

MAINE



UNIVERSITY of

MAINE

*master plan report  
executive summary*

2008/2009

Recipient of the Society for College and University  
Planning, Excellence in Planning Merit Award





Office of the President  
December 2009

Dear Family and Friends of UMaine,

I am delighted to present to you the 2008-2009 Campus Master Plan for the University of Maine. It is an exceptional document, representing the culmination of dozens of hours of rigorous planning encompassing the many diverse aspects of our beautiful campus. This plan delineates a comprehensive vision for the University's future planning while full supporting our academic, research and public service mission and promoting our commitment to social, economic and environmental sustainability. It inspires campus planners with strategies to further improve campus life, reutilize and protect our historic buildings and landscapes, make more efficient use of our property through infill and redevelopment, and engage collaboratively with our neighboring communities.

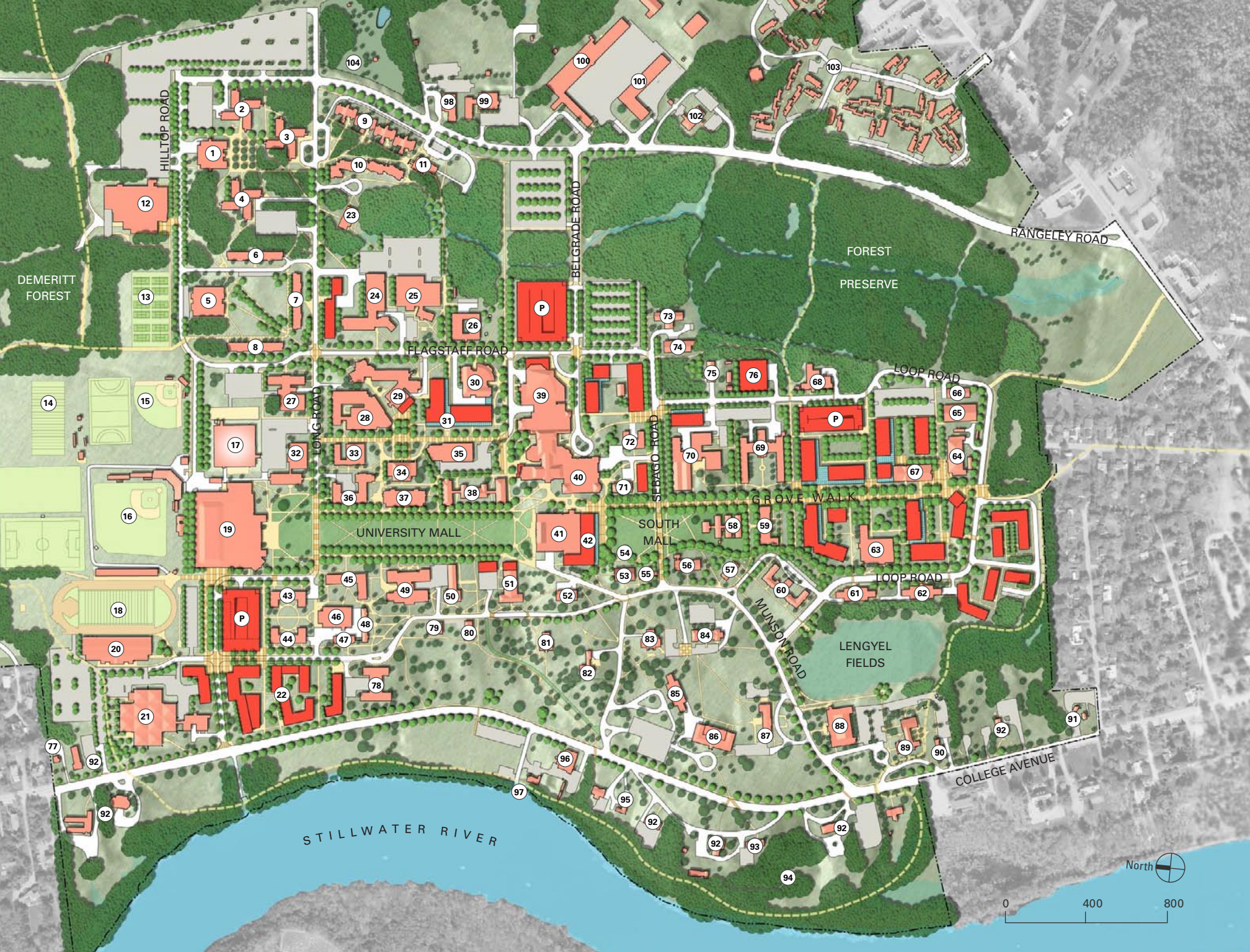
Our Plan, I am pleased to tell you, during its final editing stages, won its first award: the 2009 National Merit Award for Excellence in Planning for an established Campus from the Society for College and University Planning. The selection committee chose UMaine's plan out of 200 entries, saying that it was "...refreshing to see... a good environmentally driven plan... first attempt out of the box and is admirable..." Our Plan, we have also been informed, is already becoming well known in higher education planning circles for its unique focus on sustainability. It is truly a document to be proud of.

I sincerely thank the professionals at Sasaki Associates for their assiduous dedication and exemplary vision for our campus, Mac Collins for all the work he did on the Historic Preservation Master Plan which helped lay the groundwork for this Plan, and Vice President for Administration and Finance Janet Waldron and the Campus Planning Committee members for effectively guiding the master planning process.

I trust that your reading will be both enjoyable and informative.

With warmest regards and sincerest appreciation for your continued interest in the University of Maine.

Dr. Robert A. Kennedy, President



HILLTOP ROAD

BELGRADE ROAD

RANGELEY ROAD

DEMERITT FOREST

FOREST PRESERVE

FLAGSTAFF ROAD

LOOP ROAD

LONG ROAD

SEBAGO ROAD

GROVE WALK

UNIVERSITY MALL

SOUTH MALL

LOOP ROAD

MUNSON ROAD

LENGYEL FIELDS

STILLWATER RIVER

COLLEGE AVENUE



0 400 800

# 2008 Master Plan: Existing and Proposed Buildings

## North Residential Villages

1. HILLTOP
2. SOMERSET HALL
3. OXFORD HALL
4. KNOX HALL
5. STEWART COMMONS / ARTS BUILDING
6. ANDROSCOGGIN HALL
7. CUMBERLAND HALL
8. GANNETT HALL
9. DORIS TWITCHELL ALLEN VILLAGE (DTAV)
10. EDITH PATCH HALL
11. DTAV COMMUNITY CENTER

## North Athletic and Black Bear Village

12. STUDENT RECREATION AND FITNESS CENTER
13. BRIDGE TENNIS COURTS
14. NORTH ATHLETIC FIELDS
15. KESSOCK FIELD
16. MAHANEY DIAMOND
17. MAHANEY DOME
18. MORSE FIELD / BECKETT FAMILY TRACK
19. MEMORIAL GYMNASIUM
20. HAROLD ALFOND STADIUM
21. HAROLD ALFOND SPORTS ARENA
22. BLACK BEAR VILLAGE

## Academic Core

23. BION AND DORAIN FOSTER STUDENT INNOVATION CENTER
24. JENNESS HALL
25. ADVANCED ENGINEERED WOOD COMPOSITES (AEWC)
26. MURRAY HALL
27. CUTLER HEALTH CENTER
28. BARROWS HALL / ENGINEERING AND SCIENCE RESEARCH BUILDING (ESRB)
29. NEVILLE HALL AND EXPANSION
30. DONALD P. CORBETT BUSINESS BUILDING
31. SHIBLES HALL REPLACEMENT
32. BENNETT HALL

33. MACHINETOOL LAB
34. CROSBY HALL
35. ADVANCED MANUFACTURING CENTER (AMC)
36. BOARDMAN HALL
37. LITTLE HALL
38. STEVENS HALL
39. COLLINS CENTER FOR THE ARTS
40. MEMORIAL UNION
41. RAYMOND H. FOGLER LIBRARY
42. FOGLER LIBRARY ADDITION
43. CORBETT HALL
44. DUNN HALL
45. HART HALL
46. WELLS CONFERENCE CENTER
47. HANNIBAL HAMLIN HALL
48. OAK HALL
49. AUBERT HALL
50. LORD HALL
51. ALUMNI HALL AND ADDITION
52. HOLMES HALL
53. WINSLOW HALL
54. EDGAR ALAN CYRUS PAVILION THEATER
55. THE MAPLES
56. MERRILL HALL
57. COLVIN HALL
58. ROGER CLAPP GREENHOUSES
59. DEERING HALL
60. ESTABROOKE HALL
61. KENNEBEC HALL
62. AROOSTOOK HALL
63. YORK HALL AND COMMONS
64. SAWYER ENVIRONMENTAL CHEMISTRY RESEARCH LABORATORY
65. LIBRARY STORAGE
66. OCEANOGRAPHIC OPERATIONS BUILDING
67. BRYAND GLOBAL SCIENCES CENTER
68. USDA LAB
69. NUTTING HALL



70. HITCHNER HALL
71. ROGERS HALL
72. NORMAN SMITH HALL
73. AQUACULTURE RESEARCH BUILDING
74. PERKINS HALL
75. PAGE FARM AND HOME MUSEUM
76. USDA AQUACULTURE LAB

## Front Lawn and River Front

77. NAVY ROTC
78. HANCOCK HALL
79. WINGATE HALL
80. FERNALD HALL
81. COBURN HALL
82. PRESIDENT'S HOUSE
83. CARNEGIE HALL
84. BALENTINE HALL
85. PENOBSCOT HALL
86. STODDER HALL
87. CHADBOURNE HALL
88. LENGYEL HALL
89. BUCHANAN ALUMNI HOUSE
90. CANADIAN-AMERICAN CENTER
91. UMAINE PRESS
92. GREEK ORGANIZATIONS
93. SIGMA CHI HERITAGE HOUSE
94. FAY HYLAND BOTANICAL GARDEN
95. CHILDREN'S CENTER
96. STEAM PLANT
97. DOCK AND BOAT LAUNCH

## East Campus Facilities

98. UNIVERSITY CREDIT UNION
99. KEYO PUBLIC AFFAIRS BUILDING
100. SERVICE BUILDING
101. UNIVERSITY GARAGE
102. PUBLIC SAFETY BUILDING
103. TALMAR WOOD APARTMENTS (PRIVATE)
104. LYLE E. LITTLEFIELD ORNAMENTAL GARDEN

-  Existing Building
-  Proposed Building





## EXECUTIVE SUMMARY

The 2008 University of Maine Master Plan provides a vision rooted in the unique history and traditions of the University land grant, academic, research and public service missions, the goals and aspirations of the campus community, and opportunities for the future. It simultaneously looks to the past, addresses the present, and promotes a philosophy of stewardship and sustainability. The Master Plan is based on four strategic opportunities:

### 1. Adopting an Ethic of Sustainability

The Master Plan embraces the three pillars of sustainability at the broadest level: social, economic and environmental with the intent of making “Stewardship and Sustainability” the guiding principles of the University. It specifically focuses on sustainable environmental and physical design principles while identifying opportunities for community, local government and business partnerships. The partnership opportunities are intended to stimulate social and economic development in Maine.

◀ PROPOSED VIEW OF GROVE WALK AND SOUTH MALL IN AUTUMN

**The 2008 University of Maine Master Plan provides a vision rooted in the unique history and traditions of the University land grant, academic, research and public service missions, the goals and aspirations of the campus community, and opportunities for the future.**

## 2. Enhancing the Cultural and Land Grant Legacy

The Master Plan looks to the rich planning history of the campus with the aim of protecting cultural and land resources. UMaine is distinguished by the involvement of Frederick Law Olmsted, Sr. and the Olmsted Brothers in the early design and development of the campus. This involvement provides the University with a rich array of architectural and landscape resources, the future of which has been thoughtfully considered in the 2007 Historic Preservation Master Plan for the campus. The key recommendations of that plan are reinforced in the Master Plan.

The land grant legacy provides the University with tremendous natural resources and stewardship opportunities. The Master Plan establishes a physical design and policy framework to ensure that this legacy is protected for future generations as well as the current teaching and research mission.

## 3. Improving the Collegiate Environment

The Master Plan places particular emphasis on improving the overall environment and amenities of the campus. This emphasis will result in a stronger sense of collegiality and community and assist in attracting a larger and more diverse population of students, faculty and staff. To that end, improvements to the campus focus on the social and learning environment, the residential experience, pedestrian connectivity, and design considerations in a northern climate.

## 4. Fostering Community Outreach

The Master Plan identifies opportunities for social and economic development beyond the campus boundaries. The opportunities are based on consultation with the local communities of Orono and Old Town and represent the first steps toward better community / campus integration and future planning processes. The emerging planning and economic development initiatives of both communities are addressed in the Master Plan.

Within the campus boundaries, the Master Plan enhances the educational, cultural, athletic and recreational amenities that serve the campus as well as broader communities.

■ Existing Building  
□ Proposed Building



DEMERITT  
FOREST

FOREST  
PRESERVE

STILLWATER RIVER





## The Master Plan Vision

The Master Plan establishes a vision for a vibrant, attractive campus setting. It promotes sustainable and responsible development that enriches both the natural environment and campus life. The key strategies of the Master Plan are to concentrate academic, research and campus life facilities in the central campus area, limit the impact on natural systems and habitats, efficiently utilize existing infrastructure and promote a collegiate, pedestrian-scale environment.

The sustainable design strategies of the Master Plan respond to the natural systems and the relationship between the quality of life, the local climate and resource consumption patterns. The Master Plan addresses environmental sustainability in four key areas: 1) natural systems and habitats; 2) water resources; 3) energy and emissions; and 4) access and circulation.

## Principles and Goals

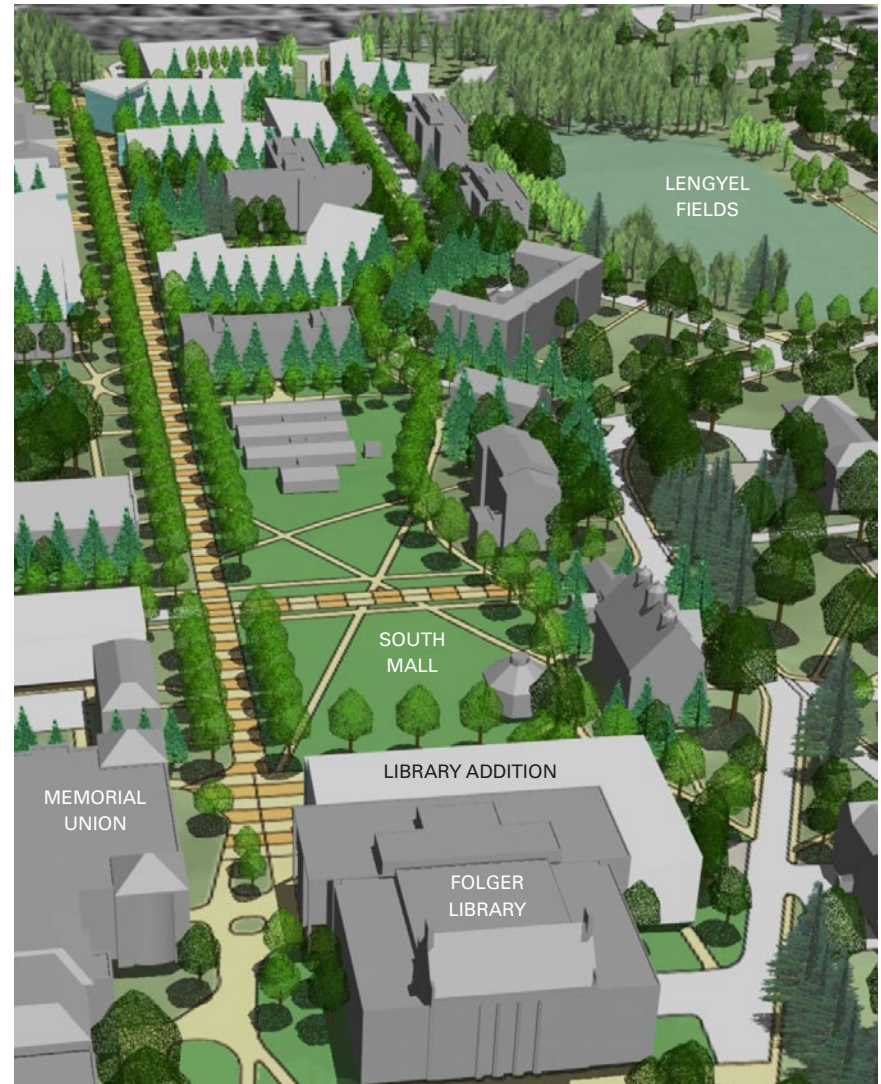
The vision is based on the principles and goals established at the outset of the planning process in conjunction with the University.

### Academic and Research

The Master Plan should define the terms by which the University's strategic academic and research vision can be physically accommodated to best effect—through integration of basic and applied research in the campus learning environment and technology transfer initiatives located to benefit the community.

### Sustainability and Stewardship

The Master Plan should advance the philosophy of sustainability, quality of life and human betterment as a 21st century expression of the land and sea grant mission of UMaine. It should promote prudent stewardship and sound management of physical resources and make the campus a working model of sustainability and smart growth. It should enhance the connections between the developed areas of the campus and the surrounding natural systems to reinforce UMaine's origins as a land grant institution.



PROPOSED VIEW SOUTH FROM THE UNION AND LIBRARY ALONG GROVE WALK

◀ WINTER VIEW OF GROVE WALK (LOOKING NORTH TOWARDS HITCHNER HALL) ILLUSTRATING THE PROPOSED SOCIAL SPACES, GROUP LEARNING AREAS AND INTERIOR 'STREETS' FOR WINTER CIRCULATION



VIEW OF MASTER PLAN LOOKING NORTH WEST

**The Master Plan establishes a vision for a vibrant, attractive campus setting. It promotes sustainable and responsible development that enriches both the natural environment and campus life.**

### Collegiality and Community

The Master Plan should create an environment that facilitates community and an academic setting that fosters robust, innovative and collaborative research, scholarship and creative activity, including strong connections between graduate and undergraduate programs.

### Compact Land Use Pattern

The Master Plan should maintain a compact land-use pattern in order to reinforce the pedestrian qualities of the campus; maintain operational and infrastructure efficiencies; preserve natural systems; and enhance campus vitality by placing a variety of activities in close proximity to one another.

### Circulation

The Master Plan should promote the pedestrianization of the central campus, taking into consideration issues of climate, security, comfort and convenience, including interior/exterior pedestrian circulation connectivity. In conjunction, the Master Plan should encourage alternative modes of transportation in line with the sustainability and carbon emissions reduction goals of the University.

### Landscape

The Master Plan should restore, enhance and extend the quality and character of the historic campus core landscape by means of a well-defined framework of open spaces and linkages as well as sustainable implementation guidelines. It should adopt the recommendations of the 2007 Historic Preservation Master Plan.

### Architectural Design

The Master Plan should inform preservation and institutional guidelines, address historic and future buildings taking into account the materials, building forms, massing and building-to-site ratios of existing buildings while responding to energy efficiency, modern program requirements, and accessibility.

### Partnerships and Community Interface

The Master Plan should maintain the existing compatible land use relationships with the surrounding business and residential districts of Orono and Old Town. New partnerships should be carefully weighed as potential economic and community revitalization generators for both the University and the broader community. Cultural, educational and recreational partnerships should be facilitated.



DEMERITT  
FOREST

REC  
CENTER

GYM

FUTURE  
BUILDING

WETLAND  
REFORESTATION

COLLINS  
CENTER

MEMORIAL  
UNION

FOGLER  
LIBRARY



DEMERITT  
FOREST

FOREST  
PRESERVE

STILLWATER RIVER



0 400 800

1. Wetland Restoration
2. Reforestation
3. Stillwater River Flood Plain
4. Front Lawn
5. University Mall
6. South Mall
7. South Academic Quadrangle
8. Beddington Walk
9. Grove Walk
10. Windbreaks/Connectors
11. MLK Plaza
12. Cloke Plaza
13. Athletic Fields
14. Lengyel Fields
15. Bike Paths
16. Wabanaki Trail
17. Fay Hyland Botanical Garden
18. Littlefield Ornamental Garden

HILLTOP ROAD

FLAGSTAFF ROAD

LONG ROAD

BELGRADE ROAD

SEBAGO ROAD

GROVE WALK

MUNSON ROAD

LOOP ROAD

COLLEGE AVENUE

RANGELEY ROAD

10

18

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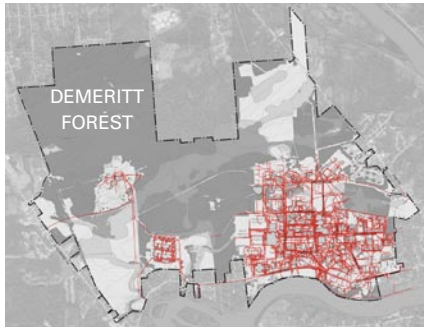
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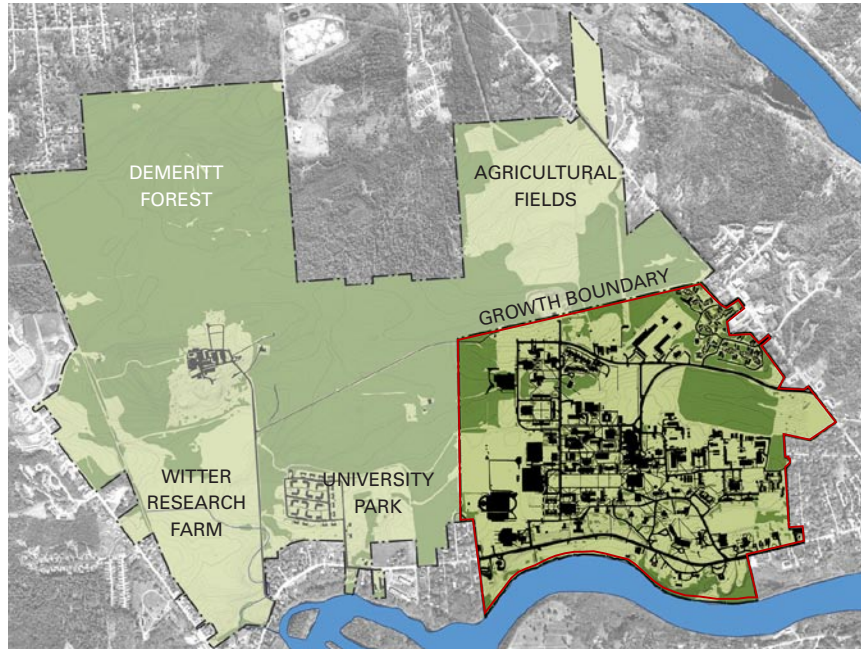
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EXISTING INFRASTRUCTURE



PEDESTRIAN REALM



PROPOSED GROWTH BOUNDARY

## Master Plan Frameworks and Elements

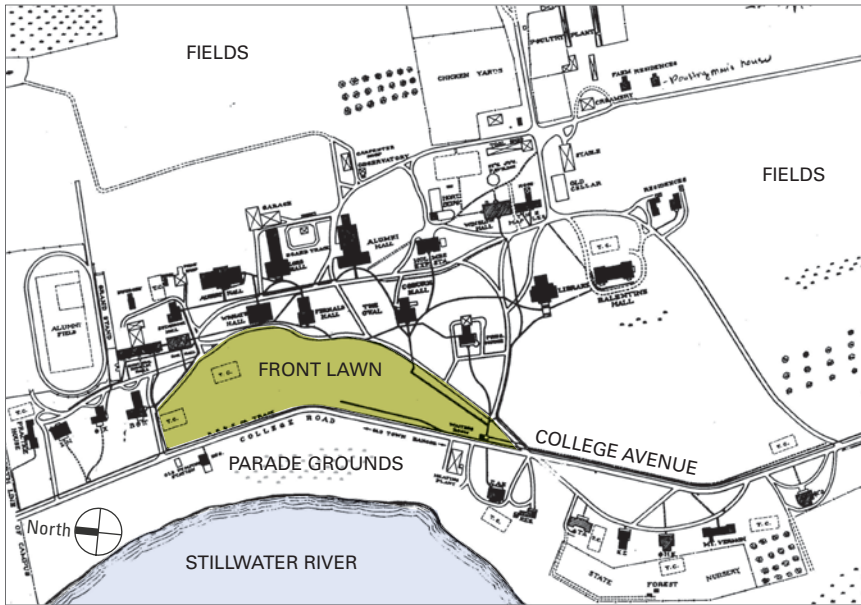
The Master Plan consists of several functional and design frameworks which collectively form a comprehensive and coordinated vision for guiding incremental change on the campus.

### Land Use Framework

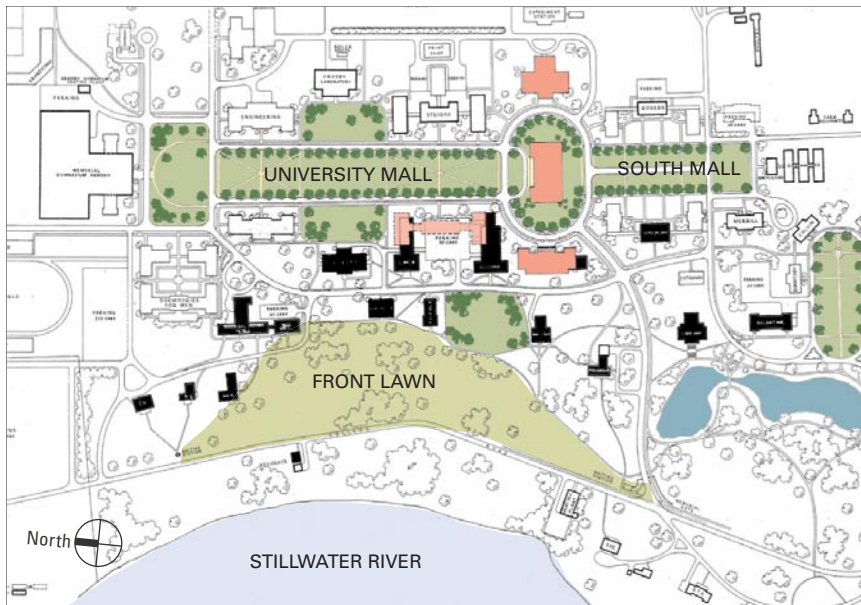
The Land Use Framework provides connections between the natural features and the existing landscape spaces of the core campus. By protecting and extending the natural systems and woodlands, the Land Use Framework defines the development and spatial pattern of the Master Plan. It sets in place policies such as a Growth Boundary to protect outlying land uses including the Demeritt Forest, the Forest Preserve, and the Stillwater Riverfront. Academic, research and campus life facilities are concentrated inside the Growth Boundary to ensure that a pedestrian scale and a compact land use pattern is maintained.

### Landscape Framework

The Landscape Framework links the “frame” of natural systems that surround the developed campus with the formal landscapes within the Growth Boundary. New pathways connect campus districts; new formal spaces organize future development; a series of east/west windbreaks shelter buildings and pathways from northern winter winds; and south-facing quadrangles provide sheltered micro-climates. The Landscape Framework maximizes the value of landscape elements to promote human comfort and capitalize on solar energy.



1922 OLMSTED SENIOR MASTER PLAN



1932 OLMSTED BROTHERS MASTER PLAN SHOWING THE UNIVERSITY MALL AND SOUTH MALL

The Landscape Framework consists of the following elements:

## Natural Frame

### Wetland Restoration and Reforestation

A key objective of the Master Plan is to protect the natural systems of the campus and repair areas where these systems have been compromised. Recommendations are provided for restoring wetland and forest conditions in the parking areas east of the Collins Center for the Arts. Restoring the former wetland in this area will address stormwater management issues of adjacent sub-watersheds and provide a more positive entry into the campus.

### Stillwater Riverfront

The riverfront parade grounds are restored in accordance with the original intent of the 1867 Olmsted master plan vision. The Steam Plant Lot and other parking areas are removed in order to reestablish a more natural condition in the 100 year floodplain of the river. The area is envisioned for riverfront recreation including the University boat launch. A proposed trail honoring the Wabanaki people will connect to the Fay Hyland Botanical Garden, and to the broader local trail system.

## Open Spaces

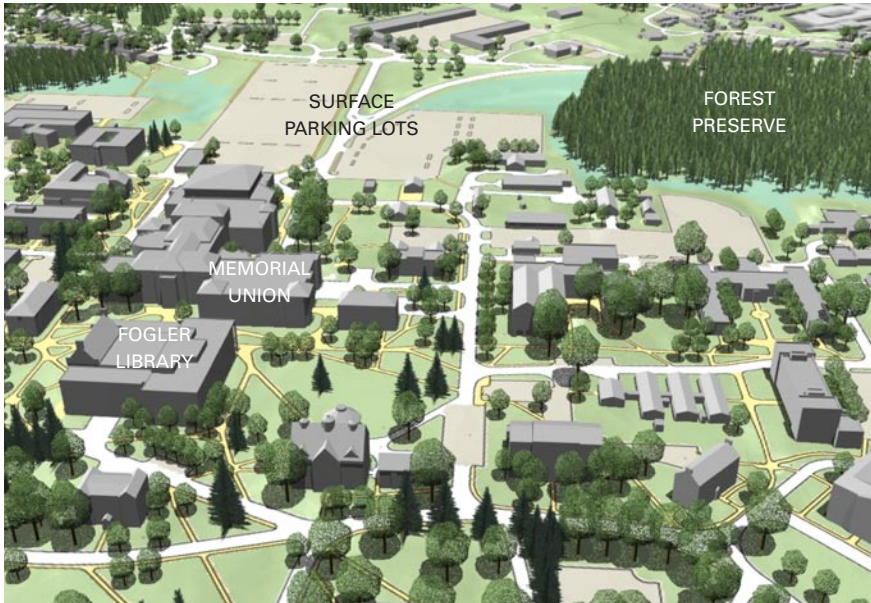
The Master Plan maintains and enhances the iconic open spaces of the campus. It includes new open spaces based on the Olmsted Legacy as well as principles for creating sheltered micro-climates.

### Front Lawn and the Olmsted Landscape Legacy

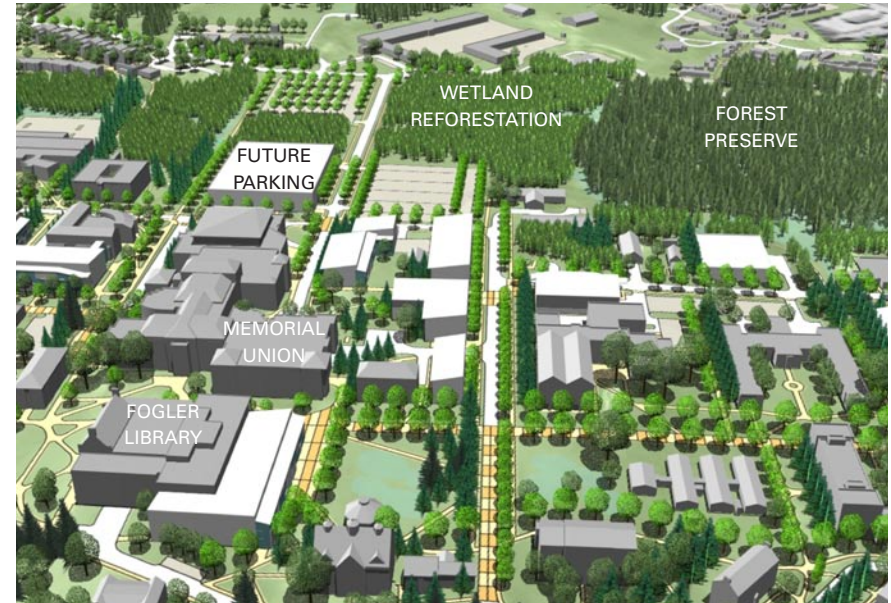
The University of Maine campus is distinguished as one of the few campuses to have been planned by both Frederick Law Olmsted Sr. and the Olmsted Brothers. This legacy is largely intact with a majority of the buildings constructed during this planning phase remaining. The Olmsted planning influence extends from the late 1800s through the 1940s, when the Olmsted Brothers' designs were adopted.

The Olmsted influence is evident in the Front Lawn and in the University Mall. The former represents the work of Olmsted Sr. and is designed in the picturesque style. It contains a number of small architecturally significant buildings including Wingate, Fernald, Coburn, and Carnegie. The Front Lawn





EXISTING CONDITIONS SOUTH MALL AND EAST CAMPUS AREAS



PROPOSED SOUTH MALL AND EAST CAMPUS AREAS

is recognized as a key cultural landscape of the campus. The Front Lawn and the associated buildings are preserved in the Master Plan. No major new development is proposed in the Front Lawn area and landscape improvements will be guided by the recommendations of the 2007 Historic Preservation Master Plan.

### The University Mall

The University Mall is the iconic open space of the UMaine campus, establishing a memorable image and place. Improvements to the Mall are guided by the recommendations of the Historic Preservation Master Plan. Notable improvements include the replacement of the existing Ash trees defining the edges of the Mall and the selective removal of shrubbery obstructing views of campus buildings. Diagonal walkways are proposed to facilitate pedestrian movement across the Mall.

### The South Mall

The Master Plan proposes the creation of the South Mall, a design concept in line with the Olmsted Brothers' plans of 1932 and 1948. The South Mall will establish a sense of place between the Fogler Library and Deering Hall to the south. In keeping with the design of the University Mall, the South Mall will feature lawn areas and an edge framed by trees. Creation of the Mall requires the removal of existing surface parking and the redesign of Sebago Road between Munson Road and Grove Walk to include traffic calming measures.

### South Mall Quadrangles

The proposed redevelopment of the South Campus features several quadrangles defined by new buildings. The quadrangles are located on the south side of the new buildings with the intent of creating micro-climates that extend the outdoor season for campus activities.



VIEW OF THE SOUTH CAMPUS DISTRICT HIGHLIGHTING THE SOUTH MALL AND EAST/WEST CONNECTORS

## Connectors

Several landscape and pedestrian circulation connectors are proposed. The connectors serve as organizational elements, cross campus routes, habitat corridors, and stormwater retention areas.

### Grove Walk

Grove Walk is the key north / south pedestrian route linking the redeveloped sites of the South Campus to the University Mall and academic facilities to the north. The existing asphalt roadway will be replaced by pedestrian paving with consistent tree planting, new lighting and benches.

### East/West Connectors

A series of connector landscapes is proposed to link the natural “frame” of the campus to the formal and picturesque landscapes that define the central academic core. The connectors are envisioned both as landscape corridors and windbreaks that address a number of aesthetic and functional needs. The corridors will feature consistent rows of evergreen trees to mitigate winter winds and will be coordinated with new pedestrian circulation routes and, potentially, stormwater detention swales. The connectors are also aligned with future building placement to provide additional wind protection and create sunny micro-climates on the south side of those buildings. From a circulation perspective, the connectors serve to link the core campus with new campus development to the east.



VIEW OF BEDDINGTON WALK, CLOKE PLAZA (LEFT CIRCLE) AND MLK PLAZA (RIGHT CIRCLE)

## Plazas

Two plazas are proposed in the Landscape and Open Space Framework to establish new gathering and commemorative spaces:

### Martin Luther and Coretta Scott King Plaza (MLK)

The MLK Plaza is located on the north side of the Memorial Union. The Plaza is the first of several improvements proposed to this important pedestrian entrance to the campus. The Plaza establishes a reflective space and is part of the daily pedestrian movements through this area.

### Beddington Walk and Cloke Plaza

Beddington Walk will be transformed from a vehicular road into a combined pedestrian and service route. The walkway will feature a narrowed cross section of street trees, lighting and new paving. Cloke Plaza will form a new gathering space along this route. Intended as a commemorative plaza for Professor Paul Cloke, founding dean of the College of Engineering, it will feature art commissioned through Maine's Percent for Art program.



A ROW OF SPRUCE TREES PROTECTS THE MARTIN LUTHER AND CORETTA SCOTT KING PLAZA AND WALKWAY FROM NORTHERN WINTER WINDS



WINDBREAKS / CONNECTORS CREATE SHELTERED PEDESTRIAN ENVIRONMENTS

**The Circulation Framework enhances the pedestrian, bicycle, and transit networks of the campus with the aim of providing a number of access options. It eliminates redundant roads, simplifies vehicular circulation and removes traffic from the central campus to improve the pedestrian experience.**

PROPOSED STUDENT LEARNING SPACES ARE COORDINATED WITH EXTERIOR CIRCULATION



LIBRARY ADDITION



GROVE WALK ACADEMIC BUILDINGS

## Circulation Framework

The Circulation Framework enhances the pedestrian, bicycle, and transit networks of the campus with the aim of providing a number of access options. It eliminates redundant roads, simplifies vehicular circulation and removes traffic from the central campus to improve the pedestrian experience. A Loop Road will rationalize traffic flow around the perimeter of the campus. The Loop Road is defined, in general, by existing roadways including Long Road, Flagstaff Road, Munson Road and new roadway segments in the south campus area. Future development is concentrated in the core campus area within a ten minute walk of the Fogler Library. The compact campus development is achieved by the relocation of existing parking from the campus interior to peripheral parking locations and, in the long term, structured parking. The garages are linked with the enhanced pedestrian network to encourage campus users to “park once and walk.”

The key access and circulation recommendations of the Master Plan include:

- Reducing vehicular traffic and pedestrian / vehicular conflicts in the core by creating a perimeter Loop Road and a pedestrian priority zone.
- Enhancing and extending the pedestrian network to facilitate pedestrian movement, provide better connectivity, ensure safety and shelter.
- Coordinate interior movement patterns with external walks to provide sheltered routes during winter months.
- Utilizing traffic calming measures to facilitate pedestrian movement.
- Designating streets for transit services and coordinating bus stops with major destinations.
- Transitioning to a peripheral and structured parking model over the long term.
- Working with Orono and local businesses to develop a shuttle route.



PROPOSED ROAD NETWORK CHANGES AND CLOSURES

## Cultural Resources

The Cultural Resource Framework preserves and enhances the unique history and traditions of the UMaine campus. It adopts the recommendations of the 2007 Historic Preservation Master Plan including the architectural guidance for “contributing” buildings and the iconic landscapes of the Front Lawn, the Riverfront and the University Mall. The proposed expansion of the existing Historic District is also adopted in the Master Plan with minor modifications.

## Community Resources

The Community Framework is an important element of the Master Plan, highlighting the amenities, civic nodes and residential communities that contribute to the quality of campus life. The Master Plan supports a sense of community by creating and enhancing civic meeting points and by providing connectivity between these nodes. Community is addressed at the following levels: 1) campus-wide gathering and meeting spaces such as the expanded Library; 2) learning nodes; 3) residential communities; 4) dining and food services; 5) cultural amenities and 6) athletics and recreation facilities.

## Development Capacity

The Master Plan provides ample capacity to accommodate future academic, research and campus life facilities. An estimated net 1.7 million gsf of new academic space can be accommodated in the Master Plan. Based on growth trends since 1945, this represents 25 years of expansion. The Master Plan proposes locations for known program elements including the Fogler Library addition and the Aquatic Research Center.

## Campus District Design Guidelines

Within the campus Growth Boundary, the Design Guidelines provide the general basis for building placement and placemaking in the Master Plan. The Guidelines provide a strategy for infill development and redevelopment in areas of the campus that are underutilized or that would benefit from regeneration. The Guidelines are organized by campus districts as follows:

- **Front Lawn**—The original campus landscape and buildings set out in the 1867 Olmsted master plan are maintained in general accordance with the recommendations of the Historic Preservation Master Plan.
- **River Front**—The Stillwater riverfront landscape is transformed the removal of surface parking, creation of the Parade Grounds and the creation of a riverfront trail to commemorate the Wabanaki Tribe who once fished along the river. The existing Greek Houses along the riverfront will remain, with increased maintenance standards.

- **University Mall (North Mall)**—As the iconic open space of the UMaine campus, the University Mall landscape is improved by new trees, diagonal pathways and new development on the Alumni Hall parking lot.
- **Core Campus Infill**—Infill development and redevelopment is proposed in areas east of the University Mall to provide opportunities for growth in conjunction with new pedestrian walkways and plazas. Specific proposals include the Diagonal Walk, Beddington Walk, Martin Luther King, Jr. Walk and Plaza, Cloke Plaza, and the Replacement of Shibles.
- **South Campus**—The South Campus District combines the long-standing planning goal of creating a South Mall with the need to provide new academic, research and campus life facilities. The South District provides future facility needs in conjunction with improvements to the landscape and pedestrian circulation frameworks.
- **Black Bear Village**—Located at the intersection of Long Road and College Avenue, and extending eastward to the Memorial Gym, Black Bear Village is envisioned as a mixed-use development including housing, parking and potential retail facilities. Subject to future study, the Village will offer opportunities for public / private partnerships.
- **North Residential Villages**—The landscape structure surrounding the residence halls of the Hilltop area, the Stewart quadrangle and the Doris Twitchell Allen Village is enhanced in the Master Plan in general accordance with the 2006 Residence Hall Landscape Guidelines. The intent is to transform the landscape to provide more outdoor gathering and passive recreation spaces.
- **North Athletic District**—Improvements to the Athletic District are proposed in accordance with current program needs including a new field hockey facility. Facilities within the district are connected via Black Bear Way, an east/west pedestrian corridor linking the Alford Sports Arena with the Student Recreation and Fitness Center.



DEMERRITT FOREST

GYM

LIBRARY

SOUTH MALL

HITCHNER

DEERING

NUTTING

ESTABROOKE

YORK

GROVE WALK

KENNEBEC

BRYANT HALL

AROOSTOOK

LOOP ROAD

SAWYER HALL

**The Master Plan addresses four key sustainability indicators; natural systems and habitats; water resources; energy and emissions; and access. It quantifies the impacts of the current campus practices and summarizes the potential outcomes of the Master Plan.**

## Sustainability Indicators

The Master Plan addresses the following sustainability indicators: 1) natural systems and habitats; 2) water resources; 3) energy and emissions; and 4) access. It quantifies the impacts of the current campus practices and summarizes the potential outcomes of the Master Plan.

### Natural Systems and Habitats

The Master Plan locates future development on previously disturbed sites thereby avoiding further loss of wooded areas, reconnecting natural systems, and developing multi-faceted habitat corridors.

#### 1. Campus Growth Boundary

The Growth Boundary is a critical commitment for preserving the existing campus forests and to increase density within the academic core. The Boundary places a moratorium on new roads and development in the forest, with the exception of research-related projects. The compact development plan for the core area is achieved through strategic infill and consolidation of surface parking.

#### 2. Reconnecting the Forest Preserve

The forested areas surrounding the core campus are reconnected to establish a perimeter corridor or “frame” extending from the Demeritt Forest to the Forest Preserve, along the southern edge of the campus, crossing College Avenue, along the Stillwater River, returning to the northwestern edge of the Demeritt Forest. The proposed connections also create the opportunity for an expanded trail network and increased recreational access to the forests, an amenity enjoyed by both students and the community.

#### 3. Campus Tree Corridors / Windbreaks







The Master Plan reintroduces windbreaks in the campus landscape as originally planned by Olmsted Senior. The windbreaks, consisting of rows of ever-green trees, are planned in conjunction with new pedestrian routes. A series of east / west windbreaks is proposed to link the campus core to the wooded areas east of the campus. The windbreaks are intended to mitigate winter winds and provide wind protection along the adjacent pedestrian routes.

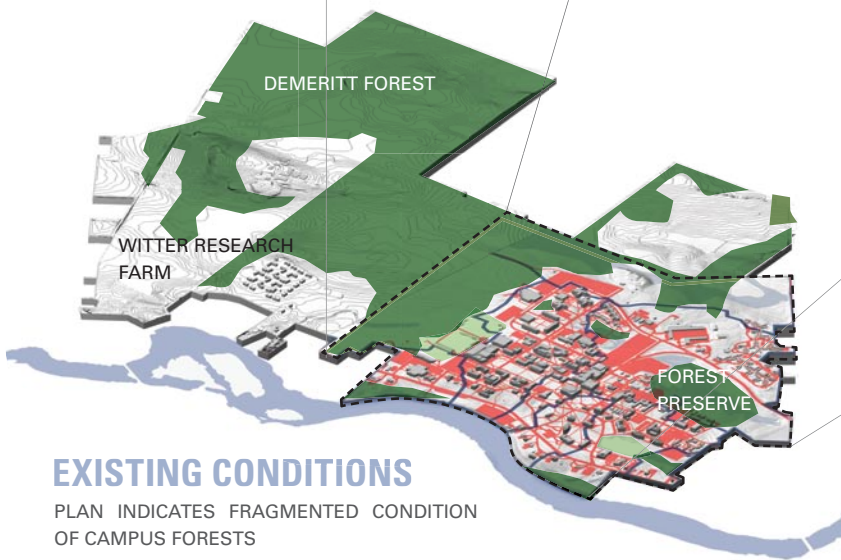
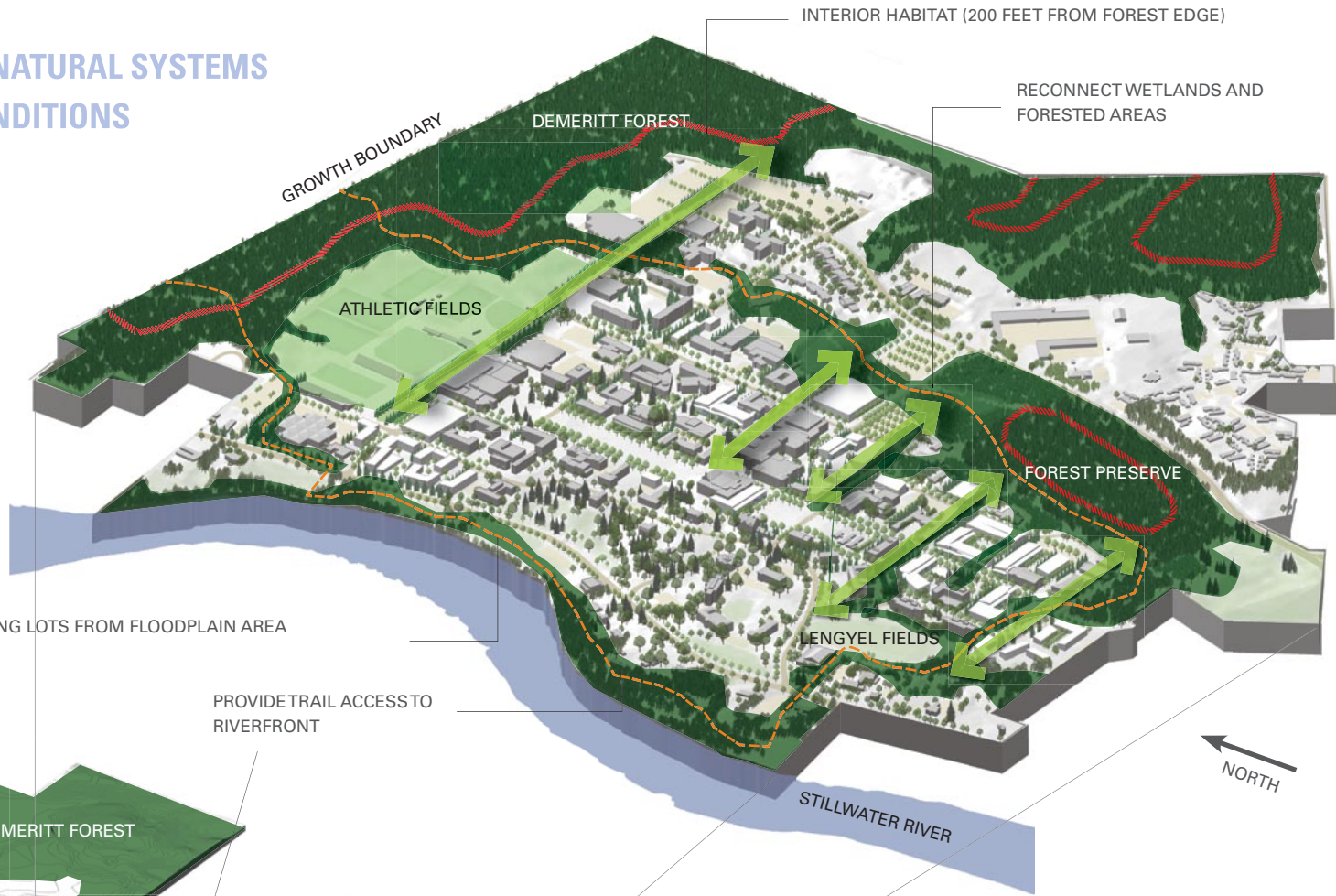
#### 4. River Corridor

The Master Plan restores the riparian buffer in the floodplain along the Stillwater River by removing the existing parking areas. The intent is to re-establish the Parade Grounds created by Olmsted Senior and reintroduce vegetation along the river in conjunction with a new trail commemorating the Wabanaki people.



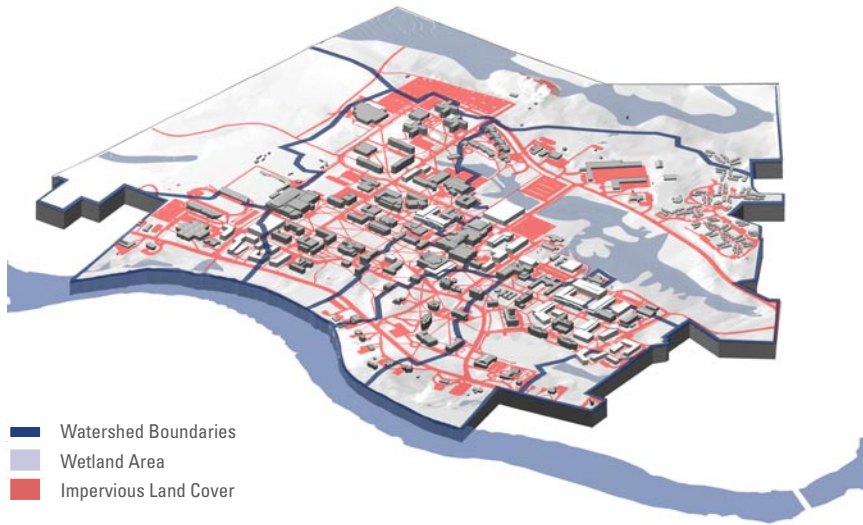
# HABITAT AND NATURAL SYSTEMS PROPOSED CONDITIONS

-  Deciduous Trees
-  Coniferous Trees
-  Open Field Habitat
-  Interior Habitat
-  Waterfront Trail
-  Habitat Areas and Windbreaks



# EXISTING CONDITIONS

PLAN INDICATES FRAGMENTED CONDITION OF CAMPUS FORESTS



EACH SUB-WATERSHED WAS ANALYZED TO DETERMINE RUNOFF VOLUME AND MEASURE THE PERCENT CHANGE IN IMPERVIOUS SURFACE AREA

## Water Resources

The Master Plan minimizes the impact of future expansion by limiting disturbance in the existing natural areas. The majority of new buildings are located on sites currently used as surface parking or for existing structures. Concentrating development in the core campus area maintains fields and forests as buffers which offer natural control of stormwater run-off and quality.

A stormwater analysis of the proposed conditions indicates that the Master Plan recommendations will reduce the peak run-off rate in six of twelve campus sub-watersheds. Five watersheds maintain the existing peak run off rate and one sub-watershed shows a slight net increase. In the core campus area impervious surface area is reduced in all but one sub-watershed area.

Interventions in the core campus area include: reduction of impervious surface area; disconnection of impervious areas to direct run-off to small scale detention areas such as swales and greenways; reconnection of wetlands along the eastern edge of campus; and reforestation.

**The Master Plan recommendations will reduce the peak stormwater run-off rate in six of twelve campus watersheds. Interventions include: reducing impervious surface area; disconnecting impervious areas to direct run-off to small scale detention areas such as swales and greenways; reconnecting wetlands along the eastern edge of campus; and restoring campus forests.**

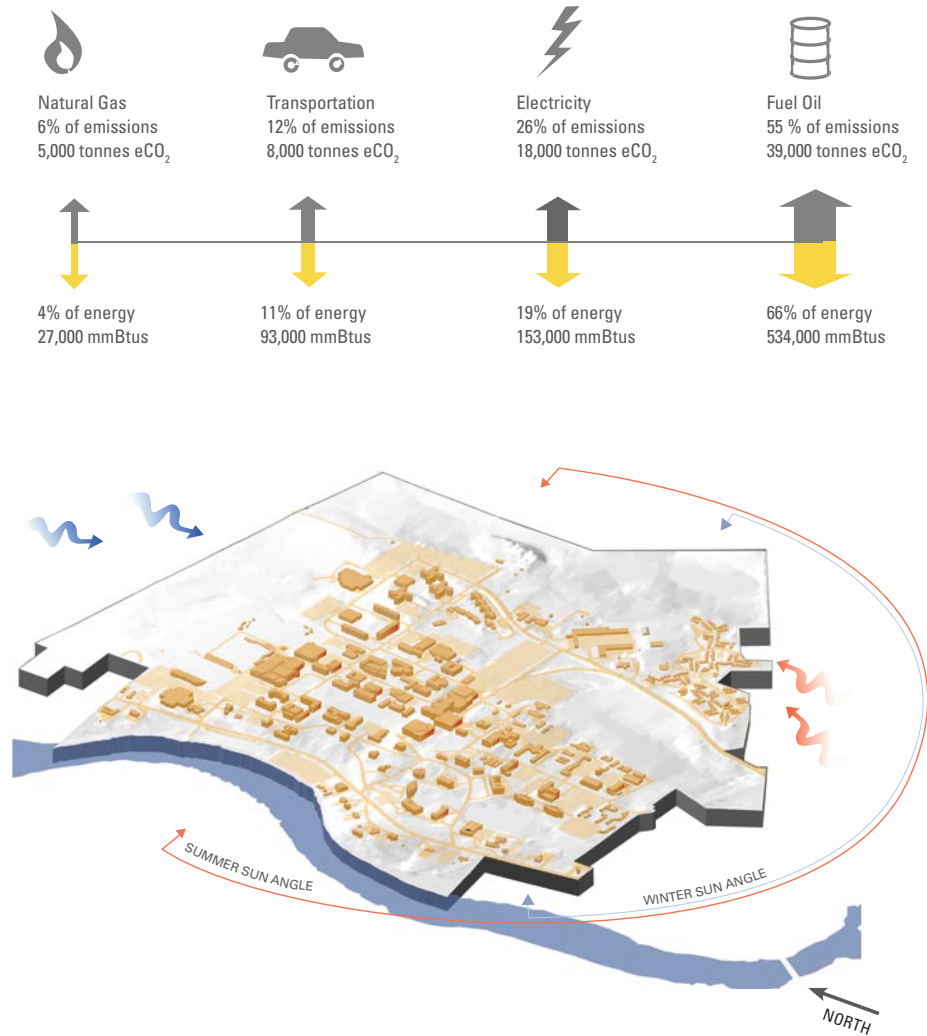
## Energy and Emissions

As a signatory of the American College and University Presidents' Climate Commitment (ACUPCC), the University of Maine is transitioning toward climate neutrality. The ACUPCC requires the University to take several immediate or tangible actions to reduce emissions of the six greenhouse gases addressed under the Kyoto Protocol, the most significant of which is carbon dioxide (CO<sub>2</sub>). While the ACUPCC will be largely addressed by the University's forthcoming Climate Action Plan, the Master Plan provides physical design strategies and recommendations for reducing carbon emissions.

As part of the overall strategy, the energy sources of the University will need to be transitioned to renewable sources. Given that significant emissions (55 percent of total emissions) are related to current heating fuel demand (No. 6 fuel oil), viable alternatives will need to be identified. Potential options include a cogeneration facility utilizing biomass or natural gas. Purchased electricity will need to be transitioned to renewable sources as well. At present, 30 percent of the University electricity purchases are from renewable sources.

The performance of existing buildings is a consideration as renovations occur and as deferred maintenance issues are addressed. Emphasis should be placed on the overall energy performance of the buildings with a goal of reducing energy consumption and the associated emissions. The University is addressing the cultural aspects of energy use through education and changes in operational procedures and policies.

The University will need to reduce emissions in the context of increases in total square footage as well as potential increases in enrollment. To that end, the Master Plan includes recommendations that will assist in reducing emissions from future buildings including orientation (emphasizing passive solar benefits), planning for the future application of solar technologies, and by suggesting energy demand reduction targets. With regard to transportation, the Master Plan places emphasis on pedestrian, bicycle and transit movement.



CAMPUS ENERGY USE AND EMISSIONS (2005)



DEMERRITT  
FOREST

HILLTOP ROAD

BELGRADE ROAD

FOREST  
PRESERVE

RANGELEY ROAD

FLAGSTAFF ROAD

LONG ROAD

BEDDINGTON ROAD

SEBAGO ROAD

ALLAGASH ROAD

GROVE STREET

SQUARE ROAD

MUNSON ROAD

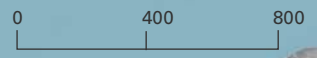
SEBEC ROAD

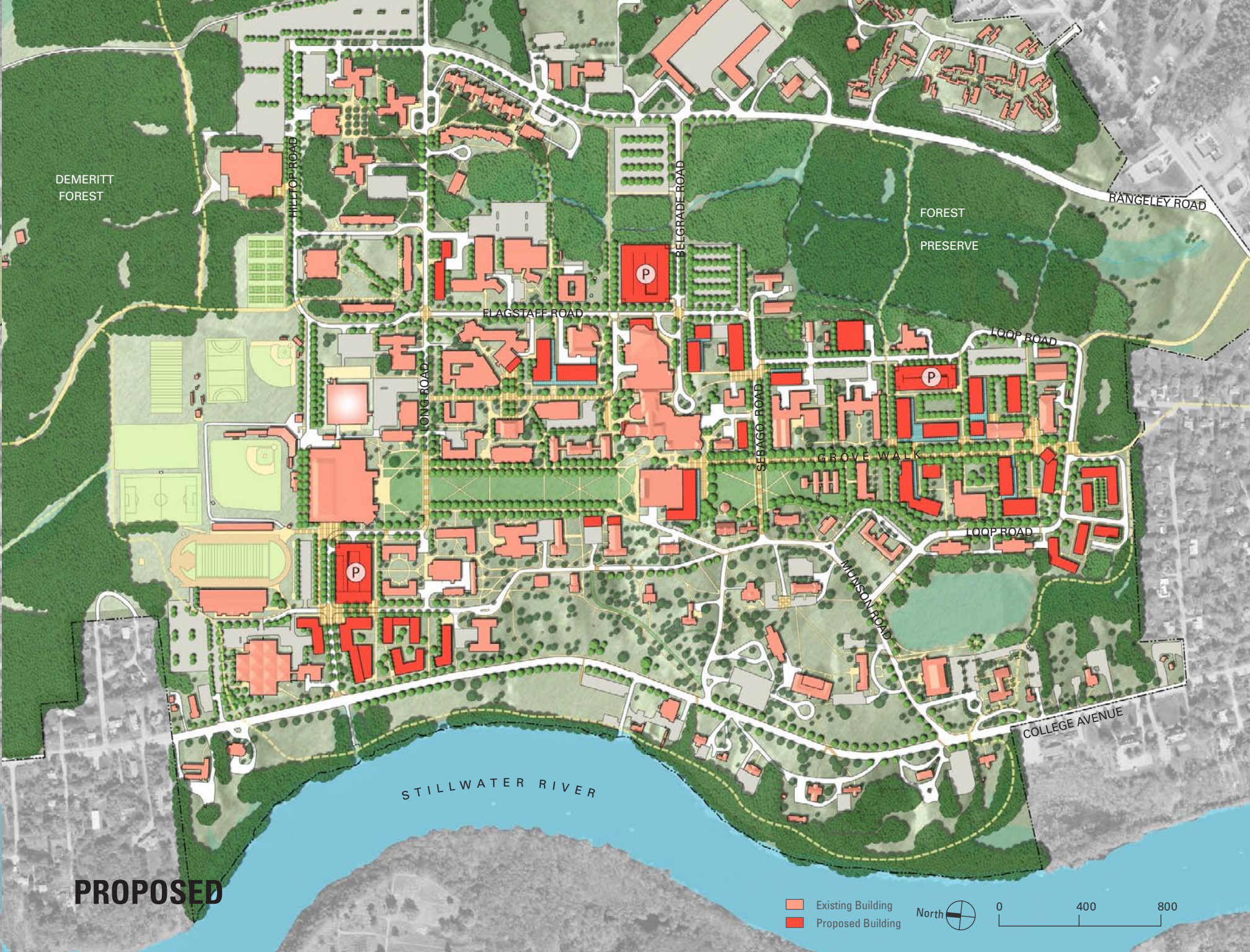
COLLEGE AVENUE

STILLWATER RIVER

**EXISTING**

- Existing Building
- Building to Be Removed





DEMERITT  
FOREST

HILLTOP ROAD

FLAGSTAFF ROAD

BELGRADE ROAD

FOREST  
PRESERVE

RANGELEY ROAD

LONG ROAD

LOOP ROAD

SEBAGO ROAD

GROVE WALK

LOOP ROAD

MINSON ROAD

COLLEGE AVENUE

STILLWATER RIVER

**PROPOSED**

- Existing Building
- Proposed Building



0 400 800





S A S A K I  
C O P L O N A S S O C I A T E S