Kalamazoo VALLEY community college

FY 2025 - 2029 Facilities Master Plan

JULY 1, 2024

KalamazooVALLEY community college

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Section 1 : Process Overview

1.0 PROCESS OVERVIEW

Kalamazoo Valley Community College (KVCC) routinely undertakes the evaluation of its facilities as part of an overall Facilities Master Plan review. TowerPinkster has been retained to perform the assessment of the college's facilities for the 5-year span encompassing 2025–2029.

The college has successfully implemented many of the past Facilities Master Plan initiatives. It has expanded both its scope and services for the community and its students in the years 2025–2029, which brings us to the present day. It is recognized that KVCC must continue to undertake successful renovation and stewardship of its existing facilities, while addressing the changing needs of the workforce environment and student demands on the college.

In the process of gathering and analyzing data for this report, TowerPinkster utilized a variety of methods to engage students, faculty, and staff to determine the needs of existing college campus facilities and gauge future initiatives. This independent, fact-finding process was then reviewed and tested with the Steering Committee and college members, comparing and contrasting TowerPinkster's findings with the opinions of the Steering Committee and college members and their information regarding the needs and demands at KVCC.

This report seeks to effectively place the college in the optimum position to respond to the demands identified in the study, as well as the environmental context of the state and the local community in the years 2025–2029.

We wish to thank the following individuals for their participation in the process of crafting the direction for this report. Their keen insight and background in various factions within the college led to a productive dialogue that enabled us to define measurable goals. The Steering Committee members consist of: Dannie Alexander, Vice President for Campus Planning and Operations; Paige Eagan, Provost and Vice President for Instruction and Student Services; Craig Jbara, Vice President for Strategic Business and Community Development; Brian Lueth, Vice President for Finance and Business; Tracy Labadie, Associate Vice President for Collaboration, Compliance, and Analytics; Rachel Bair, Director of Sustainable and Innovative Food Systems; Jeremy Breeding, Building Operations Manager; Erick Martin, Faculty, Welding; Jenny Ott,Faculty Communications; Cynthia Schauer, Faculty, Biology; Steven Walman, Faculty Business.

1.1 HISTORY OF COLLEGE FACILITIES

KVCC was established in 1966 with the overwhelming approval of voters in nine K–12 school districts in Southwest Michigan. The voters approved a 1.5-mil charter tax to operate the college. A tenth school district eventually chose to become part of the college's taxing district. KVCC opened its doors in September 1968. Currently, KVCC has four campuses:

- Texas Township
- Arcadia Commons
- The Groves
- Bronson Healthy Living Campus

The first structure on the 185-acre Texas Township Campus consisted of a 40,000-square-foot modular building, intended to be a temporary facility. In 1970, the first permanent structure was built, which included classrooms, laboratories, a library, food services, student activities area, and a television studio.

In 1982, 32,000 square feet of space was added to the Texas Township Campus for new laboratories to accommodate the growing programs. An addition of 100,000 square feet, renovation of 45,000 square feet of existing facilities, and the renovation of the temporary Redwood Building were completed in 1991.

KVCC expanded its services to downtown Kalamazoo in 1983 to meet the education, training, and retraining needs of local business and industry, and to make life-long learning a convenient possibility for employees and residents. Anna Whitten Hall on the Arcadia Commons Campus, a 55,000-square-foot, three-level facility, was constructed in 1994.

After a feasibility study was completed by community leaders in July 1991, KVCC assumed governance of the Kalamazoo Public Museum. Voters approved a charter millage to fund the museum's operations. In response to this mandate, community leaders launched a $20 million capital campaign to build a new museum on the Arcadia Commons Campus.

Proposed as part of the FY 2003–2008 Facilities Master Plan, the KVCC Center for New Media was constructed as a renovation and addition to the former W.S. Dewing Building, originally constructed in 1929. The project, completed in 2004, is located in downtown Kalamazoo's central business district, adjacent to the Arcadia Commons Campus.

The Center for New Media encompasses approximately 43,000 square feet. This facility allows KVCC to greatly expand offerings in graphic design, electronic arts, web-page design, and e-commerce initiatives, as well as supplementing downtown campus classroom space for general studies programs. It also provides a highly-visible location for exhibition of student works in the Arcus Gallery, which fronts prominently on the pedestrian mall.

The third campus, originally opened as one of 18 M-TEC facilities across the state, The Groves was financed by a $5 million grant from the Michigan Economic Development Corp. with $6 million in matching funds provided by area companies and foundations. Today, it is a respected leader in talent and business development.

In 2016 the college opened its fourth campus at the southeast side of downtown Kalamazoo. The new campus is centered around a partnership with Bronson Healthcare and Integrated Services of Kalamazoo (formerly Kalamazoo Community Mental Health and Substance Abuse Services [KCMHSAS]), and is designed to provide education and training that focuses on wellness and food sustainability.

The new campus was developed on 13.3 acres of unused land donated by Bronson Healthcare, where Kalamazoo Valley has expanded its curriculum to include training in sustainable food production, distribution, and preparation; all part of the college's efforts to increase community understanding of and access to healthy food and nutrition.

The property, near Bronson Methodist Hospital, includes 8.4 acres along Crosstown Parkway east of the City of Kalamazoo's Crosstown Center, 3.6 acres between Walnut and Dutton Streets, and 1.3 acres north of Crosstown Parkway and south of Dutton Street. Kalamazoo Valley occupies the Marilyn J. Schlack Culinary and Allied Health Building. Classes at the new campus opened in the fall of 2016.

KVCC has demonstrated responsive growth and academic program expansion to meet the changing needs of students and faculty. KVCC's methodical assessment of each of these standalone items shows a commitment to maintaining the high standards of the college as it stands, as well as evidence of its willingness to supplement and improve the college in the areas that the Board of Trustees has prioritized as most necessary. It has evaluated each of these items in regard to the impact on their distinct campuses, as well as on the college as a whole. It is expected that the same measure of care will be undertaken with the goals detailed in the 2025–2029 Facilities Master Plan.

1.2 MISSION STATEMENTS

KVCC has a single mission statement, which covers its overall objectives. In addition, individualized mission statements have been identified for subsets of the college to provide more focused direction for the unique areas they serve. The benefit to having a single mission statement for the entire college is that any and all instructional initiatives, building projects, or other work must always be measured against this statement to test the worthiness and value to the college as a whole. The mission statement offers the framework for carefully considered growth, expansion, and measurement of the true benefit to students and community. The mission statement also provides prospective students, and the community at large, with a clear image of the college's identity and methodology.

KVCC Mission Statement:

Kalamazoo Valley Community College creates innovative and equitable opportunities that empower all to learn, grow and thrive.

1.3 GOALS OF THE FY 2025–2029 MASTER PLAN

KVCC measures its success by the ways in which it serves students, faculty, and the community at large through its program offerings and facilities that make these programs possible. By analyzing future needs, this report will provide a detailed understanding of what the future years of KVCC could entail. In understanding the economic times which face KVCC, the studies investigate the potential for adaptive reuse, reinvigoration of existing facilities, and a careful expansion to suit the changing needs of the college. The challenge is to infill the existing facilities with up-to-date program offerings, while carefully and responsibly considering the college's goals to grow the student population.

The college also recognizes its prominence in the community, and has embraced practices that have been deemed as either sustainable design or responsible energy and facility management. This has been accomplished by assessing not only existing built space and future projects that are under consideration, but also the role that these facilities play in the environment and the energy that they consume. The college would like to take a leadership role in pushing environmental and energy stewardship forward to the fullest extent. Therefore, it is paramount that the best sustainable design and management practices are kept in mind throughout the assessment and recommendation phase contained within this report.

The ultimate goal of this Facilities Master Plan is to serve as a road map for KVCC growth in future years. The college uses the Facilities Master Plan as an active tool for constant measurement in the larger context, to ensure that KVCC continues to be a leader in the community.

Section 2 : Instructional Programming

2.0 INSTRUCTIONAL PROGRAMMING

KVCC recognizes that it must proactively address instructional offerings and programs that reflect the changing needs of the students it serves, as well as the changing needs of the community. The educational programs offered in the five years contained within this report seek to address the shifts in the local economic climate and business offerings to accurately depict the type of workforce training needed for students to successfully and seamlessly move from higher education to the workforce with the greatest skill set available to them.

KVCC offers students numerous avenues for pursuing education, including two-year associate degrees, one-year certificates, individualized training courses, seminars, and continuing education for professionals in the workplace, as well as lifelong learning and active relationships with 12 4-year universities for transferable credits. The college also offers emerging training in academy-style programs, which seek to accelerate knowledge and preparation through intensive training for workplace environments. To this end, KVCC offers courses in the following programs and careers:

Associate of Applied Science:

- Accounting
- Administrative Assistant
- Animation and Game Art
- Automotive Drivability Systems
- Automotive Undercar Systems
- Business Administration
- Chemical Technology
- Cisco Technician
- Computer Aided Design
- Culinary Arts & Sustainable Food Systems
- Dental Hygiene
- Electrical Technology
- Emergency Medical Services
- Engineering Technology
- Fire Science
- General Marketing
- Graphic Design
- Health Sciences General Studies
- Illustration
- IT Support Technician
- Law Enforcement & Criminal Justice
- Law Enforcement Spec/Certification
- Machine Tool Automation
- Machine Tool Technology
- Maintenance Mechanic-Industrial
- Medical Assistant Technology
- Multi-Media/Video
- Nursing
- Nursing RN Completion
- Respiratory Care Practitioner
- Software Developer
- Sustainable Brewing
- Web Design & Development

Certificate Programs:

- Administrative Support
- Auto Hybrid & Adv Tech Vehicle
- Baking & Pastries
- CAD-CAM
- CAD Specialist
- Coaching
- Culinary Arts & Sustainable Food Systems
- Electrical Construction
- Electrical Control
- General Automotive Service
- Graphic Design
- Heating, Ventilation & Air Conditioning
- Illustration
- Legal Office Assistant
- Machinist
- Maintenance Mechanic-Facility
- Maintenance Mechanic-Industrial
- Medical Administrative Assistant
- Medical Assistant Technology
- Office Management
- Supervisory Leadership
- Sustainable Brewing
- Welding Technologies

Certificate of Achievement:

- American Sign Language Studies
- Auto Automatic Transmission/Transaxle
- Auto Brake Systems
- Auto Electric/Electronic Systems
- Auto Engine Performance
- Auto Engine Repair
- Auto Heat/Air Conditioning Systems
- Auto Light Duty Diesel Engines
- Auto Manual Drive Train and Axles
- Auto Steering and Suspension
- AutoCAD
- Cisco Certification
- CNC Operator
- Coaching
- Database Specialist
- Desk Side Support
- Dietary Manager
- Emergency Medical Technology-Basic
- Inventor
- Machine Tool Operator
- Network Manager
- Office Support Specialist
- PC Support Technician
- Proengineer
- Software Specialist
- Solidworks
- Web Developer
- Welding CC Processess
- Welding CV Processess
- Word Processing Specialist

Career Academies:

- Cell Tower Technician
- Corrections Academy
- Patient Care Academy
- Phlebotomy Academy
- Police Academy
- Wind Turbine Technician Academy

KVCC continues to be active in reevaluating the goals for each of their campuses as unique entities. The Texas Township Campus serves as the primary hub for a full complement of offerings, with a strong focus on business training at the Arcadia Commons Campus, and specialty programs at the Center for New Media. The Groves affords KVCC the opportunity for expansive offerings to the business community at large to address continued training and certification required by the workplace. The Groves has also been established as the home of academy-style program offerings for accelerated training to rapidly bring people directly to the workforce in emerging areas of alternate energy technologies and law enforcement. In addition, KVCC has ramped up programming for life enrichment and community outreach to address topics with a high level of interest. The Bronson Healthy Living Campus has provided additional opportunities for education in Food Production and Processing, Culinary Arts, Sustainable Brewing while also providing state of the art facilities for the College's Allied Health programs. The location of the Bronson Healthy Living Campus has expanded the possibilities for partnerships with local businesses and has created opportunities for strengthening relationships with the community as a whole.

Lastly, KVCC supplements the educational training environment with a comprehensive catalog of online course offerings. The Canvas online learning management system and instructional program delivery tool is utilized to create a uniform methodology to deliver online-based course work.

2.1 TEXAS TOWNSHIP CAMPUS

The widest array of courses offered by KVCC is provided at the Texas Township Campus. This campus was the original home for all of the college's offerings, and has served as the location for many programs that have, over time, grown into their own entities and have been either located to additions onto the main campus building or into separate standalone facilities at the Arcadia Commons Campus, The Groves and The Bronson Healthy Living Campus. Thus, the Texas Township Campus serves as both a home base for the majority of instruction, and as an incubator for growing or emerging programs that may ultimately overtake areas or districts within the college.

The Texas Township Campus houses general classrooms, laboratory spaces, computer classrooms, and additions that have been built throughout the years to accommodate applied technology and vocational training needs. In addition, wings have been added for applied technology, the arts, and dental hygiene, which are more specific in their classroom design and programmatic offerings. Some of the programmatic growth has spurred additions to this main campus building over time, and currently there are areas which are overtaxed with enrollment as well as a need to update the now 50 year-old infrastructure in place.

2.2 ARCADIA COMMONS CAMPUS

In the 1990's, KVCC addressed the opportunity to reach out to the downtown business community in the center of Kalamazoo, which led to the formation of the Arcadia Commons Campus. The Arcadia Commons Campus consists of Anna Whitten Hall, the Center for New Media, and the Kalamazoo Valley Museum, each of which are standalone buildings.

The instructional offerings at Anna Whitten Hall focus on credit and degree programs. The majority of the programs focuses on general studies, business related courses, and computer-related instructional programs. Anna Whitten Hall is effectively set up to operate as a small college within KVCC for the focus of its course offerings.

The Center for New Media, offers specific course work in the arts and new media. These offerings revolve primarily around electronic mediums, including graphic design, illustration, time-based media, animation, game art, web design and interactive media, and web-production technology. The building also houses classrooms for conventional 2-dimensional and 3-dimensional artistic mediums to supplement the art degree programs offered.

The third structure in the Arcadia Commons Campus is the Kalamazoo Valley Museum, which is operated by KVCC. This serves as a cultural center within the downtown community and addresses the history of Kalamazoo, as well as offering educational programs to K-12 students and the community at large through programs and traveling exhibitions.

2.3 THE GROVES

The Groves (formerly known as the M-TEC) was opened in 2001 in response to statewide initiatives to provide partnering opportunities between area colleges and regional industries to provide workforce training. The Groves, by nature, is continually redefining the instructional programs that it offers, based upon the changing workforce and the demands that these changes place upon the facility. The facility was designed to offer amenities which allow for training and learning seminars, as well as teleconferencing capabilities and amphitheater-style presentations. In addition, flexible lab spaces were created to accommodate applied technology workshops and seminars for tradesmen on specific pieces of equipment or processes prior to these being implemented in the workplace.

The Groves has also expanded its role as a center for the college's academy based programs. These competency-based training programs are seen as a positive avenue for workforce training under an accelerated schedule, and a constructive climate for certification programs. With the academy-based programs in mind, certain areas of The Groves continue to be monitored for new and expanded uses that address regional areas of need such as the Wind Turbine Technician Academy, Mechatronic Systems Technician Academy, Production Tech Academy, Hospitality Academy, Healthcare Academy and Utility Line Worker Academy. At this time, KVCC is also evaluating what other academy programs could be brought into the facility to continue complementing the regional workforce needs and boosting the health of the area economy. Recent additions to The Groves offerings include phlebotomy and cell tower technician academies, as well as life enrichment and community outreach programs.

2.4 BRONSON HEALTHY LIVING CAMPUS

The Bronson Healthy Living Campus was opened in 2016. Of the three buildings that make up the campus, KVCC owns the Marilyn J. Schlack Culinary and Allied Health Building (MJSCAH). The campus was established to expand college curriculum offerings, along with creating a community magnet that promotes the education of nutrition, mental and physical health, sustainability and social concerns.

The Food Innovation Center contains space for four major program elements: food education, flexible indoor growing, outdoor growing, and food safety and processing. Within the facility, students are exposed to new trends such as hydroponics and aquaponics. The building was designed with a sustainable philosophy and integrates solar power and hot water technologies that the college embraces.

The MJSCAH delivers education centered around the idea of the interconnectedness between food and health studies. The new Culinary Arts and Sustainable Foods program focuses on the impact that healthy food can have on a community. It also has a local focus on the understanding of regional nutrition. The food service areas of the building feature a community kitchen for outreach classes, as well as a tiered classroom for large scale demonstration cooking seminars. Additionally, a health-focused cafe and restaurant space is featured on the main level. The College has also created a brewery space that has allowed for the creation of a Sustainable Brewing program.

Space for the Allied Health programs is equipped with cutting-edge equipment for medical simulation and skills development, allowing students to experience “real-world” situations. The space contains a series of flexible group-based education rooms that provide a variety of teaching and learning opportunities.

2.5 ONLINE LEARNING

In response to the tremendous opportunities afforded by online course offerings, KVCC has significantly enhanced the quantity of online courses, as well as the methodology in which online courses are offered.

KVCC currently uses the Canvas online learning management system. Before taking an online class at KVCC, students must successfully complete an Online Orientation to Canvas. This orientation can be taken at any time after one has been admitted to KVCC and has received a username and password. After successfully completing the orientation, the student will be able to access their online courses in Canvas. This orientation is designed to help online learners become familiar with the features of the online learning management system - Canvas. In this course, students complete several modules to learn to use the tools of the system as well as how to navigate through an online course.

Currently, online classes are offered in 30+ different areas, with nearly all areas of programs represented. KVCC has recognized that also providing hybrid options will extend the potential of access to learners during all hours of the day and with flexibility, access and options available. By effectively implementing these online classes, KVCC has leveraged its built facilities while expanding its educational opportunities to those who may not be able to meet the times in which traditional classes are offered, or who might not otherwise have access to education.

2.6 AGREEMENTS WITH FOUR-YEAR INSTITUTIONS

KVCC has transfer course equivalencies and transfer program guides in place with 12 4-year State of Michigan institutions. Reviews and course cross-referencing with these institutions is easily provided to students via the KVCC website, as well as through the Student Services Center. KVCC actively updates and surveys their courses offered for equivalency with four-year institutions, as it provides a beneficial and cost-effective route for students to obtain course credits and advance their learning with 4-year institutions on individualized timelines and budgets. Currently, the following State of Michigan colleges have courses with equivalence offered at KVCC:

- Central Michigan University
- Davenport University
- Eastern Michigan University
- Ferris State University
- Grand Valley State University
- Lake Superior State University
- Michigan State University
- Michigan Technological University
- Northern Michigan University
- Siena Heights University
- University of Michigan
- Western Michigan University

KVCC has also established a University Center which enables a student to establish a clean, simple integrated path for completion from a KVCC Associate's Degree to a Bachelor's Degree (and beyond) in a specific program of study from a sponsoring university on KVCC's campus.

2.7 ECONOMIC IMPACT OF CURRENT / FUTURE PROGRAMS

The College is an active partner in promoting economic development in the region. The addition of new programs and facilities such as the Marilyn J. Schlack Culinary and Allied Health Building demonstrates the important role that The College plays in adapting to the current marketplace to ensure a quality workforce is provided to the region. The Groves continues to extend the original mission of the M-TEC initiative by providing academy based programs, while also engaging local business leaders through the variety of training programs offered.

Section 3 : Staffing and Enrollment

3.0 STAFFING AND ENROLLMENT

Kalamazoo Valley Community College pays close attention to the enrollment trends and staffing sizes to ensure that the level of faculty is kept streamlined, while also working to maintain a low student-to-faculty ratio. This careful balance is monitored by the Institutional Research department internally, and is used to evaluate the successfulness of courses and offerings. This is paired with the data from room utilization monitoring to ensure that the College maximizes physical resources and course-scheduling processes.

3.1 ENROLLMENT DATA (CURRENT, PAST AND PROJECTED)

Due to recent economic conditions, KVCC has experienced notable shifts in enrollment These are detailed in the table entitled Credit Hour Enrollment: Actual 2019/20 Through Projected 2028/29. Steps have been taken to stabilize enrollments through initiatives designed to support student success. It is anticipated that this will result in moderate and steady growth over the next several years. This growth is illustrated in the same table.

Kalamazoo Valley Community College
Credit Hour Enrollment: Actual 2019/20 Through Projected 2028/29

	Actual 2019/20	Actual 2020/21	Actual 2021/22	Actual 2022/23	Estimated 2023/24	Projected 2024/25	Projected 2025/26	Projected 2026/27	Projected 2027/28	Projected 2028/29
ACC	4,529	4,045	3,615	3,350	3,521	3,353	3,193	3,041	2,896	2,758
AGF	315	416	411	337	332	308	286	265	246	228
ANM/AAMT	2,724	2,208	2,745	2,361	2,370	2,422	2,476	2,531	2,587	2,644
ART	2,028	1,623	1,864	1,491	1,557	1,536	1,516	1,496	1,476	1,456
AUTO	1,207	683	677	867	1,101	1,245	1,408	1,592	1,800	2,035
BIO	9,192	9,064	8,756	7,864	7,018	6,459	5,944	5,470	5,034	4,633
BREW	603	474	524	348	271	230	195	166	141	120
BUS	13,714	11,800	12,352	11,811	10,800	10,500	10,208	9,924	9,648	9,380
CHM	5,046	5,088	3,906	3,823	4,219	3,933	3,666	3,417	3,185	2,969
CIS	2,556	2,442	3,113	3,545	3,823	4,198	4,610	5,062	5,559	6,104
CNST	48	0	69	107	132	128	124	120	116	112
COM	5,289	4,422	5,169	4,386	4,469	4,484	4,499	4,514	4,529	4,544
CUL	1,240	1,112	1,349	1,267	1,206	1,236	1,267	1,299	1,332	1,366
DHY	1,010	971	940	1,020	1,144	1,212	1,284	1,360	1,440	1,525
ECO	3,201	2,268	2,127	2,010	1,866	1,749	1,639	1,536	1,440	1,350
EDMT	2,553	1,800	1,822	1,841	1,764	1,752	1,740	1,729	1,718	1,707
ELT	1,813	1,642	1,979	2,243	2,479	2,803	3,170	3,585	4,054	4,584
EMT	784	1,408	942	772	825	744	671	605	546	492
ENG	12,613	11,769	11,486	9,699	10,113	9,605	9,122	8,664	8,229	7,815
FIRE	354	314	387	325	419	462	509	561	618	681
FRL	3,386	2,715	2,775	2,726	2,839	2,882	2,925	2,969	3,014	3,059
GEO	1,446	2,253	2,156	2,177	2,263	2,266	2,269	2,272	2,275	2,278
HCR/NUT	493	608	564	500	524	498	473	449	426	405
HORT	0	0	0	130	583	602	622	642	663	685
HRY	3,156	3,270	2,895	2,409	2,357	2,106	1,882	1,682	1,503	1,343
HVAC	1,062	912	816	714	909	908	907	906	905	904
LEN	1,704	1,446	1,124	1,121	855	743	646	561	488	424
LPN	0	0	0	521	583	602	622	642	663	685
MAT	534	648	530	357	318	266	223	187	156	130
MATH	22,285	18,774	16,014	14,936	14,047	12,712	11,504	10,410	9,420	8,524
MUS	1,987	1,887	1,784	1,471	1,409	1,278	1,159	1,051	953	864
NURS	3,344	3,487	3,620	3,629	3,655	3,712	3,770	3,829	3,889	3,950
PHI/HUM	6,679	5,272	4,394	3,547	3,305	2,981	2,689	2,425	2,187	1,972
PHY	2,917	3,040	2,583	2,369	2,365	2,165	1,982	1,815	1,662	1,522
PSI	5,451	4,356	4,815	4,320	4,075	3,990	3,907	3,826	3,746	3,668
PSY	3,942	3,598	3,290	3,885	4,290	4,566	4,859	5,171	5,503	5,856
RCP	946	972	921	975	918	901	884	867	851	835
SOC	4,872	4,623	4,407	3,849	3,808	3,567	3,341	3,130	2,932	2,746
TRS/EDU	2,527	1,991	2,790	2,820	2,330	2,434	2,543	2,656	2,774	2,898
WELD	787	559	736	880	841	950	1,073	1,212	1,369	1,546
WPE	6,019	4,652	4,980	4,604	4,761	4,797	4,834	4,871	4,908	4,946
TOTAL	**144,356**	**128,612**	**125,427**	**117,407**	**116,464**	**113,285**	**110,641**	**108,510**	**106,881**	**105,743**

3.2 STAFFING DATA AND CLASS SIZES (CURRENT, PAST AND PROJECTED)

As a flagship community college in western Michigan, KVCC serves a large population of students. In order to effectively serve this population, the College has found it necessary to closely monitor instructional expenditures. Resulting efficiencies are reflected in the table entitled Student Faculty Ratio 2023/24, Projected Faculty FTE Through 2028/29 on the following page. Allowing for variation across several disciplines, in 2023/24 the estimated student to faculty ratio was 16.62. During the same time period, the average class size at KVCC was 21.9 students per section.

These ratios, in combination with anticipated levels of growth, point the way toward a modest increase in FTE faculty through 2021/22. This growth is illustrated in the same table.

Kalamazoo Valley Community College

Student to Faculty Ratio 2023/24, Projected Faculty FTE Through 2028/29

	Actual 2022/23 FTE Fac	Estimated 2023/24 FTE ST	Estimated 2023/24 FTE Fac	Estimated 2023/24 ST:FAC Ratio	Projected 2024/25 FTE Fac	Projected 2025/26 FTE Fac	Projected 2026/27 FTE Fac	Projected 2027/28 FTE Fac	Projected 2028/29 FTE Fac
ACC	6.90	117	6.77	17.28	6.79	6.81	6.83	6.85	6.87
AGF	1.47	11	1.40	7.86	1.31	1.23	1.15	1.08	1.01
ANM/AAMT	5.30	79	6.70	11.79	6.91	7.13	7.36	7.59	7.83
ART	5.60	52	5.50	9.45	5.78	6.07	6.38	6.71	7.05
AUTO	3.67	37	6.23	5.94	6.82	7.47	8.18	8.96	9.81
BIO	15.33	234	15.93	14.69	15.55	15.17	14.80	14.44	14.09
BREW	2.13	9	2.13	4.23	2.09	2.05	2.01	1.97	1.93
BUS	17.97	360	17.13	21.02	16.77	16.41	16.06	15.72	15.39
CHM	7.47	141	9.90	14.24	9.69	9.48	9.28	9.08	8.89
CIS	7.80	127	7.43	17.09	7.81	8.21	8.63	9.07	9.54
CNST	0.37	4	2.30	1.74	2.35	2.40	2.45	2.50	2.55
COM	4.80	149	4.80	31.04	5.04	5.29	5.55	5.83	6.12
CUL	7.37	40	6.77	5.91	6.67	6.57	6.47	6.37	6.28
DHY	6.27	38	7.47	5.09	7.79	8.12	8.46	8.82	9.19
ECO	2.60	62	2.60	23.85	2.71	2.82	2.94	3.06	3.19
EDMT	7.23	59	6.03	9.78	5.90	5.78	5.66	5.54	5.42
ELT	5.23	83	4.77	17.40	5.00	5.24	5.49	5.75	6.02
EMT	5.60	28	6.62	4.23	6.48	6.34	6.21	6.08	5.95
ENG	21.77	337	20.10	16.77	20.65	21.22	21.81	22.41	23.03
FIRE	1.70	14	1.70	8.24	1.66	1.62	1.59	1.56	1.53
FRL	7.63	95	7.23	13.14	7.38	7.54	7.70	7.86	8.03
GEO	4.83	75	3.47	21.61	3.35	3.23	3.12	3.01	2.91
HCR/NUT	1.60	17	1.53	11.11	1.44	1.36	1.28	1.21	1.14
HORT	0.27	19	3.43	5.54	3.50	3.57	3.65	3.73	3.81
HRY	5.90	79	5.30	14.91	4.74	4.24	3.79	3.39	3.03
HVAC	2.80	30	2.37	12.66	2.38	2.39	2.40	2.41	2.42
LEN	2.67	29	3.83	7.57	3.75	3.67	3.59	3.51	3.44
LPN	3.60	19	2.60	7.31	2.66	2.72	2.78	2.84	2.90
MAT	1.83	11	1.87	5.88	1.88	1.89	1.90	1.91	1.92
MATH	28.87	468	22.67	20.64	22.19	21.72	21.26	20.81	20.37
MUS	4.90	47	4.70	10.00	4.77	4.84	4.91	4.98	5.05
NURS	8.47	122	10.37	11.76	10.81	11.27	11.75	12.25	12.77
PHI/HUM	6.60	110	4.70	23.40	4.35	4.03	3.73	3.45	3.19
PHY	4.47	79	4.47	17.67	4.43	4.39	4.35	4.31	4.27
PSI	7.00	136	6.70	20.30	7.08	7.48	7.90	8.35	8.82
PSY	7.80	143	4.50	31.78	4.40	4.31	4.22	4.13	4.04
RCP	2.00	31	2.00	15.50	1.92	1.84	1.76	1.69	1.62
SOC	6.00	127	4.60	27.61	4.34	4.09	3.86	3.64	3.43
TRS/EDU	12.33	78	10.00	7.80	10.04	10.08	10.12	10.16	10.20
WELD	2.00	28	2.00	14.00	2.08	2.17	2.26	2.36	2.46
WPE	7.73	159	7.90	20.13	7.90	7.90	7.90	7.90	7.90
TOTAL	**235.87**	**3,882**	**233.52**	**16.62**	**238.47**	**243.52**	**248.68**	**253.95**	**259.33**

Section 4 : Facility Assessment

4.0 FACILITY ASSESSMENT

Through careful maintenance of the physical assets of the college, KVCC provides a clean, safe, inviting, and productive learning environment for students, faculty, staff and community members. The ongoing efforts to continually update facilities and technology are important activities in being prudent stewards of these KVCC assets. These initiatives are reviewed annually for capital expenditures and improvements. KVCC understands the role that the buildings and grounds play in providing an environment for education and training and continually focuses efforts on creating spaces that meet the needs of 21st-century educational spaces. Furthermore, campus safety and security has been bolstered in recent years by an expanded public safety presence, and technology implementation to support the safety of all persons on each campus.

4.1 FACILITY DESCRIPTION AND CONDITION ASSESSMENT

KVCC includes four campus locations throughout Kalamazoo County. The original campus in Texas Township began operations in 1968 in a temporary facility known as the Redwood Building, which remained in service until the 1980's, when it was partially renovated into the Child Development Center. The remainder of the building was demolished. The current main campus building was completed in 1970 and has undergone a number of renovations and additions over the years.

The Arcadia Commons Campus, including Anna Whitten Hall and the Kalamazoo Valley Museum, was constructed in the mid-1990's. The downtown campus was expanded in 2004, when the former W.S.Dewing Building on the Kalamazoo pedestrian mall was renovated into the Center for New Media.

In 2001, KVCC opened the doors of The Groves (previously known as M-TEC), an education, business, and technology park located in Texas Township.

In 2016, The Bronson Healthy Living Campus was opened. KVCC facilities at the campus include the Marilyn J. Schlack Culinary and Allied Health Building (MJSCAH).

These facilities serve a wide range of purposes and will be studied individually and as a whole with regard to their existing physical conditions. In addition, each facility will be considered for spatial and programmatic use.

The description of existing facility conditions has been broken into subsections for evaluation:

Section 4.1A Main Campus Building—Texas Township Campus

Section 4.1B Secondary Buildings—Texas Township Campus

Section 4.1C Anna Whitten Hall—Arcadia Commons Campus

Section 4.1D Center for New Media—Arcadia Commons Campus

Section 4.1E The Groves

Section 4.1F Kalamazoo Valley Museum-Arcadia Commons Campus

Section 4.1G Food Innovation Center-Bronson Healthy Living Campus

Section 4.1H Culinary/Allied Health Building-Bronson Healthy Living Campus

4.1A MAIN CAMPUS BUILDING - TEXAS TOWNSHIP CAMPUS

6767 West O Avenue
Kalamazoo, Michigan 49009

General Comments

The current main campus building was originally completed in 1970. Numerous additions and renovations have occurred over the years. Major additions to the building include:

- 1982 Technical Wing Addition
- 1982 Auxiliary Gymnasium Addition
- 1990 Instructional Wing, Student Services, Bookstore Additions, and Child Development Center (Redwood Renovation)
- 1994 Advanced Technology Center (formerly Technical Applications Center)
- 2000 Dental Hygiene Wing Addition
- 2001 Student Commons and Wellness and Fitness Center Additions
- 2011 Student Success Center Addition

The total footprint of the main campus building now encompasses over 593,000 square feet. The temporary and original buildings were both designed by Michigan architect Alden B. Dow, a student of Frank Lloyd Wright. The campus is beautifully integrated into its rolling 187-acre setting. Three courtyards, well-tended grounds and athletic fields, and a wonderful woodland vista from the two-story library windows make the campus an attractive setting for study. The style in which the original building was conceived has been preserved in many of the additions.

The building consists of a series of rectilinear forms that encompass interior courtyards to give one the sense of a constant connection to the outdoors while moving through the building. This does, however, create some difficulties in negotiating the expansive building as it stretches across the landscape. Some recent renovations have taken on new architectural characteristics that reflect the spirit of the interior spaces they contain. Most notable are the Student Commons/Wellness and Fitness Center, the Applied Technology Center and the new Student Success Center.

Recent Improvements

Renovations to the main campus building since the previous Facilities Master Plan include roofing replacement of areas identified in the plan, lighting replacement to increase energy efficiency and finish upgrades in select areas of flooring. Room 2110 has recently been converted from an Art studio to a Multi-Purpose Science Lab to help address the need for more Science Lab offerings. This conversion was completed in 2023. Addition rework of areas for expanding programs in Barbering and Cosmetology have been completed in the a section of the 8300s classrooms. KVCC has also undertaken improvements to Room 2310 for a new state of the art Testing Center, which greatly expands the number and oversight of the testing needs of the college. This renovation has freed up space for expanded Tutoring offerings in the adjacent areas.

Architectural - Building Enclosure

Structural System: The structure of the original building and many of the additions include concrete footings and foundation walls, steel beams and columns, steel floor and roof trusses, concrete/metal floor decks, and metal roof decks. The Student Commons includes Tectum® roof decking for acoustical properties and a space framing skylight system. The Wellness and Fitness Center includes some wood timber roof construction. Most structural systems show little to no change or damage caused by age, settling, or building movement.

Exterior Materials: The exterior walls of the original building and a majority of the additions constructed prior to the year 2000 are primarily brick veneer on concrete block. Overhangs and canopies have a decorative exposed aggregate precast panel fascia with finished gypsum board soffits. Mechanical penthouses are also clad in precast panels. In some areas, the precast panels are losing their aggregate. The brick has weathered well over 40-plus years and displays very few defects or problems. Any areas that have required repair or replacement received their damage from the elements, not from structural or building failure.

Window systems have largely been updated in the recent past to a double pane 1" glazing to improve energy efficiency as identified in previous master plan efforts. Additions that have been constructed after the year 2000 are primarily clad with stone veneer, aluminum curtain wall with insulated glass and metal panel. The large glass ceiling/roof in the Student Commons will require attention soon as the gasketing system over this large expanse of roof is starting to show areas of failure and cause for leakage.

It should be noted that the Facilities Services Department at KVCC performs a yearly test on the roofs to check the integrity of the seams, as well as a thermal scan of randomly selected areas to check for heat leaks. Appropriate repairs are made to these areas on a continual basis. Roofs are systematically replaced as part of an ongoing preventative maintenance program. The larger expanses of insulated fiberglass translucent skylighting are starting to show signs of UV breakdown and degradation and will need to be considered for replacement soon due to their age.

Architectural - Interior Finishes

Floor Finishes: Various floor materials are found throughout the main campus building. The major corridor areas in the Technical Wing are finished in either carpet tile or 6" by 6" quarry tile. Classrooms are also generally finished with carpet tile. Lab areas are finished with vinyl composition tile (VCT). The flooring in toilet areas is mosaic ceramic tile. A number of the technical and vocational areas have sealed concrete floors that appear to be in good condition, without any large cracks or areas in need of repair. The textured concrete floors in the arcade should remain in a good state for many years beyond the time period of this report. The gymnasium floors are raised hardwood and are expected to last a number of years in to the future.

The vast majority of flooring has been well maintained. Replacement of flooring materials has occurred on a regular basis as part of routine repair and maintenance. It is not foreseeable that any floor repair above and beyond routine maintenance would occur during the time period of this report. It was noted that materials were beginning to show aesthetic deterioration even if not physically, and that consideration for the new branding and student perception could be considered in future replacements.

Interior Partitions and Finishes: The primary wall construction in the main campus building is concrete block (CMU), with secondary areas constructed with gypsum board on metal stud framing. A majority of the corridor walls have a brick veneer finish to reflect the exterior material. Most CMU and gypsum board partitions have painted surfaces. These wall systems are durable and have held up very well. It is not anticipated that the partitions would require anything more than minor routine maintenance.

Ceilings: The majority of ceilings in the building are lay-in acoustical panel systems that are easily changed out and replaced over time. Most ceiling panels appear to be in good condition throughout the facility and are well maintained. Some evidence of aging and moisture damage was noted, as well as minor acoustic complaints. Future replacements with higher performing smooth-faced acoustical ceiling panels; especially during LED lighting upgrades, could improve acoustic comfort, aesthetics, and light reflectance.

Specialty Areas/Assemblies: The elevators in the original building are over 40 years old and are in need of new controls and wiring to bring them up-to-date. The elevator in the Instructional Wing addition is well maintained and in good condition. Portions of the original kitchen were upgraded during the 1990 renovations. Miscellaneous equipment needs to be replaced to bring the kitchen up-to-date. Equipment replacement could include a large oven, freezers, and an electric stove unit. The food servery area was renovated as part of the Student Commons, and a Subway franchise installed recently to keep current with student preferences. There are some ongoing maintenance items with food service equipment and walk in coolers to attend to.

Spatial Uses

Classrooms: The main building was originally designed with classroom spaces located off of the east and west corridors on the main level and the east and south corridors of the lower level. Additional classrooms were provided in the Technical Wing addition and in the Instructional Wing addition. The Dental Hygiene addition was added to relocate classroom and lab spaces for the department. Other renovations include the nursing classrooms, the former Dental Hygiene area, and miscellaneous individual classrooms. Currently, the main campus building includes over 60 general classroom spaces in a variety of sizes which are able to accommodate groups of 24 to 48 students each.

The Instructional Wing addition was constructed with several computer classrooms. Several other general classrooms have since been renovated into computer classrooms with 24 workstations each.

Changing course offerings at KVCC have also brought about changes in classroom needs and usage. While general education courses only require a generic type of classroom, the college now offers more courses that require specific types of spaces and equipment. This can be seen in the applied technology areas where classrooms are modified for specific needs. Classrooms for arts, health, and applied science programs lack flexibility for use by other disciplines.

Laboratories: The main campus building includes a variety of lab spaces that accommodates the individual instructional departments. Many of these lab facilities have been included in additions and renovations over the years. Currently there are still science labs which have some of the 50 year old infrastructure in place and will need to be modernized to meet current safety requirements and programming expansions which have occurred since their construction. Furthermore, enrollment trends and more lab-style classes will necessitate another general purpose science lab being created in the near future.

Dental Hygiene labs were added in the last 25 years to accommodate a growing interest in the curriculum. Biology labs were refurbished in the 1990 renovations. Expansion, updating, and retrofitting of chemistry laboratories occurred in 1994. In 2011, the Physics and Chemistry labs were renovated and enlarged to provide upgraded fume hoods, lab support areas, and space for Physics experiments.

Technical labs were added in the 1982 and 1994 Technical Wing additions. These laboratories all have specific needs. The automotive curriculum continues to grow causing the lab areas to overflow with equipment hoists and lifts. The flow and stacking of vehicles in the automotive garage bays creates a situation that leads to a great deal of downtime as a result of changeover. The addition of diesel mechanics to the curriculum will require additional space that is equipped to handle new height requirements. The automotive technology program is also in need of dedicated classroom space that is adjacent to the laboratory space to alleviate the changeover requirements that currently occur within shared classroom spaces. The HVAC lab currently serves as lab and classroom space. Separation of the classroom space from lab space is desired. Additional space needs to be provided in the lab to allow for more work space that will support new initiatives in commercial cooler and freezer repair as well as geothermal system study.

The Machine Tool lab has been largely expanded into the adjacent lecture area, as new equipment and expanding class sizes have pushed for more space and capabilities. The adjacent tall curtain wall windows provide daylight and views of the surrounding natural areas.

Assembly, Meeting, and Gathering Spaces: The Dale B. Lake Auditorium, which is used for performances, presentations, and large gatherings is often rented on evenings and weekends for community functions. The auditorium seats over 460 occupants and includes a stage, control booth, and backstage areas. The use of this space is not anticipated to change, although future upgrades to ADA access and audio visual equipment are being considered.

The Cafeteria area was renovated as part of the Student Commons addition. Renovations included upgrades to the food service and kitchen areas. New furniture and seating were installed at that time. The Cafeteria now includes a variety of booth and table seating capable of accommodating approximately 375 occupants. Seating in the Cafeteria appears to be adequate at this time. The Cafeteria functions as a dining and gathering space for students and staff, and the use of this space is not anticipated to change.

Adjacent to the Cafeteria are Meeting Rooms 4370 and 4380. Each room has a capacity of approximately 40 occupants in a conference-style setup. These rooms are separated by an operable partition and can be combined to provide a larger space for gatherings.

The Student Commons addition provides a number of informal seating and gathering spaces for students and staff. This area creates an interior courtyard space with its main central area, plantscaping, and skylights. The area also includes the main computer lab area for the campus which has been recently relocated to this area for better student access, as well as providing better social distancing between spaces in the pandemic era. The Student Learning Arcade also includes several smaller meeting rooms and a large lounge area with casual seating, big-screen televisions, and video games.

Adjacent to the Library on the upper level are Lecture Rooms 3250 and 3260. These rooms were renovated in 1990 to include a raised lecture platform. Each room seats 48 students in a conference-style setup. Two tiered lecture rooms are located on the lower level off the south corridor, and each room seats 120 students.

Lecture Rooms 8570 and 8580 are terraced lecture rooms with fixed tables and seating which is challenging for access to internal seats and does not allow for flexibility or group work settings. Renovation of these tiers for better access and flexibility is under consideration to meet modern safety, teaching and access protocols.

Lecture Room 9130 was added as part of the 2011 Student Success Center addition. This room provides a tiered lecture arrangement with a seating capacity of 150 seats. It provides full technology integration as well as audible enhancement capabilities for hearing-impaired individuals.

Adjacent to the computer lab on the main level of the Instructional Wing addition is an interior student lounge area. This area includes casual seating and skylights. Across from the library on the lower level is a student lounge area, which is open to the corridor and overlooks the southeast corner of the central courtyard.

Faculty Offices: The faculty offices were originally located in the area of the upper level of the current Library. Faculty offices were relocated into the lower level of the Instructional Wing addition in 1989–1990. The size and location of these spaces is appropriate, fairly centralized, and concentrated in a relatively private, non-instructional portion of the building. The 2011 Student Success Center project also included renovations to the faculty office area to provide an expanded information desk and staff workroom space. Offices for the Human Resources Department are located adjacent to the library, with views into the central courtyard.

Offices and support spaces for student service functions such as counseling, financial aid, registration, admissions, records, credit transfer, and other programs were relocated as part of the Student Success Center addition and are now located at the west side of the main building. The new location provides easier access to these services. The intent is to allow students to have hands-on assistance to remove any barriers from the student's educational experience by locating these services all within one location on campus.

Specialty Spaces: Many spaces at the main campus serve a special need or purpose. One key component of the Student Learning Arcade is the new Fitness and Wellness Center, which is a state-of-the-art facility used by students, staff, and faculty. This feature is a well-regarded element of the KVCC environment and represents the level of service that the school offers to students.

The testing and tutoring centers that the college strongly promotes are significantly utilized and could use expansion to allow for both better spacing and more capacity as the remote / online nature of courses has pushed more testing and tutoring to occur in person at the TTC location. Additionally, for safety and security, expanding these areas for less density would help with the spacing requirements of the pandemic environment.

The original Library was only on the lower level of its present location. It was expanded to the upper level during the 1990 renovations. The Library has recently been remodeled and reconfigured with new stacks, furniture, and study rooms. There is a recent effort to consolidate the library catalog which could free up areas for more student use and group study space on the main floor in an advantageous location.

The three courtyards are constantly listed among the most desirable features of the campus. These courtyards are well maintained and are used by students for relaxation and recreation.

The main campus includes its own bookstore. Its current location was part of the 1990 student services addition. The bookstore is in need of a major renovation that will address many issues with the current space. Flexibility of the space is limited. The book rush that occurs typically at the beginning of the semester and during the end of semester buy-back process, creates traffic volume that is difficult to accommodate. The overall flow of the space needs to be improved to create better traffic patterns. The current space has many blind spots that provide difficulty for staff in monitoring the entire space. The bookstore desires to expand product offerings to include sales of electronics and accessories that are essential to today's students.

Physical education classes primarily use the large gym and the auxiliary gym. Law enforcement programs also use these spaces for training exercises, however the increased need for athletic programs has created reduced availability for use by law enforcement. The gyms are used by many of the KVCC athletic programs, as well as by community groups.

The gym locker rooms are original and have had very few changes over the years. Some modifications were made for barrier-free accessibility. An increase in use of the Wellness and Fitness Center indicates a need for additional lockers.

The expanded programs and facilities offered by the addition of the Wellness/ Fitness Center have prompted increased use by students and staff. This area functions adequately, and no modifications are expected within the time period of this report.

Circulation: Circulation is straightforward in layout, and is easy to navigate using the courtyards for reference. The majority of the general circulation is single-loaded, glazed, and open to the courtyards. Brick benches along the windows are a favorite with students gathering and waiting for classes

Large open stairways connect the two levels of the building. A combination of steps and ramps connect the Instructional Wing addition and accommodate the slight change in floor level, providing barrier-free accessibility.

There are six elevators in the building. The three elevators in the original building are over 40 years old. These are located in the gymnasium area and in the Technical Wing, adjacent to the auditorium. Wiring and controls upgrades are required to bring these elevators up to date. The elevators in the Instructional Wing addition and the Library were added in 1990 and are still in good condition. These elevators meet current barrier-free codes and have 2,500 pound capacities. The sixth elevator was added as part of the 2011 Student Success Center addition.

Mechanical Systems

Central Mechanical Systems

Boilers: Three Johnson 500-hp gas-fired fire tube boilers located in the central mechanical room serve the majority of the campus. These boilers are original to the 1970 building and are in good working order. They serve the original 1970 building, the 1982 and 1990 additions, the 1995 Technology Application addition, and the 2001 Arcade project. In 2014, two Fulton Endura condensing boilers (2,000 BTUH each) were installed for periods of light loads.

Chillers: Two 700-ton York centrifugal chillers serve the campus. One chiller was recently replaced in 2013 and the other in 2001. Two roof-mounted cooling towers provide condenser water to the chillers. One cooling tower was installed in 1999. The second was installed in 2001 and incorporates the new chiller. These chillers were converted from R11 to R123 refrigerants. One chiller was also converted to variable speed.

Two other existing chillers, which are located in remote mechanical rooms, were installed in the 1970's and have since been abandoned in place, along with a cooling tower. The cooling tower was replaced prior to abandonment of the chillers and remains in good condition for relocation, reuse, or resale. The existing chilled water pumps are used in a tertiary configuration and draw chilled water from the secondary campus loop.

Hydronic Loops: The hot water heating distribution system is configured in a primary/secondary arrangement. Each original boiler is circulated with a dedicated pump. Secondary pumps pipe in parallel circulate hot water throughout the campus. These pumps are controlled through variable frequency drives for variable flow in the secondary distribution system. All pumps 5HP and larger are equipped with variable frequency drives (VFDs)

The chiller piping loop consists of a primary loop with individual chiller pumps. Two secondary system pumps piped in parallel circulate chilled water throughout the campus. The secondary chilled water distribution system is variable flow through the use of variable frequency drives on each pump.

Temperature Controls: The campus utilizes a Johnson Controls Metasys System for temperature controls and as a building management system. The campus system is a combination of pneumatic valves and damper actuators on air handling systems, operating in combination with DDC controllers. A systematic process of converting the existing pneumatic controls to DDC is in the process of being implemented. Units K, L, M, N and O have been converted, with units A and E scheduled for 2017. This conversion includes adding CO2 sensors for outside air control in many spaces. The facility's goal is to convert the balance of the building within the next 5 years.

Future Expansion: Capacities of all central hot water and chilled water systems are full for the current building size and configuration. Limited space is available for any major expansion within the existing square footage.

Air Handling Systems (General): Air handling systems are specific to each area of the campus. The air handling systems in each unit have been described separately. Each air handling unit is supplied with hot water for heating and chilled water in areas where the space is air conditioned. One specific air handling unit includes a separate condensing unit and DX coil for off-season cooling.

Typically, all VAV systems are shut-off style terminal units and include hot water reheat coils. Except in specialized cases, all air handling systems are equipped for an air side economizer cycle.

Domestic Hot Water: Domestic hot water is supplied to the campus from the central mechanical room. A Lochinvar hot water boiler is the primary source for domestic hot water. This boiler has an input rating of 2,618,000 BTUH. A second electric hot water boiler is used to maintain the system temperature through recirculation.

Individual Unit Air Handling Systems:

Unit A includes Library Room 3200, some 3300-series room numbers on the main floor, all 8400-series library rooms, and some 8500-series classroom numbers on the lower story. Unit A was upgraded in 2001 and 2002 with the addition of the Student Commons. The two existing penthouse air handling units, AHU-18 and 19, were reused and upgraded with new DDC controls that include room sensors. It is a VAV system with reheat. Frequency drives were added to the fans during the renovation. Perimeter fin tube convectors are used along exterior walls. The existing corridor air handling unit was removed during this upgrade.

The penthouse in Unit A contains an abandoned 400-ton Carrier chiller. The refrigerant from the chiller has been removed. The air handling systems are now connected to the central plant chilled water systems as a secondary loop using the original chilled water pumps.

Unit B includes the 3100-series room numbers for Biology labs to section 'T' on the upper level, and the 8300-series classroom room numbers on the lower floor. During the 2001 upgrade, Unit B was connected to the penthouse air handling units located in Unit A. The four existing corridor fan coil units serving the hallways remain in service. These units are located in a room that is open to the corridor with limited or no access for service.

Unit C includes Rooms 1500 and 8100 on the main level and lower level of the auditorium. This area includes six individual constant-volume air handling units. Each unit is dedicated to a single room or zone. Each unit has been retrofitted with a soft start device. Existing pneumatic valve and damper actuators have been upgraded with DDC controllers. Room thermostats remain pneumatic at this time.

Unit D encompasses 4300-series room numbers on the main floor and is primarily made up of classroom spaces. In 2001, during the Student Commons project, this area was upgraded and is now served by AHU 03 located in the penthouse of Unit E. All VAV box controllers and pneumatic thermostats were converted to DDC controls and electronic room temperature sensors. The corridor fan coil unit serving the hallway remains in service.

Unit E includes 4300-series room numbers for the kitchen and dining areas, as well as classrooms and the conference room on the main level. Four air handling units located in the penthouse of Unit E serve both this area and Unit D. AHU-02 and 03 are single-zone, constant-volume units that serve the kitchen and dining area. AHU-02, which serves the kitchen, will be upgraded with DDC controls in 2017. Frequency drives were added for soft start and balancing. AHU-03, which supplies the dining room and the serving line, was upgraded to DDC controls.

AHU-04 and AHU-05 are VAV systems that serve the classrooms and conference rooms in Units D and E. During the 2001 upgrade, the existing valve and damper actuators were upgraded with DDC controllers The existing VAV box controllers and room thermostats in Unit E will be upgraded in 2017.

The mechanical penthouse in Unit E also contains the second abandoned chiller. The refrigerant from the chiller has been removed. The air handling systems are now connected to the central plant chilled water systems as a secondary loop using the original chilled water pumps

Unit F includes 4100-series room numbers on the main floor. This includes nursing rooms, drafting labs and other spaces. This unit is served by AHU-25, which is a VAV system. The system was upgraded in 2001 with the Student Commons project. All pneumatic valves and damper actuators were upgraded with DDC control modules. The existing VAV boxes and room thermostats were upgraded with DDC controllers and electronic room temperature sensors. The unit was retrofitted with a new frequency drive.

Unit G includes 3300-series room numbers and two 5100-series room numbers on the main floor, as well as rooms numbered in the 8500's on the lower level. The upper level is occupied by administrative offices while the lower level consists of classrooms. This unit is served by a single VAV air handling unit, AHU-79, which is located in the penthouse of Unit A (Library). The system was upgraded in 2001, when existing pneumatic valves and dampers actuators were retrofitted with DDC control modules. The existing VAV box controllers were all replaced with new DDC control modules. All pneumatic room thermostats were replaced with electronic room temperature sensors.

Unit H includes 5300-series room numbers on the main level, and was added in 1982. These rooms are occupied by a variety of dry labs including chemistry prep, auto, HVAC, photo, welding and other programs.

Seven air handling units, AHU-41 through AHU-47, supply each individual area. These units were added or upgraded in the mid to late 1990's. Each system is constant-volume with a single zone of control. The unit serving the chemistry prep rooms is a constant-volume system with four zones of reheat. Each unit is generally exposed and located on a mezzanine within the room. All units are used for heating and ventilation only, with the exception of the chemistry prep room system which includes air conditioning. All units have been upgraded with DDC controls.

Unit I includes both 5100- and 5200-series room numbers, which are occupied by classrooms and a wet chemistry lab. Three air handling units serve this area: AHU-30, 33, and 48. AHU-48 is dedicated to the chemistry lab. This unit is a variable air volume system with reheat, which is incorporated into the Phoenix lab hood control system. Each hood includes a sash-high control, which varies the exhaust volume to maintain a constant face velocity at the hood sash. A frequency drive on the supply fan modulates the quantity of supply air in proportion to the exhaust air. This system is all DDC controlled.

The remaining two air handling units are constant-volume units, each serving a single room or zone. These units have all been upgraded with DDC controls.

A single fan coil unit remains to serve the hallway corridor. A water loop heat recovery system reclaims heat from the exhaust area for preconditioning outside air.

Unit J includes the gymnasiums and pool on the main level, along with locker rooms, offices, and a weight room on the lower level. Two heating and ventilating only (HV) units (AHU-58 and AHU-59) serve the main gymnasium. A single HV unit (AHU-62) serves the smaller gymnasium. Each unit is part of the original equipment for the campus, and utilizes the original pneumatic controls.

A newer Dectron Dry-O-Tron dehumidifying air handling system (AHU-73) serves the pool areas. This unit operates in lieu of the original HV system. As the air is dehumidified, heat is reclaimed and added back into the pool water and the air. This unit is tied into the DDC system.

A fifth double deck multi-zone air handling unit (AHU-57) serves the gymnasium offices. Individual supply air ducts are routed from this unit to each zone to provide separate temperature control zones. This unit includes a chilled water coil for air conditioning the offices. This unit is original equipment and utilizes all of the original pneumatic controls. A final seventh HV unit serves the weight room and locker rooms. This is a constant volume HV unit that is part of the original equipment and utilizes the original pneumatic controls and will be upgraded in the next five years.

Unit K and L includes the bookstore and counseling offices, which include 1000-,1100-, and 1300-series room numbers. AHU-07, located in the mechanical penthouse of Unit E, serves these areas. This is a VAV system that was upgraded in 2001 to include DDC control modules for the existing pneumatic valve, damper actuators, and frequency drives. All existing VAV boxes and room thermostats were upgraded to DDC in 2015

Units M, N, and O encompass the Instructional Wing and faculty offices. These include 2100-, 2200-, 2300-, 2400-, 2500-, and 2600-series room numbers on the main level and 7100-, 7400-, and 7500-series room numbers on the lower level. Two air handling units located in the penthouse mechanical room serve these areas. AHU-15 services the lower level and AHU-16 services the upper level. These systems are VAV. The existing pneumatic valve and damper actuators were upgraded with DDC controllers, and the fans have been updated with variable frequency drives. All VAV boxes and room thermostats were upgraded to DDC in 2015.

Unit P includes 5500, 5600-, and 5700 series room numbers, which are technical labs and classrooms. Four mezzanine-mounted air handling units, AHU-49 through AHU-53, serve these rooms. These units are a combination of single-zone, constant-volume units, with a VAV unit serving the classrooms. Each system included DDC controls and variable frequency drives when originally installed.

Unit Q supplies the Technical Applications Center which was constructed in 1994. This area includes some 5700, 5800, and 5900-series room numbers. Four mezzanine-mounted air handling units serve these areas. AHU-53, 54, and 56 are single-zone, constant-volume units dedicated to specific areas, including the manufacturing cell classroom and the auditorium. AHU-55 is a VAV system that serves a group of classrooms. Each system included DDC controls when originally installed. Each unit includes either a variable frequency drive on each supply fan to control air volume on VAV units or utilizes a soft start feature on constant-volume units. The pneumatic 'Muscle' on the AHUs will be converted to DDC within the next five years.

Unit T consists of the new Student Services wing constructed in 2011 with room numbers from 9100 to 9300. The first floor is served by rooftop air handling units RTU-T-1 and 3 while the second floor is served by rooftop air handling unit RTU-T-2. These units are VAV system using variable frequency drives to vary the airflow so that it matches the building demand. Hot water reheat coils and perimeter heating units provide zoned temperature control. Chilled water for the RTUs is created from the new cooling tower CT-T-1 and the associated chiller T. The temperature controls are a Johnson Controls DDC system that incorporates CO2 and occupancy sensors to minimize energy costs.

Dental Hygiene - The Dental Hygiene Department includes 1200-series room numbers. This area was constructed in 2000–2001 with the Student Commons, so the HVAC system that serves the space is relatively new. The area is supplied by a single air handling unit (AHU-04) that is located in an indoor mechanical room. This system is supplied from the campus chilled water system. The HVAC system includes a remote condensing unit and DX coil to provide mechanical cooling during the intermediate spring and fall seasons when the central chilled water system is down. AHU-04 is a VAV system that was installed with DDC controls throughout. The system incorporates variable frequency drives on all fans.

Arcade (Commons) - The Student Commons was constructed in 2001 and includes three air handling units located on a second level mechanical mezzanine along the west exterior wall. AHU-75 serves the west Student Commons and Wellness/Fitness Center. AHU-76 serves the south and northeast commons areas. AHU-77 serves the north commons area. Each of the three systems is VAV. All are DDC controlled and include

VAV terminal units with electronic room temperature sensors. Variable frequency drives are used on all fans.

The entrance to the Student Commons is equipped with a snow melt system that is embedded below the pavers. The system is fed from the main campus boiler through a secondary lower temperature loop containing glycol.

Electrical Systems

Power: The Texas Township Campus is fed from a Consumers Power 8,320Y/4,800- volt, three-phase electrical distribution system. This service enters a main three-pole-fused switch near the north end of the campus and feeds both the Redwood substation and "E" substation, located above the food service kitchen. Each substation is equipped with two non-fused loop switches and a fused-transformer primary switch. The remaining substations on the campus loop include an "MNO" substation, "TAC" substation, "I" maintenance substation, "A" library substation, and the new "Arcade" substation.

All substations listed above are part of a loop system which makes it possible to feed any substation from a preferred direction as well as an alternate direction. This ability to feed from different directions makes it possible to isolate any feeder between two substations for splicing, maintenance, or removal without any power interruptions. Main panel has been equipped with phase loss protection relay to reduce the amount of damaged equipment in a phase loss.

The College is evaluating how much capacity is on the current generator(s) and wants to put more heating systems (boilers and associated pumps) on the generators as capacity allows.

Substations: Underground distribution cabling runs to seven substations in various areas of the campus. All substations are in good condition and have some spare capacity and breaker space. The substation at the Redwood Center is oversized for its current load and may be removed and bypassed. The older substations are in good working condition and have been inspected. Spare parts for these units may be difficult to acquire. Replacing these substations with newer equipment may be a future consideration.

Electrical Panels: Electrical panels are in good condition, with some capacity left in each. The largest concern with many of these panels is that they are located in janitor closets or storage rooms. The janitor closets that contain electrical panels should be evaluated to determine if they could be transformed into dedicated electrical closets.

Drives: Frequency drives on all motors over 5hp, along with power-factor capacitors, have been added to help save energy and improve the power factor. The College is replacing drives as life cycles expire.

Lighting: Lighting throughout the campus is predominately 277-volt fluorescent or HID fixtures, (many of which are retrofitted with LED lamps). Occupancy sensors have been installed in most rooms. Daylight sensors have been installed in corridors where there is an abundance of natural light. Emergency lighting is accomplished with generator circuits. The battery backup power devices are a high-maintenance item and should be replaced with natural gas generator circuits. Some exit signs have been replaced with new LED-type exit signs. In the gymnasiums and in the pool area, 8'-0" industrial strip lights are being used. Glass high bays in the gymnasiums have been replaced with T8 fluorescent fixtures. The exterior building lighting and site lighting has been upgraded to LED fixtures. A few CFL fixtures remain and should be considered for replacement. The College is updating lamps with LED retrofit lamps on a space by space approach. As spaces are renovated, it is recommended to replace entire fixtures with LED fixtures rather than retrofit to provide a higher level of visual comfort and energy efficiency. The College is putting the lighting systems on BAS controlled scheduled relays. The Groves systems are mostly manual light switches and not on controls, the systems should be scheduled and brought up to current energy code.

Fire Alarm System: The fire alarm system used throughout the facility is a Simplex system that is up to date, and is designed to meet the Americans with Disabilities Act.

Security: Security on campus is maintained primarily by foot-patrol personnel and by the upgraded camera system. More video security has been added in areas prone to vandalism.

Communication Infrastructure: The communication infrastructure has a fiber backbone. Cabling is run from the closets to the user ports. Areas that were built prior to 1994 use Category 3 cable. Areas that were built from 1994 to 2000 use Category 5 cable. All construction from 2001 forward uses Category 6 cabling.

Master Clock: There is a Simplex master clock system on campus that generates and transmits a synchronization signal that is received by all the master clocks on campus. This system is antiquated, difficult to maintain, and is under rolling replacement to stand alone battery clocks.

Access Control: Current lock system is not supported. System is going to a new access control system. Exterior doors are going to hard wired card access and older spaces are being converted to access control to reduce the amount of keys issued and managed.

Site Conditions

Drives and Parking: Generally, the drives and bituminous paved areas at the Texas Township Campus are in good condition with good surfaces. The curb and gutter are also in good condition. As part of the college's preventative maintenance program, the east drive and parking areas adjacent to the maintenance building are proposed for replacement due to their aging condition.

Walks: The walks throughout the campus are in good overall condition. Current ADA standards for barrier-free ramps require tactile warning strips at locations without a grade change where pedestrian traffic will be encountering vehicular traffic to provide a textural and color contrast warning for sight-impaired users.

Site Landscaping: The overall appearance of the campus landscaping is excellent. The campus has well-established and well-maintained landscapes. The majority of parking lots have islands planted with grass and shade trees.

The main lot on Tower Drive has perennials planted with shade trees. The three courtyards within the building are in good condition and provide an excellent source of natural light to the building interiors.

Site Lighting: The campus is very well lit with a uniform lighting distribution. The parking areas all have matching pole-mounted fixtures set at a low height to provide sufficient lighting throughout the outdoor public spaces. The college has continued to systematically retrofit site fixtures to LED devices to increase their energy efficiency. Wallpacks are used to provide lighting closer to the building edge, and pole-mounted globe fixtures are utilized within the large central courtyard. Some entrances have specialized bollard lighting.

Site Furniture: A variety of site furniture has been used throughout the site landscape including refuse containers, ash pans, planters, picnic tables, and benches.

Site Storm Water Management: Overall, the site paved areas are well drained, and the storm systems are working properly. The college has undertaken many of the recommendations listed in the KVCC Storm Water Master Plan by constructing retention and sedimentation basins. These basins appear to be in working order and are properly functioning.

4.1B SECONDARY BUILDINGS - TEXAS TOWNSHIP CAMPUS

6767 West O Avenue
Kalamazoo, Michigan 49009

REDWOOD BUILDING

Recent Improvements

The building underwent a full renovation in 2023-2024 which included exterior envelope and roof renovation and complete interior demolition to house the new Cosmetology and Barbering programs in the building.

General Comments

The building previously served as a childcare facility for students, faculty, and the community during regular class hours. It was also used by the Administrative Computing department. The project included the development of a Cosmetology and Barbering area, featuring a pedicure section, multiple cosmetology stations, and both front and side wash stations in various locations. Additionally, ADA accessibility requirements for the site were enhanced.

Architectural Description

Following the decision to renovate, the building underwent a complete transformation. The roof was replaced, and the exterior was reskinned, improving both its appearance and energy efficiency. Two new classrooms were added, fully equipped with modern technology to support educational programs. The project included 12 new barbering stations, 10 manicure stations, and 36 cosmetology stations, along with storage areas for supplies. Shared spaces, such as a break and lounge area, were created for staff comfort, and new laundry facilities were added for convenience. The 10,750-square-foot renovation also included the addition of staff offices and new restrooms, designated for men, women, and unisex use. Life safety and fire protection systems were upgraded to meet current standards. The renovation included adding in-floor utilities for the cosmetology and barbering stations. Outside, the site was enhanced with improved ADA accessibility, better drainage solutions, including a rain garden, and resurfaced parking areas.

STORAGE SHED

Recent Improvements

No major renovations or improvements have been made to the shed.

General Comments

The structure is a three-sided lean-to type structure that provides some relief from the elements for salt and sand storage. This outbuilding rests on the crest of a large down slope.

Architectural Description

The shed is constructed of a dimensional wood frame with concrete storage bins for materials, and is located just east of the staff parking lot area. The building is in fair condition.

BUTLER BUILDING

Recent Improvements

No major renovations or improvements have been made to the Butler Building.

General Comments

This building is a pre-engineered metal building. It is currently used as a museum storage space, grounds service facility, paint shop and maintenance vehicle storage garage.

Architectural Description

The metal panel exterior and roof panels of the building are in good condition. Routine maintenance is anticipated during the time period of this report.

Mechanical Systems

The mechanical system serving this building is limited to individual gas-fired unit heaters and exhaust fans.

MAINTENANCE BUILDING

Recent Improvements

No major renovations or improvements have been made to the Maintenance Building.

General Comments

This facility was constructed to house the maintenance vehicles and maintenance shop for the Texas Township Campus. It has large overhead doors on both ends for easy access. It also has a large parking area, which is fenced in for the storage of college vehicles such as vans, snow removal equipment, and police patrol cars. This location also includes a gas pump area for fueling of vehicles.

Architectural Description

The metal panel exterior and roof panels of the building are in fair condition. Routine maintenance is anticipated during the time period of this report.

Mechanical Systems

The mechanical system serving the Maintenance Building is limited to individual gas-fired unit heaters and exhaust fans. Floor drainage in the building is currently routed to the storm system. The system currently does not contain an oil/water separator prior to discharging to the storm system, and needs to be addressed.

4.1C ANNA WHITTEN HALL - ARCADIA COMMONS CAMPUS

202 North Rose Street
Kalamazoo, Michigan 49007

General Comments

Anna Whitten Hall, formerly known as the Arcadia Commons Campus, opened in 1994 in downtown Kalamazoo's central business district. The site fronts Rose Street, a major downtown artery, and is bounded by the pedestrian mall and Arcadia Creek. The fourth side is bounded by Water Street which is a secondary access street. The building is three stories with a full basement. The site includes an open plaza/lawn area between the structure and the mall.

Recent Improvements

There has been some reallocation of spaces for the KVAAP program on the second floor and displacement of Faculty offices for this purpose. A renovation and expansion of the Second Floor testing center has occurred to expand offerings in this space and consolidate the computer lab which previously occupied this space into the Center for New Media. Flooring is replaced on a rolling basis within the facility.

Architectural Building Enclosure

Structural System: The structure for the building consists of concrete foundations, steel beams and columns, and metal deck/concrete floor and metal roof deck.

Exterior Materials: The exterior walls are constructed of red brick with natural mortar and cast stone. The features of this building, such as brick archways and fenestration patterns, emulate many of the features found in the surrounding historical downtown buildings. The walls appear to be properly maintained and all flashing appears to be intact. The joint sealants and caulking appear to be in the proper location and in working order.

Window and Glazing Systems: The windows are aluminum-framed curtain wall systems with tinted, insulated glazing. A portion of the student lounge is located under an aluminum-framed greenhouse structure. The tinted windows work well to help minimize the solar gain in the building, although the multipurpose room and greenhouse lounge area do experience a substantial heat gain during later parts of the afternoon. Windows appear to be in good working order, and there are no visible signs detected of air infiltration, water leakage, or damage on the inside of the windows. The caulking and seals at the windows appear to be in good working order and are intact. Interior glass within the facility has been upgraded with film to help afford protection in the event an active shooter situation arises in the downtown environment.

All building entries consist of an airlock vestibule, aluminum-framed entrances, and automatic door operators. The entry points are easily visible and accessible from Rose Street and the pedestrian mall.

Roofing: The roofing material on this building is a single-ply adhered 60-mil EPDM membrane. This roof system uses tapered insulation that drains to internal roof drains. A portion of the roof was recently replaced as part of the college's preventative maintenance program. The parapet wall of the roof is capped out by a stone coping, which appears to be in good order with no visible defects or settlement issues.

Architectural - Interior Finishes

Interior Partitions and Finishes: The walls consist of painted skim coat plaster veneer over drywall. This product creates a naturally occurring variation in color and tone intended to conceal wear and improve durability. The facility maintenance team has done a good job of keeping up with the repairs and keeping the walls clean, though some walls appear to have been painted over in a solid color. Corner guards have been installed in many key locations to reduce damage.

Floor Finishes: The flooring material used in circulation areas (corridors and stairs) and toilets is a 12" by 12" porcelain tile, some minor evidence of grout failure and chipping was observed. All educational spaces and offices are carpeted with a carpet tile material. Vestibules have walk-off carpeting. The flooring materials show the expected amount of wear for their age, and would only be replaced during the duration of this report if significant damage should warrant removal. In accordance with updated universal design standards and ADA guidelines, consideration for retrofit stair nosings to provide visual contrast at the leading edge of each step could be considered.

Ceilings: The ceilings are primarily lay-in acoustical ceilings, except for locations where ceiling height changes or accenting occurs. In these locations, the ceilings are constructed of a painted drywall material. The ceilings do not show any signs of damage or aging beyond what may be expected due to normal wear and tear. It was noted that the acoustical ceiling tile and grid in the first floor lobby and corridors are a non-standard product that would not be easily repaired or matched. The average ceiling height is 9 to 10 feet.

Interior Doors and Windows: The interior openings include painted hollow metal frames and laminate-clad, solid-core wood doors with transoms and lever lock sets. Classrooms, offices, and labs have security access lock sets. The interior doors appear to be in good shape, although some doors show some signs of chipping or scratching that can not be easily repaired. Interior borrowed lights consist of hollow metal frames and clear float glass. Many units have multiple pieces of glazing that are butt-jointed.

Spatial Uses

Classrooms/Labs: The number of general classrooms is sufficient to house the programs currently being offered. Classrooms are used heavily during the morning and evening hours because of the demographics of the student population at the downtown campus.

The first floor includes two lab spaces: a math lab, and a reading/writing lab. Each lab accommodates 14 to 15 students in a combination of computer workstations and desks. A third classroom space has been converted to function as office space for part-time faculty.

The second floor includes six classrooms and the aforementioned main testing center. Two of the classrooms are set up with 24 computer workstations. Three of the general classrooms are set up for 40 students, and one general classroom is set up with grouped seating for 24 students. The testing lab and classrooms have half height glass walls open to the corridors.

The third floor level contains six standard-sized classrooms, as well as a seventh double-sized classroom. Four of the classrooms seat 24 students, two seat 40 students, and the double-sized classroom seats 48 students. One of the smaller classrooms is set up with grouped seating.

The third floor also includes the library/resource center. The center includes library stacks, study/video carrels, and computer workstations. The equipment and location appear to be appropriate for the size of the population served at this time.

Assembly and Meeting Spaces

A multi-purpose room is located on the first floor. This room has the capability to be subdivided by folding acoustical partitions into three smaller conference rooms. The total occupancy for the space is 125 people. Adjacent to this area, on the Rose Street side, is a small receiving area where the service elevator is located.

A waiting area is located in the center of the building on the first floor. This space functions as a waiting room for both the front office spaces and the multi-purpose rooms. A student lounge space equipped with a vending and food prep area was located on the third floor. The vending has been relocated to the first floor for better access, especially during the pandemic when the lounge was closed for student use. It was discussed that the student lounge space is currently underutilized, and perhaps a more centrally located [first or second floor] student lounge and study spaces could be of benefit to the student population. Some original furnishings have been replaced or discarded. New furniture groupings could be considered to improve student use and engagement. Converting the larger third floor space to house the expanding KVAAP program offices should be considered if the student lounge spaces could be reappropriated, and thus allowing the return of Faculty offices to the second floor office bank.

Faculty and Staff Offices

Located on the first floor is the main office area which encompasses an information station, registration, financial aid, and offices for the dean and other staff. There are four open workstations and the reception desk in the front area, with eight offices located behind, the faculty offices appear to be appropriately sized and well located to serve students. The main office is open to the corridor with large windows and a rolling shutter at the information window. There is a long transaction counter that is un-staffed with workstations behind - this configuration is inefficient. KVCC's initiative to incorporate a one-stop student service center could be a driver to create a reorganized space prioritizing improved student service-delivery, waiting space, and circulation. The area in Room 121 for student service overflow should be reviewed for improvement potentials, for private discussions between students and advisors.

The second floor houses an office for KVAAP, full-time faculty offices and part-time faculty offices in a mix of enclosed offices and open office cubicles. Faculty office space has been constricted due to the growth in the KVAAP program and future considerations will need to be made for office space.

Storage Areas

General storage is provided in the basement level for both the Anna Whitten Hall and the adjacent Kalamazoo Valley Museum.

Facility Support Spaces

Toilet rooms are located on all floors and meet code requirements. A total of 30 fixtures are provided. Dual accessible electric water coolers are also provided on each floor. Dedicated electrical closets and facility maintenance closets with mop sinks and supplies appear to provide adequate service to the facility. The building has a small receiving area. In general, major deliveries are made to the Kalamazoo Valley Museum's dock prior to being re-routed to this facility. In the basement of this facility is a common room which functions as a facilities workshop, lounge area, storage area, and distribution room. It adequately serves the needs of the facility.

Circulation

The facility has two stair towers, located in the southeast and northwest corners of the building. These stairs are sufficient in size for egress requirements, with the northwest stair sized accordingly to accommodate future building expansion in the area of the adjacent plaza. Access to the rooftop is provided by a ship's ladder from the third floor.

A single passenger elevator serves all floors and is located adjacent to the northwest stair. A separate freight elevator, located adjacent to the warming kitchen, provides access from the first floor loading area to the basement. The service elevator is adequate in size and weight capacity for the type of functions it currently serves. All interior circulation to get to the elevator must pass through the warming kitchen

Mechanical Systems

Boilers: Three gas-fired tube boilers, manufactured by Cleaver Brooks, are located in the basement mechanical room of the building. Each boiler has an input rating of 4.2 million BTU per hour and a date stamp of 1994. These boilers serve both Anna Whitten Hall and the Kalamazoo Valley Museum and are in good condition.

Chillers: Two York centrifugal chillers are located in the basement mechanical room of the building and were installed in 2014. Both chillers are rated for 320 tons and utilize R134a low-pressure refrigerant. Two common cooling towers provide condenser water to both chillers. Fan speed on the cooling towers is controlled using variable frequency drives. The towers are aging but have had the fill recently replaced to extend their useful life. A waterside economizer system was added in 2014 and is in good condition.

Hydronic Loops: The hot water heating system is configured in a primary/secondary piping arrangement. Individual boiler pumps circulate water through each boiler when each boiler is operating. Two separate secondary system loops circulate hot water to both Anna Whitten Hall and the Museum. Each secondary loop consists of two pumps piped for standby operation. These pumps are set for constant flow and do not include individual frequency drives. Hot water serves the air handling unit heating coil, perimeter hot water radiant panels throughout the building, cabinet heaters, and miscellaneous unit heaters.

The chilled water piping is configured in a decoupled primary/secondary arrangement. A single chiller pump circulates each chiller piping circuit when the chiller is running. Two separate secondary system loops circulate chilled water to Anna Whitten Hall and the Museum. Each secondary loop consists of two pumps piped for standby operation. These pumps are set for constant-volume flow operation, and do not have individual frequency drives at this time.

Air Handling Units: A custom central station air handling unit located in the basement provides heating, ventilation, and air conditioning to the building. This unit was erected in place during the building construction. It consists of a filter section, hot water section, chilled water section, supply fan section, and return fan section. The system utilizes chilled water and hot water from the main building system. The hot water coil circuit is continually pumped through dedicated split coil pumps. Damper and valve actuators are powered through the pneumatic control system. The actuators are controlled through DDC control modules incorporated into the Johnson building management and control system. The system is a VAV system with terminal units that contain hot water reheat coils.

Temperature Controls: The building temperature control system is a Johnson Controls DDC system. The system utilizes a combination of pneumatic for actuator movement and DDC controllers to execute the control sequences. Individual zones are controlled through the DDC Johnson Controls system

Drives: Frequency drives are utilized on major fans and pump motors.

Future Expansion: Space has been provided for one future boiler, chiller, and cooling tower for building expansion.

Equipment Conditions: With the exception of the new chillers, the mechanical systems are original to the 1994 building and are in excellent condition.

Electrical Systems

Power: Power is provided by Consumers Energy via an underground 8,300-volt feeder. It enters the substation for Anna Whitten Hall and is split at the primary distribution end to feed an identical substation located at the museum and a spare switch to power a substation for a future addition to the Arcadia Commons Campus.

The substation in Anna Whitten Hall steps the 8,300 volts down to 480Y/277V, 3 Phase, 4 Wire for major HVAC and mechanical loads, including elevators and lighting. The 480 volts are reduced to 208Y/120 volts for receptacle loads and other miscellaneous items.

Emergency power to the museum is sourced from Anna Whitten Hall.

Electrical Panels: Electrical panels are in good condition, with some capacity left in each. Most panels are located in stacked, dedicated electrical closets throughout the facility on each floor. Panels and equipment are Siemens.

Lighting: Lighting is predominately 277-volt fluorescent or HID. There are some fluorescent and incandescent can fixtures as well. Some exit signs have fluorescent lamps for illumination. These should be considered for replacement with new LED-type exit signs. First floor 2x2 lay-in fixtures have been equipped with LED retrofits. Interior lights at the museum are compact fluorescent downlights that have been retrofitted with LED lamps. The industrial and 2x4 fixtures in the building should be considered for replacement. Exit lights at the museum are edge lit halogen fixtures and should be considered for replacement with LED exit signs.

Fire Alarm System: The fire alarm system is up to date and designed to ADA guidelines. The system appears to be in good shape.

Communication Infrastructure: The backbone of the communication infrastructure is fiber with Category 5 cabling going from the closets to the user ports.

Generator: The facility has a 250kw natural gas generator for emergency lighting, emergency outlets, and critical mechanical equipment. According to records, this generator is in good working order. Further investigation is needed to see how much spare capacity is available in the generator for an addition to the facility. Depending on the size of the addition, a separate generator may be required. The generator is tested regularly and the radiator was replaced approximately 6 years ago.

Site Conditions

Drives and Parking: This campus is located in downtown Kalamazoo and does not provide any dedicated KVCC parking. Students make use of the downtown lots, parking structures, metered street parking, and public transportation.The receiving area of the building on Water Street has always been tight in space and challenging for deliveries.

Walks: The majority of the sidewalks are in good condition. Pavers appear to be absorbing and leaching salt from winter treatment and may need replacement with an alternate material. The pedestrian traffic experience was recently enhanced with the addition of a new walk along Water Street.

Site Landscaping: The existing landscape is well maintained and in excellent condition. The rear courtyard has attractive plantings, as well as plantings at the building foundation along Rose Street. There is a small enclosed courtyard at the rear of the campus building with plantings that are well established and in good condition.

Site Furniture: The rear entrance to the building has several types of furnishings, including refuse containers, bike racks, ash cans, and benches.

Site Storm Water Management: The entire site appears well drained, with no surface ponding problems.

4.1D CENTER FOR NEW MEDIA - ARCADIA COMMONS CAMPUS

100 East Michigan Avenue
Kalamazoo, Michigan 49007

General Comments

The KVCC Center for New Media was constructed as a renovation and addition to the former 1929 W.S. Dewing Building. The project, completed in 2004, is located in downtown Kalamazoo's Central Business District, adjacent to the Arcadia Commons Campus. The site fronts onto East Michigan Avenue, a major downtown artery, and is bounded on two other sides by the Kalamazoo pedestrian mall and the Water Street parking lot. The fourth side is bounded by Water Street which is a secondary access street in the downtown district.

This renovation and expansion project for KVCC maintains the historic presence of the building while infusing the location with new life and purpose as a facility devoted to current and future technology. The KVCC Center for New Media establishes a home for an expanding department and curriculum that includes web page design, graphic design, e-commerce, animation, illustration, digital photography and multimedia. The facility encompasses classrooms, collaborative areas, art galleries, a computer lab for the Arcadia Commons Campus, student lounge, and faculty offices.

Located on a prominent downtown corner, the existing exterior limestone shell and structure of the 1929 W.S. Dewing Building were left intact, with a 9,000-square-foot addition built to match. The total area of the building is 42,700 square feet. The existing building and addition include a basement and two floors. The building is separated on the lower and main levels into two parts by Whiskey Alley. The upper level bridges the alley.

Recent Improvements

One pair of entrance doors has been replaced with automatic bi-parting sliding doors on the West facade of the building. It was discussed that the Northwest corner and eventually the Southwest corner doors could also be targeted for this replacement, to reduce the danger of swinging doors into the pedestrian traffic along the mall. No major renovations or improvements have been made to the Center for New Media since the previous Facilities Master Plan.

Architectural - Building Enclosure

Structural System: The original building structure consists of concrete foundations, steel beams and columns, steel bar joists, metal lath/concrete floor deck, and metal roof deck. The main level floor deck is ramped in corridors to transition between three different floor elevations. A new steel-framed structure was added to create light wells on the main level to the lower level.

The structure for the addition was constructed separately from the original building and consists of concrete foundations, steel beams and columns, metal deck/concrete floor, and metal roof deck. Much of the structure is left exposed and is painted. Refer to paragraph below on "Ceilings."

Exterior Materials: The exterior walls of the addition are constructed of limestone veneer on metal stud framing. The features of the addition and remodeling emulate many of the features found in the existing historical building in the limestone veneer detailing, fenestration patterns, and copper awnings. Because of the recent completion of the building, the walls are in good shape and appear to be properly mortared and flashed. The joint sealants and caulking all appear to be in the proper location and in working order. The exterior is illuminated on all sides by large wall-mounted fixtures.

Window and Glazing Systems: The fenestration systems include new and replacement aluminum-framed, thermally-broken curtain wall systems with a tinted insulated glazing system. Curtain wall and entrance systems appear to be in good working order. There are no signs detected of air infiltration, water leakage, sealant failure, or damage on the inside of the units. All building entries consist of an airlock vestibule, aluminum-framed entrances, and automatic door operators. The entry points are easily visible and accessible off of East Michigan Avenue, the Water Street parking lot, and the pedestrian mall. Secondary exterior doors are a flush aluminum style. Interior glass has been treated with film to help afford protection should an active shooter situation arise in the downtown environment.

Roofing: The roofing material on this building is a single-ply, fully-adhered TPO 60-mil membrane. This roof system uses tapered insulation that drains to internal roof drains. All laps, flashing, and coping appear to be in good shape. The parapet wall of the roof is capped out by original and new stone coping, which appears to be in good order with no visible defects or settlement issues. Access to the roof is through a roof hatch via a ship's ladder off of the southeast stair tower. A new skylight was installed during the construction project. The primary rooftop mechanical equipment is enclosed in metal wall panels. The roofing report recommends preventative maintenance and a re-evaluation of systems within the period of this report.

Architectural - Interior Finishes

Interior Partitions and Finishes: The interior partitions are generally gypsum board on metal stud framing, extending full height to the floor or roof deck above. Fire-rated partitions separate stair towers, storage, and mechanical areas. The finish on interior partitions is primarily paint; years of art display and installations, both direct on the wall and the utilizing walker display rails, have created need for frequent touch up - less saturated or revised quantity paint colors could be considered for ease of maintenance. The central stair has a tile accent wall, and tile wainscot is installed in the restrooms.

Floor Finishes: The primary flooring material used in all of the circulation routes, instructional areas, and private offices is a 24" by 24" carpet tile. Media classrooms have stained concrete floor surfaces. Rest rooms and vending areas have 12" by 12" porcelain tile floors. Stair towers have rubber treads and tile landing, aside from the central stair which has porcelain tile treads and risers. In accordance with updated universal design standards and ADA guidelines, consideration for retrofit stair nosings to provide visual contrast at the leading edge of each step could be considered.

Vestibules have aluminum rail/carpet insert entry mats with a tile border. Rubber base is used throughout the facility. The flooring materials show the expected amount of wear for their age, though it does appear the carpet tile has been replaced once already since initial construction. We would not expect any further replacement during the duration of this report unless significant damage warrants their removal.

Ceilings: The ceilings are primarily painted exposed structure. Toilets and offices generally have acoustical ceiling panel systems. A test classroom has been retrofitted with an acoustical ceiling panel system to enclose the exposed concrete deck. There is a noticeable difference in sound absorption, cleanliness, and light reflection; this solution could be considered for additional classrooms. There are also a number of painted gypsum board bulkheads throughout. The ceilings do not show any signs of damage or aging beyond what may be expected due to normal wear and tear.

Interior Doors and Windows: The interior openings include painted hollow metal frames, laminate-clad solid-core wood doors with lever handle lock sets. There was evidence of wear and some chipping on the interior laminate doors, but not beyond expectation for their age. Many classrooms have channel framed butt-glazed windows in the circulation areas to bring natural light into the rooms.

Spatial Uses

Classrooms/Labs: The number of general classrooms is currently sufficient to house the programs being offered. The lower floor level includes three classrooms that accommodate 24 students/computer stations each, one classroom that accommodates 30 students/computer stations, and a photography lab with a darkroom.

The main floor level includes three lecture/classrooms that accommodate 24 students and two drawing/ media classrooms that accommodate up to 30 students each.

The upper floor level includes three classrooms that accommodate 24 students/ computer stations, one large computer lab that accommodates 40-50 computer stations and one production lab that accommodates 12 workstations.

Student Lounge/Study Areas: The layout of each floor provides open student lounge/study areas along the west side of the building. These spaces take advantage of views and natural light from the storefront windows along the pedestrian mall, the skylight above the central stairway,and light wells between the main and lower levels. Some furnishings have been removed or discarded, leaving the hallways underutilized. New furniture groupings could be considered to improve student use and engagement. A vending area is located on the lower level.

Faculty and Staff Offices: Four faculty offices are located on the upper level above the gallery overlooking the pedestrian mall and Michigan Avenue. Other staff office areas are located adjacent to the central stair and in the computer lab. A staff lounge and work area are located adjacent to the upper level office. Each office houses several staff members.

Specialty Spaces: The Arcus Gallery is located on the south end of the main level of the facility, fronting on East Michigan Avenue and the pedestrian mall. It is separated from the main facility on the street level by Whiskey Alley. The gallery, approximately 1,000 square feet, is used for student displays.

A second, smaller gallery area is located on the main level on the north side of Whiskey Alley. This gallery, approximately 460 square feet, is also used for student displays.

Storage Areas: The majority of storage areas are located on the lower level. A large area, measuring approximately 1,400 square feet, is located below the gallery and houses miscellaneous display equipment. There is also a second, 600-square-foot storage area in the lower level. Two storage areas, measuring approximately 175 square feet each, are located adjacent to the media classroom on the main level. Current storage facilities are adequate for the building.

Facility Support Spaces: Toilet rooms are located on all floors in the addition and meet code requirements. A total of 24 fixtures are provided. Dual accessible electric water coolers are also provided on each floor. Refer to mechanical paragraphs below for descriptions of fixtures.

There are dedicated electrical closets and facility maintenance closets with mop sinks and supplies on all floors. These serve the facility adequately.

There is no defined receiving area for the building. Michigan Avenue, the pedestrian mall, and Water Street are not easily accessible to any delivery vehicle, as there is no pullover lane or back-up area provided for these vehicles. Subsequently most deliveries are made to the Water Street parking lot entrance.

The primary mechanical room in the lower level houses boilers, pumps, water treatment, and fire protection services. Building services rooms are located on the main and upper levels. The air handling unit and chiller are located on the roof. Refer to mechanical paragraphs below on HVAC systems.

The dumpsters, transformer and generator are located in an outdoor enclosure on the southeast corner of the addition.

Circulation: The facility has two egress stairs, located on the north and south ends of the main building. A central stair is open to all floors, with a skylight above. A fourth stair is located adjacent to the gallery to provide access/egress for the staff/faculty offices.

A 4,500-pound capacity elevator was installed in the addition. The elevator has a front opening on the lower and upper level, with front and rear openings at the main level.

Mechanical Systems

Boilers: Two gas-fired boilers located in the central mechanical room serve the building. One boiler, manufactured by Burnham, is original to the building construction. A second boiler, manufactured by Peerless, was added during the renovation. Combustion air is introduced by gravity to the boiler room at the ceiling level only.

Chillers: Cooling for the building is provided through a packaged condensing unit with DX coil installed in 2014. The condensing unit is located on the roof,adjacent to the penthouse unit.

Hot Water Heating System: The hot water heating distribution system consists of primary boiler pumps that circulate through each boiler when operating, and secondary system pumps that circulate hot water through the building. The location of the boiler pump makes it difficult to maintain and replace these pumps. The secondary pumping system consists of two pumps, one of which is a standby pump. These pumps are constant volume, are not variable, and do not have frequency drives. Hot water is distributed to the hot water coil in the penthouse air handling unit, to individual reheat coils on VAV boxes, to cabinet and unit heaters located through the building, and to perimeter baseboard radiation.

Air Handling Units: A custom penthouse air handling unit, located on the roof, serves the building. This unit includes hot water heating coils, DX cooling coil, supply fan,and return fan. The unit is a variable air volume (VAV) system. The supply and return fan speeds are controlled through the use of variable frequency drives.

Controls: The building temperature controls are through the Johnson Controls Metasys system. All controls are DDC.

Drives: Frequency drives are used to control fan speed on both the supply and return fan motors.

Future Expansion: The mechanical room space boilers, air handling unit, and condensing unit sizes are at maximum capacity.

Equipment Conditions: The mechanical systems are original to the 1994 building and are overall in good condition. The area which has been retrofitted with glass enclosure in the southeast corner of the second floor is under capacity for both heating and cooling.

Electrical Systems

Power: Power is provided by Consumers Energy via an underground exterior vault. The service transformer for the Center for New Media is located in the vault. The main square distribution panel (MDP) is sized at 1,200Aat480Y/277V and is located on the lower level in the mechanical/electrical room. The MDP is equipped with Square-D power logic metering with remote monitoring of all parameters via a data connection. The 480Y/277V is distributed throughout the facility for major mechanical loads and 277V for lighting. Smaller step-down transformers are used to take the 480V down to 208Y/120V for small loads and convenience receptacles.

Electrical Panels: Since this building was constructed recently,all Square-D electrical panels and gear are in new condition. There is plenty of capacity and room in each panel for future loads to be added. Panels are protected with surge protection devices.

Lighting: The lighting is run at 277V and is mostly comprised of fluorescent T5 and T8 lamped fixtures. There are some metal halide (MH) pendants used in the common areas. The lighting system is controlled by a Leviton lighting control system that can harvest daylight and control the switches and dimming of selected fixtures. Interior spaces, including corridors, are controlled from occupancy sensors within each space.

Fire Alarm System: The existing fire alarm system is a Simplex system that meets current ADA requirements for strobe and horn/speaker placements. The system is an addressable system with plenty of capacity for future expansion

Communication Infrastructure: There is a communication data system that uses Category 6 cable present at this facility, as well as a wireless system. Fixed computers use the hard connections, while the public and portable laptops can access the data via wireless connections. Hard wire data cables are run in basket-type cable trays located overhead in the ceilings of the main corridors.

Generator: This facility has a natural gas 150 kw Cummins generator with 225A main breaker. This generator is designed for standby operation of selected critical and life safety loads, such as the fire alarm system and egress lighting. This generator has some capacity left for additional lighting or receptacles, but not for any motor or large loads.

Site Conditions

The building has no additional property. It is surrounded by public walks and some landscaping that is maintained by the City of Kalamazoo.

4.1E THE GROVES

7107 Elm Valley Drive
The Groves
Kalamazoo, Michigan 49009

General Comments

The Groves facility, originally designated as an M-TEC facility, was part of a statewide initiative to provide workforce readiness, job training skills, and continuing education skills for area employers, all conducted in partnership with regional organizations. This two-story facility was opened in January of 2001. The first floor is approximately 55,000 square feet. The partial second story is approximately 20,000 square feet in area.

KVCC utilizes The Groves as a facility that supports the economic growth component of the college's mission statement by offering customized job and skills training. It has partnerships with large corporations, smaller businesses and employment agencies to provide a steady flow of well-trained employees to the area workforce.

Recent Improvements

The West wing of the second floor area has had the High Throughput Screening Lab removed and is being repurposed for Corporate training partnerships in the space using the same footprint of space.

Architectural - Building Enclosure

Structural System: The primary structure for the building consists of concrete foundations, steel beams and columns, and metal deck/concrete floor and metal roof deck. The "A" Wing and mechanical room walls are cast-in-place concrete. The roof deck over the "A" Wing and lobby area is a Tectum™system for acoustical control in the open areas.

Exterior Materials: The exterior walls of the "A" Wing and mechanical room are cast-in- place concrete. The "B" and "C" Wing exterior walls are brick veneer on block backer with cast stone window sills. The back walls of the upper floor of the "B" and "C" Wings are finished with an exterior insulation finish system (EIFS). These materials all appear to be in very good condition.

Window and Glazing Systems: The glazing systems include aluminum-framed curtain wall and entrances. Large curtain walls are located at the entries and around the "A" Wing. The entrances to the building are aluminum-framed, featuring wide stile units with power operators for barrier-free accessibility. The administrative offices in the "A", "B" and "C" Wings have fixed punched openings for windows. All systems are clear anodized, thermally broken aluminum frames with reflective, tinted, insulated glazing. All glazing systems appear to be in good condition. For solar control, roller shades are provided at all punched openings.

Secondary doors are painted hollow metal. The labs are equipped with 10-foot high metal coiling overhead doors. Due to the design of the building, there is ongoing concern that 14-foot high doors cannot be installed to permit larger vehicles to drive into the lab areas.

Roofing: The roofing over the entries and the “A” Wing are a welded PVC system that emulates the look of a metal standing seam roof.

The remainder of the building is roofed with an insulated, mechanically- fastened EPDM system. Double-glazed plastic skylights are located over the lobby area. The perimeter of the roofing systems is capped with painted metal coping.

Both roofing systems are relatively new and appear to still be in good condition. Preventative maintenance and re-evaluation of roofing systems would be expected during the time period of this report.

Architectural - Interior Finishes

Floor Finishes: Floor finishes include a variety of materials. Walk-off carpeting is provided in the vestibules to reduce the amount of water and dirt brought into the building from outdoor foot traffic. The lobby and adjacent circulation areas have textured and stained concrete floors. Classrooms, lecture rooms, and offices have carpeted floors with rubber base. Toilets have ceramic tile floors. Other areas have polished concrete, and lab areas, mezzanines, and mechanical rooms have sealed concrete floors. All flooring systems are relatively new and appear to still be in good condition.

Interior Walls

The majority of the walls are painted metal-framed gypsum board partitions. The auditorium includes decorative split-face concrete block. The toilets have glazed wall tile wainscoting. The labs have painted concrete block walls.

Ceilings

The classrooms, offices, and related circulation areas have lay-in acoustical ceiling panels. The lecture areas, lobby and circulation areas in the “A” Wing have a Tectum™deck system which controls the acoustics in otherwise reflective surfaced areas. There is also a suspended metal slat system in the lobby to hide mechanical systems. The labs have exposed structure.

Miscellaneous Architectural Features

Interior doors are wood veneered solid-core doors in painted hollow metal frames. All doors have lever handles for barrier-free accessibility and access control systems.

All classroom and lecture spaces include laminate-clad cabinets, coat racks, electrically operated screens and marker boards. Many spaces can be subdivided with operable partitions. The auditorium has fixed lecture seating and tables. Audio-visual is supplemented with mobile carts in learning spaces.

Spatial Uses

Classrooms: The Groves has ten seminar rooms, one of which can be subdivided into two smaller rooms with a moveable partition. The largest seminar room seats seventy, and the smallest room seats eight. In addition, there is one specialty computer classroom with CAD/CAM capabilities. All rooms are fully wired with data projection capability for computer use.

Laboratories: The Groves has three laboratory spaces that are located on the south side of the building. There is a large drive that provides easy access to the overhead doors into these three lab spaces. The rooms are sized so that the smallest lab is half the size of the middle size lab and one third the size of the largest lab. The largest and medium size labs have smaller lab spaces immediately adjacent to the larger open lab spaces. The two larger labs also have dedicated office space located immediately off of the laboratory. All three labs have storage rooms on the first level and the two larger labs have mezzanine storage areas. Additional laboratory spaces on the first floor include a mobile robotics lab, a HAAS CNC lab and a 3D printer room.

Assembly and Meeting Spaces: The Groves facility provides a large amphitheater with 124 seats. This is the feature space of The Groves facility design. The amphitheater is equipped with an integrated sound system, ceiling mounted projector, large screen for projection capabilities, theater type seating and charging stations available at each seat for participants.

The main floor is ringed by a large lobby space with convenient access to all rooms. The dining room is located on the second floor and can comfortably accommodate 124 people. The dining space overlooks the main lobby below.

Specialty Spaces: On the second floor of the “B” and “C” Wings are two 5,500-square-foot spaces. The second floor area above the “C” wing includes closed and open office areas as well as two conference rooms. The second floor area above the “B” wing has corporate training space.

Storage Areas: Numerous small storage rooms are located throughout the first floor level. Each lab has a dedicated storage room. The larger two labs include a storage mezzanine area

Facility Support Spaces: Toilets are located in the “A” and “B” Wings and at the second floor lounge area. A total of 28 fixtures are provided. Dual accessible electric water coolers are also provided on each floor. It is noted that providing an All Gender / Nursing Mothers room would be desired to follow the College’s inclusivity initiatives.

A small loading and a receiving area has been provided at the southeast side of the facility. Other facility support spaces, such as a dedicated security room and head end room for the telecommunications and data lines, are adequately sized and function well for the needs of the facility. These spaces appear to have the capacity for expansion of the technology supported.

Circulation: The facility has two monumental stairs in the core of the building, leading to the upper lounge and incubator areas. Two egress stairs are located at the end of the “B” and “C” Wings. Outdoor egress stairs to grade are provided at the back of the amphitheater. Two stairs lead to storage and mechanical mezzanines off of the larger lab areas.

A hydraulic passenger elevator with a 2,500 pound capacity is located in the center of the facility. Occupancy on the second floor is minimal and the elevator is adequate in size.

Mechanical Systems

Boilers: Two gas-fired fire tube boilers, manufactured by Johnson Controls, are located in the mezzanine mechanical room. Each boiler has a rating of 3,000 MBTU per hour. Combustion air is introduced into the room at the ceiling level. Each boiler has a dedicated circulating pump that pumps water through the boiler when the boiler is operating. The system is piped in a primary/secondary arrangement.

Chillers: A single water-cooled centrifugal chiller installed in 2014, manufactured by York, is located in the mechanical room. The chiller has a capacity of approximately 400 tons and utilizes R134a refrigerant. A single roof-mounted cooling tower supplies condensing water to the chiller. The chiller is piped in a primary/secondary decoupled arrangement.

Hydronic Loops: Secondary hot water pumps circulate water from the primary hot water heating loop to the secondary building loop. The secondary hot water piping system consists of two parallel pumps, which are set up for variable flow and are wired to variable frequency drives. Hot water for heating is supplied to each air handling unit hot water coil, reheat coils on VAV boxes, miscellaneous cabinet heaters, fin tube convectors, and unit heaters.

Chilled water is circulated to each of the air handling units through a secondary piping loop. Two secondary pumps piped for parallel operation circulate chilled water to each air handling unit chilled water coil. The pumps are setup for variable flow through the use of frequency drives.

Air Handling Units: Three platform-mounted custom penthouse units are located on the roof. These units are setup for variable air volume utilizing variable frequency drives. Each unit includes a return fan section, filter section, hot water heating coil, chilled water coil, and supply fan section. The field fabricated steps used to access the units for maintenance will need to be replaced in the near future.

A fourth rooftop air handling unit, manufactured by Trane, was added in 2006 to serve the wet laboratory renovation. This unit provides 100% outside air to the laboratory area for laboratory hood exhaust. This system incorporates Strobic exhaust fans for hood exhaust and Phoenix controls for variable air volume control of both make up air and hood exhaust. Exhaust air flow and make up are then based on a combination of sash height and hood face velocity, as well as proximity sensors for reducing required face velocity in the absence of occupants.

Temperature Controls: This building incorporates a Johnson Controls building management system that utilizes all DDC controls and electric actuators.

Variable Speed Drives: All major fan motors and secondary pumps incorporate frequency drives for controlling motor speed.

Future Expansion: There are no provisions for building expansion.

Equipment Conditions: The mechanical systems were all installed during or since the 2001 building construction and are in good working order.

Electrical Systems

Power: Power is provided by Consumers Energy via an underground 13,800-volt feeder to a substation

located in the facility. This substation is roughly twice the size needed for this facility, but was designed large enough to handle a sizable addition or expansion. The substation at The Groves steps the 13,800 volts down to 480Y/277V,3 Phase, 4 Wire for major HVAC and mechanical loads, including lighting. The 480 volts are reduced further to 208Y/120V for receptacle loads and other miscellaneous items.

Electrical Panels: Electrical panels are in great condition, with sufficient capacity and spare breaker spaces left in each. Most are located in dedicated electrical closets throughout the facility.

Lighting: Lighting throughout The Groves facility is predominately 277-volt fluorescent or HID. There are some HID, fluorescent, and incandescent can fixtures as well. The HID pendant cans in the main lobby space could be replaced with a more efficient fluorescent source to help offset energy costs. These could then be put on daylight-harvesting sensors to further cut energy usage.

Fire Alarm System: The fire alarm system is up to date and designed to ADA guidelines. The system is in very good shape.

Communication Infrastructure: The communication infrastructure has a fiber backbone with Category 6 cabling going from the closets to the user ports.

Generator: A natural gas generator is available for emergency lighting, emergency outlets, and some critical mechanical equipment. This generator is new and is in good shape. A second natural gas generator has been added recently to accommodate the second level east wing screening center.

Site Conditions

Drives and Parking: Generally, the drives and bituminous paved areas on the The Groves campus are in good condition with good surfaces. The curb and gutter are also in good condition. The east parking lot is expected to be milled and replaced during the time of this report as part of the college's preventative maintenance program.

Walks: Concrete walks appear to be in fair condition, showing normal wear and tear. Some of these areas do ice up quickly due to roof drainage patterns and other ideas to improve this should be considered in the future, such as a snowmelt for portions.

Site Landscaping: The landscaping at this campus is nicely established and compliments the building well. The entrance boulevard makes use of trees that were on the site at the time it was developed, as well as a raised planting bed using segmental retaining wall to create a more formal entry to the site.

Site Lighting: The campus is well lit, with two uniform lighting fixtures utilized throughout. The parking areas all have a matching pole-mounted shoebox fixture set at a low height to provide sufficient lighting. Closer to the building, a more modern pole-mounted fixture is used. The fixtures are in excellent condition.

Site Furniture: The furniture is in excellent condition and is similar to that installed at the Texas Township Campus

Site Storm Water Management: The site appears to be well drained with curb inlets and some internal catch basins. There is only one area where the pavement is joined that water ponding appears to occur. The loading dock appears to function well.

4.1F KALAMAZOO VALLEY MUSEUM

230 North Rose Street
Kalamazoo, Michigan 49007

General Comments

The Kalamazoo Valley Museum was opened in February of 1996. The museum is part of the Arcadia Commons Campus, located in downtown Kalamazoo's central business district. The museum is bounded by Eleanor Street,Arcadia Creek, and the Kalamazoo pedestrian mall. The main entry is off of a plaza that connects the museum to Rose Street. To the north is a three-story office building that has historical character and value. The museum is a four-story structure with many interesting architectural forms.

Recent Improvements

The front desk area was recently improved to allow for better circulation and larger student group experiences at the main desk, as well as improved security. The Museum store area was renovated into expanded gallery space.

Architectural - Building Enclosure

Structural System: The structure for the building consists of concrete foundations, steel beams and columns, and metal deck/concrete floor and metal roof deck.

Exterior Materials: The exterior wall construction is a mixture of brick, cast stone, and granite, with the upper floor clad in zinc-coated copper. The materials along Arcadia Creek consist of cast-in-place concrete bollards with green painted metal ornamental railings. These materials all appear to be in very good condition. The mortar, weeps, flashing, and joint sealants do not appear to require any maintenance. The zinc coating on the metal portion of the building has weathered and has caused some streaking on the exterior brick and stone work. The discoloration of these streaks could be cleaned.

Window and Glazing Systems: The windows of the entire facility are custom monumental wood windows with low-E insulated glazing. The exterior windows should be considered for replacement. The wood window systems are performing poorly at grade due to salt corrosion. Replacement of the systems will help increase the energy efficiency of the building by using updated glass technology that is available.

The main entrance is under a large covered entry. The entry consists of an air lock vestibule, fully-glazed wood-stile doors, and automatic door operators. All doors appear to be in good working order. The service and access entry doors are aluminum-framed with flush aluminum panel doors, and appear to be in good working order.

Roofing: The roofing systems include single-ply adhered 60-mil EPDM membrane roof on flat roof areas and zinc-coated copper on the planetarium dome and the atrium barrel roof. The coping is also zinc-coated copper. All of the coping, flashing, and roof systems appear to be in good working order. Many of these items are still covered by the original installation warranties. The roof was recently replaced in July of 2013. Additional insulation was added to increase the energy efficiency of the roof.

Architectural - Interior Finishes

Floor Finishes: The flooring material changes significantly throughout the museum. Systems include carpet, 12" by 12" porcelain tile, linoleum, and exposed concrete. All of these different flooring materials appear to be well maintained, and are in good condition. The carpet tile is easily replaceable and has been maintained well.

Interior Walls: The majority of the interior walls consist of plaster-coated gypsum board that has a rough texture. A number of the walls in the facility have been designed to accommodate the storage and display of numerous permanent materials at the museum.

Ceilings: The primary ceiling type is a coffered gypsum board system with sound- deadening panels and adjustable lighting fixtures for illuminating the exhibits. Specialty open-grid systems are used in areas where mechanical systems are hidden. Offices and miscellaneous areas have acoustical ceiling panels and suspended grid systems. It is not foreseeable that any changes in the ceilings would be required, as they have been designed with flexibility in mind.

Spatial Uses

Classrooms/Labs: The museum has no specific classroom or lab spaces, however both the Worldworks space and the Mary Jane Stryker Theater are both available for classroom use when not being utilized for public program use.

Assembly and Meeting Spaces: Assembly spaces are primarily located on the first floor. Common gathering spaces for visiting groups are in the area adjacent to the donor wall and reception desk, and the area outside the planetarium and auditorium. The area outside the planetarium and auditorium is also used for a number of hands-on exhibits. The limitations of these areas cause some issues when a number of larger groups are at the museum at the same time

The Mary Jane Stryker Theater was originally designed as the Opus Interactive Learning Center. When this concept was introduced, it was quite popular. However, over time the program had become out-of-date and the technology used to run the learning center had changed dramatically. The theater is now a 90-seat auditorium with an open stage area, and has been refurbished and equipped with a new high-definition projection and digital surround sound system. This allows for flexible use for concerts, presentations, and film/video screening. The access to the stage area has been considered in a manner to eliminate the lift and improve ADA access.

The Universe Theater and Planetarium was a state-of-the-art facility in 1998, and is still very much regarded as being top-of-the-line. Its attendance is the largest of any given program that the museum puts on each year. The domed planetarium seats 109 occupants. It is used for a variety of multi-media programs and features a Digistar projection system. A major upgrade to projection, sound and lighting was completed in November 2016.

Exhibit Spaces: The museum consists of a number of specifically-designed exhibit spaces that still function true to their original vision and construction.

The first floor includes three exhibit spaces. The area formerly used as the museum store is now a permanent, flexible exhibit area. In December 2016, the Science on a Sphere exhibit was installed. The exhibit is a highly animated video system that projects onto a 60 inch diameter sphere that explores many earth science related topics including the oceans, continents, weather, climate, pollution and much more.

The second floor includes six exhibit spaces. “On the Trail of History” is a series of exhibits that reference the history of Kalamazoo and the development of many of its leading manufacturing and economic growth. “Kalamazoo Direct to You” focuses on the history of the agricultural and manufacturing industries of Kalamazoo. The new Innovation Gallery, ThinkTank and Innovation Lab opened in the Fall of 2017. The third floor includes two exhibit spaces. “Mystery of the Mummy” is a smaller exhibit that houses Egyptian artifacts and the museum’s mummy. The second and larger space on this floor is used for traveling exhibits.

Exhibit Support Spaces: The museum facilities department maintains and creates a number of its own exhibits. On the first floor is a carpentry shop. The third floor includes a graphics and production shop, staff offices, and additional support spaces. Each floor includes an ample receiving area separated from the exhibit areas by a large coiling door.

Storage Areas: The third floor houses exhibit, prop, and crate storage. Additional crate storage for traveling exhibits is located directly adjacent to the exhibit area.

The primary storage for the museum is on the fourth floor. This space includes a high-density storage system, fixed shelving racks, and hanging systems on the walls. This space is a temperature- and humidity-controlled environment. Expansion of the high density storage systems is needed to accommodate additional storage requirements.

Occasionally items are temporarily stored in the loading and receiving areas, although these items are quickly moved to either the fourth floor or off-sight storage. Some of the museum’s paper literature materials and smaller items are stored in the basement level of Anna Whitten Hall.

Staff Offices: The reception desk and security/first aid office are located on the first floor. The staff offices are primarily located on the third floor. General offices are grouped together on the west side. Offices for museum archival, research, and planetarium staff are located on the east side. This area includes numerous offices, recording studios, and darkrooms. There are ample number of offices and workspaces provided, with room for the expansion of part-time staff members and volunteers.

Facility Support Spaces: Toilet rooms are located on the first three floors of the museum. The public toilets are located on the first and second floors, with staff toilets located on the third floor. A total of 26 fixtures are provided. Dual accessible electric water coolers are also provided adjacent to each toilet. Refer to mechanical paragraphs below for descriptions of fixtures.

Facility maintenance closets are provided on the first three floors adjacent to the toilets and in the fourth floor mechanical room.

The loading dock, located on Eleanor Street, is no longer usable for direct loading/unloading of semi trailers due to the building across the street. The dock door itself is sufficient in size, but a weatherproof cover or canopy would be beneficial. As previously noted in the Anna Whitten Hall report, all deliveries that go to the downtown center must be routed through the museum’s receiving area prior to their redistribution. This taxes the museum’s dock, and creates the problem of materials sitting in the receiving area prior to redistribution. The museum does not have a raised or recessed dock, but utilizes a platform lift within the loading area to unload trucks.

Circulation: The central atrium of the museum features a large staircase, which is in good condition and serves the majority of the visitor traffic. There are three egress stair towers, two of which serve all four floors and one that serves three floors.

The museum has two elevators. A hydraulic passenger elevator for visitors is centrally located, serves the three public floors, and has a 2,500-pound capacity. A hydraulic freight elevator, located near the loading dock, serves all four floors and has a 20,000-pound capacity. Both elevators are sized adequately for their use.

Mechanical Systems

Boilers: Heating for the museum is supplied from three Cleaver Brook gas-fired tube boilers located in the central mechanical room in the lower level of Anna Whitten Hall. Hot water is pumped by secondary pumps, and is piped through a tunnel under the footbridge crossing Arcadia Creek and into the museum building.

Chillers: Chilled water for the museum is supplied from two centrifugal water- cooled chillers located in the lower level mechanical room of the Anna Whitten Hall. Chilled water is pumped by two secondary pumps located in the mechanical room, then piped through a tunnel that crosses Arcadia Creek under the footbridge. A separate split-system chiller barrel and air-cooled condensing unit is located in the upper level mechanical room of the museum. This provides a backup source of chilled water and a secondary source for cooling and dehumidifying when the main chillers are down. With the new installation of a waterside economizer, this system is not typically required, but is exercised to maintain its functionality.

Hydronic Distribution Loops: Hot water for heating circulates through the museum, to the main mechanical rooms, to each air handling unit, and on to isolated heating components including fin tube radiation (Runtal), cabinet heaters, and unit heaters.

Chilled water for cooling and dehumidifying is piped through the museum to each mechanical room and supplies the chilled water coils of each individual air handling unit.

Air-Handling Units: Seven central-station air handling units are located in two areas within the building, one on the main floor shop area (AHU-1), and seven located in the main penthouse mechanical room. The seven units in the penthouse mechanical room utilize return fans. Each unit serves a dedicated zone and provides heating, ventilation, humidification, and air conditioning to that area. Each unit contains a chilled water coil and hot water with individual coil-circulating pump. These units are not capable of an air side economizer sequence. Five of the seven penthouse units are variable air volume systems (VAV)with individual zone terminal units containing hot water reheat coils.

- AHU-1: Constant volume serving the main shop area (no humidification)
- AHU-2: VAV serving the second floor area.
- AHU-3: VAV serving the first floor area with the exception of the planetarium.
- AHU-4: Constant volume serving the first floor planetarium, with a separate Liebert unit serving the control room.
- AHU-5 & 6: VAV serving the third floor back offices and administration area.
- AHU-7: Constant volume serving the third floor archives.

The unit serving the archive area (AHU-7) was retrofit with a reheat coil for added dehumidification capability.

Each VAV air handling unit is equipped with variable frequency drives. The two constant-volume units do not have variable frequency drives.

Humidification: Recently new humidification systems were installed at AHU-2 through AHU-7. The systems installed are a combination of electric and gas fired humidifiers fed from a location RO system located in the mechanical penthouse.

Snowmelt: Portions of the exterior walkways have had a snowmelt system installed (refer to site). The snowmelt system is a glycol loop fed from the tunnel to Anna Whitten Hall through the use of a heat exchanger and glycol fill system.

Controls: Temperature controls serving the building are Metasys DDC by Johnson Controls. Pneumatics are used for valve and damper actuators.

Drives: Frequency drives control the major equipment.

Future Expansion: Provisions have been made for building expansion.

Equipment Conditions: The mechanical systems are original to the 1996 building and are in good working condition.

Electrical Systems

Power: Power to the museum is provided by an underground 8,300-volt feeder originating from a primary switch in the Anna Whitten Hall substation. The substation at the museum steps the 8,300 volt down to 480Y/277V,3 Phase, 4 Wire for major HVAC and mechanical loads, including lighting. The 480 volts are reduced further to 208Y/120V for receptacle loads and other miscellaneous items.

Electrical Panels: Electrical panels are in good condition, with some capacity and spare breaker spaces left in each. Most panels are located in dedicated electrical closets throughout the facility.

Lighting: Lighting is predominately 277-volt fluorescent or HID. There are some HID, fluorescent, and incandescent cans fixtures as well. Most of the lighting in the museum space is comprised of directional PAR spots,which are a major contributor to energy usage and heat load.

Fire Alarm System: The fire alarm system is up to date and designed to ADA guidelines. The system is in good condition.

Communication Infrastructure: The communication infrastructure has a fiber backbone with Category 5 cabling going from the closets to the user ports.

Site Conditions

Drives and Parking: This campus is located in downtown Kalamazoo, and therefore does not provide any dedicated KVCC parking. Visitors make use of the downtown lots, parking structures, metered street parking and public transportation.

Walks: There is very little pedestrian paving provided for this site, with the exception of the entrance plaza. The concrete and inset pavers are deteriorating due to salts used during the winter months. The pavers appear to be absorbing and leaching salts and may need replacement with an alternate material.

Site Landscaping: The landscaping around the existing plaza is well established and well maintained. Most of the plantings are in raised planter beds with low evergreen shrubs and shade trees. Some of the evergreen shrubs are in decline and should be replaced or groomed.

Site Lighting: Being downtown, the lighting for this sight is consistent with the standards for the City of Kalamazoo, with a traditional pole-mounted fixture located near the street sidewalks.

Site Furniture: The entry courtyard of the museum has some benches, refuse containers, and ash cans.

Site Storm Water Management: The entry courtyard appears well drained with no surface ponding.

4.1G FOOD INNOVATION CENTER

224 East Crosstown Parkway
Kalamazoo, Michigan 49001

General Comments

The Food Innovation Center was opened in January of 2016. The one-story building is part of the Bronson Healthy Living Campus located immediately south of downtown Kalamazoo's central business district. The building is bounded by Crosstown Parkway to the north, Portage Creek to the east, John Street Court to the south and John Street to the west. The building measures approximately 16,500 square feet.

The Food Innovation Center contains four major program components: food education areas, flexible indoor growing space, food safety and processing areas, and outdoor growing areas. The indoor growing spaces allow students to explore new trends in how to grow food indoors within an urban environment. The processing area provides education and training opportunities for the harvesting and cleaning of consumables. Dedicated lab space is provided for research in food safety.

Architectural - Building Enclosure

Structural System: The primary structure for the building consists of concrete foundations, steel beams and columns, and steel bar joists with a metal roof deck The building floor is composed of a concrete slab on grade.

Exterior Materials: The exterior walls of the building are clad in insulated metal panel, stone veneer and decorative concrete masonry units. The dynamic roof form is clad with an insulated metal panel. Consideration should be given to providing an enclosed central receiving area separate from the food processing zone.

Window and Glazing Systems: The glazing systems include aluminum-framed curtain wall and entrances. Large curtain walls are located at the entries and around the "A" Wing. The entrances to the building are aluminum-framed, featuring wide stile units with power operators for barrier-free accessibility. The administrative offices in the "A" Wing and the "B" and "C" Wings have fixed punched openings for windows. All systems are clear anodized, thermally broken aluminum frames with tinted, insulated glazing

Roofing: The sloped roof is clad with an insulated metal panel. 'Flat' roof areas are enclosed with a TPO membrane roof

Architectural - Interior Finishes

Floor Finishes: Floor finishes include a variety of materials. Walk-off carpeting is provided in the vestibules to reduce the amount of moisture and debris brought into the building from outdoor foot traffic. A majority of the floors are polished-concrete. Office spaces have carpeted floors with a rubber base. Toilets have porcelain tile floors. Mechanical rooms have sealed concrete floors.

Interior Walls

Interior walls are composed of painted gypsum board/metal stud assemblies, painted concrete masonry units and decorative concrete masonry units. Interior storefront systems are installed to provide connection and visibility between spaces. The interior walls at the exterior of the production space are exposed metal skin of the insulated metal panel.

Ceilings

Many of the spaces have exposed ceilings. The classrooms and offices have lay-in acoustic tile set in a metal grid. The lobby space has ceiling elements composed of reclaimed wood to create accent and focus areas.

External Freezer

A 157.77-square-foot (19'11" long x 7'11" wide x 8'9.5" tall) external freezer was installed, expanding the facility's storage capacity.

New Pad, Ramp + Utilities

A new ramp was installed, enhancing accessibility and inclusivity for all.

Mechanical Systems

Boilers/Heat Source: The primary source for building heat is a low temperature heating hot water system. The heating hot water is generated using natural gas-fired, condensing, modular boilers. Each boiler is individually pumped to ensure the boiler has adequate flow and has an input capacity of 500 MBH. The heating hot water is distributed through a variable primary only piping arrangement with direct return and pressure independent control valves to aid in the correct distribution of water flow. The temperature of the hot water is reset based on the outdoor conditions using a lower temperature for reheat only during the summer, and a higher temperature as it gets colder outside. The primary distribution pumps are furnished with variable frequency drives. For freeze protection, the air handling unit coils are pumped.

Cooling: The primary source for Building Cooling is an air cooled condensing unit.

Air Handling Units: An indoor variable air volume (VAV) air handling unit serves the building. It is equipped with Dx cooling and hot water heat. Zone control is accomplished using hot water reheat coils at the terminal units. Supply, return and general exhaust air systems are fully ducted. Cabinet heaters are used at entrances, a unit heater is used in mechanical spaces.

Temperature Controls: A Direct Digital Control (DDC) System is used to operate the building HVAC controls. Direct digital controls are provided for each controlled device including the air handling unit, boilers, fan coils, damper actuators, valves and pumps. The controls are connected for a comprehensive building management system integrated with the main campus. CO2 sensors will be utilized for demand controlled ventilation for their respective zones. Room sensors are provided for each control zone.

Plumbing Systems: A 6" water service for the Food Innovation Center is extended from the municipal service. It provides water for both domestic service and fire protection. A dual water softener softens the domestic water and the HVAC make up water. The domestic cold and hot water systems originate from the mechanical room with piping systems distributing them through the building. The domestic hot water system includes a pumped recirculation line. The hot water is produced in the mechanical room using a high efficiency gas-fired water heater and storage tank. The domestic hot water is produced using a high efficiency gas fired water heater and storage tank to supplement the solar thermal collector. Compressed air is supplied by an air compressor located in the mechanical room with a capacity of 15.5 CFM. The gravity sanitary system within the building is extended from the plumbing fixtures and drains and routed out of the building where it is connected to the municipal system. Natural gas extends to the building to serve boilers and water heaters.

Electrical Systems

Power: The Food Innovation building is fed from Consumers Power 8,320Y/4,800-volt, three-phase electrical distribution system. This service enters a main (3) output fused switch that includes two spares and services the building 500kVA pad mount transformer that serves the main distribution panel.

Electrical Panels: 480/277V distribution is used for HVAC and lighting and is transformed to 208/120V for outlets and other loads. Electrical panels are in new condition with construction completed in early 2016. They are equipped with spare capacity, surge protection on each panel and an arc flash study has been performed on the whole building. Most panels are installed in dedicated electrical closets. Sub-metering of the secondary electrical distribution is provided by a CT connection from the building management system. A branch panel in the remote greenhouse building is served from the 208V secondary panel.

Generator: The facility has a 45kw natural gas generator that serves the refrigeration equipment, select lighting, technology closet, boiler, boiler pumps and select other loads.

Motor Drives: Frequency drives are installed on all motors to help save energy and improve the power factor.

Lighting: All lighting fixtures throughout the building are LED. The lighting is controlled with a Crestron lighting control system distributed throughout. The system is programmable and set up to reduce light levels after hours on a schedule. Many of the lighting zones are dimmable. Emergency lighting is integrated into the general use lighting with the use of emergency listed relays that switch the fixtures onto generator power if the power to that light zone is lost.

Fire Alarm System: The fire alarm system used throughout the facility is an addressable Simplex system that has voice annunciation.

Security: Access control system is used throughout the building on many interior and all exterior doors. Security cameras are installed throughout the building providing adequate security coverage.

Communication Infrastructure: The communication infrastructure has a central technology closet serving the entire building. Cabling is run from the closet to the user ports using Category 6 cabling and the building is provided with raceways and tray throughout to facilitate changes for technology needs..

4.1H MARILYN J. SCHLACK CULINARY AND ALLIED HEALTH BUILDING (MJSCAH)

418 East Walnut Street
Kalamazoo, Michigan 49007

General Comments

The MJSCAH was opened in September of 2016. The three-story building is part of the Bronson Healthy Living Campus located immediately south of downtown Kalamazoo's central business district. The building is bounded by Walnut Street to the north, Portage Creek to the east, Bronson Hospital parking to the south and Jasper Street to the west. The main entry is located along Walnut Street. A portion of Portage Creek was restored and redeveloped as part of the project.

Improvements for Consideration

It was discussed that the outdoor space could be further developed or reconsidered to increase and encourage the use of outdoor space at the Healthy Living Campus. Amenities could include an outdoor green roof growing area on the second floor, powered outdoor furniture, covered and uncovered spaces, and potentially the addition of a small outdoor culinary/demonstration kitchen.

A lounge and study space could be considered in the private dining space on the first floor to offer further amenities and convenience to students.

Architectural - Building Enclosure

Structural System: The structure for the building consists of concrete foundations, steel beams and columns, and metal deck/concrete floor supported by steel bar joists and metal roof deck supported by steel roof joists.

Exterior Materials: The exterior wall construction is primarily steel stud infill that supports a number of cladding materials. The building is clad in insulated metal panels, decorative concrete masonry units, brick and large expanses of aluminum curtainwall. The brick was selected to coordinate with the immediately adjacent Bronson Hospital.

Window and Glazing Systems: The windows of the facility are composed of large expanses of aluminum curtain wall along with aluminum storefront systems. All systems contain 1" low-E insulated class to maximize energy performance. The aluminum framing is clear anodized.

Public entries consist of an airlock vestibule, fully-glazed doors, and automatic door operators. The service entry doors are aluminum-framed with flush aluminum panel doors.

Roofing: The roofing systems include single-ply adhered 60-mil EPDM membrane roof on flat roof areas and metal roof panels at the sloped roof.

Architectural - Interior Finishes

Floor Finishes: Flooring is primarily patterned and colored polished concrete in the lobby, corridors, and public gathering areas. General classrooms are carpeted with a rubber base. The Allied Health spaces are resilient flooring with a rubber base, and Culinary spaces are treated with a kitchen-safe vinyl floor system.

Interior Walls: Interior walls are primarily painted gypsum board/metal stud assemblies. In areas of high abuse, such as the stair towers and service corridor, painted concrete masonry or porcelain wall tile is installed. Decorative wood wall elements are included near entries of classrooms for both design and wayfinding. On the third floor, built-in solid surface benches line a majority of the corridors for student waiting and lounge.

Ceilings: Ceilings include areas of exposed ceiling, acoustic tile ceilings and suspended wood cloud elements used to highlight focus areas within the building.

Mechanical Systems

Boilers/Heat Source: The primary source for building heat is a low temperature (130 degree) heating hot water system. The heating hot water is generated using a combination of three (3) natural gas-fired, high efficiency, medium mass, modular boilers and heat recovery chillers. Each boiler will have a heat input of 2,000 MBH and are individually pumped. The boilers are controlled via a manufacturer provided boiler plant controller.

The heating hot water is distributed to air handling units, make-up air units, reheat coils and terminal devices through a primary/secondary piping arrangement (with a standby main pump) using pressure independent control valves and balancing valves to aid in the correct distribution of water flow. The temperature of the hot water is reset based on the outdoor conditions using a lower temperature for reheat only during the summer, and a higher temperature as it gets colder outside.

The primary distribution pumps are furnished with variable frequency drives. In addition, for freeze protection, the air handling unit heating coil(s) are pumped. The system is designed for continuous system filtering and chemical treatment.

Chillers: The primary source for building cooling is chilled water. The chilled water system is pumped using variable speed pumps in a main and standby pump arrangement. A 250 ton multi-stage air-cooled chiller is located on the roof and is used in conjunction with the 64-ton heat recovery chiller to produce the chilled water. An evaporator barrel is located in th e penthouse mechanical area and is served by a refrigerant purge system. The heat recovery chiller with an evaporator barrel is used to produce both hot and chilled water when the building is calling for simultaneous heating and cooling.

Air Handling Units: The 3-story building is served by three (3) roof-mounted variable volume air handling units with the following sections: return fan with vibration isolation, economizer, filter (with 30% pre-filter and 85% final bag filter), blender, hot water coil, chilled water coil, supply fan with vibration isolation, and electric humidifier. The units serve building areas as follows:

AHU-1 serves the 1st floor (approximately 20,000 CFM)

AHU-2 serves the 2nd floor (approx. 30,000 CFM)

AHU-3 serves the 3rd (approx. 30,000 CFM)

In addition to the main air handling units, there are 4 roof-mounted make up air units with associated exhaust fans that serve the kitchen hoods located on the first and second floor. The main kitchen and community kitchen are also equipped with exhaust fans and make up units located above the ceilings.

Zone temperature control is performed by single-duct VAV boxes with reheat coils. Supply, return and general exhaust air systems are fully ducted (no plenum return) with ductwork made of galvanized steel and insulation. General exhaust direct drive fans, speed control is provided.

Cabinet heaters are installed at entrances. Unit heaters are installed in mechanical spaces and the receiving area. Perimeter heating devices including linear radiant ceiling panels and convectors are provided along the perimeter walls to offset the cold effect of exterior walls or windows. The high-volume spaces of the lobby and dining area are equipped with a radiant floor system to provide additional heat at the occupant level.

The exterior approach of the main entry sidewalk is equipped with a glycol/hot water snowmelt system.

Kitchen Equipment: Kitchen exhaust hoods serve all cooking equipment and are provided with up blast fans. Roof mounted VAV make up air units provide additional air to the space, as required, through additional diffusers within the space or a combination of front and/or side supply air plenum located on the hood. Each hood is provided with a hood-variable air flow control system based on temperature and connected to the BAS. Manufacturer-installed fire protection systems, cabinet and controls are provided with each hood and designed for “area” under the hood allowing limited flexibility of equipment type/location under the hood. Each hood, make-up air unit and its associated gas valve and electrical shunt-trip breaker are connected to the building fire alarm system.

Temperature Controls: A Tridium based Direct Digital Control (DDC) System is used to operate the building HVAC controls. Direct digital controls are provided for each controlled device including air handling units, boilers, chillers, heat recovery chillers, damper actuators, valves and pumps. The controls are connected to a comprehensive building management system integrated with the main campus. CO2 sensors are utilized for demand controlled ventilation for their respective zones. Static pressure and temperature sensors in the ventilation and hydronic systems are also provided for feedback to the respective system to maintain and reset the operating points. Room sensors are provided for each control zone.

Plumbing Systems: A 6” water line provides domestic and fire protection service for the building. The domestic cold and hot water systems originate from the mechanical room with piping systems distributing them through the building. The domestic hot water system includes a pumped recirculation line. The hot water is produced in the mechanical room using a high-efficiency, gas-fired water heater and storage tank. Exterior tamper-proof non-freeze wall hydrants are installed for building maintenance. Storm water from the building is collected through the use of roof drains at flat roof surfaces and gravity piping systems carry the water away from the building. The gravity sanitary system within the building is extended from the fixtures and is routed out of the building and connected to the municipal system. All floor drains are equipped with trap seal protection as required by code. Natural gas is extended to the building to serve the boilers, domestic water system, generator and food service equipment. A buried grease interceptor is located externally of the building and collects the discharge of kitchen equipment introducing grease into the sanitary system.

Fire Protection: The building is fully sprinkled according to NFPA 13 requirements. The fire protection service entrance includes back flow protection, a 50 HP fire pump, fire department connection, valves and flow switches.

Electrical Systems

Power: The MJSCAH is fed from Consumers Power 8,320Y/4,800-volt, three-phase electrical distribution system. This service enters a main fused switch and services the building 2000kVA pad mount transformer that serves the main distribution panel. A separate secondary service provides power to the fire pump for the building fire suppression.

Electrical Panels: 480/277V distribution is used for HVAC and lighting and is transformed to 208/120V for outlets and other loads. Electrical panels are in new condition with construction completed in early 2016. They are equipped with spare capacity, surge protection on each panel and an arc flash study has been performed on the whole building. Most panels are installed in dedicated electrical closets except those servicing kitchen classroom spaces; those are recessed in the same space to facilitate disconnecting and service of the equipment within site. Sub-metering of the secondary electrical distribution is provided by a CT connection from the building management system.

Generator: The facility has a 300kw natural gas generator that serves the fire pump, kitchen refrigerators, select lighting, technology closets, boilers, boiler pumps and kitchen equipment central chiller.

Motor Drives: Frequency drives are installed on all motors to help save energy and improve the power factor.

Lighting: All lighting fixtures throughout the building are LED. The lighting is controlled with a Crestron lighting control system distributed throughout. The system is programmable and set up to reduce light levels after hours on a schedule. Many of the lighting zones are dimmable. Emergency lighting is integrated into the general use lighting with the use of emergency listed relays that switch the fixtures onto generator power if the power to that light zone is lost.

Fire Alarm System: The fire alarm system used throughout the facility is an addressable Simplex system that has voice annunciation.

Security: Access control system is used throughout the building on many interior and all exterior doors. Security cameras are installed throughout the building providing adequate security coverage.

Communication Infrastructure: The communication infrastructure has a 10GB fiber backbone routed between (3) technology closets. Cabling is run from the closets to the user ports using Category 6 cabling and the building is provided with raceways and tray throughout to facilitate changes for technology needs.

4.2 UTILIZATION RATES

The efficiency of KVCC operations is also illustrated in the efficiencies tied to classroom usage. This is reflected in the table on the following page entitled Facility Utilization Rates, Average Hourly Utilization Rates by Campus: Fall 2019 as well as associated data tables. The average classroom utilization per campus during peak hours was 68.11%. This dropped to 54.66% in off-peak hours. Room utilization was substantially less during weekends and evenings.

Facility Utilization Rates
Average Hourly Utilization Rates by Campus: Fall 2023

Campus	**Peak M-F 10am-3pm**	**Off-Peak M-F 8am-10am 3pm-5pm**	**Evening**	**Weekend**
Texas Township	55.80%	40.65%	31.76%	5.89%
Arcadia Commons	57.72%	43.80%	38.95%	22.25%
Bronson Healthy Living	59.96%	56.00%	36.76%	12.75%
The Groves	86.16%	83.45%	56.00%	53.00% *
Average Per Campus	**64.91%**	**55.98%**	**40.86%**	**23.47%**

Ad Astra

Arcadia Commons Campus Classroom: Percent of Rooms in Use

by Day and Time

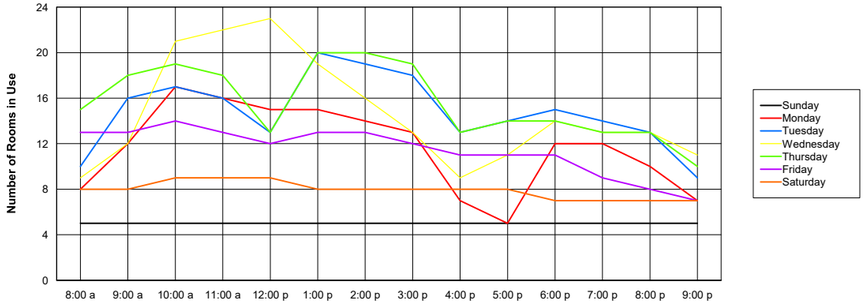
5/3/2024
8:55AM

Number of Rooms: 29 For all sections and events occurring 9/6/2023 - 12/16/2023

	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
Sunday	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%
Monday	28%	41%	59%	55%	52%	52%	48%	45%	24%	17%	41%	41%	34%	24%
Tuesday	34%	55%	59%	55%	45%	69%	66%	62%	45%	48%	52%	48%	45%	31%
Wednesday	31%	41%	72%	76%	79%	66%	55%	45%	31%	38%	48%	45%	45%	38%
Thursday	52%	62%	66%	62%	45%	69%	69%	66%	45%	48%	48%	45%	45%	34%
Friday	45%	45%	48%	45%	41%	45%	45%	41%	38%	38%	38%	31%	28%	24%
Saturday	28%	28%	31%	31%	31%	28%	28%	28%	28%	28%	24%	24%	24%	24%

Arcadia Commons Campus Classroom Rooms in Use

by Day and Time



Ad Astra

Groves Campus Classroom: Percent of Rooms in Use

by Day and Time

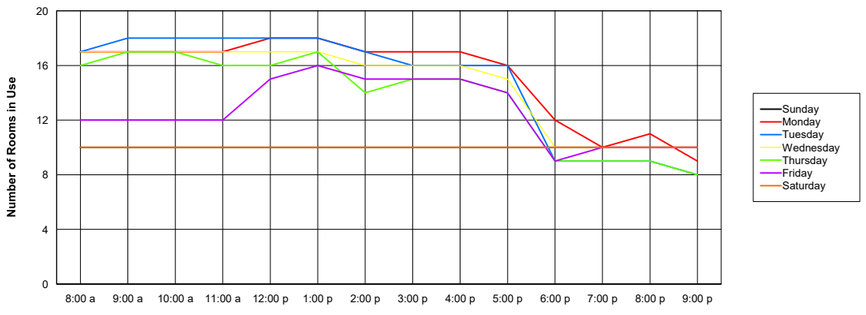
5/3/2024
9:02AM

Number of Rooms: 19 For all sections and events occurring 9/6/2023 - 12/16/2023

	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
Sunday	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%
Monday	89%	89%	89%	89%	95%	95%	89%	89%	89%	84%	63%	53%	58%	47%
Tuesday	89%	95%	95%	95%	95%	95%	89%	84%	84%	84%	47%	47%	47%	42%
Wednesday	89%	89%	89%	89%	89%	89%	84%	84%	84%	79%	53%	53%	53%	53%
Thursday	84%	89%	89%	84%	84%	89%	74%	79%	79%	74%	47%	47%	47%	42%
Friday	63%	63%	63%	63%	79%	84%	79%	79%	79%	74%	47%	53%	53%	53%
Saturday	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%

Groves Campus Classroom Rooms in Use

by Day and Time



Ad Astra

Healthy Living Campus Classroom: Percent of Rooms in Use

by Day and Time

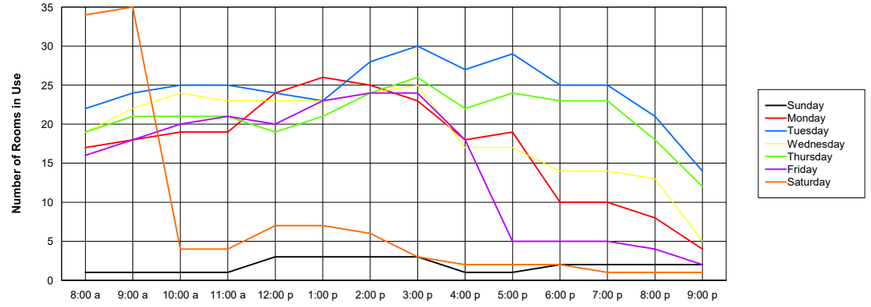
5/3/2024
9:06AM

Number of Rooms: 38 For all sections and events occurring 9/6/2023 - 12/16/2023

	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
Sunday	3%	3%	3%	3%	8%	8%	8%	8%	3%	3%	5%	5%	5%	5%
Monday	45%	47%	50%	50%	63%	68%	66%	61%	47%	50%	26%	26%	21%	11%
Tuesday	58%	63%	66%	66%	63%	61%	74%	79%	71%	76%	66%	66%	55%	37%
Wednesday	50%	58%	63%	61%	61%	61%	63%	66%	45%	45%	37%	37%	34%	13%
Thursday	50%	55%	55%	55%	50%	55%	63%	68%	58%	63%	61%	61%	47%	32%
Friday	42%	47%	53%	55%	53%	61%	63%	63%	47%	13%	13%	13%	11%	5%
Saturday	89%	92%	11%	11%	18%	18%	16%	8%	5%	5%	5%	3%	3%	3%

Healthy Living Campus Classroom Rooms in Use

by Day and Time



Ad Astra

Texas Township Campus Classroom: Percent of Rooms in Use

by Day and Time

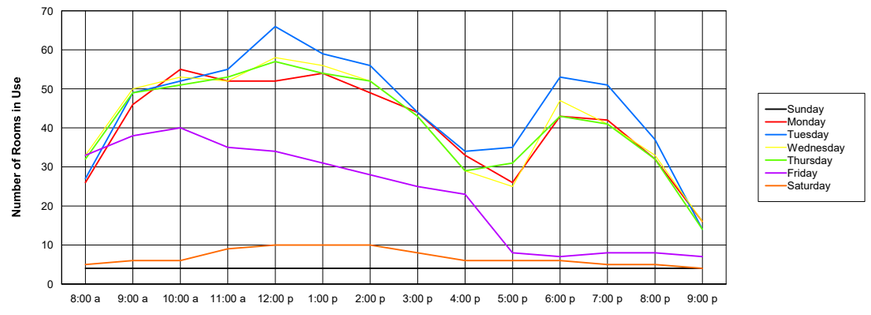
5/3/2024
9:12AM

Number of Rooms: 90 For all sections and events occurring 9/6/2023 - 12/16/2023

	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM
Sunday	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Monday	29%	51%	61%	58%	58%	60%	54%	49%	37%	29%	48%	47%	36%	18%
Tuesday	30%	54%	58%	61%	73%	66%	62%	49%	38%	39%	59%	57%	41%	16%
Wednesday	37%	56%	59%	58%	64%	62%	58%	48%	32%	28%	52%	46%	37%	18%
Thursday	36%	54%	57%	59%	63%	60%	58%	48%	32%	34%	48%	46%	36%	16%
Friday	37%	42%	44%	39%	38%	34%	31%	28%	26%	9%	8%	9%	9%	8%
Saturday	6%	7%	7%	10%	11%	11%	11%	9%	7%	7%	7%	6%	6%	4%

Texas Township Campus Classroom Rooms in Use

by Day and Time



4.3 MANDATED FACILITY STANDARDS

KKVCC monitors compliance with mandated facility and program standards set by the certifying or accrediting bodies for programs. Many of these standards are for the applied sciences programs. For the automotive program, American Society of Engineers (ASE) certification requirements are currently being met for facility, tools and equipment. In the business programs, ACBSP certification deals with faculty member education and background. Although these are non-facility issues, the requirements are being met.

For the carpentry and plumbing programs, the Associated Builders and Contractors (ABC) requirements are based on different types of equipment and materials the students must learn to use. These requirements are being met, and the equipment and materials are properly housed in the existing facilities.

The drafting program complies with American Design Drafting Association (ADDA) for all requirements regarding facility and equipment training.

The welding program complies with the American Welding Society (AWS) requirements for facility and equipment standards and material instruction.

The machine tool program meets all the National Institute of Machine Tool (NIMT) requirements for equipment training.

The automotive technology program meets the requirements for National Automotive Technician Education Foundation (NATEF) Master Automobile Service Technology Accreditation standards

Healthcare programs are accredited through various agencies. Each requirement is slightly different. The majority involve outcome-based criteria, while some have specific criteria for equipment and laboratory instruction. KVCC's healthcare accreditation agencies included the following:

- **Dental Hygiene**–Commission on Dental Accreditation (CoDA) and the American Dental Association (ADA)
- **Emergency Medical Technology**–Michigan Department of Public Health (MDPH), the Committee on Accreditation for Educational Programs for the EMS Professions (CoAEMSP), and the Committee on Accreditation for Allied Health Educational Programs (CAAHEP)
- **Medical Assisting**–Medical Assisting Education Review Board and the Committee on Accreditation for Allied Health Educational Programs(CAAHEP)
- **Nursing**–State of Michigan Board of Nursing
- **Respiratory Therapy**–Committee on Accreditation for Respiratory Care(CoARC) and the Committee on Accreditation for Allied Health Educational Programs (CAAHEP).

In addition, the college's insurer completes a risk-management report for all facilities on a biyearly basis In reviewing these standards, the insurer raised no issues regarding structural and/or spatial design of facilities..

4.4 KVCC ENERGY PLAN

The College has an enterprise-wide energy plan and continues to seek new methods of reducing energy consumption. All facilities have utilized internal staff, external contractors and engineers in addition to utility company personnel to perform energy audits. KVCC has a contract with BP Energy Retail Company, LLC for a human-based energy conservation program. The college utilizes data from both Consumers Energy and Energy Cap to track energy usage and savings.

4.5 LAND OWNED BY KVCC

The four campuses of KVCC include Texas Township, The Groves, Arcadia Commons and the Bronson Healthy Living Campus.

Each campus has varying amounts of available land area for future development. The Texas Township Campus has the most potential for growth, with many acres of developable property. While the Groves and Arcadia Commons Campuses are much more limited, they do have smaller areas which may serve future expansions.

TEXAS TOWNSHIP CAMPUS

The developable area of the Texas Township Campus is limited by West O Avenue to the north, South 8th Street to the west, and the steep topography to the southeast of the main campus building. Three areas that could accommodate future expansion of campus facilities have been identified for possible development.

- Children's Campus and Redwood Storage Area
- South of Advanced Technology Center
- Northwest Corner

Children's Campus Lane and Redwood Storage Area

An area measuring approximately 2.0 acres exists east of KVCC Way in the vicinity of Children's Campus. This area could be developed into a separate facility for additional program space. This area currently includes buildings for the Child Development Center and the Redwood Storage Building. Both of these buildings, part of the original "temporary" campus, would need to be demolished and their current functions potentially relocated elsewhere on the campus. Despite these complications, the proximity to existing classrooms, the computer lab, and existing parking areas make this an interesting area with great potential for development.

If this area were to be developed, maintaining access to the existing parking lot east of the computer lab off Faculty Lane would require either a separate stand- alone facility or a new access drive to connect to KVCC Way.

South of Advanced Technology Center

An area measuring approximately 8.5 acres exists south of the Advanced Technology Center and parking area. This area is above a steep slope that leads to Portage Creek. The existing topography would provide a prime building site similar to that of the main building: situated at the crest of the slope overlooking the natural, forested area downhill to the east.

Most of this area is currently covered with an attractive deciduous forest which would need to be cleared to accommodate new construction. This area is removed from any existing parking lots on the Texas Township Campus site. This remote location may make extending infrastructure to this area more costly.

Northwest Corner

An area of vacant property measuring approximately 26 acres exists in the northwest corner along O Avenue and 8th Street. This area is relatively flat and could be easily developed. It is currently covered by a second or third-growth deciduous forest containing few large trees. It is by far the largest and most central-remaining developable area on campus.

Located a considerable distance from the main campus buildings, a free-standing building for new or expanded programming would be required. Access could be achieved via the existing entrance off O Avenue depending on the layout or identity of the new facility. A new access point could be created. Other infrastructure needs could be accommodated in this location, but extension of other utility lines to reach the area would be necessary.

Non-Development Area

One area not considered for development at this time is the area north of the main parking lot. This area works well as a "front yard" for the campus and is utilized in the winter as an area for snow removal.

Legal Description

6767 West O Avenue,Kalamazoo, MI 49009: Section 11-3-12 Northwest quarter Exc North 594 feet of East 396 feet thereof also Exc North 67 feet thereof also beginning at intersection North line side section with center line of a branch Portage Creek (side point also being 21.75 CH West of Northeast corner side section) thence southerly along center line side branch Portage to its junction with a larger creek known as Portage Creek thence westerly along center line side creek to North & South quarter line side section thence North along side quarter line to North line side section thence East thereon to beginning also Exc North 594 feet thereof also Exc beginning at C quarter post section 11 thence West along East & West quarter line side section 742.5 feet thence North parallel to North & South quarter line side section 346.76 feet thence South 89 degrees 59 minutes 30 seconds West 201 feet thence North 0 degrees 01 minutes West 315.36 feet thence North 59 degrees 39 minutes East 1382.09 feet thence North 17 degrees 37 minutes 18 seconds C East 707.32 feet to point 594 feet South of North line side section thence East parallel to North line side section to West Branch Portage Creek thence southerly & westerly along side creek to North & South ¼ line side section thence South thereon to beginning Exc commencing at West quarter post thence North along west section line 697.16 feet thence South 89 degrees 50 minutes 27 seconds east 1432.20 feet to beginning these continuing South 89 degrees 50 minutes 29 seconds east 225.00 feet thence north 00 degrees 09 minute 31 seconds East 420 feet thence South 89 degrees 50 minutes 29 seconds East 735 feet thence North 00 degrees 09 minutes 31 seconds East 180 feet South 89 degrees 50 minutes 29 seconds east 270 feet thence North 00 degrees 09 minutes 31 seconds East 425 feet thence North 89 degrees 45 minutes 58 seconds West 1195 feet thence South 00 degrees 09 minutes 31 seconds West 745 feet thence South 89 degrees 50 minutes 29 seconds East 325 feet South 00 degrees 09 minutes 31 seconds west 281.57 feet to beginning subject to easement (6/96 1996 split part off to Kalamazoo County Road Commission Right-of-way). And a second parcel with an abbreviated description of: Section 11-3-12 North 367 feet Southwest from quarter Exc East 45 R thereof.

ARCADIA COMMONS CAMPUS

The only space available for development at this urban site is the area east of Anna Whitten Hall in the courtyard, which is consistent with the initial concept for the Arcadia Commons Campus. The area contains approximately 22,500 square feet of buildable space.

It is recommended that this space house programs that serve the downtown business community and the urban core population. The space could also potentially accommodate expansion of exhibit space and facilities for the adjacent Kalamazoo Valley Museum. Expansion into this space could be easily accomplished, since the necessary support infrastructure was installed during the first phase of development.

Legal Description

Parcel 1: Lot 243, Plat of Town of Kalamazoo, lying in Section 15, Town 2 South, Range 11 West, City of Kalamazoo, County of Kalamazoo, Michigan (according to the plat thereof) and recorded in Liber 3 of Plats, Page 8, Kalamazoo County Records.

Also, that part of Lot 92 of said Plat, (according to the Plat thereof as recorded in Liber 3 of Plats, Page 8, Kalamazoo County Records) described as: Beginning at the Southwest corner of Lot 92; thence North 00 degrees 06 minutes 41 seconds East along the West line of said Lot, 132.05 feet to the line common to Lots 92 & 243 of said Plat; thence North 89 degrees 53 minutes 55 seconds East 00 degrees, 09 minutes, 34 seconds East along said East line, 31.83 feet to the Northerly line of a Public Alley as described in Liber 788, Page 458; thence South 89 degrees 42 minutes 39 seconds West along said Northerly line 43.47 feet to a point 23.00 feet East of the East line of Burdick Street; thence South 00 degrees 06 minutes 41 seconds West parallel with and 23.00 feet East of the East line of said Lot 92, 19.29 feet to the Building Face; thence South 89 degrees 27 minutes 23 West along the Northerly building line, .97 feet to a point 22.03 feet East of the East line of Lot 92; thence South 00 degrees 01 minutes 55 seconds East along the Building Seam, 80.75 feet to the South line of Lot 92; thence South 89 degrees 49 minutes 21 seconds West thereon, 22.23 feet to the place of beginning.

Parcel 2: Commencing at the Northwest corner of Lot 243 of the Town of Kalamazoo as recorded in Liber 3 of Plats on Page 8, Kalamazoo County Records and lying in Section 15. T. 2S., R. 11 W., City of Kalamazoo, Kalamazoo County, Michigan; thence North 89 degrees 58 minutes 29 seconds East along the North line of Lot 243, 65.69 feet to the Northwest corner of Lot 244 of said plat and the place of beginning of the land hereinafter described; thence North 89 degrees 58 minutes 29 seconds East along the North line of Lot 244, 40.00 feet; thence South 00 degrees 09 minutes 34 seconds East parallel with the West line of lot 244, 163.61 feet to the Northerly line of a Public Alley as described in Liber 788 of Deeds on Page 458, Kalamazoo County Records; thence South 89 degrees 42 minutes 39 seconds West along said Northerly line 40.00 feet to the West line of Lot 94 of said plat; thence North 00 degrees 09 minutes 34 seconds East along the West line of Lots 94 & 244 of said plat, 167.79 feet to the place of beginning.

Anna Whitten Hall (a/k/a/ Parcel #1), Kalamazoo Valley Museum (a/k/a Parcel #3), Vacant Lot (a/k/a Parcel #4), Parcel #2 (located in front of KVM) 202 North Rose Street, Kalamazoo MI 49007 (Parcel #1) A parcel of land situated in the Southwest quarter of Section 15, Town 2 South, Range 11 West, being more particularly described as follows: Beginning at the Southwest corner of Block 5 of Plat of "Town (now City) of Kalamazoo" as recorded in Liber 6 of Plats on Page 8, Kalamazoo County Records; thence North 0 degrees 06 minutes 42 seconds East 139.44 feet along the West line of said Block; thence North 89 degrees 55 minutes 58 seconds East 113.52 feet; thence South 85 degrees 18 minutes 30 seconds East 52.81 feet; thence South 0 degrees 06 minutes 42 seconds West 135.27 feet parallel with said West line to the South line of said Block; thence North 89 degrees 59 minutes 41 seconds West 166.16 feet along said South line to the Place of Beginning.

232 North Rose Street, Kalamazoo, MI 49007 (Parcel #2) A parcel of land situated in the Southwest quarter of Section 15, Town 2 South, Range 11 West, being more particularly described as follows: Commencing at the Southwest corner of Block 5 Plat of "Town (now City) of Kalamazoo" as recorded in Liber 6 of Plats on Page 8, Kalamazoo County Records; thence North 0 degrees 06 minutes 42 seconds East 162.44 feet along the West line of said Block to the Place of Beginning; thence North 89 degrees 55 minutes 58 seconds East 114.41 feet; thence South 85 degrees 18 minutes 30 seconds East 51.92 feet; thence North 0 degrees 06 minutes 42 seconds East 63.83 feet parallel with said West line to a point South 0 degrees 06 minutes 42 seconds West 63.00 feet from the North line of said Block 5; thence South 89 degrees 55 minutes 02 seconds West 166.16 feet parallel with said North line to said West line; thence South 0 degrees 06 minutes 42 seconds West 59.48 feet along said West line to the Place of Beginning.

201 North Kalamazoo Mall, Kalamazoo, MI 49007 (Parcel #4) A parcel of land situated in the Southwest quarter of Section 15, Town 2 South, Range 11 West, being more particularly described as follows: Beginning at the Southwest corner of Block 5 of Plat of "Town (now City) of Kalamazoo" as recorded in Liber 6 of Plats on Page 8, Kalamazoo County Records; thence North 89 degrees 59 minutes 41 seconds West 166.17 feet along the South line of said Block to a point 166.16 feet from the Southwest corner of said Block; thence North 0 degrees 06 minutes 42 seconds East 135.27 feet parallel with the West line of said Block; thence South 85 degrees 18 minutes 30 seconds East 44.10 feet; thence South 89 degrees 58 minutes 50 seconds East 122.07 feet to the East line of said Block at a point 131.64 feet from said Southwest corner; thence South 0 degrees 03 minutes 07 seconds West 131.64 feet along said East line to the Place of Beginning.

251 North Kalamazoo Mall, Kalamazoo, MI 49007 (Parcel #3) A parcel of land situated in the Southwest quarter of Section 15, Town 2 South, Range 11 West, being more particularly described as follows: Commencing at the Northwest corner of Block 5 of Plat of "Town (now City) of Kalamazoo" as recorded in Liber 6 of Plats on Page 8, Kalamazoo County Records; thence South 0 degrees 06 minutes 42 seconds West 63.00 feet along the West line of said Block; thence North 89 degrees 55 minutes 02 seconds East 180.00 feet parallel with the North line of said Block to the Place of Beginning; thence North 0 degrees 06 minutes 42 seconds East 63.00 feet parallel with said West line to said North line; thence North 89 degrees 55 minutes 02 seconds East 152.03 feet along said North line to the East line of said Block; thence South 0 degrees 03 minutes 07 seconds West 130.79 feet along said East line to a point 154.64 feet from the Southeast corner of said Block; thence North 89 degrees 58 minutes 50 seconds West 121.18 feet; thence North 85 degrees 18 minutes 30 seconds West 31.08 feet; thence North 0 degrees 06 minutes 42 seconds East 64.99 feet parallel with said West line to the Place of Beginning.

THE GROVES CAMPUS

Expansion area at The Groves Campus is limited to an area of approximately 0.75 acres south of the existing building. This area is relatively wooded, but the existing topography could easily accommodate a building or parking addition. Service and infrastructure requirements for this area pose no issues.

Legal Description

7107 Elm Valley Drive, Kalamazoo, MI 49009: Kalamazoo Valley Community College's Groves Center Campus is situated in the KVCC Education and Office Park. It is a condominium planned unit development in Texas Township. The following is the parcel number and short description.

Parcel No. 09-02-305-004 KVCC Education and Office Park Unit #4

Parcel No. 09-02-305-005 KVCC Education and Office Park Unit #5

Parcel No. 09-02-305-006 KVCC Education and Office Park Unit #6

THE BRONSON HEALTHY LIVING CAMPUS

Legal Description

Located in Section 22, T. 2 S., R. 11 W.

City of Kalamazoo, Kalamazoo County, Michigan

18 E. Walnut Street:

A parcel of land located in Section 22, T. 2 S., R. l1 W. , City of Kalamazoo, Kalamazoo County, Michigan, being more particularly described as follows: Beginning at the Northeast corner of Lot 7, Jane A. Dewing's Addition to the City of Kalamazoo, as recorded in Liber 5 of Plats, Page 8, Kalamazoo County Records, said point being on the South right-of-way line of East Walnut Street; thence South 88°-52'-08" East along said South right-of-way line, 82.52 feet to the Westerly bank of the Portage Creek; thence South 38°-59'-11" West along the Westerly bank of said Creek, 134.48 feet to a point which is South 01°-07'-52" West, 106.18 feet from the Northeast corner of said Lot 7, thence South 01°-07'-52" West, 36 feet, more or less, to the center line of said Creek; thence Southwesterly along the center line of said Creek, 73 feet, more or less, to a line which is the extension of the Southerly line of Lots 8 thru 15 of said Plat; thence North 76°-34'-15" West along said extension, 21 feet, more or less, to a point on the Westerly bank of said Creek; thence continuing North 76°-34'-15" West along the South line of Lots 8 thru 13 of said Plat, 250.00 feet to the Northeast corner of Lot 17, 2nd Kook's Addition to the City of Kalamazoo, as recorded in Liber 7 of Plats, Page 28, Kalamazoo County Records; thence South 04°-20'-49" West along the East line of said Lot 17, 49.97 feet; thence North 80°-20'-27" West along the South line of said Lot 17,82.04 feet to the East right-of-way line of Jasper Street; thence North 03°-57'-42" East along said East right-of-line line and the West line of said Lot 17, 55.49 feet to the Northwest corner of said Lot 17; thence South 7 O 34'- 15" East along said East right-of-way line and the North line of said Lot 17, 2.00 feet to the West line of part of Lot 15, said Jane A. Dewing's Addition to the City of Kalamazoo; thence North 03°-02'-43" East along said East right-of-way line and that part of said Lot 15, I 23.33 feet to the South right-of-way line of East Walnut Street and the North line of said Lot 15; thence South 88°-52'-08" East along said South right-of-way line, 387.48 feet to the Northeast comer of Lot 7 of said Jane A. Dewing's Addition to the City of Kalamazoo and the place of beginning. Containing 1.65 Acres, more or less. Intending to include all of Lots 7 thru 14 and part of Lot 15, Jane A. Dewing's Addition to the City of Kalamazoo.

Legal Description

Located in Section 22, T. 2 S., R. 11 W.

City o1 Kalamazoo, Kalamazoo County, Michigan

Area located between Crosstown Parkway, Portage Creek, Lake Street and relocated John Street:

A parcel of land located in Section 22, T. 2 S., R. 11 W., City of‘ Kalamazoo, Kalamazoo County, Michigan, being more particularly described as follows: Beginning at a point at the intersection of the West line of relocated John Street, as recorded in Liber 719, Page 406, and the South right-of-way line of Crosstown Parkway; thence North 75°-12′-31 “ East (recorded as North 75°-08′-15 “ East) along said South right-or-way line, 112.84 feet; thence Northeasterly 181.40 feet (recorded as 182.40 feet) along a curve to the left with a radius of 369.63 feet and a chord bearing North 61°-10′-14” East, 179.59 feet (recorded as North 61°- 06′ East); thence North 88°- 12′- 14” East, (recorded as North 88°-08′-00” Last), 108.30 feet; thence North 68°-51′-15 East (recorded as North 68°-47′-00” East). 200.72 feet; thence South 19°-07′-45” East (recorded as South 19°- 12′-00” East), 111.75 feet: thence South 23 °- 12′-30” East (recorded as South 23°-1 6′-45 “ East), 285.32 feet; thence North 90°-00′-00” East, 9.67 feet to a point at the top of the Westerly bank of the Portage Creek; thence South 20°-54′- l3” East along the top of said Westerly bank, 228.22 feet to the Northerly right-of-way line of Lake Street; thence South 48°-3 6′-50” West thereon, 190.45 feet to an angle point; thence continuing South 87°-24′-17” West thereon, 237. 79 feet to the Southwest corner of Lot 252, P. Den Bleykers Addition to Den Bleykers Addition to the City of Kalamazoo. as recorded in Liber 2 of Plats, Page 18, Kalamazoo County Records; thence North 00°-02′-5 7” East (recorded as North) along the West line of said Lot 252, 132.00 feet to the Northwest corner o1 said Lot 252, said point also being on the South line of Lot 270 of said Plat; thence South 8 O 27′-03” West along the South line of said Lot 270; 114.74 feet (recorded as South 86°-45′-00” West, 114.82 feet); thence North 00°-38′-50” East, 28. 11 feet (recorded as North,28.21 feet); thence South 82°-35′-25” West, 23 8. 0 8 feet to the East line of relocated John Street, as naonumented, (recorded as South 81°-50′-48 “ West, 234.93 feet); thence South 04°- 40′-59” East thereon (recorded as South 04°-00′-34” East), 100.12 feet: thence continuing South 08°-14′-14 “ East thereon, 40.20 feet to the North right-of-way line of Lake Street (recorded as South 07°-36′-24” East, 39.87 feet), said point being South 87°-24′-00” West, 336.71 feet from the Southwest corner of said Lot 252 (recorded as South 86°-45′-00” West, 335.45 feet); thence South 87°-24′-07” West along the North line of Lake Street, 25.01 feet to the West line of relocated John Street; thence North 01°-06′-04” West thereon, 40.01 feet; thence North 04°-40′-5 9” West thereon, 225.16 feet to an angle point; thence North 08°-02′- 56” West thereon, 244.39 feet; thence North 11°-37′-36” West thereon, 40.06 feet to the place of beginning. Containing 8.62 Acres. Intending to include all that part of Lots 252, 253, 254 and 270 thru 275, P. Den Bleykei‘s Addition to Den Il leykers Addition to the City of Kalamazoo, as recorded in Liber 2 of Plats, Page 18, Kalamazoo County Records. Together with that portion of John Street Court, all lying East of relocated John Street, as recorded in Liber 719, Page 406.

Legal Description

Located in Section 22. T. 2 S., R. 11 W.

City of Kalamazoo, Kalamazoo County, Michigan Area Located Between Walnut, Dutton & Jasper Streets:

A parcel of land located in Section 22, T. 2 S., R. 11 W. , City of Kalamazoo, Kalamazoo County, Michigan, being more particularly described as follows: Beginning at the Southeast comer of the intersection of Jasper and East Walnut Streets, said point being on the North line of Lot l5, Jane A. Dewing’s Addition to the City of Kalamazoo, as recorded in Liber 5 of Plats, Page 8, Kalamazoo County Records; thence South 88°-52′-08 “ East along the North line of Lots 7 thru 15 of said plat, 537.31 feet to the center line of Kromdyke Court as monumented; thence South 30°-31′-09” East along said center line of Kromdyke Court, 216. 64 feet to the Northerly line of Lot 37, Garrett & John R. Van Bochove Addition to the City of Kalamazoo, as recorded in Liber 6 of Plats, Page 3, Kalamazoo County Records; thence South 59°-39′-22” West along the Northerly line of said Lot 37, 30.25 feet to the Northeast corner of Lot 38, of said Garrett & John R. Van Bochove Addition to the City of Kalamazoo; thence South 30°-40′-44” East along the East line of said Lot 38, 78.86 feet to the Northerly right-of-way line of Dutton Street; thence South 59°-20′-08” West along said Northerly right-of-way line, 322. 99 feet to the Westerly line of the Easterly 22.25 feet of Lot 44, of said Garrett & John R. Van Bochove Addition to the City of Kalamazoo ; thence North 30°-40′-44” West along said Westerly line, 80.66 feet to the Northerly line of said Lot 44; thence South 59°-39′-22” West along the Northerly line of said Garrett & John R. Can Bochove Addition to the City of Kalamazoo, 106.07 feet to the Easterly right-of-way line of Dutton Street; thence North 44°-15′-05” West along said Easterly right-of-way line, 73 feet, more or less, to the center line of Portage Creek; thence Northeasterly and downstream along the center line of the Portage Creek, 22 feet, more or less, to the extension of the South line of Lot 6, 2nd Kook’s Addition to the City of Kalamazoo, as recorded in Liber 7 of Plats, Page 28, Kalamazoo County Records; thence North 86°-25′- l8 “ West along the North line of Dutton Street (said line also being the South liie of Lots 6 & l3 of said 2nd Kook’s Addition to the City of Kalamazoo). 154.38 feet to the Southwest comer of said Lot 13; thence North 03°-56′-17” East along the West line of said Lot 13, 62.44 feet to the Northwest corner of said Lot 13; thence South 84°-37′-45” East along the North line of said Lot 13, 98.8 l feet to the center line of Kook Court (now vacated); thence North 03°-4l ‘-04” East along said center line of Kook Court, 42.42 feet to the Easterly extension of the South line of Lots 11 & 16, of said Garrett & John R. Van Bochove Addition to the City of Kalamazoo; thence North 81°- 50′-04” West along said South line of Lots 1 l & 16, 18 l . 09 feet to the East right-of-way line of Jasper Street and the Southwest comer of said Lot 16; thence North 03°—5 7′-42 “ East along said East right-of-way line of Jasper Street and the West line of Lots 16 & 17 of said Garrett & John R. Van Bochove Addition to the City of Kalamazoo, 105.43 feet to the Northwest corner of said Lot 17; thence South 76°-34′-15 “ Last along said East right-of-way line of Jasper Street and the North line o1 said Lot 17, 2.00 feet to the West line of part o1 Lot 15 of said Jane A. Dewing’s Addition to the City of Kalamazoo; thence North 03°-02′-43” East along said East right-of-way line of Jasper Street and that part of said Lot 15, 123.33 feet to the South right-of-way line of East Walnut Street and the North line of that part of said Lot 15 and the place of beginning.

Together with a parcel of land lying Northerly of Lot 18, Garrett & John R. Van Bochove Addition to the City of Kalamazoo, as recorded in Liber 6 of Plats, Page 3, Kalamazoo County Records, Southerly of the center line of the Portage Creek, and Westerly of the Westerly right-of-line of Dutton Street.

Excepting a parcel of land known as 517 Dutton and described as: The Westerly 6 feet and II inches of Lot 41 and the Easterly 36 feet and 2 inches of Lot 42, Garrett & John R. Van Bochove Addition to the City of Kalamazoo, as recorded in Liber 6 of Plats, Page 3, Kalamazoo County Records.

Total area less excepted area is 4.94 Acres.

Legal Description

Located in Section 22, T. 2 S.. R. 11 W.

City of Kalamazoo, Kalamazoo County, Michigan

Area Located Between Dutton Street & Crosstown Parkway:

A parcel of land located in Section 22, T. 2 S., R. 11 W. , City of Kalamazoo, Kalamazoo County, Michigan, being more particularly described as follows: Beginning at a point on the Southerly right-of-way line of Dutton Street at the Northwest corner of the East 14 feet of Lot 24, Garrett & .Iohii R. Van Bochove Addition to the City of Kalamazoo, as recorded in Liber 6 of Plats, Page 3, Kalamazoo County Records; thence North 59°-19'-48" East along said Southerly right-of-way line, 263.52 feet to the Northeast corner of Lot 29 of said Plat; thence South 30°-39'-00" East along the East line of said Lot 29, 132.53 feet to the Southeast comer of said Lot 29; thence South 59°-20'-00" West along the South line of said Lot 29 and the North linc of Lot 1 of said Plat, 18.25 feet to the Northeast corner of the West 28 feet of said Lot 1 ; thence South 30°-41'-06" East along the East line of the West 28 feet of said Lot 1, 131.67 feet to the Northerly right-of-way line of Crosstown Parkway; thence South 59°- 18'-54" West along said Northerly right-of-way line, 220.25 feet to the Southwest corner of the East 42 feet of Lot 5 of said Plat; thence North 30°-41'-06" West along the West line of the East 42 feet of said Lot 5, 131.74 feet to the Northwest corner of the East 42 feet of said Lot 5 and the South line of Lot 25 of said Plat; thence South 59°-20'-00" West along the South line of Lots 24 & 25 of said Plat, 25.02 feet to the Southwest corner of the East 14 feet of said Lot 24; thence North 30°-39'-00" West along the West line of the East 14 feet of said Lot 24, 132.51 feet to the place of beginning. Containing 1.47 Acres.

Temporary Grading Easement on Tax Parcel 3906-22-402-00 1 :

Legal Description

A parcel of land situated in the East I /2 of Section 22, T. 2 S., R. I I W ., City of Kalamazoo, Kalamazoo County. Michigan being more particularly described as follows:

All that land is bounded on the North by East Vine Street, on the West by Jasper Street and on the East and South by Crosstown Parkway.

Together with a 200.00 foot strip of land lying East of the centerline of the Portage Creek and bound on the North by Crosstown Parkway and on the South by Lake Street.

4.6 CURRENT FINANCIAL OBLIGATIONS FOR FACILITIES

Anna Whitten Hall is obligated to the State Building Authority(SBA). As part of this agreement, the SBA holds the title to this building. The State of Michigan makes lease payments to the SBA and the college pays operating and maintenance costs. This lease came into service in 2001 and expires in 2036, with an approximate annual payment of $993,000. Upon completion of this term, the SBA has agreed to sell its interest to the college for $1.00.

Texas Township Campus is obligated to the State Building Authority (SBA). As part of this agreement, the SBA holds the title to this building. The State of Michigan makes lease payments to the SBA and the college pays operating and maintenance costs. This lease came into service in 2011 and expires in 2046, with an approximate annual payment of $474,000. Upon completion of this term, the SBA has agreed to sell its interest to the college for $1.00.

The Marilyn J. Schlack Culinary and Allied Health Building on the Bronson Healthy Living Campus is obligated to the State Building Authority (SBA). As part of this agreement, the SBA holds the title to this building. The State of Michigan makes lease payments to the SBA and the college pays operating and maintenance costs. This lease came into service in 2016 and expires in 2051, with an approximate annual payment of $475,000. Upon completion of this term, the SBA has agreed to sell its interest to the college for $1.00.

*To be provided from Brad L. -KVCC

4.7 REPLACEMENT VALUE OF EXISTING FACILITIES

KVCC has provided financial documentation on the current status of all of the college's holdings. The current appraised value as of 30 November 2020 is $314,240,300.00. This breaks down into the following table:

Summary by Location	Replacement Value New	Sound or Depreciation Value
Texas Township Campus		
Main Building	172,596,400	132,299,200
Butler Bldg.	2,056,400	966,400
Redwood Center	2,447,400	1,272,700
Maintenance	746,900	351,000
Redwood Storage	821,400	386,100
Arcadia Commons Campus		
Anna Whitten Hall	17,884,500	12,876,800
Museum	47,638,300	39,063,400
Center for New Media	13,121,400	11,153,200
Groves Campus	22,172,000	18,181,000
Bronson Healthy Living Campus		
MJSCAH	26,276,500	24,962,700
Food Innovation Center	6,103,400	5,798,200
Food Innovation Greenhouse	588,200	564,700
ASSET ACCOUNT GRAND TOTAL	**$314,240,300**	**$248,947,500**

*To be provided from Brad L. -KVCC

Section 5 : Implementation Plan

5.0 IMPLEMENTATION PLAN

Through the analysis included in previous sections, the following initiatives are proposed to continue to address both the changing environment of educational offerings and the continued stewardship by KVCC of the assets it already possesses. Many small to medium sized initiatives contained within this report have been combined into single categories, as it is foreseeable that there are benefits to shuffling programs and areas within existing spaces, as well as building new. This strategy seeks to keep the end costs down, and keep updating and revitalizing areas within the existing structures. Additionally, many of the initiatives will focus on projects with a sustainable return on investment, as the College works actively to include energy saving strategies in all projects.

5.1 PRIORITIZED INITIATIVES

Outlined below are steps recommended for KVCC during the years 2025-2029 to best meet the needs and initiatives identified throughout this report. These items primarily center on re-densification of the existing campus areas and capabilities to better serve the students and boost instructional opportunities at the college. The following list prioritizes these initiatives in order of their greatest importance to the college, although more than one of these could certainly be undertaken during any given period of time in the coming years.

Section 5.1A Texas Township Campus Facility Improvements

1. Testing and Learning Center Renovations
2. Student Services One-Stop Renovation/Bookstore Reimagination
3. Science Lab Renovations
4. Library + Media Center Renovation
5. Campus Storage Facility

Section 5.1B Anna Whitten Hall

1. Connector between Anna Whitten Hall and Kalamazoo Valley Museum
2. KVAAP program relocation, Faculty Office expansion, and Student Lounge Improvements

Section 5.1C Bronson Healthy Living Campus

1. Bronson Healthy Living Campus Initiatives

Section 5.1D Kalamazoo Valley Museum

1. Various Improvements

Section 5.1E The Groves Center Improvements

1. Multipurpose Space Addition

Section 5.1F Texas Township Energy and Sustainability Upgrades

KVCC, as a leader in the community, has adopted a policy of sustainable development for all of the above initiatives, utilizing the U.S. Green Building Council's LEED Silver certification level as a target standard.

This would apply to building and renovations, as well as the support services or alternative energy sources that may be available to power or offset the carbon footprint from these developments.

5.1A TEXAS TOWNSHIP CAMPUS FACILITY IMPROVEMENTS

It is envisioned that KVCC would undertake a feasibility study of the following prioritized improvements, to test out which of these initiatives could be undertaken in a comprehensive fashion as a single, larger phased project. The outcome of the feasibility study would ultimately spell out the sequencing and overall cost of this section of work.

1. Learning Center Renovations The continued investment in academic support and repurposing of space within the existing TTC Main Campus will be enhanced by the renovation and extension of the Learning Center Area of the building on the Main level. This area previously included the Testing Center, which was enlarged within the past 5 years to support greater student assessment, testing support, and achievement. The renovation of the Learning Center would continue this focus, by creating improved spaces for student support, group and individual coaching, and tutoring programs. Furniture, modest finish upgrades, lighting and the creation of student group tutoring and individual tutoring will support academic improvements at KVCC.

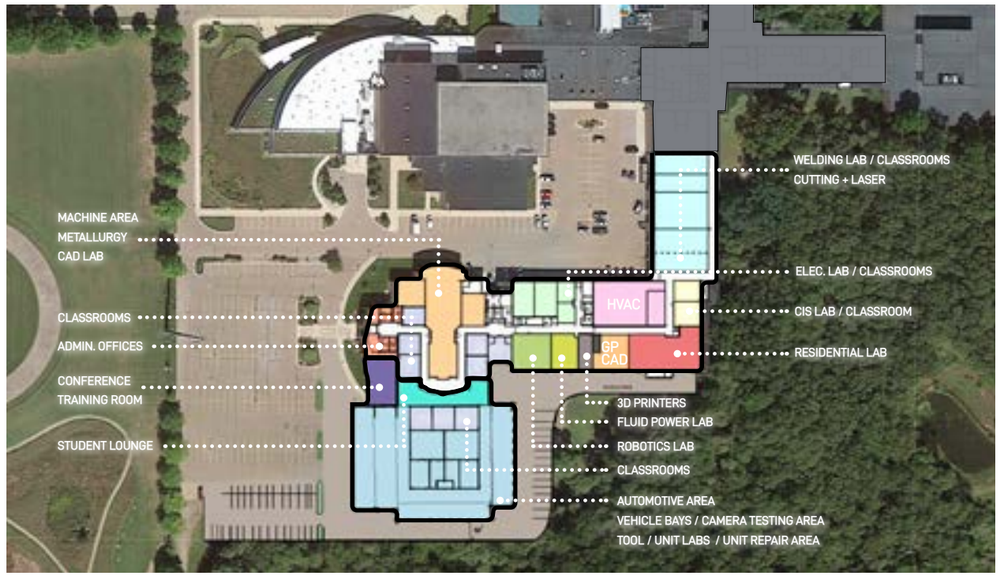
Learning Center Renovation	
Loose Furnishings & Equipment	$250,000
Learning Center Renovation (13,000 sf)	$1,625,000
Subtotal	$1,875,000
Soft Costs @ 30%	$562,500
Total L.C. Renovation	$2,437,500
Grand Total Learning Center Renovations	***$2,437,500***

2. Student Services One-Stop/Bookstore Reimagination

KVCC desires to renovate Room 4250 (currently utilized as a Student Lounge) into a One-Stop function providing student services in a location that provides convenient access for students. The proposed location will provide easy in and out access for visitors that will help in eliminating wayfinding issues with the current location of the Student Success Center. The location also provides a more centralized location for internal access by students. The project will embody the new KVCC approach of bringing services to the student, rather than requiring students to seek out the services.

The internal environment of the One-Stop will be welcoming, open and flexible. The desire is to create a space that feels student owned rather than feeling like an office suite controlled by staff. The space will provide 3-4 advising areas for students to work with academic coaches. These spaces will provide privacy, while also maintaining visibility to the overall space. A new work/copy area will be included. Comfortable and flexible furnishings will create an environment that encourages student and coach interaction while providing for a multitude of arrangements and uses for the space.

Building upon the desire to provide greater accessibility of services for students, a series of four new Information Centers are strategically proposed throughout the Texas Township facility. Potential locations include: at the north main entry (flagpole entry), within the Student Commons, within the Student Success Office and within the Faculty Office Area at the east side of the Texas Township Facility.



One Stop Renovation & Information Center Initiatives

One-Stop Renovation- Room 4250 (3,700 sf)	$1,295,000
Information Center Renovations (4 locations)	$500,000
Subtotal	$1,795,000
Soft Costs at 30%	$538,500
Total of One-Stop/Info Center Initiatives	$2,333,500

The bookstore space at the Texas Township Campus no longer reflects the type of services that are being provided to students on campus. Textbooks are no longer the major driver of bookstore offerings. As this shift in services has occurred, the need for facility updates to support the new goal are required. The reimagined space will provide greater flexibility of uses throughout the entire school year. Multiple floor tiers within the existing space create barrier free accessibility issues that will be addressed as part of the new plan. A focus on facilitating better flow of customers, especially during peak times of the year, will be accomplished in the new plan. The current location of the bookstore is beneficial for easy access by visitors coming through the north entry as well as adjacency to the loading for receipt of deliveries. The redesigned space will also provide pick-up opportunities that do not require customers to enter into the bookstore as a way of further managing traffic flow within the space.

Bookstore Renovation	
Feasibility Study/Bookstore Consultant	$40,000
Bookstore Renovation (3,600 sf)	$1,100,000
Subtotal	$1,140,000
Soft Costs at 30%	$342,000
Total of Bookstore Initiative	$1,482,000
Grand Total One-Stop/Bookstore Initiatives	***$3,815,500***

4. Science Lab Renovations

At the Texas Township Campus, the science labs are heavily used and have seen increases in demand for the core curriculum courses towards the numerous degree offerings. Some of these labs have yet to be upgraded from their original construction in the 1970s and are in need of upgrades to keep current with the requirements of programs. Our recommendation for a series of updates and expansions to these will take some of the under utilized areas for former programs in close proximity to the current science area and retrofit them into new flexible science labs.

In 2023, Room 2110 was renovated into a Science Lab as an initial step This step allows the second renovation to take place in 3170, the current A&P science room. Room 3170 is undersized and by taking Room 3171, the science storage room, and removing the wall between, a renovated and appropriately sized science room can be created. The storage function will move to Room 3180, which is immediately adjacent and available for redeployment in this overall science wing.

Once these two labs are renovated, Room 3130 can be renovated. This is the cell biology and genetics lab and has not been upgraded in nearly 50 years. This room is heavily used, and will require the two initial steps to occur in advance to build overflow capacity.

In the Chemistry and Flex lab area, it is recommended that Room 5230 be changed from an undersized instrumentation room to a lab storage and prep room, due to the small size and inability to handle a full lab section. The instrumentation lab would occur in a renovated Room 4110 as a Flex lab space which could handle a multitude of lab types. Room 4110 would likely receive (2) 6' fume hoods as well as flexible overhead snorkel exhausts and vacuum pumps. There would be provisions for deionized water in this location. Planning for movable lab tables and overhead utility rails for electrical and gas supply throughout all the lab spaces mentioned will provide the ability to cross schedule rooms which are now currently more purpose built.

Renovation of Science Rooms 3170/3171/3180	$1,200,000
Renovation of Science Room 3130	$700,000
Renovation of Room 5230 and 4110	$1,800,000
Subtotal	$3,700,000
Soft Costs at 30%	$1,110,000
Total of Science Lab Renovations	$4,810,000

5. Library + Media Center Renovations

The existing Library occupies one of the most serene locations on the Texas Township campus, with views to nature and a quiet space for research, study and reflection. Over the past decades, the use and functionality of the library has evolved, and the integration of technology in research and study has been profound. The library team has focused on condensing the library's volumes and incorporating more areas for collaboration and technology.

The consolidation of the main library stacks and circulation to the lower level only would allow for improved wayfinding, service to students, and staffing, while freeing up floor area on the first floor to be repurposed. On the lower level, the areas used previously for periodicals could be focused on the increased demand for check out technologies such as laptops, hotspots and other devices. The circulation and device check out areas could be consolidated to this location to allow for a single point of service for students.

On the main floor level, currently there are group study areas and open study/computer stations which are in high demand. The area vacated by the circulation desk on this floor would be able to be infilled with flexible wall and furniture partitions to create more private and small group study areas. During the pandemic, these spaces have been vastly used for small project work, and the incorporation of technology with monitors and videoconferencing would bring these spaces up to par for interconnecting groups on remote projects and preparing them for the workforce with similar configurations to employers. Some of the specific technology could be made available on mobile carts for check out at the circulation desk as well.

Additionally, to reinforce the connection on the lower level as library focused space, the area in 8410 just outside of the library entrance could be reprogrammed with study and lounge focused furniture to again facilitate group meeting between classes and working on group projects.

Main Level Renovation of Circulation Desk to Group Study Area	$1,000,000
Lower Level Consolidation and New Circulation Desk	$650,000
Improved Student Meeting and Informal Learning Area 8410	$250,000
Subtotal	$1,900,000
Soft Costs @ 30%	$570,000
Total of Library /Media Center Renovations	$2,470,000

6. Campus Storage Building

In an effort to address campus storage capacity at the Texas Township Campus, a new storage facility is proposed. The new facility is planned as a combination of conventional construction and pre-engineered metal building structure measuring 10,000 square feet. The proposed height for the new facility is 24' feet to allow for the college to install pallet racking and create a higher density of storage capacity. The proposed location of the storage facility is adjacent to the Redwood Facility at the eastern edge of campus.

Construction Cost (10,000 sf Renovation)	$2,000,000
Site Work	$180,000
Subtotal	$2,180,000
Soft Costs at 30%	$654,000
Total Project Campus Storage Building	$2,834,000

Grand Total 5.1A Texas Township Campus Facility Improvements…….$56,842,600

5.1B ANNA WHITTEN HALL

1. Connector between Anna Whitten Hall and Kalamazoo Valley Museum

Separated physically by Arcadia Creek currently, there has been a long standing operational and physical challenge presented by the lack of a physical connection of these two closely sited buildings, Anna Whitten Hall and the Kalamazoo Valley Museum in the downtown environment. The review of uses and potential for crossover between programs and people would be significantly enhanced by an overhead connector on the second story that bridges the creek. This connection would be beneficial for students and staff of Anna Whitten Hall, visitors to the museum, and for the sharing of operational and class functions across the buildings. This connector would also offer the potential for an additional elevator to serve both buildings, which has proven challenging when the current elevators go offline. If this connector were positioned along the Arcadia Creek pathway with a new creekside entry and vertical circulation, this would be a dual benefit allowing for after-hours activation of the planetarium, theatre and other first-floor spaces without access to the upper floors. This enhancement could serve to open up new means of access and programming to the community as well.

Overhead Physical Connector/Elevator/Stair/Entry	$2,350,000
Soft Costs @ 30%	$705,000
Total Project Connector AWH & KVM	$3,055,000

2. KVAAP program relocation, Faculty Office expansion, and Student Lounge Improvements

Due to the success and growth of the KVAAP program, additional space is needed for staff and students. While the third-floor student lounge is well sized for student engagement, the space remains underutilized due to both inconvenience of location and lack of awareness. This initiative will move the KVAAP program including KVAAP program group study and resource space into the current third-floor student lounge. The former second-floor KVAAP space will receive minor renovations to serve the growing need for additional faculty offices. Underutilized circulation and lounge space in corridors on all floors, and the central lobby on the first floor will receive minor renovations to refresh and provide amenities, while prioritizing new furnishings of various postures to create attractive student study and lounge space that offers greater convenience to the student population, and a modern aesthetic to reinforce the KVCC brand.

KVAAP & Faculty Office Renovation on Third Floor (2,900 sf Renovation)	$500,000
Minor Renovation for Faculty Offices in former KVAAP space (1,600 sf Light Renovation)	$200,000
Refresh of Student Lounge Amenities Across Corridors and First Floor Lobby	$250,000
Subtotal	$950,000
Soft Costs @ 30%	$285,000
Total Project Office & Student Lounge Renovation	$1,235,000

Grand Total 5.1B Anna Whitten Hall $4,290,000

5.1C BRONSON HEALTHY LIVING CAMPUS INITIATIVES

The Bronson Healthy Living Campus at KVCC consists of two buildings which enjoy a connected nature to their programming and students can often take classes between each of these buildings while obtaining degrees, certifications, and training.

The Food Innovation Center has seen growth and change in its programming since opening, and has some new initiatives which would benefit from reconfiguration of areas. The first of these recommendations focuses on establishing an airlock portal for incoming and outgoing bulk food at the loading dock area. By creating a series of closed portals from the exterior, the building will realize improvements in food safety and health. This will come in the way of improved pest and insect control from the exterior environment, as well as improved temperature control as the indoor food processing area does not have a means to currently be buffered from the exterior. This addition to the south would be approximately 16' deep, and 40' long to accommodate the overhead doors and dock area. Each side of the addition would have an overhead door as well as a man door to control the aforementioned factors.

A second area for improvement would be the partitioning off of a classroom space inside of the area currently occupied by the Indoor Growing Lab. Currently the FIC only has a single classroom for up to 30 students, and by creating a second smaller classroom for up to 18 students within the Lab, class offerings in the building can increase within the same footprint. Another support office for additional faculty in this same zone would be beneficial for an instructor and Lab manager. This partitioning of space would be completed with a glass and aluminum system to match the exterior materials.

At the Culinary and Allied Health building, the original design of the structure allowed for the placement of either an outdoor roof garden or greenhouse, to complement the food cultivation and instruction on growing environments in urban rooftop areas. This was not realized in the initial construction, and as program demand has grown, the placement of approximately 1,200 sf of outdoor garden and appropriate safety railing would allow for the activation and planting of this area to allow for outdoor food and plantings, and/or potential apiary for pollinators and associated education and programming.

Food Innovation Airlock/Vestibule/Dock Improvements	$500,000
Internal Classroom and Office in Flex Grow Lab	$350,000
Green/Food Bearing Roof at Culinary Building	$250,000
Subtotal	$1,100,000
Soft Costs @ 30%	$330,000

Grand Total 5.1C Bronson Healthy Living Campus Initiative.....$1,430,000

5.1D KALAMAZOO VALLEY MUSEUM IMPROVEMENTS

1. Various Improvements

The Kalamazoo Valley Museum is a treasured resource for the community, and over time its collections and exhibits have grown and evolved through donations and acquisitions. Similarly, there have been changes in the experiences and interactions which technology has allowed for in documenting and cataloging the history of the greater Kalamazoo community.

The initiatives contemplated for the Five Year Master Plan follow these changes in order to remain active and flexible in the handling, display, and storage of the Museum catalog. An initial area of focus is the management of the storage of materials and archival quality environments for portions of the collection which warrant special storage. The first step for providing more storage onsite at the museum is to implement the already planned for integration of High Density storage on the 4th floor area. Provisions of the structure are in place, and a straightforward installation of a rail and shelving system can nearly double the capacity of the area planned for this use. The step following this expansion for offsite storage would be planned either at the TTC campus for expanding the temperature and humidity controlled environment, or at another location to be determined. The current TTC campus archive quality storage could be expanded in place, although this might not be the ideal location for investment for this function, due to the potential for a longer-term plan on this same area of campus.

The current loading dock area has been impacted by the evolution of the surrounding areas and always been challenged due to the small size and lack of cover for this space. A solution to providing a means for weatherproof cover for semi trailer size loading and unloading is a long standing need for the KVM.

Internal to the KVM, improvements to the current Mary Jane Stryker Theatre are desirable to improve the accessibility for all participants within the space, and a design concept has been prepared to address these deficiencies. The removal of the current vertical lift and implementation of a ramped approach to the tiered levels of the theatre would result in a net loss of a single seat of audience, but significantly improved access for persons and equipment to the stage floor.

Additional Archival Storage Offsite -2nd entry (10,000 SF)	$300,000
Loading Dock Canopy	$90,000
Stryker Theatre Accessibility Improvements	$425,000
Subtotal	$815,000
Soft Costs @ 30%	$244,500

Grand Total 5.1D Kalamazoo Valley Museum Improvements $1,059,500

5.1E THE GROVES IMPROVEMENTS

1. Multipurpose Space Addition

The Groves M-TEC facility has hosted credit courses, accreditations, training and certificate programs for over 20 years in a flexible environment. This building houses KVCC's alternative energy programs which have seen a significant increase in enrollment, and are likely to continue this trend with the focus on infrastructure and alternate power generation. Many of these offerings for wind and solar have unique space requirements indoors and outdoors due to the large equipment involved and the hands-on training and skill development involved. Additionally the law enforcement classes which focus on tactical and hands on training which require space as well as separation are held in this location . First aid training could also occur in a common area to the law enforcement classes.

The recommendation to supplement and redistribute programming at The Groves focuses on creating a large, open multipurpose room for the above uses. This space would ideally allow for up to 30 law enforcement cadets, or 20-24 alternate energy program students to utilize this large area for the hands-on training discussed. To supplement this larger interactive lab-style space, 2 standard size classrooms would be proposed as well as a locker/shower/changing area due to the nature of the classes and a need to clean and change clothing afterwards. The training Lab would have direct exterior access and be a double height space to support large equipment and apparatus being brought into the space from the exterior.

By providing this space as an addition, many of the originally programmed areas for employment training partnerships and certifications could be redirected into rooms which were originally designed and sized for these intended uses. Currently these activities have been displaced or are not able to be offered concurrently with the energy, first aid, and law enforcement classes described.

Addition for Flex Lab, 2 Classrooms Locker/ Shower/Toilet Facilities - 1st entry Anticipated at 10,000 SF of New BuildingAddition - 2nd entry	$4,750,000
Subtotal	$4,750,000
Soft Costs @ 30%	$1,425,000

Grand Total 5.1E The Groves Center Improvements $6,175,000

5.1F TEXAS TOWNSHIP ENERGY AND SUSTAINABILITY UPGRADES

With the push to develop alternative energy sources nationwide, along with the unique positioning of KVCC and West Michigan as a prime location for wind power initiatives, it is foreseeable that programmatic offerings beyond just wind power will evolve for alternative/sustainable energy initiatives. Additionally, the Facilities Services Department at KVCC has expressed a desire to reduce the carbon footprint of the college and lower their energy costs. This combination of factors suggests an ideal opportunity for collaboration on the Texas Township Campus to investigate ways in which solar power, solar hot water and/or ice storage programs for cooling the campus could occur.

It is thought that future college construction of any of the initiatives detailed in this report could potentially benefit from the alternative energy exploration initiative, and that a creative partnership between the college's Facilities Services Department and instructional initiatives could occur.

The college plans to continue ongoing interior and exterior lighting replacement and retrofitting projects. The potential for the use of solar hot water to supply facilities with domestic water is also being studied.

As vehicle technology continues to evolve and a larger number of electric vehicles are in the marketplace, KVCC wishes to support sustainable transportation with the installation of additional charging stations at all campuses. Two new stations are proposed at the Bronson Healthy Living Campus, one station at the Food Innovation Center, and two stations at the northeast parking lot at the Texas Township Campus.

5.2 DEFERRED MAINTENANCE ITEMS & SCHEDULE

To retain KVCC's current high standard of business maintenance and preventative repairs, a number of sub-initiatives have been grouped into this category to ensure that the facilities at the Texas Township Campus stay in proper working order and operate at maximum efficiency. The majority of these items fall under the category of necessary or expected repairs and/or repairs that will provide operational savings over time if undertaken.

5.2a Continuation of Scheduled Roofing Replacement, Repairs and Maintenance

5.2b Building Envelope Upgrades

5.2c Replacement of Select Ceilings and Lighting

5.2d Continuation of Scheduled Paving Replacement, Repairs and Maintenance

5.2e Network Fiber Optic Extension Upgrades

All of these are considered to be items that must be addressed during the 2025–2029 timeline to ensure that the highest quality of facilities are made available to students as the college moves forward. These initiatives also fulfill the objective of energy and operational savings targeted throughout this report.

5.2A ROOFING REPLACEMENT, REPAIRS AND MAINTENANCE

1.	2025 Roofing Replacement Texas Township Campus (25,000 sf)	$585,000
2.	2026 Roofing Replacement Texas Township Campus (35,000 sf)	$819,000
3.	2027 Roofing Replacement Texas Township Campus (27,000 sf)	$631,000
4.	2028 Roofing Replacement Texas Township Campus (40,000 sf)	$936,000
5.	2029 Roofing Replacement Texas Township Campus (30,000 sf)	$702,000
	Grand Total Years 2025-2029	***$3,673,800***

5.2B BUILDING ENVELOPE UPGRADES

A number of areas at the main building at the Texas Township campus currently have non-thermally broken aluminum window systems that contain single pane glass. As a continuation of the energy management program that the college has in place, it is desired to replace all areas that contain the outdated technology. New thermally-broken aluminum frames with one inch insulated glass will be installed. The approximate amount of frame and glass area to be replaced is 7,300 square feet. Replacement will occur in a phased approach over the 5 year period of this report.

1.	2025 Window Replacement Texas Township Campus (1,500 sf)	$201,825
2.	2026 Window Replacement Texas Township Campus (1,500 sf)	$201,825
3.	2027 Window Replacement Texas Township Campus (1,500 sf)	$201,825
4.	2028 Window Replacement Texas Township Campus (1,400 sf)	$188,370
5.	2029 Window Replacement Texas Township Campus (1,400 sf)	$188,370
	Grand Total Years 2025-2029	***$982,215***

5.2C SELECT CEILING AND LIGHTING REPLACEMENTS

1.	2025 Ceiling/Lighting Replacement Texas Township Campus (5,700 sf)	$133,380
2.	2026 Ceiling/Lighting Replacement Texas Township Campus (5,700 sf)	$133,380
3.	2027 Ceiling/Lighting Replacement Texas Township Campus (5,700 sf)	$133,380
4.	2028 Ceiling/Lighting Replacement Texas Township Campus (5,700 sf)	$133,380
5.	2029 Ceiling/Lighting Replacement Texas Township Campus (5,700 sf)	$133,380
	Grand Total Years 2025-2029	***$666,900***

5.2D PAVING REPLACEMENT, REPAIRS AND MAINTENANCE

1.	Texas Township Campus-Mill/Repave at Maintenance Bldg. Scope of Work is 54,200 sf (Heavy Duty Asphalt)	$387,530
	Grand Total Years 2025-2029	***$387,530***

5.2E NETWORK FIBER-OPTIC EXTENSION UPGRADES

KVCC intends to replace all locations that currently have a 1GB single-mode fiber-optic system with a new 10GB multi-mode fiber-optic system.

1.	Texas Township Campus	$75,000
2.	Anna Whitten Hall	$10,000
	Grand Total Years 2025-2029	***$85,000***

5.3 ONGOING CAPITAL OUTLAY PROJECTS

Currently there are capital outlay projects in design or under construction approved in 2023 - PA 321

1. Automotive Technology Addition / Advanced Technology Wing Renovations

The Automotive Technology program expansion has been a highlight of previous facility master plans. Continued pressure through program growth is being placed upon the current spaces. Significant growth is also being experienced within many of the programs located within the Advanced Technology Wing (ATC). The proposed plans for additions and renovations to the ATC, will focus on strengthening relationships with community and professional organizations within the technology fields.

The proposed plan for addressing program growth is centered around a major addition (approximately 38,000 square feet) to serve the Auto Tech program. Proposed to be located at the southwest corner of the Texas Township facility, the new addition will provide an increased number of vehicle repair labs, unit labs and classrooms. The space will be designed to support education in emerging technologies, such as autonomous vehicle repair.

The new addition will open up existing space for reshuffling and renovation to many of the technology program spaces. As part of the reshuffling of space, synergies will be emphasized between programs allowing for greater collaboration within the advanced technology community. Classroom spaces will be located to provide greater access of use by all technology programs.

Expanded lab spaces for HVAC technology will provide dedicated space for HVAC repair and an independent space for hydronic technology instruction. Electrical technology space improvements will address growth within that program. The metallurgy lab will be relocated to provide better adjacency to the Machine Tool program space that was recently expanded to address their program demand. The welding lab will be renovated to provide better workflow and material flow. Computer Information Systems (CIS) will be relocated to the technology wing to provide better opportunities for collaboration with many of the technology programs.

Overall Project Construction Subtotal	$31,600,000
Design & Engineering Fees @ 7%	$2,212,000
Legal/Administrative/Testing/DTMB Fees @ 2%	$632,000
Construction Management Fees @ 3.5%	$1,106,000
Furniture, Fixtures and Equipment @ 7.5%	$2,212,000
Subtotal	$37,762,000
Project Contingency @ 5%	$1,888,100
Grand Total Texas Township Automotive Tech Addition / ATC Wing Renovations	***$39,650,100***

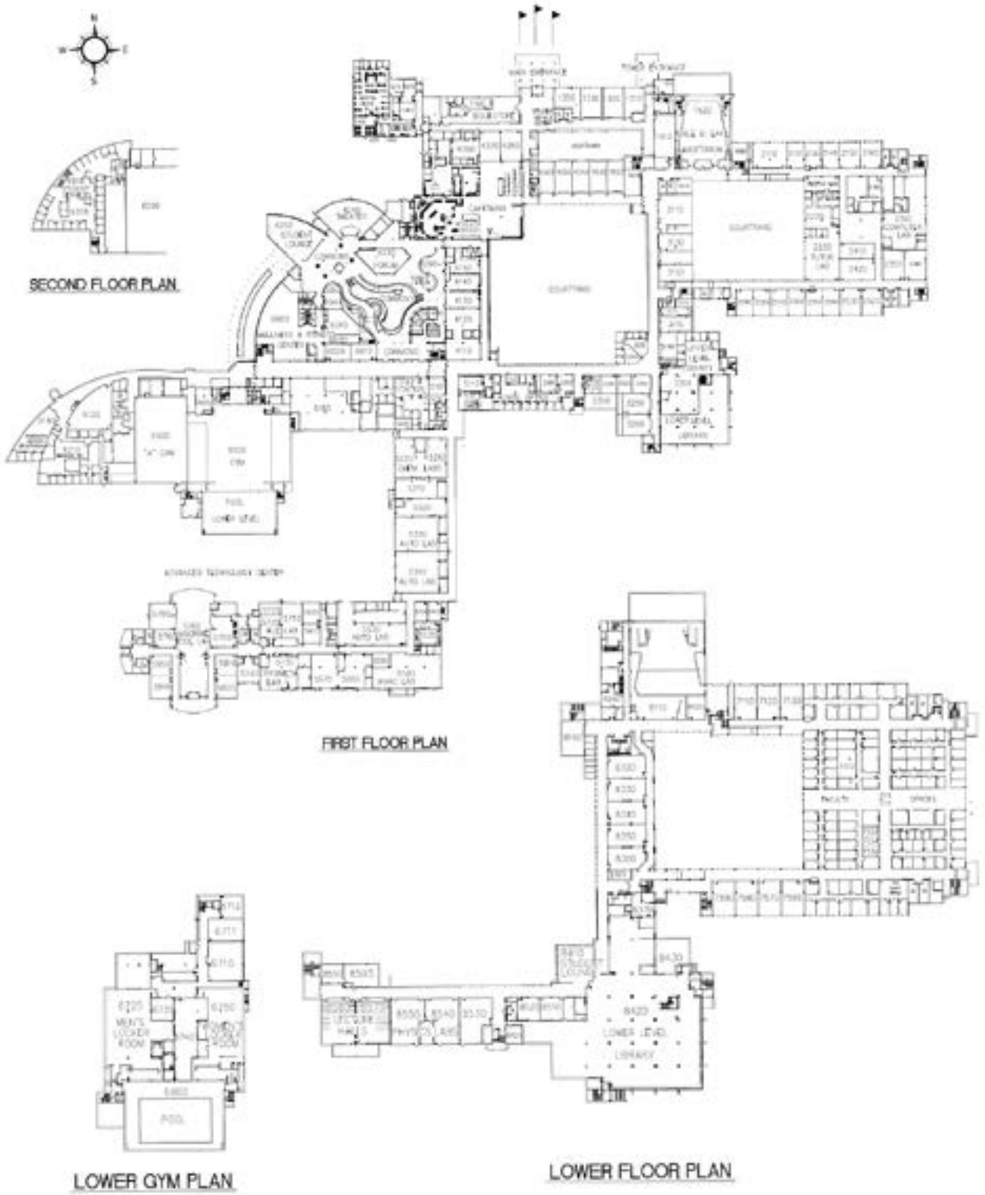
5.4 OPERATIONAL SAVINGS OPPORTUNITIES

A majority of the initiatives being proposed as part of this plan do not offer up significant operational saving opportunities, however, each project will seek to maximize the potential.

Separate from the initiatives proposed in this plan, KVCC is actively pursuing professional service firms to assist with a number of feasibility studies that examine alternative energy technologies and also control strategies that could have significant impact on operational expenditures. State of the art equipment and technologies provide the college with additional opportunities for savings; examples include solar hot water, geothermal and high efficiency equipment installations.

Section 6 : Supplemental Information

6.1 BUILDING FLOOR PLANS



FIRST FLOOR PLAN

SECOND FLOOR PLAN

THIRD FLOOR PLAN

BASEMENT PLAN

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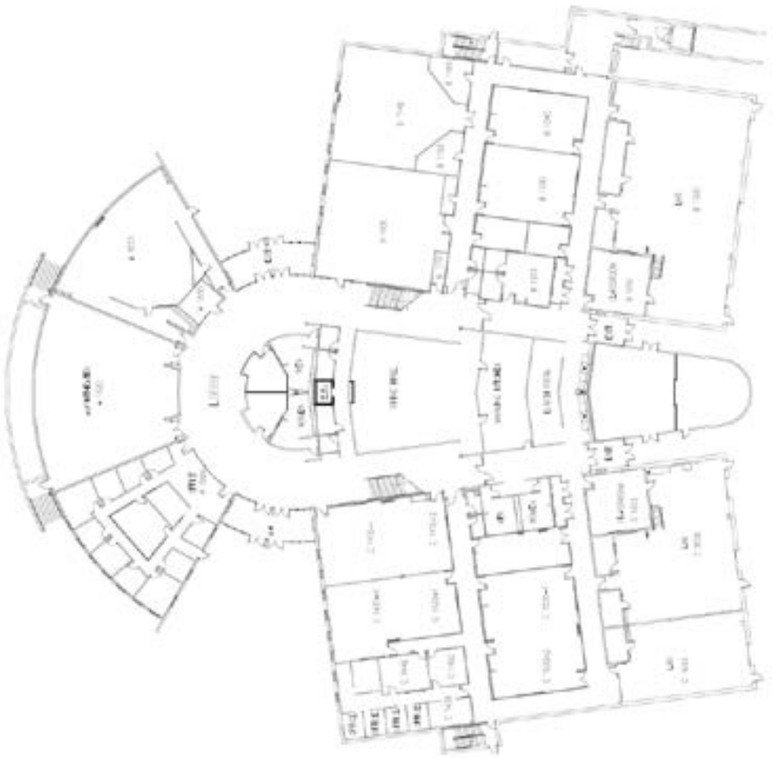
Anna Whitten Hall

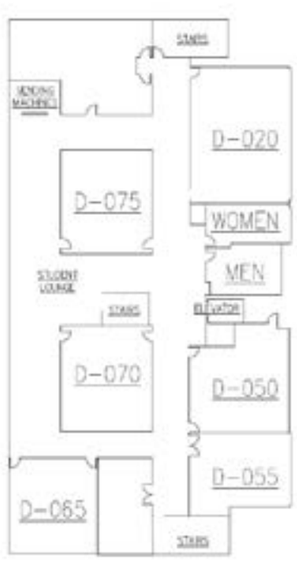
Texas Township Campus - Main Building



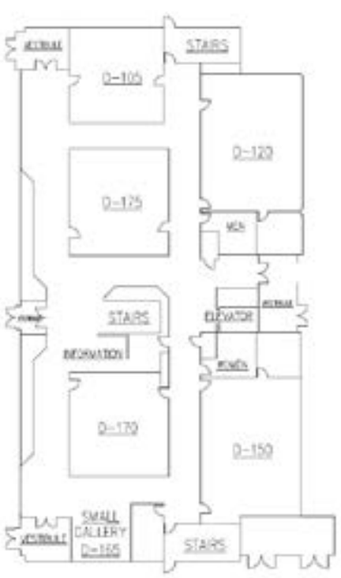
1st Level Plan

2nd Level Plan

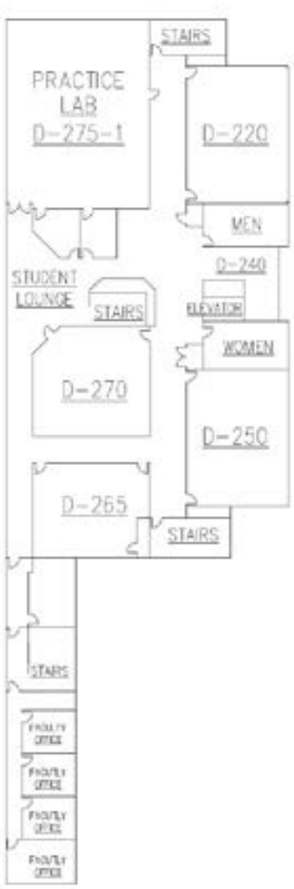
The Groves



LOWER FLOOR



MAIN FLOOR



UPPER FLOOR

CENTER FOR NEW MEDIA

Kalamazoo Valley Museum

Food Innovation Building

Culinary Allied Health Building - 1st Level Plan

Culinary Allied Health Building - 2nd Level Plan

Technology Wing Studies

Culinary Allied Health Building - 3rd Level Plan