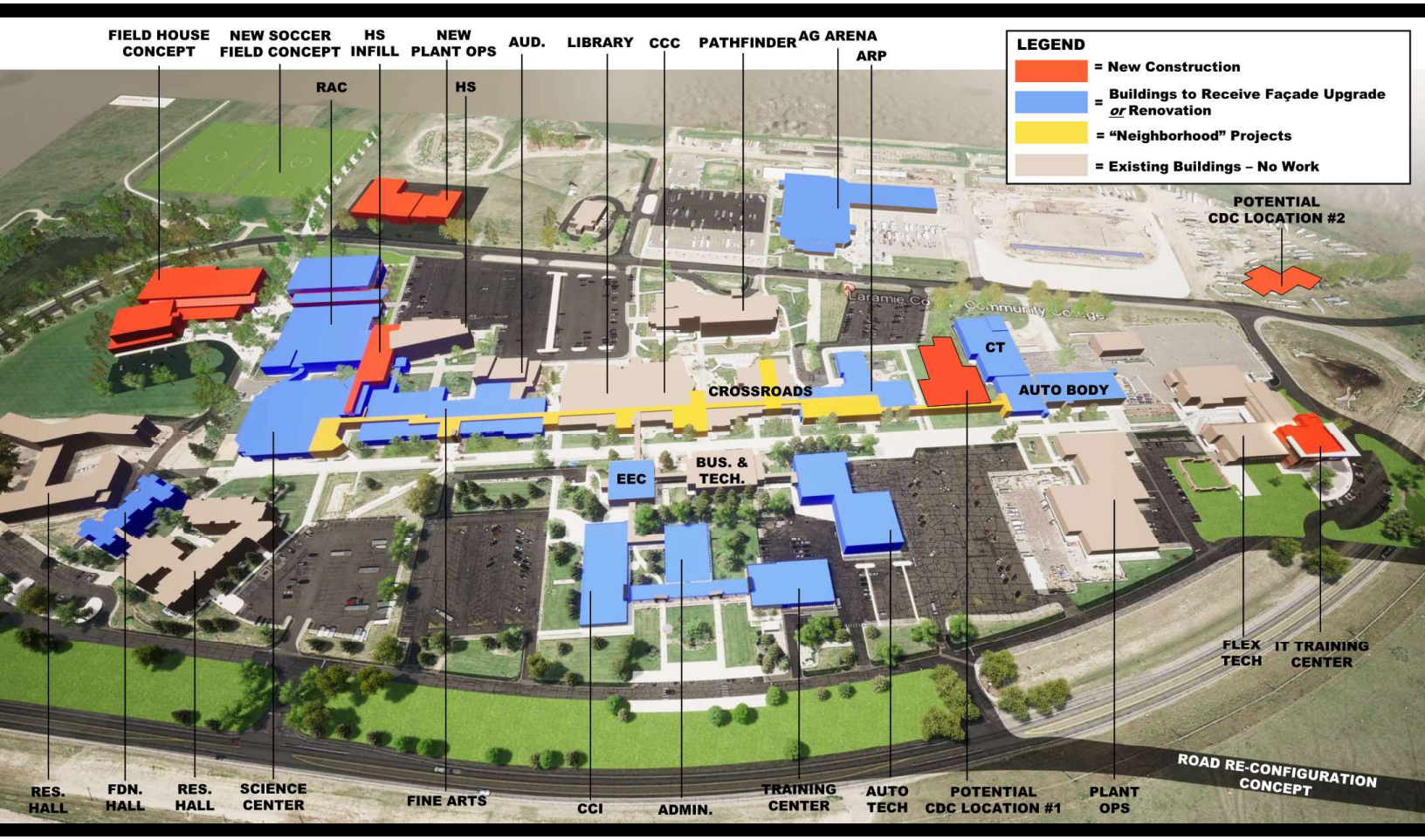
LARAMIE COUNTY COMMUNITY COLLEGE



LARAMIE COUNTY COMMUNITY COLLEGE MASTER PLAN UPDATE

FEBRUARY 1, 2022

PLAN 1 plan one / architects

plan one/architects
cheyenne cody rock springs

February 1, 2022

Dr. Joe Schaffer, President
Laramie County Community College
1400 E College Drive
Administration, Room 138
Cheyenne, WY 82007

Re; Laramie County Community College
2021 Master Plan Update

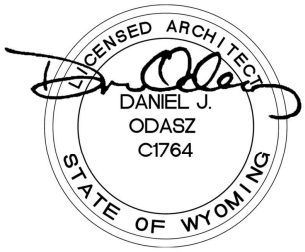
Dear Dr. Schaffer;

Attached is the 2021 LCCC Master Plan Update, for your use, distribution, and submittal to the State of Wyoming. The purpose of this master plan update is to set a high-level overview of projects and facility improvements for the future of the LCCC campus. Additionally, a number of campus wide assessments have been performed and included, which provide detailed base data for major maintenance expenditures.

It has been a pleasure working with your leadership group and staff. The following information shows a great level of enthusiasm and forward thinking by your organization, all geared towards providing opportunities for our youth and community.

Sincerely,

Dan Odasz AIA, President
Plan One/Architects





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1 Executive Summary

1 EXECUTIVE SUMMARY

Executive Summary: Laramie County Community College retained the services of Plan One/Architects in July 2021 to update the LCCC Campus Master Plan. The scope of work for the project was identified in Request for Proposals RFP-142111 titled "Campus Master Plan Update" which was publicly advertised through the Wyoming Public Purchase website. The detailed scope of work is contained in the RFP, which is included in the appendix of this report. The Plan One/Architects design team submitted a proposal to LCCC dated May 25, 2021. The Plan One team was selected for the project, and a contract for the work was executed on June 21, 2021.

Master Plan Requirement: Each Wyoming community college is required to provide a campus master plan update every five years. This requirement is manifested in Wyoming State Statute W.S. 21-18-225. As a college institution experiences changes in the needs of students, differing economic conditions in Wyoming, and different needs in regional workforces, it then reacts by tailoring its educational offerings. Inclusion in a master plan is the first step towards implementation of a project. It shows forethought and planning on behalf of the institution, and an intent to make progress in that direction. The next step in the progress is the development of a Level I / Level II Study. This takes the development of the project to the next highest level, commonly recognized as schematic design. The Level II is generally used for the pursuit of full project funding. Once funded, the project moves into Level III development, which is the preparation of full construction documents, bidding activities, and the actual construction itself.

Leadership and Guidance: As the team moved forward with the master plan update, leadership and guidance was provided by the following LCCC Administrative Staff:

- Dr. Joe Schaffer, President
- Mr. Rick Johnson, Vice President of Administration and Finance
- Mr. Bill Zink, Director of Physical Plant
- Ms. Jamie Spezzano, Director of Contracting & Procurement
- Mr. Chad Marley, Chief Technology Officer

Individual Project Leadership and Guidance: For each of the renovation and new projects included in the master plan, additional guidance was provided by specific staff dedicated to each curriculum area. In this manner, master plan input was gained from both top LCCC leadership, and curriculum specific user groups. This provided a well-rounded basis for the formulation of each project.

LARAMIE COUNTY COMMUNITY COLLEGE

Master Plan Design Team: Plan One/Architects utilized the services of a number of specialized engineers and consultants to complete these tasks. Their respective expertise was necessary not only to assist with each of the project designs, but to complete the full campus wide building assessments that were a part of this update as well. Each of their significant contributions can be found in this report. The full master plan update team consisted of the following:

• Plan One/Architects	Dan Odasz, AIA	Architecture & Planning
• Martin/Martin Engineering	Derek Swanson	Structural Engineering
• Martin/Martin Engineering	Ben Nemec	Civil Engineering
• Wood	Nick Pickering	Mechanical Engineering
• Wood	Rick Shields	Electrical Engineering
• TCS	Marc Auville	Technology
• Studio Plaats	Shane Fagan	Landscape Architecture

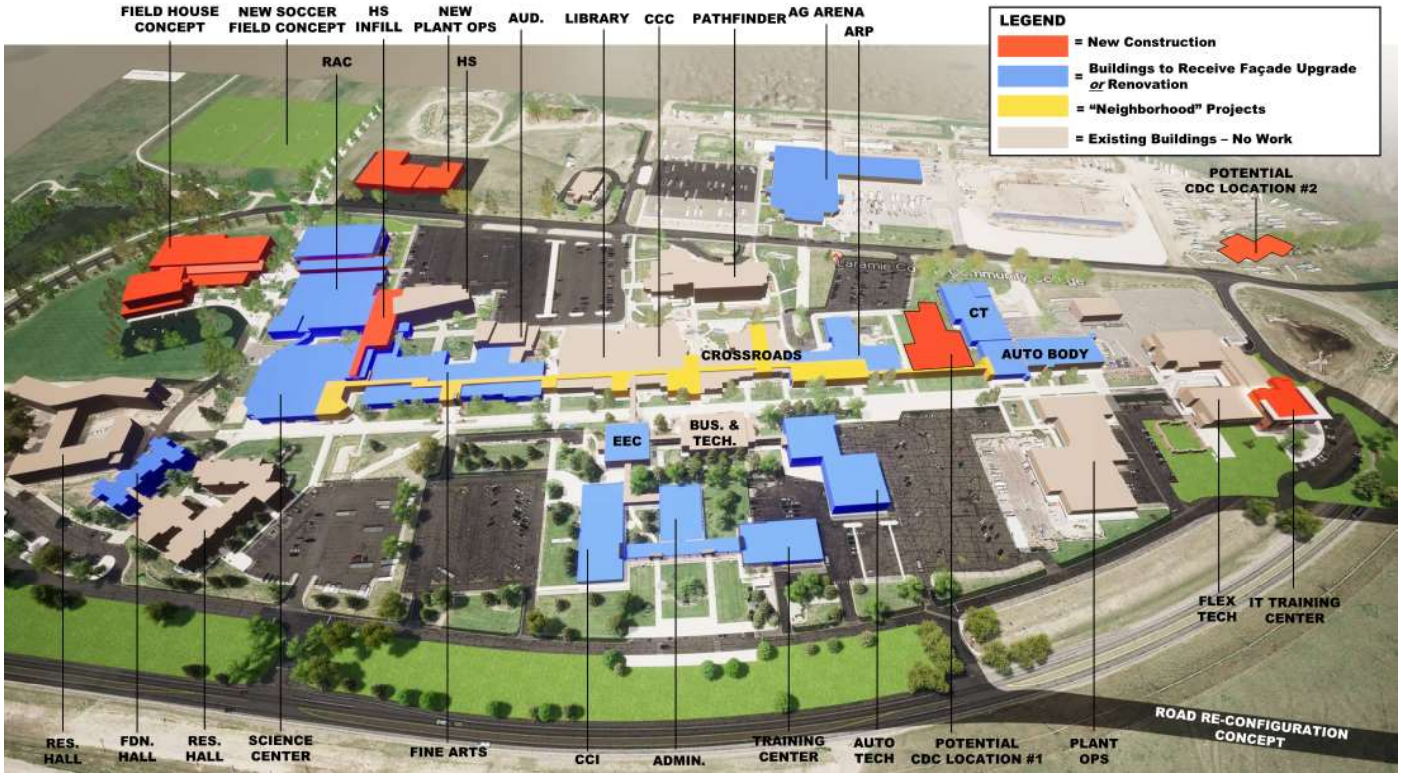
Master Plan Update Process: The Request for Proposals (appendix) defined the scope of work for this master plan update. It included eleven new construction projects, and a full compliment of campus wide facility evaluations. Each project started with a different level of baseline information. Some were basically started from the beginning, while others already had the benefit of some preliminary planning work. The goal of the master plan team was to advance each of these for inclusion in the master plan update. Each of the projects was developed through the following process flow:

- Staff interviews
- Review of previously prepared materials
- On-site field investigations of the existing facilities
- Development of space programs of needed spaces and attributes
- Conceptual design services including new site plans, floor plans, and 3D imagery
- Conceptual cost estimating

A distinct chapter is provided in the master plan update for each of these projects.



Campus Three-Dimensional Model: In order to assist in the visualization of each project, the Plan One Team built a full campus, three-dimensional model in our software program. This model was used to insert new projects, show renovation areas, façade improvements, and other master plan ideas. The three-dimensional model has the benefit in that it can be viewed from any angle, giving the users many benefits over flat two-dimensional drawings. The three-dimensional aspect gives verticality to the campus, and allows building mass to be seen as well as location. The overall campus map is seen below:

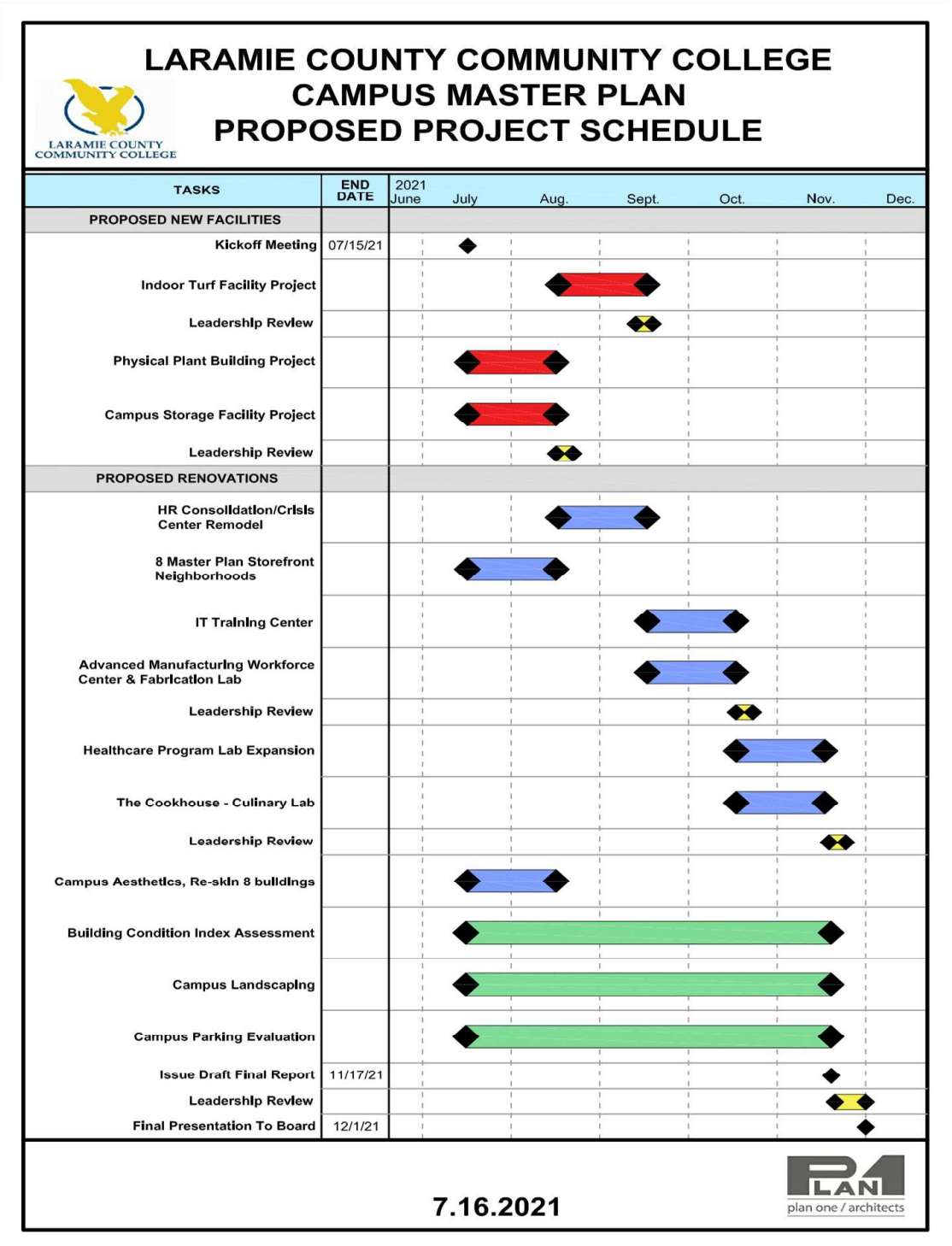


This 3D model of the campus is color coded based on the particular projects within the Master Plan Update.

Master Plan Schedule: The master plan kick-off meeting was held on July 15th, 2021. At this meeting a suggested plan of action was approved by the leadership group. The scheduling concept was to develop two or three of the proposed projects at one time concurrently, then seek review and advice from the leadership group. This provided a more focused and thoughtful approach to each project, rather than starting all of them at the same time. The groupings of projects were spread out over the time frame of July 2021 to December 2021.



Concurrently, the campus wide facility assessments were initiated and progressed through the entire time frame. These elements included the more "nuts and bolts" type of assessments such as civil, landscape, structural, mechanical, electrical and technology assessments. Progress of these activities were presented to the leadership group at each meeting, along with the specific project design exercises for that time period. The full master plan project schedule, dated July 16, 2022, is displayed below.



Appendix

1. *Request for Proposals RFP-142111 titled "Campus Master Plan Update"*
2. *Engineering Parts*

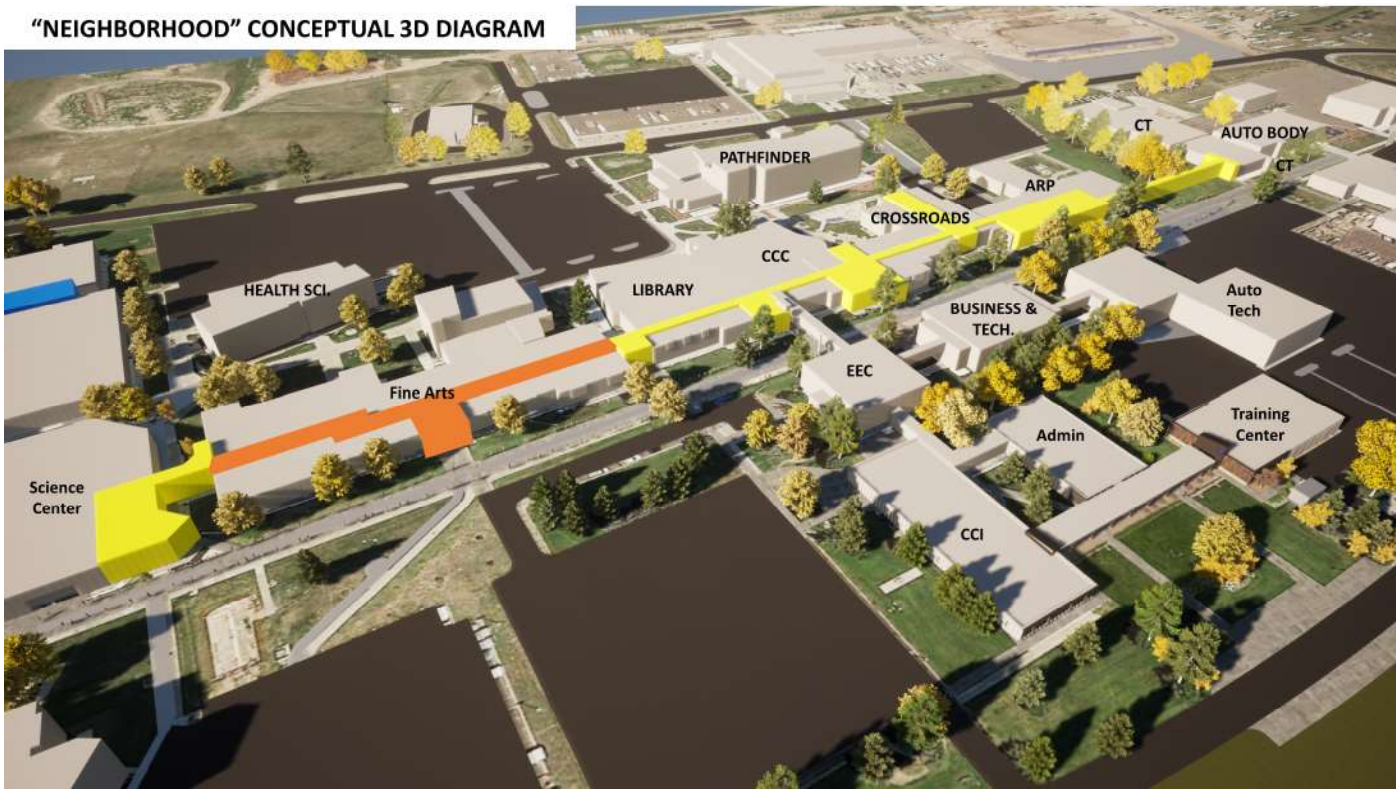




2 Individual Project Development

Eight Storefront Neighborhoods

Project Origin: The "Neighborhoods" concept was originally displayed in the 2016 campus master plan update (reference pages 66-76 of that document). It enhances a string of existing buildings along the inner pedestrian core of the campus, connecting them with an improved corridor system and adding a specialized academic node to each building. This master plan has retained this concept, and brought it forward as a desired and valid project in this 2021 master plan update.



Aerial view from the south looking at string of neighborhood projects proposed.

The three-dimensional representation above shows the neighborhood concept spanning from the Science Center to the west, all along the interior promenade, to the Auto Body Building in the east. A cost estimate was prepared for the entire system. The cost estimate included not only hard construction costs, but "soft" project related costs as well, in order to provide LCCC with full funding requirements.

To respect the probability of limited funding resources, the LCCC leadership group asked if the project could be completed in phases. The answer was yes. Together, the group decided to look at the Fine Arts Building as a good place to start the process. Therefore, in the cost estimate at the end of this section, the Fine Arts project cost has been separated out for the sake of obtaining funding.





Concept image illustrating new landscaping potential and entrance form.

Individual Building Identity: In an effort to fully describe the project, Plan One and our Landscape Architect, Studio Plaats, began to explore different looks for the entrances to the buildings. Currently, the existing campus motif is a very uniform, mono-style of pre-cast painted tees for the exterior walls.

The concept arose that a unique entrance design would give a sense of unique individuality to each of the buildings. The following images show how a vertical tower design would help with building identification from a distance.

Concentrated Landscape Focus: The central core area of the campus has already begun a landscape transformation away from mowed, irrigated lawn to more of a water conservative xeroscape design. To further that idea, and to again bring focus to the entrance points of the building, Studio Plaats developed a series of concepts that would add a splash of color and variety to just the immediate area of the front door.



Concept image illustrating new landscaping potential and entrance form.



Concept image illustrating new landscaping potential and entrance form.

Unique Curriculum Enhancements: During the course of design, the team took the exterior façade enhancement one step further. To further individualize the entrance to each building, a curriculum specific enhance is proposed for each building.



Concept image illustrating "active" artistic chalk wall.

A Sense of Place: For the Fine Arts building, a relatively low- cost pergola is envisioned for the exterior just outside the entrance. This is intended to encourage students and staff to linger outside, by creating a new "place" in the campus fabric. This pergola could be galvanized and painted for longevity and low maintenance. It could also have a wind break incorporated into the west side.

Artistic Expression: Another great idea, specific to the Fine Arts, was the creation of a "Chalk Wall" opposite the pergola. This solid concrete wall would be available for the students to create temporary chalk art, messages, or other creations. These would be short-lived and temporary, washed away by the next rain.

Project: Neighborhood Concept
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 10/26/21

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 50,000	$ 50,000
General Conditions	2%	%	$ 9,543,850	$ 190,877
Bonds & Insurance	0.8%	%	$ 9,543,850	$ 76,351
Total Division 1				**$ 317,227.80**
Construction Costs				
Fine Arts - Entrance Node	394	sf	$ 375	$ 147,750
Fine Arts - Collaboration Space	1,641	sf	$ 225	$ 369,225
Fine Arts - Corridors	4,549	sf	$ 175	$ 796,075
Science Center - Entrance Node	1,334	sf	$ 375	$ 500,250
Science Center - Collaboration Space	2,380	sf	$ 225	$ 535,500
Science Center - Corridors	1,615	sf	$ 175	$ 282,625
Library - Entrance Node	265	sf	$ 375	$ 99,375
Library - Collaboration Space	905	sf	$ 225	$ 203,625
Library - Corridors	2,095	sf	$ 175	$ 366,625
CCC - Entrance Node	265	sf	$ 375	$ 99,375
CCC - Collaboration Space	905	sf	$ 225	$ 203,625
CCC - Corridors	2,095	sf	$ 175	$ 366,625
Crossroads - Entrance Node	1,395	sf	$ 375	$ 523,125
Crossroads - Collaboration Space	7,823	sf	$ 225	$ 1,760,175
Crossroads - Corridors	2,484	sf	$ 175	$ 434,700
ARP - Entrance Node	1,200	sf	$ 375	$ 450,000
ARP - Collaboration Space	5,990	sf	$ 225	$ 1,347,750
ARP - Corridors	2,499	sf	$ 175	$ 437,325
CT - Entrance Node	636	sf	$ 375	$ 238,500
CT - Entrance Corridor	1,893	sf	$ 175	$ 331,275
Landscaping	1	ls	$ 50,000	$ 50,000
Subtotal Construction Costs				**$ 9,543,525**
General Contractor OH&P	1	%	8%	$ 788,860
Total Construction Costs (Including Division 1)				**$ 10,649,613**
Project Soft Costs				
Architectural / Engineering Fees		%	10%	$ 1,064,961
Testing & Inspection		%	0.85%	$ 90,522
FF&E		%	4%	$ 425,985
Construction Contingency		%	10%	$ 1,064,961
Design Contingency		%	10%	$ 1,064,961
Subtotal Project Soft Costs				**$ 3,711,390**
Total Project Cost - Hard & Soft Costs Combined				**$ 14,361,003**

Fine Arts Project Cost	$	1,975,865
Science Center Project Cost	$	1,983,878
Library Project Cost	$	1,007,645
CCC Project Cost	$	1,007,645
Crossroads Project Cost	$	4,090,020
ARP Project Cost	$	3,363,319
CT Project Cost	$	857,392

Eight Building Re-Skin Projects

Project Origin: This project entails applying a new exterior façade, or "skin" over the top of the existing exterior pre-cast concrete surfaces. The test pilot for this project was the reskin that was applied over the Andrikopoulos Business & Technology Building. This project was designed by Tobin & Associates in 2017, and is considered very successful. In fact, this project was featured in the 2022 Wyoming Architectural calendar. The new facade adds a modern look to the building. It has an important added benefit, in that additional insulation is added to the exterior envelope during the process, increasing energy efficiency for the long term.



Existing photograph of the Business & Technology building, which recently received a facade upgrade.

Extent of the Proposed Project: With the Business & Technology Building upgrade as a starting point, a number of the other original buildings on campus have been slated for a façade upgrade. The partial campus map below shows the project extent that is suggested in this master plan update.



3D model of the entire campus, with color coded buildings based on Master Plan projects.

Building Individuality: As described in the preceding Neighborhoods section, it may be desired to provide each building with its own sense of individuality. Available in the construction market today are a great number of architectural metal panels. These come in a great variety of colors, profiles, finishes and textures. Additionally, different reveals can be added, separating the panels and adding a negative space for dramatic effect. For the sake of example, the Master Plan Team used a corner of the Training Center Building as a location for a variety of exterior panel studies, shown on the next page.



The Training Center was 3D modeled in order to study several different re-skin concepts.

Indeed, not all the buildings need to look alike. In everyone's mind, the monolithic look of the painted, pre-cast concrete walls are ready for a new modern look. The newer buildings on campus are beautiful representations of what all the re-skinned buildings could be. However, there is a general feeling in that the buildings are different, they should all share a common color palette, throughout the campus, so there is still a sense of unification.



These thumnbail images represent various re-skin methodologies, all of which could help tie the campus into a common aesthetic.



Physical Plant & Campus Storage Facility

Project Origin: This is a new project shown for the first time in this 2021 master plan update. The current Physical Plant Building is located on the eastern side of campus, but within the main central core. As such, this location might be better suited for an academic use in the future. The Physical Plant Building needs to be near campus for convenience, but would be better suited to be away from the pedestrian nature of the central campus core.

Additionally, the physical plant, and the surrounding walled corporation yard, are nearing capacity. A relocation and new build for the physical plant would allow it to be right-sized for todays needs, but also be designed to accommodate future expansion.



Image to the Left:
Existing physical plant building

Campus Storage Building: Another new project is the Campus Storage Building. As with most institutions, storage space is at a premium. Most available storage areas get taken with new uses as an institution grows (an evidence of success). Currently, the LCCC staff end up moving stored items from one location to another, time and time again, causing an inefficiency and expense in staff resources. The concept is to have a large warehouse where surplus items are stored, all under one roof. The warehouse would have a drive-in bay for drop-off and pick-up convenience, all under roof.

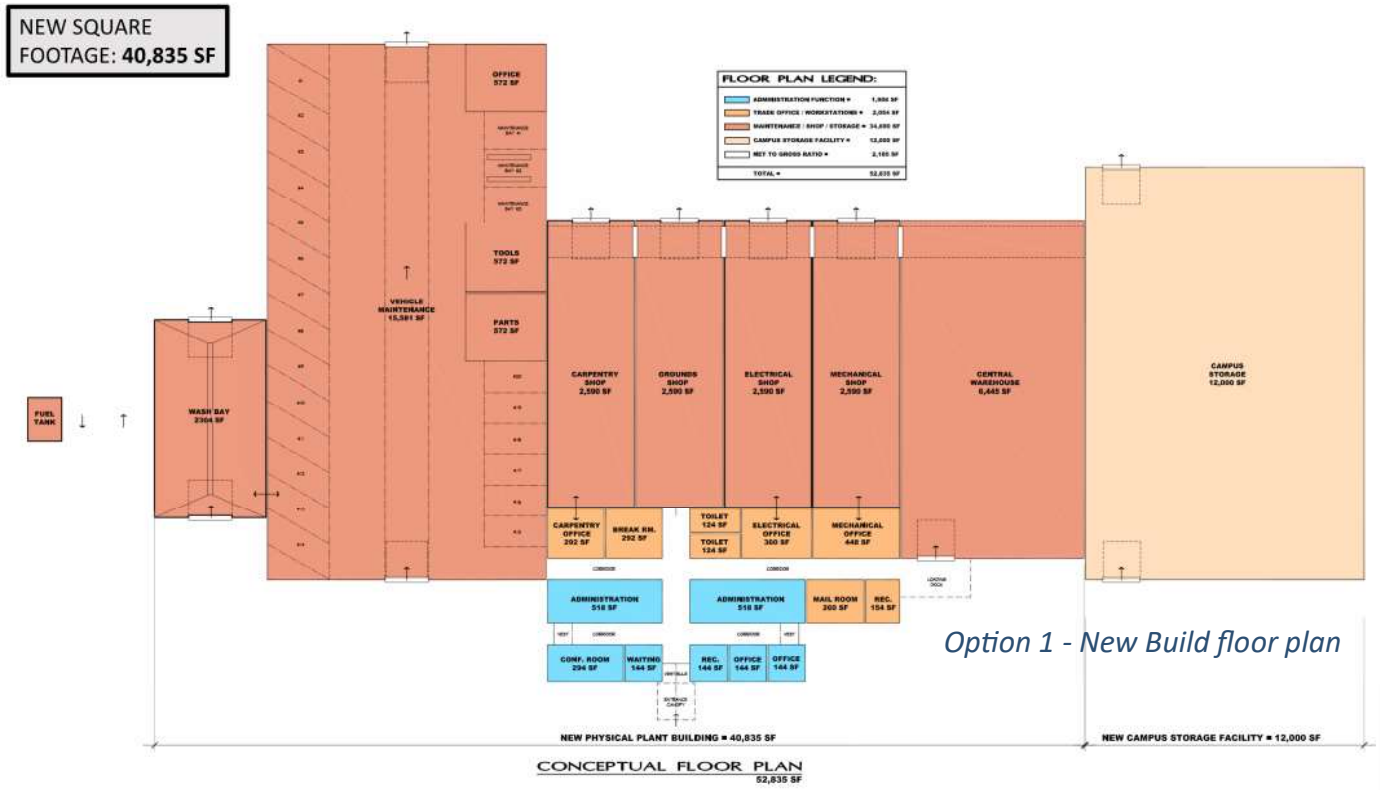
Construction Type Economy: Both of these facility needs lend themselves to a pre-engineered metal building (PEMB) solution. This is a very economical building construction type, that has the added benefit of large, clear spans within, with a limited number of columns. These buildings could have a limited amount of conventional exterior finishes applied, especially at the main entrance, to help them blend with the campus. However, they should and would remain basically utilitarian, in order to receive the maximum amount of useable square footage for a reasonable cost.

Project Consolidation Efficiency: As both of these facility needs suggest the same construction type, it made sense for the sake of this master plan update to consolidate them into a single project. The campus storage space has been placed directly adjacent to the campus warehouse space in the physical plant. Both types of storage could overflow and mix back and forth for efficiency according to fluctuating needs.

Option 1 – New Build: The first solution explored was the construction of a new physical plant and Storage Building (combined) on the north side of campus, outside of the loop road. This provides the proximity needed for quick service to all the campus buildings, but places the new facility beyond the higher aesthetics of the inner campus core. If the physical plant operation was to be relocated, the existing central heating and cooling plant would remain in its current location, due to its connectivity to the campus infrastructure system.



Option 1 - New Build site plan



Option 1 - New Build floor plan

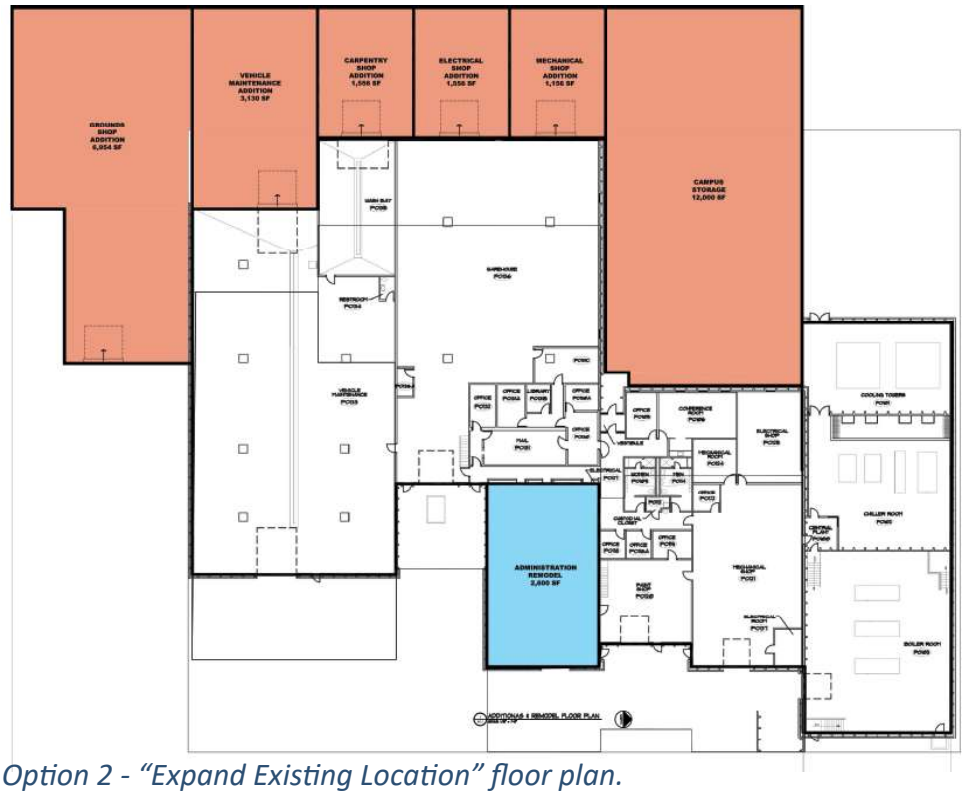
Floor Plan Design: In programming sessions with the staff, it made sense to design the floor plan area by the individual trades. Therefore, the automotive, electrical, carpentry, grounds, and other trades all have their own individual areas, where they will store their own supplies and perform their own work task. The PEMB building system works perfectly for this type of arrangement. In the floor plan graphic below, the building has been designed for future expandability in all directions. This allows the economy of right-sizing for current needs, and accommodating future growth as well.

Option 2 – Expand Existing Location: Due to the expense of a new facility, the Leadership Group asked for a second scheme of adding onto the existing physical plant building to be explored. This would be accomplished by building additions into the existing walled corporation yard. While this does present a lower first cost investment, it eliminates the useable exterior yard space currently used for vehicle and material storage. It may also be considered a short-term fix, in that more eventual growth would mean a future relocation anyway. In that event, this capital expenditure should be carefully evaluated, due to the cost of adding new construction onto an older building with a limited remaining lifespan.



Option 2 - "Expand Existing Location" site plan.

Administration Relocation: Both schemes portray the improvement of relocating the physical plant administrative function to a more accessible location. The current location is tucked back in a corner, and is difficult to find for vendors and visitors. A new "front door" to the physical plant operation would make the floor plan system more efficient and improve flow. It would also limit visitor access to the interior part of the building, for an appropriate separation between public and private spaces.



Option 2 - "Expand Existing Location" floor plan.

Image to the left: Conceptual Floor Plan Diagram of Option 2 - Expand Existing Location.

LCCC Operations Plant - Option 1 Conceptual Estimate

Project: LCCC Operations Plant / Campus Storage Facility Project
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 08/19/21

CONCEPTUAL PROJECT COST ESTIMATE	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 50,000	$ 50,000
General Conditions	2%	%	$ 15,830,000	$ 316,600
Bonds & Insurance	0.8%	%	$ 15,830,000	$ 126,640
Total Division 1				**$ 493,240.00**
Construction Costs				
Administration Offices	1,906	sf	$ 525	$ 1,000,650
Trade Offices & Workstations	2,054	sf	$ 400	$ 821,600
Maintenance Shop & Storage	34,690	sf	$ 300	$ 10,407,000
Campus Storage Facility	12,000	sf	$ 300	$ 3,600,000
Subtotal Construction Costs				**$ 15,829,250**
General Contractor OH&P	1	%	8%	$ 1,305,799
Total Construction Costs (Including Division 1)				**$ 17,628,289**
Project Soft Costs				
Architectural / Engineering Fees		%	6%	$ 1,057,697
Testing & Inspection		%	0.85%	$ 149,840
Construction Contigency		%	10%	$ 1,762,829
Design Contingency		%	10%	$ 1,762,829
Subtotal Project Soft Costs				**$ 4,733,196**
Total Project Cost - Hard & Soft Costs Combined				**$ 22,361,485**

LCCC Operations Plant - Option 2 Conceptual Estimate

Project: LCCC Operations Plant Additions & Remodel Project
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 09/22/21

CONCEPTUAL PROJECT COST ESTIMATE	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 50,000	$ 50,000
General Conditions	2%	%	$ 8,348,000	$ 166,960
Bonds & Insurance	0.8%	%	$ 8,348,000	$ 66,784
Total Division 1				**$ 283,744.00**
Construction Costs				
Administration Office Remodel	2,600	sf	$ 250	$ 650,000
Maintenance Shop & Storage	22,654	sf	$ 300	$ 6,796,200
Subtotal Construction Costs				**$ 7,446,200**
General Contractor OH&P	1	%	8%	$ 618,396
Total Construction Costs (Including Division 1)				**$ 8,348,340**
Project Soft Costs				
Architectural / Engineering Fees		%	6%	$ 500,900
Testing & Inspection		%	0.85%	$ 70,961
Construction Contigency		%	10%	$ 834,834
Design Contingency		%	10%	$ 834,834
Subtotal Project Soft Costs				**$ 2,241,529**
Total Project Cost - Hard & Soft Costs Combined				**$ 10,589,869**

INDOOR TURF FACILITY

Project Origin: This project consists of a new indoor turf and basketball complex directly adjacent to the Recreation & Athletics Center (RAC) Building. It was first briefly mentioned in the RAC Level II Study prepared by Tobin & Associates in 2017.

The RAC Project: Funding has been secured for the RAC project, and design work is underway for a complete gut & remodel of the existing facility. One key feature of the RAC project is the transformation of the current Multi-Purpose Room (MPR) into a new competition gym, capable of hosting basketball or volleyball games, with seating for up to 1,800 spectators. The new indoor turf facility contains three new basketball / volleyball courts. Together, with the two courts that be within the remodeled RAC, makes a total of five courts. This will provide LCCC with the ability to host large scale tournaments on campus for the first time.



Design sketch showing the currently proposed "Scheme C" for the RAC renovation.

Surrounding Site Context and Connectivity: The new indoor turf facility will be located due west from the RAC. The RAC project features a new main entrance and promenade corridor, that will flow all the way through the building from east to west. At the western end, there is an opportunity for a strong connection to the new indoor turf facility. This may be either a landscaped courtyard, or a fully enclosed link, to protect from the weather. To the north a new soccer field complex is proposed. Four fields are envisioned. The southeast field would be the competition filed. It would consist of artificial turf, and be equipped with bleachers, press box, and lighting. Pedestrians would be kept to the inside of the new field system, and vehicular access would be provided around the outer perimeter, for separation and safety.



This image depicts the conceptual layout for future soccer fields, located just to the north of the existing athletic facilities (and proposed location for the indoor turf facility).

Floor Plan Arrangement: The new indoor turf facility will provide an interior athletic practice space for year-round use. The opportunities for this large open space are many. The main corridor will align with the new RAC main entrance and corridor, making the two facilities compliment each other and feel as one. New locker rooms and support spaces have been placed to the southern side. The three new basketball / volleyball courts have been envisioned as a separate building form, making this an easy component of the project to be considered a bid alternate or to be phased for future implementation. The cost estimates at the end of the section show this portion of the project separated out, to assist with funding consideration. Space is provided south of the new parking lot for a future pool building as part of this master plan as well.



Concept site layout of new indoor turf facility, adjacent to the soon to be renovated Recreation and Athletic Center.

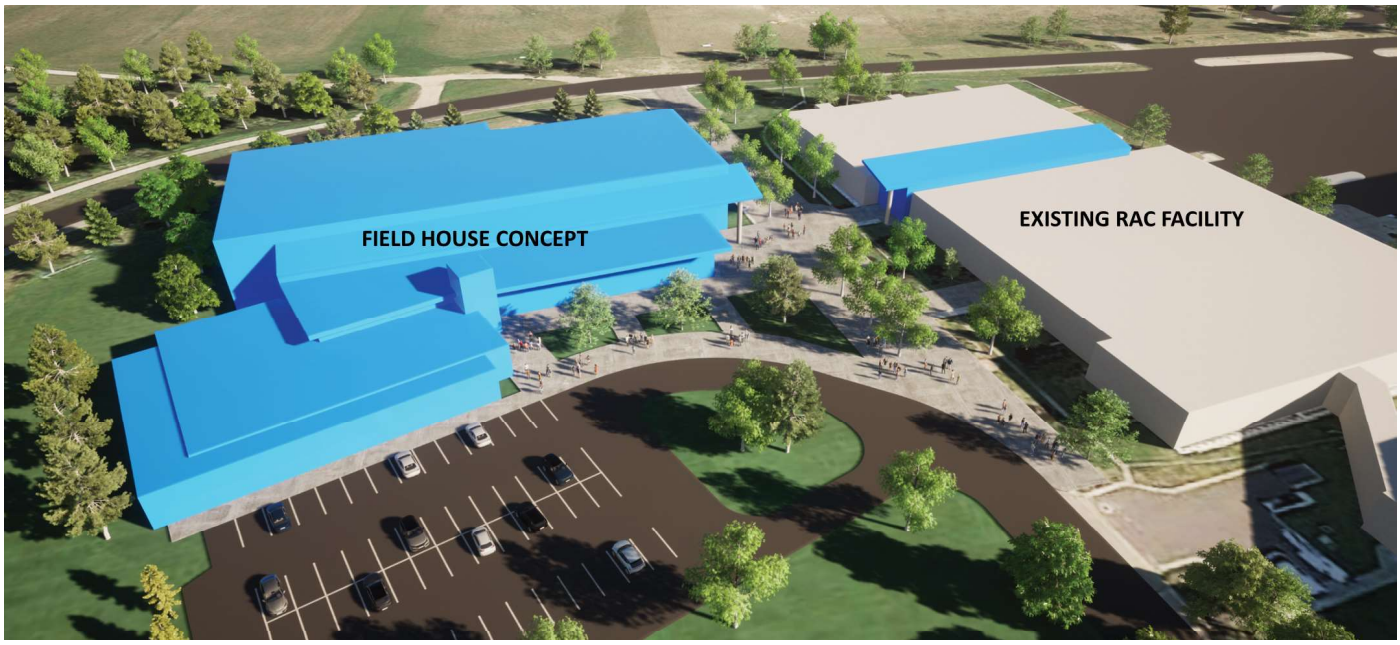
New Look for the Future: In the near future, the RAC building will receive a new exterior look as a part of the current renovation project. A major component of the RAC project includes the reskinning of the exterior envelope of the building. An added benefit is the additional insulation that will be applied, for long-term energy efficiency.



Photograph of the current exterior of the RAC building, showing the exposed pre-cast concrete walls.



Conceptual rendering of the new look proposed for the RAC exterior, modern materials to blend with the newer buildings on campus.



Above Image: *The above image illustrates a conceptual 3D design of the indoor turf facility. Early concepts include tying in the pedestrian walks and traffic patterns into the neighboring Recreation and Athletic Center.*

3D Conceptualization and Building Form: The new Indoor Turf Facility, together with the remodeled RAC and soccer fields, will create prominent visual landmarks to the northwestern corner of the LCCC campus. Due to the long, clear span required for the athletic events, a pre-engineered metal building (PEMB) construction type is envisioned, complimented with a percentage of conventional exterior finishes to achieve a blend with the newer buildings on campus.

Project: Indoor Turf Facility & Basketball Courts
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 09/23/21

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 35,000	$ 35,000
General Conditions	2%	%	$ 9,672,500	$ 193,450
Bonds & Insurance	0.8%	%	$ 9,672,500	$ 77,380
Total Division 1				**$ 305,830.00**
Construction Costs				
Turf Facility (Base Bid)	36,500	sf	$ 265	$ 9,672,500
Subtotal Construction Costs				**$ 9,672,500**
General Contractor OH&P	1	%	8%	$ 798,266
Total Construction Costs (Including Division 1)				**$ 10,776,596**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 862,128
Testing & Inspection		%	1.00%	$ 107,766
Construction Contingency		%	10%	$ 1,077,660
Design Contingency		%	10%	$ 1,077,660
Subtotal Project Soft Costs				**$ 3,125,213**
Total Project Cost - Hard & Soft Costs Combined (Turf Facility)				**$ 13,901,809**

Bid Alternate - Basketball Courts

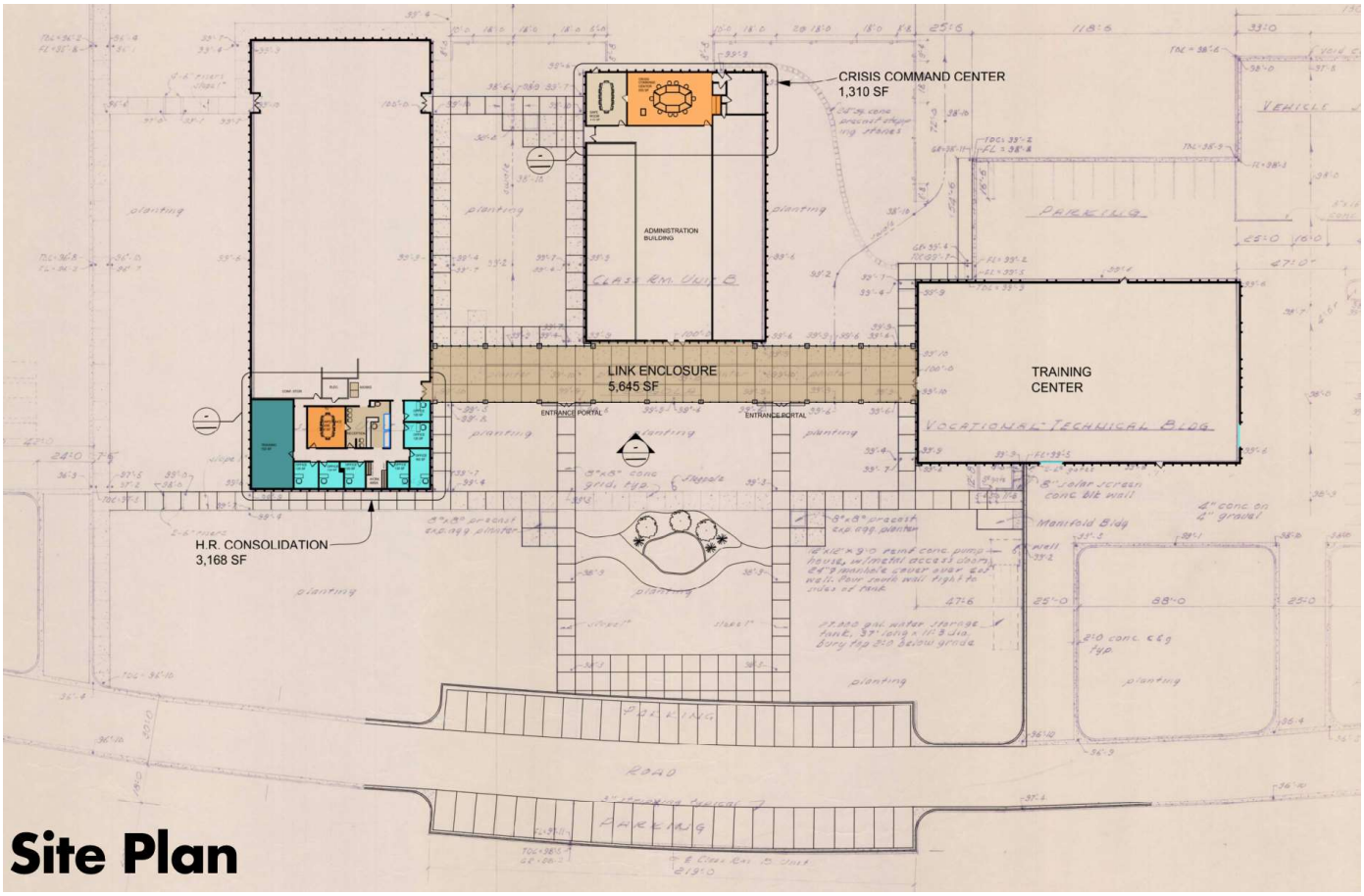
Division 1 - General Conditions				
Mobilization	1	ls	$ 25,000	$ 25,000
General Conditions	2%	%	$ 4,400,000	$ 88,000
Bonds & Insurance	0.8%	%	$ 4,400,000	$ 35,200
Total Division 1				**$ 148,200.00**
Construction Costs				
Bid Alternate - Basketball Courts	16,000	sf	$ 275	$ 4,400,000
Subtotal Construction Costs				**$ 4,400,000**
General Contractor OH&P	1	%	8%	$ 363,856
Total Construction Costs (Including Division 1)				**$ 4,912,056**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 862,128
Testing & Inspection		%	1.00%	$ 107,766
Construction Contingency		%	10.00%	$ 491,206
Design Contingency		%	10%	$ 491,206
Subtotal Project Soft Costs				**$ 1,952,305**
Total Project Cost - Hard & Soft Costs Combined (Bid Alternate - Basketball Court)				**$ 6,864,361**


RECREATION AND ATHLETIC CENTER
AA-120-RT

5 RENOVATION PROJECTS

HR Consolidation | Crisis Center

Project Origin: This project consists of several smaller projects in the same area on campus. They are combined here due to proximity. The primary of the three parts is a Human Resources (HR) Department consolidation. This was originally presented by Tobin & Associates in a 2019 Level II document. Also included is a new Crisis Center, which is a transformation of the current Petersen Board Room. And the third and final component is a suggested enclosure of the front entrance canopy, that links the Center for Conferences & Institutes (CCI) with the Administration Building and the Training Center. All three of these project areas occur in portions of the oldest buildings on campus, which date back to 1969.



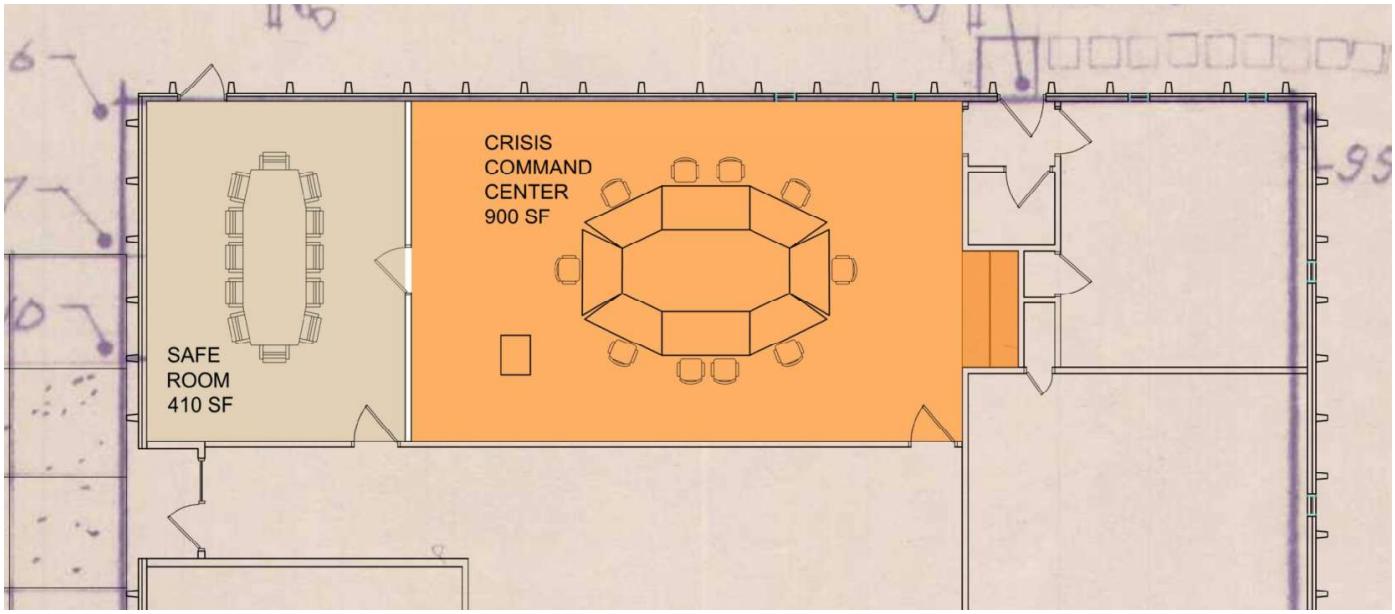
This plan shows the CCI Building on the left, the Administration Building in the center, and the Training Center on the right. Parking Lot K is to the bottom of the diagram, and the landscaped pond is in the center.

HR Consolidation: Currently, the HR department is somewhat fragmented, with offices in different locations. This hinders easy collaboration between staff members, and creates inefficiencies within the department. Fortunately, there is an appropriate, under-utilized space nearby in the southern portion of the CCI building. This opportunity makes a remodel project fairly easy, as all the construction work could be performed without interruption to the current HR operations. The new location is well situated on campus, and easy to find from the administration parking lot (K). The remodel is modest in extent and cost. It features private offices for confidential conversations, a conference room, a training room, a reception area / lobby, and support spaces. The offices and conference room would be constructed with a robust wall system, to reduce sound transmission between spaces.



HR Consolidation concept floor plan.

New Crisis Center & Safe Room: In today's uncertain times, there is a desire to construct and equip a new Crisis Center function on campus. The Petersen Board Room in the Administration is a perfect location. Within the Administration Building, it is close to the president and LCCC leadership. In fact, the room itself, including the furniture, is already well suited to this function and will remain. A new board room location is being proposed in the College Community Center Building, Room 128. That project is included in a later chapter within this report. The main focus of the construction improvements will be hardened surfaces, security, enhanced communications to first responders and campus security. A "safe room" will be constructed immediately to the west, in a space vacated by the newly consolidated HR. The safe room will have the same features as the crisis center, and have a new outside emergency exit door on the north wall. All hope that the Crisis Center is never needed. A significant benefit of this project is that both rooms will still appear as quality conference room spaces, and be used on a daily basis for normal LCCC functions.



New Crisis Center & Safe Room concept floor plan.

First Impression to Campus:
Administration is the first stop for many visitors to campus. The typical approach is from Parking Lot K. From there, visitors walk around and past a beautifully landscaped water feature. Granted, the landscaped mound is attractive, but it blocks the direct view of the buildings beyond, making the front door to campus unnoticeable. As a visitor continues north, the flagpoles are visible. Then the path takes you to a long, open colonnade that connects the CCI, Administration, and Training Center Buildings.



Photo of the existing first impression to the Administration Building.

Enclosed Colonnade: A new concept proposed in this master plan update is to enclose the open colonnade. This idea is particularly cost effective, in that the entire roof structure is already existing, and the open walls can be filled with aluminum storefront windows and doors. As the landscape feature splits the pedestrian path from the parking lot into two approaches, it is suggested that an architectural tower form could identify the two entrances and make them more prominent. This new tower form is being suggested throughout the campus, to give each building a unique identity, and signify the primary entrance. Therefore, the Administration would be an appropriate location to begin this design enhancement.



Conceptual rendering of a new first impression to campus.

Project: LCCC HR Consolidation
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 10/26/21

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 20,000	$ 20,000
General Conditions	2%	%	$ 515,000	$ 10,300
Bonds & Insurance	0.8%	%	$ 515,000	$ 4,120
Total Division 1				**$ 34,420.00**
Construction Costs				
Remodeled Space	3,168	sf	$ 163	$ 516,384
Subtotal Construction Costs				**$ 516,384**
General Contractor OH&P	1	%	8%	$ 44,064
Total Construction Costs (Including Division 1)				**$ 594,868**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 47,589
Testing & Inspection		%	1%	$ 5,949
Construction Contigency		%	10%	$ 59,487
Design Contingency		%	10%	$ 59,487
Subtotal Project Soft Costs				**$ 172,512**
Total Project Cost - Hard & Soft Costs Combined (LCCC HR Consolidation)				**$ 767,380**

Project: LCCC Crisis Command Center
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 10/26/21

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 15,000	$ 15,000
General Conditions	2%	%	$ 315,000	$ 6,300
Bonds & Insurance	0.8%	%	$ 315,000	$ 2,520
Total Division 1				**$ 23,820.00**
Construction Costs				
Remodeled Space	1,320	sf	$ 163	$ 215,160
Hardened Surfaces, Communications, Security	1	ls	$ 100,000	$ 100,000
Subtotal Construction Costs				**$ 315,160**
General Contractor OH&P	1	%	8%	$ 27,118
Total Construction Costs (Including Division 1)				**$ 366,098**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 29,288
Testing & Inspection		%	1.00%	$ 3,661
Construction Contigency		%	10.00%	$ 36,610
Design Contingency		%	10%	$ 36,610
Subtotal Project Soft Costs				**$ 106,169**
Total Project Cost - Hard & Soft Costs Combined (LCCC Crisis Command Center)				**$ 472,267**

Project: LCCC Link Enclosure
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 10/26/21

CONCEPTUAL PROJECT COST ESTIMATE

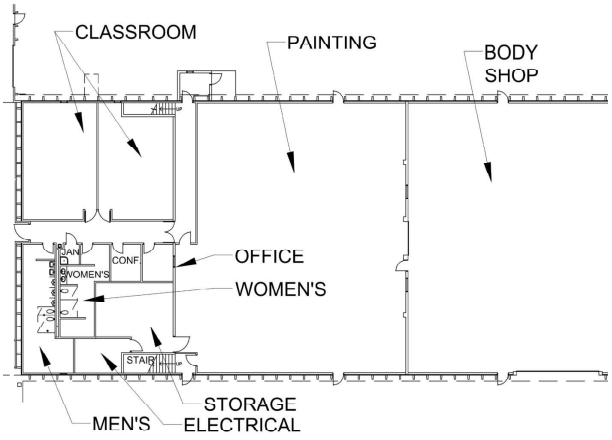
	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 10,000	$ 10,000
General Conditions	2%	%	$ 570,000	$ 11,400
Bonds & Insurance	0.8%	%	$ 570,000	$ 4,560
Total Division 1				**$ 25,960.00**
Construction Costs				
Link Enclosure	5,645	sf	$ 100	$ 564,500
Towers	2	ls	$ 50,000	$ 100,000
Site Development	1	ls	$ 5,000	$ 5,000
Subtotal Construction Costs				**$ 564,500**
General Contractor OH&P	1	%	8%	$ 47,237
Total Construction Costs (Including Division 1)				**$ 637,697**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 51,016
Testing & Inspection		%	1.00%	$ 6,377
Construction Contingency		%	10.00%	$ 63,770
Design Contingency		%	10%	$ 63,770
Subtotal Project Soft Costs				**$ 184,932**
Total Project Cost - Hard & Soft Costs Combined (LCCC Link Enclosure)				**$ 822,629**

Project Origin: This project consists of remodeling the existing Auto Body Building into a new space for the Advanced Manufacturing & Materials Center. This project scope has already been formulated, and is contained in a number of recent documents, most notably a Level II Study by Tobin & Associates dated 2021. The project is included here in this master plan, updated to describe to readers the full compliment of projects and improvements underway now at LCCC, as well as those slated for the future. To avoid duplication, this project description is abbreviated, and instead respects and refers to the previous efforts by others.

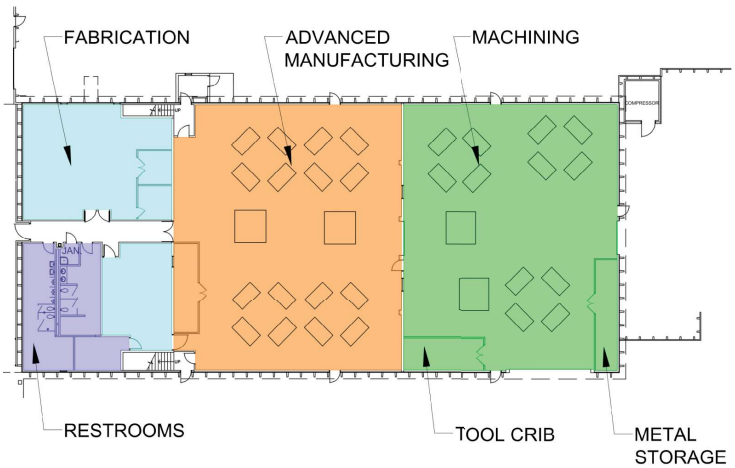


Image to the Left: *View of the existing Auto Body Building, from the south pedestrian promenade. The entrance for the new AMMC would benefit from a façade remodel and reskin project.*

Existing Building, New Uses: The proposed new uses and remodel of the Auto Body Building are shown below:



Floor plan of the existing Auto Body Building.



Floor plan of the proposed new Advanced Manufacturing & Materials Center.

Project Purpose, Scope, and Costs: The following project description and cost information has been provided by others:



The manufacturing industry is growing quickly again in the United States and in Southeast Wyoming. In 2019, the National Association of Manufacturers reported that 77% of manufacturers had positions going unfilled because of the lack of qualified applicants.

Wyoming is positioned well to embrace the next wave of American manufacturing progress. This industry has become a strategic focus for many statewide initiatives. One of the biggest barriers to growing manufacturing in Wyoming is the availability of a trained workforce. Laramie County Community College wants to help solve that problem.

What's the plan?

LCCC will establish the Advanced Manufacturing and Materials Center (AMMC) that will focus on training a skilled workforce for the Advanced and Additive Manufacturing industries. To create the AMMC, the college will renovate and upgrade 14,500 square feet of existing space on the LCCC campus.

The college will offer both credit and non-credit programming leading to college credentials and industry certifications. Specific skills taught will include: Safety, Lean Manufacturing, mill and lathe operations, CAD/CAM, 3D modeling, ISO and quality, project management, Coordinate Measurement Machine, Geometric Dimensioning and Tolerancing, CNC milling and turning, and metal and plastic additive manufacturing. Workplace professionalism will be reinforced throughout all coursework.

Cutting edge equipment in the AMMC will include: CNC Turning Center (Lathe) and CNC Milling Machines, Coordinate Measuring Machine, Industrial Systems, Wire EDM, 5-Axis CNC mill and plastic and metal 3D printers. The AMMC will include a Fabrication Laboratory and Concept Forge to help small manufacturers grow and to support entrepreneurs in prototyping and production.

Ultimately, the AMMC will help address worker- and skill-gaps in the area, which in turn will diversify and strengthen Wyoming's economy.

INDUSTRY FACTS

$2.79
For every $1 spent in manufacturing, another $2.79 is added to the economy.

77%
Percent of manufacturers with unfilled positions due to lack of qualified applicants

4 million
Number of manufacturing jobs needed by 2030

$57,280
Average salary of machinists. And their occupational growth is predicted at 14% annually

30
Number of manufacturing companies that Cheyenne LEADS has been in contact with about potentially relocating to SE Wyoming

Sources: National Association of Manufacturers, Deloitte and The Manufacturing Institute, onetonline.org, Cheyenne LEADS

MANUFACTURING AND INDUSTRY PARTNERS

AVVID CORPORATION
THUNDER BEAST ARMS CORPORATION
Cheyenne LEADS — The Cheyenne-Laramie County Corporation for Economic Development
SEE WHAT YOU'VE BEEN MISSING™ HIVIZ® SHOOTING SYSTEMS
TPW TUNGSTEN PARTS WYOMING
MW MANUFACTURING WORKS
alliance brew gear™
CENTRAL
GREATER CHEYENNE CHAMBER OF COMMERCE — PROTECTING BUSINESS SINCE 1907
MAGPUL
SPENSALL Precision Machined Solutions — HOLO-KROME — Divisions of: FASTENAL Manufacturing

Location, location, location

Laramie County, and southeast Wyoming in general, has been determined to be an ideal location for manufacturers to start or expand operations. The proximity to critical transportation infrastructure, availability of affordable "shovel-ready" land, favorable tax environment and the proximity to the growing Front Range of Colorado, all position southeast Wyoming as an ideal growth opportunity. In addition, LCCC has a proven track record of standing up trades programming to help the community solve problems and capitalize on opportunity.

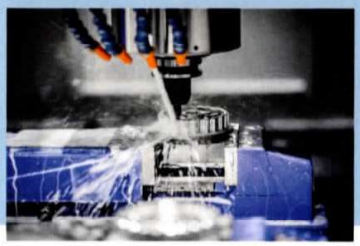




Costs

The Advanced Manufacturing and Materials Center is estimated to cost $6.2 million. This includes start-up costs and the first three years of operations to establish the AMMC. More specifically, the breakdown of costs include:

- Facilities Rehabilitation and Renovation - $1,750,000
- Equipment Acquisition and Installation - $3,000,000
- Operating Costs - $350,000
- Faculty and Staffing - $ 1,100,000



Funding

The Advanced Manufacturing and Material Center will be funded by a mixture of private and public investments, including grants, donations, tax revenues, tuition, etc.

- Private Gifts and Donations - $1,400,000
- 6th Penny Funding - $3,000,000
- Federal and Other Grants - $1,500,000
- Tuition and Fee Revenue - $300,000



For more information on AMMC, contact LCCC at 307.778.1287 or 307.778.1146

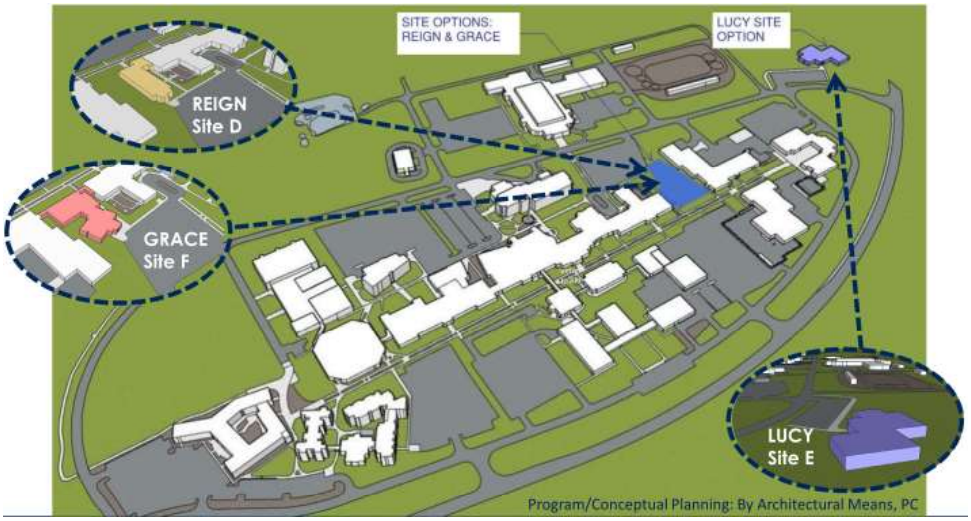
LARAMIE COUNTY COMMUNITY COLLEGE

LCCC does not discriminate based upon any protected status. Please see lccc.wy.edu/NDS.

210511-1311

Children's Discovery Center

Project Origin: This project consists of a new Children's Discovery Center Building on campus. This project scope has already been formulated, and is contained in a number of recent documents, most notably a Level II Study by the firm By Architectural Means, PC. The final report of this Level II Study was presented to the LCCC Board of Trustees on January 7th, 2022. The project is included here in this master plan updated to describe to readers the full complement of projects and improvements underway now at LCCC, as well as those slated for the future. To avoid duplication, this project description is abbreviated, and instead respects and refers to the previous efforts by others.



Site Location: The Level II Study suggests three potential locations for the new CDC, as shown to the left.

Floor Plan Configuration: The Level II Study described a floor plan layout for each of the three site options. The floor plan options are shown below.







Site Option D

Plan Concept:

- **REIGN**

Site Option E

Plan Concept:

- **LUCY**

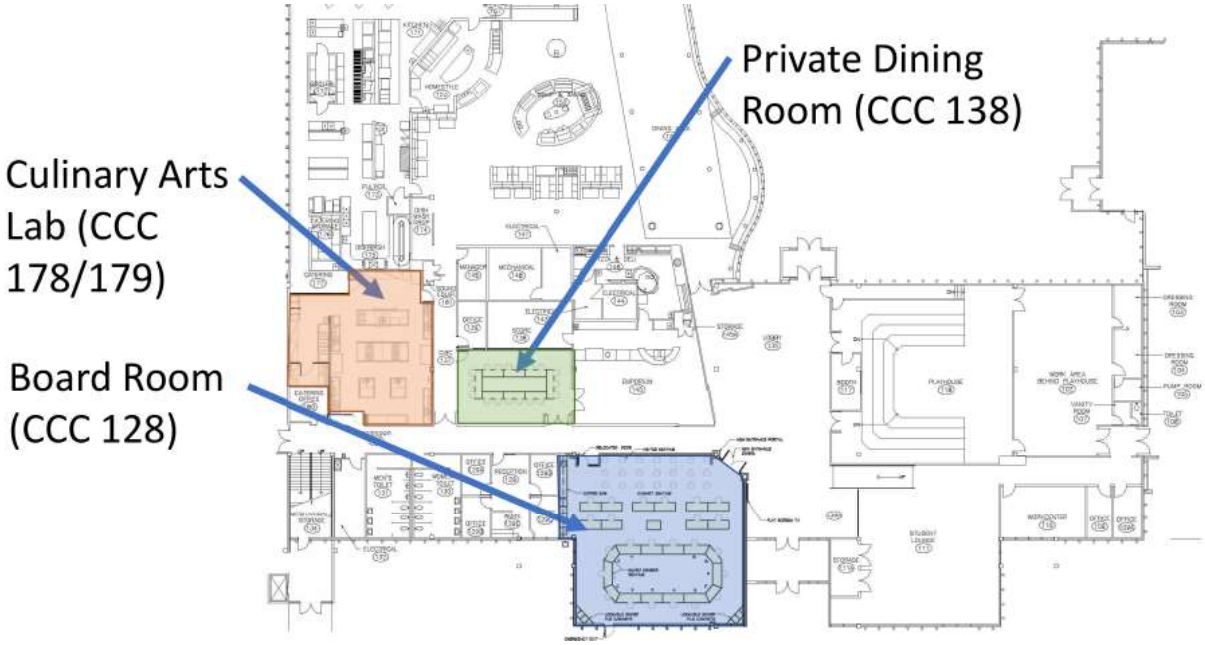
Site Option F

Plan Concept:

- **GRACE**

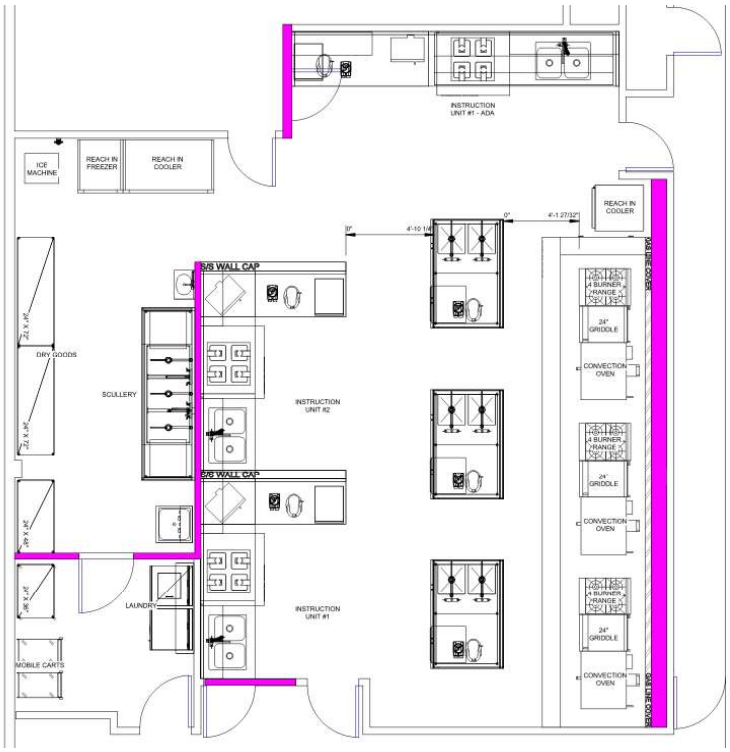
Project Purpose, Scope, and Costs: See the Level II Study for the Children's Discovery Center, produced by the firm By Architectural Means PC, for a detailed description of the project purpose, scope, and associated costs.

Project Origin: This project consists of three remodel projects in the same building, the College Community Center (CCC). They are combined here due to proximity. The first project is a new Culinary Arts Lab, a new curriculum program on campus. The second project is a relocation of the Private Dining Room. And the third project is a remodel of Room CCC128, which has been selected as the location for the new board room.



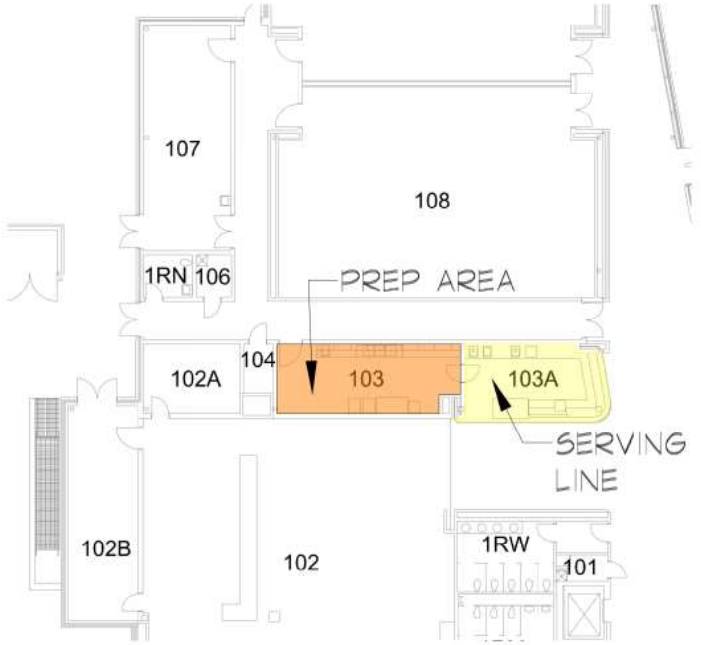
This plan shows the three remodel areas and their proximity to each other in the College Community Center.

Culinary Arts: This new program on campus is looking for the appropriate supporting facilities. The current private dining room, Rooms CCC178 and 179, has been selected for this purpose. These rooms have a direct association and adjacency to the dining area and its kitchen. The design features direct access to the back of the kitchen and the loading dock for deliveries. The synergies between these two spaces and their functions make this location a great choice. Chefs, working in the kitchen, can easily enter the lab and become instructors. Students, working in the lab, can easily enter the kitchen to see in action food preparation. Additionally, this lab location has a front entrance presence along the main CCC corridor, making it easy to find for students and visitors. The kitchen and equipment layout are designed to promote both commercial restauranteur training, but also specialty and ethnic foods offerings as well.



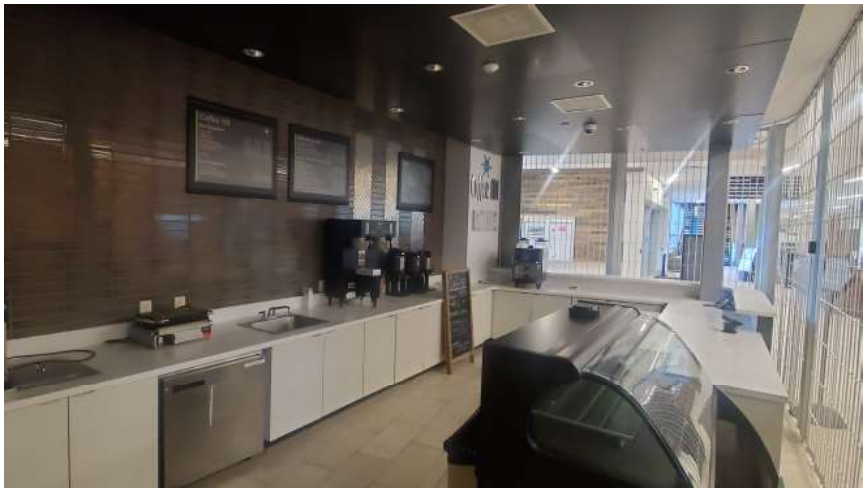
The Culinary Arts plan is designed with a demonstration area, and several student lab stations.

Pathfinder Concessions: An associated second component of the Culinary Arts program is the reopening of the Pathfinder Concessions Kiosk. This space is already fully constructed and equipped as a coffee shop and bakery goods style concessions kiosk. The space consists of a "back of house" prep area (Room PF103) and the front concessions area (Room PF103A).





Floor plan view of the Prep Area 103 and the Serving Line 103A.



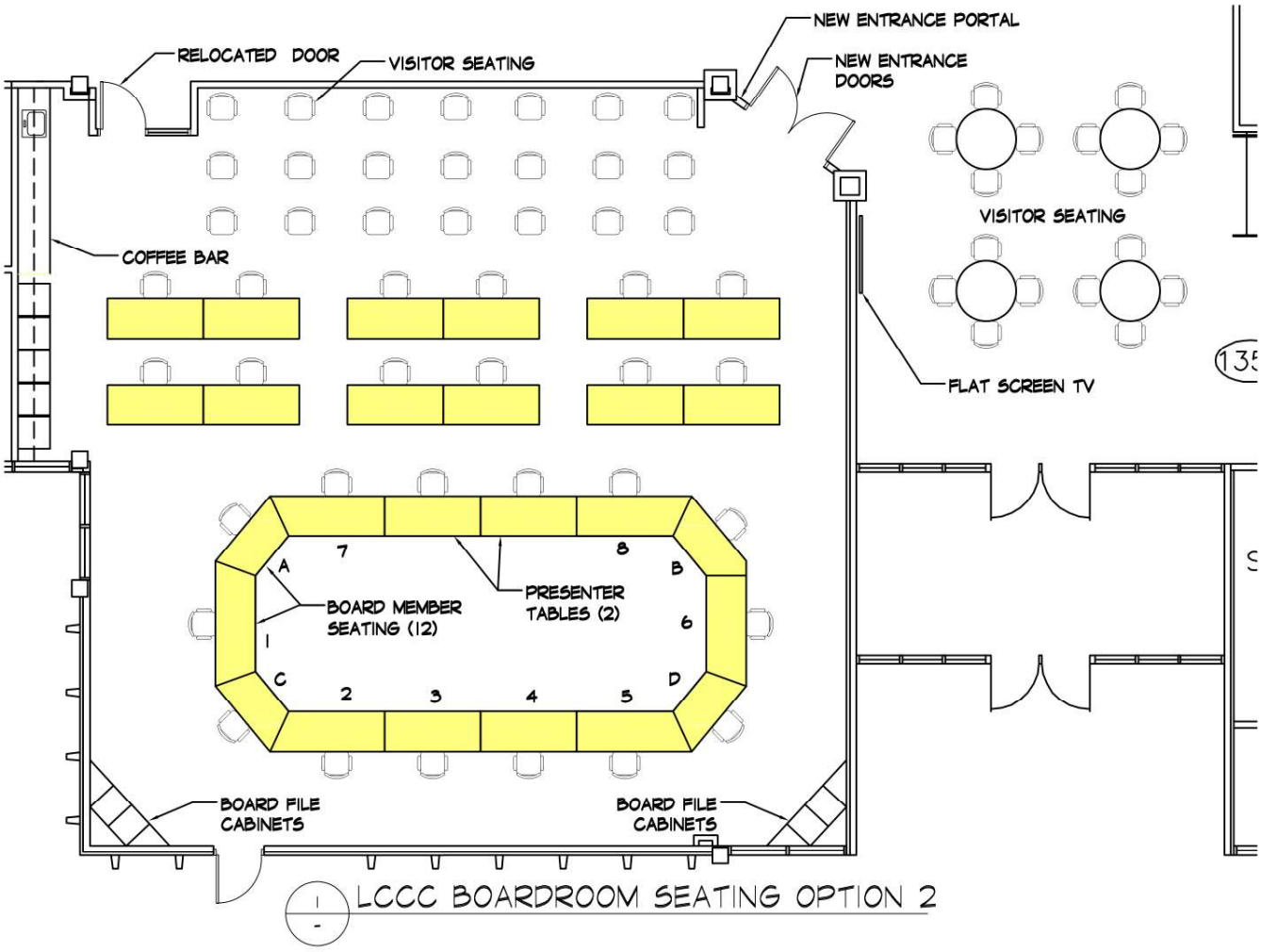
The central location in Pathfinder Commons gives the concession kiosk great exposure opportunities.



This existing facility is complete, and requires very little capital outlay to reopen operations.

Private Dining Room: The current private dining room (178/179) is being displaced by the new Culinary Arts Lab. Therefore, this function will be rebuilt in Room CCC 138). This space is currently only used for storage, and is underutilized. This new location for private dining has great access to the CCC corridor and also great proximity to the new board room.

Board Room: The previous board location has been the Petersen Board Room in the Administration Building (see section on HR & Crisis Center). This room is thought to be too small and confining, especially with covid concerns over social distancing. Recently, the board has been using CCC128 as the new board room, which allows the board, administration, college cabinet, and visitors the opportunity to spread out more comfortably. This room is very well suited to the board rom function, and has size, location, and arrangement as just a few of its positive attributes.



This is the preferred Board Room design, known as Option 2.

Board Room Attributes: The design for the remodeled board room was conceived with board member input through interview sessions. This process went efficiently and productively, as the board has been using this space for a while, and is familiar with the surroundings. The following are a few of the primary board room remodel project attributes:

- **Location and Accessibility:** CCC128 is thought to be a great location, much more accessible and easier for the public to find than the Petersen Board Room. Also, the private dining room and dining functions are right across the hall, as well as the emporium. This provides for easy catering support when needed. This location also has a generous lobby / commons function right outside CCC128, to act as a holding area for waiting, meeting participants.
- **Number of Board Members and Staff:** The board table system should be designed to hold the appropriate number of board members, administrative leaders, and other representatives. The following spaces should be provided at the board table:

  - 7 Board Members
  - President
  - Administrative Assistant
  - Attorney
  - Student Representative
  - Albany County Representative

- **Number of Cabinet Members:** Up to 10 cabinet members also attend the meetings, and sit in the next row of tables. They often work on their laptops during the meetings, and require tables and chairs.
- **Number of Audience:** The audience levels are fairly light, unless there is a controversial topic (which is rare). The audience can sit at the far back, in individual chairs (spaced out for covid protocols).
- **Board Table Configuration - U Shaped or Oval:** A few options were presented during the design process. The oval table configuration – Option 2, seems to find the most favor. It allows for a more collaborative arrangement between the board members, in a face-to-face arrangement. The furniture system suggested allows either table configuration to be utilized, by merely re-arranging the tables.
- **Covid Protocol:** Each of the board members will receive an individual table, that fit together into a system. The tables are all 6 feet long, in keeping with social distancing standards. The cabinet tables and presenter tables are all also 6 feet long.
- **Presenters Table or Podium:** Both design options allow presenters to join the board when it is their time to approach the board. The oval option allows the presenters a more equal status when they join the oval table.
- **Audiovisual / IT Systems:** Audiovisual and IT systems will be a key to the success of a board room renovation. The board generally uses laptops at meetings, but also look at the large screens for presentations if they have other topics on their laptops. The large screens (multiple) need to be positioned for great viewing from both the board and the public.
- **Aesthetics and Finishes:** When CCC128 is remodeled, a new aesthetic in finishes will be applied, appropriate to the board room function. A richer palette of materials and colors would help to bring a greater sense of dignity appropriate to the room function.

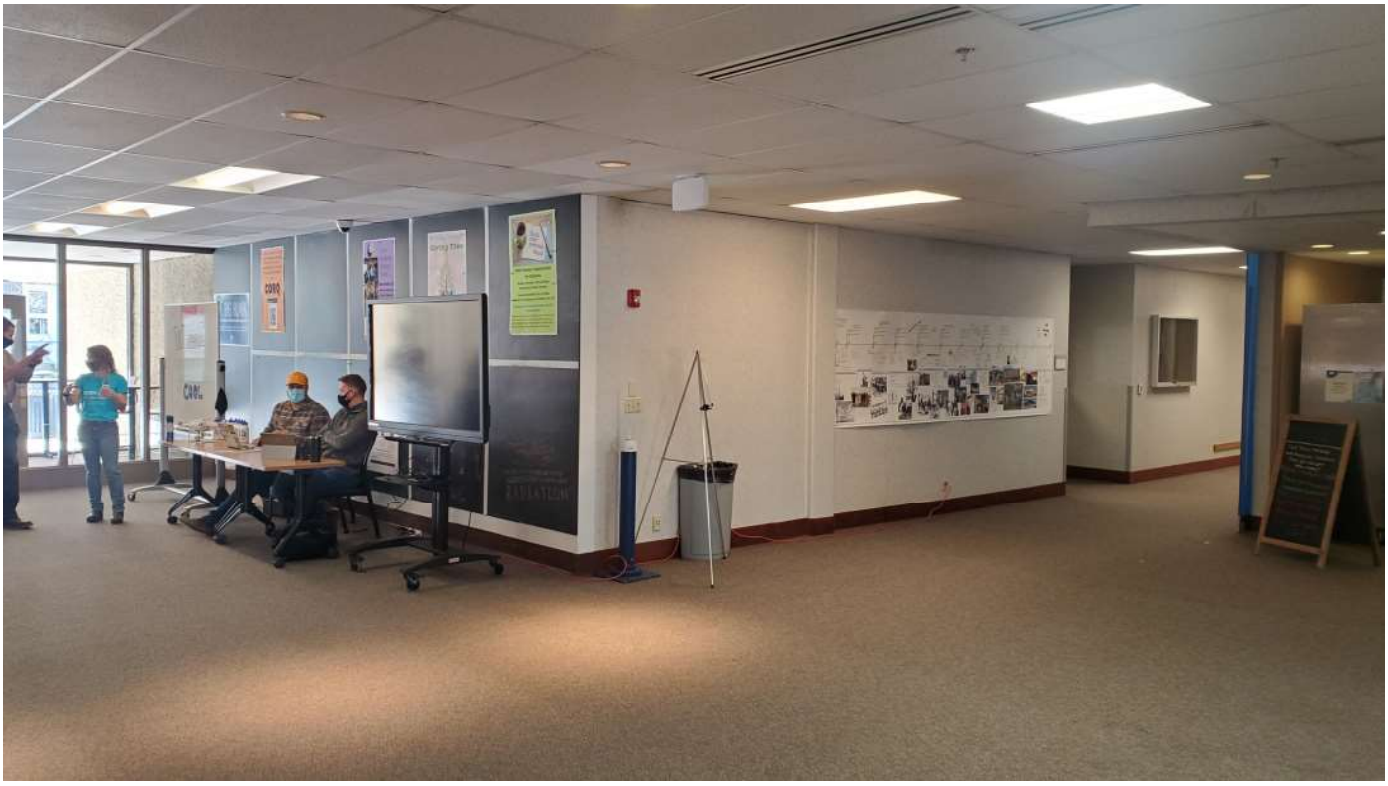
Special Features: A few special features of the proposed CCC128 remodel are listed below, and are shown on the Option 2 design;

- **Door Arrangement:** A new main entrance door is shown at a 45-degree angle to the lobby. This will be provided with a "portal" or "surround" that makes the main public entry obvious. The secondary entrance door will be moved west, opposite the main public entrance. This will act as the more private board entrance, and allow the board access to the corridor and bathrooms without traveling through the public seating area. An emergency exit door will also be provided at one of the existing window openings on the south side.

- **Coffee Bar:** A coffee bar area will be provided along the west side, in an area not dominated by the board or the public, for universal access.

- **Lockable Storage**: Several areas of lockable storage cabinets are shown on the plans. These can be utilized by the board members for private document storage and file storage.

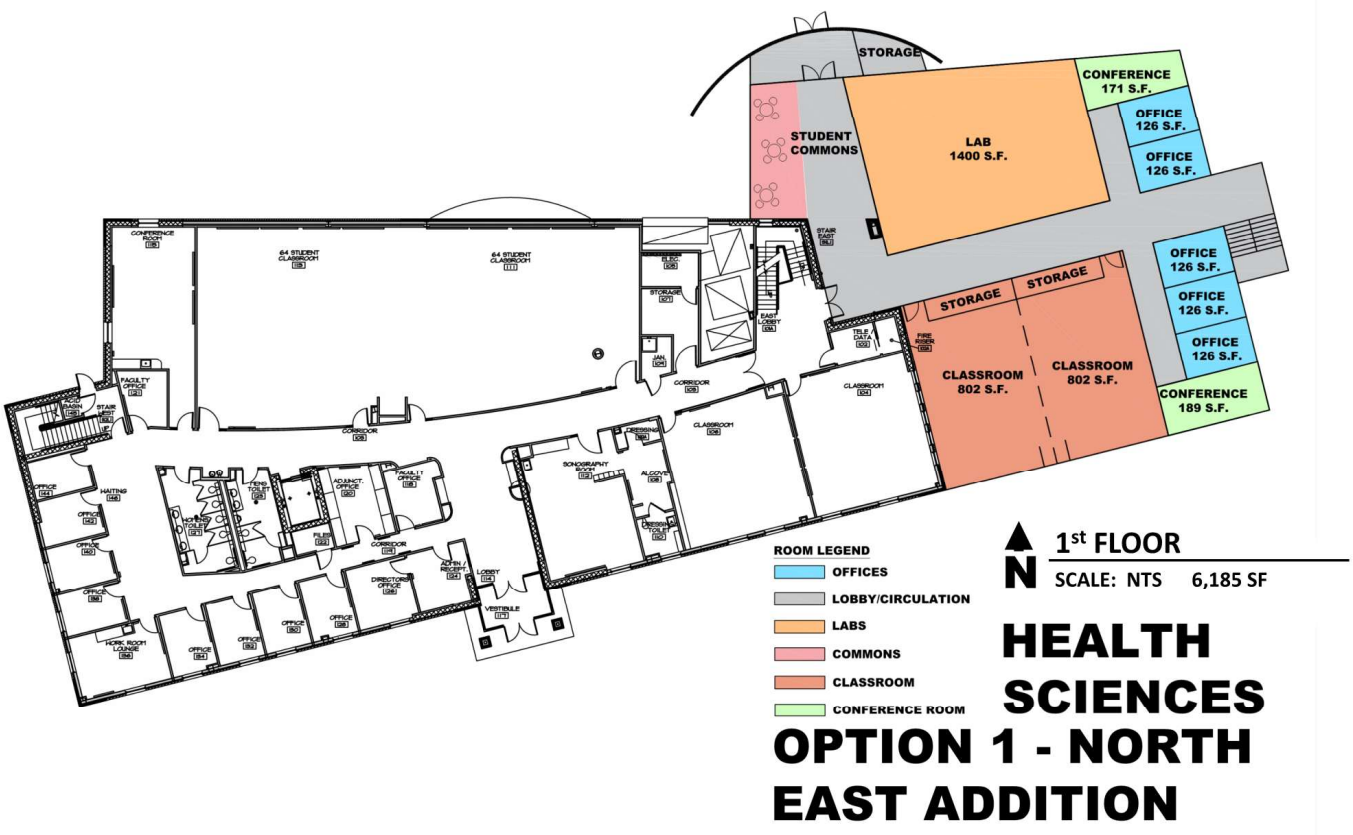
- **Lobby Seating and AV:** The lobby area just outside the board room may be equipped with a large format TV. This will allow the board meetings to be observed from outside the room. Participants awaiting their turn in the meeting will be allowed to wait in the lobby, until it is their turn to present. The general public may watch the entire meeting from the lobby if they wish, rather than being inside the board chambers.



This corner will become the new public entrance portal to the board room.

Health Care Program Lab Expansion

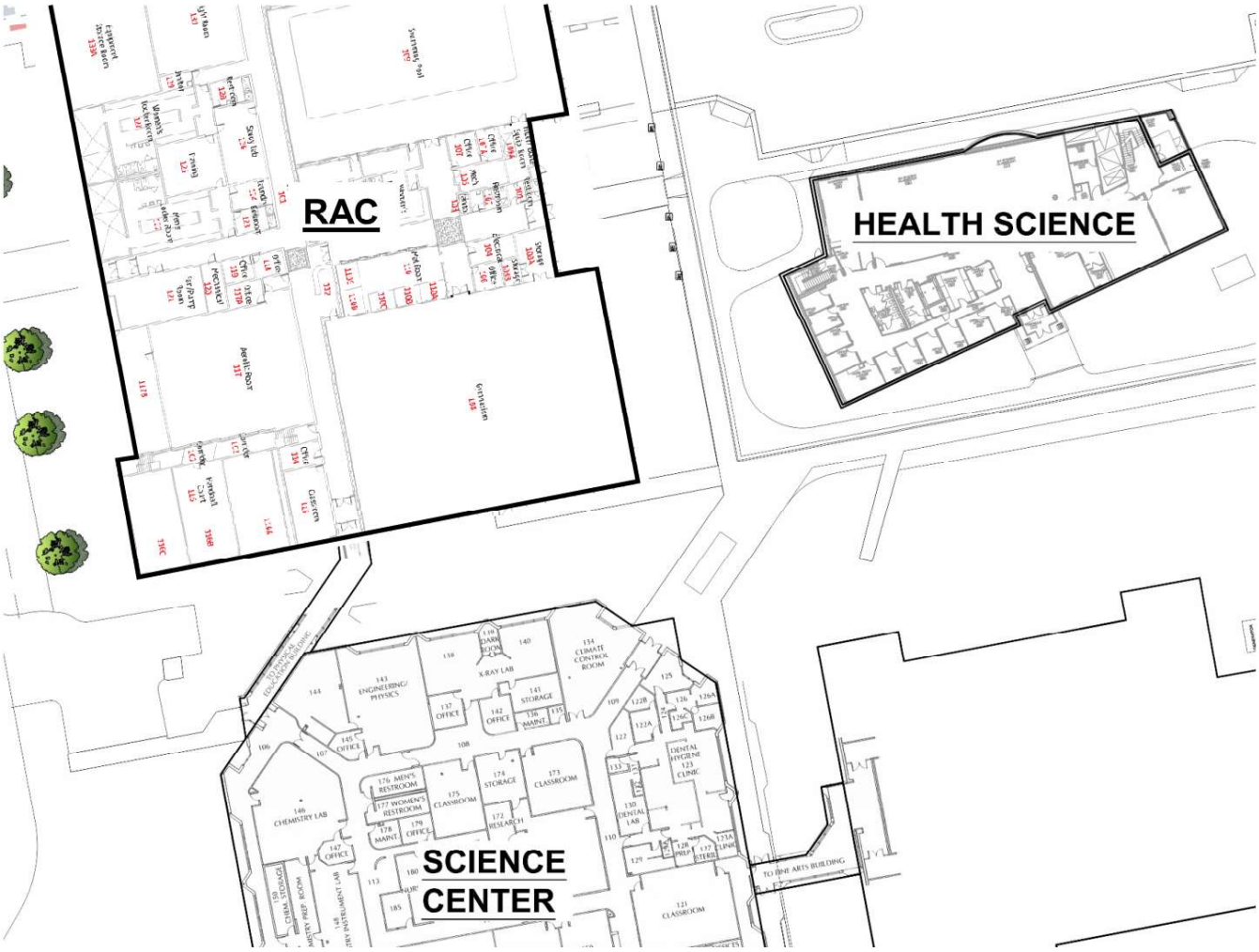
Project Origin: This is a new project displayed for the first time in this master plan update. It responds to the success and growth of the Health Science curriculum at LCCC. The initial addition concept (Option 1) was to build a three-story addition on the northeast corner of the building. This option was presented at the October 28th Leadership Review Meeting. Concerns were raised over the resulting loss of parking, which is at a premium. Further input from LCCC suggested that an infill scheme be explored that physically links Health Sciences with the Science Building. Both options are included in this master plan update, for the sake of comparison. Diagrams are included below, with a listing of the primary attributes.



Floor plan of Option 1 – Three Story Addition on the northeast corner of the Health Sciences Building.

Option 1 – Three Story Addition on the Northeast Corner

- Program needs are easily met as shown, and by adjusting the size of the addition.
- Parking would be lost, and this is a heavily used parking lot.
- The addition would utilize one existing stair and the existing elevator, which is a cost savings. A new exit stair would be required in the addition, to meet code required exiting parameters for two exits.
- The addition could be built without major disruptions to operations in the Health Sciences Building, until the project is complete. The main entrance would be blocked, and foot traffic would be directed to the south entrance during the construction period.
- The design is expandable, as the corridor circulation could continue to the northeast with future additions.



Proposed location of the Option 2 infill scheme, between the Health Sciences Building, Science Center, and the Recreation & Athletics Center.



Photo to the Left: *Existing Health Sciences Building, looking from potential location of infill.*

Option 2 – Three Story Addition on the Southwest Corner

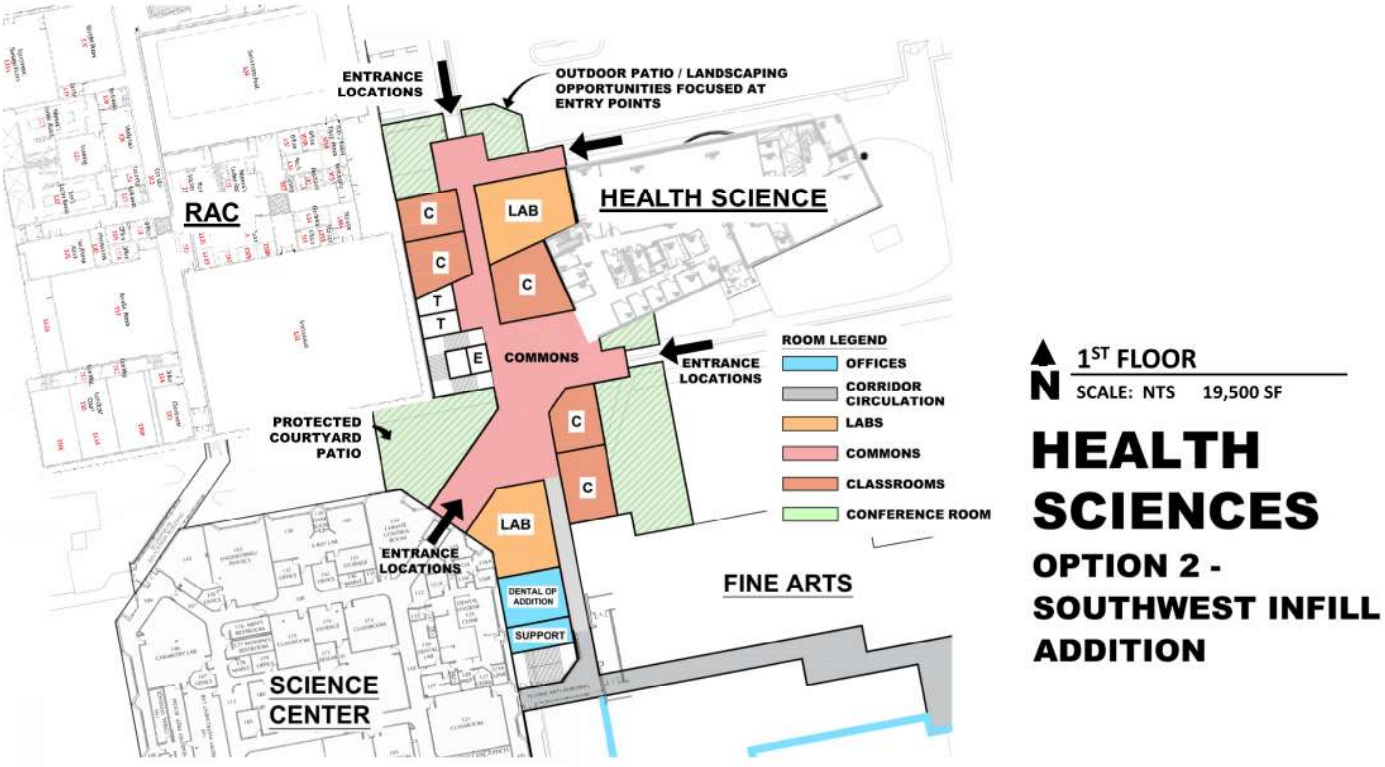
- Program needs are easily met as shown, and by adjusting the size of the addition. In fact, a two-story addition as shown would meet the current program needs. Therefore, the third floor could be either deleted, or built and shelled out for future use.

- No parking would be lost.

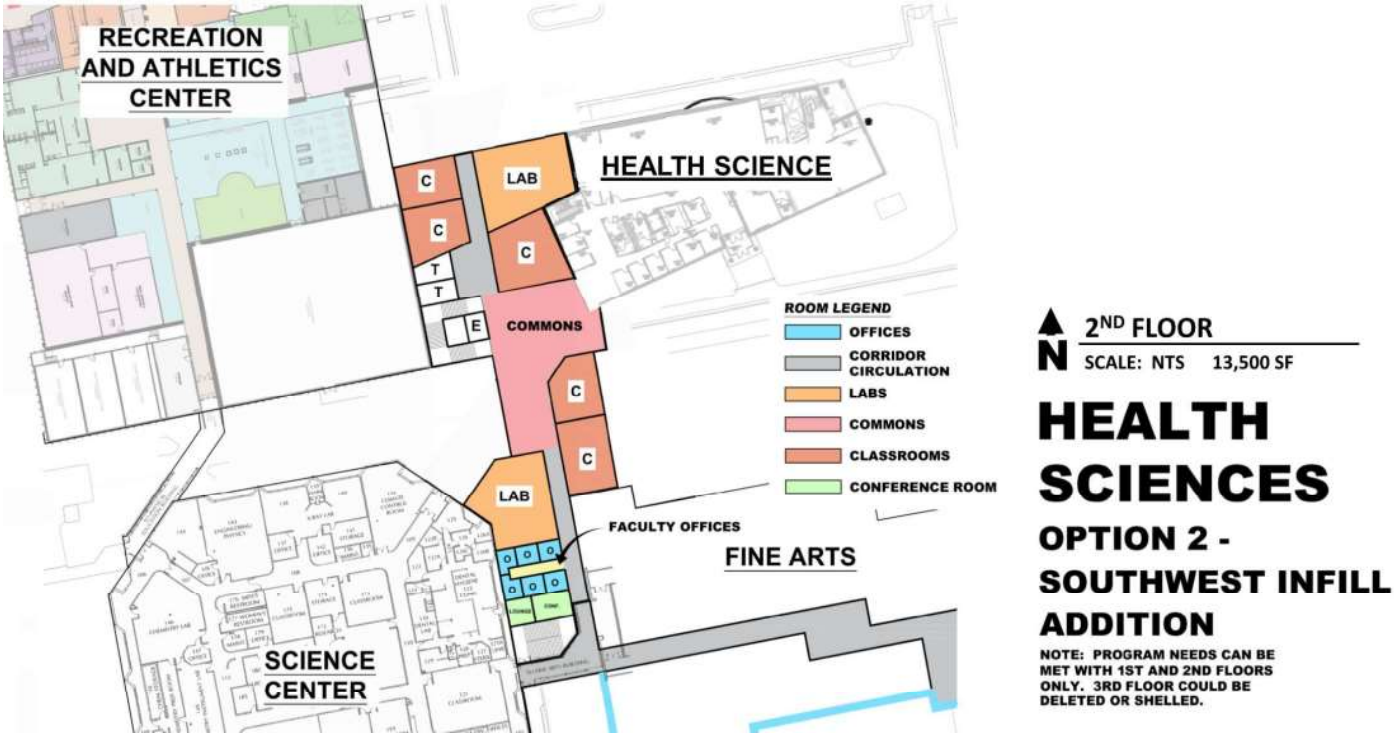
- The design creates a nice link between the existing buildings. The current exterior walkway paths would remain in location, be enclosed, and join together in the middle in what would become a very nice commons area. This would facilitate a strong pedestrian link between the Health Sciences and Science Buildings.

- The addition would require new stair and elevator systems for vertical transportation.

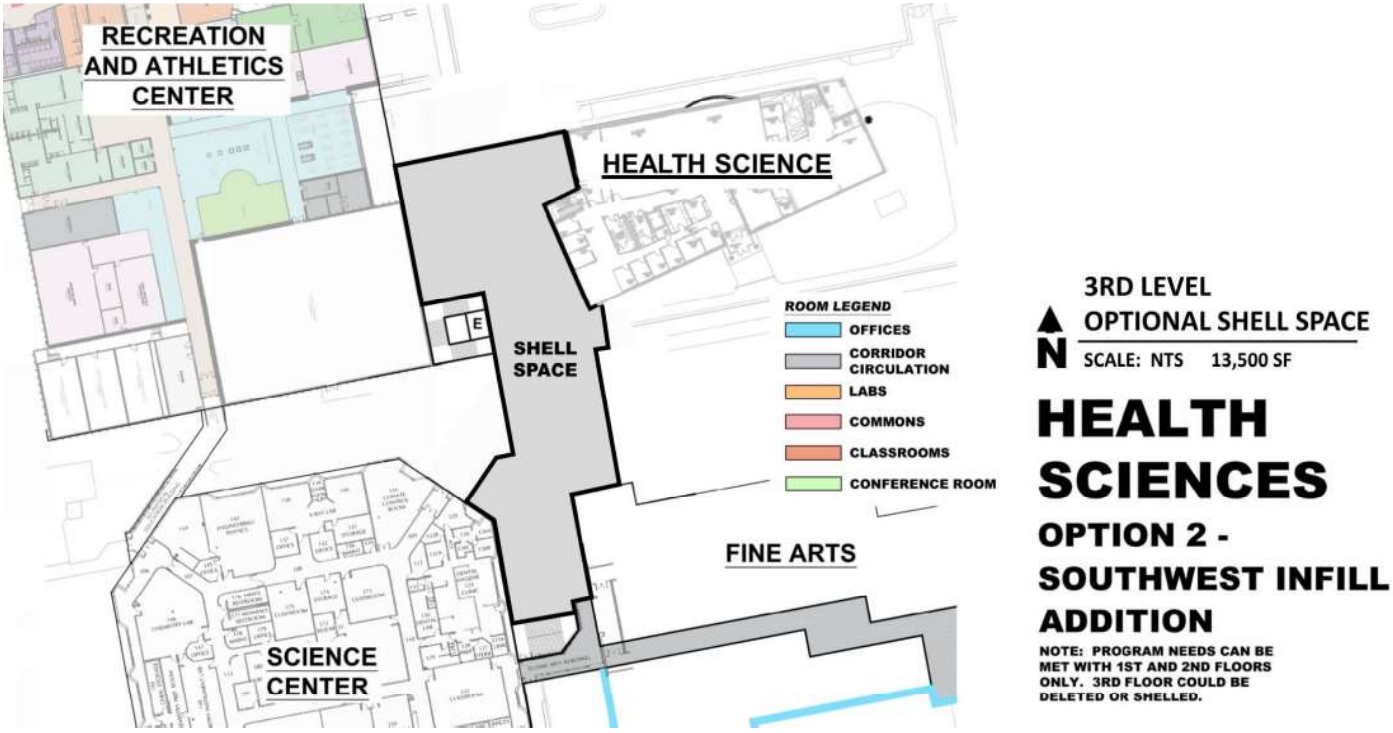
- The addition could be built without disrupting the main north entrance to the Health Sciences Building. The northeast entrance to the Science Building would be blocked during construction, as well as foot traffic in the current courtyard area.



The ground floor features an intersection of pathways, that would make for an interesting and active commons.



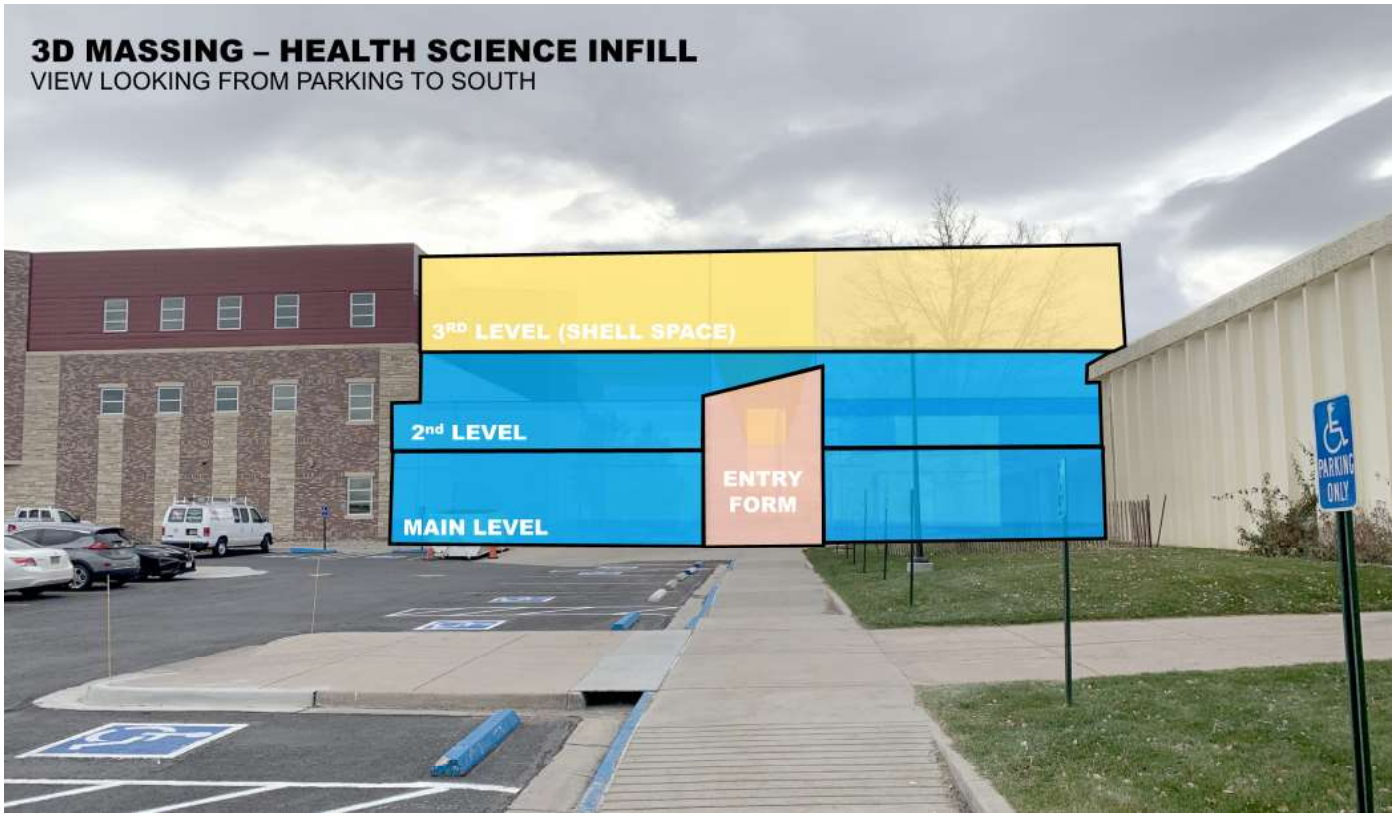
The second floor becomes more efficient from an academic utilization standpoint, featuring classrooms paired with labs.



The first two floors meet the current program needs. Therefore, the third floor could be built as a shell, awaiting future tenant improvements.



View from the south, with the RAC on the right, and the existing Health Sciences on the left.



A massing diagram as viewed from the south. The height and materials of the existing three-story Health Sciences building would extend over to bridge the gap to the RAC building.

Project: Health Science Option #1 - Northeast Addition
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 01/06/22

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 35,000	$ 35,000
General Conditions	2%	%	$ 6,958,125	$ 139,163
Bonds & Insurance	0.8%	%	$ 6,958,125	$ 55,665
Total Division 1				**$ 229,827.50**
Construction Costs				
New Construction	18,555	sf	$ 375	$ 6,958,125
Subtotal Construction Costs				**$ 6,958,125**
General Contractor OH&P	1	%	8%	$ 575,036
Total Construction Costs (Including Division 1)				**$ 7,762,989**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 621,039
Testing & Inspection		%	1.00%	$ 77,630
FF&E		%	4.00%	$ 310,520
Construction Contigency		%	10%	$ 776,299
Design Contingency		%	10%	$ 776,299
Subtotal Project Soft Costs				**$ 2,561,786**
Total Project Cost - Hard & Soft Costs Combined				**$ 10,324,775**

Project: Health Science Option #2 - Southwest Infill Addition
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 01/06/22

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 50,000	$ 50,000
General Conditions	2%	%	$ 14,337,500	$ 286,750
Bonds & Insurance	0.8%	%	$ 14,337,500	$ 114,700
Total Division 1				**$ 451,450.00**
Construction Costs				
New Construction (1st & 2nd Floor)	27,000	sf	$ 375	$ 10,125,000
3rd Floor Shell Space	13,500	sf	$ 275	$ 3,712,500
Landscaping/Sitework	1	ls	$ 500,000	$ 500,000
Subtotal Construction Costs				**$ 14,337,500**
General Contractor OH&P	1	%	8%	$ 1,183,116
Total Construction Costs (Including Division 1)				**$ 15,972,066**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 1,277,765
Testing & Inspection		%	1.00%	$ 159,721
FF&E		%	4.00%	$ 638,883
Construction Contigency		%	10%	$ 1,597,207
Design Contingency		%	10%	$ 1,597,207
Subtotal Project Soft Costs				**$ 5,270,782**
Total Project Cost - Hard & Soft Costs Combined				**$ 21,242,848**

IT Training Center

Project Origin: This project was being formulated and promoted prior to the development of this master plan update. The existing IT Training program currently resides in the Business & Technology Building, second floor. The program is very popular and successful, and looks forward to significant growth in the future. The following program brief is offered by Mr. Troy Amick; Program Director, Information Technology Pathway at LCCC:

"In fall of 2022, Laramie County Community College will officially launch a major expansion of our ability to instruct and provide Wyoming with a highly trained technical workforce. This expansion will encompass leaps forward in Applied Information Technology instruction, preparing an employee base that meets the needs of today and looks to build for the requirements of tomorrow. During advisory meetings with industry representatives, the inability of Wyoming to provide a technically skilled workforce versed in modern technologies is mentioned time and again. The new Information Technology Pathway at LCCC works to address this need.

Currently offering five (5) distinct programs with twenty-six (26) courses, the new pathway will expand this to twenty-three (23) distinct programs and seventy-four (74) courses between fall of 2022 and spring of 2026. Programs such as Datacenter Specialist are designed to prepare students to enter the workforce quickly, while new offerings in Virtualization, Cloud, Data Analytics, Networking, Applied Programming, Telecommunications, and Cybersecurity offer intermediate skillsets towards an Associate of Applied Science Degree. Additional offerings at more advanced levels are also under consideration and planning.

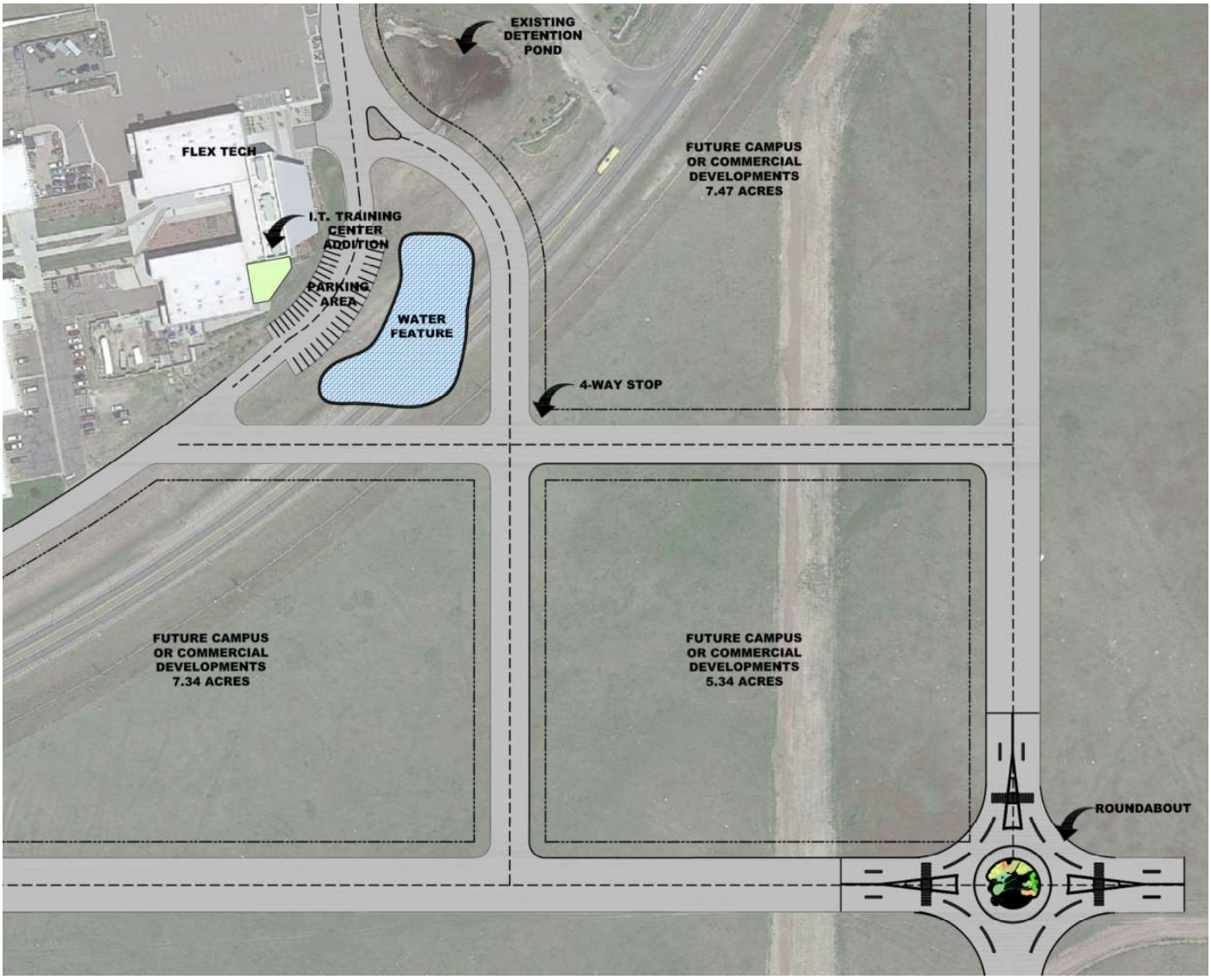
Effectively leveraging federal funding opportunities will position LCCC to not only have innovative and high-potential program offerings but can position us as a regional and national leader in IT education and workforce production. Our program has grown and been built on leveraging donated and defunct equipment and resources. Faculty often instruct with technologies that lost relevancy in 2015 or earlier, and the newest technologies are taught as theory and with images from the internet. Lab spaces are compromises in space and utilization, with concerns over floor-load capacities, network capabilities, and electrical supply resulting in disparate lab experiences and locations. Over and again, employers have indicated that graduates with hands-on, demonstrable experience and skills have more value and higher initial earnings potential. Technological currency is an important aspect of that.

Properly equipping and modernizing the existing facility and lab spaces will be a 7-10 year stopgap in the growth of LCCC into the forefront of premiere IT training. The best solution is the construction and outfitting of a dedicated training facility or addition, where labs and infrastructure are designed from day 1 for support of IT education. This construction would also support the design of a compartmentalized program for Cybersecurity, where resources are logically and physically separated from LCCC networks to protect student and school data. A grant would construct a world-class facility and support the program with technology and resources that could last (and remain relevant) for 7-10 years. The grant would be utilized in the following manner:

- *Construction of a new Information Technology Training facility, or addition to the FlexTech facility, to support the Pathway. Construction of top-of-the-line lab spaces, including a Datacenter lab, Fiber Optics lab, Telecommunications lab, Hardware lab, Networking Lab, Cybersecurity Lab, and a Blockchain lab; classroom spaces equipped for the future, and sufficient infrastructure resources to meet current and future needs. "*

Design Process and Progress: Based on the great head start on the formulation of the expanded IT Training program, the master plan team developed conceptual designs and cost estimate to be included in this master plan document. The design effort began by detailing a Space Program of needed spaces. Quantities and sizes of rooms, along with special attributes were determined. This Space Program became the recipe book for the facility layout.

The Southeast Corner of the LCCC Campus: The excitement of this expanded program is contagious. It speaks to great possibilities for future opportunities for our youth and community. This was proposed to provide the new addition with a prominent location on campus, that could be seen while passing by. With a highway alignment project forthcoming in the near future, LCCC is in the position of obtaining additional land on the southeast corner of campus. With this in mind, the southeast corner of the modern FlexTech Building was selected as an appropriate location for the IT Training Center addition.



The diagram above shows one conceptualization of the possible development of the southeast corner of the LCCC campus, with the proposed It Training Center addition onto FlexTech.

First Floor Plan Organization: The first floor positions the main entrance away from the prevailing Wyoming wind. The Cyber City feature is put on a prominent display in the central core. Most of the faculty offices are located here for easy access by students. The plan is efficient in that it connects to, and utilizes, FlexTech toilets, stairs and elevators for service.

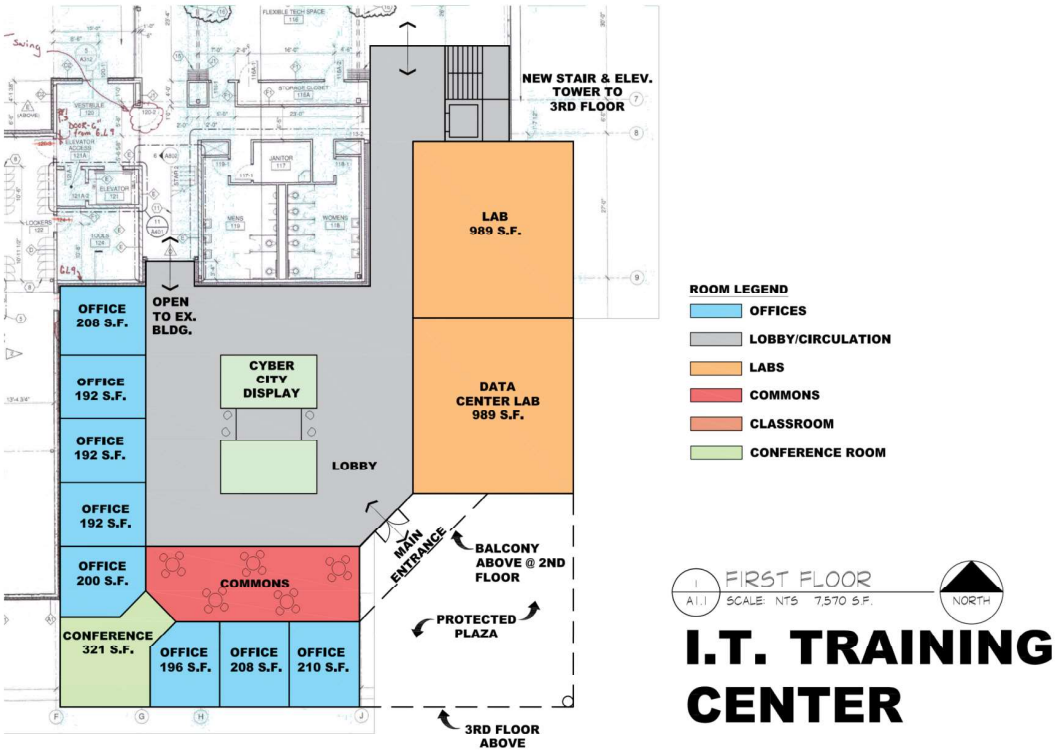


Diagram of the proposed first floor of the IT Training Center.

Second Floor Plan Organization: The second floor has great academic utilization, with classrooms and labs.

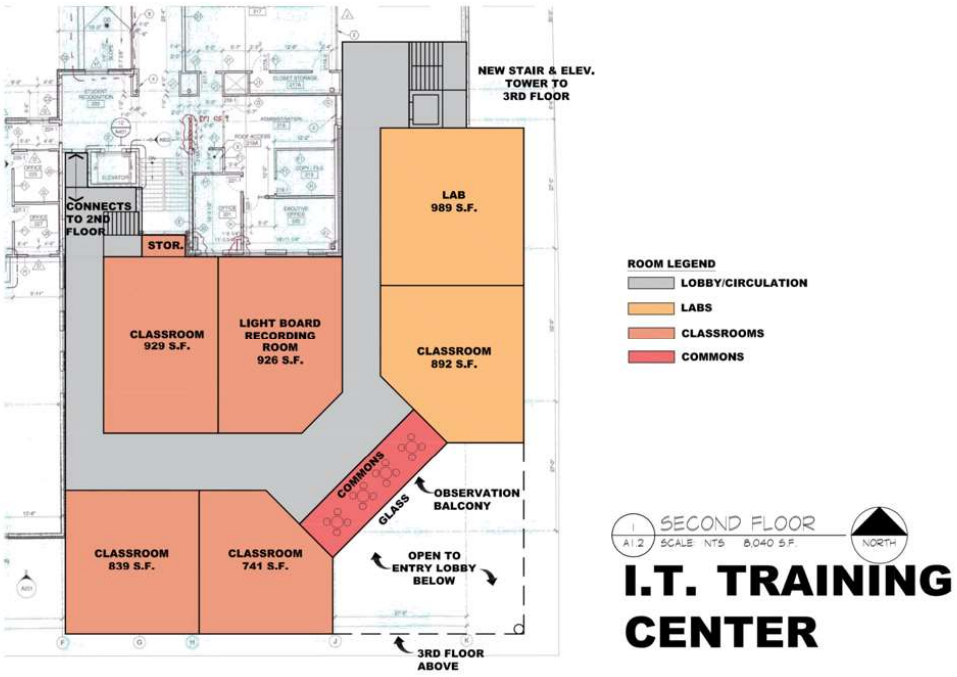


Diagram of the proposed second floor of the IT Training Center.

Third Floor Plan Organization: The third floor again has great academic utilization. It also has additional faculty offices and a conference room that extends out over the main entrance below.

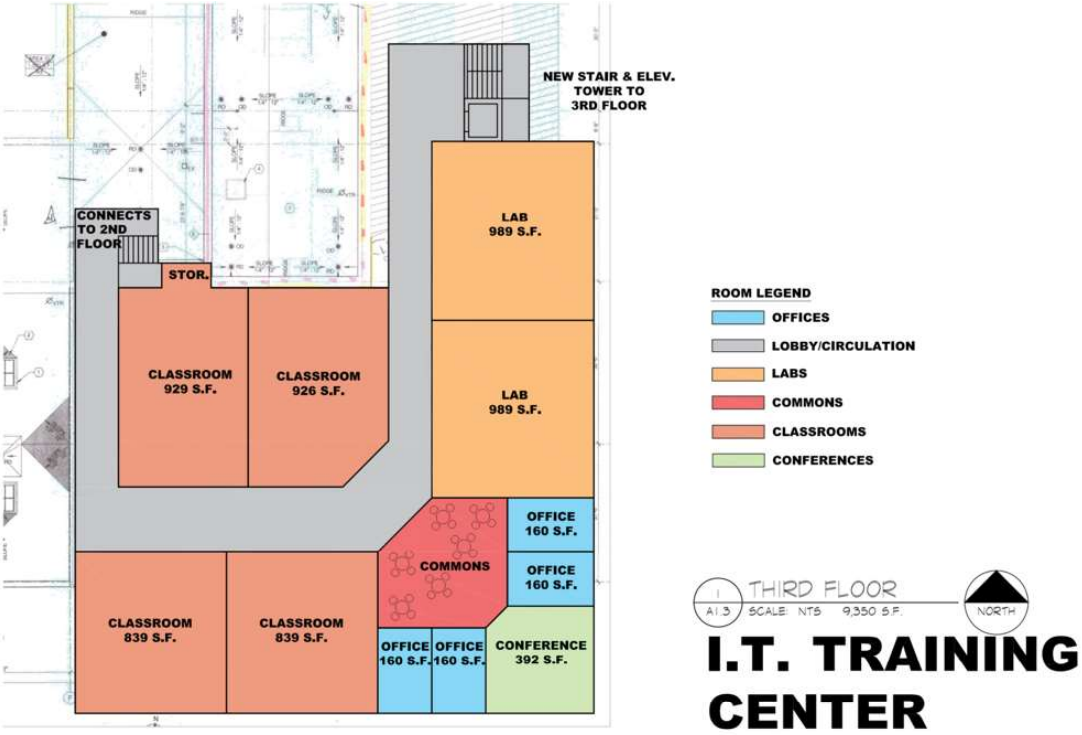


Diagram of the proposed third floor of the IT Training Center.

Exterior Visualization: The purpose of a master plan is not to fully develop a design concept, but rather to initiate a project scope for future funding and implementation. However, with enthusiasm, we offer the following 3D images of what just two ideas for the exterior of the new IT Training Center might look like.



This image shows one idea for the new IT Training Center addition onto FlexTech, as viewed form the southeast.

Above Image: *This image shows the same IT Training Center addition, with a different palette of exterior materials and forms.*



Image to the Left: *With a prominent location near the new highway intersection, the new IT Training Center could feature a lighting scheme that creates a sort of beacon to the campus at night.*

Project: IT Training Center
Project No: 2139
Project Phase: Conceptual Estimate
Documents Dated: 10/26/21

CONCEPTUAL PROJECT COST ESTIMATE

	Quantity	Pricing Unit	Unit Price	Total Cost
Division 1 - General Conditions				
Mobilization	1	ls	$ 35,000	$ 35,000
General Conditions	2%	%	$ 10,250,000	$ 205,000
Bonds & Insurance	0.8%	%	$ 10,250,000	$ 82,000
Total Division 1				**$ 322,000.00**
Construction Costs				
Offices	2,238	sf	$ 350	$ 783,300
Lobby/Circulation	7,488	sf	$ 325	$ 2,433,600
Labs/Cyber City	5,311	sf	$ 400	$ 2,124,400
Commons	1,396	sf	$ 325	$ 453,700
Classroom	7,864	sf	$ 375	$ 2,949,000
Conference Room	713	sf	$ 350	$ 249,550
Road Reconfiguration / Sitework	1	ls	$ 1,000,000	$ 1,000,000
Landscaping	1	ls	$ 250,000	$ 250,000
Subtotal Construction Costs				**$ 10,243,550**
General Contractor OH&P	1	%	8%	$ 845,244
Total Construction Costs (Including Division 1)				**$ 11,410,794**
Project Soft Costs				
Architectural / Engineering Fees		%	8%	$ 912,864
Testing & Inspection		%	1.00%	$ 114,108
FF&E		%	4.00%	$ 456,432
Construction Contigency		%	10%	$ 1,141,079
Design Contingency		%	10%	$ 1,141,079
Subtotal Project Soft Costs				**$ 3,765,562**
Total Project Cost - Hard & Soft Costs Combined (IT Training Center)				**$ 15,176,356**

Agriculture & Equine - Ag Master Plan / Facility Upgrade

Project Origin: The Agricultural and Equine Program at Laramie County Community College is an important aspect of both the college and the community. Enrollment has been constant over the last several years, but improvements can be made; most of which directly relate to the condition of the existing facilities. The following information and diagrams were taken from the LCCC Agriculture & Equine Master Plan, which was completed in January of 2020 by the architectural firm Cushing Terrell:

AG Master Plan Phase 1
(2022 - 2025)

This document provides a series of different recommendations, referred to as "menu items", and based upon the FCI analysis, proposed Master Plan options, additional recommendations, and prioritization of new construction. The menu is separated into (2) phases (3 years, 5 years+) with distinct scopes of work divided into categories of Facility Maintenance and Repairs, Program Upgrades, and Program Growth.

1. **Facility Maintenance and Repairs -** Items associated with repairs and upgrades derived from the multi-disciplinary Facilities Cost Index (FCI) assessment.
2. **Existing Program Upgrades -** Items associated with proposed upgrades or renovations to existing facilities.
3. **Program Growth -** Items associated with future construction to meet the needs of the growing Ag & Equine programs.

FACILITY MAINTENANCE AND REPAIRS

1. **Arena Maintenance and Repairs**
   a. Roof replacement – scheduled for 2022 per LCCC
   b. Replace caulking between concrete panels
   c. Clean Fire Alarm and voice evacuation systems
2. **Ag. Classroom Maintenance and Repairs**
   a. Accessibility upgrades to casework and showers
   b. Clean Fire Alarm and voice evacuation systems
3. **Stall Building Maintenance and Repairs**
   a. Replacement of roof
   b. Maintain paints and sealants on exterior concrete walls
   c. Toilet room accessibility upgrades
   d. Clean Fire Alarm and voice evacuation systems
4. **Livestock East Repairs**
   a. Provide gutters, downspouts and splash blocks as required to collect water and direct away from building
5. **Livestock South Repairs**
   a. Provide gutters, downspouts and splash blocks as required to collect water and direct away from building
   b. There is no construction joint in the concrete wall on the North side of the stalls, retrofit with construction joints to prolong life of wall

PROGRAM UPGRADES

1. **Existing Arena Upgrades**
   a. New siding on existing arena
   b. New overhead door in existing arena
   c. Accessibility Upgrades to Existing Arena
2. **Landscape and Fencing Improvement along S. College Drive**
3. **Regrade and Reshape Roads, correct drainage and accessibility**
4. **Outdoor Arena Watering**

PROGRAM GROWTH

1. Hay Storage Infill
2. Hay Barn
3. Livestock Addition and Pens
4. Quarantine
5. New Arena
6. Pens
7. Trailer Parking – 44 stalls
8. New Parking – 24 stalls
9. Replacement Parking – 50 stalls
10. Pasture
11. FFE & Equipment
12. Horse Stalls and Pens – 130 stalls

AG Master Plan Phase 2

(2015 - Beyond)

FACILITY MAINTENANCE AND REPAIRS

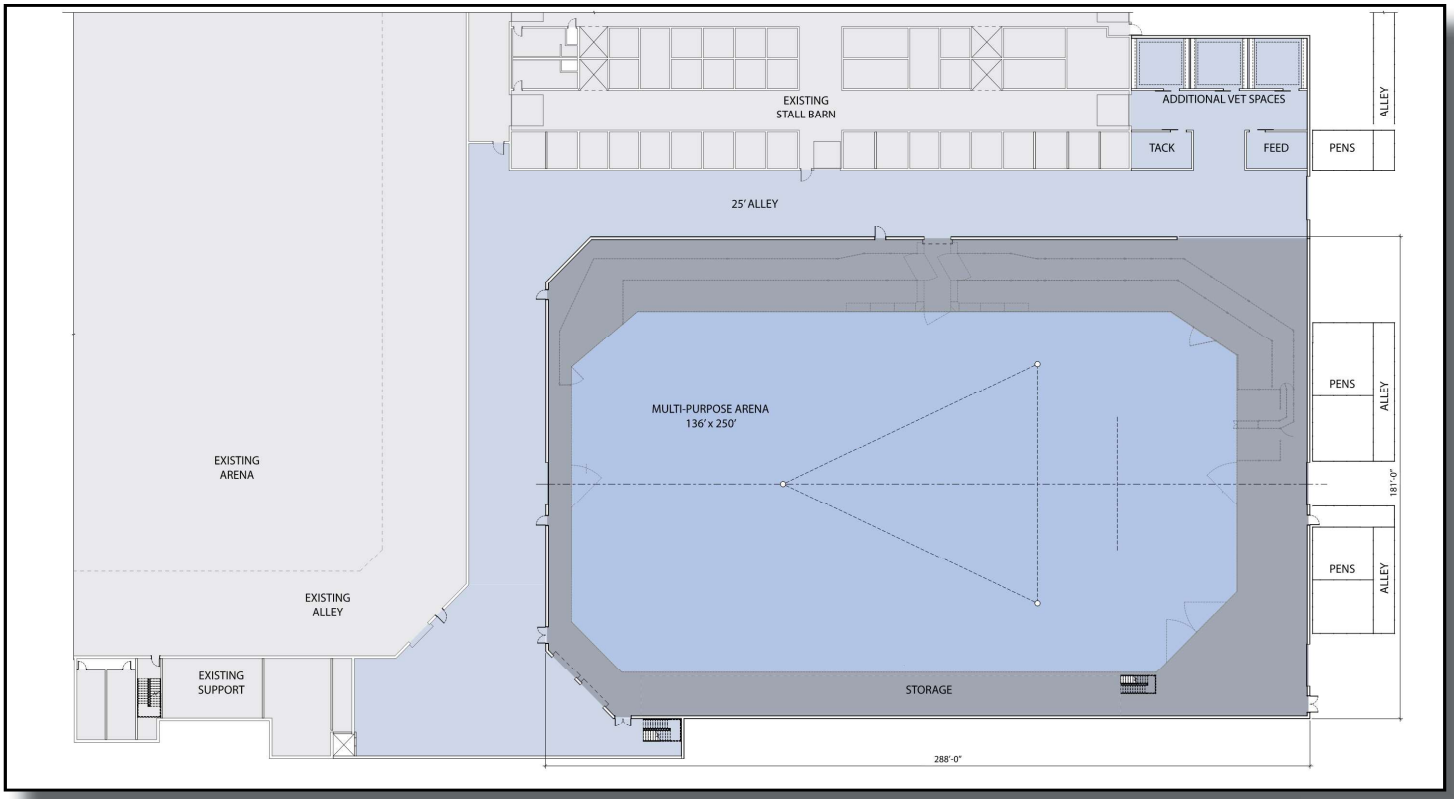
1. **Arena Repairs**
   a. Clean algae off of interior stairwell walls, removed rust from wall plates, maintain paint and sealants
   b. Replace thermostat, air devices, ductwork, fans, louvers, and dampers
   c. Replacement of plumbing equipment and fixtures that is original and reaching end of useful life
   d. Upgrade lighting controls that were not previously upgraded, i.e. occupancy sensors
   e. Replace receptacles and power devices that have been exposed to moisture and are showing signs of corrosion
2. **Ag. Classroom Repairs**
   a. Replace fixed aluminum windows
   b. Maintain paints and sealants
   c. Replace casework and FFE as needed for educational models
   d. Replace heating and ventilation units, air terminals, heating water boiler and ductwork that is original and at end of life
   e. Upgrade thermal zones and DDC Controls
   f. Replace plumbing fixtures and equipment that are original and reaching end of life
   g. Upgrade lighting controls that were not previously upgraded, i.e. occupancy sensors
   h. Replace receptacles and power devices that have been exposed to moisture and are showing signs of corrosion
3. **Stall Building Repairs**
   a. Replace aluminum windows in stall building
   b. Replace exhaust fans, cabinet heaters, and unit heaters that are original and reaching end of life
   c. Replace plumbing equipment and fixtures that are original and reaching end of life
   d. Upgrade lighting controls that were not previously upgraded, i.e. occupancy sensors
   e. Replaced receptacles and power devices that have been exposed to moisture and are showing signs of corrosion

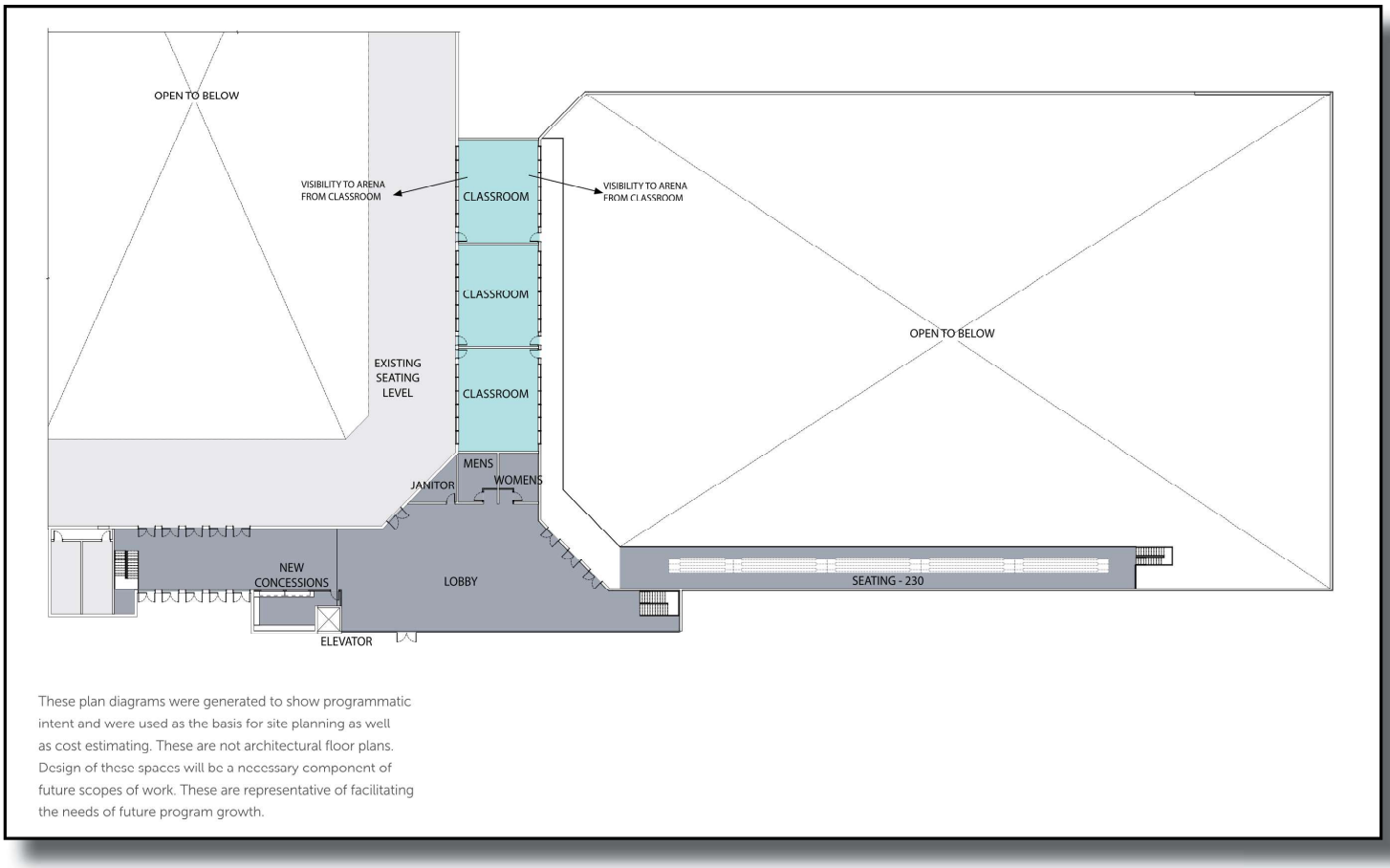
PROGRAM UPGRADES

1. **Cooling for Ag. Classroom**

PROGRAM GROWTH

1. **Multi-Use Livestock and Runs and Connection Lobby**
   a. Existing Animal Science Lab would still serve a variety of functions in support of the equine program, including as a warm up area for equine practice and class warm-up, warm-up and runway for timed event practices, and of season storage for dump truck, trailers, pick-up, and rodeo equipment. Additionally this area has been used for portable stalls for large events.
2. **Horse Stalls and Pens – 52 stalls**
3. **Trailer Parking – 22 stalls**
4. **New Parking – 27 stalls**
5. **Replacement Parking – 29 stalls**





These plan diagrams were generated to show programmatic intent and were used as the basis for site planning as well as cost estimating. These are not architectural floor plans. Design of these spaces will be a necessary component of future scopes of work. These are representative of facilitating the needs of future program growth.

AG Master Plan Phase 2



1. HORTICULTURE CLASSROOM/LABS/ GREEN HOUSE AND PARKING
2. MULTI-USE LIVESTOCK FACILITY
3. NEW ENTRY AND STUDENT LOUNGE
4. EXISTING CLASSROOM BUILDING
5. EXISTING ANIMAL SCIENCE BUILDING
6. EXISTING ARENA
7. EXISTING LIVESTOCK PENS
8. NEW LIVESTOCK PENS
9. EXISTING STALL BARN
10. NEW HAY STORAGE
11. NEW INDOOR ARENA
12. EXISTING PARKING LOT
13. EXISTING OUTDOOR ARENA
14. EXISTING HORSE STALLS
15. MAIN ENTRY
16. EMERGENCY VEHICLE ACCESS ONLY/ TRAILER EXIT, EVENTS ONLY
17. MAIN EXIT
18. NEW HORSE STALLS - 32 MORE PHASE 2
19. NEW HAY BARN
20. NEW TURNOUT PENS
21. NEW QUARANTINE BARN
22. NEW TRAILER PARKING - 75 TOTAL (PERVIOUS/UNPAVED, POWER FOR RV HOOKUPS)
23. LANDSCAPE BERM
24. CORRAL & PASTURE


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3 Campus Wide Master Plan Efforts

Site Assessment - Martin / Martin

Landscape Assessment - Studio Platts

Structural Assessment - Martin / Martin

A / M / E / P Building Assessments - Wood

Technology Standards - TCS

CIVIL - PARKING ASSESSMENT



MARTIN/MARTIN WYOMING

LCCC Master Plan Update – Civil Assessment

Campus Summary:

The Laramie County Community College (LCCC) is located southeast of Cheyenne, Wyoming in Laramie County. It consists of approximately 260 acres of developed and undeveloped land and is bounded to the north by Niobrara Energy Park, to the west by multiple residential developments, and to the south and west by College Drive/Wyoming Highway 212. The existing site consists of roughly 28 multi-use and education buildings. These buildings range in age from 70 to 4 years old.

Civil Assessment:

The initial Civil assessment began with a review of existing site and utility plans provided by Laramie County Community College. This was followed with a discussion with the Facility Maintenance staff to discuss all components of the site and understand if there are any site wide issues that should be further investigated. Next, a site walk was performed around the perimeter of all buildings where general observations were made regarding site grading, drainage, and circulation. In general, the campus is in good state. There are areas that require attention, but these are isolated to the older portions of the campus. More detail is provided in the Civil Narrative for each component of the site.

The domestic water system has experienced failures in the past. These failures are generally isolated to older parts of the system that were constructed using cast iron pipe. Facility staff have been able to maintain pace with failures and did not feel it was prudent at the time for replacement of large portions of the system. The Sanitary Sewer was also in decent shape and maintenance requirements were reported to be manageable.

Drainage represented the most significant issue on the campus. Issues were generally located in the older portions of the campus. Most significant was sidewalk movement effecting building entries and door stoops. This was concentrated on the central corridor along the main axis of the campus. Additional study is required to understand the full extend of potential improvements, however, additional storm sewer infrastructure within the central corridor of the campus is recommended to provide adequate drainage away from building and walks. Spot sidewalk repairs is also recommended in areas where movement has created obstacles.

Finally, it was observed that several paths, parking areas, and routes what may not meet current accessibility requirements. A more detailed study will require a topographic survey to verify actual slopes of these areas to determine compliance. The most common issue observed was lack of clear routes from accessible parking stalls to an accessible building entrance. Common issues included vertical obstacles such as curbs or pavement movement, paths that were easily blocked by parked cars, or inappropriate pavement hatching that would provide a direct and clear route to a buildings entrance.

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LANDSCAPING

STUDIOPLAATS

LANDSCAPE ARCHITECTURE
22.01.05

Executive Summary - Laramie County Community College Masterplan
Existing Conditions Study and Guidance on Future Proposals

Summary: Laramie County Community College (LCCC) is required to produce an update to it's ongoing masterplan every five years. LCCC is a growing educational institution meaning it not only needs to continuous be producing successful graduates, but all keep up with the demand of technology, facilities and the desire from it's students to have a true college experience. This requires constant planning and projects focused on elevating the campus's visibility. Part of that endeavour is to implement new buildings and spaces on their campus in SE Cheyenne. STUDIOPLAATS Landscape Architecture is part of that effort, through it's collaboration with Plan One/Architects, to envision the next 5-10 years of place-making.

Purpose: The purpose of this report is to analyze current conditions at LCCC, understand the efforts and plan to date, whether they were built or not, understand what has been successful, what areas need help, listen to the wants and needs of different staff members and propose elements that can best move LCCC forward. From a landscape architecture point of view, STUDIOPLAATS is focused on understanding the campus as several scales. We gather a wide range of information - regional watershed issues, grounds crew lawn maintenance commitments, and what type of trees work well in windy climates with extreme temperatures. By looking through many lenses and listening to the people who are on campus every day, we are able to identify issues, opportunities and translate them into possible design solutions.



Masterplan Approach: As described above, STUDIOPLAATS approached the LCCC Masterplan through site observation, research, discussion and collaboration with the other team members. We made several site visits over the span of the last 4 months to see the campus in different seasons as well as understand how students use the outdoor spaces and listen to the crews who manage it.

Analysis: We researched larger scale factors that influence the LCCC Campus. This included but not limited to:

- State and Regional Watersheds
- Regional and local ecologies - what is beneficial and what is damaging
- Typical to extreme wind and weather patterns
- Transportation and access to and from the site for multiple type of transport

A more campus focus analysis was also completed to understand changes executed over the last 10-15 years. That history and ongoing progress heavily influences proposals made going forward. These included, but not limited to:

- Building construction, their approach to adjacent or connected outdoor spaces and how students and visitors are using them now
- Material choice an it's impact on water infiltration
- Management of lawn and efforts to reduce water usage
- Canopy cover and the challenges an environment like Cheyenne has to speedy tree growth
- Circulation, social spaces, overall spatial usage.

Proposals and Guidance: Budgets are always a challenge and without a Harvard level endowment, a program like LCCC has to be selective in the projects it decides to move forward with. We took this very seriously and established a set of metrics for goals to achieve in the next 5-10 years in regards to environmentally responsible design decisions, ecological sensitivity and connectivity. Additionally, we did not forget to think big, even if many of our suggestions are small in scale. When combined and given time to grow, they have the ability to transform the campus. Concepts and elements listed in the report included in the index both focus on making the LCCC campus a hidden gem, but also include many ideas to get people into the campus ground to explore whether they are a student o visitor. These include:

- Expanded connection to the Greenway trail, giving opportunities to view LCCC as a place of interest and node on this trail work exploring
- Keeping it human scaled, even though it is primarily a commuter campus.
- Emphasizing small moments for engagement and many spaces to meet, talk and get to know one another.
- Exploring ideas and spaces to keep people on campus, rather than driving away as soon as class is over.

These elements are elaborated upon and illustrated in the report we produced that will be include in the index. We greatly appreciate being a part of this masterplan team and hope the ideas we put forth are seeds for something greater at LCCC.

Sincerely,



Shane Fagan, RLA - Director, STUDIOPLAATS Landscape Architecture

STRUCTURAL - BUILDING STRUCTURE ASSESSMENT



LCCC Master Plan Update – Structural Assessment

Campus Summary:

The campus building structures consist of a combination of precast double tee wall and roof buildings built in the late 70's and 80's along with some newer structures. The majority of the newer structures are steel post and beam construction but also include wood framed construction and a precast insulated wall panel structure. Exterior finishes on the campus consist of the precast double tee walls as well as a combination of brick and metal panel at the newer structures.

Structural Assessment:

Our structural assessment consisted of walking the perimeter of all the building structures to document structural deterioration, foundation settlement and maintenance items that may affect the structural performance of the buildings. In general, the structures on campus are in fair to good condition and the precast buildings have held up well given their age. No major structural concerns were observed except a steel canopy column at the agricultural building which is address in the building report.

The structural assessment also included walking the building roofs for items that may affect the structural condition of the building. We did not assess the condition or life expectancy of the roofing material. We did not walk the roof of the residential buildings or the central plant. We did not observe any items that were a structural concern. We did observe that many of the bitumen roofs have lost a lot of the granules and they have "drifted" in the corners of the roofs. We also noted that some of the foil facing on the parapet flashing has been torn off likely due to wind. We would recommend that a roofing consultant assess the condition of the roofing and flashing and provide recommendations for replacement.

During our roof assessment, we noted that there are multiple locations where roof to roof access ladders were either owner fabricated or store-bought aluminum ladders. We would recommend that these ladders be replaced with engineered ladders and permanently installed. We did not review the roofs for fall protection, however, a review by a qualified consultant may be beneficial to the campus.

Many of the precast buildings have a concrete mow strip around the perimeter with a sealant joint between the mow strip and the double tee wall. The mow strips occur in landscaped areas and at paved areas. At several locations on campus the sealant has cracked and/or separated from the wall and others have indications that they have been replace. The cracked sealant has the perception that this is a maintenance item and should be replaced. In our opinion, at landscaped locations the sealant is not required and appears to be a significant maintenance item for the campus. To reduce the ongoing maintenance cost, a revised mow strip with a concrete curb and landscaping rock or something similar could be installed. We do recommend that the joint sealant should be maintained at the paved areas.

Laramie County Community College
Building Condition Assessment

wood.

Executive Summary – Laramie County Community College Masterplan – Building Condition Assessments

Summary

Laramie County Community College (LCCC) issued a request for proposal for the five year update to the ongoing masterplan. As part of that masterplan process, LCCC included the requirement to perform a Building Condition Assessment for all buildings older than approximatley 5 years. As part of that requirement, Wood was hired in collaboration with Plan One/Architects to perform site investigations of the buildings in question. From those site investigations we have developed an inventory for each of the buildings for mechanical, electrical, plumbing, and building interiors and exteriors. The inventory identifies 802 major maintenance items across 25 buildings, totalling over $13 million in short and long term projects.

Purpose of this report

The purpose of the inventory database is to develop a living document for each building that can be used by LCCC to identify short and long term major maintenance projects. As projects are completed, or more are identified, LCCC will be able to keep a running list going forward. The inventory also includes approximate costs to assist in grouping projects for any funding that may become available. Often funding will become available and projects will need to be identified quickly so the money can be spent within a certain timeframe. The inventory also includes a picture summary of all of the identified issues, assisting operation personnel in identifying the issue noted in the database.

Building List	Year built	Last Renovation	Square Foot	Short term	Long term	Total	Mechanical Description
Administration	1969	2006	9,650	$71,081.44	$95,145.34	$179,792.25	HVAC system is aging. AHU is beyond expe beyond expected life and corroded. Recor
Andrikopoulos Business & Technology	1973	200	21,888	$233,309.58	$471,127.09	$728,209.15	Pumps are nearing expected life and corrc damge, AHU-2 is equiped with R-22 DX cor term.
Arena	1982		74,745	$105,285.43	$81,579.69	$195,993.92	Existing fans and infrared heaters in the ar replacement in the short term.
Arp	1981	2001	27,050	$261,366.76	$273,192.65	$542,007.01	The AHU is a large unit with two large fans The units appear to be in good fair conditi recomended for replacement in the short
Auto Body	1974	1988	17,656	$284,208.03	$160,899.61	$449,682.56	The autobody shop has 4 AHUs, still contrc is beyond the expected life. Recommend
Auto Tech	1973		22,687	$115,906.60	$101,182.96	$226,356.06	AHU and pumps are beyond expected life term.
Boyd Agriculture	1985		15,284	$143,388.73	$198,316.68	$342,565.41	AHU is the original system and while contr condition it is 10+ years beyond expected Recommend replacement in the short ter
Career & Technical	1979	1989	27,900	$277,332.60	$149,215.78	$429,685.87	Many units are beyond their life expecten AHU, pneumatic controls, and pumps. CT-/ leaks into the mechanical space. The Lenn

Figure 1 - Overall Building Summaries

Mechanical

The mechanical inventory has identified nearly 300 short and long term major maintenance projects for the buildings. This includes major mechanical equipment installation dates, make model and serial number (when available), a condition score, and service life. Each building includes a summary identifying aging air handling equipment, pneumatic controls, damaged coils, corosion, and equipment nearing or past the expected service life. $43,075 is estimated for immediate repairs, $4,151,715 for short term repairs, and $4,313,047 for long term repairs, for a total of $8,543,204 in identified mechanical repairs.

Electrical

The electrical inventory has identified 218 short and long term major maintenance projects for the buildings. This includes major electrical equipment installation dates, make model and serial number (when available), a condition score, and service life. Each building includes a summary identifying motor control center condition, transformers at or past end of life, generator condition and remaining life, and panels with OEM parts that are not currently available. $343,512 is estimated for short term repairs, and $1,513,366 for long term repairs, for a total of $1,919,611 in identified electrical repairs.



Figure 2 - Picture Database

Plumbing

The plumbing inventory has identified 133 short and long term major maintenance projects for the buildings. This includes major plumbing equipment installation dates, make model and serial number (when available), a condition score, and service life. Each building includes a summary identifying rusting valves and hydrants, missing backflow preventers, general plumbing fixture condition and an extensive review of each building's domestic hot water systems. $12,370 is estimated for immediate repairs, $120,566 for short term repairs, and $2,484,353 for long term repairs, for a total of $2,617,290 in identified plumbing repairs.

Interior and Exterior Building

The interior and exterior building inventory has identified 135 short and long term major maintenance projects for the buildings along with a number of ADA requirements that are not being met. Each building includes a summary identifying everything from caulk and joint sealants needing replaced to wall coverings and carpet that are aging. Roofs were inspected with recommendations for how long until the college can expect until they will require replacement. The ADA review also identified a building that does not have proper elevator access which will need to be addressed at the next major renovation. $12,370 is estimated for immediate repairs, $120,566 for short term repairs, and $2,484,353 for long term repairs, for a total of $2,617,290 in identified plumbing repairs

TECHNOLOGY - CAMPUS STANDARDS

Executive Summary – Laramie County Community College Masterplan

Technology System Standards

Summary: Laramie County Community College (LCCC) is required to produce an update to their ongoing masterplan every five years. As part of this effort, Technology Consulting Solutions (TCS) was retained through Plan One Architects to assess the Technology Systems installed on the College's Cheyenne campus. These systems were not evaluated in the previous 2016 master plan update or the 2011 master plan.

From our initial assessment of the systems installed on campus, the College has upgraded many of their Technology Systems, including their video surveillance system, access control system, wireless (WIFI) network and classroom audiovisual systems, providing staff and students with state-of-the-art systems. What the College was lacking were Campus Technology Standards that document these systems, including product specifications and requirements, installation practices and the delineation of work between the various trades and the Owner that could be used for future new construction or renovation projects on campus.

Purpose: Therefore the purpose of this portion of the Master Plan Update is to develop standards for architects, engineers, consultants, and contractors regarding the design and installation of these systems on the Cheyenne campus. New construction projects would need to strictly adhere to the requirements outlined within the standards unless written approval is provided from LCCC prior to design completion. Renovation projects would need to adhere to these requirements to the best of the ability of the design team and/or contractor.

Standards Development Approach: TCS met several times on campus with the College's IT Department to thoroughly review the requirements of these systems, including performing several high level site observations of the installed systems. Draft standards were developed and forwarded to the IT Department for review and comment. The draft standards were also reviewed by the campus Physical Plant department regarding security system requirements. Comments were incorporated into the standards and these updated standards were forwarded to the College for a final review.

Technology Standards Overview: Two technology standards were developed as part of this effort and are included within the appendix. These include:

- Division 27– Structured Cabling System Standards
- Division 28 – Electronic Security System Standards

These standards document the requirements of several of the Technology Systems on campus, namely the:

- IT / Telecommunications Infrastructure
- IT Network Voice / Data Systems
- Wireless LAN Network
- Security - Access Control System (ACS)
- Security – Video Surveillance System (VSS)

Division 27 Structured Cabling System Standard: This standard provides detailed requirements on the design and construction of telecom rooms, the pathways/raceways and the low voltage and communications cabling that supports various Technology Systems.

The standard lists the core systems that must be installed within telecom rooms and other low voltage systems that may also need to be supported and the minimum required sizes of these rooms for new construction and major renovation projects. Guidelines for the locations and

quantities of rooms is also included in the standard. These guidelines should be used by engineers and consultants during space planning with the architect to ensure these spaces are incorporated into the floorplans.

The standard also provides requirements for the provisioning of the telecom rooms for coordination with the design team such as floor, wall, ceiling and door requirements for architects and power, lighting and HVAC requirements for MEP engineers. The standard provides provisioning requirements for the contractor on the installation of the various systems within the rooms, including equipment rack and ladder rack layouts, grounding and bonding requirements and required clearances.

The standard provides guidelines for the various pathways/raceways required. This includes the pathways that interconnect a new building to the campus IT infrastructure, the pathways required between telecom rooms, linking the systems with backbone cabling and the pathways for installation of cables to various Technology devices throughout a building.

The standard also identifies the cabling requirements. These include the outdoor cabling required for linking a new building to the campus data centers, the cabling required for linking the telecom rooms within a building and the cabling required to the various Technology devices such as voice/data outlets, WIFI access points, including security cameras and doors to name a few.

The standard also identifies the requirements for various spaces within a building such as classrooms, conference rooms, computer labs, offices, and connectivity to facilities such as elevators, electrical rooms and mechanical rooms, to name a few.

Division 28 Electronic Security Systems Standard: This standard provides detailed requirements on the design and construction of the access control system (ACS) and video surveillance system (VSS).

This standard documents the existing campus-wide ACS and VSS systems installed that must be integrated into for security systems being installed within new construction and major renovation projects. Products are identified within the standard along with the installation practices required during construction. A responsibility matrix is provided that identifies the delineation of work amongst the various trades and Owner.

The standard documents the College's specific ACS system requirements. This includes what doors will require security and to what level such as card reader access, only monitoring if a door was left open, etc. All products are identified and listed that will need to be specified and installed, along with documenting the installation practices required at security doors and the associated pathways and cabling required to tie doors into the system. Guidelines for the installation of the ACS equipment within the telecom rooms is provided, including any provisioning required such as power, grounding and wall space for engineers and consultant to coordinate during design and for installation by the contractor. Coordination requirements are listed for the design team and contractor, such as coordinating with Division 8 door hardware, door frames, AC power, fire alarm and IT connectivity interfaces.

The standard documents the College's specific VSS system requirements. This includes identifying where cameras are to be installed and their viewing requirements. While the College furnishes and installs the security cameras, per the responsibility matrix, engineers and consultants still need to produce construction drawings identifying camera locations, pathways and cabling and telecom room equipment requirements. The standard includes installation practices required at security cameras and the associated pathways and cabling required to tie cameras into the system. Guidelines for the installation of the VSS equipment within the telecom rooms is provided, including any provisioning required such as power and grounding.