



**Alpena Community College
Alpena, Michigan**

**Five-Year Capital Outlay Plan
FY2022-2026
Submitted October 2020**

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I. Mission Statement

The College Mission

The mission of Alpena Community College is to create a culture of educational excellence and service to the community.

The College Goals

(1) Campus/Culture

Offer a welcoming, safe, and adaptable culture that inspires diversity.

(2) Learning/Education

Motivate continuous exploration of diverse opportunities and knowledge acquisition through a flexible learning environment.

(3) Community

Stimulate community collaboration, which fosters comprehensive economic, cultural, and community development.

(4) Value

Exercise sustainable value that supports career pathways and fiscal responsibility.

The College Vision

To be recognized in our local and global communities as the premier resource and first choice for exceptional, affordable, and innovative education.

The College Values

- We demonstrate **accountability** to all our stakeholders, students, staff, business partners, industry alliances, and taxpayers.
- We act with **integrity**, placing fairness and honesty at the center of all our actions.
- We aspire to **excellence** in all our endeavors.
- We show **respect** for diversity, individual contributions, and educational partnerships.

II. Instructional Programming

a. Existing Academic Programs

ACC offers the Associate in Arts and Associate in Science degrees for students who plan to transfer to a four-year institution after two years of study.

Associate in Arts Concentrations

- | | |
|--------------------------------|---------------------|
| • Anthropology | • English |
| • Business Information Systems | • Fine Arts |
| • Computer Information Systems | • Geography |
| • Criminal Justice | • History |
| • Economics | • Liberal Arts |
| • Education, Elementary | • Political Science |
| • Education, Secondary | • Pre-Law |
| • Education, Vocational | • Psychology |
| | • Social Work |
| | • Sociology |

Associate in Science Concentrations

- | | |
|-------------------------------|------------------------------|
| • Biology | • Pre-Fisheries and Wildlife |
| • Chemistry | • Pre-Medical Technology |
| • Computer Science | • Pre-Medicine |
| • General Sciences | • Pre-Occupational Therapy |
| • Mathematics | • Pre-Pharmacy |
| • Natural Sciences | • Pre-Physical Therapy |
| • Physics | • Pre-Radiology |
| • Pre-Construction Management | • Technology |
| • Pre-Dental | • Pre-Veterinary |
| • Pre-Engineering | • Psychology |

The Associate of Applied Science degree marks the progress of students seeking employment after graduation from a variety of two-year programs. Current majors for the AAS degree include the following.

- Accounting
- Auto Service and Repair
- Business Information Systems
- Business Management
- CADD Technology
- CAD/CAM Technology (Machining Option and Welding Option)
- Concrete Technology
- Corrections
- Customer Energy Service
- Electrical Maintenance Technician
- Industrial Sales
- Law Enforcement
- Manufacturing Technology
- Marine Technology
- Marketing
- Medical Assistant
- Medical Coder and Biller
- Millwright Technician
- Network Administration
- Nursing
- Small Business Management
- Utility Technician

The Certificate award marks the progress of students seeking employment after graduation from a variety of one-year programs. Certificate awards are currently made in these fields.

- Apprentice – Electrical
- Apprentice – Millwright
- Auto Body Repair
- Auto Service and Repair
- Business Information Systems
- CAD/CAM, Advanced
- Construction Technology – Green Building
- Corrections Officer
- Customer Energy Service
- Industrial Technology
- Manufacturing Technology
- Network Administration
- Licensed Practical Nursing
- Small Business Management
- Utility Technician
- Welding Fabrication

ACC projects the following programming changes will be affected by structural considerations:

- ACC has successfully transformed its highly successful Utility Technology and Electrical Apprentice programs into a comprehensive and coordinated set of electrical power offerings linked to the State of Michigan's growing markets and alternative energy initiatives. Factors converging to justify this pursuit include:
 - ✓ The statewide reach of ACC's electrical programs in terms of recruitment of students; alliances with power companies, trade associations, and unions; and employment of graduates.
 - ✓ Readiness of ACC's electrical faculty to advance curriculum and instruction into wind, solar, and biomass for energy production and distribution.
 - ✓ Recent authorization for community colleges to offer bachelor's degrees in the field of energy production. At ACC a BS degree in Electrical Systems Technology has been created, and work to upgrade accreditation with the Higher Learning Commission has been approved.
 - ✓ Authorization by the Higher Learning Commission in September 2015 for ACC to offer a Baccalaureate degree in Electrical Systems Technology.
 - ✓ On June 25, 2012, Governor Snyder signed legislation making provision for the State of Michigan to fund half the \$5 million cost of ACC's Electrical Power Technology Center, in which these transformations will take place.
 - ✓ ACC successfully launched its Baccalaureate degree in Electrical Systems Technology in fall 2016.
- Recently mandated discipline-specific accreditation guidelines from the Accreditation Commission for Education in Nursing and the State of Michigan have necessitated curriculum changes involving increased clinical hours. Because of these increases, ACC has hired three additional full-time faculty members while increasing intake of LPN and RN students to 48 per year. Our ACEN application was approved with final award of accreditation in March 2017. The FY17 capital outlay project request aligned with this direction, calling for renovations of the Van Lare Hall to make it dedicated to nursing classrooms and laboratories. This \$8.695 million repurposing project is underway and is expected to be complete by March 31, 2011.
- ACC has also moved forward with nursing pre-requisite classes at the Oscoda branch campus, and has created an LPN track fully obtainable

there by residents of Iosco County and southern Alcona County. Plans to expand the LPN to include an RN track are underway.

- Obtaining Bachelor of Science in Nursing (BSN) authorization is a high priority for the College.
- Admissions, academic advising, registration, tutoring, career placement, testing, and counseling services are offered to ACC students at several Main Campus locations dispersed on both sides of the Johnson Street. At most community colleges the necessity of sending students to multiple stops across campus has been mitigated by organization of one-stop shop centers for delivery of these and other services to students. Based on documented better results, the renovation of Van Lare Hall to incorporate a Center for Student Success where necessary student support services are centralized makes sense for ACC and its students.

b. Unique Characteristics

The Concrete Technology AAS program at ACC is one of only two in the nation. It operates out of the World Center for Concrete Technology on the ACC Main Campus alongside incumbent worker training and research/testing performed as a service to the concrete industry.

The Utility Technology (lineworkers) program is also nearly unique, with only one other similar program offered at a Michigan community college. Graduates of this program enter employment with electrical cooperatives, municipalities, and at large energy providers such as Consumers Energy. It is not uncommon for Utility Tech graduates to enter employment at a starting wage of \$37/hr.

No other community college in Northern Michigan or the Upper Peninsula offers the range of manufacturing technology programs found at ACC, including Marine Technology and customized training in drones and autonomous aerial vehicles.

For at past five years ACC has ranked highly among Michigan community colleges in rate of graduation. For the cohort most recently measured in the US Department of Education Integrated Post-Secondary Education Data System, ACC's overall rate of 35% of students graduating within 150% of normal time to completion is twice the rate of the other nine comparable Group 1 Michigan community colleges.

ACC has administered four Department of Labor training grants over the past twelve years, the most recent a four-year TAACCCT grant for \$2.50 million to intensify workforce development in the fields of advanced manufacturing, aerospace production, cybersecurity, and smart grid technology. ACC received the Department's 2007 Recognition of Excellence award for the best community college implementation in the nation of training under its first grant. ACC also received a \$2.25 million Title III Strengthening Institutions Program (SIP) grant from the United States Department of Education in September 2019.

Alpena Early College in collaboration with Alpena Public Schools is now in its 7th year. The May 2019 cohort graduated 38 students earning an average of 51 college credits.

ACC has boosted enrollment in dual enrollment programs by offering discounted in-district tuition to all K-12 districts enrolling students in our classes. As far as we are aware, no other college in Michigan pursues this strategy for encouraging access by qualified high school students.

ACC is fortunate to provide a classroom and office on campus for a very robust Association of Lifelong Learners boasting 300+ members of all ages and over 160 presentations, excursions, and social events per year.

As for university partnerships, ACC participates in the new Michigan Transfer Agreement, administers numerous other articulation agreements, and performs reverse transfer functions for students who leave us before graduating to begin university study. In addition, ACC's Madeline Briggs University Center brings bachelor's degree programs in business from Northwood University, integrative studies and information technology from Ferris State University, and nursing from University of Michigan – Flint so that local residents have access without relocation or long road trips.

c. Other Initiatives Affecting Facilities Usage

- Collaboration with the Alpena Fiber Ring Consortium and Merit Network, Inc., to expand broadband service to the Northeast Lower Peninsula.
- Successful rollout of an LPN nursing track to the Oscoda Campus, which entailed building out a nursing instructional laboratory.

d. Economic development Impact

In general terms, ACC's economic impact is documented by a study performed in 2006 by CCBenefits, Inc. The Fact Sheet is attached at the end of this report in the Source Material section. This document demonstrates that within the five-county college service area, the regional economy is \$88.1 million stronger per year as a result of past and present college operations.

III. Staffing and Enrollment

a. Enrollment by Program with ≥ 10 Majors

PROGRAM	MAJORS
Apprenticeship Millwright Certificate	10
Automotive Service Certificate	10
Business Info Systems Adm. Asst.	10
Mathematics	10
Marketing	10

Apprentice-Electrical Certificate	11
Pre Pharmacy	11
Millwright Technician	12
Network Administration	12
Pre Radiologic Technology	15
CAD/CAM Tech (Machining Option)	15
Electrical Maintenance Technician	15
English	15
Pre Veterinary Medicine	16
Marine Technology	17
General Studies	17
Computer Information Systems	17
Computer Science	17
Education Secondary	18
Automotive Service Technology	20
Sciences General	25
Pre Engineering	25
Biology	26
Law Enforcement	26
Pre Physical Therapy	27
Psychology - AA	28
Accounting	34
Utility Technology	34
Licensed Practical Nursing Certificate	35
Business Administration	36
Welding Fabrication Certificate	37
Fine Arts	43
Pre Medicine	44
Social Work	44
Medical Assistant	45
Registered Nursing	49
Concrete Technology	55
Utility Technician Certificate	58
Criminal Justice	60
Business Management	78
Pre Nursing	176
Liberal Arts	280

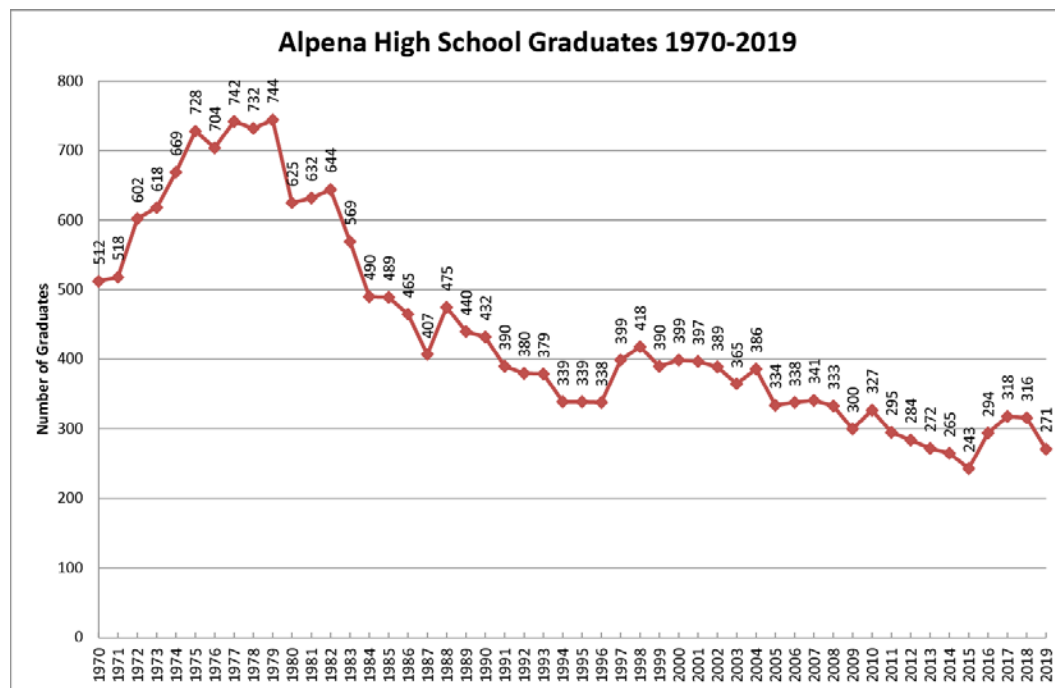
b. Enrollment projections

Fall semester 2019 ACC was number one among Michigan's 28 community colleges with a 4.5% increase in headcount and credit hours. Affected by the uncertainty caused by the COVID-19 pandemic, fall semester 2020 enrollment declined 4.1% in headcount and 6.8% in credit hours compared to Fall semester 2019. This enrollment decline was experienced, and in many cases more severely, across Michigan and most of the 1100 community colleges nationally. Some ACC enrollment highlights:

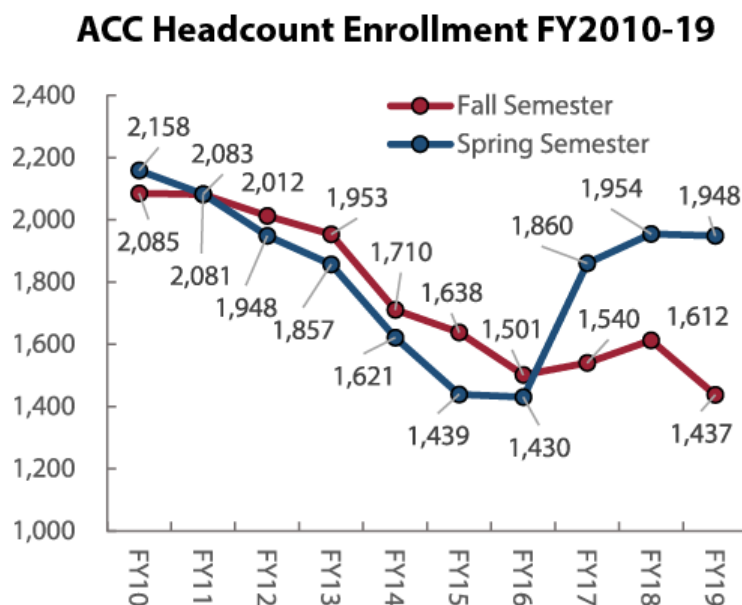
- Online course enrollment was up 148.9% in credit hours, and 102.1% in headcount.
- Early College enrollment was up 28.9% in credit hours, 23.5% in headcount.
- Dual enrollment was up 15.9% in credit hours, 3.8% in headcount.
- Early College and dual enrollment comprised 40.8% of headcount, and 29% in credit hours.
- Continuing Students and New First Time Students, the largest aggregation of headcount and credit hours, were down more than 15%.
- ACC finished 3rd among Michigan's 28 community colleges in headcount based on data from the Michigan Community College Student Services Association (MCCSSA), the official report from community college registrars.

Over the next five years ACC will be dealing with a number of other factors that might cause continued enrollment challenges. Population in Alpena County, the source of most ACC students, is likely to remain stable with an increasing senior citizen component and a decreasing youth component. In addition, tighter restrictions on federal Pell grants for low-income students has adversely affected enrollment at all community colleges. To address the local demographics, the college continues to follow an annually updated marketing plan, available at http://discover.alpenacc.edu/about_acc/docs/acc_marketing_plan.pdf. The plan calls for continuing proven strategies and also initiating new emphases on technical program recruitment all over the state, Oscoda Campus students, and dual enrollment and Early College partnerships with regional K-12 districts. Introduction of videoconferencing system equipment (VCS) has supported technology-enabled learning across the district served by Alpena Community College and has been particularly helpful in responding to the COVID-19 pandemic. ACC's innovative work in this area was featured in *EDTech* magazine in March, a national publication focused on technology innovation in higher education.

An ongoing enrollment challenge is the regional demographic of NE Lower Michigan, namely, there are fewer graduates every year at every K-12 in the district. Data from Alpena High School, the largest school in the region, illustrates this demographic challenge (see graph below):



c. Past ACC Enrollment Patterns



d. Ratios

From the 2018 Fall Semester through the 2019 Summer Semester, ACC generated 29,373 credit hours. This number divided by 30 yields 979 Fiscal Year Equated Students (FYES) by the Activities Classification Structure definition. During the same period the credit students were served by 67 equated full-time faculty members. Forty-six full-time faculty members provided 74% of instruction by credit hour, with the remaining 26% provided by adjunct faculty members. Thus, taking 67 equated faculty members for 979 equated students, we arrive at a 1:14.6 faculty-student ratio.

During the same period ACC's General Operating Fund supported the employment of 19.14 administrators. (The other administrators were supported by grants or auxiliary funds.) This produces a 1:51 administrator-student ratio at ACC.

e. Future Program Staffing Needs

For programs affected by the capital outlay plan, no new full-time faculty positions are anticipated.

f. Average Class Size

Not counting independent studies or internships, average credit class size for fall semester of 2019 is 13.

IV. Facility Assessment

FACILITY ASSESSMENT AND DEFERRED MAINTENANCE CAPITAL PLANNING REPORT

2015 UPDATE

Prepared by SHW Group

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Introduction

Process Background

SHW Group, in conjunction with the Alpena Community College Facilities staff, performed an update to the facility condition assessment of all campus buildings in May 2008.

As part of the study, SHW Group staff interviewed campus personnel and performed a walk-through of each building. Existing conditions, maintenance history, potential problems, and projected life expectancy of systems and components (including structural, mechanical, and electrical systems) were recorded.

Collected information was analyzed to develop estimates of repair and replacement costs in a database format for record-keeping, long-range planning, prioritizing and cost projection.

This report contains the printed version of that database.

Condition Reports

Highlights of this data are presented in this section to provide an overview of the condition of the entire College, each facility, and major campus systems. Recommendations for funding, both immediate and long term are provided.

Individual building reports include additional detail and representative photographs of each facility.

Database Report Pages

The underlying data used to develop this report and the budgeting recommendations are included in the appendix. This is the raw data for use and regular updating by facilities staff. This information is also useful as a permanent record of conditions often retained in multiple locations, and as an “owner’s manual” for new employees.

Purpose of the Study

This Facilities Assessment and Deferred Maintenance Capital Planning Study, developed through a combination of personnel interviews, facility walk-throughs and building system analysis, was performed to accomplish the following objectives:

- Provide an inventory of the College’s facilities in a database format to be easily updated and maintained by college personnel and allow for quick access to facilities information.
- Determine the general condition of the buildings and grounds of the college and provide the data in a concise format, allowing quick determination of the current replacement value and condition of each facility.
- Determine a Facilities Condition Index (FCI) for each building and the college as a whole. The FCI is a benchmark index that rates the condition of existing college buildings and is used by facilities managers to quantify and prioritize deferred maintenance projects for capital planning purposes.
- Assist the college in meeting the goals of its Mission Statement through timely maintenance of the physical backbone of the college – the campus buildings.



Glossary

Vital Statistics

Basic building information– building use types (classroom, library, administration), year built, building area in square feet, and number of floors.

Observation Highlights

A partial list of field observations, highlighting major repair/replacement items and recently completed work. For a more complete list of field observations, see the individual building data sheets in the appendix.

Current Replacement Value (CRV)

The CRV is the cost to construct a typical replacement building in today's dollars. The figure is based on the square footage of the current structure and the estimated current construction cost for that type of structure. Since some buildings are conglomerations of different uses (i.e.: classroom, library, administration) the CRV is based on estimated proportions of use types in each building. By the nature of the calculations and square foot construction costs, the current replacement value has a $\pm 20\%$ margin of error and will increase annually due to inflation.

Priority Issues/One Year Deferred Maintenance Backlog (1YR DMB)

The value of projects that have been deferred and require completion in order to safely maintain facilities and related infrastructure for their current use. The 1 Year DMB amounts shown are for items requiring immediate attention to fix critical problems. A long-term investment strategy should also include items that require repair or replacement within 5 years, thus avoiding the increased repair costs resulting from deferred repairs (i.e. leaky roof damaging interior finishes).

Facilities Condition Index (FCI)

Simply put, the FCI is the current DMB divided by the CRV. The resulting number is compared against nationally accepted standards and used to determine the condition of the building, campus or college.

FCI < 5% = Good

FCI $\geq 5\%$ and $\leq 10\%$ = Fair

FCI > 10% = Poor

The Association of Higher Education Facilities Officers (APPA) recommends that the FCI for any given building should not exceed 5% for the building to be considered in "Good" condition. The rating of "Fair" indicates that the building requires some attention to bring it up to standard, with some problems areas potentially requiring immediate attention. The rating of "Poor" indicates that the building needs urgent attention to prevent the existing problems from affecting other building systems and compounding future repair costs.

The APPA FCI Ratings, indicating the general condition of the building, are shown here along with the corresponding “traffic signals” that give a quick visual indication of the FCI rating.

Priority Issues/One Year DMB Excess

This represents the amount the DMB exceeds the APPA benchmark of a building with a 5% FCI – essentially the dollar amount to be spent immediately to reduce the DMB to attain the APPA rating of “Good”. In situations where a building is in better than “Good” condition (FCI<5%), the one year DMB excess is shown as zero.

For example, if a building has a CRV of \$1,000,000 and an FCI of 10%, the DMB would be \$100,000. This would leave a DMB excess of \$50,000 – the amount to be spent to reduce the FCI to within the APPA 5% benchmark

Zero-Five Year Cumulative Deferred Maintenance Backlog (5YR DMB)

Similar to the One Year DMB, the Five Year DMB represents the total value of projects that will require attention within the next five years, including those that fall under the One Year DMB. This value is included to help determine the investment required over the next five years to repair and/or replace problem items before they become critical.

The Zero-Five Year DMB is often more telling of a buildings’ condition than the One Year DMB, since the first year number focuses primarily on life safety, code compliance and collateral damage. Most maintenance issues are not so critical as to fall into this category but often become so within 5 years.

Looking at the previous example, if the building condition survey indicated an additional \$250,000 in repairs from years 1-5, then the 0-5 Year DMB would total \$350,000 (including \$100,000 from the first year).

Zero-Five Year DMB Excess

Similar to the One Year DMB Excess value, this amount represents the investment to bring the DMB in line with the APPA benchmark of 5% of the Current Replacement Value. In situations where a building is in better than “Good” condition – a bit more difficult over a five year span, the five year DMB excess is shown as zero.

This number is a good starting point for determining budgets – it allows the college to see what to spend to bring buildings into the APPA “Good” range – with the understanding that complete elimination of the Deferred Maintenance Backlog is not a likely scenario.

DMB Equilibrium (Annual cost to maintain current DMB)

This is the dollar amount to be invested annually to keep the FCI (and DMB) from deteriorating – regardless of the current condition of the building.

Reusing the previous example, the amount required to maintain the FCI at current levels would be \$20,000 annually (2% of \$1,000,000).

The number is based on a nationally accepted rule of 2% of the CRV and assumes that building components have a 50-year renewal cycle and depreciate along a straight line. The assumptions were made to simplify calculations; in reality, building components DO NOT expire according to straight-line depreciation, and most components will require replacement within 30-40 years (excluding structure and foundation).

To restate – this annual investment will only maintain the existing FCI and do little or nothing to reduce any existing backlog.

CRV:	\$10,000,000
One Year FCI:	1.0%
Five Year FCI:	6.0%
One Year DMB:	\$100,000
Five Year DMB:	\$600,000
One Year DMB Excess:	\$0 over APPA 5% benchmark
Five Year DMB Excess:	\$100,000 over APPA 5% benchmark
Maintain DMB:	\$200,000 annual cost to maintain current DMB

Above: A generic example of how the aforementioned data appears in this report

Building Use Types

The table below shows building use types and their respective current construction costs per square foot used to develop this database. As some of these use types are not found on all campuses, not all use types are used in the database. These costs, based on regionally weighted, preliminary construction cost data provided by contractors, historical cost databases and data from RS Means and Marshall and Swift, are for typical college and university buildings.

Use Type	Cost/SF
Administration	\$180
Athletic	\$185
Auditorium	\$285
Classroom	\$190
Kitchen/Food Service	\$200
Lab	\$280
Library	\$185
Maintenance	\$110
Student Union	\$170
VoTech	\$170

Building Components

The table below shows the building components used in the report. These are the basic components having a major influence on the replacement value of a building. The buildings were evaluated during walkthroughs with the facility personnel to determine how much of each component made up the CRV. It was then determined what percentage of each component required repair or replacement within one year, five years, ten years, and beyond. This data is used to determine the investment required to reduce the current and future deferred maintenance backlog.

Category	Component Name
Structure	Structure
Envelope	Roof, Glazing, Cladding
Mechanical	HVAC Equipment, Plumbing
Electrical	Primary/Secondary, Distribution, Lighting, Voice/Data
Finishes	Ceilings, Walls, Doors, Floors
Safety/Code	Building, Fire, ADA
Other	Site Repair, Ext. Light, etc.

Deferred Maintenance Backlog

A Brief Background

The problem of deferred maintenance at colleges and universities has been studied and better understood over the last decade. From an article by Dan Hounsell, in the magazine *Maintenance Solutions*, discussing how universities are addressing the issue of deferred maintenance:

“Maintenance management professionals, who once seemed to be one of the few parties giving serious thought to the issue, now have been joined in the debate by growing numbers of sympathetic voters and far-sighted facility decision makers.”

The Association of Higher Education Facilities Officers (APPA) concluded in a 1995 report titled “A Foundation to Uphold: A Preliminary Report” that the national backlog of deferred maintenance at colleges and universities exceeds \$26 billion, up 27 percent from estimates made in a similar report from 1988.

\$5.7 billion of that \$26 billion backlog is classified as “urgent deferred maintenance” – projects that require immediate attention and that will cost far more if they are not completed within a year. Although spending this sum will eliminate current urgent needs, in only a few years there will be a new roster of items to replace them – if future budget planning is not undertaken. According to the APPA report, the current backlog “represents a threat to the capability of higher education facilities to support college and university missions.”

Other conclusions from the report include:

- More than 50 percent of all college types reported that deferred maintenance increased or stayed the same since 1988; only 25 percent reported decreases.
- 20 percent of the colleges in the study accounted for nearly 60 percent of the accumulated deferred maintenance.
- Public colleges typically have a greater deferred maintenance backlog than private universities, with 78 percent of the public research universities reporting an increase in deferred maintenance backlogs.
- By assuming that infrastructure deferred maintenance – site repairs, road and parking lot maintenance, exterior lighting, etc. – was not included in the figures provided by the campuses in the study, the estimated cost to eliminate accumulated deferred maintenance increases to \$32.5 billion – with urgent needs increasing to \$7.1 billion.
- When senior school administrators made deferred maintenance a priority, the institution made progress in reducing its backlog.

The most important point to remember is that even if universities and colleges spend these amounts, this will only eliminate the existing deferred maintenance backlog. There needs to be a coordinated, funded plan put into place at colleges and universities to maintain the condition of the facilities once they have been repaired – or time will again take its toll.

College Information:

Alpena Community College (ACC), founded in 1952, consists of two campuses. The eight facilities included in this report total approximately 319,000 square feet with a total Current Replacement Value estimated at approximately \$59.6 million, with the oldest building built in 1957. The immediate general condition of the ACC facilities is “Good”.

This result is somewhat improved by the construction of new facilities which offsets the negative effect older buildings can have on the overall facilities condition index.

The three buildings contributing most to the immediate and longer term FCI values are the Besser Technology Center (BTC), the University Center, and the Huron Shores Building on the Oscoda campus.

Though the life expectancy of many building materials and systems has been reached, solid construction and good maintenance practices have helped to keep those materials (i.e., original windows, doors and certain HVAC systems) in as good condition as can be expected. However, in specific cases, some older systems including roofs, windows, doors and HVAC components are beginning to reach time for replacement.

Several areas of concern noted in the original 2000 assessment, including HVAC, lighting and ADA upgrades have been resolved since. Areas in need of attention include: water infiltration through exterior single-wythe masonry walls in newer facilities; older window and entry doors and related hardware; aging HVAC equipment; and roofing.

The average immediate deferred maintenance backlog and FCI for Alpena Community College is below the national average of approximately 7%, representing a manageable capital investment over the next several years. Most of the projected expenses at ACC fall into the category of aging systems.

This data, when compared to the accepted APPA benchmark, shows that Alpena Community College, when all buildings are viewed together, is currently in good condition. The next section of this report breaks this data down into a building-by-building review to clarify where attention is needed.

Priority areas:

Certain areas were noted and observed to be in need of particular attention. While listed on the individual building sheets, some of the more important issues are listed below:

Roofing: While roofing was replaced at the BTC, ponding water on the roof has occurred due to original, failed insulation. The Van Lare Hall and University Center roofs have reached their end of life and are due for replacement (These roofs have been replaced since the initial 2008 investigation).

Water Infiltration: The single-wall masonry construction at many of the newer buildings poses an ongoing maintenance cost and an immediate concern in several locations. One particular location of continued issues is at the Newport Center, especially in the arena, where penetrations

and lack of wall flashing appear to have contributed to leaks and collateral damage. The World Center for Concrete Technology is also experiencing ongoing problems with water entering through the exterior wall into the main lobby.

HVAC: Many HVAC system components, particularly the boilers at the BTC and the AHU's at Huron Shores are at or past the end of the useful life (the boilers at BTC are undergoing replacement, reflected in this report). Good maintenance practices have kept major repairs at bay, but funds to replace boilers, original air handling units, unit ventilators, and pumps should be set aside in the near term.

Windows and Doors: Original windows, including sealant and hardware - especially those at the Natural Resources Center and University Center - are noticeably deteriorated and due for replacement.



Concrete roof deterioration at the Natural Resources Center – reroofing may have stopped progression of problem.



Original vinyl asbestos floor tile deterioration and adhesive failure at Van Lare Hall.



Concrete plank roof shifting at Besser Technology Center – connecting cables are suspect.



Concrete block between upper and lower windows allowing water infiltration – flashing is suspect.

Summary

The jump from the “Priority Issues FCI” of 1.8% to the long-term “0-5 Year FCI” of 9.0% is typical for many campuses with 40+ year-old buildings. If conditions are not addressed, the future situation will require increasing capital investments, even to maintain conditions in their current state.

This predicted potential FCI increase is mostly attributed to older campus facilities with systems nearing or past their typical life. For example, due to their size, age and cost, the Besser Technology Center and the Oscoda Campus contribute over half of the College’s predicted 5-year deferred maintenance expenses.

As stated in the Deferred Maintenance Backlog background, the investment solution has two facets:

- The funds needed for immediate repair projects – repairs and/or replacements that will prevent further deterioration of the buildings and infrastructure and help the college stay ahead of life-safety concerns.
- The funds required to maintain and/or improve the condition of the buildings. These funds need to be budgeted in advance to allow for repairs at the appropriate time, before items become critical or cause additional damage.

The following pages of this report break this data down into a building-by-building review to clarify where attention is most needed.

Recommendations:

Short Term Recommendations

The college should review the items that compromise the One Year Deferred Maintenance Backlog of approximately \$1.1 million and address those affecting life/safety issue, those having the greatest potential for future damage to other building components, and those that are code compliance issues.

In addition to the first year issues that will carry over into the next five years, the college should also immediately begin budgeting for the projected \$5.4 million in cumulative issues over the next five years and evaluate alternative solutions where the cost outweighs the benefit of repair.

Long Term Recommendation

The College should budget as much as possible of the industry recommended “2% of CRV” maintenance fund of \$1.1 million annually for ongoing repairs to maintain the buildings once they are upgraded. While this benchmark is difficult for most institutions to attain, the goal of setting aside this amount annually is to ensure the buildings remain in stable condition and that funds are available in advance when systems reach the end of their lives.

Alpena Community College

CRV:\$62,510,885
Priority Issues FCI:3.6%
0-5 Year FCI:12.6%
Priority Issues DMB:\$3,228,106
0-5 Year DMB:\$7,855,020
Priority Issues DMB Excess:\$1,545,876 over APPA 5% benchmark
0-5 Year DMB Excess:\$5,054,020 over APPA 5% benchmark
Priority Issues Maintain DMB:\$1,250,218 annual cost to maintain current DMB

Van Lare Hall



Facility: Van Lare Hall

Use Type(s): Classroom, Administration

Built: 1957

Area: 36,876 SF

Floors: 1 story

CRV:\$6,859,680

Priority Issues FCI:11.0%

0-5 Year FCI:26.1%

Priority Issues DMB:\$1,433,673

0-5 Year DMB:\$1,786,947

Priority Issues DMB Excess:\$1,090,689 over APPA 5% benchmark

0-5 Year DMB Excess:\$1,443,963 over APPA 5% benchmark

Priority Issues Maintain DMB:\$137,194 annual cost to maintain current DMB

One Year FCI = Poor

Five Year FCI = Poor

Observation Highlights:

- Building reroofed in 2008. (EPDM roof was at end of life, leaking and due for replacement)
- Surging of water levels in boilers periodically causes shut down due to low water.
- Unit ventilators in classrooms older, near end of expected lifespan.
- Poor ventilation, poor air circulation in offices.
- Several distribution panels at or near capacity.
- New 2x4 fluorescent fixtures in suspended ceilings installed in corridors in 2008.
- New suspended 2x4 lay-in in corridors, offices, 102 and computer labs.
- Exterior original full-lite aluminum frame doors at end of life. Original hardware failing and due for replacement
- Corridor and entry flooring removed and replaced (2009).
- VAT flooring in classrooms. Tile breaking apart and coming loose as adhesive fails.

Besser Technical Center



Facility: Besser Technology Center
Use Type(s): Votech, Classroom, Kitchen/Food Service
Built: 1962
Area: 73,799 SF
Floors: 2 stories

CRV:\$15,092,750
Priority Issues FCI:1.2%
0-5 Year FCI:11.4%
Priority Issues DMB:\$182,622
0-5 Year DMB:\$1,722,083
Priority Issues DMB Excess:\$0 over APPA 5% benchmark
0-5 Year DMB Excess:\$967,445 over APPA 5% benchmark
Priority Issues Maintain DMB:\$301,855 annual cost to maintain current DMB

One Year FCI = Good
Five Year FCI = Poor

Observation Highlights:

- Deck planks sagging, cracked – never tested to address structural integrity issue. Parts of deck falling at soffit. Bottom of block broken away
- Roofing: Durolast area showing continued signs of ponding. Some minor leaks at roof drains at built-up roof area.
- Window glazing compound brittle and cracked at windows, especially in 1972 addition, may require re-caulking/replacement
- Block wall sealant at exterior control joints at end of life., due for replacement
- Boilers replaced – summer 2008 with (3) high efficiency, pulse type boilers at a cost of \$103,000 for units and \$36,000 to remove existing and install new. Savings of \$30,000/year with improved efficiency gives a 4-1/2 year payback.)
- Horizontal unit vents functioning well but near end of life.

- HVAC Water pump bearing assembly failures becoming common with many replaced.
- Plumbing: Inadequate shut-off valves throughout building. Adding valves as repairs/modifications to the system are made.
- Power: Original underground 4160 V service, replaced in 2008 with 280/240v service.
- Casework: Science casework countertops in Physics lab at end of life, needs replacement or re-surfacing.
- Doors: (3) Machine shop and auto shop doors heavily rusted frames at end of life and due for replacement
- Floors: Some terrazzo deterioration at entries, due for re-grinding
- Site: Some cracking in concrete walks. Concrete at west entry heaved, chipped.
- Some washout at roof drain outlets

University Center



Facility: **University Center**
Use Type(s): Administration, Classroom
Built: 1969
Area: 3,220 SF
Floors: 1 story

CRV:\$592,480
 Priority Issues FCI:16.4%
 0-5 Year FCI:23.0%
 Priority Issues DMB:\$91,886
 0-5 Year DMB:\$128,584
 Priority Issues DMB Excess:\$67,543 over APPA 5% benchmark
 0-5 Year DMB Excess:\$106,350 over APPA 5% benchmark
 Priority Issues Maintain DMB:\$11,850 annual cost to maintain current DMB

One Year FCI = Poor
 Five Year FCI = Poor

Observation Highlights:

- Durolast roof installed in 2008 (Built-up roof was at end of life, leaking and due for replacement)
- Extensive cracking in east block wall at garage
- Original single pane aluminum windows at end of life. Hopper windows with hardware in poor condition. Many units fastened shut.
- Heating controls poorly coordinated, temperature difficult to control
- Fire alarm original, not ADA compliant, not monitored.
- Exterior walks have settled at entry 3 +/-, trip hazard.

Natural Resources Center



Facility: Natural Resources Center

Use Type(s): Classroom, Lab

Built: 1972

Area: 39,518 SF

Floors: 4 stories

CRV:\$9,642,880

Priority Issues FCI:9.0%

0-5 Year FCI:23.4%

Priority Issues DMB:\$869,788

0-5 Year DMB:\$2,253,541

Priority Issues DMB Excess:\$387,644 over APPA 5% benchmark

0-5 Year DMB Excess:\$1,771,397 over APPA 5% benchmark

Priority Issues Maintain DMB:\$192,858 annual cost to maintain current DMB

One Year FCI = Fair

Five Year FCI = Poor

Observation Highlights:

- Settlement at first floor room 110, at building expansion joint. Floor and wall cracked and moved, appears to have stabilized. Engineer reports that no further movement anticipated.
- Windows at end of life – hardware failing, hinges sagging, gaskets on casements brittle. Windows leaking at stairwells.
- Hardware in poor condition. Window handle/ locking mechanism don't operate well – plastic parts wearing out and replacement part availability limited.
- West entry curtain wall - caulk deteriorating, aluminum frames pitted, system at end of life, due for replacement
- (5) Chemistry and Biology fume hoods replaced as part of 2006 renovations. Fume hoods not on constantly – corrosives cabinet vents into system, but not on unless fume hood is on. Verify with safety regulator to determine system operation requirements.
- No shut-off valves for HVAC system make maintenance very difficult.
- Valves added when possible as repairs are made.
- Pumps had high failure rate on bearing assemblies, replaced with new type that has resolved the problem.
- Shut-off valves are inadequate and are added as repairs are made.
- Some distribution panels at or near capacity. No reported problems.
- Walls on level one and two repainted summer 2009.
- Spalling/ cracking of concrete waffle slab overhang and balcony floor at fourth floor boardroom, reinforcing exposed.

Newport Center



Facility: Newport Center
Use Type(s): Athletic, Votech, Classroom, Library, Auditorium, Administration
Built: 1996
Area: 67,134 SF
Floors: 1 story

CRV:\$13,008,375
 Priority Issues FCI:2.9%
 0-5 Year FCI:7.9%
 Priority Issues DMB:\$381,145
 0-5 Year DMB:\$1,022,458
 Priority Issues DMB Excess:\$0 over APPA 5% benchmark
 0-5 Year DMB Excess:\$372,040 over APPA 5% benchmark
 Priority Issues Maintain DMB:\$260,168 annual cost to maintain current DMB

One Year FCI = Good

Five Year FCI = Fair

Observation Highlights:

- Settlement at classroom 111. Some initial settlement, no further movement since.
- Water infiltration at split faced, single width masonry walls
- Pressure bar attachment at transition from low roof to arena wall has no counter-flashing; just caulk bead along top edge. Caulk is cracked, potentially allowing water on wall or from cavity to run inside building at transition bar location.
- Extensive patching dating to original installation, particularly at seams.
- Patch adhesive showing signs of failure. Monitor condition and repair as necessary to prevent further deterioration.
- Glazing gasket on interior of windows popping out – pushed back in place on a regular basis.
- AHU #6 at the arena is not working due to relay failure, AHU #5 is handling the load alone
- Fire suppression riser leaking at valve M168, likely packing failure
- Hollow metal service doors of auto body shops and arena rusting at bottom
- Carpet in wellness center entry shrinking and pulling at seams, potential trip hazard.

World Center for Concrete Technology



Facility: World Center for Concrete Technology

Use Type(s): Votech, Classroom, Lab

Built: 2000

Area: 44,220 SF

Floors: 1 story

CRV:\$9,065,100

Priority Issues FCI:0.6%

0-5 Year FCI:2.9%

Priority Issues DMB:\$55,297

0-5 Year DMB:\$225,721

Priority Issues DMB Excess:\$0 over APPA 5% benchmark

0-5 Year DMB Excess:\$0 over APPA 5% benchmark

Priority Issues Maintain DMB:\$181,302 annual cost to maintain current DMB

One Year FCI = Good

Five Year FCI = Good

Observation Highlights:

- Water infiltration at main lobby, especially at main window wall, flashing may be inadequate and weeps may not be working.
- HVAC: Bearing assembly failures on Bell & Gossett pumps
- AHU #2 (heat only) for labs 105 & 107, unit is cutting out on power overload; cause is unknown
- Power: Voltage fluctuates – usually over. Investigating supply problem with Alpena Power
- Past frequent breaker tripping problem solved by redistributing loads on panels for certain areas
- Doors: Roll-up doors – NE plant door gearbox leaks oil, SE plant door has minor forklift damage. Manual overhead door between 107 & 109 damaged by forklift and will not close
- Heaving problems at concrete pavers in front drives repaired in 2006
- Salt deterioration on bollard light fixtures at front, most lights replaced

Fine Arts Center



Facility: Fine Arts Center
Use Type(s): Votech, Classroom
Built: 2007
Area: 14,090 SF
Floors: 1 story

CRV:\$2,395,300
Priority Issues FCI:0.0%
0-5 Year FCI:1.0%
Priority Issues DMB:\$0
0-5 Year DMB:\$22,755
Priority Issues DMB Excess:\$0 over APPA 5% benchmark
0-5 Year DMB Excess:\$0 over APPA 5% benchmark
Priority Issues Maintain DMB:\$47,906 annual cost to maintain current DMB

One Year FCI = Good
Five Year FCI = Good

Observation Highlights:

- Building new, under warranty
- Building HVAC creates negative pressure problems and concerns about proper distribution and ventilation throughout labs.
- Revolving darkroom door – not ADA accessible (only door).

Oscoda Campus



Facility: Oscoda Campus Building

Use Type(s): Classroom, Administration

Built: 1977

Area: 31,140 SF

Floors: 3 stories

CRV:\$5,854,320

Priority Issues FCI:3.6%

0-5 Year FCI:11.7%

Priority Issues DMB:\$208,414

0-5 Year DMB:\$685,541

Priority Issues DMB Excess:\$0 over APPA 5% benchmark

0-5 Year DMB Excess:\$392,825 over APPA 5% benchmark

Priority Issues Maintain DMB:\$117,086 annual cost to maintain current DMB

One Year FCI = Good

Five Year FCI = Poor

Observation Highlights:

- Roof: Some roof leaks at edges of NE & NW corners. Downspout at boiler room door loose, pulling off building
- Windows: Original insulated glazed, sliding aluminum windows in good condition. Hardware in good condition, locks work well.
- Cladding: Evidence of brick damage and replacement at new stair/ elevator tower in SW corner. Brick still appears to be problematic in these areas.
- HVAC: Most components are original, near or past end of life. Above-ceiling AHU's are very noisy; several only operate when lights are on - very poor air quality. (2) intake louvers at lower level are covered, should be uncovered for better indoor air quality.
- Excessive humidity problems evident from sagging ceiling tile.
- Server closet on second floor overheats.

- Drinking fountains don't have adequate water flow
- Power: Panels are not labeled well. No GFI outlets in science lab
- Lighting: Stairway lighting on switches, lighting level low
- Ceilings: Sagging tiles on all floors, especially the 1st floor. Grid is stained and rusty, due for re-paint. Grid damaged in computer lab. 5+% of ceiling tile is stained or damaged by water.
- Doors: Closer at main entry needs repair. Original hardware at end of life, due for replacement. North door sticks & doesn't close tight. West lower level hollow metal door rusting at bottom, delaminating, doesn't close, due for replacement
- Interior doors: Finish scratched and veneer damage, most doors have holes where parts were removed
- Carpet replaced throughout first and second floor with the exception of a few offices
- Emergency and Exit lighting - Several not working.
- Treads in poor condition on some stairs, especially front entry stair
- Front entry steps nosings missing or loose.

Deferred Maintenance Detail Report - by Building

Alpena Community College

Last Updated: 10/1/2014

Notes: Data for past assessments is included for reference purposes. 2008 assessment notes indicate if past issues have been addressed.

*** indicates a priority issue

Van Lare Hall

Campus: Main

Bldg. No.: 01

Building: Van Lare Hall

Area: 36,880 sf

Year Built: 1957

Floors: 1

Use Types:

40% Administration

60% Classroom

Notes: Addition at east end

1962

System	CRV of System		Percent of System Value to Budget for Repair/Replacement				System/Component Notes
	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	21	\$1,440,533	0	5	25	70	Load bearing masonry Utility tunnels on entire perimeter. Slab on grade 2000 assessment: Concrete block construction. Crack in main hall floor needs to be repaired. Joints not closed. 2008 assessment: No reported changes.
Roof	4	\$274,387	0	0	0	100	Durolast PVC roof installed over existing roof on entire facility BUR on boiler room and small office addition, original EPDM on balance of roof 2000 assessment: Some roof leaks 2008 assessment: Durolast PVC roof installed over EPDM roof and insulation (2008). Insulation replaced where wet. Approx. \$90,000
Glazing	3	\$205,790	10	0	10	80	All aluminum windows replaced approximately 1990, insulated glass Hopper windows with hardware in good condition. 2008 assessment: No reported problems.
Cladding	6	\$411,581	5	10	5	80	Concrete brick on concrete block backup 2000 assessment: Stone and concrete brick cladding – south wall cracking in joints. 2008 assessment: ***Wall cracking/settlement remains.

HVAC	18	\$1,234,742	95	5	0	0	<p>Generation</p> <p>(2) Steam boilers replaced in 1993, Distribution</p> <p>(2) Small RTU AC units with condensers serve computer labs and office.</p> <p>(1) Large ceiling mounted fan coil unit serve student commons.</p> <p>(4) Small ceiling mounted fan coil units serve offices</p> <p>Unit ventilators with thru wall fresh air intakes are typical in classrooms</p> <p>Controls</p> <p>Pneumatic controls</p> <p>2000 assessment:</p> <p>2 steam boilers, 8 years old. Roof top air units new at labs – not controllable.</p> <p>Univents throughout building – original, but adequate. 12 window air conditioning units in offices.</p> <p>Poor ventilation. Poor air circulation in offices</p> <p>2008 assessment:</p> <p>***Surging of water levels in boilers periodically causes shut down due to low water. High-low pressure staging of boilers</p> <p>***Distribution system (unit ventilators, piping, etc.) mostly original, at end of useful life.</p> <p>***Pneumatic controls – some problems with moisture in the lines</p> <p>Exhaust fans in toilet rooms are noisy</p> <p>***Poor ventilation. Poor air circulation in offices. Indoor air quality throughout should be investigated (building ventilation originally anticipated through unit ventilators and operable windows - does not likely meet current standards, especially where walls relocated).</p>
Plumbing	8	\$548,774	35	10	25	30	<p>Main – copper service, original. Poor water quality, common throughout campus</p> <p>Distribution - galvanized. Pipes showing signs of buildup, but no leaks.</p> <p>Waste – replaced with PVC</p> <p>One toilet room upgraded to unisex ADA toilet room</p> <p>2000 assessment:</p> <p>Potable water system – discoloration of water – should be replaced. One bathroom is ADA compliant.</p> <p>2008 assessment:</p> <p>***Flush valves and most hardware are original and in good operational condition, but showing signs of pitting and deterioration.</p> <p>***Galvanized pipes showing signs of buildup, but no leaks.</p> <p>Main – Poor water quality, common throughout campus</p> <p>Plumbing fixtures are original, near end of expected life but in good condition. No reported problems.</p> <p>Domestic hot water; gas fired hot water heater. No reported problems.</p> <p>Drinking fountains upgraded in 2005</p> <p>Toilet partitions: original metal, in good condition for age.</p>
Primary/Secondary	5	\$342,984	0	0	5	95	<p>208/ 110 service provided by transformer recently installed</p> <p>2008 assessment:</p> <p>Past power fluctuations, problem resolved</p>
Distribution	4	\$274,387	5	15	10	70	<p>***Several distribution panels at or near capacity.</p>

Lighting	4	\$274,387	0	0	10	90	Pendant mounted fluorescent in classrooms. 70% converted to T8 indirect fixtures, 30% original T12. HID in student commons. 2008 assessment: New 2x4 fluorescent fixtures in suspended ceilings installed in corridors in 2008.
Voice/Data	2	\$137,194	0	0	0	100	Data: Fiber run between buildings. Cabling 100% category 5e. No reported problems. Head end for campus (also @ BTC) 2008 assessment: Voice: Hub for phone system near end of life., obsolete Central Clock: Not functioning, not used
Ceilings	3	\$205,790	0	10	20	70	12x12 glue on tiles throughout building Plaster drops in main lobby 2000 assessment: Fixed drop ceiling, in good shape. Questionable dust/material. 2008 assessment: New suspended 2x4 lay-in in corridors, offices, 102 and computer labs. ***12x12 tile adhesive failing in some areas including learning center.
Walls	8	\$548,774	0	0	5	95	Painted CMU in good condition. 2008 assessment: No reported problems.
Doors	4	\$274,387	5	15	25	55	Exterior: Main entry and student commons replaced with aluminum framing and insulated glass Original full-lite aluminum frame typical at other entries. 2000 assessment: Some doors in need of new hardware or repairs Interior: Original solid core wood. No reported problems. All hardware has been upgraded to ADA compliant lever handles. 2008 assessment: ***Exterior original full-lite aluminum frame doors at end of life. ***Original door hardware failing and due for replacement
Floors	3	\$205,790	0	10	40	50	Ceramic tile in toilet rooms. Carpet – offices, commons, learning center and rooms 117, 124 & 126 Rubber floor tile over VAT in entry, VAT elsewhere VAT in classrooms and corridors 2008 assessment: ***VAT in classrooms and corridors. Tile breaking apart and coming loose as adhesive fails. Corridors need replacement or cover with product other than carpet. ***Entry and hallway flooring abated and replaced with VCT. (2008, approx. \$25,000) Ceramic tile - no reported problems. Carpet – no reported problems. Rubber floor tile in entry is uneven and shrinking. VAT underneath is telegraphing through

Code (fire, ADA, etc.)	4	\$274,387	0	0	10	90	(1) ADA compliant toilet room. Exit lighting and emergency lighting on battery backup. No reported problems. No fire protection sprinkling in entire building. 2000 assessment: Original fire system, in need of replacement 2008 assessment: Fire alarm upgraded to ADA compliant in 2002, not monitored. No reported problems.
Immed. Site, Ext. Ltg., etc	3	\$205,790	0	0	10	90	Walks and parking lots in good condition Wall and pole mounted lighting functioning 2000 assessment: Some site backfilling towards back of building, near river. Parking lot in fair condition, needs some landscaping. Lighting improvements needed in west parking lot. 2008 assessment: No reported problems.
CRV Totals:		\$6,859,680	\$1,433,673	\$353,274	\$878,039	\$4,194,694	

Priority Issues Data

CRV: \$6,859,680

DMB: \$1,433,673

Excess: \$1,090,689

FCI: 20.9%

Rating: Poor

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

Besser Technical Center

Campus: Main

Bldg. No.: 02

Building: Besser Tech Center

Area: 82,700 sf

Year Built: 1962

Floors: 2

Use Types:

5% Kitchen/Food Service

40% VoTech

55% Classroom

Notes: Addition 1967; 2nd floor extended into former concrete lab to provide new classrooms

CRV of System			Percent of System Value to Budget for Repair/Replacement				System/Component Notes
System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	23	\$3,471,333	2	10	5	83	Load bearing masonry. Concrete plank roof system. Slab on grade. Tunnels under corridors for mechanical piping and wiring. 2000 assessment: Deck planks sagging, cracked – never tested to address structural integrity issue. Parts of deck falling at soffit. Bottom of block broken away 2008 assessment: ***Roof deck planks sagging, cracked - structural investigation recommended. Minimal settlement at exterior walls. Some initial settlement at line of building additional, no further movement since.
Roof	3	\$452,783	5	50	0	45	60% BUR, some leaks typically at drains, not significant 30% Durolast – installed 1996 - laid over old 1-1/2" fiber board insulation some of which was saturated and is crushed resulting in extensive ponding. 10% EPDM replaced with Computer lab renovation Extensive skylights (dome type) in computer and auto labs area – no leaks reported 2000 assessment: Roof is of multiple ages and should be re-roofed down to structure. 2008 assessment: ***Durolast area showing continued signs of ponding due to flatness of roof and crushed insulation. ***Some minor leaks at roof drains at BUR area - roof nearing end of life.
Glazing	3	\$452,783	10	20	10	60	Original aluminum frame with single pane glass with the exception of new fixed windows at recently renovated computer labs. Most old windows are operable units – some hopper and casement. Skylights in corridor- original acrylic dome, no reported problems 2000 assessment: Most glazing (75%) needs replacing 2008 assessment: ***Glazing compound brittle and cracked at windows, especially in 1972 addition, may require re-caulking/replacement ***Hardware in fair condition, but nearing end of predicted life.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Cladding	5	\$754,638	0	5	10	85	<p>Concrete block – mixture of types and sizes</p> <p>Metal fascia panels</p> <p>Minimal metal siding on penthouse at lab area only</p> <p>2008 assessment:</p> <p>***Sealant at exterior control joints at end of life, due for replacement</p> <p>Metal fascia panels re-painted in 1998</p> <p>Minimal mortar problems</p> <p>No reported problems with water infiltration</p> <p>No reported problems with weep holes or spalling/cracking</p> <p>Concrete deck soffit at overhang on SW corner moved, deck uneven, Concrete soffit due for re-paint</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
HVAC	19	\$2,867,623	0	10	25	65	<p>Generation (2) 1962 hot water boilers – low efficiency (60%), gas fired, ground mounted, cycled for complete redundancy. Boilers provide hot water for reheat coils at BTC and CTR. Cooling provided by (4) DX rooftop AHU's for computer/CAD labs (2007), bookstore (1998) and president's office area (1998). Some window AC units elsewhere for individual rooms. Water service is treated.</p> <p>Distribution Horizontal unit vents in classrooms, corridors and some offices. (7) new vertical units with rooftop compressors provided in 2007 computer lab renovation Auto lab: Co-Ray-Vac radiant heating (1993). Welding lab: Gas fired RTU connected to exhaust fan system Machine shop: 3-zone AHU, original Controls Primarily pneumatic controls on original equipment. Air compressor motor replaced previously. DDC controls on new roof top equipment. Welding lab fume venting system works well (1988+/-) Auto lab exhaust system works well (1998+/-) Toilet exhaust system tied to lighting. 2000 assessment: No air conditioning. Original hot water/boiler - OK Need more outside ventilation. Primarily univents, some air handlers. Piping problem in boiler room should be addressed within the year. \$20,000-\$25,000 to fix. Transformer in boiler room - leak sprayed into transformer - situation not considered safe. 2008 assessment: *** (2) plugged tubes on boiler #1, (1) failed fire tube – repairs on hold. No way to determine condition of boilers besides the tubes. *** Horizontal unit vents in classrooms functioning well but near end of life. *** Pump bearing assembly failures becoming common with many replaced. Considering replacement with (3) high efficiency, pulse type boilers at a cost of \$103,000 for units and \$36,000 to remove existing and install new. Savings of \$30,000/year with improved efficiency gives a 4-1/2 year payback. Cooling DX rooftop AHU's - no reported problems. No coil leaks reported. Auto lab: Co-Ray-Vac radiant heating functioning well. Pneumatic controls in good working condition Welding lab fume venting system works well. Auto lab exhaust system works well.</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Plumbing	6	\$905,565	0	35	10	55	<p>Main – copper service, original. Water service has high iron content. Distribution - galvanized. Inadequate shut-off valves throughout building. Adding valves as repairs/modifications to the system are made.</p> <p>Waste - PVC, exterior piping replaced with PVC (1998)</p> <p>Plumbing fixtures are original. Flush valves are original and in good condition.</p> <p>Domestic hot water; gas fired hot water heater, 80 gal tank.</p> <p>Oil separator system in auto shop</p> <p>2008 assessment:</p> <p>Main - no reported problems</p> <p>Distribution - no reported problems.</p> <p>Original shut-off valves are in poor condition generally.</p> <p>Faucets replaced in 2000. No reported problems.</p> <p>Oil separator system in good condition</p> <p>Toilet partitions: original metal, well maintained with minor damage (graffiti)</p>
Primary/Secondary	6	\$905,565	0	0	10	90	<p>Original underground 4160 V service, planned for replacement in 2008 with 280/240v service.</p> <p>2000 assessment:</p> <p>Transformer in boiler room - leak sprayed into transformer, not considered safe.</p> <p>2008 assessment:</p> <p>***System is planned and budgeted to be replaced this year using 480/240 service.</p> <p>(3) Transformers are served by current service. All equipment other than lab has been converted for new power. Conversion should be complete by fall.</p>
Distribution	7	\$1,056,493	0	0	5	95	<p>Some distribution panels at capacity.</p> <p>2008 assessment:</p> <p>New panels were added in 2007 with computer lab renovations. No reported problems.</p>
Lighting	5	\$754,638	0	5	10	85	<p>2x4 fluorescent T12 fixtures typical. No reported problems. When ballasts fail fixtures are switched over to T8 lamps</p> <p>Some compact fluorescent in downlights.</p> <p>HID fixtures in shops. No reported problems.</p> <p>2008 assessment:</p> <p>No reported problems</p>
Voice/Data	4	\$603,710	0	0	5	95	<p>Data:</p> <p>Fiber run between buildings.</p> <p>Cabling 100% category 5e. No reported problems.</p> <p>2008 assessment:</p> <p>Voice:</p> <p>Phone system near end of life, obsolete</p> <p>Central Clock:</p> <p>Newer head end. No reported problems.</p>
Ceilings	2	\$301,855	0	5	15	80	<p>Painted concrete plank exposed ceiling in most spaces.</p> <p>2x4 lay-in installed in approximately 20% of spaces. Plan to continue adding lay-in ceilings.</p> <p>Open to metal deck in shop areas.</p> <p>No reported problems.</p> <p>2008 assessment:</p> <p>No reported problems</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Walls	6	\$905,565	0	10	5	85	Painted CMU in good condition. Re-paint as needed President's office area has wood wainscot 2008 assessment: ***Science casework countertops in Physics lab at end of life, needs replacement or re-surfacing.
Doors	3	\$452,783	5	10	10	75	Exterior: Original full-lite aluminum frame typical at entries. Hardware replaced as needed, generally in good condition Hollow metal at service doors of shops and labs. (2) Newer OH doors at auto lab, motorized. No reported problems. (1) Original bi-fold metal door at machine shop. No reported problems. 2000 assessment: Exterior: Overhead doors need to be replaced Interior: Original solid core wood. 5% of doors need refinishing. All hardware has been upgraded to ADA compliant lever handles. 2008 assessment: ***3 Machine shop and auto shop doors heavily rusted frames at end of life and due for replacement
Floors	3	\$452,783	0	5	10	85	Terrazzo in corridors and toilet rooms Carpet – offices, commons, Lumberjack Shack, computer lab, bookstore and classroom 126, in good condition. No reported problems. VCT in classrooms and corridor to CTR. No reported problems. Vinyl stair treads. No reported problems. 2008 assessment: ***Some terrazzo deterioration at entries, due for re-grinding
Code (fire, ADA, etc.)	2	\$301,855	0	0	5	95	Fire protection sprinkling in Auto lab and computer lab only. 2000 assessment: Not ADA compliant. Strobes etc 2008 assessment: Elevator added in 2007 computer lab renovations. Elevator service on contract. ADA compliant throughout. Toilet rooms, door operators, fire alarms, etc. Fire alarm upgraded in 2000 with strobes and horns. No reported problems. Exit lighting: most replaced previously. No reported problems. Emergency lighting on battery backup. No reported problems.
Immed. Site, Ext. Ltg., etc	3	\$452,783	5	5	5	85	Concrete walks. Pole mounted and building mounted lighting. 2000 assessment: Curb in front of building – expansion joint chipping. Parking lot needs surface treatment, seal. Some paving removed for planting, leaving mud pits. Exterior lighting not adequate 2008 assessment: ***Some cracking in concrete walks. Concrete at west entry heaved, chipped ***Some washout at roof drain outlets adjacent to building. Water should be redirected further away to prevent future problems. Irrigation system added for lawn restoration lost due to grubs
CRV Totals:		\$15,092,750	\$182,622	\$1,539,461	\$1,569,646	\$11,801,021	

Priority Issues Data

CRV: \$15,092,750

DMB: \$182,622

Excess: \$0

FCI: 1.2%

Rating: Good

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

University Center**Campus:** Main**Bldg. No.:** 03**Building:** University Center**Area:** 3,200 sf**Year Built:** 1969**Floors:** 1**Use Types:**

40% Classroom

60% Administration

Notes:

System	CRV of System		Percent of System Value to Budget for Repair/Replacement				System/Component Notes
	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	14	\$82,947	0	0	5	95	Load bearing masonry Slab on grade 2008 assessment: No reported problems.
Roof	5	\$29,624	0	0	0	100	Durolast roof installed in 2008 (12,000) 2008 assessment: BUR roof at end of life, leaking. Replaced (2008).
Glazing	3	\$17,774	5	95	0	0	Original single pane aluminum windows, operable units are hopper type. 2000 assessment: Original single pane glazing. Some problems with frames/sash, parts for operable hardware unavailable. 2008 assessment: ***Original single pane aluminum windows at end of life. ***Hopper windows with hardware in poor condition. Many units fastened shut.
Cladding	9	\$53,323	15	5	10	70	Brick on concrete block backup and single wythe block. 2008 assessment: ***Extensive cracking in east block wall at garage ***Damp areas on brick indicate water infiltration issues - may be resolved with new roof. Roofing tar spilled on to brick from past work.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
HVAC	21	\$124,421	60	10	10	20	Generation Hot water Lochinvar boiler. Distribution Unit ventilators and perimeter fin tube (5) window mounted AC units. Controls Electric thermostats 2000 assessment: Hot water boiler, 10 years old, unreliable –needs to be replaced. Some window air units installed recently. HVAC units in space are not operable, cannot be controlled. Very poor ventilation 2008 assessment: ***Controls poorly coordinated, temperature difficult to control ***Unit ventilators and fin tube older, near end of life. Boiler in good condition. No reported problems with window A/C units
Plumbing	5	\$29,624	0	0	5	95	2000 assessment: Plumbing adequate, but not ADA compliant 2008 assessment: No changes reported.
Primary/Secondary	6	\$35,549	0	0	5	95	No reported problems.
Distribution	5	\$29,624	0	0	5	95	No reported problems.
Lighting	4	\$23,699	0	10	10	80	Original ceiling mounted fluorescent fixtures T12. Nearing end of expected life, but no reported problems.
Voice/Data	4	\$23,699	0	0	0	100	No reported problems.
Ceilings	3	\$17,774	0	0	0	100	Exposed construction
Walls	6	\$35,549	0	0	5	95	Painted CMU in good condition.
Doors	5	\$29,624	0	5	10	85	Exterior: Main entry aluminum framing with single pane glass. Sectional overhead garage door 2000 assessment: Exterior doors, garage & pass doors need replacement Interior: Original hollow metal doors and frames. No reported problems. 2008 assessment: (3) Hollow metal doors, garage man door replaced Sectional overhead garage door repaired
Floors	3	\$17,774	0	0	5	95	VCT in classroom and corridor Carpet – all other spaces 2008 assessment: no reported problems
Code (fire, ADA, etc.)	3	\$17,774	50	10	40	0	Fire alarm original, not ADA compliant, not monitored. Exit lighting original on battery backup. No reported problems. No fire protection sprinkling in entire building. 2000 assessment: Original fire protection system 2008 assessment: ***No changes reported - see notes above.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Immed. Site, Ext. Ltg., etc	4	\$23,699	20	5	10	65	Wall and pole mounted lighting functioning. Concrete walks surrounding building. Minimal landscaping - mix of grass and pea gravel. 2000 assessment: Sidewalks at building have settled. New parking lot at one end of building – needs some landscaping to take care of settling. 2008 assessment: ***Walks have settled at entry 3" +/-, trip hazard.
CRV Totals:		\$592,480	\$97,167	\$38,807	\$44,140	\$412,366	

Priority Issues Data

CRV: \$592,480

DMB: \$97,167

Excess: \$67,543

FCI: 16.4%

Rating: Poor

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

Natural Resources Center

Campus: Main

Bldg. No.: 04

Building: Natural Resources Center

Area: 39,520 sf

Year Built: 1972

Floors: 4

Use Types:

40% Classroom

60% Lab

Notes: 1996 – 1/3 remodeled

System	CRV of System		Percent of System Value to Budget for Repair/Replacement				System/Component Notes
	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	16	\$1,542,861	1	5	5	89	Concrete structure with waffle slab floors. 5'-6" crawl space for piping and ductwork. 2000 assessment: Some settlement cracks in first floor hallway 2008 assessment: ***Excessive spalling/ cracking of concrete waffle slab overhang and balcony floor at fourth floor boardroom, reinforcing exposed. Structural inspection and repair recommended. ***Steel angle supporting block railing on balcony very rusty – due for inspection/ clean/ re-paint Settlement at first floor room 110, at building expansion joint. Floor and wall cracked and moved, appears to have stabilized. Engineer report indicates that no further movement anticipated. No reported problems with heaving at doors. No reported problems with water infiltration
Roof	3	\$289,286	0	30	5	65	Durolast roofing installed in 2000 to resolve roof problems. 2000 assessment: Original roof needs great deal of work or replacement. Significant leaks on 2nd floor, 4th floor. Poor roof integrity. Expansion joints leak. 2008 assessment: Previous leaks at penthouse were patched. Minimal ponding, No reported problems.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Glazing	4	\$385,715	10	80	0	10	<p>All aluminum frame with single pane, casement windows. Aluminum frame greenhouse system</p> <p>2000 assessment: Original single pane glazing. Seals breaking. Panels, curtainwall damaged.</p> <p>Hardware not functioning.</p> <p>2008 assessment: ***Windows at end of life – hardware failing, hinges sagging, gaskets on casements brittle ***Windows leaking at stairwells ***West entry curtain wall - caulk deteriorating, aluminum frames pitted, system at end of life., due for replacement ***Hardware in poor condition.</p> <p>Window handle/ locking mechanism don't operate well – plastic parts wearing out and replacement part availability limited.</p> <p>Greenhouse automatic window system functioning, No reported problems.</p>
Cladding	5	\$482,144	0	5	10	85	<p>Concrete block – fluted block and colored concrete brick. No reported problems.</p> <p>2000 assessment: Exterior concrete brick showing some signs of weathering</p> <p>2008 assessment: Water entering wall and staining concrete brick where roof overhang meets wall.</p> <p>Some discoloration from water runoff at concrete block screenwall near entry.</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
HVAC	24	\$2,314,291	35	25	5	35	<p>Generation</p> <p>Original Bryan flex tube, atmospheric boiler on 3rd floor. AHU with DX cooling in boiler room with condenser on roof serves board room. Installed in 1994</p> <p>Distribution</p> <p>Fin tube heat at exterior walls typical Constant volume system with (2) AHU's. AHU in basement serves room 101. AHU on 3rd floor serves the rest of the building. Reheat coils at each room. No shut-off valves for HVAC system make maintenance very difficult. Valves added when possible as repairs are made.</p> <p>Greenhouse radiant heating system</p> <p>Controls</p> <p>Hybrid system of pneumatic controls tied to campus EMS</p> <p>(5) Chemistry and Biology fume hoods replaced as part of 2006 renovations.</p> <p>Twist timers provided for full room exhaust in labs. General room return air connected to building return system</p> <p>2000 assessment:</p> <p>No air conditioning. Original hot water boiler. Equipment well maintained. Original fume hoods - have been inspected</p> <p>2008 assessment:</p> <p>(5) Chemistry and Biology fume hoods replaced as part of 2006 renovations.</p> <p>***Fume hoods not on constantly to vent cabinets used from storage. Corrosives cabinet vents into system, but not on unless fume hood is on. Verify with safety regulator to determine system operation requirements.</p> <p>***Twist timers provided for full room exhaust in labs. General room return air connected to building return system (current code requires full air exchange without return)</p> <p>Original Bryan flex tube boiler functions very well. No reported problems.</p> <p>No shut-off valves for HVAC system make maintenance very difficult. Valves added when possible as repairs are made.</p> <p>Pumps had high failure rate on bearing assemblies, replaced with new type that has resolved the problem.</p> <p>Greenhouse radiant heating system - No reported problems.</p> <p>Added filter bank and UV light sterilizer to improve indoor air quality in 2004. No reported problems.</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Plumbing	7	\$675,002	0	25	25	50	Main – copper service, original. No reported problems. Water service has high iron content. Distribution - copper. No reported problems. Shut-off valves are inadequate and are added as repairs are made. Plumbing fixtures are original and in good condition. No reported problems. Flush valves are original and in good condition. No reported problems. Domestic hot water; gas fired hot water heater on third floor. No reported problems. No central water purification system. Gas shut-off valves provided for each lab. Toilet partitions: original metal, in good condition. 2000 assessment: Plumbing in good condition. Catch basin at NE corner of building needs work. Only one ADA bathroom in building 2008 assessment: Waste piping replaced with PVC at renovated labs in 2006. No reported problems. One of two sanitary mains collapsed as it exits building, was combined with other internally. Backflow preventers upgraded in 2006
Primary/Secondary	5	\$482,144	0	0	5	95	480/240 service. Exposed exterior fuses. No reported problems. Power quality is good 2008 assessment: No reported problems.
Distribution	3	\$289,286	0	5	10	85	GFI receptacles provided in labs. 2008 assessment: Some distribution panels at or near capacity. No reported problems.
Lighting	5	\$482,144	0	5	10	85	Surface mounted fluorescent T12 fixtures typical in corridors. No reported problems. Pendant mounted fluorescent in classrooms. Converted to T8 as ballasts are replaced. (1) classroom converted to 2x4 deep cell parabolic fixtures in suspended grid. College plans to do additional rooms. 2000 assessment: Original lighting fixtures. On second floor, 25% replaced in last 10 years. 2008 assessment: No reported problems.
Voice/Data	3	\$289,286	0	5	10	85	Data: Fiber run between buildings. Cabling 100% category 5e. No reported problems. Building updated with wireless. 2008 assessment: Voice: Phone system near end of life, obsolete Central Clock: No system.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Ceilings	3	\$289,286	2	5	10	83	First floor labs typically open exposed construction Second and third floor suspended 2x4 lay-in. Gypsum board in corridors 2000 assessment: Lay-in ceiling, reverse box & pan, needs repainting. Some staining due to roof leaks 2008 assessment: ***Some ceiling damage on second floor under boiler room due to leaking pumps
Walls	8	\$771,430	0	5	15	80	Painted CMU - color outdated. 2008 assessment: Walls on level one chipped and scuffed - due for re-paint Combination of original and new oak and maple casework in labs renovated. Lab tops in Chemistry and Biology replaced.
Doors	3	\$289,286	0	0	5	95	Exterior: Original full-lite aluminum frame typical at entries. Original hardware in good condition Hollow metal doors in good condition. No reported problems. Aluminum framed, full-lite doors at boardroom in good condition, No reported problems. 2000 assessment: Doors in good condition but need ADA compliant hardware in most areas Interior: Original solid core wood. Many replaced with 2006 renovations to provide fire rating. No reported problems. All hardware has been upgraded to ADA compliant lever handles. 2008 assessment: No reported problems.
Floors	4	\$385,715	0	5	10	85	Ceramic tile in toilet rooms. 2nd floor replaced in 2006, 3rd floor needs replacement. Carpet – offices and boardroom. VCT in classrooms, corridors and labs. Quarry tile at entry 2008 assessment: Rooms 210 and 214 carpet to be replaced in 2008. Carpet in rooms 202 & 204 stained and near end of life. VCT replaced in renovated labs (2006)
Code (fire, ADA, etc.)	4	\$385,715	0	0	5	95	ADA compliant toilet room upgrade on first floor. No fire protection sprinkling in entire building. Traction elevator – original upgraded for ADA. 2008 assessment: Exit lighting and emergency lighting updated in 2005. No reported problems. Fire alarm upgraded to ADA compliant on central monitored system. No reported problems. Fire doors blocked open in several locations throughout

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Immed. Site, Ext. Ltg., etc	3	\$289,286	0	5	10	85	No reported problems. 2000 assessment: Cracking on concrete cap on seatwall next to site ramp. New parking lot this year. More site lighting required 2008 assessment: No reported problems.
CRV Totals:		\$9,642,880	\$869,788	\$1,383,753	\$800,359	\$6,588,980	

Priority Issues Data

CRV: \$9,642,880

DMB: \$869,788

Excess: \$387,644

FCI: 9.0%

Rating: Fair

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

Newport Center

Campus: Main

Bldg. No.: 06

Building: Newport Center

Bldg./Annex

Area: 67,140 sf

Year Built: 1996

Floors: 1

Use Types:

5% Kitchen/Food Service

10% Auditorium

20% VoTech

20% Library

20% Classroom

25% Athletic

Notes: Connected to Besser

Tech Annex in 1996

CRV of System			Percent of System Value to Budget for Repair/Replacement				System/Component Notes
System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	20	\$2,601,675	1	5	5	89	Load bearing masonry. Slab on grade. 2000 assessment: Water leaking into concrete block, through wall, onto steel. 2008 assessment: Settlement at classroom 111. Some initial settlement, no further movement since. ***Water infiltration at split faced, single wythe masonry walls. Primary source not known.
Roof	6	\$780,503	35	35	30	0	EPDM (fully adhered) installed in 1996 2008 assessment: ***Pressure bar attachment at transition from low roof to arena wall has no counter-flashing; just caulk bead along top edge. Caulk is cracked, potentially allowing water on wall or from cavity to run inside building at transition bar location ***Extensive patching dating to original installation, particularly at seams. Patch adhesive showing signs of failure. Monitor condition and repair as necessary to prevent further deterioration. ***Active leak at roof to wall transition between rooms 101/103 & 105/103 and in arena.
Glazing	2	\$260,168	5	5	10	80	All aluminum frame with insulated, fixed glass No reported problems with fogging. 2008 assessment: ***Glazing in corridor near room 113 leaking at head of window. ***Glazing gasket on interior of windows popping out – requires being pushed back in place on a regular basis.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Cladding	10	\$1,300,838	2	3	5	90	<p>Concrete block – split faced, single wythe</p> <p>No reported problems. with spalling/cracking</p> <p>2000 assessment:</p> <p>Core-filled block cladding. Sealed all along library, north wall, Wellness Center & gym, south side approach of parking. Will need resealing in 7-10 years.</p> <p>2008 assessment:</p> <p>***Problems with water infiltration at upper wall of arena and corridor near classroom 111. Cause undetermined, but may be due to lack of through-wall flashing, block sealer, or lack of counter flashing where roof membrane meets wall.</p> <p>***Ongoing water leak from wall above in room 105</p> <p>Open joint weep holes filled with sealant and tubes installed at base flashing and window heads in 2002</p>
HVAC	18	\$2,341,508	1	2	5	92	<p>Generation</p> <p>BTC boilers provide hot water for reheat coils.</p> <p>(2) Ground mounted Trane DX chiller with compressor provides for cooling</p> <p>Distribution</p> <p>Combination of Trane roof top and indoor AHU's provide for all spaces as follows:</p> <p>RTU #1 – arena and theater; RTU #7 – library; AHU #3 – wellness center; AHU #4 – Kitchenette; AHU #5&6 – Arena; AHU #9 – Utility Technology</p> <p>Auto Body: Co-Ray-Vac radiant heating functioning well</p> <p>The library and rooms 104, 106, 108, 112, 114 & 116 have air conditioning.</p> <p>VAV system with reheat coils throughout building</p> <p>Ceiling mounted CUH in entry vestibules</p> <p>Controls</p> <p>Pneumatic controls in good working condition with no reported problems.</p> <p>Auto lab paint booth ventilation system works well. No reported problems.</p> <p>2008 assessment:</p> <p>***AHU #6 at the arena is not working due to relay failure, AHU #5 is handling the load alone</p>
Plumbing	5	\$650,419	1	0	5	94	<p>Main – cast iron service, original. No reported problems. Water service has high iron content.</p> <p>Distribution - copper. No reported problems.</p> <p>Shut-off valves are in good condition and adequate quantity.</p> <p>Waste – cast iron.</p> <p>Plumbing fixtures are original and in good condition</p> <p>Flush valves are original and in good condition. No reported problems.</p> <p>Toilet partitions: original metal, in good condition.</p> <p>2008 assessment:</p> <p>***Fire suppression riser leaking at valve M168, likely packing failure</p> <p>Domestic hot water; gas fired hot water heater, 100 gal tank installed in 2007. No reported problems.</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Primary/Secondary	5	\$650,419	0	0	5	95	277 V transformer for lighting and 120V receptacles. Transformer not owned by college Power quality is good 2008 assessment: No reported problems.
Distribution	5	\$650,419	0	0	5	95	Some capacity at distribution panels. 2008 assessment: No reported problems.
Lighting	5	\$650,419	0	5	15	80	2x4 fluorescent T12 fixtures typical. No reported problems. Original magnetic ballasts; no ballasts replaced to-date. Some compact fluorescent in downlights in conference rooms. No reported problems. HID fixtures in arena. No reported problems. 2000 assessment: New lighting, but T-12, no electronic ballasts. Inefficient/expensive. 5-6 year payback to take out. 2008 assessment: No reported changes.
Voice/Data	4	\$520,335	0	0	5	95	Data: Fiber run between buildings. Cabling 100% category 5e. No reported problems. 2008 assessment: Voice: Phone system near end of life., obsolete Central Clock: Newer head end. No reported problems.
Ceilings	3	\$390,251	1	5	5	89	2x4 and 2x2 lay-in installed in most spaces. Open to metal deck in arena, utility tech, and auto lab. Some gypsum board drops in theater. No reported problems. 2008 assessment: ***Water damaged ceiling tiles in 104/106 (5%) – potentially from roof leak
Walls	6	\$780,503	0	2	5	93	Ground faced CMU in good condition. No reported problems. Vinyl wall covering in limited areas. 2008 assessment: Some cart damage on wall covering in room 104 service corridor
Doors	3	\$390,251	1	5	5	89	Exterior: Original full-lite aluminum frame typical at entries. Hardware in good condition Hollow metal at service doors of auto body shops and arena. (3) OH doors at auto shop, motorized. 2000 assessment: Rusting center mullion at entrance side door. Interior: Original solid core wood. No reported problems. Hollow metal doors at auto body. No reported problems. All hardware has been upgraded to ADA compliant lever handles. 2008 assessment: Hollow metal at service doors of auto body shops and arena - rusting at bottom Exit door from corridor to exterior (near 124) sticking – hinges loose

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Floors	4	\$520,335	1	10	10	79	Ceramic tile in toilet rooms Carpet – offices, theater, 104, 106, library, part of wellness center entry. VCT in classrooms, corridors and smaller toilet rooms. Rubber sheet flooring at Wellness Center. No reported problems. Wood flooring in arena in good condition. Refinished annually. 2008 assessment: ***Walk-off mat by library entry loose, trip hazard ***Carpet in wellness center entry shrinking and pulling at seams, potential tripping hazard. Some VCT failure at entry to 124 . Scheduled for replacement in 2008.
Code (fire, ADA, etc.)	2	\$260,168	0	0	5	95	ADA compliant throughout. Toilet rooms, door operators, door hardware, etc. Fire alarm original, ADA compliant. No reported problems. All lighting including exit lighting and emergency lighting on emergency generator. No reported problems. Fire protection sprinkling in entire building. 2000 assessment: No rail on stair at loading dock. Security system in some areas 2008 assessment: No reported changes.
Immed. Site, Ext. Ltg., etc	3	\$390,251	0	0	5	95	No cracking in concrete walks. No reported problems. Building mounted lighting. No reported problems. 2000 assessment: Grass recently replaced 2008 assessment: Irrigation system added for lawn restoration lost due to grubs
CRV Totals:		\$13,008,375	\$381,145	\$641,313	\$956,116	\$11,159,885	

Priority Issues Data

CRV: \$13,008,375

DMB: \$381,145

Excess: \$641,313

FCI: 2.9%

Rating: Good

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

World Center for Concrete Technology

Campus: Main

Bldg. No.: 07

Building: World Center for
Concrete Technology

Area: 44,220 sf

Year Built: 1998

Floors: 1

Use Types:

10% Classroom

30% Lab

60% VoTech

Notes:

System	CRV of System		Percent of System Value to Budget for Repair/Replacement				System/Component Notes
	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	21	\$1,903,671	0	0	0	100	Load bearing masonry - classroom building Steel roof structure and structure - block plant. Slab on grade 2008 assessment: No reported problems
Roof	6	\$543,906	0	15	50	35	EPDM – original, past leaks in corridor repaired, No reported problems. Metal roofing on plant, No reported problems. 2008 assessment: No reported problems
Glazing	1	\$90,651	0	0	5	95	All aluminum storefront frame with insulated, fixed glass. No windows in plant 2008 assessment: No reported problems
Cladding	5	\$453,255	3	5	10	82	Split faced and ground faced concrete block – single wythe construction with sealant. Metal siding on upper portion of plant, No reported problems. 2008 assessment: ***Water infiltration at main lobby, especially at main window wall. Cause may be inadequate flashing above window heads and/or weeps may not be working.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
HVAC	18	\$1,631,718	2	2	4	92	<p>Generation (2) Cast iron sectional boilers, No reported problems. Bearing assembly failures on Bell & Gossett pumps DX ground mounted unit for AC for non-plant spaces on AHU #1 Co-Ray-Vac radiant heating for plant No AC in plant (2) split AC units for plant offices, No reported problems. (1) stand alone HVAC unit for Environmental lab #105 Autoclave and processing boiler in plant for block curing Distribution Fin tube perimeter heat throughout, No reported problems. VAV system with reheat coils in classrooms, No reported problems. Exhaust fans in plant, No reported problems. Controls DDC controls on EMS 2008 assessment: ***AHU #2 (heat only) for labs 105 & 107: fan motor is cutting out as if on power overload, however motor is not overloaded, so cause is unknown. Further investigation is recommended.</p>
Plumbing	5	\$453,255	0	0	5	95	<p>Main – copper service, No reported problems. Distribution – copper, No reported problems. Adequate shut-off valves. Cast iron waste piping Fixtures and valves –original, No reported problems. Gas fired domestic water heater Large sediment separators on lab drains, No reported problems. 2008 assessment: No reported problems.</p>
Primary/Secondary	10	\$906,510	0	0	5	95	<p>460 V service 2008 assessment: Voltage fluctuates – usually over. Investigating supply problem with Alpena Power</p>
Distribution	7	\$634,557	0	3	5	92	<p>Adequate capacity. No reported problems. 2008 assessment: Frequent tripping problem solved by redistributing loads on panels for certain areas</p>
Lighting	5	\$453,255	0	0	5	95	<p>2x4 lay-in fluorescent throughout, No reported problems.. HID in plant 2008 assessment: No reported problems</p>
Voice/Data	3	\$271,953	0	0	5	95	<p>Data: Fiber run between buildings. Building wireless. Voice: New system Central Clock: No system. 2008 assessment: No reported problems</p>
Ceilings	2	\$181,302	0	0	5	95	<p>Open exposed construction in labs and plant Suspended 2x4 lay-in in classrooms and offices 2008 assessment: No reported problems</p>
Walls	7	\$634,557	0	0	5	95	<p>Ground faced concrete block</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Doors	2	\$181,302	5	5	10	80	Exterior: Aluminum frame typical at entries. Hollow metal doors at classrooms in good condition. (4) motorized roll-up doors Interior: Solid core wood in HM frames at classrooms and offices Hollow metal doors and frames at labs and plant All hardware ADA compliant lever handles. 2008 assessment: ***Manual overhead door between 107 & 109 damaged by forklift and will not close ***Interior double door coordinators not operating properly. Roll-up doors – NE plant door gearbox leaks oil, SE plant door has minor forklift damage
Floors	2	\$181,302	0	0	5	95	Concrete floors with epoxy coating in labs 103, 107, 109 and plant, No reported problems. Carpet – offices and classrooms, No reported problems. VCT in corridors and lab 105, No reported problems. Ceramic tile in lobby and entry vestibules, No reported problems. 2008 assessment: No reported problems.
Code (fire, ADA, etc.)	3	\$271,953	0	0	5	95	Exit lighting and emergency lighting on battery back-up Fire protection sprinkling in entire building. Fire alarm system is ADA compliant. 2008 assessment: No reported problems.
Immed. Site, Ext. Ltg., etc	3	\$271,953	0	2	8	90	2008 assessment: Heaving problems at concrete pavers in front drives repaired in 2006 Salt deterioration on bollard light fixtures at front, most lights replaced
CRV Totals:		\$9,065,100	\$55,297	\$170,424	\$626,398	\$8,212,981	

Priority Issues Data

CRV: \$9,065,100

DMB: \$55,297

Excess: \$0

FCI: 0.6%

Rating: Good

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

Fine Arts Center

Campus: Main

Bldg. No.: 08

Building: Fine Arts Center

Area: 14,090 sf

Year Built: 2007

Floors: 1

Use Types:

100% VoTech

Notes: Still under warranty

System	CRV of System		Percent of System Value to Budget for Repair/Replacement				System/Component Notes
	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	20	\$479,060	0	0	0	100	Load bearing masonry Steel roof structure. Slab on grade 2008 assessment: building new, under warranty
Roof	4	\$95,812	0	0	0	100	Durolast roof 2008 assessment: building new, under warranty
Glazing	6	\$143,718	0	0	0	100	All aluminum storefront frame with insulated, fixed glass 2008 assessment: building new, under warranty
Cladding	9	\$215,577	0	0	0	100	Ground faced concrete block – single wythe construction with sealant. No reported problems. 2008 assessment: building new, under warranty
HVAC	19	\$455,107	0	5	10	85	Distribution (4) Trane RTU's – gas fired. Provide heating and cooling (4) zones with (2) rooms per zone. Controls DDC controls 2008 assessment: ***Building HVAC creates negative pressure problems - concerns noted about proper distribution and ventilation throughout labs. ***Desired increase in ventilation for ceramics lab - may be limited due to current pressurization issues. Building new, under warranty
Plumbing	5	\$119,765	0	0	0	100	Main – copper service Distribution - copper. Clay traps provided in ceramic lab 2008 assessment: building new, under warranty
Primary/Secondary	5	\$119,765	0	0	0	100	208/ 110 service. Separately metered. 2008 assessment: building new, under warranty
Distribution	5	\$119,765	0	0	0	100	Adequate capacity. No reported problems. 2008 assessment: building new, under warranty
Lighting	5	\$119,765	0	0	0	100	Pendant mounted fluorescent in classrooms. HID in some rooms. 2008 assessment: building new, under warranty
Voice/Data	5	\$119,765	0	0	0	100	Data: Fiber run between buildings. Building wireless. Voice: New system Central Clock: No system. 2008 assessment: building new, under warranty

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Ceilings	2	\$47,906	0	0	0	100	Open exposed construction Suspended 2x4 lay-in in offices. 2008 assessment: building new, under warranty
Walls	3	\$71,859	0	0	0	100	Painted gypsum board on metal studs Ground faced concrete block at corridor bearing walls 2008 assessment: building new, under warranty
Doors	4	\$95,812	0	0	0	100	Exterior: Painted aluminum frame typical at entries. (3) pairs of hollow metal doors in good condition. Revolving darkroom door – not ADA accessible (only door). Interior: Solid core wood in HM frames All hardware ADA compliant lever handles. 2008 assessment: building new, under warranty
Floors	3	\$71,859	0	0	0	100	Concrete floors typical. Carpet – offices and (1) classroom VCT in gallery and main corridor. 2008 assessment: building new, under warranty
Code (fire, ADA, etc.)	2	\$47,906	0	0	0	100	Exit lighting and emergency lighting on battery back-up Fire protection sprinkling in entire building. 2008 assessment: building new, under warranty
Immed. Site, Ext. Ltg., etc	3	\$71,859	0	0	0	100	2008 assessment: building new, under warranty
CRV Totals:		\$2,395,300	\$0	\$22,755	\$45,511	\$2,327,034	

Priority Issues Data

CRV: \$2,395,300

DMB: \$0

Excess: \$0

FCI: 0.0%

Rating: Good

0-5 Year Cumulative Data

DMB: N/A

EXCESS: N/A

FCI: N/A

\$/YR MAINTAIN: N/A

RATING: N/A

Oscoda Campus

Campus: Oscoda

Bldg. No.: 05

Building: Oscoda Campus
Building

Area: 31,140 sf

Year Built: 1977

Floors: 3

Use Types:
20% Administration
80% Classroom

Notes: Renovated 1996

System	CRV of System		Percent of System Value to Budget for Repair/Replacement				System/Component Notes
	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	
Structure	17	\$995,234	3	5	5	87	Steel structure. No reported problems. Slab on grade, lower level ½ story below grade, No reported problems. 2000 assessment: No evidence of structural settling. 2008 assessment: ***Settlement cracking evident in masonry @ NE stairwell ***Steel lintels at windows rusting, due for repainting
Roof	3	\$175,630	10	10	15	65	Newer Durolast – edge drain 2000 assessment: Roof replaced 3 years ago. 2008 assessment: ***Some roof leaks @ edges of NE & NW corners ***Downspout at boiler room door loose, pulling off building
Glazing	2	\$117,086	0	5	10	85	Original insulated glazed, sliding aluminum windows in good condition Hardware in good condition, locks work well. 2008 assessment: no reported problems.
Cladding	8	\$468,346	5	15	15	65	Brick on concrete block backup. Metal siding on penthouse in fair condition Metal soffit panels on stairwell/ elevator tower in fair condition 2008 assessment: ***Evidence of brick damage and replacement at new stair/ elevator tower in SW corner. Brick still appears to be problematic and potentially wet in these areas.

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
HVAC	25	\$1,463,580	0	5	45	50	<p>Generation (1) Hot water boiler, (3) Circulating pumps Complicated system, difficult to maintain.</p> <p>Distribution Building divided into 3 vertical zones. AHU's are on each floor, several above ceiling with outside fresh air intake. Perimeter fin tube in all rooms RTU serves third floor Window mounted AC units in various locations Second floor NW classroom has split system providing heating and cooling</p> <p>Controls Pneumatic controls 2000 assessment: Not air conditioned – some window air units. Hot water boiler 3 years old. HVAC distribution needs to be redone. Zoning problems. Ventilation units installed to meet code need to be redone. 2008 assessment: ***Most components are original, near or past end of life. ***Above-ceiling AHU's are very noisy, several only operate when lights are on - very poor air quality. ***2 intake louvers at lower level are covered, should be uncovered for better indoor air quality. ***Excessive humidity problems evident from sagging ceiling tile ***Server closet on second floor overheats ***Fume hood in science lab is older model with asbestos back panel, may not have backflow preventer on water supply. Operation is not continuous to ensure fumes do not build up in hood when room not in use.</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Plumbing	6	\$351,259	5	5	10	80	Main – cast iron service, No reported problems. Water quality improved with switchover to Oscoda water Distribution – copper, No reported problems. Adequate shut-off valves. Cast iron waste piping Fixtures and valves –original Gas fired domestic water heater in boiler room for lower level, small water heaters above ceilings for second and third floor toilets Toilet rooms original and one unisex ADA compliant toilet room on each floor Acid waste in science lab stored in containers for disposal off-site Eye wash. Shower in science lab 2000 assessment: Original plumbing. 3 ADA bathrooms. Some faucets should be replaced, some parts need replacement 2008 assessment: ***Drinking fountains don't have adequate water flow Fixtures and valves –original, No reported problems.
Primary/Secondary	5	\$292,716	0	0	5	95	Square D equipment, No reported problems. 2008 assessment: no reported problems.
Distribution	4	\$234,173	5	0	5	90	Square D equipment 2008 assessment: ***Panels are not labeled well - difficult to determine circuiting. ***No GFI outlets in science lab
Lighting	4	\$234,173	10	25	15	50	Original 2x4 lay-in fluorescent fixtures T12. Some noisy ballasts, converting to T8 as ballasts fail 2000 assessment: Original lighting needs to be replaced with more efficient ballasts. New lights in labs & I.T. rooms. 2008 assessment: ***Stairway lighting on switches so egress at night may be compromised. Stairwell lighting level low.
Voice/Data	4	\$234,173	0	0	5	95	Data: Cat 5 cabling Phone: Older phone system same as main campus Central Clock: No system 2000 assessment: Voice/data up to date 2008 assessment: no reported problems.
Ceilings	3	\$175,630	15	45	30	10	2x4 lay-in typical throughout, some 2x2 2000 assessment: Newer lay-in ceiling 2008 assessment: ***Sagging tiles on all floors, especially the 1st floor ***Grid is stained and rusty, due for re-paint. Grid damaged in computer lab ***5+% of ceiling tile is stained or damaged by water

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Walls	7	\$409,802	5	15	10	70	<p>Painted CMU exterior walls</p> <p>Painted gypsum on stud interior walls</p> <p>Some demountable vinyl covered partitions in office areas</p> <p>Vinyl wall covering on both gypsum and block walls in some classrooms</p> <p>2008 assessment:</p> <p>All walls repainted in 2008</p> <p>***Wood trim on walls in lower level in poor condition – some pulling off in classrooms</p> <p>Science lab casework and tops in good condition</p>
Doors	2	\$117,086	10	5	10	75	<p>Exterior:</p> <p>Aluminum frame doors at entry, hollow metal elsewhere</p> <p>Interior:</p> <p>Solid core wood</p> <p>2000 assessment:</p> <p>Doors in good shape – original hardware.</p> <p>Bottom floor door (entry/back of building) ADA compliant</p> <p>Interior:</p> <p>Hardware all ADA complaint and in good condition</p> <p>2008 assessment:</p> <p>***Original door hardware at end of life., due for replacement</p> <p>***Closer at main entry needs repair.</p> <p>***North door sticks & doesn't close tight</p> <p>***West lower level hollow metal door rusting at bottom, delaminating, doesn't close, due for replacement</p> <p>Interior doors:</p> <p>***Door finish scratched and veneer damage, most doors have holes where parts were removed - holes should be covered for security and smoke separation.</p>
Floors	4	\$234,173	0	5	10	85	<p>VCT in first floor lounge, No reported problems.</p> <p>VCT and ceramic tile in toilet rooms, No reported problems.</p> <p>VCT with metal nosings at stairs</p> <p>Quarry tile at main entry lobby</p> <p>Carpet in classrooms, offices, conference rooms, corridors.</p> <p>2008 assessment:</p> <p>***Carpet worn and end of life, scheduled/budgeted for replacement throughout first and second floor with the exception of a few offices</p>

System	%	\$	Immediate	1-5 yrs	6-10 yrs	11+ yrs	System/Component Notes
Code (fire, ADA, etc.)	3	\$175,630	5	5	10	80	Unisex ADA compliant toilet room on each floor. Main east entry not ADA compliant Fire alarm upgraded to ADA compliant Emergency lighting on battery backup Exit lighting original on battery backup Fire protection sprinkling in entire building. Security system for office, computer lab and ITV room. Hydraulic elevator, ADA compliant, on service contract 2000 assessment: ADA strobe. ADA updated in 1996 2008 assessment: ***Emergency lighting - battery replacement required on most lights ***Exit lighting - Several not working. ***Stairway fire doors blocked open ***Treads in poor condition on some stairs, especially front entry stair One handrail cover in stairwell loose
Immed. Site, Ext. Ltg., etc	3	\$175,630	10	10	10	70	Building mounted lighting functioning. No reported problems. Sidewalks in good condition 2000 assessment: Sidewalk being replaced. Parking lot in back needs new lights. Asphalt needs resurfacing and plants removed. Front steps cracking, nosing missing 2008 assessment: ***Front entry steps: metal nosings loose or missing, potential trip hazard. ***Landscaping overgrown all around building, potential safety issue
CRV Totals:		\$5,854,320	\$208,414	\$477,127	\$1,088,904	\$4,079,876	

Priority Issues Data

CRV: \$5,854,320

DMB: \$208,414

Excess: \$0

FCI: 3.6%

Rating: Good

0-5 Year Cumulative Data

DMB: \$685,541

EXCESS: \$392,825

FCI: 11.7%

\$/YR MAINTAIN: \$117,086

RATING: Poor

V. Implementation Plan

- a. Repurposing Van Lare Hall is well underway and due to be completed and ready for occupancy on March 31, 2021. The \$8.695 million project: (1) expands the ACC nursing program, both in terms of instructional space, technology, and programming; (2) upgrades a centralized center for student success; and (3) dramatically improves the HVAC, electrical, technology, and overall efficiency of the wing housing the administrative and student services functions of this legacy building.
- b. Addressing ACC's deferred maintenance campus-wide would entail a set of projects estimated to represent a total of \$7,855,000 in expenditures. Approximately \$2.425 million is covered under the Van Lare Hall repurposing proposal listed above.
- c. Rate of return on planned expenditures expressed as number of years to break even on operational savings:
 - Less than 15 years for heating and air conditioning system in Van Lare Hall.
- d. Distance learning methodologies are relevant for nursing. As for centralizing student services, many of the ACC services (such as admissions, registration, and financial aid) will be conducted online. Others (such as career advising, academic advising, and tutoring) are best conducted in person in a "one stop shop" environment. The COVID-19 pandemic has driven virtual learning delivery methodologies at an unprecedented pace.
- e. Maintenance projects associated with the buildings referenced in Part IV, Facilities Assessment, will require expenditures in excess of \$1,000,000.

VI. Source Material: Economic Contribution Study

Fact Sheet: *The Economic Contribution of Alpena Community College (CCBenefits 2006)*

What role does Alpena Community College (ACC) play in the local economy? The results of this study demonstrate that ACC is a sound investment from multiple perspectives. Students benefit from improved lifestyles and increased earnings. Taxpayers benefit from an enlarged economy and lower social costs. And the community as a whole benefits from increased job and investment opportunities, higher business revenues, greater availability of public funds, and an eased tax burden.

ACC stimulates the state and local economy

- ACC activities encourage new business, assist existing business, and create long-term economic growth. The college enhances worker skills and provides customized training to local business and industry. It is estimated that the present-day ACC Service Area workforce embodies around **530,100 credit and non-credit hours** of past and present ACC training.
- ACC skills embodied in the workforce of the ACC Service Area where the former students are employed **increase regional income by \$69.4 million**. Associated indirect effects increase income by **another \$9.9 million**.
- Altogether, the ACC Service Area economy annually receives roughly **\$88.1 million in income** due to the past and present efforts of ACC. Clearly it is accurate to describe ACC as an engine of economic growth.
- The ACC Service Area economy receives roughly **\$8.7 million in regional income** annually due to ACC operations and capital spending.

ACC leverages taxpayer dollars

- The state and local community will see **avoided social costs amounting to \$12 per year for every credit earned** by ACC students, including savings associated with improved health, reduced crime, and fewer welfare and unemployment claims.
- This translates to **\$387,000 worth of social savings** to the State of Michigan each year as long as students are in the workforce.
- Students benefit from higher earnings, thereby expanding the tax base and reducing the tax burden on state and local taxpayers. When aggregated together, ACC students generate about **\$3.5 million annually in higher earnings** due to their ACC education.
- Students see their annual income increase by \$111 per year for every credit completed at ACC.

ACC generates a return on government investment

- State and local government allocated around **\$7.8 million in support of ACC** in fiscal year 2005.
- For every dollar appropriated by state and local government, taxpayers will see a **cumulative return of \$1.90** over the course of the students' working career (in the form of higher tax receipts and avoided social costs).

- State and local government will see a **rate of return of 8%** on their support for ACC, which compares very favorably with private sector rates of return on similar long-term investments.

ACC increases students' earning potential

- Studies demonstrate that education increases lifetime earnings. **The average annual earnings of a student with a one-year certificate are \$25,963**, or 84% more than someone without a high school diploma or GED, and 16% more than a student with a high school diploma. **The average earnings of a student with an Associate Degree are \$30,586**, or 117% more than someone without a high school diploma or GED, and 37% more than a student with a high school diploma or GED.
- ACC students will see their annual income increase, on average, by about **\$111 per year for every credit completed** at ACC during the analysis year.
- Throughout his or her working career, the average ACC student's discounted lifetime earnings (i.e., future values expressed in present value terms) will increase **\$5.20 for every education dollar invested** (in the form of tuition, fees, books, and foregone earnings from employment).
- Students enjoy an attractive **16% annual rate of return** on their ACC educational investment, and recover all costs (including wages foregone while attending) in **9 years**.