

#### Acknowledgements

Thank you to the hundreds of students, faculty, and staff members who contributed time and energy to the development of this plan.

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Welcome to the Plymouth State University master plan. Its purpose is to guide decisions for facilities that will best serve the University's current and future programmatic needs, enhance the aesthetic character and functionality of a vibrant, student-centered campus, and incorporate campus values of sustainability, safety, and effective use of resources. Appropriate facilities and technology are critical to educational excellence, whatever the student's field.

What you will read is a vision for the future, the outcome of a comprehensive and inclusive process involving hundreds of Plymouth State University students, faculty, and staff who participated in space planning workshops, master plan forums, and climate action implementation events, responded to questions and polls, and served on task forces and the Master Planning Steering Committee. With the collaborative professionals at Goody Clancy, PSU explored new and repurposed facilities designed for a value-added residential campus and the people who live and learn here, as well as the host communities with whom PSU works closely and well. The community relationships are strong, from joint research projects to economic development.

The ALLWell (Active Living, Learning, and Wellness) Center, is a key element of Plymouth State's plans for health and wellness, with much-needed space for teaching and research, as well as for athletics, recreation, and health and fitness. In addition, you will see thoughtful and integrated ideas about expanded and remodeled academic space, student housing and dining, the flow and character of the campus, energy conservation and cost effectiveness, even signage.

All this is to say that I hope you will consider carefully this plan to ensure PSU's future and its students' success.

PRESIDENT SARA JAYNE STEEN

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introduction

#### Introduction to PSU

Plymouth State University is a public regional comprehensive university of approximately 4,800 undergraduate students and 2,500 graduate students located within the towns of Plymouth and Holderness, New Hampshire. Established in 1871, PSU has a longstanding commitment to the academic, economic, and cultural life of the region and the state. Academic offerings at Plymouth State University include 55 undergraduate majors and 75 graduate degree and certificate programs.

PSU's faculty, staff and students value the strong sense of community at Plymouth State, the University's natural setting at the foot of the White Mountains and spanning the Pemigewasset River, and proximity to downtown Plymouth and its amenities.

#### **MISSION**

As a regional comprehensive university, Plymouth State University serves the state of New Hampshire and New England by providing well-educated graduates; by offering ongoing opportunities for graduate education and professional development; and by extending to communities partnership opportunities for cultural enrichment and economic development. In each of these roles, Plymouth State University has a special commitment of service to the North Country and Lakes Region of New Hampshire.



## **Purpose of the Master Plan Update**

A campus master plan provides a framework for campus development and improvement—a roadmap for shaping the physical environment over time to support the mission and strategic plans of an institution.

Master plans are tools for:

- Defining a physical vision for the future of the campus
- Answering important questions such as: Is there a need for new buildings? What are the optimal locations for those buildings?
   What needs to be renovated? How can we strengthen our identity and sense of community?
- Coordinating future improvements to maximize benefits and synergies

A master plan should provide **clear direction** and the **flexibility** to accommodate changing circumstances.

Every ten years, New Hampshire's state colleges and universities update their campus master plans. These plans focus on a ten year period but also consider changes that might reasonably be envisioned over a 20 year timeframe. Plymouth State's last two campus master plans (completed in 1994 and 2004) have provided a solid framework for guiding campus improvements over time. These master plans have set the stage for needed new facilities, renovation of existing facilities, and development of a stronger,

more cohesive pedestrian environment. Accomplishments since PSU's 2004 master plan have included:

- Development of the ALLWell Center plan to guide phased development of academic, athletic, and recreation facilities on PSU-owned land in Holderness. Implementation of the ALLWell plan has thus far included:
  - o Construction of a new Welcome Center and Ice Arena (ALLWell Phase I)
  - Design of a new academic and field house building (ALLWell Phase II)
- Construction of Langdon Woods residence hall
- Renovation of iconic Mary Lyon residence hall
- New entryway and lobby renovations within Blair residence hall
- Acquisition and renovation of Highland Hall for the College of Graduate Studies and Information Technology Services<sup>1</sup>
- Improvements to High Street—Holderness Road at the Pemigewasset River crossing, including enhancement and realignment of the road bridge and construction of a roundabout at Main Street

<sup>1</sup> Highland Hall also continues to house a branch of Citizens Bank.

- Partnering with the Grafton County Economic Development Council on development of the recently completed Enterprise Center at Plymouth
- Purchase and adaptive reuse of a former church building contiguous to campus for the new Museum of the White Mountains
- Conversion of several public streets within the campus core to pedestrian ways
- Development of a Climate Action Plan pledging 50% reduction of greenhouse gas (GHG) emissions by 2025 and carbon neutrality by 2050
- Planned conversion of Power Plant from diesel fuel to Compressed Natural Gas (CNG)—a significantly greener fuel source (conversion will take place in Fall 2014)

The 2014 master plan update is an opportunity to reassess the University's space, site, and facilities needs in light of current practices and institutional goals. It is also an opportunity to revisit several space and facility needs first identified in the 2004 master plan that have not yet been addressed.

Strategic planning provides an important foundation for the master planning process. As of this writing, PSU has completed its last strategic plan and is in the processing of finalizing the new strategic plan. The 2012 plan included major themes such as:

- Excellence and Quality
- Student Success
- Faculty and Staff Support
- Partnerships and Engagement
- Physical, Technological and Financial Resources

The new 2020 strategic plan is expected to be completed by December 2013. The Planning and Budgeting Leadership Group (PBLG) is currently guiding the process. It is expected that the PBLG will follow similar themes as in the prior strategic plan but with a sharper focus on:

- High quality academic and co-curricular experiences that support student success
- Affordable educational programs
- Increases in engagement and commitment to service, citizenship and character development
- · A culture of holistic wellness
- Environmental sustainability
- · Leveraging of resources to ensure long term sustainability

## **Planning Process**

The Plymouth State University Campus Master Plan Update was developed through a three phase planning process beginning in fall 2012 and concluding in summer 2013. The three phases can be described as follows:

#### Phase 1: Analysis & Investigation

The first phase of the master planning effort focused on investigation of issues and opportunities related to space, infrastructure, and PSU's indoor and outdoor environment.

#### **Phase 2: Alternative Directions**

The second phase of the process focused on developing and evaluating alternative approaches for how the campus could grow and change over time in response to institutional goals and the issues and opportunities identified in Phase 1.

#### Phase 3: Draft and Final Plan

The final phase of the process combined preferred elements from across the Phase 2 alternatives—and a few new elements emerging from campus discussion—into a draft master plan, and ultimately, the final master plan documented here.

#### Plymouth State University Campus Master Plan Process (2012–2013)

#### FALL/WINTER WINTER/SPRING SPRING/SUMMER **Phase 1: Analysis and Investigation Phase 2: Alternative Directions Phase 3: Draft and Final Plan** PSU'S PLAN FOR NEAR-, MID-, AND LONGER-TERM SPACE NEEDS CHOICES FOR HOW THE CAMPUS COULD CHANGE How much and what type? CAMPUS IMPROVEMENTS OVER TIME TO MEET PSU'S learning spaces teaching spaces **NEEDS** work spaces • dining and "hang out" spaces **Alternatives address:** · recreation and athletic spaces space needs • overall campus development concept, including: > building and infrastructure renewal PHYSICAL ENVIRONMENT > sustainability > parking, circulation, and outdoor spaces What works well and what could be improved? · utilities and infrastructure buildings outdoor spaces • parking and circulation · campus and community context energy management

Faculty, staff, students, administrators, and the towns of Plymouth and Holderness all contributed to shaping this plan through:

- The Master Plan Steering Committee: Development of the master plan update was guided by a broadly representative Master Plan Steering Committee that included students, faculty, staff, administrators, and representatives from the towns of Plymouth and Holderness. The Steering Committee met nine times, approximately once a month, to review master plan findings and to offer feedback on emerging strategies.
- PSU Cabinet: President Sara Jayne Steen and her Cabinet
  were active participants in every phase of the master plan effort, providing policy guidance and direction throughout the
  process. Cabinet members also participated directly in master
  plan Steering Committee Meetings and master plan events.
- Interviews, focus groups and work sessions: Meetings, interviews, focus groups and work sessions engaged hundreds of faculty, staff and students from across PSU in focused discussions of topics ranging from Plymouth State's space needs, to the student experience at PSU, to how PSU might advance its Climate Action Plan goals.

- Campus Forums: Two major Campus Forums brought together over 250 people from across the institution to provide input on major master plan questions.
- Forum 1 (November 27, 2012) invited faculty, staff and students to identify what works well about PSU and what needs to be improved.
- Forum 2 (April 2, 2013) invited faculty, staff and students to review master plan alternatives and provide feedback on each option.

These events provided invaluable insights that helped drive development of the plan.

- Surveys and pop-up polls: At key points in the process, the master planning team conducted Pop-Up Polls—stations in the Hartman Union Building (the HUB) and Prospect dining hall where passersby were asked to provide quick input on questions that would help shape development of the master plan (e.g., What makes the PSU campus a great place to learn, live, work or play? What would make the PSU campus an even better place to learn, live, work or play?)
- Moodle Site: Master plan information—including presentations, emerging findings, and draft materials—were posted to a dedicated page on the campus Moodle system, where all campus affiliates could follow the master plan process as it unfolded.









Hundreds of PSU faculty, staff and students participated in master plan events, meetings and pop-up polls.

## **Master Planning Team**

The planning team for development of this master plan incorporated expertise from PSU, the university system, and beyond:

- PSU's Master Plan Steering Committee played an active role in each phase of the planning effort, and helped guide development of master plan strategies and recommendations.
- The University System of New Hampshire (USNH) served as a key resource throughout the master planning process.
- Goody Clancy (master planning consultant) was charged with identifying needs and opportunities related to PSU's overall physical environment, and with development of the master plan. Goody Clancy was supported by a multidisciplinary team

- that included: RFS Engineering (site utilities), GreenerU (energy strategy/sustainability), Carol R. Johnson Associates (open space/landscapes), and VHB (transportation, circulation and parking).
- JBA 1ncorporated (space planning consultant) was charged
  with identifying PSU's space needs as well as providing insights
  on how these needs might be incorporated in existing or proposed facilities. JBA developed a Space Model—an editable
  database that PSU can update over time to adjust assumptions
  about space needs as circumstances change and as departments, or demand for particular types of spaces, grows or
  contracts.



psu campus today

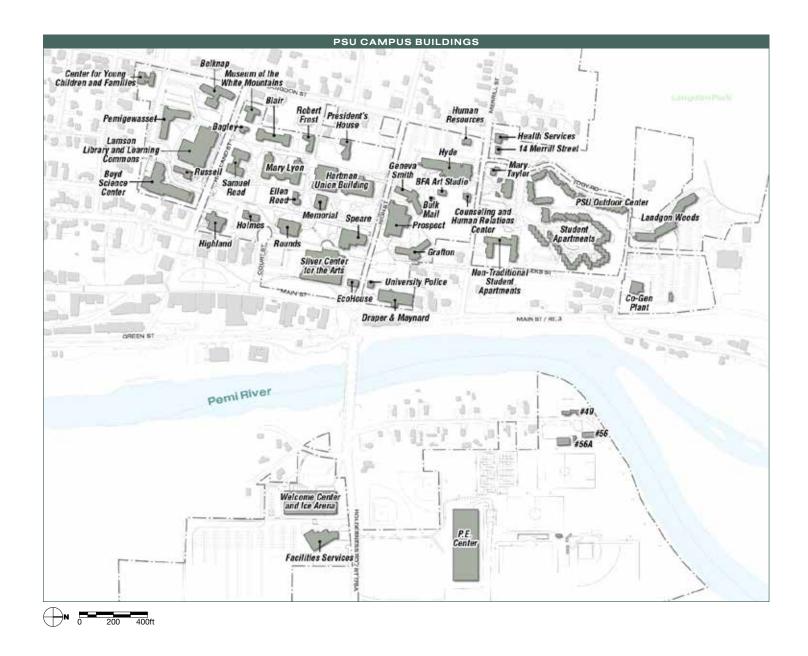
#### **Overview**



Plymouth State University provides an attractive, walkable campus of 66 buildings on 170 acres. The main campus, in downtown Plymouth, is a classic New England collegiate environment of mature trees and landscapes, with buildings constructed as long ago as 1797 and as recently as 2010. Facilities at PSU represent a range of eras and architectural styles. The heart of the main campus is a strong central Campus Green surrounded by a mix of academic, administrative, and campus life facilities. The emerg-

ing ALLWell Center, located just across the Pemigewasset River in Holderness, is home to PSU's new Welcome Center and Ice Arena, athletic and recreation fields, and the PE Center, as well as PSU's primary maintenance and operations complex.

Key campus strengths, as well as key issues and opportunities, are described in the diagrams on pages 16 and 17.



## **Campus Character**

The PSU campus is a special and distinctive place. The character of the campus, most strongly visible within the campus core, is defined by a mix of elements, including:

- Views of the surrounding mountains, visible from locations across campus whether you're indoors or out
- Much-loved, hundred-year-old iconic buildings that frame views from within the campus and beyond
- Historic residential scale "small house" buildings beside large academic buildings
- A strong Campus Green lined with a broad mix of campus buildings and activities
- Brick paths and mature trees
- The surrounding woodlands
- New England 'Town Center' setting, beside the shops, restaurants and civic institutions of downtown Plymouth











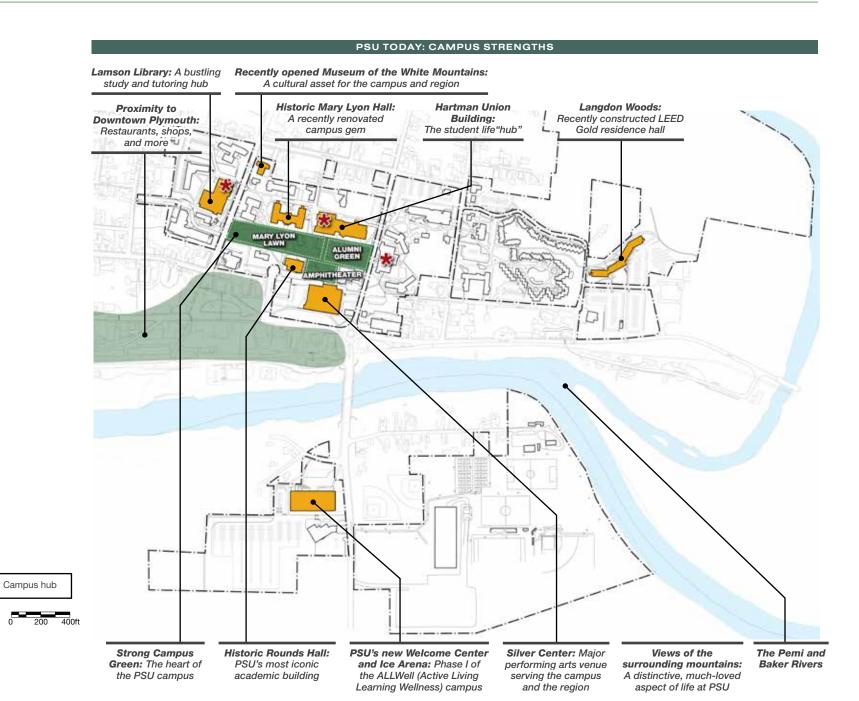


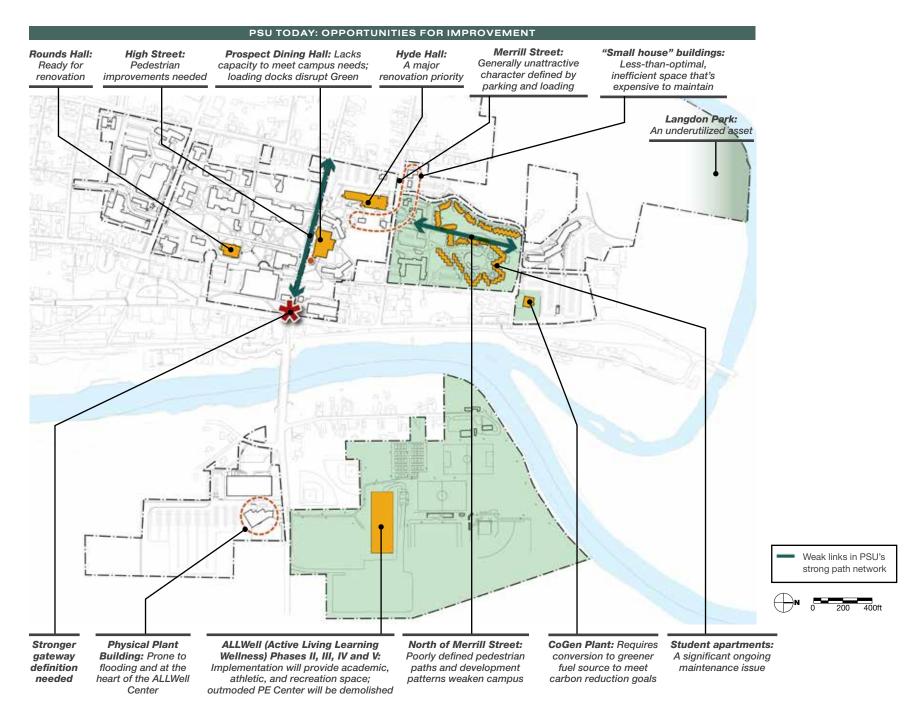












## **Campus Building Inventory**

| BUILDING NAME                        | GSF     | YEAR BUILT | YEAR ACQ | RENO DATE  |
|--------------------------------------|---------|------------|----------|------------|
| ACADEMIC                             |         |            |          |            |
| BFA Art Studio                       | 2,558   | 1961       | 1971     |            |
| Boyd Hall                            | 91,774  | 1967       |          | 2002       |
| Center for Young Children & Families | 7,164   | 1930       | 1972     | 1991       |
| Draper Maynard                       | 54,940  | 1909       | 1994     | 1993       |
| Hyde Hall                            | 81,333  | 1974       |          |            |
| Memorial Hall                        | 16,044  | 1890       | 1971     | 1987       |
| Rounds Hall                          | 39,260  | 1891       |          | 1978       |
| Silver Center                        | 66,229  | 1955       |          | 1992       |
| 14 Merrill (Nursing Lab)             | 1,076   | 1988       |          | 2010       |
| Ellen Reed House                     | 7,163   | 1900       | 1934     | 1989       |
| Highland Hall                        | 24,399  | 1976       | 2008     | 2008       |
| Mary Taylor                          | 3,676   | 1923       | 1982     | 1985       |
| Subtotal                             | 395,616 |            |          |            |
| ADMINISTRATIVE                       |         |            |          |            |
| 16 Merrill (Health Center/SAGE)      | 5,397   | 1930       | 1987     | 1991, 2006 |
| Bagley House                         | 4,517   | 1923       | 1975     | 1991       |
| Counseling Center                    | 3,600   | 1968       | 1971     |            |
| Holmes House                         | 7,557   | 1870       | 1989     | 1990       |
| Human Resources                      | 2,550   | 1962       | 1974     |            |
| Robert Frost House                   | 4,884   | 1870       | 1903     | 1990, 2004 |
| Russell House                        | 10,592  | 1797       | 1925     | 1987       |
| Speare Hall                          | 31,628  | 1931       | 1971     | 1972       |
| Subtotal                             | 70,725  |            |          |            |

| BUILDING NAME                      | GSF     | YEAR BUILT | YEAR ACQ | RENO DATE  |
|------------------------------------|---------|------------|----------|------------|
| CAMPUS LIFE                        |         |            |          |            |
| Centre Lodge                       | 5,678   | 1990       |          |            |
| Hartman Union Building             | 73,366  | 1958       | 1971     | 1995       |
| Welcome Center and Ice Arena       | 65,755  | 2010       |          |            |
| Lamson Library                     | 88,444  | 1964       |          | 1992, 2006 |
| P.E. Center                        | 102,330 | 1969       |          | 1991       |
| Prospect Dining Hall               | 35,894  | 1967       |          | 1990, 2002 |
| Subtotal                           | 371,467 |            |          |            |
| STUDENT HOUSING                    |         |            |          |            |
| Residence Halls                    |         |            |          |            |
| 1 High Street (EcoHouse)           | 3,494   | 1943       | 2002     | 2008       |
| Belknap Hall                       | 45,899  | 1967       |          |            |
| Blair Hall                         | 40,873  | 1960       |          |            |
| Grafton Hall                       | 52,821  | 1967       |          |            |
| Langdon Woods                      | 113,555 | 2006       |          | 0          |
| Mary Lyon Hall                     | 87,493  | 1915       |          | 2007       |
| Pemigewasset Hall                  | 46,389  | 1964       |          |            |
| Samuel Read Hall Hall              | 35,449  | 1932       |          |            |
| Smith Hall                         | 54,126  | 1968       |          |            |
| Non-Traditional Student Apartments | 23,951  |            |          |            |
| Hodgdon NTSA (1-3, 16-18)          | 4,585   | 1968       |          |            |
| O'Neil NTSA (10-15, 25-30)         | 10,724  | 1968       |          |            |
| Seavey NTSA (4-9, 19-24)           | 8,642   | 1968       |          | 2001       |

| BUILDING NAME             | GSF     | YEAR BUILT | YEAR ACQ | RENO DATE |
|---------------------------|---------|------------|----------|-----------|
| Student Apartments (1977) | 51,367  |            |          |           |
| Cabot (97-102)            | 4,743   | 1977       |          |           |
| Cannon (85–90)            | 4,897   | 1977       |          |           |
| Carrigan (67-72)          | 5,892   | 1977       |          |           |
| Flume (91–96)             | 4,743   | 1977       |          |           |
| Liberty (79–84)           | 5,028   | 1977       |          |           |
| Moriah (49-54)            | 4,934   | 1977       |          |           |
| Osceola (61-66)           | 4,947   | 1977       |          |           |
| Passconaway (73-78)       | 5,315   | 1977       |          |           |
| Tecumseh (55-60)          | 5,237   | 1977       |          |           |
| Waumbek (43-48)           | 5,631   | 1977       |          |           |
| Student Apartments (1990) | 75,679  |            |          |           |
| Bondcliff (135-146)       | 12,570  | 1990       |          |           |
| Gale Head (157-166)       | 9,266   | 1990       |          |           |
| Moosilaukee (31-42)       | 11,076  | 1990       |          |           |
| North Kinsman (103-116)   | 14,565  | 1990       |          |           |
| North Twin (117–128)      | 12,570  | 1990       |          |           |
| Owl's Head (147-156)      | 9,773   | 1990       |          |           |
| Whiteface (129-134)       | 5,859   | 1990       |          |           |
| Subtotal                  | 631,093 |            |          |           |

| BUILDING NAME                                   | GSF    | YEAR BUILT | YEAR ACQ | RENO DATE |
|-------------------------------------------------|--------|------------|----------|-----------|
| SUPPORT                                         |        |            |          |           |
| #49—Landscaping/greenhouse (North River Street) | 2,196  | 1906       | 1987     |           |
| #56—Field maintenance<br>(North River Street)   | 1,979  | 1950       | 1987     | 1988      |
| #56A—BSW office (North River Street)            | 662    | 1950       | 1987     |           |
| Bulk Mailing                                    | 610    | 1961       | 1972     |           |
| Facilities Services Building                    | 19,635 | 1963       | 1989     | 1989      |
| Hazmat Building                                 | 912    | 2006       | 2006     | 0         |
| Paint Shop                                      | 1,293  | 1960       | 1989     |           |
| University Police                               | 2,838  | 1940       | 1999     | 2000      |
| Subtotal                                        | 30,125 |            |          |           |
| OTHER                                           |        |            |          |           |
| Museum of the White Mountains                   | 11,603 | 1948       | 2008     | 2012      |
| President's House                               | 10,701 | 1904       | 1928     |           |
| University Camp                                 | 1,729  | 1924       | 1924     |           |
| Subtotal                                        | 24,033 |            |          |           |



space needs

## **Space Needs**

As part of the master planning process, JBA Incorporated conducted an assessment of PSU's current and potential future space needs. A brief overview of this assessment is provided here. Additional information on the space assessment and the Space Model that has been customized to address PSU's needs is available separately as Appendix D.

The space needs assessment is a foundational element of the master plan, defining the quantity and type of space needed to support the University's programs. The space needs assessment involved interviews and workshops with hundreds of campus stakeholders, walk-throughs of each building, and analysis of space and scheduling data. Space needs have been evaluated with the assumption that enrollment on campus will remain largely at its current level, with growth occurring primarily in online offerings. The analysis concluded that PSU's current space inventory of 1.3 million square feet falls well short of the University's current need of 1.7 million square feet.

One casualty of PSU's current "space crunch" has been informal learning spaces that support interaction and collaboration among faculty, staff, and students. For instances, in Boyd Hall—PSU's science facility—informal seating areas and small meeting rooms have been eliminated to enable creation of needed additional office and support space, diminishing Boyd Hall's ability to support learning beyond the classroom.

As PSU's enrollment has grown over the last decade, development of facilities has not kept pace, resulting in the current space deficit of approximately 400,000 square feet. Full development of the long-planned ALLWell Center, including Phases II, III, and IV, will cut this deficit in half providing much-needed academic, athletic, and recreation space. However, significant additional needs will remain related to the academic, dining, and support spaces that sustain PSU as community of learning.

PSU's first priority is to address current space deficits. However, the assessment also evaluated needs related to potential future growth: an anticipated increase of 3%–5% in PSU's on-campus student population over the next 10 years. To support this growth, a modest increase in faculty, staff, and student employees is also anticipated. Accommodating this growth would require up to 89,000 GSF of additional space.

By addressing these space needs, PSU will enhance its ability to provide an optimal learning environment for students and to support undergraduate research across the curriculum.

# "The ALLWell Center will bring academics together with athletics and recreation in a unique way."

#### PRESIDENT SARA JAYNE STEEN

Based on the space assessment, the master planning team identified a need for the following<sup>1</sup>:

- Completion of Phases II-IV of the ALLWell Center—PSU's highest capital priority—which will provide 190,000 GSF of additional academic, athletic and recreation space, addressing roughly half of PSU's total need
- Expansion of **dining space** from 35,000 GSF to 60,000 GSF
- Additional academic and support space totaling about 150,000 GSF

The initiatives identified within this master plan fully address PSU's current and anticipated space needs.



Completion of the ALLWell Center, PSU's highest priority capital initiative, will establish the Holderness side of campus as a major hub for academics, athletics, and recreation—and address fully half of PSU's current space deficit. (shown on left: Holderness side of campus today)

 $<sup>1\,</sup>$  The master plan also identifies locations for long-term expansion of student housing.

#### **Current Space Needs by Space Type**

|      |                 | ASSIGNABLE SQUARE FEET* |                  |            |  |
|------|-----------------|-------------------------|------------------|------------|--|
| CODE | SPACE TYPE      | EXISTING                | CURRENT<br>NEEDS | DIFFERENCE |  |
| 100s | Classroom       | 50,231                  | 51,743           | (1,512)    |  |
| 200s | Laboratory      | 70,763                  | 94,961           | (24,198)   |  |
| 300s | Office          | 130,948                 | 142,098          | (11,150)   |  |
| 400s | Study           | 62,872                  | 43,989           | 18,883     |  |
| 500s | Special Use     | 118,516                 | 325,319          | (206,803)  |  |
| 600s | General Use     | 118,695                 | 130,447          | (11,752)   |  |
| 700s | Support Service | 25,930                  | 59,323           | (33,393)   |  |
| 800s | Health          | 618                     | 2,860            | (2,242)    |  |
| 900s | Residential     | 364,371                 | 395,362          | (30,991)   |  |
| 000s | Unassigned      | 379,238                 | 489,093          | (113,855)  |  |
|      | Total           | 1,322,182               | 1,739,195        | (417,013)  |  |

SOURCE: JBA SPACE MODEL

| paces (for comparison) |
|------------------------|
| 92,000 GSF             |
| 81,000 GSF             |
| 35,000 GSF             |
|                        |

\* Assignable Square Feet (ASF) is a measure of "assignable" spaces only; it does not include spaces such as hallways, stairwells and toilet rooms that are accounted for within the "unassigned" category noted in the chart above. Elsewhere in this document, square footages are shown as totals, in Gross Square Feet (GSF), which includes both "assignable" and "unassignable" areas.

#### **Current Space Needs by Division (ASF)\***

| Academic Affairs        | Short 168,545 ASF | Health and Human Performance, Wellness, Athletics, Business, Atmospheric Science and Chemistry, Communication and Media Studies, Nursing, Interdisciplinary Studies, Criminal Justice, Early Childhood Studies, Learning Commons, Study Space |  |  |  |
|-------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| Advancement             | Short 382 ASF     | Office, Meeting                                                                                                                                                                                                                               |  |  |  |
| Finance and Admin       | Short 3,419 ASF   | Office, Meeting, Physical<br>Plant                                                                                                                                                                                                            |  |  |  |
| General Campus          | Short 153,837 ASF | Storage, Service, Non-<br>Assignable Spaces such<br>as hallways, mechanical,<br>restrooms, and building<br>service spaces needed<br>to support all the<br>campus assignable<br>space                                                          |  |  |  |
| University Relations    | Short 3,231 ASF   | Office and event support space                                                                                                                                                                                                                |  |  |  |
| President's Office      | Short 342 ASF     | Office support space                                                                                                                                                                                                                          |  |  |  |
| Student Affairs         | Short 87,256 ASF  | Recreation, Student<br>Programming, Dining,<br>Increased bed sizes                                                                                                                                                                            |  |  |  |
| SOURCE: JBA SPACE MODEL |                   |                                                                                                                                                                                                                                               |  |  |  |



master plan framework

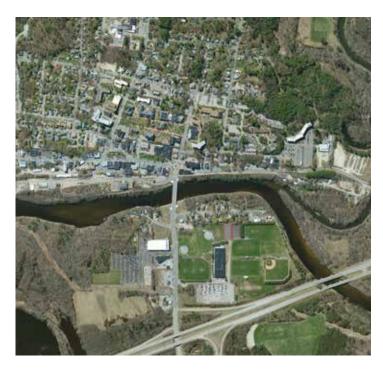
## **Overview**

The master plan advances the University's Strategic Plan through adherence to three key objectives:

- Provide for identified space needs through development of new facilities and renovation of existing campus buildings
- Continue to strengthen the campus' physical cohesiveness, its sense of place, and its relationship to its neighbors in the towns by improving links among campus destinations, enhancing the use of outdoor spaces, better defining the arrival sequence to the campus, and improving connections to the surrounding natural setting including the Pemigewasset River and Langdon Park
- Support development and improvement of efficient and sustainable campus systems by greening and renewing campus infrastructure and advancing the University's Climate Action Plan goals

Wherever possible, the initiatives within the master plan have been structured to address several of these goals simultaneously.

The Master Plan Framework incorporates an array of interrelated building, landscape and infrastructure initiatives that together advance these goals. Incorporating more than 400,000 GSF of new construction and rehabilitation of several existing buildings, the framework fully addresses PSU's anticipated space needs. The

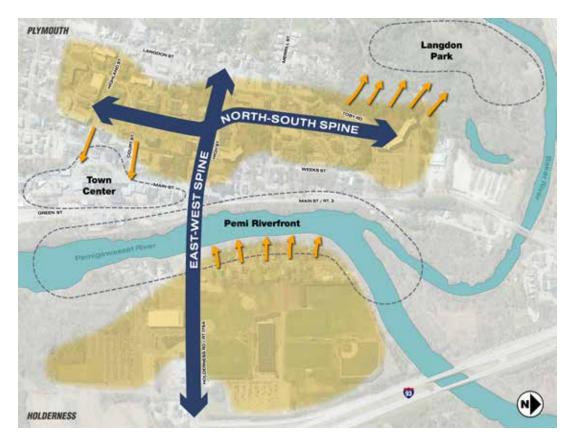


framework provides PSU with the flexibility to provide additional space in the areas of campus—and for programs—with specific needs. Like previous master plans, it is unlikely that all initiatives identified here will be advanced within the 10-year planning horizon covered by the plan, but the master plan provides a flexible roadmap for addressing each need as circumstances allow.

## **Physical Context for Planning**

For more than a century, the campus has continued to reshape itself within the town of Plymouth, evolving to meet the educational needs of a growing student body. More recently, the Holderness side of campus has played an increasingly important role in the life of the University. Each phase of campus development—including master plans over the last two decades—has been accompanied by efforts to strengthen and clarify the structure of the campus as a cohesive place, well-integrated into the structure of the towns and the surrounding natural environment. This master plan seeks to build on prior efforts by advancing three physical planning goals:

- Continue to strengthen the North-South pedestrian spine within the Plymouth Campus
- Enhance the East-West Campus spine to improve the arrival experience to campus and continue to strengthen pedestrian links between the Holderness and Plymouth sides of the campus
- Provide new and enhanced connections; redefine transitions between the campus and its surroundings



## Continue to strengthen the North-South Pedestrian Spine within the Plymouth Campus.

The pedestrian network that links the north and south areas of the campus is the principal artery of pedestrian movement within the campus today. Between Highland and Merrill Streets, improvements to this network of paths and related campus open spaces have been the focus of campus planning over the last several decades. Notable enhancements have been accomplished through closure of vehicular streets and conversion to campus spaces and pedestrian walks (e.g., in front of Hyde Hall, along the eastern edge of Mary Lyon Lawn, and in front of Blair Hall). A new student arriving at the campus today would probably be surprised to learn just how much the core area of the campus has changed over time. And for those who have witnessed and contributed to these changes, the transformation is no less noteworthy. While opportunities remain for continued improvement, these areas of the campus are characterized by mature and attractive landscapes interspersed by views of the surrounding mountains. In these areas of campus, between Highland and Merrill Streets, future enhancements will include provision of additional outdoor seating areas that will allow the campus community to linger outdoors and enjoy these settings more fully in several seasons. Between Merrill Street and the Langdon Woods residence hall, however, the spine is less well-established, a poorly-defined pathway that traverses

the student apartment complex, making these areas of campus seem more remote or disconnected from the amenities of the central campus. The weakness of the pedestrian spine in these areas also limits easy access to underutilized campus amenities such as Langdon Park. Through positioning a new Dining Commons on Merrill Street and phased replacement of the deteriorated portions of the student apartments in ways that reinforce the central campus spine as a major campus thoroughfare, the master plan can advance the University's goal to create a stronger more cohesive campus.



The path that winds through the student apartments and on to Langdon Woods residence hall begins at the green bollards shown above. The path is not well connected to campus destinations south of Merrill Street.



# Enhance the East-West Campus Spine to improve the arrival experience at PSU and further strengthen pedestrian links between the Holderness and Plymouth sides of the campus.

This corridor is the primary vehicular approach to Plymouth State University, shaping first impressions of the campus for visitors arriving from Interstate-93 Exit 25, and it is an increasingly important pedestrian linkage within the institution. As PSU continues to advance development of the ALLWell Center in Holderness, movement between the Plymouth and Holderness sides of the campus will be become ever more important in the life of the campus. Over the last decade, development of the Welcome Center and

Ice Arena, replacement of the bridge over the Pemigewasset River and incorporation of a roundabout in Plymouth have resulted in notable improvements in this corridor, and development of the Enterprise Center at Plymouth is continuing this pattern of positive change. Important next steps incorporated within the master plan include further development of the ALLWell Center, development of an improved campus gateway at the base of High Street in Plymouth, repurposing of Prospect Hall with associated pedestrian improvements along High Street, and the addition of a new academic building near Hyde Hall. In combination, these changes can further reinforce this important corridor as a functional, identity-shaping link.

# Provide new and enhanced connections; redefine transitions between the campus and its surroundings.

Three connections are especially notable:

- **Court Street** is an especially important connection between the heart of the campus and the heart of Plymouth's attractive downtown area. Over time, this area has been reshaped through collaborative town-PSU efforts. Additional modest changes could further enhance walkability along this street, and improve campus connections from Main Street and Court Street.
- Langdon Park is an underused open space incorporating
  wooded areas, steep slopes and riverfront land that has the
  potential to serve a larger role within the campus. Improved
  access to the park and better linkages to campus pedestrian
  networks are an essential first step in expanding its use and
  visibility.
- A new park along the Pemigewasset River is incorporated within Phase V of the ALLWell Center. Development of the park within the Holderness side of campus would further enrich PSU's open space amenities and strongly connect the campus to one of the region's most important natural amenities, enhancing campus and public use.



Langdon Park has long been an outdoor learning laboratory and recreation asset for PSU and the broader community. Improved access to Langdon Park could expand use and visibility of the Park for all. Shown above: Professor Robert L. Boyd with a group of science students in Langdon Park, 1955 (PSU Archives photo).



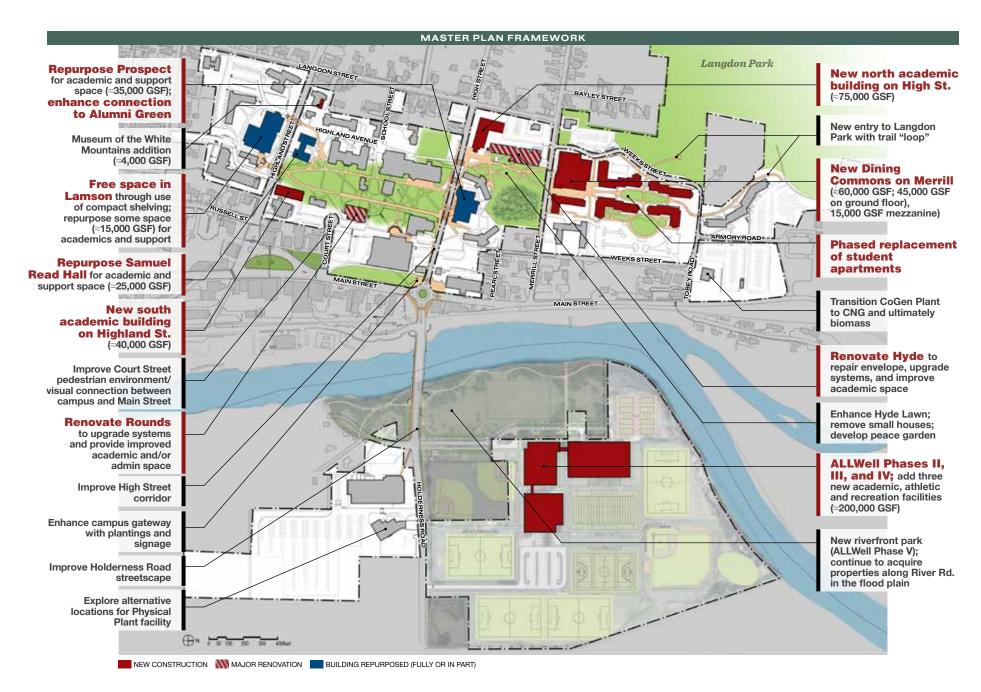
Modest improvements to Court Street could strengthen this important connection between downtown Plymouth and the heart of the PSU campus.

# **Framework Summary**

The Master Plan Framework drawing on page 35 and the Master Plan Initiatives list on page 36 provide a summary of key master plan elements. These projects address campus needs related to space and facilities, landscape, energy and infrastructure. Additional detail and further description are provided in the following sections of this document:

- Land Use
- Buildings
- Landscapes
- Climate Action
- Utilities
- Parking and Transportation
- Future Campus Boundaries





# **MASTER PLAN INITIATIVES**

#### **Building Initiatives**

- ALLWell Center, Phases II, III, and IV (190,000 GSF net)
  - ALLWell Phase II (now in design): academic, athletic, and recreation space, including a new field house to replace the outdated PE Center
  - o ALLWell Phase III: academic, athletic, and recreation space, including a new natatorium
  - ALLWell Phase IV: academic, athletic, and recreation space, including a new gymnasium
- New **Dining Commons** (60,000 GSF)
- Prospect Hall repurposed for academic and support functions (35,000 GSF)
- Samuel Read Hall residence hall repurposed for academic and support space (30,000 GSF); already underway at completion of the master plan.
- Lamson Library for academic/ support functions, leveraging an existing surplus of study space (15,000 GSF)
- New academic space on High Street (North Academic Building) or Highland Street (South Academic Building) to address remaining space deficits (115,000 GSF)
- Renovation of Hyde Hall (81,500 GSF) and Rounds Hall (39,500 GSF)
- Phased replacement of **Student Apartments**
- Relocation of **Physical Plant**

- operations outside of ALLWell Center and floodplain
- Modest ongoing upgrades to other buildings as needed
- Demolition of Mary Taylor House and Centre Lodge to enable construction of new Dining Commons; demolition of Counseling Center Building, BFA Art Studio and Bulk Mail Shed for creation of Hyde Lawn

# **Landscape Initiatives**First Steps

- Define a stronger campus gateway at High and Main Streets through signage and plantings
- Provide additional informal seating in key campus outdoor spaces
- Create campuswide signage program

#### Next steps

- Continue discussion of Holderness/High Street corridor improvements
- Advance Hyde lawn improvements
- Continue town-PSU efforts to strengthen Court Street; Improve pedestrian environment/visual connection to Main
- Alumni lawn improvements/plantings
- Improved access to Langdon Park
- ALLWell Phase V: Establish a new riverfront park along the Pemigewasset

### Climate Action and Building Efficiency Initiatives

#### Short-Term

- Conversion of CoGen plant to compressed natural gas (CNG)
- Building energy efficiency projects in the Power Plant, Langdon Woods, Highland Hall, and Lamson Library
- Exterior lighting upgrades—conversion to LED
- Steam line replacement (425 LF)
- Building energy management best practices—training and documentation
- Energy conservation training and outreach for building users
- Solid waste training and program improvements

#### Medium-Term

- Conversion of central plant to biomass
- Targeted window and roof replacements
- Building energy efficiency projects in Boyd Hall, Prospect, and Silver Center
- Use of high-performance building standards for new construction and major renovation projects
- Campuswide lighting controls
- Targeted upgrade of HVAC controls
- Development of ALLWell Center as green buildings powered by wood pellet boilers
- Use of CNG for vehicle fleet

- Use of solar and other renewable
- Solid waste infrastructure improvements

#### **Utility Infrastructure Initiatives**

- Central Plant: Planned conversion of PSU's CoGen plant to Compressed Natural Gas (CNG) and ultimately biomass
- Steam Distribution & Condensate Return: Completion of steam and condensate loop; replacement of leaky and failing distribution infrastructure north of Merrill Street, near Belknap Hall, and between Mary Lyon and Rounds Hall
- Electrical: Expansion of electrical capacity to support facilities expansion; continued undergrounding of overhead power lines; addition of Highland Hall and EcoHouse to the campus primary power system
- Water: Completion of water main loop to eliminate two dead ends
- Sewer: Replacement of the old PSU-owned sewage pump station in Holderness
- Storm Drains: Investigation and repairs related to water penetration issues at Hyde Hall, Draper & Maynard, and in the utility tunnel between Mary Lyon and Samuel Read Hall Hall; provision of new manhole and catch basin replacement at Silver Center
- Stormwater: Inventorying

- University-owned stormwater management infrastructure.
  Assessment of the system's capacity and also its impacts on water quality. Development of a Stormwater Management Plan to address the University's impacts on water quality and quantity
- Tel/Data Infrastructure: Upgrade of capacity from campus into Speare Hall and within the student apartments; provision of fiber optic service cable to EcoHouse; upgrade of tel/data infrastructure where needed; completion of the single-mode backbone infrastructure project for resiliency; other targeted infrastructure upgrades

#### Parking & Transportation Initiatives

- Continue to monitor utilization of parking and shift lot allocations as appropriate
- Continue to provide shuttle service with 10-minute peak headways, linking remote lots to the campus core
- Improve walkability between campus destinations and remote parking lots through continued improvements to High Street, Holderness Road, and pedestrian links north of High Street; see Landscapes section for more information



Create a New Dining Commons on Merrill Street that becomes a major new campus hub and redefines Hyde Lawn as a major campus open space.



Repurpose Prospect Hall for academic and support space. Remove large loading docks and enhance the relationship of the building to Alumni Green and High Street.

## **Land Use**

The diagram that follows provides a framework for guiding future land use decisions—but not a set of rules that must be adhered to without deviation.

A strength of the PSU campus is the varied mix of land uses from academic, to residential, to campus life, to central administration and student services—that exist side-by-side along the Campus Green, the major open space composed of Mary Lyon Lawn, Alumni Green, and the amphitheater beside Silver Center. At the same time. PSU recognizes the efficiencies and synergies that grow from clustering like functions together, and limiting dispersal of single departments across multiple buildings and districts. Over time, PSU will continue efforts to cluster related uses together, to the extent possible, in ways consistent with the land use framework illustrated in the diagram that follows. Through new and repurposed buildings, PSU will seek to provide expansion space in the districts where it's needed. Yet PSU will continue to allow for a diversity of functions and uses within each district, and will reinforce the Campus Green as a place for learning, recreation, and accessing support services.

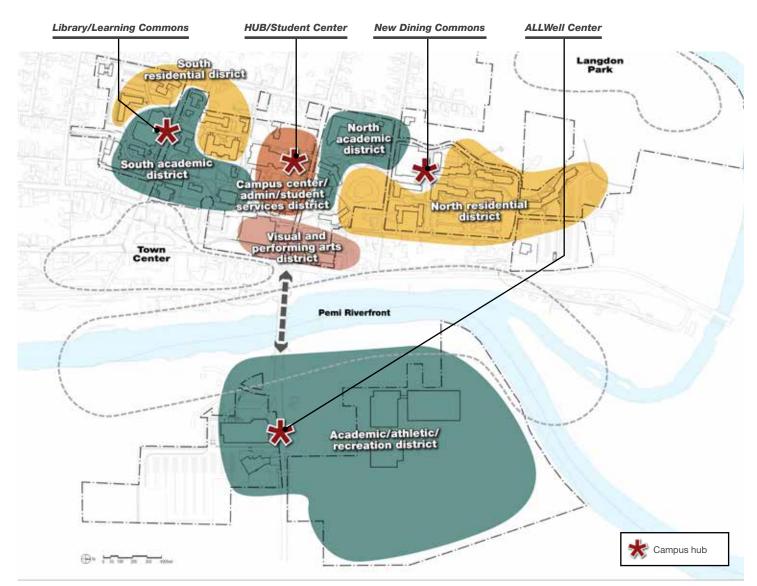
### **Campus Districts**

 North Academic District: The North Academic District, now focused on Hyde Hall, can be expanded through the addition of a new academic building and possible conversion of Prospect Hall to an academic facility. In total, this cluster will include up to approximately 190,000 GSF of academic space.

- South Academic District: The South Academic District,
  which includes Boyd Hall, Rounds Hall, and Highland Hall,
  is now being expanded through conversion of Samuel Read
  Hall residence hall to an academic and support building. This
  district can be further expanded through the addition of a new
  academic building. In total, across the five buildings identified
  above, this cluster will include up to approximately 230,000
  GSF of academic space.
- North Residential District: The North Residential District currently accommodates approximately 1,350 students within five residential complexes. The district could accommodate approximately 300 additional students through replacement of the White Mountain Student Apartments, now in poor condition, with denser and more compact student apartment facilities.
- South Residential District: The South Residential District will offer capacity for approximately 850 students. This district has limited potential for residential expansion.
- Campus Center/Admin/Student Services District: The
   Campus Center/Admin/Student Services District continues to
   be a hub of student life and support services, anchored by the
   HUB (Hartman Union Building) and Speare Hall. No expansion
   anticipated.
- Academic/Athletic/Recreation District: With development of ALLWell Phases II, III, IV, and V, the Holderness side of campus (currently anchored by the new Welcome Center and Ice Arena, and the old PE Center) will be significantly expanded as a center of academics, athletics, and recreation.

#### **FUTURE CAMPUS LAND USE**

- Visual and Performing Arts District: Silver Center and Draper & Maynard will continue to define PSU's arts district. No facilities expansion is anticipated within this district.
- Campus Hubs: The PSU campus will continue to have three major campus life hubs: the Library (Lamson), the student center (the HUB), and the dining hall each of which incorporates a food venue. The current dining hub at Prospect will shift north to a new Dining Commons. This new facility will represent an important new anchor that will extend the life of the campus to the north. The distribution of these hubs along the main campus pedestrian spine within different campus districts supports pedestrian movement and social interaction across the campus community.



# **Buildings**

PSU remains committed to maintaining existing facilities and meeting programmatic space needs to the greatest extent possible. Renovation of aging academic buildings and the addition of needed new facilities—including completion of the ALLWell Center and construction of a new Dining Commons—as funding is available will provide PSU with the space it needs to support research, instruction, and a high quality learning environment for students.

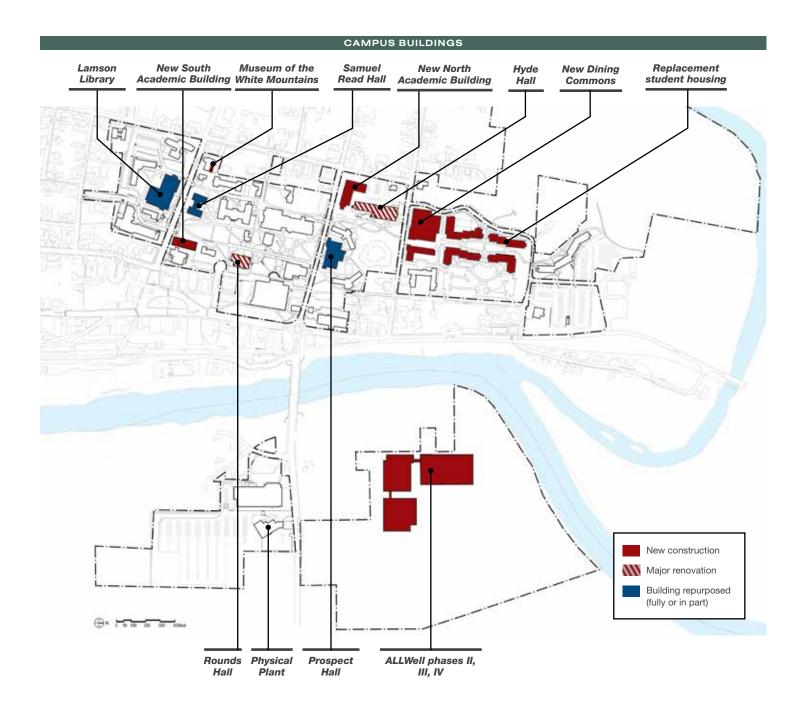
Campus building initiatives are summarized as follows:

- Complete ALLWell Center, Phases II, III, and IV (190,000 GSF net)
- ALLWell Phase II (110,000 GSF)
- ALLWell Phase III (80,000 GSF)
- ALLWell Phase IV (100,000 GSF)

The ALLWell initiative also includes demolition of PSU's outmoded 100,000 GSF PE Center (within ALLWell Phase III) and development of a new riverfront park through acquisition of floodplain properties on North and South River Streets (ALLWell Phase V).

Completion of the ALLWell Center, identified as a major campus need within the 2004 Master Plan, remains PSU's highest priority initiative.

- Construct a new Dining Commons on Merrill Street
- New Dining Commons (60,000 GSF)
- Repurpose space within existing buildings to meet academic and support space needs
  - Samuel Read Hall Hall Reuse & Renovation (25,000 GSF)
- Lamson Library Partial Reuse (15,000 GSF)
- Prospect Hall Reuse & Renovation (35,000 GSF)
- Renovate major academic buildings in need of renewal
  - Hyde Hall (81,500 GSF)
  - Rounds Hall (39,500 GSF)
- Add new academic space within the campus core
  - New North Academic Building (75,000 GSF)
  - New South Academic Building (40,000 GSF)
- Phased replacement of Student Apartments
  - Potential replacement of 1990s units
  - Potential replacement of 1970s units
- Demolition
- Relocation of Physical Plant operations
- Other building initiatives



# Complete ALLWell Center, Phases II, III, and IV (190,000 GSF net)

# Completion of the ALLWell Center remains PSU's highest priority initiative.

Construction of the ALLWell Center was identified as a need in the 2004 PSU Master Plan, and further developed through the 2007 ALLWell Center Master Plan. Phase I—the Welcome Center and Ice Arena—was completed in 2010. Advancement of each remaining phase—Phases II, III and IV—is needed to address academic, athletic and recreation space needs, comprising approximately 200,000 GSF of new space. Design of ALLWell Phase II, to include instructional and lab space for the Department of Health and Human Performance (HHP), a new field house, and additional athletic and recreation space is already underway. Completion of the ALLWell initiative will address fully half of PSU's current space deficit while also strengthening the relationship of the campus to the river.

 ALLWell Phase II (110,000 GSF): Will provide academic, athletic, and recreation space, including a new field house to replace a portion of the outmoded PE Center and upgrade of outdoor athletic fields. Phase II will also house the mechanical systems and biomass plant that will serve ALLWell Phases II, III and IV. Design of Phase II is underway.

- ALLWell Phase III (80,000 GSF): Will provide classroom and lab space for additional programs within the HHP department, as well as needed athletic and recreation facilities including a new natatorium and diving well. Phase III also begins demolition of the old field house portion of the PE Center.
- ALLWell Phase IV: (100,000 GSF): Provides the remaining classrooms, research labs, and offices required by the HHP department, as well as athletic, recreation and support space—including a new gymnasium. Phase IV also completes demolition of the old 100,000 GSF PE Center.

Phase V of the ALLWell initiative is focused on development of a new riverfront park through acquisition of floodplain properties on North and South River Streets. For more information on ALLWell Phase V, please see the Landscape section of this document.

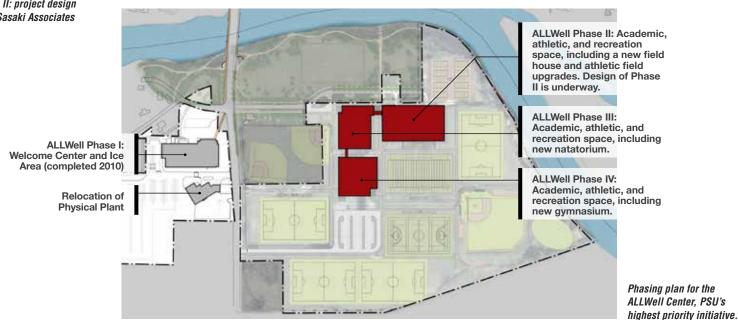
The ALLWell initiative also calls for relocation of the Physical Plant complex. For more information, please see "Relocation of Physical Plant operations" within the Buildings section of this document.



ALLWell Phase II: project design and image by Sasaki Associates

"ALLWell will serve as a livinglearning laboratory, increasing opportunities to provide educational, athletic, wellness, and recreational activities to the campus, local communities, the region, and the state."

STRATEGIC PLAN 2012





Prospect Hall is significantly undersized, and loading docks are a major disruption to campus structure and movement.

### **Construct a new Dining Commons on Merrill Street**

A new Dining Commons of approximately 60,000 GSF is needed to address a significant shortfall of dining space. The new dining facility will establish an important new campus hub on Merrill Street, extending the core campus and contributing to transformation of this area from a service corridor to an attractive campus street. Several options for a new or expanded dining facility were explored as a part of the master plan process with the Merrill Street location emerging as the most beneficial, providing a strong link between the northern and southern portions of the existing campus. The current dining facility at Prospect Hall contains approximately 35,000 GSF and offers no viable options for further expansion.

Moreover, Prospect Hall today reflects an earlier generation of dining facilities, and is no longer competitive with peer institutions. Newer and successful dining facilities, such as Zorn Dining Commons at Keene State or the Holloway Commons at UNH, offer an array of food stations that highlight variety in menu options, maximize the extent to which food is prepared within view of students, offer variety in seating options, and are sized to allow diners to linger. PSU's dining facility lacks space to accommodate these amenities, and has been identified by students as one of the places on campus they would most like to see improved.

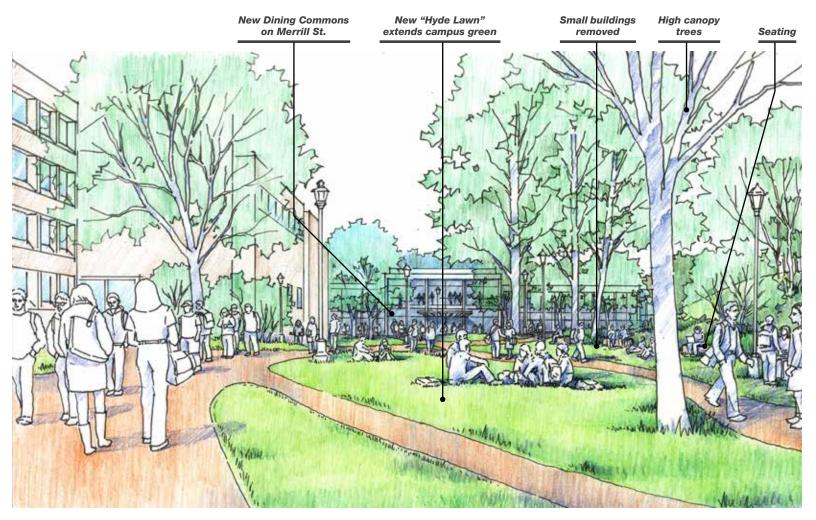
In addition to an improved dining facility, the new Dining Commons could also include meeting facilities, lounge, study, and/ or other common spaces that would expand use of the building throughout the day and evening. Such uses would support this facility as a true multi-use hub of campus activity and engagement, rather than simply a place to eat as Prospect is today.

Relocation of the dining facility with its robust servicing requirements and repurposing of Prospect Hall addresses dining needs and—by enabling removal of loading and service areas from the edge of Alumni Green—enhances the cohesiveness of much of the High Street area of the campus.

 New Dining Commons (60,000 GSF): Modern dining facility with meeting, lounge and other informal learning spaces



In a campus master plan drop-in session involving approximately 100 PSU students, PSU's current dining facility (Prospect Hall) was identified as the place on campus most in need of improvement. A second area of focus was the PE Center, which will be replaced through the ALLWell initiative.



Hyde Lawn and New Dining Commons

# Repurpose space within existing buildings to meet academic and support space needs

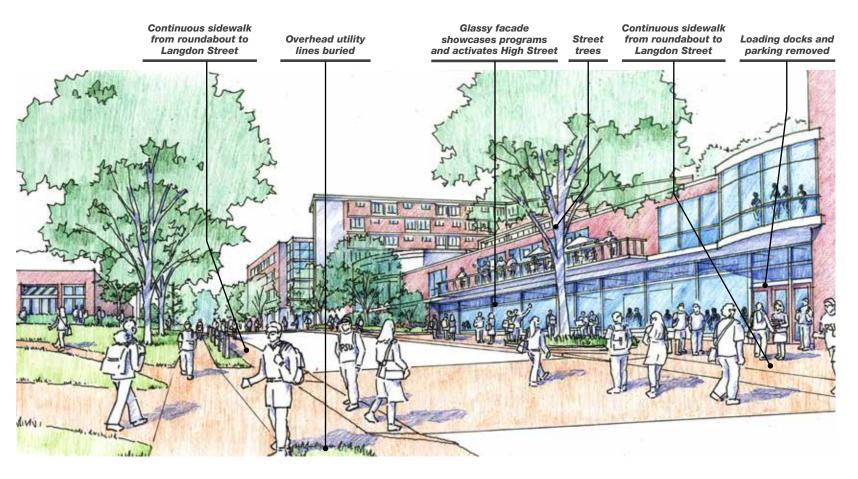
In the near-term, renovation projects at Samuel Read Hall Hall (repurpose from residential to academic) and Lamson Library (redesign portions of library to free up space for other uses) can provide up to 40,000 GSF of academic and support space for underserved programs, particularly those located at the south end of campus.

Over the longer-term, following completion of the new Dining Commons, PSU will have the potential to repurpose 35,000 GSF within Prospect Hall as a new center of academic and support space at the edge of Alumni Green. Removal of the major loading docks required to service the dining facility will enable redesign of the building façade facing the Green and reestablishment of sidewalks in front of the building. These moves will provide a more walkable High Street, and a friendlier edge to the Green. By repurposing Prospect and improving the area just in front of the building, PSU will remove a significant visual and functional disruption from the core of the campus.

- Samuel Read Hall Hall Reuse & Renovation (25,000 GSF):
   Conversion of Samuel Read Hall residence hall to an academic building; already underway at completion of master plan update.
- Lamson Library Partial Reuse (15,000 GSF): Through use of compact shelving, surplus space in Library repurposed to meet the needs of other departments or programs.<sup>1</sup>
- Prospect Hall Reuse & Renovation (35,000 GSF): Current dining hall repurposed as academic and support space following construction of the new Dining Commons<sup>2</sup>; loading dock removed to improve High Street and provide friendlier edge to Alumni Green.

<sup>1</sup> Potential uses for recaptured Library space identified through the space needs analysis include expansion of the Learning Commons - which accommodates tutoring and academic support services for students on the ground floor of the Library – and the Math Center, now located in Hyde Hall.

<sup>2</sup> Possible future uses for Prospect identified through the space needs analysis include general academic space (e.g., classrooms); Business Department (e.g., a School of Business building); Math and Computer Science Departments; Student life space (e.g., additional event, lounge and meeting space); Student support services hub; and Admin services)



Prospect Hall reuse

### Renovate academic buildings in need of renewal

PSU has a strong, long-standing commitment to renewal of historic and mid-century buildings, including Mary Lyon, Boyd Hall, and Lamson Library. By continuing this tradition, PSU can equip aging buildings to serve the University's needs for decades to come. Renovation of 1970's Hyde Hall (an initiative identified as a

What places or facilities on campus need improvement?
Place your red dots on places where you'd most like to see improvement.

In a campus master plan workshop attended by nearly 100 PSU faculty and staff members, Hyde Hall was identified as the place on campus most in need of improvement. The faculty, staff and students also focused on the PE Center, which will be replaced through the ALLWell initiative.

priority within PSU's last two master plans, targeting PSU's oldest yet-to-be-renovated academic building) and renovation of iconic and historic Rounds Hall will together provide over 120,000 GSF of upgraded space tailored to meet the needs of a broad range of programs; upgrade energy inefficient building systems; and address persistent water penetration issues in both buildings.

- Hyde Hall Renovation (81,000 GSF)¹: Renewal of PSU's
   oldest un-renovated academic building; to include upgrade of
   outdated classroom environments, replacement of aging and
   inefficient building systems, and resolution of persistent water
   penetration issues. A comprehensive upgrade would include
   right-sizing of building spaces and functions to meet the spe cific needs of future users.
- Rounds Hall Renovation (39,000 GSF)<sup>2</sup>: Renewal of one of PSU's most iconic buildings to provide improved academic and/or administrative space, replace aging and inefficient building systems, and resolve persistent water penetration issues.

<sup>1</sup> Possible future users for a renovated Hyde Hall identified through the space needs analysis include Business, Criminal Justice, Psychology, and Social Work Departments.

<sup>2</sup> Possible future users for a renovated Rounds Hall identified through the space needs analysis include central administrative functions such as Institutional Advancement, the President's Office, Public Relations, Human Resources, Financial Affairs, Budget and Accounting Services, and Institutional Research.

### Add new academic space within the campus core

Construction of additional academic space beside Hyde Hall on High Street and/or on Highland Street will enable PSU to fully meet space deficits and consolidate departments now dispersed across multiple buildings.

• New North Academic Building—High Street (75,0000 GSF): will provide needed academic and support space; well-located to serve departments on the north end of campus—e.g., departments now in Hyde Hall, where space constraints limit PSU's ability to fully meet space needs of programs.¹ A new 3–4 story building at this location would be an enhancement to High Street and would be centrally located at the intersection of the major campus pedestrian spines. This site has the flexibility to accommodate a smaller or larger structure, or could potentially be advanced as an addition to Hyde Hall. In the design of a building on this parcel, careful attention should be paid to the design of the Langdon Street frontage (in height, setback, scale and landscaping) to ensure the building is compatible with the residential scale and character of the street.

• New South Academic Building—Highland Street (40,0000 GSF): will provide needed academic and support space; well-located to serve departments in the south end of campus—e.g., departments now in Boyd Hall, where space constraints limit PSU's ability to fully meet space needs of science programs.<sup>2</sup> A new 2–3 story building at this location can add new life and vitality to Mary Lyon Lawn and the south end of campus. The building's lower floor might be placed at the level of Highland Hall (with the potential for connection) and entry might occur from the Green at the second level. The building should be no higher than 2.5 stories when seen from Mary Lyon Lawn.

<sup>1</sup> Possible users for new Academic Building on High Street identified through the space needs analysis include the English, Language & Linguistics, Communications & Media Studies, History & Philosophy, and Social Science Departments.

<sup>2</sup> Possible users for new Academic Building on Highland Street identified through the space needs analysis include STEM disciplines such as the Computer Science & Technology Department and the Mathematics Department.

### **Phased Replacement of Student Apartments**

PSU's student apartments provide a format that is liked by students, but the specific design of the facilities presents ongoing and costly maintenance challenges. The apartments were built in the major phases (1990 and 1977); the 1990s units, with their many roofs, wooden steps and water penetration issues, are especially problematic. Phased replacement of the student apartments with more compact, more efficiently operated student apartments would be a significant improvement. Over time, this portion of the campus could be transformed to provide better student housing and a stronger pedestrian link between the campus core and the Langdon Woods residence hall, as well as parking and recreation space.



These Student Apartments, with their many roofs, wooden stairways, and water penetration issues, are a significant ongoing maintenance expense.





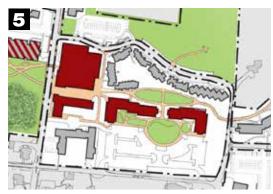
Condition following completion of new dining commons



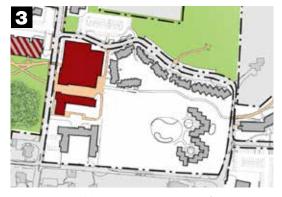
Construct 140-175 new beds (3 or 4 story)



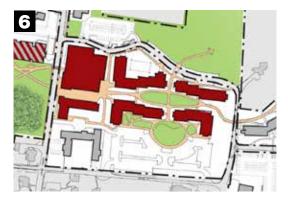
150 beds (apt format 330 GSF/bed) constructed on existing parking



Construct 110-150 new beds (3 or 4 story); demolish 100 existing beds; add new recreation space



Demolish 150–200 beds; create new parking (replace all displaced by housing construction) and housing site



Construct 275–370 new beds if needed (3 or 4 story); demolish 200 existing beds; create new linear courtyard

New beds: up to 870—replaces 496 beds

#### **Demolition of smaller structures**

Over time, PSU will seek to reduce the number of 'Small House' buildings within its inventory.

The PSU campus includes a number of small residential-scale buildings that house a range of campus functions, from faculty offices, to student and administrative services, to lab and studio spaces associated with particular departments. Some of these residential scale-buildings are historic structures that, together, are an integral part of the campus' character—for instance, Russell House (home to Admissions) and Ellen Reed (which houses faculty offices). Some of these buildings serve an important design function—for instance, EcoHouse and the UPD Building, which screen parking lots along High Street. Other buildings—for instance, those along Merrill Street and adjacent to Hyde—are simply former residential buildings that provide less-than-optimal space for the functions within them, present accessibility chal-

lenges for students with mobility impairments, and are not adequate from operations cost and energy performance perspectives. Demolition will be advanced once alternative locations are established for current functions. Removal of these properties is in some cases necessary to advance other master plan initiatives:

- Mary Taylor House (3,676 GSF)
- Counseling Center Building (3,600 GSF)
- BFA Art Studio (2,558 GSF)
- Bulk Mail Shed (610 GSF)
- Demolition of Centre Lodge (5,678 GSF), which houses two large meeting rooms and a small office area, is necessary for construction of the new Dining Commons; the lounge and office spaces can be replaced within the new Dining Commons

### **Relocation of Physical Plant**

PSU's Physical Plant complex contains offices, shops, and vehicles critical to supporting the University's buildings and grounds. The Physical Plant complex is currently located in Holderness—at a highly visible location within the ALLWell Center and within the floodplain. Periodic floods are an ongoing concern, resulting in significant expense and disruption. Physical Plant relocation was



Physical Plant complex

a goal identified within the 2007 ALLWell Center Master Plan, but has not yet taken place.

Relocation of Physical Plant functions to a site outside of the floodplain—for instance, near the northern portion of the Plymouth campus—continues to be an important goal. A new location for Physical Plant is key to supporting campus operations over the long-term, and continuing development of the ALLWell Center as a cohesive, attractive, and welcoming feature of the PSU campus.

### **Other Building Initiatives**

Over time, PSU will continue to pursue smaller initiatives as part of the University's ongoing efforts to address deferred maintenance issues, and to improve functionality within buildings in response to current and emerging needs. Such initiatives might include creating new lab, office, or meeting space environments within existing buildings; energy efficiency upgrades; and continued upgrade of finishes within residence hall common areas.

# Landscapes

The landscapes at the center of the Plymouth side of the campus are important elements in defining the University's identity. The central Campus Green formed by Mary Lyon Lawn, Alumni Green and the amphitheater beside Silver Center is a community space tying together many of PSU's major academic, administrative and student life centers. From the Green, the campus community enjoys views of the surrounding mountains that are a distinctive feature of the campus setting.

Exterior spaces and landscapes are maintained to a high standard and this contributes to the campus' appeal.

As PSU's campus has evolved over an extended period, its buildings have come to exhibit a variety of architectural formats and styles. Consequently, the campus landscape—trees, pathways, furniture, lighting, fencing, seating, signage and other elements—plays a particularly important role in creating a cohesive and unified feel.

Between Highland and Merrill Streets, PSU has worked hard to create a highly cohesive and attractive campus core, through development of a strong pedestrian network, conversion of vehicular streets to campus open spaces, and careful attention to land-scape elements.

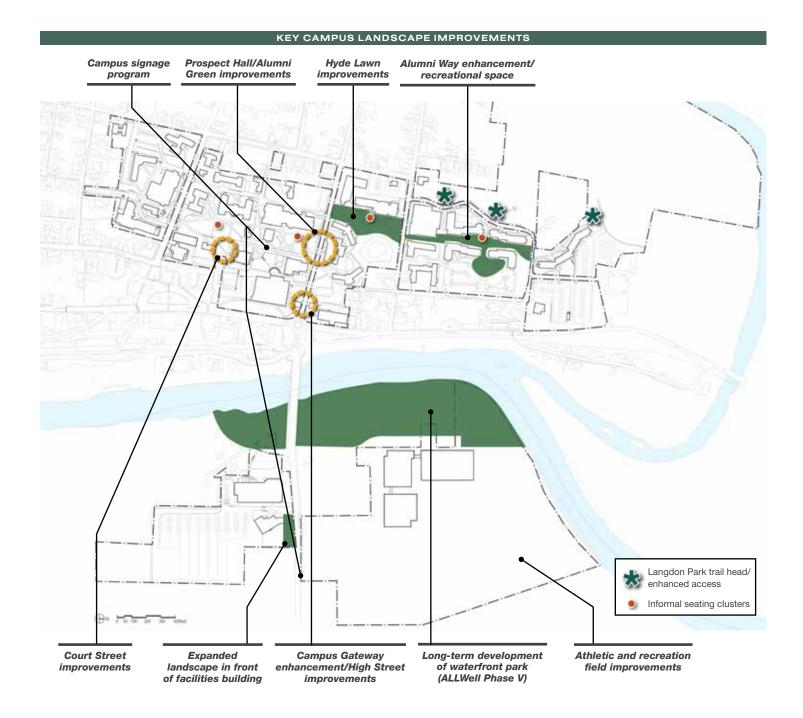
Between Merrill Street and the Langdon Woods residence hall, the campus has a less cohesive character, appearing more like an addition to the core area rather than an integral part of the University. Over the longer term, PSU will need to work to enhance the character of this area through development of a stronger pedestrian network, placement of new buildings, and rehabilitation or replacement of existing structures—all in ways that create a more legible and cohesive environment.

Other key long-term goals include strengthening the connection between the campus and downtown along Court Street, and strengthening the character of the Holderness Road / High Street corridor in Holderness and Plymouth to provide a stronger pedestrian environment between the emerging ALLWell side of campus and the Plymouth side of campus, enhancing an important arrival sequence for campus visitors.

In the near-term, several targeted improvements can offer immediate benefits to the character and experience of the campus.

# First Steps: Further strengthen PSU's outdoor environment through signage, seating, and an improved campus gateway

• Define a stronger gateway at High and Main through plantings and signage: Development of the roundabout at High and Main Streets has marked this important intersection as a moment of arrival at both downtown Plymouth and the core of the PSU campus. Targeted improvements on University land at High and Main would enable PSU to announce arrival at the campus core, to more strongly convey PSU's image and



identity at this key location, and to strengthen the connection between the main campus and the emerging ALLWell Center. Key elements to strengthening this gateway include:

- o Adding signage, including a low seating wall that reads: Plymouth State University
- o Planting high canopy trees in front of EcoHouse
- o Extending the lawn that fronts Silver Center

The University Police Department (UPD) Building and the EcoHouse, which flank High Street at the roundabout, serve an important design function by screening parking lots along High Street. The presence of structures at this location is important to the success of this area as a gateway.

• Provide additional informal seating in key campus outdoor spaces: Provide additional informal seating (e.g., café tables and chairs, additional Adirondack chairs placed in clusters) in high-traffic open space areas across the campus to invite lingering within PSU's well-loved outdoors. Begin with a demonstration project that enables PSU to experiment with different types of furnishings and locations to see which approaches attract the most use. In addition, consider locations and furnishings that can support active student use year-round. Seek furniture that dries quickly; locations that are both busy and relatively sheltered from the weather (e.g., the brick patio beneath the overhang at the entrance to the HUB); and seating that can be easily moved when large storms are expected and easily put back after storm clean-up.

Create a campuswide signage program: Well-designed, consistently applied signage strengthens a campus as a welcoming, easily navigable place. Moreover, good signage communicates a university's image and identity. Today, PSU's exterior signage reflects a range of eras and design vocabularies. Existing signage does not contribute to the strong open space environment PSU has created within the campus core. PSU would benefit from a campuswide initiative focused on design and installation of campus wayfinding and building signage.

Next steps: Continue to strengthen PSU's open space network and pedestrian links; strengthen connections among campus destinations, and to downtown Plymouth

 Continue discussion of Holderness Road/High Street corridor improvements: Continuing to strengthen east-west campus connections is an important goal, and will be increasingly important with further development of the ALLWell Center.





Campus Gateway improvements near roundabout at High and Main Streets



Pedestrian way beside Hyde Hall

PSU will need to work closely with the towns of Plymouth and Holderness to establish and implement plans for improving these roadways.

In partnership with the town of Plymouth, PSU could consider a range of walkability improvements on High Street, including removal of the Prospect Hall loading dock following construction of the new Dining Commons, adding sidewalks in places where none is currently provided, adding a planted buffer between the sidewalk and the road on the north side of High Street, adding street trees, burying overhead utility lines, or even potentially, partially closing High Street, should impacts to the area's road network prove modest. Similarly, in partnership with the town of Holderness, PSU could consider a number of walkability improvements on Holderness Road. Improvements could include adding PSU banners to light fixtures, burial of remaining overhead utility lines, and the addition of street trees.

• Advance Hyde Lawn improvements following completion of the new Dining Commons: Once a public street, the area east of Hyde is now a pedestrian way linking the campus core to Hyde Hall, as well as housing for nearly 1,350 students and other campus facilities north of High Street. The new Dining Commons on Merrill Street will reinforce this area as an important link between campus destinations. With a second wave of improvements, PSU can transform this area from a major pedestrian way to a prominent campus open space that extends the sense of Campus Green north to Merrill Street and the new

Dining Commons. Development of Hyde Lawn should consider:

- Removal of three small buildings adjacent to Hyde, and relocation of the functions within them: the Counseling Center building, the BFA Art Studio, and the Bulk Mail Shed.
- Provision of clear views from High Street to the new Dining Commons
- Design of an inviting campus open space that feels a part of the Campus Green but is distinct in character from both Alumni Green and Mary Lyon Lawn

#### • Continue town-PSU efforts to strengthen Court Street:

Court Street has long been an important link between downtown Plymouth and the heart of the PSU campus. Historically, PSU and the town of Plymouth have worked together on initiatives to improve this street in ways that benefit both the town and Plymouth State. Future collaboration on improvements to Court Street might consider incremental moves such as:

- o Relocating town parking spaces from the turnaround at the top of Court Street to reopen uninterrupted view corridors between downtown and historic Mary Lyon Hall. PSU might dedicate an equal number of spaces to the town in the campus parking lot directly behind Town Hall in order to offset any impact from this change.
- o Adding spacious steps from the turnaround up to Mary Lyon
- o Providing a planted buffer between the Court Street sidewalk and the road
- o Screening PSU parking areas with small trees and shrubs



Alumni Green

- Enhance Alumni Green as an important campus open space: With completion of the new Dining Commons, removal of the Prospect Hall loading dock, and rework of Prospect to include new entries comes the opportunity for a more welcoming High Street and a friendlier edge to Alumni Green. In conjunction with improvements to Prospect Hall, additional improvements to Alumni Green might be considered:
  - Reworking the street edge to promote easier access between the Alumni Green and Prospect Hall
  - Flattening the grade in portions of Alumni Green—for instance, to enable placement of café tables and chairs on the terrace outside of the HUB
  - Supplementing existing plantings to include high canopy trees throughout the space, but especially on the east side that, over time, can help define the space while adding shade
  - o Incorporating a low stone seating wall near the HUB
- Improve access to Langdon Park: Langdon Park is a significant but underutilized campus open space. With improved access between the campus and the park, Langdon Park could become a broadly used hiking destination, an outdoor learning lab, and a source of pride for a campus that deeply values its outdoor environments. Initial improvements might include:

- A new trail head, with signage, near the foot of Langdon Street
- A new trail head, with signage and a gathering space, at the Student Apartments; area should be part of a network of small gathering spaces
- o Access and signage near Langdon Woods residence hall
- Riverfront Park along North and South River Roads (ALL-Well Phase V): Phase V of the ALLWell initiative will establish a riverfront park between the ALLWell Center and the Pemigewasset River, providing a new open space and recreation amenity for the campus and the broader community.

# **LANDSCAPE TREATMENTS**

A consistent vocabulary of landscape elements is the glue that holds a campus together as a navigable, cohesive place. PSU should continue—and in some cases supplement—existing landscape treatments to reinforce the campus' strong outdoor environment. New projects and initiatives, big and small, should adhere to campus standards so that each investment reinforces, rather than undermines, improvements made over time.

 Fencing: PSU uses granite post with wood rail fences, particularly as an edge treatment along roads that pass through the campus.
 This landscape feature is similar to what is used by the town of Plymouth—e.g., at the



Granite-post fencing provides a useful edgetreatment along roads traversing the campus.

Town Green—providing a cohesive element common to downtown Plymouth and the campus. This treatment has performed well and should be retained. However, while the fences work well to corral pedestrians toward crosswalks, use of this fencing to corral pedestrians to paths within an open space (e.g., south of Hyde Hall) should generally be avoided. Instead, pedestrian use of open space should be encouraged, with paths added where appropriate to reflect desire lines.

• Crosswalks: PSU uses brick pavers to mark crosswalks as pedestrian zones, helping these areas stand out for both motorists and pedestrians. Through a partnership with the town of Plymouth, PSU has installed brick paver crosswalks on Highland Street, High Street, and Merrill Street to better link campus destinations across public roads. The town installed similar crosswalks in various locations across downtown, but due to ongoing maintenance issues, the town will replace the brick pavers with stamped asphalt. This change will not impact crosswalks installed by PSU.



Brick pavers help designate crosswalks as pedestrian zones, and as part of campus' pathway network.

As PSU's brick paver crosswalks have held up relatively well, have been effective in highlighting street crossings, and complement PSU's brick paver paths, contributing to a cohesive pedestrian environment across the campus, use of this feature should be continued.

• Brick Paver Paths: Brick pavers are used to define major paths within the campus core. These paths are a decorative element that helps to unify the campus's pedestrian network, and that reinforces PSU's classic New England college character. While brick paver paths installed with an asphalt base do not allow for proper drainage and tend to ice up quickly, paver systems installed with a compacted sand base function better in wet conditions. Use of brick paver paths featuring a compacted sand base should be continued within the campus core, and extended north of Merrill Street as new facilities are built.



Use of brick pavers on major paths contributes to a cohesive pedestrian environment.

• Bollards: PSU uses narrow black bollards to discourage vehicles from turning down campus pedestrian paths within the core. The bollards are designed to fall flat when struck, enabling access for emergency and maintenance vehicles. Initially installed as a temporary solution following conversion of roads to pedestrian ways, the bollards are an ongoing maintenance burden and do not match the collegiate identity PSU has worked hard to establish in the core. Efforts to identify a more easily maintained, attractive, and cost-effective bollard system should continue. Replacement of the existing system should remain a goal.



The bollard system should be replaced.

• Low seating walls: Low seating walls located close to building entrances—similar to the wall outside of Draper & Maynard—provide an inviting outdoor space for students to linger before and after classes or meetings, and see active use in dry weather. Extending this feature to other locations within the campus core could help expand use of outdoor spaces across seasons and advance a special identity for PSU that



#### Example seating wall

reflects its New England setting. Design of these walls should consider use of stone rather than brick (as brick walls have posed maintenance challenges in PSU's climate and sloping terrain) and potential for damage by skateboarders.

• Exterior lighting: PSU is anticipating a three phase, three year transition from high-pressure sodium lights to more



New LED fixtures will replace the high pressure sodium lighting (shown above) now used in the campus core

energy efficient LED lighting. This project will involve replacement of all of PSU's decorative lighting fixtures and echoes a similar project underway within the town of Plymouth. Previously, most fixtures within the campus core matched the lighting used downtown. The new lighting need not match the town's but should be complementary and consistent with the classic New England college environment PSU has established in the core.

Outdoor trash and recycling receptacles: Training and signage focused on solid waste disposal at PSU has been identified as a near-term initiative within PSU's Climate Action Implementation Plan. As part of this initiative, both indoor and outdoor trash and recycling receptacles should ultimately be replaced. New receptacles should reduce current confusion about what can or cannot be recycled in any given receptacle. Use of solar compacting receptacles should be



Upgrade of exterior trash receptacles should consider campus recycling objectives and compatibility with PSU's overall landscape character.

considered, emphasizing PSU's commitment to advancing its Climate Action goals. More traditional exterior waste receptacles should be compatible with PSU's existing landscape vocabulary.

• Signage: Today, PSU's exterior signage represents a mix of eras and design vocabularies. The University would benefit from a campuswide initiative focused on design and installation of high quality, consistently applied building and wayfinding signage that adds to campus image and identify.



University of Buffalo



Wayne State University



Ferris State University

# **Climate Action**

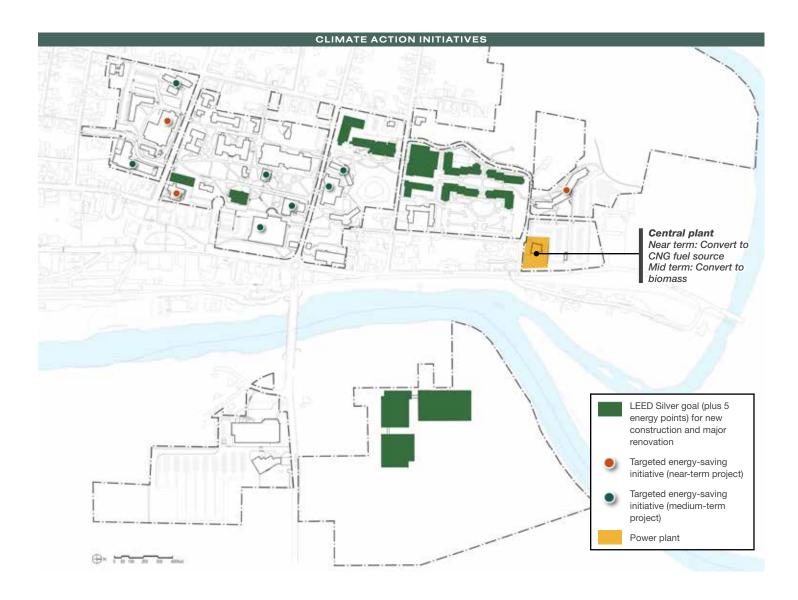
In 2007, PSU became a charter signatory of the American College and University Presidents' Climate Commitment (ACUPCC). As part of that commitment, the University developed a Climate Action Plan in January of 2010, pledging to reduce campus greenhouse gas (GHG) emissions 50% by 2025 and to make PSU's operations greenhouse gas neutral by 2050.

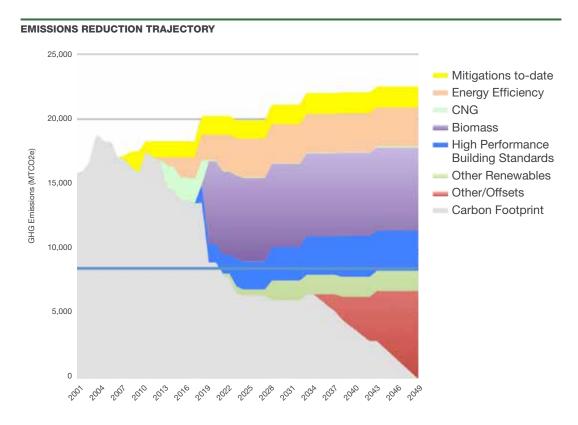
PSU has done significant work to establish momentum and make progress towards its ambitious GHG emissions reduction goals. In addition to pursuing a number of other energy-efficiency and conservation measures, PSU has improved energy efficiency of the existing building stock via high-efficiency lighting upgrades, building envelope improvements, and HVAC control improvements. The University is also about to embark on a major GHG emissions reduction project converting the central boiler plant—which currently operates on Number 6 fuel oil—to compressed natural gas (CNG). Eventual conversion of the central boiler to biomass is a key campus goal.

As part of the Campus Master Plan Update, PSU has developed an Implementation Plan for achieving the 2025 goal of 50% reduction and advancing the ultimate goal of carbon neutrality.

First steps and next steps identified within the Implementation Plan are summarized in the chart that follows. The full Implementation Plan is included as Appendix A. Key actions include the following:

- Conversion of the central plant to biomass prior to 2025 is necessary. Without conversion to biomass, PSU will be unable to fully meet its 2025 carbon reduction goal.
- Near-term conversion of the central plant to compressed natural gas (CNG), in advance of biomass conversion, will reduce emissions significantly.
- A continued focus on energy efficiency projects targeting existing buildings and infrastructure will help PSU operate more sustainably. This includes recommissioning buildings to optimize efficiency of systems, upgrading aging and inefficient building systems, replacing low performing steam lines, pursuing window and roof replacements where needed, and continuing lighting retrofits.
- Continuing PSU's commitment to high performance building standards in new construction will enable PSU to address its space needs while minimizing the carbon impacts of new facilities. For instance, development of future ALLWell phases as planned—with green buildings powered by wood pellet boilers and demolition of energy inefficient PE Center—will enable PSU to add a significant amount of square footage with minimal impact to the University's carbon footprint. The implementation plan identifies a goal of LEED Silver + at least 5 energy points, for both new construction and major renovation projects, as PSU's green building standard.





This chart documents the roles of various emissions reduction strategies in allowing PSU to reach its goal.

| SHORT-TERM PROJECTS (YEAR 1-3) FISCAL YEARS 2014-2016   |                                                                                                                                                                                                                                                            |                                                      |                                                            |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       |           |             |                            |  |  |  |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|----------------------------|--|--|--|
|                                                         |                                                                                                                                                                                                                                                            |                                                      |                                                            |                                                                                                                                                                                                                       |                                                                                                                                                                                                                                       | Scoring*  |             |                            |  |  |  |
| Project Title                                           | Project Description                                                                                                                                                                                                                                        | Estimated<br>Emissions<br>Reductions<br>(MT of CO2e) | Estimated<br>Payback<br>(Investment/<br>Annual<br>Savings) | Suggested Resources for Successful<br>Implementation                                                                                                                                                                  | Co-Benefits/Ancillary Benefits                                                                                                                                                                                                        | Financial | Co-Benefits | Cost of CO2e<br>Reductions |  |  |  |
| Compressed Natural Gas<br>(CNG) Project                 | Convert existing boilers to dual-fuel Install infrastructure to support mobile compressed natural gas tanks Replace existing burners with dual-fuel burners                                                                                                | 1,774                                                | 0.8                                                        | Underway                                                                                                                                                                                                              | <ul> <li>Cleaner boiler operation, reduced boiler maintenance</li> <li>Strong public relations opportunity</li> </ul>                                                                                                                 | •         | •           | •                          |  |  |  |
| Phase 1 Targeted Building<br>Energy Efficiency Projects | Power Plant  Lighting retrofits at Langdon Woods Hot water pump control at Highland Hall Chiller replacement Boiler replacement at Lamson Library Occupancy control for stack lighting Chiller/cooling tower optimization  3-way to 2-way valve conversion | 829                                                  | 4.4                                                        | External energy expertise (see attached outline retrocommissioning scope)     Project Management support—find the right balance of allocating internal resources and bringing in external support     Utility rebates | Opportunities to improve occupant comfort     Improve lighting quality     Improved building maintenance     Supplementing infrastructural improvements with complementary outreach and engagement programs could improve co-benefits | •         | •           | •                          |  |  |  |
| Exterior Lighting Upgrades                              | Convert to LED and standardize across campus                                                                                                                                                                                                               | 461                                                  | 3.8                                                        | <ul> <li>Project Management support –<br/>allocation of internal resources</li> <li>Utility rebates</li> </ul>                                                                                                        | Aesthetic improvement                                                                                                                                                                                                                 | •         | •           | •                          |  |  |  |
| Steam Line Replacements                                 | Replace 425 linear feet of steam main                                                                                                                                                                                                                      | 85                                                   | 49                                                         | Engineering     Project Management                                                                                                                                                                                    | Necessary to maintain heat to<br>campus     Reduced future emergency<br>repairs                                                                                                                                                       | •         | •           | •                          |  |  |  |
| Building Energy Management Best Practices               | <ul> <li>Documenting DDC standards and existing conditions</li> <li>Operator training (e.g. Building Operator Certification)</li> </ul>                                                                                                                    | 138                                                  | Neutral                                                    | <ul> <li>External training opportunities<br/>via formal classes</li> <li>Consider customized training<br/>for optimizing building energy<br/>performance</li> </ul>                                                   | <ul> <li>Professional development benefits for staff</li> <li>Greater staff participation in energy &amp; CAP initiatives</li> </ul>                                                                                                  | •         | •           | •                          |  |  |  |

<sup>\*</sup>Scoring Key: Green marks "best-case scenario" for the scoring category listed. Yellow represents a moderate rating, whereas red represents the least favorable rating.

| SHORT-TERM PROJECTS (YEAR 1-3) FISCAL YEARS 2014-2016 |                                                                                                                                                                                                                                                                                |                                                      |                                                            |                                                      |                                                                                                                                                         |           |             |                            |  |  |  |  |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|----------------------------|--|--|--|--|
|                                                       |                                                                                                                                                                                                                                                                                |                                                      |                                                            |                                                      |                                                                                                                                                         | Scoring*  |             |                            |  |  |  |  |
| Project Title                                         | Project Description                                                                                                                                                                                                                                                            | Estimated<br>Emissions<br>Reductions<br>(MT of CO2e) | Estimated<br>Payback<br>(Investment/<br>Annual<br>Savings) | Suggested Resources for Successful<br>Implementation | Co-Benefits/Ancillary Benefits                                                                                                                          | Financial | Co-Benefits | Cost of CO2e<br>Reductions |  |  |  |  |
| User Energy-Conservation<br>Training & Outreach       | <ul> <li>Address the "user" side of building<br/>energy management through awareness<br/>and behavioral change programming</li> <li>Install a demonstration student photovol-<br/>taic project</li> </ul>                                                                      | Small                                                | Long                                                       | Expanded sustainability staff                        | <ul> <li>Greater campus community<br/>involvement and buy-in</li> <li>Significant student education<br/>and engagement benefit</li> </ul>               | •         | •           | •                          |  |  |  |  |
| Solid Waste Training & Program Reinvestment           | Maximize aversion and diversion through<br>training and signage programs that ad-<br>dress both users and operators     Develop structure/policy to capture sav-<br>ings and/or revenue from recycling and<br>reinvest into continued waste aversion/<br>diversion programming | Small                                                | Long                                                       | Expanded sustainability staff                        | Greater campus community involvement and buy-in     May reduce costs associated with waste     Creates a partially self-sustained program/funding model | •         | •           | •                          |  |  |  |  |

<sup>\*</sup>Scoring Key: Green marks "best-case scenario" for the scoring category listed. Yellow represents a moderate rating, whereas red represents the least favorable rating.

# **Utilities**

Supporting campus operations at PSU is a broad network of site utility infrastructure. Efficient and sustainable operation of this infrastructure is essential to efficient and sustainable operation of the University as a whole. Over time, PSU will continue to address site utility needs, ensuring that infrastructure is kept in a state of good repair, at sufficient capacity, and with the resiliency to enable PSU to respond to emergencies.

The campus is served by public water and sewer. The Plymouth Village Water and Sewer District owns, operates, and controls the sanitary sewer system for portions of the campus located in Plymouth, as well as water supply and mains for both Plymouth and Holderness portions of the campus. On the Holderness side of campus, the University owns and operates the sewage pump station and forcemain extending under the river, as well as service connections to University buildings.

PSU's cogeneration facility—which converts and distributes power to campus facilities—is nearing its design capacity. Currently, PSU has a switch gear that's near capacity and back-up generators that are at capacity. To provide power to new main campus facilities identified within this plan, the University will need to expand electrical capacity. Options for expanding electrical capacity include:

 Upgrading generators and switchgear (the best option if funding is available)

- Providing separate power feeds from the utility to serve new buildings (e.g., not incorporating new facilities into the campus network)
- Powering PSU's next main campus building through the CoGen plant, utilizing the remaining switchgear capacity; as the backup generators are already at capacity, with this approach, backup power could not be provided via the campus network

Full findings and recommendations of the site utilities analysis conducted as part of the master planning effort are provided as Appendix B: Utility Infrastructure Analysis Report.

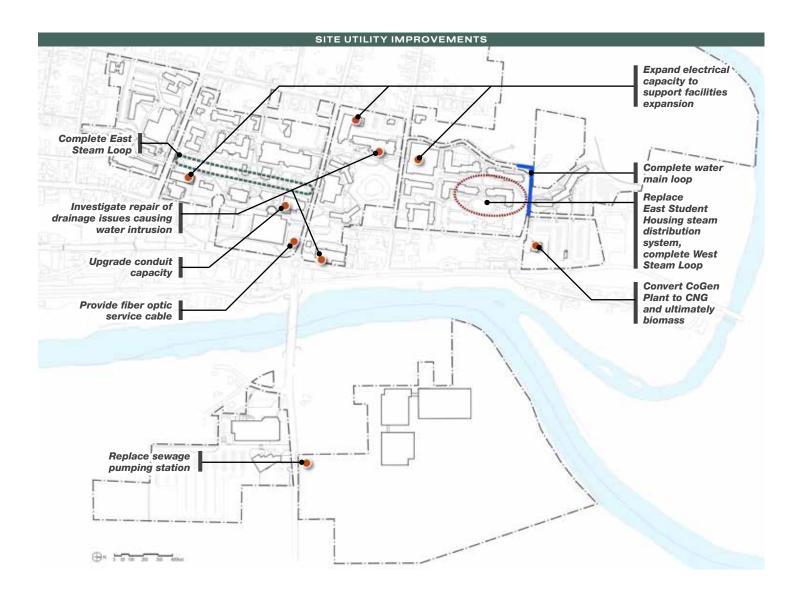
Key future initiatives for PSU related to site utilities include:

- Central Plant: Planned conversion of PSU's CoGen plant to Compressed Natural Gas (CNG) and ultimately biomass.<sup>1</sup>
- Steam Distribution & Condensate Return: Completion of steam and condensate loop; replacement of leaky and failing distribution infrastructure north of Merrill Street, near Belknap Hall, and between Mary Lyon and Rounds Hall
- Electrical: Expansion of electrical capacity to support facilities expansion; continued undergrounding of overhead power lines;

<sup>1 \*</sup>Conversion of central plant to biomass will likely require construction of either a new building or an addition to the building that now houses PSU's CoGen plant. Preferred location for central plant expansion is the parking area just north of the existing CoGen plant.

addition of Highland Hall and EcoHouse to the campus primary power system

- Water: Completion of water main loop to eliminate two dead ends
- **Sewer:** Replacement of the old PSU-owned sewage pump station in Holderness
- Storm Drains: Investigation and repairs related to water penetration issues at Hyde Hall, Draper & Maynard, and in the utility tunnel between Mary Lyon and Samuel Read Hall residence halls; provision of new manhole and catch basin replacement at Silver Center
- Stormwater: Inventorying University-owned stormwater management infrastructure. Assessment of the system's capacity and also its impacts on water quality. Development of a Stormwater Management Plan to address the University's impacts on water quality and quantity
- Tel/Data Infrastructure: Upgrade of capacity from campus into Speare Hall and within the student apartments; provision of fiber optic service cable to EcoHouse; upgrade of tel/data infrastructure where needed; completion of the single-mode backbone infrastructure project for resiliency; other targeted infrastructure upgrades



# Parking & Transportation

PSU maintains an effective parking and transportation system. Shuttle service links the campus core with perimeter parking lots and provides PSU affiliates with easy access to destinations across the campus and beyond.

Key findings related to parking and transportation are summarized below. For more information, please see Appendix C: Parking and Transportation Assessment.

## **Parking at PSU**

PSU has a parking inventory of 2,556 spaces. Use of these spaces is controlled through a parking permit system that allocates lots to particular user groups (residential, commuter, faculty/staff). Parking utilization is carefully monitored by the campus staff, who conduct multi-day parking counts four times a year. Lot allocations for user groups are adjusted as appropriate in response to utilization data. For instance, PSU recently converted a low-use permit parking area on Merrill Street to an open pay-to-park lot with a kiosk, and use of this lot has increased.

**Overall, PSU has enough parking spaces to meet current and anticipated needs.** Today, approximately 700 spaces are typically available on the PSU campus during middle of the day, which represents the peak period of parking use. Lots within the

campus core are heavily utilized, particularly from 12 noon–2pm when the number of available spaces in the core is very limited. In these periods, parking is primarily available in perimeter parking lots served by the campus shuttle system, mostly within a 10-15 minute walk from the center of campus. Most of these spaces (approximately 600) are located in the Welcome Center and Ice Arena lot and the PE Center lot, with approximately 100 spaces available at the Langdon Woods lot. The Ice Arena and PE Center lots are fully used for major events but serve wider campus needs in other periods.

Opportunities to add parking within the core are very limited, and the addition of new surface lots would detract from the walkable and cohesive outdoor environment PSU has worked hard to create within the center of campus. Structured parking is not a viable option in the foreseeable future given the high cost of construction and operation, and the limited options to secure revenues to offset these expenditures.

In some cases, construction of new facilities envisioned within the master plan may result in a modest reduction of parking in or near the campus core. Overall, however, PSU will continue to have an adequate supply of parking spaces.

Parking actions are as follows:

- Continue to monitor utilization of parking and shift lot allocations as appropriate
- Continue to provide shuttle service with 10-minute peak headways, linking remote lots to the campus core
- Improve walkability between campus destinations and remote parking lots through continued improvements to High Street, Holderness Road, and pedestrian links north of High Street.
   See Landscapes section for more information

### **Vehicular Traffic**

Even during peak traffic flows, intersections near the PSU campus operate at a level of service below their capacity. However, vehicular delays during times of heavy pedestrian crossings have been a long-standing frustration for motorists traveling along Highland and High Streets. To alleviate pedestrian-vehicular friction on Highland Street, an important town thoroughfare, PSU has:

• Installed textured crosswalks that channel pedestrian crossings and alert motorists of a pedestrian zone

- Equipped crosswalks with LED lighting triggered by the presence of pedestrians within the crosswalk, alerting motorists to the presence of pedestrians at night
- Placed campus police officers at crosswalks during peak crossing periods to direct traffic flow and prevent long vehicular delays for motorists

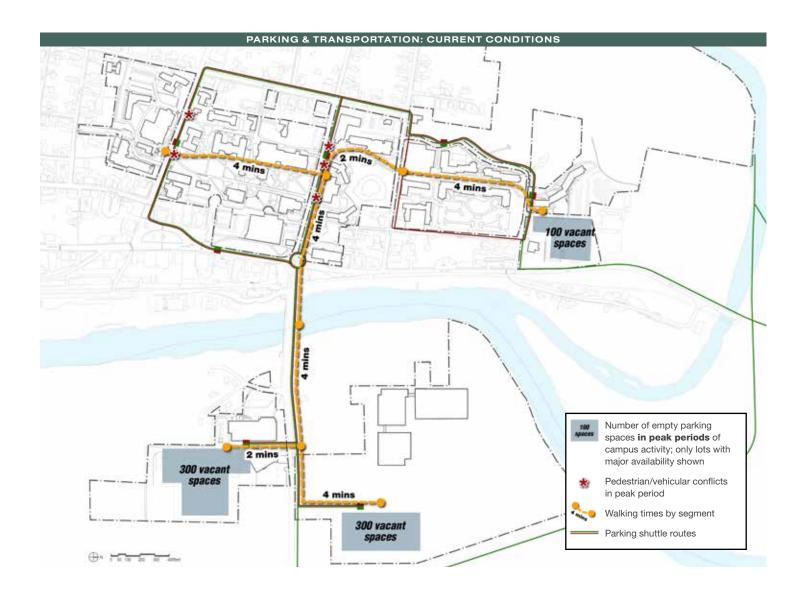
PSU has also installed textured crosswalks to channel pedestrian crossings at High Street, where much of the vehicular traffic is attributable to PSU affiliates traveling to or from campus parking areas.

#### Overall, PSU manages points of pedestrian-vehicular friction

well. PSU has worked hard to balance pedestrian and vehicular traffic on both High and Highland Streets. While some have suggested pedestrian bridges or tunnels on these streets to further reduce pedestrian-vehicular friction, such strategies are not recommended due to cost, the need for ADA-compliant ramps which would need to stretch far north and south of the street, and, most importantly, national experience that shows adult pedestrians will overwhelmingly ignore bridges and tunnels if a more convenient at-grade crossing is at all possible.

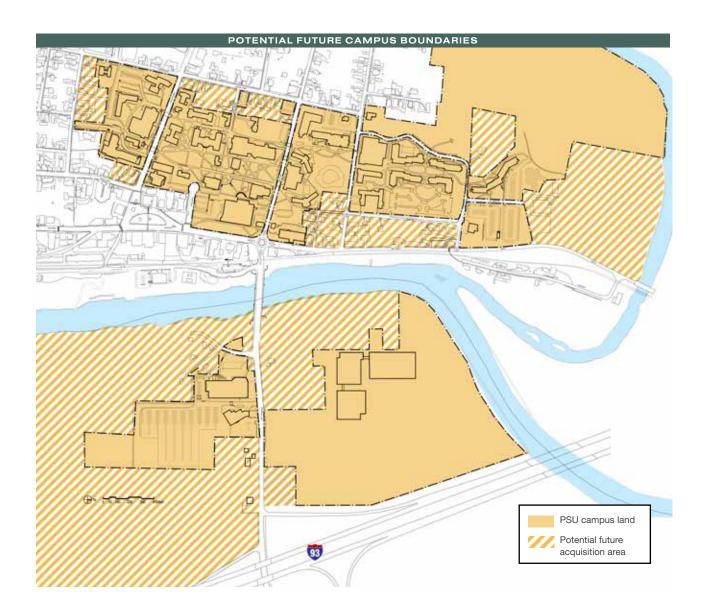
While such infrastructure can work well over or under highways, neither Highland nor High pose enough of a barrier for these strategies to be effective. Instead, PSU should continue to focus on incremental moves in cooperation with the town of Plymouth that improve conditions for both motorists and pedestrians. This might include:

- Installation of pedestrian-activated, pedestrian-scaled crossing lights along Highland Street
- Removal of the Prospect Hall loading dock—a current area of friction—following construction of the new Dining Commons
- Continued monitoring of vehicular and pedestrian traffic in partnership with the towns of Plymouth and Holderness to ensure that impacts are managed appropriately as campus changes are designed and developed



# **Potential Future Campus Boundaries**

As part of the master planning process the University System of New Hampshire (USNH) Board of Trustees requires that USNH institutions identify land they might consider acquiring. Over time, as needs and circumstances evolve, PSU may consider acquisition of certain properties adjacent to campus. These properties would clarify campus boundaries, and are shown in stripes within the diagram on the opposite page.





implementation

# **Implementation**

### **ALLWell**

Completion of the ALLWell Center Phases II, III, and IV remains PSU's top priority for major campus improvement projects. The ALLWell Center will provide much-needed instructional and lab space for the Department of Health and Human Performance (HHP), expand and improve both indoor and outdoor athletic and recreation facilities, and reduce PSU's space deficit by one-half.

#### **Completion of the ALLWell Center**

- ALLWell Phase II (110,000 GSF): Will provide academic, athletic and recreation space including a new field house; design of ALLWell Phase II is now underway
- ALLWell Phase III (80,000 GSF): Will provide academic, athletic, and recreation space, including a new aquatic center, classrooms, laboratory and lecture hall
- ALLWell Phase IV (100,000 GSF): Will provide academic, athletic, and recreation space, including a new gymnasium, athletic training facility and Human Performance Center. Phase IV also completes demolition of the old 100,000 GSF PE Center

## **Other Major Initiatives**

Renewal of aging buildings and expansion of needed academic and dining space are the next areas of focus. In the coming years, as funding permits, PSU will continue to advance other major master plan initiatives:

#### **Major Academic and Support Initiatives**

- Lamson Library Partial Reuse (15,000 GSF): Repurpose surplus space within the Library to address space deficits related to academic and support programs; use compact shelving to consolidate Library holdings
- Prospect Hall Reuse & Renovation (35,000 GSF): Repurpose current dining hall as academic and support space following construction of the new Dining Commons; remove loading dock to improve High Street and provide friendlier edge to Alumni Green
- Major Renovation of Hyde (81,500 GSF): Pursue comprehensive renewal of PSU's oldest un-renovated academic building by upgrading outdated classroom environments, replacing aging and inefficient building systems, and resolving persistent

water penetration issues; right-size and equip spaces to meet the specific needs of programs to be housed within the building

 Rounds Hall Renovation (30,000 GSF): Upgrade one of PSU's most iconic buildings to provide improved academic and support space, replace aging and inefficient building systems, and resolve persistent water penetration issues

#### **Major Auxiliary Initiatives**

- New Dining Commons (60,000 GSF): Replace the dining hall located in Prospect with an adequately sized, modern campus dining facility on Merrill Street; equip building with lounges, study environments, and other informal learning spaces that will keep the building lively and ensure active use outside of meal periods
- Replacement of Student Apartments (Phase I, 150 beds): Pursue phased replacement of the Student Apartments
   —now in poor condition—with new student housing offering a more compact, more efficiently operated and maintained format; begin with a new 150-bed apartment-style residence hall along Merrill Street

### **Smaller Initiatives**

In addition, PSU will continue to pursue lower-cost, high-impact campus improvement initiatives on an ongoing basis, as funding is available.

- Hyde Hall, minor renovations: In advance of a comprehensive renovation, move forward with a phased program of targeted repairs
- Campuswide signage improvements: Upgrade signage campuswide using a consistent design to further strengthen the PSU campus as a welcoming, easily navigable, and imagable place
- Gateway improvements at High and Main Streets: Define a stronger gateway to the campus through plantings, a low seating wall, and signage that more strongly convey PSU's image and identity
- Ongoing infrastructure improvements: Continue to make needed improvements to campus infrastructure through utility upgrades, energy efficiency projects, stormwater management initiatives, and tel-data improvements

## **Initiatives already underway**

Finally, PSU should be recognized for initiatives already underway at the conclusion of this master planning effort.

- ALLWell Phase II: Design for Phase II of the ALLWell Center is underway; see above
- Samuel Read Hall Residence Hall Reuse & Renovation:
   Samuel Read Hall, formerly a residence hall, is currently being renovated to meet academic and support space needs
- Conversion of Central Plant: Conversion of PSU's CoGen
  Plant to a greener fuel source (Compressed Natural Gas) will
  occur in fall of 2013; eventual conversion to biomass is planned
- Exterior Lighting Project: A three-phased initiative will replace high-pressure sodium lights with more energy efficient LED lighting