MID-PLAINS COMMUNITY COLLEGE



2017 Facilities Master Plan

Final Draft August 22, 2017

McCook | North Platte

Broken Bow | Imperial | Ogallala | Valentine

WILKINS
ARCHITECTURE | DESIGN | PLANNING

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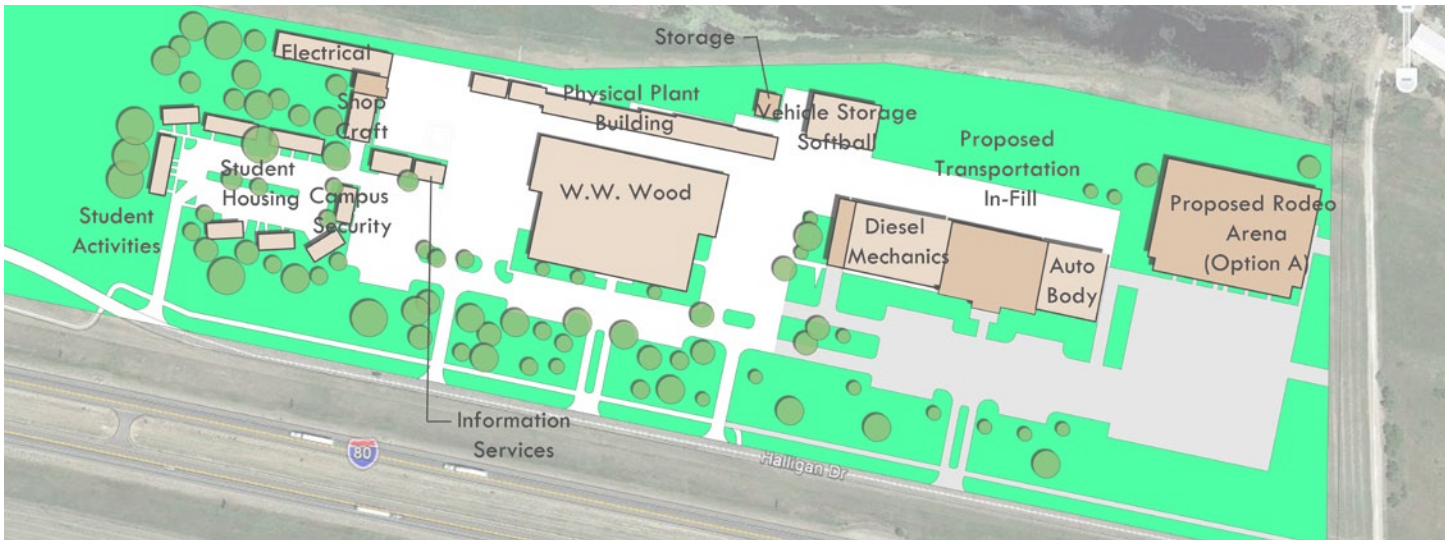
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Executive Summary

Background

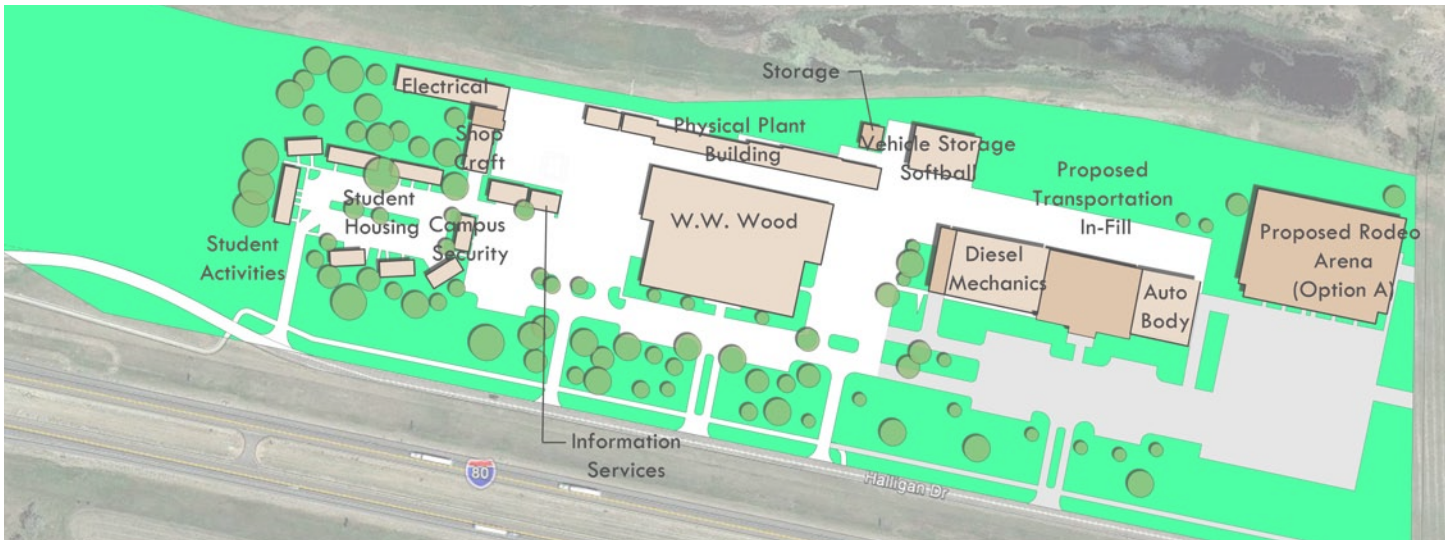
Mid-Plains Community College engaged WILKINS Architecture Design Planning, LLC in April of 2016 to update their Facilities Master Plan which was last executed in 2001. Over the course of the last sixteen (16) years, significant changes have taken place to the physical resources on all of the campuses necessitating this update. High impact physical enhancements included the establishment of new campuses in Broken Bow, Imperial, Ogallala and Valentine between 2000 and 2003, the construction and opening of the Peter and Dolores Graff Events Center on the McCook campus, and the Health and Science Center on the North Platte (South) campus, both in August of 2012. The opening of the new campuses and the high impact additions to the McCook and North Platte campuses continues to stimulate growth in a variety of ways across both campuses by providing more flexible, convenient and accessible classes to more of the College area and affording existing programs the space to grow, freeing up vital spaces in the buildings that were vacated by programs that moved into the new spaces, and enhancing the student experience for all students. As the focus is turned towards the next ten (10) to fifteen (15) years in the life of Mid-Plains Community College, the addition of the East Campus in McCook and significant projects in North Platte look to continue to build on the momentum created from the last Master Plan.

History

Mid-Plains Community traces its origins back to 1926 with the birth of McCook Junior College as part of the McCook Public School District. McCook Junior College is the oldest two-year collegiate institution in Nebraska and continues to be a source of pride for the entire community of McCook. North Platte's campuses date back to 1965 with the advent of North Platte Junior College (South Campus) in 1965 and Mid-Plains Vocational-Technical College (North Campus) in 1967.

McCook Junior College, North Platte Junior College and Mid-Plains Vocation-Technical College merged in 1973 to serve the 18-county, 20,500 square mile area mandated by the state legislature. Between 2000 and 2003 the campuses of Broken Bow, Ogallala, Valentine and Imperial were created to continue the college's mission of serving the education and training needs of the west central region of Nebraska. Rebranding of the institution in 2002 brought the seven campuses under one name of Mid-Plains Community College.

Mid-Plains Community College continues to serve its agrarian base and industry, along with an ever expanding offering of educational opportunities available in healthcare and the technical trades. More and more students and residents of west central Nebraska are looking to Mid-Plains Community College as their ultimate source for post-secondary education, training and certifications.



Introduction

Scope, Mission, Values, Legislated Priorities

Scope

Mid-Plains Community College is a comprehensive, student-centered, open access institution primarily devoted to quality instruction and public service, providing counseling and other student services intended to promote the success of a diverse student population, particularly those who have been traditionally underserved in other educational settings. Mid-Plains Community College consists of the McCook Community College in McCook, Nebraska; North Platte Community College in North Platte, Nebraska; and campuses located in Broken Bow, Ogallala, Valentine, and Imperial, Nebraska.

Mission

Transforming lives through exceptional learning opportunities for individual student success.

Values

The College believes that certain values should guide each decision made in the operation of the College. Mid-Plains Community College values excellence in education through:

- Integrity
- Programs that enhance the quality of life for people and our region
- Accessibility and affordability
- Respect for our college, communities, and the people we serve
- Open and honest communication
- Safe, quality, and engaging environments
- Continuous collaboration among all campuses

Legislated Priorities

Mid-Plains Community College seeks the following instructional and service priorities:

- Applied technology and occupational education and, when necessary, foundations education

- Transfer education, including general academic transfer programs, or applied technology and occupational programs which may be applicable to the first two years of a bachelor's degree program, and, when necessary, foundations education
- Public service, particulary adult continuing education for occupations and professions, economic and community development focused on customized occupational assessment and job training programs for businesses and communities, avocational and personal development courses
- Applied research

Demographic Profile & Student Data

MPCC has three large campuses, one in McCook and two in North Platte, as well as four smaller campuses, one each in Broken Bow, Ogallala, Valentine, and Imperial. Overall within the 18-county Mid-Plains Community College Area the population is trending downward. There are five (5) counties which have shown slight growth between 2010 and 2016, but overall the 18-county Area has lost population.

MPCC 18 County Area - Population by Age Groups

Census 2010

County	0-14 yrs	15-24 yrs	25-64 yrs	65+ yrs	Total
Arthur	104	41	221	94	460
Blaine	90	42	251	95	478
Chase	800	401	1,955	810	3,966
Cherry	1,026	572	2,925	1,190	5,713
Custer	2,107	1,101	5,448	2,283	10,939
Dundy	364	169	1,014	461	2,008
Frontier	479	432	1,322	523	2,756
Hayes	167	111	498	191	967
Hitchcock	498	269	1,476	665	2,908
Hooker	124	64	355	193	736
Keith	1,503	792	4,301	1,772	8,368
Lincoln	7,601	4,328	18,711	5,648	36,288
Logan	158	72	394	139	763
Loup	115	62	318	137	632
McPherson	129	39	274	97	539
Perkins	614	298	1,456	602	2,970
Red Willow	2,092	1,428	5,463	2,072	11,055
Thomas	119	57	336	135	94
Grand Total	**18,090**	**10,278**	**46,718**	**17,107**	**92,193**

MPCC Campus Towns

Census 2010

Town	Population
Broken Bow	3,559
Imperial	2,071
McCook	7,698
North Platte	24,733
Ogallala	4,737
Valentine	2,737
Total	**45,535**

MPCC 18 County Population Size

Census 2010

County	Population	Sq. Miles
Arthur	460	715
Blaine	478	711
Chase	3,966	894
Cherry	5,713	5,961
Custer	10,939	2,576
Dundy	2,008	920
Frontier	2,756	975
Hayes	967	713
Hitchcock	2,908	710
Hooker	736	721
Keith	8,368	1,061
Lincoln	36,288	2,564
Logan	763	571
Loup	632	570
McPherson	539	859
Perkins	2,970	883
Red Willow	11,055	717
Thomas	647	713
Total	**92,193**	**22,834**
State of Nebraska	**1,826,341**	**77,421**

McCook



The McCook campus is home to McCook Community College, the oldest junior college in Nebraska, founded in 1926. The campus is located in the northeast section of the city of McCook and can be accessed by taking East 3rd street north from Hwy 34, or heading east from Hwy 83 and J Street. McCook is a town of 7,698, a hub in southwest Nebraska.

McCook has around 425 Full-Time Equivalents (FTE) of credit student activity annually, and also does over 3,500 contact hours in reimbursable non-credit, and over 26,000 contact hours in non-reimbursable non-credit activity.

In September 1935, McCook Junior College moved from the YMCA building to Cecil McMillen Memorial Hall. In September 1939, McCook Junior College opened another new facility, an auditorium-gymnasium-classroom complex, later named True Hall after J.A. True.

Brooks Residence Hall, named after R.G. Brooks, was originally completed in the spring of 1960. In the spring of 1990, Brooks Hall was doubled in size with the addition of a new wing that increased the housing capacity to 140 students. The student center was opened in the fall of 1966. Tipton Hall, named in honor of Gladys Tipton, was opened in 1969 and provided music and maintenance facilities.
The von Riesen Library named after Ralph von Riesen, and Barnett Hall, named in honor of the Barnett family, were opened in the spring of 1972. The Wrightstone Fine Arts Building, named after Pearl Wrightstone, was opened for classes in the spring of 1976. Walsh-Brady Hall, named in honor of Mary Walsh Brady and her uncle, Patrick Walsh, was opened for classes in the fall of 1987.

On September 11, 2003, three major construction projects were dedicated. In cooperation with the McCook College Foundation and the Hormel Family Foundation, McCook Community College celebrated the completion of a remodel and addition to McMillen Hall in a formal ribbon cutting.

On August 22, 2012, the Peter and Dolores Graff Events Center was dedicated and is the home for all of the intercollegiate athletic programs, student wellness and other academic programming. In this same year True Hall was repurposed as the new home of the Physical Resources department.

On August 17, 2015, the expanded and renovated Brooks Hall cafeteria was dedicated.

North Platte



North Platte, a city of 24,733, is the largest in the College's service area.
North Platte has around 850 Full-Time Equivalents (FTE) of credit student activity annually, and also does over 25,000 contact hours in reimbursable non-credit, and over 15,000 contact hours in non-reimbursable non-credit activity.
North Platte North campus is located east of Hwy 83 on the interstate frontage road, Halligan Drive, just north of Interstate 80.



North Platte South campus is located on the north side of State Farm Road, west of Hwy 83 about a mile south of Interstate 80 in North Platte.

Construction of a new Post Office and Federal Building in North Platte in 1964 opened up a new opportunity. On July 3 of that year, the federal government transferred title to the former Post Office/Federal Building at Fifth and Jeffers to the Junior College District. North Platte Junior College was now more than just a name. An open house was held on Sunday, August 29, 1965 to show off the remodeled building and classes began the following Tuesday. North Platte had a junior college, supported entirely by taxpayers in School District 1 and governed by the North Platte Board of Education, which was also the board for the Junior College District. Otto Oakes, Superintendent of North Platte Schools, was the college President and William Ptacek, who had come to North Platte as Assistant Superintendent of schools in 1963, was named Dean of the college.

At the same time the Junior College was getting started, North Platte leaders were pushing for a trade school also called a vocational-technical school. A Legislative interim study in 1964 said that North Platte should be the first priority for location of a second such school.

The North Platte Development Corporation and the Chamber of Commerce spearheaded a campaign to locate a school in North Platte. The interim study recommendation went to the 1965 Legislature, which wrestled with several proposals for expanding vocational-technical education.

Senators approved a bill, which would provide for the establishment of trade schools on an area-wide basis through local initiatives, and another bill providing for some state aid for such schools.

Using rented buildings the old Carnegie Library on North Jeffers (now the home of the Children's Museum) and a Cohagen warehouse on East Front Mid-Plains Vocational-Technical School opened for classes.

Victor Halligan, a longtime North Platte attorney, donated land on the north side of Interstate 80 east of Highway 83. Wendell Wood hatched a plan for creating a Mid-Plains Foundation to raise funds for initial construction on short-term notes backed by a lease-purchase agreement with the college. The first building on the new Mid-Plains Voc-Tech campus was dedicated May 16, 1971.

In 1972, it was announced that the late Janet McDonald had left a major portion of her estate to the district for the construction of an academic college building and named after her McDonald and Belton families. The Board already possessed 100 acres of land on West State Farm Road south of the city and it was decided to locate the new campus on that site. First use of the partially completed McDonald-Belton building was in December 1974 and was formally dedicated on February 23, 1975.
During the fall of 1999, Mid-Plains Community College Board of Governors voted to sell the old Post Office building in North Platte. The building had housed the MPCC Area Administration Offices since the completion of the McDonald-Belton campus. Those administrators housed in the downtown offices were relocated to the campuses.

In a vision of growth and expansion, the institution implemented a systematic plan to create a series of outreach sites. In 2000, the college established campuses in Broken Bow and Ogallala. The Valentine Campus was created in June 2002. In 2003, the Imperial Campus became MPCC's fourth outreach location. Each campus site is staffed with qualified administrators who are trained in all aspects of helping students achieve post-secondary educational opportunities in their local communities. All four campuses offer a localized Associate of Arts degree program as well as academic

transfer, technical, community service and business and industry training in their respective communities.

On September 11, 2003, North Platte Community College dedicated a new 144-bed residence hall complex and the completion to a remodeled entrance to the McDonald-Belton building.

On August 22, 2012, the Health and Science Center was dedicated enabling all of the health, math and science programs to unite in one comprehensive building.
In the summer of 2014, a new cafeteria was dedicated on the South Campus attached to the Knights Center, providing a full service, dedicated cafeteria and dining area to South Campus students for the first time.

Broken Bow



The Broken Bow campus is located on the west side of the town of Broken Bow, a town of 3,559, on the south side of Highway 92/2.

Broken Bow has around 40 Full-Time Equivalents (FTE) of credit student activity annually, and also does over 500 contact hours in reimbursable non-credit, and over 2,000 contact hours in non-reimbursable non-credit activity.

Ogallala



The Ogallala campus is located on the south side of the town of Ogallala, a town of 4,737, just south of Interstate 80, on the east side of Hwy 61/26.

Ogallala has around 50 Full-Time Equivalents (FTE) of credit student activity annually, and also does over 500 contact hours in reimbursable non-credit, and over 6,000 contact hours in non-reimbursable non-credit activity.

Valentine



The Valentine campus has a new facility that opened in 2017, and is located on the southeast side of the city of Valentine, a town of 2,737, with an entrance right off the south side of Highway 83/20.

Valentine has around 25 Full-Time Equivalents (FTE) of credit student activity annually, and also does over 150 contact hours in reimbursable non-credit, and over 400 contact hours in non-reimbursable non-credit activity.

Imperial



The Imperial campus is on the east side of Highway 6 (Broadway St.) on the north side of the town of Imperial, with a population of 2,071.

Imperial has around 30 Full-Time Equivalents (FTE) of credit student activity annually, and also does over 400 contact hours in reimbursable non-credit, and over 1,500 contact hours in non-reimbursable non-credit activity.

Strategic Goals & Processes

On April 26, 2016 members of the Mid-Plains Community College Master Plan committee, along with Wilkins ADP met for a kickoff meeting to begin the planning process and establish goals for the Facility Master Plan. The process began with a comprehensive analysis of the strengths, weaknesses, opportunities and threats (SWOT Analysis) of Mid-Plains Community College.

Strengths of MPCC:

- Rising Student Retention Numbers
- Transferability to 4 – Year Institutions
- Available Scholarship Dollars
- Distance Learning Capabilities
- High Percentage of Classes Taught by Full-Time Faculty
- Strong Faculty
- Affordable
- Accessible
- Academic Quality Improvement Project (AQIP) Accreditation
- Facilities
- Flexibility
- Strong Cash Reserve
- 3 Year Equipment Plan
- Athletic Program
- Strong support from the communities of McCook, Broken Bow, Imperial and Ogallala
- Good Employer in the Community

Weaknesses of MPCC:

- Geography
  - Location
  - Service Area
  - Population Base
- Low Program Enrollments in some Programs
- Area Focus
- Workload for Administration and Staff due to Size
- Aging Staff

Opportunities for MPCC:

- High School Partnerships – Dual Credit, Academies
- Business Partnerships – Internships, Trainings
- Expand Athletic Programs
- Community Support from North Platte and Valentine
- NPCC and MCC Foundations

Threats to MPCC:

- State Funding
- Large Employer Layoffs
- Population Decline in MPCC Area
- Land Valuations
- Federal Employment Laws
- Health Insurance Costs
- State and Federal Regulations

The master plan team also identified the following process and goals for the master plan:

PROCESS

- Toured McCook campus (along with East Campus, CAST building and Fox Theater) and discussed campus specific needs on a macro level.
- Toured North Platte campuses and discussed campus specific needs on a macro level.
- Toured all of the campuses and discussed their needs.
- Met with all academic departments to obtain comprehensive input on their program's needs.
- Conducted planning meetings to strategize and identify capital projects that serve to facilitate implementation of MPCC's academic master plan goals.
- Conducted community and employee input sessions to secure feedback on proposed facilities master plan.

GOALS

- Provide facilities that support and promote the academic programs, student life and wellness.
- Provide facilities that are on par with or exceed those at peer institutions.
- Provide facilities that enable the college to recruit students, faculty and staff.
- Provide facilities that are flexible enough to meet the rapidly changing world of technology and industry.

Academic Master Plan Summary

Coinciding with the development of the college wide facilities master plan, a parallel process took place in developing the college's academic affairs master plan. Academic administration, along with Wilkins ADP, met with all departments to secure feedback on all aspects of the college's academic departments. Each academic department was asked to provide input on the five common themes that impact and determine the overall success and/or growth of each department and program.

Those five common themes are Academic Programs and Curriculum, Learning Environments, Meaningful Partnerships, Students and Faculty Support. Across all of the college programs, there are consistent initiatives which will be emphasized college wide over the next three years. Without exception, each program identified the following initiatives as being vital to the continued success and growth of their programs, and the college as a whole:

1. Relevance – Each program must continue to offer programs that are relevant to their particular profession and/or trade.

2. Competitive Facilities and Technology – The College must continue to invest in facilities, technology and equipment that will keep the College, at a minimum competitive, if not superior, to those facilities offered at peer institutions.

3. Partnerships – Partnerships across a variety of platforms must be encouraged and promoted. Those partnerships include high schools, businesses, communities and four-year institutions. The goals of these partnerships being to get high school students involved with the College to a greater degree (dual credit), offering meaningful internships and facilitating an easy to transition to four-year institutions for those students choosing that path.

4. Recruiting – Each program must work actively and hand-in-hand with Enrollment Management to pursue highly motivated and better prepared students. Better students are attracted to rigorous and challenging academic and trade programs.

5. Faculty Recruitment and Continuing Education – The continued success and growth of the College is contingent upon the recruitment of highly skilled and gifted faculty along with promoting and facilitating continuing education opportunities for all faculty so they can remain current and relevant in their particular fields.

Summary of Proposed McCook Campus Projects

East Campus - With the College's acquisition of the former Elks Club property, located three blocks east of the main campus, the College is faced with the challenging decision of how best to incorporate this new east campus into the overall fabric of McCook Community College. After researching a number of options, the team determined that the highest and best use for the existing building on the east campus is to completely renovate it and relocate Music, Nursing, and the Protective Services (Criminal Justice, EMS, EMT, Fire Science) to this facility and also utilize it to provide housing for non-traditional students. All of those programs are currently housed in spaces that are undersized and/or outdated. Shifting those programs to the east campus enables those programs to continue to grow, strengthens the ability to recruit prospective students and increases the ability of the program to satisfy the strong demand for workers in those respective fields.

Another component to the redevelopment of the former Elks Club property is the creation of a new baseball/softball field complex. The complex as proposed would consist of lighted softball and baseball fields complete with hard dugouts, permanent seating, a dual use press box, concession stand, restroom building, bullpens and batting cages.

Von Riesen Library – Work on the library consists of relocating all of the functions on the main level down to the basement and relocating all of the basement functions up to the main level. Currently, the stacks and periodicals are on the main floor and the computer lab, testing and tutoring center are all located on the basement level. Swapping the contents and program of the floors enables the College to more efficiently staff the testing, tutoring and library functions. Relocating the stacks, periodicals and study areas to the lower level provides a better environment for reading and studying without having the noise and interruptions from the main entrance and circulation desk.

Wrightstone Building – An option in conjunction with redevelopment decisions on the east campus is a possible addition to this building to house new spaces for music and drama. With Tipton Hall likely being razed, the music and drama programs must be relocated. Wrightstone was originally built with expansion capabilities and an expansion to the west enables the fine and performing arts programs to be together in one building. Along with the proposed addition, the existing art gallery and studio spaces would be renovated and expanded to provide those programs with more suitable space and up to today's standards.

Walsh-Brady Hall – To accommodate the expansion of the art studios, the graphic design program would be relocated to the lower level of Walsh-Brady to the spaces currently occupied by the nursing program. This proposed relocation not only benefits the art program, but enables the graphic arts program to have the necessary space within which to adequately teach and collaborate and for students to have the proper space for their projects.

Housing - Strong housing enrollment on the McCook campus merits the need for studying additional housing options for students to satisfy the demand for on-campus housing.

Summary of Proposed North Platte Campus Projects

North Campus

Transportation Infill Addition Between Diesel and Auto Body – Both the Diesel Technology and Auto Body Technology buildings were planned to one day be linked together as one building with the entire building serving as the Transportation Technology building. With the addition, the automotive program would move into the new addition thereby integrating all of Transportation Technology into one building.

Connecting Classroom Link Between Electrical and Shop Craft Building – A connecting link between the Electrical and Shop Craft Building would allow for the expansion of the electrical lab which currently does not have enough mockup stations to meet demand. The connecting link would contain a new classroom facilitating the expansion of the mockup lab into the vacated classroom space. This would also benefit the program by creating a new entrance, giving it a more inviting look and giving it better visibility.

Drive-Through Transportation Addition – The Transportation program needs the ability to drive through a service bay for safe tractor-trailer inspections and servicing. Providing a drive-through service bay on the west end of the Diesel program satisfies this need.

W.W. Wood Building Renovation(s) – Currently building trade programs such as HVAC suffer from a lack of sufficient program space. Moving the snack bar to a newly renovated interior space would facilitate the growth of the HVAC program along with the other building trades.

South Campus

Health and Science Center – The Health and Science Center (H.A.S.C.) which opened in 2012 is in need of more nursing program space due to continued growth and strong demand for the program. The proposed two-story addition to the west side of the H.A.S.C. facilitates the continued growth and expansion of the nursing program including both instructional space and additional office space for the ever expanding nursing faculty.

McDonald-Belton Building - Upgrades to McDonald-Belton include a renovation of the library and student success center enabling the College to streamline and make more efficient the testing and tutoring services all while enhancing the student experience.

Softball Competition Complex – North Platte Community College Knights softball practices and plays games offsite at a city owned softball field. Creation of a new competitive softball complex on campus improves the student-athlete experience, enhances the life and vitality of the campus and certainly assists with the recruitment process of the student-athletes.

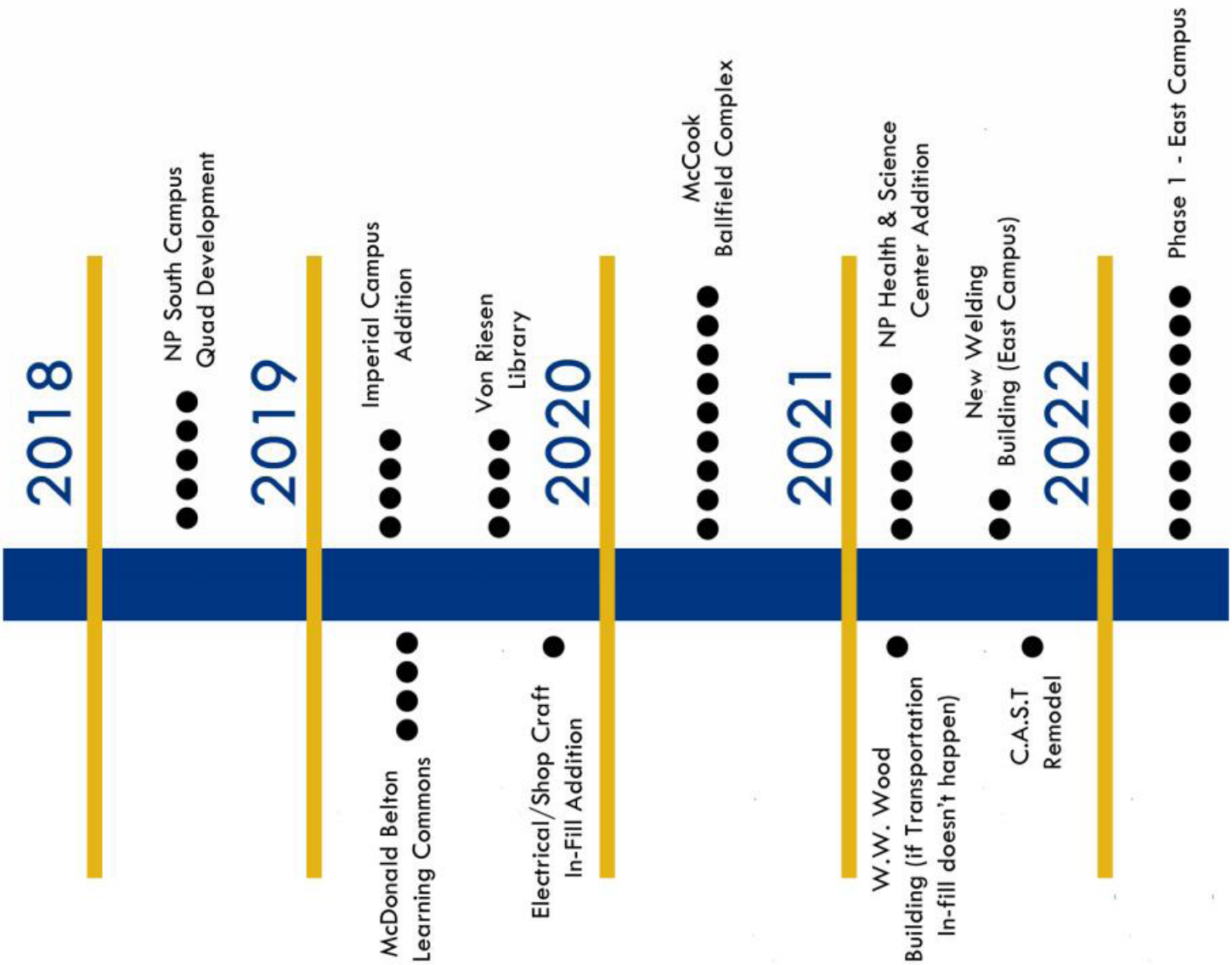
Rodeo Arena (Could be located on either North or South Campus) – North Platte's popular rodeo program and newly created agriculture program stand to benefit from a new rodeo arena with supporting educational space for the agriculture program. This new arena would serve part-time as an arena and part-time as an agriculture equipment classroom and also be available for other large event uses.

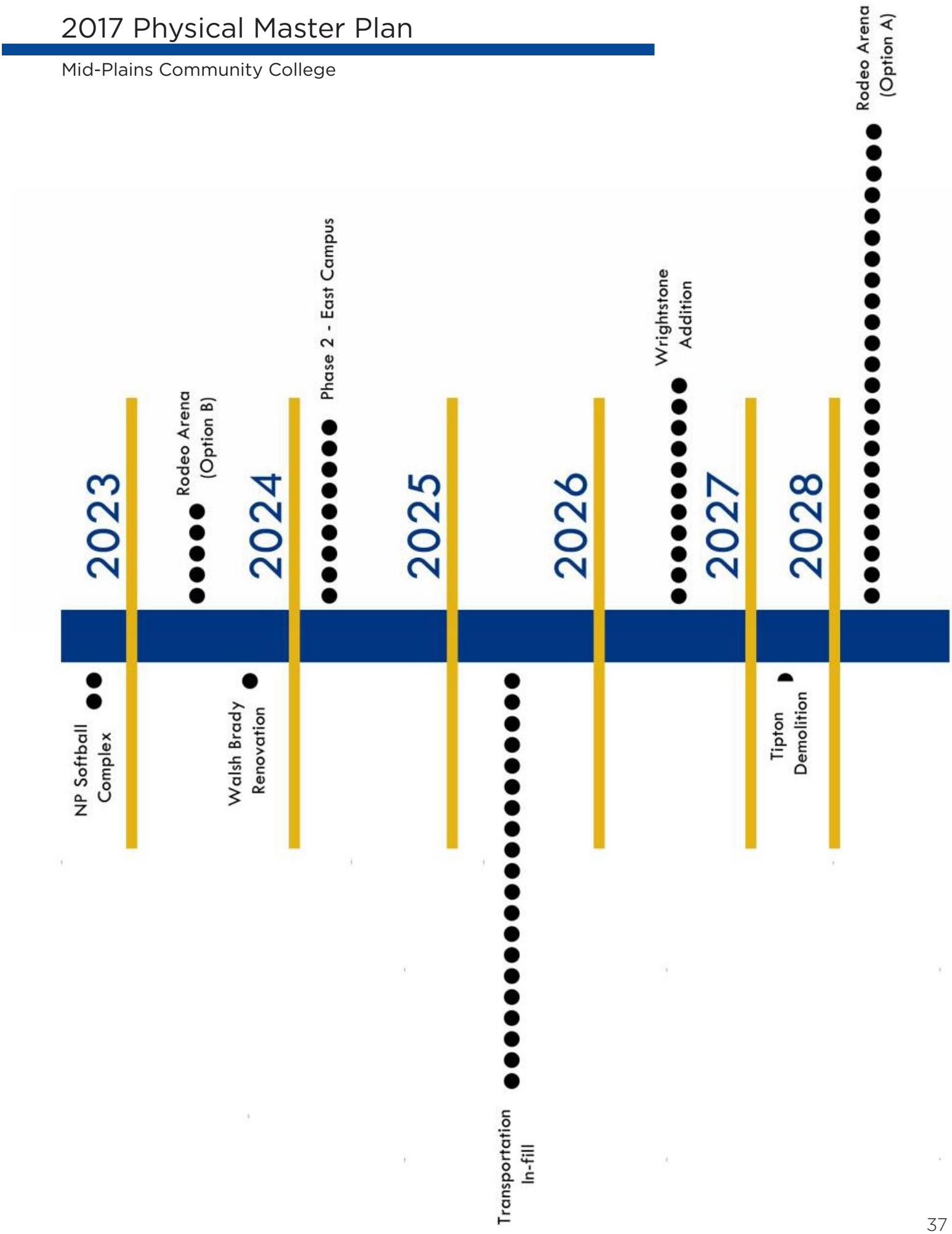
Summary of Proposed Imperial Campus Project

Unlike the Broken Bow, Ogallala and Valentine campuses, all of which have well appointed instructional labs and shop spaces for the technical trades, the Imperial campus does not have a lab or shop area suitable for technical trades. Also, this campus does not have ideal facilities for EMS, CNA/Med Aid, and Health Science classes. In fact, many courses at various times must be taught off campus at other facilities. The proposed addition to this campus building provides proper instructional spaces for the technical trades, along with agricultural programming, and also the ideal space and equipment for the instruction of the health programs.

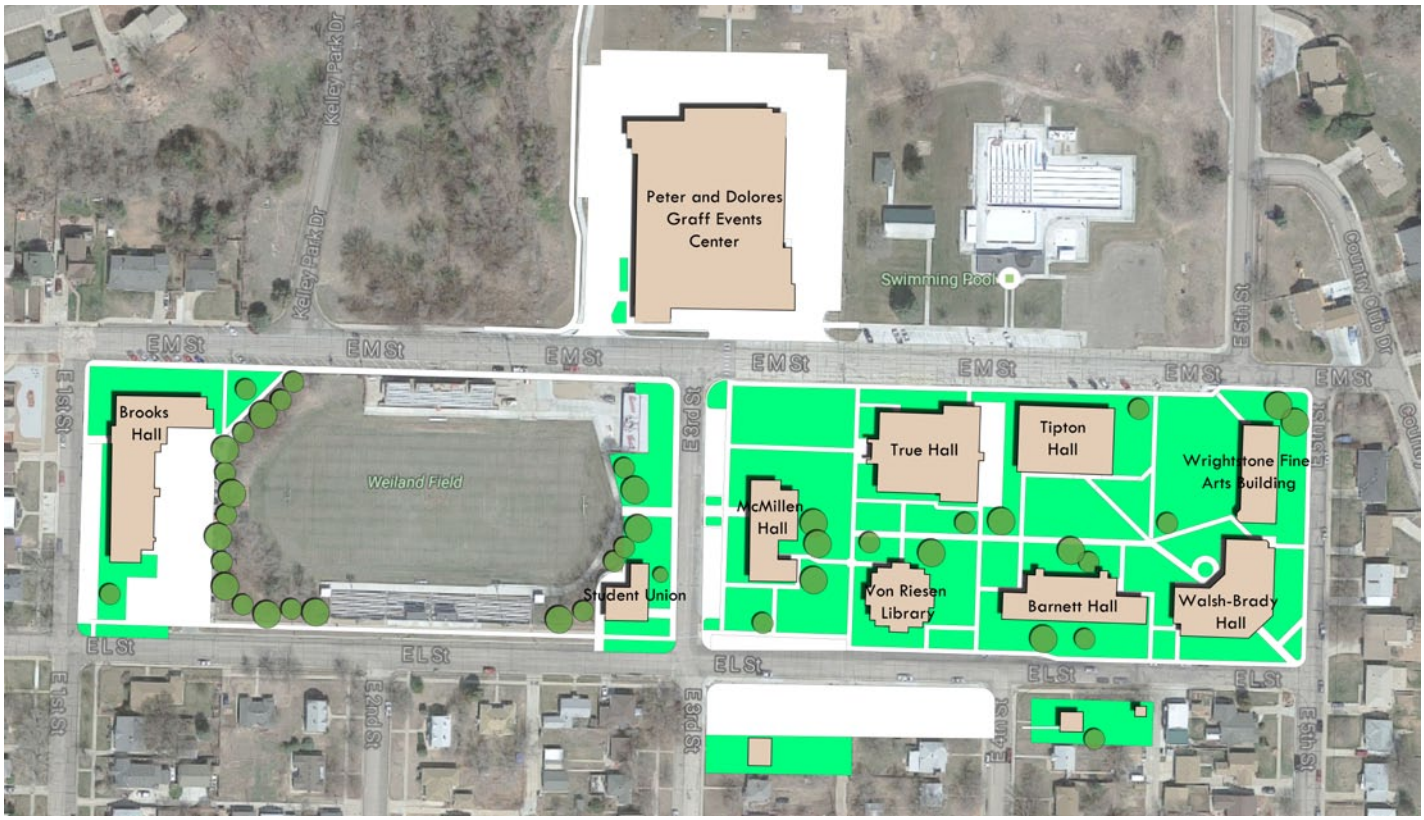


Physical Master Plan


2018
NP South Campus
Quad Development
2019
Imperial Campus
Addition
Von Riesen
Library
2020
McCook
Ballfield Complex
2021
NP Health & Science
Center Addition
New Welding
Building (East Campus)
2022
Phase 1 - East Campus
McDonald Belton
Learning Commons
Electrical/Shop Craft
In-Fill Addition
W.W. Wood
Building (if Transportation
In-fill doesn't happen)
C.A.S.T
Remodel


2023
2024
2025
2026
2027
2028
NP Softball Complex
Rodeo Arena (Option B)
Walsh Brady Renovation
Phase 2 - East Campus
Transportation In-fill
Wrightstone Addition
Tipton Demolition
Rodeo Arena (Option A)

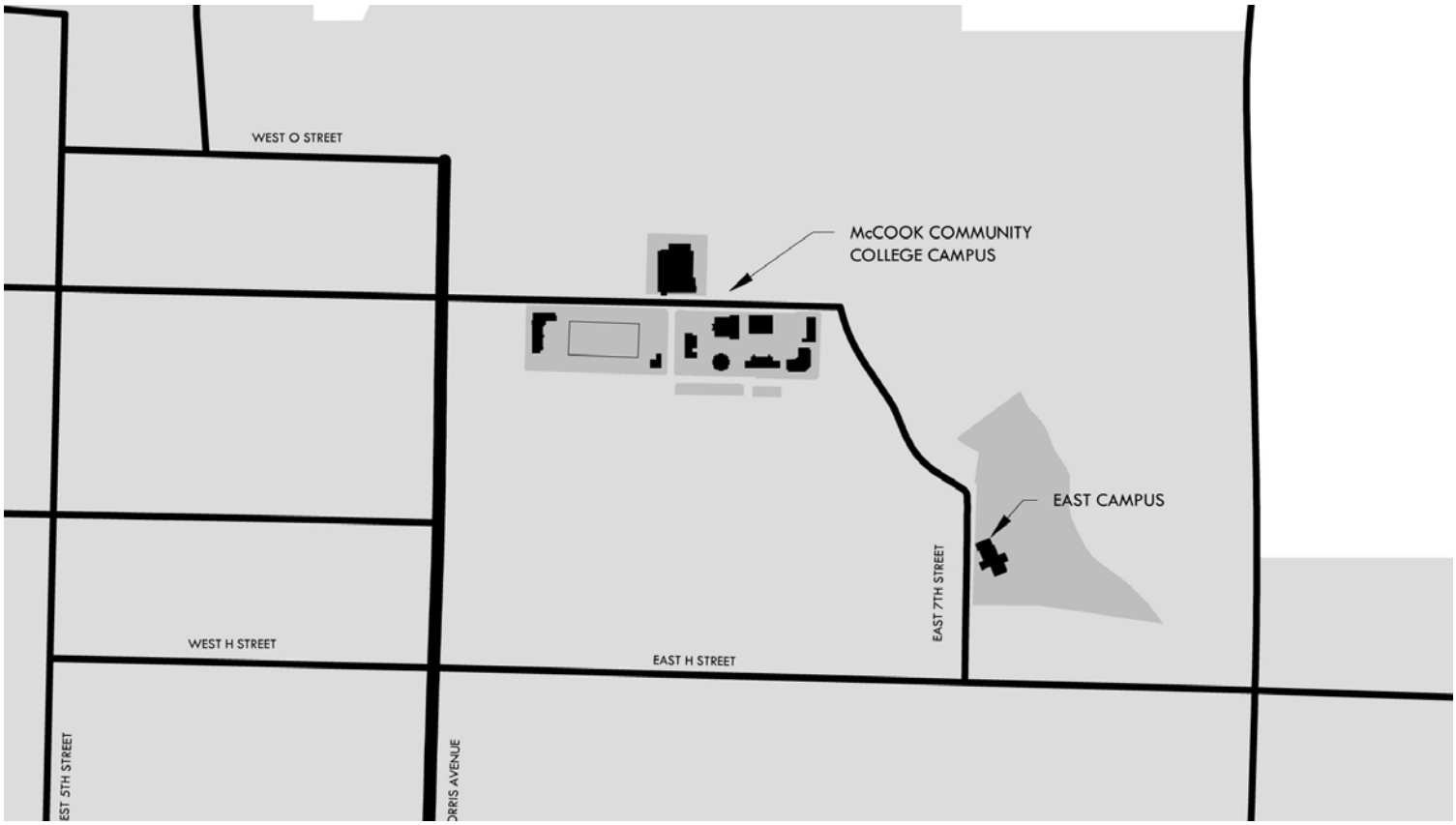
McCook Campus



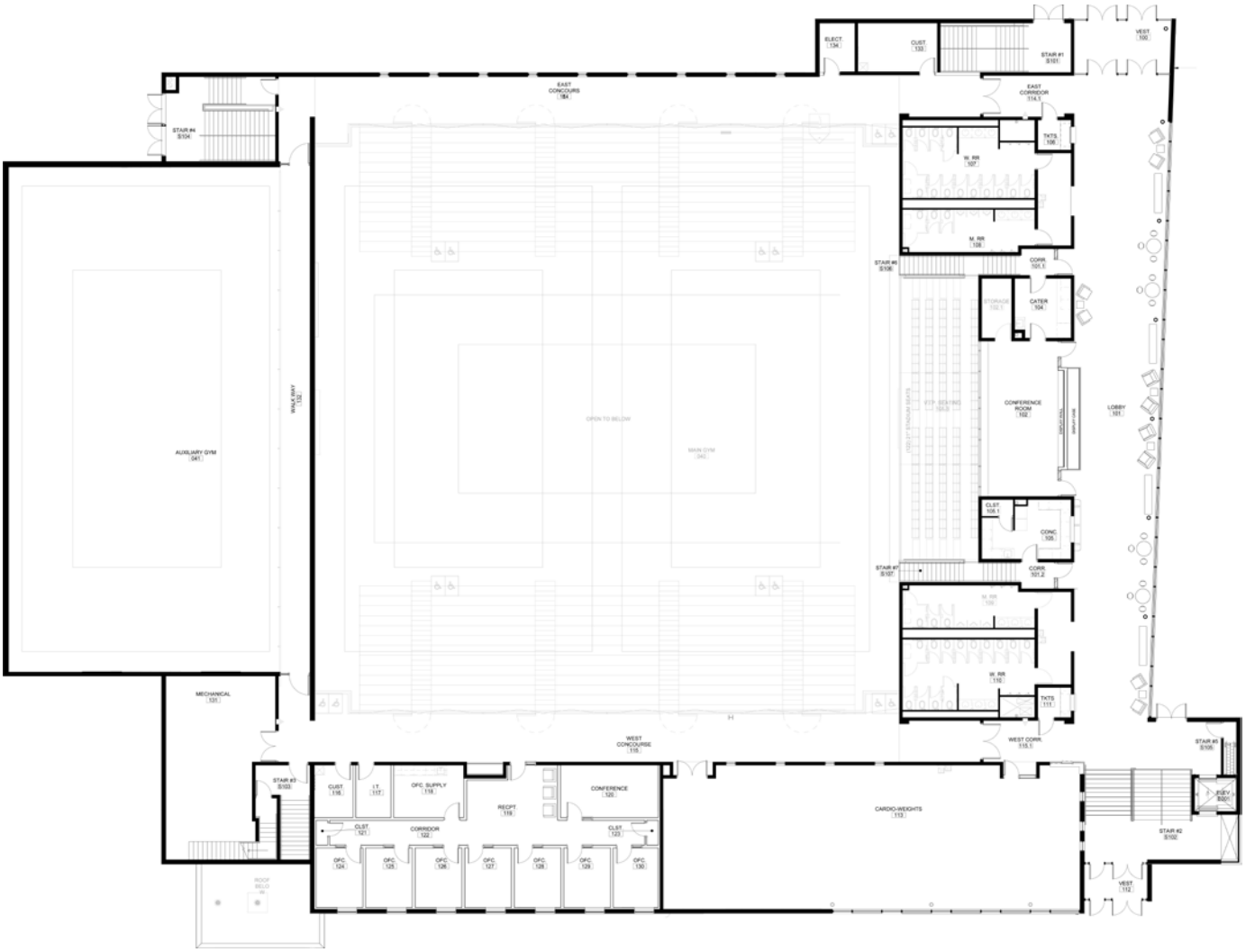
Current Site Plan



Proposed Site Plan


WEST O STREET
McCOOK COMMUNITY
COLLEGE CAMPUS
EAST CAMPUS
EAST 7TH STREET
WEST H STREET
EAST H STREET
EST 5TH STREET
ORRIS AVENUE

Peter and Dolores Graff Events Center



Peter and Dolores Graff Event Center
1611 Avenue C

Building Area: 54,000 S.F.

Site Area: 2.14 acres

Year Constructed: 2012

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 2
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

Brooks Hall



Brooks Hall
1205 East First Street

Building Area: 33,128 S.F.

Site Area: 1.32 acres

Year Constructed: 1958

Renovations/Remodels: 2015 - Kitchen/ Dining

Additions: 2 — 1989 Women's Dorm Add./ 2015 Elevator/Kitchen Add.
Year Constructed: 1989, 2015
Square Feet: 14,601 sf, 2,598 sf

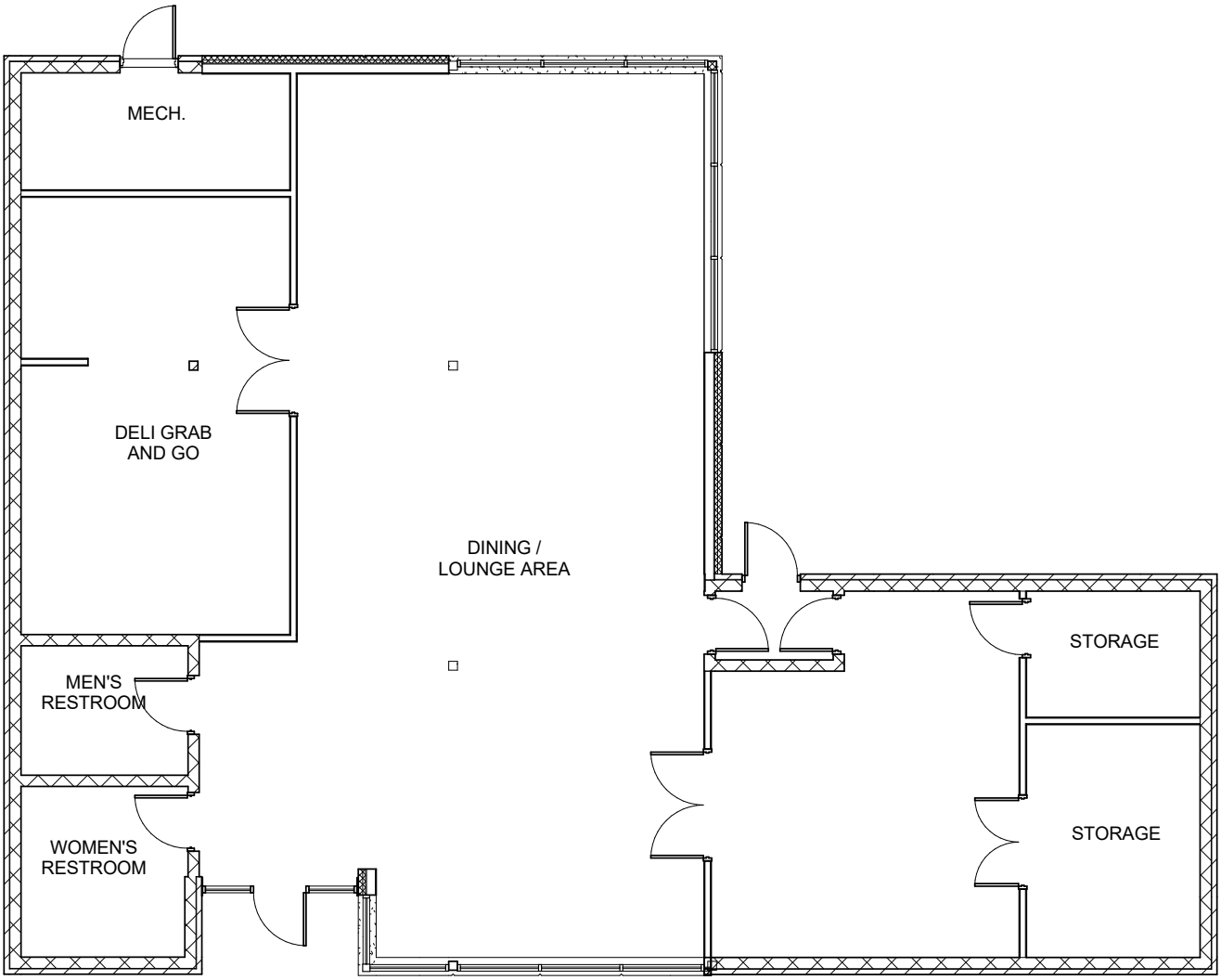
Number of Floors: 3
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- Enrollment trends and increased housing demand necessitates potential building expansion.
- Houses have been purchased adjacent to the College as an immediate solution to the housing supply shortage.

Student Union



Student Union
1214 East 3rd Street

Building Area: 2,721 S.F.

Site Area: 0.16 acres
Year Constructed: 1964

Renovations/Remodels: 2016

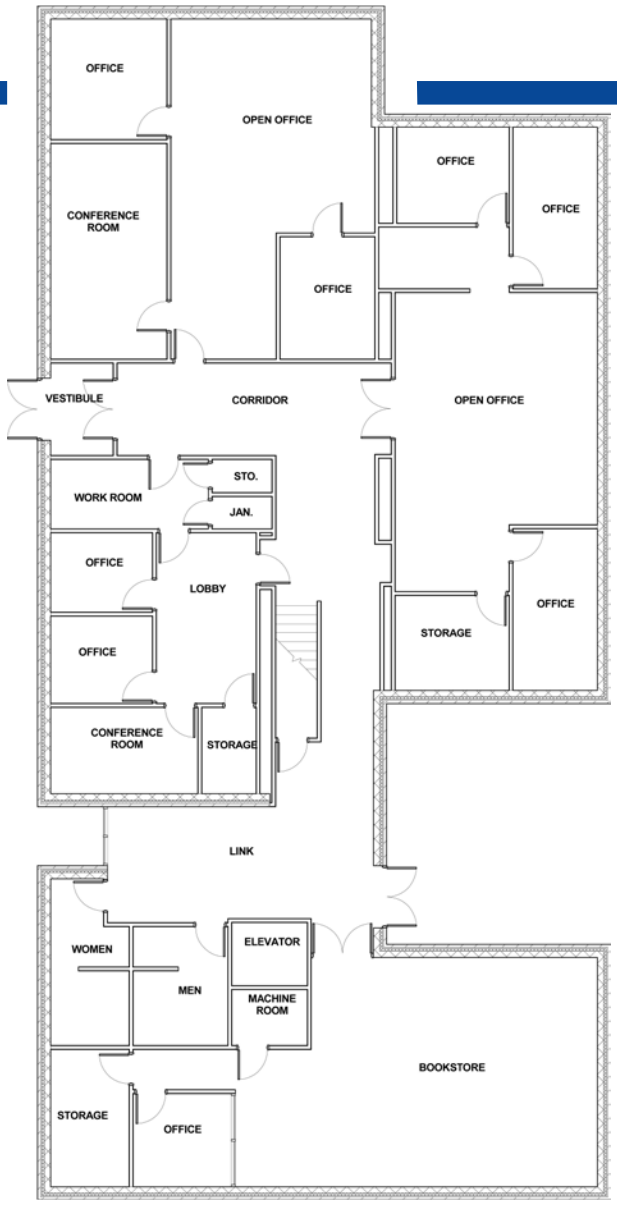
Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

McMillen Hall



McMillen Hall
1205 East 3rd Street

Building Area: 12,280 S.F.

Site Area: 1.01 acres

Year Constructed: 1935

Renovations/Remodels: 2002

Additions: 1
Year Constructed: 2002
Square Feet: 1,937 sf

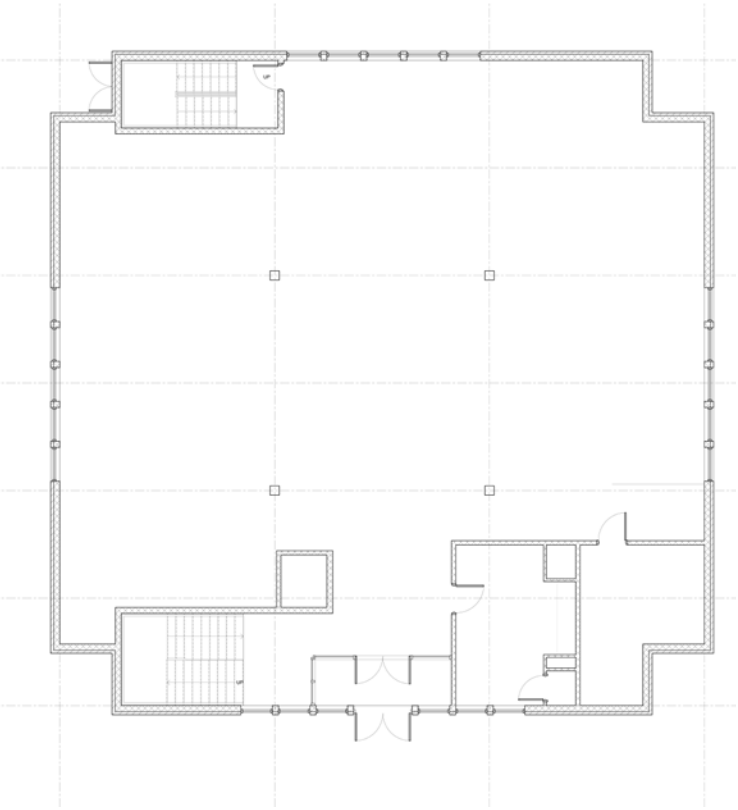
Number of Floors: 2
Basement: 1

Renovation Summary:

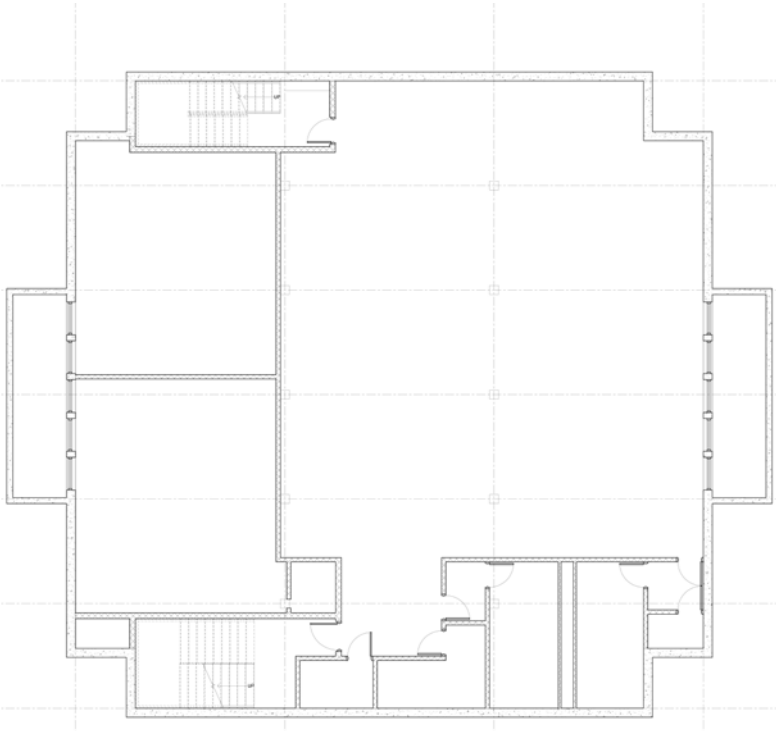
- Update finishes to match new addition

Program Needs Summary: N/A

von Riesen Library



First Floor



Basement

von Riesen Library
1205 East 3rd Street

Building Area: 9,906 S.F.

Site Area: 0.39 acres

Year Constructed: 1972

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 1

Renovation Summary:

- Relocate the stacks to the basement floor
- Move all basement programming, including testing and tutoring, to the first floor

Program Needs Summary:

- Combine learning resource center and student success center

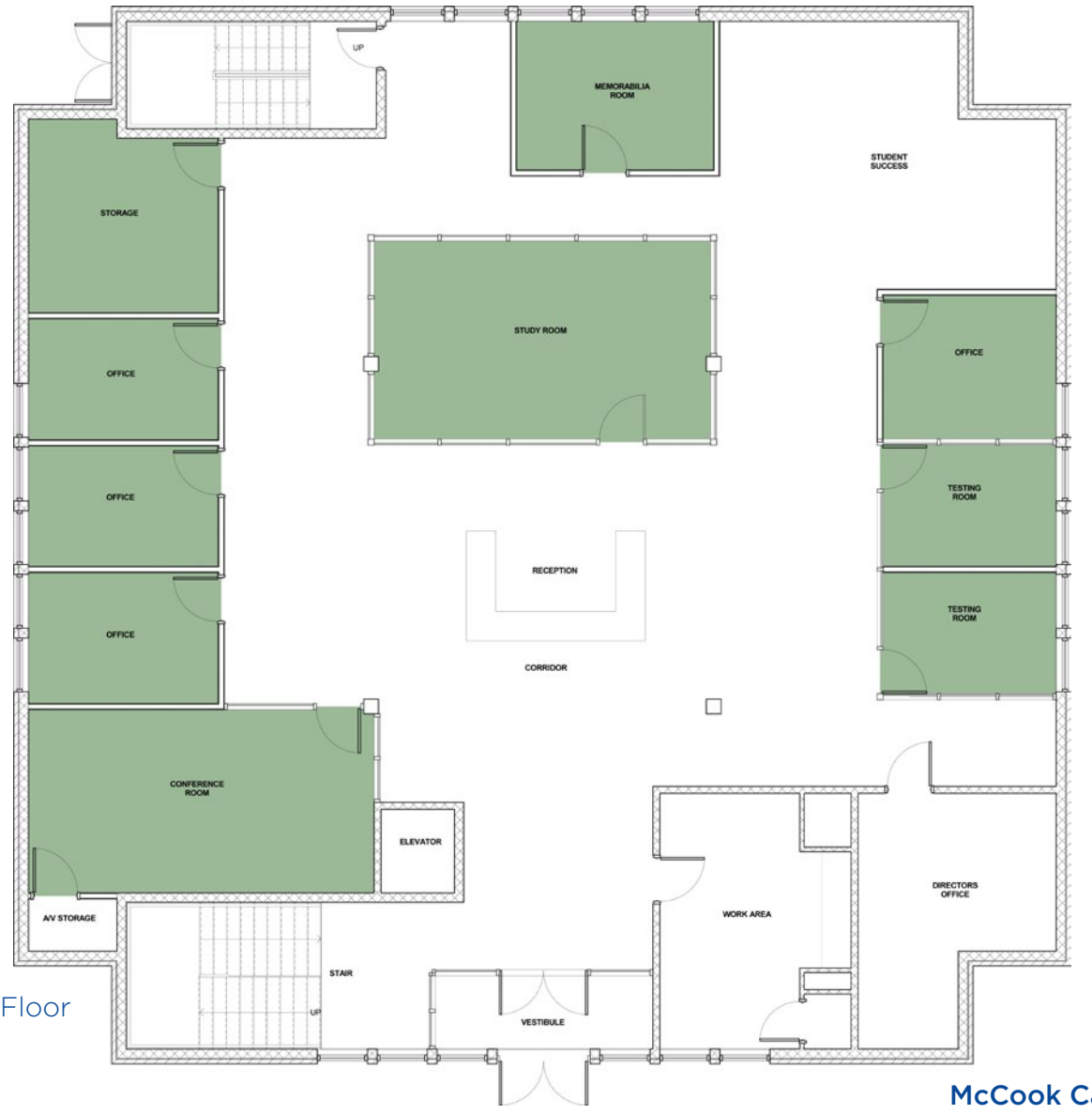
Project Rationale:

- Provide better access to testing and services
- Improve staffing efficiencies and student study areas

Projected Cost Estimate

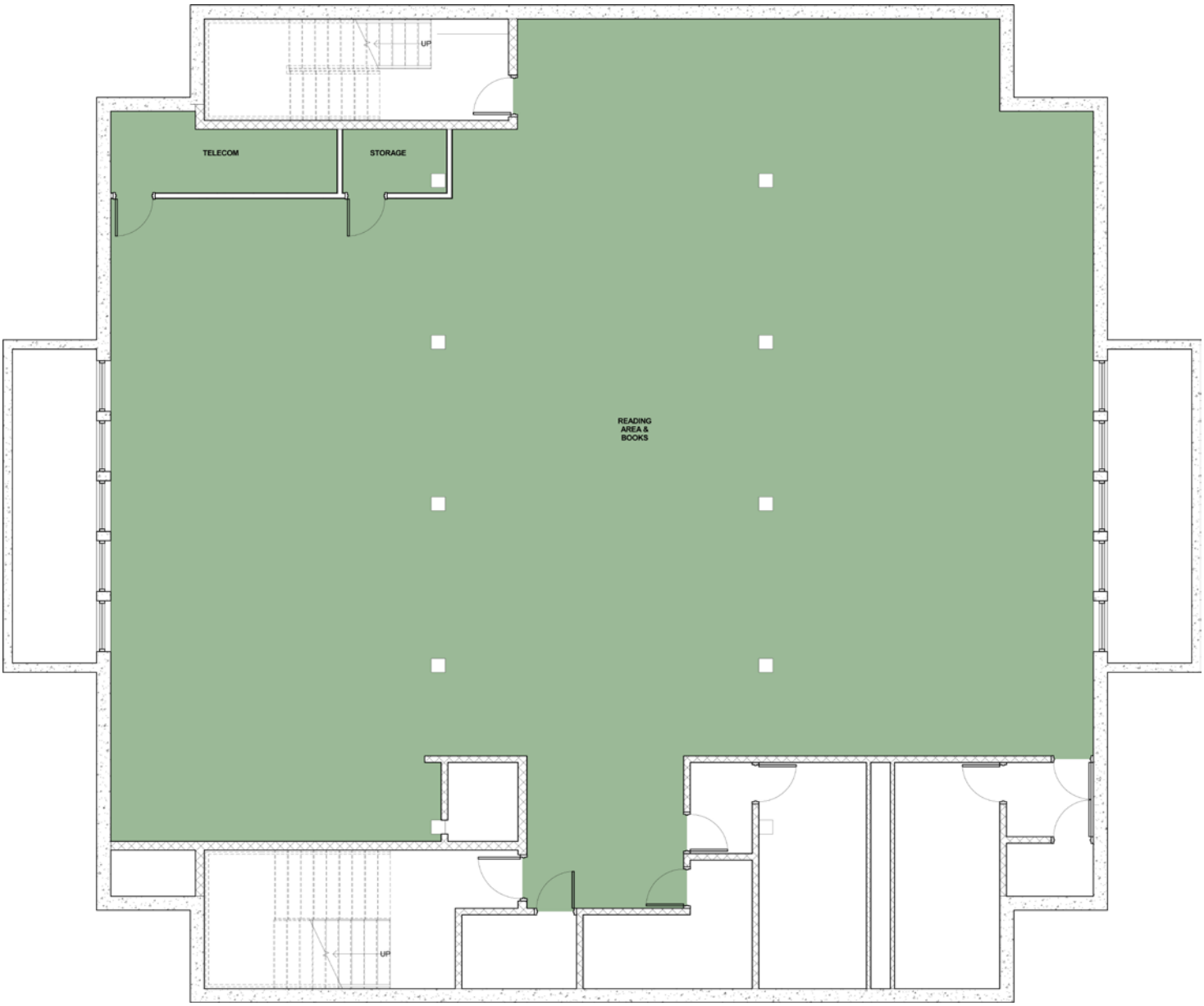
New Area	N/A
Cost per S.F.	N/A
Remodel Area	10,368 S.F.
Cost per S.F.	$35/S.F.
Total Construction Cost	**$365,000**
Furniture, Fees & Equipment	$25,000
Contingency (10%)	$10,000
Total Project Cost	**$400,000**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



First Floor

von Riesen Library



Basement

Existing HVAC Systems

Air Distribution Systems

The von Riesen Library is served by two Carrier rooftop units (RTUs). Each RTU is a packaged unit with DX cooling and natural gas heating. The RTUs both operate as constant volume airflow and are single zone units. The northwest RTU serves the basement and is rated at 7.5-tons cooling capacity and 224 MBH heating capacity. The southeast RTU serves the first floor and is rated at 12.5-tons cooling capacity and 250 MBH heating capacity. Both RTUs were installed circa 2007 and appear to be in marginal condition. The distribution duct work and accessories were installed circa 1970. There have been a significant amount of floor plan modifications to the basement since the HVAC system was installed. The basement has areas that are used as offices and as computer testing centers for students. It appears as though the HVAC system was not modified or balanced to accommodate many of the floor plan and room use changes which has resulted in inadequate airflow and occupant comfort issues.

Temperature Controls

Each RTU has a dedicated digital programmable thermostat. There is no BMS installed at this facility.

HVAC Systems Proposed Scope of Work

Air Distribution Systems

It was reported while on site that MPCC has scheduled and budgeted to replace the existing RTUs circa 2019. If the building renovation is planned within the next 5 years (approx.), it is recommended that the RTU replacement is delayed so the RTUs and air distribution systems can be designed to accommodate the proposed new layout and use of the facility.
It is recommended that the northwest RTU serving the basement is replaced with a 10-ton (approx.) unit with single zone control. This unit should have humidity control including hot gas reheat to protect the condition of the materials in the library. The southeast unit should be replaced with a 12.5-ton (approx.) unit with multizone control. It is recommended that variable air volume (VAV) terminal units with reheat are provided for the first floor since this area will be modified to have offices, student areas, testing rooms, and a conference area. The proposed new telecom room should be provided with a dedicated ductless split HVAC system capable of low ambient operation.

Temperature Controls

It is recommended that a BMS is installed for this facility. The BMS should monitor the operation of the RTUs and should have thermostats for each HVAC zone. The lower level will be one zone and the first floor will have approximately 12-15 zones with dedicated thermostats connected to VAV boxes and reheat coils. The BMS should also connect to a campus wide facility management system.

Existing Plumbing Systems

Domestic Water Service

The facility is served by a 1-1/2” domestic water service and a 1” water meter. There is no backflow prevention device installed at the facility.

Water Treatment & Heating Equipment
There is no water treatment or conditioning system installed at the facility. A Reliance natural gas fired tank style domestic water heater provides hot water for the building. The water heater is rated at an input of 35.5 MBH and has a storage capacity of 40 gallons. The water heater was installed in 2012 and appears to be in good condition. There is no hot water recirculation system installed at the facility and a noticeable delay in hot water delivery was observed while on site.

Plumbing Fixtures
The plumbing fixtures at this facility appear to meet current ADA standards and are in good condition.

Plumbing Systems Proposed Scope of Work

Domestic Water Service
No proposed scope.

Water Treatment & Heating Equipment
Provide a hot water circulation pump and a piping loop with automatic flow control valves. The pump shall be controlled by a combination timer/aquastat and shall be monitored by the new building management system.

Plumbing Fixtures
Provide new ADA compliant electric water coolers to accommodate the new space layout.

Existing Fire Protection System
There is no existing fire protection system installed at the facility.

Fire Protection System Proposed Scope of Work
At a minimum, a fire protection system shall be installed for the basement level. However, it is recommended that the fire protection system is installed to protect the entire facility. It is recommended that the fire protection system is a wet pipe sprinkler system installed per NFPA requirements that consists of the following items: a new city water service sized to accommodate the sprinkler system, riser with backflow protection and all valves, distribution piping, and sprinklers.

Existing Electrical System

Electrical Service
The building appears to be serviced from overhead power distribution located on the west side of the building. Power then enters the building underground within a shared electrical/custodial/mechanical room located within the basement. The building has (3) main service disconnects. Service disconnect 1 is a 225/3 circuit breaker at 208y/120v 3p 4w and provides primary electrical service to all of the distribution in the building. Service disconnects 2 and 3 are dedicated to the fire alarm system and the exit lights. Best practice today would be to provide internal battery backup for exit signs and the fire alarm system, eliminating the dedicated disconnects.

Electrical Distribution Equipment
It would appear that generally all of the electrical distribution serving the building is located within the shared electrical/custodial/mechanical room in the basement. The gear appears

to be of various generations but is generally aged and past its useful life. Many of the panels are showing signs of corrosion. Several locations on the panels have been provided with non-UL listed components.

Electrical System Proposed Scope of Work

Electrical Service

We would anticipate that the electrical load produced by the building would remain very similar to what it is today. The existing utility primary should remain adequate to serve the renovation. The renovated building will be provided with a single service secondary combining the (3) current disconnects in place today. New exit light and fire alarm systems will have local battery backup. We are currently anticipating a 600/3-800/3 service to serve this building.

Electrical Distribution Equipment

The entire building will be remodeled for the most part and we would recommend including a full replacement of the existing electrical distribution system. New panels would be provided as required to best accommodate branch circuit needs within the facility.

Existing Lighting Systems

Interior Lighting

Much of the existing interior lighting within the building has been upgraded to LED technology. The fixtures appear to be in good condition.

Interior Egress Lighting

The building does appear to be provided with adequate battery powered egress lighting to accommodate the current floor plan.

Exit Signage

Exit signage appears to be adequate within the basement but could use another sign or two on the main level.

Exterior Lighting

Exterior lighting appears to be fairly new and utilizes LED technology.

Exterior Egress Lighting

NFPA 101 now requires that egress lighting served from a backup source be provided to public way once you exit the building. It did not appear that a battery source was included within the new exterior lights. Egress lighting would be required moving forward.

Lighting Controls

Interior lighting controls appeared to utilize mostly manual controls. The State Energy Code requires that automatic lighting controls be provided. The building renovation would be designed in compliance with associated requirements.

Lighting Systems Proposed Scope of Work

Interior Lighting

Where renovating nearly all of the building, the Owner would have the option to remove, clean, reinstall existing light fixtures, or provide new light fixtures. In our experience it is a fractional additional cost to replace fixtures vs reusing fixtures.

Interior Egress Lighting
New interior egress lighting would be provided to accommodate a renovation project. Interior egress lighting provided within renovated areas or building additions would be provided for all paths of egress in compliance with NFPA 101. The egress lighting system designed to serve the building will be comprised of a central battery inverter serving remote fixtures throughout the facility. Where fixtures will be required to be controlled with other lighting within a space, emergency lighting relays will be provided.

Exit Signage
Exit signs will be provided throughout egress paths directing patrons to egress. The exit sign system will also be connected to the central battery inverter providing the Owner with a single point of maintenance and testing within the system.

Exterior Lighting
Exterior lighting located on the existing building will be reused where possible. New exterior egress lighting will supplement existing lighting as needed. LED technology will be continued within new fixtures with control schemes provided in compliance with governing State Energy Codes.

Exterior Egress Lighting
New exterior egress lighting will be provided at each egress location and will provide illumination to public way in compliance with NFPA 101.

Lighting Controls
Lighting controls serving renovated areas will be provided in compliance with governing State Energy Codes. Generally the system will include centralized intelligence, occupancy sensor detection for individual spaces, manual controls, daylighting components, photocell, and a timeclock.

Existing Fire Alarm Systems
The building is equipped with a fire alarm system. It did appear that some detection and notification devices were in place but generally coverage was not provided in compliance with current standards.

Fire Alarm Systems Proposed Scope of Work
As a part of this construction project, the fire alarm system would be replaced in its entirety with a system capable of serving the total square footage for the project. Smoke detection and notification device coverage would be provided in compliance with NFPA 72 and 101.

Special Systems

Data and Voice Systems
Network, phone, and user electronics would be system components provided directly by the Owner and were not necessarily reviewed as a part of this assessment. Electronics will require being modified to accommodate this project but generally equipment capacities should remain very similar to current conditions.
Cabling and jack assemblies have been located to accommodate the needs of the Owner today. Under a renovation project, cabling, jacks, and support equipment would likely all require being replaced to accommodate the new floor plan layout.

Security Systems

The building currently has a door access system to serve exterior doors. This system could remain in place and be utilized to accommodate a renovation project as well as be expanded to serve additional devices.

The building currently has a camera system serving public areas. This system would be adjusted to accommodate the building renovation. Physical camera assemblies would be upgraded to current models.

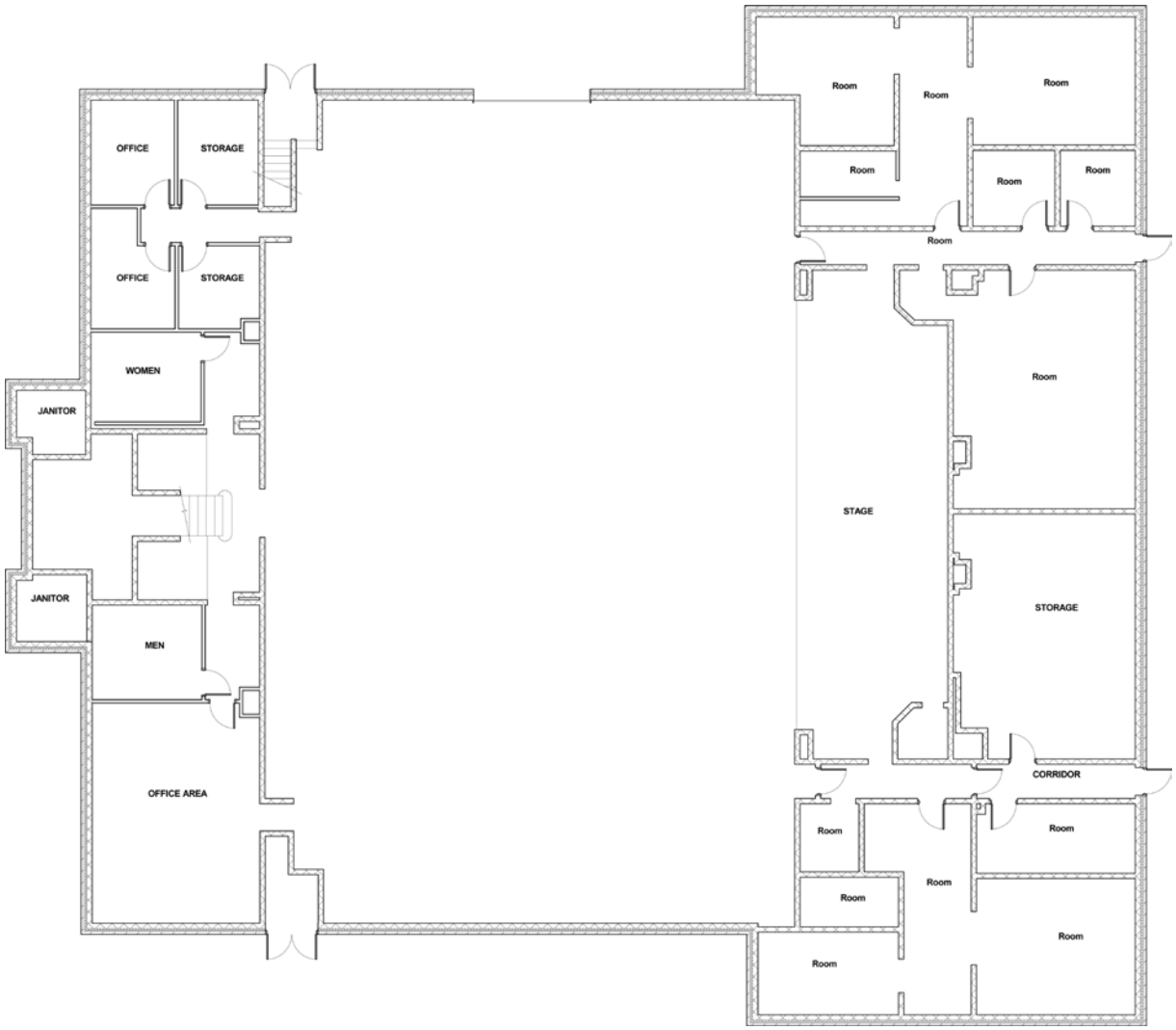
Audio Visual Systems

Audio Visual systems will be provided to support the renovation. It is anticipated that all learning spaces as well as presentation locations will be provided with either a projector or television for display. Associated cabling and components will be provided to support display activities.

Opinion of Probable Cost for Proposed MEP Scope of Work

Inflation, contingencies, tax, and contractor overhead and profit have attempted to be accounted for in the preliminary opinions of probable construction cost below. However, these opinions are preliminary and conceptual and only represent a general order of magnitude to be used for planning purposes only. These opinions are not bids, guaranteed maximum prices, or anything of that nature.

True Hall



True Hall
469 East M Street

Building Area: 17,200 S.F.

Site Area: 0.585 acres

Year Constructed: 1939

Renovations/Remodels: 1987

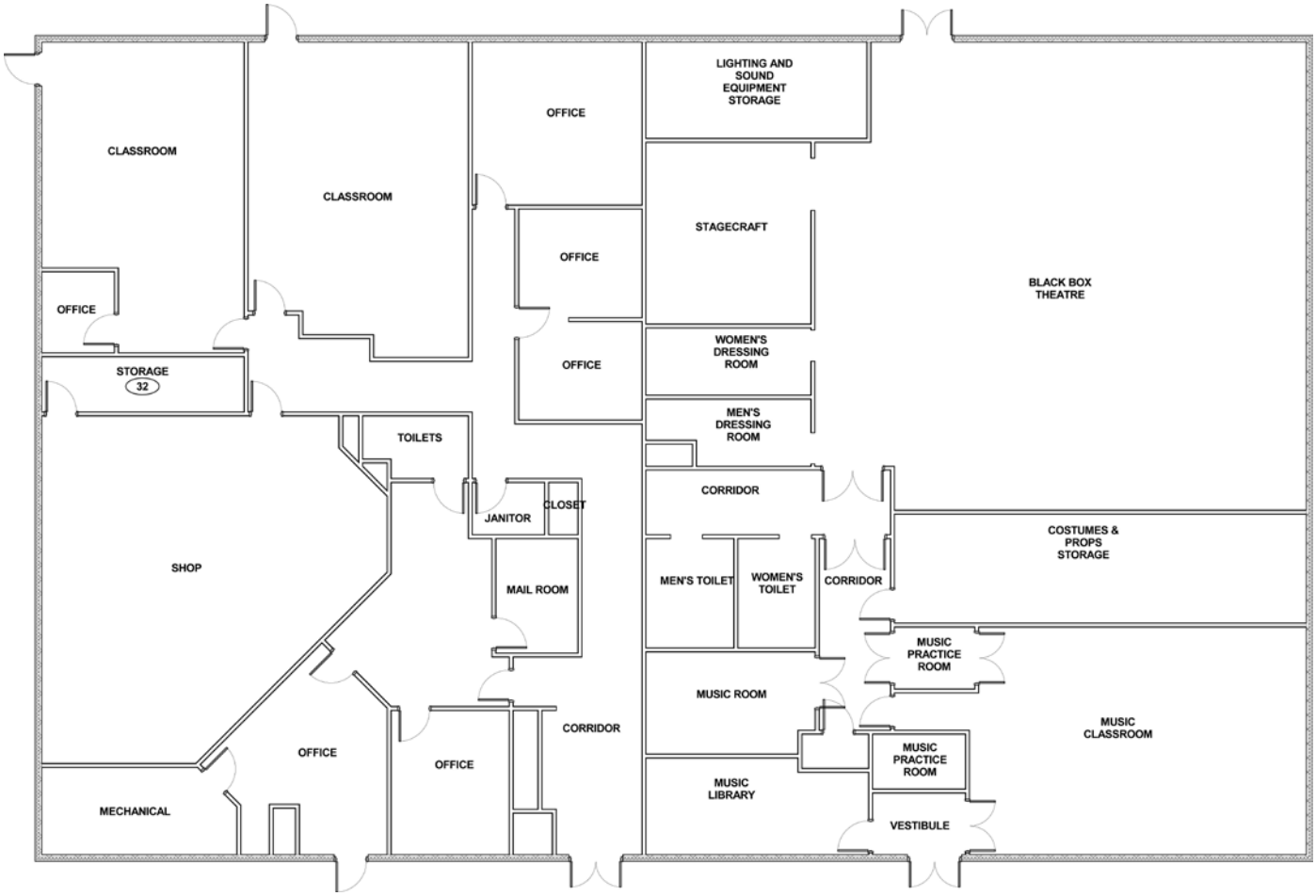
Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 2
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

Tipton Hall



Tipton Hall
513 E M Street

Building Area: 10,316 S.F.

Site Area: 0.66 acres

Year Constructed: 1979

Renovations/Remodels: 2005

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- To be demolished once East Campus is finished
- Becomes green space
- Demolition Costs = $54,720 (Includes cost for regrading and seeded turf grass)

Barnett Hall



Barnett Hall
519 East I Street

Building Area: 16,316 S.F.

Site Area: 0.63 acres

Year Constructed: 1972

Renovations/Remodels: 1

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 2
Basement: 0

Renovation Summary:

- Upstairs classrooms in need of finish upgrades
- Minor technology upgrades needed

Program Needs Summary: N/A

Walsh-Brady Hall



Walsh-Brady Hall
575 East L Street

Building Area: 20,802 S.F.

Site Area: 0.62 acres

Year Constructed: 1987

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 2
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- New, renovated space for graphic design when nursing/EMS move to East Campus

Project Rationale:

- Provide appropriate and better program space
- Better align and compete with peer institutions.

Projected Cost Estimate

New Area	N/A
Cost per S.F.	N/A
Remodel Area	1,550 S.F.
Cost per S.F.	$140/S.F.
Total Construction Cost	**$217,000**
Furniture, Fees & Equipment	$43,400
Contingency (10%)	$21,200
Total Project Cost	**$282,100**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Walsh-Brady Hall

Existing HVAC Systems

Air Distribution Systems
Walsh-Brady Hall is served by four York residential style HVAC systems with high efficiency natural gas auxiliary furnaces and remote air to air heat pumps. These units include modulating gas heat and variable speed EC fan motors. Each unit is rated at a gas input of 60 MBH and an efficiency of 97.5%. The heat pumps are rated at 5-tons of cooling capacity. These units were installed circa 2014 and appear to be in good condition.
Each of the units serves approximately ¼ of the building. Two units serve the lower level and two serve the upper level. The distribution duct work and accessories were installed circa 1986 and appear to be in acceptable condition.

Temperature Controls
Each HVAC system has multiple averaging room temperature sensors that communicate back to a master thermostat. There is no BMS installed at this facility.

HVAC Systems Proposed Scope of Work

Air Distribution Systems
The HVAC equipment can remain as is for the proposed renovation. The supply air and return air duct will be modified to accommodate the renovations and the new use of the area. The existing storage room and classroom will be combined into a single graphic design lab, the nursing lab will become a green room, and the offices will be updated.

Temperature Controls
The room temperature sensors will be relocated to accommodate the new use of the area. It is also recommended that a BMS is installed for this facility to monitor the operation of the HVAC systems. The BMS should also connect to a campus wide facility management system.

Existing Plumbing Systems

Domestic Water Service
The facility is served by a 2" domestic water service and a 2" water meter. There is no backflow prevention device installed at the facility.

Water Treatment & Heating Equipment
A Clack Corporation water softener with electric control valve is installed at the facility and serves only the domestic hot water system. The water softener does not have a bypass. An American Water Heater Company natural gas fired tank style domestic water heater provides hot water for the building. The water heater has a storage capacity of 40 gallons and appears to be in good condition. There is a hot water recirculation system installed at the facility and it appears to be in good operating condition.

Plumbing Fixtures
The plumbing fixtures and restrooms in the area of the renovation are aged but do appear to meet ADA standards.

Plumbing Systems Proposed Scope of Work

Domestic Water Service
No proposed scope.

Water Treatment & Heating Equipment
No proposed scope.

Plumbing Fixtures
The existing sink in the nursing lab that will be converted to a green room will be removed. All water, sanitary, and vent piping will be removed and capped at the nearest active main.

Existing Fire Protection System
There is no existing fire protection system installed at the facility.

Fire Protection System Proposed Scope of Work
The proposed scope of the renovation does not warrant the installation of a fire protection system. However, it is recommended that the installation of a fire protection system is considered in the future.

Existing Electrical System

Electrical Service
The building is currently serviced from a ground pad mount transformer located on the west side of the building. The transformer then feeds into the building at 208y/120v 3p 4w and enters a wireway located within a basement shared mechanical and electrical room. Within the wireway, the main service secondary conductors are terminated on a set of lugs and busway. A total of (6) panels are then fed from the wireway with each panel having its own service disconnect. Upon general review, it would appear the current installation is compliant with governing regulations.

Electrical Distribution Equipment
Electrical distribution serving the proposed area of renovation appears to all be located within the shared basement electrical/mechanical room. The overall condition of the panels look to be good. Parts appear to still be available within the industry and breaker capacity is available to serve new loads.

Electrical System Proposed Scope of Work

Electrical Service
In reviewing the proposed project, it is intended that construction will consist of primarily a renovation within the basement to add a graphic design area. Given there is not a building addition being provided as a part of this project, it would appear that the existing service capacities should be adequate to serve this project and no modifications are required.

Electrical Distribution Equipment
Existing electrical distribution will be utilized to accommodate the renovated area. Existing circuit breakers made available as a part of demolition will be utilized to serve new loads. Spare circuit breakers will be utilized in addition as necessary.

Existing Lighting Systems

Interior Lighting
The lighting within the proposed renovated area appears to either use T8 technology or retrofitted LED technology. The fixtures appear to be in good condition and are adequately serving the space.

Interior Egress Lighting
Egress lighting within the existing area to be renovated is not currently required and does not appear to be in place.

Exit Signage
The current renovated areas do no require exit signage and exit signage does not appear to be in place.

Exterior Lighting
Exterior lighting was not reviewed as a part of this assessment given the proposed project is an internal renovation.

Exterior Egress Lighting
Exterior lighting was not reviewed as a part of this assessment but based on other buildings on the campus, exterior egress lighting is likely required to be added.

Lighting Controls
Interior lighting controls appeared to utilize mostly manual controls. The State Energy Code requires that automatic lighting controls be provided. Renovations would be designed in compliance with associated requirements.

Lighting Systems Proposed Scope of Work

Interior Lighting
The Owner would have the option to remove, clean, reinstall existing light fixtures, or provide new light fixtures. In our experience it is a fractional additional cost to replace fixtures vs reusing fixtures.

Interior Egress Lighting
New interior egress lighting would be provided to accommodate a renovation project. Interior egress lighting provided within renovated areas would be provided for all paths of egress in compliance with NFPA 101. The egress lighting system designed to serve the building will be comprised of a central battery inverter serving remote fixtures throughout the facility. Where fixtures will be required to be controlled with other lighting within a space, emergency lighting relays will be provided.

Exit Signage
Exit signs will be provided throughout egress paths directing patrons to egress. The exit signage system will also be connected to the central battery inverter providing the Owner with a single point of maintenance and testing within the system.

Exterior Lighting
Exterior lighting would not be included as a part of this project.

Exterior Egress Lighting
New exterior egress lighting would be recommended at each egress location to provide illumination to public way in compliance with NFPA 101.

Lighting Controls
Lighting controls serving renovated areas will be provided in compliance with governing State Energy Codes. The system will include occupancy sensor detection for individual spaces, manual controls, and daylighting components.

Existing Fire Alarm Systems

The building is equipped with a fire alarm system. It did appear that some detection and notification devices were in place but generally coverage was not provided in compliance with current standards.

Fire Alarm Systems Proposed Scope of Work

As a part of a construction project, the existing fire alarm system would be expanded to accommodate the project area. Smoke detection and notification device coverage would be provided in compliance with NFPA 72 and 101.

Special Systems

Data and Voice Systems

Network, phone, and user electronics would be system components provided directly by the Owner and were not necessarily reviewed as a part of this assessment. Electronics will require being modified to accommodate this project but generally equipment capacities should remain very similar to current conditions.

Infrastructure components were included as a part of this project. Generally it appears cabling and jack assemblies have been located to accommodate the needs of the Owner today. Under a renovation project, cabling, jacks, and support equipment would likely all require being replaced to accommodate the changing needs of the space.

Security Systems

The building currently has a door access system to serve exterior doors. This system could remain in place and be utilized to accommodate additional devices.

The building currently has a camera system serving public areas. This system would be adjusted to accommodate the building renovation. Physical camera assemblies would be upgraded to current models.

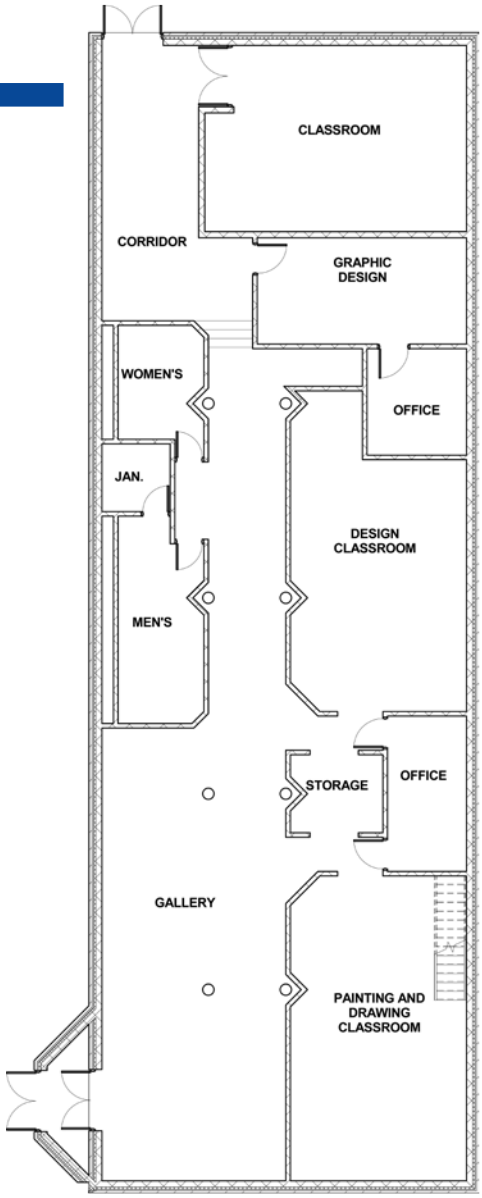
Audio Visual Systems

Audio Visual systems will be provided to support renovations and current teaching processes. It is anticipated that all learning spaces will be provided with either a projector or television for display. Associated cabling and components will be provided to support teaching activities.

Opinion of Probable Cost for Proposed MEP Scope of Work

Inflation, contingencies, tax, and contractor overhead and profit have attempted to be accounted for in the preliminary opinions of probable construction cost below. However, these opinions are preliminary and conceptual and only represent a general order of magnitude to be used for planning purposes only. These opinions are not bids, guaranteed maximum prices, or anything of that nature.

Wrightstone



Wrightstone
1229 East 5th Street

Building Area: 4,840 S.F.

Site Area: 0.71 acres

Year Constructed: 1976

Renovations/Remodels: 2004*

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary:

- Renovate existing gallery and art classrooms to allow for more students and flexible learning spaces

Program Needs Summary:

- Move Graphic Design out of building into Walsh-Brady
- Option to expand Wrightstone to add music and theatre departments, if they don't move to East Campus

Project Rationale:

- Place all of fine and performing arts programs in one building.
- Current music program spaces are inadequate and not on par with peer institutions.

Projected Cost Estimate

New Area	12,566 S.F.
Cost per S.F.	$275/S.F.
Remodel Area	4,680 S.F.
Cost per S.F.	$186/S.F.
Total Construction Cost	**$4,288,050**
Furniture, Fees & Equipment	$762,903
Contingency (10%)	$429,805
Total Project Cost	**$5,490,758**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Existing HVAC Systems

Air Distribution Systems

The Wrightstone building is primarily served by two York rooftop units (RTUs). Each RTU is a packaged unit with DX cooling and natural gas heating. The RTUs both operate as constant volume airflow and are single zone units. Each unit is rated at 12.5-tons cooling capacity and 240 MBH heating capacity. Both units were installed circa 2012 and appear to be in good condition.

The sculpture/pottery art classroom is served by a dedicated residential style HVAC system. The system consists of a vertical fan coil unit (FCU) with auxiliary electric heating coil installed in a closet in the classroom. A remote air to air heat pump is installed on the roof and is connected to the FCU. This system was installed circa 2015 and appears to be in good condition.

The distribution duct work and accessories appear to be in acceptable condition with the exception of the graphic design classroom. This room has a significant number of computers and a high occupancy load but is served by the north RTU. The thermostat for the RTU is located in the art classroom south of the graphic design classroom. This layout causes significant issues with occupant comfort.

Temperature Controls

Both RTUs and the residential style system have a dedicated digital programmable thermostat. There is no building management system (BMS) installed at this facility.

HVAC Systems Proposed Scope of Work

Air Distribution Systems

The existing RTUs and associated distribution should remain as is. However, it is recommended that testing and balancing is performed to provide proper airflow to the area that is currently the graphic design classroom. The existing residential style FCU shall be relocated as required to accommodate the renovation but a majority of the distribution duct work can be left in place and reused.

It is recommended that the addition to the building is served by packaged RTUs similar to the equipment on the existing building. However, extra care should be taken during design to account for the acoustical impact of the HVAC system. The music classrooms, practice rooms, and black box theater are extremely sensitive to acoustics. HVAC design strategies such as decreased air velocity, extra duct elbows, and displacement ventilation should be implemented. It is recommended that the addition is served by four RTUs with approximate capacities of 12.5-tons (black box theater), 10-tons (gallery/corridor/restrooms), 5-tons (central music classroom/offices/practice rooms), and 5-tons (south music rehearsal classroom). It is recommended that the rooftop units are provided with variable capacity control (modulating compressors and modulating gas heat exchanger) and humidity control (hot gas reheat). Additionally, the roof curbs for the RTUs should include vibration isolation rails and insulation with drywall lagging to aid in noise control.

Temperature Controls

It is recommended that a BMS is installed for this facility. The BMS should monitor the operation of the RTUs and should have thermostats for each HVAC zone. The BMS should also connect to a campus wide facility management system.

Existing Plumbing Systems

Domestic Water Service
The facility is served by a 1-1/4" domestic water service and a 3/4" water meter. There is no backflow prevention device installed at the facility.

Water Treatment & Heating Equipment
There is no water treatment or conditioning system installed at the facility. A Reliance electric tank style domestic water heater provides hot water for the building. The water heater is rated at an input of 1.65 kW and has a storage capacity of 10 gallons. The water heater appears to be in good condition. There is no hot water recirculation system installed at the facility and a noticeable delay in hot water delivery was observed while onsite.

Plumbing Fixtures
The plumbing fixtures at this facility appear to meet current ADA standards and are in good condition.

Plumbing Systems Proposed Scope of Work

Domestic Water Service
The existing domestic water service should be removed and a new 2" (approx.) water service with backflow prevention device and water meter should be provided in the new mechanical room to serve the entire facility.

Water Treatment & Heating Equipment
The existing water heater should be removed and a new natural gas fired tank style domestic water heater should be provided in the new mechanical room. The new water heater should have storage of approximately 40 gallons and an input of 40 MBH. A hot water recirculation system should be installed to serve the new addition and the fixtures to remain in the existing building.

Plumbing Fixtures
The existing restrooms will be demolished to accommodate the new building addition. The new restrooms shall meet current ADA standards.

Existing Fire Protection System
There is no existing fire protection system installed at the facility.

Fire Protection System Proposed Scope of Work
A fire protection system should be installed to protect the entire facility. It is recommended that the fire protection system is a wet pipe sprinkler system installed per NFPA requirements that consists of the following items: a new city water service sized to accommodate the sprinkler system, riser with backflow protection and all valves, distribution piping, and sprinklers.

Existing Electrical System

Electrical Service
The building is currently serviced from a pad mount utility transformer located on the north side of the building. The service enters the building underground to a centrally located shared electrical/janitorial space located between the Men's and Women's Toilet Rooms.

The main service panel serving the building is a Square D distribution panel with breaker distribution and a 400/3 main circuit breaker acting as the service disconnect. The overall panel appears to show no signs of corrosion. The circuit breakers located within the panel are in working condition with no signs of defects but are likely reaching the end of their typical life in the industry. Spare parts will likely not be available in the near future. The panel does have some breaker capacity available but when looking at the proposed addition for this building, this panel will not be able to support a project of that magnitude and would require replacement.

Electrical Distribution Equipment
The current electrical distribution located within the building appeared to consist of a single Square D panelboard. This panel is located within the same electrical room as the main service panel. This panel does not appear to show any signs of corrosion. This panel utilizes circuit breakers that are still available in the industry but will likely no longer be manufactured in coming years. This panel does not have any physical capacity remaining and would likely not be utilized to serve the building addition.

Electrical System Proposed Scope of Work

Electrical Service
In reviewing the proposed addition, a new electrical service would be required. A new pad mount transformer sized as necessary would be provided on the north side of the building and again be fed from the utility overhead lines routing east/west along the north side of the site. The service to the building would be provided as 208y/120v 3p 4w. A new electrical room would be required within the addition. Given the size of the addition, we would anticipate the new electrical main would consist of a switchboard with a main circuit breaker. For estimating purposes we are assuming a 1200A-1600A service at this time. Along with the new service, an updated grounding system would be provided in compliance with governing regulations.

Electrical Distribution Equipment
New electrical distribution would be provided to accommodate the building addition as well as backfeed the existing building. Electrical panelboards would be provided to accommodate branch circuit loads with larger loads routed back to the service main switchboard.

Existing Lighting Systems

Interior Lighting
The interior lighting serving the building appears to consist of several different styles. The primary lighting source serving learning spaces utilizes T5 fluorescent technology while hallways utilize incandescent technology. T5 lighting is current within the industry though slowly being phased out with LED technology. The physical condition of the T5 lighting appeared to be good.
Incandescent lighting technology is an older very inefficient technology that is being phased out of the industry. In most cases incandescent lighting has a relatively short payback when upgrading to LED technology. LED lighting is currently the lighting technology that we would recommend for all new projects as the energy savings is significant over both incandescent and fluorescent technologies. LED lighting utilizes a series of light emitting diodes (LED) in lieu of a lamp or bulb source. It would be recommended that as part of a larger project, that all lighting be upgraded to LED technology.

Interior Egress Lighting
There appears to be some interior battery style egress lighting in place but the code requires

that a minimum of 1 foot candle be provided for egress illumination for the entire path to the exit point from the building. Upon a visual review, it did not appear that adequate egress lighting is present within the building.

Exit Signage
Exit signage appeared to be working and properly visible when entering the egress path for the building.

Exterior Lighting
Exterior lighting consisted of a mix of newer LED wall packs as well as older style metal halide wall packs. The lights appeared to be working with no known deficiencies. The LED wall packs were in excellent condition and the metal halide wall packs were in moderate condition.

Exterior Egress Lighting
NFPA 101 now requires that egress lighting served from a backup source be provided to public way once you exit the building. It did not appear that a battery source was included within any of the exterior lights. Egress lighting would be required moving forward from each exit point to public way.

Lighting Controls
Interior lighting controls appeared to utilize mostly manual controls. The State Energy Code requires that automatic lighting controls be provided. Renovations or building additions would be designed in compliance with associated requirements.
Exterior building lighting appeared to be controlled with a photocell and time clock. This control method is code compliant.

Lighting Systems Proposed Scope of Work

Interior Lighting
New lighting provided within renovated areas and building additions would utilize LED technology. LED technology is 50% more efficient than most incandescent and T12 fluorescent technology and is 15% more efficient than T8 and T5 fluorescent technology. Lighting would be designed as required for each application and space type. Lighting levels would be provided in accordance with the IES Guidelines and Owner requirements. Energy demand would be designed in accordance with governing Energy Codes.

Interior Egress Lighting
Interior egress lighting provided within renovated areas and building additions would be provided for all paths of egress in compliance with NFPA 101. The egress lighting system designed to serve the building will be comprised of a central battery inverter serving remote fixtures throughout the facility. Where fixtures will be required to be controlled with other lighting within a space, emergency lighting relays will be provided.

Exit Signage
Exit signs will be provided throughout egress paths directing patrons to egress. The exit signage system will also be connected to the central battery inverter providing the Owner with a single point of maintenance and testing within the system.

Exterior Lighting
LED exterior lighting located on the existing building will be reused where it does not interfere with the building addition. New exterior egress lighting serving the addition as well as existing metal halide light locations, will be designed to look similar to the existing building. LED technology will be utilized with control schemes provided in compliance with governing State Energy Codes.

Exterior Egress Lighting
New exterior egress lighting will be provided at each egress location and provide illumination to public way in compliance with NFPA 101.

Lighting Controls
Lighting controls serving renovated areas and building additions will be provided in compliance with governing State Energy Codes. Generally the system will include centralized intelligence, occupancy sensor detection for individual spaces, manual controls, daylighting components, photocell, and a timeclock.

Existing Fire Alarm Systems
The building is equipped with a fire alarm system. It did appear that some detection and notification devices were in place but generally coverage was not provided in compliance with current standards.

Fire Alarm Systems Proposed Scope of Work
As a part of a construction project, the fire alarm system would be replaced in its entirety with a system capable of serving the total square footage for the project. Smoke detection and notification device coverage would be provided in compliance with NFPA 72 and NFPA 101.

Special Systems

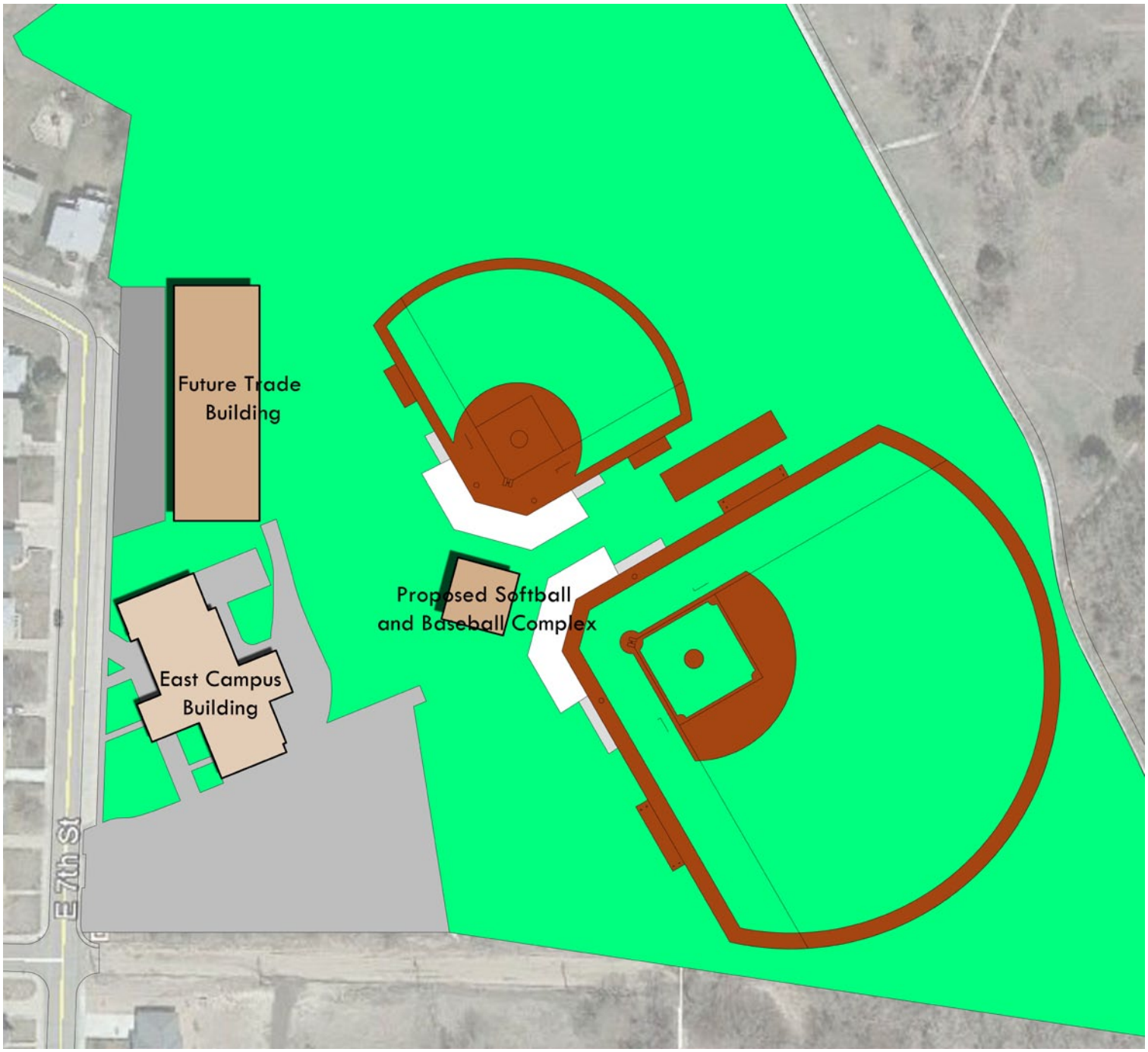
Data and Voice Systems
Network, phone, and user electronics would be system components provided directly by the Owner and were not necessarily reviewed as a part of this assessment. Electronics will require modifications and expansions to accommodate this project.
Infrastructure components were included as a part of this assessment. Generally it appears cabling and jack assemblies have been located to accommodate the needs of the Owner today. Under a renovation or building addition project, cabling, jacks, and support equipment would likely all require replacement.

Security Systems
The building currently has a door access system. This system would likely be replaced and upsized to serve a renovation and building addition project.
The building currently has a camera system serving public areas. This system would be adjusted and expanded to serve a building addition. Physical camera assemblies would be upgraded to current models.

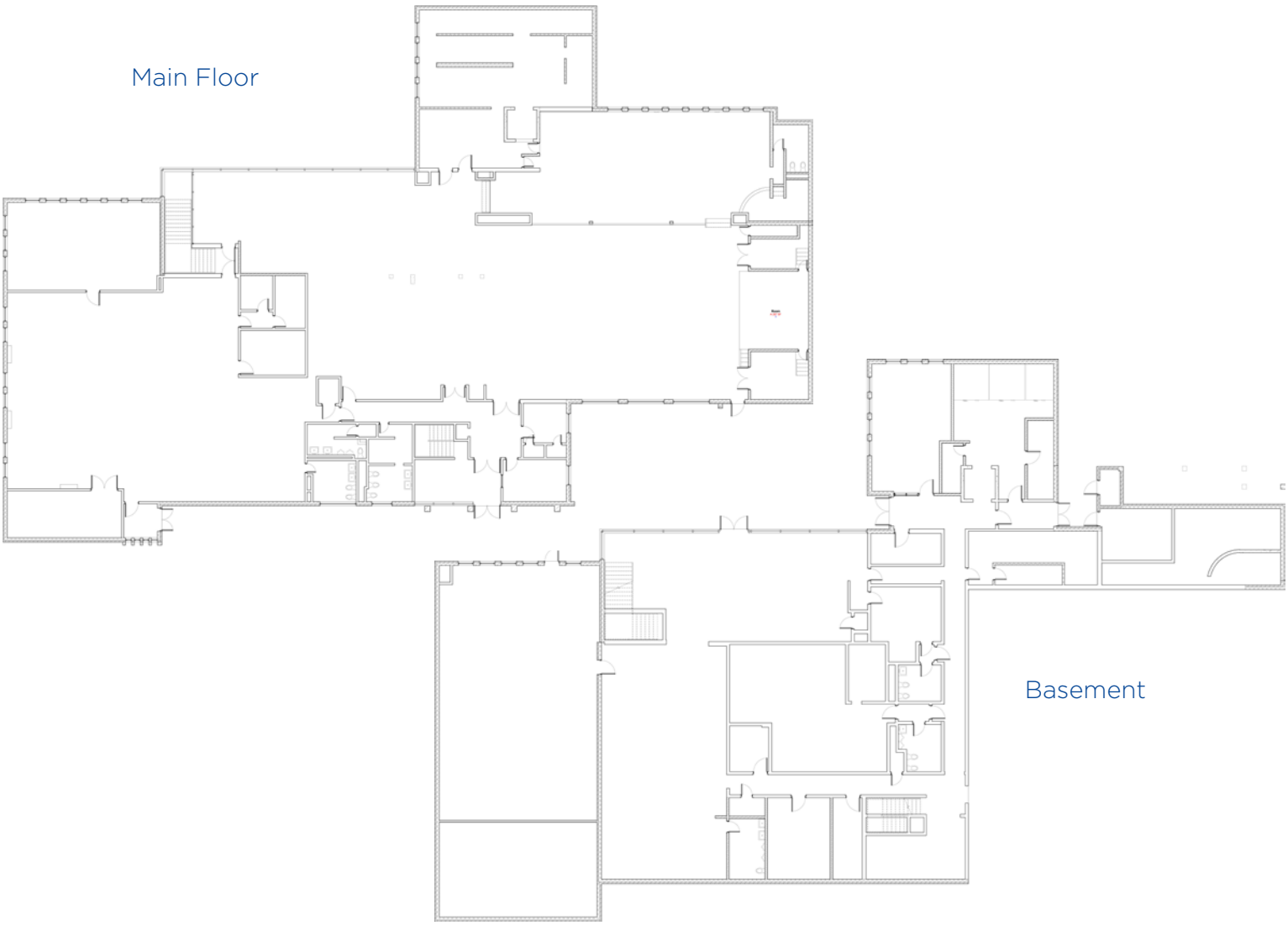
Audio Visual Systems
Audio Visual systems will be provided to support renovations and building additions to support the current teaching processes of the facility. It is anticipated that all learning spaces will be provided with either a projector or television for display teaching. Associated cabling and components will be provided to support teaching activities.

Opinion of Probable Cost for Proposed MEP Scope of Work
Inflation, contingencies, tax, and contractor overhead and profit have attempted to be accounted for in the preliminary opinions of probable construction cost below. However, these opinions are preliminary and conceptual and only represent a general order of magnitude to be used for planning purposes only. These opinions are not bids, guaranteed maximum prices, or anything of that nature.

McCook Campus - East



East Campus (Former Elks Club Building)



East Campus Building
905 East 7th Street

Building Area: 26,340 S.F.

Site Area: 17.59 acres

Year Constructed: 1955

Renovations/Remodels: 2

Additions: 2
Year Constructed: 1968
Square Feet: N/A

Number of Floors: 1
Basement: 1

Renovation Summary:

- Complete renovation, including interior partition walls, doors, ceilings, flooring, casework, and mechanical, plumbing, electrical, life safety, and technology.
- Replace parking lot

Program Needs Summary:

- Add Music and Theatre
- Move Nursing from Walsh-Brady
- Move Fire Science, EMS and EMT programs
- Add apartments for non-traditional students

Project Rationale:

- Need adequate program space
- Modern facilities comparable to industry standards
- Comparable to peer institutions
- Available, structural sound building

East Campus (Former Elks Club Building)

Projected Cost Estimate	
New Area	N/A
Cost per S.F.	N/A
Remodel Area	26,340 S.F.
Cost per S.F.	$235/S.F.
Total Construction Cost	**$6,189,900**
Furniture, Fees & Equipment	$1,114,185
Contingency (10%)	$618,990
Total Project Cost	**$7,923,072**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Main Floor

Basement


VISITOR LOCKER ROOM
STORAGE
EXIST. MECH
EXIST. MECH
EXIST. MECH
CORRIDOR
CORRIDOR
CLASSROOM
REFEREE LOCKER ROOM
CORRIDOR
CORRIDOR
WOMEN'S TOILET
CLASSROOM
CLASSROOM
MEN'S TOILET
CORRIDOR
ELEVATOR
CLASSROOM
CLASSROOM
EXIST. MECH

Existing HVAC Systems

Primary Systems
The East Campus building is served by a multitude of mechanical systems including a hot water boiler. The boiler, hot water pumps, exhaust flue, and all associated equipment are in extremely poor condition.

Air Distribution Systems
This building is served by several different styles of air handling units including residential style gas furnaces with remote condensing units, packaged rooftop units, and cabinet heaters. All systems and the associated equipment is in extremely poor condition and a significant amount of the equipment has been abandoned in place. The distribution duct work for the facility is in extremely poor condition.

Piping Systems
The hot water distribution piping for the building is in extremely poor condition with obvious signs of corrosion and leaks.

Temperature Controls
There is a mixture of some electric controls and pneumatic controls. It appears as though none of the control equipment is in proper operating condition and a significant amount of the equipment has been abandoned.

HVAC Systems Proposed Scope of Work

Primary Systems
All existing equipment should be removed from the building. Based on the size and proposed future use of the facility, it is recommended that a geothermal loop or a California loop (hot water boiler and cooling tower) is installed as a primary heating and cooling source for the building. However, the proposed systems are preliminary recommendations and there are numerous good alternative system types that could be applied to this facility based on the project budget and Owner preferred system types. Other potential system types include variable refrigerant flow (VRF), variable air volume with reheat, or packaged rooftop units.
If a geothermal system is preferred, it will consist of approximately 60 bores at 300 FT depth each. It is recommended that a test bore and conductivity test are performed before determining the exact quantity and depth of the geothermal bores.
If a California loop is selected, it will consist of two high efficiency condensing boilers each rated at approximately 600 MBH and a closed circuit cooling tower rated for approximately 90-tons of cooling capacity.
For both primary loop types, two base mounted end suction centrifugal pumps should be provided to distribute water to the building and the primary equipment. These pumps should be controlled by variable frequency drives to minimize energy consumption and wear on components. These pumps would be sized at approximately 20 HP each.

Air Distribution Systems
All existing equipment should be removed from the building. For either primary system selection, water source heat pumps will be provided to heat and cool the individual room spaces. Each classroom should have a dedicated unit. It is recommended that classroom units are vertical style located in closets to promote easy maintenance and service. Each bedroom should also have an individual dedicated unit. Bedroom units could be either console style units or horizontal units in the ceiling with an exposed face. If connected to a

geothermal system, the heat pumps should be specified to have an extended temperature operation range.
It is recommended that rooftop mounted energy recovery ventilators (ERVs) are installed to provide the code required ventilation and exhaust air for the facility. These ERVs will be packaged units with DX cooling, natural gas heating, and desiccant energy recovery wheels.

Piping Systems
All existing equipment should be removed from the facility. An entirely new network of heat pump loop piping will be installed for the building. Each heat pump should receive an automatic flow control valve and a 2-way temperature control valve. Schedule 40 steel piping with insulation to meet current energy code will be specified.

Temperature Controls
All existing equipment should be removed from the facility. It is recommended that a BMS is installed for this facility. The BMS should monitor the operation of all HVAC equipment and should have thermostats for each HVAC zone. The BMS should also connect to a campus wide facility management system.

Existing Plumbing Systems

Domestic Water Service
The facility is served by a 2" domestic water service and a 2" water meter. There is no backflow prevention device installed at the facility.

Water Treatment & Heating Equipment
There is an existing water softener and multiple existing domestic water heaters installed in the facility. All equipment is in extremely poor condition.

Plumbing Fixtures
The plumbing fixtures and equipment throughout the building are in extremely poor condition and do not meet current ADA standards.

Plumbing Systems Proposed Scope of Work

Domestic Water Service
All existing equipment should be removed from the facility. A new 3" (approx.) domestic water service with backflow prevention device and water meter should be provided to serve the entire building.

Water Treatment & Heating Equipment
All existing equipment should be removed from the facility. A new water softener should be provided to condition the domestic hot water service at minimum. If preferred, the softener could be sized to treat all domestic cold and hot water except for the service to hose bibbs and electric water coolers. Two new high efficiency natural gas fired tank style domestic hot water heaters should be provided to serve the entire facility. Each water heater should be sized at approximately 125 gallons of storage and 300 MBH input. A domestic hot water recirculation loop should be installed to decrease delays in hot water delivery times.

Plumbing Fixtures
All existing equipment should be removed from the facility. All new restrooms and public fixtures will be designed to meet current ADA standards.

Existing Fire Protection System

There is no existing fire protection system installed at the facility.

Fire Protection System Proposed Scope of Work

A fire protection system should be installed to protect the entire facility. It is recommended that the fire protection system is a wet pipe sprinkler system installed per NFPA requirements that consists of the following items: a new city water service sized to accommodate the sprinkler system, riser with backflow protection and all valves, distribution piping, and sprinklers.

Existing Electrical System

Electrical Service

The building is serviced from a ground pad mount transformer located on the east side of the building towards the south end of the building. In reviewing existing plans, this transformer replaced an existing set of (3) oil set single phase transformers that originally fed the building. The service secondary enters the building directly behind the transformer and feeds a wall mount two section fused distribution panelboard. The panelboard is manufacturer ITE and appears to be aged beyond its useful life. The board does not show immediate signs of corrosion but spare parts are likely no longer available.

Electrical Distribution Equipment

The building is equipped with several branch panels located throughout the building. Generally most panels appear to be of original vintage to the building. In most cases the existing distribution panels are beyond their useful life and should be replaced. New parts for most of the buildings electrical equipment is no longer available. Equipment located within the basement mechanical rooms appear to be in the worst shape with signs of major corrosion.

Electrical System Proposed Scope of Work

Electrical Service

The electrical service and associated equipment should be replaced in its entirety. A new main switchboard should be provided to serve the building sized in the range of 1600A-2000A depending on the final uses of the building. The new service would be 208y/120v 3p 4w. A new code compliant grounding system shall be provided with the new service into the building.

Electrical Distribution Equipment

Electrical distribution throughout the building should be replaced in its entirety as well. New equipment will be provided throughout the building to accommodate the needs of each space.

Existing Lighting Systems

Interior Lighting

The existing lighting within the building is comprised of a mix of incandescent and T12 fluorescent technologies. As a whole, the majority of the lighting within the building is beyond its useful life and should be replaced. There are some decorative light fixtures that could be refurbished and fitted with LED replacement lamps if maintaining the look of some of those fixtures is desired.

Interior Egress Lighting
The building is lacking egress lighting. There are some battery egress lighting units in place but they do not appear to be working. To maintain the building in its current state, new egress lighting should be added.

Exit Signage
The building has some exit signage in place but is lacking exit direction in many locations. It would be recommended to add exit signage to the building if it will be used in its current state.

Exterior Lighting
The exterior lighting serving the building appeared to be of the same vintage as the interior lighting and is generally at end of life.

Exterior Egress Lighting
NFPA 101 now requires that egress lighting served from a backup source be provided to public way once you exit the building. Egress lighting would be required moving forward.

Lighting Controls
Interior lighting controls appeared to utilize mostly manual controls. The State Energy Code requires that automatic lighting controls be provided. Renovations or building additions would be designed in compliance with associated requirements.

Lighting Systems Proposed Scope of Work

Interior Lighting
All lighting located within the building should be replaced with current LED technology in compliance with State Energy Codes. The lighting for each space will be designed in compliance with the IES guidelines and Owner requirements.

Interior Egress Lighting
New interior egress lighting would be provided to accommodate a renovation project. Interior egress lighting provided within renovated areas or building additions would be provided for all paths of egress in compliance with NFPA 101. The egress lighting system designed to serve the building will be comprised of a central battery inverter serving remote fixtures throughout the facility. Where fixtures will be required to be controlled with other lighting within a space, emergency lighting relays will be provided.

Exit Signage
Exit signs will be provided throughout egress paths directing patrons to egress. The exit sign system will also be connected to the central battery inverter providing the Owner with a single point of maintenance and testing within the system.

Exterior Lighting
Exterior lighting will be replaced in its entirety. New locations will be provided to best accommodate building egress and aesthetics of the building. LED technology will be utilized with control schemes provided in compliance with governing State Energy Codes.

Exterior Egress Lighting
New exterior egress lighting will be provided at each egress location and provide illumination to public way in compliance with NFPA 101.

Lighting Controls
Lighting controls serving renovated areas will be provided in compliance with governing State Energy Codes. Generally the system will include centralized intelligence, occupancy sensor detection for individual spaces, manual controls, daylighting components, photocell, and a timeclock.

Existing Fire Alarm Systems

Fire alarm components were not identified within the building. A building of this type would require a fire alarm and detection system.

Fire Alarm Systems Proposed Scope of Work

A new fire alarm system would be provided to serve the entire building. Smoke detection and notification device coverage would be provided in compliance with NFPA 72 and 101.

Special Systems

Data and Voice Systems
Network, phone, and user electronics would be system components provided directly by the Owner and would require 100% replacement for the building.
In reviewing infrastructure components such as IT cabling, jacks, and support equipment, all components have been identified as inadequate and would require being replaced in their entirety to best accommodate the space.

Security Systems
Functional security components were not identified within the building.
New camera and door access components would be provided in compliance with Owner standards.

Audio Visual Systems
Audio Visual systems will be provided to support current teaching processes as well as presentation locations. It is anticipated that all learning spaces as well as presenting locations will be provided with either a projector or television for display. Associated cabling and components will be provided to support display activities.

Opinion of Probable Cost for Proposed MEP Scope of Work

Inflation, contingencies, tax, and contractor overhead and profit have attempted to be accounted for in the preliminary opinions of probable construction cost below. However, these opinions are preliminary and conceptual and only represent a general order of magnitude to be used for planning purposes only. These opinions are not bids, guaranteed maximum prices, or anything of that nature.

East Campus Ballfield Complex

Projected Cost Estimate	
New Area	N/A
Cost per S.F.	N/A
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$3,500,000**
Furniture, Fees & Equipment	$595,000
Contingency (10%)	$350,000
Total Project Cost	**$4,445,000**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.

Project Rationale:

- Need for college level facilities on campus
- Comparable facilities to peer institutions
- Community support for the college



HVAC Systems Proposed Scope of Work

Air Distribution Systems
It is recommended that a combination of residential style HVAC units and packaged RTUs are installed to serve the proposed facility accommodates locker rooms, concessions, and press boxes. The RTUs should serve the locker rooms and all other spaces can be conditioned by residential style HVAC units with remote air to air heat pumps.

Temperature Controls
It is recommended that a BMS is installed for this facility. The BMS should monitor the operation of all HVAC equipment and should have thermostats for each HVAC zone. The BMS should also connect to a campus wide facility management system.

Plumbing Systems Proposed Scope of Work

Domestic Water Service
A new 2-1/2" (approx.) domestic water service with backflow prevention device and water meter should be provided to serve the entire building.

Water Treatment & Heating Equipment
A new water softener should be provided to condition the domestic hot water service at minimum. If preferred, the softener could be sized to treat all domestic cold and hot water except for the service to hose bibbs and electric water coolers. Two new high efficiency natural gas fired tank style domestic hot water heater should be provided to serve the entire facility. Each water heater should be sized at approximately 100 gallons of storage and 200 MBH input. A domestic hot water recirculation loop should be installed to decrease delays in hot water delivery times.

Plumbing Fixtures
All new restrooms and public fixtures will be designed to meet current ADA standards. A freezeproof yard hydrant should be installed at the batting cages for cleaning purposes.

Fire Protection System Proposed Scope of Work
No proposed scope.

Electrical System Proposed Scope of Work

Electrical Service
Prior to starting design and finalizing budgeting for this project, it would be recommended to have a site survey completed to identify if any unknown site utilities are located within the limits of construction. We are unable to identify any exact underground utilities that would require being relocated due to not having a locate performed at this time. Site utilities can get overlooked and result in large unidentified costs to a project.

Electrical Distribution Equipment
We would work with NPPD to extend primary utility down to the project site. We would likely provide a ground pad mount transformer to serve the main facilities with distribution from there to ensure coverage for concessions, press box, lockers, batting cages, and field lighting. The service secondary voltage would be 208y/120v 3p 4w.

Lighting Systems Proposed Scope of Work

Interior Lighting
Interior lighting serving the different areas would consist of LED lighting designed in compliance with the IES guidelines and Owner requirements.

Interior Egress Lighting
New interior egress lighting would be provided to accommodate the project. Interior egress lighting will utilize stand alone emergency egress lighting units.

Exit Signage
Exit signs will be provided throughout egress paths directing patrons to egress. Exit signs will have internal batteries within each light.

Exterior Lighting
Exterior lighting will be provided to best accommodate building egress. LED technology will be utilized with control schemes provided in compliance with governing State Energy Codes.

Exterior Egress Lighting
New exterior egress lighting will be provided at each egress location and provide illumination to public way in compliance with NFPA 101.

Lighting Controls
Lighting controls serving this project will be provided in compliance with governing State Energy Codes. Generally the system will include centralized intelligence, occupancy sensor detection for individual spaces, manual controls, daylighting components, photocell, and a timeclock.

Field Lighting
SES will work with a field lighting specialist to provide field lighting in compliance with current standards. Field lighting will likely utilize HID technology. Controls will be manual and installed in a secure locations. Egress lighting from the field is recommended to be provided served from a large battery inverter or small generator.

Fire Alarm Systems Proposed Scope of Work
A new fire alarm notification and detection system will be provided to serve new buildings as well as central public areas. Smoke detection and notification device coverage would be provided in compliance with NFPA 72 and 101.

Special Systems

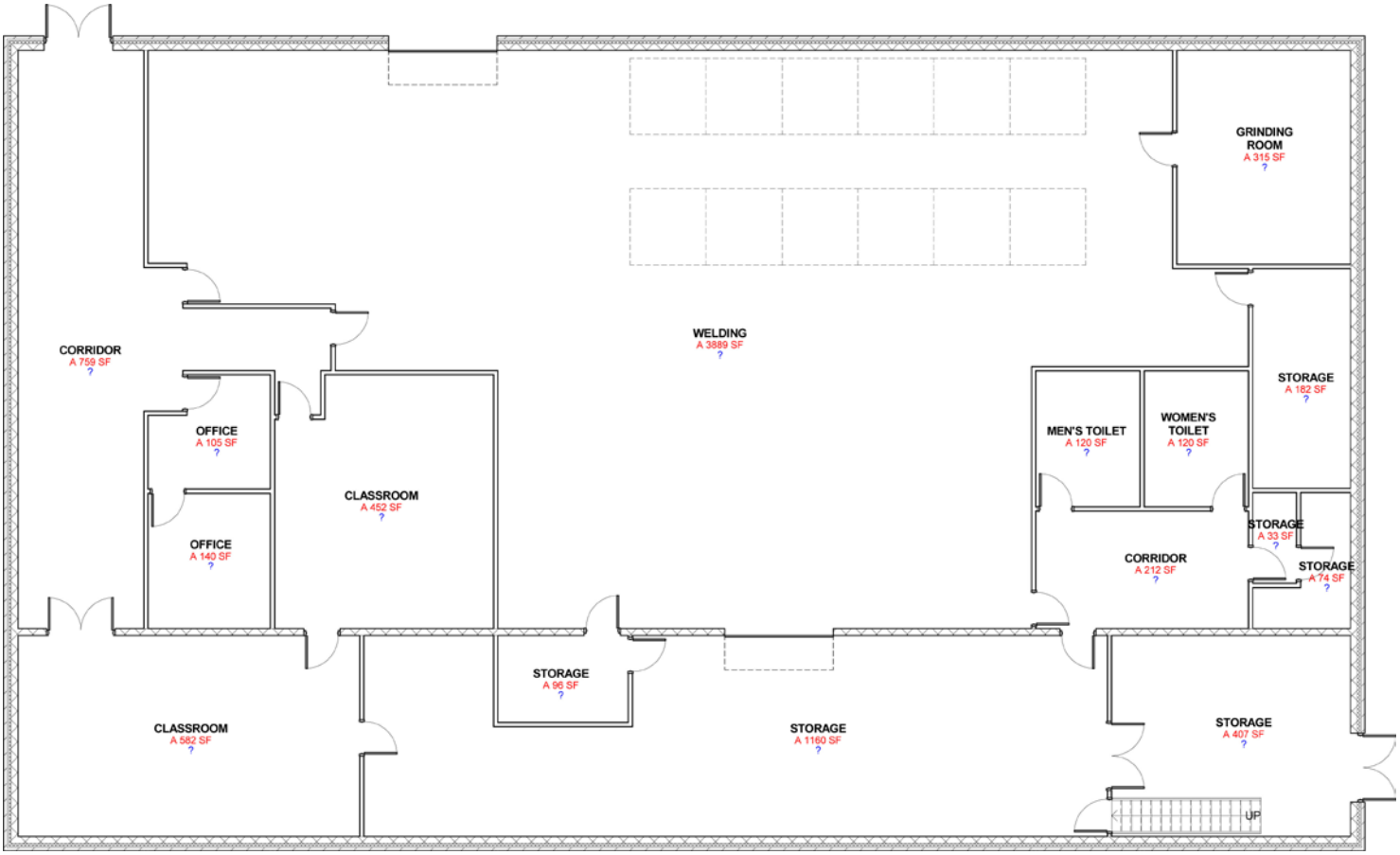
Data and Voice Systems
Network, phone, and user electronics would be system components provided directly by the Owner.
The internet and phone carriers will be required to extend services to the new building locations. Cabling, jack, and support components would be provided to accommodate the new facilities.

Security Systems
We will work with the Owner to provide new security camera and door access systems to serve the new facility in compliance with the requirements of the college.

Audio Visual Systems
A sound system will be provided to serve the fields with central annunciation at the press box. Connections to scoreboards will be included.

Opinion of Probable Cost for Proposed MEP Scope of Work
Inflation, contingencies, tax, and contractor overhead and profit have attempted to be accounted for in the preliminary opinions of probable construction cost below. However, these opinions are preliminary and conceptual and only represent a general order of magnitude to be used for planning purposes only. These opinions are not bids, guaranteed maximum prices, or anything of that nature.

Center for Applied Science & Technology (C.A.S.T.)



Center for Applied Science & Technology
226 Blue Star Memorial Highway

Building Area: 9,412 S.F.

Site Area: 18,765 sf

Year Constructed: 1970 (MPCC occupied in 2008)

Renovations/Remodels: 2008

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 1

Renovation Summary: N/A

Program Needs Summary:

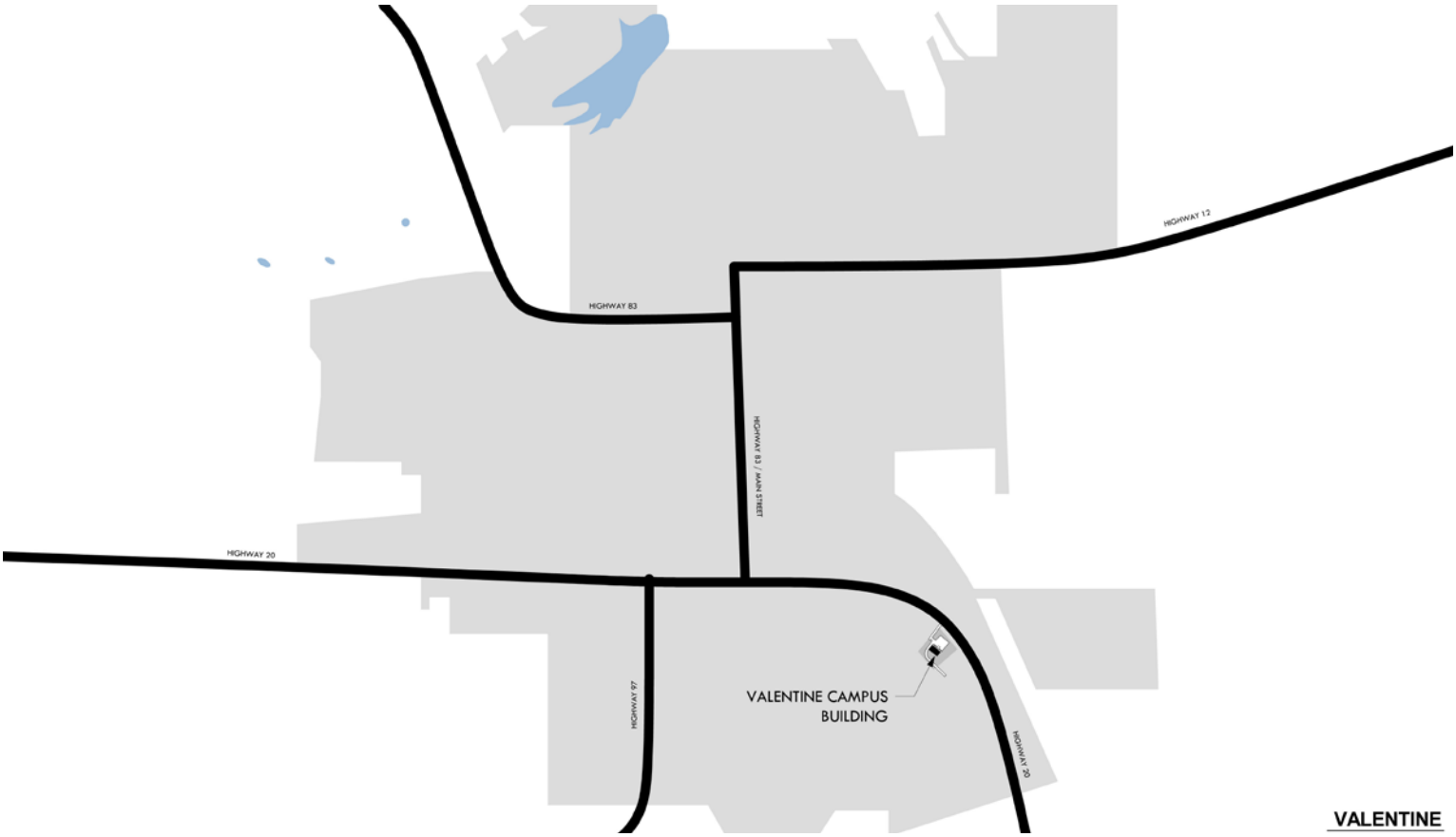
- Additional welding booths
- More space to expand program
- HVAC upgrades needed
- Not enough space to accomodate needs

Project Rationale:

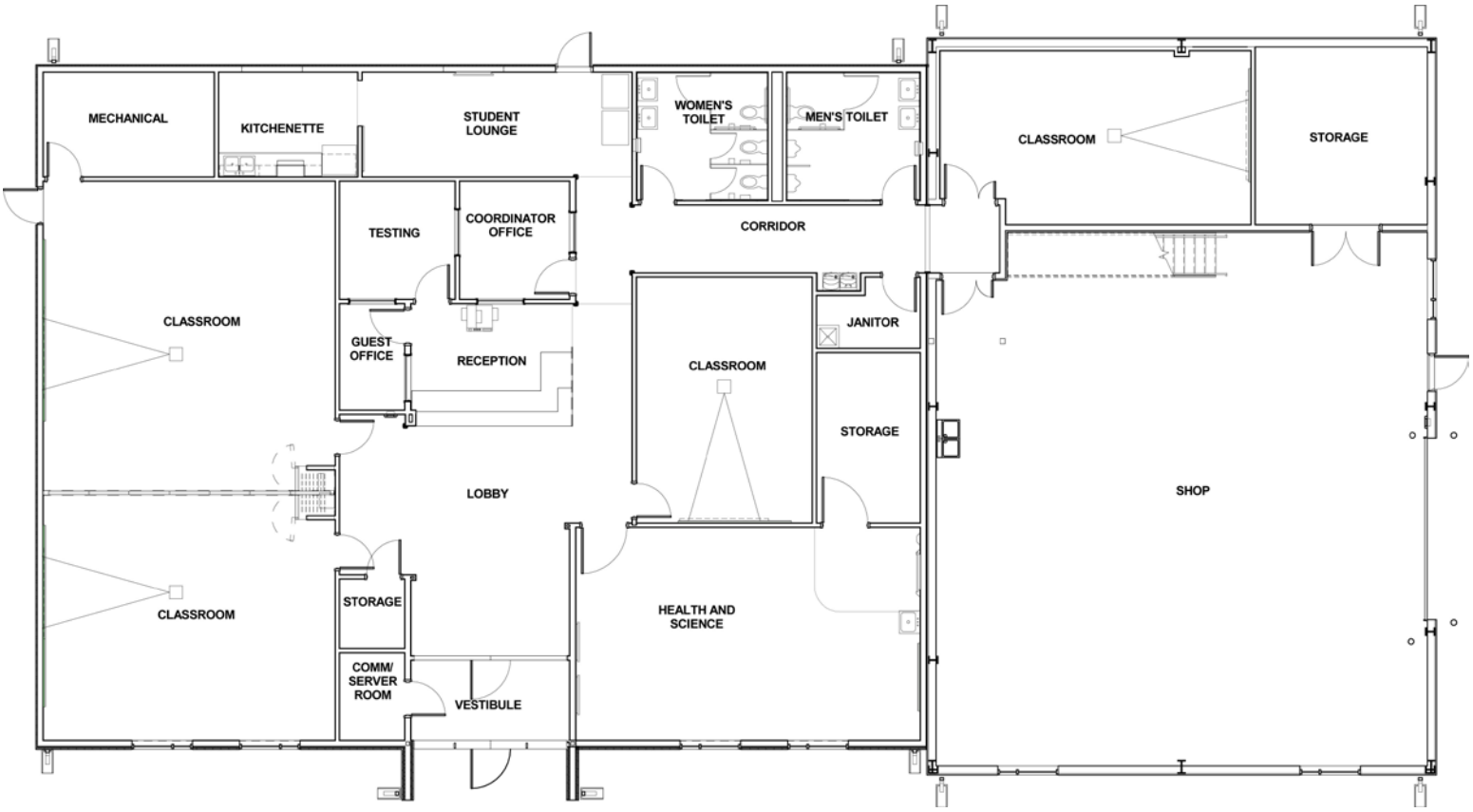
- Provide appropriate program spaces.

Projected Cost Estimate	
New Area	N/A
New East Campus Building Cost	$750,000
Remodel Area	N/A
Remodel Cost	$375,000
Total Construction Cost	**N/A**
Furniture, Fees & Equipment	$200,000
Contingency (10%)	$40,000
Total Project Cost	**N/A**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.


HIGHWAY 12
HIGHWAY 83
HIGHWAY 83 / MAIN STREET
HIGHWAY 20
HIGHWAY 97
VALENTINE CAMPUS
BUILDING
HIGHWAY 20
VALENTINE

Valentine Campus



Valentine Campus
715 East Highway 20

Building Area: 8,882 S.F.

Site Area: 2.19 acres

Year Constructed: 2017

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

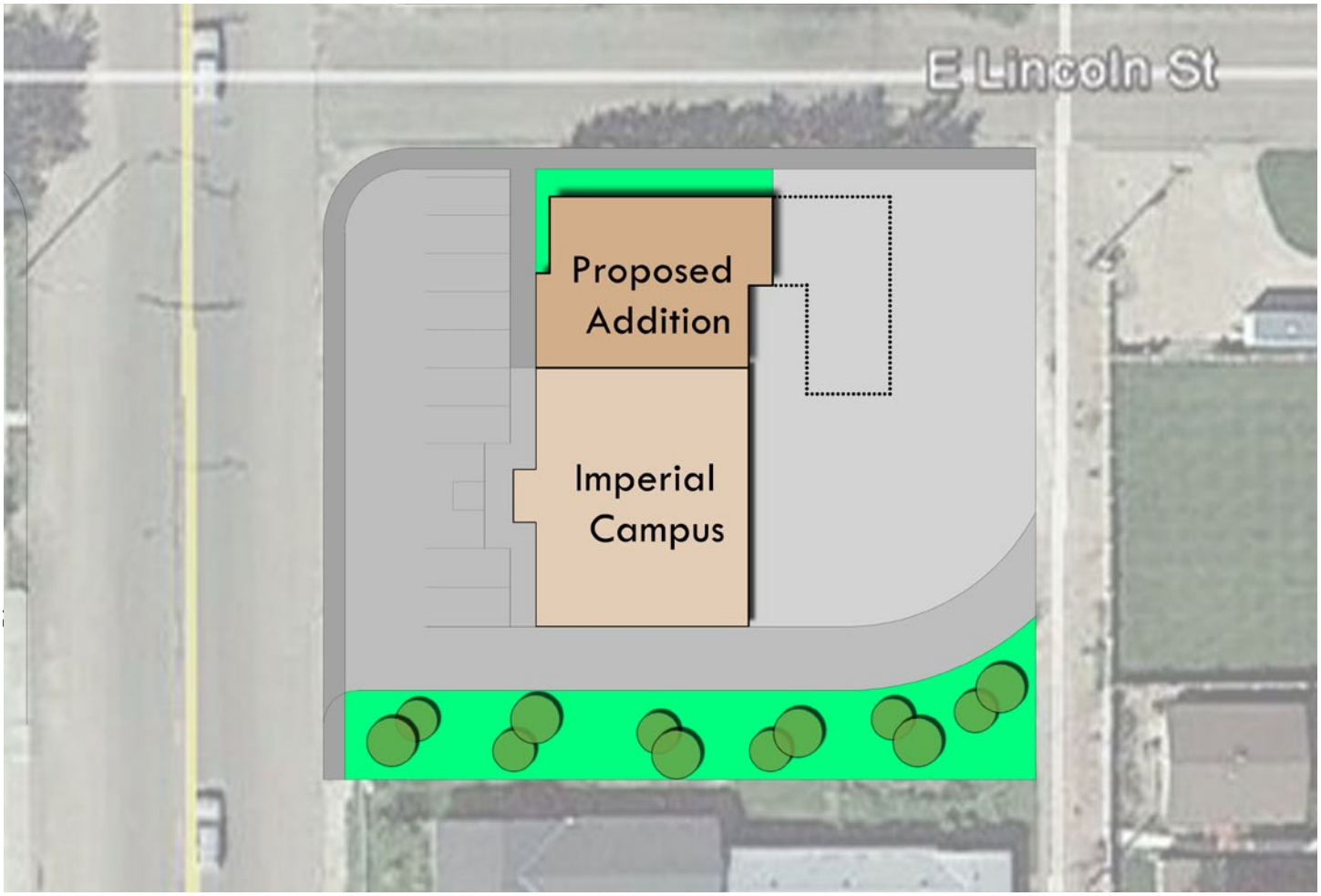
Number of Floors: 1
Basement: 0

Renovation Summary: N/A

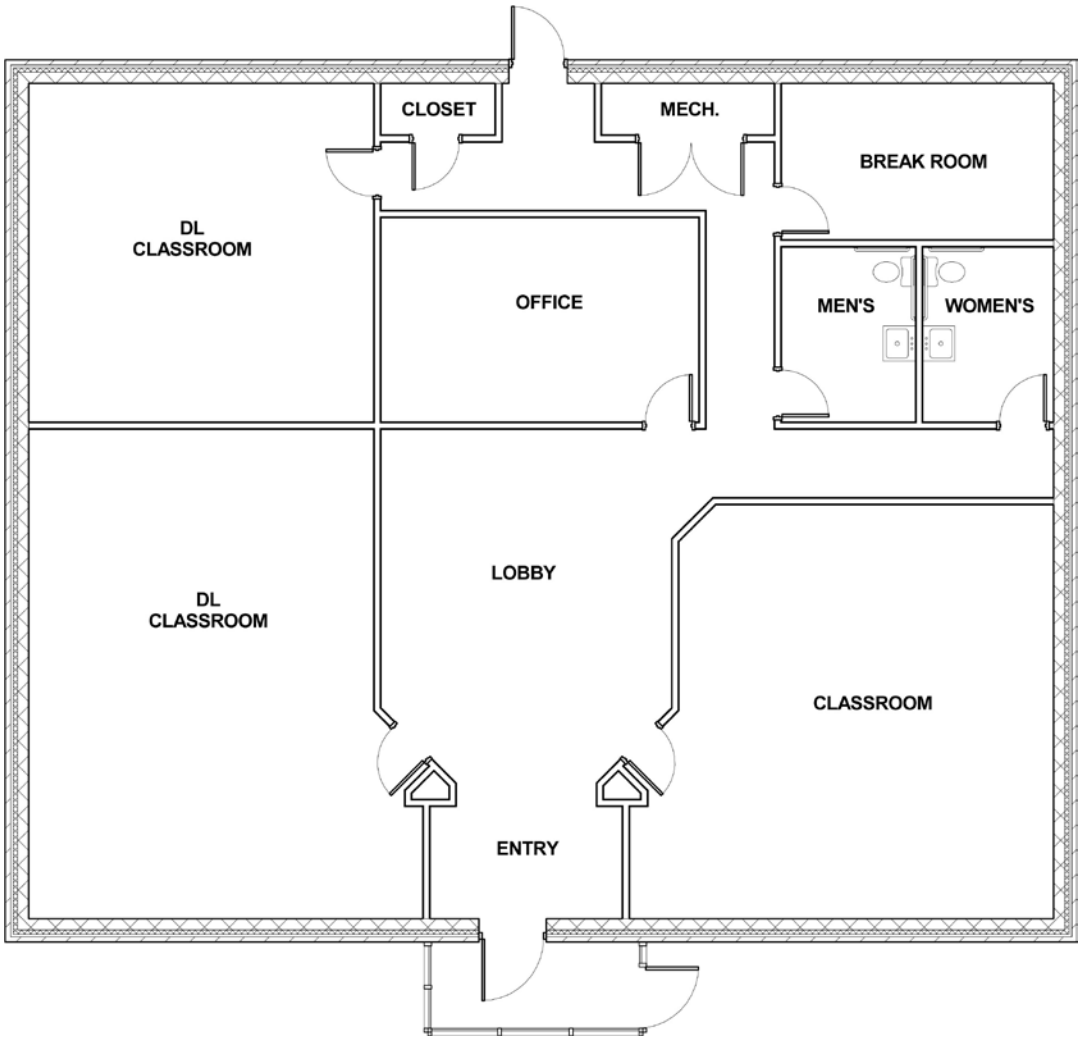
Program Needs Summary: N/A

Imperial Campus




E Lincoln St
Proposed Addition
Imperial Campus

Imperial Campus



Imperial Campus
1324 Broadway

Building Area: 3,070 S.F.

Site Area: 0.57 acres

Year Constructed: 2003

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

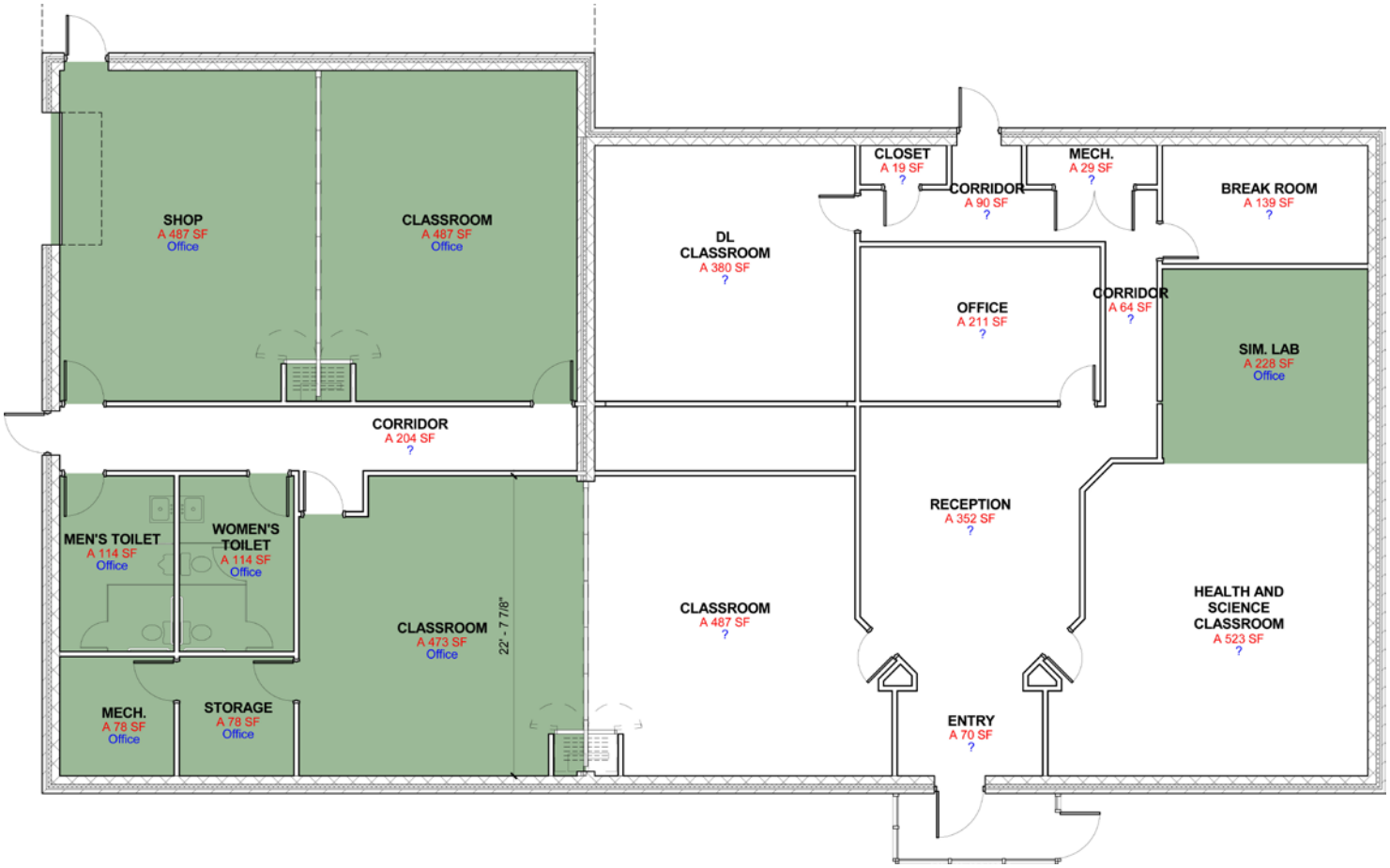
- Additional classrooms
- Nursing classrooms and simulation lab
- Shop area to offer technical classes
- More storage

Projected Cost Estimate

New Area	2,090 S.F.
Cost per S.F.	$275/S.F.
Remodel Area	227 S.F.
Cost per S.F.	$180/S.F.
Total Construction Cost	**$615,610**
Furniture, Fees & Equipment	$116,966
Contingency (10%)	$61,561
Total Project Cost	**$794,137**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.

Additional expansion area (2,340 SF) is estimated to have a construction cost of $643,500 ($275/SF)



Existing HVAC Systems

Air Distribution Systems

The Imperial Campus building is served by a single residential style HVAC system. The fan coil unit has a high efficiency natural gas fired auxiliary furnace with a remote air to air heat pump rated at 5-tons of cooling capacity. The HVAC equipment and distribution duct work appears to be in good condition.

Temperature Controls

The residential style system has a dedicated digital programmable thermostat. There is no building management system (BMS) installed at this facility.

HVAC Systems Proposed Scope of Work

Air Distribution Systems

The existing HVAC system should remain in place. Under option #1, both of the existing restrooms should be removed and converted into a Sim Lab. All exhaust systems should be removed and the existing HVAC system should be modified and extended to condition the new Sim Lab.

Under option #2, the existing women's restroom should be removed and converted into a Sim Lab. The exhaust system should be removed and the existing HVAC system should be modified and extended to condition the new Sim Lab.

Under both options, the movable partition between the existing distance learning classroom and the adjacent classroom will be removed and a hallway will be constructed. The existing HVAC system distribution should be modified to accommodate the renovation. A new residential style HVAC system with remote air to air heat pump should be installed to serve the new building addition. The new system should be rated at approximately 5-tons cooling capacity.

It is recommended that a supplemental heat source such as a gas fired unit heater or an electric unit heater should be installed in the shop.

Temperature Controls

It is recommended that a BMS is installed for this facility. The BMS should monitor the operation of the HVAC units and should have thermostats for each HVAC zone. The BMS should also connect to the McCook campus facility management system.

Existing Plumbing Systems

Domestic Water Service

The facility is served by a 3/4" domestic water service. There is no backflow prevention device installed at the facility.

Water Treatment & Heating Equipment

There is no water treatment or conditioning system installed at the facility. An A.O. Smith electric tank style domestic water heater provides hot water for the building. The water heater is rated at an input of 4.5 kW and has a storage capacity of 30 gallons. The water heater appears to be in good condition. There is no hot water recirculation system installed at the facility and a noticeable delay in hot water delivery was observed while onsite.

Plumbing Fixtures
The plumbing fixtures at this facility appear to meet current ADA standards and are in good condition.

Plumbing Systems Proposed Scope of Work

Domestic Water Service
The existing domestic water service should remain in place under both proposed scope of work options. Under option #1, the existing service should be extended to serve the new building addition. Under option #2, an additional 1" (approx.) water service with backflow prevention device and water meter should be provided in the new mechanical room to serve the building addition.

Water Treatment & Heating Equipment
The existing water heater should remain in place under both options. Under option #1, the existing water heater should serve the new building addition. Under option #2, a new natural gas fired tank style domestic water heater should be provided in the new mechanical room. The new water heater should have storage of approximately 30 gallons and an input of 40 MBH.

Plumbing Fixtures
One or both of the existing restrooms will be demolished to accommodate the renovation. Water, sanitary, and vent piping serving the demolished fixtures should be removed and capped at the nearest active main. The new restrooms shall meet current ADA standards.

Existing Fire Protection System
There is no existing fire protection system installed at the facility.

Fire Protection System Proposed Scope of Work
No proposed scope.

Existing Electrical System

Electrical Service
The building is currently served from overhead utility distribution located in the alley east of the building. There appears to be a single pole mount transformer serving the building. The electrical service appears to be 240/120v 1p 3w.

Electrical Distribution Equipment
The building is currently served from a single 200 amp electrical panel with a 200/2 main service disconnect. The panel appears to be in great physical condition and is still modern in the industry. The panel is lacking physical breaker space and likely will not be able to support the addition.

Electrical System Proposed Scope of Work

Electrical Service
The addition will be provided with a new electrical service likely in the 400 amp range at 240/120v 1p 3w. The utility will likely need to adjust the size of the transformer serving the building.

Prior to starting design and finalizing budgeting for this project, it would be recommended to have a site survey completed to identify if any unknown site utilities are located within the limits of construction. We are unable to identify any exact underground utilities that would require being relocated due to not having a locate performed at this time. Site utilities can get overlooked and result in large unidentified costs to a project.

Electrical Distribution Equipment
A new panelboard will be located within the building addition and backfeed the existing panel. The NEC will require that we have a single service to this building at our current voltage.

Existing Lighting Systems

Interior Lighting
Existing lighting systems appear to utilize T8 technology. The existing lighting appears to be in excellent condition and will be modified as required to accommodate the project.

Interior Egress Lighting
No interior egress lighting was identified within the building and would be required to be added to comply with current requirements.

Exit Signage
Exit signage appeared to be in place with no known deficiencies.

Exterior Lighting
Exterior lighting serving the building was comprised of LED wall packs controlled by a photocell. The lighting appeared to be in excellent condition.

Exterior Egress Lighting
NFPA 101 now requires that egress lighting served from a backup source be provided to public way once you exit the building. Egress lighting would be required moving forward.

Lighting Controls
Interior lighting controls appeared to utilize mostly manual controls. The State Energy Code requires that automatic lighting controls be provided. Renovations or building additions would be designed in compliance with associated requirements.

Lighting Systems Proposed Scope of Work

Interior Lighting
New lighting provided within renovated areas or building additions would utilize LED technology. Lighting would be designed as required for each application and space type. Lighting levels would be provided in accordance with the IES Guidelines and Owner requirements. Energy demand would be designed in accordance with governing Energy Codes.

Interior Egress Lighting
Interior egress lighting provided within renovated areas or building additions would be provided for all paths of egress in compliance with NFPA 101. The egress lighting system designed to serve the building will be comprised stand alone emergency lighting units.

Exit Signage
Exit signs will be provided throughout egress paths directing patrons to egress. The exit sign system will also be connected to the central battery inverter providing the Owner with a single point of maintenance and testing within the system.

Exterior Lighting
Exterior lighting located on the existing building will be reused where it does not interfere with the building addition. New exterior egress lighting serving the addition will be designed to look similar to the existing building. LED technology will be utilized with control schemes provided in compliance with governing State Energy Codes.

Exterior Egress Lighting
New exterior egress lighting will be provided at each egress location and will provide illumination to public way in compliance with NFPA 101.

Lighting Controls
Lighting controls serving renovated areas and building additions will be provided in compliance with governing State Energy Codes. Generally the system will include centralized intelligence, occupancy sensor detection for individual spaces, manual controls, daylighting components, photocell, and a timeclock.

Existing Fire Alarm Systems
The building is not currently equipped with a fire alarm and detection system.

Fire Alarm Systems Proposed Scope of Work
The learning spaces will not require a fire alarm system be added to the building. Depending on the use of the shop space, a fire alarm and detection system may be required.

Special Systems

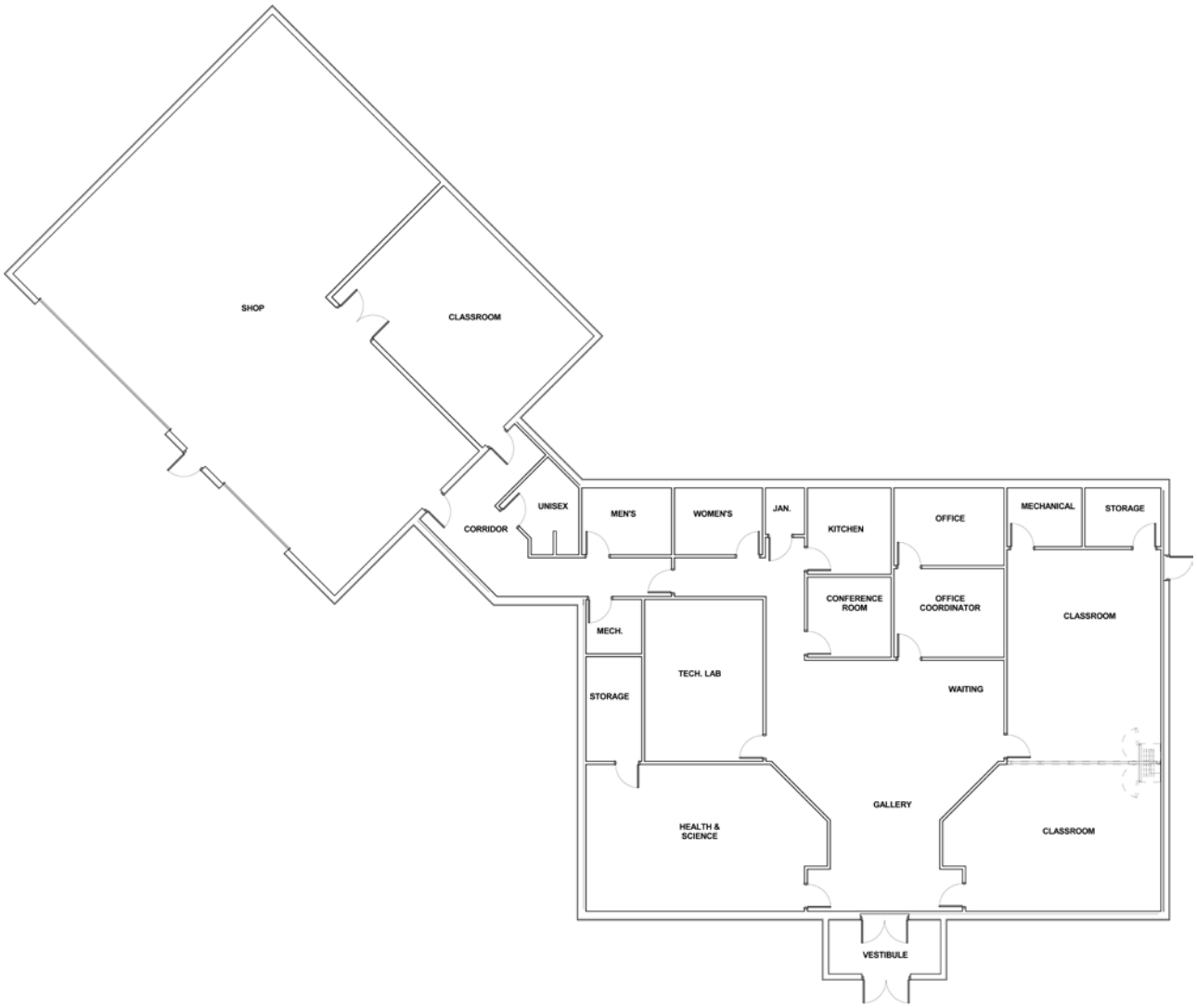
Data and Voice Systems
Network, phone, and user electronics would be system components provided directly by the Owner and were not necessarily reviewed as a part of this assessment.
IT infrastructure components such as cabling, jacks, and support equipment will be provided to serve the addition. Existing systems will be expanded as necessary.

Security Systems
The existing camera system serving the building will be expanded to serve the building addition.
A door access system will be provided to serve the building as required by the Owner.

Audio Visual Systems
Audio Visual systems will be provided to accommodate renovations and building additions to support current teaching processes as well as presentation locations. It is anticipated that all learning spaces as well as presenting locations will be provided with either a projector or television for display. Associated cabling and components will be provided to support teaching activities.

Opinion of Probable Cost for Proposed MEP Scope of Work
Inflation, contingencies, tax, and contractor overhead and profit have attempted to be accounted for in the preliminary opinions of probable construction cost below. However, these opinions are preliminary and conceptual and only represent a general order of magnitude to be used for planning purposes only. These opinions are not bids, guaranteed maximum prices, or anything of that nature.

Broken Bow Campus



Broken Bow Campus
2520 South E Street

Building Area: 7,585 S.F.

Site Area: 2.29 acres

Year Constructed: 2011

Renovations/Remodels: N/A

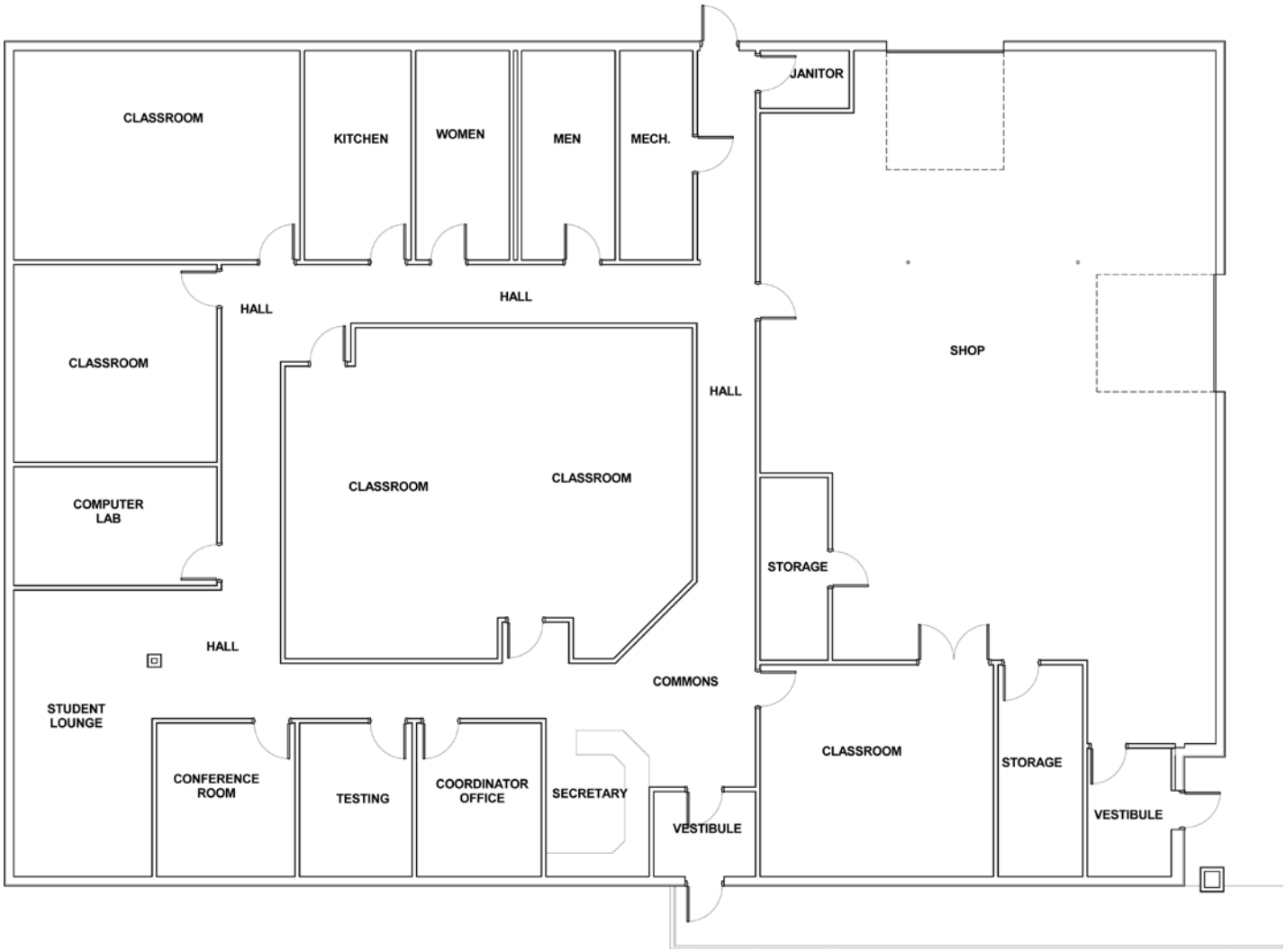
Additions: 1
Year Constructed: 2016
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/

Ogallala Campus



Ogallala Campus
512 East B Street South

Building Area: 7,210 S.F.

Site Area: 1.08 acres

Year Constructed: 2000

Renovations/Remodels: 1, 2012

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

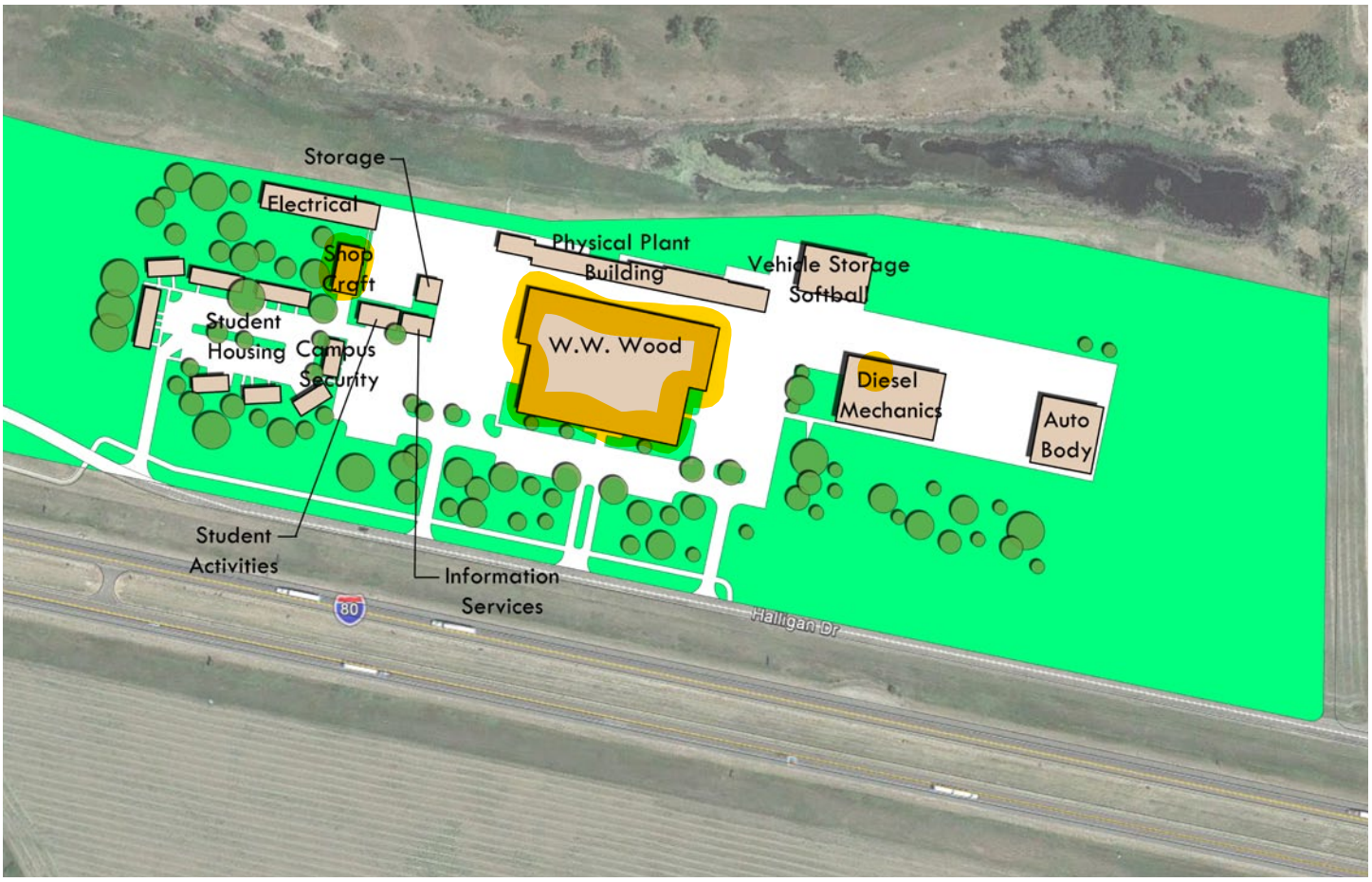
Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- Exterior cameras for improved security
- Improved parking lot lighting
- Better signage/wayfinding from Interstate 80

North Platte Campus - North

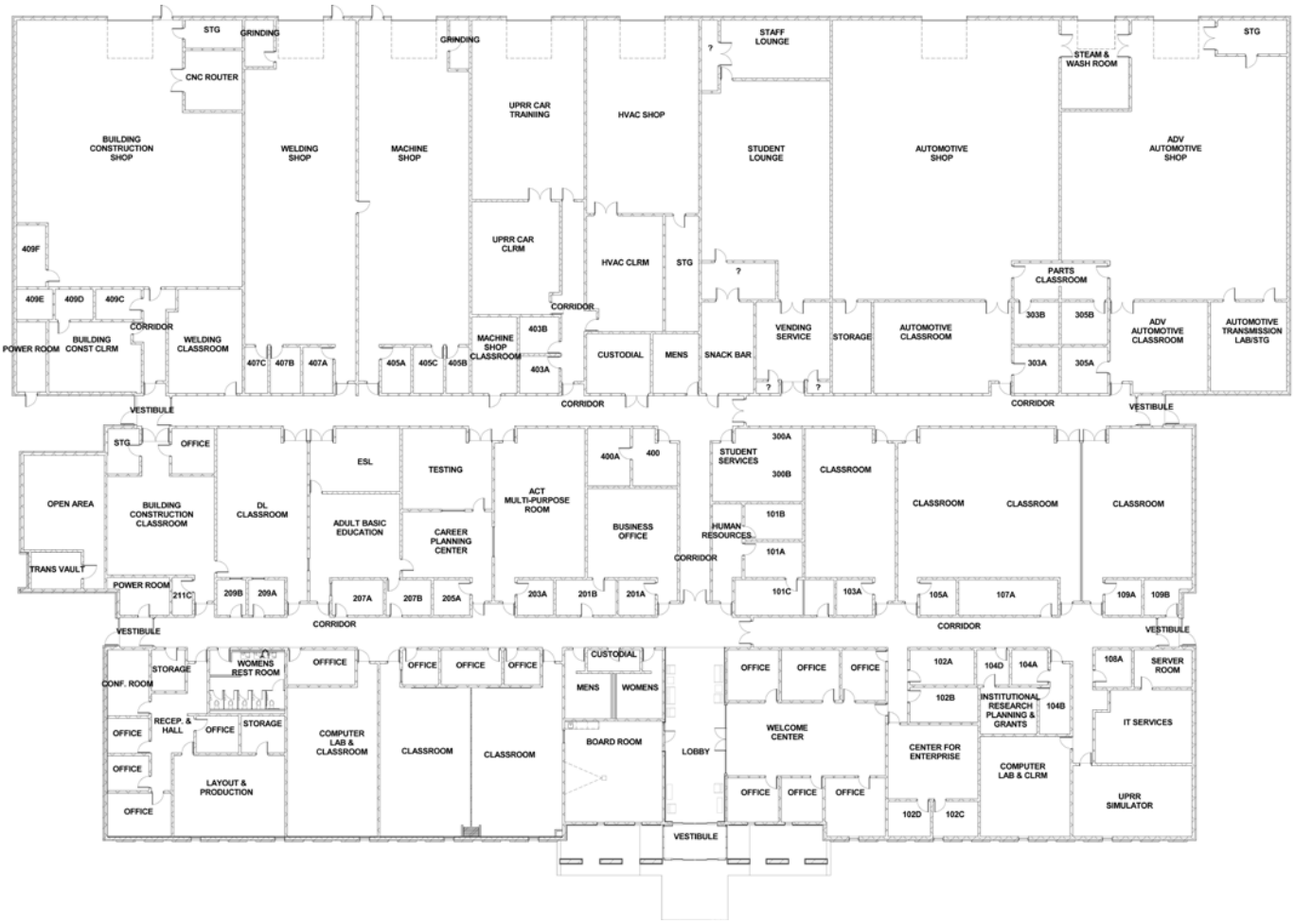


Current Site Plan



Proposed Site Plan

W.W. Wood Building



W.W. Wood Building
1101 Halligan Drive

Building Area: 69,421 S.F.

Site Area: 3.71 acres

Year Constructed: 1971

Renovations/Remodels: Numerous, most recently 2016

Additions: 2
Year Constructed: 1980, 2016
Square Feet: 36,636 sf

Number of Floors: 1
Basement: 0

Renovation Summary:

- Move snack bar to internal space
- Expand shop areas for additional shop space
- Updated finishes in corridors and classrooms to coincide with rest of building

Program Needs Summary:

- Rearrange program spaces due to some programs moving out of building

Project Rationale:

- Provide alternate automotive program expansion

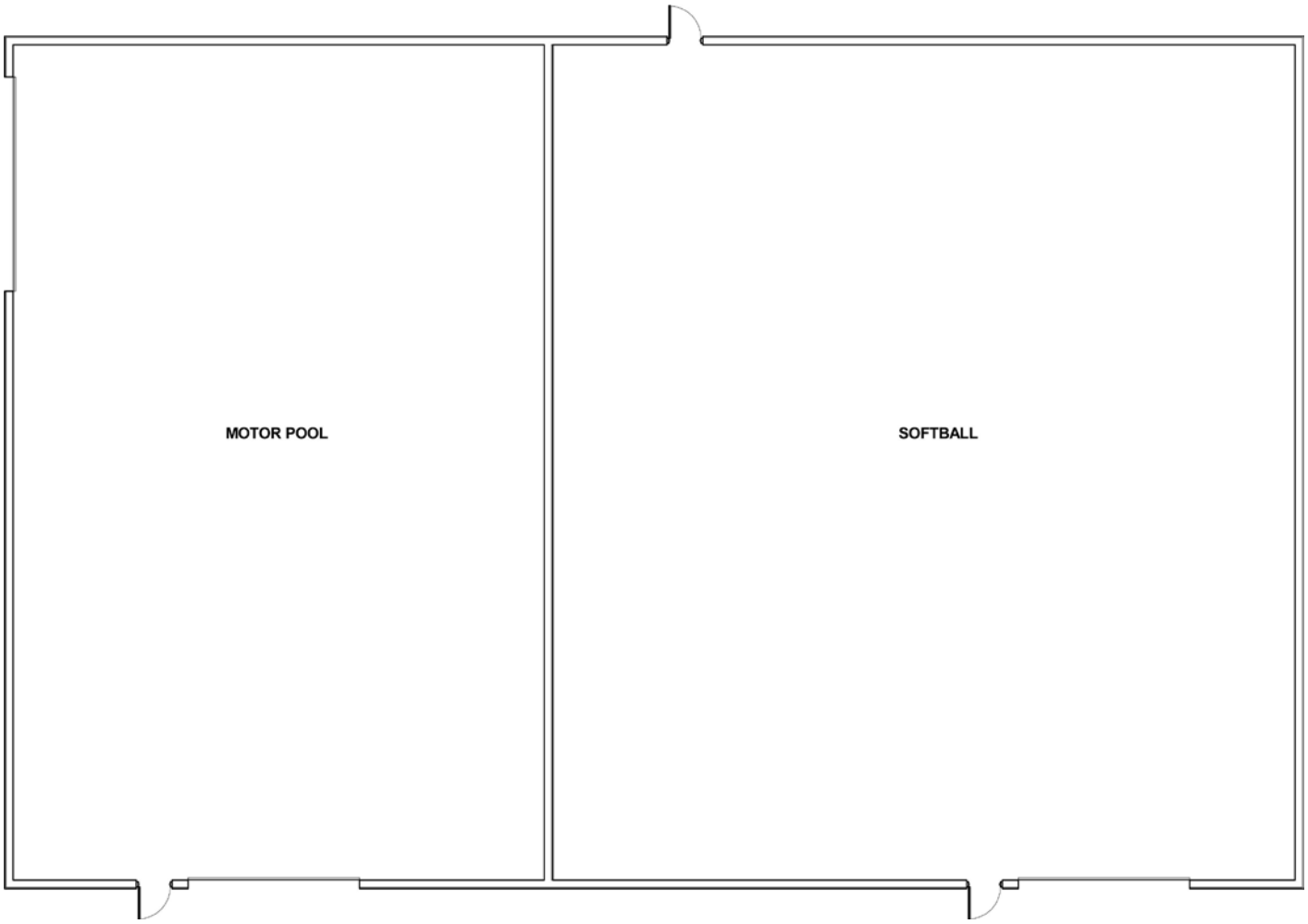
Projected Cost Estimate

New Area	N/A
Cost per S.F.	N/A
Remodel Area	2,572 S.F.
Cost per S.F.	$175/S.F.
Total Construction Cost	**$450,100**
Furniture, Fees & Equipment	$90,020
Contingency (10%)	$45,010
Total Project Cost	**$585,130**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Vehicle Storage and Softball Building



Vehicle Storage and Softball Building
1101 Halligan Drive

Building Area: 9,000 S.F.

Site Area: 18,000 S.F.

Year Constructed: 2008-10

Renovations/Remodels: N/A

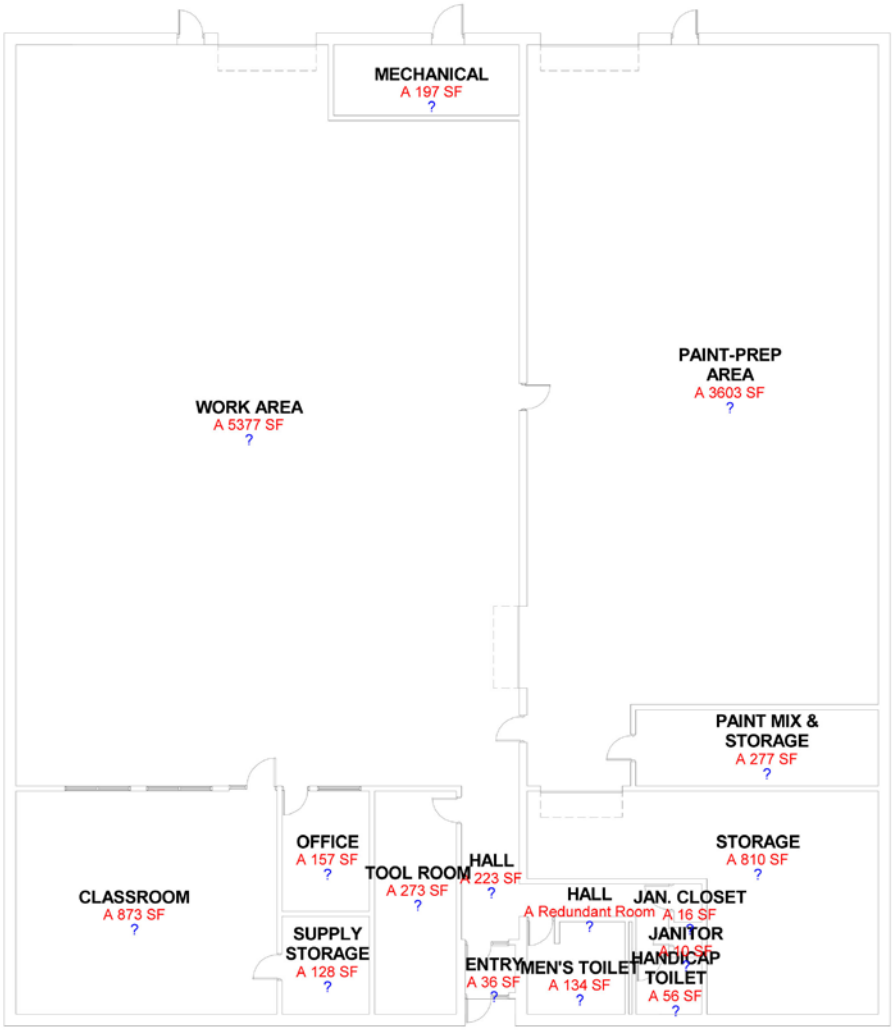
Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

Auto Body Building



Auto Body Building
1101 Halligan Drive

Building Area: 12,528 S.F.

Site Area: 0.59 acres

Year Constructed: 1992

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- Additional shop area to expand technical programs

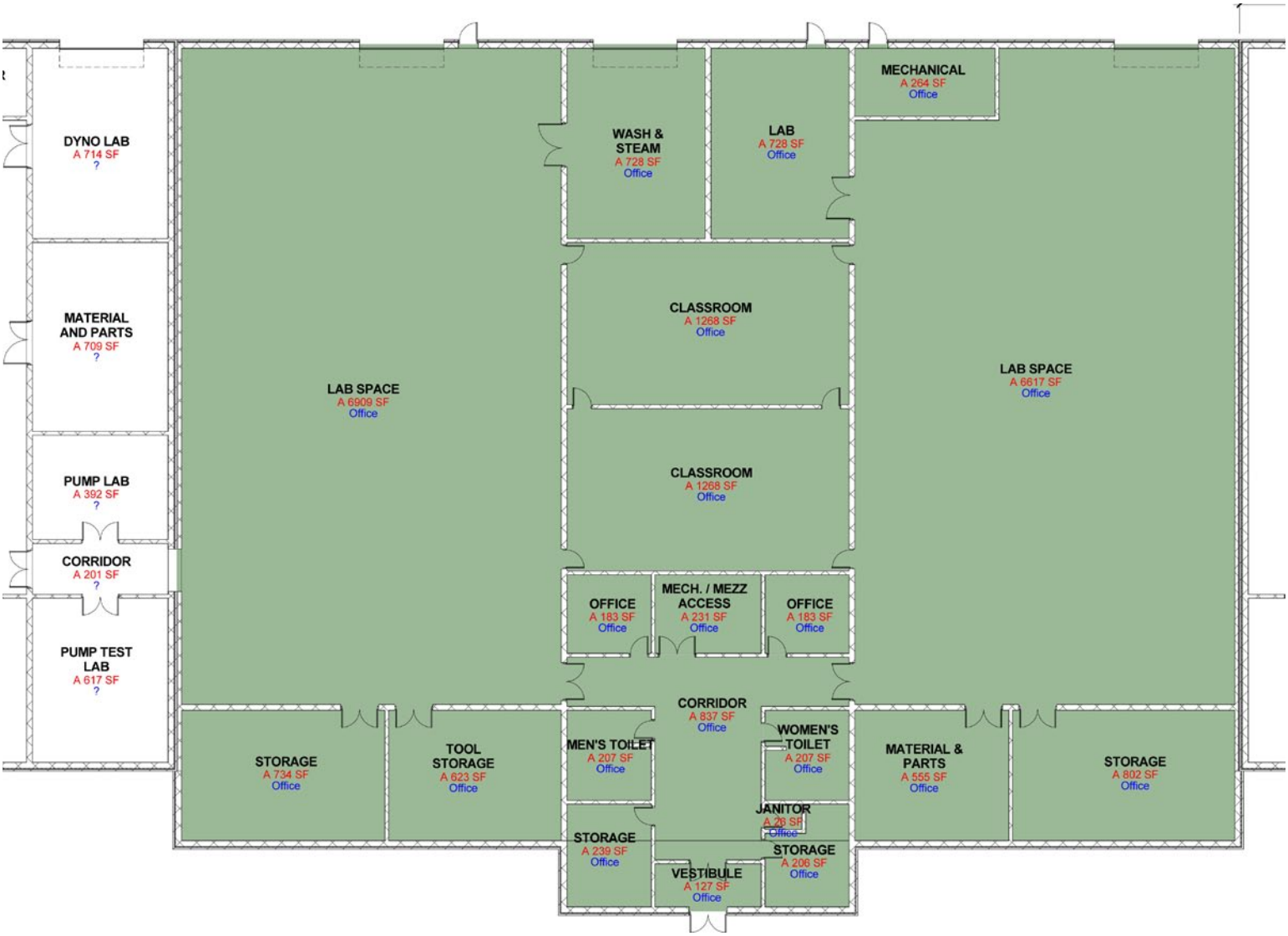
Project Rationale:

- Provide more efficient delivery of program, curriculum and equipment
- Remain competitive with peer institutions
- Provide facilities comparable to what is found in the industry

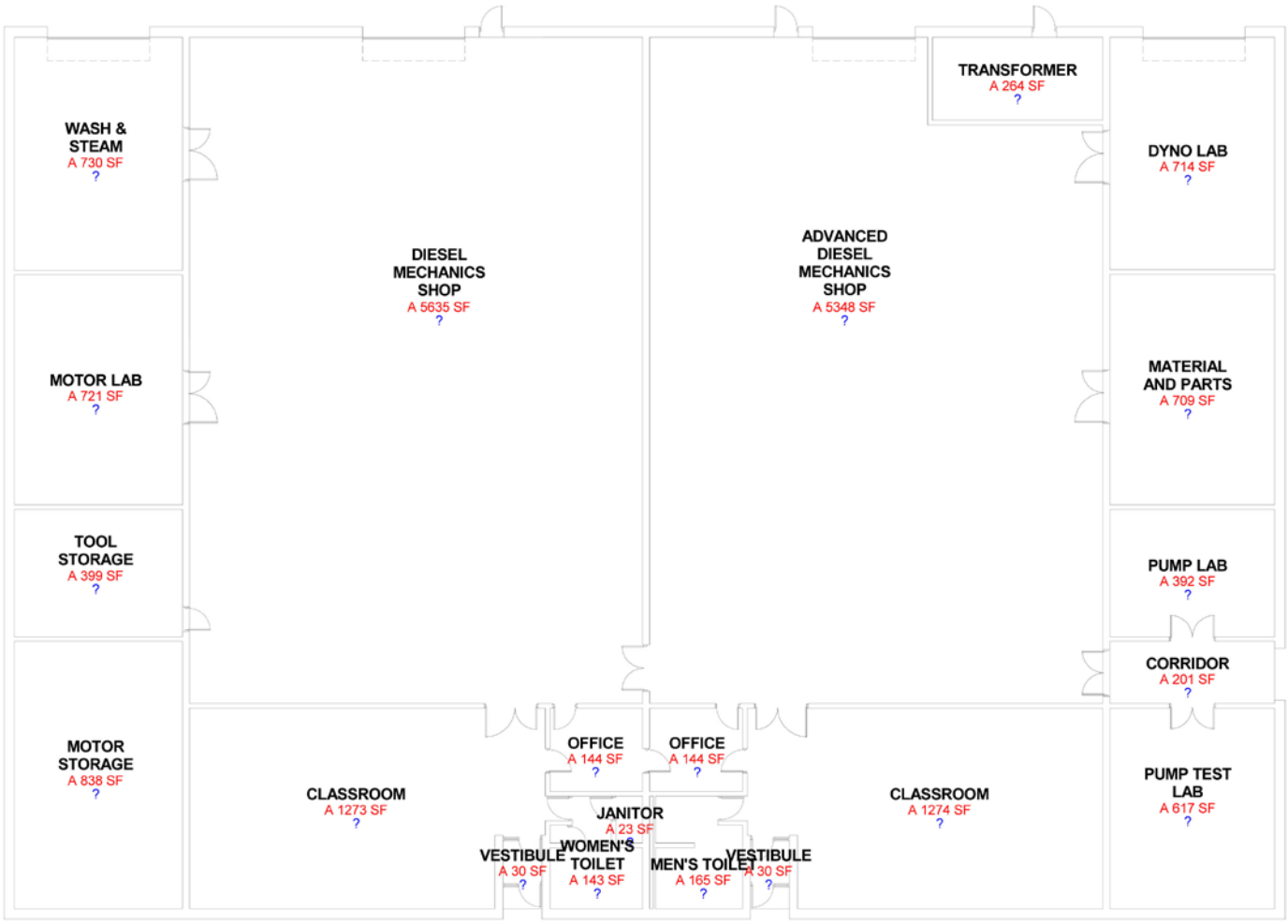
Projected Cost Estimate

New Area	30,714 S.F.
Cost per S.F.	$250/S.F.
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$7,678,500**
Furniture, Fees & Equipment	$1,362,934
Contingency (10%)	$767,850
Total Project Cost	**$9,809,284**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Diesel Tech Building



Diesel Tech Building
1101 Halligan Drive

Building Area: 21,385 S.F.

Site Area: 0.59 acres

Year Constructed: 1987

Renovations/Remodels: N/A

Additions: 2
Year Constructed: 1988
Square Feet: 5,464 sf

Number of Floors: 1
Basement: 0

Renovation Summary:

- Additional storage space for shop areas

Program Needs Summary:

- Additional shop area to expand technical programs

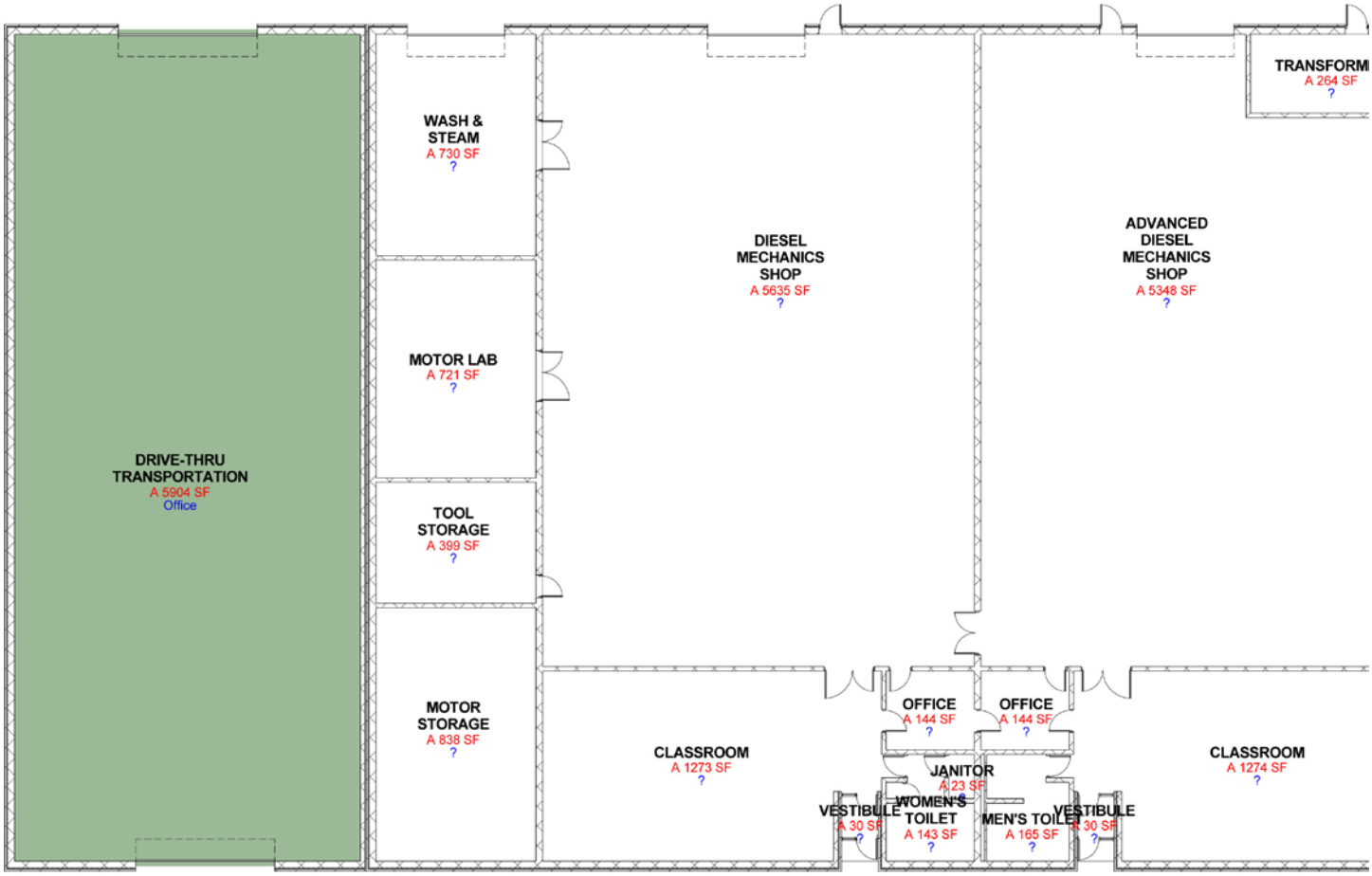
Project Rationale:

- Facilitate large vehicle and equipment inspection and servicing
- Simulate real world conditions

Projected Cost Estimate

New Area	5,904 S.F.
Cost per S.F.	$220/S.F.
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$1,298,880**
Furniture, Fees & Equipment	$230,551
Contingency (10%)	$129,888
Total Project Cost	**$1,659,319**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Auto Body & Diesel Building

MECHANICAL

HVAC Systems

a. Existing Equipment

Both Auto body and Diesel buildings are served by electric overhead radiant heaters. The classroom areas are served by furnace type units with condensing units located on the roof. Little/no ventilation air is being provided. Diesel building has an overhead exhaust system and miscellaneous exhaust fans. Auto body has exhaust systems and a makeup air system for the paint area and other miscellaneous exhaust fans.

b. Proposed Scope of New Equipment

The proposed HVAC system will be VRF fan coils and condensing unit(s) for the classrooms, lab areas, offices, restrooms, storage areas and supporting corridors. Vestibules will be conditioned via electric cabinet unit heaters. Data closet(s) will have a dedicated fan coil unit on the VRF system or a dedicated 1 ton mini-split system to condition the space. Ventilation air will be distributed to all classrooms/lab areas, offices, etc. via a packaged energy recovery unit (ERV) located on the roof. ERV unit will supply 70°F room neutral ventilation air to each fan coil or room directly. ERV unit will have DX cooling and electric or natural gas/propane heat. The new shop areas will be served by electric overhead radiant heaters similar to what is currently being used. The shop areas will have dedicated exhaust systems with carbon monoxide and nitrogen dioxide detection. Destratifications fans will also be considered.

HVAC Piping Systems

a. Existing Equipment

Existing HVAC equipment has refrigerant piping routed from the indoor units to the outdoor units. Condensate piping is routed to the nearest drain.

b. Proposed Scope of New Equipment

Type M copper or PVC condensate piping from HVAC units will be routed to floor drains, drain boxes or a mop sink. Insulated refrigerant piping will be installed between the VRF fan coils and associated condensing unit(s).

Temperature Controls

a. Existing Equipment

The existing HVAC system is controlled via local controls/thermostats. It is believed that there is no building management system (BMS) controls currently but may have a BMS installed in the future.

b. Proposed Scope of New Equipment

Engineering Controls is the Owner's Controls Contractor. HVAC controls will be installed by controls contractor for all new work. Mechanical equipment that will be added are electric radiant heaters, exhaust systems, variable refrigerant flow systems and energy recovery ventilation systems. Individual room control will be provided for each classroom, office, shop, vestibule, lab, etc.

Plumbing Systems

a. Existing Equipment

The Auto body and Diesel buildings have complete plumbing systems installed. There are no deficiencies with the system or known issues at this time. On the Auto body building, water comes into the building on the southeast side and sanitary and storm all route from south to north with multiple exits on the north end. There is a natural gas meter on the east side of

the building that feeds the paint area. On the Diesel building, water comes into the building on the south side and storm routes to both the north and east sides of the building. Sanitary sewer routes west to east with connection into the main on the east side of the building. It appears that storm and sanitary sewer on the east side of the building could be affected by the new construction. Both buildings have a compressed air system with air compressors located in the electrical/mechanical room on the north side of the buildings.

b. Proposed Scope of New Equipment
Water, sanitary sewer and storm will need to be routed to the new addition. Sizing will depend on layout and quantity of fixtures, assume 2-inch domestic cold water line which could be connected into at the Diesel shop building and a 6-inch sanitary sewer line. Plumbing contractor will connect to utilities 5'-0" from the building and the remaining pipe and installation will be by the site contractor. A new water heater and recirculation pump will be installed to provide hot water to lavatories, sinks, wash fountains and a mop sink. Floor drains and trench drains will be installed throughout the facility as needed. Shop area drains will drain to a sand/oil separator before going to the sanitary system. Storm drainage will be routed to the north and connected to the main. A new air compressor and associated piping will be installed for this addition.

Fire Sprinkler System
a. Existing Equipment
A fire suppression system is only installed in the Painting area. All other areas have no fire suppression installed. A FDC is located on the east side of the Auto body building and fire risers are located near the paint booths in Paint-Prep Area.

b. Proposed Scope of New Equipment
It is our understanding that no new fire suppression system is required.

ELECTRICAL

Electrical Distribution
a. Existing Equipment
The main electrical service for both Diesel building and Autobody enters from a pad-mounted transformer, through two (2) pad mounted CT cabinets to three main switchboards in the north main electrical room.
The three main switchboards split up the heating loads and general loads. Each of these switchboards feed panelboards located in the Diesel building, but also feeds two (2) main switchboards for the Autobody Shop via underground conduits across the open area between the two buildings. The new addition/link will be considered a separate building. NEC does not allow service feeders from one building to pass through another building (see NEC 230.3), but with these existing feeds being below the new addition and encased below minimum 2" concrete these feeds can remain since they are underground and would not be considered within the new addition/like building (see NEC 230.6).
The main switchboards in the Diesel building each do not have a main disconnect switch/breaker. Instead they rely on NEC 225.3 6 switch rule, which allows each service to have no more than 6 switches or circuits breakers in a single enclosure. Currently 5 main switches are utilized. However, two (2) new switches/breakers will be needed to feed the addition/link and therefore would create 7 main disconnects, which would violate NEC 225.3.

b. Proposed Scope of New Equipment
It would be recommended to provide a new main electrical service transformer and main switchboard to the new link/addition building. This new service transformer could then re-feed the existing switchboards in Diesel and Autobody.
The new Drive-Thru Building will be located to the west of the Diesel Building. This building will be considered a part of the Diesel Building. New electrical panelboards will be provided and fed by the existing Diesel Building Switchgear. Ampacity, spare breakers, and spaces are available from these heating and general load switchboards.

Electrical Systems
a. All existing electrical systems will remain in the existing Diesel and Autobody Buildings.

b. Proposed Scope of New Equipment
New general receptacle and dedicated owner provided equipment circuits will be fed from new 208/120 panelboards. New mechanical equipment and new lighting fixtures will be fed from new 480/277 panelboards. Other new electrical equipment will consist of receptacles, floor boxes (Classrooms), junction boxes, conduit, conductors, safety switches, motor starters, and new breakers in existing panelboards as required. New breakers will be provided where required; otherwise, existing spare breakers will be utilized.

Lighting
a. Existing Equipment
All Diesel and Autobody lighting will remain. Existing lighting on the exterior of the Diesel and Autobody Buildings on the addition side will be removed.

b. Proposed Scope of New Equipment
New LED lights will be provided for the Addition/link and Drive-thru buildings and be connected to 277 volt circuits. Lighting will be controlled via occupancy sensors, timer switches, manual low voltage switches, or photocells.

Exit/Emergency Lighting
a. Existing Equipment
Wall mounted and ceiling mounted emergency lights are in the Diesel and Autobody buildings

b. Proposed Scope of New Equipment
New wall mounted and ceiling mounted emergency battery packs will be provided for all areas in the renovation as per MPCC standard. Exit lights will be located along paths of egress and above exit doors per code.

Fire Alarm Systems
a. Existing Equipment
There is an existing fire alarm control panel located in the Diesel building electrical room that also controls the fire alarm devices in Autobody. This panel will remain for new devices to connect into. Connection between buildings is via underground conduit feeds in the open space between buildings. This conduit will need preserved and protected or relocated/re-fed.

b. Proposed Scope of New Equipment
New fire alarm notification and initiation devices will be provided in the addition/link and Drive-Thru. Devices will include manual pull stations, speaker/strobes, and smoke detectors as required.

Telecommunications Systems

a. Existing Equipment

Diesel building main telecom feeds (fiber) is via underground feed from the west. This feed will potentially need relocated/refed due to the Drive-Thru addition. The main feed goes to a wall mounted IT cabinet in the main electrical room. There is 1" conduit with telecommunications lines that then feed the Autobody Building. Connection between buildings is via the underground conduit that routes in the open space between buildings. This feed will need preserved/protected or re-fed to allow for the new addition/link. All telecommunications outlets cabling in the Diesel and Autobody connect to their respective wall mounted IT cabinet and will remain.

b. Proposed Scope of New Equipment

New telecom outlets will be provided in each of the new addition areas as required. Junction boxes with minimum 1" conduits will be provided to above accessible ceilings. New cable tray or j-hooks will be provided and routed to the main electrical/communication room. Conduit sleeves will provide access to each individual space. New cabling will be provided as instructed by the owner. New equipment (switches, patch panels, servers, etc) will be provided by owner.

Security Systems

a. Existing Equipment

Access control and CCTV is seen in both Diesel and Autobody.

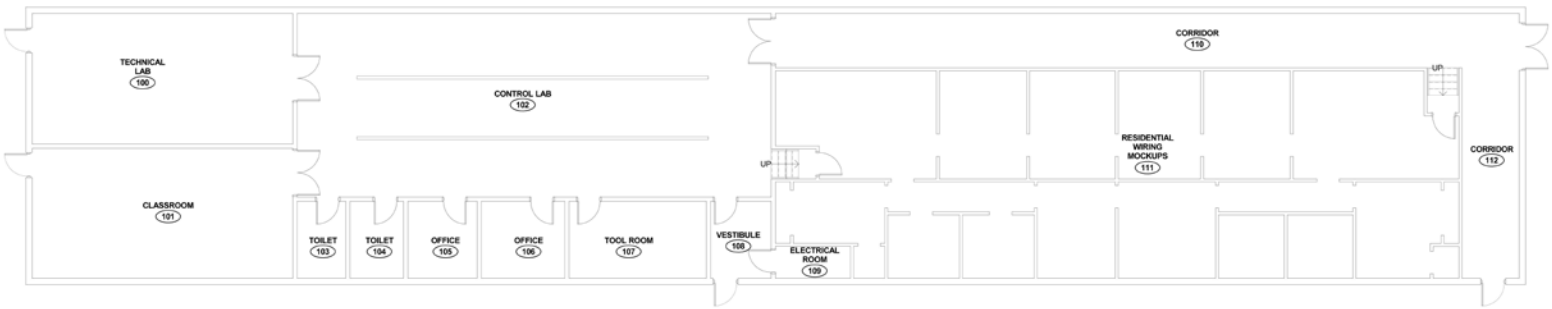
b. Proposed Scope of New Equipment

New access control and CCTV rough-ins (junction box and conduit) will be provided as directed by the owner (exterior doors, classrooms, and offices). Conduit will extend to main electrical rooms. CCTV and Access control equipment provided by owner.

A/V Systems

Rough-ins for owner provided TVs and projectors will be provided. Rough-ins from j-boxes and floor boxes will have conduit routed to above accessible ceiling. Power (receptacles) will be provided for all equipment. A/V equipment and cabling will be provided by owner.

Electrical Building



Electrical Building
1101 Halligan Drive

Building Area: 7,400 S.F.

Site Area: 0.56 acres

Year Constructed: 1979

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary:

- Update finishes
- Replace lights, ceiling and flooring
- Tear out select walls
- Provide a place to set up electrical panels

Program Needs Summary:

- Additional classrooms

Project Rationale:

- Create program space to facilitate continued program growth
- More program space is needed to meet employer's demands for labor
- Facilitate motor controls program expansion
- Provide a more visible, appealing and accessible front door and identity

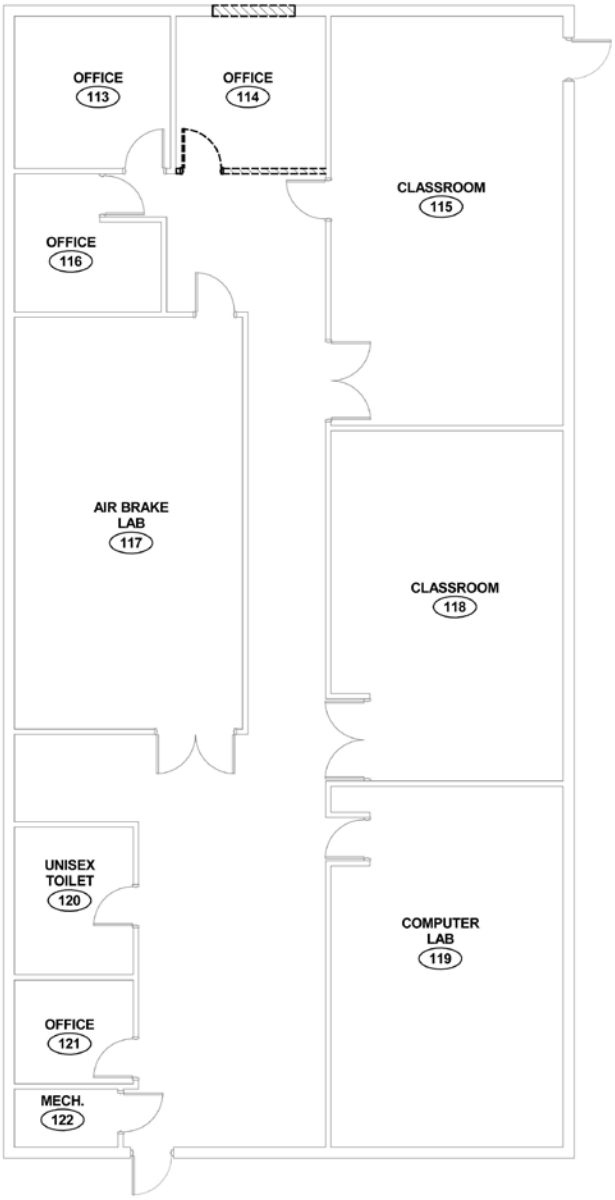
Projected Cost Estimate

New Area	1,427 S.F.
Cost per S.F.	$250/S.F.
Remodel Area	10,705
Cost per S.F.	$50/S.F.
Total Construction Cost	**$892,000**
Furniture, Fees & Equipment	$133,800
Contingency (10%)	$89,200
Total Project Cost	**$1,115,000**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Shop Craft Building



Shop Craft Building
1101 Halligan Drive

Building Area: 3,156 S.F.

Site Area: 0.50 acres

Year Constructed: 1985

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- Larger shop area to expand program

MECHANICAL

HVAC Systems

a. Existing Equipment

The Electrical building is conditioned by furnace/air-source heat pumps with outdoor condensing units. Limited amount of room conditioning is performed – mainly on the west side of the building. The Craft building is currently being conditioned by two (2) furnace/air-source units with outdoor condensing units. Limited to no ventilation air is provided for these classroom/offices. One of the furnaces is installed in a mezzanine over the top of Office 114. This unit would possibly need to get reconfigured with the office area becoming a corridor.

b. Proposed Scope of New Equipment

It is proposed that the new classroom/corridor would be conditioned via an air-source heat pump with an electric heating coil and a small energy recovery device above the ceiling. The vestibule would be provided with an electric cabinet unit heater. Zones of control and ventilation air should be considered for the classrooms in both buildings.

HVAC Piping Systems

a. Existing Equipment

Existing HVAC equipment has refrigerant piping routed from the indoor units to the outdoor units. Condensate piping is route to the nearest drain or outside the building.

b. Proposed Scope of New Equipment

Under this project, new refrigerant piping and condensate piping will be routed as needed for the new equipment.

Temperature Controls

a. Existing Equipment

The existing HVAC system is controlled by local programmable thermostats.

b. Proposed Scope of New Equipment

It is proposed that due to the size of the project, that the new air-source heat pump be controlled via programmable thermostat. The ERV would be controlled via time-clock system to regulate airflow when occupied. Vestibule electric cabinet unit heater would have an integral thermostat.

Plumbing Systems

a. Existing Equipment

The Electrical and Craft buildings have limited water for a few restrooms and sinks.

b. Proposed Scope of New Equipment

Under this project, no additional plumbing work should be needed.

Fire Sprinkler System

a. Existing Equipment

No existing fire suppression in either the Electrical or Craft building.

b. Proposed Scope of New Equipment

It is our understanding that no new fire suppression system is required.

Electrical & Shop Craft Building

ELECTRICAL

Electrical Distribution

a. Existing Equipment

A pad-mounted transformer located southwest of the Craft Building serves both the Craft building and Electrical Shop. The Craft Building is served by a 600A, 208/120V, 3P, 4W Distribution panelboard located in an 'open nook area' on the west interior wall located roughly in the middle of building. There is a Square D Load Center panelboard in the corridor that has room for (2) single pole breakers that can serve the new link areas. All downstream electrical panelboards will remain. The existing pad mounted, utility owned, site transformer will remain. Due to this being a small addition/link of the two buildings, it is not anticipated to add any significant additional electrical load to the electrical system.

b. Proposed Scope of New Equipment

No new electrical distribution equipment is anticipated.

Electrical Systems

a. All existing electrical equipment will remain, except for removing a disconnect switch that feeds the shed to the north of the Craft building and receptacles that need removed from the Craft building's north/central office that will get removed to provide access the new link corridor.

b. Proposed Scope of New Equipment

No new circuits will come from the electrical shop. All new circuits will derive out of the Craft Building. New general receptacle and dedicated owner provided equipment circuits will be fed from existing 208/120 load center. New mechanical equipment will be served from existing circuit switches in the distribution panelboard. New lighting fixtures will be connected to existing lighting circuits in the Craft building. All panels above have capacity & space to add additional circuits. Other new electrical equipment will consist of receptacles, floor boxes and 2-section wiremold (classroom), junction boxes, conduit, conductors, safety switches, motor starters, and new breakers in existing panelboards as required. New breakers will be provided where required; otherwise, existing spare breakers will be utilized.

Lighting

a. Existing Equipment

All existing lighting is fluorescent. All lights will remain in both buildings with the exception of where door/corridors are created to the new link. In the Craft building the connection point will remove an office and therefore all lights in the office space will be removed along with the light switch. On the Electrical Shop side, the connection point will enter where electrical shop mockups are located and therefore all room mockups will need removed in this location.

There is an exterior wall mounted light fixture on the south side of the Electrical Shop that will need removed or relocated due to the link addition.

b. Proposed Scope of New Equipment

New LED lights will be provided in the addition. 2x4 or 2x2 grid recess fixtures will be provided in the classroom, corridor, and vestibule. New lighting will connect back to existing lighting circuits in the Craft building. Lights in all spaces will be controlled via occupancy sensors and dimmer switches except the corridor and vestibule which will be controlled via occupancy sensors only. Classrooms will have front and back lights switched separately.

Exterior lights will be new LED wall packs and controlled via a photocell.

Exit/Emergency Lighting

a. Existing Equipment

No emergency lighting was seen. Exit lights are located above exterior egress doors.

b. Proposed Scope of New Equipment

New wall mounted emergency battery packs will be provided for all areas in the renovation as per MPCC standard. New exit lights will be located in egress pathways.

Fire Alarm Systems

a. Existing heat detectors and pull stations were seen. There is an existing fire alarm control panel located in the Electrical Shop south/central vestibule's west wall. This panel will remain for new devices to connect into.

b. Proposed Scope of New Equipment

New fire alarm notification and initiation devices will be provided in the renovated areas. Devices will include manual pull stations, speaker or horn/strobes, and heat or smoke detectors as required.

Telecommunications Systems

a. Existing Equipment

All telecommunications outlets/cabling in the existing Craft building connects to the Communications Room located in the southwest corner of the building. Telecom device in the north/central office of the Craft building will be removed.

b. Proposed Scope of New Equipment

New telecom outlets will be provided in the classroom within the 2-section wiremold. Junction boxes with minimum 1" conduits will be provided to above accessible ceilings. Conduit sleeves will provide access to each individual space. New cabling will be provided as instructed by the owner. New equipment (switches, patch panels, servers, etc) will be provided by owner.

Security Systems

a. Existing Equipment

No access control or CCTV equipment was seen in the buildings.

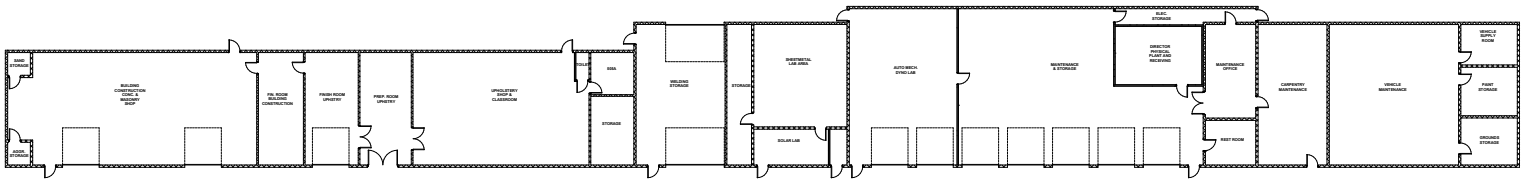
b. Proposed Scope of New Equipment

New CCTV and access control rough-ins (junction box and conduit) will be provided at the new vestibule exterior door and classroom door or as directed by the owner. Conduit will extend to above accessible ceilings. Equipment provided by owner.

A/V Systems

Rough-ins for owner provided TVs and projectors will be provided in the classroom. Rough-ins from j-boxes and floor boxes will have conduit routed to above accessible ceiling. Power (receptacles) will be provided for all equipment. A/V equipment and cabling will be provided by owner.

Physical Plant Building



Physical Plant Building
1101 Halligan Drive

Building Area: 15,591 S.F.

Site Area: 1.7 acres

Year Constructed: 1976, rebuilt 1996

Renovations/Remodels: N/A

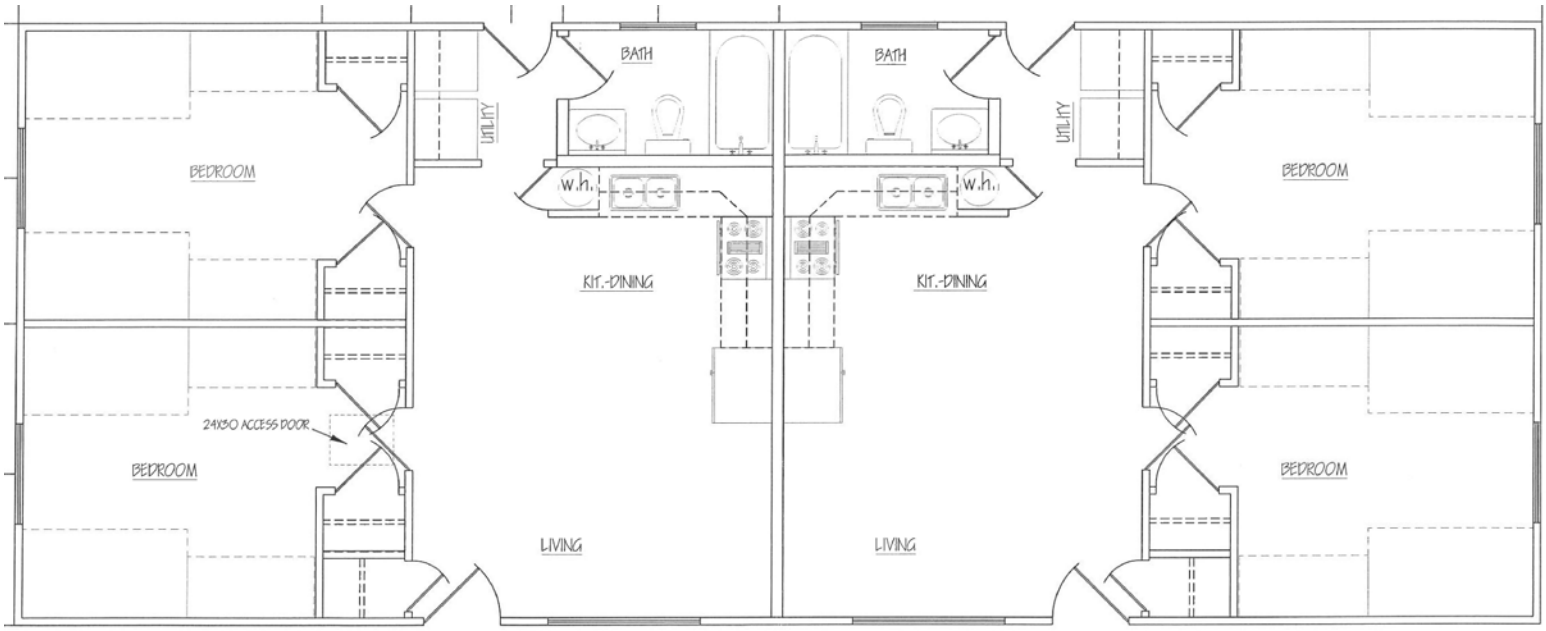
Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

North Student Housing Dorms



North Student Housing Dorms
1101 Halligan Drive

Building Area: 1,800 S.F. (x5 Buildings)

Site Area: 2.03 acres

Year Constructed: 1977-1993

Renovations/Remodels: N/A

Additions: 2
Year Constructed: 1988
Square Feet: 5,464 sf

Number of Floors: 1
Basement: 0

Renovation Summary:

- New finishes

Program Needs Summary: N/A

North Student Housing Rec and Laundry Unit



North Student Housing Rec and Laundry
1101 Halligan Dr.

Building Area: 2,575 S.F.

Site Area: 0.27 acres

Year Constructed: 1977-1993

Renovations/Remodels: N/A

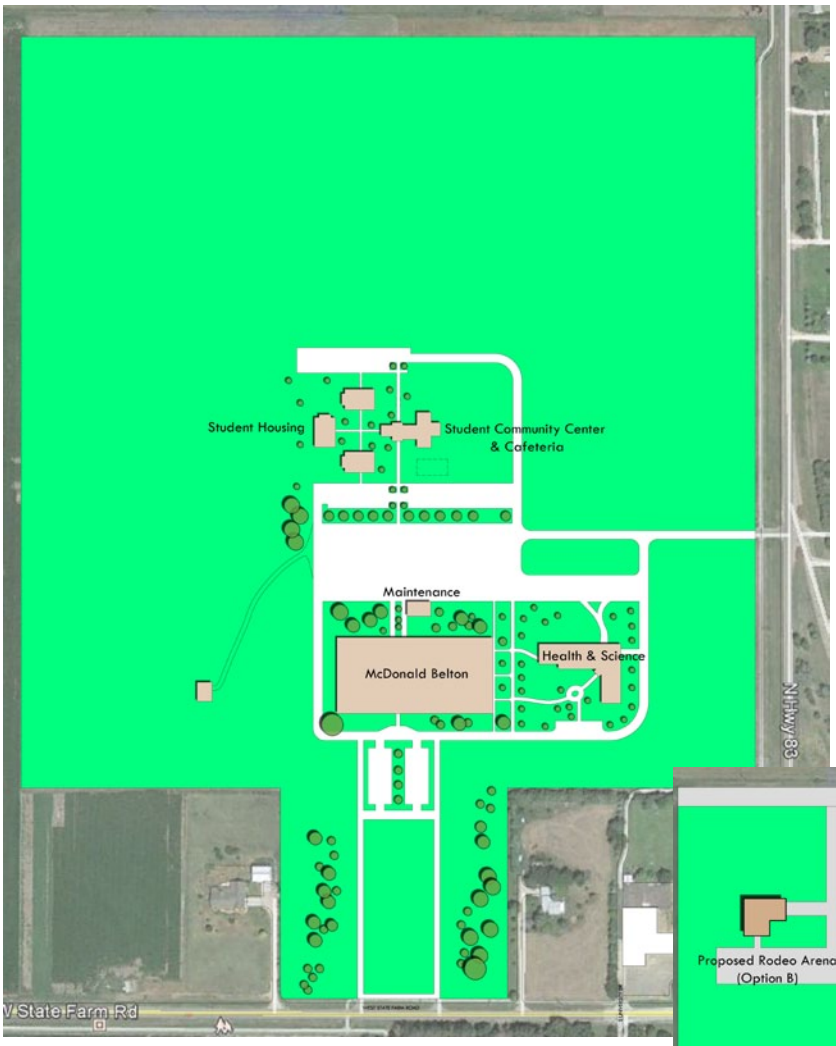
Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 1
Basement: 0

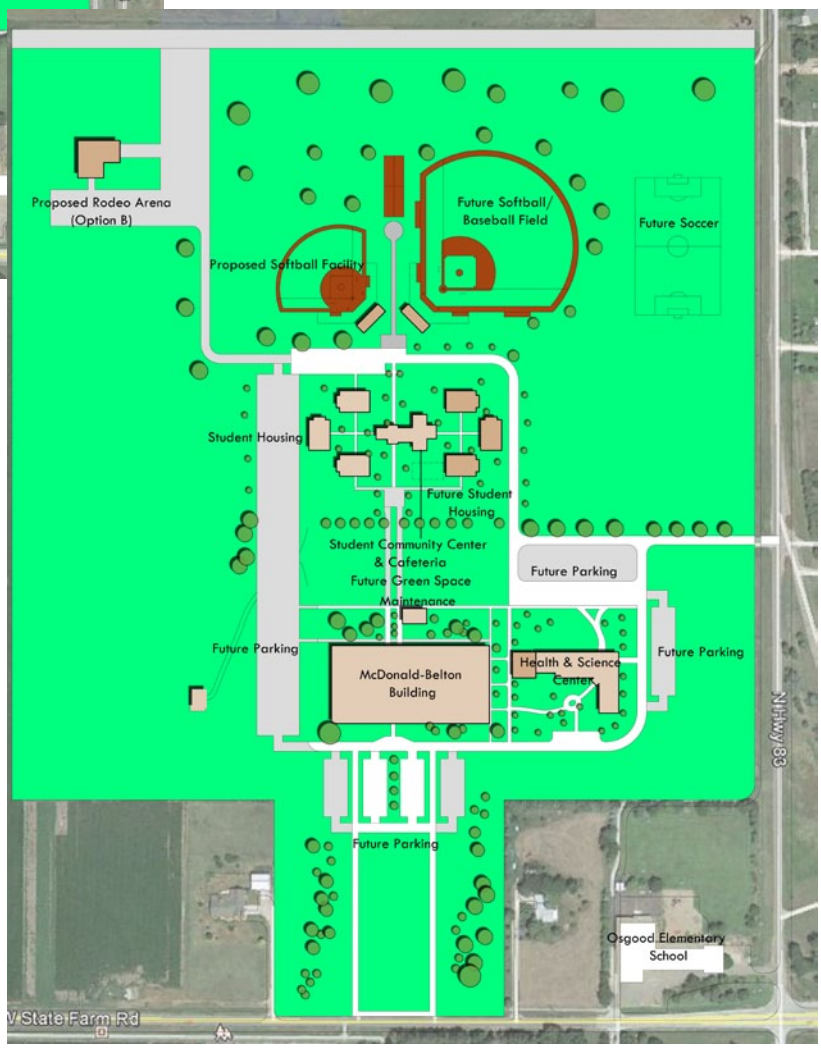
Renovation Summary: N/A

Program Needs Summary: N/A

North Platte Campus - South



Current Site Plan



Proposed Site Plan

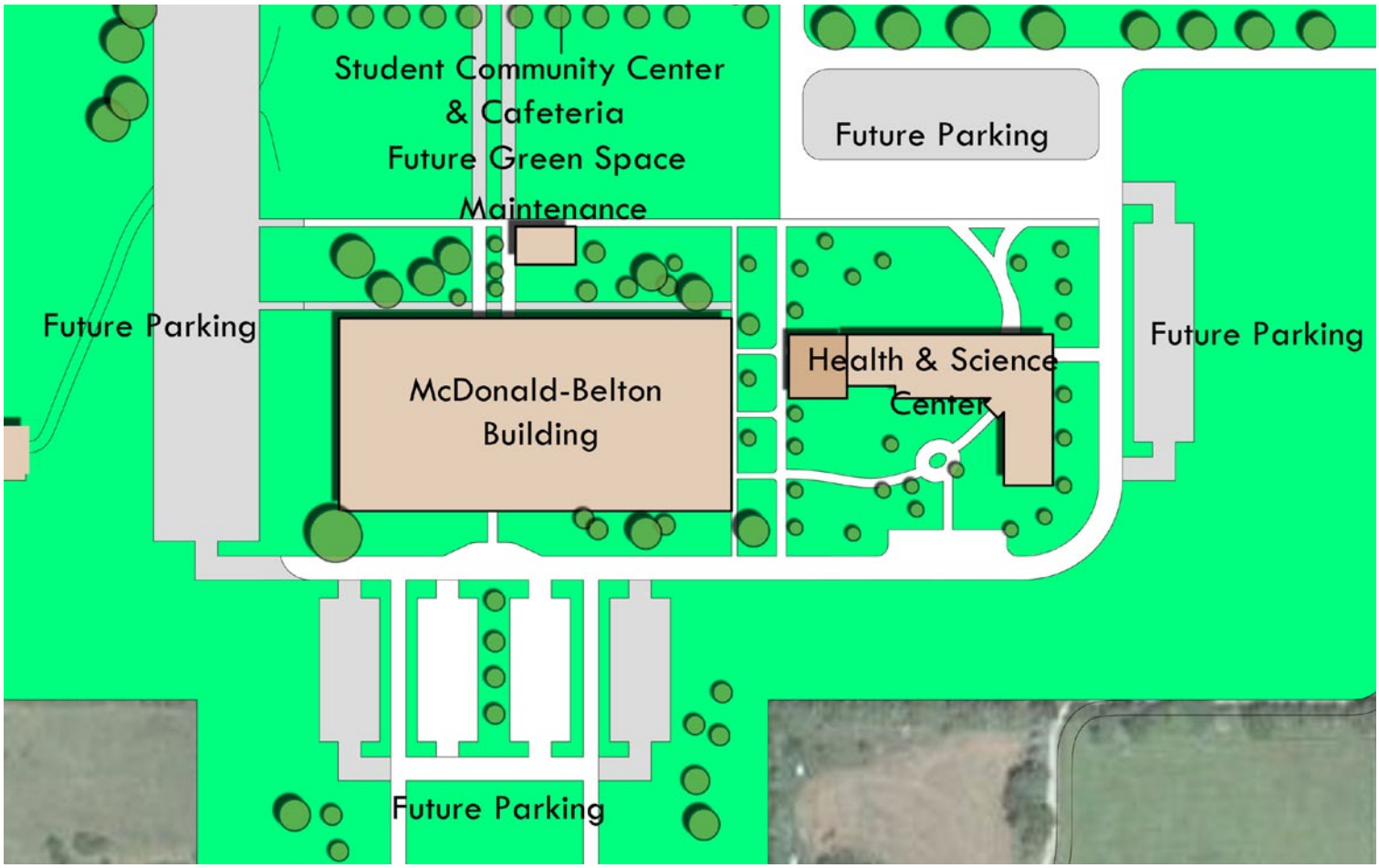
South Campus Quad (New Perimeter Parking)

Projected Cost Estimate	
New Area	200,800 S.F.
Cost per S.F.	$5.60/S.F.
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$1,564,480**
Furniture, Fees & Equipment	$234,672
Contingency (10%)	$156,448
Total Project Cost	**$1,955,600**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.

Project Rationale:

- Increase available parking
- Giving the campus a more collegiate feel and presence and improve student/staff welfare, safety and health



Proposed Site Plan

Health and Science Center



Health and Science Center
601 West State Farm Road

Building Area: 36,589 S.F.

Site Area: 2.50 acres

Year Constructed: 2012

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 2
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- Additional nursing classrooms and labs

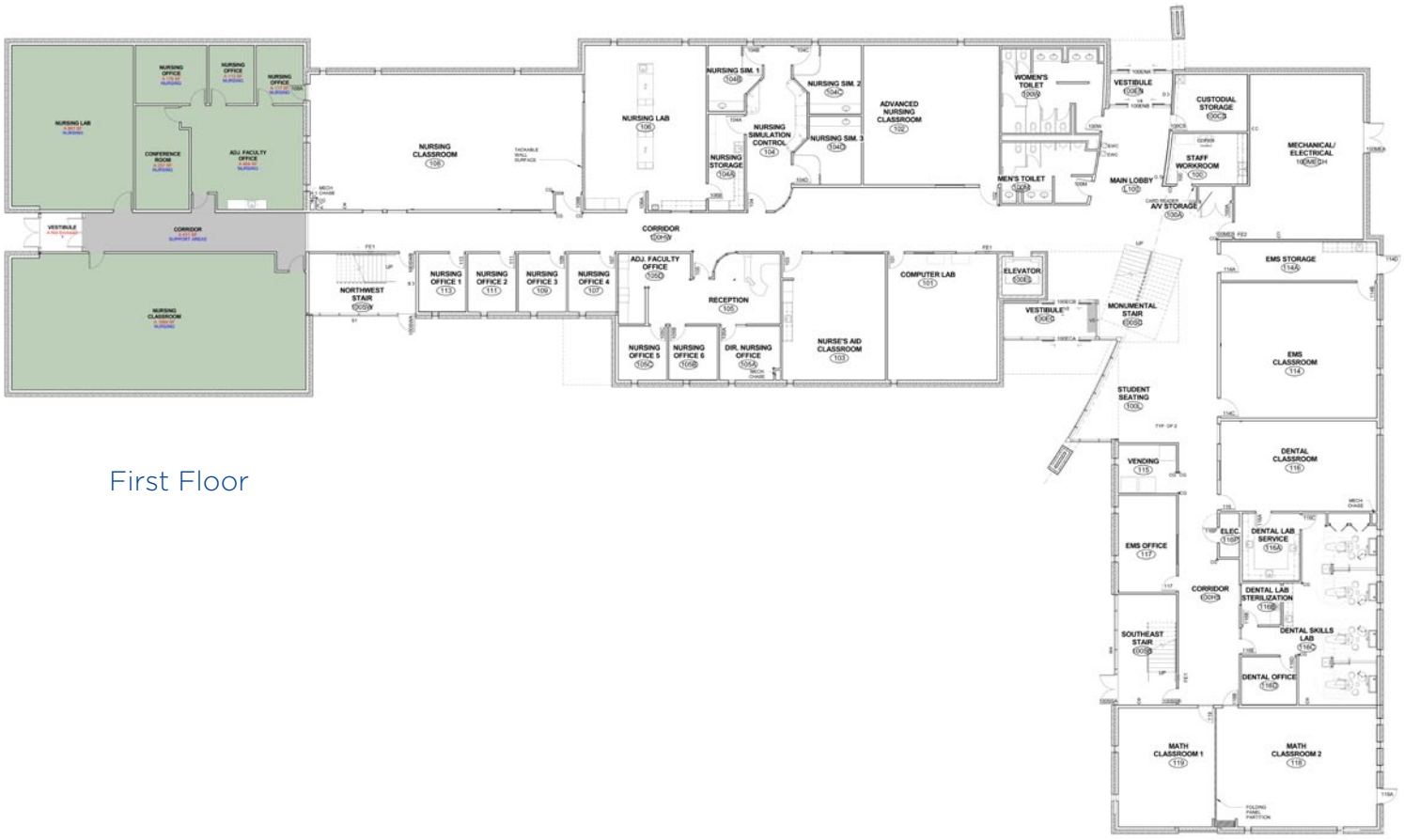
Project Rationale:

- Current program is running at capacity
- Critical shortage of nurses/healthcare in 18 county service area

Projected Cost Estimate

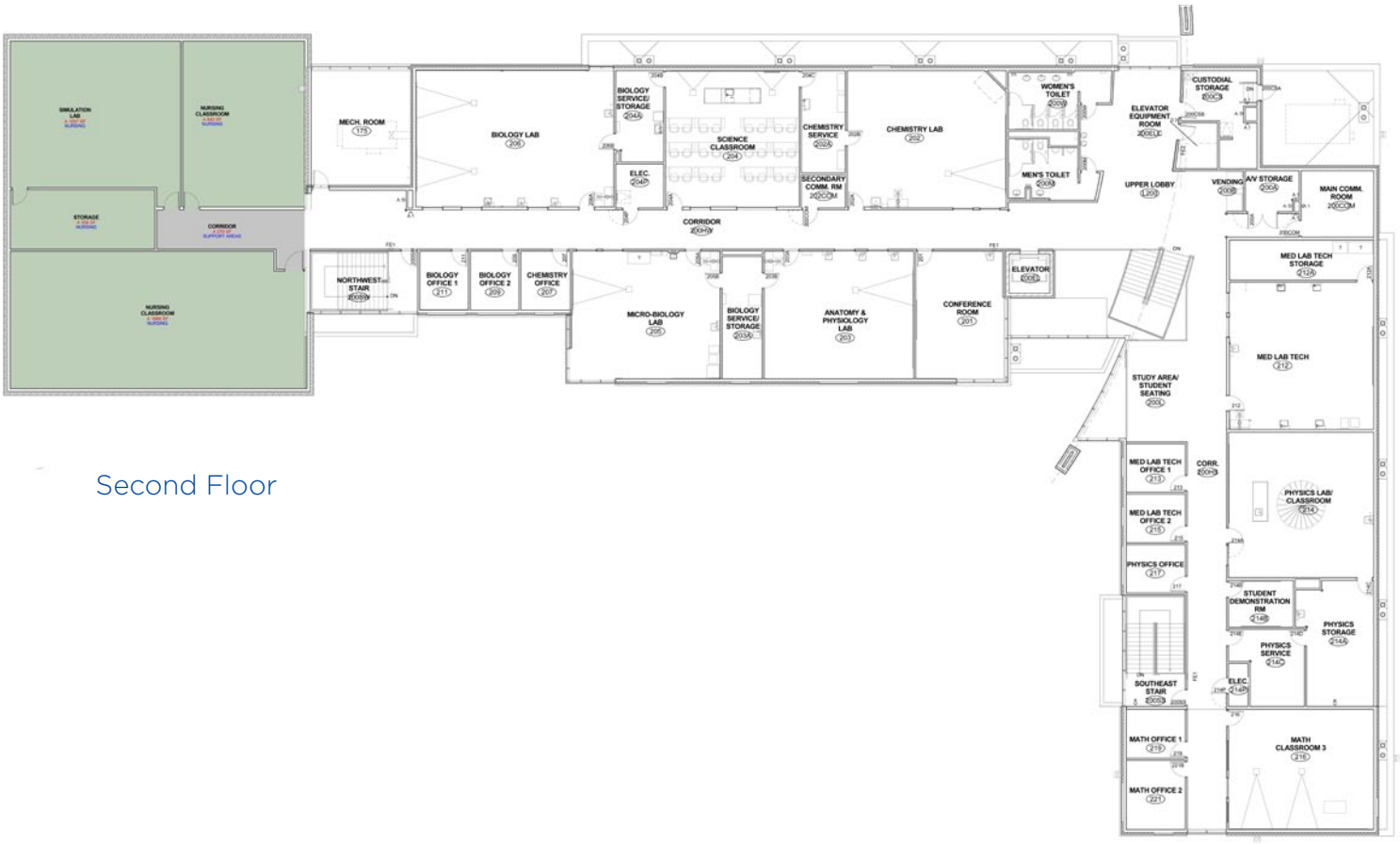
New Area	9,280 S.F.
Cost per S.F.	$275/S.F.
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$2,552,000**
Furniture, Fees & Equipment	$452,900
Contingency (10%)	$255,200
Total Project Cost	**$3,260,180**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



First Floor

Health and Science Center



Second Floor

MECHANICAL

HVAC Systems

a. Existing Equipment

The HASC building has a geothermal heat pump system, chilled/heating hot water air handling unit, energy recovery unit and associated support systems.

b. Proposed Scope of New Equipment

The building addition will require the addition of approximately 8-10 heat pumps, supporting duct work, diffusers, etc. Additional ventilation and exhaust air will need to be provided either via the existing energy recovery ventilator (ERV) or by a new ERV. Heating hot water cabinet heater will be removed from Vestibule 100EW and either relocated to new vestibule or a new cabinet heater will be installed. Air handling unit located on west roof will be enclosed and intake and exhaust louvers/hoods will be added. Minor duct work, registers and controls removal will need to occur when the addition is built.

HVAC Piping Systems

a. Existing Equipment

This building is served by a geothermal heat pump system, heating hot water system and chilled water system. All systems contain 30% propylene glycol.

b. Proposed Scope of New Equipment

The building addition will require an extension of the heat pump system piping. Approximately 8-10 heat pumps will be added to support the new addition. The existing

ERV will need to be evaluated to see if additional capacity is available for the addition, if so, rework of duct work will be required. If capacity is insufficient, a new ERV will be added.

Temperature Controls

a. Existing Equipment

The existing HVAC system is controlled via centralized building management controls. Engineering Controls is the Owner's Controls Contractor.

b. Proposed Scope of New Equipment

HVAC controls will be expanded as needed for new mechanical equipment. Mechanical equipment that will be added are heat pumps connected to the geothermal system and possibly an ERV. New controls for dampers will be installed when AHU-1 is enclosed into a mechanical room.

Plumbing Systems

a. Existing Equipment

The existing plumbing system will not be affected much for the addition. The addition will require the removal of a wall hydrant, storm drain and overflow storm drain and rerouting of a storm overflow drain downspout nozzle.

b. Proposed Scope of New Equipment

Primary and overflow roof drainage piping will be added for the new addition. Domestic cold and hot water will be extended to any new plumbing fixtures installed. Hot and cold water is available in the ceiling of Nursing Classroom 108. Sanitary piping will have to be extended to new plumbing fixtures. If new plumbing fixtures are added on the first floor, the existing floor would need to be saw cut to get to the existing sanitary piping. Depending on equipment that is added, services will need to be extend and/or upgraded (acid waste, acid vent, medical gases (vacuum, medical air and oxygen), etc.).

Fire Sprinkler System

a. Existing Equipment

Existing building is served by a wet-pipe fire riser that is located in Mech/Elec 100Mech. Fire sprinkler heads are concealed type with a white cover plate. Dry pendant sprinklers serve vestibules.

b. Proposed Scope of New Equipment

Sprinkler heads will be removed as needed for new addition. Fire suppression system will be recalculated and new piping and sprinklers will be added to serve new additional as well as the areas affected by the new addition. The same type of sprinkler heads will be used for the new addition.

ELECTRICAL

Electrical Distribution

a. Existing Equipment

The building is served by a 1600A, 480/277, 3P, 4W Main Switchboard 'MSB' located on first floor in mechanical/electrical room '100'. The system was designed in 2011 and installed in roughly 2012. The original design had a total design load of 656.1 KVA or 789.17 amps. At 125% this equates to 986.46A. The service can handle 1600 amps at 125%, therefore there is sufficient electrical service capacity for the planned 2-story addition on the west wing of the building. All downstream electrical transformer and panelboards will remain. The existing pad-mounted, utility owned site transformer will remain.

b. Proposed Scope of New Equipment
A new 480/277 volt and 208/120 panelboard will be provided to serve the new addition mechanical and general power. 208/120 panelboard will be served from a new 480-208/120 transformer.

Electrical Systems
a. Existing Equipment
The existing exterior GFI/WP receptacle currently located west of Nursing Classroom 108 will be relocated adjacent the new vestibule.

b. Proposed Scope of New Equipment
New general receptacles and dedicated owner provided equipment circuits will be fed from the new 208/120 panelboard. New mechanical equipment and new lighting fixtures will be fed from the new 480/277 panelboard. Other new electrical equipment will consist of receptacles, floor box (conference room and larger classrooms), 2-section wiremold (classrooms), junction boxes, conduit, conductors, safety switches, motor starters, and breakers in existing panelboards as required.

Lighting
a. Existing Equipment
Interior: The lighting in existing classrooms and office areas are grid recessed 2x4 with T5HO fluorescent lamps. The west corridors are lit with wall mounted T5HO fluorescent type fixtures. The west vestibule has an 8" can light that will be relocated to the new west vestibule. All areas above are controlled via occupancy sensors and manual light switches.

Exterior: The 6" canopy/soffit light will need removed. There is a pole light to west of building's west wing that will need removed or relocated. New building mounted lights will be added as required for pathway lighting and connected to existing exterior lighting controls.

b. Proposed Scope of New Equipment
New LED lights will be provided in the building addition. 2x4 grid recess fixtures will be provided in the classrooms, labs, and office areas. Corridors will be provided with new wall mounted fixtures that will match as close as possible to the existing wall mounted corridor lights. Lights in all spaces except corridors and storage rooms will be controlled via occupancy sensors and dimmer switches. Corridors will be controlled via occupancy sensors. Storage room will have a combination switch/occupancy sensor located on the wall.

Exit/Emergency Lighting
a. Existing Equipment
Existing emergency lighting consists of internal battery packs, wall packs, and central lighting inverter. The lighting inverter feeds exterior egress lights.

b. Proposed Scope of New Equipment
New LED wall mounted emergency battery packs will be provided for all areas in the addition as per MPCC standard. New LED exit lighting will be provided in egress pathways, above classroom doors, and exit doors.

Fire Alarm Systems

a. Existing Equipment

There is an existing addressable fire alarm system that will remain, located in the main Comm Room 200. The existing west vestibule fire alarm pull station will need relocated to the new vestibule.

b. Proposed Scope of New Equipment

New smoke detectors, fire alarm speaker/strobes, and pull stations will be added within the 2-story addition and connected to the existing fire alarm system.

Telecommunications Systems

a. Existing Equipment

All telecommunications outlets cabling on the west wing is routed to Comm Room 202C. There is a single floor mounted telecommunications rack with switches and patch panels in this room.

b. Proposed Scope of New Equipment

New telecom outlets will be provide in each classroom, office, lab, conference room. Junction boxes with minimum 1" conduits will be provided to above accessible ceilings. New cable tray will be provided and routed along the new addition corridor and connect into the exiting cable tray. Conduit sleeves will provide access to each individual space. New cabling will be provided as instructed by the owner. New equipment (switches, patch panels, servers, etc) will be provided by owner.

Security Systems

a. Existing Equipment

The existing access control card reader and ADA door operator buttons/motors currently located adjacent the existing west vestibule will need relocated to the new vestibule. The existing door monitor switch and CCTV rough-in will be removed that are currently located on the nursing classroom 108 exterior door.

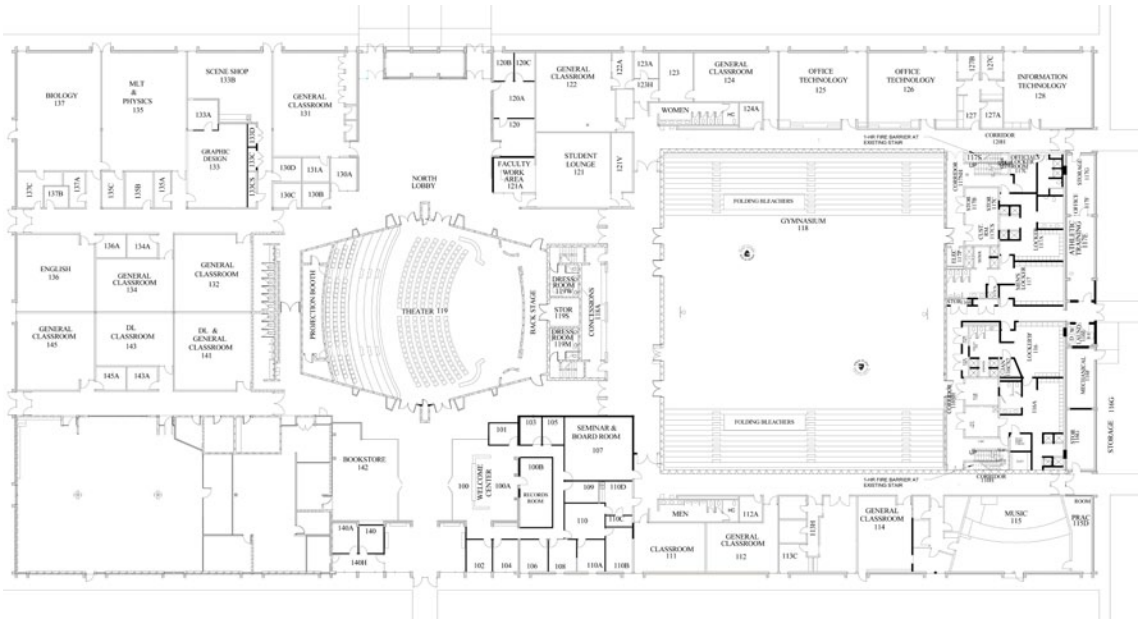
b. Proposed Scope of New Equipment

New CCTV and Access Control rough-ins (junction box and conduit) will be provided as directed by the owner. Conduit will extend to new cable tray above accessible ceilings.

A/V Systems

Rough-ins for owner provided TVs, projectors, speakers will be provided. Rough-ins from j-boxes and floor boxes will have conduit routed to above accessible ceiling. Power (receptacles) will be provided for all equipment. A/V equipment and cabling will be provided by owner.

McDonald-Belton Building



McDonald Belton Building
601 West State Farm Road

Building Area: 80,784 S.F.

Site Area: 3.47 acres

Year Constructed: 1974

Renovations/Remodels: 1981; Numerous, most recent: 2011, 2014, 2015, 2017

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 2
Basement: 0

Renovation Summary: N/A

Program Needs Summary:

- Combine learning resource center and student success center
- Additional athletic storage

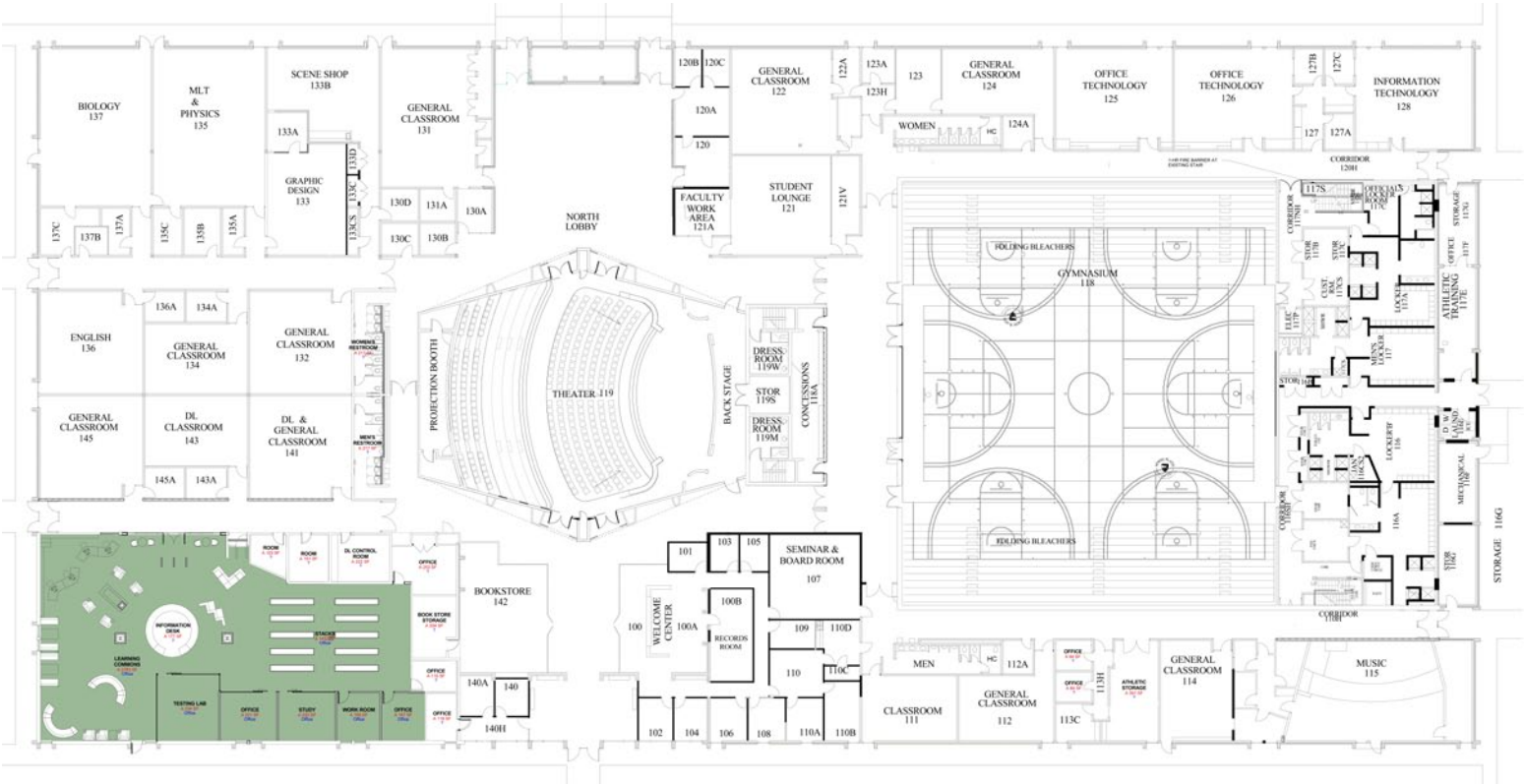
Project Rationale:

- Improve efficiencies in staffing and testing delivery

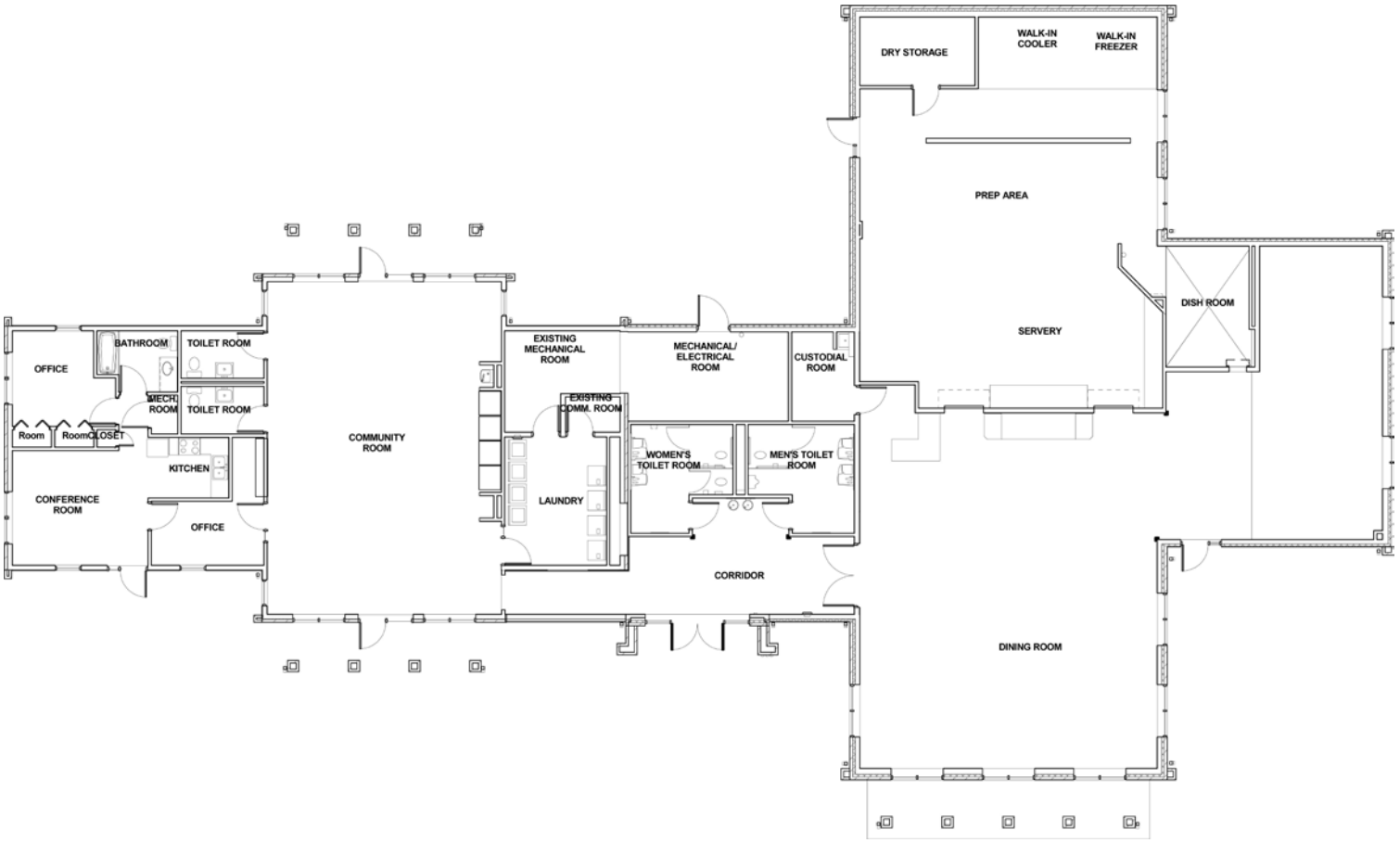
Projected Cost Estimate

New Area	N/A
Cost per S.F.	N/A
Remodel Area	5,505 S.F.
Cost per S.F.	$66/S.F.
Total Construction Cost	**$365,000**
Furniture, Fees & Equipment	$25,000
Contingency (10%)	$10,000
Total Project Cost	**$400,000**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



Knights Center



Knights Center
601 West State Farm Road

Building Area: 6,932 S.F.

Site Area: 171,000 S.F.

Year Constructed: 2003

Renovations/Remodels: 2013

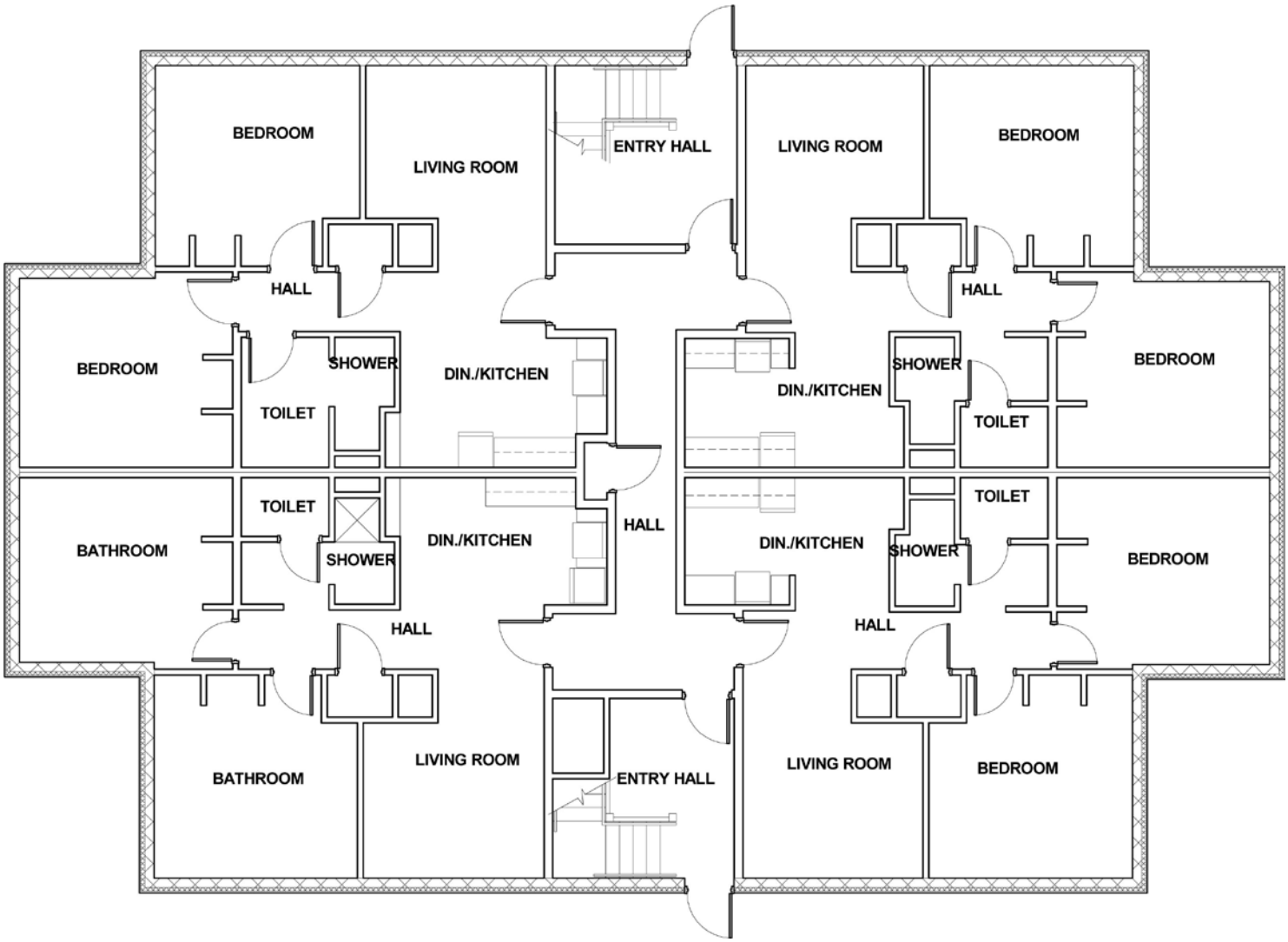
Additions: 1
Year Constructed: 2013
Square Feet: 2,350 sf

Number of Floors: 1
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

Student Housing



Student Dormitories
601 West State Farm Road

Building Area: 13,176 (x3) S.F.

Site Area: 171,000 S.F.

Year Constructed: 2003

Renovations/Remodels: N/A

Additions: N/A
Year Constructed: N/A
Square Feet: N/A

Number of Floors: 3
Basement: 0

Renovation Summary: N/A

Program Needs Summary: N/A

Rodeo Arena

Projected Cost Estimate	
New Area	56,355 S.F.
Cost per S.F.	$175/S.F.
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$9,862,125**
Furniture, Fees & Equipment	$1,676,560
Contingency (10%)	$986,212
Total Project Cost	**$12,524,897**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.



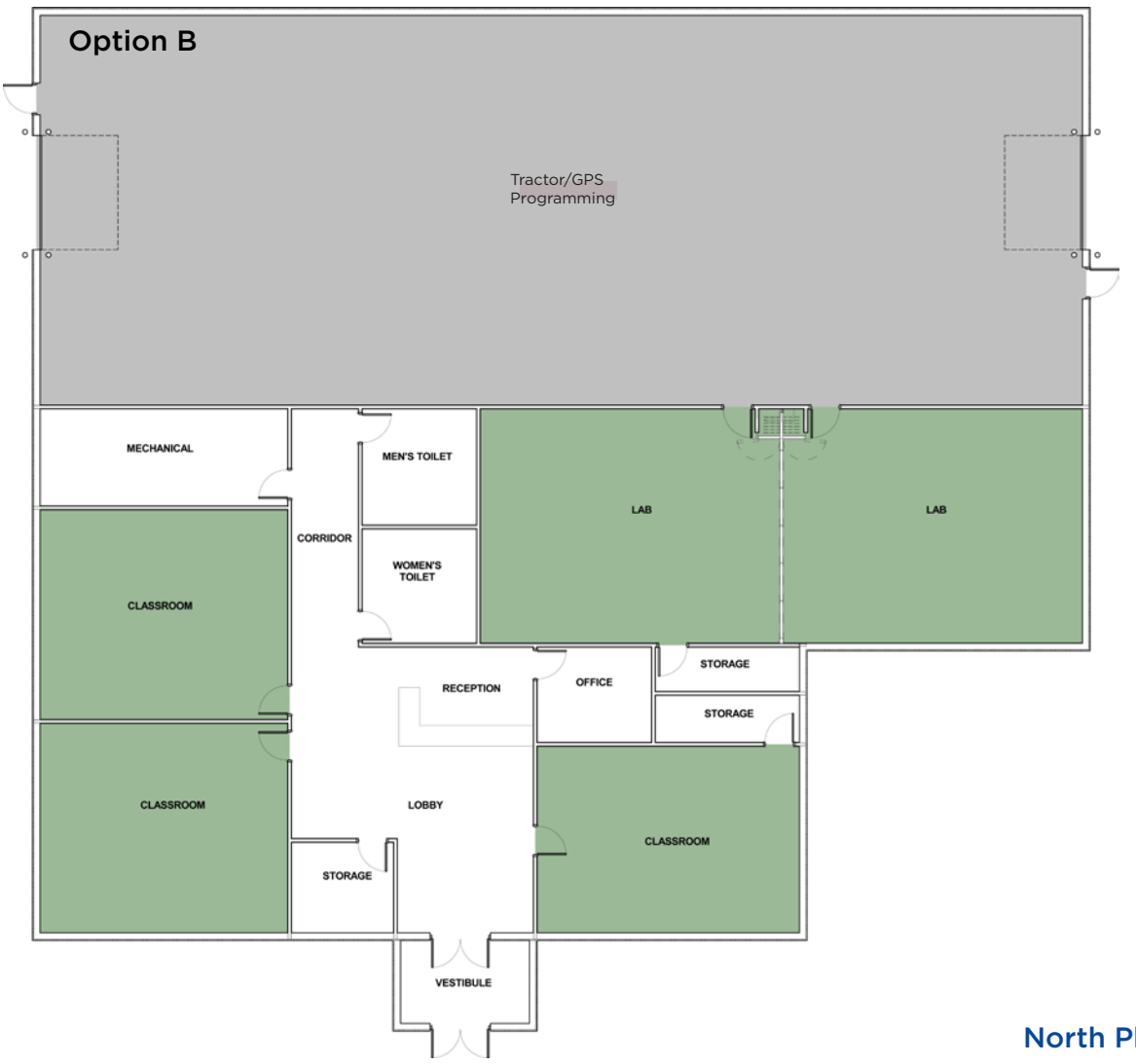
North Platte Campus

Projected Cost Estimate	
New Area	10,106 S.F.
Cost per S.F.	$180/S.F.
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$1,819,080**
Furniture, Fees & Equipment	$322,887
Contingency (10%)	$181,908
Total Project Cost	**$2,323,875**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.

Project Rationale:

- Program space for Ag programming and Rodeo



Rodeo Arena

MECHANICAL

HVAC Systems

The proposed HVAC system will be VRF fan coils and condensing unit(s) for the classrooms, lab areas, concessions, restrooms, storage areas and supporting corridors. Vestibules will be conditioned via electric cabinet unit heaters. Data closet(s) will have a dedicated fan coil unit on the VRF system or a dedicated 1 ton mini-split system to condition the space. Ventilation air will be distributed to all classrooms/lab areas, concessions, etc. via a packaged energy recovery unit (ERV) located on the roof or grade mounted. ERV unit will supply 70°F room neutral ventilation air to each fan coil or room directly. ERV unit will have DX cooling and electric or natural gas/propane heat. The rodeo arena area will have a dedicated exhaust system with carbon monoxide and nitrogen dioxide detection. Since the arena is open to the main building (classrooms, labs, etc.) it will be fully conditioned (heated and cooled). Rooftop units (RTU) will be provided with them either installed on the roof or grade mounted. RTUs will have electric or natural gas/propane heat and DX cooling capabilities. With the arena being fully conditioned, the RTUs will be provided with hot gas reheat capabilities for humidity control of the space. The RTUs will also supply the required ventilation air for the arena/bleacher areas. Destratifications fans will also be considered.

HVAC Piping Systems

Type M copper or PVC condensate piping from HVAC units will be routed to floor drains, drain boxes or a mop sink. Insulated refrigerant piping will be installed between the VRF fan coils and associated condensing unit(s).

Temperature Controls

The HVAC system will be controlled via new centralized building management controls. Engineering Controls is the Owner's Controls Contractor. Individual room control will be provided for each classroom, lab, concessions, vestibule, etc.

Plumbing Systems

Water, sanitary sewer, storm and gas utilities will need to be routed to the rodeo arena. Sizing will depend on layout and quantity of fixtures, assume 3-inch domestic cold water line and a 6-inch sanitary sewer line. Plumbing contractor will connect to utilities 5'-0" from the building and the remaining pipe and installation will be by the site contractor. Depending on local code requirements and activities in the concessions stand, a grease interceptor may be required. A new water heater and recirculation pump will be installed to provide hot water to lavatories, mop sink, kitchen sink(s) and hand wash sink(s). Floor drains will be installed throughout the facility as needed. Storm drainage will be via downspouts onto grade or internal drainage picked up by the site contractor 5'-0" from the building. The need for compressed air will need to be discussed depending on activities in the building.

Fire Sprinkler System

A new 6" fire sprinkler line would be brought to the building for a completed fire suppression system. A fire riser room will be required along with the associated accessories (PIV, FDC, drain valves, etc.)

ELECTRICAL

Electrical Distribution

The building's new main switchboard will be fed from a utility company provided pad mounted transformer located at the southeast corner of the arena. The arena will be served by a new 480/277, 3P, 4W Main Switchboard 'MSWB' located in the main electrical room. Based on 20 watts per square foot, the service size will be 1200 amps. The main switchboard will feed downstream 480-208/120 transformers and 208/120 distribution panelboards. Distribution panelboards will feed all 208/120 panelboards. There will be secondary electrical room on the west side of the arena. Both the main electrical room and secondary electrical rooms will have both 480/277 and 208/120 volt power panelboards.

Electrical Systems

Lighting will be fed at 277 volts from dedicated lighting panelboards. Mechanical equipment will be fed by dedicated 208/120 and 480/277 panelboards. General loads will be fed by dedicated 208/120 panelboards. Other new electrical equipment will consist of receptacles, floor boxes (classrooms), 2-section wiremold at baseboard height (classrooms), junction boxes, conduit, conductors, safety switches, and motor starters.

Lighting

Interior lighting for the entire arena will be provided with LED light fixtures. Arena floor will consist of high bay light fixtures for general lighting and also with separate spot lighting. General lighting will be controlled by multiple zones of switches via low voltage controls/switches. Spot lighting will be controlled separate from the general lighting. 2x4 grid recess fixtures will be provided in the classrooms, labs, restrooms, ticket office, and concession office areas. All areas will be dimmable. Classrooms and labs will have front of rooms switched separately from back of room. Linear lensed industrial pendant fixtures will be provided in corridors, mechanical, electrical, and storage rooms. Vestibules with 6" can lights. Lights in all spaces except corridors and storage rooms will be controlled via occupancy sensors and dimmer switches. Corridors will be controlled via occupancy sensors. Storage room will have a combination switch/occupancy sensor located on the wall. Electrical and mechanical rooms controlled by timer switches.

Exterior lighting will all be LED and will consist of building mounted wall packs, light poles for parking, and light poles for driving paths. Lights will be controlled via central photocell and timeclock/relay panel.

Exit/Emergency Lighting

New wall mounted emergency battery packs will be provided for all areas in the arena, except for the rodeo floor. Rodeo floor and exterior egress lighting will be from the general lighting fed by central batter inverter.

Fire Alarm Systems

A new addressable fire alarm control panel with integral mass notification capabilities will be provided. Notification will be via combination speaker/strobes throughout. Initiation will be via smoke detectors, heat detectors, manual pull stations, duct smoke detectors. Heat detectors will be provided in the arena floor area since area will have dirt/dust. Sprinkler flow and tamper switches will be monitored.

Rodeo Arena

Telecommunications Systems

All new floor mounted telecommunication racks with patch panels will be provided in separate centrally located telecommunications room. All electrical and telecom infrastructures will be provided (telecom outlets, receptacles, cable tray, conduit paths, empty junction boxes, etc). Telecommunications cabling will be provided throughout to locations directed by owner and terminated on patch panels. Patch cords will be provided by the owner. New telecom outlets will be provide in each classroom, office, lab, arena floor. Junction boxes with minimum 1" conduits will be provided to above accessible ceilings or directly to telecom room. New cable tray will be provided and routed along corridors. Conduit sleeves will provide access to each individual space. New cabling will be provided as instructed by the owner. New equipment (switches, patch panels, servers, etc) will be provided by owner.

Security Systems

Rough-ins for CCTV and card access will be provided. Conduits will be provided and routed to cable tray or directly to telecom room. CCTV locations will be at exterior building corners and interior corridors/Arena floor. Access control will be to telecom rooms and all building entrances.

A/V Systems

Rough-ins for owner provided TVs, projectors will be provided in classrooms and labs. A public address system complete with microphone inputs, speakers, amplifiers, digital signal processor, etc. will be provided. Head end equipment will be located in the telecom room. Power (receptacles) will be provided for all equipment. A/V equipment and cabling will be provided by A/V equipment supplier.

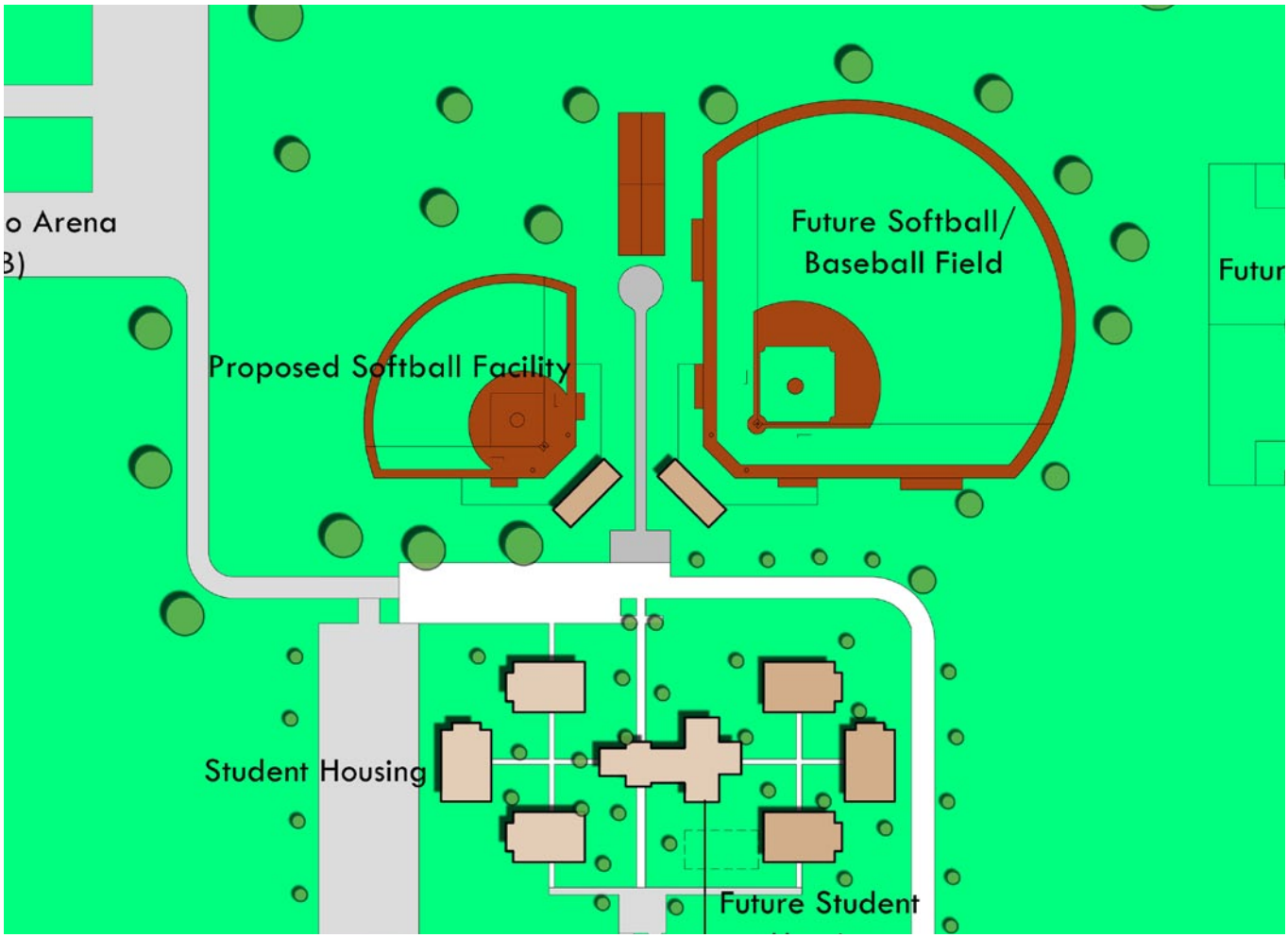
Competition Softball Field

Projected Cost Estimate	
New Area	N/A
Cost per S.F.	N/A
Remodel Area	N/A
Cost per S.F.	N/A
Total Construction Cost	**$975,000**
Furniture, Fees & Equipment	$173,062
Contingency (10%)	$97,500
Total Project Cost	**$1,245,562**

NOTE: All costs are in today's dollars. Add 3% per year for inflation.

Project Rational:

- Need for college level facilities on campus
- Comparable facilities to peer institutions



MECHANICAL

HVAC Systems
The proposed HVAC system will be electric unit heaters in the concessions and restrooms. The press boxes will have electric baseboard heat and possibly some air-conditioning units depending on the room layout and if air-conditioning is desired. Restrooms will have ceiling or roof-mounted direct drive exhaust fans and associated duct work, grilles and accessories. Transfer air duct work and grilles will be installed to have airflow into the restrooms. A small 1 ton split system unit will be installed to condition the telecommunications room

HVAC Piping Systems
Type M copper or PVC condensate piping from HVAC units will be routed to drains or the exterior of the building, if air-conditioning is installed. Insulated refrigerant piping shall be installed between the mini-split and associated outdoor condensing unit and on other HVAC systems as need.

Temperature Controls
With this area being in a remote location, programmable local wi-fi thermostats will be considered.

Plumbing Systems
Water and sanitary sewer utilities will need to be routed to the concessions /press box. Sizing will depend on layout and quantity of fixtures, assume 2-inch domestic cold water line and a 4-inch sanitary sewer line. Plumbing contractor will connect to utilities 5'-0" from the building and the remaining pipe and installation will be by the site contractor. Future construction of the softball/baseball field and associated concessions/press box shall be taken into account when main utilities are designed. Depending on local code requirements and activities in the concessions stand, a grease interceptor may be required. A 20-40 gallon water heater will be installed to provide hot water to lavatories, kitchen sink(s) and hand wash sink(s). Floor drains will be installed throughout the facility as needed. Storm drainage will be via downspouts onto grade. Entire domestic cold and hot water system will be designed to have the ability to "winterize " the building by draining all the water piping and blowing out the system with compressed air.

Fire Sprinkler System
No fire suppression is planned for the concessions/press box at this time.

ELECTRICAL

Electrical Distribution
The building's new main service entrance panelboard will be fed from a utility company provided pad mounted transformer located at the southeast corner of the facility adjacent the concession stand building. The area will be served by a new 480/277, 3P, 4W Main Distribution Panelboard 'MSDP' located in the main electrical room of the concession building. It is anticipated the distribution panelboard will be 600 amps and capable of providing power to the future baseball/concession building and field lights. The main distribution panel will feed downstream 480/277 panelboards, 480-208/120 transformers and 208/120 panelboards.

Electrical Systems
Lighting will be fed at 277 volts from a dedicated lighting panelboard. Mechanical equipment will be fed by dedicated 208/120 and 480/277 panelboards. General loads will be fed by dedicated 208/120 panelboards. Other new electrical equipment will consist of receptacles, junction boxes, conduit, conductors, safety switches, and motor starters.

Lighting
Interior lighting for the concession stand/press box will be LED light fixtures. 2x4 recessed fixtures will be provided in the concession stand, restrooms, and press box. Most areas will be dimmable. Concession will be all on/off. Press box will have zones of lights for control. Linear lensed industrial pendant fixtures will be provided in mechanical, electrical, telecom and storage rooms. Concession and press box will be controlled via occupancy sensors and manual dimmer switches. Restrooms will be controlled via occupancy sensors and manual switches. Storage rooms will have a combination switch/occupancy sensor located on the wall. Electrical, telecom, and mechanical rooms controlled by timer switches.
Exterior lighting will all be LED and will consist of Pole mounted sports field type lights. Lighting locations will follow NCAA Softball Standard Intercollegiate Play Best Lighting Practices. There will be 6 poles placed around the softball field (2 along 1st base line, 2 along 3rd base line, and two behind the outfield. Infield lighting will be lit to 70 foot-candles. Outfield will be lit to 50 foot-candles. Lights will be controlled timeclock/relay panel with manual override functions.

Exterior pole lights will be located between the existing parking lot to the south and bleachers along with building mounted lights on each side of the concession building. These building lights and pole lights will be connected to a battery inverter to provide emergency egress pathway lighting. All will be controlled by a central photocell mounted to the concession building.

Exit/Emergency Lighting

New LED wall mounted emergency battery packs will be provided for all areas in the concession stand/press box areas. New LED exit lights above egress doors.

Fire Alarm Systems

A new addressable fire alarm control panel with integral mass notification capabilities will be provided. Notification will be via combination speaker/strobes throughout the interior spaces. Exterior speakers will be provided around the concession building for mass notification to athletes and fans. Fire alarm initiation will be via smoke detectors, heat detectors, and manual pull stations. If sprinkled, sprinkler flow and tamper switches will be monitored.

Telecommunications Systems

A new floor mounted telecommunication racks with patch panels will be provided in a separate telecommunications room located in the press box. All electrical and telecom infrastructures will be provided (telecom outlets, receptacles, conduit paths, empty junction boxes, etc). Telecommunications cabling will be provided throughout to locations directed by owner and terminated on patch panels. Patch cords will be provided by the owner. Junction boxes with minimum 1" conduits will be provided to above accessible ceilings or directly to telecom room. Conduit sleeves will provide access to each individual space. New cabling will be provided as instructed by the owner. New equipment (switches, patch panels, servers, etc) will be provided by owner. Telecom cabling will be provided to one of the infield light poles for owner provided wireless access point equipment connections.

Security Systems

Rough-ins for CCTV and Card Access will be provided. Conduits will be provided and routed to above accessible ceilings or directly to telecom room. CCTV locations will be at exterior building corners, 2 of the infield light poles and interior concession/press box. Access Control will be to telecom rooms and all building entrances.

A/V Systems

A public address system complete with microphone inputs, speakers, amplifiers, digital signal processor, etc. will be provided. Head end equipment will be located in the telecom room. Power (receptacles) will be provided for all equipment. A/V equipment and cabling will be provided by A/V equipment supplier.



WILKINS

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