | Hally Jolivette Cherry | *Prunus* 'Hally Jolivette' |
| 38 | Crabapple species | *Malus* sp. |
| 39 | Green Ash | *Fraxinus pennsylvanica* |
| 40 | Sugar Maple | *Acer saccharum* |
| 41 | Green Ash | *Fraxinus pennsylvanica* |
| 42 | Scarlet Oak | *Quercus coccinea* |
| 43 | Columnar Norway Maple | *Acer platanoides* |
| 44 | Kousa Dogwood | *Cornus kousa* |
| 45 | Japanese Tree Lilac | *Syringa reticulata* |
| 46 | Blackgum | *Nyssa sylvatica* |
| 47 | Sweetgum | *Liquidambar stryaciflua* |
| 48 | Serviceberry | *Amelanchier canadensis* |
| 49 | Scotch Elm | *Ulmus glabra* |
| 50 | Goldenraintree | *Koelreuteria paniculata* |
| 51 | Littleleaf Linden | *Tilia cordata* |
| 52 | Redbud | *Cercis canadensis* |
| 53 | Tuliptree | *Liriodendron tulipifera* |
| 54 | Amur Corktree | *Phellodendron amurense* |
| 55 | European Mountain Ash | *Sorbus aucuparia* |
| 56 | Basswood | *Tilia americana* |
| 57 | Pin Oak | *Quercus palustris* |
| 58 | Corkscrew Willow | *Salix* sp. |
| 59 | English Oak | *Quercus robur* |
| 60 | Constellation White Dogwood | *Cornus* x *rutgersensis* |
| 61 | Corneliancherry Dogwood | *Cornus mas* |
| 62 | Korean Stewartia | *Stewartia koreana* |
| 63 | Japanese Stewartia | *Stewartia pseudocamellia* |
| 64 | Chinese Elm | *Ulmus parvifolia* 'Allee' |
| 65 | Scarlet Oak | *Quercus coccinea* |
| 66 | Hophornbeam | *Ostrya virginiana* |
| 67 | Cucumbertree Magnolia | *Magnolia acuminata* |

1040 Hull Street
Suite 100
Baltimore, MD 21230
410.347.8500
410.347.8519 fax
www.asg-architects.com