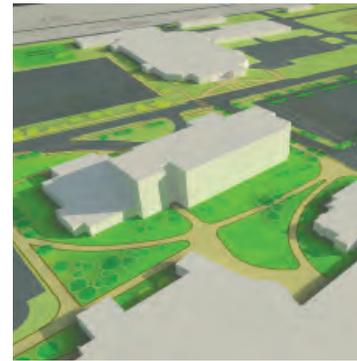


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# Laramie County Community College Campus Master Plan Update

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MASTER PLAN REPORT  
OCTOBER 2016

Campus Master Plan Update prepared by: **SmithGroupJJR, LLC**  
**Anderson Mason Dale Architects**  
**Paulien & Associates, Inc.**

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### Appendix A | ASF by Building

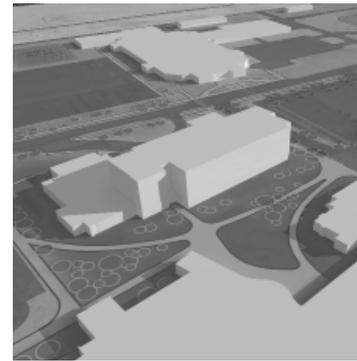
### Appendix B | Utilization of Classrooms by Building

### Appendix C | Utilization of Teaching Laboratories by Building

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# one|introduction

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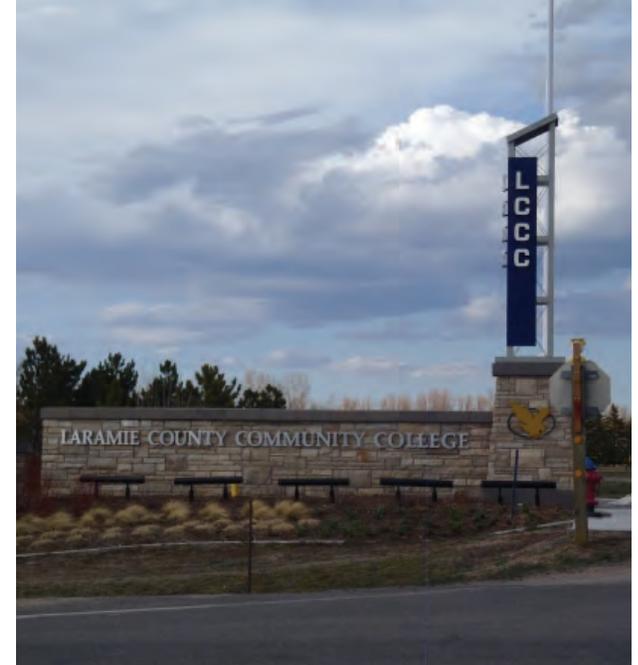
# Master Plan Overview

The Laramie County Community College (LCCC) Campus Master Plan Update (Master Plan Update) provides an update to the Campus Master Plan Update completed in 2011. It was developed over a 6-month period with participation from LCCC administration, faculty, and staff.

Much has changed within the past 5 years at LCCC. The Cheyenne campus has experienced significant physical changes, highlighted by the construction of two new academic buildings with modern student amenities and learning environments. LCCC has stable executive leadership with a bold vision for the future of the college.

The economic and enrollment conditions are also markedly different from 2011. In 2011, the country was slowly rebounding from a major economic recession. This recession helped fuel higher education enrollments across the country, notably in community colleges. Both LCCC campuses were at their highest enrollment levels in 2011. The country has experienced a general economic recovery since this time and LCCC, like the rest of its community college peers in Wyoming, has experienced a decreasing enrollment trend. However, recovering economy has not fully been realized in Wyoming, where a poor energy market has hampered the state's economy.

This report comes at an opportune time for LCCC as the analysis and recommendations that follow were developed to anticipated future growth.



## Report Structure

The Master Plan Update report consists of five chapters.

- One | Introduction
- Two | Space Needs Analysis
- Three | Cheyenne Campus Analysis
- Four | Cheyenne Campus Master Plan
- Five | Albany County Campus Master Plan

The introduction details the purpose of the Master Plan Update and describes the master plan process. The next chapter discusses the results and implications of the space needs analysis for both the Cheyenne and Albany County campuses. The following two chapters provide analysis and master plan recommendations respectively for the Cheyenne campus. The Albany County campus is given its own chapter which describes the master plan recommendations for this campus.

## Purpose of the Master Plan

The Master Plan Update is a planning tool to aid in decisions regarding future campus development. It provides an assessment of the existing conditions of LCCC in addition to recommendations that address immediate and future concerns of the institution. The recommendations are intended to be flexible in their application to allow the plan to adapt to future conditions which may not be evident today. As an update to the 2011 Campus Master Plan Update, it provides refined recommendations for LCCC given the recent changes that have occurred within the college and the local community.

## Master Plan Process

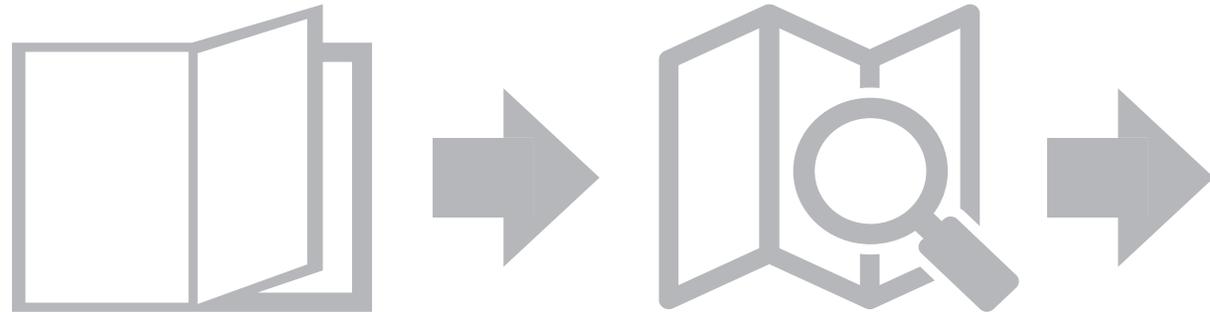
The master plan process was divided into five major phases: Discovery, Campus Analysis, Revised Space Needs, Preliminary Plan, and the Final Plan and Documentation. Each phase was critical to the overall development of the master plan process. Throughout each phase, the master planning team worked with representatives from LCCC so the ultimate recommendations were crafted and supported by LCCC leadership.

### Discovery

The Discovery phase included collecting various types of data for the project and hosting interviews and meetings with LCCC personnel.

### Campus Analysis

The Campus Analysis phase was focused on understanding the existing structure and functionality of the LCCC campuses. It included updating the campus base information to reflect 2016 conditions. The master planning team performed a campus comparison analysis to document the changes that have occurred on the Cheyenne campus between 2011 and 2016. This phase also including an in-depth look at the existing space use on the Cheyenne campus.



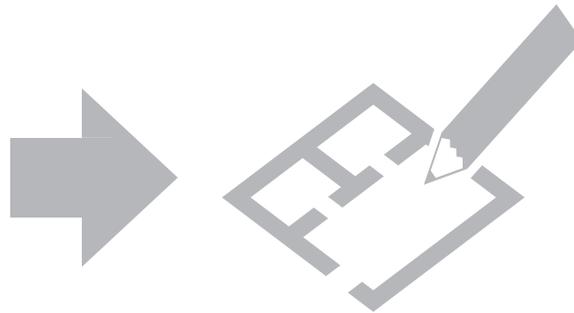
## Revised Space Needs

The master planning team participated in a quantitative review of the existing space on the Cheyenne and Albany County campuses to classify the existing spaces and determine the utilization and future space needs of each. It phase also included interviews with campus personal to discuss future space needs for LCCC's academic programs.



## Preliminary Plan

A series of master plan initiatives were developed and vetted with LCCC leadership. These ideas provide development strategies for the Cheyenne campus and were based on the needs identified by the space needs analysis and space requests. A critical element of this was the development of backfill planning strategies that provide recommended relationships within individual building footprints. A preliminary plan was developed that represented the physical changes to the campus form based on implementing the master plan initiatives. A master plan was also developed for the Albany County campus that reflected a vision for future campus growth.



## Final Plan and Documentation

The last phase of the process was the preparation of the final documentation materials, including the creation of the final illustrative graphics and the preparation of this report.

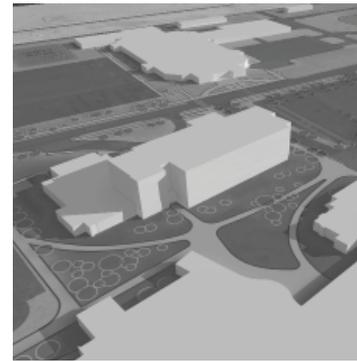




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# two|campuswide space needs analysis

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# Introduction and Background

## Purpose

The purpose of the utilization and space needs analysis study was twofold:

- Understand how classrooms and laboratories are being used and interpret outcomes; and,
- Generate a space needs analysis by space category at both current and prescribed target enrollment and staffing levels and understand the differences between existing space and the optimum space needs from a quantitative perspective.

The space needs analysis was developed through a collaborative process that engaged stakeholders in a discussion about LCCC's future during April and May 2016.

The utilization and space needs analysis study was developed to be a comprehensive planning document that integrates key components of LCCC's mission and strategic goals.

## Summary of Findings

Utilization of classroom and teaching laboratories in Fall 2015 indicate a surplus of teaching space on the Cheyenne campus. A campus deficit of 14,141 ASF was generated primarily in the categories of Academic Success, Open Laboratory, and Assembly space. In the 2020 Cheyenne campus analysis two buildings currently in construction will increase the surplus in teaching space. The Residence Life campus deficit is generated primarily by the need for an additional 160 student beds. This deficit is offset by the space being vacated by programs moving to the new buildings, creating an effective campus surplus of 13,383 ASF.

On the Albany County campus there was a deficit in all space categories in Fall 2015 of 9,587 ASF. With the planned addition of teaching and academic office space, the 2020 target year guideline indicates a small surplus in classrooms, but retains deficits in all other space categories totaling 9,362 ASF.

## Background

### Brief History & Description of the College

Established in 1968, LCCC is a full-service, comprehensive community college serving Laramie and Albany counties in southeast Wyoming. LCCC has campuses in Cheyenne and Laramie, and centers at the F.E. Warren Air Force Base and in Pine Bluffs.

At the institutional level, credit enrollment reached a high of 5,302 headcount students in Fall 2011. As a result of the recent economic recovery, enrollment has decreased to 4,603 headcount students for Fall 2015. Distance learning has decreased slightly over the same time period, while enrollments at other sites has declined by slightly less than 50%.

In 2001, LCCC expanded its non-credit offerings to include workforce development courses and services.

Wyoming is a participant in the Complete College America Alliance of States. The Complete College Wyoming team has created a plan for improving college completion in Wyoming with key goals and objectives in four categories: participation, progress, performance, and placement.

LCCC is accredited by the Higher Learning Commission and has selected the Academic Quality Improvement Program pathway for its accreditation model.

## Programs

Students attending LCCC are preparing for entry into a growing career field or are seeking transfer to a baccalaureate institution for further study. In response to student and community needs, LCCC offers 67 credit programs and concentrations leading to associate degrees and 25 credit programs. These programs include: Agribusiness Technology, Automotive Technology, Cybersecurity, Education, Equine Science, Nursing, Radiography, Welding, and Wind Energy.

LCCC has seven sports teams: Men's Soccer, Women's Soccer, Women's Volleyball, Men's Basketball, Women's Basketball (Fall 2016), Rodeo, and Equestrian.

In addition, LCCC has 24 officially recognized student organizations including: Block and Bridle, Cattlemen's Club, Human Services Club, Metalsmithing Guild of LCCC, Nursing Club, and Phi Theta Kappa.

## Campus & Facilities

The Cheyenne campus is comprised of 27 buildings on 271 acres. Two new buildings, the Pathfinder building (Student Services Center) and the Flexible Industrial Technology building are completing construction this year.

The Albany County campus is comprised of one building adjacent to the University of Wyoming campus in Laramie, Wyoming with plans to expand.

The two centers (F.E. Warren Air Force Base and Pine Bluffs) are not included in this study.

## Committee Membership & Meetings

The Master Plan Update was developed with diverse representation of faculty, staff, and administrators from LCCC, as well as the Board of Trustees. The process was informed by the President and his executive staff, which was comprised of the executive leadership of the campus and the decision-making body for the master plan process. Meetings were conducted with various staff, including vice presidents, deans, directors, and others during the course of the study.

## Planning Statements

The Laramie County Community College Strategic Plan 2013-2020 was developed in advance of the Master Plan Update. The Strategic Plan includes a Mission Statement, The Big Goal, and a Vision Statement, as follows:

### Mission Statement

The Mission of Laramie County Community College is to transform our students' lives through the power of inspired learning.

### The Big Goal

Our over-arching goal is that our accomplishments as a community college will distinguish LCCC from others in the nation, in turn benefitting our communities and bringing pride to the Great State of Wyoming.

### Vision Statement

In the future we are individuals united for a single purpose – to transform our students' lives. Our nationally recognized entrepreneurial and innovative programs and services help students become the most sought after individuals. We develop world-class instructors. We are relentless in the use of evidence to make decisions that responsibly and efficiently allocate resources, drive instruction, and create an environment of adaptability and productivity. Every individual has the freedom to innovate and take informed risks based on promising practices and creative ideas. We fail fast, and learn from that failure as much as from our success. Clear academic pathways, high-touch services, and engaged employees are the bedrock of our students' success. We drive collaboration throughout the community to ensure the success of all students who come to LCCC. We are changing the world of higher education facing seemingly impossible challenges head on.

**Table 2-1: LCCC Enrollment Assumptions**

	Fall 2010 Master Plan	Actual Fall 2015	% Change 2010 to 2015	Fall 2020	% Change 2015 to 2020
<b>Cheyenne On-Campus Enrollment</b>					
Headcount	2,685	2,425	-10%	2,571	6%
FTE	2,423	1,930	-20%	2,085	8%
<b>Albany County On-Campus Enrollment</b>					
Headcount	836	708	-15%	750	6%
FTE	685	434	-32%	460	6%

Fall 2010 and Fall 2015 enrollment data from LCCC IR reports

# Student, Staff and Academic Planning Assumptions

## Planning Assumptions

This section describes the analysis of student enrollment and staffing and addresses the underlying assumptions that were used to predict these factors into the future. Accurate student enrollment and staffing projections are critical in the space planning process and are used to determine if there is sufficient space for current operations and what space will be needed in the future to support students, faculty, and other users of LCCC.

## Enrollment Projections

LCCC provided Fall 2015 student full-time equivalent (FTE) and headcount enrollment data for the Cheyenne and Albany County campuses. Enrollment assumptions are based on the number of students that are physically present on campus. Hence, online education and off-site delivery are excluded from the analysis. The assumptions are noted in *Table 2-1*.

Enrollment declined between 2010 and 2015 at both campuses. LCCC has projected modest increases to the target year of 2020.

Student headcount is projected to increase by 6% over the planning period. FTE at the Cheyenne campus is expected to increase by 8% as additional residential life facilities could increase the number of full-time students attending the campus.

## Staff Projections

LCCC has projected a decline in administration and staff positions at the Cheyenne campus during the planning period. Due to a reduction in state

revenues, a reduction of 20 staff positions in the near-term is expected to recover some by 2020. Staff positions at the Albany County campus and faculty positions at both campuses are projected to remain constant. Staff assumptions are noted in *Table 2-2*.

## Academic Programs

Campus leadership, including division deans, were interviewed for the space needs analysis. Information varied, but generally included enrollment trends, issues related to current space needs, and a list of programs under consideration.

Growth is anticipated in Health Sciences, with potential expansion in Surgical Technology (Perioperative program), Respiratory Therapy, Occupational Therapist Assistant, Dental Assistant, Speech Pathology Technician, Sleep Technician, and other fields. Exercise Science has the potential to grow if additional space can be accessed in the

Recreation and Athletics Complex.

Welding, Diesel Technology, and Engineering Technology are all expected to increase enrollment with the move to the new Flexible Industrial Technology building. Automotive Technology currently has a waiting list that could be alleviated when additional space becomes available.

A Construction Management program is getting started. Plumbing and Surveying could be added soon.

A Culinary program is in consideration. It will be offered off site in cooperation with a local high school.

These changes will provide the ability for LCCC to maintain enrollment levels over the planning period.

## Building Assumptions

During the study, two new buildings were in construction on the Cheyenne Campus, the Pathfinder building and Flexible Industrial Technology building, with a combined total of 74,037 ASF available to LCCC. Space dedicated to the University of Wyoming is located on the upper floor of the Pathfinder building and is not included in this total. Space dedicated to LCCC is included in the target year analysis, but not the base year, as the buildings were still under construction. Planned additions at the Albany County campus totaling 2,925 ASF are also included in the target year analysis, but not the base year. Funding is currently underway for an addition to the Ludden Library, however it has not been included in the space needs analysis. Similarly, potential renovations within the Physical Education building are not included in the study as it is unclear when they will be completed.

**Table 2-2: LCCC Enrollment Assumptions**

	Actual Fall 2015	Fall 2020	% Change 2015 to 2020
<b>Cheyenne Campus</b>			
Full-Time Faculty	102	102	0%
Administration & Staff	240	235	-2%
<b>Albany County Campus</b>	Actual Fall 2015	Fall 2020	% Change 2015 to 2020
Full-Time Faculty	12	12	0%
Administration & Staff	16	16	0%

*Fall 2015 data from LCCC Staffing File*

*LCCC: Staff reduced by 20 FTE FY17-19, with 15 back in 2020*

*ACC: Maintain existing staff over master plan period*

# Process Methodology and Existing Space Overview

The utilization and space needs analysis was completed using four data sets provided by LCCC: facilities, course, staffing, and enrollment data.

These quantitative data sets were analyzed with a proprietary relational software program developed and refined by Paulien over 25 years. Several reports were generated to review the variances between the data sets. After an acceptable level of accuracy was established, the data were analyzed and converted into information that was used by the master planning team to make informed decisions and create viable options for the future.

## Data Sets

A Data Request Memorandum was submitted to LCCC outlining the information needed to develop the analyses in this report. Paulien was provided with data from the Fall 2015 semester. Items requested included:

- Course Data – The course number and description, student enrollments, course type, start and stop times, start and end times, and meeting locations for both credit and non-credit courses.
- Staffing Data – A unit record database of each employee by headcount and FTE, including job title and major employee category for the Cheyenne and Albany County campuses.
- Facilities Inventory – Developed by the master planning team and verified by Paulien. This data set provided building name, room number, square footage, and space use classification on a room-by-room basis.

- Floorplans of Existing Buildings – Used during the space inventory validation process.
- Library Data – Collection volumes, number of study stations, gate counts, and hours of instruction activity by librarians.
- Student Enrollments – Included both historical and projected student enrollments.

The data provided a snapshot of activities for the Fall 2015 semester, which was used as the master planning base year.

## Methodology

The outcomes of the utilization and space needs analysis were developed based upon empirical observation during on campus visits and the application of associated space guidelines. Discussions with campus representatives further highlighted Paulien’s understanding of the issues. A brief description of the methodology is as follows:

- Familiarity with the campus via published sources, including mission and vision statements, strategic plans, program offerings, organizational structure and history, and work on the 2011 Campus Master Plan Update.
- Review Fall 2015 data sets as noted in the previous section.
- Tour various buildings, grounds and spaces on the campus to gain familiarity and assess the overall reliability of the base data.
- Conduct work sessions with key college officials, the Board of Trustees, students, and the local community. Enrollment growth, institutional vision, academic

program goals, changing pedagogies, current space needs, and LCCC’s strategic planning goals were the focus of most on-site sessions.

- Analyze the quantity and distribution of space across the campus based on the space categories as established by the National Center of Education Statistics (NCES), *Postsecondary Educational Facilities Inventory and Classification Manual (FICM): 2006 Edition*.
- Analyze current utilization of classrooms and teaching laboratories and compare outcomes to established guidelines.
- Develop space guidelines and apply to existing data to generate an order-of-magnitude space needs analysis for all academic, academic support, and auxiliary space categories. The different guideline methods included national and state recommendations, benchmarking, review of design and/or program plans completed for prior projects and LCCC empirical data to project space needs.
- Present initial analysis and findings during on-campus meetings to key college officials, the Board of Trustees, students, and the local community.
- Incorporate comments into final analysis and develop written report.

## Existing Space Overview

### Inventory of Existing Space & Definitions

As part of the overall planning services provided by the master planning team, the facilities inventory was updated. All academic space on campus was reviewed and coded on a room-by-room basis. It must be noted that no departmental data was collected during the facilities update process.

**Table 2-3: Existing Space by Building - Cheyenne Campus**

Building Name	ASF
Administration	6,709
Agricultural Building	11,242
Arp Building	18,524
Auto Body	14,492
Auto Diesel	21,056
Business Building	16,097
Career & Technical Building	24,601
Center for Conferences & Institutes	12,728
Central Plant North	236
College Arena	69,330
College Community Center	24,349
Education & Enrichment Center	10,754
Fine Arts Building	33,417
Health Science	23,332
Ludden Library	17,803
Modular	1,193
Physical Education	56,618
Plant Maintenance	24,967
Residence Hall - Commons	4,240
Residence Hall - East	17,588
Residence Hall - North	22,220
Residence Hall - West	17,467
Science Center	24,698

Stock Shelter - East	2,376
Stock Shelter - West	4,185
Student Services	9,214
The Training Center	8,706
<b>Total</b>	<b>498,142</b>

**Table 2-4: Existing Space by Building - Albany County Campus**

Building Name	ASF
Albany County Campus	20,631
<b>Total</b>	<b>20,631</b>

Facility space is calculated according to major space classifications as outlined in the FICM.

There are three major parts to building measurements:

- **Assignable Square Footage (ASF)** is defined as the “usable” space that can be assigned to people or programs. It is the area measured within the interior walls of a room that can be assigned to an organizational unit. It does not include circulation, mechanical or building service spaces.
- **Nonassignable Area** is the amount of space in a building not directly assigned to people or programs. These spaces include circulation, mechanical rooms, public restrooms, janitorial closets and other building service areas.
- **Gross Square Footage (GSF)** is inclusive of all space in the building and is measured from the outside faces of exterior walls.

The overview of existing space and the space needs analysis uses assignable square footage as the basic of analysis.

## Existing Space Distribution

A list of buildings and the estimated ASF contained in the facilities inventory for both the Cheyenne and Albany County campuses are noted in *Table 2-3* and *Table 2-4*. In summary, the 27 buildings on the Cheyenne campus total 498,142 ASF. Current ASF on the Albany County campus is 20,631 in a single building.

Two buildings under construction on the Cheyenne campus and an addition on the Albany County campus are included in the target year of the space needs analysis.

## Existing Space Allocations by Campus

*Table 2-5* and *Table 2-6* illustrate LCCC’s existing ASF by FICM space type for the Cheyenne and Albany County campuses.

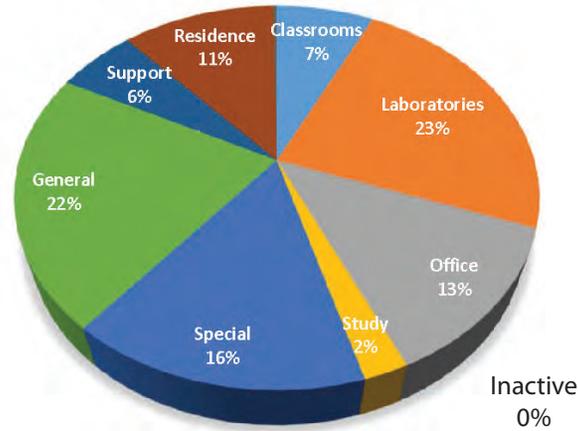
- Classroom space (SUC 100) comprises 7% of total space on the Cheyenne campus and 29% on the Albany County campus.

Laboratories (SUC 200) comprise the largest category of space on both the Cheyenne (23%) and Albany County (31%) campuses.

- The percentage average of classroom and teaching laboratory space on community college campuses in Colorado is 41% (14% classroom and 27% lab), in Utah is 42% (17% classroom and 25% lab), and in Wyoming is 36% (10% classroom and 26% lab). These averages do not include residence life facilities or unique program facilities in the total campus square footage. Removing the residence halls and arena/stock facilities from the Cheyenne campus totals, campus classroom and teaching laboratory space is 42% (10% classroom and 32% lab) on the high end of the state averages.

**Table 2-5: Existing ASF by Space Use Category - Cheyenne Campus**

SUC	Space Category	ASF	Percent
100	Classroom	35,894	7%
200	Laboratories	116,281	23%
300	Office	62,827	13%
400	Study	11,526	2%
500	Special	77,427	16%
600	General	107,530	22%
700	Support	28,819	6%
900	Residence	56,462	11%
70	Inactive	1,376	0%
Subtotal ASF		498,142	100%



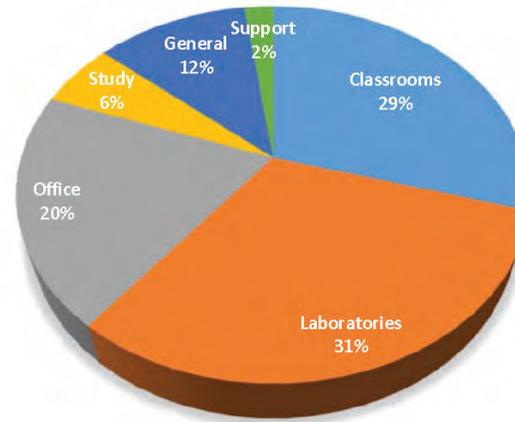
- Office space (SUC 300) represents 13% of total space on the Cheyenne campus and 20% on the Albany County campus. This category includes offices for both academic and administrative staff as well as office support spaces such as copy rooms, conference rooms, and file rooms.

The special use facilities space category (SUC 500) includes athletic and physical education facilities, media production areas, animal facilities, and greenhouses. These types of spaces are more pronounced at the Cheyenne campus.

The general use facilities (SUC 600) includes assembly and exhibition spaces, food facilities, lounges, recreation, and meeting rooms. Again, these types of space were more common (22% of total space) at the Cheyenne campus.

**Table 2-6: Existing ASF by Space Use Category - Albany County Campus**

SUC	Space Category	ASF	Percent
100	Classroom	6,075	29%
200	Laboratories	6,437	31%
300	Office	4,112	20%
400	Study	1,117	6%
600	General	2,380	12%
700	Support	450	2%
Subtotal ASF		20,631	100%



The remaining sections in this report present findings for the institution as a whole for the utilization of classrooms and teaching laboratories and the space needs analysis, both of which were developed specifically for LCCC.

**LEGEND**

- Classrooms
- Study
- Laboratories
- Special
- Office
- General/Support

# Classroom and Teaching Laboratory Utilization

This section provides utilization results for classrooms and class laboratories at the Cheyenne and Albany County campuses. The utilization of these rooms was examined using the fall term 2015 course file and facility inventory data. Understanding how classrooms and teaching laboratories are scheduled and utilized provides the foundation for and assists in the understanding of space standards and guidelines.

## Classroom Utilization Overview

The utilization analysis includes scheduled classroom use for credit and non-credit courses. There are always exceptions or caveats to the raw data in the utilization analysis. Issues such as cross-registration, zero enrollment courses, on-line and off-site courses, and missing information were clarified as needed prior to the analysis.

## Scheduled Classroom Use by Day & Time

Table 2-7 and Table 2-8 illustrate classroom use for credit and non-credit instruction for the Fall 2015 semester. Each graph represents a different day of the week, with the outcomes averaged over the entire semester.

The horizontal axis notes time of day while the vertical axis indicates the percent of classrooms in use. The average percent of classrooms in use is based on Monday through Friday. If Friday were excluded, the average would be distorted because many courses are scheduled Monday/Wednesday and Tuesday/Thursday blocks. The *Scheduled Classroom Use by Day and Time* tables for each campus provide the results in tabular format.

**Table 2-7: Scheduled Classroom Use by Day and Time (Fall 2015) - Cheyenne Campus**

(Darker colors indicate a large percentage of rooms are scheduled)

Time of Day	Monday		Tuesday		Wednesday		Thursday		Friday		Average	
	Rooms In Use	% In Use										
7:30 AM	0	0%	1	2%	0	0%	1	2%	0	0%	0	1%
8:00 AM	10	22%	16	36%	14	31%	16	36%	11	24%	13	30%
9:00 AM	22	49%	22	49%	27	60%	24	53%	17	38%	22	50%
9:30 AM	21	47%	31	69%	26	58%	34	76%	17	38%	26	57%
10:00 AM	20	44%	30	67%	24	53%	33	73%	19	42%	25	56%
11:00 AM	27	60%	30	67%	30	67%	32	71%	24	53%	29	64%
11:30 AM	27	60%	29	64%	30	67%	31	69%	24	53%	28	63%
12:00 PM	16	36%	22	49%	17	38%	23	51%	10	22%	18	39%
12:30 PM	12	27%	9	20%	13	29%	12	27%	9	20%	11	24%
1:00 PM	24	53%	22	49%	27	60%	25	56%	8	18%	21	47%
2:00 PM	25	56%	25	56%	27	60%	27	60%	7	16%	22	49%
3:00 PM	14	31%	18	40%	16	36%	19	42%	3	7%	14	31%
4:00 PM	11	24%	12	27%	12	27%	13	29%	3	7%	10	23%
5:00 PM	10	22%	7	18%	8	18%	9	20%	0	0%	7	16%
6:00 PM	19	42%	14	31%	16	36%	12	27%	1	2%	12	28%
7:00 PM	17	38%	14	31%	16	36%	10	22%	2	4%	12	26%
8:00 PM	9	20%	11	24%	8	18%	7	16%	2	4%	7	16%
9:00 PM	3	7%	2	4%	2	4%	2	4%	2	4%	2	5%
9:30 PM	2	7%	2	4%	1	2%	2	4%	1	2%	2	4%

Total Classrooms: 45

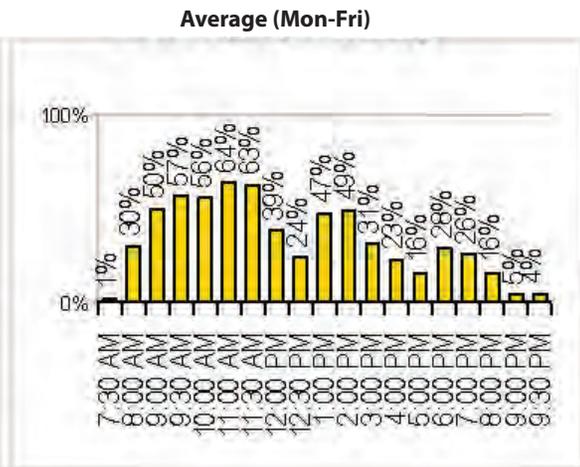
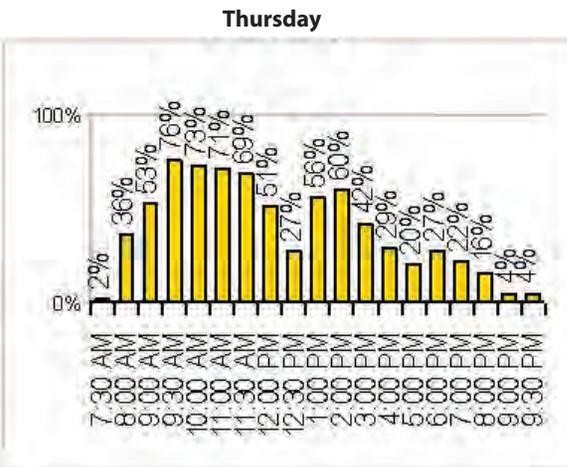
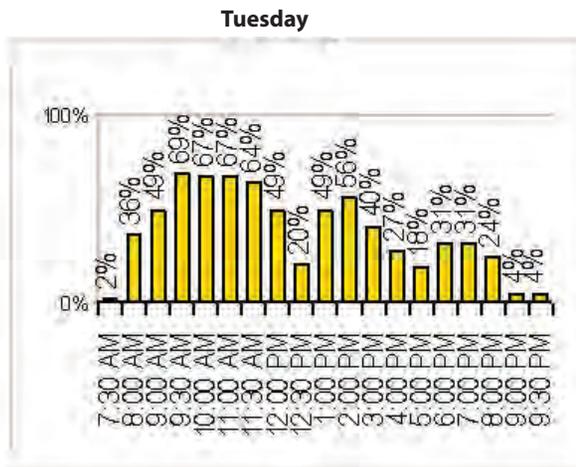
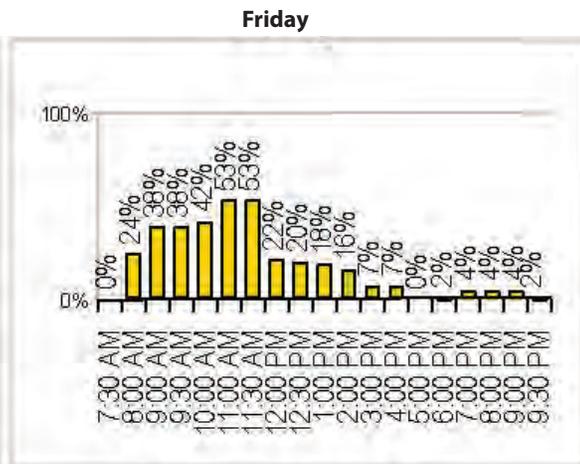
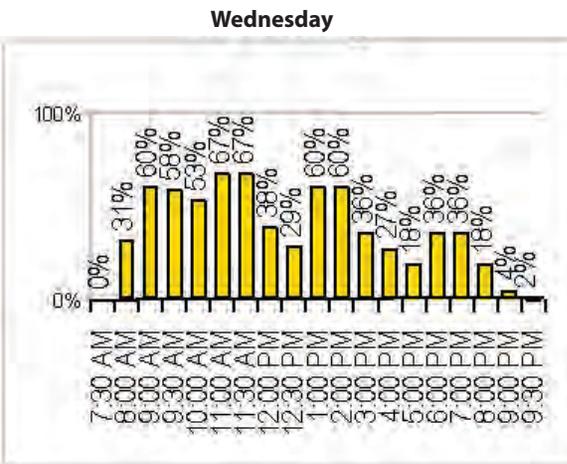
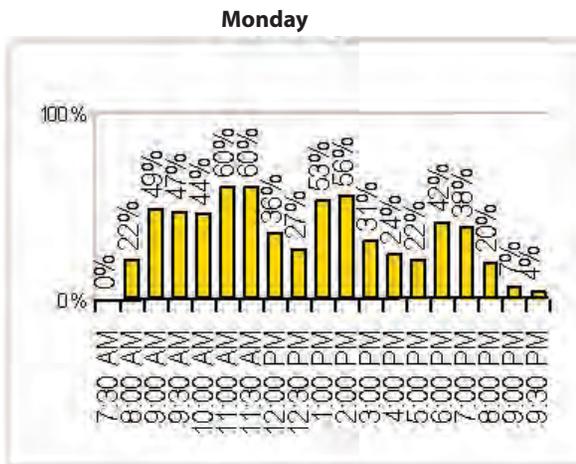
### Cheyenne Campus

Table 2-7 notes use of the 45 classrooms. The outcomes of the analysis reveal that the heaviest classroom use for the Fall 2015 semester occurred at 9:30 AM on Thursday when 76% of the classrooms were in use. Overall, classroom use is greater on Tuesday and Thursday, especially from 9:30 AM until Noon. Classroom use declines

significantly between the hours of 3:00 PM and 5:00 PM before evening classes begin at 6:00 PM. Evening use is greatest on Monday, with 42% of the classrooms in use at 6:00 PM. Friday evening use is minimal.

Overall, ample classrooms are available, especially during afternoons and evenings.

Percent of Classrooms in Use - Cheyenne Campus



Total classrooms = 45

**Table 2-8: Scheduled Classroom Use by Day and Time (Fall 2015) - Albany County Campus**

(Darker colors indicate a large percentage of rooms are scheduled)

Time of Day	Monday		Tuesday		Wednesday		Thursday		Friday		Average	
	Rooms In Use	% In Use										
7:30 AM	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
8:00 AM	4	44%	5	56%	4	44%	5	56%	1	11%	4	42%
9:00 AM	5	56%	7	78%	5	56%	7	78%	1	11%	5	56%
9:30 AM	3	33%	5	56%	3	33%	5	56%	0	0%	3	36%
10:00 AM	7	78%	7	78%	7	78%	7	78%	0	0%	6	62%
11:00 AM	6	67%	5	56%	6	67%	5	56%	0	0%	4	49%
11:30 AM	4	44%	4	44%	4	44%	4	44%	0	0%	3	36%
12:00 PM	4	44%	6	67%	4	44%	6	67%	0	0%	4	44%
12:30 PM	3	33%	5	56%	3	33%	5	56%	0	0%	3	36%
1:00 PM	7	78%	7	78%	7	78%	7	78%	0	0%	6	62%
2:00 PM	7	78%	7	78%	7	78%	7	78%	0	0%	6	62%
3:00 PM	5	56%	6	67%	5	56%	6	67%	0	0%	4	49%
4:00 PM	3	33%	5	56%	3	33%	5	56%	0	0%	3	36%
5:00 PM	6	67%	7	78%	6	67%	6	67%	0	0%	5	56%
6:00 PM	8	89%	7	78%	7	78%	6	67%	0	0%	6	62%
7:00 PM	8	89%	7	78%	6	67%	6	67%	0	0%	5	60%
8:00 PM	4	44%	4	44%	2	22%	3	33%	0	0%	3	29%
9:00 PM	1	11%	0	0%	0	0%	0	0%	0	0%	0	2%
9:30 PM	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Total Classrooms: 9

**Albany County Campus**

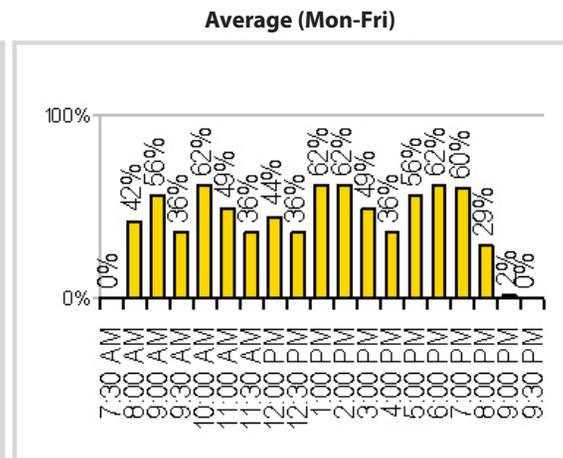
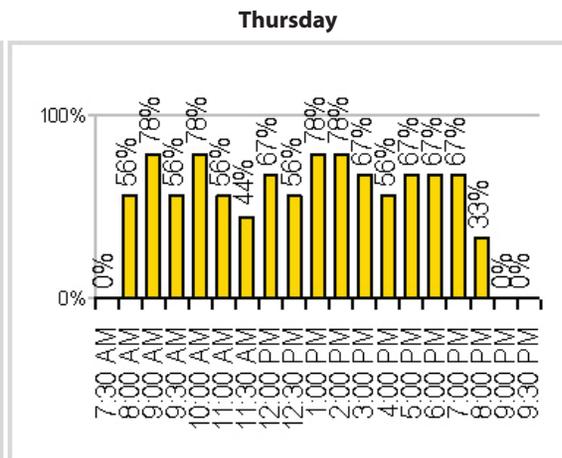
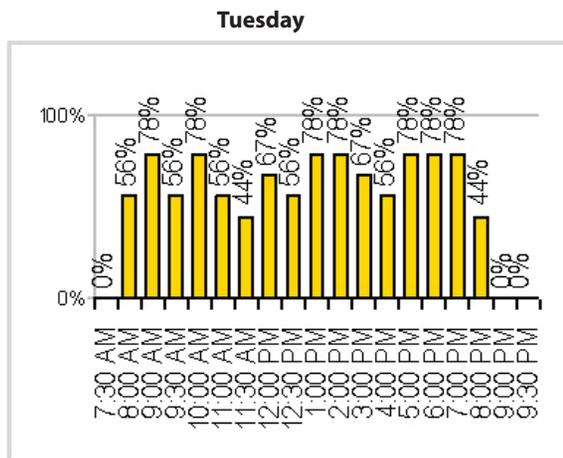
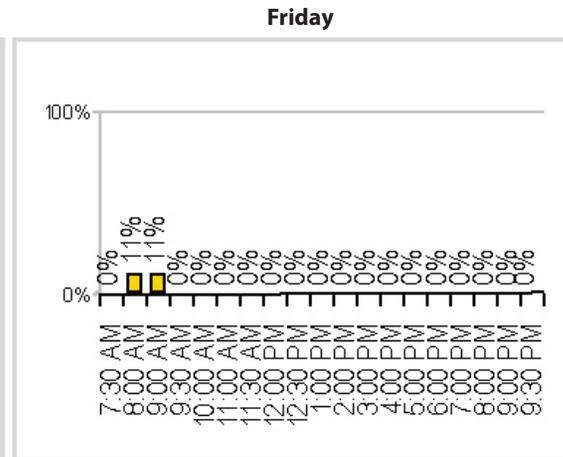
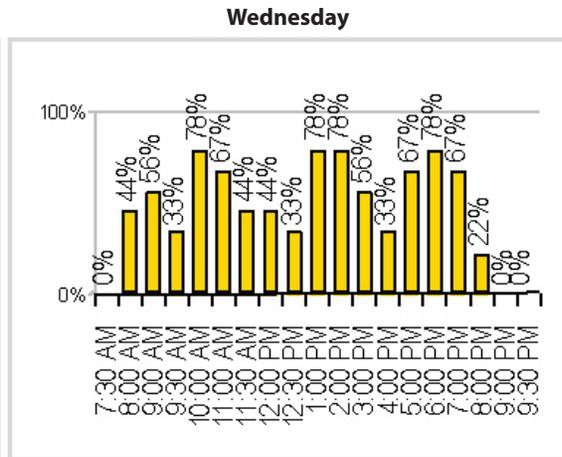
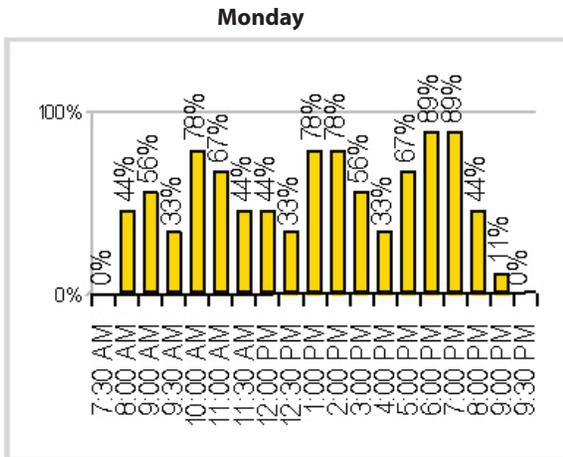
Table 2-8, provided on the next page, notes use of the nine classrooms. Overall, classroom availability is more limited than on the Cheyenne campus. The outcomes of the analysis reveal that the heaviest classroom use for the Fall 2015 semester occurred from 6:00 PM to 8:00 PM on Monday when 89% of the classrooms were in use. Overall, classroom use is greater Monday through Thursday, with minimal use on Friday.

Overall, ample classrooms are available at most times, especially on Friday.

**Classroom Utilization by Building Summary**

A classroom utilization analysis was developed for both campuses. The analysis was completed at the room level for credit and noncredit instruction with statistical averages for each building and for the campus as a whole. The room-level analysis can be found in Appendix B.

Percent of Classrooms in Use - Albany County Center



Total classrooms = 9

**Table 2-9: Classroom Utilization Analysis by Building Summary**

**Credit/Non-Credit Courses - Cheyenne Campus**

Building Name and ID		No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
AG	AG	4	701	23	14	11.4	20	56%
ARP	ARP	10	659	19	18	12.3	25	55%
Auto Body	ABR	2	690	34	11	19.3	38	51%
Business Building	B	4	661	26	16	13.1	20	66%
Career and Technical	CT	1	581	23	19	23.4	42	55%
Education And Enrichment Center	EEC	4	807	28	14	11.4	23	49%
Fine Arts	FA	4	718	23	18	10.1	19	60%
Health Science	HS	8	996	24	24	5.7	10	55%
Physical Education	PE	1	505	25	11	6.9	13	52%
Science Center	SC	4	813	19	15	3.7	11	45%
Training Center	TC	3	893	38	7	19.7	45	43%
	Average		767	24	17	10.2	22	53%

Total No. of Rooms: 45

**Table 2-10: Classroom Utilization Analysis by Building Summary**

**Credit/Non-Credit Courses: Albany County Campus**

Building Name and ID		No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
Albany County Campus	ACC	9	675	31	14	19.5	28	72%
	Average		675	31	14	19.5	28	72%

**Cheyenne Campus – Credit and Non-credit Courses**  
Classrooms were noted in 11 buildings on the campus. Interpreting *Table 2-9* for the Cheyenne campus, ten classrooms are located in the Arp building and eight in the Health Science Center.

The four classrooms in the Business building contained an average of 661 (ASF) each. The rooms averaged 26 ASF per station, with an average section or course size of 16 students. The 20 average weekly room hours is the number of hours (averaged over the semester) that the four classrooms were scheduled for credit and non-credit instruction each week. During scheduled use, student station occupancy of 66% is the average number of seats filled. The weekly seat hours (10.2) are the average room hours multiplied by the student station occupancy and is a measure of utilization efficiency.

Campuswide, classrooms at the Cheyenne campus were utilized 22 weekly room hours at 53% student station occupancy with an average of 24 ASF per station.

**Albany County Campus – Credit and Non-credit Courses**

The nine classrooms in the Albany County campus building contained an average of 675 assignable square feet (ASF) each, as shown in *Table 2-10*. The rooms averaged 31 ASF per station, with an average section or course size of 14 students. Classrooms averaged 28 weekly room hours at 72% student station occupancy. The weekly seat hours (19.5) is the average room hours multiplied by the student station occupancy and is a measure of utilization efficiency.

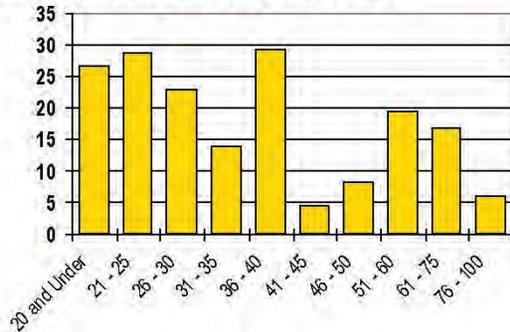
**Table 2-11: Classroom Utilization Analysis by Building Summary**

**Credit/Non-Credit Courses - Cheyenne Campus**

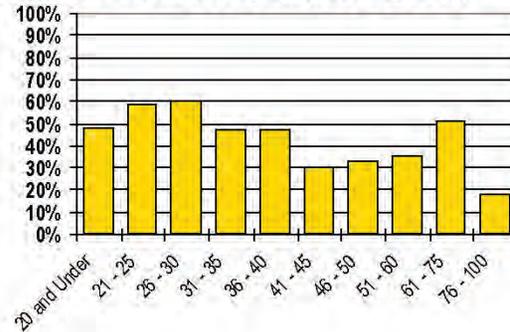
Classroom Capacity Grouping	No. of Rooms	No. of Seats	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
20 and under	6	118	568	29	11	12.8	27	48%
21 - 25	7	168	732	30	13	17.1	29	59%
26 - 30	14	401	745	26	16	13.8	23	60%
31 - 35	6	192	645	20	14	6.5	14	47%
36 - 40	3	113	711	19	16	13.7	29	47%
41 - 45	1	44	1,087	25	20	1.4	5	30%
46 - 50	2	98	1,015	21	15	2.6	8	33%
51 - 60	2	120	769	13	20	6.9	20	35%
61 - 75	3	191	1,194	19	39	8.7	17	51%
76 - 100	1	90	1,304	14	17	1.1	6	18%
Average			767	24	17	10.2	22	53%

Total No. of Rooms: 45

**Weekly Room Hours by Capacity:**



**Student Station Occupancy by Capacity:**



**Table 2-12: Classroom Utilization Analysis by Building Summary**

**Credit/Non-Credit Courses - Cheyenne Campus**

Classroom Capacity Grouping	No. of Rooms	No. of Seats	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
21 - 25	8	172	667	31	15	22.3	31	73%
26 - 30	1	26	740	28	3	0.7	6	12%
Average			675	31	14	19.5	28	72%

Total No. of Rooms: 9

**Classroom Utilization Analysis by Room Capacity**

Room size inefficiencies are often detectable when classrooms are sorted by room size. *Table 2-11* on the following page disaggregates classrooms on the Cheyenne campus into ten categories based on the number of stations or seats. A review of the table and bar graphs on the next page provides further insight into classroom use.

There are 14 classrooms with capacities of 26 to 30 stations. These rooms average 23 weekly room hours at 60% student station occupancy with an average of 26 ASF/station.

There are four capacity groupings where classrooms are utilized more than 20 weekly room hours. No grouping averaged more than 30 hours.

There are 15 classrooms with 735 seats that are used an average of less than 20 hours per week. These poor performing classrooms are using approximately 11,411 ASF. These rooms should be studied in more detail to determine if weekly room hours can be increased or if rooms with very low utilization can be repurposed for other uses.

The one large classroom (76-100 seat category) was only used six hours a week for scheduled instruction. When scheduled, only 18% of the seats were filled. It may be that this room is used heavily for guest speakers, theater productions, and other campus/community events.

On the Albany County campus, as noted in *Table 2-12*, all of the classrooms have capacities of 26 or fewer students. The eight classrooms with capacities of 21 to 25 stations average 31 weekly room hours at 73% student station occupancy. The one classroom with 26 stations is only used six hours per week with a 12% student station occupancy. It may be that this room is used as an open space at other times.

## National Perspective on Classroom Utilization

More than half the 50 States either have a statewide utilization expectation, or there are specific expectations in one or more of their public higher education systems. The lowest classroom utilization guideline currently in use is approximately 30 hours per week. This figure used to be a widely accepted standard and remains the most commonly used figure today. In many jurisdictions, it was based on day usage only with evening and weekend usage being excluded from the expectation. More recently, common practice has been using this guideline as a full day expectation.

A few states have much higher utilization targets. The average of those systems which have classroom utilization guidelines is now 38 weekly room hours as states monitor the efficiency of physical resources.

Paulien has performed utilization studies for more than 180 campuses. The most common findings are between 32 and 36 average weekly room hours for rooms specifically scheduled for instruction. Paulien used 30 hours per week for the LCCC space needs analysis. This is the same guideline as used in the 2011 Campus Master Plan Update.

The second utilization factor which is normally part of the utilization expectation in jurisdictions that have adopted guidelines is the percentage of seats occupied when rooms are in use. The most widely used guideline remains at 60%.

There has recently been a strong push in many states to increase the utilization factor to 67%. One jurisdiction has gone to 75% for a particular subset of classrooms, while the Colorado Community College System has recently adopted a guideline of 68% student station occupancy.

In the many studies Paulien has conducted, the actual seat utilization tends to be lower. Because institutions do not ultimately control the final enrollment in a specific course, there will always be a degree of disparity between estimated course size

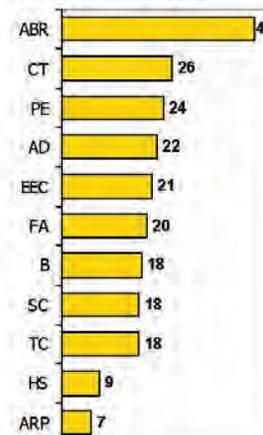
and the actual size of the course. For this analysis, the student station occupancy was set at 65% and is the same guideline as used in the 2011 Campus Master Plan Update.

**Table 2-13: Class Laboratory Utilization Analysis by Building Summary**  
Credit/Non-Credit Courses - Cheyenne Campus

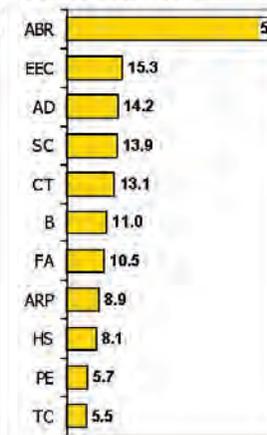
Building Name and ID		No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
ARP	ARP	1	760	40	25	8.9	7	128%
Auto Body	ABR	2	5,068	338	17	55.7	45	124%
Auto Diesel	AD	3	3,875	186	15	14.2	22	62%
Business Building	B	5	829	38	11	11.0	18	60%
Career and Technical	CT	7	2,328	108	9	13.1	26	66%
Education And Enrichment Center	EEC	1	700	35	15	15.3	21	73%
Fine Arts	FA	9	1,244	57	12	10.5	20	59%
Health Science	HS	6	978	66	15	8.1	9	94%
Physical Education	PE	1	2,850	58	11	5.7	24	24%
Science Center	SC	7	1,232	54	16	13.9	18	67%
Training Center	TC	2	671	34	6	5.5	18	31%
		Average	1,671	83	13	12.6	20	69%

Total No. of Rooms: 44

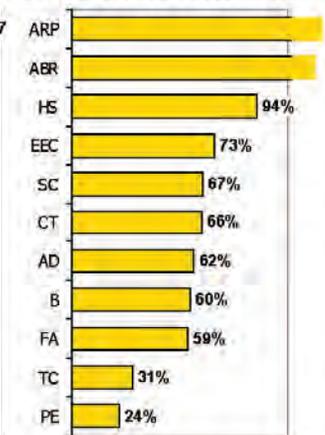
**Weekly Room Hours**



**Weekly Seat Hours**



**Student Station Occupancy**



Learning environment technological advancements and recent changes in pedagogy have placed demands on physical space, especially classrooms. These demands can best be described based on the assignable square feet per student station (ASF/Station). While there is still a need for lecture type rooms where seat count can be maximized, there is also an increasing need for rooms that can accommodate a variety of teaching methods and pedagogies.

Based on programming studies provided by Paulien, the following ASF/Station is noted for several classroom types:

- Traditional Classroom - Loose Seating: 20 to 22 ASF/Station with table and chair or tablet arm chair configurations.
- Traditional Classroom for Collaborative (group) Methods: 25 to 32 ASF/Station accommodates flexibility in furniture arrangements and group presentation systems.
- Seminar Classroom: 25 to 30 ASF/Station where students typically face each other in a conference style or U-shaped arrangement.

For LCCC, the guideline was set at 25 ASF/Station across all classroom types.

## Classroom Utilization Analysis Summary

Compared to other community colleges and the results of the 2011 space needs analysis (as included in the 2011 Campus Master Plan Update), the utilization of classrooms for the Cheyenne campus demonstrates there are ample opportunities to schedule additional courses with existing physical resources. In other words, existing classrooms have capacity for additional use and a greater number of students. The findings show that there is additional capacity in the afternoons and early evening hours. However, some of these are difficult time slots to fill due to student work hours and family commitments.

The classroom utilization by room capacity analysis suggests that some rooms are being scheduled below their intended capacity. Overall, LCCC may not have the correct mix of classrooms to serve its needs, and therefore has to use classrooms that are not the appropriate size for some course sections.

The average 24 ASF/Station indicates that existing classrooms could reflect contemporary pedagogical trends and be converted into active learning spaces. There are a variety of reasons why some classrooms are used heavily and others are not. Classroom utilization needs to be considered within the context of the existing classrooms educational adequacy and functionality, available technology, and overall qualitative assessment, which were not

components of this analytical utilization study.

On the Albany County campus, with 72% student station occupancy, there is only limited ability to increase the number of students in existing course sections. The primary opportunity to increase utilization is to use classroom facilities on Friday and mid-mornings (11:00 AM to 1:00 PM) on Monday and Wednesday.

## Class Laboratory Utilization

During the Fall 2015 semester there were 48 rooms classified as discipline class laboratories, and computer laboratories (SUC 210) within the facilities inventory. Discipline class laboratories have specialized equipment and include instructional areas used for biology, chemistry, physics, art, and career and technical programs such as automotive, welding and electronics.

### Cheyenne Campus – Credit and Non-credit Courses

Laboratories were noted in 11 buildings on the Cheyenne campus. Interpreting *Table 2-13* on the previous page, the majority of labs were located in the Fine Arts building (9 labs), the Career & Technical building (7 labs), and Science Center (7 labs).

The 44 labs contained an average of 1,671 ASF each. The two labs in the Auto Body building, at 5,068 ASF, significantly skew the overall average. The labs averaged 83 ASF/Station, but varied widely from 34 ASF to 338 ASF/Station with an average section or course size of 13 students.

The 20 average weekly room hours is the number of hours (averaged over the semester) that the 44 labs were scheduled for instructional activities. Again, weekly room hours vary significantly by building with a low of 7 room hours in the Arp building to

**Table 2-14: Class Laboratory Utilization Analysis by Building Summary**

### Credit/Non-Credit Courses - Albany County Campus

Building Name and ID		No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Weekly Seat Hours	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
Albany County Campus	ACC	4	935	37	13	16.5	28	58%
	Average		935	37	13	16.5	28	58%

Total No. of Rooms: 4

a high of 45 hours in the Auto Body building. The hours in use student station occupancy of 69% is the average number of lab seats filled during scheduled use. Two buildings have labs that average more than 100% student station occupancy. This indicated that there are more students in the lab than the number of stations.

The weekly seat hours of 12.5 is the average room hours multiplied by the student station occupancy and is a measure of lab utilization efficiency.

### **Albany County Campus – Credit and Non-credit Courses**

As shown in *Table 2-14*, the four labs at the Albany County campus contained an average of 935 ASF each. The rooms averaged 37 ASF/Station with an average section or course size of 13 students.

The 28 average weekly room hours is the number of hours (averaged over the semester) that the four labs were scheduled for instructional activities. The

hours in use student station occupancy was 58%. The weekly seat hours of 16.5 is the average room hours multiplied by the student station occupancy and is a measure of lab utilization efficiency.

### **National Perspective on Laboratory Utilization**

As with classroom utilization, laboratory guideline targets are usually implemented by states, systems, or institutions within the public higher education sector. These targets tend to oversimplify the use of teaching laboratories. Some guideline targets are based on discipline while others are based on the intensity in which a discipline relies on laboratories for instructional delivery.

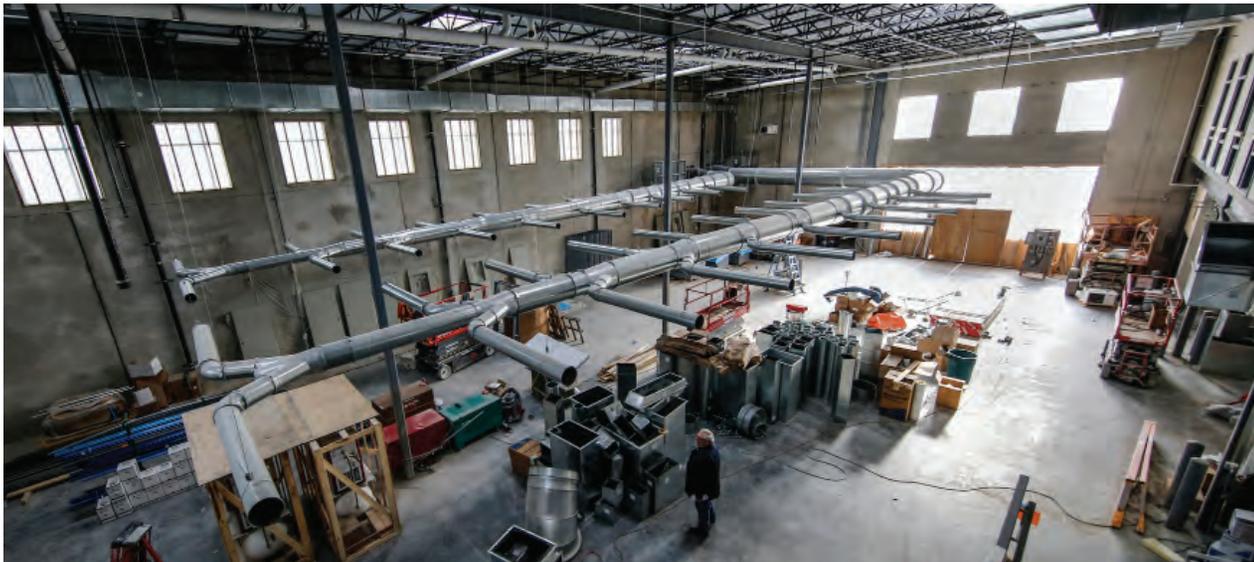
The most used guideline targets have expectations of 20 hours per week at an 80% student station occupancy rate. In an effort to increase laboratory use, one state has raised utilization goals to an extreme of 40 hours per week at 85% student station occupancy. One set of published guidelines recommends 11 weekly room hours for certain

heavily equipped labs such as engineering, agriculture, and selected health professions but maintains the 80% student station occupancy rate.

While 80% student station occupancy is the most used rate in guideline targets, most colleges rarely achieve it. In reality, occupancy averages studied by Paulien typically range between 68% and 76%.

Teaching laboratory usage has as much to do with course level, instructional methods, and student research activities and capstone experiences, as it does discipline or discipline type. It is not unusual to find lower scheduled use (12 hours and under) in upper division laboratories. On the other hand, entry level science laboratories and computer labs can have much higher levels of scheduled use – 24 hours or more.

Laboratories tend to be subject specific and do not lend well to sharing among disciplines. However, more laboratories are being used for interdisciplinary activities which can assist in achieving higher weekly room hour usage. Conversely, if discipline class laboratories are required for interdisciplinary activities then scheduled use may be lower.



## Laboratory Summary

Laboratories have additional time demands that classrooms typically do not have. For example, there is setup and preparation time required, sometimes for a class, sometimes for the day. Other laboratories require an experiment to stay set up for multiple lab sessions or the entire semester, which excludes the room from other scheduled

activity. As a result, expectations are typically lower than classrooms.

For the LCCC analysis, the guideline was established at 20 weekly room hours with 80% student station occupancy, the same guideline as developed for the 2011 Campus Master Plan Update.

On the Cheyenne campus, with the exception of Auto Body and Health Science class laboratories, student station occupancy is lower than typical guidelines, indicating additional enrollment capacity in existing course sections is possible.

At the Albany County campus, the average weekly room hours at 28 exceeds expectations; however, the hours in use student station occupancy at 58% indicates additional capacity in some labs.



# Guideline Application for Space Needs Analysis

## Overview

This section reviews space category definitions and guidelines specifically developed for LCCC. The application and outcomes of the selected guidelines is typically called a space needs analysis, which comprises the next section of this report.

Space planning guidelines can span from “micro” to the “macro” level. Micro-level guidelines include detail normally developed during room-by-room program planning of specific facilities. Macro-level guidelines are usually at the space category level (i.e., classrooms, offices, library) as part of a campuswide study or long-range facility master plan. For LCCC, the guidelines and the space needs analysis are at the macro-level.

The outcomes are divided into two planning periods: base year (Fall 2015) and a 5-year plan horizon to 2020. The operating assumption in applying space guidelines is to provide LCCC with the correct amount of space to conduct its current and future activities. In order to apply the various guidelines and conduct the space needs analysis, several assumptions were made in this study. Planning assumptions were noted on page 9.

To perform the space needs analysis, physical space parameters were divided into separate categories, consistent with the classification system outlined in the FICM.

The space guidelines or standards described in this section will be used in *Space Needs Analysis* section to develop a space needs analysis for the Cheyenne and Albany County campuses. The space needs analysis for campus master planning involves a process that quantifies space amounts likely to

be needed at a comprehensive community college based on projected enrollment, staffing, program, and quality service levels. Reliability of the findings depends on several factors including the quality of the facility data, the appropriateness of the space standards, and the validity of the planning projections.

Unless otherwise noted, all findings are in ASF. ASF is defined as the area measured within the interior walls of a room that can be assigned to a program. ASF does not include circulation, mechanical, or building service spaces, therefore space standards were not developed for these spaces. The appropriate conversion to GSF is determined based on design parameters such as building type and climate requirements. Converting assignable space to gross square feet usually adds approximately 30% to 50% to the assignable space amount.

The following section outlines space standards or guidelines for each of the 16 categories. First, a definition of the space will be provided followed by the space standard or guideline

### Classroom & Service

Classrooms are defined as any room generally used for scheduled instruction requiring no special equipment and referred to as a “general purpose” classroom, seminar room, or lecture hall. Classroom service space directly supports one or more classrooms as an extension of the classroom activities, providing media space, preparation areas, or storage. The classroom station size is considered as including the classroom service area space. There are three variables for classrooms in the guideline equation: weekly room hours, student station occupancy, and square feet per station. As LCCC does not have a standardized set of classroom utilization expectations nor does it have a set of

space standards to which it is required to adhere, Paulien developed a set of classroom utilization targets as part of the Wyoming Capital Construction study.

The selected classroom utilization targets state that each classroom should be scheduled 30 hours per week with a student station occupancy (student station fill) of 65% when the room is in use.

Prior to 2000, many guidelines for classroom space were developed at a time when tablet armchair classrooms were the predominant seating preference. These guidelines called for approximately 16 ASF/Station, which is significantly lower than what today’s active classrooms require. Classrooms that have good sight lines, which are required by technology and flexible seating arrangements, usually average between 20 and 25 ASF/Station. For master planning purposes Paulien used 25 ASF/Station, as some classrooms are used for demonstration in technical programs. The 25 ASF/Station will provide LCCC with enough space for a variety of seating arrangements across the campuses.

### Teaching Laboratories & Service

Teaching laboratories are defined as rooms used primarily by regularly scheduled classes that require special purpose equipment to serve the needs of particular disciplines for group instruction, participation, observation, experimentation, or practice.

The scheduled weekly room hour average for teaching laboratories is generally found to be less than the scheduled use of classrooms due to the need for preparation time of specialized equipment prior to class. Conversely, the student station occupancy is normally higher as the number

enrolled in a laboratory exercise is more closely monitored, safety being a key issue as well as the limitations of faculty observation. The utilization goals of 20 weekly room hours and 80% student station occupancy were used for all disciplines at LCCC, and is consistent with the 2011 Campus Master Plan Update.

Station sizes in teaching laboratories vary by discipline. Space requirements are calculated with a formula that is similar to those used to determine classroom space requirements, except that the ASF/Station often varies by discipline. For this analysis Paulien employed a space per student station guideline based on different subject areas.

Examples follow:

Art	80 ASF
Auto Diesel	220 ASF
Auto Mechanics	220 ASF
Autobody Repair	320 ASF
Biological Sciences	65 ASF
Business & Management	40 ASF
Chemistry	75 ASF
Construction/Transport	120 ASF
Computer-Based Lab	40 ASF
Dance	100 ASF
Geology	60 ASF
Health Professions	80 ASF
Industrial Systems Technology	220 ASF
Mathematics	30 ASF
Music	45 ASF
Nursing	80 ASF
Physics	75 ASF
Welding	240 ASF
Wind Energy	325 ASF

## Open Laboratories & Service

The space classified as open Laboratories includes rooms that are open for student use and that are not used on a regularly scheduled basis. These rooms may provide equipment to serve the needs of particular disciplines for group instruction in informally or irregularly scheduled classes. Alternatively, these rooms are used for individual student experimentation, observation, or practice in a particular field of study.

The size of these laboratories is based on equipment size, the station size, and student count desired and, therefore, should be determined on an individual basis. Types of rooms included in this category include computer laboratories, language laboratories, music practice rooms, and tutorial and testing facilities. A guideline of 6 ASF/Student FTE was applied for both campuses based on Paulien's experience with community colleges similar to LCCC and a review of the 2011 Campus Master Plan Update.

## Office Space (Academic and Administrative) & Service

The guideline application for office space needs is based upon major categories of staff types and the additional application of space amounts for office service and conference space needs. Office space usually consists of at least three types of space: offices and workstations; conference rooms; and office service space. Office service space includes work rooms, file rooms, supply rooms, reception areas, and other rooms usually found in an office suite environment.

Representative Faculty	Office Space guidelines include: 120 ASF office plus 45 ASF for conference and service
Dean	200 ASF office plus 90 ASF for conference and service
Coordinator/Specialist	100 ASF workstation plus 50 ASF for conference and service
Coach	140 ASF office plus 60 ASF for conference and service
Adjunct Faculty	15 ASF in shared office plus 10 ASF for conference and service
Administrative Assistant	100 ASF workstation plus 20 ASF for conference and service
Student Worker	35 ASF in shared workstation with 1 ASF for service

## Academic Success Laboratories

These laboratories and spaces are used primarily for individual or group instruction that is informally unscheduled for the purpose of academic achievement. Spaces include areas for individual and/or group study, and computer stations. Many of the spaces required for a robust learner success program fall into this category. The types of spaces include tutorial facilities for math and writing centers, and rooms with adaptive technology for impaired learners. A guideline of 2 ASF/Student FTE was developed based on a comparative analysis of like institutions.

## Other Department Space

The space classified as other department space includes all other space assigned to an academic or administrative department or unit that has not been included in the other classifications of classrooms, teaching laboratories, open laboratories, or office. These areas consist of a variety of spaces including:

- study rooms
- meeting rooms
- media production
- demonstration rooms
- greenhouses
- lounges
- vending areas
- locker rooms
- clinic space
- animal quarters
- server rooms
- computer rooms

A guideline of 11 ASF/Student FTE in the base year and 10 in the target year was applied based on LCCC strategic goals and Paulien's experience with similar community colleges. A guideline of 3 ASF was developed for the Albany County campus.

## Learning Commons/Library

Library space comprises a range of NCES space use codes with the majority from the 400 (Study Facilities) category. Library space at LCCC included study rooms, stack, open-stack areas, processing rooms, and service spaces. To better understand the library space needs, offices for librarians and library staff are also included in this category.

Guidelines for library space utilize one set of factors for collections, another for study stations, and a third for service space. As most community college libraries are moving toward a learning commons model, Paulien used a modified guideline focusing on less stack space for print volumes and greater space for student study and collaboration.

Paulien also referred to a Level One space program developed by LCCC in April 2015 for a proposed library renovation/expansion to the Ludden Library, however this space was not included in the space needs analysis.

## Physical Education/Student Recreation/Athletics

Physical Education space includes gymnasias, basketball courts, handball courts, squash courts, wrestling rooms, weight or exercise rooms, indoor swimming pools, indoor ice rinks, indoor tracks, indoor stadium fields, and field houses that are used for intramural sports or general student use.

Recreation space includes exercise and general fitness rooms, billiards rooms, games and arcade rooms, bowling alleys, table tennis rooms, dance or ballrooms, and TV rooms, as well as any other rooms that are used primarily for recreation and amusement and not for instructional purposes.

Space for athletics typically includes space for concessions, training facilities, locker/shower rooms, and meeting/viewing/conference facilities required to support intercollegiate athletics. Space needs calculated in this report are for indoor space only and do not include the needs for outdoor athletic facilities.

At LCCC, these space types are intertwined, making it difficult to attribute the space to one category over another. The multi-use of these facilities does not allow for separate analysis.

Space guidelines were developed for physical education and student recreation. Due to the varied space requirements of indoor athletics program space, there is no one guideline that addresses this space category. Athletic space needs are usually based on the number and competitive level of the

intercollegiate athletic activities. Space for this category was based on benchmarks with existing community colleges, 29 ASF/Student FTE in the base year and 28 ASF/Student FTE in the target year for the Cheyenne campus.

## Assembly & Exhibit Space

For a community college, assembly and exhibit space usually includes rooms designed and equipped for the assembly of a large number of people, such as theaters or auditoriums. Exhibit spaces are used for exhibition of materials, works of art, or artifacts intended for general use by students and the public.

A nationally recognized two-year assembly and exhibit guideline includes:

- A core of 16,000 ASF for institutions up to 5,000 FTE

LCCC identified the need for a 500 seat auditorium/lecture space in addition to current assembly and exhibit space during campus interviews. Paulien used a guideline of 16,000 ASF for this category. The Albany County campus has no space in this category.

## Central Computer & Service

A central computer and service space is used as a data or telecommunications center with applications that are broad enough to serve overall administrative or academic primary equipment needs of a central group of users, departments, college, or entire institution. It must be noted that this category does not include data closets that are not accessed on a regular schedule. A recognized guideline of 1 ASF/Student FTE was used for both campuses.

## Physical Plant

Physical Plant space includes carpentry, plumbing, HVAC, electrical, and painting shops, as well as any centralized warehouses for general and vehicle storage. Additionally, facilities such as tool storage rooms, materials storage rooms, and areas related to shops like lockers, showers, and similar non-public areas are included. Any hazardous material storage areas are also classified in this space category.

Typical guidelines suggest that a percentage of all square footage on campus be used to determine the space need in this category. Based upon Paulien's experience, a factor of 6.5% was used for this analysis for both campus locations.

## Equine Agricultural Center

During on campus interviews the Equine Agricultural Center was determined to be adequate for existing needs and planned growth. Since this space is not easily repurposed to another use, investigations to identify any excess space were not conducted. The existing space is identified in the analysis as appropriate in the base year and in the target year on the Cheyenne campus.

## Student Social & Study Space

Student social and study space are rooms or areas used by individuals or groups to study or interact with other students or faculty at their convenience, the space not being restricted to a particular subject or discipline or by specialized equipment.

Social and study space or collaborative learning areas are best located near classrooms, laboratories and faculty offices where students can gather before class or a faculty member can easily continue a discussion with students after a class in an active setting. Collaborative learning areas are

usually open to a corridor and usually have a white board with movable furniture where the flow of ideas and discussion can easily be communicated. The Master Plan Update addresses multiple opportunities to full this space typology. This guideline is relatively new as these types of spaces are continuing to evolve in community colleges. A guideline of 5 ASF/Student FTE was applied.

## Student Center

Student center space typically includes facilities built and maintained by student (auxiliary) funds. Spaces may include meeting rooms, food service and dining facilities, bookstores and other merchandising facilities, open galleries, film viewing rooms, television and other lounge areas, and game rooms.

Space guidelines for this category are based on both the total on-campus student population and the number of students in residential housing. The campus setting may also dictate space requirements as campuses located near city centers may provide students with a greater range of dining and recreation options off-campus.

The Association of College Unions International (ACUI) recommends 10 ASF/Student FTE towards generation of student union space. However, this guideline has expectations of a significant residential population. Benchmarking studies have found that community colleges without housing generally require between 4 and 6 ASF/Student FTE. LCCC has an on-campus residential component that is expected to increase. For the base year at the Cheyenne campus, a guideline of 7 ASF/Student FTE was used, increasing to 8 ASF/Student FTE in the target year with the anticipated addition of more students living on campus. For the Albany

County campus, a reduced guideline of 4 was used at the target year.

## Residence Life (Cheyenne Campus)

Residence life space includes the sleeping, study, and social space provided within the residence halls. Dining space was included in the student center guideline. Trends in student housing have been to focus on building academic communities with a corresponding increase in social/collaboration space within the residential environment. A typical guideline in current residence hall construction is 240 ASF/bed, which was used in this analysis.

## Child Care Center

The space guidelines for on campus child care vary, depending on the age and number of children. For the Cheyenne campus, a guideline of 3.25 ASF/Student FTE was used in the base year, reducing to 3.1 ASF/Student FTE in the target year. It is anticipated that student enrollment increases will be focused more on younger students living on-campus with a reduction in the growth of child care requirements moving forward.

# Space Needs Analysis

## Space Needs Analysis by Space Category

This section summarizes the space needs analysis by functional space category. The space needs analysis was performed by classifying existing space categories on the Cheyenne and Albany County campuses into three areas:

### Academic Space

- Classrooms and Service
- Teaching Laboratories and Service
- Open Laboratories and Service
- Offices and Service
- Academic Success Laboratories
- Other Department Space

### Academic Support Space

- Learning Commons/Ludden Library
- Physical Education, Recreation and Athletics
- Assembly and Exhibit
- Central Computer
- Physical Plant
- Equine Agriculture Center
- Student Social and Study

### Other or Auxiliary Space

- Student Center
- Residence Life
- Child Care Center

**Table 2-15: Campuswide Space Needs Analysis - Cheyenne Campus**

Space Category	Base Year				Target Year			
	Student FTE = 1,930 Staff Headcount = 342				Student FTE = 2,085 Staff Headcount = 337			
	Existing ASF	Guideline ASF	Surplus/Deficit	Percent Surplus	Existing ASF	Guideline ASF	Surplus/Deficit	Percent Surplus
<b>Academic Space</b>								
Classroom & Service	36,594	26,355	9,538	27%	40,324	27,564	12,760	32%
Teaching Laboratories & Service	91,817	89,095	2,722	3%	112,888	91,678	21,210	19%
Open Laboratories & Service	9,003	11,580	(2,547)	(28%)	13,345	12,510	835	6%
Offices & Service	54,473	53,681	792	1%	61,860	53,561	8,299	13%
Academic Success Laboratories	2,580	3,860	(1,280)	(50%)	2,580	4,170	(1,590)	(62%)
Other Department Space	20,417	21,230	(813)	(4%)	20,019	20,850	(831)	(4%)
<i>Academic Space Subtotal</i>	<i>214,214</i>	<i>205,801</i>	<i>8,413</i>	<i>4%</i>	<i>251,016</i>	<i>210,333</i>	<i>40,683</i>	<i>16%</i>
<b>Academic Support Space</b>								
Learning Commons/Library	15,763	18,444	(2,681)	(17%)	15,763	19,979	(4,216)	(27%)
PE, Recreation, & Athletics	52,031	55,970	(3,939)	(8%)	52,031	53,380	(6,349)	(12%)
Assembly & Exhibit	5,643	16,000	(10,375)	(184%)	10,407	16,000	(5,593)	(54%)
Central Computer	2,212	1,930	282	13%	2,447	2,085	362	15%
Physical Plant	26,332	26,669	(337)	(1%)	26,332	27,757	(1,425)	(5%)
Equine Agriculture Center	82,770	82,770	0	0%	82,770	82,770	0	0%
Student Social & Study	10,132	9,650	482	(5%)	12,753	10,425	2,328	(18%)
<i>Academic Support Space Subtotal</i>	<i>194,883</i>	<i>211,433</i>	<i>(16,550)</i>	<i>(8%)</i>	<i>202,503</i>	<i>217,396</i>	<i>(14,893)</i>	<i>(7%)</i>
<b>Other</b>								
Student Center	16,039	16,975	936	6%	18,447	20,600	(2,153)	(12%)
Residence Life	61,515	66,240	(4,725)	(8%)	61,515	104,640	(43,125)	(70%)
Child Care Center	5,930	6,273	343	6%	5,930	6,464	(534)	(9%)
<i>Other Subtotal</i>	<i>83,484</i>	<i>89,488</i>	<i>(6,004)</i>	<i>(7%)</i>	<i>85,892</i>	<i>131,704</i>	<i>(45,812)</i>	<i>(53%)</i>
<b>Campus Total</b>	<b>492,581</b>	<b>506,722</b>	<b>(14,141)</b>	<b>(3%)</b>	<b>539,411</b>	<b>559,433</b>	<b>(20,022)</b>	<b>(4%)</b>
<i>Inactive/Conversion Space</i>	<i>1,376</i>				<i>33,405</i>			
<i>UW &amp; Outside Organization</i>	<i>4,185</i>				<i>10,941</i>			

ASF: Assignable Square Feet

Target year space needs were generated in relation to existing space using Fall 2015 as the base year. The space guidelines and standards, as described in the *Guideline Application for Space Needs*

*Analysis* section, were applied to the key space determinants using the target enrollment mix and future faculty and staffing assumptions to develop an order of magnitude space needs analysis.

## Interpretation of Space Needs Analysis Outcomes

The space needs analysis reviews Fall 2015 (base year) and a five-year target year period for each space category. The Existing ASF includes all current facilities.

As an illustration, the Cheyenne campus contained 35,894 ASF of existing Classrooms & Service space in Fall 2015 per the College’s facilities inventory. Four columns illustrate the findings for each time period, as noted in *Table 2-15, Campuswide Space Needs Analysis*, shown on the following page.

Reviewing the second column, the Guideline ASF is a calculation of how much space is ideally needed in each space category at the base year and target year, given enrollment, program, and staffing assumptions. Referring again to *Table 2-15*, the guideline calculation generated a need for 26,355 ASF of Classroom & Service space for Fall 2015, using selected guidelines.

The Surplus/(Deficit) column is the difference between the Existing ASF and Guideline ASF totals, while the Percent Surplus/(Deficit) column is the magnitude of the difference expressed as a percent. For each column, deficits are in parentheses and indicate a space need in that category.

In *Table 2-15*, the Cheyenne campus had a 9,539 ASF surplus of Classroom & Service space at the base year. This represents a 27% surplus of space. The space needs analysis is quantitative only and does not take into account the quality of space to serve the campus mission. The space needs analyses for each major space category will be reviewed, for both the Cheyenne and Albany County campuses.

**Table 2-16: Campuswide Space Needs Analysis - Albany County Campus**

Space Category	Base Year Student FTE = 434 Staff Headcount = 28				Target Year Student FTE = 460 Staff Headcount = 28			
	Existing	Guideline	Surplus/ Deficit	Percent	Existing	Guideline	Surplus/ Deficit	Percent
	ASF	ASF		Surplus	ASF	ASF		Surplus
<b>Academic Space</b>								
Classroom & Service	6,075	6,214	(139)	(2%)	7,350	6,360	990	13%
Teaching Laboratories & Service	4,122	6,445	(2,323)	(56%)	5,572	6,554	(982)	(18%)
Open Laboratories & Service	1,791	2,387	(596)	(33%)	1,791	2,530	(739)	(41%)
Offices & Service	4,112	5,230	(1,118)	(27%)	4,312	5,476	(1,164)	(27%)
Academic Success Laboratories	524	868	(344)	(66%)	524	1,012	(488)	(93%)
Other Department Space	250	1,302	(1,052)	(421%)	250	1,380	(1,130)	(452%)
<i>Academic Space Subtotal</i>	<i>16,874</i>	<i>22,446</i>	<i>(5,572)</i>	<i>(33%)</i>	<i>19,799</i>	<i>23,312</i>	<i>(3,513)</i>	<i>(18%)</i>
<b>Academic Support Space</b>								
Learning Commons/Library	1,177	2,223	(1,046)	(89%)	1,177	2,409	(1,232)	(105%)
Assembly & Exhibit	0	0	0	n/a	0	1,200	(1,200)	n/a
Central Computer	450	434	16	4%	450	460	(10)	(2%)
Physical Plant	0	604	(604)	n/a	0	1,095	(1,095)	n/a
Student Social & Study	1,694	2,170	(476)	(28%)	1,694	2,300	(606)	(36%)
<i>Academic Support Space Subtotal</i>	<i>3,321</i>	<i>5,431</i>	<i>(2,110)</i>	<i>(64%)</i>	<i>3,321</i>	<i>7,464</i>	<i>(4,143)</i>	<i>(125%)</i>
<b>Other</b>								
Student Center	436	2,124	(1,688)	(387%)	436	2,250	(1,814)	(416%)
<i>Other Subtotal</i>	<i>436</i>	<i>2,124</i>	<i>(1,688)</i>	<i>(387%)</i>	<i>436</i>	<i>2,250</i>	<i>(1,814)</i>	<i>(416%)</i>
<b>Campus Total</b>	<b>20,631</b>	<b>30,218</b>	<b>(9,587)</b>	<b>(46%)</b>	<b>23,556</b>	<b>32,918</b>	<b>(9,362)</b>	<b>(40%)</b>

ASF: Assignable Square Feet

## Cheyenne Campus

As illustrated in *Table 2-15*, the space needs analysis at the base year (Fall 2015) for the Cheyenne campus generates an overall need for 506,722 ASF, a deficit of 14,141 ASF when compared with actual space.

Currently two buildings are under construction on the Cheyenne campus, the Pathfinder building and the Flexible Industrial Technology building,

with a total of 74,037 ASF of available space. Space dedicated to the University of Wyoming is not included.

At target year enrollment and staffing levels, application of the guidelines generates a need for 559,433 ASF of space, a deficit of 20,022 ASF. However, 33,405 ASF of existing space becomes inactive/conversion space with the migration of programs and staff to the new buildings, creating an effective surplus of 13,383 ASF.

## Academic Space

On the Cheyenne campus, the Academic space category for the target year generated a surplus of space in all categories with the exception of Academic Success Laboratories. This category includes spaces such as collaboration spaces and “maker” spaces for interactive learning and student engagement.

## Academic Support Space

The Academic Support space category generated a deficit of 14,893 ASF in the target year. The Learning Commons/Library deficit from the base year increases as enrollment growth is realized. The PE, Recreation, & Athletics space deficit will be eliminated with planned construction of additional space within the current facility. The Assembly & Exhibit deficit is significantly reduced with new space in the Pathfinder building; however, there is still a need for a large auditorium.

## Other or Auxiliary Space

In reviewing the Other space category for the Cheyenne campus at the target year, the guidelines generated a deficit of 45,812 ASF. This amount is influenced by the need for an additional 160 student beds and associated community spaces. Additional housing also creates a deficit in Student Center space.

## Albany County Campus

In Fall 2010 (previous study), the Albany County campus space needs analysis generated a total need for 30,745 ASF, a deficit of 10,622 ASF compared to existing space. At that time, student enrollment was near an all-time high of 635 FTE. The classroom and laboratory utilization for this location suggested that these spaces were reaching capacity, greatly reducing the ability of the Albany County campus to generate additional FTE moving forward without the expansion of instructional spaces.

In Fall 2015 (as shown in *Table 2-16*), enrollment declined to 434 FTE, a decrease of 201 FTE. This reduction of FTE has reduced the overall utilization of classrooms but not in laboratories, as the demand for science courses has increased. A 2,925 ASF building expansion is in the design stages for this location. The expansion would add one additional classroom, a science laboratory, and several offices to the facility. This expansion is included as existing ASF for the target year space needs analysis.

The space needs for the Albany County campus excludes space and FTE for developmental education programs that are currently being held at the University of Wyoming campus in Laramie. Given the current space constraints of the Albany County campus, relocating these programs to LCCC’s Albany County campus is not feasible for this 5-year master planning period. The space needs analysis does not include credit and non-credit courses offered at local recreation centers, high schools, or community centers. It was assumed that many of these programs and courses would continue to use off-campus facilities.

It must also be noted that Laramie High School is completing construction of a new high school adjacent to the Albany County campus. An agreement is being developed with the school district and LCCC for use of multiple vocational laboratories and support spaces between the hours of 4:00 PM and 10:00 PM that will allow LCCC to offer programming to high school and college students in automotive technology, emergency medical technology, and culinary arts. Depending on program demand, these courses may increase the need for additional classroom space, as new students take electives in these programs.



In reviewing *Table 2-16* for the Albany County campus, the base year (Fall 2015) analysis generated an overall need for 30,218 ASF, a deficit of 9,587 ASF when compared to existing space. The largest space deficits were in the Teaching Laboratories & Service (2,323 ASF), Student Center (1,688 ASF) and Offices & Service (1,118 ASF) space categories. Fall 2015 space needs by space category outcomes are similar to those generated in the 2011 space needs analysis.

At 2020 enrollment and staffing levels, the application of the guidelines generated a need for 32,918 ASF, a deficit of 9,362 ASF. This analysis assumes completion of the building addition. Despite the additional 2,925 ASF of space in classroom and laboratories, the target year analysis generated a deficit of space in the Teaching Laboratories & Service space category. The additional classroom space contained in the building addition should suffice at projected enrollment levels. At the target year, a 1,200 ASF, 75 seat auditorium and physical plant space of 1,095 ASF were included in the analysis.

In conclusion, while the building addition eases space constraints for classrooms and laboratories, there is still a need for additional academic support facilities, especially for increased space in the Learning Commons/Library, assembly/community meeting space, Student Center, and physical plant.

## Limitations of Analysis

Campus data provided by LCCC on staffing, course, facilities and projected enrollment was used in this analysis. The data provides a “snapshot in time” of current conditions at LCCC.

Reliability of the findings of any space needs study depends on several factors including the quality of the data, the appropriateness of the space standards used, and the validity of the projections. Data used in this study was updated and refined to as high a level of accuracy as possible, given the broad magnitude of the study. The scope of this study did not identify every individual department requirement and did not include detail normally developed in room-by-room program planning of specific facilities.

Furthermore, this study only analyzed space needs and did not evaluate the quality of existing space or the suitability of the space, which are often factors that reduce occupancy. Unless otherwise noted, all findings are in ASF, which is defined as the area measured within the interior walls of a room that can be assigned to a program. It does not include circulation, mechanical or building service space.

# Campus Space Requests

With the completion of two significant new buildings on the Cheyenne campus, the Pathfinder building and the Flexible Industrial Technology building, 33,405 ASF will become available for repurposing. Proposals for the use of this space were requested from campus constituents. The proposals were discussed at campus meetings with the master planning team and campus leadership and determined to all be worthy of consideration.

The proposals frequently suggested the reuse of a specific space. In those instances where that specific space was not required the space need has been adjusted to meet the space guidelines and standards.

It should be noted that some of the requests are for additional space, some are for relocation, and some are for relocation/expansion. In those instances where the request is for relocation, the existing occupied space will be vacated providing opportunity for additional reassignment of space.

A brief description of each proposal and a summary space needs tabulation follows.

1. Center for Secondary Students: High School Programs: Relocation to space in the current student services area to better serve over 1,200 students and 300 parents per year in a more welcoming environment that is conveniently accessible.
2. Library Study Rooms: Relocate Librarians: Relocation of two librarians to space outside of, yet adjacent to, the library to provide additional student study rooms in the library.
3. Campus Safety Secure Storage: A secure storage space for sensitive campus safety reports and materials, currently located in a shared storage room.

4. Student Veterans/Families Center: A space for the 300 LCCC veterans and family members of veterans to build community and access services.
5. Storage Space for Accounting, Payroll, Contracting & Procurement: Additional storage space for paper records that are required to be retained.
6. Photography Studio for Public Relations: A photography studio to produce professional quality documents for marketing and advertising, and portraits of student athletes, board members, employees, and other LCCC constituents.
7. Children’s Discovery Relocation: Relocation of three classrooms from the Auto Diesel building (future Automotive Technology building) to collocate them with other Children’s Discovery Center classrooms. The existing location is inconvenient and has questionable environmental quality.
8. Human Resources (HR) Office: Additional and reconfigured space that is more conducive to HR operations collocating all HR functions in one location. Space for private meetings with customers, conference space, and a waiting area.
9. The Pantry Relocation: Relocation and expansion to improve visibility and storage capacity.
10. Swing Space: Space to be used as classrooms or offices when occupied space is taken off-line for maintenance or remodeling.
11. Institutional Effectiveness Relocation/Expansion: Collocation of Institutional

Effectiveness staff currently located in five buildings. Additional space to accommodate anticipated new hires.

12. IT Expansion in Fine Arts building: Additional space for IT.
13. E-Learning Collaborative Center: Creation of a multi-faceted center for e-learning collaboration, including production, workshop, and training space.
14. Lightboard Dedicated Space: Space to accommodate Lightboard Technology LCCC is acquiring.
15. Center for Teaching & Learning: Dedicated space for the center. Could be located in the Ludden Library or collocated with the Center for Learning Technologies in the e-Learning Center.
16. Central Services Relocation: Relocation of accounting, cash management, accounts payable, purchasing, budget administration, payroll, and human services from the Administration building to a central campus location in closer proximity to student accounts and student services when they are relocated to the Pathfinder building.
17. Expanded Adult Career and Education System Location: Additional space within the Career & Technical building to accommodate program expansion related to Career Pathways.
18. University of Wyoming Lease Space for the Wyoming Small Business Development Center and the Wyoming Procurement Technical Assistance Center: Relocation and additional space for University of Wyoming occupants in the Career & Technical building.

19. Wind Energy Classroom/Instructor Office Relocation: Relocation to more appropriate educational and office space in the Career and Technical building.
20. AD104 Reutilization for Automotive Technology: Reuse of existing Diesel Technology program space by the Automotive Technology program.
21. Automotive Technology Reuse of AD116, 116A and 116B: Reuse of existing Diesel Technology program space by the Automotive Technology program.
22. ARP169 for additional Math and Science Classroom: Reuse of vacated testing lab as additional classroom space. Note that the space needs analysis does not justify a need for additional classroom space.
23. CT Electrical Closet Expansion: Expansion of existing electrical closet to accommodate new technology needs. Displaces an office.
24. CT135 Reutilization for Plumbing, Electrical, and HVAC Lab: Reuse of vacated welding lab for building trades.
25. Relocation of Student Engagement Space: Relocation and expansion of offices and support space to enhance student development, program and activities participation, and student government.
26. Field Engineer Office Relocation for Manufacturing Works: On campus office space for the Wyoming Business Resource Network.

The relocation of college units that are part of these requests are part of the strategy for the Master Plan Update.

**Table 2-17: Campus Space Request**

	ASF
<b>1. Center for Secondary Students - High School Programs</b>	<b>1,260</b>
8 offices at 120 ASF	
1 meeting space at 300 ASF	
<b>2. Library Study Rooms - Relocate Librarians</b>	<b>240</b>
2 offices at 120 ASF	
<b>3. Campus Safety Secure Storage</b>	<b>150</b>
Dedicated storage room	
<b>4. Student Veterans/Families Center</b>	<b>400</b>
Casual collaboration/lounge space at 300 ASF	
1 office at 100 ASF	
<b>5. Storage Space for Accounting, Payroll, Contracting &amp; Procurement</b>	<b>130</b>
Dedicated storage room	
<b>6. Photography Studio for Public Relations</b>	<b>300</b>
High ceiling - 20' x 15'	
<b>7. Children's Discovery Relocation</b>	<b>2,700</b>
3 classrooms at 900 ASF	
<b>8. Human Resources Office</b>	<b>1,280</b>
6 offices at 120 ASF	
Reception/waiting at 240 ASF	
Conference Room at 240 ASF	
Copy/storage at 80 ASF	
<b>9. The Pantry Relocation</b>	<b>320</b>
1 room	
<b>10. Swing Space</b>	<b>3,000</b>
4 classroom size rooms	
<b>11. Institutional Effectiveness Relocation/Expansion</b>	<b>1,800</b>
8 offices at 120 ASF	
Reception/waiting at 240 ASF	
Conference room at 360 ASF	
Multi-purpose room at 240 ASF	

	<b>ASF</b>
<b>12. IT Expansion in Fine Arts Building</b>	<b>550</b>
4 offices at 100 ASF	
Storage room at 150 ASF	
<b>13. E - Learning Collaborative Center</b>	<b>1,690</b>
1 office at 150 ASF	
5 offices at 100 ASF	
Production studio at 200 ASF	
E-learning studio at 120 ASF	
Workshop at 120 ASF	
Faculty/staff training area at 200 ASF	
E-learning collaborative space at 400 ASF	
<b>14. Lightboard Dedicated Space</b>	<b>200</b>
1 room at 200 ASF	
<b>15. Center for Teaching and Learning</b>	<b>1,030</b>
1 office at 150 ASF	
1 office at 130 ASF	
1 room at 750 ASF	
<b>16. Central Services Relocation</b>	<b>4,495</b>
1 conference room at 360 ASF	
1 conference room at 240 ASF	
1 training room at 400 ASF	
Payroll storage at 250 ASF	
HR storage at 250 ASF	
Storage at 450 ASF	
Supply storage at 150 ASF	
1 office at 225 ASF	
16 offices at 100 ASF	
3 offices at 150 ASF	
1 office at 120 ASF	
<b>17. Expanded Adult Career and Education System Location</b>	<b>4,890</b>
5 classrooms at 600 ASF	
1 classroom at 1200 ASF	
1 office at 150 ASF	
Reception/waiting at 240 ASF	
3 offices at 100 ASF	

	<b>ASF</b>
<b>18. UW Lease Space for WSBDC and PTAC</b>	<b>830</b>
1 office at 150 ASF	
1 office at 240 ASF	
1 office at 100 ASF	
1 office at 340 ASF	
<b>19. Wind Energy Classroom/Instructor Office Relocation</b>	<b>1,120</b>
1 classroom at 1000 ASF	
1 office at 120 ASF	
<b>20. AD104 Reutilization for Automotive Technology</b>	<b>3,476</b>
1 lab at 3,476 ASF	
<b>21. Automotive Technology reuse of AD 116, 116A and 116B</b>	<b>3,266</b>
1 lab at 2,289 ASF	
1 shop at 636 ASF	
1 storage at 341 ASF	
<b>22. ARP 169 for additional Math &amp; Science Classroom</b>	<b>502</b>
1 classroom at 502 ASF	
<b>23. CT Electrical Closet Expansion</b>	<b>75</b>
Additional space at 75 ASF	
<b>24. CT 135 Reutilization for Plumbing, Electrical, and HVAC Lab</b>	<b>2,049</b>
1 lab at 2,049	
<b>25. Relocation of Student Engagement Space</b>	<b>1,060</b>
2 offices at 120 ASF	
2 offices at 100 ASF	
1 meeting space at 300ASF	
1 storage at 200 ASF	
1 workroom at 120 ASF	
<b>26. Relocation of Student Engagement Space</b>	<b>300</b>
1 office at 300 ASF	
<b>Total</b>	<b>37,113</b>

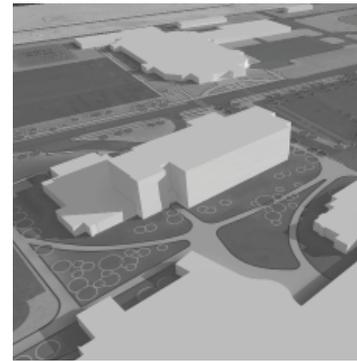




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# three|cheyenne campus analysis

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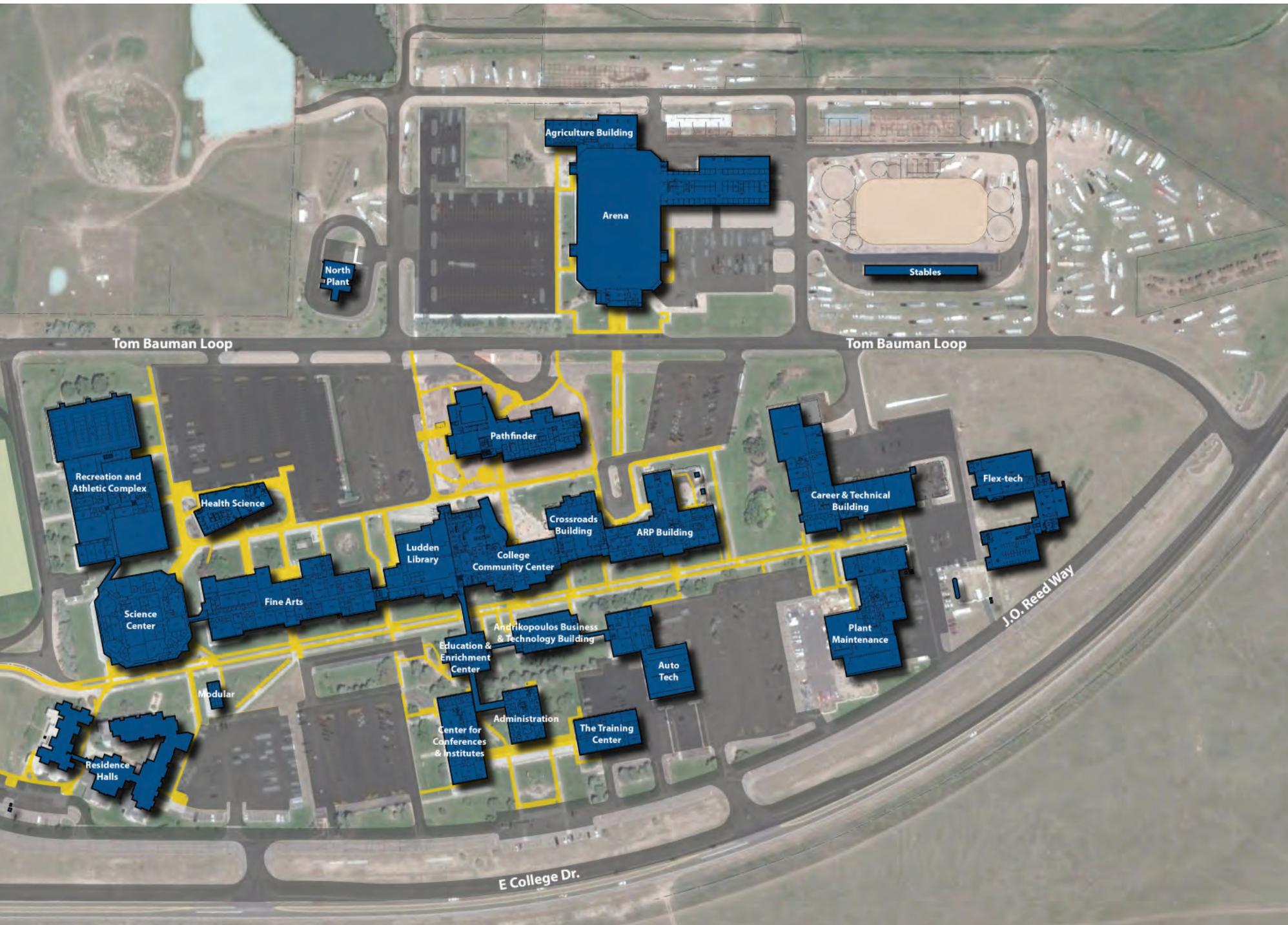
## Physical Campus Analysis

In addition to the space needs analysis, a comprehensive physical analysis was completed to better understand the current challenges and opportunities at LCCC. The following information presents a summary of the existing conditions observed on the Cheyenne campus. The analysis combines information gained from technical assessments provided by LCCC, observations by the master planning team and information gained from the discussions and meetings held throughout the master plan process.

## Floorplan Analysis

The space needs analysis for the Cheyenne campus indicated a surplus of assignable campus space once the Pathfinder and Flexible Industrial Technology building are completed. Given this situation, the master planning team created a series of spatial analysis graphics that visually described the use of existing campus space within the existing building footprints. The floorplans of the existing campus buildings were mapped according to space use classification, space use by academic school, classroom utilization efficiency, and planned vacancy.





## Space Use Classification

The existing space type of every room on campus was mapped according to the space use classifications. The resulting analysis provided a visual representation of the spatial organization of campus. Upon reviewing the data, several development patterns were seen that provided insight to the structure of the Cheyenne campus.

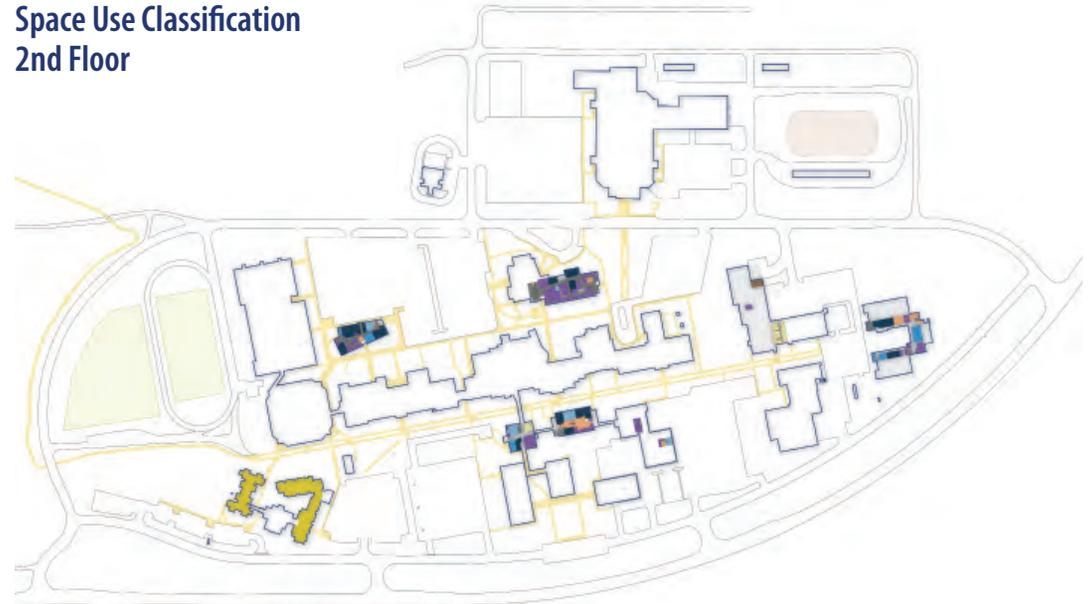
- The core academic uses, such as classrooms and teaching labs are scattered throughout the campus, with the bulk of these spaces occurring on the eastern and western ends of the main building spine north of the academic mall.
- The physical center of the campus (Ludden Library, Community College Center, and the Pathfinder building) contains a bulk of the academic support space including assembly/exhibit, student center and student social and study spaces.
- Office space is generally distributed throughout the campus.
- All physical education and recreation space occurs at the Recreation and Athletics Complex.
- The Center for Conferences & Institutes and the Administration building only contain office and general departmental space.
- All on-campus residential space is located in the southwest corner of the site.

## Space Use Classification - 1st Floor

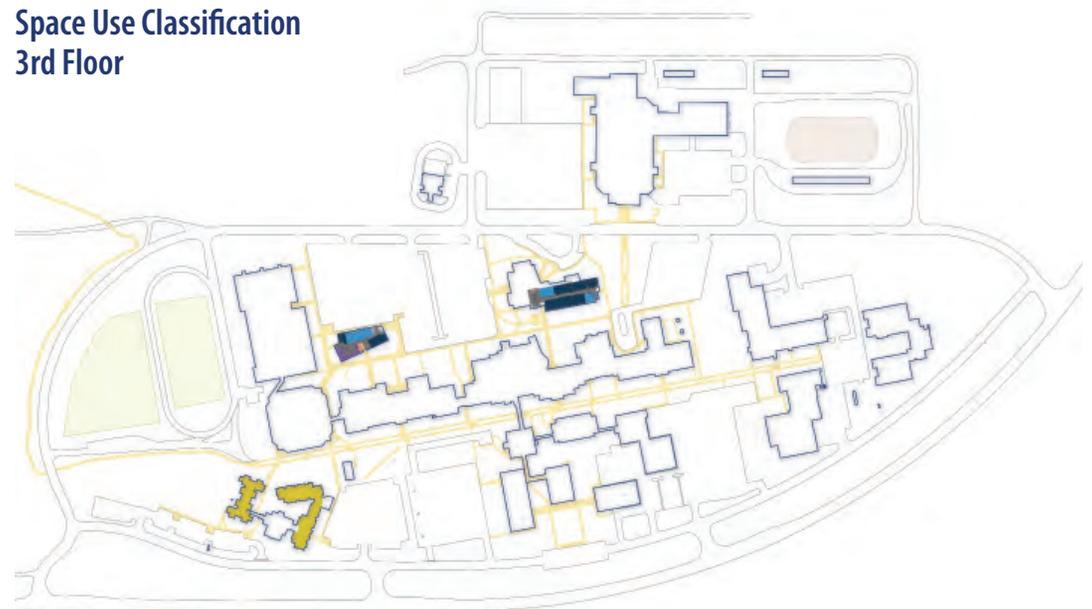




**Space Use Classification  
2nd Floor**



**Space Use Classification  
3rd Floor**



## Classroom & Teaching Lab Use by School

The campus was analyzed by what academic programs were scheduled to use the various classrooms and teaching labs. LCCC's academic programs currently fall into one of four academic schools:

- Arts and Humanities
- Business, Agriculture, and Technical Studies
- Health Science and Wellness
- Math and Science

Certain programmatic patterns were noticed throughout the campus. While there is a wide breadth of programs within the different schools, the significant presence of academic programs in certain buildings could be an opportunity for LCCC to create identifiable campus program nodes.

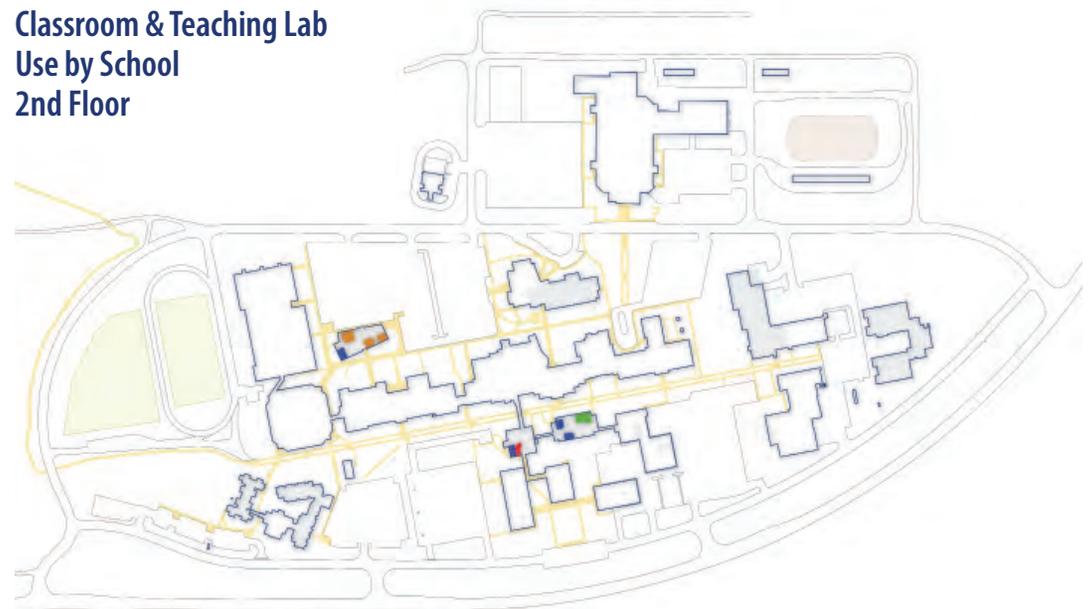
- Generally, a number of the individual buildings have a primary academic school user.
- The Science Center contains programs from each academic school; however, is primarily used by programs within the School of Math and Science.
- Arts and Humanities programs are primarily located in the Fine Arts building; however, also have a significant presence in the Center for Conferences & Institutes.
- Health Sciences and Wellness programs are primarily located in the Health Sciences building and the Recreation and Athletics Complex. They are also present in the Science Center, the Center for Conferences & Institutes and the Training Center.
- Business, Agriculture, and Technical studies are primarily in the Auto Diesel, Business, Career and Technical, and Agriculture buildings.

## Classroom & Teaching Lab Use by School - 1st Floor

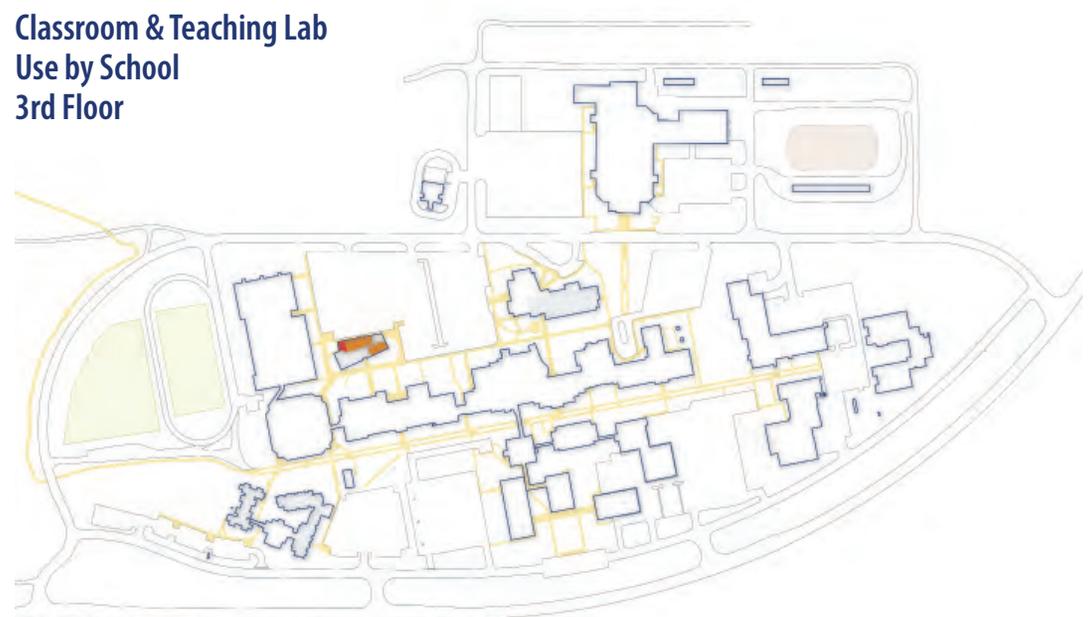




**Classroom & Teaching Lab  
Use by School  
2nd Floor**



**Classroom & Teaching Lab  
Use by School  
3rd Floor**



## Classroom + Teaching Lab Efficiency

Classroom and lab efficiency were other metrics that was mapped on the campus. The classroom guideline for efficient utilization is 30 weekly room hours at 65% student station occupancy. Similarly, the teaching lab guidelines are 20 weekly room hours at 80% student station occupancy. Actual weekly room hours and student station occupancy for each were compared with the guideline to determine efficiency.

- Rooms coded in red have a poor efficiency rating, achieving under 45% of the guideline efficiency metric.
- Rooms coded in yellow have an average efficiency, from 45%-69% of the classroom guideline.
- Rooms coded in green have high efficiency, achieving at least 70% of the combined room hours and student station occupancy classroom guideline.

This information indicates LCCC may have the ability to review course and classroom scheduling methods to increase the efficiency rate of underutilized spaces. The space needs analysis indicated a surplus of classroom space which may account for the lower classroom efficiency observed.

This analysis is based on quantitative course scheduling data; however, there may be qualitative reasons why certain classrooms and labs are used less than others. Capacity, layout, equipment, and type of furniture may impact the usability of certain rooms for specific uses. Environmental factors, such as a lack of windows and natural light or poor heating or cooling systems, are factors which may deter rooms from being scheduled. LCCC should evaluate the condition of the poorly utilized rooms to determine what changes may be warranted to potentially increase their efficiency.

## Classroom + Teaching Lab Efficiency - 1st Floor

### Classroom Efficiency

≤ 45% (*Poor Efficiency*)

45.1%-69.9% (*Average Efficiency*)

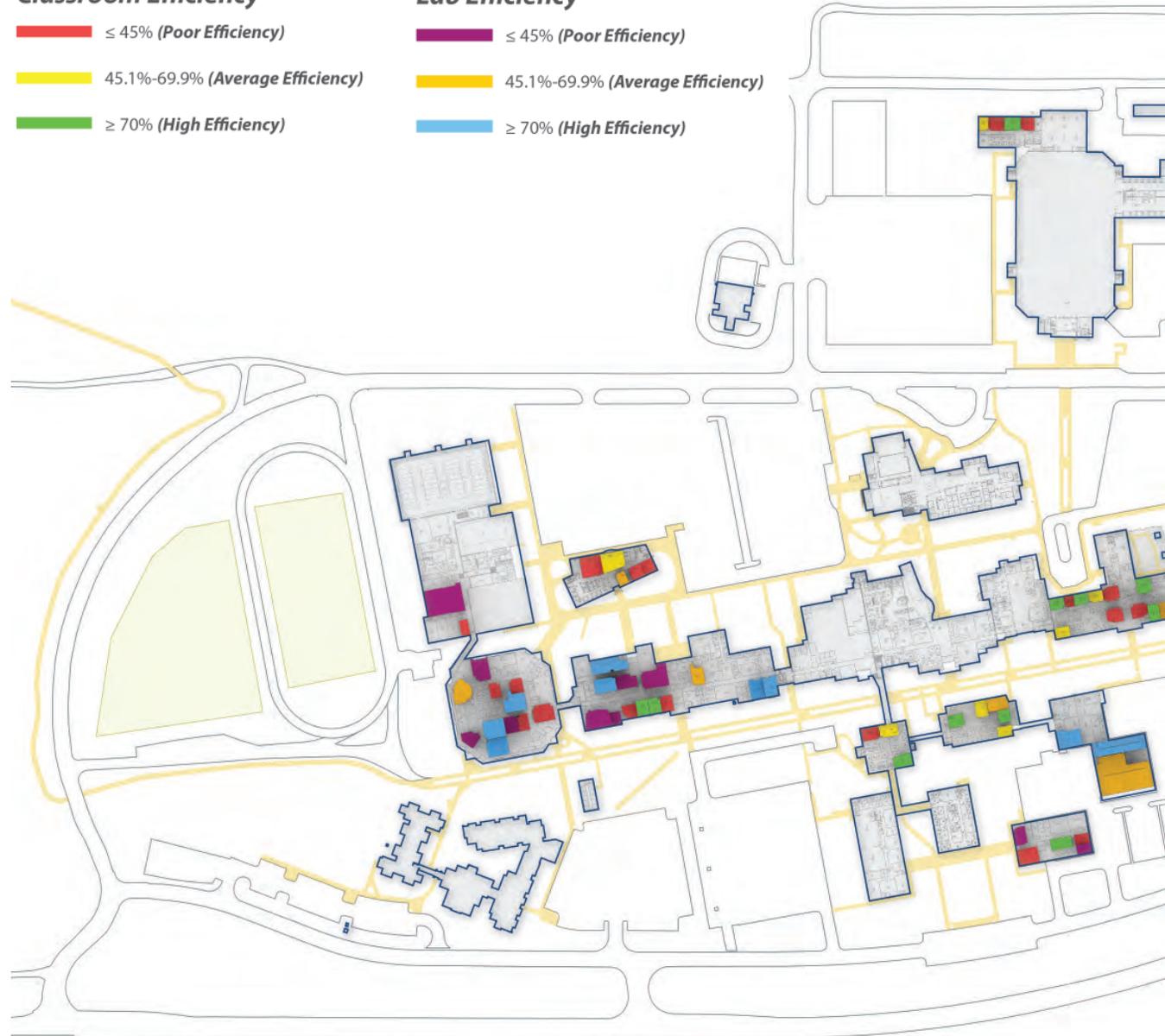
≥ 70% (*High Efficiency*)

### Lab Efficiency

≤ 45% (*Poor Efficiency*)

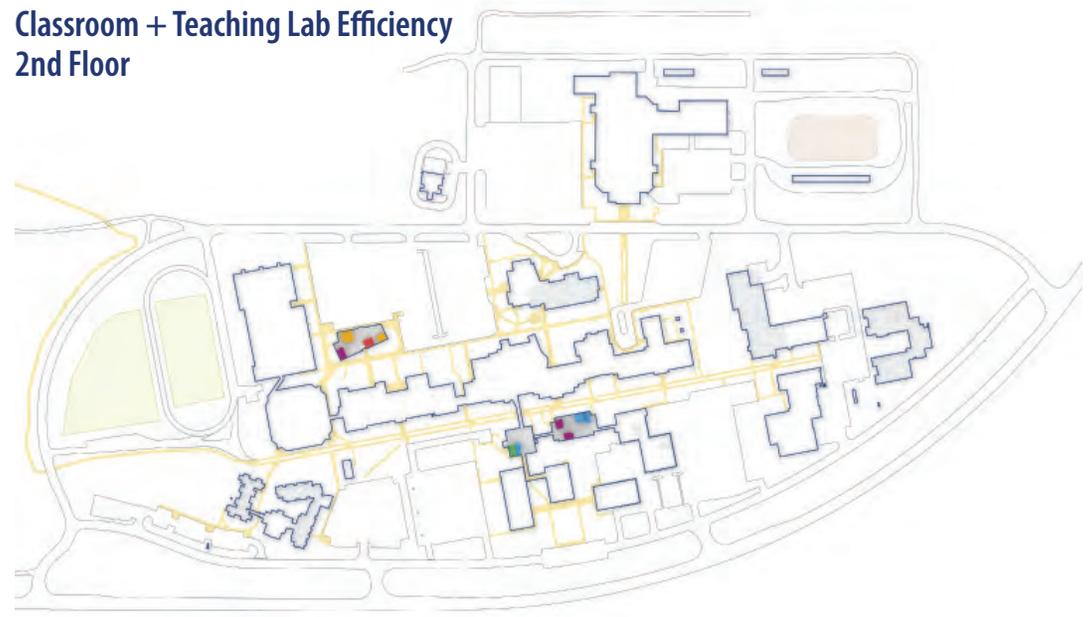
45.1%-69.9% (*Average Efficiency*)

≥ 70% (*High Efficiency*)

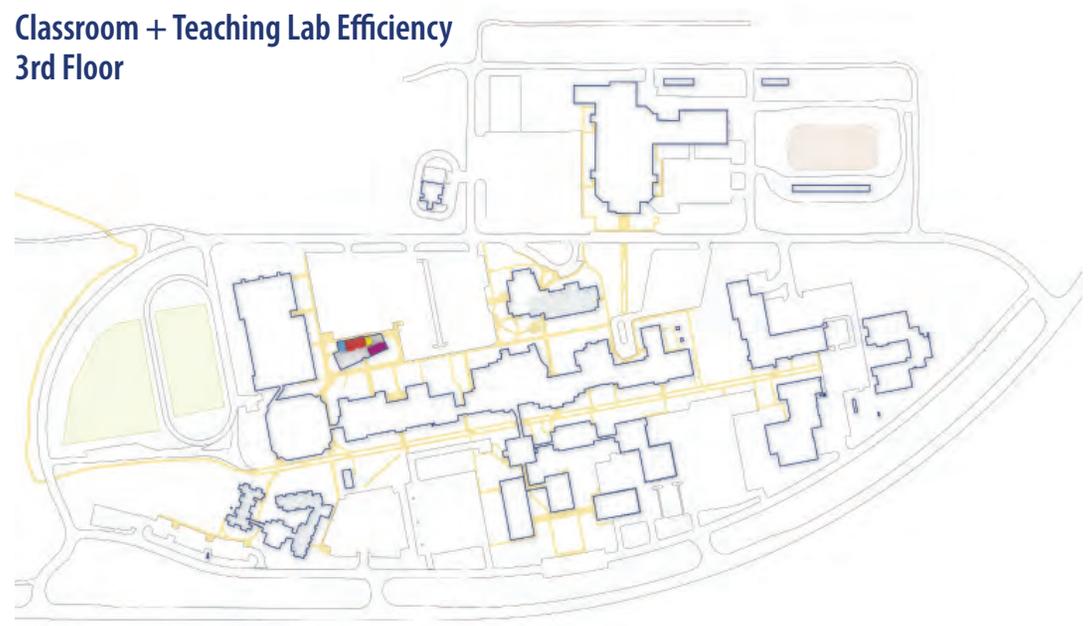




**Classroom + Teaching Lab Efficiency  
2nd Floor**



**Classroom + Teaching Lab Efficiency  
3rd Floor**



## Vacancy

One of the big drivers of the recommendations of the Master Plan Update is the future room vacancies that will occur once the Pathfinder and Flexible Industrial Technology buildings come online. These spaces were mapped to visualize where these openings are located. These areas are prime opportunities for LCCC to implement strategic maneuvers within the campus to fulfill the space needs deficits described in the previous chapter. The following observations are noted:

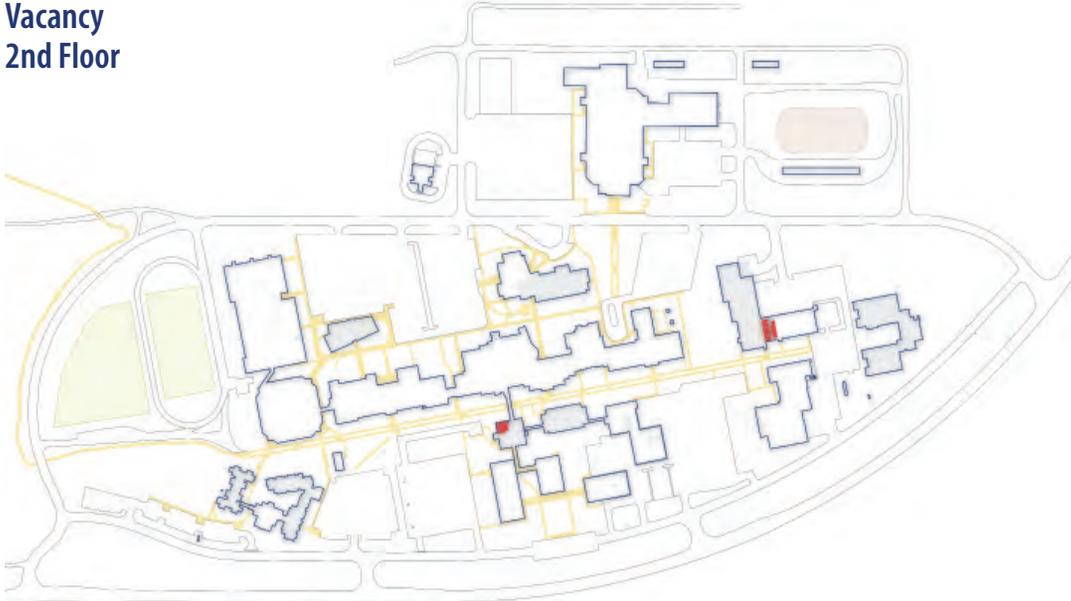
- Almost all the used space within the existing Student Services building (future Crossroads building) will be moving to the Pathfinder building. This concentration of available space provides a great opportunity for LCCC to consider a significant reuse of this building.
- There is a cluster of spaces being vacated in the College Community Center. The College Community Center serves as the main student life area and provides an opportunity to expand these types of uses in this location.
- There is a large group of classrooms being vacated in the Science Center that could be re-utilized to fulfill space needs.
- Isolated classrooms being vacated in individual buildings may best be suited for reuse by existing programs remaining within these buildings to help relieve scheduling conflicts.
- Vacancies create opportunities for new student and staff collaborative space.

## Vacancy - 1st Floor

 Vacated Room



**Vacancy  
2nd Floor**



# Campus Comparison Analysis

The Cheyenne campus has invested in significant site improvements since the previous master plan was issued in 2011. This Master Plan Update established a series of three objectives to guide campus development:

- Strengthen the existing academic mall
- Create a series of campus neighborhoods
- Redevelop the Loop Road to serve as the new campus “front door”

Many of the recent improvements fall in line with one or more of these objectives. In addition, the 2011 Campus Master Plan Update provided a series of design guidelines that provided recommendations on specific architectural, site, and landscape elements. The graphic to the right shows the areas of campus that have seen investment or transformation. The colored boxes correlate with one of the three objectives of the previous Master Plan. The following pages provide a summary of these changes.

## LEGEND



Strengthen the Academic Mall



Create a series of Campus Neighborhoods



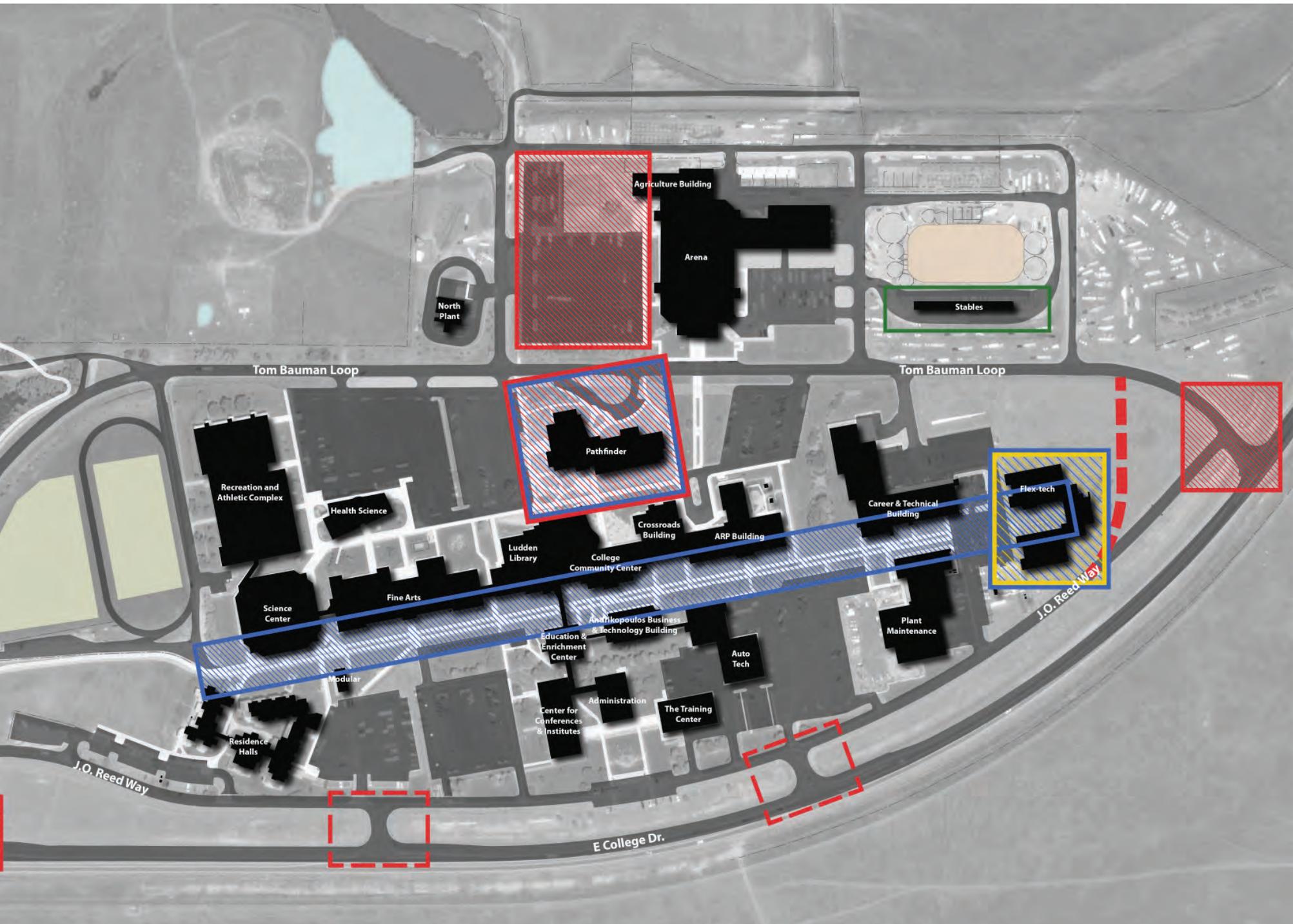
Redevelop the Loop Road



Other Improvement

\*Note: Dashed lines indicate improvements current underway or in the planning stage





## Flexible Industrial Technology Building

In addition to providing new classroom and lab space, the Flexible Industrial Technology building ingrains itself within the existing campus development pattern. The building anchors the east end of the academic mall, providing a defining visual terminus to this open space. The front building facade presents a new modern face to the community that can be seen when approaching the eastern part of campus from College Drive. The rear facade engages the internal campus and relates to the existing building spine on the north and south sides of the academic mall, while its “U-shape” creates an outdoor courtyard space that could be used as a new outdoor space for students. The building’s design and materials adhere to the Campus Drive architectural guidelines established in the previous report.



*Flexible Industrial Technology Building (Under Construction)*

## Pathfinder Building

The Pathfinder building will serve as a new public face for the Cheyenne campus. In addition to being the new home of student services, the building also provides additional classroom, lab, and assembly/exhibit spaces. The building extends the campus development north where it addresses the Loop Road with a new front entry and drop off arrival point. Similar to the Flexible Industrial Technology building, the Pathfinder building utilizes materials and an architectural style follow the Campus Drive architectural guidelines. The Pathfinder building’s design, location, and function will ensure it will be a major activity center within the campus.



*Pathfinder Building (Under Construction)*

## Campus Gateways

New vehicular entrance gateways have been installed at the east and west ends of campus where the Loop Road intersects with College Drive. These gateways create a visual and physical threshold for the campus and provide a presence for LCCC within the Cheyenne community. The gateways incorporate masonry walls, vertical pillars, and enhanced lighting and landscape per the recommendations of the previous master plan.

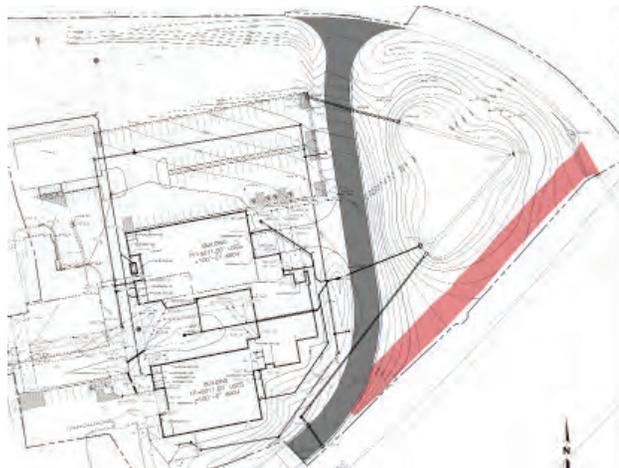


*Campus Gateway Signage at Southwest Entrance*

## Loop Road (Tom Bauman Loop)

The Loop Road is a critical piece of campus infrastructure. It not only serves as a primary vehicular circulator, it also provides access to most of LCCC's parking resources. With the opening of the Pathfinder building, the Loop Road's prominence will be enhanced as it will be the main drive for people arriving on campus for the first time.

The east end of the Loop Road is being realigned in concert with the construction of the Flexible Industrial Technology building. The pre-construction condition had an internal intersection near the major entrance off College Drive; the new road alignment pulls this intersection away from College Drive. In addition to creating a safer vehicular condition, this will help emphasize the prominence of the Loop Road as the primary campus street.



*Plan View of Loop Road Realignment (old alignment in red)*

## Lighting

As part of the 2011 Campus Master Plan Update, the campus underwent a lighting master plan that provided recommendations for changes to the campus lighting system. The master plan identified lighting recommendations for both vehicular- and pedestrian-based areas. The campus has begun to incorporate these changes with new LED light standards down the center of the academic mall. LED's have also been installed in a majority of the campus parking lots. In addition to increased energy efficiency, a more consistent style of lighting helps unify the visual campus aesthetic and promotes a safer campus environment.



*New Pedestrian Light Poles and Fixtures in the Academic Mall*

## Additional Initiatives

In addition to these changes, LCCC has engaged in other site improvement initiatives. A summary of these initiatives include:

- The Cheyenne campus is currently in the midst of a building identification and pedestrian wayfinding signage implementation plan.
- Plans are underway for the establishment of secondary campus gateway signage at the two remaining central entrances from College Drive.
- An enhanced pedestrian crossing with a pedestrian activated lighted visual signal is planned for the crosswalk between the Agriculture and Pathfinder buildings.
- The Recreation and Athletics Complex and Ludden Library are slated for future renovations/additions.



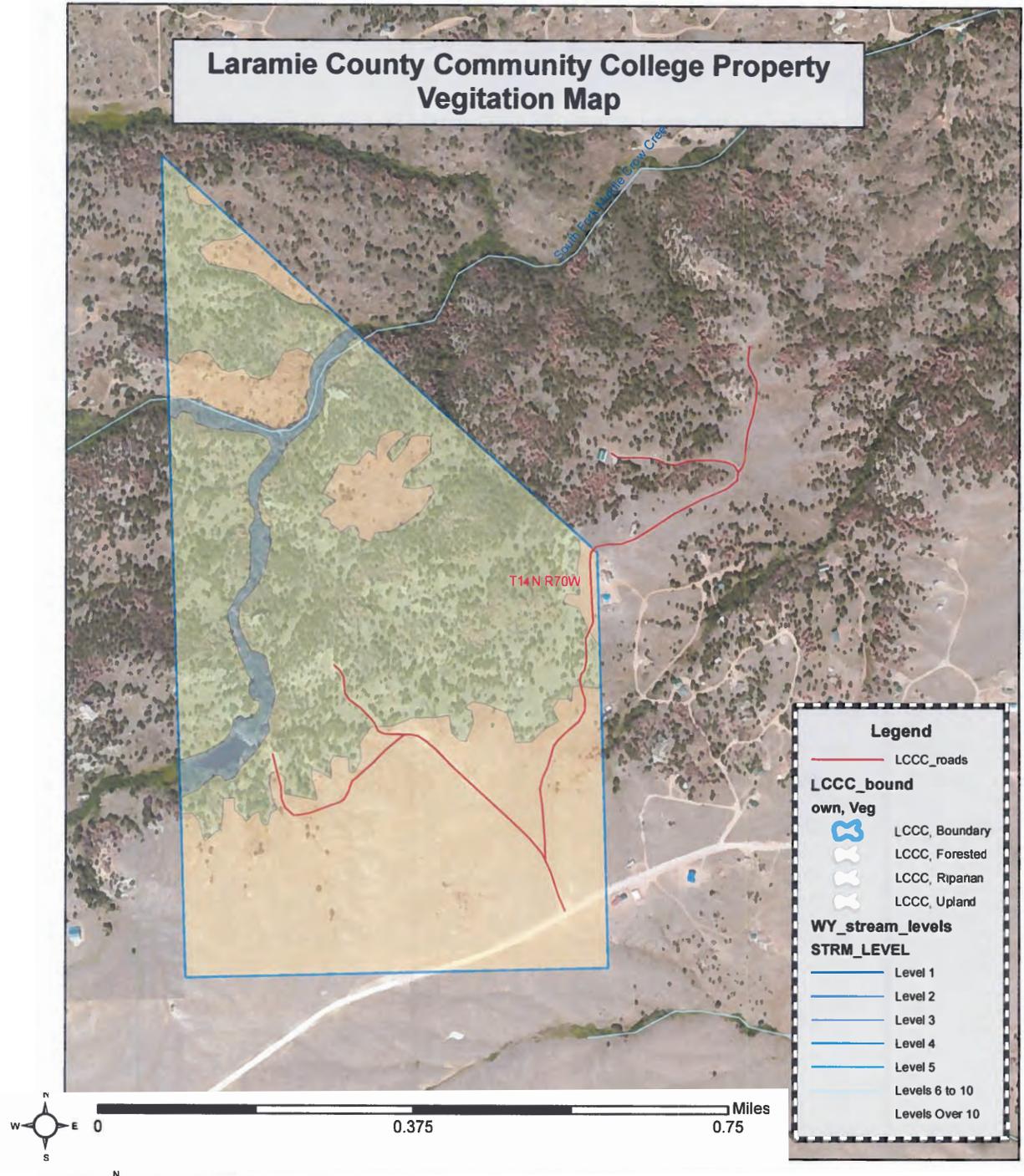
*RAC Renovation Rendering by Tobin & Associates*

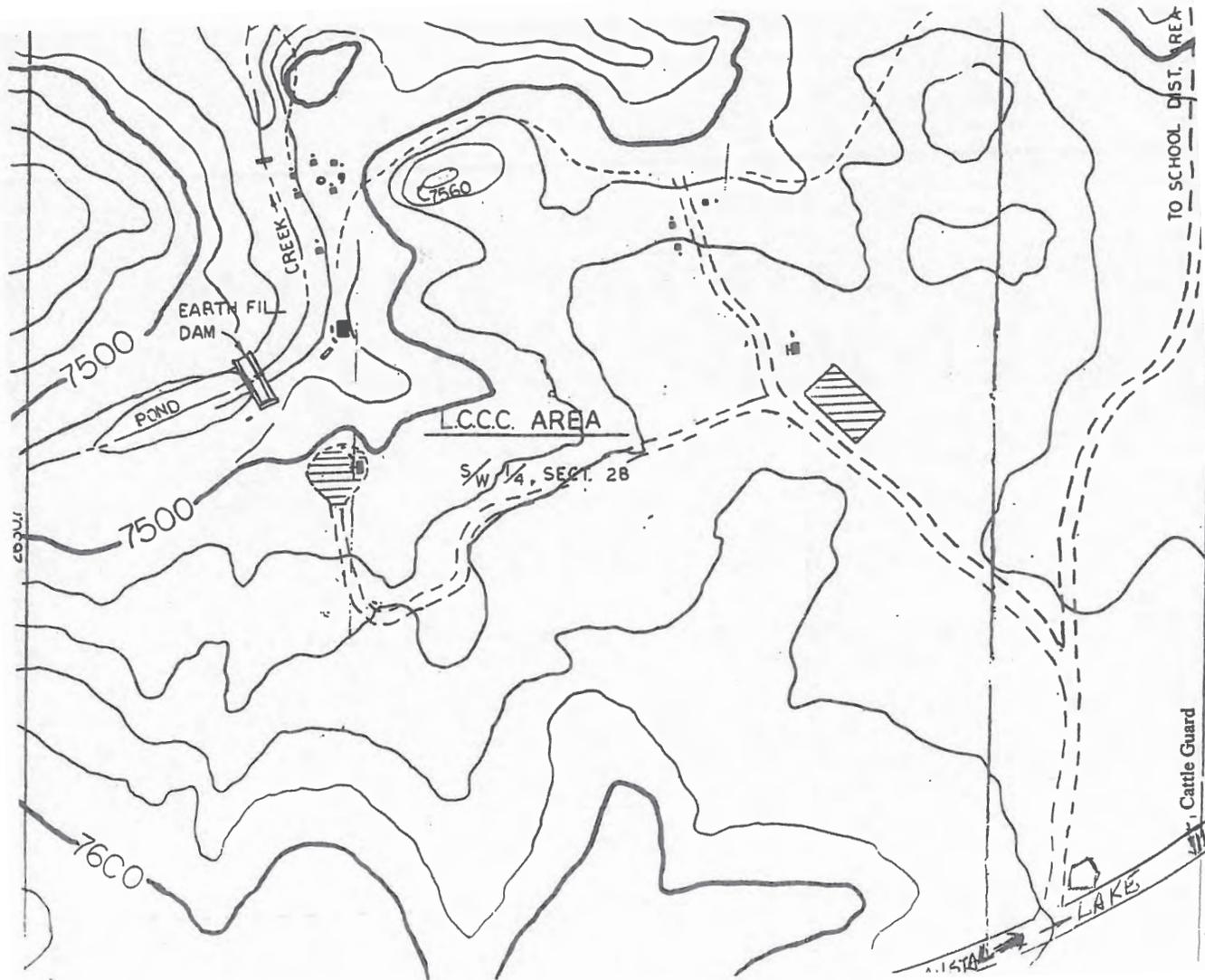
## Other Enterprise Assets

The LCCC enterprise has other property assets located within the region. The Albany County will be discussed in Chapter 5.

LCCC operates two smaller centers, at F.E. Warren Air Force Base and Pine Bluffs that are not included in this study.

In addition to these academic centers, LCCC owns a parcel of land roughly 25 miles west near the town of Buford. Known as the Vedauwoo Property, this land currently contains recreational opportunities that include trails, picnic tables and benches, and a precast concrete amphitheater. This report recommends no action be taken on this property at this time.





**LEGEND**

- IMPROVED TRAILS
- WOODEN BRIDGES
- PICNIC TABLE & BARBEQUE PIT
- PARKING LOT
- CIRCULAR FIRE PIT
- CONCRETE BENCHES
- PRECAST CONCRETE OUTHOUSE
- AMPHITHEATER (PRECAST CONCRETE)

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# four|cheyenne campus master plan

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# Campus Master Plan

This chapter describes the planning framework and ideas that support the LCCC Master Plan for the Cheyenne Campus. It begins describing the different master plan initiatives and is followed by a breakdown of the campus open space and circulation systems

## Master Plan Initiatives

A series of master plan initiatives were developed to provide overarching strategies to guide future campus development decisions. These initiatives are big ideas that can be implemented over an extended timeframe to allow LCCC to adapt the recommendations to the campus as it continues to evolve. The initiatives developed are as follows:

- Develop Program Neighborhoods along the Interior Pedestrian Corridor
- Create the Campus Crossroads
- Optimize Program Partners
- Strengthen the Student Forum
- Create a Student Engagement Center
- Continue Investments in Site Based Improvements
- Sustainability
- Strategic Space Backfill

The initiatives are not listed by priority; certain aspects of each may be able to be instituted more readily, while others may depend on other moves taking place before they can be initiated.



*Campus Master Plan Looking Northeast*



*Campus Master Plan Looking Southwest*



At a macro-level, this initiative recommends looking for opportunities to locate related academic programs within specific buildings to create a program mass that provides an identity to the building that houses the programs (i.e. cluster science-based academic programs in the Science building, visual and performing arts and humanities in the Fine Arts building, etc.). By creating a critical mass of similar programs in one location, LCCC can develop unique academic neighborhood hubs that students and visitors can associate with when on campus.

In addition to enhancing the building identity through program use, this initiative recommends creating a series of new collaboration spaces (see *Table 4-1* on the previous page) through re-purposing vacated spaces along the existing corridor. These spaces serve a two-fold purpose: they allow for new and re-purposed campus space that satisfies space needs while providing new types of learning and social environments that cater to today's students. As the corridor runs between the different buildings, the type of collaboration space changes to reflect the building neighborhood to strengthen the identity of each.

These collaboration spaces are unique campus spaces and are further described in the *Master Plan Program* section of this chapter. These spaces should be highly visible to allow students and visitors to see what types of studies and activities are occurring on campus. The spaces should be robust to accommodate a range of different uses and feature different programs within each building.

The opportunities of this initiative are timely given the surplus of campus space. This initiative is intended to be flexible in its application so as LCCC and its mission and programs evolve, the new spaces are able to serve the college as it sees fit.



*Campus Model Highlighting the Active Pedestrian Corridor (yellow) within the Overall Series of Buildings*



*Collaborative Maker Space along Active Interior Corridor*

## Optimize Program Partners

LCCC has the chance to strategically review the distribution of its academic programs across the campus in search of opportunities to develop stronger links between related programs and more effectively share existing campus resources. Sharing resources (i.e. computer labs, conference rooms, etc.) can increase the utilization efficiency of these spaces, in turn providing other opportunities for the reuse of campus space. The following list suggests opportunities for LCCC to strengthen the relationships between programs and best-utilize some of the vacated space opening up on campus:

- Relocate the Children's Discovery Center from Auto Diesel (herein referred to Automotive Technology building) to the Arp building near the existing Children's Discovery Center. These two functions have programmatic synergies and would be able to share the existing play area on the northeast side of the Arp building. The Master Plan Update recommends the construction of a new child care facility on the northern side of the play area, thereby not displacing any of the current uses within the ARP building.
- Expand the Automotive Technology program into the vacated Diesel Technology space of the Automotive Technology building. When the Diesel Technology program moves to the Flexible Industrial Technology building, it will vacate a series of very specialized spaces. The neighboring Automotive Technology program can expand into the adjacent space without the need for significant renovation that virtually any other reuse would require.
- Expand the Wind Energy program into the vacated Engineering Technology classroom



and office in the Career & Technology building. When Engineering Technology moves to the Flexible Industrial Technology building, a classroom and office adjacent to the Wind Energy program will become available. The Wind Energy program currently utilizes a large high bay lab as a classroom; however, this room contains pedagogic challenges due to its physical layout and conditions. Utilizing the opening classroom allows the Wind Energy program to have a dedicated instructional space in a more appropriate classroom setting while maintaining its program footprint in a consolidated area of campus.

- Expand Adult Career and Education System (ACES) in vacated Career and Technical classroom and office spaces. The ACES program is housed in the Career &

Technical building and has identified the need for additional classroom and office space. There are a series of rooms being vacated within the Career & Technical building that could be readily used by ACES without significant renovation.

- Consolidate the offices for the Center for Teaching and Learning within the vacated Education & Enrichment Center space.
- Locate a new large auditorium/performance space near the Fine Arts building to strengthen the Arts neighborhood and fill this space need.
- Consolidate offices for personnel within the Department of Institutional Effectiveness into Fine Arts as these employees are currently spread throughout multiple locations on campus.

## Create the Campus Crossroads

The Cheyenne campus has a very linear campus structure with most of the pedestrian activity occurring along the east-west interior circulation corridor. The construction of the new Pathfinder building is an intentional deviation from this development pattern that begins to address the Loop Road as a new campus arrival destination.

This goal of this initiative is to strengthen the connection between the Pathfinder building and the existing campus through a significant open space with deliberate connections that tie into the pedestrian networks. The connection between the Pathfinder building and the College Community Center intersects with two major exterior pedestrian corridors (north of the main building spine; along the academic mall) and the primary internal corridor.

The Pathfinder building contains a vehicular arrival drive on the north side of the building that will provide a prominent new face for students and visitors to campus. The transition from this building to the remainder of the campus is a very important link that should not be downplayed, it is critical to connect the Pathfinder building to the existing campus fabric in the effort to build upon the campus ideal. It is anticipated there will be significant student activity flowing between the Pathfinder building and the College Community Center and LCCC has the opportunity to implement a significant new open space that can greatly impact the character and quality of the Cheyenne campus.

The open space falls in a location that is shaped by the architecture of the College Community Center, Crossroads, and Pathfinder buildings. The space is semi-protected from the prevalent westerly winds due to the surrounding buildings; however, the



design may consider additional wind protection measures via earthwork, vegetation, or other means. The space should incorporate areas of both hardscape and landscape that take into account views, microclimate, and use.

The space should be an iconic campus space that encourages multiple uses such as student gathering, socialization, study, dining, and passive recreation. Recommended elements include:

- Open green space with sidewalks that accommodate desired pedestrian flows
- Engaging site features such as seating walls, planters, and/or sculpture
- Exterior site furniture such as benches, trash receptacles, bicycle rack, dining tables
- High quality landscape materials
- Pedestrian lighting



*Signature Open Space between Pathfinder Building and College Community Center*

## Strengthen the Student Forum

The College Community Center is the epicenter of Student Life and activity on the Cheyenne campus. It is in the middle of the main campus spine and currently houses a number of student-based activities such as the dining hall, convenience store, coffee-shop, student bookstore, counseling offices, and student collaboration space. It sits adjacent to other significant student resources such as the Ludden Library and the Crossroads building. As space within the College Community Center becomes available, this initiative recommends utilizing these spaces for additional student activity uses that will further enhance its identity as the student-life hub on campus.

There are several specific recommendations for the reuse of these spaces. As the bookstore vacates from its current location next to the convenience store, it is recommended LCCC expand the food service options into this location with fast-casual food bars (i.e. a burrito or sandwich bar). This would provide additional food options for students without meal plans so they do not have to leave campus for meals. In support of this additional food service, the existing counseling office suite space across the corridor could be converted into a large open dining area with cafe-style seating. This space should provide moveable tables and chairs where students can sit with peers in various sized groups for both dining and socializing. There is also an opportunity to create a small outdoor dining patio on the academic mall adjacent to this area with similar design elements to serve the same function.

LCCC should evaluate the function of the existing dining hall. The existing system prevents students without a meal plan from accessing the dining hall seating area due to the location of the point-of-sale system. This separates students with and without



meal plans from being able to dine with one another. As the dining options are expanded, there may be an opportunity to restructure this program so students with and without meal plans are able to sit together in either of these dining spaces.

This initiative also recommends developing a large student collaboration area in the southeast portion of the building with flexible spaces and seating that students can utilize in a variety of ways. See the Master Plan Program section for additional information.



*Active Student Collaboration and Learning Environments*

## Develop the Crossroads Building into a Student Engagement Center

The Crossroads building (previously Student Services building) will undergo the most significant transformation of any building on campus upon the opening of the new campus facilities. The current building hosts many student service functions that are being relocated to the Pathfinder building, resulting in a significant amount of vacant space left within the building. A number of potential backfill scenarios were evaluated for this area; however, the most transformational opportunity for the campus exists with the conversion of this space into a student engagement center.

The concept of a student engagement center is based on the development of a centralized resource to offer services that support the development and enrichment of students through their academic careers. A number of the space needs requests have potential fits within this space that adhere to the principles of a student engagement center. Potential backfill programs and activities that could fulfill this purpose include:

- Create a student veterans/family center
- Incorporate an existing student work area that may be relocated from the College Community Center
- Incorporate spaces for private tutoring
- Relocate the Pantry from the Business building to the student engagement center. Its location within the Crossroads building should provide easy access from both the interior and exterior and should meet the functional requirements needed by this use
- Incorporate spaces geared toward small study group spaces
- Dedicate space and storage for student life and engagement and campus organizations
- Incorporate general collaborative space that could be converted into a new use in the future as the campus develops

A more detailed breakdown of the backfilling of the Crossroads building can be found in the *Master Plan Program Improvements* section of this chapter.



Multiple Student Learning Spaces within Larger Building

## Continue Investment in Site-Based Improvements

LCCC has enacted several transformative site based improvements since the publication of the 2011 Campus Master Plan Update. Many of the recommendations from this study remain pertinent and should be referenced when considering future campus development. These recommendations include:

- Implement traffic calming measures such as pedestrian crosswalks and speed tables along the Loop Road
- Break up large expanses of parking with green spaces
- Realign angled parking with more efficient 90° parking stalls
- Create a pedestrian path along the Loop Road with future connections to the regional greenway
- Implement bicycle lanes on the Loop Road and provide bicycle parking near the campus core
- Implement a unified signage and wayfinding package that includes a system of signage types including gateway, vehicular-oriented, building identification, and pedestrian-oriented signage
- Develop new campus open spaces, including signature open spaces, campus quads, plazas, and nodes

## Sustainability

LCCC should incorporate sustainable site and building initiatives as the campus continues to develop. If supported, LCCC can be a local champion for sustainability which can be a draw for future students as well as receive the long-term environmental and costs benefits this type of development can bring. Suggested recommendations include:

- Prioritize high energy efficiency in new building construction
- Implement or purchase energy from sustainable sources such as solar or wind energy from on- or off-site sources
- Implement a low water/maintenance landscape except in specific open spaces to reduce water consumption and pollutants
- Incorporate stormwater Best Management Practices (BMP) in site design projects. Examples of BMP's include:
  - Bioswales in parking lots to infiltrate and cleanse stormwater before being released into the regional stormwater system
  - Pervious pavements
  - Bioretention areas
- Incorporate greenroofs on existing and new buildings and additions

# Master Plan Program Improvements

The following pages outline the improvements for each of the neighborhoods identified in the Master Plan Update. In developing recommendations for the program improvements the three guiding principles of the Master Plan Update were reinforced wherever possible. Consolidation, Activation, and Transformation have been the overarching concepts in assessing the program improvements in each neighborhood.

## Consolidation

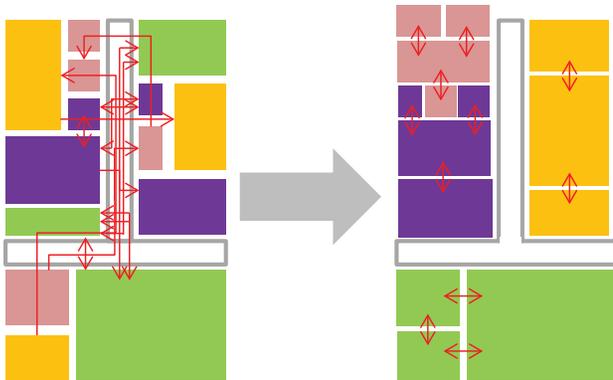
The program and master planning team analyzed each of the neighborhoods in relation to program adjacencies and synergies. An overriding concept in the Master Plan Update was to optimize adjacencies between related departments in order to maximize operational efficiencies.

## Activation

At the core of the master plan concept is the notion of creating identifiable neighborhoods along a very strong pedestrian spine. The spine occurs on both the interior as well as the exterior and connects all of the major program departments. In each neighborhood the master planning team assessed the potential for activating the spine and providing an identity to each of the neighborhoods. The overall concept is that each of the neighborhoods might have a particular 'theme' that manifest itself in the student activity areas associated with that neighborhood. Implicit in this approach is a new and clear wayfinding strategy for the campus.

## Transformation

A major deficiency identified in the program analysis was a deficit of student activity areas. Specifically, these areas consist of the active learning spaces and interaction spaces that are essential to today's higher education environments. These spaces in many ways are the 'pearls' that are strung together by the spine that connects each of the neighborhoods. The active student learning environments would be crafted to support the neighborhood where they are located. In the Science neighborhood the active learning spaces might be maker spaces associated with science compared to the Arts neighborhood where the active learning environments might be art galleries or graphics labs. In addition to these themed active learning areas, the neighborhoods would be supported by a variety of student interaction and collaboration areas that build on the notion that 'learning occurs everywhere'. The accompanying photos begin to describe the variety of spaces identifies in each of the neighborhoods.



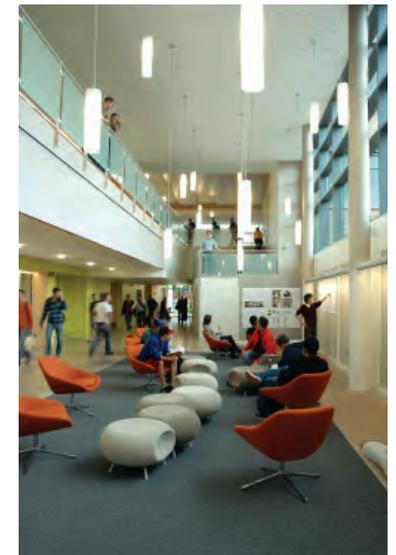


College Neighborhood Concept Plan

## Relationship to 2011 Assessment Report

All of the improvements identified in this update should be considered within the context of the Facilities Condition Assessment as part of the 2011 Campus Master Plan Update – these are companion documents and should be used together. The summary outline in the following pages includes a brief review of the assessment and how it relates to the proposed program improvements. Ideally, many of the assessment deficiencies will be addressed during the proposed program improvements. It is the master planning team’s opinion that each of the buildings should be considered in a case-by-case analysis of the cost of the assessment improvements and its relationship to the proposed program improvements.

*\*Note: The following pages provide diagrammatic building representations illustrating potential uses and relationships within each building footprint that correlate with the overall neighborhood concept. The diagrams are not intended to be interpreted as strict floorplans designating specific programmatic uses. The intent of the diagrams are to provide flexible recommendations for LCCC to reference as building renovation projects arise and funding is available. The recommendations within this report are subject to change as future conditions warrant.*



Active Learning Environments

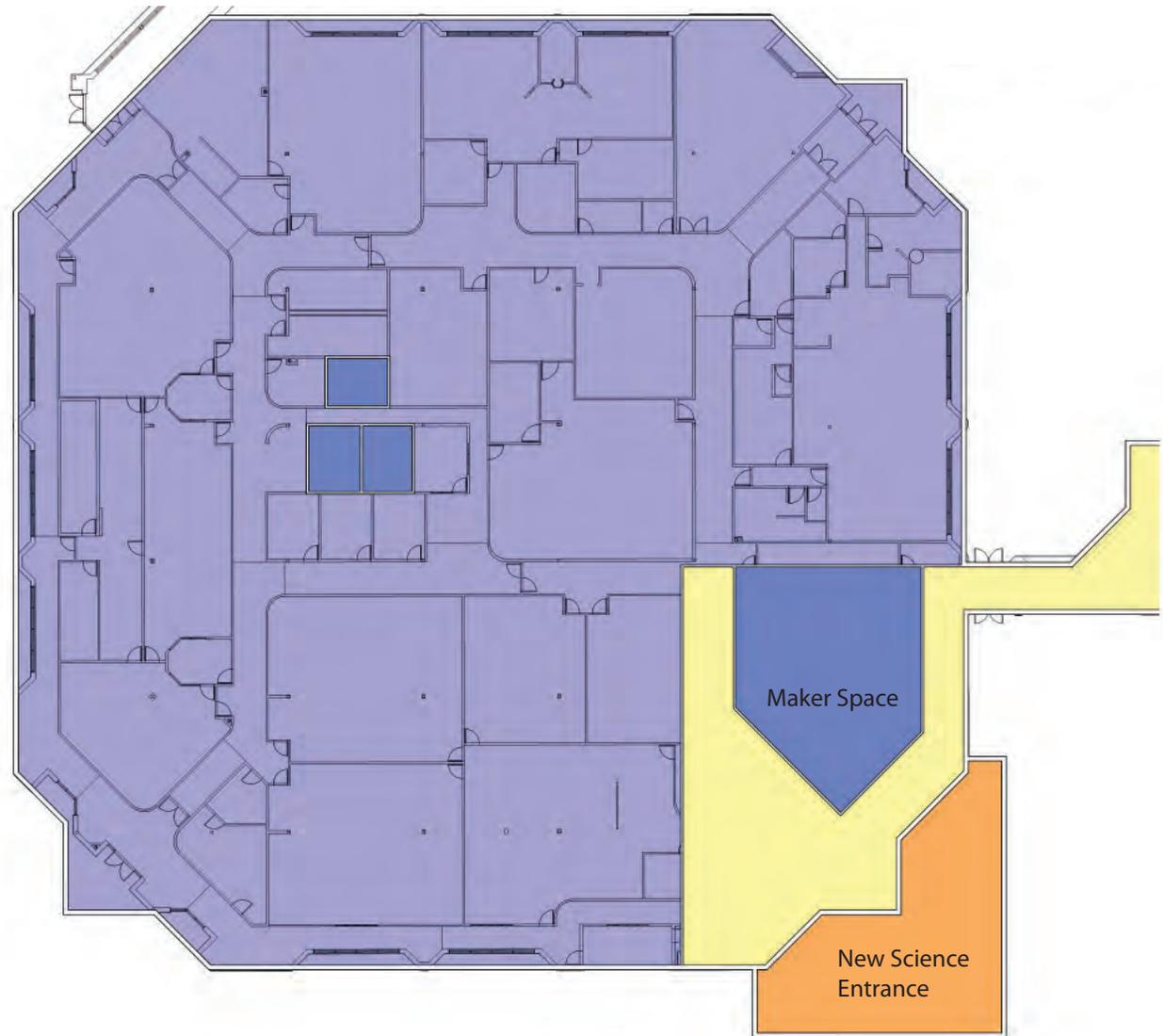
# Science Neighborhood Concept

The Science neighborhood program analysis suggests a surplus of lab, classroom and office spaces. As indicated in the needs analysis, student collaboration space and student activity space are the primary space deficits in the current program. The proposed renovation of the Science neighborhood would provide opportunities to address these shortcomings.

The concept put forth by the master planning team proposes to use some of the surplus space as a science 'maker space' to serve the science community and provide a thematic heart to the building and visually connect to adjacent circulation and student activity spaces. Other recommendations include renovations to lab and classroom spaces to update these learning spaces and provide smaller breakout areas for student collaboration. A new entry and active learning area could also be considered for this area as detailed in the previous Master Plan.

## Relationship to Assessment Report

The Facility Condition Index for the Science Complex was .073 which places the building in the **Fair** category. The majority of the assessment deficiencies could be addressed as part of the proposed renovation for the program improvements. A new Building Automation System (BAS) fire sprinkler system, lighting, carpet and casework were the larger items in the assessment report. All of these could be a part of a larger renovation. Many of the ADA upgrades would be addressed as part of the improvements to the program plan.



### Key Recommendations

- Create science maker space along the pedestrian corridor
- Create student collaboration spaces
- Create a new entry along the academic mall.

### LEGEND

- Active Corridor
- Existing Science
- Science
- Student Collaboration

# Arts Neighborhood Concept

The Arts neighborhood program analysis indicates no major changes to the arts programs. The opportunity exists to consolidate LCCC's various Department of Institutional Effectiveness programs into one congruent location within the Fine Arts building.

Consistent with the overall master plan and the goal of providing student activity space, the program revision proposes a new student collaboration space located along the southern spine. The proposed new collaboration space would include a new entry from the academic mall, which would provide a clear identity for the Fine Arts building.

The student activity space in the Arts neighborhood could include arts maker spaces that provide opportunities for students to produce art both

physically and digitally through the use of active lab areas. This highly visible and public space would enable all students and visitors to engage with the activities being performed at LCCC. Another possible component of the renovation could be an exhibit space for art and sculpture that would be integrated into an interactive and collaborative art space.

## Relationship to Assessment Report

The Facility Condition Index for the Arts Complex was .082 which places the building in the **Fair** category. Since the renovations proposed are outside of the bulk of the building, the existing assessment deficiencies would need to be addressed via a deferred maintenance program. Some of the deficiencies could be addressed with

the consolidation of the Department of Institutional Effectiveness and the addition of the new entry, and student interaction areas. However, the major deficiencies such as a new BAS, a new sewer line, air conditioner in the server room, and a new security system are independent of the minor renovations in this area.

## Key Recommendations

- Create new student collaboration space along southern spine. The space could include active art and exhibit spaces
- Consolidate the Department of Institutional Effectiveness program within the Fine Arts building



# Student Life and Engagement Neighborhood Concept

The Student Life and Engagement neighborhood lies at the heart of the Cheyenne campus. The Student Life and Engagement area is intended to serve as the primary spot for student interaction, collaboration and wellness. A number of initiatives are recommended within this active neighborhood.

The Ludden Library has undergone a Level I Reconnaissance Assessment (Assessment, performed by Bennett Wagner Grody Architects, April 30, 2015) detailing a new building addition and renovation. The Assessment calls for the development of a "Library/Learning Commons" that would serve as the western activity anchor of this neighborhood. The associated diagram depicts the recommendations for the development of the Learning Commons, for which funding has been approved and is currently underway.

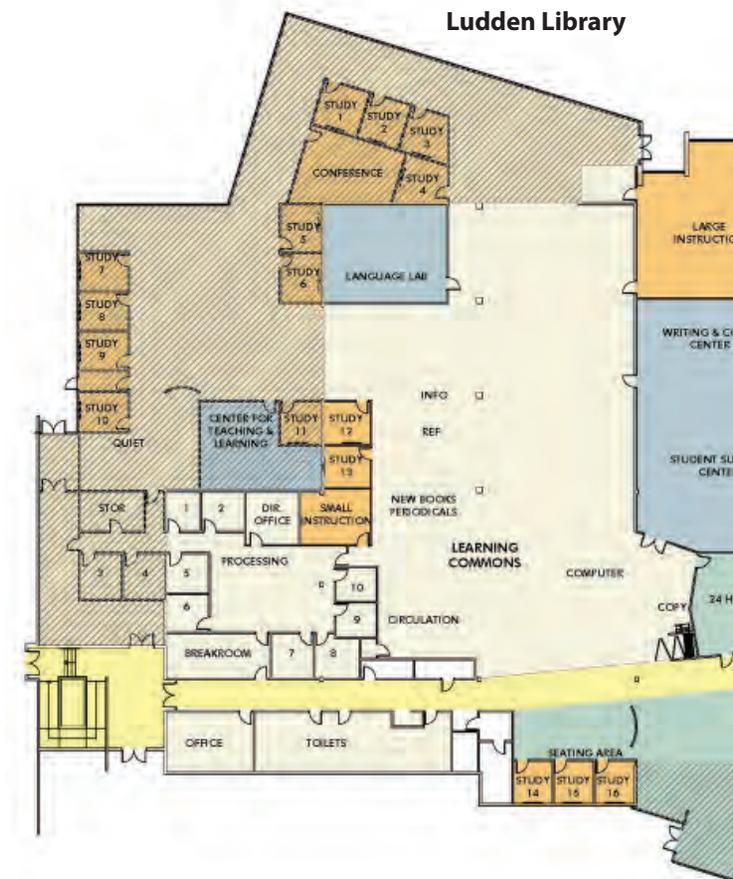
In the center of the neighborhood is the College Community Center. A primary component of this building is the food service program. The 2009 renovation to the dining hall has created a separate entity from the rest of the building due to the single point-of-sale location for students with a meal plan. This program renovation concept relies on an expanded food service program and a more distributed point-of-sale system that would enable the food service and dining to spill out into adjacent spaces in the neighborhood. It is the intention of this program renovation to compose a more integrated and exciting facility by providing a variety of dining options at multiple scales.

The Advising Center offices located across the corridor from the food service area are slated to move to the Pathfinder building. The intent of the revitalization of this area is an extensive remodel that would transform these spaces and the existing

corridor system into a dynamic student interaction and collaboration space. The new space would contain a variety of spatial types and program areas focused on student activity. Small work rooms, open collaboration areas, various sized collaboration spaces and dining opportunities are envisioned in this area. In addition to the interactive student areas, the theater would be revitalized to provide a more flexible performing and presentation venue. As with other neighborhoods, a new entry is proposed to create an identity along the spine and provide a major new entrance that connects this building to the Business building to the south and the Pathfinder building to the north.

The Student Life and Engagement neighborhood extends further east into the Crossroads building. The Crossroads building has direct adjacency to a public drop-off which makes it ideal for outreach programs and interface with the community. The master planning team explored many options for this component and the ultimate recommendation is it be used as a versatile space that is capable of adapting to various functions with a focus on student support. Currently the plans suggest a home for the student veterans/family center, a new pantry, and a student life space catering to student organizations and student engagement. The diagram shows all of the programs identified above, but consideration should be given to other programs when the renovation of this building is initiated. Other potential uses could include a smaller satellite tutoring center (in support of the scheduled tutoring and writing centers in the Ludden Library Learning Commons) and space for Supplemental Instruction. For purposes of the Master Plan, the space in the Crossroads building is viewed as flexible student space that can accommodate new student-focused programs as they arise.

In keeping with the Master Plan Update guidelines, the renovation proposes opening up the spine to make student activity areas that are visually connected to each other and the outdoors. There is also a new entry element identified which would give the building a needed identity along the exterior mall. The central space that organizes each of the program components should be designed as an open and flexible meeting space for students, families, and community members.



*Learning Commons Diagram courtesy of Bennett Wagner Grody Architects*

## Relationship to Assessment Report

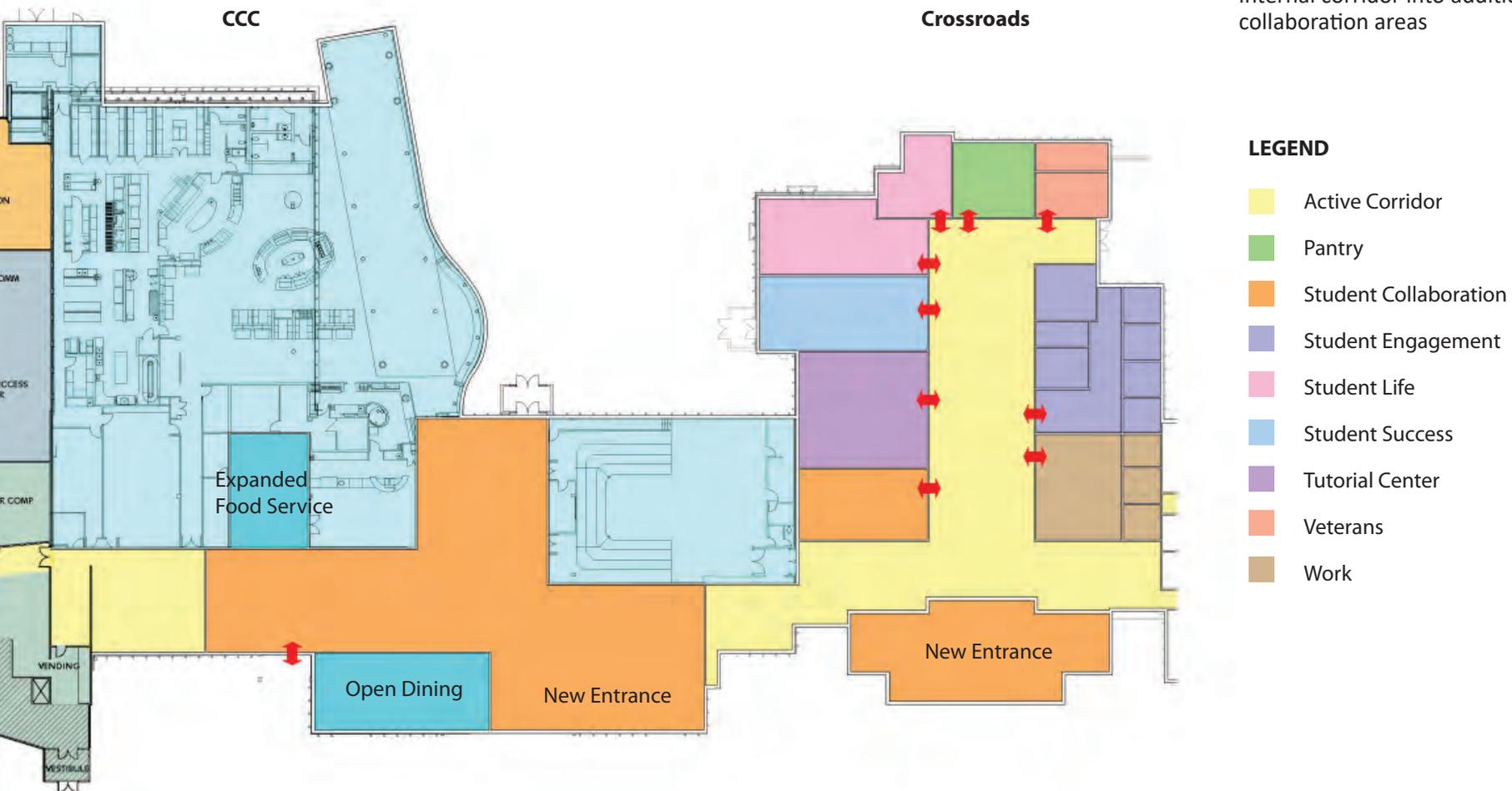
There are a number of existing buildings that are part of the Student Life and Engagement complex. The Facility Condition Index for the Ludden Library and College Community Center was .086 which places the building in the **Fair** category. The majority of the assessment deficiencies could be addressed as part of the renovation for the program improvements. A new roof, renovation of the theater complex, and upgraded water service were

the main assessment deficiencies in this building and would clearly be part of this reprogramming effort.

The Facility Condition Index for the Crossroads building was .042 which places the building in the **Good** category. The majority of the assessment deficiencies are minor and could be addressed as part of the renovation for the program improvements. New entrance doors and a new MDP section are the biggest cost items and minor compared to the rest of the physical plant.

## Key Recommendations

- Renovate and expand to create the Ludden Library and Learning Commons
- Reconfigure the food service program to encourage more student interaction and provide additional food options
- Repurpose the Crossroads building as a flexible space for numerous student uses
- Transform open space along the internal corridor into additional student collaboration areas



# General Studies Neighborhood Concept (Arp Building)

The General Studies neighborhood consists of generally assigned classrooms and the child care and teaching facility within the Arp building. The big idea for the Arp building is to reconfigure the general classroom spaces to provide more workable and accessible classrooms paired with a faculty office/workroom complex. The offices are supported by open work areas that could be utilized as conference spaces. A new entry provides easy access off of the spine and provides a means to integrate into a larger student activity area.

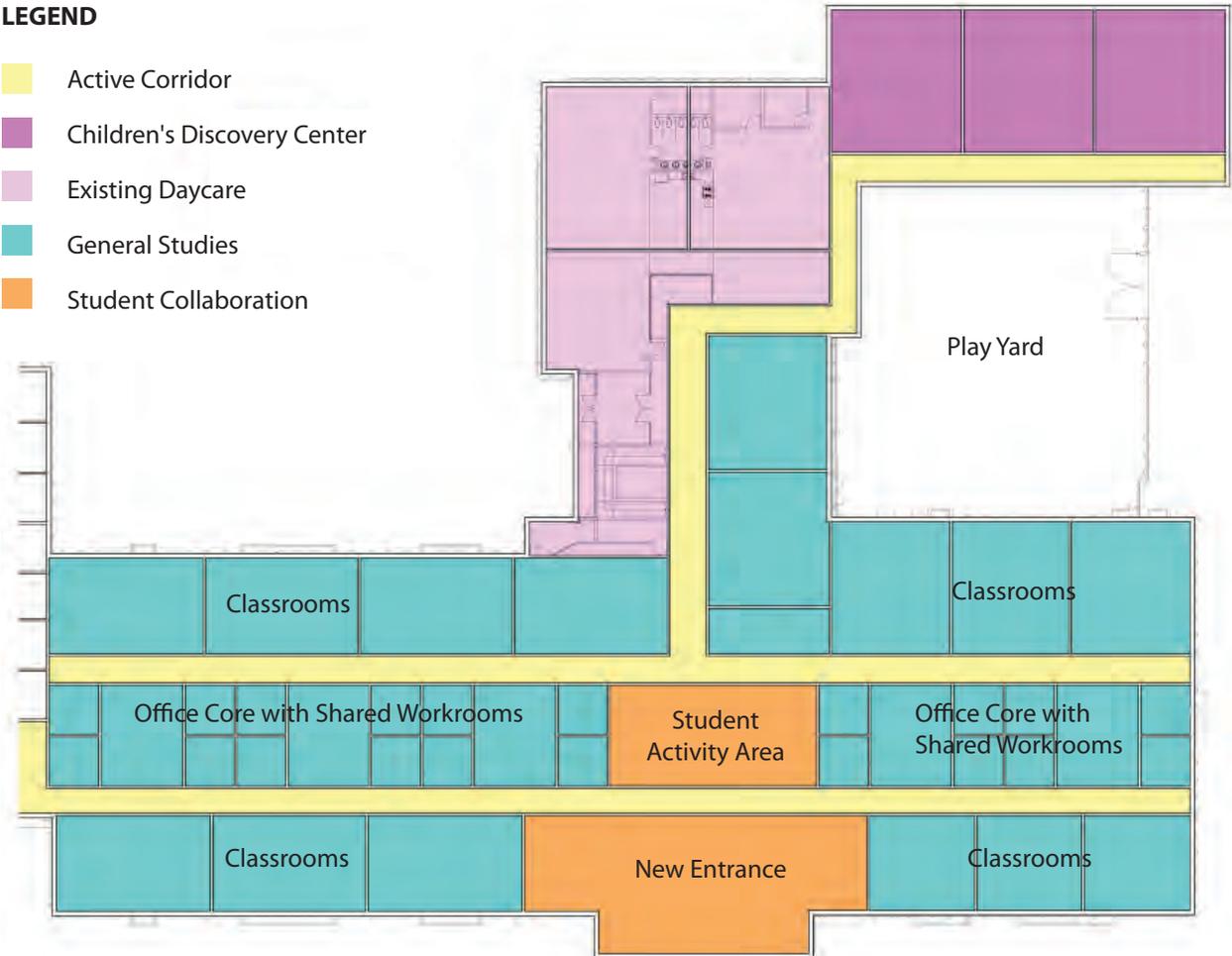
The second part of the proposed program plan for the Arp building involves the addition of new Children's Discovery Center classrooms that form the northern edge of the existing outdoor space. This arrangement would enable direct access to a protected outdoor area for children. The classrooms were relocated from the Automotive Technology building.

## Relationship to Assessment Report

The Facility Condition Index for the General Studies Complex was .042 which places the building in the **Good** category. A new BAS System, building security, and enhanced ventilation are three major components of the building assessment that could be addressed through a larger renovation. The remaining deficiencies are relatively minor and would easily be incorporated into other projects.

### LEGEND

- Active Corridor
- Children's Discovery Center
- Existing Daycare
- General Studies
- Student Collaboration



### Key Recommendations

- Relocate the portion of the Children's Discovery Center currently located in the Auto Technology building to the Arp building next to the existing Children's Discovery Center facilities
- Renovate/reconfigure the Arp building as a general studies building with flexible classroom, office, and meeting/study spaces

# Career Tech Neighborhood Concept (Career & Technical Building)

The program modifications to the Career Tech neighborhood are relatively minor. The master planning team proposes a new simulation lab for plumbing, electrical, and HVAC be added to the northeast corner of the building. Also, there is a minor renovation proposed of a career technical classroom located in the classroom bar of the building.

There is significant cost associated for adding program to the existing second level. This program would come at a cost premium because of the need to add an additional stair and elevator. It was determined that the best use of this space would be for temporary swing space to accommodate temporary uses during renovation.

## Relationship to Assessment Report

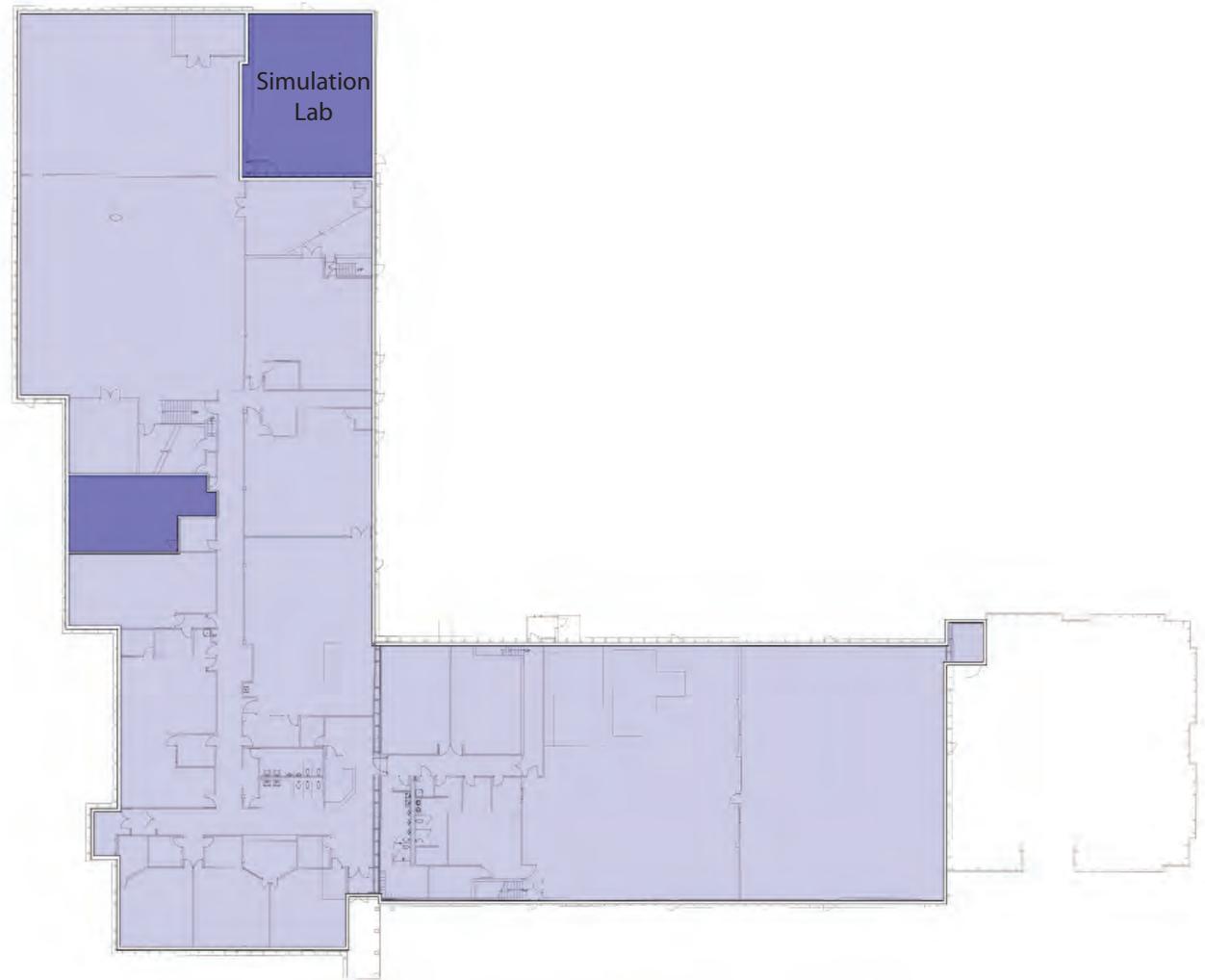
The Facility Condition Index for the Career Tech Complex was .083 which places the building in the **Fair** category. There are few major assessment deficiencies that will need to be addressed outside of these minor improvements to the program. A new roof, a new lift connecting the high bay to the main floor, and a new security system are a few of the more major items in the Career & Technical building.

## Key Recommendations

- Implement a new simulation lab in the current welding space
- Do not actively program the second level of the building due to accessibility and environmental quality issues

### LEGEND

- Career Tech
- Career Tech Existing



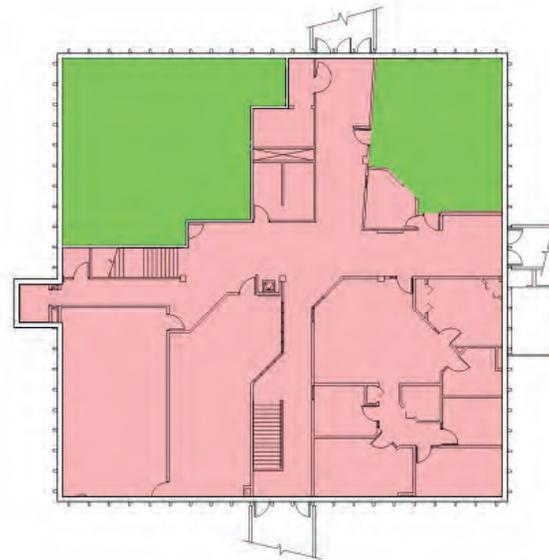
# Education and Enrichment Neighborhood Concept (Education & Enrichment Center)

The Education and Enrichment neighborhood would require minimal renovations as a result of the program analysis update. The program analysis indicates additional space available within the building footprint. This provides an opportunity to consolidate disparate programs throughout the campus, such as the Center for Teaching and Learning and the Center for Learning Technologies. Additional areas may also be used as swing space.

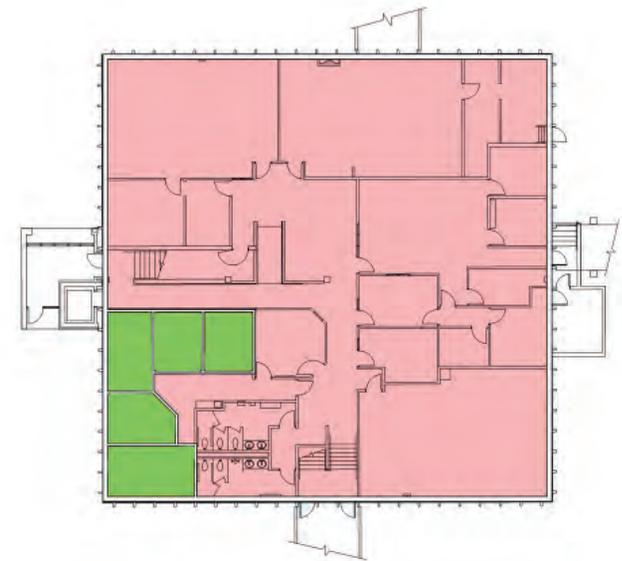
## Relationship to Assessment Report

The Facility Condition Index for the Education and Enrichment Complex was .109 which places the building in the **Poor** category. The primary reason for this is its size. The large items in the assessment report include significant exterior repairs, a new elevator, new Variable Air Volume (VAV) boxes in the mechanical system and a new security system. The categorization suggests that a building this size does not have inherent value when compared to building a new building of similar size. In any case, the renovations proposed for the program changes would not address any of the larger issues associated with this building. LCCC would need to determine if the building merits renovation at a relatively high dollar per square foot cost or if replacing this building makes more fiscal sense.

*EEC - Main Level*



*EEC - Lower Level*



## Key Recommendations

- Repurpose vacated spaces within Education & Enrichment Center to allow for the expansion of the Center for Learning Technologies (CLT) and the Center for Teaching and Learning (CTL) with shared collaboration space

## LEGEND

- Expanded CLT and CTL Programs
- Education and Enrichment

# Business and Technology Neighborhood Concept

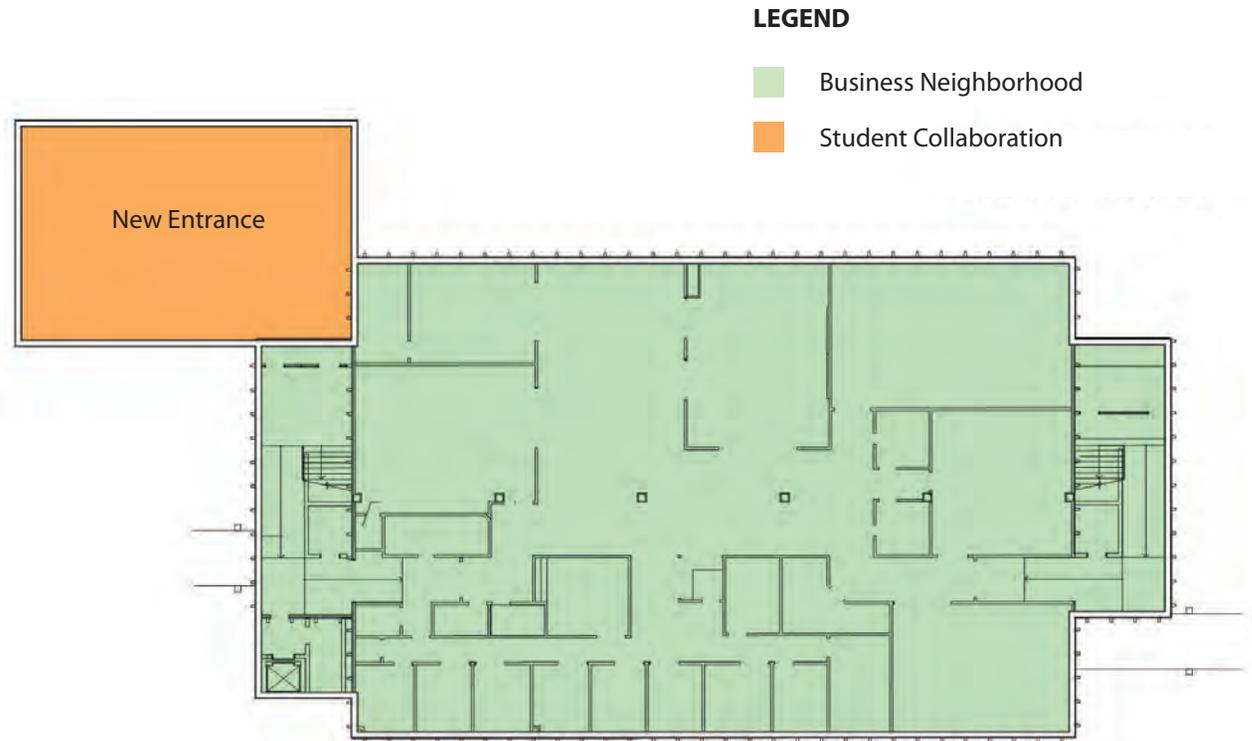
There are no program changes recommended for the Business building. As the development of the overall Master Plan Update is put in place there is an opportunity to provide a new entry with additional active learning spaces for business.

## Relationship to Assessment Report

The Facility Condition Index for the Business and Technology Complex was .176 which places the building in the **Poor** category. The larger assessments items include new air handling units, duct work, exterior enclosure, and a new security system. Since there are no programmatic improvements to the facility, the building upgrades can be accomplished whenever LCCC has the available funds.

## Key Recommendations

- Provide a new entrance and collaboration space of the academic mall



# Automotive Technology Neighborhood Concept

The program analysis and Master Plan Update recommends the relocation of the Child Development Center to the new General Studies neighborhood in the Arp building. Due to this move as well as Auto Diesel moving into the Flexible Industrial Technology building, the Automotive Technology program could easily expand into the vacated spaces within this building. The space vacated by the Children's Discovery Center could be used for swing space. These proposed changes remedy the safety and environmental concerns that currently exist in the building.

## Relationship to Assessment Report

The Facility Condition Index for the Automotive Technology Complex was .249 which places the building in the **Poor** category. The renovation of the existing child care space together with the remodeling of the high bay space for auto technology approximates 50% of the building area. It is logical to conclude that these program improvements would trigger a total remodel of the Automotive Technology building. The list of major improvements identified in the assessment report are substantial. New electrical switchgear, lighting upgrades, new air handling units, sprinkler system and plumbing systems, demolition of the upper level apartment, and upgraded finishes are some of the major items identified in the report.

## Key Recommendations

- Allow Auto Technology program to expand into vacated high bay space



# Administrative Neighborhood Concept

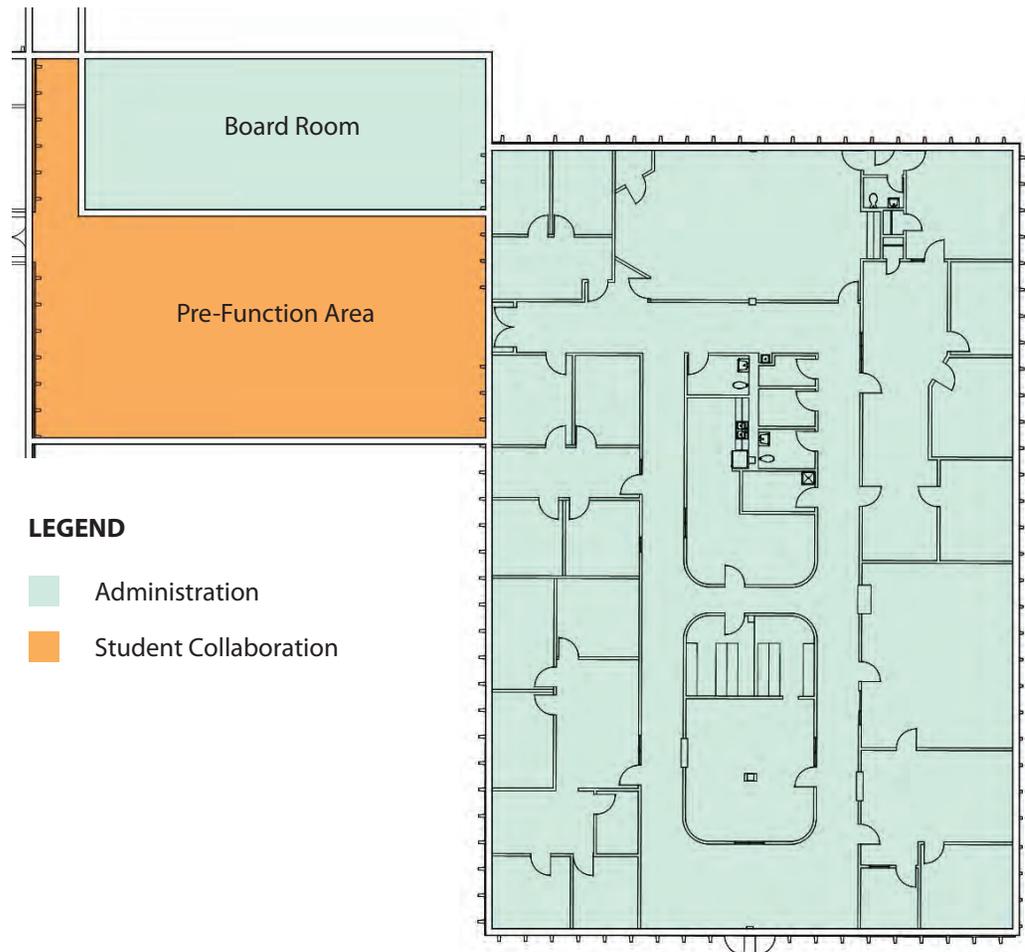
The needs analysis did not identify any vacated space in the Administration building. However, conversations with administration and the advisory committee suggested that there were some inefficiencies in how the current program operated. Furthermore, the group identified the Board Room as a major deficiency in regards to size and operations. In light of these observations the Master Plan Update recommends the addition of a new Board Room adjacent to the current Administration building. The Board Room would be larger to accommodate larger groups. A larger pre-function/lobby space is also proposed for this area. This new lobby and adjacent outdoor space would serve as an appropriate venue for community and campuswide functions. The location of the proposed Board Room would provide easy access to the food service facilities in the adjacent Center for Conferences & Institutes.

## Relationship to Assessment Report

The Facility Condition Index for the Administrative Complex was .114 which places the building in the **Poor** category. Exterior restoration, security systems, and roof replacement at the breezeway are the major components identified in the assessment report. It is anticipated that if a new Board Room is put in place the entire administration floor plate could be re-thought and designed to optimize adjacencies and operations, such as co-locating the human resources offices together within this neighborhood. In light of this, it is the recommendation of this report that all of the deficiencies identified in the assessment report would be addressed during the implementation of this component of the Master Plan Update.

## Key Recommendations

- Implement a new Board Room and pre-function space between the Administration and Center for Conferences & Institutes
- Co-locate the human resource offices and look for opportunities to optimize other operations via renovation or repurposing of space within the administration floor plate



# Site Master Plan

The implementation of these initiatives will have a significant impact on the physical form and function of campus. The site master plan provides a coordinated vision that illustrates the impacts of these initiatives. Included in the master plan are representations depicting new building construction, building additions, and changes to the open space, pedestrian and vehicular circulation, and the campus parking systems. The following section provides an overview of the proposed site plan recommendations.

## LEGEND

- ① New Residential Quad
- ② Campus Crossroads (Signature Open Space)
- ③ Vehicular Drop-off
- ④ Flex Tech Courtyard
- ⑤ Board Room Entrance

-  Sidewalks
-  Roadways/Parking Lots
-  Plaza/Node/Pedestrian Crossing
-  Existing Campus Building
-  New Academic Building/  
Building Addition
-  New Residential Building





## Master Plan Building Program

The following summaries provide recommendations for new building construction and additions on the Cheyenne campus. The summaries provide a label linking the plan buildings to the summary descriptions and contain suggested building footprints (in GFS) and number of stories to accommodate the results of the space needs analysis. The actual building sizes and footprints will require an additional study and design prior to implementation to ensure new construction best fulfills the LCCC's needs.

### Proposed Academic Buildings

- (N1) Children's Discovery Center**  
# of Floors: 1  
Footprint: 4,000 GSF

#### *Development Recommendations*

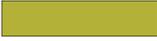
A new building for the Children's Discovery Center is proposed near the northern wing of the Arp building. The existing child care center is located here and sits next to an open play yard that child care and the Children's Discovery Center use. The proposed building location on the north side of this space would provide additional protection for the playground from the weather, notable the prevailing winds. The building could be connected to an existing interior corridor within the Arp building. The new building would be served via a new drop-off loop to the west and the adjacent parking lot.

- (N2) Assembly Building**  
(Fine and Performing Arts Space)  
# of Floors: 1-1.5  
Footprint: 12,000 GSF

#### *Development Recommendations*

The space needs assessment indicates a significant deficit in assembly and exhibit space. LCCC has acknowledged the desire for a multi-purpose assembly venue that could be located on campus that could be utilized for both campus and community functions. These uses could include musical and theatrical performances, banquets, guest speaking engagements, and local community events. A new building located south of Fine Arts could fulfill this purpose. The proposed location strengthens the proposed Arts neighborhood that is focused within the Fine Arts building. The building is located in a green space adjacent to an existing parking lot. This lot could be managed to allow student parking during the day that could open in the evening hours for performances and events. The new design should incorporate a vehicular pull off so visitors can be dropped off before circulating into the parking lot. The new addition should incorporate an appropriately sized pre-function area that can be utilized during events. A building at this location has the potential to leverage the existing hillside and provide entrances on an upper level from the parking lot and a lower level from the academic mall.

#### LEGEND

-  Proposed Academic Buildings
-  On-campus Residential
-  Academic Building Addition





## Academic Building Additions

- (A) Science Center Addition**  
# of Floors: 1  
Footprint: 1,800 GSF

### *Development Recommendations*

A new building addition is proposed at the southeast corner of the Science Center. The addition extends toward the academic mall to create a new identifiable entrance for the building. The building facade should be set back at least 5 feet from the existing northern sidewalk of the academic mall. A small plaza node could be implemented at this location to further enhance the building entrance.

- (B) Fine Arts Addition and Renovation**  
# of Floors: 1  
Footprint: 3,000 GSF

### *Development Recommendations*

A new addition is proposed on the south face of the Fine Arts building. A new entrance at this location would aid in the identification of the Fine Arts building along the academic mall. This space could be utilized as a gallery or exhibit space to showcase work being performed by students and faculty at LCCC. A small plaza space could be developed in front of the building with some benches and landscaping.

- (C) Ludden Library Addition + Renovation**  
# of Floors: 1  
Footprint: 13,400 GSF (addition)

### *Development Recommendations*

A Level 1 Reconnaissance Study has been performed detailing an addition to and renovation of the Ludden Library. This investment would transform the existing facility into an "innovative

learning hub that integrates technology, information, and expertise in a learning-centered environment focused on promoting collaboration, building community, and achieving academic excellence." (Level 1 Reconnaissance Study, May 2015) The improvements are slated to include various types of learning labs, study rooms, and updated technology. The proposed improvements directly align with the goals and intent of the Student Life and Engagement neighborhood and would greatly enhance the learning opportunities and experience at the College.

- (D) Crossroads Building Addition**  
# of Floors: 1  
Footprint: 1,990 GSF

### *Development Recommendations*

The Crossroads addition is envisioned to serve as another student collaboration space that also creates a recognizable building entrance along the academic spine. It is slated to house the new student engagement center and should be developed to permit activities in this space to spill out into the open collaboration area. From the exterior, this space can serve as a new welcoming entrance to the Student Engagement Center. It should provide visual transparency onto the mall with and could contain an outdoor plaza node.

- (E) Business Building Addition**  
# of Floors: 1  
Footprint: 1,200 GSF

### *Development Recommendations*

This addition is located at the northwest corner of the Business building. This addition should extend toward the academic mall as it is the terminus of the north-south pedestrian connection from the Pathfinder building. The entrance should relate with the entrance of the College Community Center

across the mall. There is an opportunity to create a plaza node at this location to connect these buildings.

- (F) Board Room and Pre-Function Space**  
# of Floors: 1  
Footprint: 3,860 GSF

### *Development Recommendations*

This addition is located on the north side of the existing corridor between the Administration and Center for Conference & Institutes buildings. This location could serve as the space for a new, appropriately sized Board Room for LCCC. The existing corridor could be expanded to provide a pre-function space at the entrance to the Board Room. The courtyard in front of this corridor could function as the new public entrance to the Board Room, removing the need to navigate through the Administration or Center for Conference & Institutes buildings for meetings. This would free up the existing Board Room for additional administrative or central services functions.

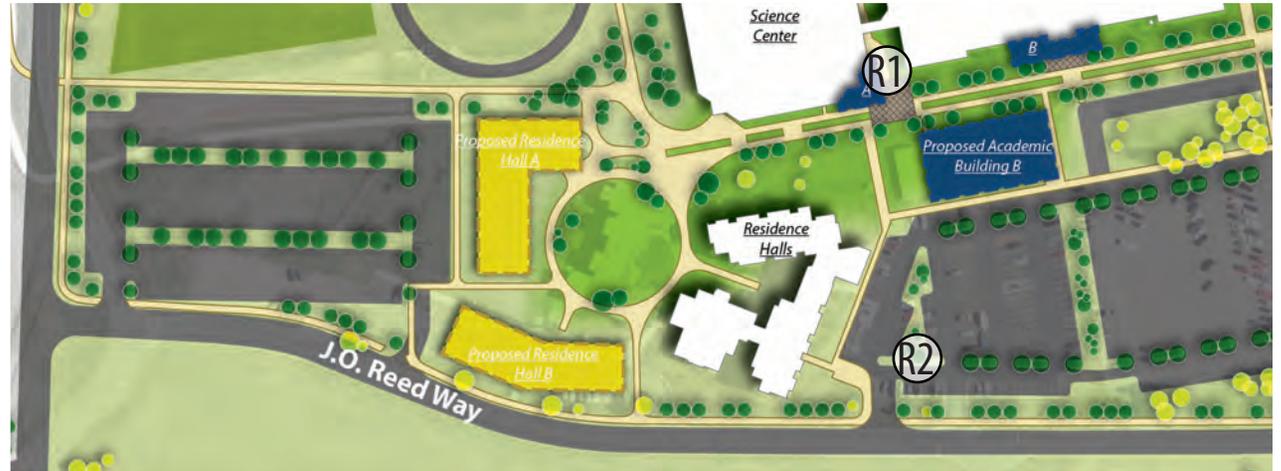
- (G) Recreation and Athletic Complex (RAC)**  
# of Floors: 3  
Building Size: 75,912 GSF

A Level 1 Study and Update have been completed detailing an addition and renovation to the RAC. This project will create a collegiate level recreation center that is capable of hosting sanctioned sporting events and competitions. In addition to supporting LCCC's athletic programs, the renovated RAC will benefit students and community members who utilize the facility on a daily basis. The improvements include a renovated competition arena, a new building facade and entrance on the west side of the building, and a new upper level club lounge.

## On-campus Residential

LCCC has expressed the desire to provide more on-campus residential housing at the Cheyenne campus. Currently, the campus contains a total of 276 beds. 92 of these beds are located in the West Residence hall, which the administration has noted as near the end of its lifespan and a candidate for removal in the future.

There are two different residential development models that could be applied to the Cheyenne campus. The first development model consists of traditional student housing. These are envisioned as suite-style apartments that share common spaces similar to the existing housing stock of the North and East Residence Halls. The other residential option is non-traditional student housing. These are typically a more independent-style apartment that cater to students who have families or children. Options were developed that accommodate both these residential styles, depending on the type of residential demand.



**Development Option 1 (Traditional Student Housing)**

**R1** # of Floors: 3  
Footprint: 18,400 GSF  
Building Size: 55,200 GSF

**R2** # of Floors: 3  
Footprint: 12,000 GSF  
Building Size: 36,000 GSF



**Development Option 2 (Mix of Residential Styles)**

**R3** Non-traditional Student Housing  
# of Floors: 2  
Footprint: 6,000 GSF  
Building Size: 12,000 GSF

**R4** Non-traditional Student Housing  
# of Floors: 2  
Footprint: 8,000 GSF  
Building Size: 16,000 GSF

**R5** Traditional Student Housing  
# of Floors: 3  
Footprint: 10,800 GSF  
Building Size: 32,400 GSF

**R6** Traditional Student Housing  
# of Floors: 3  
Footprint: 10,800 GSF  
Building Envelope: 32,400 GSF

## Master Plan Systems

The following is a summary of the recommendations pertaining to vehicular and pedestrian circulation, parking, and open space.

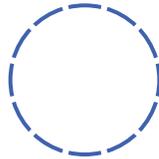
### Vehicular Circulation Recommendations

- Straighten the curve in the Loop Road and re-align the intersection with Reed Drive in the southwest corner of campus.
- Create a new vehicular drop-off loop in the space between the Crossroads and Arp buildings. The location of this drop-off will serve multiple buildings including the Pathfinder, Crossroads, Arp, and College Community Center buildings.
- Create a new drop-off in front of the assembly space addition at the Fine Arts building.
- Implement traffic calming measures such as crosswalks and speed tables to reduce speeds along the Loop Road.
- Maintain access for service and emergency vehicles along major campus pedestrian corridors.
- Install a raised pedestrian crossing at the driveway west of the Flexible Industrial Technology building to extend the pedestrian paths of the academic mall across this driveway.

### Parking Recommendations

- In conjunction with new implementation of new residence halls, construct a new parking lot in the southwest portion of campus that is designated for residential parking.
- Break up large expanses of parking with green space. Incorporate stormwater bioswales to capture surface run-off and slow the release of stormwater into the storm system.
- As adjacent building projects impact parking lots, replace angled parking with 90 degree stalls

### LEGEND

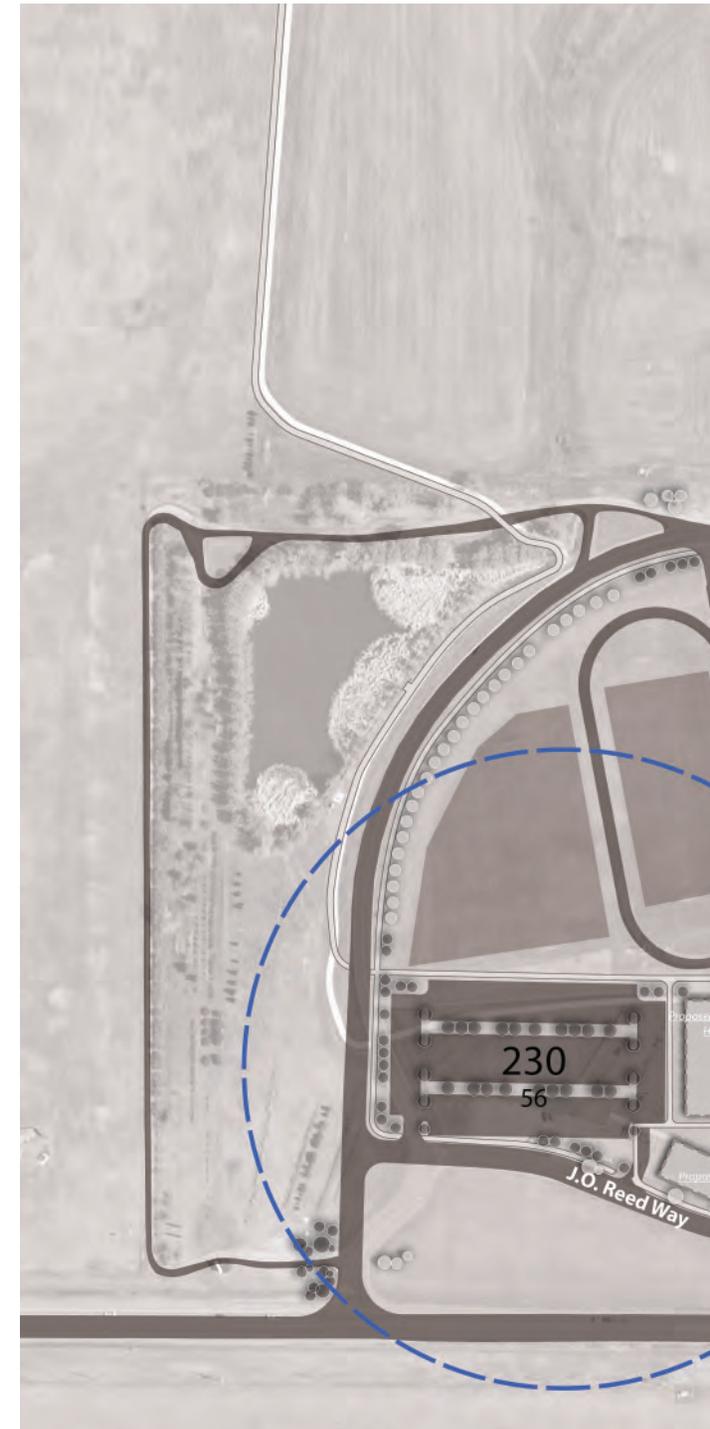


2.5 Minute Walking Radius from Center of Parking Area

300  
200

Proposed # of Parking Spaces

Existing # Parking Spaces



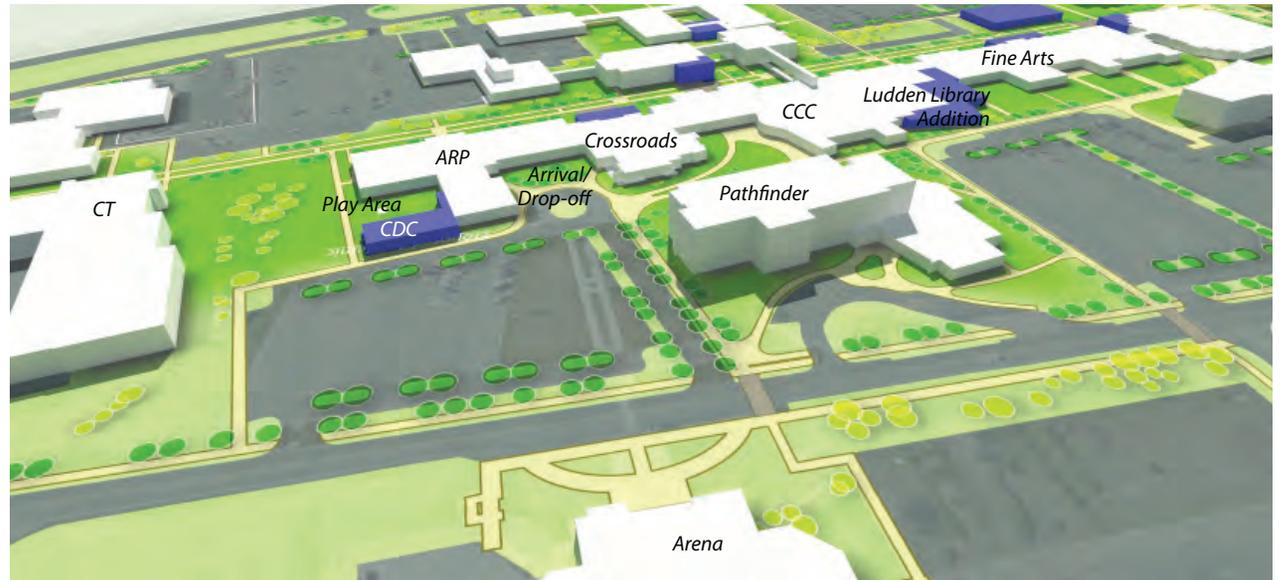


### Pedestrian Circulation Recommendations

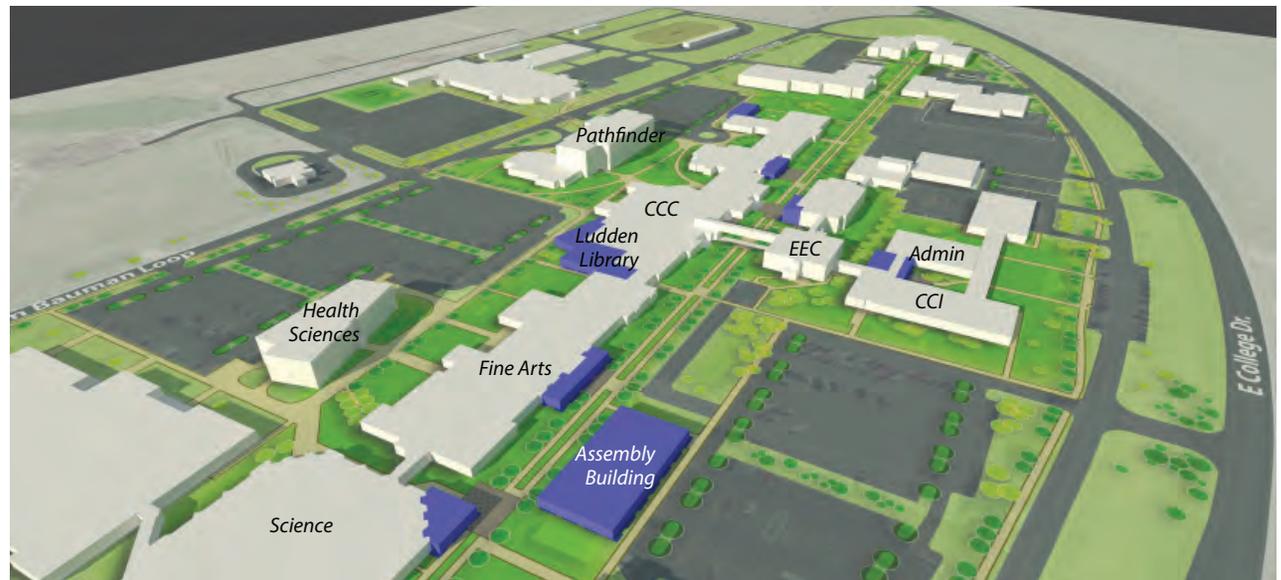
- Implement a pedestrian path along the Loop Road.
- Create a connection from the campus academic mall to the regional greenway system.
- Enhance the pedestrian crossings to the Pathfinder building between the Arena and parking lot north of the Loop Road.

### Open Space Recommendations

- Develop a residential quad by the new residence halls. The quad should be a large open space to encourage active and passive recreation. Building architecture should play a role in the shaping of the space and can provide some protection from the westerly winds.
- Develop a signature open space between the Pathfinder and College Community Center buildings as described in the Master Plan initiatives.
- Develop an open space with spaces that encourage student interaction, socializing, and study in the Flexible Industrial Technology building courtyard.
- Implement a series of plazas and nodes along the academic mall at key locations to encourage more use and activity along this corridor. The spaces should follow the recommendations of the previous master plan.



*New Vehicular Arrival Area and Drop-off between Arp and Crossroads Buildings*

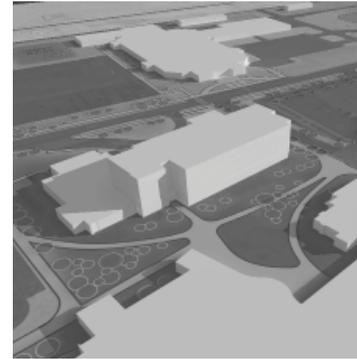


*Campus Master Plan Looking Northeast*

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# five|albany county campus master plan

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# Space Needs Analysis

From an existing space and physical site standpoint, the Albany County campus is largely the same today as it was in 2011.

## Albany County Campus

As illustrated in *Table 5-1*, the space needs analysis at the base year (Fall 2015) for the Albany County campus generates an overall need for 31,515 ASF, a deficit of 10,884 ASF when compared with actual space.

Currently an additional 2,925 ASF is planned for the Albany County campus, and is included in this analysis. At 2020 enrollment and staffing levels, the application of the same guidelines generates a need for 33,234 ASF of space, a deficit of 9,678 ASF after the building addition is completed.

## Academic Space

In the Albany County campus, the Academic space category for the target year generated a surplus of space in the Classroom and Service category, and the deficits from the base year are reduced in most other categories. No new programs are anticipated in this analysis.

## Academic Support Space

The Academic Support Space category generated an overall need for 7,490 ASF in the target year. The deficit of 4,169 ASF is more than the existing space in the category. The Learning Commons/Library and Student Social & Study deficit from the base year is increased with the increased enrollment projection.

**Table 5-1: Campuswide Space Needs Analysis - Albany County Center**

Space Category	Base Year				Target Year			
	Student FTE = 1,930 Staff Headcount = 342				Student FTE = 2,085 Staff Headcount = 357			
	Existing ASF	Guideline ASF	Surplus/ Deficit	Percent Surplus	Existing ASF	Guideline ASF	Surplus/ Deficit	Percent Surplus
<b>Academic Space</b>								
Classroom & Service	6,075	6,214	(139)	(2%)	7,350	6,360	990	13%
Teaching Laboratories & Service	4,122	6,445	(2,323)	(56%)	5,572	6,554	(982)	(18%)
Open Laboratories & Service	1,791	2,387	(596)	(33%)	1,791	2,530	(739)	(41%)
Offices & Service	4,112	5,230	(1,118)	(27%)	4,312	5,476	(1,164)	(27%)
Academic Success Laboratories	524	868	(344)	(66%)	524	1,012	(488)	(93%)
Other Department Space	250	1,302	(1,052)	(421%)	250	1,380	(1,130)	(452%)
<i>Academic Space Subtotal</i>	<i>16,874</i>	<i>22,446</i>	<i>(5,572)</i>	<i>(33%)</i>	<i>19,799</i>	<i>23,312</i>	<i>(3,513)</i>	<i>(18%)</i>
<b>Academic Support Space</b>								
Learning Commons/Library	1,177	2,223	(1,046)	(89%)	1,177	2,409	(1,232)	(105%)
Assembly & Exhibit	0	0	0	n/a	0	1,200	(1,200)	n/a
Central Computer	450	434	16	4%	450	460	(10)	(2%)
Physical Plant	0	604	(604)	n/a	0	1,095	(1,095)	n/a
Student Social & Study	1,694	2,170	(476)	(28%)	1,694	2,300	(606)	(36%)
<i>Academic Support Space Subtotal</i>	<i>3,321</i>	<i>5,431</i>	<i>(2,110)</i>	<i>(64%)</i>	<i>3,321</i>	<i>7,464</i>	<i>(4,143)</i>	<i>(125%)</i>
<b>Other</b>								
Student Center	436	2,124	(1,688)	(387%)	436	2,250	(1,814)	(416%)
<i>Other Subtotal</i>	<i>436</i>	<i>2,124</i>	<i>(1,688)</i>	<i>(387%)</i>	<i>436</i>	<i>2,250</i>	<i>(1,814)</i>	<i>(416%)</i>
<b>Campus Total</b>	<b>20,631</b>	<b>30,218</b>	<b>(9,587)</b>	<b>(46%)</b>	<b>23,556</b>	<b>32,918</b>	<b>(9,362)</b>	<b>(40%)</b>

ASF: Assignable Square Feet

## Other or Auxiliary Space

In reviewing the Other space category for the Albany County campus at the target year, the guidelines generates a deficit of 3,000 ASF, almost six times the current space available. This reflects the lack of Student Center space on this campus.

# Existing Conditions

The Albany County Campus (ACC) is located in the City of Laramie within the 442-acre Turner Tract property. The Turner Tract Area Plan, issued in 2001 and updated in 2013, includes a mix of residential, civic and institutional, office, retail, and open space uses on the property. As part of the update, the Master Plan recommends a development pattern that builds on the civic and educational facilities that are already on site while also maintaining open space and greenways, as well as promoting pathways for linking various land uses within the Tract. The ACC has a significant role to play within the overall vision of the parcel.

The ACC is currently located on an approximately 10-acre parcel (designated as Lot #3 within the plan) with existing vehicular site access from Boulder Drive. The facility has a vehicular drop-off loop and a dedicated 177 space parking lot. The site contains a regional drainage swale running along the northern edge that eventually enters Spring Creek. There is a topographic ridge that runs along the southern third of the parcel. The parcel contains an existing wind turbine along this ridge. The ACC is surrounded by a variety of users, including recreational and commercial uses.

The ACC is located in the midst of a group of both developed and undeveloped parcels. ACC leadership has engaged the City of Laramie regarding the acquisition of six additional undeveloped parcels for the future expansion of LCCC. In response, the master planning team developed a master plan vision for the full site development utilizing these parcels. While an agreement for these parcels has not been struck with the City of Laramie, the Master Plan Update provides a long-range development tool that may be used by the ACC during future negotiations.

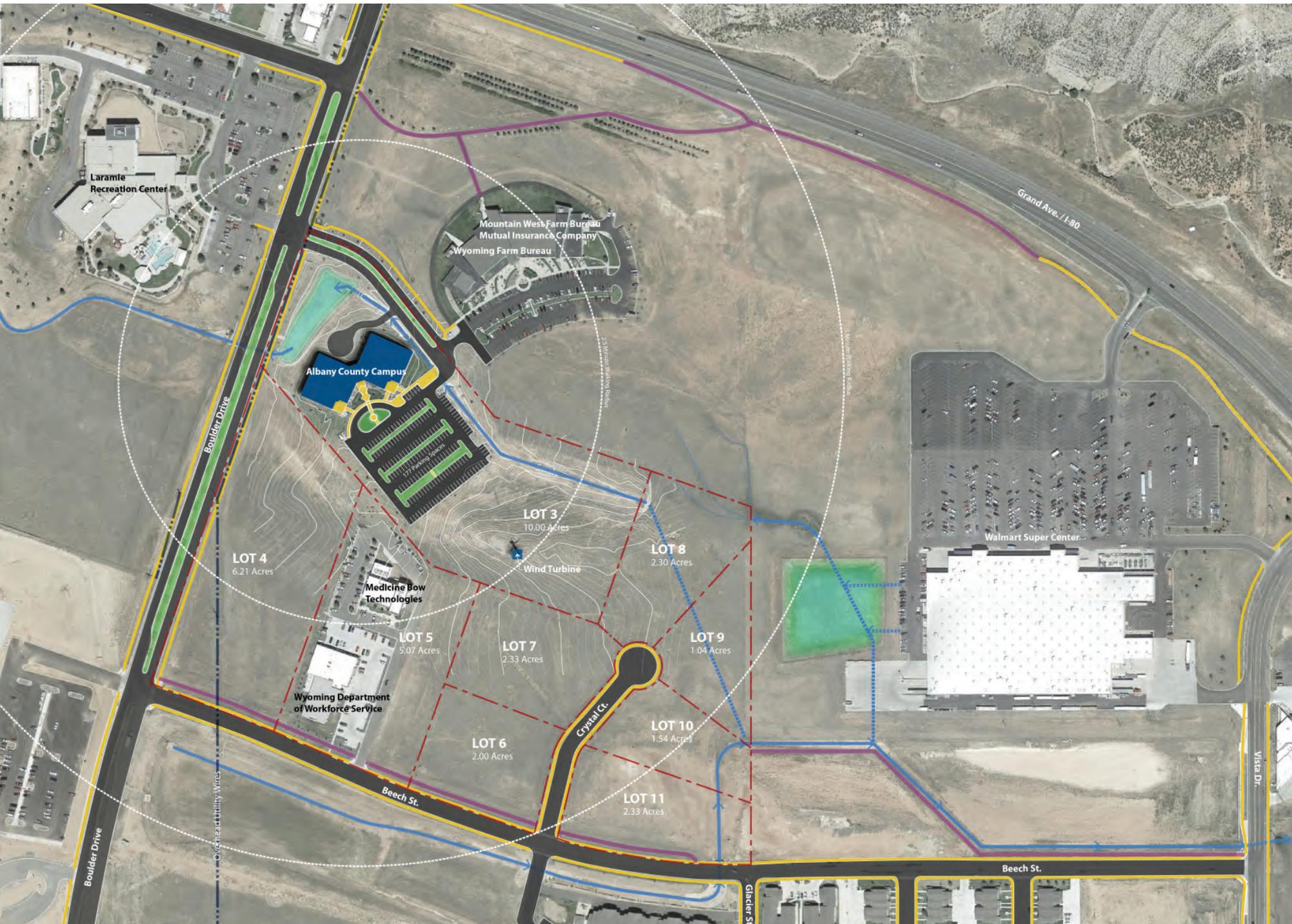
## Existing Space - Parking Ratio

Existing ACC Space:	20,631 ASF
ACC ASF with planned addition:	23,556 ASF
Existing Parking:	177 spaces
Existing Parking ratio:	1 sp./116 ASF
Parking ratio with planned addition:	1 sp/133 ASF

## LEGEND

-  Campus Buildings
-  Existing Landscape
-  Pedestrian Walkway/Paving
-  Existing Detention
-  Drainage Pattern
-  Multi-Use Trail
-  Overhead Utilities Wires
-  Property Line





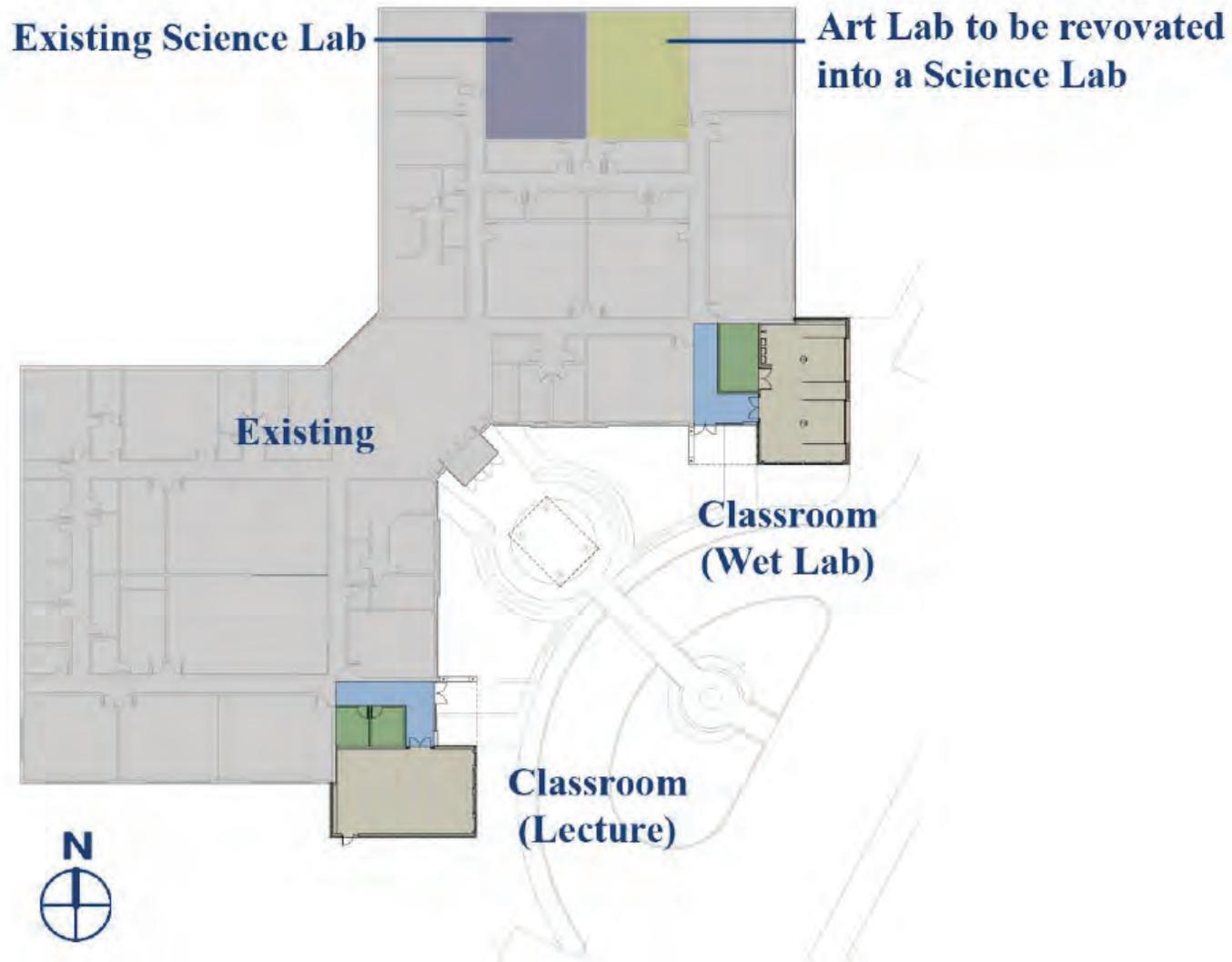
# Concurrent Work at ACC

As noted in the space needs analysis, the ACC has an existing deficit of campus space. The College initiated a Level I and II Assessment report that details an addition and renovation plan to provide additional classroom, office, and laboratory instructional space. The plan and rendering (at right) were developed as a part of this study. Construction for the project is slated to begin in the Spring of 2017, to be completed at the beginning of the 2018 Spring semester. Additional information regarding this project may be found in the Albany County Campus "Classroom Additions, Level I & II Report" by Tobin & Associates, P.C. (August 8, 2016)

The following development options have incorporated this work into the Master Plan.



ACC Addition Rendering (Tobin & Associates, P.C.)



# Campus Master Plan

## Development Options

### Phase I

Based on the results of the space needs analysis, the Albany County campus could meet its current space needs with additional development on its existing parcel. LCCC has completed a Level I and II building addition study that planned a 3,520 SF addition that includes additional classroom, lab, storage, and office space. This addition was included in the 2020 Target Year Space Needs Analysis. Even with this addition, the campus will still contain a deficit of approximately 9,850 ASF in the target year.

The Phase I plan shows the new addition to the existing building. The plan indicates a location for a new stand alone building south of the existing facility. The building is depicted at approximately 15,000 GSF which could accommodate the 9,850 ASF need; however, the ultimate size and design of the building necessitates further study.

It is worth noting that 2/3 of the Albany County campus' current spatial deficits are in the academic support and student center space needs categories. If the Albany County campus continues to develop and become a larger campus, this will be a critical space typology that serves the student population. If the campus expansion is limited and the Albany County campus remains a satellite Center with one or two buildings, this use may not be as critical. With either option, much like at the Cheyenne campus, there may be the opportunity to relocate programs from the existing building to the new to develop synergies between uses.

The existing vehicular circulation patterns have been reconfigured to accommodate the new building and set the campus up for the future development. A new vehicular drop-off is shown

between the existing and new buildings that would serve both the buildings. The parking lot has been reconfigured in an east-west arrangement that could work with the site topography. The parking lots depict landscaped islands separating the parking bays that could be utilized as bioswales to capture parking lot runoff.

### Development Summary:

Building A: 15,000 GSF  
(~10,000 ASF)

Total ACC Space: ~33,500 GSF

ACC Parking: 205 spaces

Approximate ACC Parking ratio: 1 sp/163 ASF

### LEGEND

-  Campus Buildings
-  Future Building
-  Existing Sidewalk
-  Open Space Improvements
-  Future Parking
-  Future Road
-  Drainage Pattern
-  Existing Multi-Use Trail
-  Future Trail Extension
-  Future Sidewalk
-  Property Line

### PLAN SUMMARY

*Lots Included: 3*

*Existing ACC + Addition: ~30,000 GSF*

*Building A: ~15,000 GSF*

*Building Total: ~45,000 GSF*

*Proposed Parking: ~205 Spaces*





## Phase II

While not currently warranted by the space needs analysis, the existing Albany County campus parcel has the capacity to contain another future academic building. The building depicted is a similar size to the Phase 1 building at approximately 15,000 GSF. The building is located in the southeast corner of the existing parcel. There is additional parking shown on campus to accommodate the additional campus growth.

### Development Summary:

Building B: 15,000 GSF  
(~10,000 ASF)

Total ACC Space: ~43,500 ASF  
(~43,556 ASF)

ACC Parking: 300 spaces

Approximate ACC Parking ratio: 1 sp/145 ASF

### LEGEND

-  Campus Buildings
-  Future Building
-  Existing Sidewalk
-  Open Space Improvements
-  Future Parking
-  Future Road
-  Drainage Pattern
-  Existing Multi-Use Trail
-  Future Trail Extension
-  Future Sidewalk
-  Property Line

### PLAN SUMMARY

*Lots Included: 3*

*Existing ACC + Addition: ~30,000 GSF*

*Building A: ~15,000 GSF*

*Building B: ~15,000 GSF*

*Building Total: ~60,000 GSF*

*Proposed Parking: ~300 Spaces*





## Full Build Out

As part of the Master Plan Update, LCCC requested the master planning team develop a vision that depicts the Albany County campus reaching an agreement with the City of Laramie regarding the adjacent parcels and expanding the campus footprint throughout the site. The Master Plan Update has developed this vision so the ultimate build-out of the Albany County campus achieves a true “campus.” The core of the new buildings are connected via a series of green spaces and pedestrian connections. The existing entrance driveway continues east to connect with Crystal Court.

The parking resources for the campus primarily fall on the outside of the connector road. The plan suggest utilizing bioswales in parking lots to capture, filter, and convey stormwater to a series of vegetated stormwater detention cells that could slow the release rate prior to being released.

### Building Summary

#### Building A (Phase I):

# of Floors: 1  
Building Footprint: 15,000 GSF

#### Building B (Phase II)

# of Floors: 1  
Building Footprint: 15,000 GSF

Following the implementation of Building ‘B’, the Albany County campus would begin expansion onto the adjacent series of parcels. There are a number of major site changes as a result of this development. It is recommended the existing entrance driveway continue through the site to connect to Crystal Court.

The ultimate development of this plan is dependent

upon what parcels are controlled by LCCC. For the purposes of this Master Plan Update, the following development summaries are based on the Albany County campus acquiring all six parcels.

#### Building C

# of Floors: 1  
Building Footprint: 15,000 GSF

#### Development Recommendations

The next development begins the expansion off the existing parcel. Implement the proposed road network changes including the driveway connection to Crystal Court. Provide a road setback of at least 30 feet to allow for sidewalk connections and open space.

#### Building D

# of Floors: 1  
Building Footprint: 15,000 GSF

#### Building E

# of Floors: 1  
Building Footprint: 15,000 GSF

#### Building F

# of Floors: 1  
Building Footprint: 15,000 GSF

The development of the plan is congruent with the guidelines of the Turner Tract Area Plan. The expanded footprint forms a well-connected, walkable campus with linked open spaces and pedestrian connections. The development ties in to the existing pedestrian and vehicular networks. It also allies with the 2013 update recommending institutional anchors within the property. In addition, the plan indicates a shared parking resource on Lot 6 in conjunction with the new Laramie High School under construction across Boulder Drive.

### LEGEND

	Campus Buildings
	Future Building
	Existing Sidewalk
	Open Space Improvements
	Future Parking
	Future Road
	Drainage Pattern
	Existing Multi-Use Trail
	Future Trail Extension
	Future Sidewalk
	Property Line

### PLAN SUMMARY

*Lots Included: 3, 7, 8, 9, 10*  
*Existing ACC + Addition: ~30,000 GSF*  
*Building A: ~15,000 GSF*  
*Building B: ~15,000 GSF*  
*Building C: ~15,000 GSF*  
*Building D: ~15,000 GSF*  
*Building E: ~15,000 GSF*  
*Building F: ~15,000 GSF*

*Building Total: ~120,000 GSF*  
*(~83,500 ASF)*

*Proposed Parking: ~660 Spaces*

*Approximate. ACC Parking Ratio: 1/126 ASF*





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## **appendix a** | asf by building

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**laramie county community college**  
**campus master plan update** | campuswide space needs analysis

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July 2016 DRAFT

# Assignable Square Feet by Building by Campus

for Base Year

Class-rooms (110-115)	Teaching Labs (210-215)	Open Labs (220-225)	Research Labs (250-255)	Office (300's)	Library & Study (400's)	Ath/Phys Ed & Rec (520-525)	Special Use (500's)	Assembly & Exhibit (610-625)	General Use (600's)	Support (700's)	Health Care (800's)	Residence (900's)	Inactive/Conversion	Uncoded Space	TOTAL ASF
ADMINISTRATION															
				5,897					812						6,709
AG															
2,805	6,879	402		1,156											11,242
ARCADES															
													0		0
ARP															
7,294	818	1,071		3,532	1,020		502		4,239	48					18,524
AUTO BODY															
1,379	10,549			2,564											14,492
AUTO DIESEL															
	16,481	586		1,551					2,438						21,056
BUSINESS BUILDING															
2,669	4,316	2,658		3,279	162				2,873	140					16,097
CAREER AND TECHNICAL															
581	16,827	2,205		1,725					2,332	931					24,601
CENTER FOR CONFERENCES & INSTITUTES															
				1,579					10,728	421					12,728
CENTRAL PLANT NORTH															
				122						114					236
COLLEGE ARENA															
	813						14,160	53,214	633		510				69,330
COLLEGE COMMUNITY CENTER															
				3,337				4,427	16,585				0		24,349
EDUCATION AND ENRICHMENT CENTER															
3,227	700	2,384		3,487					333	623					10,754
FINE ARTS															
3,014	15,465	1,990		8,170			414	1,216		3,148					33,417
Flexible Industrial Technology Building															
0	0	0		0	0				0						0

# Assignable Square Feet by Building by Campus

for Base Year

Class-rooms (110-115)	Teaching Labs (210-215)	Open Labs (220-225)	Research Labs (250-255)	Office (300's)	Library & Study (400's)	Ath/Phys Ed & Rec (520-525)	Special Use (500's)	Assembly & Exhibit (610-625)	General Use (600's)	Support (700's)	Health Care (800's)	Residence (900's)	Inactive/Conversion	Uncoded Space	TOTAL ASF
HEALTH SCIENCE															
8,375	7,635	598		5,162					830	732					23,332
LIBRARY															
		4,560		2,836	10,344					63					17,803
MODULAR BUILDING															
				1,103					90						1,193
PHYSICAL EDUCATION															
505	2,850			1,232		52,031									56,618
PLANT MAINTENANCE															
				2,368						22,599					24,967
RESIDENCE HALL - COMMONS															
		318		955					2,550			417			4,240
RESIDENCE HALL - EAST															
									462			17,126			17,588
RESIDENCE HALL - NORTH															
									768			21,452			22,220
RESIDENCE HALL - WEST															
												17,467			17,467
SCIENCE CENTER															
3,250	14,835			3,364			3,249								24,698
STOCK SHELTER - EAST															
							2,376								2,376
STOCK SHELTER - WEST															
							4,185								4,185
STUDENT SERVICES															
				7,465					373				1,376		9,214
Student Services & University Center															
0	0	0		0				0	0	0					0
TRAINING CENTER															
2,795	1,341			1,943					2,627						8,706

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Assignable Square Feet by Building by Campus**

*for Base Year*

Class-rooms (110-115)	Teaching Labs (210-215)	Open Labs (220-225)	Research Labs (250-255)	Office (300's)	Library & Study (400's)	Ath/Phys Ed & Rec (520-525)	Special Use (500's)	Assembly & Exhibit (610-625)	General Use (600's)	Support (700's)	Health Care (800's)	Residence (900's)	Inactive/Conversion	Uncoded Space	TOTAL ASF
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*Laramie County CC • Cheyenne Campus Total*

35,894	99,509	16,772		62,827	11,526	52,031	24,886	58,857	48,673	28,819	510	56,462	1,376		498,142
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**Base Year Campus Student FTE: 1,930**

*Campus ASF/FTE*

19	52	9		33	6	27	13	30	25	15	0	29	1		258
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**LARAMIE COUNTY CC • ALBANY COUNTY CENTER**

**Assignable Square Feet by Building by Campus**

*for Base Year*

Class-rooms (110-115)	Teaching Labs (210-215)	Open Labs (220-225)	Research Labs (250-255)	Office (300's)	Library & Study (400's)	Ath/Phys Ed & Rec (520-525)	Special Use (500's)	Assembly & Exhibit (610-625)	General Use (600's)	Support (700's)	Health Care (800's)	Residence (900's)	Inactive/Conversion	Uncoded Space	TOTAL ASF
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ALBANY COUNTY CAMPUS

6,075	4,122	2,315		4,112	1,177				2,380	450					20,631
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*Laramie County CC • Albany County Center Total*

6,075	4,122	2,315		4,112	1,177				2,380	450					20,631
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**Base Year Campus Student FTE: 434**

*Campus ASF/FTE*

14	9	5		9	3				5	1					48
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**INSTITUTION TOTAL**

41,969	103,631	19,087		66,939	12,703	52,031	24,886	58,857	51,053	29,269	510	56,462	1,376		518,773
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**2015 Project Total Student FTE: 2,364**

**Institution ASF/FTE**

18	44	8		28	5	22	11	25	22	12	0	24	1		219
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## **appendix b** | utilization of classrooms by building

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**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Classroom Utilization Analysis by Building - Credit and Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>AG</b> <span style="float: right;"><b>No. of Rooms = 4</b></span>									
AG 116	110	483	30	16	17	285	9.5	19.0	50%
AG 117	110	828	40	21	11	277	6.9	21.4	32%
AG 118	110	811	30	27	23	816	27.2	36.0	76%
AG 119	110	683	24	28	5	30	1.2	3.6	34%
<i>Average</i>		701	31	23	14		11.4	20	56%
<i>Total</i>		2,805	124			1,408		80	
<b>ARP</b> <span style="float: right;"><b>No. of Rooms = 10</b></span>									
ARP 120	110	699	37	19	23	789	21.3	34.0	63%
ARP 121	110	801	30	27	22	881	29.4	40.3	73%
ARP 124	110	769	60	13	16	484	8.1	24.2	33%
ARP 128	110	769	60	13	23	345	5.8	15.0	38%
ARP 133	110	792	63	13	19	451	7.2	24.1	30%
ARP 165	110	584	32	18	14	332	10.4	22.7	46%
ARP 166	110	590	24	25	18	434	18.1	24.9	73%
ARP 167	110	392	18	22	11	151	8.4	15.0	56%
ARP 168	110	589	24	25	20	396	16.5	20.8	79%
ARP 171	110	606	36	17	15	477	13.2	32.4	41%
<i>Average</i>		659	38	19	18		12.3	25	55%
<i>Total</i>		6,591	384			4,738		253	
<b>AUTO BODY</b> <span style="float: right;"><b>No. of Rooms = 2</b></span>									
ABR 101	110	723	20	36	10	623	31.2	62.3	50%
ABR 102	110	656	20	33	11	148	7.4	13.9	53%
<i>Average</i>		690	20	34	11		19.3	38	51%
<i>Total</i>		1,379	40			771		76	

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Classroom Utilization Analysis by Building - Credit and Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>BUSINESS BUILDING</b>									
									<i>No. of Rooms = 4</i>
B 121	110	649	29	22	16	316	10.9	20.3	54%
B 125	110	556	22	25	18	318	14.5	18.0	80%
B 127	110	721	26	28	16	294	11.3	18.0	63%
B 131	110	719	26	28	14	420	16.2	23.8	68%
<i>Average</i>		661	26	26	16		13.1	20	66%
<i>Total</i>		2,645	103			1,348		80	
<b>CAREER AND TECHNICAL</b>									
									<i>No. of Rooms = 1</i>
CT 121	110	581	25	23	19	584	23.4	42.3	55%
<i>Average</i>		581	25	23	19		23.4	42	55%
<i>Total</i>		581	25			584		42	
<b>EDUCATION AND ENRICHMENT CENTER</b>									
									<i>No. of Rooms = 4</i>
EEC 117	110	877	30	29	16	417	13.9	27.0	51%
EEC 131	110	809	30	27	17	289	9.6	18.0	54%
EEC 132	110	762	26	29	7	42	1.6	6.0	27%
EEC 211	110	779	30	26	15	579	19.3	39.0	49%
<i>Average</i>		807	29	28	14		11.4	23	49%
<i>Total</i>		3,227	116			1,327		90	
<b>FINE ARTS</b>									
									<i>No. of Rooms = 4</i>
FA 113	110	693	48	14	16	208	4.3	13.0	33%
FA 147	110	774	28	28	17	472	16.9	28.0	60%
FA 148	110	708	26	27	21	436	16.8	20.7	81%
FA 149	110	695	32	22	17	244	7.6	14.8	52%
<i>Average</i>		718	34	23	18		10.1	19	60%
<i>Total</i>		2,870	134			1,360		77	

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Classroom Utilization Analysis by Building - Credit and Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>HEALTH SCIENCE</b> <span style="float: right;"><i>No. of Rooms = 8</i></span>									
HS 104	110	656	32	21	13	124	3.9	8.0	48%
HS 106	110	655	32	20	10	191	6.0	15.7	38%
HS 111	110	1,450	64	23	58	747	11.7	15.4	76%
HS 113	110	1,341	64	21	41	462	7.2	11.4	63%
HS 210	110	870	30	29	15	71	2.4	7.7	31%
HS 307	110	573	20	29	16	200	10.0	12.3	81%
HS 309	110	1,087	44	25	20	61	1.4	4.6	30%
HS 311	110	1,337	50	27	14	48	1.0	3.2	30%
<i>Average</i>		996	42	24	24		5.7	10	55%
<i>Total</i>		7,969	336			1,904		78	
<b>PHYSICAL EDUCATION</b> <span style="float: right;"><i>No. of Rooms = 1</i></span>									
PE 143	110	505	20	25	11	137	6.9	13.1	52%
<i>Average</i>		505	20	25	11		6.9	13	52%
<i>Total</i>		505	20			137		13	
<b>SCIENCE CENTER</b> <span style="float: right;"><i>No. of Rooms = 4</i></span>									
SC 121	110	1,304	90	14	17	99	1.1	6.0	18%
SC 159	110	654	32	20	16	179	5.6	11.2	50%
SC 173	110	666	30	22	13	224	7.5	16.1	46%
SC 175	110	626	32	20	15	179	5.6	10.5	53%
<i>Average</i>		813	46	19	15		3.7	11	45%
<i>Total</i>		3,250	184			680		44	
<b>TRAINING CENTER</b> <span style="float: right;"><i>No. of Rooms = 3</i></span>									
TC 112	110	1,254	24	52	6	359	15.0	39.8	38%
TC 115	110	869	25	35	9	745	29.8	51.0	58%
TC 123	110	556	20	28	5	252	12.6	43.5	29%
<i>Average</i>		893	23	38	7		19.7	45	43%
<i>Total</i>		2,679	69			1,356		134	

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Classroom Utilization Analysis by Building - Credit and Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>AVERAGE</b>		767	34	24	17		10.2	22	53%
<b>TOTAL</b>		34,501	1,535			15,613		968	
<b>NO. OF ROOMS</b>		45							

**LARAMIE COUNTY CC • ALBANY COUNTY CENTER**

**Classroom Utilization Analysis by Building - Credit and Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>ALBANY COUNTY CAMPUS</b>									<i>No. of Rooms = 9</i>
ACC 104	110	648	21	31	14	97	4.6	7.1	65%
ACC 113	110	857	25	34	15	525	21.0	34.5	61%
ACC 114	110	668	21	32	17	622	29.6	36.4	81%
ACC 115	110	678	21	32	13	364	17.3	29.1	60%
ACC 116	110	670	21	32	18	592	28.2	29.0	97%
ACC 204	110	740	26	28	3	18	0.7	6.0	12%
ACC 205	110	546	21	26	15	574	27.3	38.0	72%
ACC 206	110	645	21	31	14	496	23.6	34.4	69%
ACC 219	110	623	21	30	15	573	27.3	36.2	75%
<i>Average</i>		675	22	31	14		19.5	28	72%
<i>Total</i>		6,075	198			3,861		251	
<b>AVERAGE</b>		675	22	31	14		19.5	28	72%
<b>TOTAL</b>		6,075	198			3,861		251	
<b>NO. OF ROOMS</b>		9							

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**appendix c** | utilization of teaching laboratories  
by building

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**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Teaching Laboratory Utilization Analysis by Building - Credit/Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>ARP</b>									<b>No. of Rooms = 1</b>
ARP 104	210	760	19	40	25	170	8.9	7.0	128%
	<i>Average</i>	760	19	40	25		8.9	7	128%
	<i>Total</i>	760	19			170		7	
<b>AUTO BODY</b>									<b>No. of Rooms = 2</b>
ABR 112	210	5,179	15	345	12	937	62.5	54.9	114%
ABR 113	210	4,957	15	330	21	735	49.0	35.0	140%
	<i>Average</i>	5,068	15	338	17		55.7	45	124%
	<i>Total</i>	10,136	30			1,672		90	
<b>AUTO DIESEL</b>									<b>No. of Rooms = 3</b>
AD 101	210	6,586	20	329	16	157	7.8	9.6	82%
AD 104	210	3,476	20	174	16	308	15.4	19.7	78%
AD 128	210	1,564	28	56	14	503	18.0	37.5	48%
	<i>Average</i>	3,875	23	186	15		14.2	22	62%
	<i>Total</i>	11,626	68			968		67	
<b>BUSINESS BUILDING</b>									<b>No. of Rooms = 5</b>
B 126	210	983	30	33	13	308	10.3	22.0	47%
B 203	210	712	20	36	8	111	5.6	11.3	49%
B 214	210	853	20	43	13	248	12.4	21.0	59%
B 215	210	803	20	40	16	425	21.2	25.5	83%
B 220	210	795	20	40	8	116	5.8	12.3	47%
	<i>Average</i>	829	22	38	11		11.0	18	60%
	<i>Total</i>	4,146	110			1,208		92	

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Teaching Laboratory Utilization Analysis by Building - Credit/Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>CAREER AND TECHNICAL</b>									
									<b>No. of Rooms = 7</b>
CT 108	210	567	12	47	8	108	9.0	17.0	53%
CT 120	210	2,167	15	144	11	385	25.7	35.0	73%
CT 125	210	941	17	55	7	52	3.1	6.8	45%
CT 126	210	1,458	15	97	7	158	10.5	18.8	56%
CT 128	210	8,245	40	206	6	133	3.3	24.8	13%
CT 133	210	868	25	35	10	256	10.2	26.2	39%
CT 135	210	2,049	12	171	13	685	57.1	52.6	109%
<i>Average</i>		2,328	19	108	9		13.1	26	66%
<i>Total</i>		16,295	136			1,777		181	
<b>EDUCATION AND ENRICHMENT CENTER</b>									
									<b>No. of Rooms = 1</b>
EEC 210	210	700	20	35	15	306	15.3	21.0	73%
<i>Average</i>		700	20	35	15		15.3	21	73%
<i>Total</i>		700	20			306		21	
<b>FINE ARTS</b>									
									<b>No. of Rooms = 9</b>
FA 117	210	472	12	39	11	33	2.8	3.0	92%
FA 118	210	1,828	50	37	9	204	4.1	22.9	18%
FA 131	210	1,794	18	100	13	276	15.3	19.3	79%
FA 132	210	1,153	15	77	9	196	13.1	19.0	69%
FA 135	210	1,115	17	66	11	117	6.9	10.6	65%
FA 136	210	1,975	34	58	13	212	6.2	15.9	39%
FA 160	210	830	26	32	10	235	9.0	22.8	40%
FA 204	210	1,015	20	51	13	546	27.3	39.5	69%
FA 205	210	1,013	20	51	17	410	20.5	23.9	86%
<i>Average</i>		1,244	24	57	12		10.5	20	59%
<i>Total</i>		11,195	212			2,228		177	

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Teaching Laboratory Utilization Analysis by Building - Credit/Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>HEALTH SCIENCE</b>									<b>No. of Rooms = 6</b>
HS 112	210	476	8	60	9	63	7.9	7.0	113%
HS 202	210	694	8	87	9	68	8.4	7.5	113%
HS 233	210	1,396	16	87	17	138	8.6	8.8	98%
HS 242	210	892	18	50	18	127	7.1	7.0	101%
HS 302	210	1,633	20	82	19	57	2.9	3.0	95%
HS 315	210	775	24	32	18	313	13.0	17.9	73%
<i>Average</i>		978	16	66	15		8.1	9	94%
<i>Total</i>		5,866	94			765		51	
<b>PHYSICAL EDUCATION</b>									<b>No. of Rooms = 1</b>
PE 133	210	2,850	49	58	11	280	5.7	23.7	24%
<i>Average</i>		2,850	49	58	11		5.7	24	24%
<i>Total</i>		2,850	49			280		24	
<b>SCIENCE CENTER</b>									<b>No. of Rooms = 7</b>
SC 143	210	1,386	28	50	16	141	5.0	9.0	56%
SC 146	210	1,307	16	82	15	177	11.1	12.0	92%
SC 153	210	684	12	57	11	33	2.8	3.0	92%
SC 156	210	1,468	30	49	17	519	17.3	30.0	58%
SC 157	210	1,527	32	48	26	768	24.0	30.0	80%
SC 158	210	846	18	47	15	87	4.8	6.0	81%
SC 169	210	1,407	30	47	16	584	19.5	36.5	53%
<i>Average</i>		1,232	24	54	16		13.9	18	67%
<i>Total</i>		8,625	166			2,309		127	

**LARAMIE COUNTY CC • CHEYENNE CAMPUS**

**Teaching Laboratory Utilization Analysis by Building - Credit/Non-Credit Courses**

Room ID	Space Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Seat Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<b>TRAINING CENTER</b>									<i>No. of Rooms = 2</i>
TC 103	210	779	20	39	7	99	4.9	11.7	42%
TC 125	210	562	20	28	5	122	6.1	24.4	25%
	<i>Average</i>	671	20	34	6		5.5	18	31%
	<i>Total</i>	1,341	40			221		36	
	<b>AVERAGE</b>	1,671	21	83	13		12.6	20	69%
	<b>TOTAL</b>	73,540	944			11,904		872	
	<b>NO. OF ROOMS</b>	44							