

## **Facility Assessment**

*A professionally developed comprehensive facilities assessment is required. The assessment must identify and evaluate the overall condition of capital facilities under college or university control. The description must include facility age, use patterns, and an assessment of general physical condition. The assessment must specifically identify:*

- A. Summary description of each facility (administrative, classroom, biology, hospital, etc.) according to categories outlined in “net-to-gross ratio guidelines for various building types,” DTMB-Office of Design and Construction Major Project Design Manual, appendix 8. If facility is of more than one “type,” please identify the percentage of each type within a given facility.*

See table on following page.

## **Facility Description**

	Facility											
	Napier Academic		Mendel Center <sup>2)</sup>		Bertrand Crossing		Hanson Tech Center		South Haven		Beckwith Hall	
Building Type	Sq. Ft	% <sup>1)</sup>	Sq. Ft	%	Sq. Ft	%	Sq. Ft	%	Sq. Ft	%	Sq. Ft	%
Administrative	4,038	1.33					835	1.69	1,970	4.58		
Auditorium	10,088	3.33	5,235	3.77								
Biology	5,005	1.65			1,321	3.85						
Chemistry	3,903	1.29			1,539	4.49						
Classroom	52,121	17.19	2,286	1.65	12,811	37.37	4,298	8.71	14,273	33.18	1,756	2.78
Courthouse												
Dining Hall	384	0.13										
Dormitory											48,724	77.08
Engineering												
Garage	6,864	2.26										
Gymnasium	12,528	4.13										
Hospital												
Laboratory	14,595	4.81	478	0.34	3,204	9.35	20,236	41.02	7,323	17.02		
Library	22,308	7.36	159	0.11								
Office	30,014	9.90	179	0.13	1,973	5.76	1,519	3.08	3,338	7.76		
Science	3,252	1.07										
Service	33,630	11.09	131	0.09	2,254	6.57	916	1.86	2,112	4.91	1,548	2.45
Warehouse	6,488	2.14	272	0.20	370	1.08	-		4,519	10.50		

1) Percentage is based on gross square footage of each facility.

2) Please note the Mendel Center is a Conference and Performing Arts Center.

*B. Building and/or classroom utilization rates (Percentages of rooms' used and percent capacity). Identify building/classroom usage rates for peak (M-F, 10-3), off-peak (M-F, 8-10 am, 3-5 pm), evening, and weekend periods.*

### **Classroom Utilization Rates**

The College's routine hours of operation for all facilities are as a minimum 8:00 a.m. – 10:30 p.m., Monday through Thursday; 8:00 a.m. – 5:00 p.m., Friday; and 8:00 a.m. – 12:00 p.m., Saturday.

A 2008 space needs assessment performed by Comprehensive Facilities Planning Inc. and updated in Winter 2009 indicates that primary hours when students will attend classes are 9:00 a.m. – 2:00 p.m., Monday through Friday, and 6:00 p.m. – 10:00 p.m., Monday through Thursday. Data continues to show that classrooms are used at over 80% of capacity, where 30 hours per week is considered full capacity. When factoring in non-credit activity like community education, tutoring, testing, professional development and club meetings, the use rate increases to nearly 90%; however, station occupancy is 103% indicating that some classrooms are overcrowded.

LMC achieved record enrollment of 4,832 unduplicated head count in Fall 2010 Semester and has remained above 4,000 until Fall 2017. Fall 2017 Semester enrollment for unduplicated head count is 3,276. Our preliminary assessment tells us that the decrease in unemployment has contributed to this enrollment decline. We continue to aggressively schedule classes at non-primary times. Increases in Early and Middle College students increases pressure on classroom availability during the primary hours. Additional offerings in viticulture and enology, culinary, health care certifications, welding certificate and associate degree, energy production and technology, and community education continue to support expectations that our recent enrollment numbers will hold steady in forthcoming years. Additionally, new programming in Early Childhood/Elementary Education, Medical Assisting at our South Haven Campus, and the new Baccalaureate program in energy production will continue to drive enrollments higher.

In addition to for-credit classes and directly related college activities, our classrooms and other facilities are routinely used by a variety of programs including Workforce Development training classes and countywide K-12 training programs. These room use and occupancy rates tend to be scheduled in the short term and are therefore not reflected in the figures above, and were not evaluated in the space needs assessment.

Areas with space shortages remain: Health Sciences, Transitional Studies, Culinary/Hospitality, Student Success, and assembly and collaboration space. We continue to experience a shortage of office space and associated storage; some classroom space has been converted into office space. We continue to rent offsite warehouse storage space to ameliorate the shortage of simple storage space. With the program and curriculum growth at our branch campuses, we anticipate additional space needs. In particular at our Niles Campus there is a need to expand our curriculum offerings to include expanded Health Sciences, Advanced Manufacturing and the addition of Computer Information Systems and Geographic Information Systems, none of which are feasible based on the current layout and use of the facility.

For further details please see **FY'18 Space Needs Assessment Update** section.

*C. Mandated facility standards for specific programs, where applicable (i.e. federal/industry standards for laboratory, animal, or agricultural research facilities, hospitals, use of industrial machinery, etc.).*

There are no mandated facility standards applicable to any Lake Michigan College programs.

*D. Functionality of existing structures and space allocation to program areas served.*

For further details please see **FY'18 Space Needs Assessment Update** section.

*E. Replacement value of existing facilities (insured value of structure to the extent available).*

### **Data and Discussion**

In March 2002, in accordance with General Accounting Standards Bulletins (GASB) 34 & 35, the College conducted a full and complete audit of facility assets. The building replacement values and machinery and equipment values noted below are based on a July 2017 summation of replacement value by MASB-SEG Property/Casualty Pool.

Facility	Building	Machinery & Equipment	Land & Improvements Thereto	Total
Benton Harbor Academic Building	\$91,455,860	\$47,438,332	\$8,678,749	\$147,572,941
Mendel Center	\$36,150,581	\$2,620,759	\$0	\$38,771,340
Niles	\$7,367,012	\$1,590,539	\$326,151	\$9,283,702
Hanson Tech Ctr.	\$9,986,716	\$1,576,726	\$0	\$11,563,442
South Haven	\$9,905,316	\$1,553,715	\$1,142,170	\$12,601,201
Beckwith Hall	\$8,808,026	\$880,803	\$0	\$9,688,829
Total	\$163,673,511	\$55,660,874	\$10,147,071	\$229,481,456

Land and improvements are based on an earlier evaluation by R.A. Shettler, Inc. adjusted for inflation.

Excluded from the replacement values above are any subsurface structures such as foundations, sanitary system piping, underground wiring, and below ground tanks.

*F. Utility system condition (i.e., heating, ventilation, and air conditioning (HVAC), water and sewage, electrical, etc.).*

### **Discussion**

The Napier Academic building was constructed beginning in 1968. The HVAC system is the original steam system with original fire tube boilers. We continue to replace a significant number of the fire tubes in each of the two boilers annually in order to reliably heat the facility with this equipment. One of two redundant electrical centrifugal chillers was replaced in 1998. Condenser water for the chillers is drawn from the man-made lake surrounding the building. This cooling system was ahead of its time when introduced, but no longer operates effectively due to the warmer summer weather which has increased the lake's temperature. One mechanical penthouse was renovated as part of the second phase of our science lab renovation project. This involved a new air handling unit, motors and associated ductwork. All other electrical, mechanical, sanitary and potable water systems are original construction.

The Mendel Center was constructed over a period of years from approximately 1980 through 1990. System boilers and all heating system equipment are original. The centrifugal chiller and cooling tower were replaced in summer 2002.

The Niles Campus and South Haven Campus facilities were constructed in 1998 and 2003, respectively. With the exception of the Niles boiler, all equipment is original and in excellent operating condition. In 2011, the Niles boiler was replaced with two gas-fired package units to improve energy efficiency and reliability.

The Beckwith Hall residence life facility was constructed in 2014 and opened for the first time to student residents in July 2014.

The Hanson Technology Center was construction in 2016 and opened for classes in September 2016.

System-wide routine preventive maintenance is performed and service agreements for major mechanical systems are in place.

*G. Facility infrastructure condition (i.e. roads, bridges, parking structures, lots, etc.).*

### **Description**

The infrastructure at all sites consists of access roads, parking lots, and pedestrian walkways. The sole exceptions are two small vehicular bridges and a large pedestrian bridge, all located at the Benton Harbor Campus.

The emergence of Men's and Women's Soccer in Fall 2013, along with the opening of our first residence facility, Beckwith Hall in Fall 2014 led to significant revitalization of our west campus area. Improvements in roadways, utility infrastructure, lighting, wayfinding signage, technology and emergency/safety equipment upgrades have all been made within the past couple of years.

As noted in section F. above, the Niles Campus and South Haven Campus facilities have been constructed within the past fifteen years and the infrastructure is in excellent condition. Also as noted above Beckwith Hall and the Hanson Technology Center have been constructed within the past two years.

The College's Napier Academic Building, Mendel Center, Hanson Technology Center and Beckwith Hall share common infrastructure. Two of three parking lots have been replaced, the Staff/Student lot in 1998, and the Mendel South lot in 2002. The Mendel North lot was resurfaced in Summer 2004, and a significant number of large surface cracks were repaired in Summer 2012; however, the base is seriously degraded and the lot will need to be replaced within the next few years. The Mendel South lot was resurfaced during Summer 2010. The Staff/Student lot was resurfaced in 2012 and the majority of the College primary access roads were resurfaced that same summer. A significant amount of curb and gutter and paving repairs were made during summer 2015 in the Staff portion of the Staff/Student lot. The lot itself was fully replaced including subsurface and drainage summer of 2017.

A new pedestrian plaza was constructed in 2012 and was extended to the east side of the campus in 2016. This reduces the amount of vehicular and pedestrian interface on Benton Harbor Campus. In general the pedestrian walkways are original infrastructure and there has been some degradation of the surface. Where necessary, portions of the walkways continue to be replaced on an annual basis.

The vehicular and pedestrian bridges located at the Benton Harbor Campus are original construction. They are in good condition.

*H. Adequacy of existing utilities and infrastructures system to current and 5-year project programmatic needs.*

## **Discussion**

Our #1 Capital Outlay Project Request proposes replacement of our energy infrastructure and extending the classroom technology upgrades to the remainder of Napier Academic building. This remains our highest infrastructure priority.

In conjunction with the improvements made at our Benton Harbor Campus over the past year and the construction of our new technology facility, we expect the emergence of residence life and increased campus activity to drive facility and infrastructure expansion improvements in this area of our College.

On the NE corner of the Benton Harbor Campus we are planning an Enology/Viticulture facility. We have already invested in the extension of utilities and infrastructure to support this new facility.

Currently a temporary Enology and Viticulture Center is housed in the Mendel Center.

Within the Napier Academic Building we have captured existing space and renovated it into a new student center, the Hawk's Nest. The center overlooks a green roof plaza that is over 50+ years old and now requires renovation to refresh the look of this student space while maintaining the integrity of the green roof. Some additional improvements on the plaza were made in Summer 2014, but in the long term more extensive renovation will be required to maintain the plaza.

Please see the following sections of this submittal for additional information: **Space Utilization, Master Plan, and Information Technology Plan.**

*I. Does the institution have an enterprise-wide energy plan? What are its goals? Have energy audits been completed on all facilities? If not, what is the plan/timetable for completing such audits?*

All of our energy planning is grounded in Lake Michigan College's over four decade history of sustainability embodied in our original green roof on our plaza and the historic use of the lake surrounding our Napier Academic building as the cooling source for our original HVAC plant.

We have completed several energy audits with a variety of firms and consultants including Honeywell Energy Services, Progressive Architecture & Engineering Services and VFA as part of our facilities condition assessment. In addition we have had and continue to have explorative discussions on performance improvements with several energy services firms. In conjunction with our master planning effort we also developed an energy master plan. Finally we conducted a multi-disciplinary energy planning charrette in which we invited several architects, engineers and contractors to a daylong planning discussion on the direction Lake Michigan College would take in energy planning. The results of these planning efforts have been built into our facilities condition assessment and into our five-year capital plan.

Over the past five years Lake Michigan College has invested over \$38M in physical plant upgrades, enhancements and expansions. Each of these projects included energy efficiency and sustainability elements including energy efficient roofing, package-boilers and window systems, and low-volume flush units in any restroom upgrades completed to date. Heat recovery systems and acuity monitors have been installed in our new science lab spaces. Collegewide we have replaced incandescent fixtures with CFL's where possible and are installing LED lighting units when lighting upgrades or replacements are needed. We are continuing to expand our building control system to cover more and more of our facilities. Finally, hybrid vehicles were purchased for our College pool.

While significant progress has been made, our most critical energy improvement, the replacement of our 50+ year old primary heating and cooling plant and distributions system in our Napier Academic Building is encompassed in our #1 FY'19 Capital Outlay Project Request.

*J. Land owned by the institution, and include a determination of whether capacity exists for future development, additional acquisitions are needed to meet future demands, or surplus land can be conveyed for a different purpose.*

### **Property Listing**

The College owns the following land, which houses academic facilities.

<u>Address</u>	<u>City</u>	<u>State</u>	<u>Facility</u>	<u>Acreage</u>
2755 E. Napier Avenue	Benton Harbor	Michigan	Benton Harbor Campus	263.00 acres
1905 Foundation Drive	Niles	Michigan	Niles Campus	19.49 acres
125 Veterans Blvd.	South Haven	Michigan	South Haven Campus	22.37 acres

In addition, our Niles and South Haven Campus sites each allow for expansion by at least two additional facilities.

Lake Michigan College has also acquired additional properties and associated acreage to protect its perimeter in anticipation of future development. These include:

<u>Address</u>	<u>City</u>	<u>State</u>	<u>Facility</u>	<u>Acreage</u>
1442 Yore Avenue	Benton Harbor	Michigan	<i>none</i>	2.06 acres
1486 Yore Avenue	Benton Harbor	Michigan	<i>none</i>	2.06 acres
1508 Yore Avenue	Benton Harbor	Michigan	<i>none</i>	1.98 acres
2840 Territorial	Benton Harbor	Michigan	<i>none</i>	23.80 acres

Please note the Yore Avenue properties listed above are adjacent to the Napier Avenue property.

### **Discussion**

At the Napier Avenue Campus/Mendel Center, approximately 111 acres are being maintained, leaving 152 acres open, some of which is available for development. The College is planning to use a portion of this for development of its enology and viticulture programs. Portions of the remaining acreage are maintained in natural forest, wetlands, and prairie grass ecosystems, and are used for instructional programming (see enclosed Master Plan).

At the Niles Campus, approximately 5 acres are maintained, and as noted above, sufficient property exists to support future development. In 2003, we sold 0.51 acres to the City of Niles for the erection of a water tower on the southeast corner of our property.

Our South Haven Campus includes land for at least two additional facilities.

In summary we have adequately planned for and acquired land for our future development needs.

*K. What portions of existing building, if any, are currently obligated to the State Building Authority and when are these State Building Authority leases set to expire?*



**Data**

<u>Facility</u>	<u>Obligated in:</u>	<u>Expires in:</u>
South Haven Campus	2003	2043