



Northern Michigan University

WELCOME TO

Northern Michigan University



**Five-Year Facilities Master Plan
November 2011**



Table of Contents

Section I – University Mission

Mission and Vision	4
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Section II – Instructional Programming

Strategic Direction: Road Map to 2015.....	6
Academic Programs	11
Academic Affairs Division Organizational Chart	18
Existing Academic Programs and Projected Programming Changes.....	19
Initiatives / Academic Program Needs with Impact on Facilities.....	25
Community Presence Activities	27
Economic Impact / Partnerships with Business and Industry	32

Section III – Enrollment and Staffing

Enrollment – Fall 2009

Headcount.....	39
Recruiting Region	40
Where Students Live.....	41
Full-time / Part-time Status.....	42
Full Year Equated Student (FYES) Change.....	43
Freshmen Change	45
Class Size.....	46

Staffing

FTE by Employee Category	47
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Table of Contents

Section IV – Facility Assessment

Facility Overview

Introduction	49
NMU and Sustainability	50
Physical Plant Overview	53
Facilities Condition Cost Analysis by Priority Class – State Buildings	54
Facilities Condition Cost Analysis by Priority Class – Auxiliary Buildings	55
Facility Assessment Summary	56
Long Term Maintenance and Space Utilization	57
Assessment of Campus Utilities System	60
Assessment of Campus Infrastructure	63
Building Bonds	67
Map – Road and Parking Statistics	68

Assessment of University Land

University Land	70
Map – Facilities Statistics	71

Section V – Facilities Implementation Plan

Introduction and FY 2013 Capital Outlay Project Requests	73
Summary – Outlay Project Request	75
Outlay Project Request – #1	76
Outlay Project Request – #2	80
Outlay Project Request – #3	84
Outlay Project Request – #4	87
Map – Project Outlay Request Locations – Learning Resource Center, Jamrich Hall, PEIF, Forest Roberts Theatre, McClintock, Sam M. Cohodas Hall	91
Status of “In-Progress” State Building Authority Projects	92
University Projects – Completed	93
University Projects – Planned	94
Maintenance Projects	96
Future University Projects	101



Northern Michigan University

Section I Mission

Five-Year Capital Outlay Plan



Mission Statement

Northern Michigan University challenges its students and employees to think independently and critically, develop lifelong learning habits, acquire career skills, embrace diversity and become productive citizens in the regional and global community.

September 2008

Vision Statement

Northern Michigan University will become the university of choice in the Midwest for students seeking a quality academic program with individualized attention in a high-tech learning environment.



Northern Michigan University

Section II

Instructional

Programming

Five-Year Capital Outlay Plan



Strategic Direction: Road Map to 2015

NMU's success has enabled us to understand more fully the strengths and distinctive features that will define NMU's future. The heritage of being a high-touch, high-tech, high-quality campus that is both affordable and accessible must remain an important part of our value system. In order to sustain our uniqueness and differentiate NMU from other universities, we must be clear about our priorities and direction. Three unique themes will frame our Road Map to 2015 and beyond.

Information technologies are the critical signature of an NMU degree. The laptop culture, enhanced by new wireless technologies and portable devices, places NMU far ahead of and distinct from our competitors. Our capability to blend this expertise with digital television and public broadcasting increases both the capacity and the quality of NMU. Our instructional and technical reach becomes planetary rather than regional.

International opportunities also will become a critical feature for NMU. Students demand it, employers seek it, and a relevant education cannot exclude it. Beyond study abroad, our curriculum, our faculty, our student body, and our thinking must reflect the realities of an interconnected, world community. We are in a unique position to distinguish all NMU majors with significant and meaningful international experiences.

NMU's location in the Upper Peninsula is a unique asset and, as one, must become a prominent feature of our portfolio of academic programs and our research agenda. Lake Superior and the neighboring landscapes offer resources that attract students, faculty, and staff and enhance a high-quality university experience. How we choose to brand and distinguish our degrees will depend, in large part, upon our creative use of this most prominent resource.

Against these three distinctive brushstrokes lie specific strategies that are the foundation of the Road Map to 2015 and Beyond. The Road Map is comprised of four broad elements that each have specific goals and priorities. Each is relevant to faculty, staff, and students' sense of engagement with the campus; with who we are and where we're going. More importantly, the Road Map will capture how we're going to get there.



Strategic Direction: Road Map to 2015 *(continued)*

The Four Strategic Elements are:

Innovation:

The university experience is predicated on a blend of a number of intellectual and organizational enterprises. Northern must reinvigorate the standards and processes that will sustain successful programs, create new ones, eliminate programs with declining enrollment, and reflect the creativity of campus talents. The curriculum must remain relevant and meaningful, and our teaching must be contemporary and effective.

- An academic curriculum that balances successful programs with new offerings at the undergraduate and graduate level to meet the needs of students, as well as improve student career opportunities after graduation
- A new professional development program for faculty and staff that rewards innovative practices and encourages interdisciplinary and interdepartmental collaboration
- A growing portfolio of corporate collaborations that exploit NMU's technical expertise, enhance academic programs, and facilitate global engagement for students and faculty, both on campus and abroad
- Develop the financial resources to support innovation and student success





Strategic Direction: Road Map to 2015 *(continued)*

Meaningful Lives:

The personal, social, and intellectual maturity of NMU students is the ultimate benchmark of the achievement of the University's mission. A high-quality university education creates lifelong learners, contributing citizens, and thoughtful neighbors. NMU will develop those programs and employ those practices that maximize the opportunity for all students to succeed in their university experience and to lead a productive, meaningful life.

- A Liberal Studies Program that provides students with the abilities and knowledge necessary for lifelong learning and effective citizenship in a challenging and rapidly changing world
- Develop a new academic advising system that integrates the advising assets of academic departments and student services to contribute to a new, effective retention management network – similar to our enrollment management network
- Integrate the highest possible level of information technology skills and competencies throughout the University





Strategic Direction: Road Map to 2015 *(continued)*

Campus Attributes:

The attractiveness of the NMU campus in the beautiful natural environment of the Upper Peninsula of Michigan is a unique asset that should play a prominent role in our portfolio of academic programs, our research agenda, and the efficiency with which the campus operates. While the campus itself represents NMU's physical assets, academic programs and other campus operations represent the human capital of the University community. Both are instrumental in sustaining the university's collective efforts to maintain a standard of excellent practice, manage costs, and achieve the institutional mission.

- Utilize the Campus Master Plan and related initiatives to continue to build and develop a greener and more learner-centered campus
- Enhance processes throughout campus operations to guide the use of resources and inform resource allocation
- Enhance the portfolio of academic programs, research, and other activities that leverage the University's location in the Upper Peninsula of Michigan
- Be a model community for sustainable education and practices





Strategic Direction: Road Map to 2015 *(continued)*

Community Engagement:

Acknowledgement and use of the rich learning environment outside the campus energizes the faculty-student relationship and creates an essential bridge from theory to practice. According to the Carnegie Foundation for the Advancement of Teaching, a community-engaged campus collaborates with its larger communities (local, state, regional, national, and global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. Students who attend a community-engaged institution learn the broad context in which they live, work, play, and grow.

- Include all units of the campus in the process of community engagement; that is, collaborations between the University and its larger communities (local, state, regional, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity
- Increase faculty, staff, and student involvement in the Superior Edge program, academic service learning, and other community engagement and leadership development initiatives
- Put into action a commitment to be an inclusive community where differences are recognized as assets of the institution, respected attributes of the person, and a valuable part of the university experience
- Increase collaboration with local communities, schools, governments, development groups, and other partners to enhance community and economic development in the Upper Peninsula





Academic Programs

Baccalaureate Degree Programs

Major

- Accounting
- Accounting/Computer Information Systems
- Accounting/Corporate Finance
- Accounting/Financial Planning
- Art and Design - BS, BA, or BFA
- Art and Design
 - Concentrations
 - Ceramics
 - Digital Camera
 - Drawing/Painting
 - Electronic Imaging
 - Film/Video
 - Furniture Design
 - Graphic Communication
 - Human-Centered Design
 - Illustration
 - Metal Crafts
 - Photography
 - Printmaking
 - Sculpture
 - Woodworking
- Art History
- Athletic Training
- Biochemistry
- Biology
- Biology/Ecology
- Biology/Microbiology
- Biology/Physiology
- Business Computer Information Systems
 - Concentrations
 - Networking
 - Systems Analysis
 - End –User Training
 - Web Development
- Chemistry (ACS Certified)
- Clinical Health Science
 - Concentrations
 - Radiography
 - Respiratory Therapy
 - Surgical Technology
- Clinical Laboratory Science
 - Concentrations
 - Anatomical Pathology
 - Clinical Systems Analysis
 - Diagnostic Genetics
 - Laboratory Medicine
 - Microbiology
 - Science Technologist
- Communication Studies
- Community Health Education
- Computer Science
- Construction Management
- Criminal Justice
- Early Childhood
- Earth Science
- Economics
- Electronic Journalism
- Electronics Engineering Technology
- Elementary Education (2 minors)



Academic Programs

Baccalaureate Degree Programs (continued)

Major

Elementary Education Cognitive Impairment	Individualized Studies
Elementary Education Emotional Impairment	Industrial Technology
Elementary Education English	International Studies
Elementary Education Integrated Science	Liberal Arts and Sciences
Elementary Education Language Arts	Loss Prevention Management
Elementary Education Mathematics	Management
Elementary Education Social Studies	Management of Health and Fitness
English	Marketing
English/Graduate Bound	Mathematics
English/Writing	Mechanical Engineering Technology
Entertainment and Sports Promotion	<u>Concentrations</u>
Entrepreneurship	Computer Numerical Control
Environmental Conservation	Technology
Environmental Science	Industrial Electrical Technology
Environmental Studies and Sustainability	Industrial Technologies
Finance	Mechanical Engineering Design
Finance and Risk Management	Music
<u>Concentrations</u>	<u>Concentrations</u>
Corporate Finance	Choral
Personal Financial Planning	Instrumental
Risk Management and Insurance	Network Computing
Forensic Biochemistry	Nursing
French	Outdoor Recreation Leadership and
Geography Information Science	Management
Geomatics	Personal Financial Planning
German Studies	Philosophy
History	Physical Education Coaching
Hospitality Management	Physics



Academic Programs

Baccalaureate Degree Programs (*continued*)

Major

Political Science
Political Science/Pre-Law
Pre-Architecture
Pre-Chiropractic
Pre-Dental
Pre-Engineering
Pre-Law
Pre-Medicine
Pre-Optometry
Pre-Pharmacy
Pre-Physical Therapy
Pre-Physician
Pre-Veterinary
Psychology
Psychology/Behavior Analysis
Psychology/Graduate School Preparation
Public Administration
Public Relations
Ski Area Business Management
Social Work
Sociology
Sociology in Liberal Arts
Spanish
Speech, Language and Hearing Sciences
Sports Science
Theatre
Zoology



Academic Programs

Associate Degree Programs

Major

Applied Child Development
Art and Design
Automotive Service Technology
Aviation Maintenance Technology
Building Technology
Climate Control Technology
Clinical Laboratory Technology
 Clinical Laboratory Technician
 Science Technician
Computer Information Systems
Computer Numerical Control Technology
Criminal Justice
Engineering Technology
 Industrial Electronic Technology
 Electrical Power Technician
 General Electronics Technology
Food Service Management
General Business
General University Studies
Health Information Processing
Individualized Studies
Industrial Maintenance
Law Enforcement
Liberal Arts/Sciences
Office Information Assistant
Radiography
Respiratory Therapy
Surgical Technology

Certificate Programs

Aviation Maintenance Technology
Automotive Service
Clinical Assistant
Computer Numerical Control Technician
Cosmetology
Engineering Design
Geographic Information Systems
Heating, Ventilation, Air
 Conditioning/Refrigeration
Individualized Studies
Office Services
Welding

Diploma Programs

Advanced Law Enforcement
Electrical Line Technician

Certifications

Cosmetology Instructor
Police Academy



Academic Programs

Graduate Programs

Biology
Biochemistry - Biology
Business Administration
Creative Writing
Criminal Justice
English
Exercise Science
Family Nurse Practitioner
Individualized Studies
Nursing
Psychology
Psychology Training and Development
Public Administration
 Community Planning
 General Administration
 Personnel and Labor Relations
 State and Local Administration

(Certificates)

Advanced Adult Health Nursing
Criminal Justice Management
Facilitating Training
Family Nurse Practitioner
Health Care Administration
Public Management

Education

School Counseling
Administration and Supervision
Instructional Leadership
Mathematics Education
Education
Reading
Reading Specialist
Science Education
Learning Disabilities
Education Certificates
 State Professional Education
Certificate, Elementary
 State Professional Education
Certificate, Secondary
 Additional Endorsement
 School Guidance Counseling
Endorsement

Post-Baccalaureate Programs

Elementary Provisional Certificate
Secondary Provisional Certificate



Academic Programs

Elementary Education Minors

Elementary Education Planned Component
English
French
Geography
German
History
Integrated Science
Language Arts
Mathematics
Physical Education
Reading
Social Studies
Spanish

Secondary Education Minors

Art and Design Education
Biology Education
Chemistry Education
Earth Science Education
Economics Education
English Education
French Education
Geography Education
German Education
Health Education
History Education
Industrial Technology Education
Integrated Science
Journalism
Mathematics Education

Music
Choral
Instrumental
Physical Education
Physics Education
Political Science Education
Spanish Education
Special Education
Cognitive Impairment
Emotional Impairment

Non-Education Minors

Accounting
Alternative Energies
Anthropology
Applied Ethics
Architectural Technology
Art and Design
Art History
Automotive Service Technician
Biology
Business Administration
Chemistry
Child Care Services
Clinical Laboratory Techniques
Communication Studies
Computer Information Systems
Computer Science
Contracted Minor
Criminal Justice



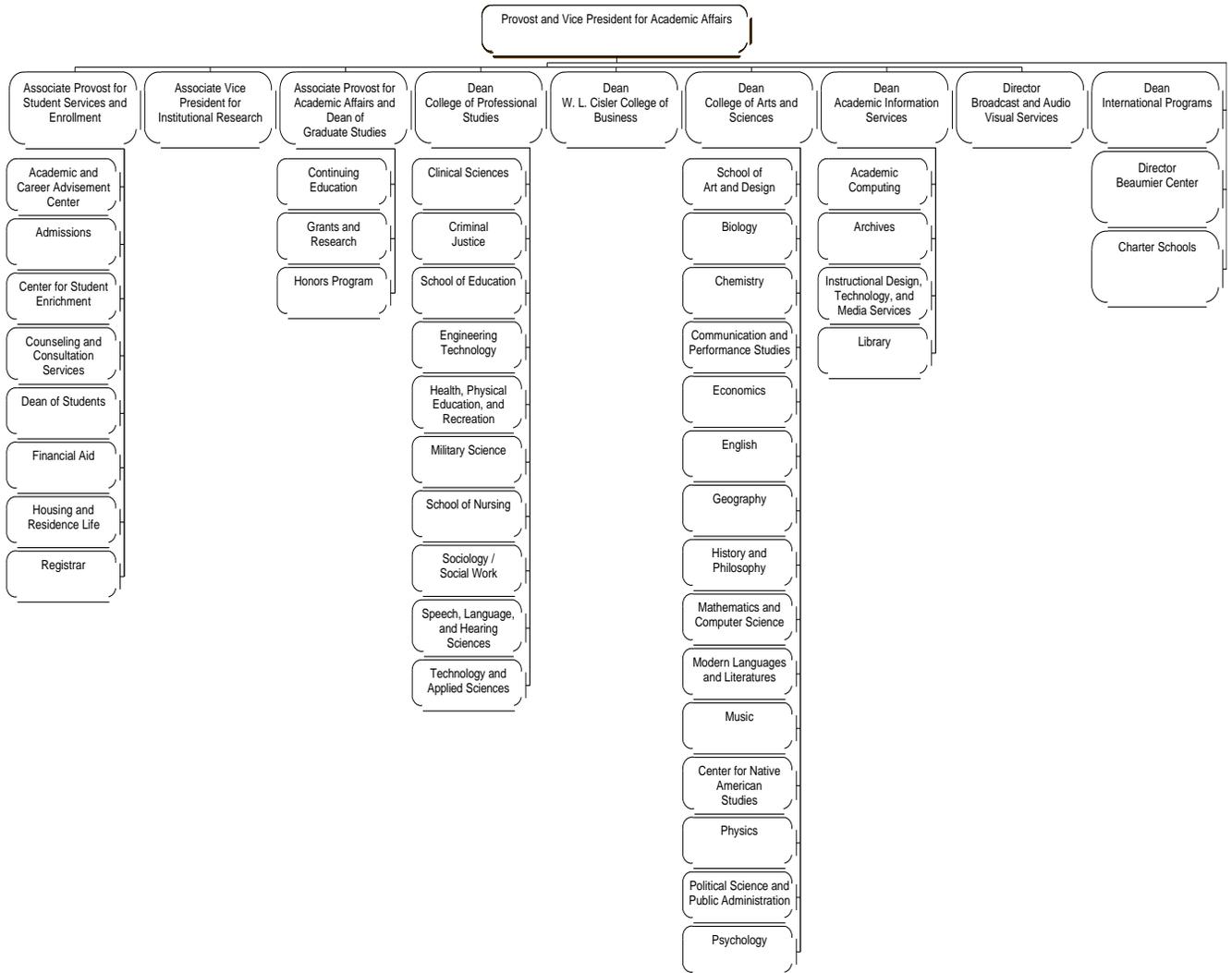
Academic Programs

Non-Education Minors (*continued*)

Earth Science	Journalism
Economics	Latin American Studies
Electronic Journalism	Management
Electronics	Manufacturing
Emergency Medical Services	Marketing
Engineering Design	Mathematics
English	Media Production and Technology
Entertainment and Sports Promotion	Military Science
Entrepreneurship	Music
Environmental Conservation	Native American Studies
Film Studies	Office Services
Finance	Outdoor Leadership
French	Outdoor Recreation
Gender Studies	Outdoor Recreation Leadership Management Cluster
Geographic Information Services	Philosophy
Geography Cluster	Physical Education/Coaching
German	Physical Geography
Gerontology	Physics
Group Science	Planning
Health Education Cluster	Political Science
Health and Nutrition	Public History
Heating, Ventilation, Air Conditioning	Psychology
History	Public Administration
Hospitality Service Management	Public Relations
Human Behavior Cluster	Religious Studies
Human Biology	Social Services
Human Geography	Sociology
Human Services	Spanish
Industrial Electrical Technology	Speech, Language, and Hearing Sciences
Industrial Maintenance Technology	Sports Science Cluster
International Studies	Theatre
Interpretation and Outdoor Education	Writing



Academic Affairs Division





Instructional Programming

Existing Academic Programs and Projected Programming Changes

Northern Michigan University's (NMU) vision is to be the comprehensive university of choice in the Midwest where students receive individualized attention in a high tech learning environment. Northern has experienced continued success in our efforts to grow enrollment. For fall 2010, we had an enrollment of 9,273 students, which is near the highest level in Northern's 110-year-history. This continued success in enrollment has come despite a declining enrollment in Upper Peninsula K-12 schools. Northern is continuing to attract more students from outside the Upper Peninsula with more than 60% of our new freshmen coming from the Lower Peninsula or outside the state, which has a positive impact on the local, regional, and state economy. The local newspaper has noted that "Growth at the university is great news for NMU and the local economy, and it's also a challenge." They also noted that the enrollment growth is "surprising, given the declining sizes of graduating classes around the Upper Peninsula." The continued declining size of the K-12 population in the Upper Peninsula is a significant challenge to the institution and our geographic location.

NMU's Roadmap to 2015 Strategic Plan includes many new program initiatives that will be implemented on an opportunity and strategic basis over the next several years. The projected programming changes that would have specific structural considerations are listed below:

Element 1: Innovation

The university experience is predicated on a blend of a number of intellectual and organizational enterprises. Northern must reinvigorate the standards and processes that will sustain successful programs, create new ones, eliminate programs with declining enrollment, and reflect the creativity of campus talents. The curriculum must remain relevant and meaningful, and our teaching must be contemporary and effective.



Instructional Programming *(continued)*

Existing Academic Programs and Projected Programming Changes *(continued)*

An academic curriculum that balances successful programs with new offerings at the undergraduate and graduate level to meet the needs of students, as well as improve student career opportunities after graduation.

Priorities include:

- Integrate global engagement and diversity learning experiences throughout the academic curriculum.
- Continue implementation of the faculty-mix model and faculty enhancement positions.
- Explore and act upon opportunities to expand programs in nursing and allied health to meet the growing demand for professionals in health care and related fields.
- Explore and act upon graduate programming (certificate, master's, doctoral) in areas of recognized strengths, needs and opportunities.
- Develop new applied programs in computing and IT-related majors.

A growing portfolio of corporate collaborations that exploit NMU's technical expertise, enhance academic programs and facilitate global engagement for students and faculty both on campus and abroad.

Priorities include:

- Utilize corporate partners to promote additional international opportunities.
- Work with strategic technology and telecommunication partners to enhance the teaching, learning and working environment.
- Utilize corporate partners to increase internship opportunities for students.
- Utilize alternative energy plans to seed academic and research programs in energy and energy management.



Instructional Programming *(continued)*

Existing Academic Programs and Projected Programming Changes *(continued)*

Element 2: Meaningful Lives

The personal, social and intellectual maturity of NMU students is the ultimate benchmark of the achievement of the university's mission. A high-quality university education creates lifelong learners, contributing citizens and thoughtful neighbors. NMU will develop those programs and employ those practices that maximize the opportunity for all students to succeed in their university experience and to lead a productive, meaningful life.

Integrate the highest possible level of information technology skills and competencies throughout the university.

Priorities include:

- Create an enhanced infrastructure that will continually expand the availability and variety of new technological tools and services for NMU students, faculty and staff
- Develop a "virtual" campus that provides reliable, convenient access to online courses and other essential student services

Element 3: Campus Attributes

The attractiveness of the NMU campus in the beautiful natural environment of the Upper Peninsula of Michigan is a unique asset that should play a prominent role in our portfolio of academic programs, our research agenda and the efficiency with which the campus operates. While the campus itself represents NMU's physical assets, academic programs and other campus operations represent the human capital of the university community. Both are instrumental in sustaining the university's collective efforts to maintain a standard of excellent practice, manage costs and achieve the institutional mission.



Instructional Programming *(continued)*

Existing Academic Programs and Projected Programming Changes *(continued)*

Utilize the Campus Master Plan and related initiatives to continue to build and develop a greener and more learner-centered campus.

Priorities include:

- Establish strategies and a communication plan for implementation of the Campus Master Plan that ensures the highest possible level of input from the NMU and local communities as financially feasible components of the plan are implemented
- Examine classroom and other learning spaces to create the highest quality learning environments, and to advance the application of new pedagogies and technologies
- Continue campus discussions regarding the "library of the future" to identify state-of-the-art facilities, collections, technology and collaborations that will meet current and emerging instructional and research needs, and that will support the goals and priorities of the Road Map

Enhance the portfolio of academic programs, research and other activities that leverage the university's location in the Upper Peninsula of Michigan.

Priorities include:

- Consolidate NMU's several environmental science efforts into a cohesive whole that will take full advantage of educational and research opportunities unique to the natural environment of the Upper Peninsula to best attract and serve students and faculty
- Work to enhance opportunities, funding and events that strengthen and increase current university areas that focus on the Upper Peninsula—Center for Native American Studies, Center for Upper Peninsula Studies, Beaumier Heritage Center and NMU and Central Upper Peninsula Archives
- Create a task force to examine expanding or adding programs that take advantage of U.P. assets and that would be unique to the region or nation, including such assets as the environment, local geography, recreation, rural demographics and lifestyle and weather
- Provide seed funding for faculty-student research projects focused on the U.P. region



Instructional Programming *(continued)*

Existing Academic Programs and Projected Programming Changes *(continued)*

Element 4: Community Engagement

Acknowledgement and use of the rich learning environment outside the campus energizes the faculty-student relationship and creates an essential bridge from theory to practice. According to the Carnegie Foundation for the Advancement of Teaching, a community-engaged campus collaborates with its larger communities (local, state, regional, national and global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. Students who attend a community-engaged institution learn the broad context in which they live, work, play and grow.

Increase faculty, staff and student involvement in the Superior Edge program, academic service learning and other community engagement and leadership development initiatives.

Priorities include:

- Develop a resource plan for the Superior Edge and academic service learning programs to ensure optimal growth.
- Significantly increase the number of NMU students who participate in the Superior Edge, academic service learning and other leadership development opportunities
- Improve the alignment of the curriculum with the Superior Edge and academic service learning initiatives
- Implement strategies to assist students to more effectively communicate the skills and competencies developed through their achievements in community engagement



Instructional Programming *(continued)*

Existing Academic Programs and Projected Programming Changes *(continued)*

Increase collaboration with local communities, schools, governments, development groups and other partners to enhance community and economic development in the Upper Peninsula.

Priorities include:

- Establish a team of NMU faculty, under the auspices of the Sam M. Cohodas Scholar, who conduct and publish applied research that supports community and economic development across the Upper Peninsula
- Continue to increase and whenever possible promote a culture of openness and access through regularly scheduled community/campus forums, high-quality publications and the effective use of communication technologies
- Explore the feasibility of collaborating with existing community development organizations, units of government and the private sector to establish a high-tech economic development center on the NMU campus
- Explore the feasibility of collaborating with the state, U.P. universities and private alternative energy companies to make the Upper Peninsula a nationally recognized alternative energy and technology corridor



Initiatives / Academic Program Needs with Impact on Facilities

Instructional Programming:

A major part of NMU's success is its high-tech learning environment. The campus is a connected learning community with over 9,500 notebook computers distributed to students as part of the students' tuition and fees (the second most affordable tuition and fees in the state, including the notebook computer). These computers have built-in wired and wireless networking and are replaced on a three-year cycle. Wireless technology throughout campus provides improved student access in and out of the classroom, and provides greater efficiency in delivery of student services via the internet. The University has expanded the wireless network to provide community-wide access through new WiMAX technology that has provided wireless access from campus directly to more than 6,300 students that live off campus in the Marquette area and surrounding cities. The improvements include higher speed internet access and services for students to utilize in performing coursework and research. The WiMAX network will continue to expand over the next two years. Northern is a leader in the development and utilization of web-based or web-enhanced courses. The University has more than 1,758 course sections developed utilizing Web-based software, and more than 86 percent of our students are enrolled in at least one or more web-based or web-enhanced courses. NMU is a recognized leader (as noted by *Computerworld Magazine*) in using technology in higher education, and our graduates enhance the economy of Michigan by being part of a work force that is among the nation's most technologically advanced and leadership oriented.

The University continues to focus on renovation and transformation of existing facilities to a state-of-the-art environmentally efficient campus. A connected learning environment requires that we continue to improve our support systems, technology infrastructure, and facilities. The University continues to move forward with its plans for the construction of a solid bio-mass fuel facility that would generate steam and electricity for most of the buildings on campus. The University is committed to the use of wood, a renewable resource, as the primary fuel for this combined heat and power project. This project will provide the opportunity for academic research for various departments.



Initiatives / Academic Program Needs with Impact on Facilities

Instructional Programming: *(continued)*

The University's public radio and television stations will continue its transition to digital broadcasting. The television station has completed Phases I and II of its digital conversion, upgrading its technical core, master control, and transmission systems that allows the station to program and switch multiple digital program streams. In addition, Phase III is being completed this year with the installation of a new HD digital production facility that allows staff and students to produce programs in a high definition format. All of the digital conversion initiatives directly impact the station's ability to offer instructional course content to area residents and K-12 schools. Specifically, WNMU-TV uses its new digital television production capacity to program two standard definition and one high definition channels. These channels allow more specialized programming to be aired at various times throughout the day. In addition, WNMU is continuing with development of a partnership with Superior Healthcare Partners to offer health-related programs designed to enhance patient education for both in-hospital and at-home care.

The initiatives noted above, and the projected programming changes identified in NMU's Roadmap to 2015 Elements, Goals, and Priorities, will have an impact on our facilities as they are implemented. We will continue to evaluate and plan for necessary changes in our capital infrastructure to meet the needs of proposed curriculum changes.

In addition, the capital outlay projects listed in Section V describe University needs to continue its conversion of the campus to a high-tech learning environment through renovation of existing facilities that are necessary to help support our growing and changing learning environment, including academic, recreational, and living facilities.



Community Presence Activities

Intercollegiate Athletics and Recreational Sports Facilities

NMU athletic and recreational facilities serve as a regional events center for the entire Upper Peninsula. A number of recreational and leisure programs are offered within the facilities for the community and include ongoing walking programs, recreational programming for children, adults, and youth sports camps. Youth programs in hockey, basketball, volleyball, swimming/diving, soccer, track and field, and others meet in our facilities throughout the year. Exercise and aquatic programs for senior citizens are held as well. These facilities have also become a major tourist destination for visitors in our area. Approximately 225,000 people pass through the Superior Dome turnstiles on an annual basis. The Superior Dome is home to Northern Michigan University football and track, and hosts high school football regular season games, as well as many MHSAA football playoff games. Marquette County Youth Football Dome Day, high school track and field meets, NMU and youth soccer tournaments, Lacrosse, local non-profit fundraising events, Michigan Special Olympics, and K-8 school field day programs are several examples of other activities taking place in the Superior Dome. The Superior Dome also serves the needs of regional business and industry by providing a venue for various trade shows and conferences. The Michigan Municipal League, Michigan Association of Counties, Midwest Regional Cable Television Managers meeting, Michigan Association of Water Works, U.P. Job Fairs, Boat, Sport and Recreational Vehicle Show, Marquette County New Car Show, and the U.P. Builders Show are all examples of trade shows and conferences hosted in the Superior Dome. NMU Commencement activities are held in the Superior Dome each December and May.

The Berry Events Center is home to Northern Michigan University hockey and basketball. The facility hosts many junior hockey tournaments, NMU men's and women's club hockey games, as well as figure skating programs. The USOEC short track speed skating programs train in this facility and hosts prestigious competitions. The Berry Events Center also plays host to numerous concerts, lectures, banquets, and conferences. NMU students use the facility for activity and classroom academic coursework.

The Physical Education Instructional Facility (PEIF Building) is home to Northern Michigan University volleyball and swimming. The facility hosts numerous community events, youth sports tournaments, youth sports camps, Native American Pow Wows, concerts, and lectures. NMU students, faculty, staff, and Marquette area community members utilize recreation venues in the PEIF through recreation memberships daily (year round). The PEIF is a comprehensive, indoor recreation facility that contains instructional activity venues and classrooms for NMU students.



Community Presence Activities *(continued)*



Intercollegiate Athletics

Northern Michigan University offers thirteen (13) intercollegiate men's and women's sports. Approximately 320 student athletes compete in NCAA events annually, with an average of 90 contests held in Marquette County. An average of 110 visiting athletic teams visit the Marquette area annually to compete in events held at NMU. Events held at NMU regularly attract fans from throughout the Upper Peninsula, as well as Northern Wisconsin and Lower Michigan. Fans representing opposing teams from Ohio, Wisconsin, Illinois, Minnesota, Indiana, Alaska, and Canada annually attend events at NMU. The majority of these groups spend multiple days on each visit to Marquette.

U.S. Olympic Education Center

NMU is home to the nation's only United States Olympic Education Center. The Center provides Olympic-aspiring athletes the opportunity to continue their education while training to represent all Americans at the Olympic Games and other international events. Since 1985, more than 22,000 athletes from 43 countries have trained at the USOEC. More than 400 of these athletes have made Olympic teams earning 60 Olympic medals, along with high school diplomas and college degrees.





Community Presence Activities *(continued)*

Northern Initiatives



NORTHERN INITIATIVES
is a non-profit
community development
corporation

NMU invests annually in Northern Initiatives (NI), a non-profit economic development corporation now housed on the NMU campus. NI serves 49 rural counties; its original fifteen Upper Peninsula counties, twenty-nine counties in the northern Lower Peninsula, and the five Wisconsin counties that border the Upper Peninsula. NI provides assistance to small business entrepreneurs, aiding them to fill capital, information, and market access gaps that characterize enterprises that are often remote, isolated, and sometimes seasonal in nature. NI provides business development services to over 200 companies annually and since 1994 has loaned over \$31,000,000 through over 530 loans, with nearly half of those loans going to start-up enterprises. Small businesses requesting loans <\$50,000 can do so on-line at www.niupnorth.org and receive a credit decision in twenty-four to forty-eight hours. These “micro” borrowers can take advantage of Northern Initiatives Enterprise Center. Through the Center, Northern Michigan University students work with NI staff to offer small business loan customers credit analysis, market research, and e-commerce solutions. NI is affiliated with the Michigan Manufacturing Technology Centers and annually works with around 100 manufacturers and small businesses supporting them with consultations or technical assistance. It also works on regional sustainability projects that offer small businesses the ability to reach larger markets. Its current example is the Great Waters, Nature Tourism Initiative, www.greatwaters.net.

Community College and Meeting Needs of Business and Industry

NMU serves the community college role for the citizens of Marquette and Alger Counties. NMU’s community college programs offer students an array of associate degrees, certificate programs, diploma programs, and certifications in 50 areas of study.

Northern maintains extensive partnerships with K-12 schools through outreach activities, student teaching positions, and professional development for teachers and administrators. Nearly every school district in the Upper Peninsula has recently hosted NMU student teachers. These partnerships with schools provide experience with all class-levels in public, private, and charter educational settings. To further the value of these experiences, NMU has extended its wireless signal to student teachers in K–12 schools.



Community Presence Activities *(continued)*

Community College and Meeting Needs of Business and Industry *(continued)*

NMU's Centers for Educational Development and Economic Education and the Seaborg Center for Math and Science Education provide a wide variety of professional development opportunities for teachers and administrators across the Upper Peninsula. NMU also works with a number of schools in Michigan's Lower Peninsula, Northern Wisconsin, and Chicago. Additionally, NMU works with five public school academies (charter schools) in Michigan.

Distance Education and Instructional Support

To provide greater access to education for the citizens of the region, NMU continues its use of instructional, career pathway and "virtual field trip" experiences to K-12 schools in response to new high school graduation requirements and shrinking school budgets. Programs are conducted using internet-based interactive TV (ITV) technology and developed with content experts from within the University and surrounding areas and are designed specifically to assist students in learning about possible career and higher education choices that are available after graduation. In addition, NMU offers continuing education for teacher re-certification and enrichment using interactive TV and works with local Regional Educational Services Agencies (RESA) to support the technology needs of area schools. A key component of the University's technology portfolio has been the deployment of a carrier-grade WiMAX wireless network that now encompasses a seven-city area surrounding NMU. Serving the communities of Marquette, Marquette Township, Harvey, Sawyer, Gwinn, Ishpeming, Big Bay, and Negaunee, more than 6,300 students use the WiMAX network to manage course related activities and research, including bandwidth intensive applications such as streaming media, video conferencing, and large data file transfers. Through its use of web-based network services and WiMAX, NMU has enabled easier access to K-12 course content and student services, reduced travel costs for administrators and school board members engaging in professional training activities, and provided new methods for remotely monitoring student teachers assigned to area schools.



Community Presence Activities *(continued)*

Public Broadcasting

NMU's public radio and television stations continue with their transition to digital broadcasting. WNMU-FM continues to be the only radio station in Upper Michigan to offer digital broadcasting and recently upgraded an older, analog microwave studio to transmitter link that now permits the transmission of multiple program channels. This critical link is a major step forward in the stations plan to eventually offer discrete programming for niche audiences. Once enabled, multicasting will permit the transmission of course related lectures, interviews, and music as the demand dictates. This year, the station restored translator services to the communities of Escanaba and Stephenson through a relicensing process with the FCC. In addition, WNMU-FM added digital mixing capabilities to its main control room, made significant progress in transferring its CD and music library to a new digital storage system, and upgraded its capacity to deliver emergency messages to the surrounding community as part of the EAS network.

By the end of 2009, WNMU-TV completed its transition to full digital broadcasting, finalizing the installation of a new microwave link, digital transmitter and antenna system, and master control system. In 2011, the station completed its studio conversion project, upgrading control room facilities with HD, digital video, and audio switching. This latest studio conversion project is 100% funded by a \$633,231 Rural Utilities Service Digital Conversion grant which is slated for completion by November 2011.

NMU intends to use digital television and radio transmissions to offer Michigan's Upper Peninsula residents high-definition broadcasts, plus additional standard-definition program streams that contain classroom and course content especially designed for higher education and K-12 instruction. Digital television and radio broadcasts will also have the capability to support broadband data that will benefit instruction and public safety services alike. WNMU has been designated as the primary emergency alert facility for the Central Upper Peninsula Region and provides emergency messaging services to area broadcasters as needed. Both stations continue to provide service learning opportunities for NMU students with hands-on production, graphics, and electronic engineering opportunities. Along with its new DTV production capabilities, WNMU-TV and FM are exploring manufacturer certification programs that will provide broadcasting students with industry standard credentials on selected production systems that can be used to help secure employment upon graduation.



Economic Impact / Partnerships with Business and Industry

Economic Impact

Northern Michigan University (NMU) has a significant impact on the economy of the Upper Peninsula (UP). According to an economic study completed in March 2001, the total impact that NMU has on economic activity in the U.P. is \$262 million. The study indicated that NMU has an impact on more than 5,000 jobs, which represents one of every 25 jobs in the U.P., and one of every five in Marquette County. The economic impact generates a five-to-one return on the annual investment in NMU by the State of Michigan.

Partnerships with Business and Industry

Northern has a variety of partnerships to meet the needs of existing businesses, emerging industries, the public schools, and working adults. Among our current corporate partners with on-site or specially designed education programs are Cliffs Natural Resources, Inc., Hoover Precision, Extreme Tool and Engineering, Ironwood Plastics, L'Anse Manufacturing, Manistique Papers, Neenah Paper, Peninsula Powder Coating, Precision Edge Surgical, Verso Paper, Royale, Inc., Pioneer Surgical Technologies, WE Energies, and NewPage Corporation.

Internships for NMU students with business, industry, and service providers are critical to quality employment preparations. Among NMU's most well-known internship sponsors are American Express Financial Advisors, General Motors, Hudson's Corporation, Dendreon, Mayo Clinic, Marquette General Health Systems, Marshfield Clinic, Michigan State Police, Michigan DNR, Northwestern Mutual Life, Six Flags Great America, State Farm Insurance, the U.S. Marshall Service, and Wal-Mart. Additionally, internships are also sponsored by major construction firms across the nation such as Whiting-Turner, Mortenson, Michels Corporation, and Power Construction.

Partnership with Marquette General Health Systems

Northern Michigan University has entered into a partnership with Marquette General Health Systems in order to offer two new associate degree programs. New accreditation standards require that all hospital-based training programs form a partnership with an academic institution. The Radiography and Respiratory Therapy Programs represent a collaborative effort between Marquette General Health Systems and the Clinical Laboratory Sciences Department, which will result in students being awarded an associate's degree.



Economic Impact / Partnerships with Business and Industry *(continued)*

The first majors were enrolled at NMU in fall 2007. The programs require one year of prescribed prerequisite course work at NMU. Following that, students would complete a two year clinical practicum at Marquette General Health Systems. These two programs will help meet the increasing need for accredited professionals in these two rapidly growing fields. Graduates will be in high demand, both locally and regionally. All of these credits will also ladder into a bachelor's degree program which is currently being developed.

School of Technology and Applied Sciences

Cliffs Natural Resources, Inc.

The School of Technology and Applied Sciences works closely with Cliffs Natural Resources, Inc. (Cliffs) to prepare entry level technical employees for both the Tilden and Empire mining/processing operations. Associate degree programs in Industrial Electrical and Industrial Maintenance, along with baccalaureate degree programs in Mechanical Engineering Technology, Industrial Technology, and Electronics Engineering Technology prepare graduates for employment with this local company. Management at Cliffs views the technical programs at NMU as virtually a sole source provider of entry level technical talent to their mining/ processing operations.

Cliffs is committed to continuing their partnership with Northern Michigan University by leasing additional space within the Jacobetti Center in order to provide state-of-the-art training for their employees. NMU facilitates these training events by often coordinating the training agenda and securing training expertise.

Cliffs further relies on NMU to provide on-going factor testing and skill upgrade training for existing workers. This testing and training requires working labs equipped with the industry's highest technology manufacturing and processing components. The company partners closely to assist NMU in acquiring much of the needed lab equipment. This level of cooperation is dependent on, and evidence of, a close working relationship between academics and industry.



Economic Impact / Partnerships with Business and Industry *(continued)*

Ironwood Plastics

Students have access to a scholarship endowment from Ironwood Plastics to provide students with a certificate in Injection Molding Technology. This program provides graduates with the necessary skills for entry-level employment within the plastic injection industry.

American Eagle Airlines (AMR)

An excellent working relationship exists between the NMU School of Technology and Applied Sciences and the AMR Sawyer Maintenance facility resulting in 30-50% of the students graduating in the NM Aviation Maintenance program being hired by AMR.

Regional Organized Labor Unions

Apprentice training for five area trade unions is located in the D.J. Jacobetti Center at NMU. The Local 7 Sheet Metal Workers, Local 8 Iron Workers, in addition to the Local 506 Plumbers and Pipefitters, have all located their regional training base to the Jacobetti Center.

In addition to the apprentice training, journeyman upgrade sessions within each trade jurisdiction will be offered. Each year, from August through June, nearly 700 hours of instruction takes place.

The Operating Engineers Local 324, located in Howell, Michigan, has chosen NMU as its regional training center for their annual January session. Thirteen different units of instruction are offered, ranging from asbestos and hazardous material awareness to welding certifications.

Food Service Industry

In response to changes in Michigan's food safety laws, NMU conducts mandatory food safety certification courses. All food service industry businesses, including those closely linked with the critical regional tourism industry, are able to have local access to regulatory training.

TeamTech Motor Sports

The NMU student group of the Society for Automotive Engineers partnered with TeamTech Motor Sports to build two mini baja vehicles used in student competitions across the Midwest.



Economic Impact / Partnerships with Business and Industry *(continued)*

Pioneer Surgical Technology

A close working relationship continues between NMU and Pioneer Surgical Technology, a Marquette-based designer and manufacturer of orthopedic implants. Entry level production employees are prepared in a one-year CNC program offered by NMU in the Jacobetti Center, along with seminars at the nearby Pioneer facility. Other ongoing cooperative programs between NMU and Pioneer Surgical include undergraduate internships and continuing education seminars for Pioneer employees offered by NMU faculty.

Electrical Line Partnership

A joint venture between Northern Michigan University, The Lake Superior Community Partnership, Michigan Works, and numerous electrical companies (both utilities and contractors) developed the Electrical Line Technician Program to help fill an employment void within the Electrical Power Distribution industry. The curriculum received all equipment through donations and is located at Sawyer.

Northern Initiatives (NI) and Marquette Food Co-Op

A collaborative initiative between NI, The Marquette Food Co-op, and NMU that involves the production of fruits and vegetables in a controlled environmentally green structure. This project will provide local families and growers a sophisticated demonstration site that will assist local farmers in expanding and refining crop selection and methods associated with agriculture in the U.P.



Economic Impact / Partnerships with Business and Industry *(continued)*

Continuing Education for Business Professionals and Personal Enrichment

Continuing Education and Workforce Development has developed various local, state, and national relationships that provide business professional and the public with quality education and training.

Personal Enrichment

Northern Center for Lifelong Learning (NCLL) is an organization that plans and offers informal educational programs and activities to enrich the daily lives of its members through mini courses, regular programs, outdoor activities, and social events. Member-directed, self-supporting, and nonprofit, it is affiliated with Northern Michigan University and the Elderhostel Institute Network.

With the Elderhostel Institute Network, one can discover more than 8,000 learning adventures in all 50 states and more than 90 countries abroad. Roach Scholar offers in-depth and behind-the-scenes learning experiences for almost every interest and ability: history, culture, nature, music, outdoor activities such as walking and biking, individual skills, crafts, study cruises. Enjoy these and many more with the not-for-profit leader in educational travel for older adults.

Northern Michigan University is one of 14 state sponsored regional training agencies providing motorcycle safety training funded through a grant from the Michigan Department of State. New riders with little or no experience seeking a license endorsement enroll in this course. If successful, riders receive a completion waiver, good for one year, for the riding skills portion of the state motorcycle endorsement test.

Professional Education

The University is committed to the provision of high quality professional development programs in its service region through both the creation of such activities within its academic departments and through collaboration with outside providers who meet University approval standards. Recognizing the need for, and value of continuing, professional development in order to keep abreast of constantly changing demands and possibilities in the workplace, and in order to encourage practicing professionals to participate in various activities directly related to their job, NMU CE provides the following:



Economic Impact / Partnerships with Business and Industry *(continued)*

Professional Education *(continued)*

Educators – The 900-level program offers for-credit educational opportunities to over 400 teachers each year. Teachers use these courses towards their teacher licensure recertification of upgrade.

In addition, NMU CE also offers non-credit State Board Certification Units that teachers use towards these same purposes. Many teachers use a combination of both 900-level courses and SBCEUs during their teacher recertification.

Social Workers – NMU CE is a course sponsor for the National Association of Social Workers and partners with numerous local entities to provide social workers with educational opportunities. These opportunities are used by social workers to maintain their Social Work License.

Bus Drivers – Northern Michigan University is the state-approved Pupil Transportation Bus Driver Training Agency for the central and western Upper Peninsula. The purpose of school bus safety instruction is to promote safe, efficient pupil transportation programs using Michigan Department of Education approved curriculum.

Appraisal Education – Northern Michigan University offers a full range of residential and non-residential continuing education appraisal courses to thousands of appraisers each year at sites located throughout Michigan and via webinar to over twenty other approved states. These courses are used by appraisers to retain their individual appraiser licenses.

Off-campus, individualized programs, seminars, and training – NMU CE recognizes that adult students require programs that deliver results specific to their professional needs with course schedules and delivery methods that allow participation outside the traditional semester format. Continuing Education's goal is to provide these vitally important lifelong learning opportunities to individuals and groups in the Upper Peninsula and beyond.



Northern Michigan University

Section III Enrollment and Staffing

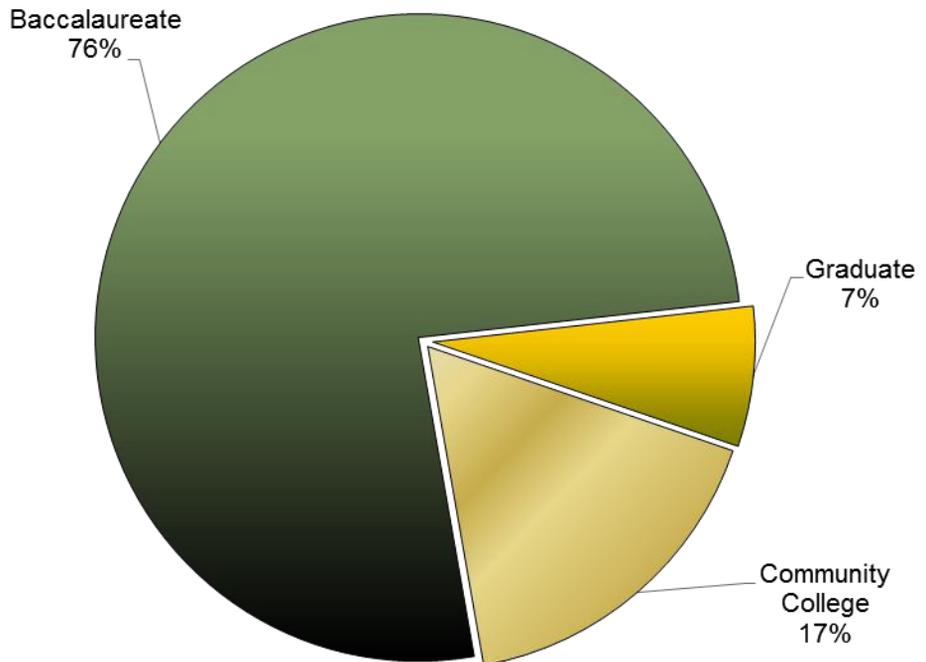
Five-Year Capital Outlay Plan



Enrollment

Headcount

Fall 2011 (n = 9,252 – 10th Day of Class)



Average age

- ▶ Undergraduates: 22.8
- ▶ Graduates: 37.0
- ▶ Overall: 23.8

Other student statistics

- ▶ At least one student from:
 - ▶ 83 of 83 Michigan counties
 - ▶ 48 different states
 - ▶ 26 different countries



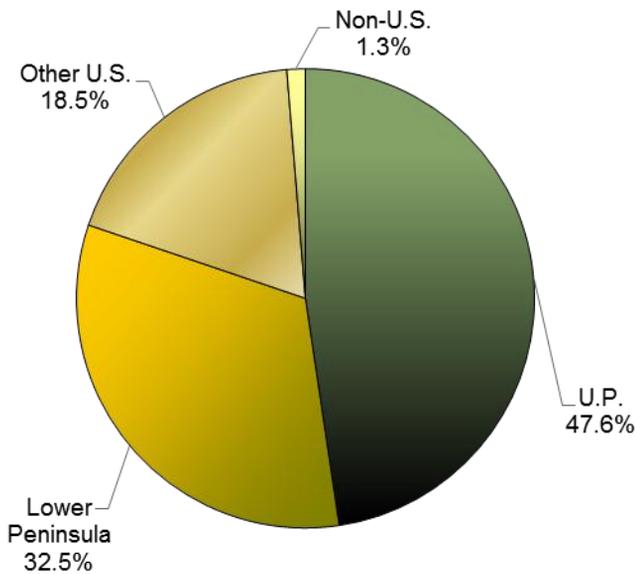
Enrollment

Recruiting Region

Fall 2011 (n = 9,252 – 10th Day of Class)

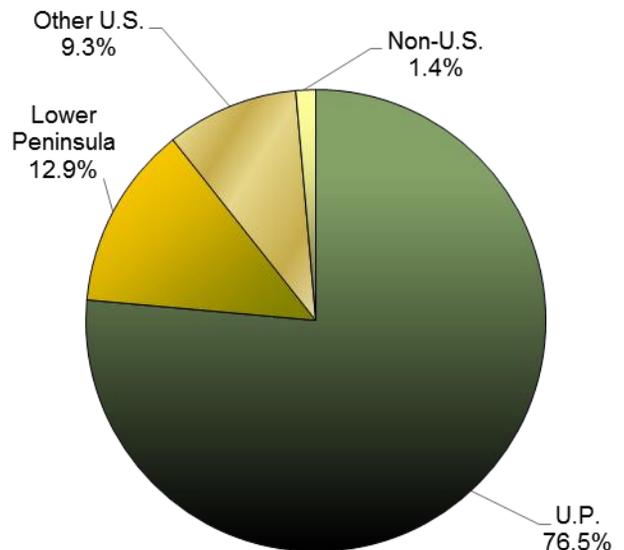
Undergraduate

(n = 8,615)



Graduate

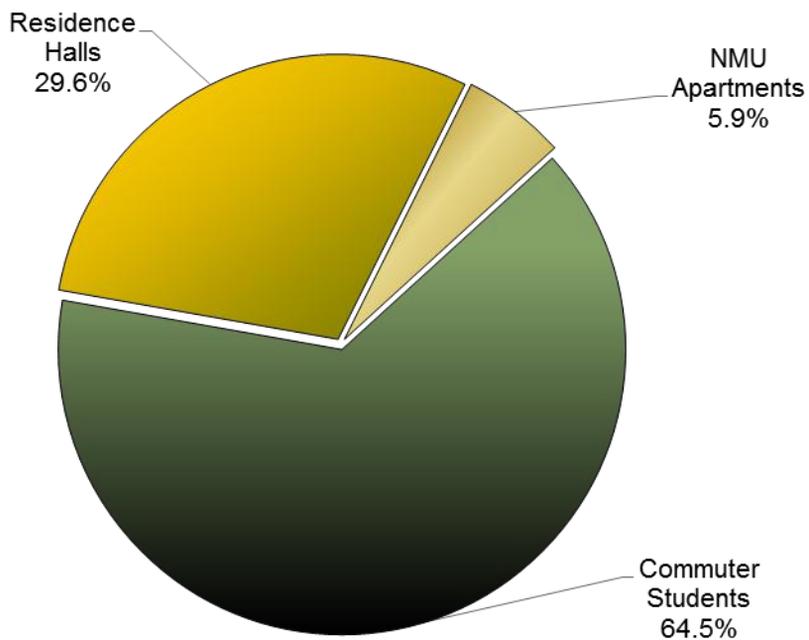
(n = 637)





Enrollment

Where NMU Students Live Fall 2011 (n = 9,252 – 10th Day of Class)

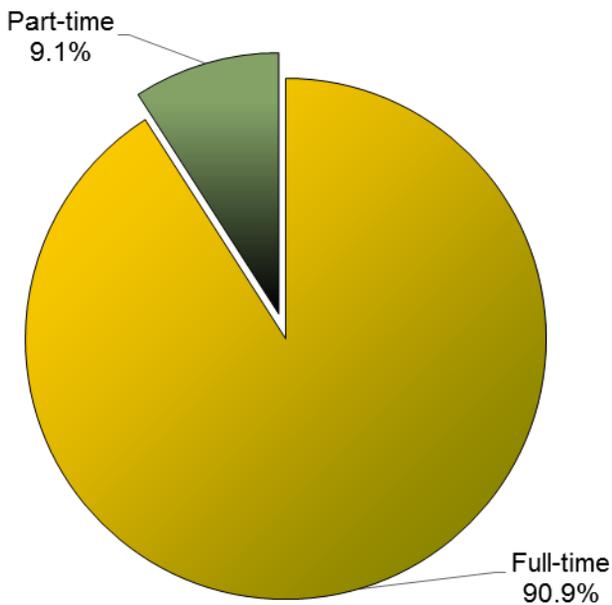




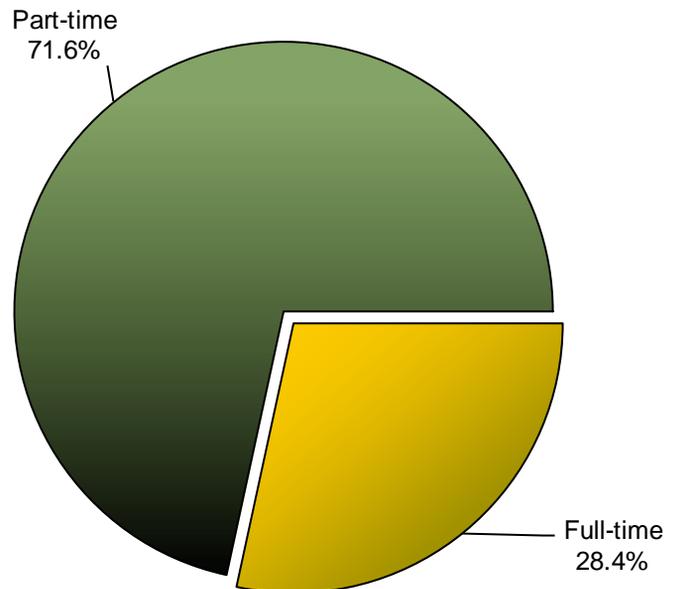
Enrollment

Full-time/Part-time Status Fall 2011 (n = 9,252 – 10th Day of Class)

Undergraduate (n = 8,615)



Graduate (n = 637)

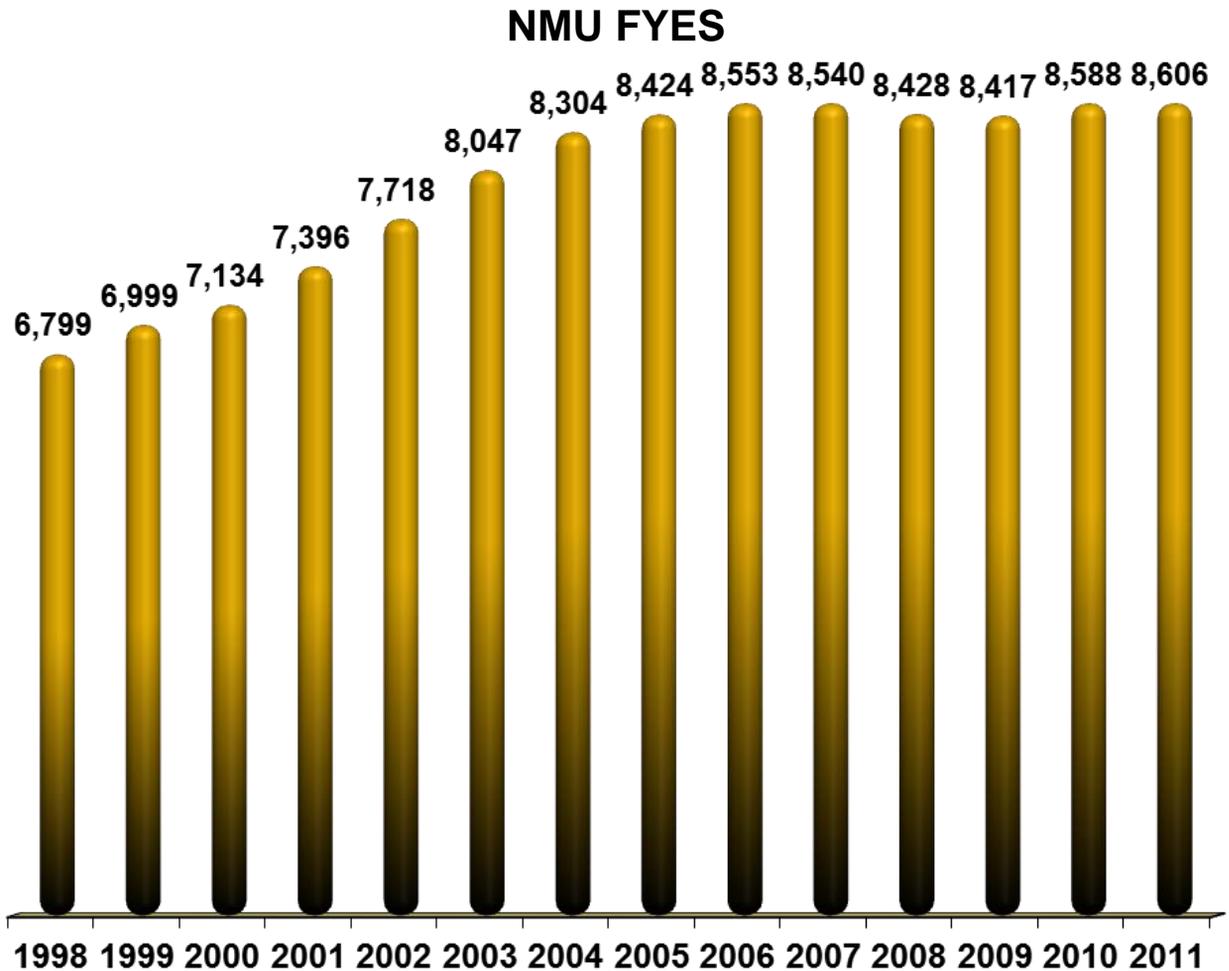




Enrollment

Full Year Equated Student Change

- ▶ FYES increased for the second year after three successive years of decline
 - ▲ Increase of 0.2% as compared to prior year
 - ▲ Overall increase of 20.6% since 2000

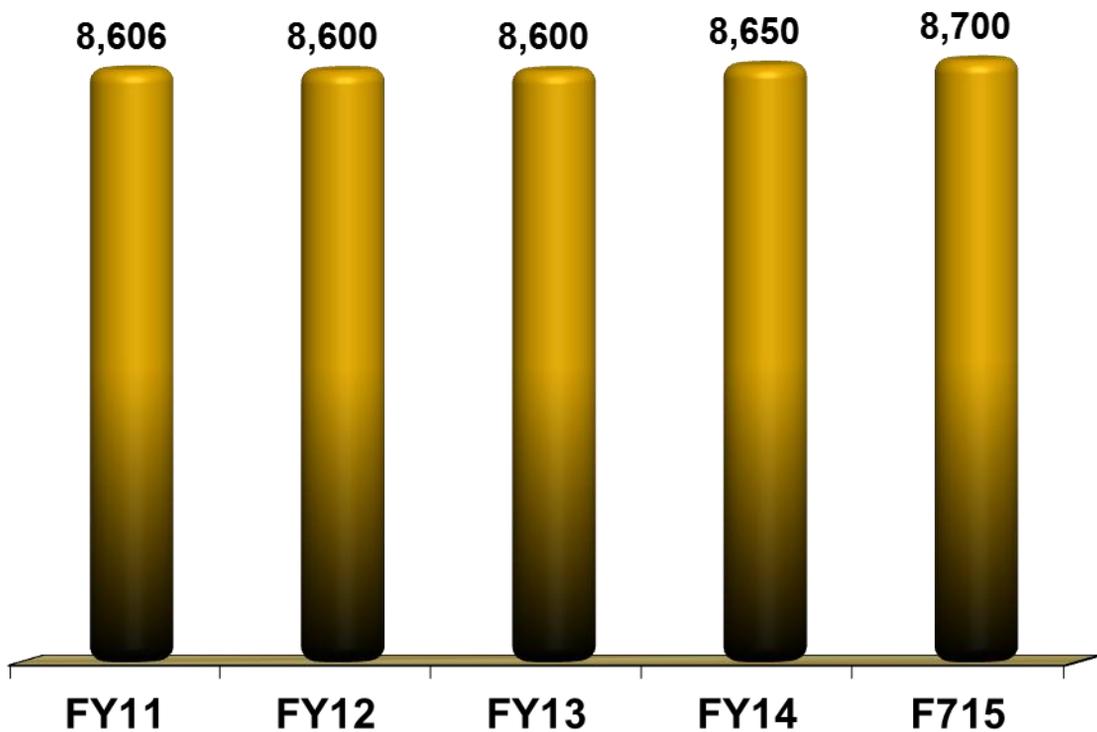




Enrollment

Full Year Equated Student Change (FYES)

5 Year Projection

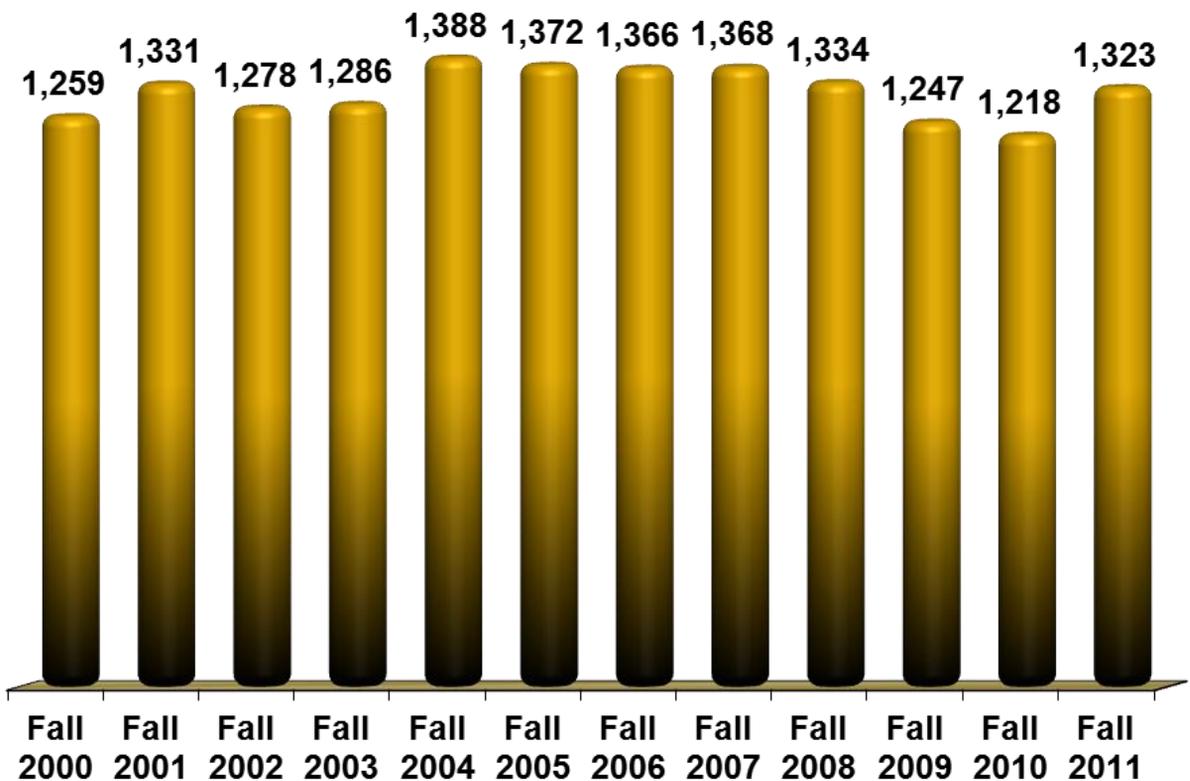




Enrollment

Baccalaureate First-Time, Full-Time New Freshmen

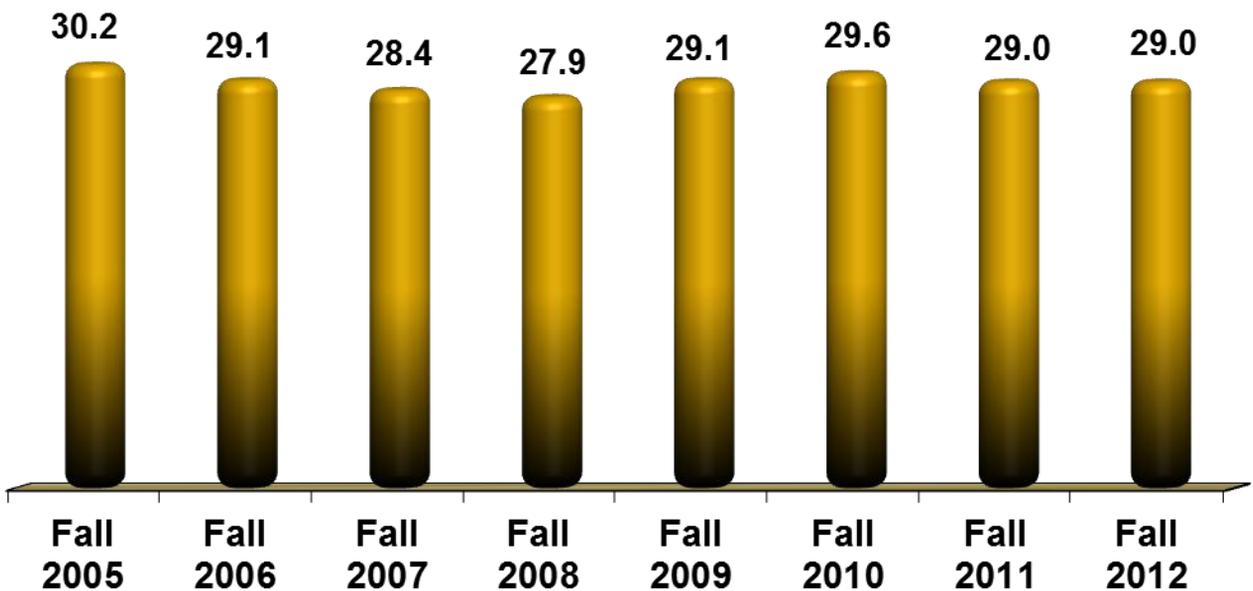
- ▶ Fall 2011 Freshman Class will increase by 9% compared to prior year number
- ▶ Fall 2011 Freshman Class has increased by 5.1% Since Fall 2000





Enrollment

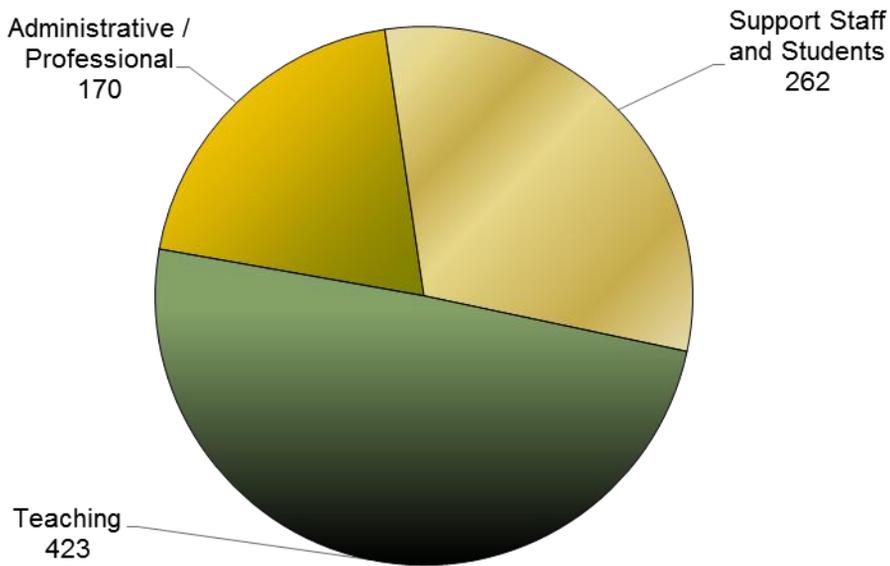
Average Lecture Class Size and Projected Average Class Size





Staffing

2010-2011 Full-Time Equivalent By Employee Category



Staff FTE

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Teaching (Instructional Staff)	372	383	402	408	416	417	423	426	428	431	434
Administrative/Professional Staff	163	156	161	163	167	172	170	170	170	170	170
Service Staff and Students	308	270	277	287	271	267	262	262	262	262	262

Student (FYES) - to - Staff Ratios

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Teaching (Instructional Staff)	22.65	22.33	21.24	20.65	20.25	20.58	20.35	20.19	20.09	20.07	20.05
Administrative/Professional Staff	51.68	54.83	53.03	51.55	50.37	49.98	50.62	50.59	50.59	50.88	51.18
Service Staff and Students	27.53	31.68	30.82	29.37	31.10	32.20	32.85	32.82	32.82	33.02	33.21



Northern Michigan University

Section IV Facility Assessment

Five-Year Capital Outlay Plan



Introduction

In 2001, the University contracted to develop a comprehensive Facility Condition Analysis, or benchmark, for the existing condition of all campus buildings and hardscape. These reports identified maintenance needs and associated costs and divided them into categories based on priority, system type, and facility type. Each year, one-third (1/3) of all campus facilities are inspected by a professional engineering and architectural firm to update these reports to ensure current maintenance needs are identified and projected costs are kept current.

The Facility Condition Analysis reports are used to prioritize, budget, and plan yearly maintenance projects to be completed by both internal departments and external contractors.





NMU and Sustainability

Northern Michigan University has embraced sustainability efforts to help reduce its environmental impact on the planet by reducing the use of fossil fuels, conserving resources, and reducing waste – a philosophy NMU has followed for over 30 years. Expanding efforts include: continually improving energy management systems, following LEED® design and building practices to achieve Green Building certification and changing operational and product selection policies to improve recycling and conservation efforts. By following these philosophies, NMU has been able to achieve substantial cost reductions.

Energy

Sustainability and conservation efforts are goals of the University. To improve these efforts, the Facilities Department conducts regular meetings with trades staff to evaluate building mechanical and electrical system operation, make scheduling and system improvements, and review utility usage. In addition, a monthly Facilities Energy Newsletter is sent out in an effort to keep the campus community informed of utility consumption, as well as provide tips on how everyone can assist with the University's energy saving commitment.

To better understand utility usage, the University is in the process of enhancing its utility meters to provide reliable data to improve budget development, billing accuracy, and energy saving analysis. In the spring of 2009, an energy consultant was contracted to broadly survey each stateside building. This report provided estimates on construction cost with resultant projected savings and return on investment. Several projects have been implemented, such as the installation of variable frequency drives on fans and feed water pumps at the Ripley Heating Plant, campus-wide steam trap replacement, and WiMAX power reduction in residence halls, along with multiple boiler replacements in campus apartments. The University has applied for energy incentive rebates on several of these projects.

In the spring of 2010, an energy services company was contracted with to conduct an energy audit and conditions assessment of the Jacobetti Center and the University Center buildings. The two facilities presented a significant opportunity for savings through HVAC and lighting upgrades, water conservation improvements, and installation of a new building automation system to provide optimal control during occupied and unoccupied times. Phase I improvements were completed in fall 2010 and significant energy reduction has been observed. The consultant has been retained to measure and verify the savings for the following year.



NMU and Sustainability *(continued)*

Phase II of this project focuses on ten of the highest utility consuming buildings on campus. The energy services company again performed comprehensive energy conservation audits, determined the energy consumption and operational characteristics of the facilities, and identified the facility improvement measures (FIMs), procedures, and other services that could be implemented in order to reduce NMU's energy and other operating costs for the facilities. Construction is underway to implement the proposed FIMs and is expected to be complete by summer 2012. The energy savings, operational savings, and cost avoidance achieved from the improvement measures in both phases are approximately \$600,000 for a return on investment over a period of 12 years or less, using a 5% interest rate. The performance of the FIMs, services, and reduced energy consumption will be guaranteed by the energy services company.

Over the next year, the university plans to evaluate its remaining buildings, which primarily includes the fine arts complex, Superior Dome and student housing, for potential energy and operational savings.

As an energy and cost savings measure, NMU experimented with a "4-10" work week during the summer of 2011, being open four days a week for 10 hours each day.

Building Design

LEED® Green Building certification is being sought through the specification of "green" building materials, wise management of materials during construction through reduction, reuse and recycling of construction and packaging materials, and design of efficient systems that require less energy and use of natural resources. The overall goal is to reduce operating costs, provide a healthier environment for building occupants, and conserve energy. The university has achieved LEED Green Building certification for the renovation of Meyland Hall and LEED Green Building Silver certification on Van Antwerp Hall and Hunt Hall renovations. The two recent Quad II Lobby renovations are anticipated to be certified by the end of 2011. These coveted awards are among the first in the Midwest under the LEED certification system and speak to the university's continued commitment to sustainability. As further commitment, two NMU staff members have attained the status of LEED Accredited Professional to help guide building design efforts.



NMU and Sustainability *(continued)*

Recycling

Since 1992, the university has diverted more than 8,000 tons of material from the landfill through its recycling program. In 2007, this effort was expanded to include used batteries, along with a “single sort” program, to make first-line recycling efforts easier for students, faculty, and staff. Fluorescent lamps, computer components, waste oil, and antifreeze are products that are also recycled by the university. The university’s housing operations have instituted an extensive sustainability and recycling program within its residence halls that has been well embraced by students. The battery recycling program has expanded through an agreement with the county landfill as they have purchased a hammer-mill that pulverizes the household batteries and recycles the material as it is separated.

All building renovation and construction projects require participants to record tonnage of recycled metal, cardboard, and organic building materials. This information is essential to the LEED certification process.

Product Selection/Operational Policies

NMU is examining the products it purchases as part of its sustainability effort. The use of biodegradable “spudware,” cutlery manufactured from 80% potato starch and 20% soy oil, drink containers made from corn starch that biodegrade 60 days after use, and recycled paper napkins, plates, and cups have all been implemented in the university’s dining halls. Also, a food pulper was installed in one of the dining halls to reduce food waste volume. This waste product can be composted and the University has been in discussion with the Marquette County Landfill, which has built a certified composting site to accept the waste product. Dining Services has changed operational policies to going trayless within campus dining halls to help reduce waste. The university also utilizes green cleaning products for most of its applications. In 2010, the NMU Golf Course began using soy biobased products for its operation which include multi-purpose grease, lubricants, coolants and penetrating oils. They are also testing RePLAY, a soy-based asphalt preservation agent on cart paths.

Community Awareness

Sustainability and conservation efforts are a university goal and to improve community awareness, the Facilities Department provides monthly updates for the campus community highlighting energy and utility consumption, along with tips to help conserve energy. Additionally, the university has a representative that serves on the City of Marquette’s “Sustainable Communities Committee.”



Facilities Assessment

◆ NMU Physical Plant Overview

- ▶ 64 Buildings
 - ▼ 3.48 million square feet

- ▶ 684 acres
 - ▼ 359 acres on main campus
 - ▼ 120 acres - Longyear Forest
 - ▼ 206 acres - near Mount Marquette

- ▶ 3.6 miles of roadway

- ▶ 13.95 miles of sidewalk





Facilities Condition Cost Analysis by Priority Class For all State Buildings

Building	Immediate	Year One	Years Two to Five	Years Six to Ten	Total
Ada B. Vielmetti Health Center		\$5,296	\$55,160	\$78,547	\$139,003
Art And Design North		\$112,774	\$5,584	\$925,016	\$1,043,374
Berry Center Link			\$2,896	\$38,911	\$41,807
Bus Garage			\$16,691	\$3,335	\$20,026
Butler Building		\$16,221	\$38,394		\$54,615
CB Hedgcock			\$50,000	\$302,400	\$352,400
Carey Hall	\$96,648	\$329,593	\$5,499,648	\$531,612	\$6,457,501
Dome / PEIF Link		\$2,270	\$229	\$15,652	\$18,150
Events Center	\$231,230		\$15,384	\$469,518	\$716,131
Forest Roberts Theatre		\$673,299	\$654,520	\$525,937	\$1,853,756
New Science Facility	\$2,903	\$41,995	\$80,710	\$903,978	\$1,029,587
Harry D. Lee Hall	\$123,375	\$298,764	\$4,085,548	\$183,709	\$4,691,397
Jacobetti Center		\$698,413	\$264,162	\$3,599,168	\$4,561,743
Jacobetti Storage		\$20,028	\$3,996	\$52,937	\$76,962
John X. Jamrich Hall	\$34,302	\$489,973	\$6,376,398	\$2,744,232	\$9,644,906
Kaye House (President's House)			\$50,446	\$37,138	\$87,584
Learning Resource Center	\$104,455	\$1,019,276	\$10,501,198	\$2,790,384	\$14,415,312
LRC/WS Link		\$10,698	\$7,336	\$19,966	\$37,999
Luther S. West Science Building				\$1,070,482	\$1,070,482
McClintock Building		\$360,482	\$487,911	\$446,569	\$1,294,962
Physical Education Instruction Facility		\$1,897,244	\$2,070,820	\$1,499,012	\$5,467,077
Ripley Heating Plant		\$3,689	\$68,457	\$12,507	\$84,653
Sam M. Cohodas Administrative Center	\$9,948	\$45,693	\$2,812,294	\$6,289,266	\$9,157,202
Services Building			\$112,010	\$233,475	\$345,485
Superior Dome			\$1,478,114	\$1,502,512	\$2,980,626
Thomas Fine Arts		\$9,744		\$29,159	\$38,903
UC/Gries Link		\$39,444		\$73,960	\$113,404
W. F. Gries Hall		\$36,350	\$298,978	\$607,022	\$942,350
Campus Security			\$394,395		\$394,395
Hardscape		\$44,161	\$215,001	\$956,025	\$1,215,187
Utility Infrastructure	\$186,548	\$98,048	\$21,414,028	\$373,473	\$22,072,097
	<u>\$790,096</u>	<u>\$6,264,088</u>	<u>\$57,148,300</u>	<u>\$26,315,902</u>	<u>\$90,419,077</u>



Facilities Condition Cost Analysis by Priority Class For all Auxiliary Buildings

Building	Immediate	Year One	Year Two to Five	Year Six to Ten	Total
Center Street Apartments	\$53,590	\$434,952	\$4,661,932	\$602,772	\$5,753,247
Charles C. Spooner Residence Hall	\$59,731		\$5,330,186	\$285,980	\$5,675,898
Don H. Bottum University Center	\$134,757	\$69,519	\$12,317,791	\$2,169,011	\$14,691,078
Gant Hall	\$28,276		\$4,986,272	\$1,335,349	\$6,349,898
Halverson Hall	\$157,898		\$4,555,149	\$1,345,326	\$6,058,373
Hunt Hall				\$150,000	\$150,000
Lincoln Street Apartments	\$112,489	\$393,466	\$4,571,387	\$1,166,610	\$6,243,953
Magers Hall		\$7,079		\$195,023	\$202,102
Maude L. Van Antwerp Residence Hall			\$7,979	\$156,667	\$164,646
Norwood Street Apartments	\$47,711	\$776,811	\$3,408,334	\$117,512	\$4,350,368
Payne Hall	\$166,904		\$4,568,533	\$1,343,441	\$6,078,878
Quad 1 Service	\$9,421		\$215,043	\$116,443	\$340,907
Quad 2	\$76,669	\$700,174	\$3,248,550	\$475,720	\$4,501,114
Spalding Hall	\$66,741		\$4,707,415	\$1,341,070	\$6,115,227
Summit Street Apts			\$7,760,770		\$7,760,770
Wilbur D. West Residence Hall	\$28,905		\$6,411,237	\$363,596	\$6,803,738
Wilkinson House			\$225,408		\$225,408
	<u>\$943,093</u>	<u>\$2,382,003</u>	<u>\$59,215,217</u>	<u>\$10,714,521</u>	<u>\$81,465,604</u>

Facility Assessment Summary

Building Number	BUILDING	2010-2011 REPLACEMENT COST	YEAR CONSTRUCTED	CONST_TYP	GROSS SQUARE FOOTAGE	NET SQUARE FOOTAGE	USE CODE	STANDARDS	ACCESSIBILITY	ELECTRICAL	EXTERIOR	FIRE	HEALTH	HVAC	INTERIOR	PLUMBING	SECURITY	SITE	MAINTANCE PROJECT TOTAL
2	Sam M. Cochran Hall	12,976,208	1975	FR	106,009	92,376	AD	1	311,435	493,151	1,540,833	445,307		5,567,119	785,617			13,740	9,157,202
6	Storage Building	46,403	1988	ST	3,760	3,760	ST	1			50,000								
7	Harry D. Lee Hall	7,380,558	1949	M	42,507	36,395	AD	1	837,041	594,435	406,427	356,819		1,041,789	826,277	614,730		13,879	4,691,397
9	C.B. Hedcock	11,976,073	1958	M	116,745	99,210	AD	1			50,000				302,400				352,400
10	Forest A. Roberts Theatre	3,286,550	1964	FR	30,704	22,510	TH	1	80,790	405,547	342,404	267,753		623,041	86,078	34,363		13,780	1,853,756
11	R. Thomas Fire Arts Building	12,561,649	1964	FR	90,867	64,217	CH	1			29,159				9,744				38,903
12	W. B. McClintock Industrial Arts Building	6,016,138	1964	M	41,453	32,382	CH	1		85,055	47,504	275,427		487,911	304,006	35,130		18,476	1,294,962
13	L.S. West Science Building	19,768,834	1966	FR	159,319	138,241	CL	1,4							22,505	989,307	58,670		1,070,482
	LRC/West Science Link	91,373	1996	NC	6,784	5,376	BC	1		8,294				10,698	19,908				37,999
14	E.L. Harden Learning Resource Center	24,959,559	1969	FR	198,781	175,246	CL,LS,SU	1		81,977	1,860,312	1,585,381		1,430,631	4,387,579	2,047,803	3,015,621	6,007	14,415,312
15	John X. Jamrich Hall	9,908,429	1969	FR	98,936	88,485	CH	1		176,421	1,840,350	914,283		474,042	2,939,336	1,264,418	2,010,241	25,814	9,644,905
	Jamrich/West Science Link	57,483	2001	NC	2,760	2,330	BC	1											-
17	Vielmetti Health Center	19,611,861	1961	FR	7,838	7,838	AD	1		48,821				11,143				2,993	139,000
18	Phys. Ed. Instruction Facility	17,637,359	1976	FR	179,627	161,298	CG	1		59,576	865,197	642,554		93,340	9,379	305,548	1,179,238	2,313,244	5,467,077
48	Whitman Hall	3,618,439	1961	M	35,900	31,000	CH,AD	1											-
58	Hedcock/TFA Link	213,477	2004		3,145	2,977	BC	1											-
90	Woodland Park Apartments	12,195,274	2006		105,000	94,757	RS	1											-
19	D. J. Jacobetti Vocational Skill Center	23,807,276	1980	FR	209,179	193,817	CL	1	465,721		574,484			656,194	1,593,400	951,816	197,565	122,561	4,561,743
20	Berry Events Center	11,726,471	1999	FR	133,600	75,740	CG	1											716,131
	PEIF/Berry Events Center Link	91,373	1999	NC	10,092	8,936	BC	1		\$ 2,896					444,535	255,635			41,807
21	Superior Dome	28,138,867	1991	F	251,436	213,296	CG	1		30,077	1,342,683	212,374			\$ 114,631	1,193,309	85,216	2,335	2,980,626
	Dome/PEIF Link	57,483	1991	NC	2,760	2,466	BC	1		229	10,600				5,051				18,150
22	New Science Facility	25,400,225	2000	FR	124,600	109,538	CL,CH	1,3											8,178
23	Jacobetti Storage	116,033	1988	ST	6,075	5,520	ST	1											1,029,587
25	M.K. Maxens Residence Hall	8,825,612	1966	FR	62,579	50,794	AD	1		842	10,852				22,851			22,388	76,962
40	Art & Design North	18,811,357	1996	FR	101,428	83,550	CL	1	15,029		374,952			255,460	53,264	9,313		10,977	1,043,374
42	Ripley Heating Plant	13,408,783	1965	FR	21,417	14,711	PP	1		59,974									84,653
43	Butler Building	169,207	1950	FR	6,380	6,411	ST	1			7,888				31,091				9,848
46	Services Building	10,991,221	1996	M	94,028	91,225	PP	1			8,492				1,667				54,615
47	Bus Garage - 1901 Enterprise	71,804	1961	ST	2,480	2,437	ST	1			36,640				26,464				345,485
50	E.G. Carey Hall	6,367,617	1948	FR	56,247	45,653	CH	1		510,370	1,065,197	432,453		362,295	11,464	3,995			20,026
51	C.C. Spooner Hall	4,595,694	1957	FR	55,136	38,637	RS	1		1,471,606	791,229	88,647		59,731	1,349,640	440,828	1,413,094	22,130	29,748
52	Kaye House-Official Residence	613,811	1980	FR	8,173	6,599	RS	1		14,000					1,101				38,993
62	Summit Street Apartments	6,188,974	1958	M	55,363	41,452	RS	1			607,195				3,046,349	2,485,172	466,378		7,760,770
64	W.D. West Residence Hall	3,483,023	1960	FR	59,048	49,594	AD	1		1,648,188	824,102	285,564		28,905	1,424,104	867,429	1,651,678	28,067	45,701
63	Don H. Bottom University Center	19,949,180	1996	NC	148,686	133,362	AD,SU,FS	1		431,157	1,969,803	1,827,665		204,276	4,189,962	3,350,228	2,310,331	14,745	14,691,078
64	W.F. Gries Hall	9,800,740	1961	FR	58,226	48,564	AD	1,2			176,307				129,747	39,366			942,349
	UC/Gries Link	91,973	1995	NC	3,049	2,740	BC	1							27,889				113,404
65	L.O. Gant Residence Hall	4,910,408	1964	FR	55,929	48,078	RS	1		1,689,904	835,359	231,072		1,378,941	717,859	1,415,899	31,846	29,748	6,349,898
66	G.A. Spalding Residence Hall	4,910,408	1964	FR	55,949	48,204	RS	1		1,332,673	835,630	369,485		66,741	1,379,429	653,487	1,416,189	31,846	6,115,227
67	Quad I Common Area	11,324,204	1964	FR	74,727	72,473	FS	1			102,676				9,421	112,367			340,907
68	L. Payne Residence Hall	4,805,119	1965	FR	55,929	48,161	RS	1			1,341,679	835,359		236,180	1,378,941	653,487	1,415,899	29,687	29,748
69	L.H. Halverson Residence Hall	4,805,119	1965	FR	55,949	48,049	RS	1		1,332,673	835,630	240,900		157,898	1,379,429	634,061	1,416,189	31,846	6,058,373
70	G.C. Mevland Residence Hall	8,391,531	1966	FR	63,022	58,949	RS	1											202,102
72	Quad II Common Area	6,513,873	1966	FR	80,947	70,156	RS	1		102,752	632,321	282,739		404,525	2,375,317	666,789	36,670		4,501,114
73	L.F. Hunt Residence Hall	8,576,975	1967 / 2008	FR	58,800	50,349	RS	1							150,000				150,000
74	M.L. Vanantwerp Residence Hall	8,576,975	1967 / 2007	FR	62,767	53,481	RS	1		7,979					156,667				164,646
75	Center Street Apartments	3,425,665	1967	M	39,194	30,488	RS	1		650,110	1,073,762	573,829		459,057	850,191	879,946	1,206,833	38,862	20,755
77	Norwood Street Apartments	3,314,573	1967	M	35,134	33,324	RS	1		575,318	825,022	302,371		358,058	724,815	591,165	944,757	38,862	4,350,368
82A	Lincoln Street Apartments	8,358,580	1980	F	84,336	65,122	RS	1		1,791,914	1,101,042	10,582		474,584	868,941	1,365,671		118,502	6,243,953
90	Microwave Link (St) Morgan Mead	126,293	1972	FR	1,000	1,000	PP	1											-
91	Microwave Link (St) Palmer	6,252	M		-	-	PP	1											-
92	Transmitter Site-Ely Township	2,251,221	1972	FR	1,997		PP	1											-
93	1500 Wilkinson Avenue	115,091	1952	F	4,623	2,742	RS	1											-
	1422 Presque Isle	743,269	1972		TBD	4,256	RS	1											-
	1716 Presque Isle Building	206,838	1960	FR	6,300	6,300	RS	1		97,027	52,031	23,067			13,836	7,330		32,117	225,408
	1716 Schaffer	-	1940		TBD	664	RS	1											-
	300 Waldo	127,885	1909 / 2003		TBD	1,648	RS	1											-
	2075 Sugarbalt	99,638																	-
	Dome Storage	97,866	1998		2,800	2,592													-
	Salt Barn	57,483	1996	F	4,456	4,115	ST	1											-
30	1010 Wright Street - Chase Levy	304,465			5,950	5,602	ST	1											-
31	1020 Wright Street - Industrial Piping	415,334			5,736	5,341	AD	1											-
32	1020 Wright Street - Fab Shop	132,825			4,000	4,000	ST	1											-
33	1020 Wright Street - Storage	60,969			3,200	3,200	ST	1											-
34	1020 Wright Street - Storage	55,253			2,900	2,900	ST	1											-
35	1020 Wright Street - Storage	27,436			TBD	1,707	ST	1											-
41	Dow Storage	97,986																	



Facility Assessment *(continued)*

Long Term Maintenance

Since September 2010, Northern has completed \$6.96 million of long term maintenance for state buildings, auxiliary buildings, utility infrastructure, security, and hardscape. Examples of some of this past year's projects include, but are not limited to, the following:

- Performance Contracting in twelve buildings
- Superior Dome roof replacement
- Jacobetti Center roof replacement
- Cohodas entry door replacement
- Campus fire protection upgrades
- Condition Assessment repairs in ten buildings
- Water system cross connection/back flow preventers
- PEIF north elevator equipment relocation
- Asphalt, sidewalk, and catch basin repairs
- Spalding Hall roof replacement
- Lincoln Avenue Apartment boiler replacement
- Wilkinson House roof replacement
- Apartment renovations
- Berry Event Center dasher board replacement
- University Center Explorer Wing chiller replacement
- University Center roof replacement
- Quad I kitchen make-up air replacement

When buildings are renovated, long term maintenance projects are incorporated whenever possible. This fiscal year, general fund monies totaling \$1,709,500 have been allocated to address long term maintenance items.

Space Utilization Initiatives

NMU's room scheduling/utilization software by CollegeNet (R25) has been utilized since the fall 2007 semester for majority of all class scheduling. This tool allows the university to optimize course scheduling and evaluate/improve both room and building utilization.

To help direct the utilization of space on campus, the university has established a Space Utilization Committee. This committee helps identify space deficiencies, provide the administration with space utilization information, and develop recommendations to effectively manage campus facilities. During the fall of 2009, the committee recommended the adoption of priority and consolidation scheduling.



Facility Assessment *(continued)*

Space Utilization Initiatives (Continued)

This effort requires close coordination between the Registrar's office and the Facilities Department to concentrate evening and weekend courses to select buildings or select areas within buildings allowing heating, cooling, and lighting systems to be turned off or down reducing energy/operational costs. NMU successfully implemented this scheduling practice during the Winter 2010 semester and each subsequent semester with positive results.

Space Report

Space Utilization reports for general use facilities have been developed; however, these reports reflect formally scheduled classes only. Events such as open lab hours are not reflected in the current reports, reducing the reported classroom utilization rates.

Below is a summary of *General Use Classroom Utilization* by building for fall 2011 (Monday/Friday - 10:00am – 3:00pm)

<i>Building</i>	<i># of Classrooms</i>	<i>Average Room Utilization (%)</i>	<i>Average Seat Utilization (%)</i>
John X. Jamrich Hall	32	69	57
Luther S. West Science Building	14	75	65
Wayne B. McClintock Building	6	61	58
Russell Thomas Fine Arts	6	70	59
Walter F. Gries Hall	3	71	77
New Science Facility	4	72	64
Whitman Hall	2	70	68

Utilization rates represent only credit classes formally scheduled by the Registrars office. It does not reflect events or activities scheduled by other departments or student organizations.



Facility Assessment *(continued)*

Space Distribution

To help develop many of the building initiatives outlined in the Campus Master Plan, the university classified all of its existing space and then compared the spatial distributions with similar institutions to identify opportunities for expansion or the repurposing of existing space to improve space utilization. This benchmarking of existing space, and comparing it with peer institutions, identified space deficiencies: study/library space and general use/student union space. This data supports the need voiced by students and staff, and reaffirms many of the future building opportunities identified in the Campus Master Plan and those identified in Section V of this plan.

As part of the Jamrich Hall Modernization Project, NMU initially reviewed classroom and seat utilization for all classrooms on campus. The results showed approximately 77% of course offerings have an enrollment of 40 or less; while only 28% of our classroom stock had a matching capacity. This indicated that, despite good classroom utilization of 70% (average) for General Use Classrooms between 10:00 a.m. and 3:00 p.m., room capacity was not being maximized. This study was expanded during the programming phase of the Jamrich Hall Modernization Project to ensure new classroom space appropriately matched course offerings. As a result of the evaluation, the renovated Jamrich Hall will have fewer large lecture halls; some space will be repurposed for other uses; and the facility will have less overall square footage.



Assessment of Campus Utilities System

Water

NMU has 79,247 linear feet of water lines on campus and tries to update aging water mains during new construction, as permitted. Since 1996, 4,718 feet of water main has been replaced or installed in conjunction with various projects. Also, NMU, in cooperation with the City of Marquette, installed seven master water meters around the university to simplify and ease the reading required for university usage. In addition to these meters, the university calibrates and maintains all building meters and compares the readings to the master meters to verify the City's billing statements and help detect water loss. During the summer of 2010, NMU installed 110 feet of water main and 5 isolation valves serving the Summit Street Apartments.

Steam

In 1996, NMU completed a major update to its aging main steam distribution system. A total of 27,078 linear feet of un-insulated line was replaced with 13,236 feet of new insulated steam and condensate lines, servicing all major academic buildings on campus. In addition, during the 2000 fiscal year, approximately 500 feet of new line was installed to service the campus apartments on the east portion of campus. NMU installed 875 feet of new steam line servicing the Quad I and 175 feet servicing West Hall during the 2002-2003 fiscal year.

Recent upgrades to the Ripley Heating Plant include the replacement of one 30,000 lbs/hr and one 70,000 lbs/hr boiler with two new 70,000 lbs/hr units. These boilers were operational fall of 2006.





Assessment of Campus Utilities System *(continued)*

Electric

During 2003, the university installed approximately 61,000 feet of high voltage cable to update the primary conductors, replaced three oil-filled loop switches, and all existing 15KV switchgear had new fault indicators and fuses installed.

In 2006, the university replaced the original 40 year old electric switchgear in the Ripley Heating Plant that serves the majority of buildings on campus. The change has increased system reliability, provided capacity to split the campus electrical distribution loops to meet future expansions, and provided better coordination with utility protection.

Gas

All gas mains on campus are owned by the SEMCO gas company. NMU is responsible for all laterals. There is a total of 48,943 linear feet of gas line on campus.

Phone

Existing campus phone lines (19,629 feet) were installed in 1985 by ATT Technologies. The buried lines are fiber optic and 24 gauge copper twisted pair. The current plant system is considered to be in very good condition with existing infrastructure for a fiber optic ring to provide a redundant path between the main server rooms on campus.

Storm

On campus, there is approximately 55,300 linear feet of storm sewer, with the majority of the university's storm run-off being directed to the city's system. A portion of the city's storm water is directed through university storm pipes entering campus from the southwest and exiting to the northeast. Design for all new construction tries to address storm water run-off with the use of retention ponds and ground infiltration.

In 2008, as part of the Hunt Hall renovation project, as with the 2007 Van Antwerp project, the university reduced the amount of the rain water run-off entering the City storm water system by adding hipped roofs to the facility and shedding rain water onto a grassed, landscaped area. This reduced the water entering the city storm system by approximately 400,000 gallons annually.



Assessment of Campus Utilities System *(continued)*

Sanitary

There are 43,332 feet of sanitary sewer lines on campus. Aging sanitary sewer lines are updated with new construction, as permitted. During the 2004 construction season, a section of aging sewer pipe and three new sanitary manholes serving the new Student Services Center, the newly renovated Thomas Fine Arts building, and the new Art and Design addition were replaced/installed to help alleviate an existing maintenance problem of an aging line, and to allow access to an inaccessible section of pipe. During the summer of 2011, all sanitary sewer laterals were replaced from 701 Summit extending to the sewer main.

UTILITY SYSTEM	NEED YEAR	ESTIMATED COST
Water System	4	\$167,107
Steam Distribution	3	\$2,228,096
Storm Drain Mains	5	\$64,272
Sanitary Sewer Mains	2	\$167,107
Utility System Total		\$2,626,582



Assessment of Campus Infrastructure

Roadways (3.6 miles)

Improvements:

The last road improvement was completed in 2003 with over 3,800 feet of new roadway being constructed, including curb and gutter and storm sewer by the Michigan Department of Transportation. This project was funded through a Michigan Institutional Roadway (MIR) grant and completed the road network encompassing the university's Recreation and Sports Complex.

Conditions:

Because of the northern proximity of NMU and the harsh winter climate, the campus roadway structures endure severe exposure and subsequent deterioration and damage as a result of the operation of snow clearing equipment. It can be anticipated that significant amounts of asphalt resurfacing will be required in order to maintain the roadways.

Areas Requiring Maintenance:

Several areas around the campus show signs of deteriorating pavement. Fair Avenue, between Seventh and Eighth Street, and Tracy Avenue, north of the Lee Drive and Seventh Street intersection past the entrance into Lot #28, will need to be paved in the next several years. These areas have superficial cracks in the pavement that will worsen over time as a result of the harsh winters. The areas will need to be repaired by filling potholes with asphalt patch and crack sealant, and select areas of paved surface may be scarified where necessary to improve drainage patterns. The entire pavement should receive a 2" asphalt surface course and new striping.

It is expected that additional sections of the campus' asphalt road network will have to be replaced as a result of normal wear and the harsh winter environment. These areas are expected to crack requiring sealant and patchwork before applying the new surface wearing course. It is expected that at least one-half of all campus roadways will need to be repaired and resurfaced within the next ten years. Along with the replacement of the road surface, a significant amount of roadside concrete curb and gutter will also have to be replaced and/or repaired.



Assessment of Campus Infrastructure *(continued)*

Parking (6,875+ spaces total)

Improvements:

Current parking lot conditions on campus range from paved parking with curb and gutter to unimproved gravel lots. During the 2004 construction season, Lots 28 and 62 were re-constructed to serve the newly renovated Student Services Building, Learning Resources Center, and the Fine Arts complex. These two parking lots have been dedicated to faculty and staff to reduce vehicle turnover and help eliminate vehicular and pedestrian conflicts in the core of campus. During the summer of 2006, a new 207-space parking lot was completed as part of the new Woodland Park Apartments and a portion of Lot 15 was resurfaced.

Conditions:

Because of the northern proximity of the university, significant amounts of snowfall occur on campus each year. As a result of the harsh winter climate, the campus hardscape structures endure more severe exposure and subsequent deterioration and damage as a result of the operation of snow clearing equipment. The streets and sidewalks are cleared of snow and ice before classes begin each morning. With the average annual snowfall generally being above 150 inches, the clearing of snow from sidewalks and streets are a top priority of the campus operations staff. As the sidewalks crack from the effect of freeze and thaw, the surfaces become uneven, and the scraping of the ice and snow causes more and more structural damage. The typical deterioration of the hardscape structures is accelerated as a result of the harsh winter environment.

Lot #12 (Cohodas) is in the worst condition, followed by Lot #14 (Tracy Avenue).



Assessment of Campus Infrastructure *(continued)*

Sidewalk

There is 13.95 miles of sidewalk on campus. All new sidewalks are reinforced concrete, and designed 10 feet wide to accommodate service vehicles and snow removal traffic. In 2010, 1,370' of 10-foot wide sidewalk between Lot 11 and 36 and between West Hall and the University Center was replaced. There are still a number of walks that do not meet the existing campus standard or are badly deteriorated and in need of replacement. Some sidewalks on campus do not meet current ADA or MBFD guidelines. There are also several areas that currently are not paved, which require a finished surface in order for the maintenance crews to be able to keep those walks clear of snow in the winter.

Several sections of the concrete sidewalk around the campus have cracked, resulting in heaving or sunken sidewalk sections, causing uneven settlement at the joints or crack lines. These areas are beginning to become minor trip hazards and are showing signs of deterioration associated with snow plowing, freeze/thaw cycling, and water infiltration.

The campus standard for sidewalks is a 10-foot wide concrete walk. The concrete surface is preferred over asphalt for the durability when scraping snow and ice in the winter months. Within the next two to five years, existing asphalt sidewalks on campus will need to be reconstructed with the campus-standard width geometry and materials so the snow plows can access these walks for clearing and maintaining. The existing walk from Carey Hall east to Waldo Street for accessing the Berry Events Center/Physical Education Instructional Facility/Superior Dome area is planned for replacement with concrete. During the summers of 2010 and 2011, approximately 16,000 square feet of damaged sidewalk was replaced in various locations on campus.



Assessment of Campus Infrastructure *(continued)*

Over the next six to ten years it is expected that additional sections of the campus' concrete sidewalk network will have cracked, resulting in heaving or sunken sidewalk sections causing uneven settlement at the joints. These areas will become trip hazards as a result of the deterioration associated with snow plowing, freeze/thaw cycling, and water infiltration. It is expected that at least one-half of all sidewalks on campus will need to be replaced over the next decade.

Network

Over the next six to ten years, as new buildings are added, existing buildings are remodeled, or if there is a need for increased networking performance, data, fiber strands, wiring cable, and wireless access points will be replaced. The majority of the campus currently has 4 single-mode fiber strands and 12-60 multi-mode fiber strands connecting each building, depending on its data requirements. In turn, each individual building is wired internally with Cat 5, Cat 5e, or Cat 6 cable, depending on when the cable was installed; and each individual building also has 802.11 abgn wireless access points installed.

For all new construction, remodeling, or networking redesign, data, fiber, wiring cable, and wireless access points will be installed as follows: Buildings will be connected with an increased number of strands of single-mode fiber to facilitate 10 Gigabit Ethernet, data wiring cable will be Cat 6 or better quality, and wireless access points will be 802.11abgn.

In addition to the 802.11abgn wireless access points, 802.16e Mobile WiMAX base stations will be added, as needed, to ensure adequate outdoor and mobile access to the NMU network throughout the campus, the surrounding City of Marquette, and cities surrounding Marquette where students, faculty, and staff live. WiMAX network coverage will also be expanded to meet the needs of the university community that live outside the City of Marquette within the NMU WiMAX GSA (Geographic Service Areas), a 35 mile radius of the city.



Building Bonds

All bonds issued by the University are General Revenue Bonds. The interest on Revenue Bonds are primarily payable from General University Revenue. Total General Revenue Bonds payable are summarized as follows:

Fiscal Year	Principal	Interest	Total
2012	\$3,435,000	\$4,538,338	\$7,973,338
2013	3,495,000	4,412,975	7,907,975
2014	3,745,000	4,281,156	8,026,156
2015	3,500,000	4,146,181	7,646,181
2016	3,530,000	4,009,956	7,539,956
Total Five Years	17,705,000	21,388,606	39,093,606
Thereafter			
2017-2021	20,530,000	17,271,984	37,801,984
2022-2026	24,575,000	11,788,241	36,363,241
2027-2031	19,985,000	6,479,094	26,464,094
2032-2036	13,550,000	2,222,328	15,772,328
2037-2039	1,700,000	130,250	1,830,250
Total	98,045,000	\$59,280,503	\$157,325,503
Less: deferred amount refunding, net	(4,249,951)		
Less: unamortized re-offering premium	1,738,394		
Total	\$95,533,443		

Buildings currently obligated to the State Building Authority and lease terms are as follows:

Glen T. Seaborg Science Complex Renovation and Addition

Phase 1 100% obligated Expires 35 years from March 1, 2001 unless earlier terminated
 Phase 2 100% obligated Expires 35 years from November 1, 2001 unless earlier terminated

Heating Plant Addition/Services Building

100% obligated Expires 35 years from February 1, 1997 unless earlier terminated

Fine and Practical Arts Project – Art and Design North and Russell Thomas Fine Arts

100% Obligated Expires 35 years from November 1, 2005 unless earlier terminated

Student Services Building Project

100% Obligated Expires 35 years from November 1, 2005 unless earlier terminated

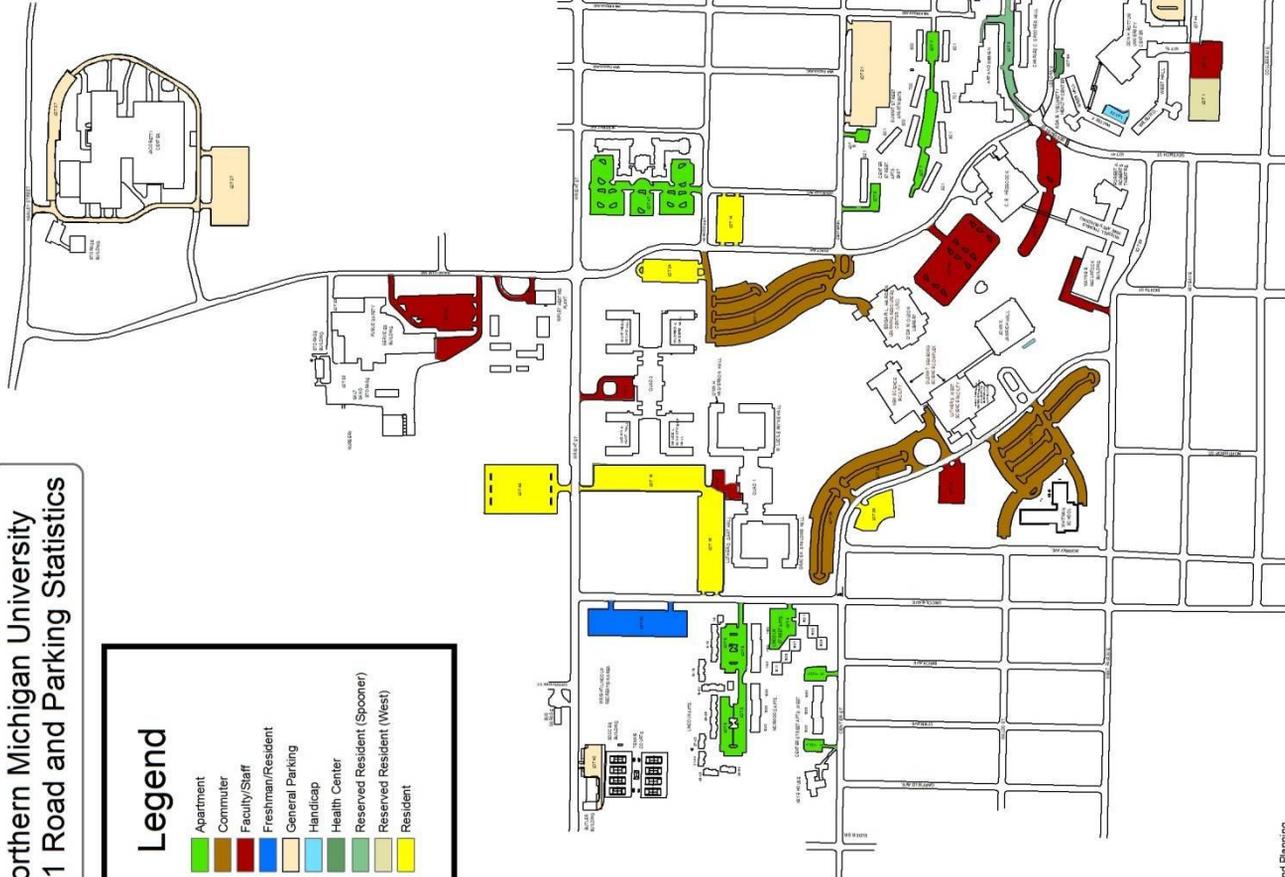
Northern Michigan University 2011 Road and Parking Statistics

Legend

- Apartment
- Commuter
- Faculty/Staff
- Freshman/Resident
- General Parking
- Handicap
- Health Center
- Reserved Resident (Spooners)
- Reserved Resident (West)
- Resident

Summary of NMU Parking Lots

Primary Type	# of Lots	Total of Spaces
Apartment	8	609
Commuter	4	940
Faculty/Staff	10	1082
Freshman/Resident	1	180
General Parking	17	2757
Handicap	2	13
Health Center	1	9
Heating Plant	1	5
Nonway Street Faculty Parking	1	45
Reserved Resident (Spooners)	1	123
Reserved Resident (West)	1	106
Resident	5	915
Service Entry	1	12
Street Parking - Faculty Only	2	46
Street Parking - General	1	35





Northern Michigan University

Assessment of University Land

Five-Year Capital Outlay Plan



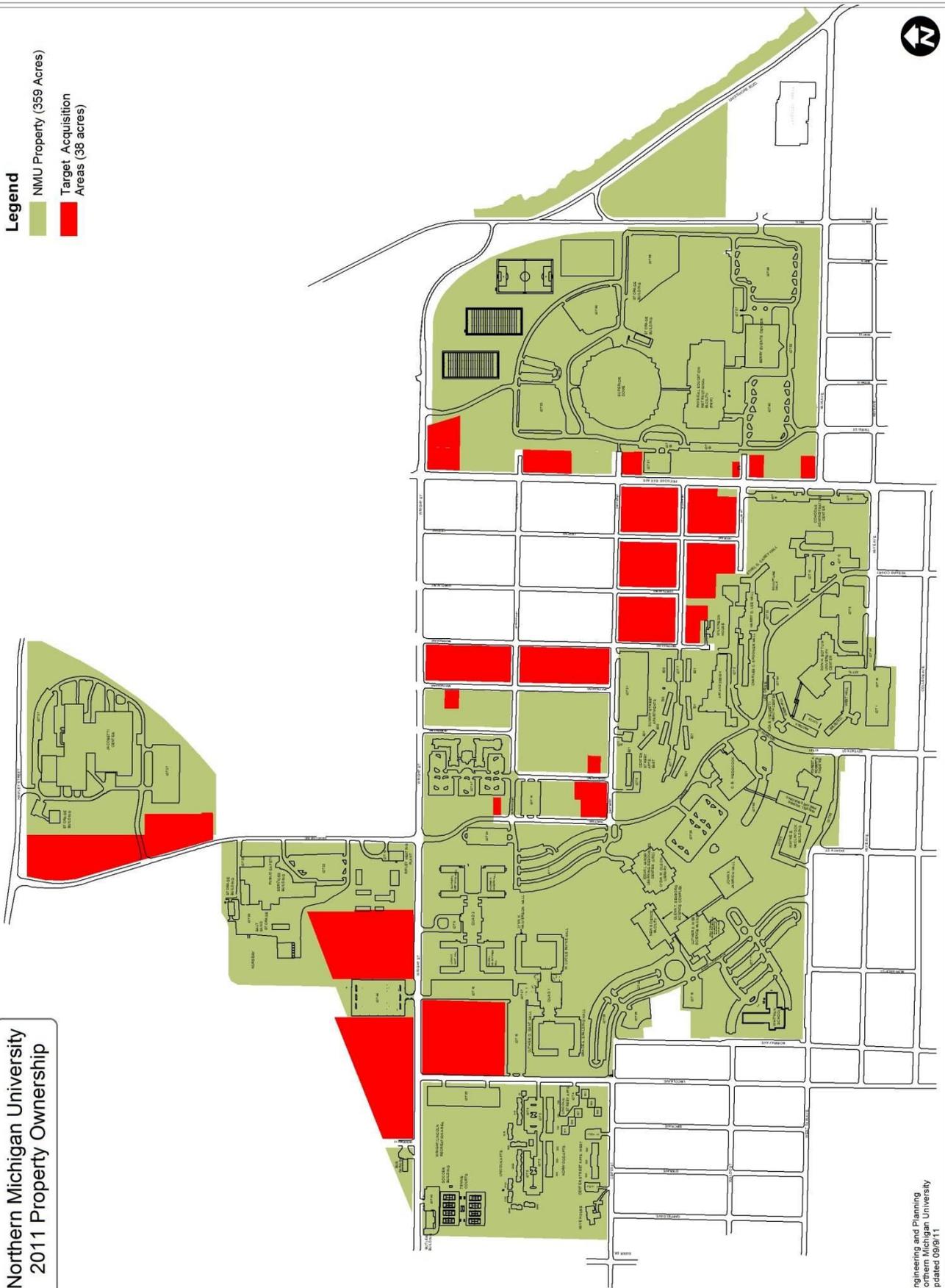
University Land

The University owns 684 acres comprised of 359 acres on the main campus, 120 acres known as the Longyear Forest in Marquette Township, and 206 acres near Mount Marquette in south Marquette. The accompanying map illustrates the property owned (main campus) by NMU, as well as property within the NMU boundaries that the university will need to acquire to fulfill future expansion plans. These properties are currently under private ownership as either commercial or residential use.



Northern Michigan University
2011 Property Ownership

- Legend**
- NMU Property (359 Acres)
 - Target Acquisition Areas (38 acres)





Northern Michigan University

Section V Facilities Implementation Plan

Five-Year Capital Outlay Plan



Introduction

Northern Michigan University (NMU) is one of the oldest public universities in the State of Michigan, having celebrated our 110th birthday on September 19, 2009. Reaching the century milestone is an indication of our past success. Our physical plant was primarily built in the 1960s and 1970s to meet the needs of our students of the past. To prepare our students for the future, many of NMU's east campus facilities need to be transformed to accommodate the programmatic needs of today and the continued development of a state-of-the-art learning environment. Other criteria that determine the capital project priority ranking are the condition of building and grounds operational systems; the appearance of the physical plant as it affects recruitment; compliance with safety, building, and accessibility codes; opportunities for energy savings; comfort of building occupants; and opportunities provided through donors, government funding, grants, and joint ventures with other nonprofits or private sector entities.



Fiscal Year 2013 Capital Outlay Project Requests

John X. Jamrich Hall Modernization

(Public Act 329 of 2010 Planning Authorization Approval)

Jamrich Hall was completed in 1969 and serves as the university's primary general-use classroom building. As with most classroom buildings from this era, it was designed for traditional lecture type instruction and is not conducive for modern pedagogies. The goal of this project is to create a modern, high quality classroom facility that supports active learning by providing high-tech, flexible learning spaces that can be adapted to various class sizes and room layouts with the latest support technologies. The project will create faculty/student interaction spaces within the learning environment, thereby, increasing opportunity for students and faculty to engage in a collaborative experience. The project will facilitate the removal of Gries Hall, a 1960s vintage residence hall that was converted to faculty offices in the early 1980s, and the reduction in operating costs for this end of life facility.



Fiscal Year 2013 Capital Outlay Project Requests

(continued)

Renovation and Addition to the Learning Resource Center (LRC)

This building was designed for university programs and needs that were in effect 30 years ago. Renovation of the space is key to the university's vision for development of a learning community for the 21st century, and addresses the teaching and learning technologies that were not available at the time the building was constructed. The renovation will also provide for increasing library needs and expansion of the University archives. The LRC also needs to be brought up to ADA code for barrier-free access and life safety.

Academic Facilities Upgrade Project

The university is continually assessing the operational and physical condition of the facilities on campus. In the latest review, three buildings constructed in the mid-sixties and seventies are in need of considerable upgrades. The goal of this project is to address maintenance items in these buildings, to include the Forest Roberts Theatre, McClintock Building, and the Physical Educational Instructional Facility. Correcting these items will have a positive effect on the operational efficiencies of the facilities and enhance the learning environment.

Sam M. Cohodas Hall

The goal of this project is to create a high quality environment for providing resources and services that support the Northern Michigan University student. Further, new program functions will be introduced while efficiently utilizing the existing building structure. Programs include general-purpose and designated classrooms that will place students in closer proximity to faculty offices. Programs will be enhanced by increased interaction and improved availability of programs. Renovation should reflect an easily accessible environment for the student, faculty, administrators, and public users.





SUMMARY

FISCAL YEAR 2013 CAPITAL OUTLAY PROJECT REQUEST

Priority	Project	Total Project Cost (in thousands)
1	Jamrich Hall Modernization*	\$33,400
2	Renovation and Addition to the Learning Resources Center	\$65,600
3	Academic Facilities Upgrade Project	\$9,160
4	Sam M. Cohodas Hall Renovation	\$18,800

**Public Act 329 of 2010 Planning Authorization Approval*



NORTHERN MICHIGAN UNIVERSITY
 FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Jamrich Hall Modernization –
 A Sustainable, Efficient, High-Tech Learning Facility
 Priority Ranking #1

Project Total Cost (in thousands) = \$33,400
 (Public Act 329 of 2010 Planning Authorization Approval)

Is the Project a Renovation or New Construction?	Ren	___	New	<u>X</u>	Both	___
Is the Project for a Single, Stand-Alone Facility?			Yes	<u>X</u>	No	___
Is there a 5-Year Master Plan Available?			Yes	<u>X</u>	No	___
Are Professionally Developed Program Statements and/or Schematic Plans Available Now?			Yes	<u>X</u>	No	___
Are Match Resources Currently Available?			Yes	<u>X</u>	No	___
Has the University Identified Available Operating Funds?			Yes	<u>X</u>	No	___

A. Project Descriptive Narrative

Jamrich Hall was completed in 1969 and serves as the university's primary general use classroom building. The facility has 32 classrooms with a total seating capacity of over 2,800. It comprises 45% of the University's total classroom capacity with over 980 scheduled course hours per week. However, the building's architectural, mechanical, and electrical systems are antiquated and wasteful of space and energy by modern standards. The existing building and classroom design is inefficient and based on traditional large lecture type instruction, not conducive to modern pedagogies. Consequently, classrooms are not supportive of emerging technologies, classrooms have low utilization, and operational expenditures are high. To correct this, the University has focused its efforts on a plan to provide an efficient, state-of-the-art classroom facility that improves academic delivery, maximizes building use, and reduces operational and maintenance costs.

Planning for this project began with a university-wide analysis of facility use for both academic and administrative spaces. Comprehensive Facility Planners (CFP) completed a classroom analysis and evaluated course offerings compared to the entire classroom inventory on campus, classroom seat utilization, and the available infrastructure to support active learning. The results noted an average classroom utilization rate of 25 weekly room hours (WRH's), well below the national standard of 28.5 to 31.5 WRH's; underutilized seating in large lecture halls; and inconsistent course scheduling patterns. As a result of the programming/study phase, several key limitations were identified that supported the need for an upgraded classroom facility.

Existing Jamrich Hall Limitations include; (1) Current classroom layout/design does not support active learning pedagogies and new technology requirements, (2) Existing classroom capacities do not match the demand of course offerings, 77% of courses have an average enrollment of 40 students or less, yet only 28% of the classrooms have a matching capacity, (3) Information technologies critical to the success of NMU's academic goals are limited, (4) The current building's thermal envelope, HVAC, and lighting systems are antiquated and inefficient, and (5) The building requires approximately \$10 million of deferred maintenance.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #1: Jamrich Hall Modernization (*continued*)

Upon completion of the programming/study phase, it became apparent that achieving desired programmatic need is compromised by the footprint of the existing building and greater efficiencies will be achieved with a new building rather than renovating the existing. After careful review with its design professional, the University determined that renovation of Jamrich Hall was not a desirable option. The University has subsequently moved forward with the design of a new facility. This option will provide; (1) a net square foot reduction of 36,000 compared to 19,000 with the renovation, (2) an increase in net program efficiency of an additional 9%, (3) a reduction in annual operating cost of \$180,000 compared to \$80,000 with the renovation and (4) a reduction of overall construction cost of \$500,000. Additionally, the new building eliminates course scheduling disruption during construction. Because of the increased benefits, Northern Michigan University has determined the best choice to improve efficiencies and long-term financial sustainability for NMU and the State of Michigan is to pursue the new facility.

A new building achieves the following goals:

- Provides a modern, high-tech classroom facility that provides highly collaborative instructional space for students and faculty.
- Provides an efficient academic building, allowing the demolition of Gries Hall and the existing Jamrich Hall (demolition will be self-financed by the University), resulting in a reduction of approximately 36,000 GSF of total campus building area.
- Realizes an estimated total annual operation savings of \$180,000 compared to current operation cost.
- Improves opportunity for faculty-to-student collaboration by locating classrooms adjacent to academic departments.
- Eliminates underutilized classroom space - total number of campus classrooms will be decreased by 7 and large lecture halls (80-500 seats) decreased from 7 to 5.
- Achieves a campus-wide room utilization goal of 28.5 to 31.5 WRH, consistent with national standards
- Provides new classrooms with a seat capacity sized to match enrollment – classrooms with excess capacity are eliminated.
- Provides a new facility that is highly flexible and adaptable to changing innovations in teaching pedagogies and information technologies.
- Provides an enclosed pedestrian link connecting Jamrich Hall to another instructional complex, the Learning Resources Center, allowing for improved barrier free accessibility, and direct access to technology support services.
- Achieves LEED® Green Building certification.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST Request #1: Jamrich Hall Modernization (continued)

Gross square footages of this project by building:

The new John X. Jamrich Hall 128,103 square feet

The estimated project start date would be May 2012, with an estimated completion date of August 2013.

The estimated annual operating cost for this project b-y building is:

The new John X. Jamrich Hall \$521,379

B. Programmatic Benefit to Institution

The Jamrich Hall Modernization will build on NMU's success in the use of technology through a collaborative learning environment. This learning environment will:

- provide graduates with a greater understanding of subject matter
- will provide students with a broader range of skills making them more attractive to future employers
- will promote students to pose questions, construct and interpret ideas and elaborate on thoughts of others promoting their development as life-long learners
- encourage student-faculty contact and student-peer collaboration
- provides access to technology, regardless of student's economic status
- provide a healthier atmosphere for the building occupants due to the sustainable construction





FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #1: Jamrich Hall Modernization (*continued*)

The Jamrich Hall Modernization project will support the programmatic needs of all disciplines on campus and provide a new high-tech, learning center that supports modern pedagogies.

C. Economic Benefit to the State of Michigan

The proposed capital outlay project will provide the following economic benefits to both the local community and the state:

- Tax payers will benefit indirectly from a broader range of skills graduates possess and bring to the local, regional and state workforce a result of the new collaborative learning environment.
- Local and regional economy will benefit directly from the jobs associated with the construction phase of the project.
- Local economy will benefit directly from the attraction and recruitment of new students to the university.
- State of Michigan and taxpayers will benefit through a new, more efficient facility designed and built to reduce overall campus square footage and optimize operational efficiencies through energy efficient building systems.

D. Match Resources

1. Local and regional sources for project:

- A. Industry contributions
- B. NMU Foundation

2. Bonding





NORTHERN MICHIGAN UNIVERSITY
 FY 2013 CAPITAL OUTLAY PROJECT REQUEST
 Renovations and Addition to the Learning Resources Center
 Priority Ranking #2
 Project Total Cost (in thousands) = \$65,600

Is the Project a Renovation or New Construction?	Ren	___	New	___	Both	<u>X</u>
Is the Project for a Single, Stand-Alone Facility?			Yes	<u>X</u>	No	___
Is there a 5-Year Master Plan Available?			Yes	<u>X</u>	No	___
Are Professionally Developed Program Statements and/or Schematic Plans Available Now?			Yes	___	No	<u>X</u>
Are Match Resources Currently Available?			Yes	___	No	<u>X</u>
Has the University Identified Available Operating Funds?			Yes	<u>X</u>	No	___

A. Project Descriptive Narrative

The Learning Resources Center was constructed in 1966. The building was designed for university programs and needs that were in effect 40 years ago. Those needs included temporary office space for faculty which were located on the ground floor of this building. The intent was to expand the library collection to the ground floor when necessary and to create faculty offices elsewhere on campus. During the last ten years, a majority of faculty have been relocated on campus. As the last of the faculty have moved from temporary offices in the Learning Resources Center, we renovated the vacated space to create a student gathering space, expanded writing center, a satellite tutoring program, consolidated the Academic Computing operations, and expanded the computer server space. These renovations are temporary in nature until the major building renovation can take place.

Renovation of the facility is key to the university's vision for development of a learning community for the 21st century. The renovation will address the teaching and learning technologies that were not available at the time the building was constructed, and which are necessary to prepare students and K-12 teachers for today and the future global economy. These technologies include:



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #2: Renovations and Addition to the Learning Resources Center (*continued*)

- an interactive and multimedia instructional development center where faculty can design electronic learning environments
- a learning classroom with capabilities to foster cooperation, communication, efficiency, and greater access to students at a distance and on-site
- a help and service center where walk-in technical assistance can be provided
- infrastructure for K-12 and higher education cooperative learning network
- work areas with networked ports, wireless access, and power outlets for interactive research with library holdings and remote information resources

The renovation will also provide for expanded library holdings and expansion of university archives. In order to comply with the FCC's digital broadcasting mandate, the university upgraded the WNMU-TV's master control and transmitter facilities. Additionally, NMU recently converted its production control room, audio post production suite, and announce facility to industry-standard digital technology. However, studio lighting equipment and dimmers are original to the building and are past their useful life. The equipment is no longer supported by the manufacturer and component replacement inventories no longer exist. Classroom space needs to be incorporated with the production facilities to meet the teaching mission of the university and the studios require updating to meet the needs associated with a fully digital-compliant broadcast center.

The Learning Resources Center also needs to be brought up to today's standards for ADA barrier-free access and life safety. The building requires extensive work, which includes window replacement, masonry repair, and a complete renovation of the HVAC systems. This project will additionally upgrade and renovate the building to meet current architectural, mechanical, and electrical codes and standards. Sustainability and energy efficiency will be primary concerns. LEED® Green Building certification will be sought through the specification of "green" building materials; wise management of materials during construction through reduction, reuse, and recycling of construction and packaging materials; and design of efficient systems that require less energy and use of natural resources. The overall goal is to reduce operating costs, provide a healthier environment for building occupants, and conserve energy.

The estimated gross square footage for this project is 290,300.

The estimated construction start date for this project would be May 2013, with an estimated completion date of December 2014.

The estimated annual operating cost for this building is \$1,550,202.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #2: Renovations and Addition to the Learning Resources Center (continued)

B. Programmatic Benefit to Institution

Northern Michigan University's (NMU) strategic plan includes the continued development of a learning community where students receive individualized attention in a high-tech learning environment. This learning environment will:

- meet student and employer needs of the information age
- promote the development of independent lifetime learners
- encourage student-faculty contact and collaboration
- provide access to technology, regardless of student's economic status
- build a stronger partnership with educators and community
- provide greater opportunities and course offerings for the student
- provide a healthier atmosphere for the building occupants due to the sustainable construction.

These renovations will provide students needed exposure to enhanced teaching and learning technologies that will better prepare them for the highly competitive global job market, where technology is continuing to change at an exponential rate. In addition, expansion of the university's library holdings are necessary to support academic programs, to maintain accreditation standards, and to provide the resources necessary for students to achieve their learning goals. Enhanced distance, multimedia, and interactive learning resources will increase access to location bound students in remote areas of the Upper Peninsula.

C. Economic Benefit to the State of Michigan

The proposed capital outlay project will provide the following economic benefits to both the local community and the state:

- taxpayers will benefit directly with access to advanced educational opportunities
- taxpayers will benefit indirectly from more highly educated students that are better prepared to make effective use of technology in the coming century
- ability to provide Upper Peninsula K-12 teachers and administrators with enhanced in-service educational opportunities
- enhanced facilities for document preservation center would benefit taxpayers throughout the state
- taxpayers will benefit from the operational efficiencies gained through the more energy efficient building systems



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #2: Renovations and Addition to the Learning Resources Center (*continued*)

D. Match Resources

Federal sources available for project:

1. U.S. Department of Commerce
National Telecommunications Information Administration (NTIA)
Public Telecommunications Financial Planning (PTFP)
2. U.S. Department of Commerce
Telecommunications Information and Infrastructure Assistance Program
3. Corporation for Public Broadcasting (CPB)
Rural Stations Grant Fund Pool for Radio
4. Local and Regional Sources for project:
 - A. Industry contributions
 - B. NMU Foundation
5. Bonding





NORTHERN MICHIGAN UNIVERSITY
 FY 2013 CAPITAL OUTLAY PROJECT REQUEST
 Academic Facilities Upgrade Project
 Priority Ranking #3
 Project Total Cost (in thousands) = \$9,160

Is the Project a Renovation or New Construction?	Ren	<u> X </u>	New	<u> </u>	Both	<u> </u>
Is the Project for a Single, Stand-Alone Facility?			Yes	<u> </u>	No	<u> X </u>
Is there a 5-Year Master Plan Available?			Yes	<u> X </u>	No	<u> </u>
Are Professionally Developed Program Statements and/or Schematic Plans Available Now?			Yes	<u> </u>	No	<u> X </u>
Are Match Resources Currently Available?			Yes	<u> X </u>	No	<u> </u>
Has the University Identified Available Operating Funds?			Yes	<u> X </u>	No	<u> </u>

A. Project Descriptive Narrative

There are three buildings that have been identified that have urgent maintenance issues. Two of these buildings, the Forest Roberts Theatre and McClintock Building, were constructed in 1964, and the Physical Education Instructional Facility was finished in 1976. These buildings are used for academic purposes, providing general use classrooms, physical education instructional areas, and communication and performing arts area.

The academic facilities upgrades include the replacement of HVAC systems, electrical upgrades, handicap accessibility items, exterior brick replacement, and fire alarm system enhancements. Sustainability and energy efficiency will be primary concerns. "Green" building materials will be specified. Construction and packaging materials will be recycled, reused, and reduced during construction. Efficient systems will be specified that require less energy and use of natural resources. The overall goal is to reduce operating costs, provide a healthier environment for building occupants, and conserve energy.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #3: Academic Facilities Upgrade Project (*continued*)

Gross square footages of this project by building:

Forest Roberts Theatre	30,704 square feet
McClintock Building	33,575 square feet
Physical Education Instructional Facility	179,627 square feet

The estimated project start date would be June 2012, with an estimated completion date of August 2013.

The estimated annual operating cost for each building is:

Forest Roberts Theatre	\$138,168
McClintock Building	\$146,051
Physical Education Instructional Facility	\$727,489

B. Programmatic Benefit to Institution

This capital outlay project will continue the development of a learning community for the 21st century. The university's goal is a learning environment that:

- meets student and employer needs of the information age
- promotes the development of independent lifetime learners
- encourages student-faculty contact and collaboration
- provides access to technology, regardless of student's economic status
- builds a stronger partnership with educators and community
- provides greater opportunities and course offerings for the student
- provide a healthier atmosphere for the building occupants due to the sustainable construction.

Improvements made in these buildings will enhance the learning environment and increase the operational efficiency of these facilities.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #3: Academic Facilities Upgrade Project (continued)

C. Economic Benefit to the State of Michigan

The proposed capital outlay project will provide the following economic benefits to both the local community and the state:

- taxpayers will benefit directly with access to advanced educational opportunities
- taxpayers will benefit indirectly from the more highly educated students that are better prepared to make effective use of technology in the coming century
- State of Michigan benefits through the renovation and reuse of an existing facility, thus optimizing current campus facilities in lieu of extensive cost for new comparable facilities
- taxpayers will benefit from the operational efficiencies gained through the more energy efficient building systems

D. Match Resources

1. Local and regional sources for project:

- A. Industry contributions
- B. NMU Foundation

2. Bonding



NORTHERN MICHIGAN UNIVERSITY
 FY 2013 CAPITAL OUTLAY PROJECT REQUEST
 Renovations to the Sam M. Cohodas Hall
 Priority Ranking #4
 Project Total Cost (in thousands) = \$18,800

Is the Project a Renovation or New Construction?	Ren	<u>X</u>	New	<u> </u>	Both	<u> </u>
Is the Project for a Single, Stand-Alone Facility?			Yes	<u>X</u>	No	<u> </u>
Is there a 5-Year Master Plan Available?			Yes	<u>X</u>	No	<u> </u>
Are Professionally Developed Program Statements and/or Schematic Plans Available Now?			Yes	<u>X</u>	No	<u> </u>
Are Match Resources Currently Available?			Yes	<u>X</u>	No	<u> </u>
Has the University Identified Available Operating Funds?			Yes	<u>X</u>	No	<u> </u>

A. Project Descriptive Narrative

Located on the site of the original campus buildings, construction on the six-story Cohodas Building was completed in July 1975. The building contained most of the administrative offices, as well as student related support services departments. The original structure was named after a local produce entrepreneur and philanthropist, Sam M. Cohodas.

The renovation to the Sam M. Cohodas Hall will enhance the quality of services that support the students of Northern Michigan University by changing the use of the first four floors from administrative offices to academic classrooms and faculty offices. This change in use, including those relocated academic departments and classrooms, will have a positive effect on the operation and availability of programs to the general student population.

Two floors of the current six-story structure will be renovated to accommodate classrooms ranging from 690 square feet to 1,150 square feet. One of these classrooms will be a twenty-eight station computer lab specifically used by the Real Time Trading classes. This is a unique program and teaching opportunity where students learn about the financial markets through the use of special software. Students are online with the markets purchasing and selling stocks, bonds, etc. without actually spending real money.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #4: Renovations to the Sam M. Cohodas Hall *(continued)*

Minor renovations will occur in departmental offices as a result of the program changes and efficiency due to incorporating classrooms and faculty offices.

Modifications within administrative areas vary from technology upgrades supporting new programs, to relocation and expansion necessary to accommodate the projected student enrollments.

Upgrades and new programs shall be supported by the latest technologies not currently existing within the fabric of the structure. The facility has been maintained well and its basic structure and building envelope remain in good condition. However, the existing building support systems are outdated and in poor condition. With the change in use, the opportunity will allow the mechanical, electrical, and information technology systems be upgraded to today's standards.

Sustainability and energy efficiency will be primary concerns. LEED® Green Building certification will be sought through the specification of "green" building materials, thoughtful management of materials during construction through reduction, reuse, and recycling of construction and packaging materials, and design of efficient systems that require less energy and use of natural resources. The overall goal will be to reduce operating costs, provide a healthier environment for building occupants, and conserve energy.

The design will address barrier-free regulations and the Americans with Disabilities Act by including renovations in the areas of accessibility and support facilities. Vertical circulation components, including stairways and elevators, do not meet today's standards and codes. Door hardware, access ways, signage, etc. also do not meet the current program requirements.

The gross square footage of this project is approximately 104,000 square feet.

The estimated construction start date for this project would be June 2012, with an estimated completion date of August 2013.

The estimated annual operating cost for this building is \$697,840.



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #4: Renovations to the Sam M. Cohodas Hall (*continued*)

B. Programmatic Benefit to Institution

Northern Michigan University's (NMU) strategic plan includes the continued development of a learning community where students receive individualized attention in a high-tech learning environment. This learning environment will:

- meet student and employer needs of the information age
- promote the development of independent lifetime learners
- encourage student-faculty contact and collaboration
- provides access to technology, regardless of student's economic status
- build a stronger partnership with educators and community
- provide greater opportunities and course offerings for the student
- provide a healthier atmosphere for the building occupants due to the sustainable construction

Renovations to the Cohodas Hall support several new use and programmatic needs. Existing areas will be redeveloped to provide learning environments and support to academic programs and students. It will bring much needed general purpose classrooms in direct proximity of departmental and faculty offices.

C. Economic Benefit to the State of Michigan

The proposed capital outlay project will provide the following economic benefits to both the local community and the state:

- taxpayers will benefit directly with access to advanced educational opportunities
- taxpayers will benefit indirectly from the more highly educated students that are better prepared to make effective use of technology in the coming century
- State of Michigan benefits through the renovation and reuse of an existing facility, thus optimizing current campus facilities in lieu of extensive cost for new comparable facilities
- taxpayers will benefit from the additional capacity and opportunities for enrollment within the university
- taxpayers will benefit from the operational efficiencies gained through the more energy efficient building systems



FY 2013 CAPITAL OUTLAY PROJECT REQUEST

Request #4: Renovations to the Sam M. Cohodas Hall (*continued*)

D. Match Resources

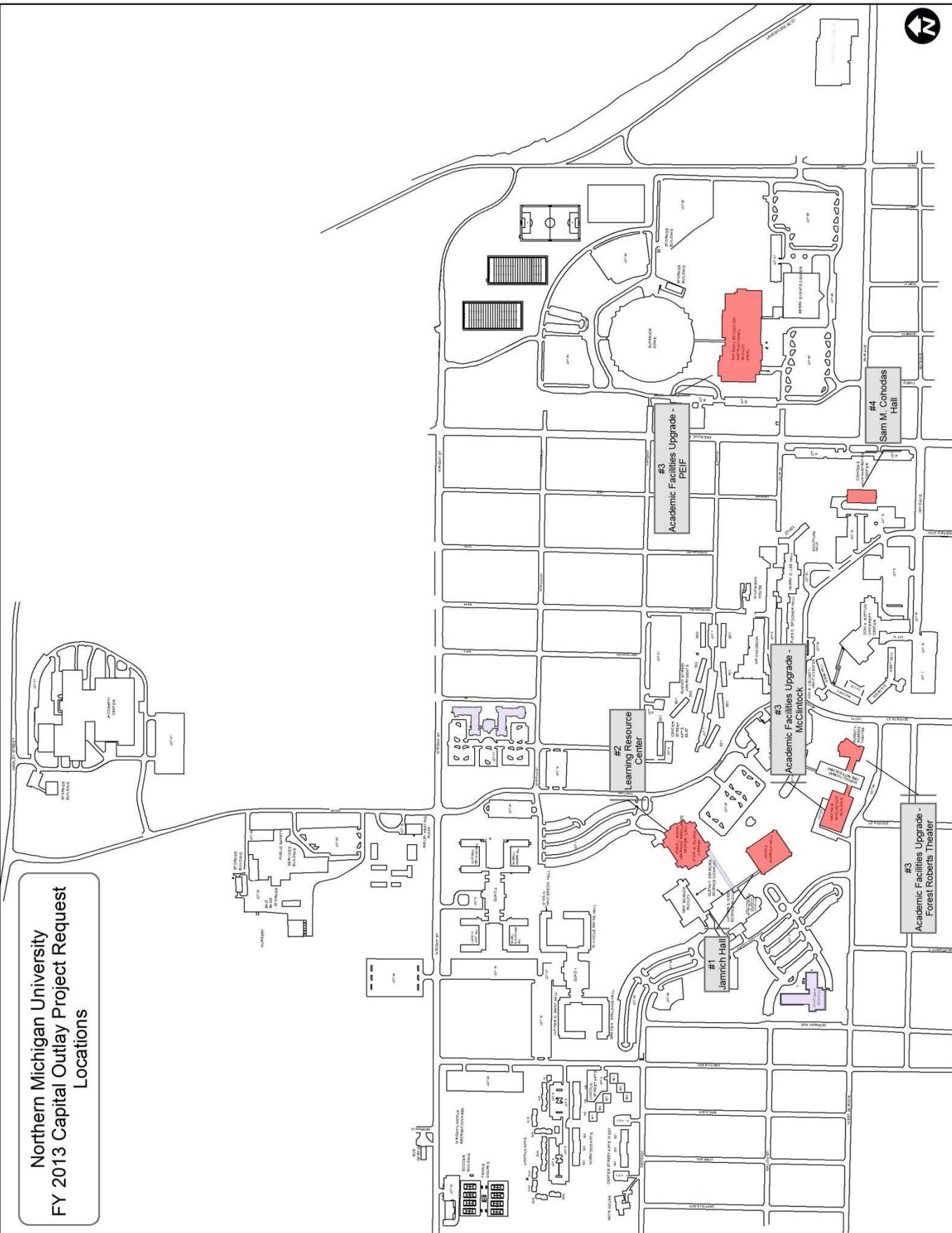
1. Local and regional sources for project:

- A. Industry contributions
- B. NMU Foundation

2. Bonding



Northern Michigan University
 FY 2013 Capital Outlay Project Request
 Locations





Status of “In-Progress” State Building Authority Projects

John X. Jamrich Hall Modernization

Project Total Cost: \$33.4 million

(Public Act 329 of 2010 Planning Authorization Approval)

Jamrich Hall Modernization project has been authorized for planning per Public Act 329 of 2010. A professionally prepared program statement and schematic plans have been submitted under separate cover for consideration of construction funding in Fiscal Year 2013 Executive Budget.





University Projects

Completed From November 1, 2010 to November 1, 2011

With a Total Cost Between \$500,000 - \$3,000,000

Superior Dome Roof Replacement

A new 80 mil TPO mechanically-fastened membrane was installed over the existing 20-year-old TPO roofing membrane. This system provided a sustainable solution by keeping the existing roofing membrane intact and out of the local landfill, along with keeping the interior of the building dry during construction. As part of the project, a set of exit doors in southeast corner and its associated dormer were removed to allow the snow to shed more easily and prevent damage to roof. The project was completed in November 2011 for a total cost of \$2.5 million.

Jacobetti Center Roof Replacement

The existing ballasted EPDM roof was replaced with a new mechanically fastened EPDM roof. A two-thousand square foot area of the roof was prepared for a future green roof. The project was completed in July 2011 for a total cost of \$735,385.

WNMU-TV Digital Transmission and Production

Phase III was the final component of WNMU-TV's digital conversion and involved renovating WNMU's production facilities to digital. This project was fully funded by a \$634,000 Rural Utility Services grant and included the addition of an HD mobile production unit and the replacement of analog audio video and graphics facilities with HD digital equipment. The replacement included minor updating renovation of production spaces and will be completed by November 2011.



University Projects

Projects Planned November 1, 2011 to November 1, 2012
with a Total Cost Over \$1,000,000

Ripley Heating Plant Combined Heat and Power Renewable Energy Project

This project has four goals that pertain to campus facilities operations: 1) reduce operating costs, 2) provide fuel flexibility, 3) utilize a renewable resource, and 4) create local jobs. To meet these goals, the university worked with a major energy service company to conduct a comprehensive energy optimization analysis of the campus and identify improvement measures.

The existing central steam plant that serves a majority of the campus facilities was a primary focus, specifically concerning the type of fuel utilized. The primary fuel for the existing plant is natural gas, with fuel oil as backup. The Heating Plant is also the primary distribution point for electricity purchased from the Marquette Board of Light & Power (MBLP), a municipal generating station. Backup electrical power consists of emergency levels of individual diesel/natural gas generators in a minimum number of the University's major facilities.

As part of a campus energy optimization project, a new biomass fueled cogeneration combined heat and power (CHP) plant will be constructed as an addition to the existing plant that will provide guaranteed cost savings. The new plant addition will utilize a solid fuel stoker boiler rated at 42,000 pounds per hour, capable of burning wood chips with natural gas as a backup fuel. The new plant will be capable of meeting 87% of thermal needs on campus. A back pressure steam turbine generator will produce up to 745 kilowatts of electricity, which is about 16% of the university's electrical load. The existing natural gas boilers will supplement the biomass plant for peaking duty and electricity will continue to be purchased, as needed, from the Marquette Board of Light and Power.

The proposed biomass plant would utilize wood chips and wood by-products of the Upper Peninsula wood products industry; for example, tree tops, sawdust, and bark for fuel. Discussion of the costs of wood by-products and availability on a continuous basis confirmed the viability of this renewable resource as a reliable fuel source for the project. The new plant will incorporate the best available boiler control technology and meet the Environmental Protection Agency and Michigan Department of Natural Resources and Environment Standards.



University Projects

Projects Planned November 1, 2011 to November 1, 2012
with a Total Cost Over \$1,000,000

The project also will address several long term maintenance issues in the existing plant, including the replacement of the condensate tank, condensate and feedwater pumps; installation of a fire suppression system throughout the existing facility; and the replacement of the original water softeners and brine system.

Other energy optimization improvements include the interconnection of the New Science chiller to the Learning Resource Center chilled water system and the replacement of the existing absorption chiller in Cohodas Hall.

The project cost is \$16.4 million for the plant expansion with the estimated building construction start date of April 2012 and an anticipated completion date of June 2013. The maintenance items in the existing plant will be funded by annual long term maintenance dollars. Positive annual cost avoidance after debt service for the plant expansion is projected with the twenty-year net present value of approximately \$5.1 million.

Performance Contracting Phase II

To continue the effort to further reduce energy/operational costs, Phase II of this project focuses on ten of the highest utility consuming buildings on campus; Art & Design, Berry Event Center, Cohodas, Hedgcock, Learning Resources Center, New Science, PEIF, Services Building, West Science, and Whitman. The energy services company performed comprehensive energy conservation audits, determined the energy consumption and operational characteristics of the facilities, and identified the facility improvement measures (FIMs), procedures, and other services that could be implemented in order to reduce NMU's energy and other operating costs for the facilities. Construction is underway to implement the proposed FIMs and is expected to be complete by summer 2012. The energy savings, operational savings, and cost avoidance achieved from the improvement measures for this phase is approximately \$460,000. The project budget is \$5.2 million for a return on investment over a period of 12 years or less, using a 5% interest rate. The performance of the FIMs, services, and reduced energy consumption will be guaranteed by the energy services company. Over the next year, the university plans to evaluate its remaining buildings, which primarily includes the fine arts complex, Superior Dome and student housing, for potential energy and operational savings.



Maintenance Projects 2012 to 2017 With a Total Cost Over \$1,000,000

As a result of the Facility Condition Analysis, the following projects have been identified:

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Total</u>
Security/Door Access Control System	\$1,600,000						\$1,600,000
Fire Alarm/Mass Notification		\$2,000,000					\$2,000,000
Performance Contracting Phase III*							TBD
Total	<u>\$1,600,000</u>	<u>\$2,000,000</u>					<u>\$3,600,000</u>

**Schedule and project costs to be determined*



Maintenance Projects

2012 to 2017

With a Total Cost Over \$1,000,000

Project Descriptions

Security, Door Access, Fire Alarm, Mass Notification, and Energy Management System Replacement. The existing Honeywell fire alarm, door access, security, and energy management system installed in nineteen buildings on campus has reached the end of its useful life. The system is no longer supported by the manufacturer and replacement parts are difficult to acquire. Through three separate projects, the existing system will be separated into three independent systems that have the latest technology and problems on one system would not affect another.

- 1) **Security/Door Access:** The existing CBORD security/card access system that is currently in all ten residence halls and Woodland Park apartments will be expanded to replace the existing Honeywell Building card access system in the nineteen Stateside and Auxiliary buildings. Additional doors will be installed on the new system to allow Public Safety to perform an all-building lockdown in the event that there is an active shooter on campus as well as lock/unlock doors with building schedules. In addition, the project results will be increased reliability; simplified operational, maintenance, and personnel training needs by standardizing to one system for all campus facilities; and improved cross departmental support. All door and system hardware and software has been ordered; construction installation bids are being procured. Construction is expected to start by November 2011 with an estimated project cost of \$1.6 million.
- 2) **Fire Alarm/Mass Notification:** The existing Honeywell FS90 system will be replaced with a new fire alarm system in the nineteen Stateside and Auxiliary buildings. The new system would incorporate the NFPA Part 12 recommendations for mass notification within campus facilities. The existing Simplex fire alarm systems currently installed in several Housing and Stateside buildings on campus will also need to be modified to incorporate mass notification. This project is expected to start construction by June 2012 with an estimated cost of \$2.0 million.



Maintenance Projects

2012 to 2017

With a Total Cost Over \$1,000,000

- 3) **Energy Management:** The replacement of the existing obsolete Honeywell systems with new Johnson Controls systems in nineteen Stateside and Auxiliary buildings. The new system would increase reliability; improve the controllability of mechanical and electrical systems to generate energy savings; simplify operational, maintenance, and personnel training needs by standardizing to one system for all campus facilities; and allow system access through the Internet so that problems could be diagnosed remotely by university staff and Honeywell. This work will be incorporated on a building-by-building basis as part of the Performance Contracting project. In 2010, the systems in Jacobetti and University Center have been converted and expanded with new Johnson Controls systems. As part of the Phase II performance contract, the systems will be replaced in Art & Design, Cohodas, Learning Resources Center, West Science, PEIF, and Services Building. The existing Johnson Controls systems will be expanded in the Berry Event Center, Hedgcock, New Science, and Whitman. The expected completion of this work is summer 2012.

Performance Contracting Phase III

To continue the effort to further reduce energy/operational costs, Phase III of this project focuses on housing facilities, fine arts complex, and Superior Dome. The energy services company will perform comprehensive energy conservation audits, determine the energy consumption and operational characteristics of the facilities, and identify the facility improvement measures (FIMs), procedures, and other services that could be implemented in order to reduce NMU's energy and other operating costs for the facilities. The energy savings, operational savings, and cost avoidance achieved from the improvement measures for this phase will produce a return on investment over a period of 12 years or less, using a 5% interest rate. The performance of the FIMs, services, and reduced energy consumption will be guaranteed by the energy services company. The cost of the detailed energy audit and condition assessment have yet to be determined.



Long-Term Maintenance Projects

2012

With a Total Cost of Less than \$1,000,000

As a result of the Facility Condition Analysis the following projects have been identified:

Long Term Maintenance for 2012

Each year the university provides base budget and auxiliary funds to address long term maintenance projects. These specific projects are selected based on the condition of building and grounds operational systems; the appearance of the physical plant as it affects recruitment; compliance with safety, building, and accessibility codes; opportunities for energy savings; comfort of building occupants; and opportunities provided through donors, government funding, grants, and joint ventures with other nonprofits or private sector entities. The projects for 2012 are indicated on the following page.



Long-Term Maintenance Projects

2012

With a Cost of Less than \$1,000,000

As a result of the Facility Condition Analysis, the following projects have been identified:

2012 Long Term Maintenance List	General Fund Budget	Auxiliary Fund Budget	Total Project Budget
PEIF Roof Reserve (replace in 2013; total cost \$775,000)	\$350,000		\$350,000
LRC Roof Replacement	\$475,000		\$475,000
<i>Combined Heat and Power Projects Funded from LTM:</i>			
Replacement of Existing Heating Plant Feedwater Pumps	\$73,840		\$73,840
Replacement of Existing Heating Plant Condensate Storage Tank	\$156,238		\$156,238
Pumps	\$31,766		\$31,766
Biomass Boiler System Parts	\$31,594		\$31,594
Replacement of Heating Plant HVAC Control Systems	\$40,201		\$40,201
Condition Analysis Report Repairs (Note 2)	\$103,861		\$103,861
Thomas Fine Arts			
Forest Roberts Theatre			
McClintock			
Superior Dome			
Cohodas Electrical Switchgear Replacement	\$50,000		\$50,000
PEIF Natatorium HVAC Unit Replacement	\$45,000		\$45,000
PEIF Main Condensate Receiver	\$17,000		\$17,000
PEIF Pool Repairs/Deck Regrout	\$120,000		\$120,000
Hedgcock Water Heater Replacement	\$25,000		\$25,000
Interior Finishes (Paint; Carpet; Ceiling, Wall, and Floor Tile; Stair Treads; Door Hardware; Blinds, etc.)	\$50,000		\$50,000
Hardscape Infrastructure (Concrete, Asphalt, Irrigation, Landscaping, etc.)	\$50,000		\$50,000
Utility Infrastructure (Water, Sanitary, Storm, Steam Electric, Gas, Telecom, etc.)	\$25,000		\$25,000
Building Envelope (Tuckpointing, Sealing Brick, Painting Exterior Doors, Repair EIFS, etc.)	\$65,000		\$65,000
Berry Event Center Steam Room Repairs		\$75,000	\$75,000
<i>University Center:</i>			
Stair Treads		\$10,000	\$10,000
Exterior Doors		\$25,000	\$25,000
Partial Toilet Partitions		\$10,000	\$10,000
Floor Coverings		\$55,000	\$55,000
Sanitary Sewer Line Replacement		\$10,000	\$10,000
Window, Caulking, and Entrance Modifications		\$40,000	\$40,000
Presques Isle Commons - Parking Lot, Steps, Patio		\$40,000	\$40,000
Apartment Refurbishment		\$200,000	\$200,000
Lincoln Avenue Boiler Replacement		\$100,000	\$100,000
Total Budget	\$1,709,500	\$565,000	\$2,274,500

Notes:

- Over this fiscal year, Housing and Residence Life will be updating their long range facilities plan to meet their anticipated needs at a level that aligns with their anticipated circumstances with the inclusion of the renovation of one residence hall per year.
- Over this fiscal year, Facilities will be working with Johnson Controls to conduct the condition assessment report as part of Phase III of the Performance Contract. Repairs include maintenance on air handling units, exhaust fans, chillers, pumps, drives, etc. which will be funded over multiple years through the operational savings that are generated.



Future University Projects

The 2008 Campus Master Plan for Northern Michigan University (NMU) identifies growth opportunities, spatial efficiencies, land utilization, and community/business partnerships to help accommodate the projected enrollment growth of 10,400 students. Below is a brief description of various initiatives that are either included in the plan specifically or support the theme of the plan.

Future Student Housing Projects

With the completion of the four residence halls connected to Quad II, the University is reviewing the other housing complexes, both residence halls and apartments, to determine how best to meet the future needs of students. The possibilities being discussed are renovating some or all of the remaining six residence halls and renovating or replacing aging apartment complexes. In considering all options, the university's overall bed count would remain about the same.

Mixed-Use Development

A mixed-use development to support student commercial activities and enhance the image of the university adjacent to campus is envisioned as a vibrant living-learning district (retail and housing) and partnership opportunity between the university, City of Marquette, and a third party development entity. A market study was completed to determine the economic, demographic, and market opportunities for this use project. As a start, the university has opened a smoothie and Japanese cuisine restaurant in May 2011 that serves also as a late night study space for the students and bookstore outlet.

Student Union

A need expressed by students and staff during the 2008 Campus Master Plan update was a centrally located student union. This need was also noted as a space deficiency when the university's net assignable square footage was compared with peer institutions. Possibilities regarding location and potential services/occupants for this facility are being discussed with student organizations and staff.

Bike Paths

As part of the Campus Master Plan update, a comprehensive review of many existing studies related to campus planning were reviewed, including the Bicycle Feasibility Study conducted in 2001. The 2008 Campus Master Plan illustrates a number of potential paths and identifies key design principles for pedestrian networks.



Future University Projects *(continued)*

Wayfinding

One of the initiatives identified in the 2008 Campus Master Plan is to develop and implement a comprehensive wayfinding and signage system. This project is intended to provide a design for a comprehensive wayfinding system that clearly identifies existing campus entries and orients/directs both vehicular traffic and pedestrians (students, faculty/staff, and visitors) to facilities and amenities at Northern Michigan University. These amenities include campus entries, circulation routes, academic facilities, student support facilities, parking areas, recreational facilities, conference facilities, museum space, and theater space. The first phase of the campus wayfinding project has been completed which included the installation of a new campus entry sign at Seventh Street, trailblazers marking the routes from city streets to the university, a new golf course sign, and a new C.B. Hedgcock Building sign to make the facility more recognizable for prospective students and campus visitors. Phase II includes campus entry signs at Wright Street/Tracy Avenue and Third Street/Fair Avenue entrance. Boundary markers are planned for the corner of Kaye and Presque Isle Avenue and the Wright Street entrance to the Superior Dome. The estimated construction cost for Phase II is \$170,000.

Landscape Master Plan

The University has been investigating ways in which it can lower maintenance costs through the use of different landscape material. A private consulting firm was retained to inventory the university's existing landscape, identify areas where low maintenance landscape would be appropriate, conduct an analysis of cost savings, and develop recommendations for phased construction. A test plot has been constructed to showcase the plantings that are being considered in the master plan. The plot development will be evaluated over the next few growing seasons to determine the level of attention required for establishment of the plantings and to review the appearance throughout the process.

East/West Corridor - NMU/Marquette General Health Systems Study

A joint study between NMU and Marquette General Health Systems was conducted to review the possibility of a joint parking deck and the connection of Kaye Avenue to Fair Avenue. This connection will provide an east-west corridor link that will benefit the City, Hospital, and University. This connection will also allow the University to eliminate 7th Avenue, helping to eliminate traffic congestion on campus.

University Center/Marquette General Health Systems

MGHS and the University completed a collective study to determine possibilities for joint use of this facility for educational, medical, and conference space. This potential project would include renovations associated with inner building office moves and future tenant build-outs. Maintenance items, such as the replacement of windows, doors, roof, cooling tower, plumbing fixtures, exit lighting, etc., were included.



Future University Projects *(continued)*

Jacobetti Center Technology Center

Northern is developing a Business and Industry Center in the Jacobetti Center. This is a one-stop service center for new business ventures designed to help diversify and revitalize the state's struggling economy, support student internships and entrepreneurial academic programs, speed the commercialization of university research, and promote a culture of "entrepreneurial risk-taking." This project is a partnership between Northern Initiatives and the university. Phase I of this project included relocating the Northern Initiatives' office to the Jacobetti Center. This phase was completed in July 2009. In 2010, two startup businesses established a presence in the incubator space.

Superior Dome Locker Rooms

The university is evaluating the feasibility of concentrating all athletic department offices and the construction of new locker rooms for Track, Cross Country Running, and Cross Country Skiing in the Superior Dome. This construction will allow all athletic offices to be consolidated into one location and provide dedicated locker room space for each of the teams mentioned above.

Lee Hall Renovation

Lee Hall is the second oldest building on campus. Renovations are planned to create an Alumni/Visitor Welcoming Center, NMU Club, University/Upper Peninsula History Museum, and departmental offices for the NMU Foundation. The ballroom on the second floor will be restored and a facility for catering services will be constructed. The construction and reuse of this facility will bring recognition to the University, its heritage, and participation in the community. The project may be completed in phases with the Phase I renovation focusing on the renovation of existing art gallery and restrooms; installation of a new elevator, and the restoration of the Ballroom. The Phase I project budget is estimated to be \$1.4 million.

Physical Educational Instructional Facility Pool

The university is developing conceptual designs for a Natatorium addition to the PEIF for swimming, diving, and related amenities. The building should reinforce the architecture and character, create visibility from Presque Isle Avenue, and embrace future adjacent mixed-use elements. This addition will also address increased maintenance issues with the existing pool, meet current state and federal regulations, and NCAA requirements.



Future University Projects *(continued)*

Carey Hall Renovation

Carey Hall is the oldest building on campus and in recent years has primarily been used as transitional space for displaced departments during building renovation projects. In accordance with the 2008 Campus Master Plan, the underutilized facility is planned for demolition with the removal of building, restoration of site, capping of utilities, and preparation of east exterior wall which is contiguous to Lee Hall. Estimated project cost \$800,000.

NMU Golf Course Clubhouse

In conjunction with the NMU Construction Management Program, programming and facility needs assessment have produced preliminary plans for construction of a clubhouse. The facility would be LEED Certified and be a working laboratory for students in the C/M program during the remaining phases of design and construction. The NMU Foundation is exploring opportunities for funding this \$850,000 project.

Green Building Technology Demonstration Center

To help students, educators, regional consumers, and builders understand green building technologies and increase energy savings, Northern Michigan University proposes a Green Building Technology Demonstration Center at the Jacobetti Center. This facility would be constructed as a live demonstration center exhibiting all of the structure's operational systems. The building systems, including the envelope, heating, cooling, lighting, and electrical, will stress energy efficiencies and sustainability. This facility will be constructed displaying all technologies creating a living laboratory. Design, construction, and maintenance of the facility will be incorporated into the College of Technology and Applied Science curriculum. The building will be provided with information kiosks and serve as a regional education/ demonstration center serving students, builders, and consumers on the latest green building technologies. The total project cost is estimated to be \$450,000.



Future University Projects *(continued)*

Sawyer Academic Center

NMU is in preliminary discussions with Marquette County about renovating an existing facility at Sawyer International Airport to accommodate both the NMU Aviation Maintenance Associate degree program and other NMU general education courses. The possibility of incorporating the AMR Maintenance Academy for new hires is also being negotiated with American Eagle, a subsidiary of American Airlines.

Bookstore Study

NMU's Bookstore operations were evaluated by independent consultants to analyze the overall efficiency, benchmark it to the service level and historical financial performance, and to provide a long range plan to improve the level of return and overall service. The plan outlines strategic initiatives for relocation of the Bookstore to align with the campus growth pattern, in a location proximate to the academic core.

Quad II

The common area between the four Quad II residence halls would be renovated to enhance student life. Possible new venues include a convenience store, bookstore, food emporium, student lounge, programming rooms, meeting and study space, and satellite student recreation center.

Dining Services Marketplace Renovation Phase III

Phase III project will include modifications to the Cat Trax convenience store, replacement of servery line casework and floor replacement. The relocated convenience store will expand product offering and hours of operation to accommodate the additional needs of students. The estimated budget for this Phase is \$900,000 and will complete this project.



Future University Projects *(continued)*

MIR Roadway Improvements Request

NMU has been working with the Michigan Department of Transportation (MDOT) on three possible Michigan Institutional Roadway (MIR) requests to resurface (1) Fair Avenue between Eighth and Seventh Street, (2) the entrance and roadway around the Jacobetti Center, and (3) the inner-most ring road north of the Superior Dome. Not all of the costs for these projects would be covered by MIR funds; however, by participating in these programs, the University can leverage state funds to help improve its infrastructure. The MDOT is providing both design and construction estimates at no cost to the University for each potential project. Below is a brief description of each project:

- 1) The section of Fair Avenue between Eighth and Seventh Street was constructed by the MDOT in 1967. It is the oldest section of roadway on campus and the asphalt is in very poor condition. This project will resurface approximately 750 feet of roadway. The curb is in good condition and will remain. There are 15 on-street parking spaces that would not qualify for MIR funds. Estimated cost to resurface the parking area: **\$112,000 (MDOT \$89,000; NMU \$23,000)**.
- 2) The entrance and ring road around the Jacobetti Center was installed when the building was constructed and is almost 30 years old. The project will resurface approximately 3,300 feet of roadway and provide approximately 800 feet of new curb to help control drainage problems adjacent to the entrance road and the main entrance to the building. There are a number of on-street parking spaces along the ring road that would not qualify for MIR funds. Estimated cost to resurface the on-street parking: **\$383,000 (MDOT \$247,000; NMU \$136,000)**.
- 3) The ring road directly north of the Superior Dome was constructed in 1990 and is in fair condition; however, the original plans called for curb the entire length of this roadway. This was eliminated as a cost savings measure during construction. The elimination of this curb has created a number of drainage issues that have been exemplified since parking has been expanded and the access road to Wright Street constructed. This project would provide and install approximately 1,200 feet of new curb and resurface 1,200 feet of roadway. The only portion of this project that does not qualify for MIR funding is the loading dock area. Estimated cost to resurface the loading dock area: **\$255,000 (MDOT \$225,000; NMU \$30,000)**.



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