# laramie county community college
## campus master plan update

**MASTER PLAN REPORT**
**OCTOBER 2011**

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

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# one|introduction

# Master Plan Overview

The Laramie County Community College (LCCC) Campus Master Plan Update (Master Plan) represents the culmination of a six month process to develop a comprehensive vision for future physical growth at the institution. The Master Plan update is the direct result of hard work and dedication from numerous administrators, faculty, staff, students, community members, and professionals with a focused goal of developing a realistic, fact-based, actionable plan to guide the future development of the college.

Established in 1968, LCCC is a full-service, comprehensive community college that provides an important educational service to the local community and its students. Since its initial founding, the College has experienced consistent student population growth and has developed its academic programs to meet the ever-changing needs and demands of its students. The LCCC main campus is located in Cheyenne; Wyoming's largest city and a cultural and governmental hub. In 2005, the College opened a second campus located in the City of Laramie, referred to as the Albany County campus (ACC). These two campuses, along with two smaller outreach centers, have established LCCC as an educational anchor within the region.

LCCC, like many community colleges across the country, has experienced significant recent growth in enrollment as people have increasingly turned to two-year institutions to improve their skill base and value in the labor market. While the growth in enrollment has occurred on both the Cheyenne campus and the ACC, the ACC has experienced nearly exponential growth relative to its initial student population and has already outgrown the existing facilities in Laramie.

The enrollment increase has created a substantial need for new space on both the Cheyenne and Albany County campuses, and enrollment growth is projected to continue over the next ten years. Two recent developments are potential game changers that could expand the number of students at both Cheyenne and the ACC, creating exciting opportunities to expand the role of and scope of offerings at LCCC.

The first of these game changers is the exploration and potential development of the Niobrara oil shale deposit. This work has already produced jobs and investment in the Cheyenne area, and should the deposit go into production the demand for a trained workforce will create a significant opportunity for LCCC to prepare workers in welding, well head management, pump maintenance and similar highly skilled, well-paying positions. The second game changer is an invitation from the University of Wyoming (UW) to enter into a new relationship with LCCC by locating a facility on the UW campus. While this offer requires a great deal of discussion and consideration, the opportunity to rethink the role of LCCC and the relationship of community college to research university is significant and exciting.

View looking towards recent campus construction of cafeteria addition

LCCC students

# Report Structure

The Master Plan report consists of six chapters.

- One | Introduction
- Two | Existing Conditions
- Three | The Master Plan
- Four | Albany County Campus
- Five | Design Guidelines
- Six | Implementation of the Master Plan

The introduction details the purpose of the Master Plan and describes the master plan process. The next two chapters deal with the existing conditions/analysis and Master Plan recommendations exclusively for the Cheyenne campus. This was done to ensure continuity between the presentation of the spatial and physical needs immediately followed by the specific recommendations to resolve these issues. The ACC is given its own section in Chapter 4 which describes both the analysis and Master Plan recommendations for this campus. The fifth chapter describes campus design guidelines which primarily pertain to the Cheyenne campus; however, can be implemented for future development of the ACC as well. The final chapter contains recommendations for the phased implementation of the Master Plan.

# Purpose of the Master Plan

The Master Plan is a dynamic, comprehensive planning document intended to establish a flexible framework for the continued development and growth of LCCC. It is a collection of powerful ideas that maintain a constant balance of vision and reality to:

- Provide a composite document of principles, goals, objectives, ideas, and recommendations that address the current and future needs of the institution.
- Strategically prioritize development opportunities and develop a phasing strategy to implement the proposed initiatives.
- Provide a long-range tool that can adapt to future changes. Many of the concepts illustrated in the Master Plan are multi-year ideas that may require numerous projects to achieve.
- Build upon the recommendations of the 2004 Master Plan and provide an update given the development that has occurred since the release of the document.

# Planning Philosophy

The Master Plan analyzes the facilities and activities of the existing campuses and presents a vision for the future. It can be summarized by the following:

- The Master Plan is LCCC's plan. Although the consultant team contributed their technical expertise, LCCC's participants passionately guided its development.
- The campus is a moving target. The Master Plan responds to this by remaining flexible. Political, administrative, financial, and academic needs are constantly shifting. The overarching framework is solid enough to provide direction, but not so detailed that minor changes cannot be incorporated. It is important to monitor key issues and carefully adjust the plan to changing conditions.
- The Master Plan does not mandate growth. Rather, it defines opportunities for accommodating the growth that institutional leadership believes is desirable and necessary, supported by an objective analysis.
- The Master Plan emphasizes an integrated approach to coordinate facility improvements, utility enhancements, parking and transportation initiatives, and pedestrian amenities.
- The plan identifies campus-wide space needs. It is important to emphasize that the Master Plan does not identify specific department, school, or college-level programmatic needs.
- The illustrations in the Master Plan represent an organized collection of ideas. They graphically translate ideas and communicate concepts and opportunities, physical patterns, and idealized relationships.
- The Master Plan's metrics and analysis data presented within this report address the Cheyenne and Albany County campuses and are based on enrollment and campus data from the Fall 2010 semester.

One of several LCCC campus sculptural boots

# Master Plan Process

The master plan process was divided into five major phases:  discovery, analysis, alternatives, refinement, and documentation.  Each phase was critical to the overall success of the Master Plan process.

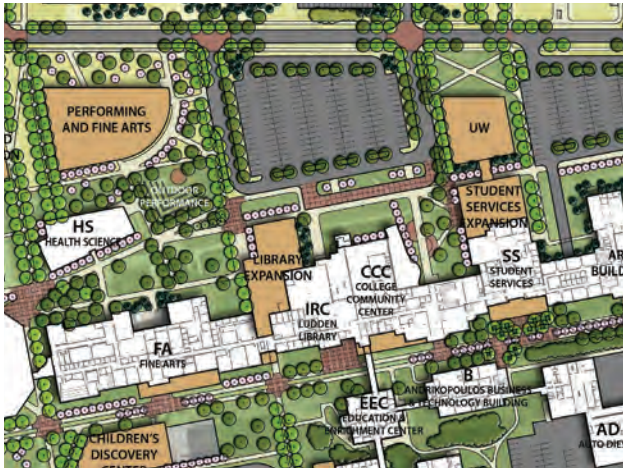
**Discovery:** As part of the "plan before the plan," this important first step included committee structuring, data collection, interviews and meetings, and the development of overarching principles.

**Campus Analysis/Space Needs:** During the analysis phase, the campus and surrounding context were evaluated.  This analysis included both a physical evaluation (facilities, utilities, transportation, and site elements) and a spatial evaluation.  Conclusions from this phase of work established the condition of campus buildings, set the design baseline and development parameters for the future campus framework, and identified specific needs for additional space and facilities.

**Alternatives:** The alternatives phase involved the testing of ideas and principles and exploring several divergent scenarios for organizing the programmatic elements of the campus.  These alternatives were thoroughly scrutinized against common objectives and political and logistical realities.  The result was a composite framework plan that became the basis for further refinement.

**Refinement:** During this phase, the framework plan was developed into preliminary and final plans. These campus-wide plans quantified and verified the programmatic elements, including academic space needs, parking distribution and quantities, and land uses.

**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.



Facade of new cafeteria addition

# Committee Lists

The Master Plan is a comprehensive planning tool that came about through the hard work and input from a wide array of individuals. The team would like to thank all those involved in establishing the master plan vision for LCCC.

## Executive Committee

Carol Hoglund
John Kaiser
Miles LaRowe
Brenda Lyttle
Tim Macnamara
Greg Thomas
Marlene Tignor
Stan Torvik
Grant Wilson

## Campus Advisory Committee

Dean Bartow
Elizabeth Chambers
Doug Cook
Melissa Gallant
Tanya Griffith
Jenny Hargett
Misty Heil
Phyllis Jones
Meghan Kelly
Lisa Murphy
Jenny Rigg
Lynn Stalnaker
Lisa Stich
Ty Stockton
Maryellen Tast
Kathleen Urban
Jodi Weppner

## Community Advisory Committee

Amber Ash
Don Brown
Dave Coffey
Jim Doherty
Amy Edmonds
Ken Esquibel
Rick Kaysen
Jerry Kennedy
Scott Mullner
Sandy Shanor
Shawn Sullivan
Troy Thompson
Gay Woodhouse

## LCCC Board of Trustees

Bill Dubois
John Kaiser
Kevin Kilty
Brenda Lyttle
Carol Merrell
Ed Mosher
Greg Thomas

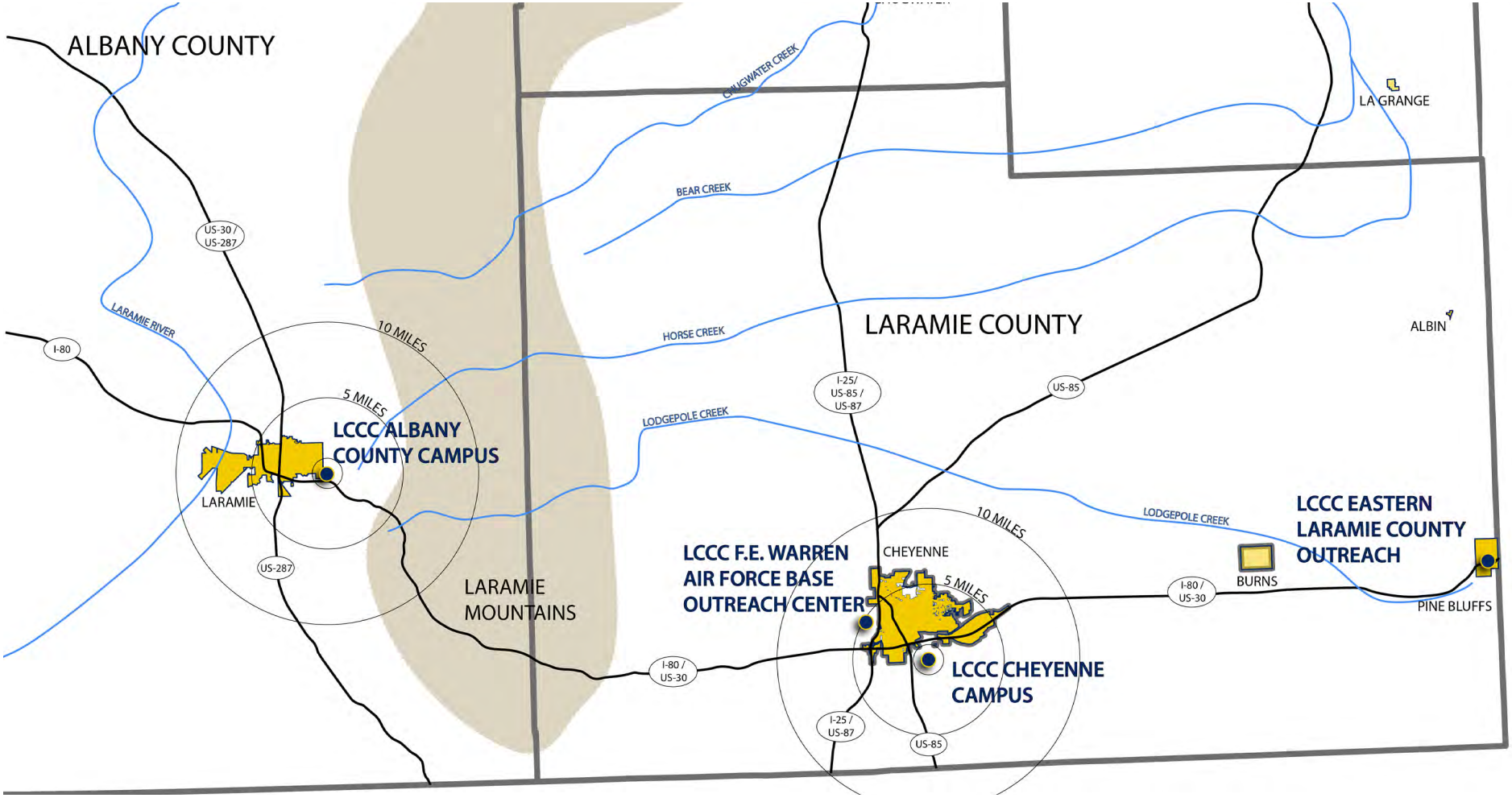
Albany County Campus entrance

# two|existing conditions

Cheyenne Campus

# The LCCC System

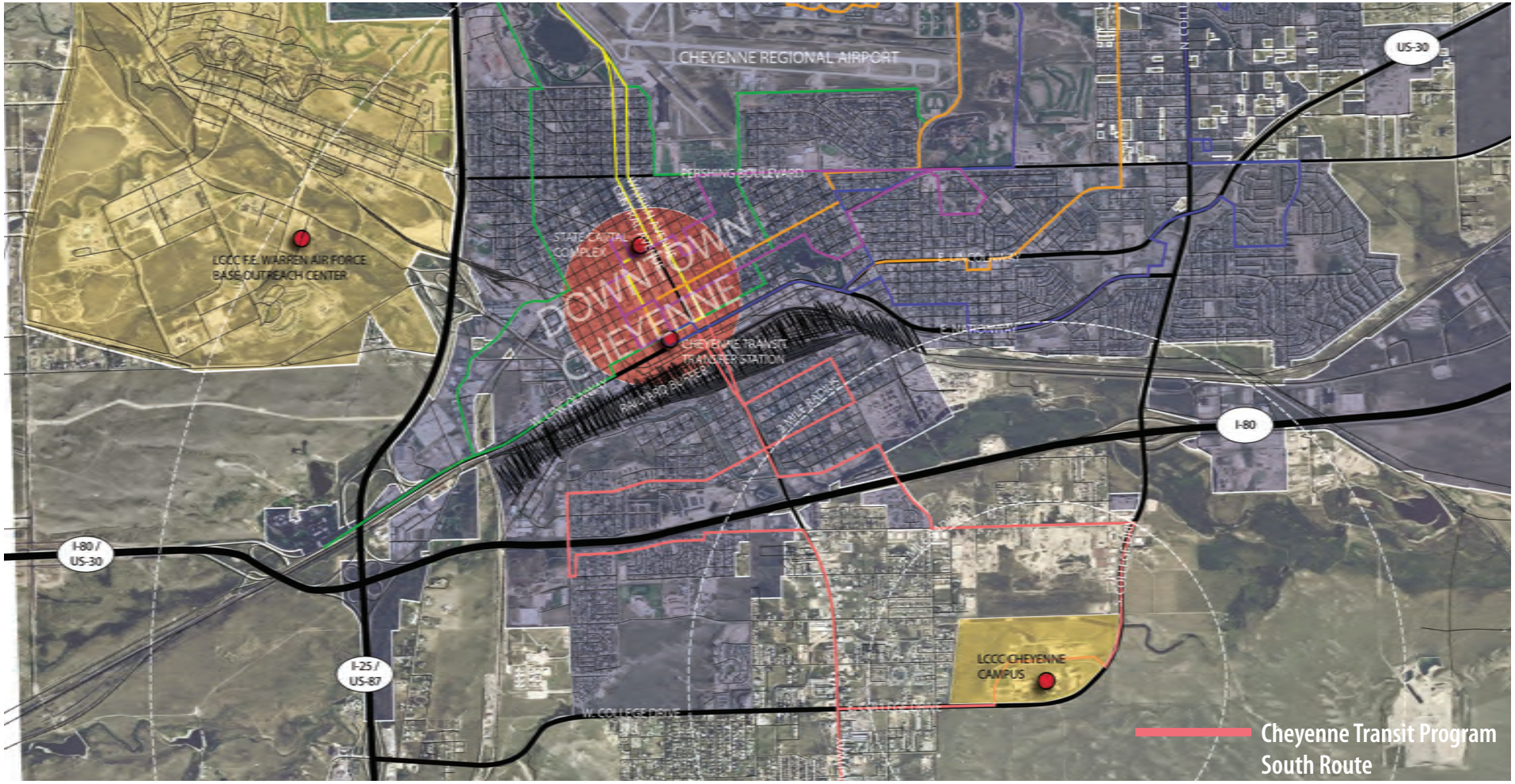
The Laramie County Community College system serves a wide geographic area in the southeast corner of Wyoming. The institution is comprised of two campuses and two additional outreach centers located along the I-80 corridor in Laramie and Albany Counties. The main campus is located in Wyoming's capital city of Cheyenne, with the second campus located in the City of Laramie in neighboring Albany County. The two smaller LCCC outreach centers, which are not included in the analysis findings or Master Plan recommendations, are located on the F.E. Warren Air Force Base in Cheyenne and in the town of Pine Bluffs on the eastern border of the state.



# Community Context

The LCCC main campus is located in the southeast corner of Cheyenne, roughly 3 miles from the center of the city. The campus is accessed from East and South College Drive, which tie into the major vehicular highways within the city, notably I-80, I-25, and the Greeley Highway. The location at the edge of the community limits some opportunities to integrate the campus and programs into the civic fabric; however, the transportation system does link the campus to the population of the city and surrounding region very well.

The Cheyenne Transit Program provides bus service in and around the city with the South Route making a stop on the LCCC campus. Future planning efforts should be coordinated with the transit program to promote mass transit as an effective and viable transportation option.




Community Context

# Enrollment Growth and Space Needs

Using national and state guideline recommendations, benchmarking of peers, and input from College leadership and personnel, the master planning team compiled a Space Needs Assessment organized by functional space categories. These categories include:

- Academic Space
- Academic Support Space
- Auxiliary Space

The space needs were developed based on three target horizons for LCCC:

- Fall 2010 baseline space needs - (Current surplus or deficit)
- 10% student enrollment growth over 10 years
- 20% student enrollment growth over 10 years

For purposes of planning for new facilities the 10% enrollment growth was utilized as it represents the more likely campus growth scenario. Should enrollment growth occur at a pace consistent with the 20% projection, LCCC should adjust its needs as new facilities are planned.

All spatial data has been analyzed utilizing the metric of Assignable Square Feet (ASF) unless otherwise noted. ASF is defined as all usable space within a building that is assigned to a specific program. The resulting recommendations are based on quantitative rather than qualitative space; e.g., the analysis findings focus more on the amount of space rather than if it is being utilized appropriately for specific teaching programs.

## Cheyenne Campus

- Current space inventory: 482,022 ASF
- Current space need: 506,955 ASF
- 10% projected growth: 579,348 ASF
- 20% projected growth: 605,827 ASF
- Greatest future need deficits
  - Assembly and Exhibit
  - Office
  - Student Center
  - PE/Recreation/Athletics
  - Housing

Full results of the Space Needs Assessment can be found in Appendix B.

Based on the Space Needs Assessment, interviews with faculty and administrators, and the inclusion of previously identified projects, the following are proposed as necessary and desired facilities to be included into the Master Plan:

**Space Needs Projections (Cheyenne Campus)**

| Category | Existing Space (Fall 2010) | 2010 Guideline | 10% Projected Growth | 20% Projected Growth |
|---|---|---|---|---|
| Student Enrollment (FTE) | 2,423 | | 2,665 | 2,908 |
| Faculty and Staff (FTE) | 330 | | 351 | 396 |
| Academic Space | 262,656 ASF | 266,741 ASF | 290,576 ASF | 312,032 ASF |
| Academic Support Space | 131,860 ASF | 145,003 ASF | 150,059 ASF | 153,600 ASF |
| Auxiliary Space | 87,506 ASF | 95,211 ASF | 138,713 ASF | 140,195 ASF |
| **Total Space** | **482,022 ASF** | **506,955 ASF** | **579,348 ASF** | **605,827 ASF** |
| **Projected Need*** | | **811,000 GSF** | **927,000 GSF** | **969,000 GSF** |

*Note: For planning purposes, GSF = ASF 1.6

## New Buildings

1. Children's Discovery Center
2. Non-Traditional Student Apartments
3. Student Dormitory
4. Multi-Use Athletic Facility
5. Performing & Fine Arts Center
6. UW Center
7. Flex-Tech Laboratory
8. Potential Academic Expansion

## Building Additions with Renovations

1. Recreation Facilities (to PE)
2. Academic Commons (to Library)
3. Conference Improvements (to CCI)
4. Student Services
5. Student Center (to CCC)
6. Laboratory Bridge (to TC)
7. Physical Plant
8. Fine Arts/Collaborative Space

The numerical order of this list does not indicate a prioritization of need. The Space Needs Assessment also outlines a need for additional office space on campus which should be provided across the entire campus, as discussed in later sections of this report.

Cheyenne campus

# Physical Analysis

A physical analysis of the campus was prepared to gain a full understanding of the form and function of the campus. The following summaries highlight the primary findings from the physical campus analysis.

## Vehicular Circulation

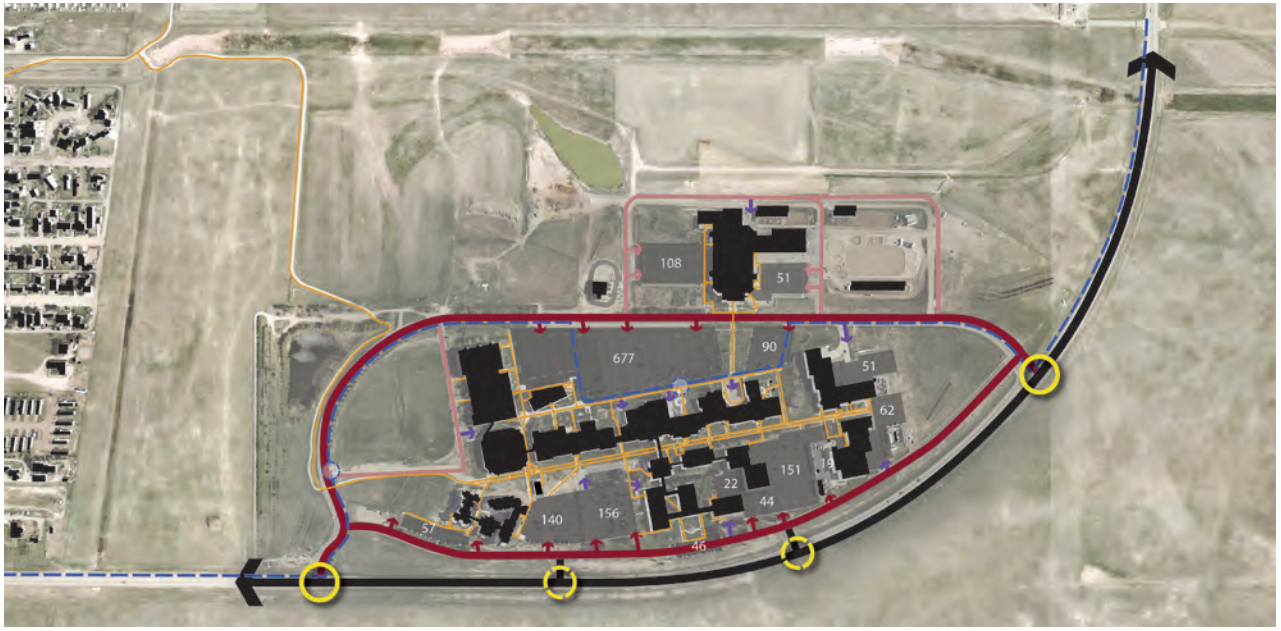
- The Loop Road is the primary vehicular organizing element providing access to campus destinations and parking lots.
- The Loop Road's width, lack of sidewalks, and linear configuration promote high speeds that are unsafe for pedestrians and vehicles entering and exiting the existing parking lots.
- The two internal Loop Road intersections are located too close to the campus entrances at College Drive and result in frequent traffic backups.
- The Loop Road currently acts as a psychological boundary to the campus. Most campus uses and infrastructure are contained within its perimeter.

## Parking

- LCCC currently has adequate parking capacity based on national community college standards.
  - The campus currently has a parking capacity of 1,643 spaces.
  - The campus parking ratio currently exceeds the national standards of 3:1.
- Parking demand peaks during the first few weeks of each semester.
- The highest-demand lots are located adjacent to the Center for Conferences & Institutes (CCI) and the new residence hall, resulting in overflow parking on the grass buffer adjacent to College Drive.
- A majority of the parking lots are currently striped with less-efficient angled parking stalls.

## Pedestrian Circulation

- A majority of pedestrian circulation on campus occurs along an interior "River," a series of interconnected hallways linking a majority of campus academic buildings. It is a defining pedestrian circulation feature of campus.
- The exterior pedestrian environment is underutilized due to a variety of factors, including:
  - Cheyenne experiences long, cold winters with persistent, harsh winds coming from the north and west.
  - There is a lack of quality outdoor pedestrian spaces and amenities.
  - Building entrances and wayfinding signs are difficult to discern, even when traveling on foot.




**Circulation and Parking Analysis**

## Gateways/Edges

- The campus lacks an appropriate entry/ threshold from College Drive, thereby minimizing the sense of arrival on campus.
- Existing vehicular-oriented signage lacks consistency in style, appearance, and placement. In some locations the signs are visually blocked from the road by landscape material, utility poles, or other signage and is difficult to read/interpret.
- There is no visual or functional hierarchy of the campus entrances.

## Landscape

- There are limited landscape plantings along the academic mall and other pedestrian places. Plantings generally occur in the form of building foundation plantings. The landscape does little to unify the campus or create a strong sense of place.
- The existing pedestrian signage and wayfinding program is largely ineffective and lacking both visual appeal and significance.
- There are a variety of lighting standards on campus, and some areas of campus, especially parking lots, are under-lit.
- The campus lacks signature outdoor gathering spaces that encourage student use and are vital to the campus open space network.
- Newer campus building construction projects have better utilized landscape as an integral site element than the remainder of campus.

## Natural Systems

- There is a floodplain related to the Allison Draw that lies north and west of the Loop Road, limiting physical campus expansion in these areas.
- Two existing reservoirs lie north and west of the Loop Road.
- The campus does not employ best management practices (BMP) in regards to storm water management.
- The floodplain and related pasture areas on the north and south side of campus provide strong prairie landscape character, important environmental function, and an opportunity for interpretive education.

## Utilities

- There is a utility tunnel on campus that runs down the academic mall and serves the majority of campus buildings.
- The campus is well-served by public and private utilities.
- LCCC is in the process of expanding its utility capacity to prepare for additional facilities.

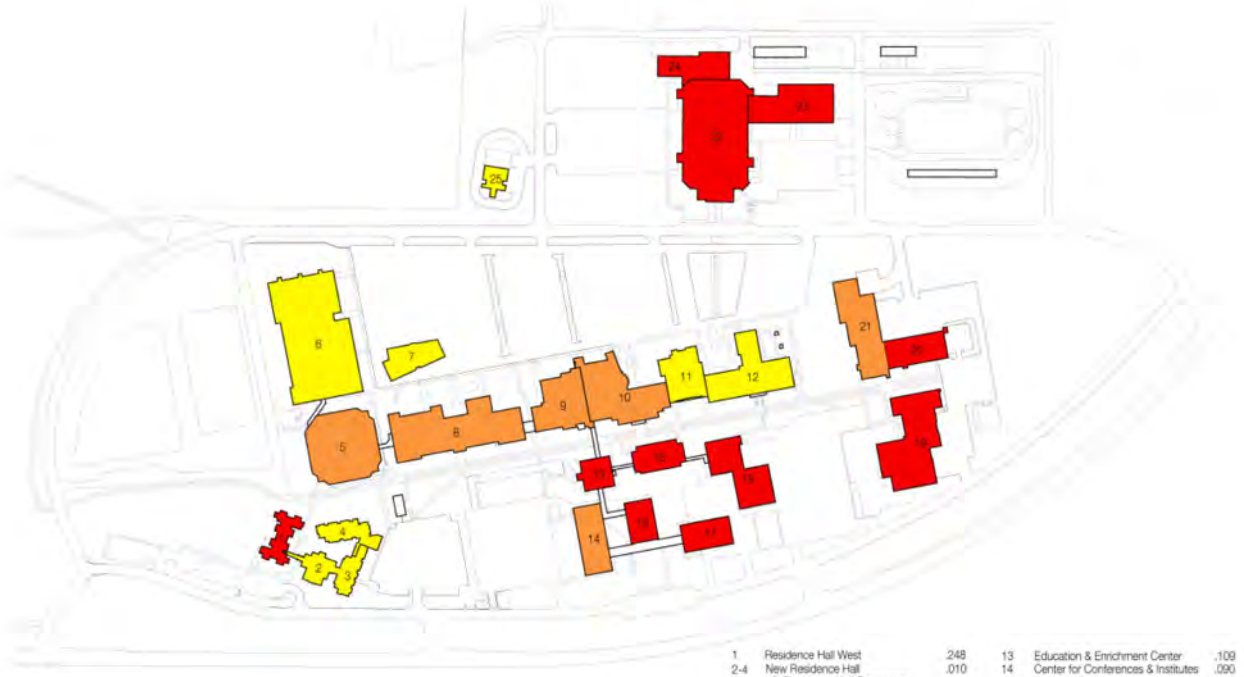
**Utilities and Hydrologic System**

# Facility Condition Assessment

All the buildings on campus were evaluated from a physical condition/performance perspective. The buildings were graded on a scale based on repair, maintenance, and replacement deficiencies measured against the cost of the current replacement value. A majority of the buildings were rated Good or Fair based on this metric.

- The buildings were rated on their functionality; how well suited the buildings are to house the functions and programs that occur within.
- A summary of costs was compiled for each building, based on the nature of the repair or improvement. The total improvement costs for all buildings approximates 13.5 million dollars.
- Almost half of the current deficiencies (48%) relate to building systems (HVAC, Electrical, and Security).
- Three buildings (Residence Hall West, Training Center, Auto Diesel) fall significantly within the Poor category.

The full results of the Facility Condition Assessment can be found in Appendix A. The Facility Condition Assessment was used as a tool for guiding the Master Plan recommendations.



| | | | | | |
|---|---|---|---|---|---|
| 1 | Residence Hall West | .248 | 13 | Education & Enrichment Center | .109 |
| 2-4 | New Residence Hall | .010 | 14 | Center for Conferences & Institutes | .090 |
| | 2 Residence Hall Commons | | 15 | Business Building | .176 |
| | 3 Residence Hall East | | 16 | Administration | .114 |
| | 4 Residence Hall North | | 17 | Training Center | .288 |
| 5 | Science Center | .073 | 18 | Auto Diesel | .249 |
| 6 | Physical Education | .010 | 19 | Plant Maintenance | .124 |
| 7 | Health Science | | 20 | Auto Body | .216 |
| 8 | Fine Arts | .082 | 21 | Career and Technical | .083 |
| 9 | Ludden Library | .078 | 22 | College Arena | .116 |
| 10 | College Community Center | .086 | 23 | Stall Building | .190 |
| 11 | Student Services | .042 | 24 | Agriculture | .189 |
| 12 | ARP Building | .042 | 25 | Central Plant North | |

Good (Under .05)

Fair (.05 - .10)

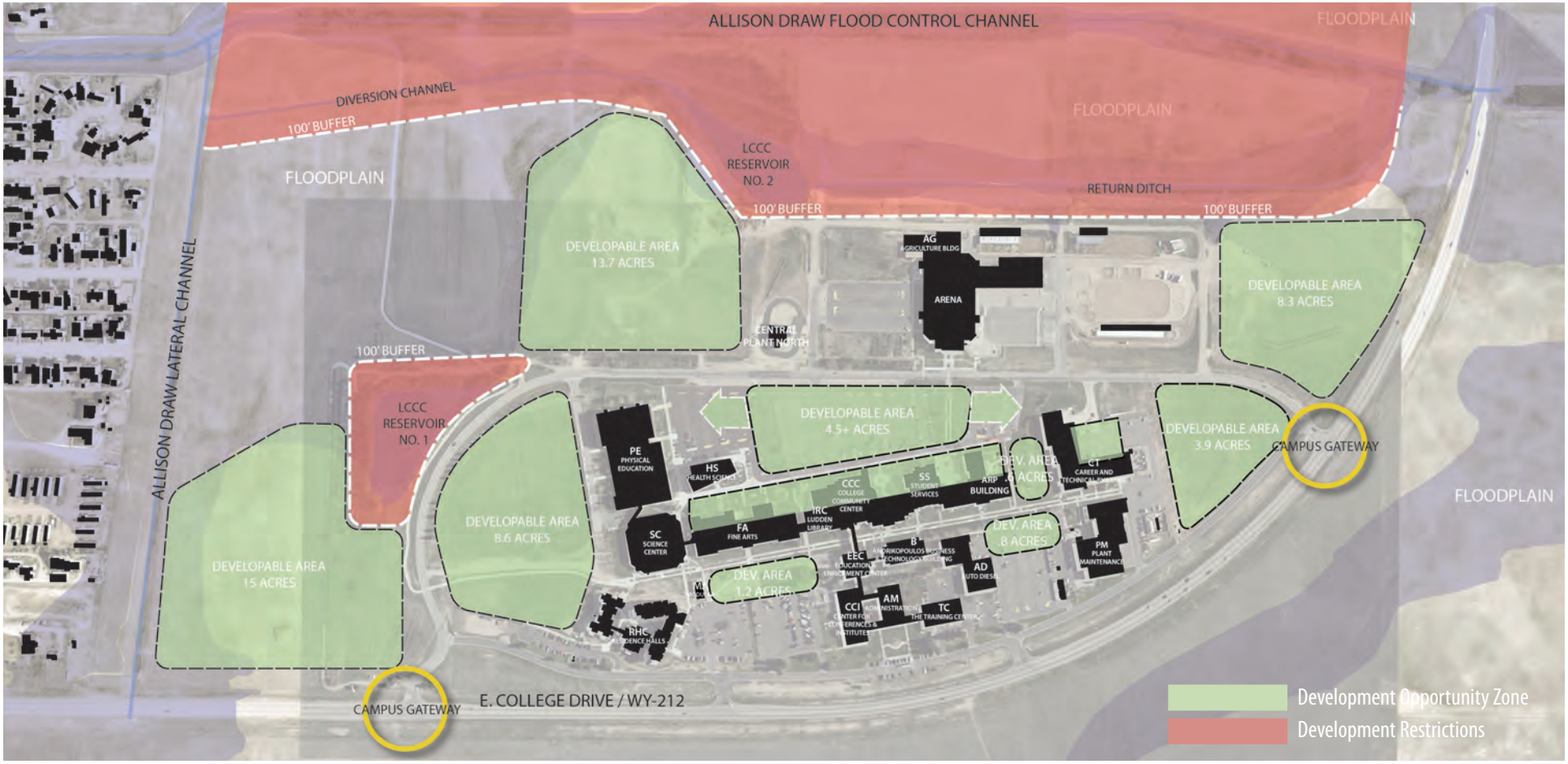
Poor (Over .10)

## Facility Condition Assessment

# Campus Development Opportunities

The analysis findings were synthesized into a plan that identifies potential growth areas based on the opportunities and constraints discovered in the studies. The Master Plan alternatives responded to these findings as they explored the future physical form of the campus.

Based on potential growth areas identified, the Cheyenne campus has a great deal of land available to accommodate future growth. While this abundance of land is a strategic benefit to the long-term development of the campus, LCCC is keenly aware of the need to be good stewards of this resource so as to not encumber future campus administrators with poorly considered facility locations.




## Campus Development Opportunities

Cheyenne campus buildings facing College Drive

# three|campus master plan

## Cheyenne Campus

# Campus Alternatives

The Space Needs Assessment and physical campus analysis define respectively, the need for additional built space on the campus and the opportunities and constraints relative to where these additional facilities could be located. Together with the Facilities Condition Assessment, these two efforts set the stage for preparing alternative visions for the Master Plan. The alternatives that were developed explored distinct approaches to the future organization and development of the campus. The alternatives addressed issues such as circulation, connectivity, open space, and program relationships in distinct ways. Each scenario was evaluated to discern the strengths and weaknesses of each concept. The resulting product, the Campus Master Plan, is a blend of these three ideas.

## A. Strengthen the Existing Academic Mall

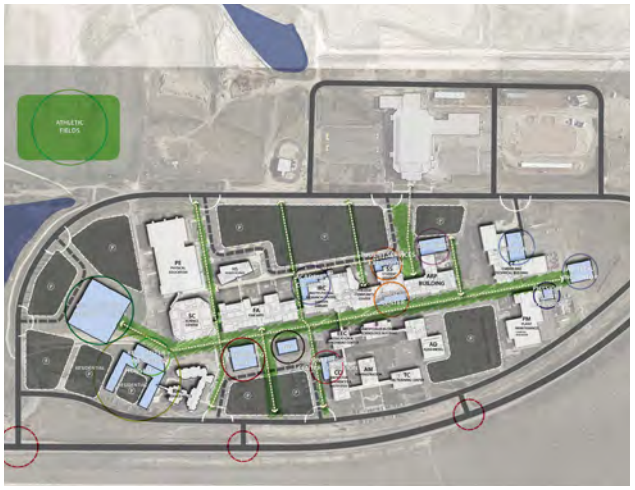
- Strategically infill gaps in the existing mall with future building facilities.
- Visually terminate the mall with buildings to strengthen the perception of the mall as a "space."
- Enhance selected building facades and create collaborative spaces along the spine through renovations and additions.
- Create pedestrian spaces and provide amenities along the mall and improve the overall landscape aesthetic.

## B. Create a Series of Campus Neighborhoods

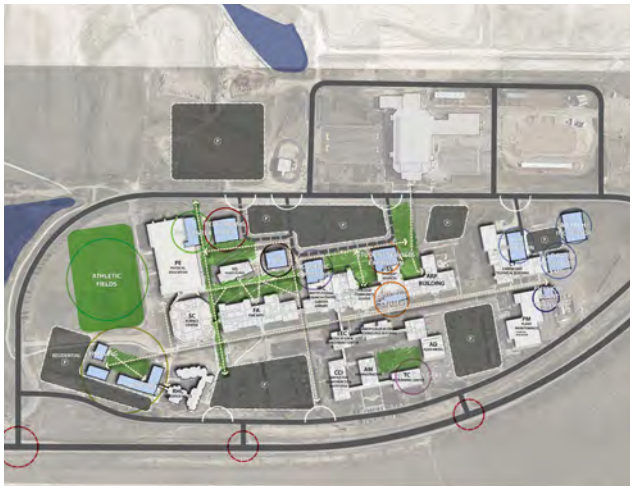
- Create academic, community-focused, technical, and residential neighborhoods to strengthen existing development patterns.
- Cluster buildings to create new campus green spaces that provide more opportunities for outdoor student activity and a more traditional sense of campus.

## C. Redevelop the Loop Road to Serve as the New Campus "Front Door"

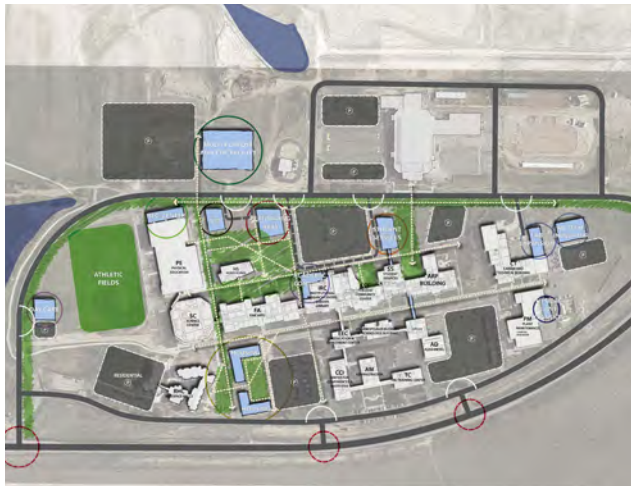
- Recreate the Loop Road from a boundary road into an integrated "campus street" through streetscape enhancements.
- Extend campus uses north across the Loop Road.
- Improve campus gateways at entry points along College Drive.
- Locate community focused uses, such as the Performing & Fine Arts Center, along the Loop Road for improved community access.



Alternative A



Alternative B



Alternative C

# The Master Plan

Each alternative was analyzed and refined based upon feedback from the college community. The Master Plan evolved as a synthesis of the supported ideas from each of the three alternatives. The recommended Master Plan contains ideas from each alternative and together these ideas represent the underlying goals of the plan.

## A. Strengthen the Existing Academic Mall

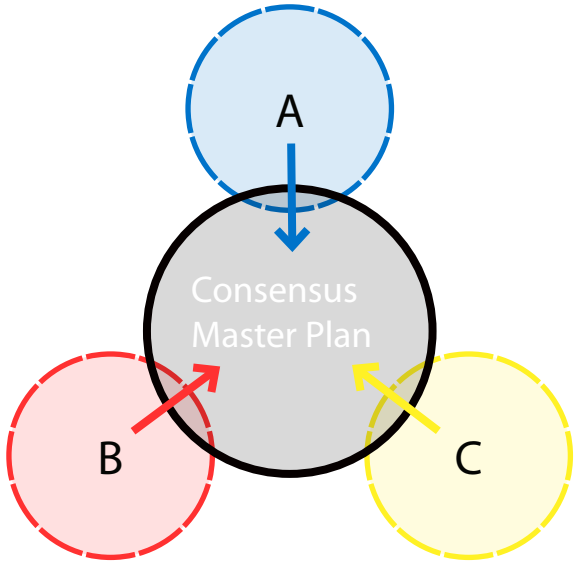
- A number of proposed buildings are located at key sites along the existing academic mall, filling in existing gaps and strengthening the character of the space.
  - The Children's Discovery Center is located along the mall south of the Fine Arts Building.
  - A lab expansion building connects the Arp Building to Career & Technical Building (CT).
  - Proposed buildings visually terminate the eastern and western ends of the mall.
- Implement open space and landscape enhancements along the mall to create a higher quality pedestrian environment.
- Increase visibility of building entrances, create additional collaborative spaces for students and faculty, and improve indoor/outdoor relationships of the existing inward focused buildings through a series of building additions along the academic mall.

## B. Create a Series of Campus Neighborhoods

- Create an on-campus housing neighborhood near the recently completed north and east residence halls. Utilize building forms to create campus quadrangle open spaces.
- Strengthen the "technology-oriented" neighborhood through the addition of the Flex-tech Lab and various lab expansions.
- Develop a student service hub in the center of campus paired with the new UW Center and building additions and renovations to the Student Services Building.
- Create an athletic neighborhood on the north side of the Loop Road that includes athletic fields and the Multi-purpose Athletic Facility, with strong links to physical education and the core of campus.
- Locate new buildings to create more traditional campus open spaces and improve the existing "shopping mall" character of campus.

## C. Redevelop the Loop Road to Serve as the New Campus "Front Door"

- Utilize the Loop Road as a campus street instead of a psychological campus boundary, improving the streetscape and locating new campus facilities north of the road.
- Develop a hierarchical system of vehicular gateways at the entrances to campus from College Drive.
- Create a primary campus arrival area that functions for a variety of college and community uses including Student Services, the UW Center, and the College Community Center (CCC).
- Develop the north side of campus, extending uses toward the Loop Road.



## Cheyenne Campus Master Plan

Existing Campus Building

Proposed Building

- (A) Residential Quad
- (B) Academic Quad
- (C) Primary Campus Gateways
- (D) Athletic Fields
- (E) Academic Mall
- (F) Primary Arrival Area
- (G) Student Center Plaza
- (H) Outdoor Performance Space

**Cheyenne Campus Master Plan Aerial Perspective**

# Proposed Buildings

## New Building Construction

- N1 - Children's Discovery Center
- N2 - Performing & Fine Arts Center
- N3 - UW Center
- N4 - Lab expansion bridge building
- N5 - Flex-tech Lab
- N6 - Multi-purpose Athletic Facility

## On-campus Residential

- R1 - Non-traditional student housing
- R2 - Non-traditional student housing
- R3 - Non-traditional student housing
- R4 - Student dorm
- R5 - Student dorm with cafe/grab-and-go

## Building Additions

- A1 - Recreation center
- A2 - Fine Arts entrance
- A3 - Library/Academic commons
- A4 - CCI expansion
- A5 - Library/CCC entrance
- A6 - Student services expansion
- A7 - Student center entrance
- A8 - CT Lab expansion
- A9 - Physical plant expansion

# Master Plan Building Program

The Master Plan responds to the space needs of the campus by distributing the required facilities on campus in three ways:

- New building construction
- Building additions
- Building renovations

The following summaries express the intent of the proposed building program. Additional information regarding the building additions, renovations, and program shifts can be found in the Space Needs Assessment, Appendix B.

Included in the following descriptions are a set of "Building Metrics" that provide basic planning assumptions for each facility. The square footage requirements identified in the Space Needs Assessment were in ASF and have been converted here into Gross Square Feet (GSF). ASF represents the actual usable space required (e.g., classroom space), while GSF represents the total space required for the building facility (including hallways, bathrooms, mechanical rooms, etc., as well as classrooms). The GSF and building outlines illustrated on the Master Plan are provided to indicate, in general, the approximate space of each facility. As each new facility is planned and designed, a more detailed level of analysis should be completed to identify specific building program requirements, and these numbers and needs will further define the individual project requirements.

## New Building Construction

### Children's Discovery Center (N1)

The Children's Discovery Center is proposed to occupy a site along the existing academic mall. The facility is envisioned as two-stories; housing child care and day care functions as well as supplemental classrooms and space. Adjacent to the facility on the east side is a new play yard, situated to provide shelter from the predominant western winds. The facility is envisioned as being built into the existing slope on the site, with the first/ground floor accessed from the academic mall and the top floor accessed from the parking lot to the south.

As part of this project, the adjacent parking lots should be reconfigured to include a drop-off loop.

Building Metrics

- # of Floors: 2
- Footprint: 13,500 GSF
- Building Envelope: 27,000 GSF
- Location Parameters: The building will help frame the pedestrian mall and the north face of the Children's Discovery Center and should be between 30- and 50 feet from the center of the mall.

### Performing & Fine Arts Center (N2)

The Performing & Fine Arts Center is located on the north side of Health Sciences and has a visual presence from both the Loop Road and the primary campus arrival area. This facility will provide a variety of performance spaces and include classrooms and practice labs essential to the various programs offered. A level one study has been completed for this facility which will need to be updated to reflect current project needs.

Building Metrics

- # of Floors: 1.5
- Footprint: 28,700 GSF
- Building Envelope: 43,000 GSF
- Location Parameters: The primary entrance to the building should face east to connect to the drop-off loop while the north facade should be a high-image facade along the Loop Road. The north facade of this building should be set back from the south curb of the Loop Road by at least 50 feet.

Primary campus arrival area - New UW Center, Student Services and Academic Commons addition

## University of Wyoming Center (N3)

The UW Center is a collaborative effort between LCCC and UW. In a true partnership, the facility will provide "One-Stop" Student Enrollment/Welcome Center for both UW and LCCC students, as well as classrooms and administrative support space adequate to support the four-year degree programs that UW will offer on the site. The new facility is adjacent to and linked with the existing LCCC Student Services building. The extent to which the uses in this existing space will move into the new UW Center and how these two facilities relate to each other will need to be defined by further study.

Building Metrics

- # of Floors: 3
- Footprint: 14,000 - 18,000 GSF
- Building Envelope: 42,000 - 56,000 GSF
- Location Parameters: The main entrance to the building should be located on the west side to take advantage of the drop-off loop and the significant landscape space that serves this facility and the CCC. The north façade of the building should be designed to create a welcoming image from the Loop Road, and should be setback from the south curb of the road by at least 50 feet. The grades for this site will require some creative design approaches for the site and building and may provide opportunities for a lower level.

## Lab Expansion Bridge Building (N4)

The lab expansion bridge building provides a critical link within the LCCC campus. The building connects the Arp Building to the CT Building, forming a physical continuation of the internal pedestrian "River". The new building can provide barrier free access to the wind lab from CT. It also serves as an academic link, connecting the classroom environments found within the Arp Building to the implementation oriented spaces of the CT Building.

Building Metrics

- # of Floors: 1
- Footprint: 14,600 GSF
- Building Envelope: 14,600 GSF
- Location Parameters: The south line of the proposed building should not be closer to the pedestrian mall than the south line of the Arp Building.

## Flex-tech Lab (N5)

The Flex-tech Lab is located at the eastern end of the academic mall. This versatile building contains classrooms, labs, and office space. The purpose of this facility is to be able to house technical training programs and be flexible in design to accommodate different programs over time, as shifts in the job market may dictate. The building may also host non-credit programming and training classrooms.

Building Metrics

- # of Floors: 3
- Footprint: 18,000 GSF
- Building Envelope: 54,000 GSF
- Location Parameters: The building design should recognize the role architecture plays as a visual terminus to the academic mall.

## Multi-purpose Athletic Facility (N6)

The Multi-purpose Athletic Facility should be the new athletic event center of the college with an approximately 2,500 seat arena.

Building Metrics

- # of Floors: 1-2
- Footprint: 40,000 GSF
- Building Envelope: 40,000-80,000 GSF
- Location Parameters: The facility should avoid the existing irrigation well field, integrate service access with the Chiller Plant, and provide additional parking as indicated on the plan. Building setback from the north curb of the Loop Road should be at least 50 feet.

# On-campus Residential

The Cheyenne campus currently contains 168 beds in the residential complex in the southwest area of campus. (Note: Beds within the West Residence Hall are assumed to be demolished based on their poor physical condition.) There is a need to increase the on-campus housing capacity based on student demand for additional housing. There are two primary types of housing proposed within the Master Plan.

- Non-traditional Student Housing
  - Apartment-style buildings geared toward students with families or children.
- Traditional Student Housing
  - Suite-style residences similar to the recently completed north and east residence halls on campus.

Existing on-campus residence hall

# Non-Traditional Student Housing

## Building R1

Building Metrics

- # of Floors: 2
- Footprint: 9,000 GSF
- Building Envelope: 18,000 GSF
- Location Parameters (applicable to all proposed housing): Buildings should be planned to create an outdoor campus quadrangle. The buildings should be setback at least 45 feet from the north curb line of the proposed location of the South Loop Road.

## Building R2

Building Metrics

- # of Floors: 2
- Footprint: 7,200 GSF
- Building Envelope: 14,400 GSF

## Building R3

Building Metrics

- # of Floors: 2
- Footprint: 7,200 GSF
- Building Envelope: 14,400 GSF

# Traditional Student Housing

## Building R4

Building Metrics

- # of Floors: 4
- Footprint: 9,600 GSF
- Building Envelope: 38,400 GSF

## Building R5

Building R5 contains a “grab-and-go” style cafe/food service on the east end of the building, terminating the academic mall.

Building Metrics

- # of Floors: 4
- Footprint: 9,800 GSF
- Building Envelope: 39,200 GSF

# Building Additions

## Recreation Center (A1)

The recreation center addition is located on the northeast face of the Physical Education Building (PE). The addition will provide a new welcoming entrance to PE, as well as contain space for uses such as training rooms and a new weight room. Since access to parking will shift to the west of the building, the west entrance to PE should be enhanced to be more visible and welcoming.

Building Metrics

- # of Floors: 1
- Footprint: 10,000 GSF
- Addition Envelope: 10,000 GSF
- Location Parameters: The addition should be located to preserve access to the existing service door.

Residential neighborhood

## Fine Arts Entrance (A2)

This building addition to Fine Arts is located along the academic mall. The addition provides space for collaborative learning, as well as a new entrance to the Fine Arts Building. Renovations within the facility will create additional office space and meeting/workrooms as many of the existing uses may become part of the new Performing & Fine Arts Center.

Building Metrics

- # of Floors: 1
- Footprint: 3,900 GSF
- Addition Envelope: 3,900 GSF
- Location Parameters: The extent to which the south facade can be moved into the pedestrian mall needs to account for the need to have a storm sewer run north of the mall sidewalks.

## Library/Academic Commons (A3)

The expansion/renovation of Ludden Library could provide additional space for collaborative learning spaces, study areas, additional computer labs, student support programs, facility meeting space, and technology support. The addition also creates prominent entrances to the building from both the academic mall and Loop Road sides.

Building Metrics

- # of Floors: 1
- Footprint: 14,600 GSF
- Addition Envelope: 14,600 GSF
- Location Parameters: The new building will necessitate the reconfiguration of the food service delivery area. The grades for this site will require some creative design approaches for the site and building, and may provide opportunities for a lower level.

## Center for Conferences & Institutes Expansion (A4)

The proposed expansion/renovation of the CCI Building provides a larger, higher function conference center, a new board room, and a new public lobby. A new entrance presents an identifiable presence to the community and campus visitors.

Building Metrics

- # of Floors: 1
- Footprint: 8,300 GSF
- Addition Envelope: 8,300 GSF
- Location Parameters: The new building should be at least 25 feet from the parking lot loop curb.

## College Community Center Entrance (A5)

A new building entrance along the academic mall at the CCC Building creates a welcoming image along this space. The addition creates space for collaborative learning, while the renovations to the interior spaces create areas for student/group gathering and a fully functioning student center.

Building Metrics

- # of Floors: 1
- Footprint: 2,700 GSF
- Addition Envelope: 2,700 GSF
- Location Parameters: Refer to Fine Arts Entrance (A2).

## Student Services Expansion (A6)

The student services expansion is located on the north side of the Student Services Building. The planning of any addition onto Student Services will need to be considered in conjunction with the UW Center. The extent of building program to be located in this addition is dependent on the student services functions that shift into the UW Center. One key issue in any reconfiguration of Student Services is the need to be able to secure the facility from the general student population during evening and weekend hours.

Cafeteria addition to the CCC building

Building Metrics

- # of Floors: 1
- Footprint: 10,200 GSF
- Addition Envelope: 10,200 GSF
- Location Parameters: Refer to UW Center (N3).

### Student Center Entrance (A7)

A new entrance to the Student Center along the academic mall is proposed in conjunction with the renovations done at the Student Services building. The expansion/renovation will provide space for student lounge/commons areas, student leadership/government, and storage space.

Building Metrics

- # of Floors: 1
- Footprint: 3,400 GSF
- Addition Envelope: 3,400 GSF
- Location Parameters: Refer to Fine Arts Entrance (A2).

### Career & Technical Lab Expansion (A8)

This proposed expansion increases the lab space for the wind technology program found within the CT Building.

Building Metrics

- # of Floors: 1
- Footprint: 4,500 GSF
- Addition Envelope: 4,500 GSF
- Location Parameters: The new addition should be setback from the south curb of the Loop Road by at least 50 feet.

### Physical Plant Expansion (A9)

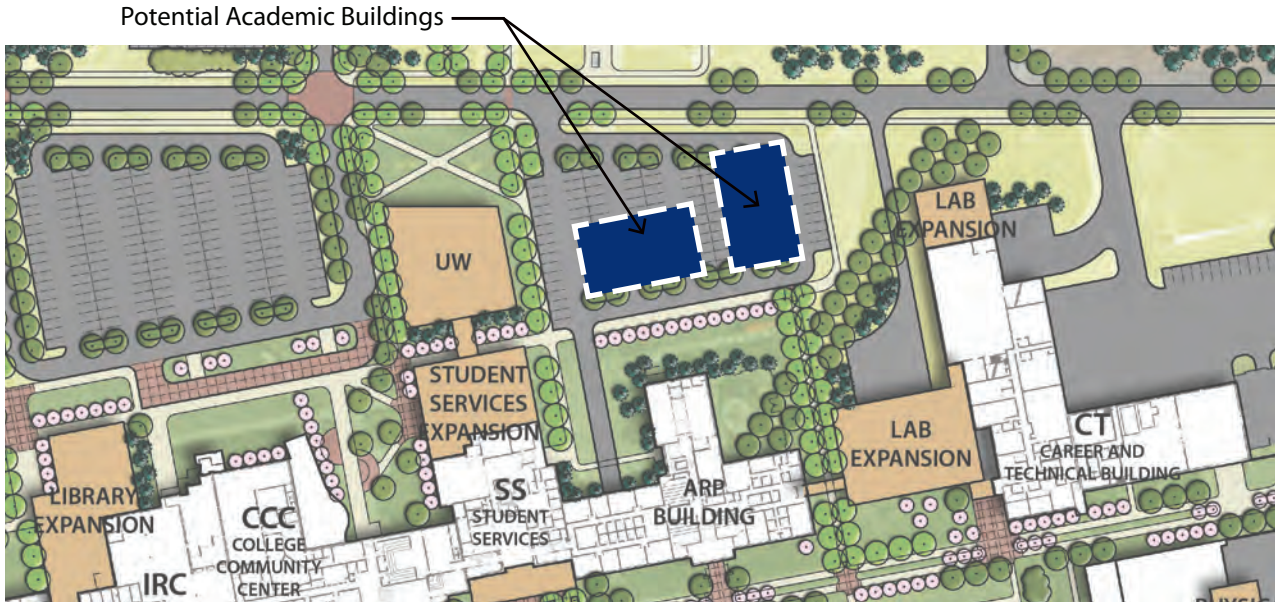
There is an existing space need primarily in the form of additional plant storage; however, the plant building will also need to expand its Chiller/Boiler capacity as additional buildings come on line.

Building Metrics

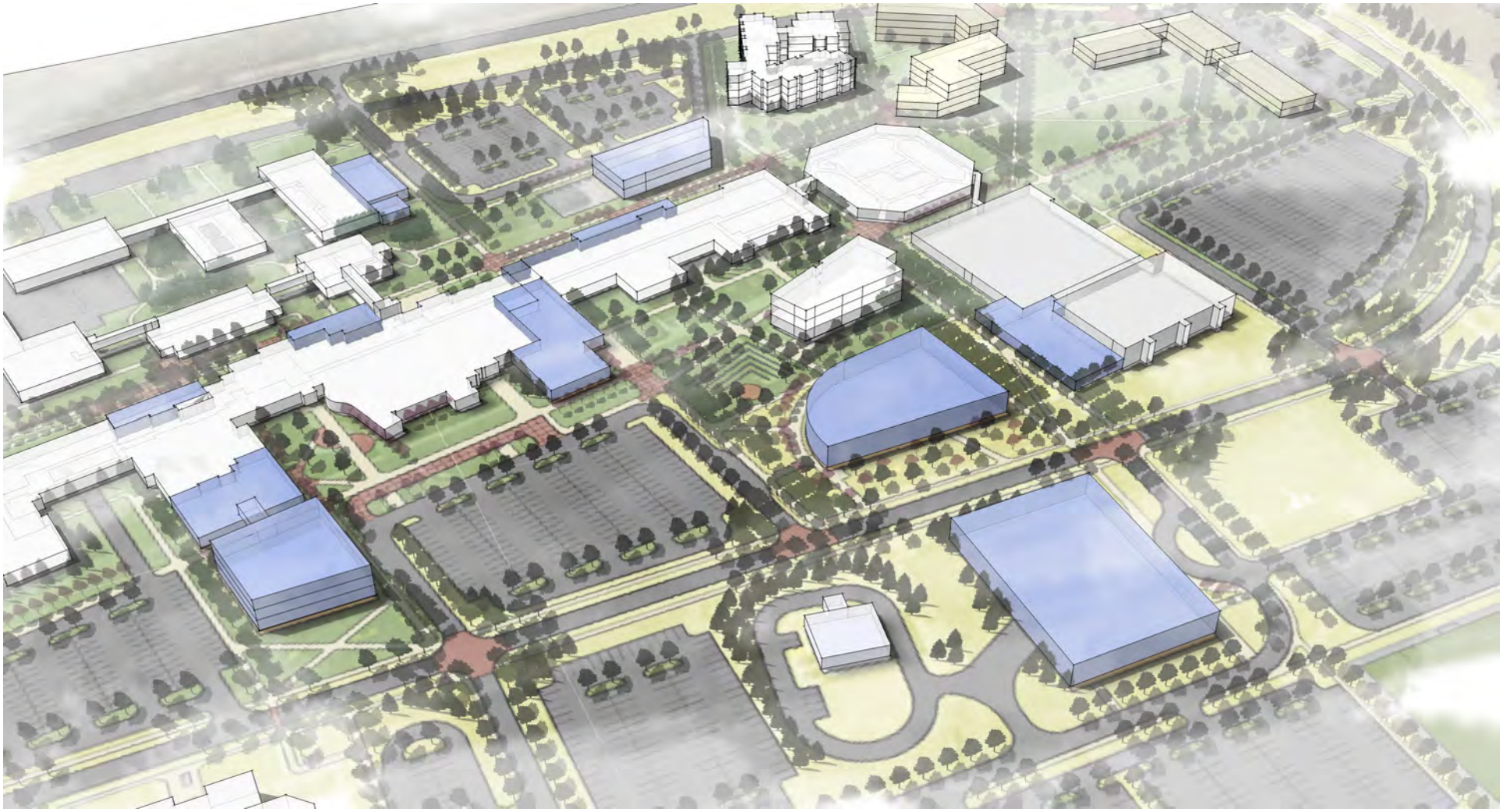
- # of Floors: 1
- Footprint: 5,600 GSF
- Addition Envelope: 5,600 GSF
- Location Parameters: The addition shown on the Master Plan is simply to imply the need for space. The actual location will need to be determined in light of existing facility details and mechanical and electrical equipment requirements.

## Additional Academic Space

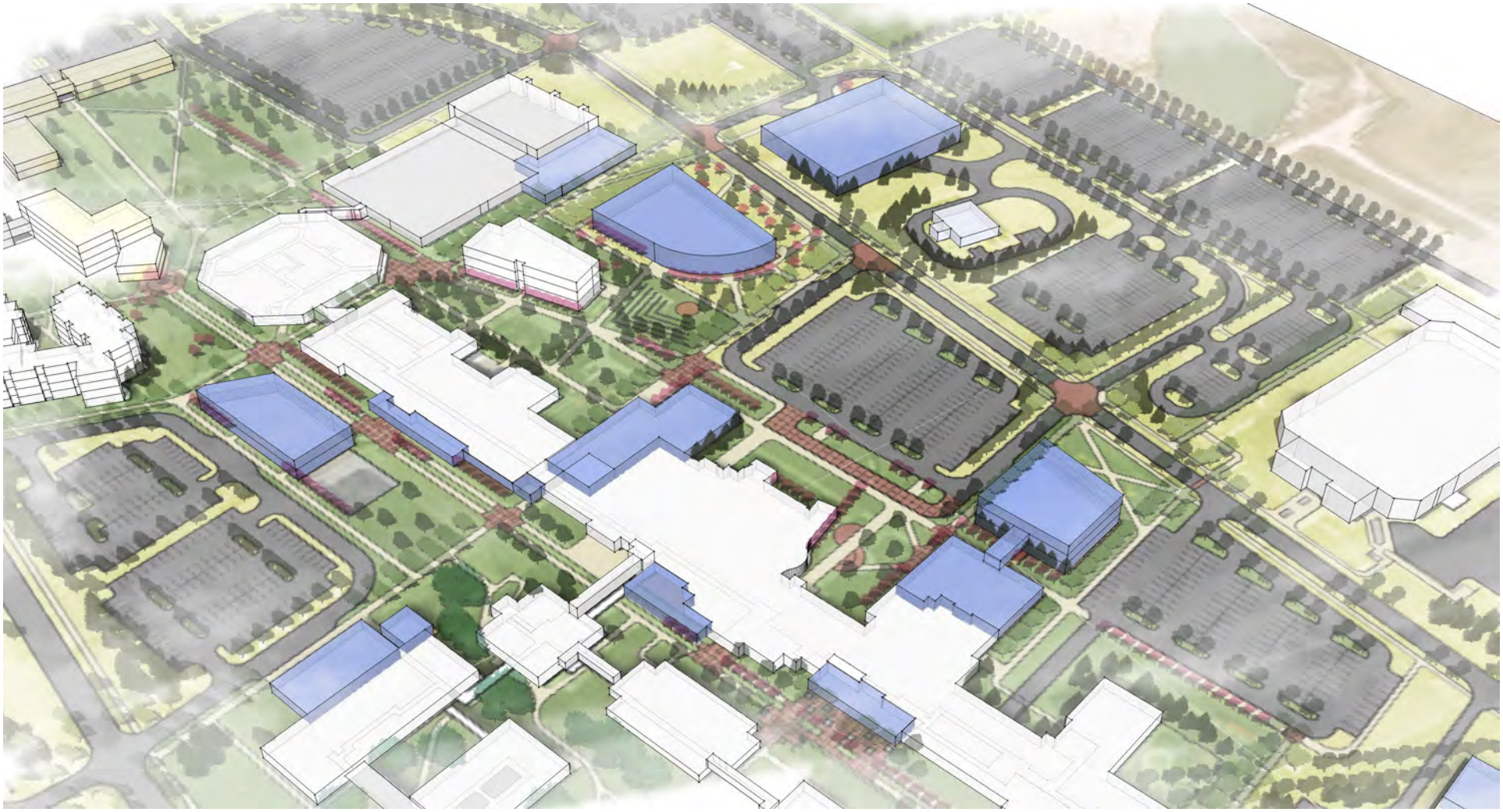
During the lifetime of this Master Plan it is conceivable that enrollment may rise faster than the 10% projected growth. Such growth will put pressure on the campus capacity for classroom and academic support space. To address this potential need, the Master Plan has identified a location suitable for accommodating new academic space to the east of the proposed UW Center site, balancing the academic space west and east of the CCC Building.




**Long-term Academic Space Opportunities**



## Perspective of Primary Arrival Area



## Academic Mall and Academic Quad

# Master Plan Systems

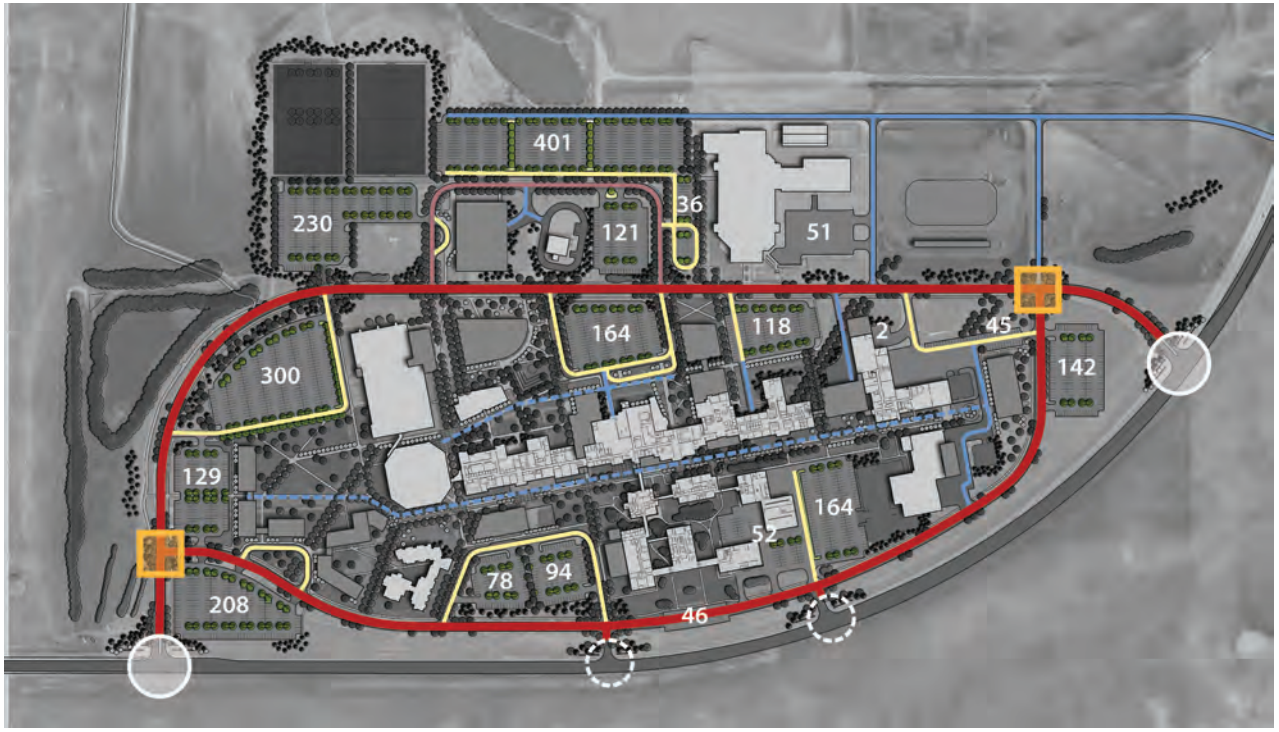
The following summaries highlight major site related recommendations and components of the Master Plan.

## Vehicular Circulation

- Relocate intersections along the Loop Road for safer traffic patterns and movements.
- Implement a series of designated driveways and drop-offs at major campus destinations:
  - Children's Discovery Center/CCI Building
  - UW Center/Student Services/Student Center/CCC/Academic Commons/ Performing & Fine Arts Center.
  - Multi-purpose Athletic Facility/Arena
  - Residence Halls
- Where possible, driveways and drop-off loops should have their intersections with the Loop Road aligned to minimize conflict points.
- Implement traffic calming measures such as pedestrian crosswalks and speed tables to reduce speeds along the Loop Road.
- Maintain access for service and emergency vehicles throughout campus, including in pedestrian oriented campus quadrangles.
- Add a tertiary (gated) access point on College Drive to the northeast that can be utilized for large events or emergencies.

## Parking

- Increase overall parking capacity on campus, maintaining at a minimum the existing campus parking ratio.
  - Master Plan parking: 2,381 spaces
- Break up large expanses of parking with green space.
- Realign existing angled parking with more efficient 90 degree parking stalls.
- Designate specific lots for campus residential parking and open the use of lots immediately west of CCI for student, staff, and faculty use.
- Add a parking lot west of the PE Building to replace parking displaced by the UW Center and the Performing & Fine Arts Center.
- Add a parking lot east of the proposed Flex-tech Lab to support this use.
- Add parking north of the Loop Road, particularly if the Multi-purpose Athletic Facility is built.




**Vehicular Circulation**

## Pedestrian Circulation

- Establish a well-connected, legible pedestrian circulation system with visual and functional hierarchies.
- Extend the pedestrian "River" through the lab expansion bridge building to connect to the CT Building.
- Create a pedestrian path along the Loop Road with future connections to the regional greenway.
- Implement bicycle lanes on the Loop Road and provide for bicycle parking near the campus core.
- Accommodate service and emergency vehicles on pedestrian paths where necessary.
- Link the campus core area to regional non-motorized path systems.

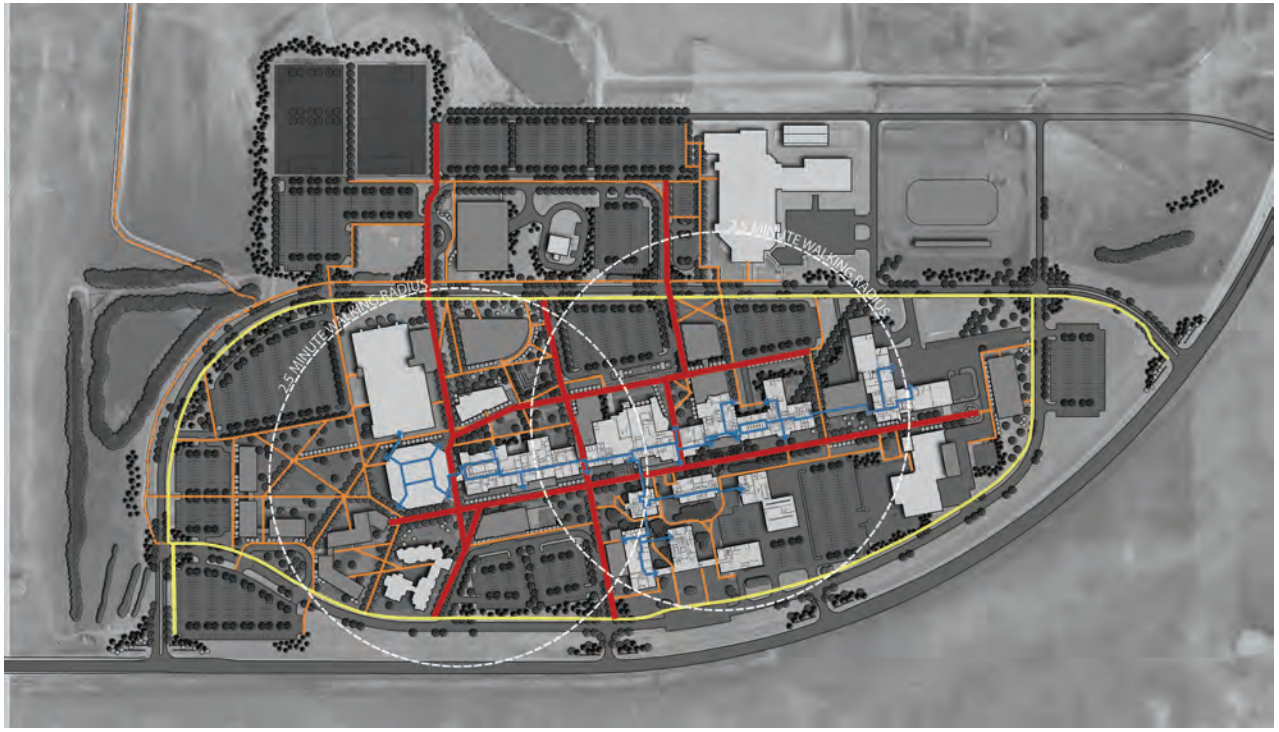
## Gateways/Edges

- Develop a hierarchy of campus gateways, including:
  - Primary gateways at the existing southwest and northeast entrances to include signage, lighting, and landscape areas.
  - Secondary gateways at the two remaining entrances with signage, lighting, and landscape.
  - The use of masonry walls as part of these gateways is encouraged. The wall materials meet the Campus Drive architectural guidelines.
- Additional tree masses are encouraged between the South Loop Road and College Drive to improve the image of campus and provide wind breaks.

## Signage and Wayfinding

- Implement a unified signage and wayfinding package that includes a system of signage types including gateway, vehicular-oriented, building identification, and pedestrian-oriented signs.

Proposed signage and wayfinding elements can be found in Chapter 5: Design Guidelines.




**Pedestrian Circulation**

# Landscape/Open Space

The campus open space strategy seeks to create a well-connected and legible pedestrian-oriented environment. Open spaces are integral components of a campus unite separate buildings into a cohesive environment for students, faculty, and visitors alike.

Campus open spaces can be typically classified in the following categories:

- Campus Quads
- Signature Open Spaces
- Pedestrian Malls
- Athletics and Recreation

These types of open space, when linked together through a unified landscape expression, work to create a rich and memorable campus environment.

## Campus Open Spaces

## Quads

Campus quads are open spaces defined by enclosures on a number of sides. These enclosures can be architectural or vegetative in nature and vary in both size and design. Quads are seen as outdoor "living rooms" that create a park-like atmosphere that promotes interaction between people in the physical, social, and intellectual realms.

The Master Plan identifies several opportunities to develop campus quads:

- Residential quads are created adjacent to concentrations of on-campus housing. They are versatile spaces that allow for a wide range of activities, including group gathering and recreation.
- An academic quad is proposed near the Performing & Fine Arts Building and Health Sciences. The proposed academic commons (library) expansion would provide enclosure to the space, effectively surrounding the open space with a variety of academic uses. The quad space can provide areas for group gathering, as well as outdoor study spaces.

## Signature Open Space

Signature open spaces are critical to the open space network, contributing to the overall campus experience of students, faculty, and visitors. Signature open spaces are interesting outdoor places that have higher intensity use and a unique identity.

Opportunities for signature open spaces on the Cheyenne campus include:

- An outdoor amphitheater/performance venue adjacent to Health Sciences and the proposed Performing & Fine Arts Center.
- A campus arrival plaza serving as the primary entrance to the CCC Building, Student Center, and the UW Center/Student Services Building.

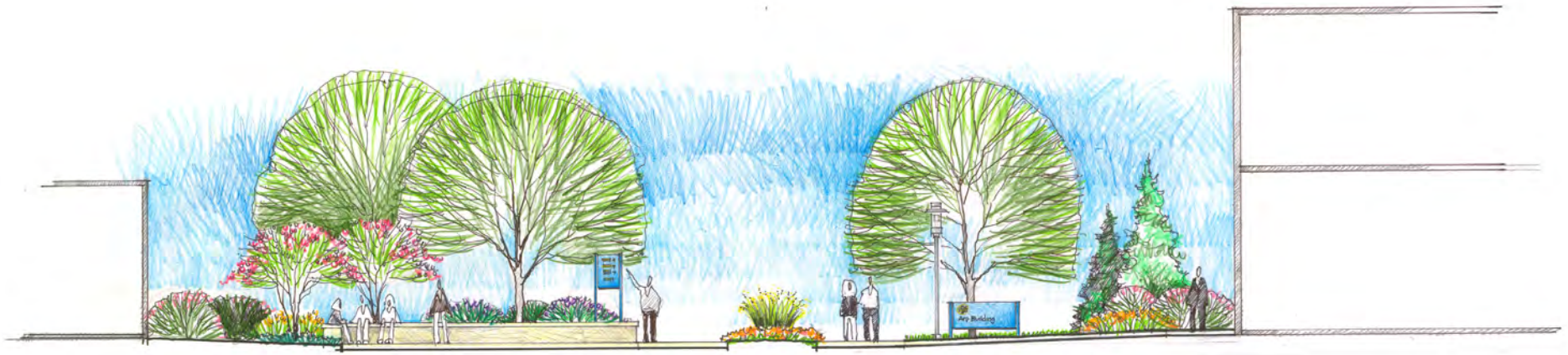
## Pedestrian Malls

Pedestrian malls are designed to facilitate pedestrian movement and form important linkages on campus. Malls tend to incorporate trees and other landscape material that aesthetically enliven and strengthen these corridors. Site lighting, furniture, and features such as public art are typical elements found within pedestrian malls.

The Master Plan suggests the creation of several new pedestrian malls:

- A series of malls running north-south connecting uses north of the Loop Road back to the campus core.
- A newly created mall running east-west on the north side of the major building spine.

The Master Plan also recognizes the need to improve the existing academic mall. This can be achieved through landscape enhancements and a series of plazas and smaller pedestrian nodes distributed along its length at key campus crossroads.




**Typical Section along Academic Mall**

Plazas are illustrated along the pedestrian malls of LCCC and they are intended to provide outdoor spaces for use in any number of ways, from providing areas for groups to gather to providing smaller, more intimate spaces for individual study. Typical elements in the plazas should include:

- Enlarged areas of hardscape/pavement.
- Corners or nooks at varying scales to provide for a range of users.
- A variety of seating options including benches, seat walls, and tables and chairs.
- Amenities in a higher concentration including lighting, signage, and waste receptacles.
- Increased landscape material.
- Strong connection to building entrances and indoor collaborative spaces.

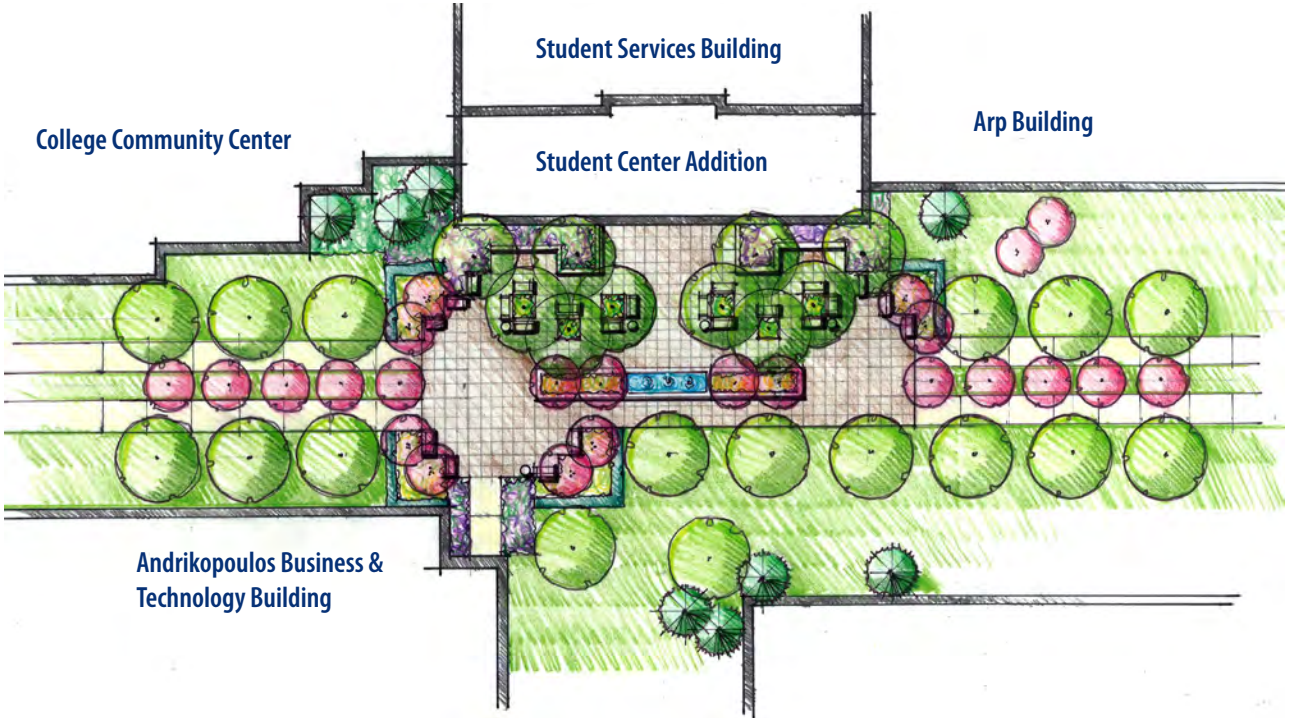
Proposed locations for these plazas are at the new Student Center entrance, a new entrance at the Fine Arts Building, and adjacent to the academic commons/Ludden Library along the academic spine.

Pedestrian nodes are also found along the pedestrian malls and they contain similar elements to plazas; however, at a smaller scale. They are proposed at important locations where pathways traverse the building spine. They provide amenities like special paving, small seating areas, signage, and landscape enhancements.

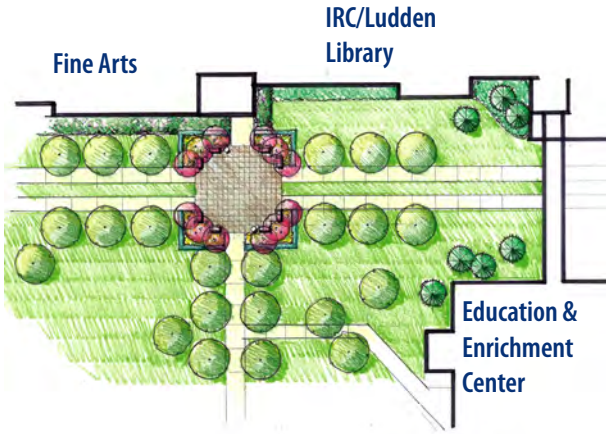
## Athletics and Recreation

The Master Plan recommends a majority of development to occur within the Loop Road. To maintain adequate parking near the core area of campus the current athletic fields that lie west of the PE Building are proposed to move across it to the north. The following recommendations should be incorporated into the design to enhance the overall image and experience.

- The proposed fields should be configured in a north-south orientation for proper sun exposure in regards to athletics.
- A series of trees should be planted to buffer the fields from the wind.




Plaza at Student Center




Typical Pedestrian Node Along Academic Mall

# four|albany county campus

# Introduction

The ACC has experienced tremendous growth since its opening in 2005. The campus is currently comprised of one facility on the eastern edge of the City of Laramie. The campus was analyzed for both spatial and physical characteristics, in addition to looking at unique future opportunities for campus growth.

# Enrollment Growth and Space Needs

Similar to the Cheyenne campus, the Space Needs Assessment analyzed the existing space at the ACC to determine the existing and future needs. The space needs were developed utilizing the same three target horizons:

- Fall 2010 baseline space needs - (Current surplus or deficit)
- 10% student enrollment growth over 10 years
- 20% student enrollment growth over 10 years

The ACC has a current space inventory of approximately 20,100 ASF. The campus is currently running at maximum capacity and has an immediate space deficit of approximately 10,600 ASF. Looking at 10% and 20% growth horizons, the ACC will have a deficit range of approximately 13,700 - 20,400 ASF, in effect doubling the size of the current facility. The ACC has several options and opportunities to accommodate this projected growth; each opportunity is described in the Master Plan recommendations.

## Albany County Campus

- Current space inventory: 20,123 ASF
- Current space need: 30,745 ASF
- 10% projected growth: 33,828 ASF
- 20% projected growth: 40,524 ASF
- Greatest future need deficits
  - Classrooms and Service
  - Teaching labs and Service
  - Offices and Service
  - Library
  - Physical Plan
  - Student Center

Albany County Campus commons area

**Space Needs Projections (Albany Campus)**

| Category | Existing Space (Fall 2010) | 2010 Guideline | 10% Projected Growth | 20% Projected Growth |
|---|---|---|---|---|
| Student Enrollment (FTE) | 635 | | 700 | 762 |
| Faculty and Staff (FTE) | 40 | | 44 | 49 |
| Academic Space | 17,324 ASF | 25,217 ASF | 27,360 ASF | 30,348 ASF |
| Academic Support Space | 1,177 ASF | 2,741 ASF | 3,396 ASF | 5,010 ASF |
| Auxiliary Space | 1,622 ASF | 2,787 ASF | 3,072 ASF | 5,166 ASF |
| **Total Space** | **20,123 ASF** | **30, 745 ASF** | **33,828 ASF** | **40,524 ASF** |
| **Projected Need*** | | **49,200 GSF** | **54,100 GSF** | **64,800 GSF** |

*Note: For planning purposes, GSF = ASF x 1.6

Golden Eagle statue at entrance

# Physical Analysis

The ACC lies on a 10-acre parcel on the Turner Tract property in Laramie. The campus shares an entrance off Boulder Drive with a separate office complex. Other physical observations include:

- The ACC currently has an existing 228-car parking lot adjacent to the ACC facility.
- There is a storm water basin and fire truck turnaround on the north side of the building.
- The site contains relatively steep slopes on the eastern end of the parcel.
- The site contains roughly 3.4 acres of open development area on the parcel.

Adjacent to the existing property is an available 5.7-acre parcel owned by the City of Laramie. This parcel could be utilized for future campus expansion; however, there are some inherent limitations due to the regulatory and physical constraints of the property, including:

- Distinct zoning regulations associated with the Turner Tract.
- A row of high-tension power lines run diagonally across the bottom third of the site.
- There are no existing access points from Boulder Drive onto the site.

The ACC has a unique growth opportunity as an alternative to development on the adjacent parcel. UW's Master Plan indicates a site available for development on its campus in Laramie by an academic partner such as LCCC. The site is approximately 6 acres in size and is located along 22nd Street, one of the major vehicular corridors of the UW campus.

The eastern side of the UW campus is growing with many newer academic and community-based uses recently built, under construction, or planned. The site works well as a community college satellite campus in that it is clearly imbedded in the fabric of the UW campus, yet the location on 22nd Street provides for a distinct identity. Planned campus site improvements in this area of campus included a pedestrian campus quadrangle, and a strong non-motorized link to the central parts of campus. The campus bus system provides a link from the proposed site to parking areas and other campus facilities, and a significant student housing project is underway to the south and east of the site.

**Albany County Campus Site Analysis**

**UW Academic Partner Site**

# Campus Alternatives

The ACC is at a significant point in its history. In its relatively short life, the ACC has filled a vital role in providing courses for residents pursing a two year degree and for UW students in need of additional remedial studies. The alteratives considered for the ACC explore three distinct development tracks based on the opportunities provided at each site.

## A. Expand on the Existing Sitel

- Build an addition onto the existing facility. This option allows the ACC to satisfy the current space needs and meet the space needs based on the 10% growth horizon.
- Develop the remainder of the parcel with necessary parking.
- Future building expansion past the 10% growth horizon will not be able to occur on site.

## B. Expand onto the Adjacent Parcel

- The adjacent parcel provides expansion capacity for the 10% and 20% plan horizons.
- Campus expansion can occur with two new facilities.
- As the student population approaches 1,000 Full Time Equivalent (FTE), the need arises for student-life type uses which the site may not be able to support.
- There are logistical issues currently on the site (power lines, zoning regulations) that would need to be resolved prior to development.

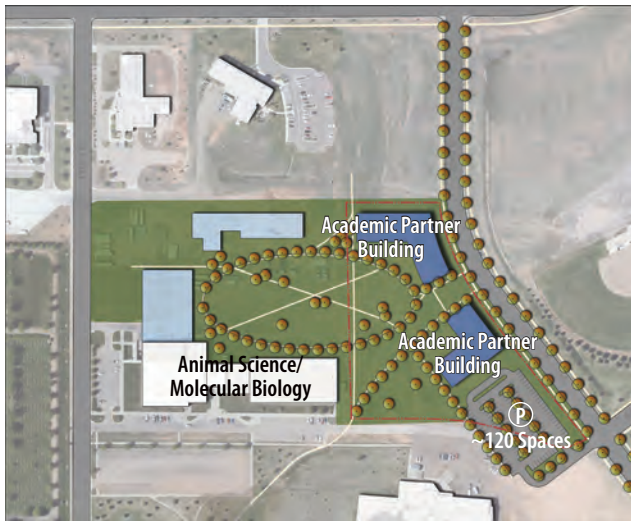
## C. Partnershipe with the University of Wyoming

This opportunity includes new construction on the UW-designated Academic Partners site.

- LCCC students would utilize the assets of the UW campus such as student life facilities, shared classrooms and laboratories, parking and transportation resources, and technical and research facilities.
- Minimal on-site parking will require a mass transit shuttle route to site.
- Partnering with UW could increase enrollment opportunities substantially, providing for growth of LCCC in size and mission.

**Alternative A**

**Alternative B**




**Alternative C**

# Master Plan Recommendations

The Master Plan recommendation for the ACC is to pursue a combination of the alternatives presented and discussed with LCCC and the Community Advisory Committee; maintaining the existing campus space while opening a new facility on the UW site designated for this purpose.

The existing site works well for non-traditional working students whose busy lifestyles require that the LCCC experience is one of convenience and ease of access. Students can easily find the existing facility, park, and attend class. The existing building can be used for programs and coursework geared toward the community and the non-traditional student (e.g., workforce development). The proposed UW experience will be different in that the new facility will be within an existing campus fabric that is not as tailored for use by students who are commuting and taking a limited number of courses in a given semester.

A partnership with UW for a new facility on their campus provides a great opportunity to expand the programs and offerings of LCCC in Laramie. Locating within the UW campus will appeal to more traditional students who desire a full campus atmosphere and experience. A partnership with UW will offer opportunities for LCCC students in Laramie to engage in student services, activities, and amenities of the larger campus, and the potential to live in student housing. LCCC can strengthen its ability to provide remedial and lower level coursework for UW students, offer a greater number of two-year degree and certificate programs in Laramie, and promote a stronger "2+2" program for those LCCC students who wish to pursue a bachelors degree.

The Master Plan alternative for the UW campus site (Altenative C) illustrates one potential scenario for developing the site. LCCC will need to work with UW to define the specific needs of this facility, carefully plan to meet the immediate needs of the partnership, and reserve capacity on the site for future growth. Any new facility on the campus will need to closely follow the design principles and guidelines adopted by UW in their Long Range Development Plan.

The expansion onto the UW campus, with the retention of the existing facilities in Laramie, captures an opportunity to expand the role of LCCC while providing for students with a broad range of needs and goals. A great deal of effort is required to work through the details of a partnership with UW, and this Master Plan recommends that LCCC pursue this opportunity with vigor.

Albany County Campus facility

# five|design guidelines

# About This Chapter

Design guidelines for LCCC reinforce the Master Plan principles at a variety of scales. The topical guidelines include disciplines ranging from architecture to urban design, site design, and landscape architecture.

## Architectural Guidelines

The architectural design guidelines fall under two broad categories:

- Campus Spine Architecture
- Campus Drive Architecture

These two categories provide recommendations for building configuration and orientation, massing, and articulation and materials.

## Site Design Guidelines

The site design guidelines include recommendations in the following areas:

- Landscape Master Plan
- Landscape Character Zones
- Open Space Typologies
- Plant Material
- Plant Placement
- Campus Gateways
- Signage and Wayfinding
- Campus Streets
- Campus Walks
- Site Furnishings
- Campus Lighting

# Purpose of Design Guidelines

The design guidelines for LCCC are meant to provide a conceptual framework for the future development of the campus. They are general in nature and have been crafted with an eye towards establishing the general characteristics that will come to distinguish LCCC. By no means are they prescriptive - they are not meant to be a formula but merely a way of establishing a common dialogue about the campus and the qualities that support the institutional vision. Their overall purpose is to provide a framework that will result in an expression that is cohesive and coherent; one that unifies rather than fragments. Design guidelines further define the physical planning goals of the Master Plan and provide design direction for implementation of the plan.

To the greatest degree possible, the guidelines try to capture the spirit of the overall Master Plan while recognizing the existing building typologies, both new and old. The Master Plan goes a long way in describing the evolution of the campus and the unique characteristics of the existing campus and the opportunities for expansion. How will the campus grow? What are the spatial and experiential qualities of the new campus? These questions are as important to the design guidelines as they are to the Master Plan. Consequently, the guidelines should be interpreted with a discerning eye towards the configuration and goals described in the Master Plan.

The design guidelines focus on the Cheyenne campus where the largest amount of new facilities are proposed. New facilities for the ACC on UW campus will need to conform to the Long Range Development Plan adopted by the university to guide growth and development.

Campus landscape character

The design guidelines provide a framework for future development that will:

- Reinforce LCCC's association with the Cheyenne community and its location within the High Plains region.
- Encourage flexibility that will allow the Master Plan vision to develop incrementally through influences from various leaders, designers, and planners.
- Further the high-quality standards and contribute to a dynamic campus environment for 21st century learning.
- Provide a means to transform the existing architectural and site design language of the campus.
- Enable and reinforce a more iconic and civic presence for LCCC; create a new 'front door' or image appropriate to the institution.
- Build on the master planning themes of the campus plan; specifically addressing the idea of a new campus drive and reinforcing the existing campus spine.
- Reinforce the role that architecture plays in wayfinding and orientation.
- Unify the main campus under an approach and philosophy that connects buildings with one another and with the landscape to form an integrated and architecturally rich campus context.

Ultimately, the guidelines and the Master Plan should be viewed as an integrated and comprehensive framework for the development of the campus. Most important, future designers should not lose sight of the ultimate goal of providing a memorable and cohesive campus experience. The guidelines are not meant to stifle creativity. They are crafted with change in mind; however, they do speak to certain patterns of place and qualities that should be carefully considered and repeated. They should also evolve with each new project so that there is a connection to things past while providing for an unknown future. The guidelines presented here are a first step in identifying those patterns that will define the character of the LCCC campus - a place that provides a cohesive and memorable experience for the students, the community and anyone else who visits LCCC.

Existing academic mall

# Sustainability and Innovation

Effective design should reference and respond to the local and geographic microclimate, while also considering orientation, construction, mass, materiality, and form. This resulting positive relationship between building and nature allows for beneficial environmental and economic impacts by minimizing carbon footprint and energy consumption. LCCC's campus should:

- Represent built and natural systems that reuse and recycle energy, materials, and biological resources to minimize impacts to the environment.
- Emphasize a "closed loop" of waste flows by seeking innovative uses for traditional waste products that allow LCCC to be on the leading edge of sustainable thinking.
- Connect to its location within the High Plains by considering habitat, material, energy, and human connections. Architectural and landscape improvements should be consistent with the region's local ecosystem.

Sustainable design should be a priority for new construction. Using the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) green building and certification system as a guide for opportunities in environmentally sensitive design, sustainable design principles for the campus will:

- Provide opportunities for alternative transportation.
- Protect and restore habitat.
- Maximize open space.
- Reduce storm water impact.
- Minimize heat island effect from roof and non-roof elements.
- Reduce light pollution.
- Reduce water consumption with low-flow fixtures and water-efficient landscaping.
- Optimize energy performance.
- Utilize renewable energy.
- Reuse existing materials where applicable.
- Utilize recycled, recyclable, regional, and rapidly renewable materials.
- Maximize daylighting and views.
- Encourage non-motorized and transit forms of transportation.

In addition to serving their primary function as educational facilities, the LCCC campus and buildings should be considered as educational tools and marketing tools for enticing and retaining quality students and staff. New facilities should utilize features that are innovative by current standards and flexible enough to incorporate future innovative features.

Given the focus at LCCC on energy production, future site and building projects should consider providing visual examples of energy production to highlight the school's role in these industries.

Cheyenne contextual landscape

# Architectural Design Guidelines

The campus at LCCC is made up of buildings that represent two distinct architectural vocabularies. The original 1970's era buildings are predominately low one-story precast buildings. The sheer number and resulting fabric of these buildings make their presence a difficult element to deny. Recently, the college has constructed newer buildings that are distinctly different than their predecessors. Although they provide a new and somewhat richer palette of materials and forms, they are difficult to reconcile with the original buildings.

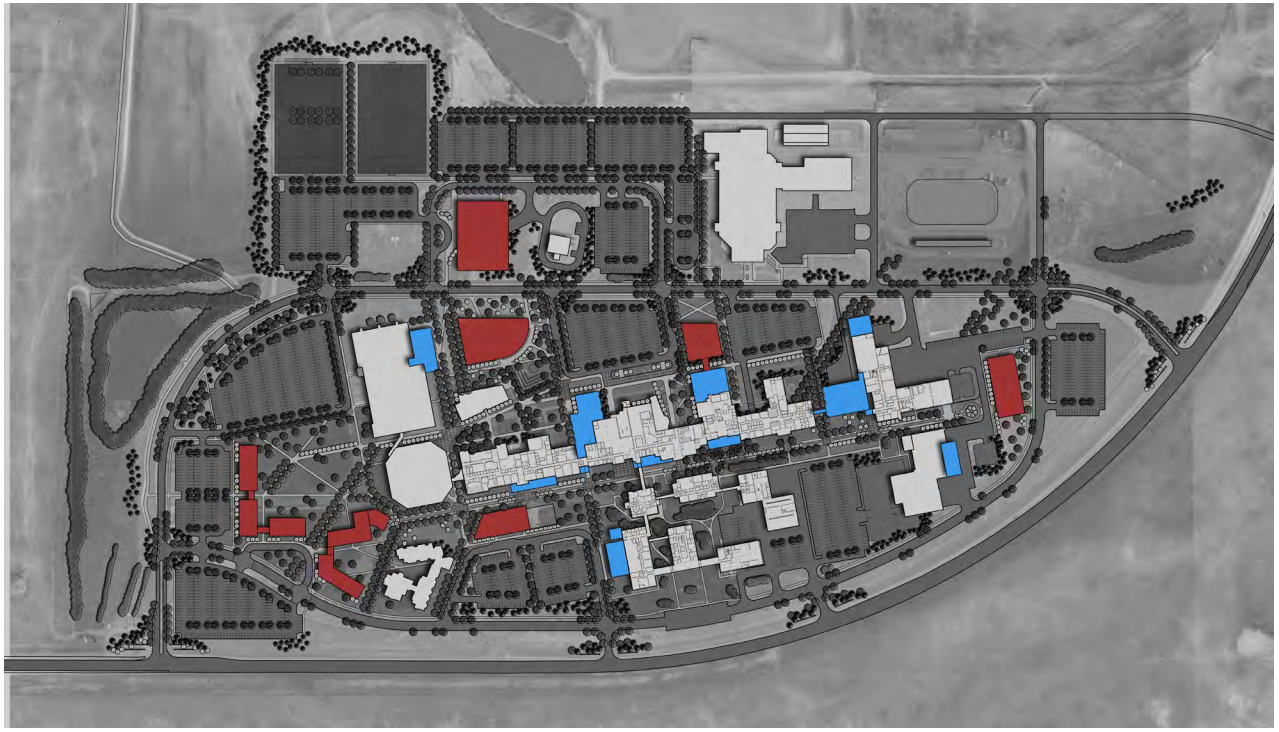
Meetings and workshops with various stakeholders and committee groups resulted in several overriding concepts that shaped the architectural guidelines.

The campus spine was utilized as a meaningful point of departure for repurposing and reallocating programs within the existing buildings. Circulation, open space, program additions, and landscaping were developed within the framework of the existing campus spine and building on the existing campus patterns.

In addition to this strategy, the Master Plan advocates new future development to occur in relation to the Campus Drive or Loop Road. This dual strategy was employed to recognize and build on the current campus patterns while providing a plan for transforming the image and physical plan of the campus by proposing a new development pattern along the Loop Road. Both strategies must work in concert with each other and both must be supported by a series of guidelines that meet the objectives outlined above. Consequently, there are two sets of architectural guidelines that speak to the specific requirements embedded in each of these development scenarios. This layered collage of existing and new development provides a rich context for the evolution of LCCC.

1970's campus architecture /Campus Spine architecture

Recent campus building/Campus Drive architecture



**Campus Architectural Vocabularies**

**Campus Spine Architecture**

**Campus Drive Architecture**

# Campus Spine Architectural Guidelines

## Intent

Transform the existing architectural vocabulary by reinforcing the massing, materiality, and linearity of the existing buildings with an overlay of contemporary materials and forms that add color, transparency, verticality and animation to the existing facades.

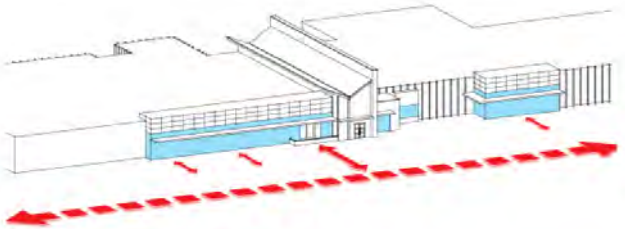
## Configuration and Orientation

- Additions should be configured in a linear fashion along the spine to maximize the more welcoming character of new construction and minimize impact to existing service corridor and utilities.
- Circulation should occur along exterior to provide connectivity, both visual and physical, to exterior campus spine and related outdoor development.
- Program elements conducive to transparency and outdoor connections should be located along exterior.
- Entry elements should be located to emphasize cross connections to significant program elements and new campus development to the north.
- Building configurations should reinforce and contribute to outdoor places described in the Landscape Master Plan.
- New building entries and outdoor program elements should be configured to protection from west-northwest winds.

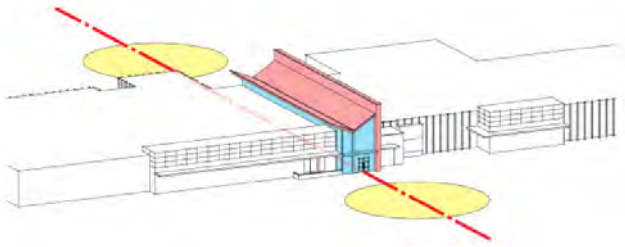
## Building Massing

- Secondary program elements should not exceed one-story in height.
- Building entry nodes and cross connection elements should be expressed as formal elements and break the one-story roof line of the existing building.
- Building massing should minimize shading onto building entries and outdoor program areas.
- Primary building massing, unrelated to entry nodes, should be simple flat roof massing.
- Any rooftop equipment or other elements should be incorporated into the massing or set back from the pedestrian spine.

Campus Spine Concept Sketch



Linearity
Transparency
One-story massing

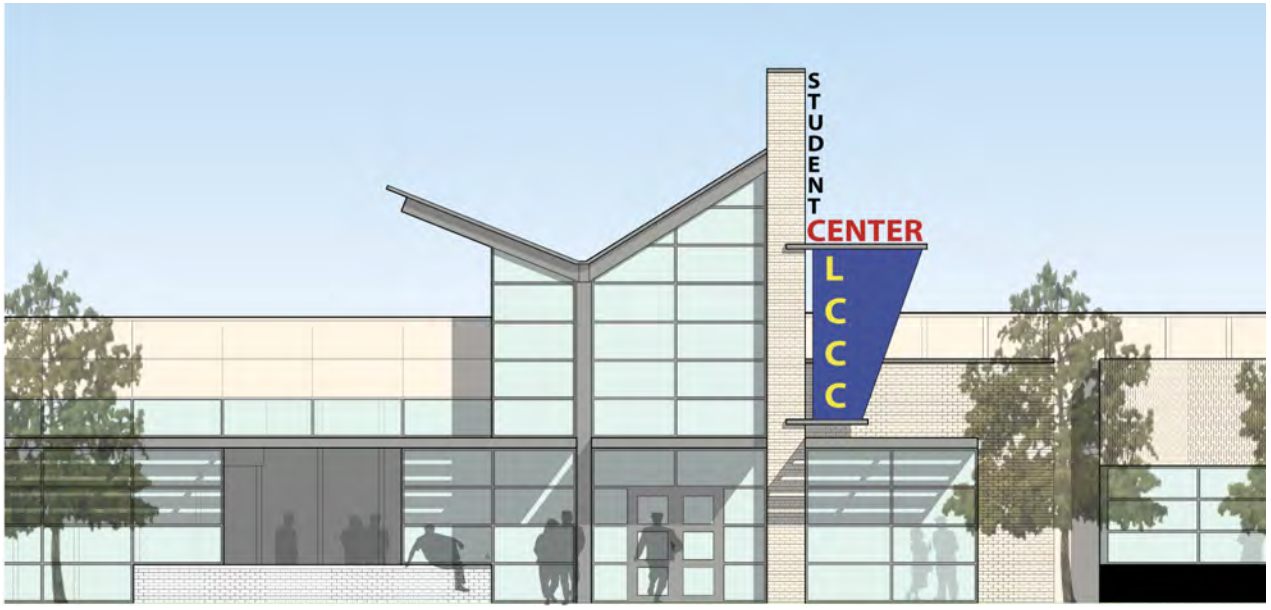


Vertical entry nodes

## Articulation and Materials

- Building entrances and cross connections should be celebrated with key vertical elements and significant transparency.
- Building materials should build on the color palette of the existing one story buildings. A color palette should be employed that is harmonious with the existing buildings. Building materials should be white or off white.
- Building additions should maximize transparency to exterior pedestrian spine. Fenestration should incorporate fitted glass and white spandrel glass where appropriate. Clear, high performance Low E glazing systems should be utilized to maximize transparency and minimize solar effects.
- Sun shading devices should be considered as a means to address solar orientation and to further animate the façade of newer building additions. Buildings should optimize shade and shadow and build on the shadow patterns currently expressed by the precast structures and fenestration bays.
- Sustainable features such as sun shades, sun shelves, and clerestories should be utilized to bring daylight into the existing building.
- Materials should be considered for long-term durability and ease of maintenance. Stucco, exterior insulations systems and wood are to be avoided. Masonry systems, rain screens, and thermally insulated metal panels are encouraged.
- Wayfinding devices and graphics should be incorporated into the new additions, especially at entrance nodes.
- The use of color is encouraged at vertical entry elements.
- Lighting should be employed in a manner that optimizes activity and transparency during nighttime hours.

Campus Spine architecture - colors and materials




Concept Sketch Illustrating Campus Spine Architecture Guidelines

# Campus Drive Architectural Guidelines

## Intent

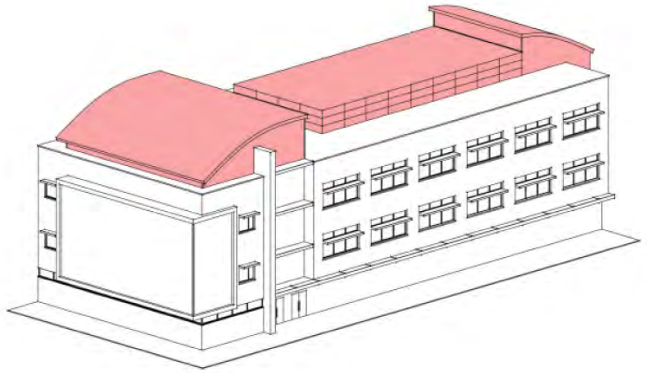
Provide a new and coherent image for LCCC that speaks to the community and civic role the campus plays within the City of Laramie. Expand on the architectural vocabularies of the new buildings to create a vibrant image that knits the different building typologies into a unified whole. The Campus Drive buildings need to be designed within the context of two scales; the first relates to the pedestrian experience and the formation of meaningful outdoor campus places while the second relates to the campus entry experience and the automobile. The second scale speaks to the sculptural and iconic character of the buildings as perceived from Campus Drive.

## Configuration and Orientation

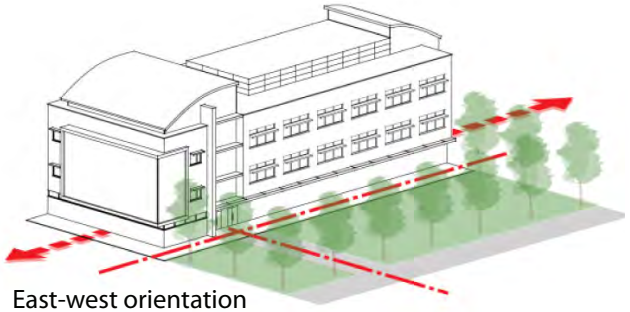
- Ideally, new buildings should be oriented along the east-west axis to maximize daylighting and minimize the negative effects of a west orientation.
- Building footprints should reinforce and contribute in a direct way in the formation of outdoor spaces identified in the Master Plan.
- Building placement and configuration should align and reinforce primary pedestrian paths illustrated in the Master Plan.
- Building footprints should be narrow, double loaded schemes to facilitate daylighting.
- Buildings along Campus Drive need to acknowledge that there are no service sides to the buildings. Service zones need to be carefully integrated into the design.
- New buildings along Campus Drive should provide a hierarchy that recognizes the Campus Drive elevation as a primary façade.
- Building configurations should explore ways to minimize wind and wind tunnels created by adjacent structures.

## Building Massing

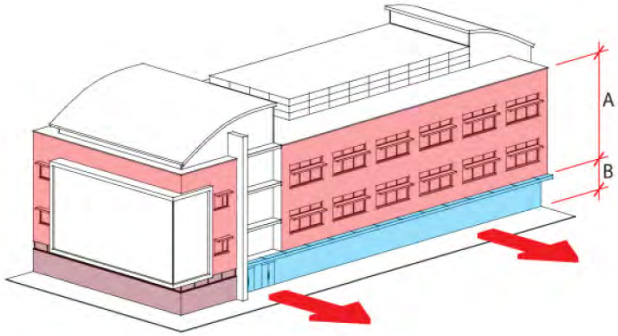
- New buildings should be at least two stories ir massing and not exceed four stories.
- The form and massing of the building should reinforce a division of the façade into a base that reflects the pedestrian and public zone of the building.
- Setbacks should be considered in the bulk plane to reduce shadows into adjacent campu activity areas.
- There is a strong desire to provide variety and form within the context of the roof profile. Building massing should provide slope roof profiles wherever possible especially as it relates to unique program elements.
- All rooftop mechanical systems and other rooftop equipment should be screened as part of the primary roof forms or roof vocabulary. No exposed mechanical systems are permissible.
- Provide vertical and figural elements at primary building entries.



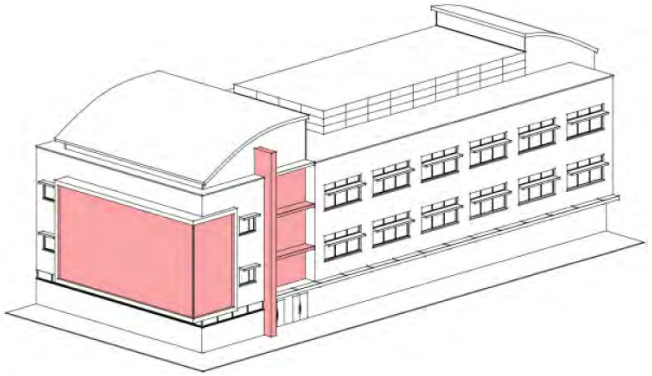
Varied roof profile



East-west orientation
Reinforce campus plan



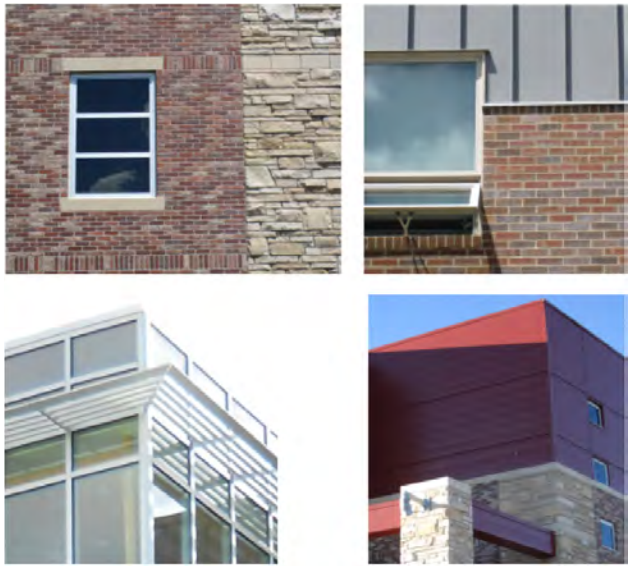

Two-part massing



Vertical/transparent elements at entry

## Articulation and Materials

- Building materials and colors should be complimentary to the new Student Housing project and the new Health Sciences Center.
- The primary masonry materials should include a three brick blend of lighter terra cotta colors found in the two reference projects.
- Accent masonry used to differentiate massing should include darker terra cotta or iron spot masonry material.
- Metal panels should relate to dark gray and zinc materials of the two reference buildings.
- Stucco and exterior insulation systems should be avoided unless screened from lines of sight.
- Sun shades and other shading devices should be used to animate and provide relief to elevations.
- Size and shape of windows should relate to program components and solar orientation.
- Spandrel glass should be light in color.
- Glazing systems should be clear, high performance Low E assemblies.
- Grade level should be physical and visually connected to outdoor spaces.



Campus Drive architecture - colors and materials

Concept Sketch Illustrating Campus Drive Architecture Guidelines

# Site Design Guidelines

The site design guidelines are intended to provide guiding principles for the future development of the campus open space, circulation systems, and general campus character. The guidelines were developed with respect to a series of fundamental ideas:

- Campus design should create a safe, efficient, and aesthetically rich pedestrian environment and build a more traditional campus character.
- The campus should develop robust spaces that provide for a diverse mix of uses and user groups.
- The campus should respond to the native environmental context of the Cheyenne region.
- Campus architecture, landscape, lighting, and signage should clarify the campus structure ad make it comfortable for visitors to find their way around campus.

Sculptural boot along the Loop Road

# Landscape Master Plan

The beauty and livability of a campus is dependent upon its open spaces. The campus open spaces form the critical links that unify the campus under the banner of one distinct place. They also provide habitat for the flora and fauna of the region and provide areas for natural ecologic processes to occur.

The Landscape Master Plan calls for a variety of unique campus spaces that create an interesting and varied campus experience. Overall themes seen in Landscape Master Plan include:

- Create distinct vegetation patterns for pedestrian- and vehicular-oriented landscapes.
- Utilize gateways and landscape to signify campus arrival.
- Develop a hierarchy of landscape planting and maintenance zones.
- Respond to local climactic conditions and utilize vegetation and building form to act as windbreaks and buffers throughout the campus.
- Create a variety of pedestrian spaces to promote the use of the outdoor environment uses.
- Improve the overall campus landscape aesthetic.
- Preserve open areas for natural hydrologic processes.

Landscape Master Plan

# Landscape Character Zones

The Landscape Master Plan seeks to balance the physical and environmental conditions of the site with the principles of successful open space development to create a place-based landscape expression. LCCC's campus character is highly shaped by its geographic location within the High Plains of the western United States. The climate is semi-arid and is typically windy and has a great range of temperature extremes. The native plant community is composed of vegetation well-adapted to these conditions.

The Landscape Master Plan has developed a series of landscape character zones, each with a distinct purpose and plant palette.

- Traditional Campus Zone
- Transitional Zone
- Plains/Perimeter Zone

Campus areas within each landscape zone include:

## Traditional Campus Zone

- Academic mall
- Campus quads and courtyards
- Plazas
- Nodes
- Building entrances

## Transitional Zone

- Buffer between Loop Road and College Drive
- Areas adjacent to the Loop Road
- Campus uses north of the Loop Road
- Campus gateways

## Plains/Perimeter Zone

- Areas exclusively outside of the Loop Road
- Allison Draw flood channel

*Note: The athletic facilities fall within the transitional landscape zone. The fields should be maintained to a standard required by the use. It generally requires irrigation, regular lawn care, and a routine field management program.

Campus resources pertaining to the landscape must be carefully considered to achieve maximum effect yet be environmentally and economically sound. Generally, more attention and resources should be spent maintaining the campus core and high image areas and less on the periphery.

Landscape Character Zones

## Traditional Campus Zone

The traditional campus landscape zone is concentrated within the core interior campus environment. This landscape is experienced at the pedestrian level and requires a greater degree of detail and care than the other zones. Primary aspects of this zone include:

- A varied palette of drought-tolerant ornamental and native trees, shrubs, grasses, perennials, and ground covers in open space and landscape areas.
- Groupings of deciduous canopy trees with both formal and naturalistic placement for a more classic campus image.
- Conifers used for wind breaks and visual/ seasonal interest.
- Turf areas implemented in a deliberate manner for distinct applications, not as a default ground cover to be used campuswide.
- Highest priority/degree of maintenance
  - Most frequent mowing schedule
  - Maintenance to plant beds and vegetation
  - Irrigation required

## Transitional Zone

The transitional landscape zone is primarily located at the edges of campus. This landscape is seen from both the vehicular and pedestrian perspectives. It serves the important function of transitioning from the contextual vegetative vernacular of the shortgrass prairie to the more manicured aesthetic of the traditional campus environment. Primary aspects of the transitional zone include:

- Convert peripheral areas of turf into a primarily native vegetative cover.
- Apply a simple plant palette to transition between the traditional campus and plains environs, composed primarily of native grasses and ground covers with intermittent usage of trees and shrubs.
- Medium priority/lower maintenance requirements
  - Less frequent mowing schedule and maintenance
  - Less/minimal irrigation requirements

## Plains/Perimeter Zone

The remainder of campus falls into the plains/ perimeter landscape zone. This area falls exclusively outside the Loop Road and is composed of the native plant community of the region. It is an important link to the regional context and serves as the backdrop for the Cheyenne campus. Primary aspects include:

- Composed of the flora of the High Plains region that are well-adapted to the local environmental conditions.
- Minimal maintenance required.
- Minimal/no irrigation requirement.

Traditional campus zone character

Transitional zone character

Plains/perimeter zone character

# Open Space Typologies

The Landscape Master Plan creates a series of prominent landscape open spaces based on proven campus planning principles. Campuses are dynamic environments and should provide a variety of spaces to accommodate the many activities that occur within, both academic and recreational. The following provides some guidelines for the design of open spaces on campus.

## Campus Open Space

## Quads

Campus quadrangles are important components of a memorable campus. Quads are versatile campus spaces that can be used for a variety of campus activities. Quads are typically designed in consideration of the immediate context, shaped to accommodate the activities of the primary user group (e.g. residential- or academic-focused). Typical characteristics of quads include:

- A mature and simple landscape palette of canopy and understory trees, with the restrained use of shrubs and ground cover.
- Strong spatial definition framed by architecture and/or vegetation.
- Open areas of turf that can be utilized for passive and/or active recreation.
- Informal groups of tree massings to provide shade and act as wind breaks.
- Major building entrances oriented toward the quad.

## Signature Open Spaces

Signature open spaces become the iconic symbols and memorable places of the college campus. These spaces have no steadfast design standard; however, there general guidelines that speak to the character of these spaces, including:

- Spaces at a variety of scales to accommodate multiple user groups.
- Areas of both hardscape and landscape.
- Concentrations of pedestrian amenities.
- Clear views and visual connectivity into and from the space for security and ease of navigation.
- Iconic designs that stand out from the rest of the campus fabric are allowed, if not encouraged.

Open space character of a campus quad

Character of outdoor performance venue

Academic quad and outdoor performance venue

## Pedestrian Malls

Malls can be seen as the pedestrian "highways" of the campus. They connect prominent campus destinations and are designed to facilitate movement. Typical characteristics of pedestrian malls include:

- Linear walks that connect prominent campus destinations. Most of these walks may be concrete, however bricks and other pavers should be used to designate special areas.
- A bold landscape expression that unifies the entire space.
- Pedestrian amenities such as lights, benches, and waste receptacles.
- Focal features such as public art.

The existing academic mall currently lacks pedestrian amenity and an effective landscape expression. The Master Plan recommends transforming the mall into a memorable and utilized campus space in a number of ways:

- Create a series of plazas and nodes that serve as gathering places and are hubs of pedestrian activity.
- Implement a simple landscape gesture utilizing canopy and ornamental trees to create a landscape rhythm along the mall.
- Utilize a varied plant palette including shrubs, perennials, and ground covers that provide four-season interest.
- Increase the transparency between the internal pedestrian "River" and the outside through building additions and renovations to promote visibility and accessibility between the two environments.

## Plazas and Nodes

Plazas are paved areas that provide places for gathering, primarily constructed in areas of heavy and frequent pedestrian use. Plazas spaces:

- Are typically located near building entrances.
- Are primarily hardscape; however, do include landscape material to create visual interest and add a sense of scale to the space.
- Designed to support different activities and different sized groups.
- Contain concentrations of pedestrian amenities, such as benches.
- Incorporate special paving to define the space.
- Provide seating that support a variety of uses, such as intimate discussion, people watching, quiet study, group gathering, etc.

Plaza design should consider the microclimate, including sun and wind exposure and seasonal conditions.

Nodes are typically located along the intersection of pedestrian paths and have design characteristics similar to plazas, but at a lesser scale.

Plaza character with seating areas and landscape

Example of a pedestrian mall

Existing LCCC academic mall

Typical example of campus node

**Landscape Enhancements and Building Additions Along the Academic Mall**

# Plant Material

The local climate at LCCC can create a harsh living environment for many plant species, particularly those not native to the region. There are a number of plant species that are able to withstand and thrive in these conditions. The following lists of plants were compiled based on plants identified as being able to survive within the Cheyenne region, located within the USDA Hardiness Zone 4.

## Deciduous Canopy Trees

- Acer x fremanii 'Autumn Blaze'
- Acer platanoides 'Deborah'
- Acer rubrum
- Betula nigra
- Celtis occidentalis
- Ginkgo biloba
- Gleditsia triacanthos 'Skyline'
- Gymnocladus dioicus
- Phillodendron amurense
- Populus deltoids 'Souixland
- Quercus macrocarpa
- Quercus rubra
- Tillia americana 'Redmond'

## Evergreen Trees

- Abies concolor
- Juniperus scopulorum
- Picea abies
- Picea glauca 'Densata'
- Picea pungens
- Pinus flexilis
- Pinus ponderosa
- Thuja occidentalis 'Techny'

## Ornamental Trees

- Acer tartaicum
- Amelanchier Canadensis
- Crataegus sp.
- Malus sp.
- Populus tremuloides
- Pyrus calleryana 'Aristocrat'
- Syringa reticulate 'Ivory Silk'

## Shrubs

- Aronia melonocarpa 'Autumn Magic'
- Cornus racemosa
- Cornus sericea
- Euonymus alatus
- Juniperus sp.
- Ligustrum obtusifolim 'Regelianum'
- Myrica pensylvanica
- Physocarpus opulifolius
- Pinus mugo
- Potentilla fruiticosa 'Goldfinger'
- Rhus aromatic 'Gro-low'
- Ribes alpinum 'Green Mound'
- Rosa Rugosa cv.
- Salix purpurea 'Nana'
- Spiraea japonica cv.
- Syringa patula 'Miss Kim'
- Taxus x m. 'Tauntonii'
- Viburnum dentaum 'Autumn Jazz'
- Viburnum opulus 'Compactum'

Acer x fremanii

Gleditsia triacanthos

Malus sp.

Syringa patula 'Miss Kim'

## Perennials

- Achillea ‘Coronation Gold’
- Amsonia tabernaemontana,
- Aster novae-angliae ‘Purple Dome’
- Baptisia australis
- Echinacea purpurea ‘Magnus’
- Geranium san. v. striatum
- Helianthus ‘Lemon Queen’
- Hemerocallis cv.
- Hosta cv.
- Iris sibericus ‘Caesar’s Brother’
- Nepeta x frassenii ‘Walkers Low’
- Rudbeckia fulgida ‘Goldsturm’
- Sedum ‘Autumn Joy’
- Solidago rugosa ‘Fireworks’

## Ornamental Grasses:

- Calamagrostis ‘Karl Foerster’
- Chasmanthium latifolium
- Miscanthus sinensis ‘Gracillima’
- Panicum virgatum ‘Prairie Sky’
- Schizachyrum scoparium
- Sorghastrum nutans ‘Indian Steel’

## Ground Covers

- Euonymus fortunei ‘Coloratus’
- Galium odoratum
- Pachysandra terminalis
- Sedum sp.
- Vinca minor

## Turf

Turf is a resource-intense ground cover from both maintenance and irrigation perspectives. It should be limited to deliberate applications within the campus core.

- Continue to provide areas of irrigated and manicured turf at key public spaces for informal gathering, outdoor play, and events.
- Consider more drought-tolerant turf grasses that require less irrigation.
- Collect and use rainwater for irrigation.
- Use rain sensors to maximize efficient use of water resources.

# Plant Placement

Care must be taken in the final landscape design such that any improvements condsider the need for a secure, safe environment. To a large extent, campus landscapes should strive to create a strong overhead canopy of trees, a rich ground plane of low shrubs, ground covers and flowers, and a clear middle view zone (above 2-feet tall and below 10-feet in height). Plantings that fill the middle view zone should be used judiciously so as to not obstruct views and create a sense of physical insecurity.

Calamagrostis ‘Karl Foerster’

Limit turf usage to core campus areas

# Campus Gateways

A majority of the Cheyenne campus population arrives to campus via the automobile. Consequently, the first impression of the campus is experienced from the perimeter along College Drive. There are four access points from College Drive; however, there is no entrance hierarchy and a minimal landscape expression to proclaim the arrival at LCCC. Campus gateways provide this sense of arrival and provide a welcoming entrance to the community. A successful system of gateways:

- Provide a visual, physical, and psychological threshold of arrival to the campus environment.
- Designate primary and secondary entrances to assist in wayfinding and campus orientation.
- Provide a consistent palette of lighting, signage, and landscape material that reflect the character of campus.

## Primary Gateways

The guidelines suggest designating the current western and northeastern entrances as the primary gateways. Primary gateways are the main access points and should be easily identifiable by first time visitors as such. These entrances provide the most direct vehicular access to a majority of the campus and its parking resources.

The primary gateways are recommended to include:

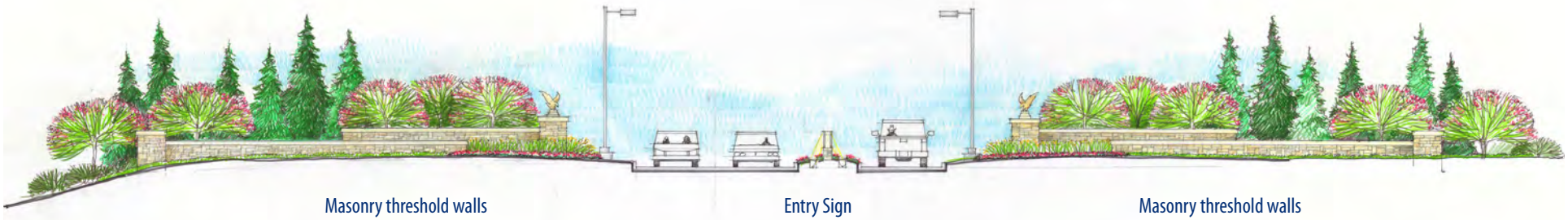
- Masonry walls of a similar material and color to the Campus Drive architecture.
- Entry signage that can be easily read from a vehicle travelling along College Drive.
- Bold landscape plantings in a simple arrangement, massing, and alignment.
- Vehicular-scaled lighting and accent lighting for signage and landscape.

## Secondary Gateways

The remaining entrances from College Drive are proposed as secondary gateways. Secondary gateways perform a similar function as primary gateways; however, they are less significant to the overall vehicular circulation patterns and orientation. Secondary gateways should contain:

- Simple walls scaled down from primary gateway.
- Bold and simple landscape plantings.

The Master Plan also proposes a new service access point at College Drive connecting to the existing service drive behind the Arena. This should not read as a gateway into campus, and signage and landscaping should not designate this driveway.




Primary Campus Gateway

# Signage and Wayfinding

Successful signage and wayfinding devices greatly enhance the image and usability of the campus. An easily understood and legible campus can leave a positive impression with visitors to LCCC. The Master Plan recommends a multi-level system of signage, each with a specific intent and design parameters.

The signage package is an important unifying element of campus and should be thematically similar in color, material, font, and style to be easily identifiable.

## Building Identification Signage

Building identification signage should be located adjacent to the primary entrances. Typical characteristics of building identification signage include:

- Succinct labels identifying desired specific building.
- Text that is legible from pedestrian walks.
- Low-growing plant material to "anchor" the sign into the landscape.

As part of the building facade, each entry should include building mounted signage.

## Pedestrian-oriented Signage

Pedestrian-oriented signage is located throughout the campus to provide wayfinding information to campus destinations and buildings. It is the most detailed and physically smallest of the signs within the signage and wayfinding system. Pedestrian-oriented signage:

- Should be located at the intersections of walkways and along major pedestrian corridors.
- Should guide visitors to campus destinations via the most direct routes.
- Should not be visually obstructed by other site elements such as vegetation, utility or light poles, or other signage.
- Should be able to be read at eye level.

## Vehicular-oriented Signage

Vehicular-oriented signage is intended to guide visitors arriving to campus via automobile to prominent campus destinations. They provide simple directional information and are located at significant points along the Loop Road. Vehicular-oriented signage should be:

- Oriented perpendicular to the Loop Road.
- Appropriately scaled for legibility from an automobile travelling at posted speeds.
- Prominently displayed and not blocked by other elements such as vegetation, utility poles, other signs, etc.
- Internally or externally lit.

Building identification signage | Pedestrian-oriented signage | Vehicular-oriented signage

## Sample Signage Package

## Campus Streets

The Loop Road is the primary vehicular distributor around campus and provides access to parking lots and building drop-offs. The Master Plan proposes to transform the Loop Road from a highway style perimeter road to an integrated campus street positively impacting the overall campus experience. This is desired for a number of reasons:

- The Master Plan relocates the athletic fields and places additional building program and parking north of the Loop Road. This requires strong connections on the north and south sides of the Loop Road to achieve a unified campus experience.
- The Master Plan expands the core of campus north toward the Loop Road. Several proposed buildings are planned to have a primary facade facing the road.

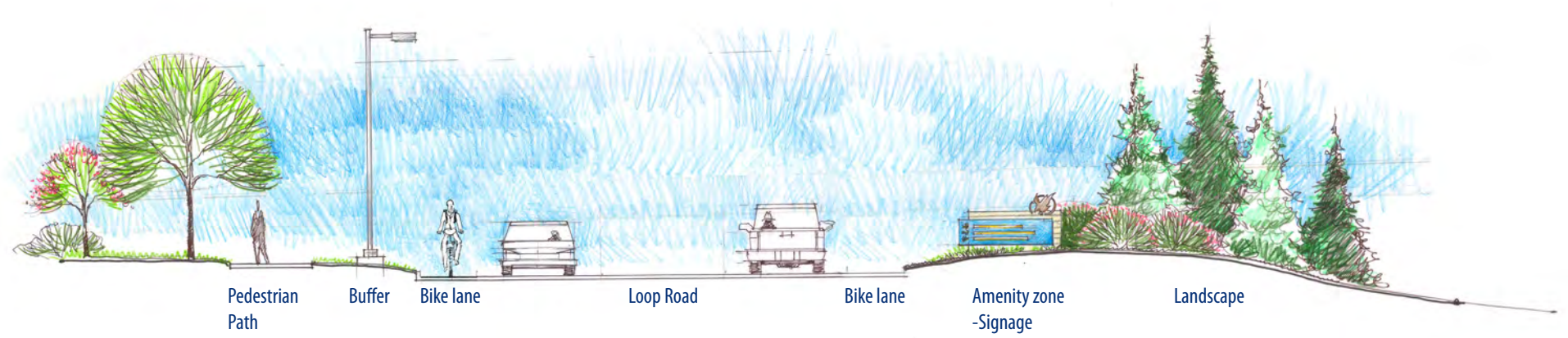
The cross section of the Loop Road suggests three vehicular lanes; two travel lanes and a center turn lane for queueing and easing turning movements into drop-offs and parking lots. Additional guidelines for the Loop Road include:

- The creation of 5-foot bicycle lanes on each side of the Loop Road. The lanes should be striped appropriately and go with the flow of vehicular traffic.
- Vehicular-oriented lighting to create a safe, well-lit environment with a focus on enabling visitors to find their way through campus.
- Signage along the Loop Road should be simple, readable, and placed to maximize the lighting of campus.
- Landscape treatments should project a consistent campus image, and promote pedestrian/cyclist visibility and safety.
- Utilize informal groupings of trees planted along the road with thicker vegetative groups at intersections as a visual clue and orientation device on campus.
- The road should be curbed and the gravel shoulders removed.

The landscape should be simple along this corridor, actively shaping views of the campus and academic core.

The west end of the Loop Road should be straightened out to maximize safety and clarity of the system. Both ends of the Loop Road are illustrated with boulevard islands to improve safety and image. As noted elsewhere in this report, the southern Loop Road intersections have been relocated to improve safety and function.

At key places along the Loop Road where pedestrians are anticipated to cross, the plan illustrates the use of special paving at crosswalks to make the campus more pedestrian friendly.




### Loop Road Section

## Campus Walks

A hallmark of a successful campus is a well-designed pedestrian circulation system. Campus walks constitute the backbone of this system.

- The campus should established a well-connected hierarchy of pedestrian walks.
- Walks should connect pedestrian origin/destination points, including building entrances and parking lots.
- Several pathways have been designated as primary pedestrian corridors. These pathways are intended to collect larger volumes of students and should connect major destinations.
- Pedestrian walks should generally follow the natural "desire lines" between destinations.
- All pedestrian walks and building entries should promote universal accessibility and the use of steps should be discouraged.
- Walks should merge when approaching roadways to reduce the number of road crossings.
- Crosswalks and barrier-free ramps should be constructed to meet regulatory requirements.

### Width, Design and Materiality

- The width of pedestrian walks should be established by the network hierarchy and intended usage.
- Primary pedestrian walks should be between 10- and 12-feet wide.
- Secondary pedestrian walkways should be at least 8-feet wide.
- Walkways must be designed to serve multiple purposes. They are primarily intended for pedestrians, but in many places they must also accommodate emergency and service vehicles. Paths should be designed and constructed to handle anticipated vehicular weight loads for emergency and service vehicles, including snow plows.
- Walkways should have a consistency in materiality and scoring with variations only at designated special areas such as plazas, nodes, or pedestrian road crossings.
- Special pavements should be used to designate special areas such as plazas and nodes.
- Pavement markings/special pavements (speed tables) should be used to signify pedestrian flows at major road crossings and curb vehicular speeds.

Utilize changes in pavement to designate special areas

Consistent pavement scoring along campus walks

## Site Furnishings

The campus currently has a wide variety of site furnishings of various ages, conditions, and styles. This detracts from the goal of creating a cohesive campus environment. A unified group of site furnishings contribute to a positive campus character and help give identity to the college. The Master Plan establishes recommendations for a variety of site furnishings, including:

- Benches
- Tables
- Bicycle Racks
- Trash and Recycling Receptacles
- Vehicular and Pedestrian Lighting

The site furnishings shown in the photographs on these pages are recommended based on durability, price, quality and design character that is suited to LCCC.

It is recognized that the implementation of these recommendations may occur over time through separate physical improvement projects and regular replacement.

In general, it is best to place site furnishings in places where people are likely to congregate (e.g., building entrances, gathering places, near food service, and place of high pedestrian activity). Site furnishings placed arbitrarily without regard to activity levels will be left unused and are more subject to vandalism.

## Benches

- Benches should be located along pedestrian corridors, but out of the path of travel.
- Typical locations for benches include building entrances, plazas, and nodes.
- Benches should be organized with other site elements.
- Benches should be structurally adequate to withstand extensive student use, inclement weather conditions, and most vandalism.
- Benches should be designed to require little or no maintenance.
- Benches should be metal with a metal mesh seating surface and back for comfort, strength, and ease of maintenance.

Existing bike rack, table, and waster receptacle

Existing bench near Science Building

Existing tables

Existing table seating area

Forms + Surfaces Ratio bench

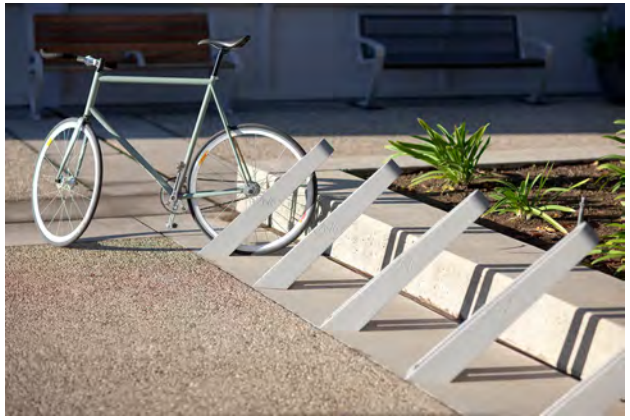
## Tables

- Tables should be located in areas adjacent to food service and in residential areas.
- Tables should be adjacent to pedestrian corridors.
- Tables should include surface mounting capability for installation in paved areas.
- Tables should meet ADA accessibility standards.

Landscape Forms Carousel table

## Bicycle Racks

- Bicycle racks need to be conveniently located, yet off-line from major pedestrian walks and building entrances. Wherever feasible, bicycle racks should be located contiguous to, but set back from, primary pedestrian walkways since these corridors also serve as bicycle routes.
- Bicycle racks can be conveniently located to serve multiple buildings.
- All bicycle parking should be secure, highly visible and well-lit areas within view of streets or pedestrian walks. Bicycle racks that are visually or physically isolated will not be used and are prone to thieves.
- To promote biking as a year-round means, a proportion of bicycle parking should be covered with a roof or similar covering or within a building.
- Bicycle parking areas are ideal environments for pervious pavements.
- In locations where snow storage is necessary, bicycle racks may be removed during the winter months.



Forms + Surfaces Bay City bike rack

## Trash and Recycling Receptacles

- Trash and recycling receptacles should be located at areas of high pedestrian activity: at the intersections of primary pedestrian walkways, in plazas, nodes, in vehicle and bicycle parking areas, at building entries, and where groups of pedestrian seating are provided.
- Units placed along walkways should be place contiguous to walks and on a concrete surface extending outward from the walk.
- The unit should be sturdy and secured to discourage vandalism.
- Receptacles for both trash and recyclables should be clearly labelled.
- Anticipated use levels should determine the appropriate capacity for receptacles and guide trash and recycle collection schedules.
- Receptacles should have an internal canister with lid for trash control and ease of trash removal.

Forms + Surfaces Transit recycling and waste receptacle

# Campus Lighting

There are several types of site and roadway lighting on campus. The fixtures range from the "gumball" lights of the academic mall to a more modern fixture installed around the new residence halls to a shoebox-style light predominately found within the parking lots. A consistent design and hierarchy of pedestrian and street lighting should be developed and implemented over time to achieve a more coherent and safe campus.

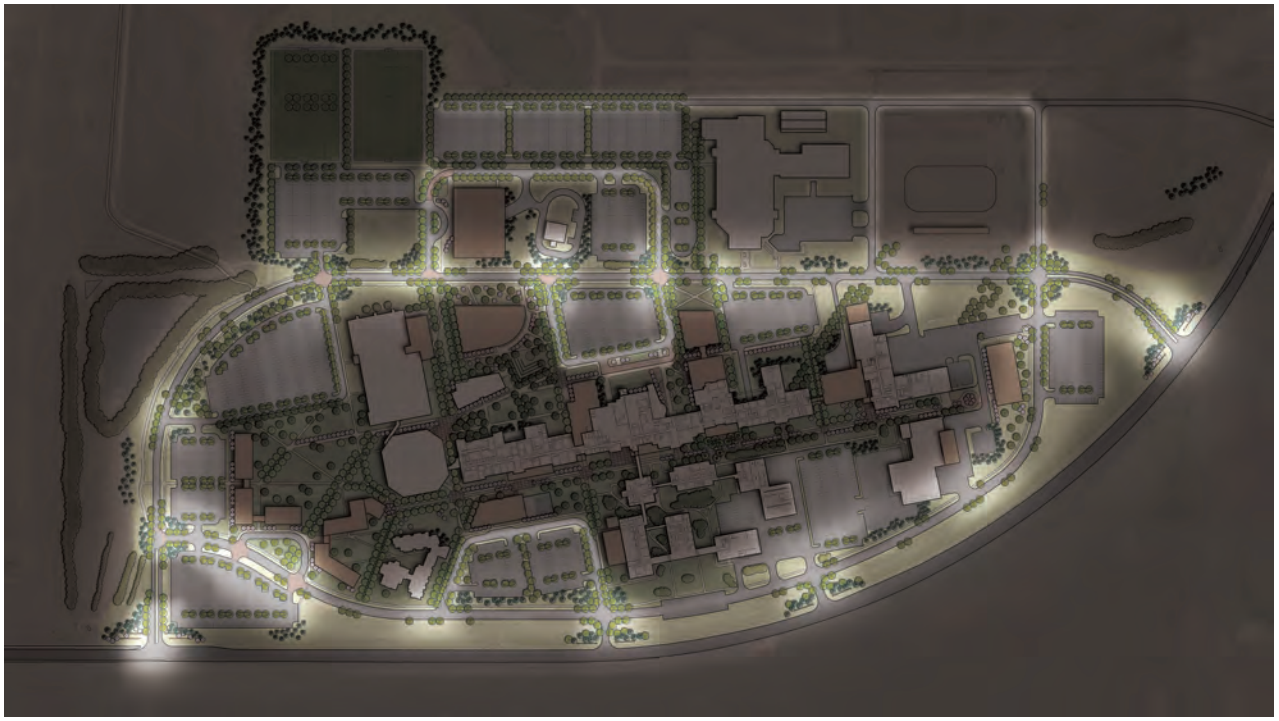
## General Campus Lighting Principles

- Campus lighting should be part of a unified family of site elements that visually organize the campus setting and improve its function, visibility, safety, and security.
- Install pedestrian lighting of a different style and scale from roadway and parking lot lighting.
- Design campus lighting so that the illumination, intensity, quality, and distribution of light responds to a logical hierarchy, the characteristics of a particular part of campus, and patterns of use.
- Use fixtures that direct light downward and minimize light pollution.
- Utilize light sources for energy efficiency, color rendition, and visibility of pedestrians on campus.
- Conceal the source of illumination on pedestrian fixtures.
- Consider uplighting of plant materials to add winter and evening interest.
- Explore alternative energy powered fixtures.

## Vehicular-oriented Lighting

Vehicular-oriented lighting should articulate the campus vehicular circulation system (streets and parking lots) for user orientation and safety. A quality lighting plan will improve cost effectiveness by optimizing intensity and distribution with the least number of fixtures.

- Streetlights should be regularly spaced along streets and drives and offset from the roadway in a consistent and safe distance.
- Intersections require higher levels of illumination.
- Lighting units should be simple, unobtrusive and utilize a standardized style, color, height, diameter.



Vehicular Lighting Hierarchy

Vehicular-oriented light character

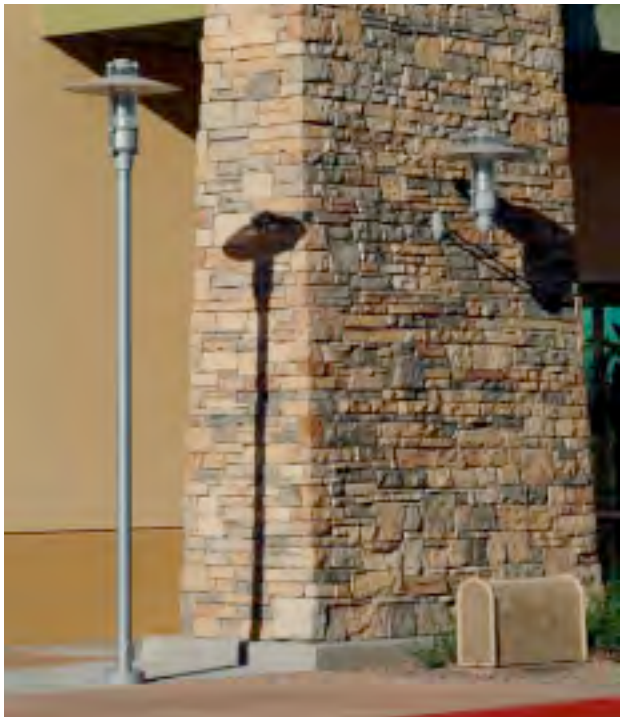
- Parking lot lighting should be at sufficient levels of intensity for safety. Parking lot lighting poles should be located in planting islands so they are less visually obtrusive. If this is not feasible, the poles should be set on 3- or 4-foot high concrete bases to protect them from damage from vehicles and snow removal equipment.
- A limited variety of luminaries is desirable to simplify maintenance requirements and stocking of replacement parts and units.
- A full cutoff fixture that meets dark-sky guidelines should be utilized to reduce light pollution in the night sky and reduce glare.
- Pole style should be simple and modern.

## Pedestrian-oriented Lighting

Light fixtures can be very iconic elements in the campus landscape. Pedestrian lighting design should organize and articulate the campus setting and enhance safety and security.

- Strategic placement of units will optimize light distribution and minimize the number of required units.
- Pedestrian lighting should always be located along pedestrian paths.
- Care should be taken in locating the poles to ensure consistent alignments and setbacks from walkway edges. All fixtures should be set plumb and level.
- Fixtures should be removed from the center of the academic mall and located on the outside edges of the walks, creating a less cluttered look within the spine.
- To facilitate lawn maintenance and protect from snow plows, a concrete maintenance collar should be installed at the base of the pole.
- The source of illumination should be concealed. Distracting, uncontrolled glare should be minimized and the lit surface emphasized.
- The campus should choose lamp types that have superior lamp life ratings and are energy efficient.
- Smooth, round poles are recommended as they are more resilient to wind loads and are easier to align.
- Attached banner mounts are allowed; however, the poles must be designed to accommodate the wind loads.

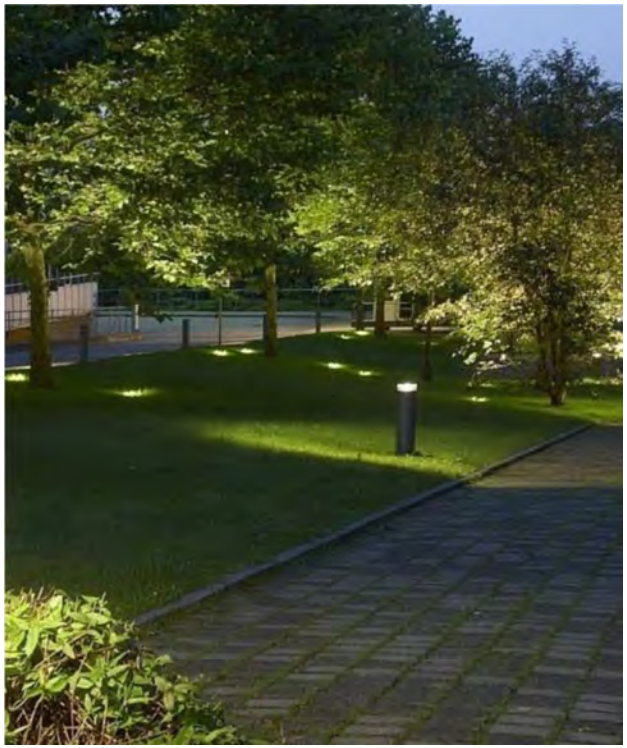
Pedestrian Lighting Hierarchy



Pedestrian-oriented light character

## Light Enhancements

LCCC should consider the use of lighting bollards and landscape lighting in conjunction with the effective lighting of the architecture and building entries. Key intersections along the Loop Road and within the pedestrian malls and signature spaces are areas to consider additional lighting.  Bollards and landscape lights add a exciting accent to the campus and contribute to creating a safe, secure, easy to understand campus environment at night.



Bollard and landscape lighting

# six|implementation of the master plan

A great master plan can offer inspiring ideas and pictures, but without a committed effort to implement the recommendations, it will not contribute to the future of the institution it serves. The LCCC Board of Trustees, administration, faculty, staff and students are, collectively, energized to move forward on improving the LCCC campuses in support of their educational goals and mission.

# Phasing

The facilities recommended in the Master Plan should fill the needs of LCCC for the next ten years. LCCC has reviewed the list of improvements and new facilities illustrated on the Master Plan and has established priorities for implementation.

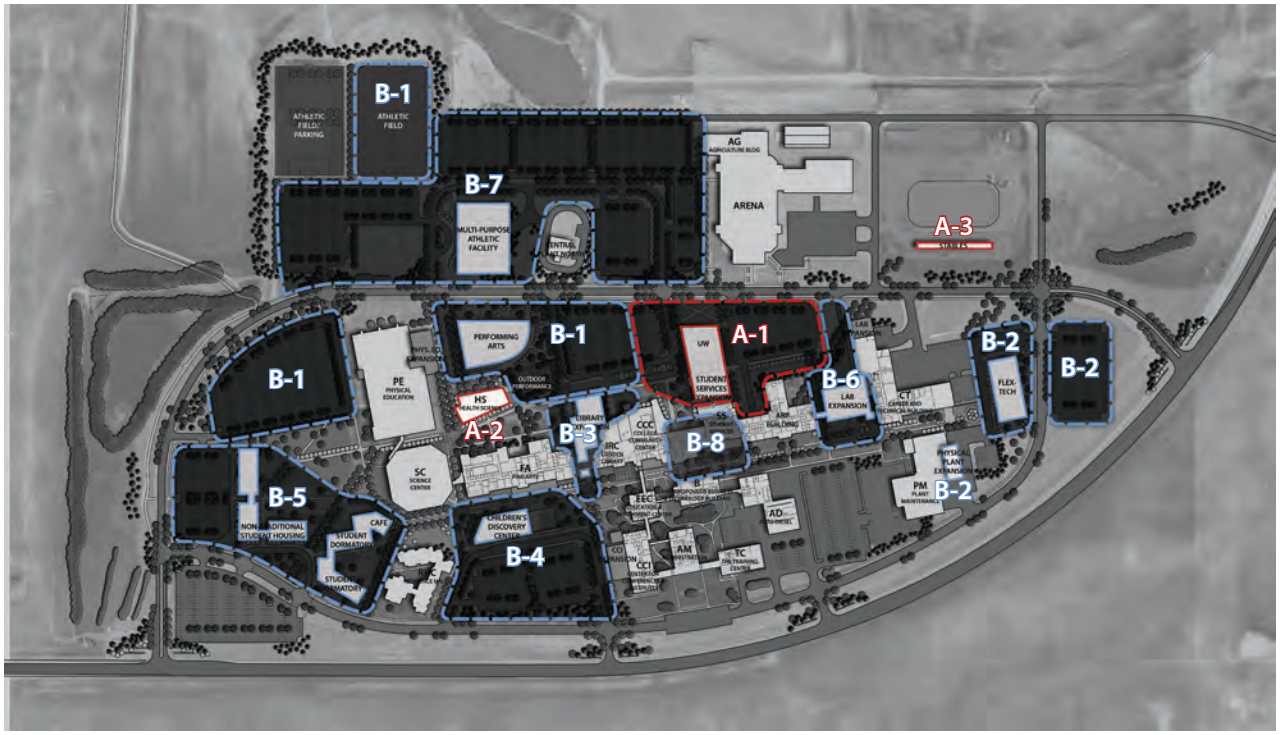
The first set of projects that should be carried forward at the Cheyenne campus are those that meet the immediate needs of LCCC, and for which LCCC has obtained funding, or is in the active process of obtaining funding. Projects that meet this description include:

- A-1 - Construction of a new UW Center
- A-2 - Finishing the 3rd Floor of Health Sciences
- A-3 - Replacing the existing Horse Stalls
- A-4 - Implementation of site improvements, including:
  - Site lighting
  - Campus entrances
  - Parking
  - Walkways and pedestrian spaces
  - Signage and wayfinding

The effort to construct campus improvements in the short-term will help meet immediate needs and create momentum for the implementation of additional projects. In the meantime, the planning and funding of the remaining campus projects can be pursued. These projects have been prioritized by LCCC in the following order:

- B-1 - Performing & Fine Arts Center
- B-2 - New Flex-Tech Lab/Classroom Facility*(and the required increase in Physical Plant capacity)
- B-3 - Academic Commons/Library expansion
- B-4 - Children's Discovery Center*
- B-5 - Building new residential housing to replace the West Dorm and expand housing choice*
- B-6 - Creation of a "Bridge" Lab/classroom facility between Arp and CT Buildings
- B-7 - Construction of a new Multi-purpose Athletic Facility
- B-8 - Renovation of existing space to create a Student Center and revamp the Student Services area
- B-9 - Continuing site improvements, including:
  - Loop Road
  - Landscaping
  - Remaining work related to site lighting, parking, and walkways and pedestrian spaces

Note that the asterisk (*) indicates facilities for which public/private partnerships are a potential avenue for facility development. This is commonly done on these types of facilities and many educational institutions have benefited from private/public partnerships with new facilities on campus. Another opportunity that LCCC should




Projects with Funding in Process

Projects that Require Funding and/or Planning

## Implementation Plan

strongly consider as the Master Plan is implemented is providing training at off-site facilities built by private entities. The ongoing development of industrial uses at the Swan Ranch development west of Cheyenne may provide such an opportunity as the development of shale oil creates a rapid growth in technically oriented energy industry jobs.

# Other Considerations

As LCCC's needs evolve over the next ten years it is possible, if not likely, that these priorities may change, and the Master Plan anticipates the need for flexibility in the implementation schedule and prioritization of projects. Also, since several of the proposed facilities could be funded with private sector partnerships, these projects may shift within the list of priorities as funding opportunities develop.

Several of the new and renovated facilities illustrated on the Master Plan (including the CCI addition, renovation of the Fine Arts Building, and expansion of the wind lab) are not indicated as a high priority; however, the pursuit of these projects will continue to be considered based on an ongoing assessment of campus needs. Another important project type not indicated in the list of priorities is the development of new office space on the Cheyenne campus. The Space Needs Assessment indicates a clear need for new office facilities; however, this use is not one that is typically concentrated into a single new building, but is distributed across campus to meet the dispersed demand. The Master Plan recommends that new offices be provided through the conversion of space that is vacated in existing buildings as new facilities are built. Opportunities for this infill approach are likely to be available in the following places:

- Vacated Child Development
- Vacated UW spaces from various places on campus
- TC and/or within new Flex-Tech lab building
- Vacated IT space (should this use move to the Academic Commons)
- Health Sciences 3rd floor
- Fine Arts Building

As new facilities are created, minor shifts in existing programs may occur. One potential shift that should be considered as the Flex-tech Lab is planned is the "dominos" move of uses from CCI into the Training Center, relocation of Emergency Tech and Paramedic training into Auto Diesel, and the potential move of Auto Diesel. This shift and others need to be considered further while new facilities are planned to insure efficient use of campus resources.

While a need for more space in the Science Building was not indicated by the Space Needs Assessment, the Facility Condition Assessment did note that many of the lab spaces and related facilities are outdated and in need of upgrading. LCCC should consider renovation the Science Building to address this deficiency.

The phasing and implementation of facility expansion at the ACC is simpler in many ways, but also more complicated, in that significant discussions with UW are required before an agreement between the two institutions can be established and firm plans for new facilities are developed. In the meantime, the ACC is operating at its existing facilities at levels above capacity. As part of the ongoing discussions with UW, or as a separate effort, LCCC should pursue temporary arrangements for additional space as necessary to meet the ongoing demand of the students in Laramie.

The 3rd floor of Health Sciences provides space for immediate programmatic use

# Infrastructure

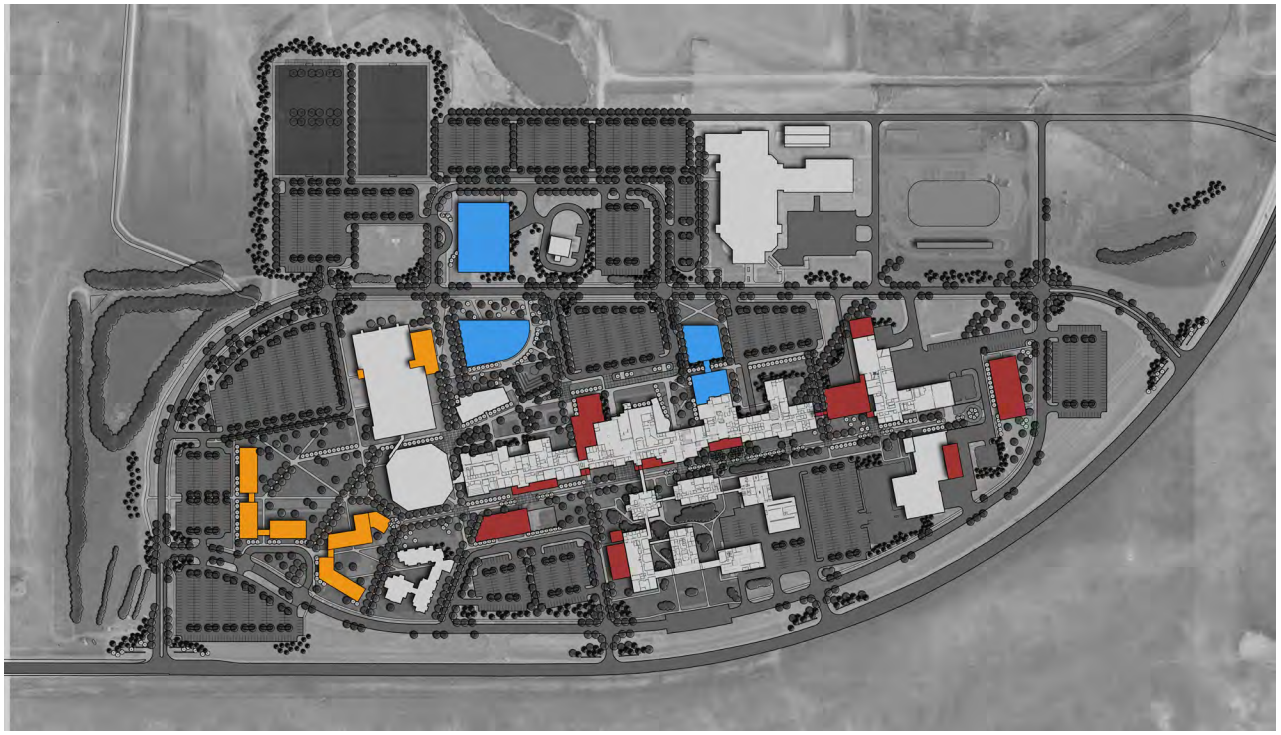
LCCC has been actively implementing utility infrastructure improvements on the Cheyenne campus over the last decade in anticipation of campus growth and to upgrade aging facilities. The plan for these improvements is not substantively changed by the recommendations of this Master Plan and the upgrading and expansion of utility capacity will need to continue.

# Utility Considerations

The planning team compared the locations of proposed facilities against the locations of existing and proposed utilities during the planning process to minimize potential conflicts and costly relocations. In some cases, to achieve the goals of the Master Plan some re-routing of utilities will be required, as is typical for most campuses where growth is experienced. As projects move forward the location of utilities will need to be carefully considered, and the detailed planning and design of the new facilities may allow for creative solutions to reduce impacts. Utility considerations identified at the master planning level include:

1. UW Center/Student Services and Library Expansions: Water and sewer lines run east and west on the north side of the existing buildings (IRC, CCC, Student Services etc.), paralleling the parking lot edge. These utilities will be in conflict with the building expansions, and will likely require some relocation effort.
2. Performing & Fine Arts Center: The building can be shaped to avoid the power duct running between the Central Plant North and Health Science; however, it is likely that sewer and water lines in this area will need to be re-routed.
3. Flex-Tech Lab: Electrical and water lines parallel the long dimension of the building, and may be impacted by the building.
4. Children's Discovery Center: A sanitary sewer line runs on the north edge of the proposed building which may influence the detailed site planning of the facility to avoid a conflict.
5. Traditional Student Housing: An existing water line at the south east corner of the new facility may influence the detailed site planning of the facility to avoid a conflict.
6. "Bridge" Lab: A sanitary line runs though this site and may need to be relocated. The connection from the new building to Arp will need to account for an underground electrical duct in the area.
7. Wind Lab Expansion: A sanitary line may need to be located, depending on the actual size of the lab expansion.
8. New entrances and collaborative space along the pedestrian mall: These additions should be sized to allow space for the storm sewer that parallels the pedestrian mall.

As new facilities come "on-line" with the existing power and heating and cooling systems, LCCC will need to consider how these facilities are best served - from the existing Physical Plant, the newer Central Plant North, or from new systems integrated into the design of the building. A map has been prepared that illustrates the current thinking about servicing the proposed buildings and additions.




**Utility Service**

# Storm Drainage

The existing campus storm system does not represent current best practices in site engineering. In a general, the storm water system relies too heavily on surface drainage, does not provide opportunities for storm water infiltration, and does not retain or otherwise treat storm water in the central part of campus. The existing building roofs drain onto the site via a downspout. Along the pedestrian mall the discharge water flows over the surface and into a storm water pipe that parallels the mall. In other parts of campus the roof water is discharged onto lawn areas and then drains onto surface parking lots. The large parking lots surface drain over very large expanses, typically draining to the north where the water intersects a paved swale and curb line. Along this drain line the storm water is directed west toward the PE Building, and then passes under the Loop Road and into the surface ponds north of the road. This area near PE experiences flooding during some storm events.

The campus should employ BMP's for storm water management for all campus projects, both new construction and renovations to existing areas. BMP's are intended to manage the quality and quantity of storm water as a result of site development. BMP's aim to remove pollutants from and reduce the runoff rates of storm water prior to release into a region's waterways. Ways to incorporate these methods include:

- Construct parking lots with bio-retention areas in islands, on the lot perimeter, or in adjacent lawn areas.
- Directing roof water and parking lot drainage to infiltration rain gardens, small retention basins, and vegetative swales to increase infiltration into the ground water, improve water quality and slow the rate at which the storm water is sent into the storm water system.
- Use of pervious parking lot and pedestrian paving where appropriate. Pervious paving can include special mixes of bituminous asphalt and specially design decorative paving which can be used in parking areas, vehicular drop-off lanes, and pedestrian plazas.
- Increasing the number of catch basin inlets to convey water underground, reducing the potential for flash flooding in parking lots.

Parking lot bio-swale

# Conclusion

The key to successful implementation of a master plan is to use it as a living document. As facilities are planned and designed in the years following the completion of a master plan, new information comes to light, goals are altered, and new priorities are developed. The Master Plan is intended to be flexible enough to accommodate these shifts in thinking; its value is as a guide for decision making, a reminder of how individual projects fit into a larger campus context, and a benchmark against which change is evaluated and measured. To be a valuable tool it must be a standing reference that is re-visited frequently as new facilities are planned.