DRAFT

Laramie County Community College

AGRICULTURE & EQUINE MASTER PLAN

LARAMIE COUNTY COMMUNITY COLLEGE

ACKNOWLEDGMENTS

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A. EXECUTIVE SUMMARY

Executive Summary

The Agriculture and Equine Programs at Laramie County Community College are unique offerings and signature programs that create the opportunity for national notoriety. Southern Wyoming, eastern Nebraska, and northern Colorado can support growth of the Programs at LCCC. However, enrollment has been constant over the last five years, which may suggest there are factors limiting program growth due to the condition of the facilities, the utilization of space, and the appropriate amount and type of space that all contribute to the potential to recruit new students.

FACILITY CONDITION

For many years, the programs have received sporadic funding that has not kept pace with the growing maintenance needs. Over time, the existing buildings have accumulated a significant amount of deferred maintenance issues. The older structures also portray an institutional aesthetic that is not consistent with the newer, more contemporary architectural direction of the campus.

THE RIGHT KIND OF SPACE

The Arena is utilized over twice as much as typical benchmarks by the Equine Program, the Rodeo Team, and the Community Workforce Training. Also, beyond the typical use by the College programs, it is also used for special events. This heavy utilization for multiple types of events has created logistical challenges for storage, staging, cleaning, and maintenance that is impacting efficiency and high quality educational delivery.

Different types of spaces will be needed in the future as classes around Livestock continue to grow and evolve. Space that allows students to get a more "hands-on" experience is limited. Currently, non-rodeo livestock and rodeo livestock are held in the same area, and horses are doubled up in stalls. Current overcrowding and common paths for movement and handling of animals is a bio-security concern and make it challenging to maintain healthy animals on campus. Especially during special events, the large number of trucks and trailers also creates logistical challenges for movement, parking, and safety of participants and animals.

RECRUITING

The greatest opportunity to draw new students to campus lies in the Agriculture Programs. Current programs are projected to increase by 43%, and new programs in Ag Education, Ag Communication, and Horticulture could double the enrollment of Ag from its current size in the future. A New Horticulture Program would be the only Program in the State of Wyoming.

Prioritization Strategies

The Master Plan prioritizes the components of the plan into 3 year, 5 year, and a 10 year phased approach. Each phase addresses deferred maintenance needs of the facilities, upgrades to improve current programs, and improvements that facilitate program growth.

THE FOLLOWING GUIDING PRINCIPLES SET THE PRIORITIZATION STRATEGIES OF THE COMPONENTS OF THE MASTER PLAN:

1. **The College must be a good fiscal steward of all its resources.**
2. **Refurbishing existing structures to make them more functional and upgrade aesthetics along with new building expansions.**
3. **Old and new facilities need to be equitable.**
4. **Provide the best programmatic flexibility for use by creating spaces that accommodate multiple functions.**
5. **Design for the day-to-day use of the facilities is a higher priority than designing for intermittent uses.**

Master Planning Process

The Master Plan document is the result of a comprehensive master planning process that has methodically and carefully assessed the current state of the Agriculture and Equine Programs, and based on relevant data, recommendations have been made on how the Programs can be strategically managed into the future.

GOALS OF THE MASTER PLAN

1. **Evaluation of the current usage of facilities across all programs and teams, and any relevant recommendations.**
2. **Evaluation of the current staffing levels used to manage and maintain all programs and teams, and any relevant recommendations.**
3. **Evaluation of the current state of the physical infrastructure that serves all programs and teams, and any relevant recommendations.**
4. **Establish updating of the Facility Condition Indexes (FCI's) for all Ag & Equine facilities, consistent with LCCC's master plan.**
5. **Evaluation and recommendations of current animal handling practices and facilities, and recommendations for best practice(s) and infrastructure.**
6. **Evaluation and recommendations of the necessary improvements needed in order to accommodate the desired new programs, teams and projects, which would include financial commitments needed.**
7. **Evaluation and recommendations for ongoing maintenance plans.**

A. EXISTING PARKING LOT

B. EXISTING CLASSROOM BUILDING

C. EXISTING ANIMAL SCIENCE BUILDING

D. EXISTING ARENA

E. EXISTING LIVESTOCK PENS

F. EXISTING STALL BARN

G. EXISTING OUTDOOR ARENA

H. EXISTING HORSE STALLS

I. NEW INDOOR ARENA

J. NEW HAY STORAGE INFILL

K. NEW HAY BARN

L. NEW HORSE STALLS - 130

M. NEW QUARANTINE BARN

N. NEW TURNOUT PENS

O. TRAILER PARKING - 53
(PERVIOUS/UNPAVED, POWERED FOR RV HOOKUPS)

P. CORRAL & PASTURE

Q. MAIN ENTRY

R. EMERGENCY VEHICLE ACCESS ONLY/
TRAILER EXIT, EVENTS ONLY

S. MAIN EXIT

T. LANDSCAPE BERM

U. NEW MULTI-USE LIVESTOCK FACILITY

V. NEW ENTRY AND STUDENT LOUNGE

W. NEW LIVESTOCK PENS

X. NEW HORSE STALLS - 52

Y. NEW TURNOUT PENS

Z. TRAILER PARKING - 26
(PERVIOUS/UNPAVED, POWERED FOR RV HOOKUPS)

AA. HORTICULTURE CLASSROOM/LABS/
GREEN HOUSE AND PARKING

Overall Site Plan

Agriculture & Equine Master Plan

N

Cushing Terrell

ASSESS

The Cushing Terrell Design Team met with key stakeholders of the Agriculture & Equine Programs and facilities early in the Fall Semester of 2019 to collect data, set goals, and begin to build a shared vision for a Master Plan that will serve as a financial and physical planning tool for LCCC in the future. The sessions included:

- Meeting with members of the Board of Trustees and Dr. Schaffer to review the Master Planning Process and set goals for the Master Plan Document.
- Meeting with the Advisory Committee and Industry Partners in two different listening sessions geared toward understanding what elements of the facilities and programs are working well, things the College might consider changing or improving, and the opportunities that exist for new facilities or programs that might lend to the success and growth of the Programs in the future.
- Meeting with Ag, Livestock, Equine, and Rodeo instructors, coaches, and students to collect further feedback and begin to prioritize opportunities.
- Touring through the facilities and site with the key stakeholders to learn from their first-hand knowledge about types of spaces, preferred teaching methods, student-to-teacher ratios, and the facility's operation.

A facility assessment began with the initial facility / site walk-throughs and stakeholder interviews to establish a strong baseline understanding of the current facilities. More comprehensive investigations were then performed on maintenance issues, materials, and systems covering all relative disciplines – architectural, mechanical, electrical, structural, and civil systems and materials. Each discipline created a report describing conditions and general recommendations and estimates of cost which will go hand-in-hand with updating the College's Facility Condition Indexes.

ANIMAL HANDLING

Dr. Temple Grandin, Professor of Animal Science at Colorado State University, led an evaluation of the animal handling practices and policies regarding instructions to users on site with Program stakeholders. Dr. Grandin made recommendations for the design of pens, quarantine buildings, animal movement, trailer parking, maintenance, site considerations, and the general reduction of animal fear. Any new facility will be designed for Best Animal Handling Practices.

PRECEDENT RESEARCH

To gain insight, learn from the experiences of other institutions, the Design Team researched animal handling practices, types of spaces, operations, and programs in other facilities in Wyoming, Montana, Colorado, and New Mexico. This included a tour of the Equine facilities at Colorado State University by Cushing Terrell, Director Bruce Nisle, and Barn Manager C.R. O'Hare from LCCC.

EXPLORE

The Cushing Terrell Design Team again met individually with students, instructors, and coaches from each of the Ag, Equine, and Rodeo Programs in October 2019 for interactive design sessions to explore a range of site options that responded to the input, priorities, and analysis of the Assess Phase. Several rounds of review, critique and refinement were used to build consensus and lead to a preferred concept plan that the stakeholders believe offers the most effective solutions and strategies for the LCCC Agriculture & Equine Programs.

APPLY

The Design Team developed the preferred concept to adequately set the scope, vision, and costs for the different components of the Master Plan. These were presented to the President's Cabinet for review. Using feedback from the Cabinet and the priorities established by the key stakeholders as a guide, the Master Plan was divided into 3 Recommended Phases that address the needs of the existing facilities, the current programs, and opportunities for growth over incremental periods of 3, 5, and 10 years.

Analysis - Expenditure vs. FTE Projection

Construction $ vs. Revnue $ Analysis*	Construction Cost $	Construction Cost $ / Year (30 Year Life)	FTE Students Impacted	$ / FTE Students Impacted / Year	Program Growth (FTE)	Revenue / New (FTE)*	Revenue from (FTE) Growth / Year	Revenue from Community Use / Year*	Revenue from Arena Rental / Year*	Total Revenue Potential / Year	Construction $ / Revenue $
New Indoor Arena (Included in Phase 1)	$ 20,781,463	$ 692,715	155	$ 4,469	36	$ 2,357	$ 84,852	$ 42,328	$ 24,816	$ 151,996	$ 137
Multi-use Livestock Facility (Included in Phase 2)	$ 4,915,870	$ 163,862	187	$ 876	64	$ 2,357	$ 150,848	–	–	$ 150,848	$ 33
Greenhouse (Included in Phase 3)	$ 2,390,997	$ 79,700	210	$ 380	30	$ 2,357	$ 282,840	–	–	$ 282,840	$ 8
Total	**$ 28,088,330**	**$ 936,278**	**552**	**$ 50,885**	**220**		**$ 518,540**	**$ 42,328**	**$ 24,816**	**$ 585,684**	**$ 127,674**

* This analysis does not include expenses such as Operations & Maintenance, Faculty Salaries, and Program Expenses
* Revenue / New (FTE) per Rick Johnson. Wyoming State aid per new FTE = $2,357 / year '
* Revenue from Community Use / Year based on 669 hours of Workforce Courses per Jill Koslosky
* Revenue from Arena Rental / Year includes rental fees, floor fees, and stall fees that go to Scholarships currently per Jill Koslosky

PHASE 1 – NEW INDOOR ARENA

A new flexible use Indoor Arena addresses the most critical need of the current Ag & Equine programs and facilities which is the over utilization of the existing Arena. A New Indoor Arena would allow the Equine program to grow. This is a priority because it addresses the heavy and inefficient use of the existing arena, it can be flexibly used for multiple functions, and a New Arena can generate additional revenue for the College through special events. The existing Arena would likely become dedicated to the Rodeo program practice and events, although the adjacent New Indoor Arena would offer some flexibility in scheduling that doesn't exist now and would be an asset for recruiting and events.

Phase 1 also prioritizes new horse stalls to help with animal overcrowding, additional trailer parking, and the most maintenance and repair to the existing facilities of all the phases. The Construction Cost for the New Arena includes site work, mezzanine area, covered alley, and connection to existing arena.

PHASE 2 – NEW MULTI-USE LIVESTOCK FACILITY

A new Multi-Use Livestock Facility will facilitate growth in the current Ag programs which has the highest potential for growth. It will provide students a better "hands-on" education experience, and allow the current Agriculture Programs to grow by providing the amount and appropriate type of space for Livestock Production, Judging, Feeding, Fitting & Showing. The existing classroom building only has the capacity to accommodate 7 more hours of classroom time / week, however growth of the existing Ag & Equine programs will require an additional 31 hours / week of classroom time. This deficit can be handled by moving Ag classes and labs into a new Multi-Use Livestock Facility allowing the current Agriculture programs to grow and afford the opportunity for the existing Animal Science Lab to be repurposed as a needed maintenance bay and warm up area to serve the existing Arena. This new facility would also assist biosecurity concerns by separating livestock from rodeo animals.

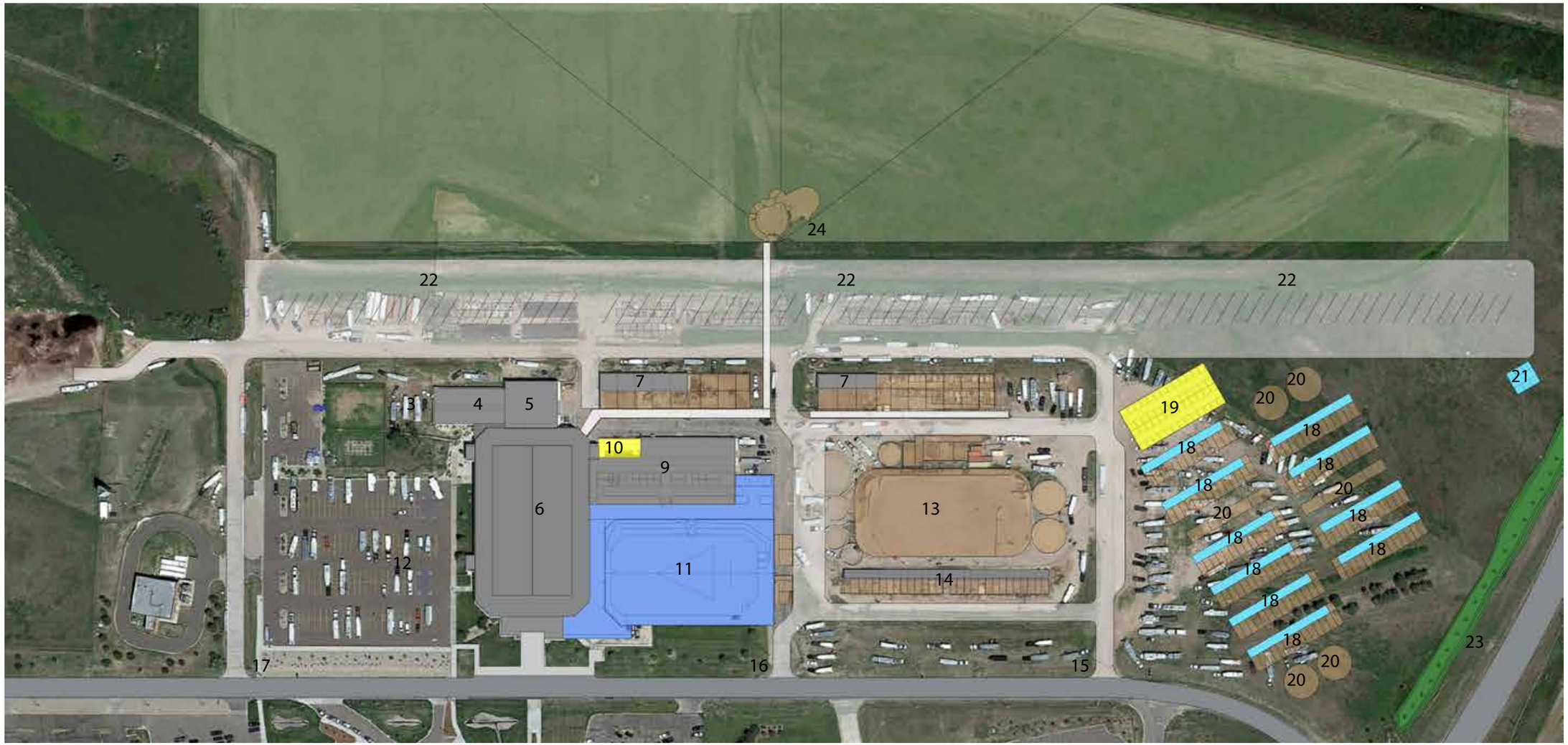
Facility maintenance issues that can wait for 5 years have also been placed in Phase 2. The Construction Cost for the New Livestock Facility includes site work, a connector lobby, and outdoor runs.

PHASE 3 – NEW HORTICULTURE PROGRAM

Phase 3 of the Master Plan addresses new program growth and facility maintenance concerns that won't need to be addressed for 10 years. A new Horticulture Program will require a Greenhouse, Soils Lab, Classroom, and Studio space and will accommodate 120 new Horticulture Students + 90 Ag Students (Soils, Agroecology, Field Crops / Pest Labs).

B. RECOMMENDED PRIORITIES

Master Plan Phase 1



1. HORTICULTURE CLASSROOM/LABS/ GREEN HOUSE AND PARKING
2. MULTI-USE LIVESTOCK FACILITY
3. NEW ENTRY AND STUDENT LOUNGE
4. EXISTING CLASSROOM BUILDING
5. EXISTING ANIMAL SCIENCE BUILDING
6. EXISTING ARENA
7. EXISTING LIVESTOCK PENS
8. NEW LIVESTOCK PENS
9. EXISTING STALL BARN
10. NEW HAY STORAGE
11. NEW INDOOR ARENA
12. EXISTING PARKING LOT
13. EXISTING OUTDOOR ARENA
14. EXISTING HORSE STALLS
15. MAIN ENTRY
16. EMERGENCY VEHICLE ACCESS ONLY/ TRAILER EXIT, EVENTS ONLY
17. MAIN EXIT
18. NEW HORSE STALLS - 130 PHASE 1
19. NEW HAY BARN
20. NEW TURNOUT PENS
21. NEW QUARANTINE BARN
22. NEW TRAILER PARKING - 75 TOTAL (PERVIOUS/UNPAVED, POWER FOR RV HOOKUPS)
23. LANDSCAPE BERM
24. CORRAL & PASTURE

N

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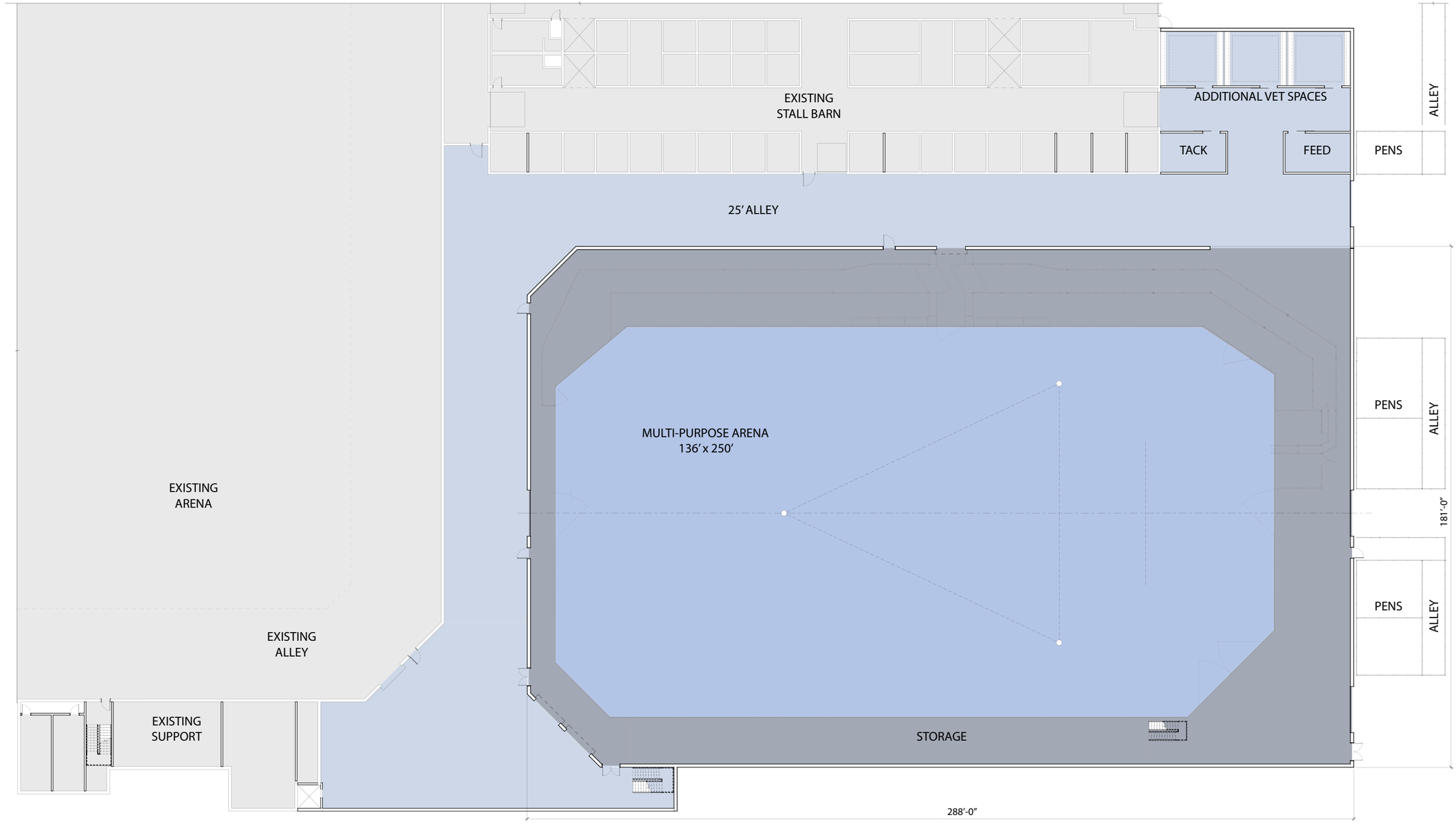
Phase 1

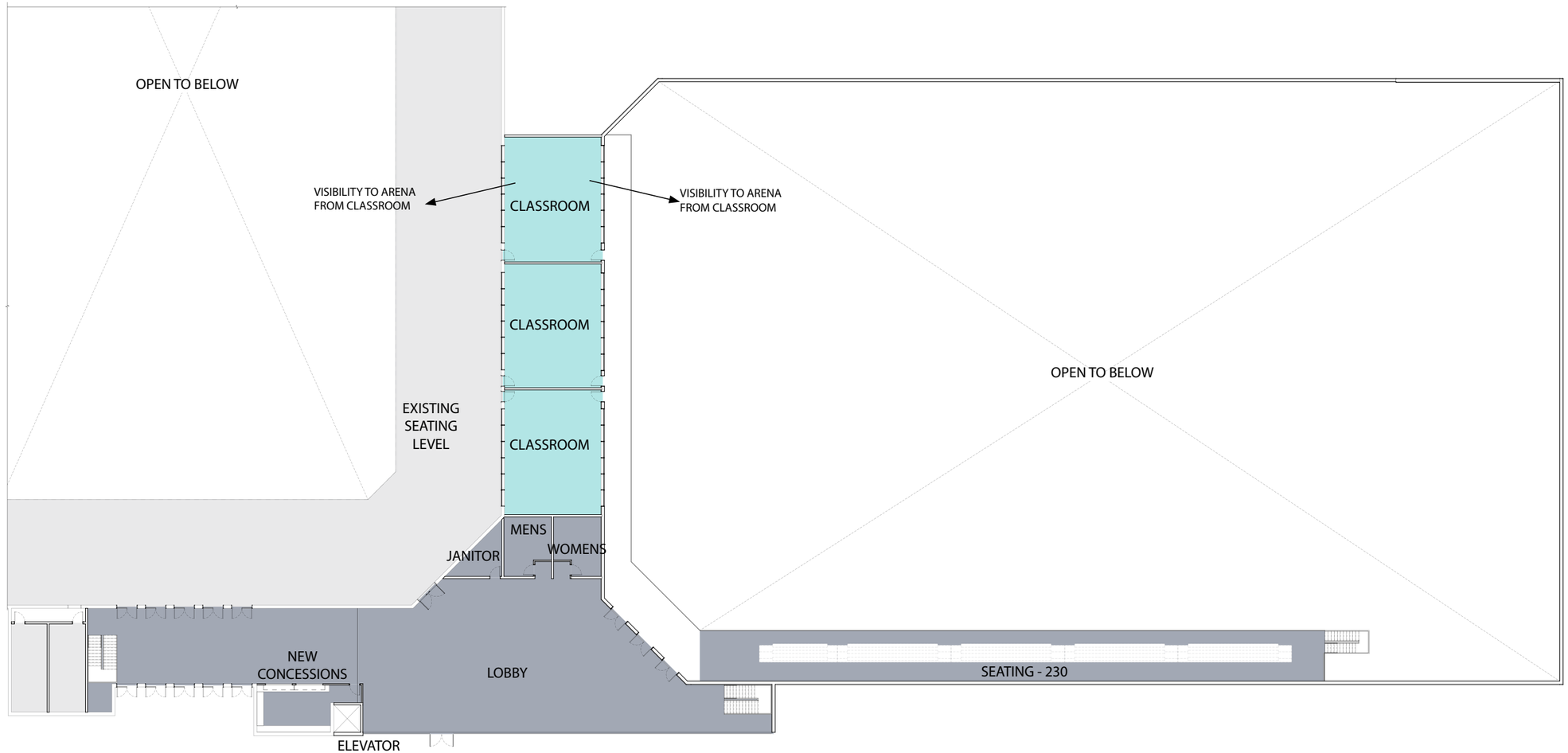
Agriculture & Equine Master Plan



New Indoor Arena - Arena Level

Agriculture & Equine Master Plan

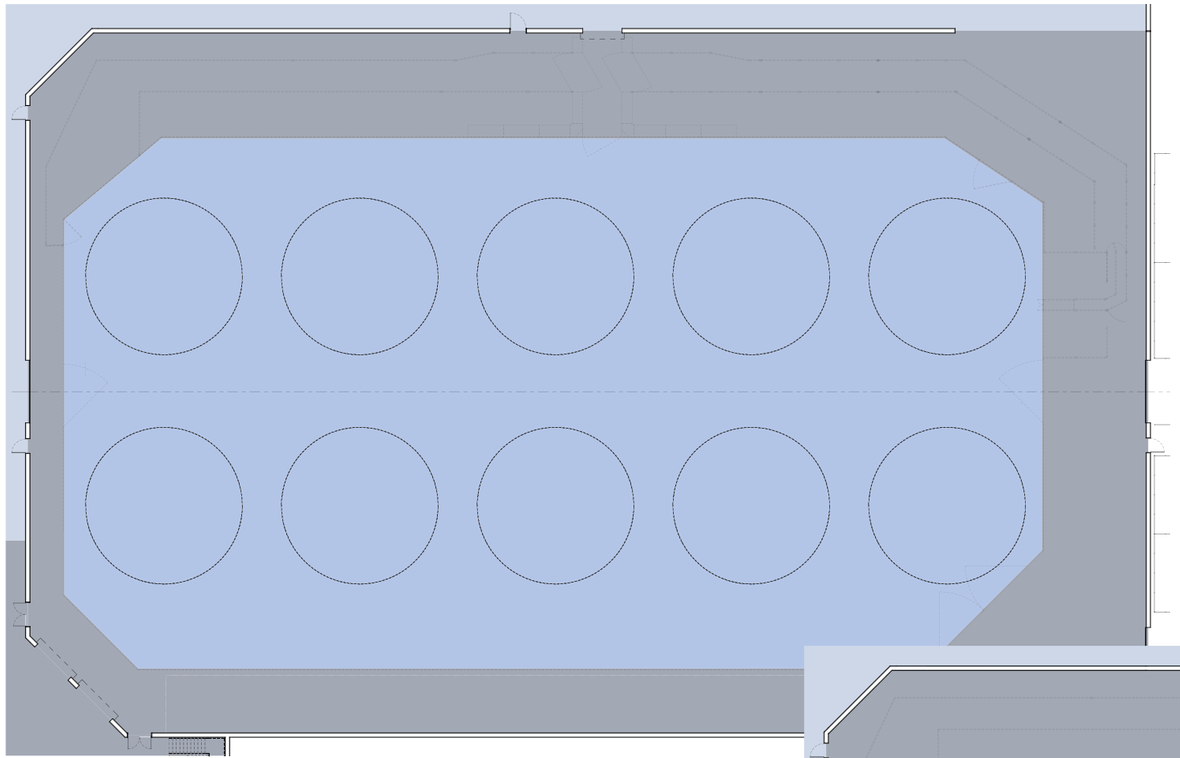
Cushing Terrell



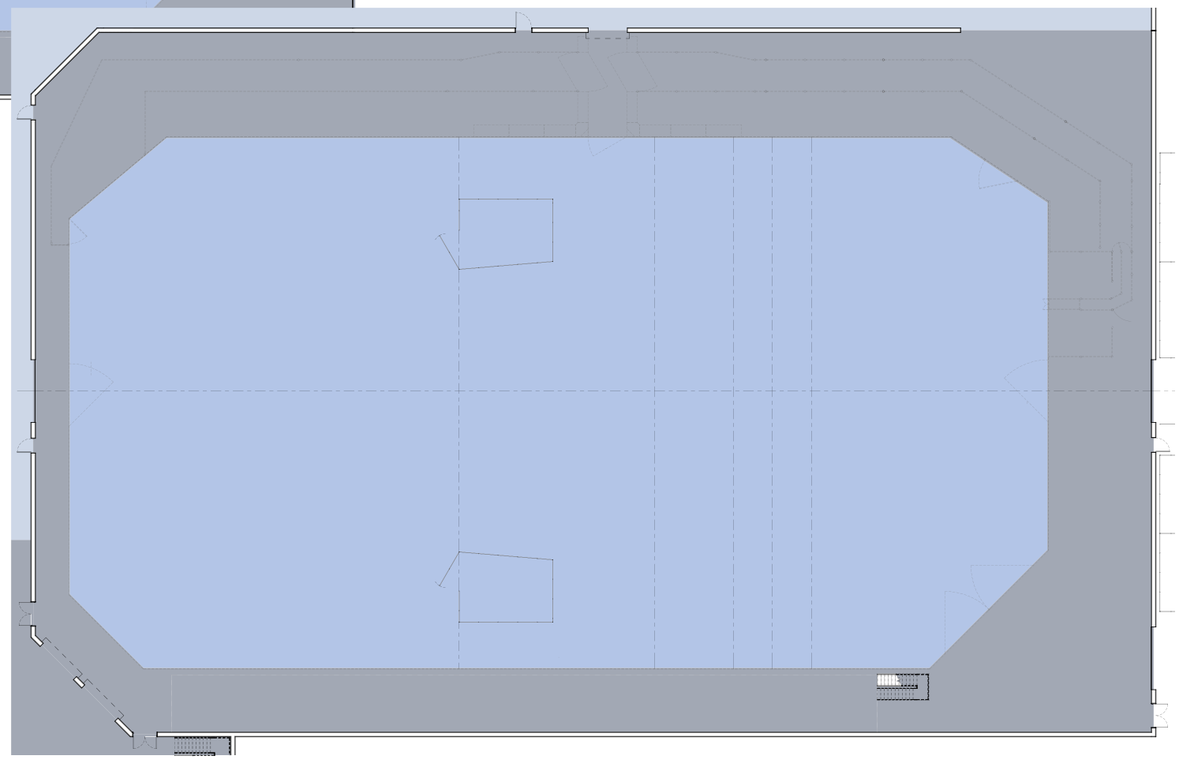
These plan diagrams were generated to show programmatic intent and were used as the basis for site planning as well as cost estimating. These are not architectural floor plans. Design of these spaces will be a necessary component of future scopes of work. These are representative of facilitating the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

New Indoor Arena - Mezzanine Level

Agriculture & Equine Master Plan



10 - 40' ROUND PENS



RANCH SORTING

New Indoor Arena - Arena Set Up Options

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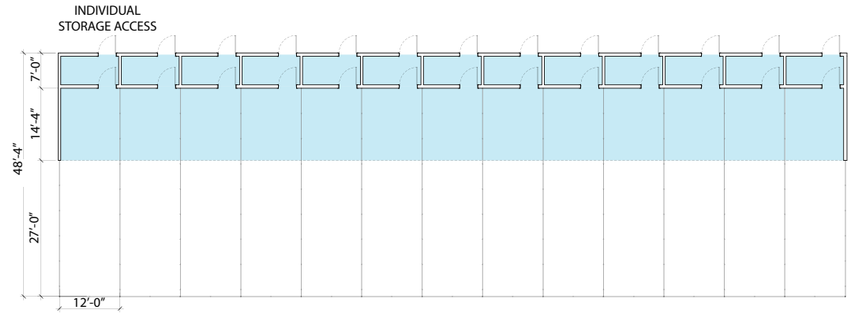
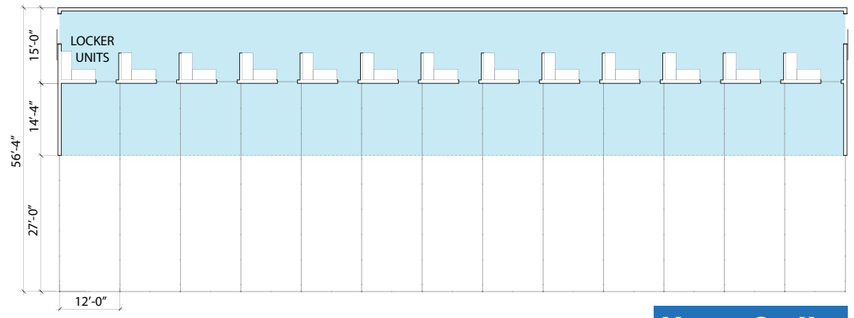
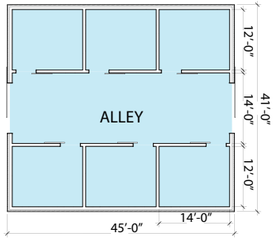
OPTION 1



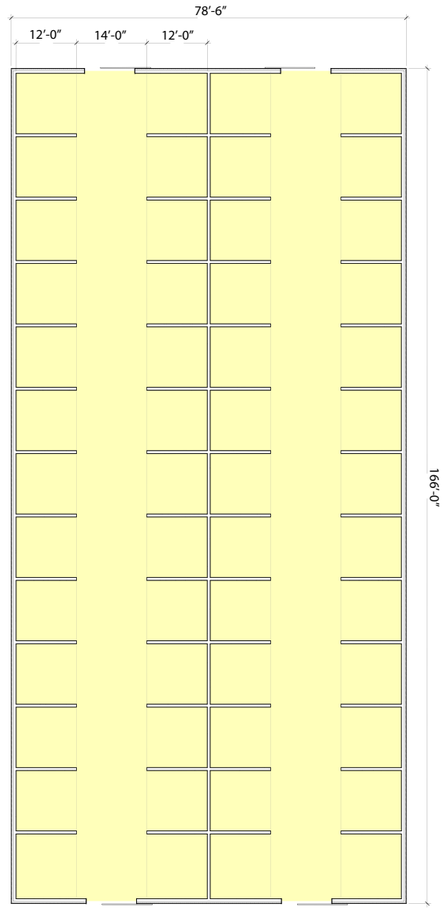
OPTION 2



Horse Stalls



Quarantine Barn



Hay Barn

Horse Stall Options, Quarantine Barn, and Hay Barn

Agriculture & Equine Master Plan

Master Plan Phase 1

This document provides a series of different recommendations, referred to as "menu items", and based upon the FCI analysis, proposed Master Plan options, additional recommendations, and prioritization of new construction. The menu is separated into (3) phases (3 years, 5 years, 10 years) with distinct scopes of work divided into categories of Facility Maintenance and Repairs, Program Upgrades, and Program Growth.

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

FACILITY MAINTENANCE AND REPAIRS

1. **Arena Maintenance and Repairs**
   a. Roof replacement – scheduled for 2022 per LCCC
   b. Replace caulking between concrete panels
   c. Clean Fire Alarm and voice evacuation systems
2. **Ag. Classroom Maintenance and Repairs**
   a. Accessibility upgrades to casework and showers
   b. Clean Fire Alarm and voice evacuation systems
3. **Stall Building Maintenance and Repairs**
   a. Complete deferred maintenance on roof. The roof appears to be degrading faster than would be expected for this type of roof. Recommend bringing a manufacturer's representative out for further evaluation.
   b. Maintain paints and sealants on exterior concrete walls
   c. Toilet room accessibility upgrades
   d. Clean Fire Alarm and voice evacuation systems
4. **Livestock East Repairs**
   a. Provide gutters, downspouts and splash blocks as required to collect water and direct away from building
5. **Livestock South Repairs**
   a. Provide gutters, downspouts and splash blocks as required to collect water and direct away from building
   b. There is no construction joint in the concrete wall on the North side of the stalls, retrofit with construction joints to prolong life of wall

PROGRAM UPGRADES

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

PROGRAM GROWTH

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

Phase 1	Total Cost by Building		Immediate - Average of 6% Escalation per year for 2 years
Facility Maintenance & Repairs			
Arena Repairs	$733,981		$822,058.82
Agricultural Classrooms Repairs	$61,693		$69,095.69
Stall Building Repairs	$116,724		$130,730.38
Livestock West Repairs	$0		$0.00
Livestock East Repairs	$1,316		$1,473.37
Livestock South Repairs	$16,779		$18,792.83
Subtotal	$930,492		**$1,042,151.09**
Existing Program Upgrades			
New siding on Existing Arena, New Overhead Door in Existing Arena, Accessibility upgrades to existing arena	$1,093,491		$1,224,709.92
Landscape and Fence Improvement along S. College Drive	$137,376		$153,861.12
Regrade and reshape roads, correct drainange and accessibility	$618,192		$692,375.04
Outdoor Arena Watering (wheeled sprinkler cart)	$13,738		$15,386.11
Subtotal	$1,862,797		**$2,086,332.19**
Future Program Growth			
Hay Storage Infill	$115,455		$129,309.81
Hay Barn	$1,129,612		$1,265,164.91
Livestock Additions and Pens	$572,355		$641,037.74
Quarantine	$177,546		$198,851.96
Large Arena	$18,554,878		$20,781,463.27
Pens	$258,360		$289,362.92
Trailer Parking - 44 stalls	$151,114		$169,247.23
New Parking - 24 stalls	$247,277		$309,096.00
Replacement Parking - 50 stalls	$515,160		$643,950.00
Pasture	$74,172		$83,073.19
FFE & Arena Equipment	$1,199,688		$1,343,650.70
Horse Stalls and Pens (130 total)	$2,561,520		$2,868,902.40
Subtotal	$25,557,137		**$28,723,110.12**
Phase Subtotal	$28,350,426		**$31,851,593.40**
Soft Costs at 25%	$7,087,606		$7,962,898.35
Total Phase 1 Costs	$35,438,032		**$39,814,491.75**

Master Plan Phase 1

This table provides a high level summary of estimated costs associated with scopes of work described in the Master Plan and broken out into 3 phases (3 years, 5 years, 10 years) based on priority. The table is largely broken up into (3) broad categories:

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

Each line item represents a unique scope of work. Costs estimations were formulated by using cost data from the 2019 RS Means books and applying the values for materials and assembly systems to approximate area takeoffs of the existing buildings or proposed new facilities. Additional factors applied include Cushing Terrell's recent project experience in Cheyenne, and on similar projects throughout Wyoming, and from cost data provided by LCCC on several recent projects on campus. Escalation across the proposed phases of work for the Master Plan was derived from several sources. For Phase 1 escalation, LCCC's recent experience of 6% per year was used. The 30-year average construction cost inflation is 3.5% so escalation for subsequent phases moves toward the more normalized long-term value. We are using 5% per year for Phase 2 and 3.5% per year for Phase 3.

The costs estimated here reflect construction cost along with a 25% multiplier for soft costs, and escalation over time as described above to provide budgeting for project costs. Soft costs (design consultants, legal fees, pre- and post-construction expenses, and additional FFE beyond what is articulated here) range from 20%-30% of a total project cost. For the purposes of this Master Plan we have utilized 25% based on historical averages.

Refer to "Areas of Note" on Master Plan Phase 3 for additional information related to implementing these scopes of work.

Master Plan Phase 2

A. EXISTING PARKING LOT

B. EXISTING CLASSROOM BUILDING

C. EXISTING ANIMAL SCIENCE BUILDING

D. EXISTING ARENA

E. EXISTING LIVESTOCK PENS

F. EXISTING STALL BARN

G. EXISTING OUTDOOR ARENA

H. EXISTING HORSE STALLS

I. NEW INDOOR ARENA

J. NEW HAY STORAGE INFILL

K. NEW HAY BARN

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Q. MAIN ENTRY

R. EMERGENCY VEHICLE ACCESS ONLY/
TRAILER EXIT, EVENTS ONLY

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T. LANDSCAPE BERM

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V. NEW ENTRY AND STUDENT LOUNGE

W. NEW LIVESTOCK PENS

X. NEW HORSE STALLS - 52

Y. NEW TURNOUT PENS

Z. TRAILER PARKING - 26
(PERVIOUS/UNPAVED, POWERED FOR RV HOOKUPS)

Phase 2

Agriculture & Equine Master Plan

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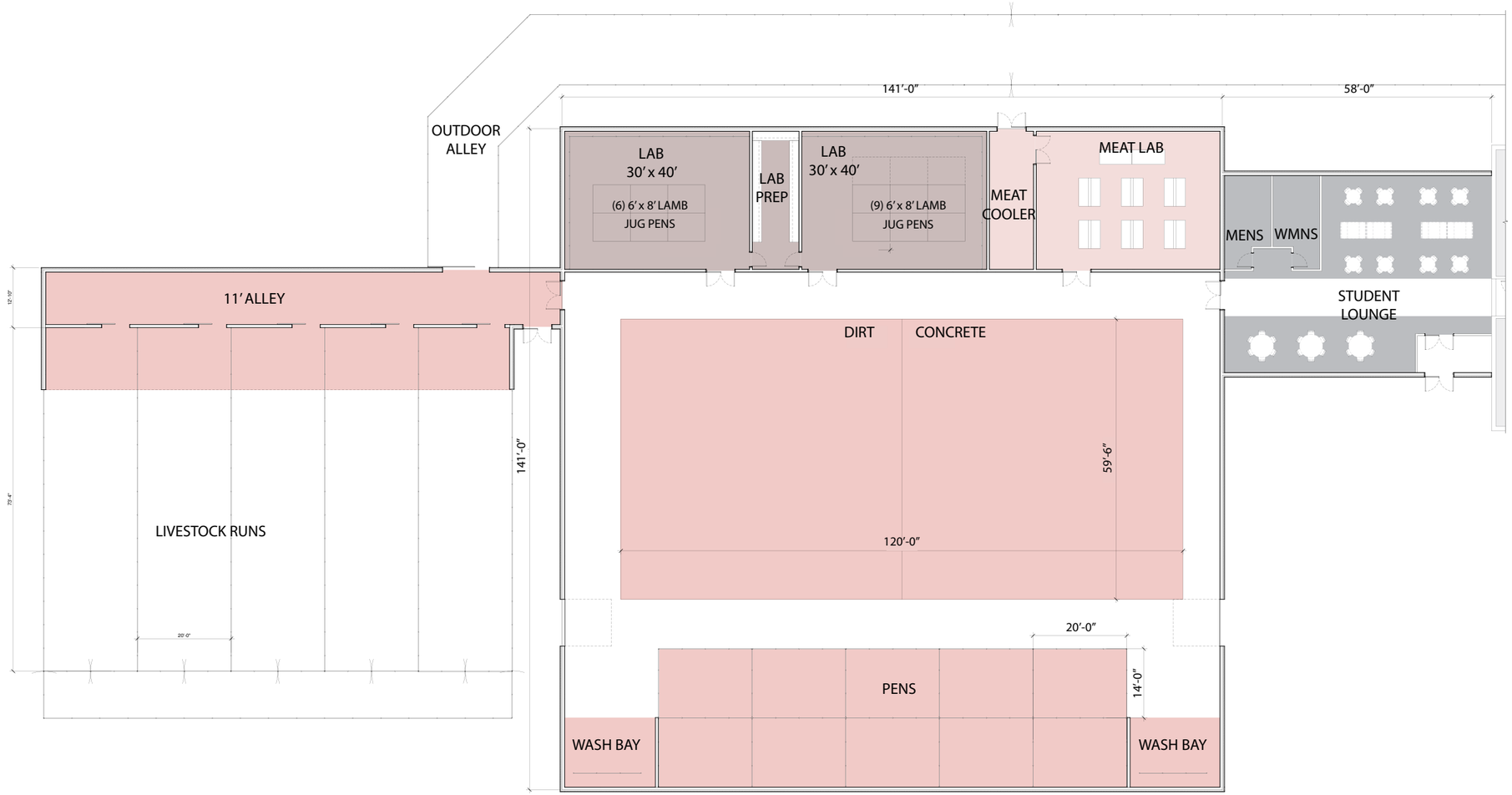

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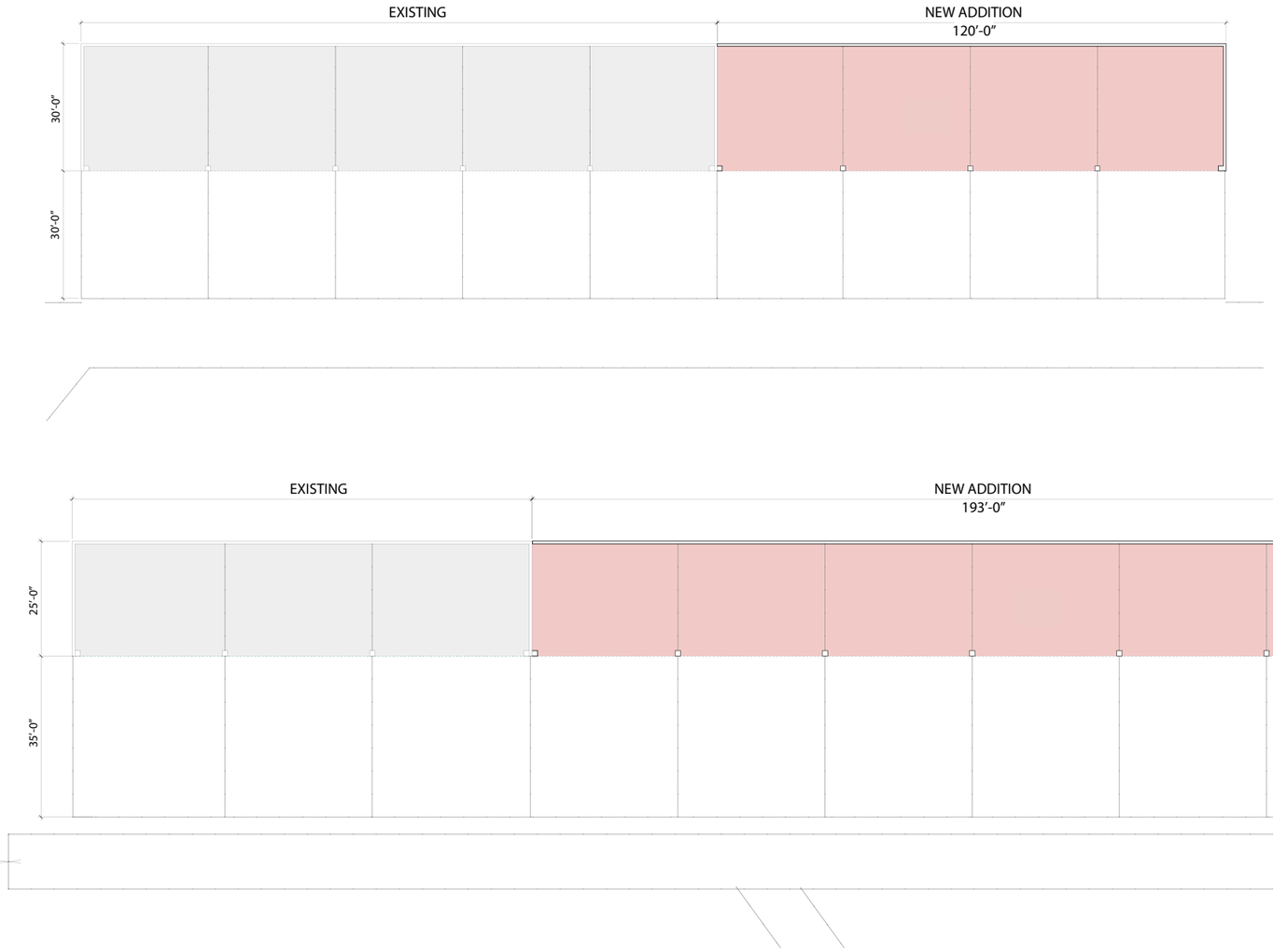

Livestock Pen Additions

Agriculture & Equine Master Plan

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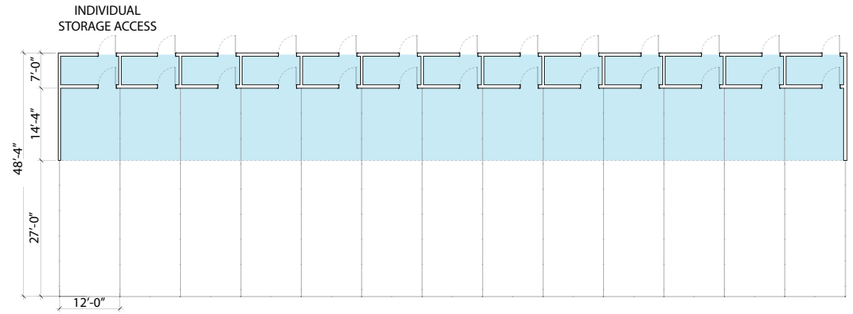
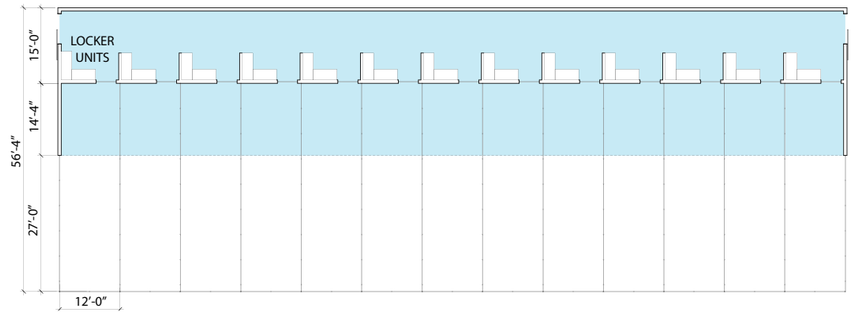
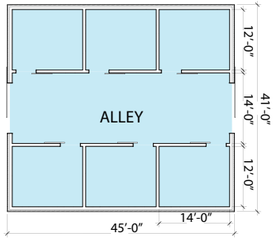
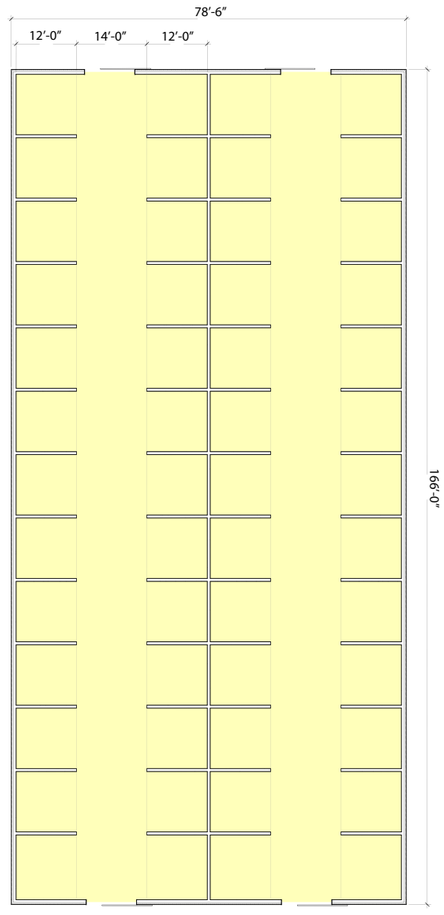
OPTION 1



OPTION 2







Master Plan Phase 2

FACILITY MAINTENANCE AND REPAIRS

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

PROGRAM UPGRADES

1. **Cooling for Ag. Classroom**

PROGRAM GROWTH

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

Phase 2	Total Cost by Building		Short Term - Average of 5% Escalation per year for 5 years
Facility Maintenance & Repairs			
Arena Repairs	$612,143		$765,179.17
Agricultural Classrooms Repairs	$681,884		$852,354.54
Stall Building Repairs	$174,326		$217,907.53
Livestock West Repairs			
Livestock East Repairs			
Livestock South Repairs			
Subtotal	$1,468,353		**$1,835,441.24**
Existing Program Upgrades			
Cooling for Ag. Classrooms	$752,463		$940,578.75
Subtotal	$752,463		**$940,578.75**
Future Program Growth			
Multi-Use Livestock and Runs and Connection Lobby	$3,932,696		$4,915,870.17
Horse Stalls and Pens (52 total)	$795,668		$994,585.58
Trailer Parking - 22 stalls	$75,557		$94,446.00
New Parking - 27 stalls	$278,186		$347,733.00
Replacement Parking - 29 stalls	$298,793		$373,491.00
Subtotal	$5,380,901		**$6,726,125.75**
Phase Subtotal	$7,601,717		**$9,502,145.74**
Soft Costs at 25%	$1,900,429		$2,375,536.44
Total Phase 2 Costs	$9,502,146		**$11,877,682.18**

Master Plan Phase 2

This table provides a high level summary of estimated costs associated with scopes of work described in the Master Plan and broken out into 3 phases (3 years, 5 years, 10 years) based on priority. The table is largely broken up into (3) broad categories:

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

Each line item represents a unique scope of work. Costs estimations were formulated by using cost data from the 2019 RS Means books and applying the values for materials and assembly systems to approximate area takeoffs of the existing buildings or proposed new facilities. Additional factors applied include Cushing Terrell's recent project experience in Cheyenne, and on similar projects throughout Wyoming, and from cost data provided by LCCC on several recent projects on campus. Escalation across the proposed phases of work for the Master Plan was derived from several sources. For Phase 1 escalation, LCCC's recent experience of 6% per year was used. The 30-year average construction cost inflation is 3.5% so escalation for subsequent phases moves toward the more normalized long-term value. We are using 5% per year for Phase 2 and 3.5% per year for Phase 3.

The costs estimated here reflect construction cost along with a 25% multiplier for soft costs, and escalation over time as described above to provide budgeting for project costs. Soft costs (design consultants, legal fees, pre- and post-construction expenses, and additional FFE beyond what is articulated here) range from 20%-30% of a total project cost. For the purposes of this Master Plan we have utilized 25% based on historical averages.

Refer to "Areas of Note" on Master Plan Phase 3 for additional information related to implementing these scopes of work.

Master Plan Phase 3

A. EXISTING PARKING LOT

B. EXISTING CLASSROOM BUILDING

C. EXISTING ANIMAL SCIENCE BUILDING

D. EXISTING ARENA

E. EXISTING LIVESTOCK PENS

F. EXISTING STALL BARN

G. EXISTING OUTDOOR ARENA

H. EXISTING HORSE STALLS

I. NEW INDOOR ARENA

J. NEW HAY STORAGE INFILL

K. NEW HAY BARN

L. NEW HORSE STALLS - 130

M. NEW QUARANTINE BARN

N. NEW TURNOUT PENS

O. TRAILER PARKING - 53
(PERVIOUS/UNPAVED, POWERED FOR RV HOOKUPS)

P. CORRAL & PASTURE

Q. MAIN ENTRY

R. EMERGENCY VEHICLE ACCESS ONLY/
TRAILER EXIT, EVENTS ONLY

S. MAIN EXIT

T. LANDSCAPE BERM

U. NEW MULTI-USE LIVESTOCK FACILITY

V. NEW ENTRY AND STUDENT LOUNGE

W. NEW LIVESTOCK PENS

X. NEW HORSE STALLS - 52

Y. NEW TURNOUT PENS

Z. TRAILER PARKING - 26
(PERVIOUS/UNPAVED, POWERED FOR RV HOOKUPS)

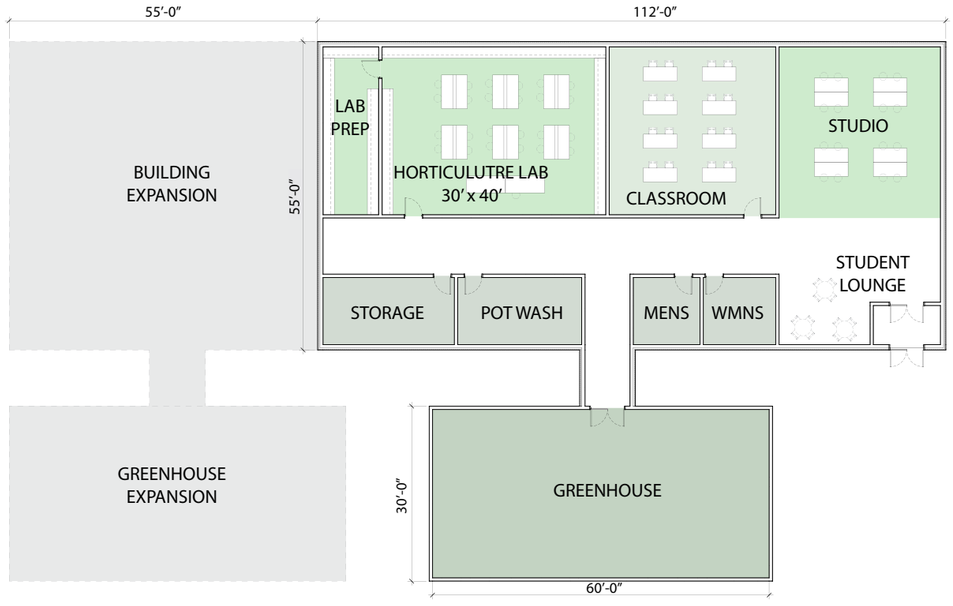
AA. HORTICULTURE CLASSROOM/LABS/
GREEN HOUSE AND PARKING

Phase 3

Agriculture & Equine Master Plan

N

Cushing Terrell



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

Master Plan Phase 3

FACILITY MAINTENANCE AND REPAIRS

1. **Arena Repairs**
   a. Replacement of gas-fired furnaces
   b. Replacement of electrical distribution
2. **Ag. Classroom Repairs**
   a. Replacement of electrical distribution
3. **Stall Building Repairs**
   a. Replacement of roof
   b. Replacement of electrical distribution
   c. Replacement of photocells, receptacles and power devices
4. **Livestock West Repairs**
   a. Replacement of roof
   b. Replacement of photocells, receptacles and power devices

PROGRAM GROWTH

1. **Greenhouse, Labs, Classrooms**
2. **New Parking – 20 stalls**
3. **New road cut onto S. College Drive**

Phase 3				Total Cost by Building		Long Term - Average of 3.5% Escalation per year for 10 years
Facility Maintenance & Repairs						
Arena Repairs		$10,930	$614,250	$907,761		$1,225,477.84
Agricultural Classrooms Repairs			$122,850	$178,378		$240,810.57
Stall Building Repairs	$126,353		$204,750	$480,762		$649,028.18
Livestock West Repairs	$19,086			$27,713		$37,412.38
Livestock East Repairs						
Livestock South Repairs						
Subtotal				$1,594,614		**$2,152,728.96**
Future Program Growth						
Greenhouse, Labs, Classrooms				$1,771,109		$2,390,997.37
New Parking - 20 stalls				$206,064		$278,186.40
New road cut onto College Drive				$343,440		$463,644.00
Subtotal				$2,320,613		**$3,132,827.77**
Phase Subtotal				$3,915,227		**$5,285,557**
Soft Costs at 25%				$978,807		$1,321,389
Total Phase 3 Costs				$4,894,034.01		**$6,606,945.92**

AREAS OF NOTE FOR IMPLEMENTATION OF FUTURE SCOPES OF WORK

1. The area of the LCCC campus dedicated to the Ag & Equine Program is in a low lying area adjacent to the Allison Draw Flood Plain and many areas have a high water table. The Master Plan includes some costs for addressing this issue, however adjustments may be necessary during future design work based on geotechnical reports completed at that time. Dewatering of the existing and new arena should be included in future scopes.
2. The proposed location of the new arena will require the relocation of some of the existing underground utilities and the generator and transformer that are currently located near the South East corner of the existing arena.
3. A Geotechnical Report and a topographic survey have not been completed as part of the Master Plan effort. The results of each may require adjustment of future building design and location.
4. A traffic study was not completed as part of the Master Plan, but should be included in project specific studies.
5. Emergency vehicle access (fire, paramedic, or otherwise) was not presented for AHJ input or approval. Vehicular movement and access is shown conceptually but will need further study in subsequent scopes of work.
6. Drainage and accessibility issues are addressed in the Master Plan, however a topographic survey was not completed as part of this study. The results of a future topographic study will dictate specific solutions to these issues.
7. A thorough study of site and roof drainage will be required as part of subsequent scopes of work. Ponding across the Ag & Equine part of the campus is a current problem.

Master Plan Phase 3

This table provides a high level summary of estimated costs associated with scopes of work described in the Master Plan and broken out into 3 phases (3 years, 5 years, 10 years) based on priority. The table is largely broken up into (3) broad categories:

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

Each line item represents a unique scope of work. Costs estimations were formulated by using cost data from the 2019 RS Means books and applying the values for materials and assembly systems to approximate area takeoffs of the existing buildings or proposed new facilities. Additional factors applied include Cushing Terrell's recent project experience in Cheyenne, and on similar projects throughout Wyoming, and from cost data provided by LCCC on several recent projects on campus. Escalation across the proposed phases of work for the Master Plan was derived from several sources. For Phase 1 escalation, LCCC's recent experience of 6% per year was used. The 30-year average construction cost inflation is 3.5% so escalation for subsequent phases moves toward the more normalized long-term value. We are using 5% per year for Phase 2 and 3.5% per year for Phase 3.

The costs estimated here reflect construction cost along with a 25% multiplier for soft costs, and escalation over time as described above to provide budgeting for project costs. Soft costs (design consultants, legal fees, pre- and post-construction expenses, and additional FFE beyond what is articulated here) range from 20%-30% of a total project cost. For the purposes of this Master Plan we have utilized 25% based on historical averages.

C. AGRICULTURE & EQUINE ASSESSMENT

Current Program/Team Status:

The Ag and Equine complex currently houses the following existing programs/teams:

COLT TRAINING PROGRAM

This is a popular program with capacity for growth if there were space on campus for both horses and indoor arena/labs. Classes are taught primarily in the daytime and utilize the arena and round pens. Colts are kept in the indoor stalls. The program currently runs about 16 students/horses with a maximum capacity of 45 students/horses.

EQUINE EVALUATION CLASS

This course serves dual purposes as it is part of the equine science program and the colt training program. This course can also be used as a working opportunity for the Equine Judging Team. Horses housed on campus for other reasons are utilized in this course with a maximum capacity of 22 horse/riders with the option to open additional sections if demand exceeded 22. This course utilizes in the indoor arena during the daytime.

AGRICULTURE-HORTICULTURE

Agriculture and horticulture classes are currently spread across campus with most of the classrooms in the ag building and the ag lab space north of the arena. The greenhouse is very small and located in the science building. The facilities for these programs are not currently up to animal-handling standards and the mix of rodeo livestock, show team livestock, and animal handling sheep, pigs, goats, and cattle add significant biosecurity risks due to lack of space.

RODEO

This team practices 5-6 days a week, primarily in the afternoon and evening during the week as the arena is full with equine classes. Students bring their own horse(s) and require housing and space for hay, feed, and tack. This team also requires facilities for housing and handling of rough stock (bulls and horses) as well as roping cattle (steers, calves) and a handful of goats. This is a popular team that is currently a maximum capacity with 35 students and 90 horses. Facility

EQUESTRIAN (IHSA)

This team practice five days a week in the indoor arena. Due to lack of space and arena availability the team is currently paired with a class in order to have arena time. These students utilize donated horses that require stalls on campus as well as hay and feed storage and tack rooms. This team has a capacity of 20 horses with 18 western riders and 14 hunt seat riders.

RANCH HORSE

This is the newest team to LCCC and the fastest growing. Students bring their own horses and they are housed on campus. The team practices 5-6 days a week and due to lack of arena time, currently shares with a class. The team currently has 16 riders with a maximum capacity of 20 riders and 20 horses. This is a team that could grow over time beyond the 20 riders, and students would prefer to bring more than one horse (like the rodeo team does).

LIVESTOCK SHOW TEAM

This team primarily shows cattle throughout the entire year (August to April). These show cattle need pens and cover from the weather as well as working facilities including wash racks and areas for fitting. With space, this team could diversify and show different livestock including pigs, sheep, and goats. Biosecurity measures including keeping these show cattle separate from all rodeo livestock. This team has a capacity of 15-20 students and 6-10 head of cattle.

LIVESTOCK JUDGING TEAM

The Livestock Judging Team works out primarily at ranches and livestock owner facilities off campus. This team does host a camp in the summer time and use the arena and livestock lab space, however the summer does not pose a conflict with other teams and classes in terms of facilities. This team has a capacity of 15 students.


CINCH
JEANS & SHIRTS

Students, Staff, & Animals Summary

CURRENT & FUTURE ENROLLMENT SUMMARY

		2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	Projected Increase in Current Programs	New Programs	Future
Agriculture		113	129	120	100	123	54	40	217
	Horticulture							30	
	Ag Education							5	
	Ag Communication							5	
	Meat Science							0	
	Meat Judging							0	
Equine		70	68	71	85	73	32	4	109
	3-Day Eventing Team							4	
Rodeo		39	32	30	36	36	10	0	46
Total		222	229	221	221	232	96	44	372

Enrollment in the Agriculture and Equine programs has remained relatively steady over the last 5 years which indicates that the programs create relevant educational opportunities for students in the area. Consistent enrollment in a strong program over a period of time without growth could be an indicator that current facilities are limiting growth. Current Ag & Equine programs could double in enrollment with additional space.

CURRENT & FUTURE STAFF SUMMARY

Staff Summary					
		2019 - 2020	Projected Increase in Current Programs	New Programs	Future
Agriculture					
	Director	1			
	Agriculture	1	1		
	Livestock	1			
	Horticulture			1	
	Ag Education			1	
	Ag Communication				
	Meat Science				
	Meat Judging				
Equine					
	Equine	1	1		
	Ranch Horse	1			
	Rodeo Coach	1			
	Rodeo Assistants	2	1		
	3-Day Eventing Team			1	
Facilities		1	1		
Total Staff		9	4	3	16

With the introduction of more classroom, lab, and arena space, additional faculty would be needed to teach additional sections in current Ag & Equine classes. It is expected that the Rodeo team would also grow with more arena space and therefore require another assistant coach. New Horticulture, Ag Education, and Ag Communication would also require additional faculty members. Staff size is projected to double in size.

CURRENT & FUTURE ANIMALS SUMMARY

Agriculture	Livestock							Show Team		
	Pigs	Sheep & Goats	Steers	Market Hogs	Breeding Hogs	Breeding Sheep & Goats	Total Livestock	Cattle	Sheep & Goats	Total Show Team Animals
Current	20	30	10	0	0	0	60	12	0	12
Future	0	30	12	24	10	20	96	18	12	30
Increase	-20	0	2	24	10	20	36	6	12	18

Equine & Rodeo	Current Rodeo Animals						RH	Equine		
	Roping Calves	Roping Steers	Bucking Horses	Student Horses	Bucking Bulls	Total Rodeo Animals	Ranch Horse Practice Cattle	College Horses	Student Horses	Total Equine Horses
Current	60	60	25	90	0	235	15	2	60	62
Future	90	90	25	125	15	345	20	5	100	105
Increase	30	30	0	35	15	110	5	3	40	43

Biosecurity facilitated by the separation of animals is currently a concern on campus due to overcrowding and the lack of segregated housing and pathways. Due to the number of animals in the current programs, multiple animals are kept in the same stalls and pens, animals from traveling programs like Rodeo have the potential to come into contact with non-traveling animals because of the proximity of their stalls, and alleys don't completely facilitate the separation of animals in the different programs. As the Ag & Equine programs grow, the demand to house College and Student animals will also increase. Currently 384 animals are members of the programs. The total animals is projected to grow 55% to almost 600.

Space Utilization & Capacity

CURRENT CLASSROOM & LAB UTILIZATION SUMMARY

Classroom & Lab Utilization / Capacity Summary		16 Student Computer Lab	30 Student Classrooms			Animal Science Lab	Rodeo & Equine Arena
	Room #	AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA
Fall 2019							
	Hours / Week	18.0	5.0	8.0	45.5	11.0	87.0
	Utilization	60%	17%	27%	152%	24%	193%
	Capacity (to meet Utilization Target)	6.0	19.0	16.0	(21.5)	25.0	(42.0)
Spring 2019							
	Hours / Week	4.0	10.0	23.0	32.0	1.5	75.0
	Utilization	13%	33%	77%	107%	3%	167%
	Capacity (to meet Utilization Target)	20.0	14.0	1.0	(8.0)	34.5	(30.0)
Maximum Hours / Week During a Semester		18.0	65.0			11.0	87.0
Maximum Utilization During a Semester		60%	72%			24%	193%
Capacity / Week (to meet Utilization Target)		6.0	7.0			25.0	(42.0)

Utilization Benchmarks

Classroom Utilization Target	80%	
Classroom Schedule	30	hours / week
Fully Utilized Classroom	24	hours / week
Arena Utilization Target	100%	
Arena Schedule	45	hours / week
Fully Utilized Arena	45	hours / week

Determining Utilization Benchmarks of different kinds of education spaces are helpful to determine how much capacity the spaces have to accommodate growing or new programs, or to determine if the spaces are over utilized. If a program is dependent on a space that is over utilized, then physical space limitations can be a barrier to growth. Working with staff from the Ag & Equine programs, typical class schedules are built around 30 hours / week, and schedules for the Arena are built around 45 hours / week. Classrooms are considered "fully utilized" if they are used 80% (24 hours / week) of the time to allow for flexibility of staff, student, and lab schedules. Due to the historical precedent to use the arena heavily, the Arena is considered to be "fully utilized" at 100% (45 hours / week).

A comparison between the current use of the Arena and the Utilization Benchmarks indicates that the Arena is 209% utilized. This represents 49 hours of time each week beyond its normal capacity. Therefore, a completely new arena would be at normal capacity on "day one" with the current enrollment. Considering the semester with the highest utilization for each space, the Computer Lab could accommodate another 6 hours / week, the 30 Student Classrooms have the capacity to accommodate another 7 hours / week, and the Animal Science Lab is not heavily utilized.

CURRENT & FUTURE CLASS & LAB HOURS SUMMARY

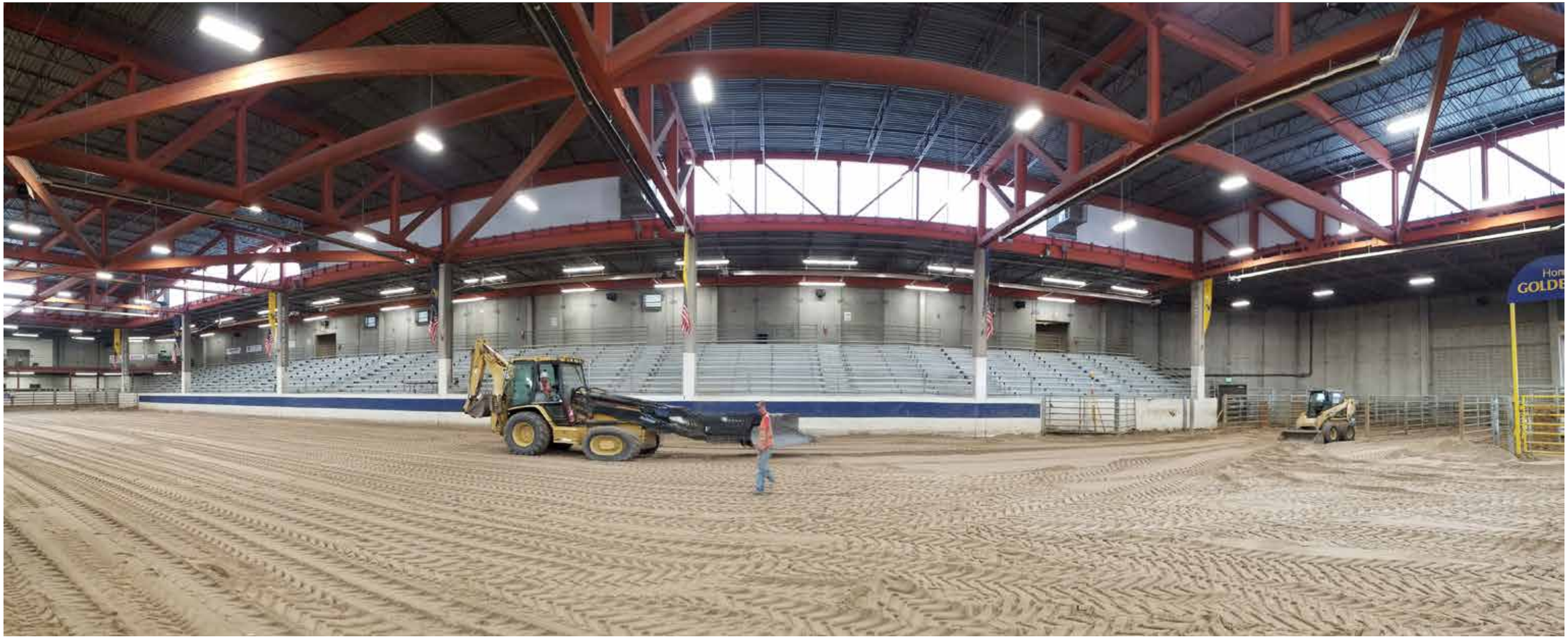
Classroom & Lab Hours Summary in the Ag & Equine Programs		Current			Future Growth			Increase		
		Classroom Hours / Week	Lab Hours / Week	Arena Hours / Week	Classroom Hours / Week	Lab Hours / Week	Arena Hours / Week	Classroom Hours / Week	Lab Hours / Week	Arena Hours / Week
Fall										
	Agriculture	69	36		82	41		13	5	
	Equine	11		31	14		50	3		19
	Rodeo			62			62			0
	Subtotal	80	36	93	96	41	112	16	5	19
Spring										
	Agriculture	65	18		80	32		15	14	
	Equine	24		39	40		59	16		20
	Rodeo			60			60			0
	Subtotal	89	18	99	120	32	119	31	14	20
New Programs										
	Agriculture (Horticulture)				26	24		26	24	
	Equine						10			10
	Rodeo									
	Subtotal				26	24	10	26	24	10
Maximum Hours / Semester		89	36	99	146	65	129	57	29	30

The accompanying table represents the classroom, lab, and arena hours of the current Ag & Equine courses during the Fall 2019, and Spring 2020 Semesters. Projections have been made for future growth of these programs under the provision that additional space would need to be created. Projections for required hours of instruction time have also been made for new programs. The "worst case" semester, or the semester with the maximum number of hours is used for planning purposes.

Growth in existing Ag & Equine (not including Rodeo) programs will generate the need for more classrooms. Growth in existing Ag programs will require more lab time. Rodeo is not expected to need more Arena hours, but the Equine program will need more Arena time. A new Ag Horticulture program would not impact existing spaces because this program would need to be accommodated in a new greenhouse / lab / studio building.

Physical Infrastructure and Facility Assessment

Our team of architects and engineers assessed the existing facilities over the course of several visits in August and September of 2019. Each discipline performed a thorough analysis of the existing conditions of each structure and produced several documents to aid in evaluating the current Facilities Condition Index (FCI) of each building. Written narratives and spreadsheets with recommended actions and the estimated associated costs are included as appendices. The following paragraphs will provide a high level summary of the conclusions.



CIVIL

This portion of the assessment focused on existing drainage, storm water runoff, and ADA access across the site. The site generally slopes from the south to north. Some of the existing drainage flows toward some of the existing buildings and into existing low lying areas. These conditions present problems with ADA access and successful drainage of storm water runoff. Re-grading and /or imported fill may be required to remedy the existing conditions.

STRUCTURAL

In general, the structures are considered to be in good to very good structural condition. Major structural deficiencies were not identified in any of the structures. There were three minor items noted on the building facades, and all of them are relative to potential water infiltration of the building envelope. Primary recommendations include remediating the caulking joints between the pre-cast wall panel, providing scuppers and downspouts to direct water away from the buildings, and providing a parapet cap on the stall building to mitigate water infiltration.

ARCHITECTURAL

In general, the buildings are in good condition and serve their intended functions well. Primary recommendations include upgrades or replacements of the envelope to maintain against water infiltration and upgrades for code compliance and accessibility issues.

MECHANICAL AND PLUMBING

In general, the mechanical and plumbing equipment is original to the buildings, with the exception of some equipment that has been replaced in the last 10-20 years. Plumbing fixtures were observed to be original to each building and not low flow or water conserving. Mechanical equipment is consistently original to each building and at or near the end of their useful life. Recommendations include replacing aging equipment and relocating exterior louvers to provide proper clearances and avoid debris entrainment.

ELECTRICAL

In general, the electrical infrastructure and equipment on site was observed to be original to the construction and in fair to good condition. Notable upgrades include facility fire alarm equipment in 2012, and LED lighting and occupancy sensors in 2014. Primary recommendations include completing cleaning and maintenance to maintain the functioning and viability of the equipment. Additionally it is recommended to complete upgrades of lighting controls to occupancy / vacancy sensors and replace receptacles and power devices in areas that have been exposed to extreme moisture.

Facility Condition Index

Recommendation of repairs and priorities based upon FCI analysis

The facilities are generally in good condition and with proper maintenance and modifications, the life span of the buildings can be extended to perform well into the future. The tables and text below give a high level view of priorities and costs of recommended repairs, replacements and upgrades. These cost estimates do not include softs costs or escalation. The Appendix provides a more in-depth analysis through written and photographic narratives and costing spreadsheets. In the Appendix provides written narratives by each discipline for each building. Items identified as "poor condition" typically were associated with an immediate priority. Items identified as "fair condition" typically were associated with a short-term priority, and items identified as "good condition" typically were associated with a long-term priority. The following tables provide a high level summary of cost estimates associated with recommended repairs and upgrades for each building broken out into different priorities and timeframes. Items on the "Immediate" table typically are for envelope items that need to be addressed immediately to mitigate possible water infiltration issues. Items on the "Short Term" table are typically maintenance and repair items but are not as critical as those identified on the "Immediate" table. Items on the "Long Term" table are typically for items that are still functioning but are beyond end of life and their replacement should be planned for. A unique escalation value was assigned to each table to account for estimated cost increases over the immediate, short, and long-term durations.

LCCC_FCI_Combined			
Data as of 1/23/2020			
Material Costs	**Total Repair Cost by Building**	**Replacement Cost**	**FCI**
Arena	$2,274,093	$20,879,397	0.11
Agricultural Classrooms	$968,435	$5,534,298	0.17
Stall	$781,740	$6,540,534	0.12
Livestock West	$61,120	$695,165	0.09
Livestock East	$24,343	$467,900	0.05
Livestock South	$50,756	$623,866	0.08
Total Costs	**$4,160,486**		

TABLE A

Table A provides a high-level view of estimated repair costs for each building and compares that cost to the estimated cost of full replacement-in-kind to provide the FCI for each building. Based on the durability of the construction used, condition of each building, and cost of replacement, it is recommended that steps be taken to perform maintenance as required on each building to support their continued performance into the future.

LCCC_FCI_Immediate	
Data as of 1/23/2020	
Material Costs	**Total Repair Cost by Building**
Arena	$733,981
Agricultural Classrooms	$61,692
Stall	$116,723
Livestock West	$0
Livestock East	$1,316
Livestock South	$16,779
Total Costs	**$930,490**
Recommendations for immediate repair or replacement within the next 1-2 years	

TABLE B - repair and upgrade items recommended for immediate attention.

Arena – below is a summary of major items included:

- **$384,472** Replacement of the roof scheduled for 2022 per LCCC
- **$29,431** Replace caulking joint between concrete panels
- **$15,470** Clean fire alarm and voice evacuation systems – evidence of animal nesting observed

Agricultural Classrooms - below is a summary of major items included:

- **$36,300** Accessibility upgrades to casework and showers
- **$6,200** Clean fire alarm and voice evacuation systems – evidence of animal nesting observed

Stall Building - below is a summary of major items included:

- **$29,040** Deferred maintenance on the roof
- **$14,000** Maintain paint and sealants on exterior concrete walls
- Improve surface drainage around building – provide positive drainage away from building
- **$36,000** Toilet room accessibility upgrades
- **$10,500** Clean fire alarm and voice evacuation systems – evidence of animal nesting observed

Livestock East - below is a summary of major items included:

- **$1,000** Provide gutter, downspouts and splash blocks as required to collect water and direct away from building

Livestock South - below is a summary of major items included:

- **$2,820** Provide gutters, downspouts and splash blocks as required to collect water and direct away from building
- There is no construction joint in the concrete wall on the North side of the stalls, retrofit with construction joints to prolong life of wall

LCCC_FCI_Short Term	
Data as of 1/23/2020	
Material Costs	**Total Repair Cost by Building**
Arena	$647,007
Agricultural Classrooms	$720,721
Stall	$184,256
Livestock West	$0
Livestock East	$0
Livestock South	$0
Total Costs	**$1,551,983**
Recommendations for short term repair or replacement within the next 3-5 years	

TABLE C - repair and upgrade items recommended for short-term attention.

Arena – below is a summary of major items included:

- **$66,000** Clean algae off of interior of stairwells, remove rust from wall plates, maintain paint and sealants
- **$150,434** Thermostat, air devices, ductwork, fans, louvers and dampers to be replaced -
- **$120,095** Replacement of plumbing equipment and fixtures that is original and reaching end of useful life
- **$72,000** Upgrade lighting controls that were not previously upgraded, i.e. occupancy sensors
- **$37,800** Replace receptacles and power devices that have been exposed to moisture and are showing signs of corrosion

Agricultural Classrooms - below is a summary of major items included:

- **$13,300** Replace fixed aluminum windows
- **$8,500** Maintain paints and sealants
- **$115,000** Replace casework and FFE as needed for educational models
- **$204,300** Replace heating and ventilation units, air terminals, heating water boiler and ductwork that is original and at end of life
- **$85,500** Upgrade thermal zones controls and DDC Controls
- **$24,280** Replace plumbing fixtures and equipment that are original and reaching end of life
- **$27,000** Upgrade lighting controls that were not previously upgraded, i.e. occupancy sensors
- **$9,500** Replace receptacles and power devices that have been exposed to moisture and are showing signs of corrosion

Stall Building - below is a summary of major items included:

- **$10,000** Replace aluminum windows in stall building
- **$29,435** Replace exhaust fans, cabinet heaters, and unit heaters that are original and reaching end of life
- **$26,975** Replace plumbing equipment and fixtures that are original and reaching end of life
- **$45,000** Upgrade lighting controls that were not previously upgraded, i.e. occupancy sensors
- **$15,750** Replace receptacles and power devices that have been exposed to moisture and are showing signs of corrosion

LCCC_FCI_Long Term	
Data as of 1/23/2020	
Material Costs	**Total Repair Cost by Building**
Arena	$990,285
Agricultural Classrooms	$194,594
Stall	$524,467
Livestock West	$30,232
Livestock East	$0
Livestock South	$0
Total Costs	**$1,739,578**
Recommendations for long term repair or replacement within the next 5-10 years	

TABLE D - repair and upgrade items recommended for long-term attention.

Arena - below is a summary of major items included:

- **$9,000** Replacement of gas-fired furnaces
- **$614,250** Replacement of electrical distribution

Agricultural Classrooms - below is a summary of major items included:

- **$122,850** Replacement of electrical distribution

Stall Building - below is a summary of major items included:

- **$204,750** Replacement of electrical distribution
- **$127,307** Replacement of roof

Livestock West - below is a summary of major items included:

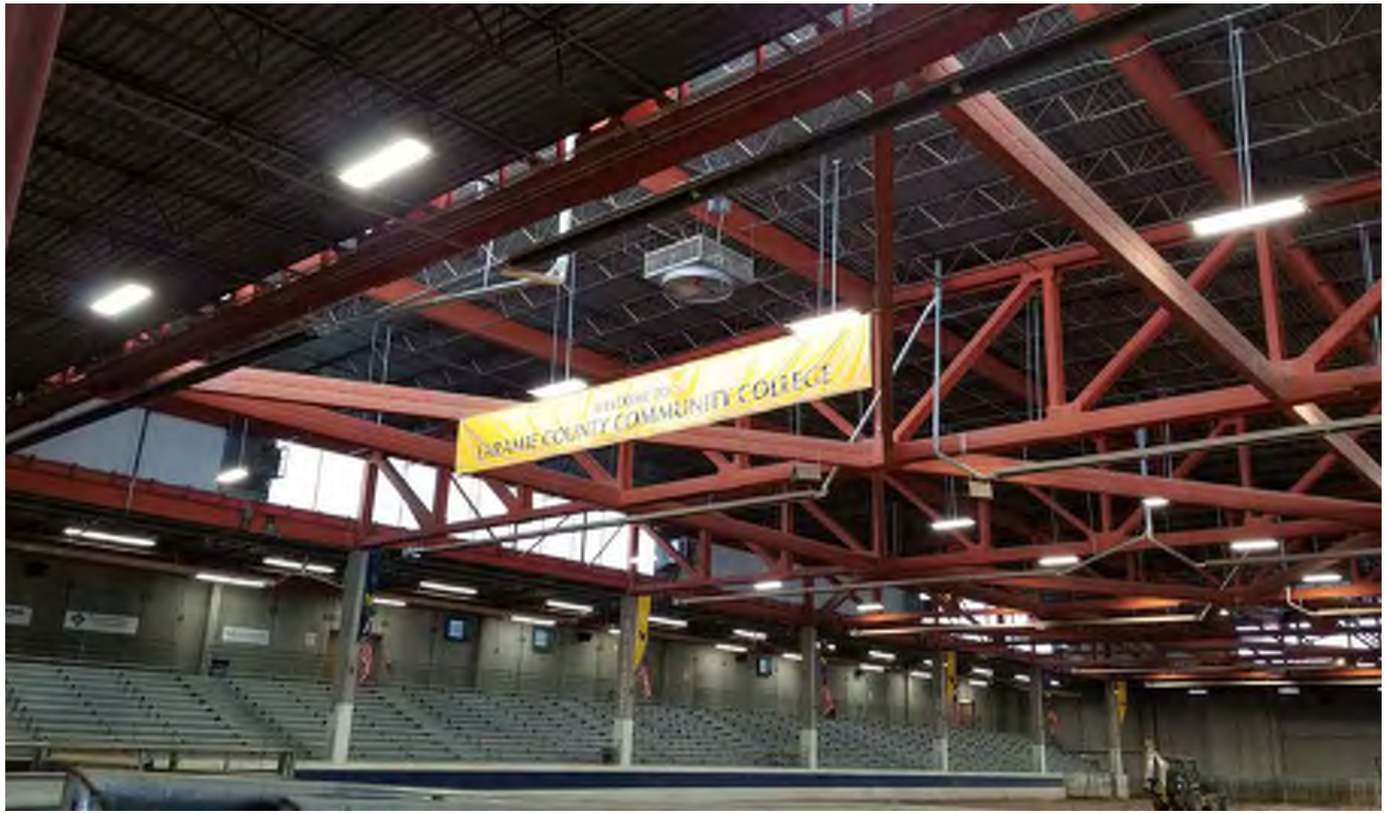
- **$20,000** Replacement of the roof
- **$17,550** Replacement of photocells, receptacles and power devices

Livestock East - below is a summary of major items included:

- **$11,700** Replacement of photocells, receptacles and power devices

Livestock South - below is a summary of major items included:

- **$23,400** Replacement of photocells, receptacles and power devices


LARAMIE COUNTY COMMUNITY COLLEGE

D. ANIMAL HANDLING PRACTICES

Recommendations For Best Practices

PENS

To accommodate the continued growth of the LCCC Ag & Equine programs additional animal pens will be required. New pens provided should all be the same size and the same construction throughout to accommodate different animals at different times as needs change. Tube steel railing with welded panels can be used for all pens, with flat expanded metal mesh at the bottom 6’ to house smaller animals (pigs, goats). Some basic rules of thumb for the pens follow:

- Add more field fabricated “pig pens” for 20 heads per pen
- Provide 100sf per pen to allow the ground to dry, 12sf is acceptable for short term holding
- New pens should also include 12’ wide alleys to accommodate any animal size at any time
- Plan for 2 animals per stall area, alleys feed to both a large and small animal squeeze chute for flexibility
- Portable sheep pens are recommended, Premier1Supplies.com has some examples

QUARANTINE

Plan to provide separate stalls and stall buildings for rodeo and equine animals to aid in biosecurity on the site. Additionally build a separate quarantine building to house sick animals.

ANIMAL MOVEMENT ACROSS SITE

Keep the existing roads but add gates and intersections to allow for the safe movement of animals. Plan to overlap gates by 2’ and have drop locks. Have a plan and system of gates to safely to coordinate and control vehicular traffic through the site and animal movement through the site. Alleys should be a minimum of 12’ with a 14’ gate and well drained. For the gate hinges weld the collar on the inside.

The alley between the existing stall building and new arena is recommended to be 25’ wide to allow extra space for structural support and trench drains and still allow 20’ clear space. The extra space will allow for coordination of gate swings, other animal handling details, and small vehicle movement.

TRAILER PARKING

Additional trailer parking is needed and a large area is needed to accommodate events. Flood zones provide a good area for trailer parking. Ideally animals unload onto a grass or non-paved surface.

ANIMAL SCIENCE LAB

Consider improving drainage, trench drains would be ideal.

SITE CONSIDERATIONS

Keep roads on site and control vehicular traffic throughout the site. Organize the expansion in phases and coordinate so that current operations can be maintained during construction. There are drainage problems in several areas, especially at the barns. Plan to improve drainage at existing and new facilities.

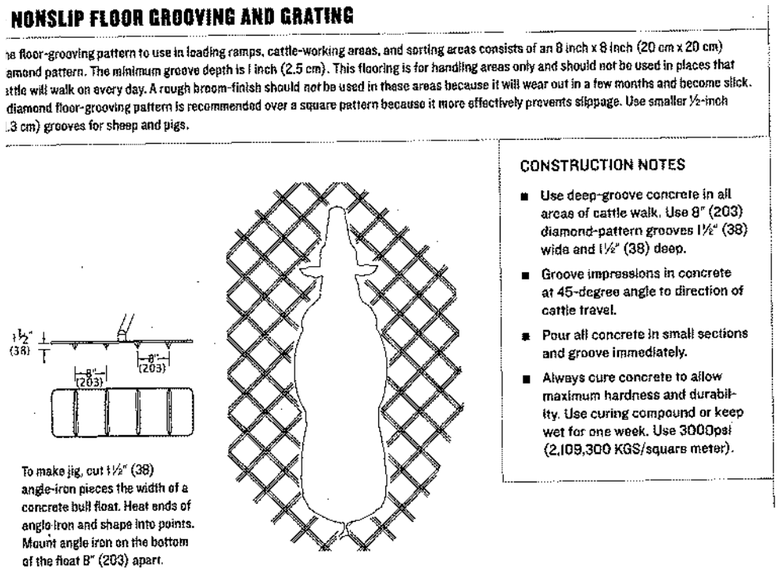
TECHNICAL ANIMAL HANDLING NOTES

- Implement Gate in/ gate out procedures for movement
- 12’ wide alley minimum with a 14’ gate so the alley is still covered when the gate is at an angle
- Gate hinges – weld collars on the inside for durability and to assist with sag
- Wash rack design and destination – be aware of environmental laws, trench drains, discharge
- Specialized concrete footing can be used in certain areas. Stamped concrete with a metal mesh pattern is good in vet office areas (specifically multi-use livestock building) – is good for longevity and animal footing
- Animals like to return to where they came from – work the pivot

DIAGRAMS

The following diagrams are from Temple Grandin’s book Humane Livestock Handling and serve to illustrate some of the points above.

Concrete Floor



NONSLIP FLOOR GROOVING AND GRATING

...e floor-grooving pattern to use in loading ramps, cattle-working areas, and sorting areas consists of an 8 inch x 8 inch (20 cm x 20 cm) ...amond pattern. The minimum groove depth is 1 inch (2.5 cm). This flooring is for handling areas only and should not be used in places that ...ttle will walk on every day. A rough broom-finish should not be used in these areas because it will wear out in a few months and become slick. ...diamond floor-grooving pattern is recommended over a square pattern because it more effectively prevents slippage. Use smaller ½-inch ...3 cm) grooves for sheep and pigs.

CONSTRUCTION NOTES

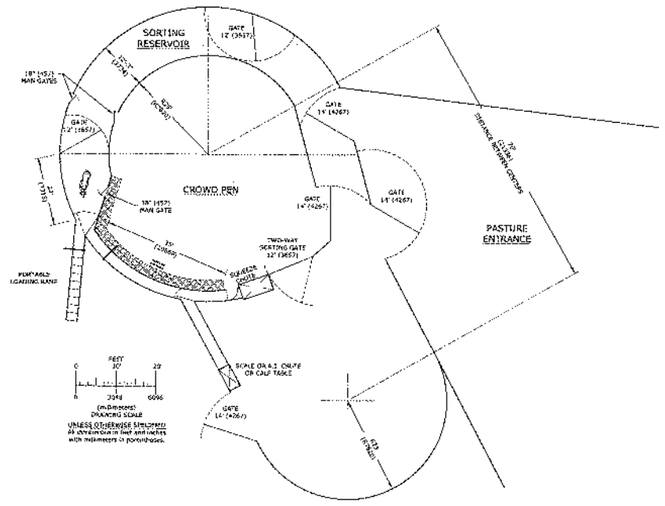
- Use deep-groove concrete in all areas of cattle walk. Use 8" (203) diamond-pattern grooves 1½" (38) wide and 1½" (38) deep.
- Groove impressions in concrete at 45-degree angle to direction of cattle travel.
- Pour all concrete in small sections and groove immediately.
- Always cure concrete to allow maximum hardness and durability. Use curing compound or keep wet for one week. Use 3000psi (2,109,300 KGS/squars meter).

1½" (38)

8" (203)

8" (203)

To make jig, cut 1½" (38) angle-iron pieces the width of a concrete bull float. Heat ends of angle iron and shape into points. Mount angle iron on the bottom of the float 8" (203) apart.



Crowd Pen in Pasture

Space Requirements for Short Term Holding Pens

SPACE REQUIREMENTS FOR SHORT-TERM HOLDING PENS

CATTLE

- **Cow and calf pairs:** 35 to 45 square feet (3.25 to 4.18 m²), depending on calf size
- **Cows with calves over 350 lbs (160 kg):** more than 35 square feet per pair
- **Adult cows and market weight fed cattle:** 20 square feet (1.86 m²)

SHEEP

- **Large breed ewes with wool:** 6.5 square feet (0.6 m²)
- **Large breed lambs:** 5 square feet (0.47 m²)
- **A large woolly ewe with a large lamb:** 10 square feet (0.93 m²)
- **A small woolly ewe:** 5 square feet (0.47 m²)

SWINE

- **Market pigs:** 5 square feet (0.47 m²) to 6 square feet (0.55 m²), depending on size

BISON

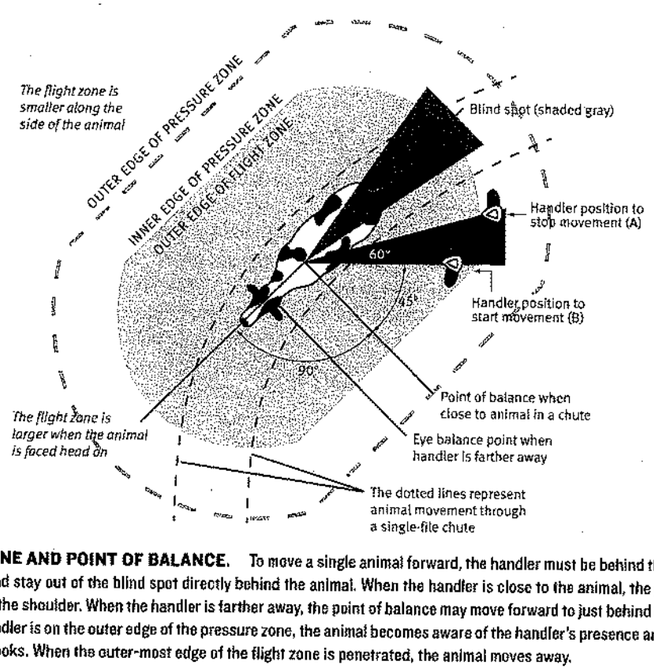
Bison require more space than cattle because they may fight and get seriously injured in a crowded holding pen.

Troubleshooting Distraction

TROUBLESHOOTING DISTRACTIONS

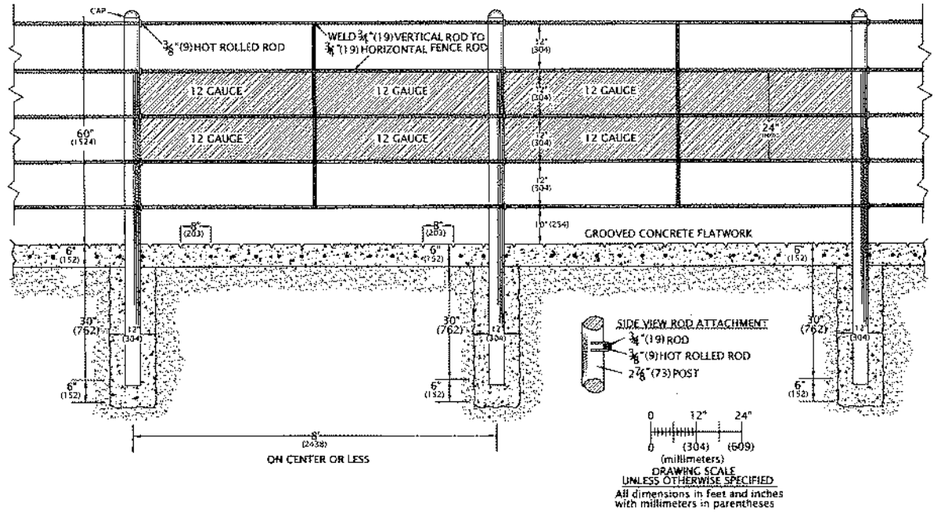
DISTRACTION	SOLUTION
Sparkling reflections on puddles, smooth metal, or vehicles with reflective paint	In indoor facilities, move overhead lamps to eliminate reflections. Outdoors, use nonreflective paint to cover metal sides or parts. Work livestock at a different time of day.
Chains that jiggle	Remove them.
Metal clanging or banging	Install rubber pads.
High-pitched noise	Choose equipment that emits less high-pitched noise.
Air hissing	Silence with mufflers or pipe outside.
Drafts blowing at approaching animals	Change ventilation fans.
Clothing hung on fence	Remove it.
Piece of moving plastic	Remove it.
Fan-blade movement (when fan is turned off)	Turn on the fan or turn it away.
Seeing people moving up ahead	Install a solid shield.
Small objects on the floor, such as coffee cups	Remove them.
Changes in flooring and texturing	Cover the floor with sand, dirt, or straw.
Drain grate on the floor	Install drains outside the area where cattle are worked.
Sudden changes in the color of equipment (colors with high contrast are the worst)	Paint all parts the same color.
One-way backstop gate	Move backstop two or three body lengths away from the entrance of the single-file chute. Another good method is equipping the backstop with a remote-control rope so that it can be held open until the chute is filled.
Visible vehicles that are moving or have high contrast colors, such as yellow or bright blue	Remove them or install a solid side.

Flight zone & Animal Handling



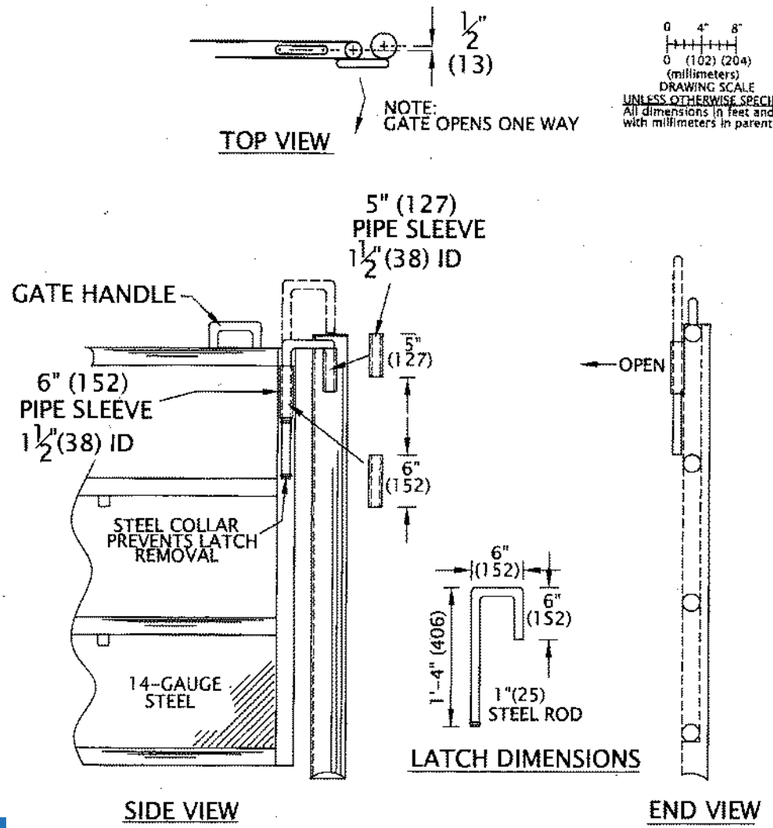
FLIGHT ZONE AND POINT OF BALANCE. To move a single animal forward, the handler must be behind the point of balance and stay out of the blind spot directly behind the animal. When the handler is close to the animal, the point of balance is at the shoulder. When the handler is farther away, the point of balance may move forward to just behind the eye. When the handler is on the outer edge of the pressure zone, the animal becomes aware of the handler's presence and turns around and looks. When the outer-most edge of the flight zone is penetrated, the animal moves away.

Corral Fencing with Belly Rail



▶ DROP LOCKS

These locks are constructed from rods to latch two overlapping gates together across an alley. Drop locks also make excellent tiebacks for holding gates open so they do not swing across the alley when cattle are being handled. Using tiebacks will help prevent injuries caused by a gate swinging out into the alley. Use the drop latch on 6-foot (1.8 m) manually operated sorting gates. The latch may be hooked over the fence or hooked into a 1½-inch (3.8 cm) pipe sleeve welded to the fence or post.



Drop Locks

Site Movement Diagrams

- ANIMAL ENTRY
- STAFF & STUDENT ENTRY
- SPECTATOR ENTRY
- SPECTATOR MOVEMENT
- HAY-FEED MOVEMENT
- TRAILER MOVEMENT
- GATE - EVENT ACCESS ONLY
- LIVESTOCK MOVEMENT
- HORSE MOVEMENT
- CONTROLLED INTERSECTIONS

1. HORTICULTURE CLASSROOM/LABS/ GREEN HOUSE AND PARKING
2. MULTI-USE LIVESTOCK FACILITY
3. NEW ENTRY AND STUDENT LOUNGE
4. EXISTING CLASSROOM BUILDING
5. EXISTING ANIMAL SCIENCE BUILDING
6. EXISTING ARENA
7. EXISTING LIVESTOCK PENS
8. NEW LIVESTOCK PENS
9. EXISTING STALL BARN
10. NEW HAY STORAGE
11. NEW INDOOR ARENA
12. EXISTING PARKING LOT
13. EXISTING OUTDOOR ARENA
14. EXISTING HORSE STALLS
15. MAIN ENTRY
16. EMERGENCY VEHICLE ACCESS ONLY/ TRAILER EXIT, EVENTS ONLY
17. MAIN EXIT
18. NEW HORSE STALLS - 182 TOTAL
19. NEW HAY BARN
20. NEW TURNOUT PENS
21. NEW QUARANTINE BARN
22. NEW TRAILER PARKING - 75 TOTAL (PERVIOUS/UNPAVED, POWER FOR RV HOOKUPS)
23. LANDSCAPE BERM
24. CORRAL & PASTURE

N

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Animal and Hay Movement

Agriculture & Equine Master Plan

ANIMAL ENTRY
STAFF & STUDENT ENTRY
SPECTATOR ENTRY
SPECTATOR MOVEMENT
HAY-FEED MOVEMENT
TRAILER MOVEMENT
GATE - EVENT ACCESS ONLY
LIVESTOCK MOVEMENT
HORSE MOVEMENT
CONTROLLED INTERSECTIONS

1. HORTICULTURE CLASSROOM/LABS/ GREEN HOUSE AND PARKING
2. MULTI-USE LIVESTOCK FACILITY
3. NEW ENTRY AND STUDENT LOUNGE
4. EXISTING CLASSROOM BUILDING
5. EXISTING ANIMAL SCIENCE BUILDING
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23. LANDSCAPE BERM
24. CORRAL & PASTURE

N

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Event Movement

Agriculture & Equine Master Plan

APPENDIX

A. Multiple Options & New Facilities

LCCC AGRICULTURE & EQUINE MASTER PLANNING

OPTION 1 | LCCC | 11.20.2019

Cushing Terrell

0 75 150 300

65 TRAILER PARKING AREA

47 TRAILER PARKING AREA

75 TRAILER PARKING SPACES

LOBBY CONNECTOR

LIVESTOCK QUARANTINE

MULTI-USE LIVESTOCK

EXISTING LAB & CLASSROOM

EXPANDED TO SMALL ARENA

EXISTING LIVESTOCK

LIVESTOCK ADDITION

EXISTING LIVESTOCK

LIVESTOCK ADDITION

NEW LIVESTOCK

HORSE QUARANTINE

EXISTING CHUTE

GREENHOUSE / SCIENCE LABS

COVERED HAY

HAY BARN

EXISTING STALL ADDITION

TURN OUT PENS

INDOOR ARENA

LIVESTOCK HOLDING

EXISTING ARENA

18 NEW HORSE STALLS

10 TRAILER PARKING AREA

26 TRAILER PARKING AREA

19 TRAILER PARKING SPACES

156 NEW HORSE STALLS

LCCC AGRICULTURE & EQUINE

OPTION 2 | LCCC | 11.20.2019

MASTER PLANNING

Cushing Terrell

0 75 150 300

66 TRAILER PARKING AREA

30 TRAILER PARKING AREA

75 TRAILER PARKING SPACES

LIVESTOCK QUARANTINE

LOBBY CONNECTOR

EXISTING LAB & CLASSROOM

EXPANDED TO SMALL ARENA

EXISTING LIVESTOCK

LIVESTOCK ADDITION

EXISTING LIVESTOCK

LIVESTOCK ADDITION

HORSE QUARANTINE

168 NEW HORSE STALLS

MULTI-USE LIVESTOCK

GREENHOUSE / SCIENCE LABS

COVERED HAY

EXISTING CHUTE

TURN OUT PENS

HAY BARN

EXISTING STALL ADDITION

EXISTING ARENA

COVERED ALLEY

INDOOR ARENA

LIVESTOCK HOLDING

26 TRAILER PARKING AREA

18 TRAILER PARKING SPACES

32 TRAILER PARKING AREA

LCCC AGRICULTURE & EQUINE

OPTION 3 | LCCC | 11.20.2019

MASTER PLANNING

Cushing Terrell

0 75 150 300

B. Agriculture Courses

CURRENT AGRICULTURE COURSES

Fall 2019		Current Classroom Hours					Current Lab Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
AGEC 1010-100	Agricultural Economics I	1	30	30	3	3						
AGEC 1010-101	Agricultural Economics I	1	30	30	3	3						
AGEC 2020-100	Farm and Ranch Business Management	1	24	24	4	4						Classroom & Lab used concurrently
							1	15	15	4	4	
ANSC 1010-100	Livestock Production	2	30	60	3	6						
	Lab						2	20	40	2	4	currently only space for 20 in the Animal Science Lab
ANSC 1010-102	Livestock Production	above										
	Lab											
AECL 2010-100	Soils: The Ecological Web	1	30	30	3	3						ideal to have in ag - need wet lab
	Lab						1	30	30	1	1	ideal to have in ag - need wet lab
RGMG 2000-100	Principles of Range Management	1	30	30	3	3						
ANSC 1210	Livestock Judging I	1	20	20	9	9						Classroom & Lab used concurrently
							1	15	15	9	9	
ANSC 2230-100	Livestock Judging III	1	12	12	9	9						Classroom & Lab used concurrently
							1	15	15	9	9	
ANSC 1200-100	Livestock Fitting and Showing	1	18	18	5	5						Classroom & Lab used concurrently
							1	15	15	5	5	
						45					32	

Agriculture Classes

Classes not located in the Ag Facilities

CURRENT AGRICULTURE COURSES

Spring 2020		Current Classroom Hours					Current Lab Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
AGEC 1020-100	Agricultural Economics II	2	20	40	6	12						
AGEC 2400	Farm Credit and Finance	1	30	30	4	4						
							1	15	15	4	4	Classroom & Lab used concurrently
ANSC 2020-100	Feeds and Feeding	1	20	20	3	3						
	Lab						1	20	20	2	2	
AECL 1000-100	Agroecology	2	30	60	3	6						ideal to have in ag - need wet lab
	Lab						2	30	60	2	4	ideal to have in ag - need wet lab
AECL 1000-101	Agroecology	above										ideal to have in ag - need wet lab
	Lab											ideal to have in ag - need wet lab
RGMG 2400	Rangeland Plants and Regions	1	10	10	3	3						
	Lab						1	10	10	2	2	
ANSC 1220-100	Livestock Judging II	1	15	15	9	9						
AECL 2395	Agricultural Science Research Methods Capstone	1	12	12	4	4						
	Lab						1	12	12	2	2	
						41					14	

8 Week		Current Classroom Hours					Current Lab Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
AGEC 2010	Farm-Ranch Business Records											stacked class
ANSC 2025	Livestock Nutrition											stacked class
	Lab											
AECL 1005	Field Crops and Integrated Pest Management											stacked class - separated in the future
	Lab											
ANSC 1100	Artificial Insemination	1	12	12	4	4						
	Lab						1	12	12	2	2	need lab for this
ANSC 1260	Livestock Merchandising	1	12	12	4	4						
ANSC 2320	Livestock Health and Management	1	12	12	4	4						
AGRI 2470/2471	Internship						1	15	15	(off campus)		
						12					2	

Agriculture Classes

Classes not located in the Ag Facilities

FUTURE AGRICULTURE COURSES

Fall 2019		Future Classroom Hours					Future Lab Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
AGEC 1010-100	Agricultural Economics I	1	30	30	3	3						
AGEC 1010-101	Agricultural Economics I	1	30	30	3	3						
AGEC 2020-100	Farm and Ranch Business Management	2	24	48	3	6						+24 sophomore students to the program
							2	24	48	3	6	New Computer Lab Space for 30
ANSC 1010-100	Livestock Production	3	30	90	3	9						+30 freshman students to the program
	Lab						3	20	60	2	6	Located in Multi-Use Livestock in the Future
ANSC 1010-102	Livestock Production	above										
	Lab											Located in Multi-Use Livestock in the Future
AECL 2010-100	Soils: The Ecological Web	1	30	30	3	3						
	Lab						2	15	30	1	2	New Wet Lab for 15
RGMG 2000-100	Principles of Range Management	1	30	30	3	3						
ANSC 1210	Livestock Judging I	1	25	25	9	9						Located in Multi-Use Livestock in the Future
							1	25	25	9	9	Located in Multi-Use Livestock in the Future
ANSC 2230-100	Livestock Judging III	1	15	15	9	9						Located in Multi-Use Livestock in the Future
							1	15	15	9	9	Located in Multi-Use Livestock in the Future
ANSC 1200-100	Livestock Fitting and Showing	1	25	25	5	5						Located in Multi-Use Livestock in the Future
							1	25	25	5	5	Located in Multi-Use Livestock in the Future
						50					37	

Agriculture Classes

Classes not located in the Ag Facilities

FUTURE AGRICULTURE COURSES

Spring 2020		Future Classroom Hours					Future Lab Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
AGEC 1020-100	Agricultural Economics II	2	30	60	6	12						assume these additional students are accounted for below
AGEC 2400	Farm Credit and Finance	2	24	48	4	8						+18 sophomore students to the program
							2	24	48	4	8	New Computer Lab Space for 30
ANSC 2020-100	Feeds and Feeding	1	30	30	3	3						
	Lab						2	15	30	2	4	Located in Multi-Use Livestock in the Future
AECL 1000-100	Agroecology	3	30	90	3	9						+30 freshman students to the program
	Lab						6	15	90	2	12	New Wet Lab for 15
AECL 1000-101	Agroecology	above										
	Lab											
RGMG 2400	Rangeland Plants and Regions	1	18	18	3	3						assume these additional students are accounted for above
	Lab						1	18	18	2	2	
ANSC 1220-100	Livestock Judging II	1	20	20	9	9						Located in Multi-Use Livestock in the Future
AECL 2395	Agricultural Science Research Methods Capstone	1	15	15	4	4						assume these additional students are accounted for above
	Lab						1	15	15	2	2	
						48					28	

8 Week		Future Classroom Hours					Future Lab Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
AGEC 2010	Farm-Ranch Business Records											
ANSC 2025	Livestock Nutrition											
	Lab											Located in Multi-Use Livestock in the Future
AECL 1005	Field Crops and Integrated Pest Management	1	15	15								
	Lab						1	15	15			New Wet Lab for 15
ANSC 1100	Artificial Insemination	2	10	20	4	8						assume these additional students are accounted for above
	Lab						1	12	12	2	2	Located in Multi-Use Livestock in the Future
ANSC 1260	Livestock Merchandising	1	15	15	4	4						assume these additional students are accounted for above
ANSC 2320	Livestock Health and Management	1	15	15	4	4						assume these additional students are accounted for above
AGRI 2470/2471	Internship						1	20	20	(off campus)		off campus
						16					2	

Agriculture Classes

Classes not located in the Ag Facilities

C. Equine and Rodeo Courses

EQUINE AND RODEO CURRENT COURSES

Fall 2019		Current Classroom Hours					Current Arena Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
EQST 1515	Equine Science I	1	30	30	3	3						
EQST 1515 Lab	Equine Science I Lab						2	15	30	2	4	
EQST 1515 Lab	Equine Science I Lab						above					
EQST 1685	Equine Behavior and Horsemanship						1	14	14	10	10	
EQST 2500	Equine Health Management	1	16	16	3	3						
EQST 2985	Equine Business	1	16	16	3	3						
EQST 2975	Individualized Training						1	7	7	10	10	
EQST 2805	Western Equitation						1	16	16	7.5	7.5	
EQST 2570	Basic Ranch Horse Versatility						1	14	14	5	5	
EQST 1550	Equine Evaluation I	1	7	7	2	2						
EQST 1725	Rodeo Rough Stock I						1	4	4	10	10	
EQST 1740	Rodeo Timed Events I						1	8	8	10	10	
EQST 1760	Alternative Rodeo Timed Events I						1	5	5	10	10	
EQST 2730	Alternative Rodeo Timed Events III						1	5	5	10	10	
EQST 2740	Rodeo Rough Stock III						1	4	4	10	10	
EQST 2760	Rodeo Timed Events III						1	7	7	10	10	
EQST 2780	Intermediate Team Roping						1	5	5	2	2	
				69		11			119		99	

Classes not located in the Equine Facilities or Arena

Equine Classes

Rodeo

EQUINE AND RODEO CURRENT COURSES

Spring 2020		Current Classroom Hours					Current Arena Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
EQST 1505	Basic Horsemanship						1	14	14	10	10	
EQST 2516	Equine Science II	1	30	30	6	6						
EQST 2985	Equine Business Law 3cr	1	16	16	4.5	4.5						
EQST 2800	Fundamentals of Teaching Riding 2cr						2	8	16	3	6	
EQST 2800	Fundamentals of Teaching Riding 2cr						above					multiple times to provide flexibility
EQST 2560	Advanced Training Techniques Lab						1	14	14	10	10	
EQST 2560	Advanced Training Techniques Lecture	1	14	14	10	10						
EQST 2970	Equine Internship 3cr	1	14	14								meets off campus
EQST 2520	Equine Reproduction 3cr	1	16	16	3	3						
EQST 2570	Basic Ranch Horse Versatility						1	14	14	5	5	
EQST 2805	Western Equitation						1	16	16	7.5	7.5	
EQST 1730	Rodeo Rough Stock II						1	4	4	10	10	
EQST 1750	Rodeo Timed Events II						1	8	8	10	10	
EQST 1765	Alternative Rodeo Timed Events II						1	5	5	10	10	
EQST 2735	Alternative Rodeo Timed Events IV						1	5	5	10	10	
EQST 2750	Rodeo Rough Stock IV						1	4	4	10	10	
EQST 2770	Rodeo Timed Events IV						1	7	7	10	10	
				90		24			107		99	

Classes not located in the Equine Facilities or Arena

Equine Classes

Rodeo

EQUINE AND RODEO FUTURE COURSES

Fall 2019		Future Classroom Hours					Future Arena Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
EQST 1515	Equine Science I	2	24	48	3	6						+18 freshman students to the program
EQST 1515 L	Equine Science I Lab						3	16	48	2	6	
EQST 1515 L	Equine Science I Lab						above					
EQST 1685	Equine Behavior and Horsemanship						2	12	24	10	20	
EQST 2500	Equine Health Management	1	24	24	3	3						+8 sophomore students to the program
EQST 2985	Equine Business	1	24	24	3	3						assume these additional students are accounted for above
EQST 2975	Individualized Training						2	10	20	10	20	assume these additional students are accounted for above
EQST 2805	Western Equitation						1	20	20	7.5	7.5	assume these additional students are accounted for above
EQST 2570	Basic Ranch Horse Versatility						1	20	20	5	5	assume these additional students are accounted for above
EQST 1550	Equine Evaluation I	1	10	10	2	2						assume these additional students are accounted for above
EQST 1725	Rodeo Rough Stock I						1	5	5	10	10	
EQST 1740	Rodeo Timed Events I						1	10	10	10	10	
EQST 1760	Alternative Rodeo Timed Events I						1	6	6	10	10	
EQST 2730	Alternative Rodeo Timed Events III						1	6	6	10	10	
EQST 2740	Rodeo Rough Stock III						1	5	5	10	10	
EQST 2760	Rodeo Timed Events III						1	9	9	10	10	
EQST 2780	Intermediate Team Roping						1	5	5	2	2	
				106		14			178		121	

Classes not located in the Equine Facilities or Arena

Equine Classes

Rodeo

EQUINE AND RODEO FUTURE COURSES

Spring 2020		Future Classroom Hours					Future Arena Hours					
		Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
EQST 1505	Basic Horsemanship						2	12	24	10	20	+14 freshman students to the program
EQST 2516	Equine Science II	2	24	48	6	12						+18 sophomore students to the program
EQST 2985	Equine Business Law 3cr	1	24	24	4.5	4.5						assume these additional students are accounted for above
EQST 2800	Fundamentals of Teaching Riding 2cr						2	12	24	3	6	assume these additional students are accounted for above
EQST 2800	Fundamentals of Teaching Riding 2cr											
EQST 2560	Advanced Training Techniques Lab						2	12	24	10	20	assume these additional students are accounted for above
EQST 2560	Advanced Training Techniques Lecture	2	12	24	10	20						assume these additional students are accounted for above
EQST 2970	Equine Internship 3cr	2	12	24								meets off campus
EQST 2520	Equine Reproduction 3cr	1	24	24	3	3						
EQST 2570	Basic Ranch Horse Versatility						1	20	20	5	5	assume these additional students are accounted for above
EQST 2805	Western Equitation						1	20	20	7.5	7.5	assume these additional students are accounted for above
EQST 1730	Rodeo Rough Stock II						1	5	5	10	10	
EQST 1750	Rodeo Timed Events II						1	10	10	10	10	
EQST 1765	Alternative Rodeo Timed Events II						1	6	6	10	10	
EQST 2735	Alternative Rodeo Timed Events IV						1	6	6	10	10	
EQST 2750	Rodeo Rough Stock IV						1	5	5	10	10	
EQST 2770	Rodeo Timed Events IV						1	9	9	10	10	
				144		40			153		119	

Classes not located in the Equine Facilities or Arena

Equine Classes

Rodeo

CLASSROOM & LAB HOUR PROJECTIONS FOR NEW PROGRAMS

Future Programs			Classroom Hours					Lab / Studio Hours					
2 Cohorts			Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Sections	Students / Section	Total Students / Course	Hours / Section	Total Class Hours	Notes
Horticulture Science Hypothetical Course Detail (Fall & Spring Semesters)													
	Fr.	Horticulture 101	2	30	60	3	6						Greenhouse Classroom
	Fr.	Biology - Principles of Living Systems	2	30	60	3	6	4	15	60	1	4	
	Fr.	Biology - Intro to Plant Biology	2	30	60	3	6						
	Fr.	Biology - Principles of Biological Diversity	2	15	30	3	6	2	15	30	1	2	
	Fr.	Chemistry - General	2	30	60	2	4	4	15	60	2	8	
	Fr.	Math - Algebra	2	30	60	3	6						
	Fr.	Writing	2	30	60	3	6						
	Fr.	Core & Electives	2	30	60	4	8						
	Soph.	Horticulture - Woody Ornamentals	2	30	60	1	2	4	15	60	2	8	Greenhouse Classroom / Lab
	Soph.	Horticulture - Herbaceous Ornamentation	2	30	60	2	4	4	15	60	1	4	Greenhouse Classroom / Lab
	Soph.	Environmental Science - Soils	2	30	60	2	4	4	15	60	1	4	
	Soph.	Horticulture - Plant Propagation	2	15	30	2	4	2	15	30	1	2	Greenhouse Classroom / Lab
	Soph.	Turfgrass Management	2	15	30	2	4	2	15	30	1	2	Greenhouse Classroom / Lab
	Soph.	Biology - Intro to Entomology	2	15	30	2	4	2	15	30	1	2	
	Soph.	Biology - General Botany	2	15	30	3	6						
	Soph.	Chemistry - Organic Chemistry	2	15	30	2	4	2	15	30	2	4	
	Soph.	Core & Electives	2	30	60	4	8						
Additonal Landscape Design Courses (Fall & Spring Semesters)													
	Fr.	Horticulture - Intro to Landscape Design Studio	2	15	30	1	2	2	15	30	3	6	Greenhouse Classroom / Studio
	Fr.	Horticulture - Landscape Desgin / Theory / History	2	15	30	3	6						Greenhouse Classroom
	Soph.	Horticulture - Sustainable Landscape Studio I	2	15	30	1	2	2	15	30	2	4	Greenhouse Classroom / Studio
	Soph.	Horticulture - Sustainable Landscape Studio II	2	15	30	1	2	2	15	30	2	4	Greenhouse Classroom / Studio
	Soph.	Horticulture - Landscape Graphics I	2	15	30	1	2	2	15	30	2	4	Greenhouse Classroom / Studio
	Soph.	Horticulture - Landscape Graphics II	2	15	30	0	0	2	15	30	3	6	Greenhouse Classroom / Studio
	Soph.	Intro to Drafting & Design	2	15	30	3	6						
				Class Hours / Week / Semester			54		Lab Hours / Week / Semester			32	
Agriculture													
	Horticulture						54					32	
	Ag Education		2	30	60	3	6						
	Ag Communication		2	30	60	3	6						
	Meat Science							1	12	12	2	2	Located in new Meat Processing Lab
	Meat Judging							1	12	12	2	2	Located in new Meat Processing Lab
Equine													
	3-Day Eventing Team							1	12	12	10	10	Practice Only

Classes and Labs not located in the Ag Facilities

Total Future Classroom Hours / Week	66	Total Future Lab Hours / Week	46
Classroom Hours / Week in Ag Facilities	26	Lab Hours / Week in Ag Facilities	24
Classroom Hours / Week in Equine Facilities	0	Lab Hours / Week in Equine Facilities	10

D. Current Class Schedule

FALL 2019

	Monday							Tuesday							Wednesday							Thursday							Friday							Saturday	Sunday
Room #	AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		ARENA	ARENA
7:00																																					
						EQST 2975							EQST 2975							EQST 2975							EQST 2975							EQST 2975			
8:00			EQST 1515							EQST 2985	ANSC 2025	ANSC 1010 LAB					EQST 1515							EQST 2985	ANSC 2025							EQST 1515		ANSC 2025 LAB			Ranch Horse Team Practice	
9:00				ANSC 1010														ANSC 1010															ANSC 1010					
						EQST 1685							EQST 1685							EQST 1685							EQST 1685							EQST 1685			
10:00				AGEC 1010														AGEC 1010															AGEC 1010					Community Work Force
11:00		AGEC 2010		RGMG 2000				AGEC 2020 COMP LAB			AGEC 2020					AGEC 2010		RGMG 2000					AGEC 2020 COMP LAB			AGEC 2020							RGMG 2000					
						EQST 2805	IHSA						EQST 2805	IHSA						EQST 2805	IHSA						EQST 2805	IHSA						EQST 2805	IHSA		
12:00																																				Rodeo Practice	
1:00				ANSC 1260			Ranch Horse Team Practice				ANSC 1260			Ranch Horse Team Practice				ANSC 1260			Ranch Horse Team Practice				ANSC 1260			Ranch Horse Team Practice									
2:00				ANSC 1010		EQST 2570				EQST 1515 LAB		ANSC 1010 LAB	EQST 2570					ANSC 1010		EQST 2570							EQST 1515 LAB	EQST 2570						ANSC 1010		EQST 2570			
3:00	ANSC 1210 2230			ANSC 1210 2230	EQST 2500	EQST 1730 2740 RODEO RS							EQST 1730 2740 RODEO RS		ANSC 1210 2230			ANSC 1210 2230	EQST 2500	EQST 1730 2740 RODEO RS			ANSC 1200			ANSC 1200		EQST 1730 2740 RODEO RS		ANSC 1210 2230			ANSC 1210 2230	EQST 2500	EQST 1730 2740 RODEO RS			
4:00		EQST 1550						ANSC 1200			ANSC 1200					EQST 1550																					
5:00						EQST 1750 2770 RODEO TE	EQST 2780 - TR						EQST 1750 2770 RODEO TE							EQST 1750 2770 RODEO TE	EQST 2780 - TR						EQST 1750 2770 RODEO TE							EQST 1750 2770 RODEO TE			
6:00				ANSC 1100														ANSC 1100																			
7:00						Rodeo Alt TE I & III							EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE			
8:00				ANSC 2320														ANSC 2320																			
9:00						Rodeo Practice							Rodeo Practice							Rodeo Practice							Rodeo Practice							Rodeo Practice			
10:00																																					
Daily Hours	3.0	2.5	1.0	12.0	1.0	13.0	4.0	4.5	0.0	3.5	7.0	4.0	13.0	3.0	3.0	2.5	1.0	12.0	1.0	13.0	4.0	4.5	0.0	1.5	7.5	2.0	13.0	3.0	3.0	0.0	1.0	7.0	3.0	13.0	3.0	8.0	7.0

AG 115	15 Person Computer Lab
AG 116	30 Student Classroom
AG 117	30 Student Classroom
AG 118	30 Student Classroom
ASL	Animal Science Lab

	Agriculture Classes
	Equine Classes
	Rodeo

SPRING 2019

	Monday							Tuesday							Wednesday							Thursday							Friday							Saturday	Sunday
Room #	AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		AG 115	AG 116	AG 117	AG 118	ASL 131	ARENA		ARENA	ARENA
7:00																																					
			EQST 2560			EQST 1505				EQST 2560			EQST 1505				EQST 2560			EQST 1505				EQST 2560			EQST 1505				EQST 2560			EQST 1505			
8:00		AECL 2395									ANSC 2020					AECL 2395							ANSC 2020									ANSC 2020 LAB				Ranch Horse Team Practice	
9:00																																					
						EQST 2560 LAB					AGEC 1020		EQST 2560 LAB							EQST 2560 LAB							EQST 2560 LAB							EQST 2560 LAB			
10:00			EQST 2520							EQST 2985							EQST 2520							EQST 2985							EQST 2520						Community Work Force
11:00	AGEC 2400 COMP LAB	AGEC 2400													AGEC 2400 COMP LAB	AGEC 2400															AECL 2395 LAB							
						EQST 2805							EQST 2805							EQST 2805							EQST 2805							EQST 2805			
12:00																																					Rodeo Practice
1:00				ANSC 1260		EQST 2800					ANSC 1260		EQST 2800					ANSC 1260		EQST 2800					ANSC 1260		EQST 2800										
2:00						EQST 2800	EQST 2570						EQST 2570							EQST 2800	EQST 2570						EQST 2570							EQST 2800	EQST 2570		
3:00			EQST 2516	ANSC 1220		EQST 1730 2750 RODEO RS				EQST 2516			EQST 1730 2750 RODEO RS				EQST 2516	ANSC 1220		EQST 1730 2750 RODEO RS				EQST 2516			EQST 1730 2750 RODEO RS					ANSC 1220		EQST 1730 2750 RODEO RS			
4:00																																					
						EQST 1750 2770 RODEO TE					RGMG 2400		EQST 1750 2770 RODEO TE					ANSC 1100		EQST 1750 2770 RODEO TE					RGMG 2400		EQST 1750 2770 RODEO TE					RGMG 2400 LAB		EQST 1750 2770 RODEO TE			
5:00				ANSC 1100																																	
						EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE							EQST 1765 2735 RODEO Alt TE			
6:00				ANSC 2320														ANSC 2320																			
7:00																																					
8:00																																					
9:00																																					
10:00																																					
Daily Hours	2.0	4.0	4.5	8.0	0.0	13.0	1.0	0.0	0.0	5.0	5.5		13.0		2.0	4.0	5.5	8.0	0.0	13.0	1.0	0.0	0.0	5.0	5.5	0.0	13.0		0.0	2.0	3.0	5.0	1.5	12.0	1.0	8.0	7.0

AG 115	15 Person Computer Lab
AG 116	30 Student Classroom
AG 117	30 Student Classroom
AG 118	30 Student Classroom
ASL	Animal Science Lab

Agriculture Classes

Equine Classes

Rodeo

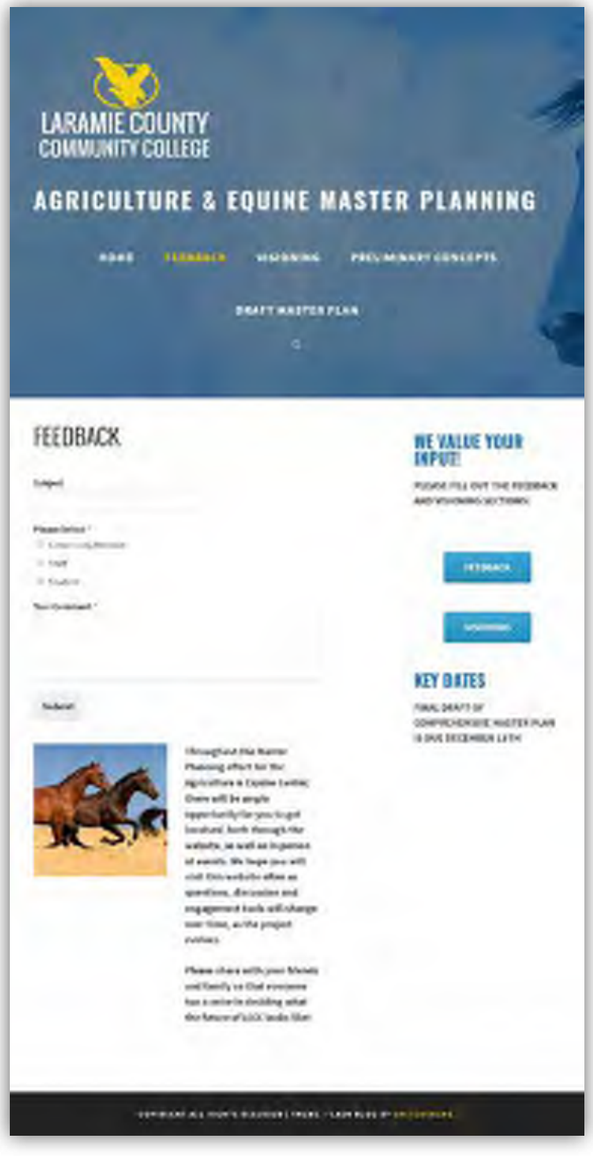
E. Website

The website was developed as a tool to provide information on the Masterplan efforts for LCCC and to provide a means for students, staff, alumni, and community stakeholders to provide feedback to the college and design team.

Different tabs on the website allowed people to provide general feedback and comments, and also more specific feedback to the visioning efforts, asking users to provide input on what to Toss, Keep and Create.

HOME

FEEDBACK



VISIONING

F. Precedent Research

CSU Temple Grandin Equine Center

The Temple Grandin Equine Center

Integrating Research And Education In Equine Assisted Activities And Therapies

There are many conditions of mind and body that can be treated by animal-human interaction. At Colorado State University, we aspire to create a new home for equine-assisted activities and therapies; a place where individuals with physical, emotional, and developmental challenges can heal, where therapists can treat, where students can learn, and where scientists can research.

The Temple Grandin Equine Center will celebrate and elevate the role of the horse in society through the physical and emotional benefits of serving those in need. TGEC will integrate research and education in order to promote evidence-based practices of EAAT. TGEC will work for the betterment of horses and humans alike.

_____

735 S. Overland Trail

Colorado State University

Fort Collins, CO 80523-1679

Bldg: B.W Pickett Center

Voice: 970-491-8373

Fax: 970-491-8419

Douglas County Fairgrounds & Event Center

Indoor Arena

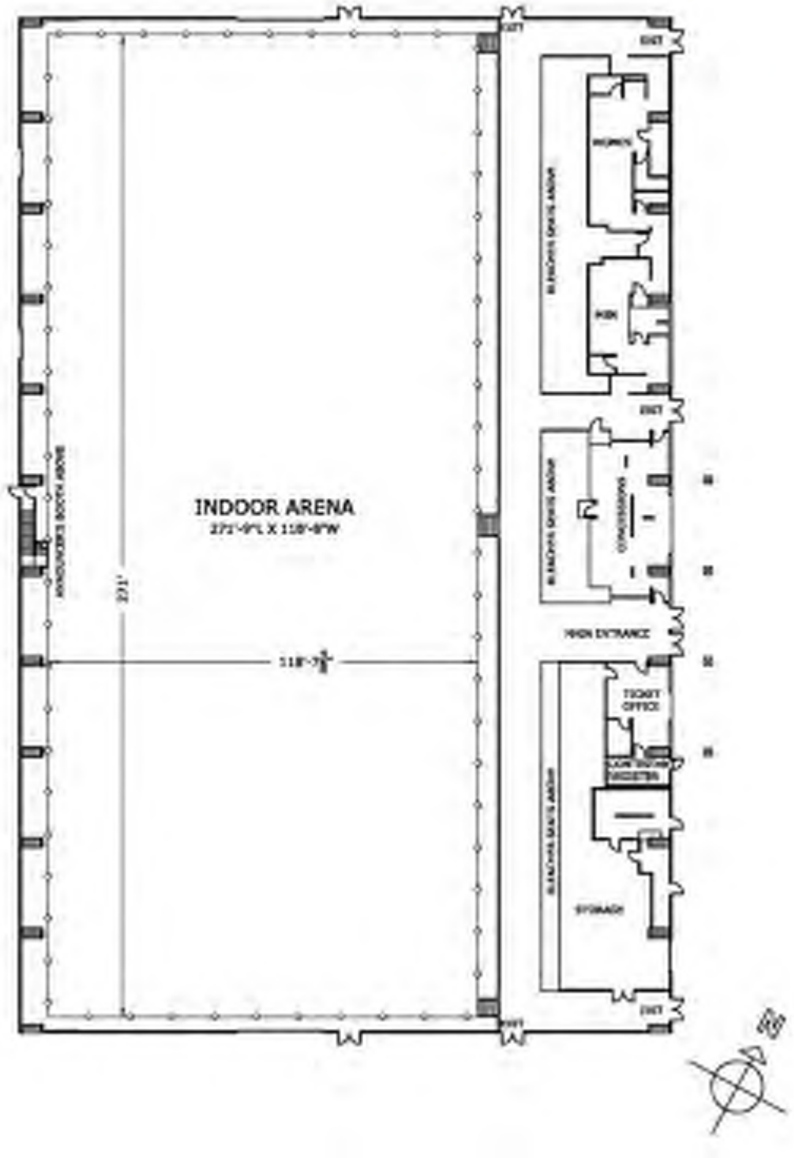
Ideal for Equine Events, Dog Shows, Trade Shows, Training, Rodeos. This facility can be rented in conjunction with other buildings or barns in the complex.

Arena Size: 118’ x 280’

Rental Includes:

- Heated, swamp cooled facility
- Sand base arena watered and harrowed once daily before event begins
- Outdoor warm-up arena approximately 100’ x 150’
- 92 Horse stalls (approximately 10’ x 10’)
- Additional 150 stalls available on a per stall rental basis
- Rodeo Equipment: bucking chutes, roping chute, strip chute
- Livestock holding pens with loading/unloading ramp and water troughs
- Announcer’s Booth equipped with PA system (cordless mic, CD/Cassette)
- Office / ticket sales windows with dedicated phone lines
- 2005 Spectator Seats
- Restrooms with Showers
- Full Service Concession area with interior and exterior serving windows

Douglas County Indoor Arena
Floor Plan



Douglas Wyoming Arena

Latigo Arena

Latigo is a 45-acre, state-of-the-art equestrian facility including horse boarding, therapeutic riding center, riding facilities, an indoor arena and two outdoor arenas. We offer an onsite restaurant with tavern and several equestrian-related retail shops.

Arenas

Indoor Arena

Large 200' X 112' arena, bleachers, new lighting, roping and buckling chutes available, holding pens, event office, sound system, restrooms, up-stairs seating and viewing, dirt surface tilled to your events needs.

Outdoor Arena

Large 280' X 140' arena, bleachers, crows-nest with sound system, roping and bucking chutes and holding pens.

Outdoor Warm-up Arena

80' X 150' plus a working round pen.

Show Stalls

New Show Stalls

We have 90 - 12'x12' newly added stalls. $25/stall per day

Show stalls with **runs**

Available for daily or overnight use during your event. 12' X 12' stalls with a 12' X 40' run and full size locker. Limited availability. $30 per day

Latigo Map

Reservations:

Bob Harrison, General Manager (719) 351-7344

Boarding Barn

Boarding - Self Care

Limited stalls available. 12x12 box stalls with 40' runs and use of facility $250 per month.

Parking

Truck & Trailer Parking

Spacious parking for day events and overnight stays. RV hookups available under the accommodation tab.

Conference Room

Rent our newly renovated spacious conference room that seats up to 50 people and includes tables, chairs and wet bar for your beverages.

Sheridan College AgriPark

AgriPark (AP)

The Sheridan College AgriPark is the college arena and home to the award-winning SC Generals Rodeo teams. The 45,000 square-foot facility features a 122×226′ indoor arena, the Kaul Outdoor Arena, office space, and an 18-stall horse barn.

The college arena and facilities also provide space for Sheridan College's agriculture and equine academic programs.

The AgriPark facility provides student rodeo athletes the opportunities for academic and competitive success. One of many reasons for the recent success of the Sheridan College Rodeo team is because the team has access to a year-around indoor practice arena.

Sheridan College schedules year-around use of this facility. When academic and rodeo needs have been met the facility is available to the community for scheduling. The AgriPark complex brings economic and cultural benefits to the region and provides a venue for collaborations with businesses and other organizations to bring tourist and participant dollars into the area.

Serving education and the community

Located on 40 acres donated by local artist and philanthropist Neltje, the AgriPark facility is open to the public to rent for use throughout the year. Academic and College events will be given priority. Additional time is available for public booking. Contact us to find out how you can reserve time for your event today.

- AgriPark Rental Guide 2019-20
- AgriPark Single Assumption of Liability Waiver
- AgriPark Event Participation Health Declaration
- Satisfaction Survey

1 Chris LeDoux Way

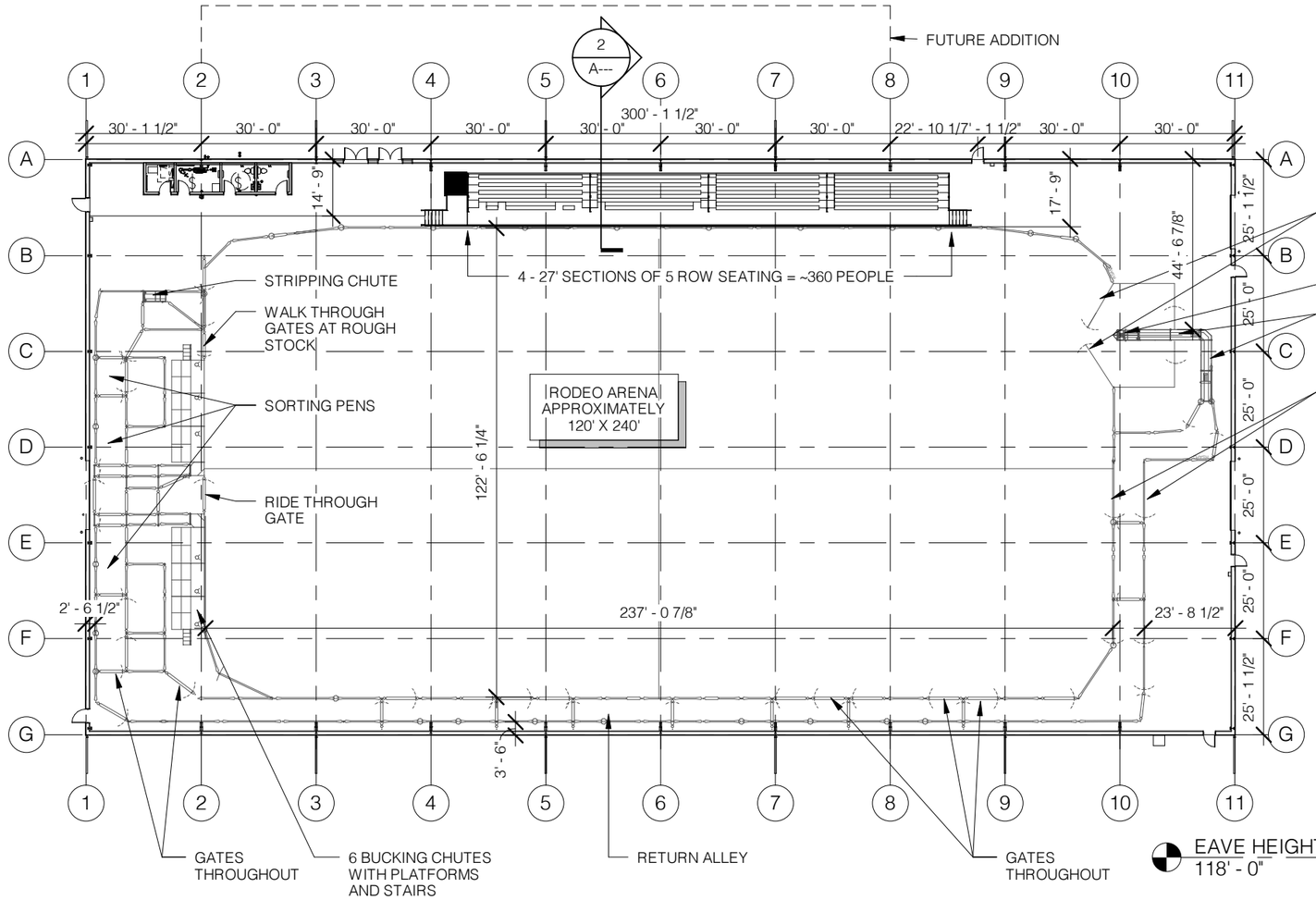
The AgriPark is located within the Wrench Ranch, on the north end of Sheridan, at 1 Chris LeDoux Way. The naming of Chris LeDoux Way recognizes the lasting impact of late country music star and rodeo athlete Chris LeDoux. LeDoux was a member of the Sheridan College rodeo team and won the bareback championship at the National Intercollegiate Rodeo Association finals in 1969 in Deadwood, SD. LeDoux was named Sheridan College Student of the Month in May 1969.

Contact

Zane Garstad, Director of College Services
307-675-0815
307-751-0121 *(cell)*
zgarstad@sheridan.edu

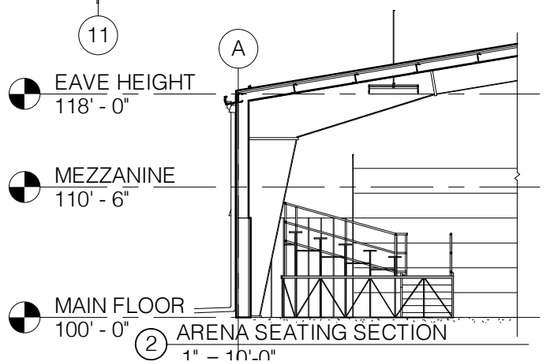
Location

1 Chris LeDoux Way
Sheridan, WY 82801



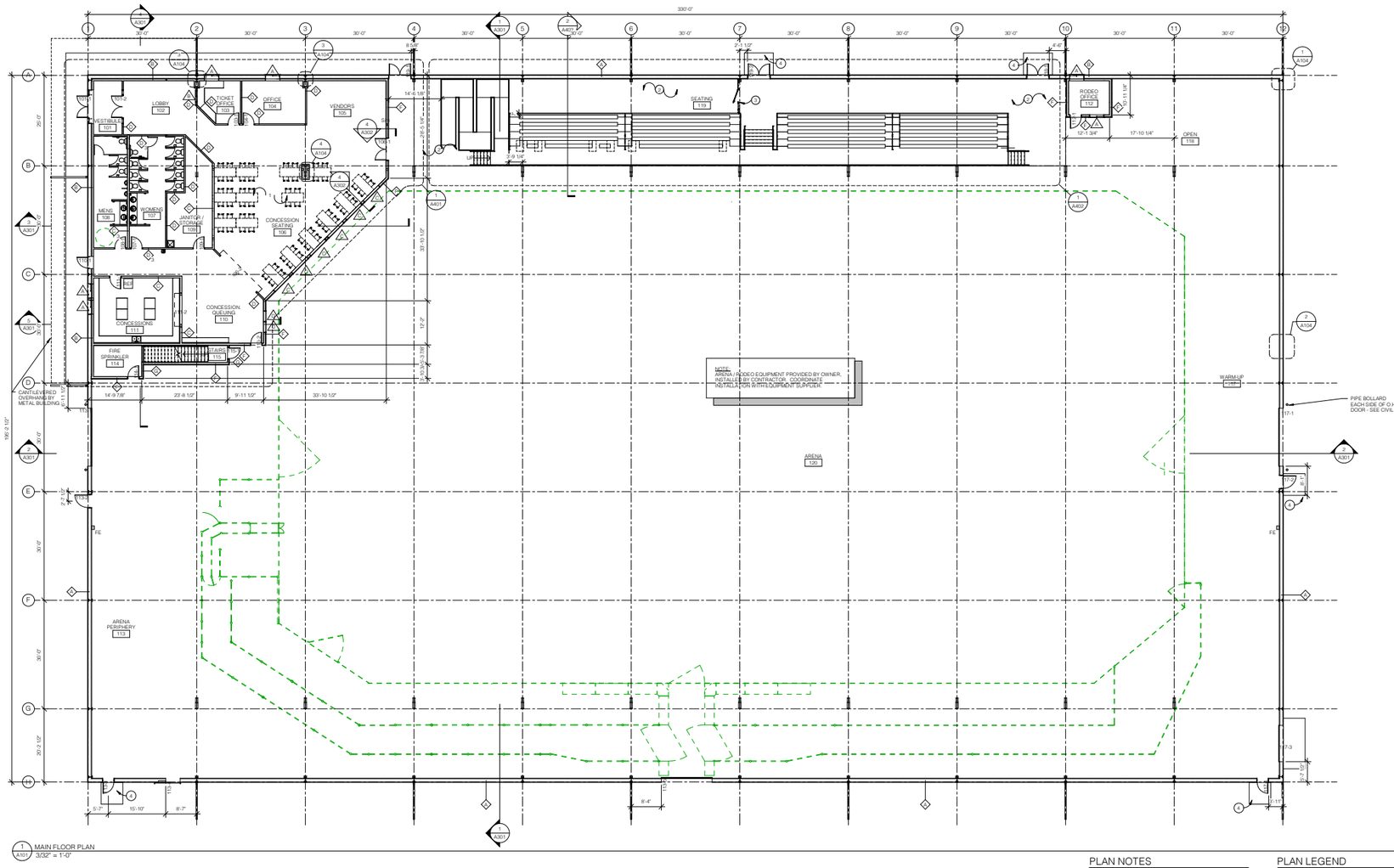
1 RODEO EQUIPMENT CONCEPT PLAN
1" = 30'-0"

NOTE:
ALL DIMENSIONS AND EQUIPMENT LAYOUT ARE TO SHOW GENERAL INTENT AND CONSTRAINTS. FINAL LAYOUT TO BE DETERMINED BY APPROVED MANUFACTURER'S PROPOSAL.



2 ARENA SEATING SECTION
1" = 10'-0"

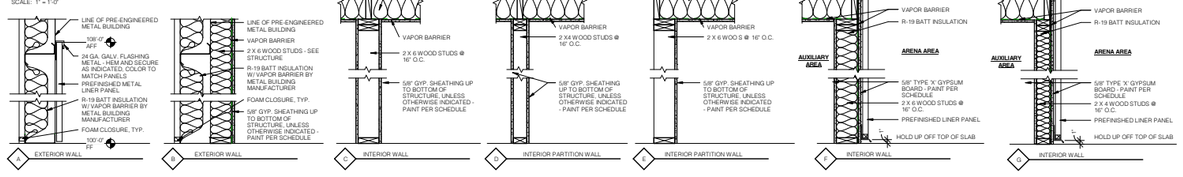
Southern Campbell County Agricultural Complex



1 A101 MAIN FLOOR PLAN
3/32" = 1'-0"

WALL TYPE LEGEND

SCALE: 1" = 1'-0"



PLAN NOTES

GENERAL

A. REFER TO ENLARGED PLANS, 1 & 2/A401 FOR ADDITIONAL DIMENSIONS, WALL TYPE MARKS, WINDOW TYPES AND INTERIOR ELEVATIONS INDICATORS
B. REFER TO A601 FOR DOORS KEY PLAN

1. FURNITURE NOT INCLUDED IN BID PACK
2. 4 1/2" FLOATING CONCRETE SLAB ON TOP OF 3' OF FILL WITH A 1" SPACE FROM FOUNDATION FOR MOVEMENT
3. 6' HIGH CHAINLINK FENCE AND GATE
4. 6' X 6' CONCRETE STOOP - SEE CIVIL FOR TYPICAL DETAIL

WALL TYPE NOTES

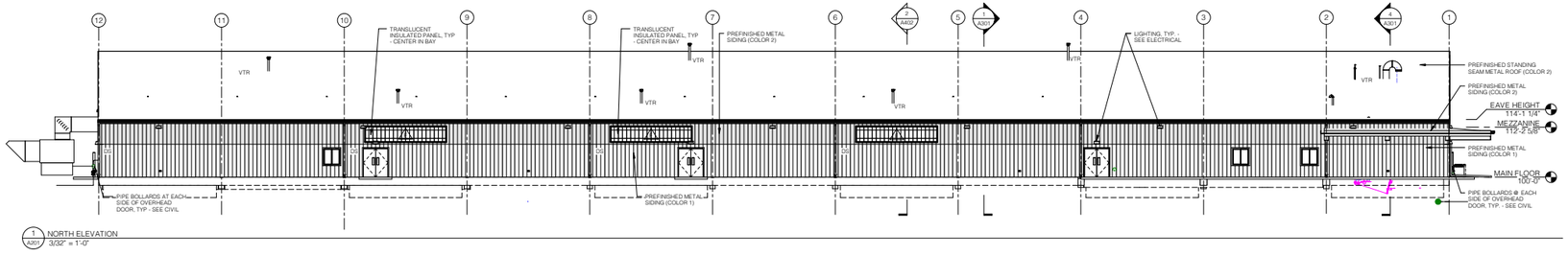
GENERAL:
1. SEE INTERIOR ELEVATIONS (SHEET A801) AND FINISH SCHEDULE (SHEET A401) FOR WALL FINISHES.
2. PROVIDE BLOCKING AS REQUIRED TO SECURE ALL HUNG COMPONENTS.
3. EXTEND ALL COMPONENTS TO UNDERSIDE OF DECK, UNLESS NOTED OTHERWISE.

KEYNOTES:
1. WATER RESISTANT GYPSUM BOARD AT PLUMBING WALLS.
2. EXTEND WALL 6" ABOVE ACOUSTICAL CEILING TILES.
3. ADD SOUND BATT INSULATION.
4. INSTALL PLYWOOD UP TO 8' AFF IN LIEU OF GYP SHEATHING AT INDICATED ROOM, PAINT PER SCHEDULE. (DATA ROOM ONLY)
5. OFFSET INTERIOR 1" AWAY FROM METAL BUILDING.

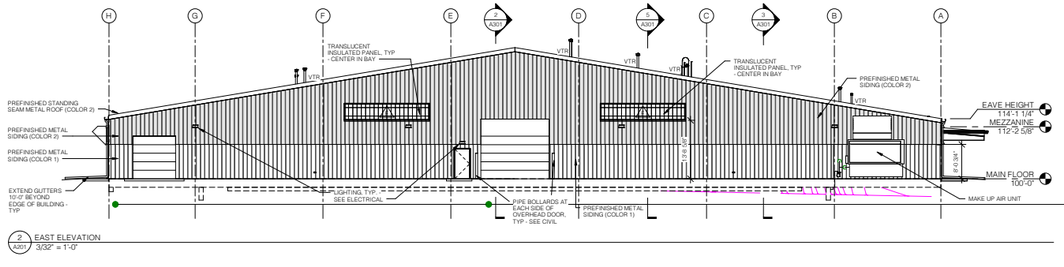
PLAN LEGEND

- WALL TYPE (SEE SHEET A101)
- WALL TYPE NOTE
- WOMENS / LOCKER 107 — ROOM NAME / ROOM NUMBER
- WINDOW TYPE (SEE SHEET A602)
- DETAIL OR SECTION NUMBER / SHEET WHERE DRAWN
- DOOR NUMBER (SEE SHEET A601)
- DIMENSION TO FACE OF STUD
- CONCRETE FOR SUPPORT POST PROVIDED BY GLC – VERIFY LOCATIONS W/ SUPPLIER
- INTERIOR ROOM SIGN - SEE 8/A303
- FE — FIRE EXTINGUISHER

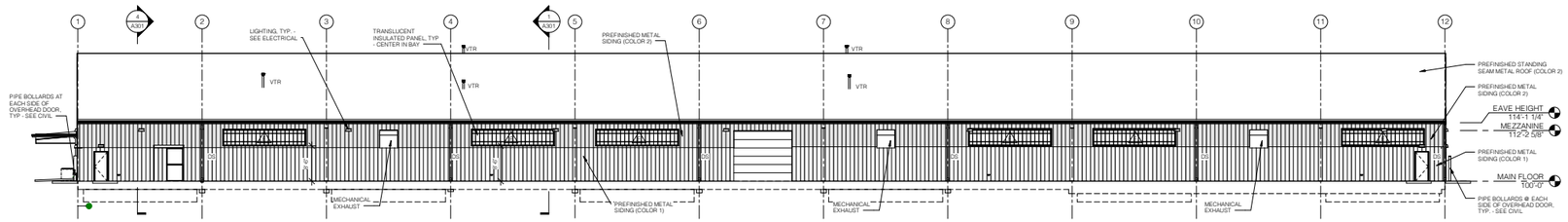
Southern Campbell County Agricultural Complex



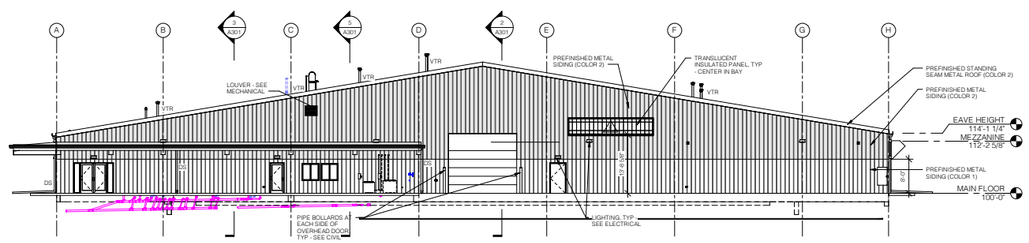
1 A301 NORTH ELEVATION
3/32" = 1'-0"



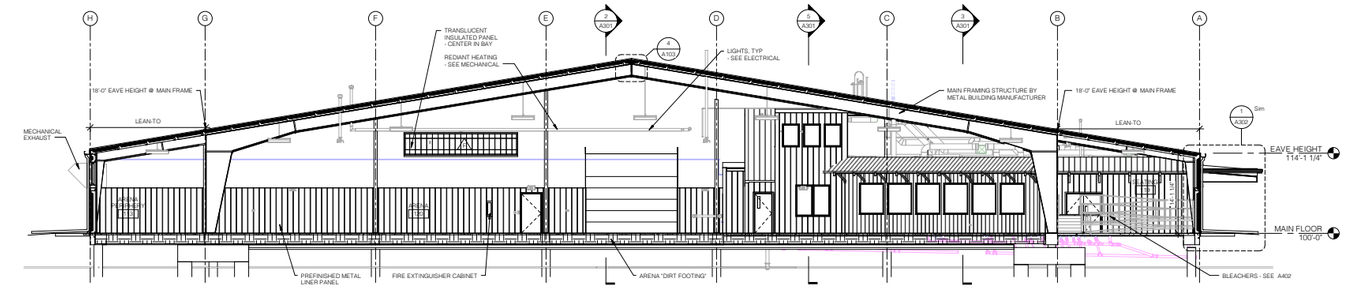
2 A301 EAST ELEVATION
3/32" = 1'-0"



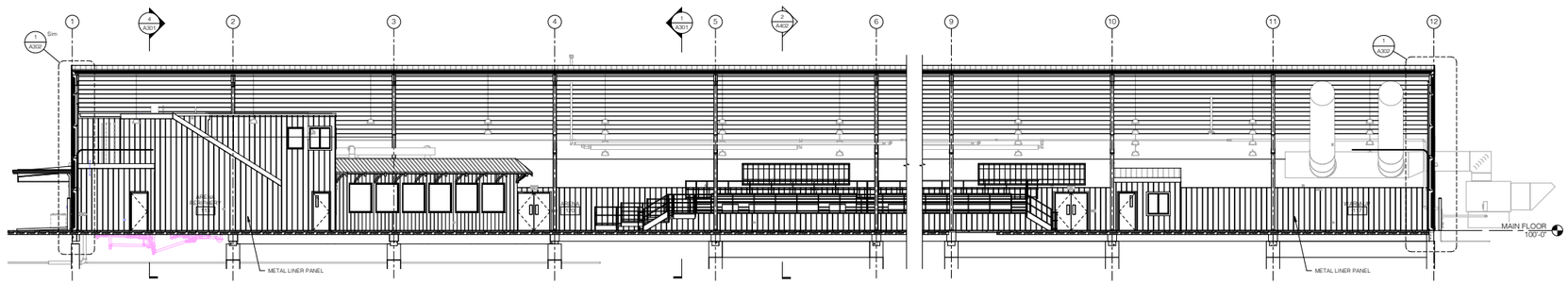
3 A301 SOUTH ELEVATION
3/32" = 1'-0"



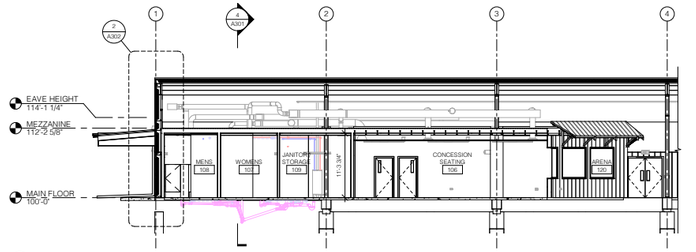
4 A301 WEST ELEVATION
3/32" = 1'-0"



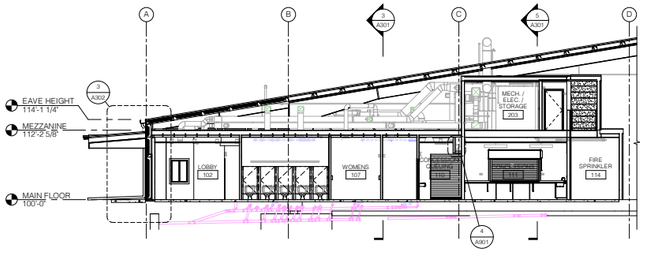
1 A301 BUILDING SECTION AT ARENA - LOOKING WEST
1/8" = 1'-0"



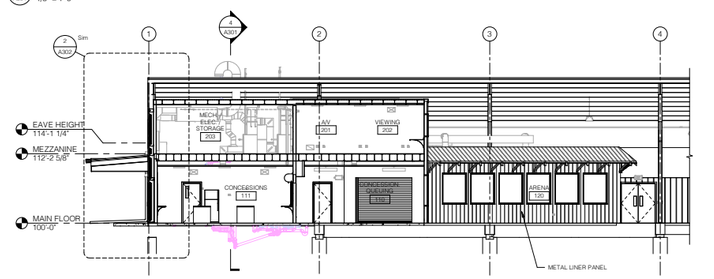
2 A301 BUILDING SECTION AT ARENA - LOOKING SOUTH
1/8" = 1'-0"



3 A301 BUILDING SECTION THROUGH CONSESSION SEATING
1/8" = 1'-0"



4 A301 BUILDING SECTION THROUGH CROWS NEST
1/8" = 1'-0"



5 A301 BUILDING SECTION THROUGH CROWS NEST
1/8" = 1'-0"

SFCC Greenhouse

Sustainable agriculture practices affect the ecological health of New Mexico and the world. This program teaches students how Controlled-Environment Agriculture assists in efforts to revitalize agriculture production and to support local food systems. Specifically student's learn greenhouse operations and management techniques; Aquaponic and Hydroponic production systems; and a variety of sustainable methods to enhance all crop production efforts.

Students will gain experience with crop production from seed to harvest in a variety of culture methods and locations. Operations in the existing geodesic dome greenhouse will involve crop rotation, pest management and pollination/pruning.

Aquaponics is a facet of Integrated Multi-Trophic Aquaculture (IMTA), which joins the science of hydroponics (growing plants in water without soil) with the science of aquaculture (raising fish).

Fish waste produces a high amount of nitrogen that is typically wasted by aquaculture farms. In this recirculating system, these wastes are combined with a select few mineral supplements (like chelated iron) to fuel the exceptional growth of a wide variety of crops. While vegetative crops, like herbs, lettuce, cabbage and kale, will grow the fastest, it is also a highly effective method for growing Fruiting/Flowering crops like tomatoes, peppers, eggplants, melons and ornamental flowers.

AAS in Controlled Environment Agriculture: The purpose of this program is to revitalize agricultural traditions in order to build local food security in a way that is ecologically, economically and culturally viable; socially just; and organic and regenerative for current and future generations. Students will receive detailed hands-on and classroom training in a wide range of skills associated with Controlled-Environment Agriculture, such as greenhouse management, hydroponics and aquaponics. Through various program concentrations, completion of this degree prepares students for careers in sustainable agriculture.

Certificate in Controlled Environment Agriculture: Successful completion of this certificate prepares students to become greenhouse management technicians or operators with the essential knowledge and skills to design, build, operate, and manage both hydroponic and aquaponics greenhouse enterprises for home/farm and commercial scale operations. Students will learn about greenhouse operations; hydroponic and aquaponic systems; techniques to grow plants from propagation to harvest; and integrated pest management.

https://www.sfcc.edu/programs/controlled-environment-agriculture/

Here's our current status (written on Aug 14, 2017) on the Greenhouse (GH), Greenhouse Classroom and Nanogrid Project:

- We are 90 percent complete of installation of GH piers.
- The Roof arches are 50 percent installed.
- Utilities site layout and trenching will begin week of August 14, 2017.
- Morgan Metal Building siding color has been selected, building is currently under manufacturing fabrication and scheduled to arrive for set up on site September 1.

• Nanogrid: SFCC has worked in partnership with the National Renewal Energy Lab to complete the conceptual design of the Nanogrid. SFCC has entered into a contract to work in partnership with Siemens Inc. to complete the Greenhouse/Nanogrid project and provide the foundation for a campus-wide Microgrid.

https://www.sfcc.edu/update-new-greenhouse/

Greenhouse info:

Controlled-Environment Agriculture is the new moniker for the college's expanding focus on sustainable farming techniques, including greenhouse management, aquaponics, hydroponics, and aquaculture, among others. The program's newest addition is the recently donated Farm Pod, a converted shipping container for growing food, which sits just outside the Trades and Advanced Technology Center. Fish tanks on the lower level can produce up to 500 pounds of fish in six to eight months. Up top is a sophisticated greenhouse where vegetables, strawberries and herbs are grown in vertical towers using recycled, filtered water from the fish tanks below. Students can monitor and control the systems using classroom computers.

"It's a terrific opportunity for our students to get hands-on experience," faculty member Richard "Charlie" Shultz said. "Students are asked to test the limits of the Farm Pod, and then to publish or present the results. It's quite high-tech and sophisticated, so our students face real-world challenges in troubleshooting and maintaining the systems."

The Farm Pod operates completely off grid. Solar voltaic and solar thermal systems used to power and heat the system allow students to integrate skills with the Solar Energy program. Shultz envisions that this type of system would be ideal for restaurants and schools wanting to raise fish and fresh produce. He adds that Pueblo leaders have expressed interest in the potential for off-grid aquaponic food production. Come the fall, harvests from the Farm Pod will be used by students in the Culinary Arts Department and served at the student-run East Wing Eatery. Bon Appétit!

https://www.sfcc.edu/inside-sfcc/high-tech-farm-pod-lands-sfcc/

G. Facility Assessment

MARTIN/MARTIN WYOMING

SCHEMATIC NARRATIVE

LCCC Agriculture and Equine Civil Narrative
November 18, 2019

I. GENERAL

This project involves the conceptual masterplan of new Agriculture and Equine Facilities and renovation to other Agriculture and Equine Facilities on the Laramie County Community College (LCCC) Campus. The gross land area of the proposed improvements are approximately 1,090,000 square feet. This area is located in Cheyenne, Wyoming at LCCC north of Tom Bauman Loop and east of the LCCC Central Plant North. The description of the existing infrastructure is based in part upon utility maps provided by LCCC.

II. DOMESTIC WATER

Domestic water within the LCCC Campus is provided by the South Cheyenne Water and Sewer District. An existing water main loop is located around the existing road around the existing arena. Existing Fire Hydrants #22, #23, #24, #25, #26, #27, and #28 are all located off the water main loop. The existing fire hydrants with a blue painted top would indicate good existing flow rates of more than 1500 gpm. Good flow and pressure will be needed for domestic water and fire protection at the site. An existing an existing domestic water service is located entering the existing arena on the northeast side of the building. Any new buildings may require a new domestic water service line and fireline for building sprinkler system if specified by the Mechanical Engineer. If required, both may be by Mechanical, both may be tapped off of the existing watermain located around the existing arena. Any additional hot water lines required by the Mechanical Engineer are assumed to be direct buried and not require a utility tunnel to any proposed buildings. A utility tunnel would impact existing and proposed utilities. There is an existing utility tunnel located south of the existing Central Plant North. Existing irrigation lines would need to be removed for the proposed buildings and new irrigation system is to be designed by the Landscape Architect if needed.

As part of the approval process for new building construction, Laramie County requires that the site plan be reviewed and signed by the Laramie County Fire Department, verifying the required fire flow and locations of fire hydrants, building fire line, and fire department connection. Construction plans for water mains, domestic taps, fire lines, water meters and fire hydrants are submitted to the South Cheyenne Water and Sewer District for review and approval in addition to Laramie County. A new fireline for building sprinkler system, relocation of a water main or any new fire hydrants would require a DEQ permit to construct.

III. SANITARY SEWER

The South Cheyenne Water and Sewer District is the agency that accepts sanitary sewerage within the LCCC area and conveys it through a series of public mains to the treatment plants. The existing sanitary sewer system in this area drains to the north from existing manhole #43 to existing manhole #44 followed by existing manhole #49, existing manhole #50, existing manhole #51 and north from there. Existing manhole #47 flows to existing manhole #48 then to existing manhole #49 and north from there. Existing manhole #46 flows to existing manhole #48 and east from there. There is currently no sanitary system west of the existing arena until west of the Central Plant North. A survey of the existing sanitary sewer is recommended in this area to ensure that to tie into the existing sanitary sewer system with an new sanitary sewer system extension to the west can be met with a gravity sewer system without a lift station. Manhole adjustments to existing manholes may be needed for changes in grade.

IV. DRAINAGE AND STORM SEWER

Laramie County and the Laramie County Engineer is the agency that accepts stormwater runoff within the County, and conveys it through a series of public storm sewer and drainage channels to major outfalls, and ultimately Crow Creek.

According to the utility maps, there are no current storm sewer below grade infrastructure in place except for the existing 18” storm sewer line located just east of the Central Plant North that drains towards the north pond.

The existing slope of the site drains generally from south to north. However, some of the existing drainage flows towards several of the existing buildings and areas. Several feet of existing grade drop occurs in this area. There are also many low lying existing areas. Existing Groundwater levels may be high in this area. A Geotechnical Report is recommended.

Storm runoff via downspouts from the proposed buildings are proposed to be collected on the sides of the proposed buildings and routed away from the buildings.

This site follows the Laramie County Standards of submitting a drainage report and getting the drainage report approved by Laramie County. This is done during the design process. The soils on this site may not be adequate, may have wet soils, and may have groundwater closer to the surface. A detention pond waiver in this location is requested as the existing site is already low and existing drainage flows towards several existing buildings and structures. Most of the site may need to be regraded to get drainage away from the existing buildings and proposed buildings and structures. If a detention pond was installed at this location, it may turn into a retention pond like the existing retention ponds near this location that in the existing condition are already containing standing water.

V. SITE GRADING

ADA access will need to be provided to the proposed new buildings. Due to many of the low lying existing parameters of this site, import fill may be needed for final site grades. Also, per FEMA, fill is not allowed in a “Floodway” so it is recommended to stay away from “Floodway” areas.

VI. ROADWAYS, ACCESSWAYS, AND PARKING

Currently, there is the Tom Bauman loop roadway located just south of the existing arena. There is an existing access way around the arena and an existing parking lot located to the west of the existing arena.

VII. PERMITTING

As part of the site approval process, Laramie County requires an approved Site Plan, Grading, Erosion and Sediment Control (GESC) permit and Storm Water Pollution Prevention Plan (SWPPP). Construction plans for the proposed storm sewer and detention/stormwater quality systems will also require review and approval.

A new fireline for building sprinkler system, relocation of a water main or any new fire hydrants would require a DEQ permit to construct.

VIII. DRY UTILITIES

A. Fiber Optics.

There are existing fiber optics lines located near the site. Design of proposed fiber optics lines are by others.

B. Gas.

Existing gas lines are available on site. They are located to the west and south of the existing arena. Design of proposed gas lines are by others.

C. Electric.

An existing electric line is available on site. This electric line and electric vaults #16, #17, #18 and #19 are located south of the existing arena. Design of proposed electric lines, lightpoles and lightpole bases are by others.

LCCC Agriculture and Equine Civil Narrative
November 18, 2019

IX. ITEMS REQUIRED TO CONTINUE DESIGN

A. Site Survey

B. Geotech Report

C. Fire Hydrants Flow Test

D. Site layout plan from Landscape Architect

E. New water/fire service requirements

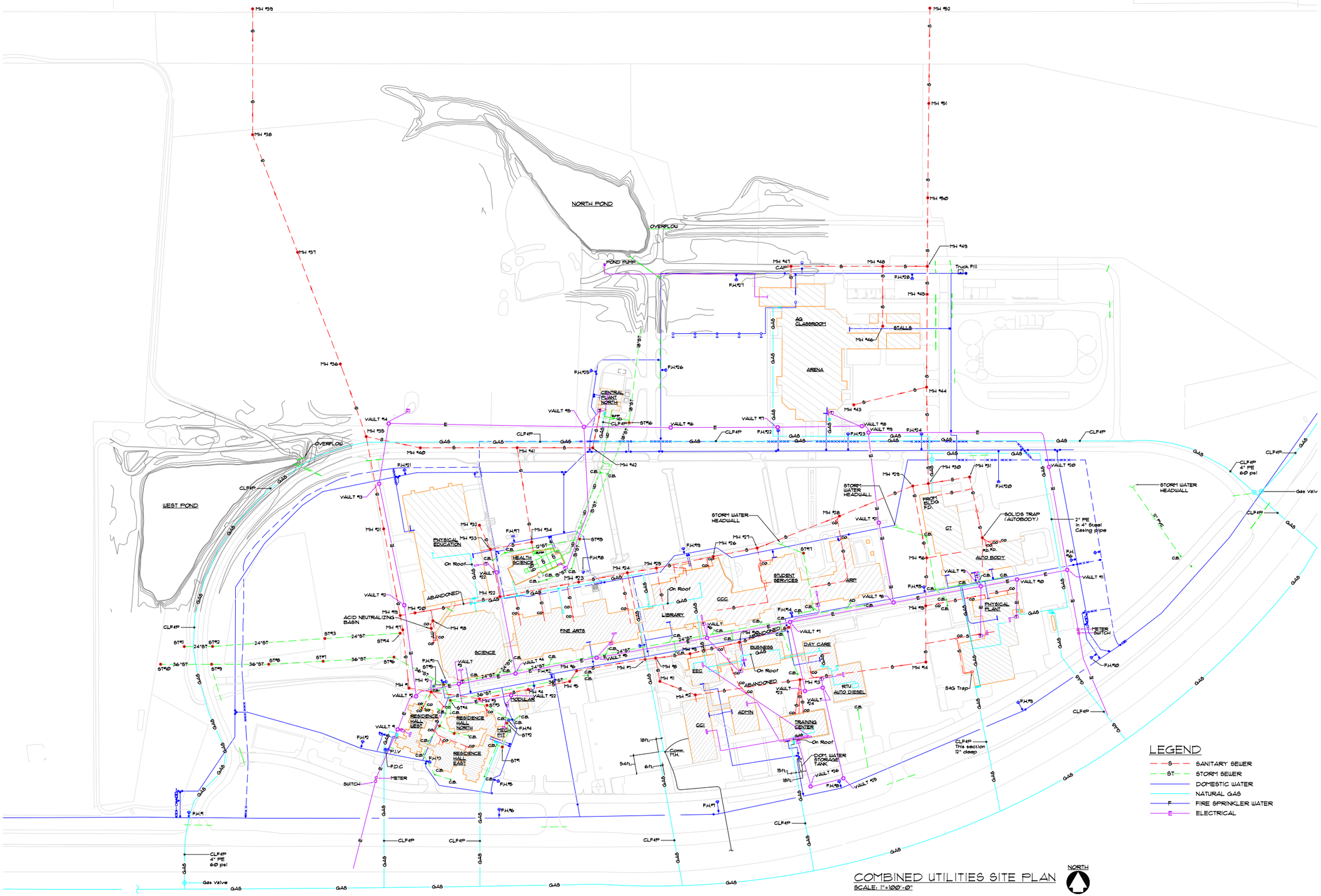
F. New sanitary service requirements

Please do not hesitate to contact me with any questions.

Respectfully submitted,

Ryan Rigg, PE
Senior Civil Project Engineer

Attachments: 1) LCCC 2019 Combined Utility Site Plan
2) Allison Draw – Floodplain Revisions 2013

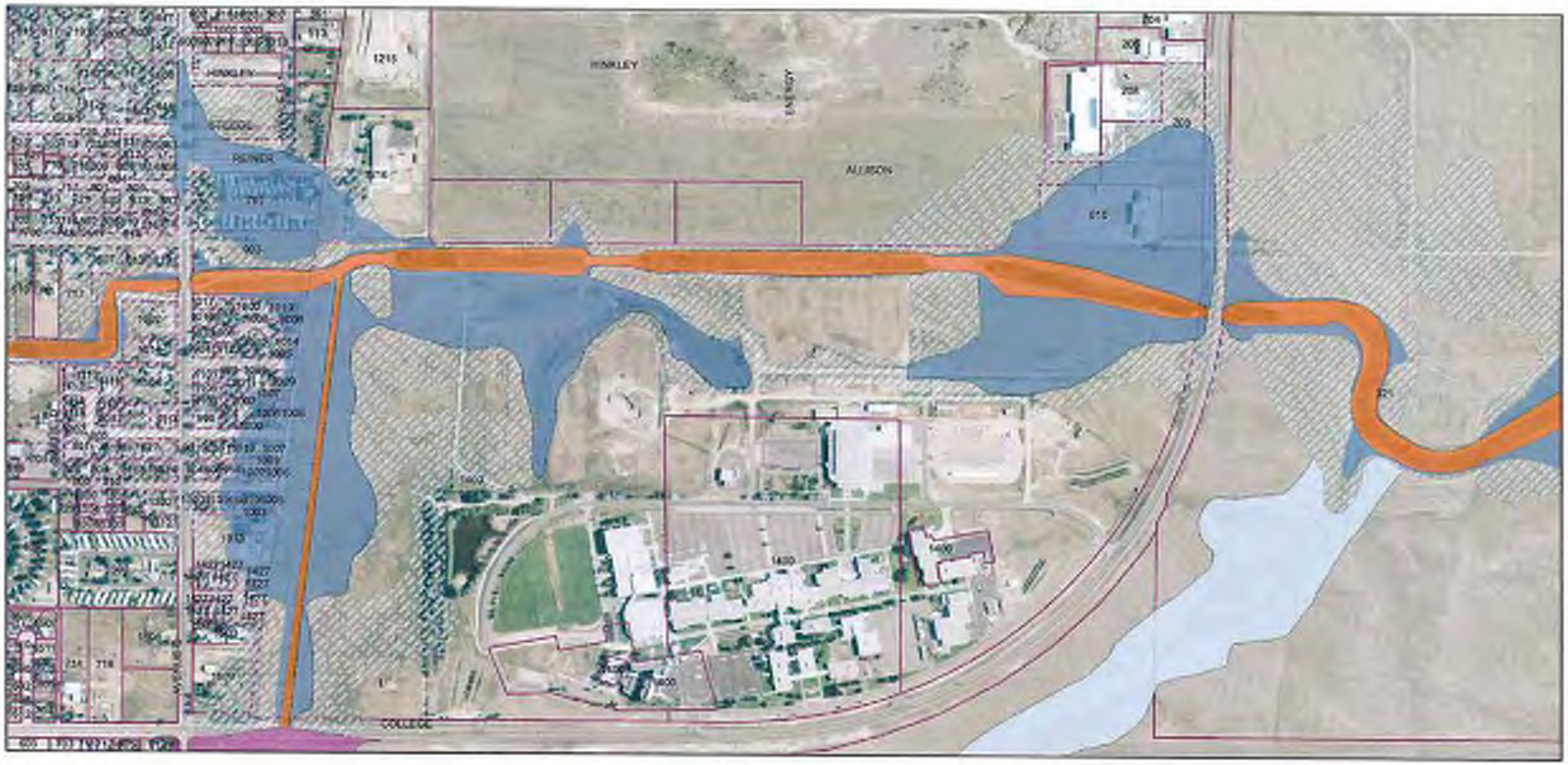


COMBINED UTILITIES SITE PLAN

SCALE: 1"=100'-0"

FEBRUARY 19, 2013

ALLISON DRAW - FLOODPLAIN REVISIONS 2013



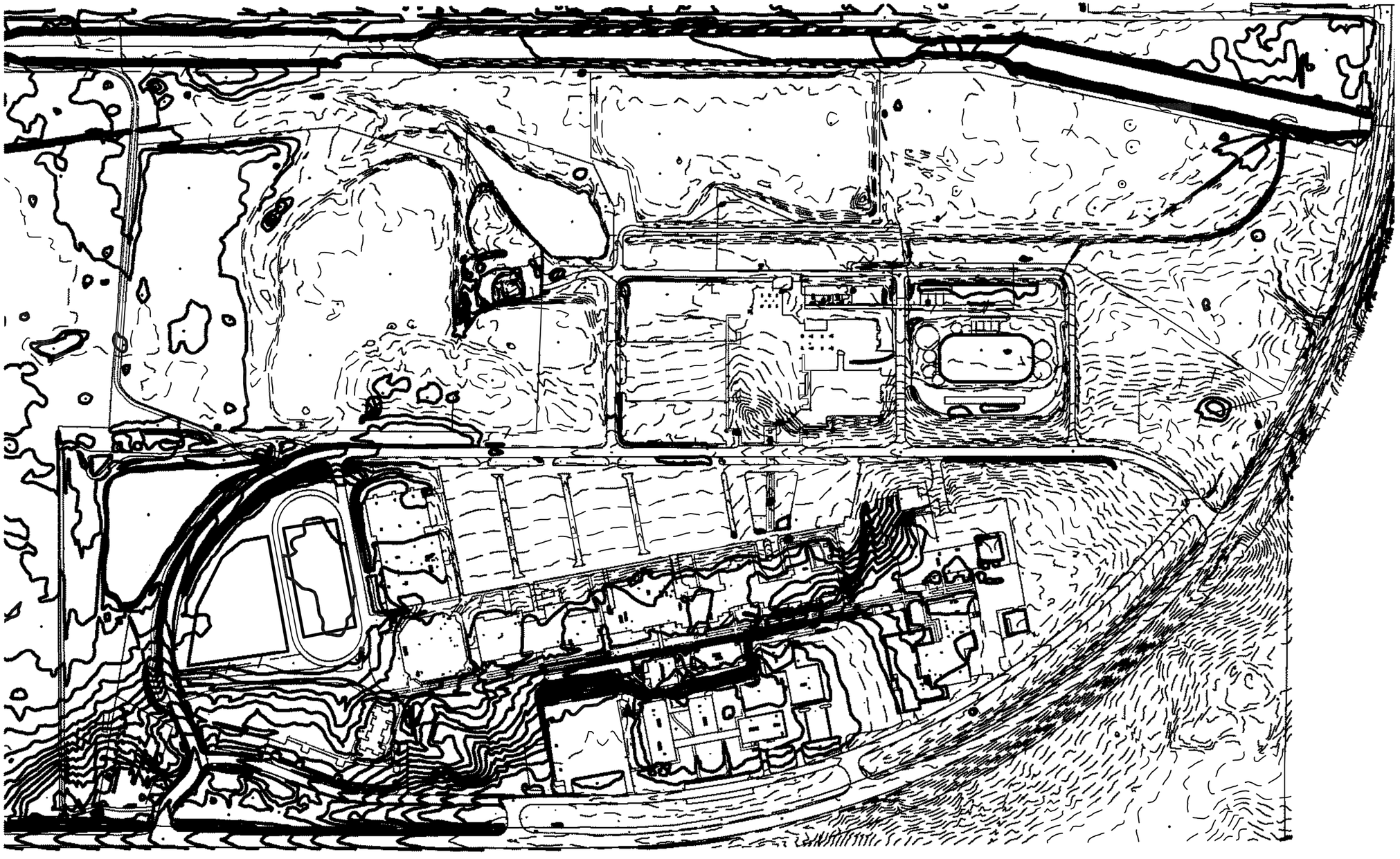
Legend

2013 FLOODPLAIN ZONES

- 500-Year Floodplain
- ZONE AH
- 500-Year Floodplain
- ZONE A
- ZONE AE
- FLOODWAY
- ZONE X

0 250 500 1,000 1,500 2,000 Feet

N



On September 20th & September 23rd, 2019, John Shaffer, PE, and Tiffany Scott, EIT, visited the Laramie County Community College Agriculture facilities on the north side of the campus. The objective of the visit was to observe the structures and identify structural issues that would need addressed in the current and upcoming master planning efforts. The observations were completed in a due-diligence style and did not include any testing of materials or structural analysis. The facilities were divided into three categories: the arena, a classroom building, and the stall buildings.

In general, the structures are considered to be in good to very good structural condition. Major structural deficiencies were not identified in any of the structures. There were three minor items noted on the building facades, and all of them are relative to potential water infiltration of the building envelope. When water is able to penetrate the building envelope and endures freeze-thaw cycles, it can lead to damage of the façade and structural system over time.

One of those issues was observed at the arena building, which is constructed of course-raked pre-cast wall panels. As with many of the buildings on campus, the pre-cast wall panels not only act as the exterior façade, but also as the structural system of the building. The caulking between the pre-cast panels was observed to be cracked and pulling away from the panels at nearly all of the joints around the perimeter of the building. As a result, this permits water to penetrate the joints; see photos 1 & 2 below. If this building is to remain functional for future years, the joints should be remediated.

Though the damaged and worn caulking between pre-cast joints was not observed to be an issue at the classroom building, it would be recommended that the joints be review by a contractor familiar with caulking and the required repairs to determine the remaining useful life of the existing caulked joints.

The second observed point of water infiltration occurred at the roof overflow and downspout locations as shown in photos 3 & 4 below, which were taken at the southeast portion of the arena building. It is recommended that all water be collected at the roof level and directed down and away from the building without flowing over the surface of the pre-cast panels.

Lastly, at the stall structure, the low roof parapet has not been capped with break metal as it has at the classroom and arena facility. In photos 5 and 6, it is apparent that the grout at the lifting loops has “popped” loose, likely due to water permeating into the grout and enduring freeze-thaw cycles. Again, if the building is to remain operable into the future, precautions should be made to prevent water from standing or pooling on the parapet surfaces.

On the second level of the arena, uniform, horizontal hairline cracks were observed wrapping around the perimeter of the concrete columns as shown in photos 7 and 8 below. The origin of these cracks is unknown, but they do appear to be consistent with shrinkage cracks that occur during the curing process, or stress cracks from shipping and/or erection. Monitoring these cracks for size, width or pattern change is recommended, but it is believed that these cracks do not affect the structural integrity of the column or structure itself.

Martin/Martin, Wyoming
4009 Laramie Street
Cheyenne, Wyoming 82001
307.637.8422
mmwy.com

Lakewood, CO
martinmartin.com
Avon, CO
Fort Collins, CO
Bay Area, CA
Northwest Arkansas
Albuquerque, NM

As stated earlier, the facilities are generally in good to very good structural condition and with proper maintenance and modifications, the life span of the buildings can be extended to perform well into the future. Please don’t hesitate to contact our office if you have any questions or concerns.

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

LCCC Agricultural Buildings Structural Observation
October 15, 2019

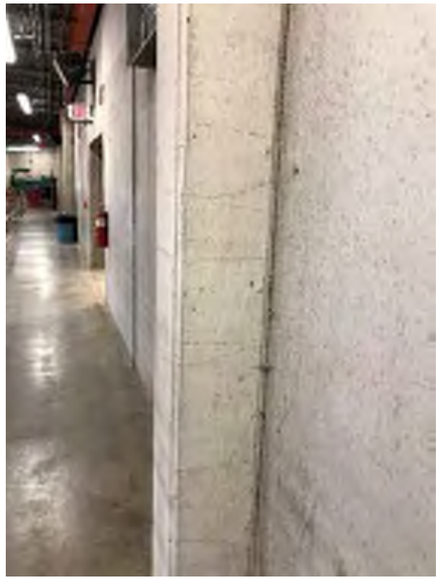


Photo 7

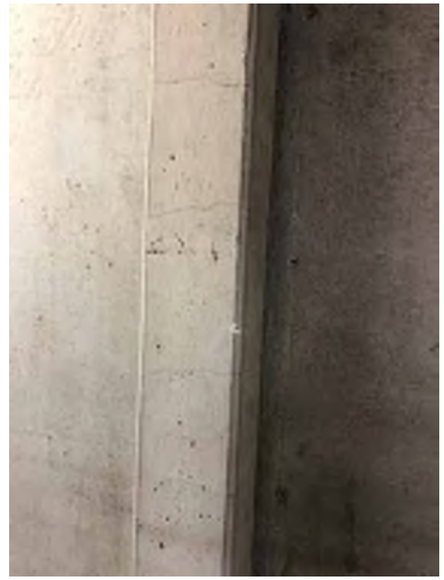


Photo 8

Architectural Facilities Assessment

Site Assessment and Zoning

The Agriculture and Equine Facilities are located along the north boundary and northeast corner of the LCCC campus. Existing facilities include an Arena, Agriculture Classroom building, Stall building, and (3) Livestock Pens. There is a fenced outdoor arena and several round pens for exercising horses. Un-programmed space on the site is often used for parking for rodeo events, especially for vehicles with trailers. Roof drainage is all to grade and there is no storm sewer connections in this part of the site. The surface water largely flows north to Allison Draw and the flood plain.

Arena

Description

The Arena serves the purposes of education, training and competition. The structure is precast concrete walls, steel columns, beams and roof trusses. The roof has a lower and higher level with Kal-Wall providing a clerestory daylighting. The roof is flat built up roofing with scuppers through the parapet walls. The arena does not have a floor or slab on grade, but instead the special sand and gravel mixture for rodeo footing. The mezzanine level is accessed from the street side and contains a lobby, ticketing area, concessions, restrooms and access to the bleachers. Egress is through four stair towers that discharge to the exterior at grade level. The stair towers have no connection to the lower arena level. The ground level, in addition to the arena, contains storage and restroom areas with slab on grade floor, and CMU and framed walls. Exterior openings include overhead doors in each corner, and man doors in each corner for egress. The building is minimally conditioned with radiant heating. There is no cooling provided and ventilation seems to be lacking, especially in the stair towers where algae was present.

Building Code

The arena is fully sprinklered including under the bleachers. A 2-hour separation is provided between the arena and the stall building. A large opening connects to the animal science area with no opportunity to close the opening. The arena is separate from the Agriculture Classroom building via a 2-hour fire barrier at the animal science lab. Ground floor egress is provided through man doors in each corner. Mezzanine level egress is provided through exits to the front and street, and through (4) stair towers that egress to grade. Hand and guardrails in the stair towers need to be upgraded for compliance. The arena has several accessibility items to address, including providing an accessible entrance, accessible transaction counter at the ticketing area, and lowering and locating braille signs to be within reach range and not obstructed.

Envelope: Windows *New Condition*

The Kal-Wall system was replaced in late summer of 2019.

Envelope: Precast Concrete Walls *Good condition*

Precast concrete walls appear in good condition, maintain paints and sealants. Clean algae off of interior stair tower walls.

Envelope: OH Doors *Fair Condition*

Overhead doors appear in fair, operable condition.

Envelope: Man Doors *Fair Condition*

Doors appear to be in fair, operable condition. Original FCI calls for sealant at man door at NE corner.

Envelope: Roof *Poor Condition*

Roof appears to be beyond end of life. LCCC facilities staff indicate that roof was last replaced in 2001-2002. Flashings and parapets appear to be missing or failing based on observed algae in interior surface of exterior walls. Recommend to replace the roof immediately. LCCC has stated that the roof is schedules for replacement in 2022.

Envelope: Roof Drainage *Poor Condition*

Collector heads are missing. Splash blocks and tie-in to site drainage appears to be missing. These are being replaced along with the Kal-Wall, late summer 2019.

Finishes: Flooring *Fair Condition*

Concrete floors on mezzanine level and storage areas appear in good condition. Restrooms have concrete with epoxy and cove base.

Finishes: Arena Flooring *New Condition*

Arena sand/footing was replaced late summer of 2019.

Finishes: Framed Walls *Fair Condition*

Framed stud walls as partitions in storage area. Typically have ½" gap at wall base, some have FRP panels.

Finishes: CMU Walls *Fair Condition*

Primary restroom and storage area is enclosed with unpainted CMU walls. Appear in fair condition.

Finishes: Ceilings *Fair Condition*

ACT Ceilings are in the lobby area and restrooms, appear in fair condition. Maintain.

Finishes: Casework *Fair Condition*

Ticket counter has 3 ticket windows and a transaction counter. An accessible transaction counter needs to be provided.

Agriculture Classrooms

Description:

The classroom building contains classroom and lab spaces and administrative offices. Construction is precast concrete T's for the walls and roof, and slab on grade. The roof was replaced in the late summer of 2019. Openings are provided through a single storefront entry by the lobby and administrative areas. A second egress point is also a storefront system. Fixed windows are in each room or lab, often with the blinds drawn. The building has no cooling and can be hot during the warmer times of year.

Building Code:

The building is non-sprinklered and has a 2-hr separation from the arena and animal science lab. Separation is concrete walls and metal fire doors on a magnetic hold open. Hardware of door system needs to be verified. Some accessibility deficiencies need to be addressed, including an accessible drinking fountain, adding 18" vertical grab bar to accessible toilet stalls, providing accessible showers and providing an accessible route at the second point of egress.

Envelope: Windows *Fair Condition*

Fixed windows, blinds down in most windows (likely due to time of assessment, efforts to keep non-air-conditioned building cool). Glazing is insulated, but frames and glass pre-date current energy code requirements.

Envelope: Precast Concrete T Wall System *Good Condition*

Walls appear in good condition. Recommend to maintain paints and sealants. Existing building documentation indicates 3-1/2" batt insulation in furred-out walls below ceiling with 2" rigid insulation installed above ceiling.

Envelope: OH Doors

Envelope: Man Doors *Good Condition*

Aluminum storefront system. Recommend maintain paint and sealants to replace at end of life.

Envelope: Roof *New Condition*

Roof and roof insulation was replaced late summer of 2019. Current insulation is R-30 per LCCC facilities staff.

Envelope: Roof Drainage *New Condition*

Scuppers were replaced late summer of 2019. Lamb's tongues remain in place.

Envelope: Foundation *Poor / Fair Condition*

Mow strips at base of wall are separating from the building. LCCC informed us that this is a common problem around campus and they have previously bid out repairs with no bid returned. Plan to re-bid in spring of 2020.

Finishes: Classroom / Admin Flooring *Good Condition*

Carpet and rubber wall base appear in good condition, maintain.

Finishes: Lab Flooring *Good Condition*

Concrete flooring appears to be in good condition. There is only one floor drain in the space. Faculty has expressed need for additional floor drainage systems.

Finishes: Framed Wall Systems *Fair Condition*

Stud walls with gypsum board and vinyl wall covering appear in good condition. Walls stop at the bottom of the ceiling and provide poor acoustic separation.

Finishes: CMU Wall Systems *Good Condition*

Painted CMU walls in restrooms appear in good condition, recommend maintain paint and sealants.

Finishes: Ceilings *Good Condition*

Gyp. Ceilings in restrooms and ACT ceilings in the classrooms and administrative areas. Appear in good condition, maintain.

Finishes: Casework *Fair Condition*

Base cabinets and countertops in classroom spaces. Appear in fair condition, maintain. Verify accessible heights.

Finishes: Restrooms and Lockers *Good Condition*

Floor is concrete with epoxy and a cove base in good condition. Lockers appear in good condition. Maintain.

Stall Building

Description:

The stall building provides facilities for horse stalls, horse wash areas, and associated support functions including tack storage, hay and grain storage, and restrooms. Walls and roof are pre-cast concrete T's. Exterior openings are provided through small awning windows, man doors, and larger overhead doors. The flat built up roof has skylights to provide additional daylighting. From conversations with staff and students the building is under ventilated and is often dusty.

Building Code:

The building is non-sprinklered and has a separation from the arena building of concrete and metal fire doors. Restrooms need an 18" vertical grab bar added to the accessible toilet stall and the showers do not provide accessibility.

Envelope: Windows *Fair Condition*

Operable, double pane awning windows. Recommend replacing in the short term with larger area, insulated windows

Envelope: Precast Concrete T Wall System *Good Condition*

Walls appear to be in good condition. Recommend to replace paint and sealants.

Envelope: OH Doors *Fair Condition*

Overhead doors with steel lintel. All doors were open on a warm day to aid in ventilation. Recommend to replace at end of life.

Envelope: Man Doors *Fair Condition*

Metal frame, hollow metal doors. Recommend to maintain and replace at end of life.

Envelope: Roof *Fair Condition*

Flat / Built-up roof. Roof appears in fair condition. Roofing granules are degrading faster than expected for this type of roof. Recommend to consult with manufacturer's representative and complete any recommended repairs or deferred maintenance. LCCC facilities staff indicate that roof was last replaced in 2011-2012.

Envelope: Roof Drainage *Fair Condition*

Scuppers with receiver heads and downspouts to concrete blocks or grade. Recommend to replace in conjunction with the roof.

Envelope: Foundation *Fair Condition*

Bottom of wall appears in fair condition. Area around Stall building does not appear to have positive drainage.

Finishes: Flooring *Good Condition*

Unfinished concrete

Finishes: Restroom Flooring *Good Condition*

Concrete with epoxy or polyurethane coating and cove base. Appears in good condition.

Finishes: CMU Wall Systems *Good Condition*

Stalls are painted split face CMU. Storage areas and restrooms are exposed CMU. Shower areas are painted CMU. Recommend to maintain as necessary. Stall doors are solid wood plank and do not provide adequate ventilation. Recommend replacement with vinyl-coated expanded metal mesh.

Finishes: Ceilings *Fair Condition*

Gyp. Ceilings in restroom appear in fair condition. Rest of building is exposed concrete T's.

Finishes: Restrooms and Lockers *Good Condition*

Exposed CMU walls, painted in shower area. Impervious concrete / epoxy floor, no tile, lockers in good condition. Recommend to maintain as necessary.

Livestock West

Description: 3-sided livestock enclosure. Precast concrete T wall construction with built up flat roof. No demising walls. Pens are made of steel pipe.

Envelope: Precast Concrete T Wall System *Good Condition*

Wall appear to be in good condition. Recommend to maintain paints and sealants.

Envelope: Roof *Fair Condition*

Flat / built up roof. Parapet coping appears newer. Recommend to replace at end of life.

Envelope: Roof Drainage *Good Condition*

Single slope roof with scuppers, receiver heads and downspouts to concrete splash blocks.

Envelope: Foundation *Good Condition*

Bottom of wall appears in good condition with grade sloping away.

Livestock East

Description: 3-sided livestock enclosure. Split face CMU wall construction with standing seam metal roof. No demising walls. Pens are made of steel pipe.

Envelope: Painted Split face CMU Wall System *Good Condition*

Walls appear to be in good condition. Recommend to maintain paint and sealants.

Envelope: Roof *Fair Condition*

Standing seam metal roof with exposed purlins, trusses, metal post and beams. Pigeons and birds roost in the open trusses. Recommend to replace at end of life.

Envelope: Roof Drainage *Fair Condition*

No gutter, all water sheet flows to grade. Recommend to install gutter and downspouts.

Envelope: Foundation *Good Condition*

Wall base appears in good condition with grade sloping away.

Livestock South

Description: 3-sided livestock enclosure. Concrete and framed wall construction with standing seam metal roof. No demising walls. Pens are made of steel pipe.

Envelope: Concrete and Framed Wall System *Fair Condition*

Concrete wall to 48”. Framed wall above with metal board and batten. Horizontal flashing joint appears in good condition. Recommend to maintain paint and sealants.

Envelope: Roof *Good Condition*

Standing seam metal roof. No flashing, gutters or downspout.

Envelope: Roof Drainage *Fair Condition*

No gutter, everything sheet flows to grade. Problems of ponding and ice formation in winter. Recommend to install gutter and downspouts.

Envelope: Foundation *Fair Condition*

No construction joints in the concrete wall. Vertical cracking present every 5’-10’. Recommend to repair and maintain.

Mechanical and Plumbing Facilities Assessment

Arena

Mechanical: Ventilation *Fair Condition*

Ventilation in the main portion of the arena is provided by eight (8) propeller wall axial exhaust fans. These fans discharge air through the side wall of the high section of the arena roof. Each exhaust fan is paired with two intake louvers, a 42" x 60" lower louver, and a 42" x 36" upper louver. Each louver is equipped with a motor operated temperature control damper. The two lower louvers on the southwest corner of the arena are installed within 12" of finished grade and are subject to fouling. The fans, louvers and control dampers appear to be the original equipment from 1982, making this equipment approximately 37 years old.

The arena is equipped with two propeller type de-stratification fans located above the arena floor, one above the north half, and one above the south half, operated by thermostat. These fans appear to be original equipment from the 1982 plans and are approximately 37 years old.

The arena addition is provided with ventilation air by two residential furnaces. One unit is ducted to provide ventilation air to the Lobby, Ticketing, Concessions, Office, Janitor and Upper Restrooms, and the other unit is ducted to serve the lower level Storage and Restrooms. A 48" x 48" intake louver is provided to serve both of these furnaces. This intake louver is located approximately 8" above finished grade and is subject to fouling. The furnaces appear to have been replaced within the last 5 years and are in good shape. They were connected to the existing duct distribution system, no other components of this system appear to have been replaced.

Mechanical: Heating *Fair condition*

Heating is provided to the arena through the use of natural gas fired radiant tube heaters. There are 12 of these heaters located above the seating on the east and west sides of the arena, and an additional 14 heaters located above the arena floor. The 12 heaters located above the arena seating on the east and west sides appear in the original design documents, but were replaced in 2003 and are 16 years old. The heaters over the arena floor however do not appear in the 1982 construction drawings, and were added in 2003 when the heaters above the arena seating were replaced, and are 16 years old.

Heating in the arena addition is provided by natural gas fired, residential grade furnaces. These units, as mentioned in the previous section, are ducted to serve the upper and lower levels of the arena addition. These units are in good condition due to their recent replacement.

The natural gas service entrance for the arena is located on the southeast corner of the arena expansion, and is equipped with pressure regulators upstream and downstream of the meter. A 3" natural gas line is extended into the building where it is distributed to the gas fired heaters and furnaces.

Plumbing: Distribution *Fair Condition*

Domestic water service to the building is through a 6" combined domestic water / fire service line. This line enters the lower level mechanical room where it splits to a 4" fire service, and 2" domestic water service. The domestic water service is equipped with a reduced pressure zone assembly, and pressure reducing valve assembly. There is no bypass line around the pressure reducing valves. Domestic water is routed through the building using copper piping.

Domestic hot water service is provided by two electric water heaters. One is located in the janitor's closet on the main level of the arena addition, and the other is located in the janitor's closet, between the lower level restrooms. The upper level water heater serial number indicates it is 37 years old, and the lower level water heater appears to have been replaced in 2014 and is only 5 years old.

The sanitary service to the building is a 6" line that enters the arena expansion on the south east corner. This line picks up the sanitary waste piping from the upper and lower restroom groups as well as the upper level concessions. No grease trap was observed on site even though the concessions includes a three pot sink and may be producing grease waste. The need for a grease trap should be evaluated when the building is renovated.

Both domestic water and sanitary waste services appear to be original from the 1982 construction documents, and are approximately 37 years old.

Plumbing: Fixtures *Fair Condition*

Upper and lower level restroom groups are equipped with wall mounted lavatories with manual fixtures, water closets with manual flush valves, and trough urinals with automatic flush valves. Each of the janitor's closets was equipped with a floor mounted mop service basin with a wall mounted manual service sink fixture. The majority of the plumbing fixtures in the arena building appear to be from the original 1982 / 1985 construction and are approximately 34-37 years old. The electric water cooler located adjacent to the ticketing office appears to have been replaced in the last 5 years, and includes a bottle filling station. None of the fixtures in the restrooms or concessions appear to be low flow water conserving fixtures. These fixtures should be replaced with low flow fixtures when the space is renovated.

Agriculture Classrooms

Mechanical: Ventilation *Fair Condition*

Ventilation in the classrooms is provided by a multi-zone heating and ventilating unit, located in the mechanical room adjacent to the main entrance. This unit is ducted to seven different thermal zones, and each supply duct is equipped with a control damper. The multi-zone air handler is original to this building and was installed in 1985, and is 34 years old.

Restroom and janitor's closet exhaust is provided by a roof mounted exhaust fan. This fan appears to have been replaced around 2000, and is approximately 19 years old.

Mechanical: Heating *Fair Condition*

Heating to the classrooms is provided by a natural gas fired boiler and heating water system. The boiler was manufactured by Buderus in 2000, as indicated by the serial number, and is approximately 19 years old. The heating water system circulates water only to the multi-zone air handler's heating coil and a unit heater located in the mechanical room.

The agriculture lab on the north end of the arena is heated by nine natural gas fired radiant heaters. These heaters are not indicated on the building drawings, and appear to have been installed following the 1985 construction. While the drawings indicate these were not part of the original construction, they still appear to be 30-34 years old.

A 1" natural gas line was extended from the campus natural gas piping system to serve this building addition. The gas connection, including pressure regulator are located next to the main entrance to this section of the building.

Plumbing: Distribution *Fair Condition*

Domestic water service to the building is through a 4" combined domestic water / fire service line. This line enters the building in the fire entry room on the north side of the building where a 1-1/2" domestic water service splits off. The domestic water service is equipped with a reduced pressure zone assembly, and pressure reducing valve assembly.

Domestic hot water service is provided by one natural gas fired water heater. It is located in the mechanical room, adjacent to the multi-zone air handler. The serial number indicates this water heater was replaced in 2008, and is approximately 11 years old.

The sanitary service to the building is a 4" line that enters the classroom building on the north side. This line picks up the sanitary waste piping from the restrooms and agriculture lab.

Both domestic water and sanitary waste services appear to be original from the 1985 construction documents, and are approximately 34 years old.

Plumbing: Fixtures *Fair Condition*

The restrooms in this building are equipped with manual flush valve water closets, wall mounted lavatories with manual faucets, a sensor operated wall mounted urinal, and standard single knob shower stalls. The janitors closet is provided with a floor mounted mop service basin with wall mounted service sink faucet. A double bowl kitchen sink is located in None of the fixtures appeared to be low flow / water conserving fixtures, and appear to be original to the building. They are approximately 34 years of age.

Stall Building

Mechanical: Ventilation *Fair Condition*

Ventilation in the stall building is provided by 10 roof mounted exhaust fans. Eight of these fans exhaust air directly from the stalls portion of the building, and the other two fans provide exhaust in the office and the restrooms. There are no intake louvers, air is drawn in through open doors and windows. The exhaust in the stalls is drawn from exhaust grilles high in the space. These grilles routinely get fouled with dirt and debris from the stalls and require cleaning.

Mechanical: Heating *Fair condition*

The only heat provided in the stall building is provided by an electric unit heater in the stall building office, and electric cabinet heaters in the restrooms. The remainder of the stall building is not provided with heat.

Plumbing: Distribution *Fair Condition*

A combined 4" domestic and fire water service enters the stall building on the east side, into the office / vet room. Fire sprinkler was not connected to this service, so it serves only the domestic water in the stalls building.

Domestic hot water is provided by two electric water heaters. One water heater is located in the office / vet room and serves hot water to the double bowl sink in the vet area, as well as serving two horse wash-down stalls to the west of the vet area. The other water heater is located in the janitor's closet adjacent to the restrooms on the west end of the stalls building. This water heater supplies hot water to the restrooms, and to two more horse wash-down stalls. Each water heater is equipped with a thermostatic mixing valve. The water heater in the vet area was replaced in 2015 and is only 4 years old. The water heater adjacent to the restrooms appears to be approximately 17 years old (as determined by the serial number) and is 17 years old.

Plumbing: Fixtures *Fair Condition*

The restrooms are equipped with wall mounted lavatories with manual fixtures, floor mounted water closets with manual flush valves, a urinal with a sensor operated flush valve, and a two gang shower stall with manual shower valves. The horse wash-down stalls are equipped with yard hydrants. The vet area is equipped with a double bowl lab sink with manually operated fixture with a vacuum breaker. All plumbing fixtures appear to be original to the building (with the exception of the sensor operated flush valve for the urinal), and are approximately 37 years old.

Electrical Facilities Assessment

Site Electrical

The Agriculture and Equine Facilities are located along the north boundary and northeast corner of the LCCC campus. The LCCC Campus currently utilizes two primary metered utility feeds to the campus, east and west. This building is tied into the east portion of the primary electrical loop. A pad mounted 500kVA 277/480V secondary transformer service to a 600A Main switchboard located in the Arena main electrical closet. Equipment is Gould ITE distribution panels and switchboards original to the construction of the building in 1982. The Generator was upgraded in 2014 to a new 100kW natural gas emergency standby generator, with emergency distribution expanding throughout the Barn, Arena, and Classroom buildings for emergency lighting.

Lighting was upgraded in 2017 to new LED lighting throughout on the exterior and interior spaces of the facility. Some lighting controls in the facility have been replaced from snap switches to newer occupancy/vacancy sensor type switches. Lighting controls in the classroom building, offices and restrooms in the Barn, and Offices and restrooms of the Arena, have been upgraded to use ceiling, wall or both types of occupancy sensors.

The facility fire alarm system has been upgraded per new equipment dated 2012, and a voice evacuation system has been provided for the facility.

Arena

Electrical: Lighting *Good Condition*

New LED lighting was upgraded in January 2017. Emergency lighting was observed to be installed but was not functionally tested.

Electrical: Distribution *Good condition*

Existing electrical distribution is original to construction of building in 1982.

Electrical: Distribution (Below Bleachers) *Fair Condition*

Existing panelboards, conduits, and devices installed below bleachers in livestock alley are showing signs of fatigue and corrosion. Recommend Replacement and relocate or install cage around the panels so not in direct contact with animals.

Electrical: Fire Alarm *Good Condition*

Fire alarm panels and annunciator indicate they were replaced in 2012. Devices in arena and livestock areas and those open to outside require additional cleaning and maintenance.

Electrical: Low voltage / telecommunications *Good Condition*

Low voltage telecom devices were identified in the office areas and appeared functional. Low Voltage wall mounted cabinets with Fiber Backbones were identified, providing adequate coverage throughout. Devices were not functionally tested, only observed.

An Audio cabinet was installed in the Area Office in summer of 2019 and appeared to be in good working order.

Agriculture Classrooms

Electrical: Lighting *Good Condition*

New LED lighting was upgraded in June 2017. Emergency lighting was observed to be installed but was not functionally tested. Classroom building has the largest extent of new lighting controls throughout the space.

Electrical: Distribution *Good condition*

Existing electrical distribution is original to construction of building in 1982, and fed from the arena building.

Electrical: Fire Alarm *Good Condition*

Main fire alarm panel is in Arena building.

Electrical: Low voltage / telecommunications *Good Condition*

Low voltage telecom devices were identified in the office areas and appeared functional. Low Voltage wall mounted cabinets with Fiber Backbones were identified, providing adequate coverage throughout. Devices were not functionally tested, only observed.

Stall Building

Electrical: Lighting *Good Condition*

New LED lighting was upgraded in January 2017. Emergency lighting was observed to be installed but was not functionally tested.

Electrical: Distribution *Good condition*

Existing electrical distribution is original to construction of building in 1982, and fed from the arena building.

Electrical: Fire Alarm *Good Condition*

Main fire alarm panel is in Arena building.

Electrical: Low voltage / telecommunications *Good Condition*

Low voltage telecom devices were identified in the office areas and appeared functional. Low Voltage wall mounted cabinets with Fiber Backbones were identified, providing adequate coverage throughout. Devices were not functionally tested, only observed.

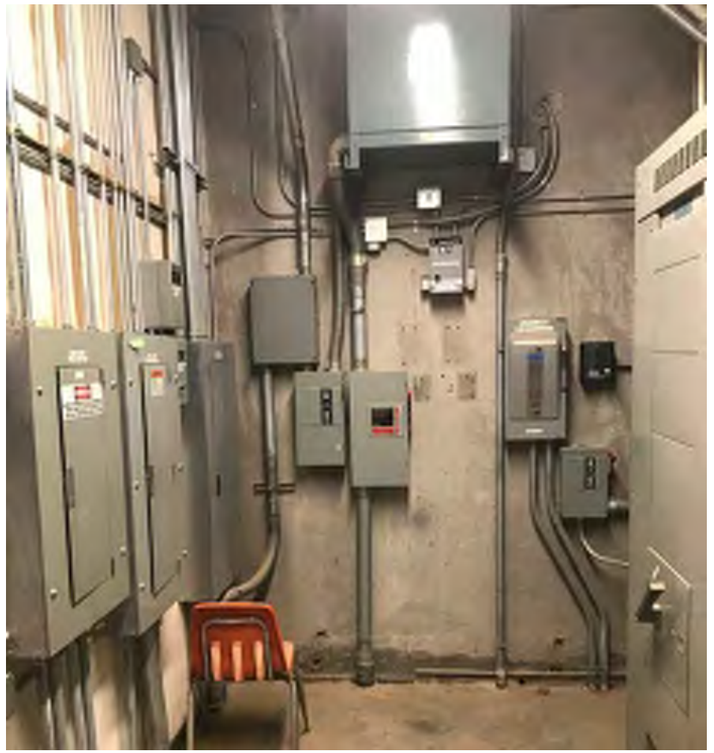
Livestock West

Electrical: Lighting *Good Condition*

Recommend cleaning fixtures and providing bird spikes.

Electrical: Lighting *Good Condition*

Recommend cleaning fixtures and providing bird spikes.



H. Cost Estimation Backup

UPGRADE COSTS

LCCC_Upgrades							
			Cost Assumptions:	Contingency	1.2		
				Phasing	1		
Building Name	**Area**	**Division**	**Project Category**	**Architectural System**	**Description**	**Comments**	**Cost**
Existing Arena	**75,120**	Division 7	Envelope	Exterior Siding			$628,320
		Division 8	Openings	Overhead Door to Animal Lab			$35,000
Ag. Classrooms	**15,284**	Division 23	Mechanical	Air conditioning			$456,450
				Estimate includes AHU replacement, VAV air terminal units, duct replacement, duct insulation replacement, air devices, controls. Does not include chilled water piping or trenching for piping.			
							$1,119,770
Cost							
Total Cost							**$1,343,724**

This table captures unique cost estimates that are not identified as items of repair in the FCI but are items that will increase the value and functionality as it relates to continued and long-term use.

EQUIPMENT & FFE

LCCC_Equipment and FFE							
			Cost Assumptions:	Contingency	1.2		
				Phasing	1		
Building Name	**Area**	**Division**	**Project Category**	**Architectural System**	**General Description**	**Comments**	**Cost**
New Arena	**75,120**	Division 10	Specialties	Rodeo Equipment			$163,870
Existing Arena		Division 10	Specialties	Repace Panels and Bucking Chutes			$163,870
Other New Arena Equipment							$75,000
New FFE							$200,000
Upgrade Existing Classroom FFE							$125,000
Cost							$727,740
Total Cost							**$873,288**

This table captures cost estimates for items that are not part of the infrastructure improvements on the campus but are critical items for the Ag & Equine programs, including new and replacement rodeo equipment and FFE for classroom renovations and FFE for new classrooms.

ARCHITECTURAL FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2		**Replacement in Kind**		
			Equipment and Mobilization / Demobilization	1		M.040 Auditorium	SF Area	SF Cost
			OH & P	1.1		Precast Concrete	75000	166
			General Conditions	1.1		Escalation		
						Contingency		
						Location Factor		
						OH & P		
						General Conditions		
						Total Cost		
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Building Name		Envelope		Maint/Repair	Poor Condition			Immediate
Arena		Finishes		Code Requirement	Fair Condition			Short Term
		Systems		Upgrade	Good Condition			Long Term
		General			Missing			Recommended
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	75,120	Envelope	Windows	Maint/Repair	New	Kal-Wall	Kal-Wall Clerestory panels replaced September 2019 (Orig FCI indicated Kal-wall replacement)	Recommended at end of Life
		Envelope	Wall System	Maint/Repair	Fair Condition	Precast Concrete - exposed	Walls appear to be in good condition - maintain paint and sealants, exterior. On the interior, clean algae off the stair tower walls. (Original FCI calls for general exterior restoration, cleaning stair tower walls, remove rust from wall plates, paint, and calls for weather proof hosebib covers)	Short Term
		Envelope	Doors - OH	Maint/Repair	Fair Condition		OH Doors appear to be in fair, operable condition	
		Envelope	Doors - Man	Maint/Repair	Fair Condition		Man Doors appear to be in fair, operable condition (original FCI calls for sealant at man door - NE corner)	Short Term
		Envelope	Roof	Maint/Repair	Poor Condition		Roof appears to be beyond end of life; flashings and parapets appear to be missing or failing based on observed algae on interior surface of exterior walls - Schedules to be replaced in 2022 per LCCC	Immediate
		Envelope	Roof Insulation	Maint/Repair	Poor Condition			Immediate
		Envelope	Roof	Demo / Remove Existing				Immediate
								Immediate
		Envelope	Wall System	Maint/Repair	Poor Condition	Precast Concrete Joints	Caulking joints are cracking or pulling away at nearly all joints. Recommended for a contrcactor familiar with caulked joints to review and make repairs as necessary	Immediate
		Envelope	Roof Drainage	Maint/Repair	Poor Condition	Scuppers/Downspouts, internal roof drains	Collector heads are missing, splash blocks/tie-in to site drainage appears to be missing (original FCI calls to replace broken splash - replaced 2019 along with Kalwall per LCC	Immediate
		Envelope	Roof Drainage	Maint/Repair	Poor Condition	Scuppers		Immediate
		Envelope	Roof control joints	Maint/Repair	Poor Condition	Butyl with metal flanges 3-1/2" opening		Immediate
		Envelope	Gravel stop	Maint/Repair	Poor Condition	aluminum 4" face height		Immediate
		Envelope	Metal Flashing	Maint/Repair	Poor Condition			Immediate
		Finishes	Flooring	Maint/Repair	Fair Condition	Concrete	Concrete floor surfaces appear to be in good condition; restroom floor … upgrade? Concessions kitchen? (Original FCI calls for installation of new sheet floor finish and damaged wall repair between conc slab edge and conc wall)	
		Finishes	Flooring - Arena	Maint/Repair	Good Condition	Sand/Footing	Sand/Footing material replaced September 2019, replacement recommended every 5-7 years	Recommended at end of Life
		Finishes	Casework	Maint/Repair	Fair Condition	Ticket counter	3 ticket windows and transaction counter	
		General	Accessibility Code Compliance	Upgrade			Provide accessible seating (Original FCI calls for paiting designated area on south end), provide ADA ramp with handrails at south entry, (Orig FCI caclls for accessible sink with under lav guards, room signage to be lowered and include braille)) - Braille signs have not been lowerd, no accessible transaction counter at ticket counter, no accessible entry, no accessible seating	Immediate
		General	Building Code Compliance	Upgrade			(Orig FCI calls for replacement of handrails/guards on all exit stairs, and replacement of guards at arena, provide 2 hour separation at Ag building and 1 hour at Stall building) - hand/guardrails not compliant, verify building separation	Immediate

ARCHITECTURAL FCI

LCCC_FCI								
	Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost		
		Equipment and Mobilization / Demobilization	1	M.120 College, Classroom Reinforced Concrete w/ Brick Veneer	15000	220	$3,300,000	
		OH & P	1.1	Escalation				1.05
		General Conditions	1.1	Contingency				1.1
				Location Factor				1.2
				OH & P				1.1
				General Conditions				1.1
				Total Cost			$5,534,298	
Ag. Classrooms	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	15,284	Envelope	Windows	Maint / Repair	Good Condition	Fixed	Blinds down in most windows	Short Term
		Envelope	Wall System	Maint / Repair	Fair Condition	Concrete T's	Walls appear to be in good condition - maintain paint and sealants	Short Term
		Envelope	Doors - OH	N/A				
		Envelope	Doors - Man	Maint / Repair	Good Condition	Aluminum Storefront	Replace at end of life	Short Term
		Envelope	Roof		New	Flat / Built Up	Parapet cap appears newer	
		Envelope	Roof Drainage		New	Scupper and lamb's tongues	both daylight	
		Envelope	Foundation	Upgrade	fair/poor condition		Horizontal slabs at wall base appear to be separating from building	Short Term
		Finishes	Flooring - classroom/admin	Maint / Repair	Good Condition	Carpet and rubber wall base	Appears in good condition, maintain	
		Finishes	Flooring - Lab	Maint / Repair	Good Condition	Tile and rubber wall base	Appears in good condition, maintain	
		Finishes	Wall Systems - framed	Maint / Repair and Upgrade	Good Condition	Stud wall with Gyp and Vinyl finish	Only go up to ceiling, poor acoustic separation	
		Finishes	Wall Systems - CMU	Maint/Repair	Good Condition	Painted CMU in RR	Appears in good condition, maintain paint	Short Term
		Finishes	Ceilings	Maint/Repair	Good Condition	ATC and Gyp.	Appears in good condition, maintain. ATC in corridors and classrooms, Gyp. in RR	
		Finishes	Casework	Maint/Repair	Fair Condition	Base cabinets and countertop	Appear fine, verify accessible countertop height and maintain	Short Term
		Finishes	Restroom Tile, Lockers	Maint/Repair	Good Condition	Floor is Concrete/Epoxy w/ Cove base	Lockers look good, no tile, maintain	
		General	Accessibility Code Compliance	Upgrade	Fair Condition		Check casework heights, shower not accessible	Immediate

ARCHITECTURAL FCI

LCCC_FCI					Replacement in Kind	SF Area	SF Cost	
	Cost Assumptions:	Location Factor	1.2		M.685 Veterinary Hospital Titl-Up Concrete Panels	25000	156	$3,900,000
		Equipment and Mobilization / Demobilization	1		Escalation			
		OH & P	1.1		Contingency			
		General Conditions	1.1		Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$6,540,534

Building Name	Area	Project Category	Architectural System	Improvement Category	Condition	General Description	Comments	Priority
Stall Building	**24,718**	Envelope	Windows	Maint/Repair	Fair Condition	Double pane awning	Operable windows, awning, appear double pane	Short Term
		Envelope	Wall System	Maint/Repair	Fair Condition	Concrete	Walls appear to be in good condition - maintain paint and sealants	Immediate
		Envelope	Doors - OH	Maint/Repair	Fair Condition	Metal frame / lintel	Warm day, all OH doors were open	
		Envelope	Doors - Man	Maint/Repair	Good Condition	Metal frame		
		Envelope	Roof	Maint/Repair	Poor Condition	Flat / built up roof	Built up roofing material appears dispersed around downspout discharge	Long Term
		Envelope	Roof Drainage	Maint/Repair	Fair Condition		scuppers with receiver heads and downspouts to grade.	Long Term
		Envelope	Skylights	Maint / Repair	Fair Condition		Fixed skylights on wood curb	Long Term
		Envelope	Roof insulation				2" composite roof insulation	Long Term
		Envelope	Roof Demo and Removal					Long Term
		Envelope	Roof insulation demo					Long Term
		Envelope	Deferred Roof Maintenance	Maint / REpair			Complete deferred maintenance on roof, recommend to consult with manufacturer's representative	Immediate
		Envelope	Foundation	Maint/Repair /Upgrade	Fair Condition		Questionable drainage away from building	
		Finishes	Flooring	Maint / Repair	Good Condition	Concrete		
		Finishes	Flooring - Restroom	Maint / Repair	Good Condition	Concrete / epoxy, polyurethane	impervious flooring with cove base and no joints	
		Finishes	Wall Systems - CMU	Maint / Repair	Good Condition	Concrete and CMU	Unpainted	
		Finishes	Ceilings	Maint / Repair	Good Condition	Concrete T's in stall areas		
		Finishes	Casework	Missing	N/A			
		Finishes	Restroom	Maint / Repair	Good Condition		No tile, exposed CMU wall (painted in shower) and impervious floor, lockers in good condition	
		General	Accessibility Code Compliance	Upgrade	Fair Condition		Toilet and Lav is accessible, need 18" vertical bar added, shower is not accessible	Immediate

ARCHITECTURAL FCI

LCCC_FCI								
	Cost Assumptions:	Location Factor	1.2		**Replacement in Kind**	SF Area	SF Cost	
		Equipment and Mobilization / Demobilization	1		M.685 Veterinary Hospital Tilt-Up Concrete Panels	4500	93	$418,500
		OH & P	1.1		Escalation			
		General Conditions	1.1		Contingency			
					Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$695,165

Building Name	Area	Project Category	Architectural System	Improvement Category	Condition	General Description	Comments	Priority
Livestock Stalls West	**4,500**	Envelope	Wall System	Maint/Repair	Fair Condition	Concrete T's	Walls appear to be in good condition - maintain paint and sealants	Recommended
		Envelope	Roof	Maint/Repair	Fair Condition	Flat / built up roof	Parapet coping looks newer, concrete T's and pigeons	Long Term
								Long Term
		Envelope	Roof Drainage	Maint/Repair	Good Condition	Single slope roof	Scuppers with receiver heads and downspouts to concrete splashblocks	
		Envelope	Foundation	Maint/Repair	Good Condition		Provide positive drainage away from building	

ARCHITECTURAL FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost	
			Equipment and Mobilization / Demobilization	1	M.685 Veterinary Hospital Tilt-Up Concrete Panels	3000	93	$279,000
			OH & P	1.1	Escalation			
			General Conditions	1.1	Contingency			
					Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$467,900
Building Name								
Livestock Stalls East	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	3,000	Envelope	Wall System	Maint/Repair	Fair Condition	Split face CMU, painted	Walls appear to be in good condition - maintain paint and sealants	Recommended
		Envelope	Roof	Maint/Repair	Fair Condition	Standing seam metal roof	Exposed purlins, trusses and metal post and beams. Pigeons in exposed trusses	Recommended at end of life
		Envelope	Roof Drainage	Maint/Repair	Fair Condition	Single slope	No gutter, sheet flows to grade	Immediate
		Envelope	Foundation	Maint/Repair	Good Condition		Provide positive slope away from building	

ARCHITECTURAL FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost	
			Equipment and Mobilization / Demobilization	1	M.685 Veterinary Hospital Tilt-Up Concrete Panels	4000	93	$372,000
			OH & P	1.1	Escalation			
			General Conditions	1.1	Contingency			
					Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$623,866
Building Name	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Horse Stalls South	**4,000**	Envelope	Wall System	Maint/Repair	Fair Condition	Concrete to 48", framed wall with metal board and batten above	Walls appear to be in good condition - maintain paint and sealants. Flashing at horizontal joint looks good	
		Envelope	Roof	Maint/Repair	Good Condition	Standing seam metal	No gutter, no flashing. Top of wall and soffit looks good. Underside of trusses in filled with standing seam metal. Pigeions and birds on metal stall rails and horizontal flashing joint	Recommended at end of life
		Envelope	Roof Drainage	Upgrade	Fair Condition		No gutter, water sheet flows into alley where it ponds and freezes in winte	Immediate
		Envelope	Foundation	Maint/Repair	Fair Condition	Concrete to 48"	No construction joints in concrete wall, vertical cracking every 5'-10	Immediate

MECHANICAL & PLUMBING FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2		**Replacement in Kind**		
			Equipment and Mobilization / Demobilization	1		M.040 Auditorium	SF Area	SF Cost
			OH & P	1.1		Precast Concrete	75000	166
			General Conditions	1.1		Escalation		
						Contingency		
						Location Factor		
						OH & P		
						General Conditions		
						Total Cost		
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Building Name		Envelope		Maint/Repair	Poor Condition			Immediate
Arena		Finishes		Code Requirement	Fair Condition			Short Term
		Systems		Upgrade	Good Condition			Long Term
		General			Missing			Recommended
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Arena	**Area**	**Project Category**	**Mechanical System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	75,120	Mechanical	Outside Air Intake Louvers	Maint/Repair	Fair Condition	Intake louver serving gas fired furnaces	Natural gas service entry adjacent to outside air intake louver allows potential for entrainment of natural gas (vented from pressure regulator) into the outside air stream provided to the building.	Recommended
		Mechanical	Outside Air Intake Louvers	Upgrade	Fair Condition	Intake louver serving gas fired furnaces	Intake louver should be a minimum of 18-24" above finished grade to prevent entrainment of debris.	Recommended
		Mechanical	Natural Gas Line	Maint/Repair	Poor Condition	Natural gas line serving the generator	Dirt leg on natural gas line serving the generator is not servicable as there isn't sufficient room to remove the pipe cap.	Recommended
		Mechanical	Outside Air Intake Louvers	Upgrade	Poor Condition	Lower intake louvers on southwest corner	Intake louver should be a minimum of 18-24" above finished grade to prevent entrainment of debris.	Recommended
		Mechanical	Ceiling Air Devices (typical)	Maint/Repair	Fair Condition	Ceiling Air Devices throughout	Air devices throughout are original air devices from 1982 and 1985. They are approximately 34 to 37 years old and have reached the end of their useful service life.	Short Term
		Mechanical	Thermostats / Temperature Sensors	Maint/Repair	Poor Condition	Thermostats / Temperature Sensors throughout the Arena	Thermostats / Temperature sensors appear range in age from 20-34 years of age and are at the end of their useful service lives.	Short Term
		Mechanical	Ductwork Distribution System	Maint/Repair	Fair Condition	Galvanized sheetmetal ductwork	The sheetmetal ductwork throughout the Arena Expansion is approximately 37 years old and appears in fair condition for its age. It should be considered for replacement / renovation.	Short Term
		Mechanical	Gas Fired Furnaces	Maint/Repair	Good Condition	Gas Fired Furnaces	The gas fired furnaces in the Arena Expasion were replaced within the last 5 years and do not need to be replaced in the near future. They have approximately 10-15 years of service life remaining.	Long Term
		Mechanical	Unit Heaters	Maint/Repair	Fair Condition	Gass Fired Vertical Discharge Unit Heaters	The gas fired vertical unit heaters in the Arena appear to be original to the building and are approximately 37 years of age. These heaters are reaching the end of their useful services lives, and should be replaced in the next 5 years.	Short Term
		Mechanical	Radiant Heaters	Maint/Repair	Good Condition	Gas Fired Radiant Heaters	The gas fired radiant heaters in the Arena appear to be approximately 20 to 37 years of age. These heaters are reaching the end of their useful services lives, and should be replaced in the next 5 to years.	Short Term
		Mechanical	Ventilation	Maint/Repair	Fair Condition	Exhaust Fans, Louvers and Dampers	The exhaust fans, louvers and dampers in the Arena appear to be original to the building and are approximately 37 years of age. These heaters are reaching the end of their useful services lives, and should be replaced in the next 5 years.	Short Term

MECHANICAL & PLUMBING FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2		**Replacement in Kind**		
			Equipment and Mobilization / Demobilization	1		M.040 Auditorium	SF Area	SF Cost
			OH & P	1.1		Precast Concrete	75000	166
			General Conditions	1.1		Escalation		
						Contingency		
						Location Factor		
						OH & P		
						General Conditions		
						Total Cost		
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Building Name		Envelope		Maint/Repair	Poor Condition			Immediate
Arena		Finishes		Code Requirement	Fair Condition			Short Term
		Systems		Upgrade	Good Condition			Long Term
		General			Missing			Recommended
Arena	**Area**	**Project Category**	**Plumbing System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
		Plumbing	Downspout	Maint/Repair	Poor Condition	Downspout in southeast corner, north of stairwell	Downspout is run in front of both upper and lower intake louvers reducing their effective free area. Re-route downspout away from intake louvers.	Recommended
		Plumbing	Downspouts (typical)	Maint/Repair	Poor Condition	Downspouts (typical of many)	Significant water staining is apparent around many of the downspouts. Replace downspouts.	Short Term
		Plumbing	Irrigation System	Maint/Repair	Poor Condition	Irrigation controller on west side	Irrigation controller on west side of arena has reached the end of it's useful service life.	Short Term
		Plumbing	Mop Service Basin	Maint/Repair	Fair Condition	Mop service basin in upper level arena entry	Mop service basin in upper level arena entry is approximately 34 years old and has reached the end of it's useful service life and should be replaced.	Short Term
		Plumbing	Electric Water Heater	Maint/Repair	Fair Condition	Electric water heater in upper level arena entry	Electric water heater is approximately 34 years old and has reached the end of it's useful service life and should be replaced.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Concessions 3-pot sink	The 3-pot sink appears to be original to the 1982 addition. The sink appears to be in good condition, but the faucet is approaching the end of its useful service life and should be replaced.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Fair Condition	Concessions Hand Sink	The hand sink appears to be original to the 1982 addition. The sink appears to be in good condition for its age, but the faucet is approaching the end of its useful service life and should be replaced.	Short Term
		Plumbing	Sanitary Piping	Code Requirement	Missing	Grease Trap	There appears to be no grease trap installed to serve the 3-pot sink in the concessions. This may be a code requirement because of the 3-pot sink and will be based on the menu of food prepared and served.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Electric Water Cooler	The electric water cooler, located in the main entry of the Arena, adjacent to the ticketing office, appears to be in good condition and does not need to be replaced in the near future.	Long Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Fair Condition	Water Closets	The water closets in the upper and lower level of the Arena expansion appear to be original to the 1982 expansion and at 37 years old, have reached the end of their useful service lives. These fixtures should be replaced in the near future.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Fair Condition	Lavatorys	The lavatories in the upper and lower level of the Arena expansion appear to be original to the 1982 expansion and at 37 years old, have reached the end of their useful service lives. These fixtures are not ADA compliant and should be replaced in the near future.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Fair Condition	Urinal	The trough urinal in the lower level of the Arena expansion appear to be original to the 1982 expansion and at 37 years old, has reached the end of its useful service life. This fixture is not ADA compliant and should be replaced in the near future.	Short Term
		Plumbing	Domestic and Fire Servie	Maint/Repair	Good Condition	Combined Domestic and Fire Service	The Domestic and Fire service appear to be approximately 37 years old and are in good condition for their age. These are both at approximately 75% of their useful service lives and need to be replaced within approximately 10 years.	Short Term

MECHANICAL & PLUMBING FCI

LCCC_FCI								
	Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost		
		Equipment and Mobilization / Demobilization	1	M.120 College, Classroom Reinforced Concrete w/ Brick Veneer	15000	220	$3,300,000	
		OH & P	1.1	Escalation				1.2
		General Conditions	1.1	Contingency				1.18
				Location Factor				1.2
				OH & P				1.1
				General Conditions				1.1
				Total Cost			$6,784,906	

Agriculture	Area	Project Category	Mechanical System	Improvement Category	Condition	General Description	Comments	Priority
	15,284	Mechanical	H&V	Upgrade	Fair Condition	H&V Unit	The existing H&V unit serving this portion of the building is approximately 34 years of age and has reached the end of it's expected service life. This unit should be replaced within the next 5 years. When replacing, consider replacing with an AHU that includes a chilled water cooling coil, and extending chilled water from the campus chilled water system.	Short Term
		Mechanical	H&V	Upgrade	Missing	VAV Boxes	Consider provision of VAV air terminal units to serve the classrooms and offices. Boxes will have HW reheat.	Short Term
		Mechanical	Heating Water	Maint/Repair	Good Condition	Boiler	Heating water boiler is approximately 34 years old and is approaching the end of it's useful service life, and should be replaced in the next 5-10 years.	Short Term
		Mechanical	Air Devices	Maint/Repair	Fair Condition	Supply, Return and Exhaust Air Devices	The existing air devices are in fair condition for their age, but are reaching the end of their expected service lives, and should be replaced in approximately 5 years.	Short Term
		Mechanical	Ductwork	Maint/Repair	Fair Condition	Supply, Return and Exhaust Ductwork	The existing ductwork is in fair condition for it's age, but should be replaced in approximately 5 years.	Short Term
		Mechanical	Air Terminal Units	Upgrade	Missing	VAV Air Terminal Units	This building should have control for each of the thermal zones. Approximately 8-10 VAVs to serve this building.	Short Term
		Mechanical	DDC Controls	Maint/Repair	Fair Condition	DDC Controls for Heating water and AHU	Upgrade DDC controls when renovating heating water system and AHU.	Short Term
		Mechanical	Unit Heaters	Maint/Repair	Fair Condition	Gas Fired Unit Heaters	The gas fired unit heaters are in fair condition for their age, but are approaching the end of their useful service lives. They should be replaced within 5 years.	Short Term

Agriculture	Area	Project Category	Plumbing System	Improvement Category	Condition	General Description	Comments	Priority
		Plumbing	Domestic Hot Water	Maint/Repair	Good Condition	Gas Water Heater	The domestic water heater is in good condition for its age. It was replaced in late 2008, as determined by the serial number. It should be replaced within the next 5 to 10 years.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Water Closets	Water closets are in good condition for their age, but are reaching the end of their usefull service life. Should replace with 1.28 GPF toilets.	Short Tem
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Lavatories	Lavatories are in good condition for their age, but are reaching the end of their usefull service life. Should replace with 0.5 GPM toilets.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Urinals	Urinals are in good condition for their age, but are reaching the end of their usefull service life. Should replace with 0.125 GPF urinal.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Mop Service Basin		Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Water Fountain	Should replace existing water fountain with an electric water cooler with bottle filler.	Short Term
		Plumbing	Plumbing Fixtures	Maint/Repair	Good Condition	Showers		Short Term

MECHANICAL & PLUMBING FCI

LCCC_FCI					Replacement in Kind	SF Area	SF Cost	
	Cost Assumptions:	Location Factor	1.2		M.685 Veterinary Hospital Titl-Up Concrete Panels	25000	156	$3,900,000
		Equipment and Mobilization / Demobilization	1		Escalation			
		OH & P	1.1		Contingency			
		General Conditions	1.1		Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$8,018,525
Stall Building	**Area**	**Project Category**	**Mechanical System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	24,718	Mechanical	Ventilation	Maint / Repair	Fair Condition	Roof Mounted Exhaust Fans	The exhaust fans are approximately 37 years old and have reached the end of their useful service lives. They should be replaced within 5 years.	Short Term
		Mechanical	Cabinet Heaters	Maint / Repair	Fair Condition	Electric Cabinet Heaters	The cabinet heaters are in fair condition for their age, but are approaching the end of their useful service lives. They should be replaced within 5 years.	Short Term
		Mechanical	Unit Heater	Maint / Repair	Fair Condition	Electric Unit Heater	The unit heater is in fair condition for its age, but are approaching the end of its useful service life. It should be replaced within 5 years.	Short Term
Stall Building	**Area**	**Project Category**	**Plumbing System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
		Plumbing	Domestic Hot Water	Maint / Repair	Fair	Electric Water Heaters	The electric water heaters appear in fair condition for their age, but are approaching the end of their useful service lives. They should be replaced within 5 years	Short Term
		Plumbing	Plumbing Fixtures	Maint / Repair	Fair	Water Closets	The water closets appear in fair condition for their age, but are approaching the end of their useful service lives. They should be replaced within 5 years	Short Term
		Plumbing	Plumbing Fixtures	Maint / Repair	Fair	Urinal	The urinal appears in fair condition for its age, but is approaching the end of its useful service life. It should be replaced within 5 years	Short Term
		Plumbing	Plumbing Fixtures	Maint / Repair	Fair	Lavatories	The lavatories appear in fair condition for their age, but are approaching the end of their useful service lives. They should be replaced within 5 years	Short Term
		Plumbing	Plumbing Fixtures	Maint / Repair	Fair	Showers	The showers appear in fair condition for their age, but are approaching the end of their useful service lives. They should be replaced within 5 years	Short Term
		Plumbing	Plumbing Fixtures	Maint / Repair	Fair	Kitchen Sink	The kitchen sink appears in fair condition for its age, but is approaching the end of its useful service life. It should be replaced within 5 years	Short Term

ELECTRICAL FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2		**Replacement in Kind**		
			Equipment and Mobilization / Demobilization	1		M.040 Auditorium	SF Area	SF Cost
			OH & P	1.1		Precast Concrete	75000	166
			General Conditions	1.1		Escalation		
						Contingency		
						Location Factor		
						OH & P		
						General Conditions		
						Total Cost		

	Area	Project Category	Architectural System	Improvement Category	Condition	General Description	Comments	Priority
Building Name		Envelope		Maint/Repair	Poor Condition			Immediate
Arena		Finishes		Code Requirement	Fair Condition			Short Term
		Systems		Upgrade	Good Condition			Long Term
		General			Missing			Recommended
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	75,120							
		Electrical	Electrical Distribution	Maint/Repair	Good Condition/But Beyond Usable Life		Electrical distribution appears to be in Fair to good condition. Equipment appears to have been installed original 1982. Replacement parts are still in production and available.	Long Term
		Electrical	Lighting	Maint/Repair	New	New LED lighting	Lighting has been recently replaced and retrofitted to LED lighting.	Recommended
		Electrical	Lighting Controls	Maint/Repair	New / Fair Conditoin		Lighting controls have been upgraded in many areas. Recommend upgrading lighting controls consistently through space.	Short Term
		Electrical	Receptacles and Power Devices	Maint/Repair	Good / Fair condition		Receptacles and Power devices appear in fair / good condition in majority of spaces. Areas exposed to extreme moisture are showing signs of corrosion.	Short Term
		Electrical	Fire Alarm	Maint/Repair	Good / Fair Condition		Fire Alarm was upgraded in July 2012, to Voice Evacuation compliant system. Evidence of Animal nesting in and around devices where regularly open to outdoors - clean	Immediate
		Electrical	Low Voltage / Telecom	Maint/Repair	Good / Fair condition			Recommended

ELECTRICAL FCI

LCCC_FCI								
	Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost		
		Equipment and Mobilization / Demobilization	1	M.120 College, Classroom Reinforced Concrete w/ Brick Veneer	15000	220	$3,300,000	
		OH & P	1.1	Escalation				1.2
		General Conditions	1.1	Contingency				1.18
				Location Factor				1.2
				OH & P				1.1
				General Conditions				1.1
				Total Cost			$6,784,906	
Agriculture	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	15,284							
		Electrical	Electrical Distribution	Maint/Repair	Good Condition		Electrical distribution appears to be in Fair to good condition. Equipment appears to have been installed original 1982. Replacement parts are still in production and available.	Long Term
		Electrical	Lighting	Maint/Repair	New	New LED lighting	Lighting has been recently replaced and retrofitted to LED lighting	Recommended
		Electrical	Lighting Controls	Maint/Repair	New / Fair Condition		Lighting controls have been upgraded in many areas. Recommend upgrading lighting controls consistently through space.	Short Term
		Electrical	Receptacles and Power Devices	Maint/Repair	Good / Fair condition		Receptacles and Power devices appear in fair / good condition in majority of spaces. Areas exposed to extreme moisture are showing signs of corrosion.	Short Term
		Electrical	Fire Alarm	Maint/Repair	Good / Fair Condition		Fire Alarm was upgraded in July 2012, to Voice Evacuation compliant system. Evidence of Animal nesting in and around devices where regularly open to outdoors.	Immediate
		Electrical	Low Voltage / Telecom	Maint/Repair	Good / Fair condition			Recommended

ELECTRICAL FCI

LCCC_FCI					Replacement in Kind	SF Area	SF Cost	
	Cost Assumptions:	Location Factor	1.2		M.685 Veterinary Hospital Titl-Up Concrete Panels	25000	156	$3,900,000
		Equipment and Mobilization / Demobilization	1		Escalation			
		OH & P	1.1		Contingency			
		General Conditions	1.1		Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$8,018,525
Building Name	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Stall Building	**24,718**							
		Electrical	Electrical Distribution	Maint/Repair	Good Condition		Electrical distribution appears to be in Fair to good condition. Equipment appears to have been installed original 1982. Replacement parts are still in production and available.	Long Term
		Electrical	Lighting	Maint/Repair	New	New LED lighting	Lighting has been recently replaced and retrofitted to LED lighting	Recommended
		Electrical	Lighting Controls	Maint/Repair	New / Fair Condition		Lighting controls have been upgraded in many areas. Recommend upgrading lighting controls consistently through space.	Short Term
		Electrical	Receptacles and Power Devices	Maint/Repair	Good / Fair condition		Receptacles and Power devices appear in fair / good condition in majority of spaces. Areas exposed to extreme moisture are showing signs of corrosion.	Short Term
		Electrical	Fire Alarm	Maint/Repair	Good / Fair Condition		Fire Alarm was upgraded in July 2012, to Voice Evacuation compliant system. Evidence of Animal nesting in and around devices where regularly open to outdoors.	Immediate
		Electrical	Low Voltage / Telecom	Maint/Repair	Good / Fair condition			Recommended

ELECTRICAL FCI

LCCC_FCI								
	Cost Assumptions:	Location Factor	1.2		**Replacement in Kind**	SF Area	SF Cost	
		Equipment and Mobilization / Demobilization	1		M.685 Veterinary Hospital Tilt-Up Concrete Panels	4500	187	$841,500
		OH & P	1.1		Escalation			
		General Conditions	1.1		Contingency			
					Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$1,730,151
Building Name	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Livestock Stalls West	**4,500**							
		Electrical	Lighting Controls	Maint/Repair	New / Fair Conditiom		Photocells - replace as needed	Long Term
		Electrical	Receptacles and Power Devices	Maint/Repair	Good / Fair condition		Receptacles and Power devices in areas exposed to extreme moisture are showing signs of corrosion.	Long Term

ELECTRICAL FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost	
			Equipment and Mobilization / Demobilization	1	M.685 Veterinary Hospital Tilt-Up Concrete Panels	3000	187	$561,000
			OH & P	1.1	Escalation			
			General Conditions	1.1	Contingency			
					Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$1,153,434
Building Name								
Livestock Stalls East	**Area**	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
	3,000							
		Electrical	Lighting Controls	Maint/Repair	New / Fair Condition		Photocells - replace as needed	Long Term
		Electrical	Receptacles and Power Devices	Maint/Repair	Good / Fair condition		Receptacles and Power devices in areas exposed to extreme moisture are showing signs of corrosion.	Long Term

ELECTRICAL FCI

LCCC_FCI								
		Cost Assumptions:	Location Factor	1.2	**Replacement in Kind**	SF Area	SF Cost	
			Equipment and Mobilization / Demobilization	1	M.685 Veterinary Hospital Tilt-Up Concrete Panels	6000	187	$1,122,000
			OH & P	1.1	Escalation			
			General Conditions	1.1	Contingency			
					Location Factor			
					OH & P			
					General Conditions			
					Total Cost			$2,306,868
	Area	**Project Category**	**Architectural System**	**Improvement Category**	**Condition**	**General Description**	**Comments**	**Priority**
Building Name								
Horse Stalls South								
		Electrical	Lighting Controls	Maint/Repair	New / Fair Conditoin		Photocells - replace as needed	Long Term
		Electrical	Receptacles and Power Devices	Maint/Repair	Good / Fair condition		Receptacles and Power devices in areas exposed to extreme moisture are showing signs of corrosion.	Long Term

I. Meeting Minutes

MEETING MINUTES

PROJECT:	LCCC AG & Equine Master Plan
MEETING MINUTES RECORDED BY:	Kevin Nelson
MEETING PURPOSE:	Equine
MEETING DATE:	September 3, 2019
ATTENDEES:	See attached Attendee List

KEEP

ANSI Lab
- Flexible, most use it.
- Not enough. Conflicts – full of sand. Small for warm ups.

Vet Room
- Doc is good, learning tool, hands-on learning.

Tack Rooms
- Good but need more.
- Barn – good other than wood on doors ventilation.
- Arena – heart of everything.

Access
- Wonderful access to all pieces.
- Need control
- Students, users.
- Public – losing access because bleachers from floor.

Pastures
- Work for Fall and Spring, eat all grass.
- Wagon Wheel Fence.
- Pond has grown taking pasture away.

Outdoor Arena
- Good for 2nd place for activities.
- Outdoor good to be able to go outside.
- Different experience for colts outside.

Lean to Runs – Good.

MEETING MINUTES (Continued)

Auto Waterer – need more.

Round pens – outside – turn horses out, 1-2 hr/day. 3 permanent inside good.

CREATE
Fencing around entire facility.
3 indoor, 2 large, one small.
Separation – direct contact biggest issue. Outside helps.
Feed – general feed College controlled access.
Water truck depends on new arena.
Truck and Trailer.
Indoor Stalls – can get more indoor but more work, outside events fits indoor.
Livestock pens.
Access to bleachers – portable metal stairs all tech.

END OF MEETING MINUTES

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CUSHING TERRELL

MEETING MINUTES

PROJECT: LCCC AG & Equine Master Plan

MEETING MINUTES RECORDED BY: Jim Beal

MEETING PURPOSE: Kick-Off Meeting: Finance & Facilities / Executive Session

MEETING DATE: September 4, 2019

How will the Master Plan be used by LCCC:

Input from the Foundation:
- The Master Plan will be a tool to secure donations.
- The MP helps to identify to naming opportunities.
- Used for marketing and advertising and PR.
- How do can we use the MP to re-imagine marketing materials?

Input from Agriculture Program:
- The MP will provide guidance on what we have and need.
- The MP is a plan to chase the money.
- Programmatically, LCCC is at capacity with the arena.
- If we want to build the program, we need to provide proper facilities.

Dr. Schaffer:
- Ag & Equine are signature programs for LCCC.
- Want to be known for Ag/Equine/Rodeo.
- They are a unique offering of college.
- Opportunity for national notoriety.

  The MP should address:
  1. Programs and Facilities
  2. Current situation
  3. Future

- Do we have facilities that accommodate the programs right now?
- What maintenance/issues do we need to do right now?
- What needs to be done in 3,5, and 10 years.
- Where can / should we strategically grow?
- What is the long term facility perspective.

Trustee:
- Make the facilities more functional.

Standards:
- National Indoor Rodeo Association Rules.
- Animal Handling Best Practices:
  - Vehicles.
  - Hygiene.
  - Biosecurity.
- Wyoming Livestock Team.
- Wyoming State Veterinarians.
- Protocols on safety/security.
- Livestock protocols.

The Comprehensive Master Plan Document:
- Easily shared format.
  - Flexibility to parcel out sections and print, so the college doesn't need to share the entire document.
- Represent the programmatic benefit visually.
- Customizable and digestible.
- Include the square footage for naming opportunities.
- Market it in phases.
  - Allow the development of programs in phases also.
  - Prioritization.
- Recruiting for Rodeo:
  - Recruit on communicating the Freshman experience / Sophomore experience.
- Look for logical components to break out:
  - Amounts greater than $100,000 go to the approval commission.
  - Amounts greater than $1.5M go to legislature.
- Break out equipment separate from infrastructure.

Communication Protocol:
- Rick Johnson/Jill Koslosky/Bruce Nisley.
- CTA will launch a website for the project.

Replacing Structures?
- Appearance is one of our issues.
  - The older buildings on campus have an institutional aesthetic - horrible.
- The strategy for future development needs to involve refurbishing of the existing structures along with expansions. This approach offers the most promising opportunities to get future improvements accomplished. Demolishing the existing structures and replacing with new will take longer and be more expensive.
  - Major maintenance budget could be used to re-skin buildings.
  - New improvements should be consistent with the new campus aesthetic.
- The arena is an exceptional facility
- Stall Barn – excellent.
- The college must be good fiscal stewards.
- Old and new facilities need to be equitable.
- Need to look at options.
- We don't want to look like the ranch that keeps adding on buildings.

Need users to have a shared vision/plan.

MEETING MINUTES (Continued)

Is there an opportunity with north pond to maybe be used as an asset?

END OF MEETING MINUTES

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CUSHING TERRELL


Ag BUILDING
VET ROOM
A/C
Manure holding space

MEETING MINUTES

PROJECT: LCCC AG & Equine Master Plan

MEETING MINUTES RECORDED BY: Kevin Nelson

MEETING PURPOSE: Finance and Facilities

MEETING DATE: September 4, 2019

ATTENDEES: See attached Attendee List

Finance and Facilities

Primary Goals and Objectives:

- Foundations and P.R.
  - Support for meetings/programs.
  - Represent college for P.R.
- Guidance on what we have/what we need:
  - Plan to be able to chase the money.
  - Full time plus use (Publicon Sundays).
  - Tapped out for space.

AG & Equine Program – would like to elevate as known program.

Program and Facilities

- Effective scheduling and use.
- 3-5 year where to grow and what it would take.
- Immediate stuff – differed maintenance.
- Long term – strategic design energy, animal handling.
- Functionality.
- Bench Marking Standards:
  - Animal Handling – teach a course but inadequate.
- Biosecurity:
  - Separating rodeo from classroom stock.
  - Separate colts separate teams.
- Protocols on Safety: Campus security, livestock.
- Facilities to enable to meet standards.
- Marketing Fund Raising:
  - Format that's easy to share – digital.
  - Printable sections.
  - Visual – unique facilities but hard to represent and explain.

  - Customizable.
  - Major spaces descriptions.
  - Phases.
  - Time Table.
  - Sequence of projects.
  - Recruiting to show investment in College and students.

- Monetary Amounts (Bite Size)
  - $100K - $2M for naming/branding

- Components that could:
  - $100K - $1M for fundraising.
  - $1.5M legislature.
  - Major maintenance funds.

- Equipment – Grants.

Communication – Jill, Bruce, Rick

Assessment

- Good bones to buildings.
- Fixes – roofing, drainage, ADA.
- Concrete structures are durable.
- Appearance is biggest issue.
- Escalation kills them on approved project costs.
- Don't have capacity for complete replacement.
- More likely to change aesthetics.
  - Possibly maintenance money.
  - Difficulties.
- New skins.
- Keep unified look.
- Arena excellent.
- Stall barn exceptional.
- Classroom needs work.
- 2 options expand or start new.
- ____ could be part of option.
- Facilities need to match programming/goals.

- Economical is fine but not at expense of quality.
- Site boundary.
- Schedules:
  - Facilities
  - Classes
- Fish and Game:
  - Ponds interest.
  - Urban public water interest.
  - Reclamation.
  - Connection.
  - North pond is part of AG complex.

  - Is used for watering.
  - Local water.

KEEP
- Vet Area: Stocks, used more in program more learning.
- Alley under bleachers.
- Ranch Horse Team.

TOSS
- Birds
- Market for Graduates – educating worth of degree.
- Staff Experience: Tenure, roll-over.
- Community Garden: Keep trying, keeps failing. Organization (extension) oversight limited.
- Replace ladder to seating.

CREATE
- 2 Indoor Arenas:
  - Pushing for time.
  - Same enclosure.
  - Multiple classes.
  - Multiple Events.
- Need two competition arenas at same time.
- Host Little Britches Rodeo: Opportunity to recruit.
  - Warmup Arena, 2nd Arena, RV Space, Parking.
- Equipment for another Arena.
- Get more students involved – more appealing.
- Agrapremurial / AGRI Tourism:
  - Make more marketable.
  - Make more viable in economy.
- AG is stuck in commodities.
  - Look at new options.
- Meat Lab / Pre-Vet Options:
  - Make more sciences.
  - Vet Tech.
  - Certified Techs doing more work.
- Incentivize to stay local.
- 4H FFA – collaboration to gain interest.
- Livestock handling with students – educate students.

RODEO

KEEP
- Outgrown facilities.
- Keep existing concept – Orientation works overall, just adjust functionality.
- Pens for Rodeo kids – outdoor – need more.
- Pastures.
- Outdoor Arena – Indoor would get more use. Upgrade to be more user friendly.
- Yellow arch make 12 foot.
- Existing stalls 50 inside 28 outside.
- Opening big doors in winder is bad for keeping place warm, slow, big, breakdown.

CREATE/PRIORITIZE
- Auto Water ____.
- Drainage – Biosecurity, fight water all year.
- All equipment should be the same brand panels.

AG AND LIVESTOCK
- DONN – MSU Grad – Broadus
- Livestock show team – classes etc. see at Nile.
- Need to separate currently at DONN's place.
- Pigeons are problem for making stock sick, added expense.
- Unique program for showing.
- Rose – AG Business, range, plants – outside of "their" box.
- External to AG building – in pathfinder building.
- Greenhouse (managed by Physical Plant).
- 119 only room with water.
- Overlap with other programs.

KEEP
- (Equine dictates who gets what).
- Cooperative attitudes.
- Calves and kids and team (staff).
- Resources for what need to do.
- After resale are gone then can bring in animals.
- Classroom – 20 on team this year.
- Not all taking credit.
- Teams create exposure and recruiting.

TOSS
- Concrete is bad for calves feet.
- Pigeons.

CREATE
- Pens.
- Chill Room – 20x30 helps to grow hair.
- Wet Lab.
- Meats.
- Facilities play into marketing.
- Create Greenhouse:
  - Lack of technical training.
- Indoor AG.
- Hydroponics.
- Would need an entire program to support sweetgrass development.
- Construction and trades programs could link in with College.
- Landscape more poised to provide business.
- Rick's Rexburg College has excellent horticulture.
- Do in conjunction with industrial (Microsoft).
- Do have wind/energy program.
- Could link in green energy.

MEETING MINUTES (Continued)

- Hydroponics would pull interest.
- Wet Lab.
- Meat Lab: USDA/slaughter portion provides jobs. Not necessarily slaughter/just place to view.
- Position AG – future of Agriculture.
- AG ED classes for exposure.

END OF MEETING MINUTES

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MEETING MINUTES (Continued)

CREATE/PRIORITIZE

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MEETING MINUTES

PROJECT:	LCCC AG & Equine Master Plan
MEETING MINUTES RECORDED BY:	Jim Beal (Laura Dougherty, Kevin Nelson attending)
MEETING PURPOSE:	Phone Call with Jill Koslosky
MEETING DATE:	September 3, 2019

Goals for Kick-Off Meeting:

Focus on Classroom and Indoor Arena Usage. Currently there are 140 horses in space for 75.
Priorities:

- Stalls/Hay/Arena – interchangeable.
- Livestock piece – secondary.
- Greenhouse – completely separate.
- Livestock programs and the Greenhouse will be easiest to raise $ for.

Focus On:

- Facilities over programs for kickoff meeting.
- Ask at least one question about programs.

Evaluate Usage of Arena:

- Academic programs need to get priority over rodeo.

Issues to be aware about:

- Safety of bucking chutes.
- LCCC deferred maintenance on the buildings.
- Arena is incredibly difficult to clean.
- Need new animal handling arena.
- The stall barn is fine, but it is difficult to keep horses healthy inside.
- Another smaller arena is desirable.
- Need more outdoor stalls and runs.

END OF MEETING MINUTES

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CUSHING TERRELL

Laramie County Community College
Agriculture & Equine Master Plan
Cheyenne, Wyoming

VISIONING KICK-OFF AGENDA
September 4, 2019

Attendees for All Meetings:

LCCC
Jill Koslosky, Dean of Business, Agriculture, and Technical Studies
Bruce Nisley, Director of Agriculture and Equine
C.R. O'Hara, Barn Manager
Cindy Henning, Interim Athletic Director

Design Team
Jim Beal, Principal, Cushing Terrell
Kevin Nelson, Project Architect, Cushing Terrell
Laura Dougherty, Project Manager, Cushing Terrell
Jerome Robinson, Rodeo & Arena Specialist

Advisory Committee & Industry Meeting #1 — 7:30 am – 8:50 am (breakfast)
- *see below*

Finance & Facilities — 9:00 am – 9:50 am
- *Board of Trustees and Dr. Joe Schaffer*
- *Lisa Trimble*

Tour Facilities — 10:00 am – 11:50 am

Advisory Committee Meeting & Industry #2 — 12:00 pm – 12:50 pm (lunch)

Equine Instructors — 1:00 pm – 1:50 pm
- *Ranch Horse Team (Danny May)*
- *Horse Judging (Don Beard)*
- *IHSA/Western (Lanae McDonald)*
- *English (Deeda Randal))*
- *Colt Training (Cole Tully)*
- *Tammy Maas*

Ag & Livestock Instructors — 2:00 pm – 2:50 pm
- *Show Team (Donn Randall)*
- *Livestock Judging (Matt Morrison)*
- *Horticulture/greenhouse/environmental sciences (Rose McBride)*

Rodeo — 3:00 pm – 3:50 pm
- *Coach (Seth Glause)*
- *Cattle timed events*
- *Barrel racing/goat tying*
- *Rough stock*
- *Stock Contractors (J.D.)*
- *Lisa Murphy*
- *Cindy Henning*
- *Beau Clark (UW and former LCCC Coach)*
- *CFD Representatives (Tom Hersig)*

-30 minutes flexible time-

Executive Summary — 4:30 pm – 5:00 pm

Advisory Committees and Industry Attendees *(two meeting time options)*

- FFA/VoAg instructors (Stacy Broda, etc.)
- Current advisory committee members (agriculture and equine committees)
- Bryan Wilson
- Jeff Shmidl (BAS)
- Alumni
- Current Students
- Former Ag Teachers from LCCC (Ron Pulse, Jeff Berry)
- Industry
  - Precision Ag
  - GIS
  - JBS
  - Horticulture/Landscaping
  - Ag Lenders
  - Internship Sponsors

LCCC Feedback

Equine Priorities

Outer target circle:

- Hay barn, LCCC hay
- Separate hay storage
- Separate and bigger feed/grain rooms
- Complete feed and shavings hay storage
- Office location contained securable and separate with good access to facility
- Air conditioning in AG building and CR office
- New stall doors
- Truck and trailer
- Water truck
- Livestock working facilities
- More livestock pens
- New gates in pastures
- More livestock pens
- Better stock handling in pasture
- Indoor round pens
- Less birds
- Manure auger
- Level floors in indoor stalls

Middle target circle:

- Separate stall/run barns for each team
- More stalls with runs outside
- More stall/runs
- Livestock expansion: separation by use and/or needs
- Bleacher access, portable staircase
- Quarantine areas
- Drain tile by outdoor runs, improve outdoor drain
- Good roads
- 3 indoor arenas
- Night time lighting
- 3 indoor arenas
- Outdoor manure pits
- Ventilation barn and arena
- Dust control
- Dust control
- Fencing and gates around whole facility
- Vet lab separate from CR office
- Facility manager has separate office
- Feed stalls in each stall section
- Feed storage and bulk bin
- Student hay

Inner target circle:

- More outdoor runs
- More indoor stalls
- Another indoor arena
- New equipment, more of it
- Indoor arena, portable storage for additional needs and uses
- Direct access from additional stalling areas to new indoor arena, specifically for training program
- Bigger tach rooms and more of them
- More tack rooms and storage
- New drag
- New drag

Keep

1. Keep professors
2. Keep collaborating with outside entities
3. Keep ranch horse team
4. Degree flexibility
5. IHSA team
6. Cooperative spirit
7. Programs: ag business, animal science
8. Rodeo, equine, livestock teams
9. Rodeo team
10. Staff is great
11. Ranch horse team
12.

Toss

1. The birds
2. Tenure of staff, we need accumulation of experiences
3. Market for graduates
4. Community garden
5. Dirt floors in stalls
6. Dust
7. Drag
8. Livestock (cattle) handling facilities
9. Too many entry points
10. Separate space in ansi lab and arena
11. Registration and stall office
12. Repair corrals and handling areas?
13. Lack of hay storage
14. Bleacher seating access
15. Makeshift horse stalls
16. Stairway to bleachers
17. Bucking chutes
18. Animal handling equipment/broken fences, etc
19. Drainage from livestock pens
20. Bulky temporary stalls
21. Outdoor arena (replace with 2nd indoor arena)
22. H2O outdoor arena

Create

1. Market for graduates
2. Agripreneurial Opportunities
3. Large animal tech
4. Incentivizing kids to stay local for school instead of moving away
5. Expand facilities to expand subject base, ex. Meat lab
6. Agritourism
7. Ability to host national little britches rodeo finals
8. Equipment for new arena (2nd and 3rd tractor, drag, etc)
9. Get more students involved
10. Focus more on livestock handling with students
11. Cross-generational programs partner with FFA and 4H, see benefits earlier
12. More pre-vet options
13. Equine runs
14. Better bucking chutes
15. Indoor arena livestock
16. Separate lab/arena area
17. Calf working facilities
18. Wet lab for classes
19. Animal production facilities
20. Livestock show arena (covered)
21. Warm up arena for horse shows or ropings
22. Stall barn with runs
23. Registration office at entrance to complex
24. Livestock barn for show team animal handling, judging and meats lab
25. Change livestock shed to an actual working livestock facility
26. 3rd smaller livestock/equine rail class arena (example: CSU Adam Adkins arena)
27. Turnout space for horses
28. RV hookups
29. Covered stalls
30. 2nd indoor arena with no dust
31. Registration office at entrance to complex
32. Rodeo indoor arena + ranch horse/IHSA indoor
33. 2nd large indoor arena
34. Covered arena for multipurpose use
35. Stall/runs (like blue roof ones) to house 250 horses outdoors
36. More livestock pens
37. Arena (indoor) space for round pens (temp and permanent)
38. More covered horse runs
39. Outdoor covered horse stalls
40. Better/different ground for outdoor arena
41. Hay storage
42. Hay storage

Keep – Noon

1. Ansi lab
2. Animal Science area
3. Outdoor warm up areas
4. Pens
5. Stall Barn
6. Vet RX area
7. Indoor arena
8. Wash racks
9. Alley under bleachers
10. Arenas are both nice, classrooms and class sizes are good

Toss – Noon

1. Live stock pens, the concrete floors aren't good for them
2. Separate vet room and office
3. Ladder from floor to grandstand, replace

Create – Noon

1. More horse runs
2. Create better livestock handling facilities for the types of livestock we have
3. 2 indoor arenas
4. Dust control inside and out
5. More indoor arena space
6. Better arena footing, more versatile
7. New outdoor stall space graded for proper drainage
8. More concrete poop pits
9. Better outdoor stall drainage
10. More livestock pens
11. More wash rack space
12. Put mats in stalls over dirt
13. Better arena drag
14. More round pens
15. Facilities for show cattle, goats, sheep, pigs
16. More stalls and horse pens
17. Put matts in stalls over dirt

Keep 7:30-9:30

1. Seating in arena is good
2. Arena/community use
3. Location of restrooms
4. Big open ag lab
5. Location
6. Round pens
7. Outdoor arena
8. Arena size is good
9. Outdoor arena
10. Round pens
11. Arena
12. Main Arena
13. Keep indoor arena but maybe expand it to accommodate more activities
14. Newest (blue roof) stall barn
15. Indoor arena
16. Indoor arena
17. Stalls for student's horses
18. Stall Barn
19. West lean to pens
20. Outside runs
21. Indoor stall with dirt floors are nice
22. Animal science lab
23. Animal science lab space
24. New lean-to runs are nice
25. Arena with changes
26. Livestock pens
27. Attached small barn
28. Roping chute lead up
29. Working equipment for arena is good
30. Ag classrooms
31. Pasture space
32. Classroom space
33. Covered horse runs
34. Pasture
35. Livestock holding facilities with changes
36. Animals
37. Vet room
38. Trailer parking space

Toss 7:30-9:30

1. Work on community outreach so we know more about programs, degrees, activities
2. Covered arena for multipurpose
3. Pigeon
4. Covered announcer stand outside
5. Potholes
6. Road in the back – redesign
7. Community Garden
8. Community Garden

Create 7:30-9:30

1. Updated technology in classrooms/computer labs
2. More scientific and technical equipment in lab
3. Agricultural mechanics space and/or programming
4. Program marketing improvement
5. Ag accounting programs
6. Ag law class
7. Farm to plate programs
8. Meats judging team
9. Good drag
10. Hydroponics room
11. Meats Lab
12. Meats Lab
13. More range or agronomy focus
14. Best practices animal handling facilities
15. Ag building and vet room a/c
16. Air conditioning in classroom offices
17. Ventilation
18. Air conditioning
19. Trailer hookups
20. One way in and out for biosecurity
21. Parking and hook ups for trailers in pasture
22. More classroom space connected to lab/arena
23. Fix it place
24. Greenhouse
25. Teaching green houses
26. Science wet lab
27. More livestock friendly lab space with flexible but fixed equipment
28. Green house/soils area
29. More trailer parking for big events
30. More covered stalls
31. More panels to use
32. Work on community outreach so we know more about programs, degrees, activities
33. Manure holding space
34. Center pivot
35. Smaller door
36. Need RV hookups

Rodeo – Keep

1. Rodeo team
2. Partnership
3. Community and alumni support
4. Pressure from community groups
5. Amount of livestock and quality
6. Pastures
7. Pastures
8. Outdoor runs
9. Need to cover outdoor arena
10. Outdoor stalls
11. Add outdoor stalls and runs
12. Update outdoor arena- more user friendly
13. Arena
14. Pens for rodeo kids
15. Outgrown facilities
16. Tack rooms
17. Indoor arena
18. Indoor arena works well
19. Tack room
20. Outdoor arena
21. Tie up area under bleachers
22. Multi use of purpose, functionalities of facilities
23. No complete redesign – keep existing concept

Rodeo Priorities

Outer target circle:

- Exercise track for horses
- Ability to host CNFR
- More stock pens in and out
- Increase pen space for stock
- Place to house bucking bulls on campus
- Gate on south end
- H2O hydrant in arena
- Scoreboard times
- Feed lot setup that feeds from trap to arena and each pasture

Middle target circle:

- Video viewing area
- Rough stock locker
- More water hydrants
- Heated automatic waters in all pens and stall with shutoffs
- West alley quarantine area
- Quarantine area
- Feed sheds

Inner target circle:

- Fix drainage issues
- Increase stall capacity, benefit students
- More stalls “covered” with nice ground
- Portable bucking chutes
- New bucking chutes and back pens
- New bucking chutes
- Indoor bucking stock pens
- More pens
- 12’ alley behind
- More bucking chutes 10’ – 15’ south
- Eliminate existing stripping chute
- Second indoor arena
- Practice arena, Metal structure limited seating, (ex. Sheridan college pre-engineered building)

MEETING MINUTES

PROJECT:	LCCC AG & Equine Master Plan
MEETING MINUTES RECORDED BY:	Kevin Nelson
MEETING PURPOSE:	Visioning Kickoff
MEETING DATE:	September 3, 2019
ATTENDEES:	See attached Attendee List

Advisory and Industry

Toss Out:

- Livestock holding – asphalt not good.
- Hay Storage:
  - ___ containers not good.
  - Four post pole barn would be better.
  - Hay lockers.
- Community Outreach.
- Pigeons – disease control.
- Covered announcer stand.

Site:

- Access Control:
  - 1 way in for Biosecurity.
  - No sneak in back.

Create:

- Arenas:
  - Same second size less seating.
  - Footing difference.
  - 3rd warmup arena classes.
  - xxxxx just for livestock, production classes.
- Casper Student Ranch/Farm:
  - Meat locker – entire process.

- Outdoor Arena Ground:
  - Possibly not needed if good 2nd indoor.
- Pens:
  - Demand for horse space.
  - Outdoor and covered – like the new blue.

  - Four posted with alley in middle.
  - Horse barn at Douglas.
  - Garage doors.

Programs:

- AG Accounting:
  - ____
  - Ranchers/Farmers.
- Law Class.
- Range and Acronomy Focus:
  - Federal owned land.
  - Can only keep leases with range background.
  - Pivot sprinkler for fields pasture.

END OF MEETING MINUTES

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CUSHING TERRELL

MEETING MINUTES

PROJECT:	LCCC AG & Equine Master Plan
MEETING MINUTES RECORDED BY:	Kevin Nelson
MEETING PURPOSE:	Visioning Kickoff
MEETING DATE:	September 4, 2019
ATTENDEES:	See attached Attendee List

Advisory and Industry

Location:
- Away in its own spot (planned road would cut through).
- AG master plan will ___ on campus ___.
- Livestock hold with changes.

Arena Seating:
- Good amount and positioning up.

Roping Lead Up:
- Concrete.

Vet Room:
- Heated, good place to meet.
- More than a Vet Room.

AG Classrooms:
- Good size location.
- Could use A/C.

Lab:
- Heated cozy, wash racks, community hangout versatile xmas party, meeting, judging, stalls.
- Big and heated – gathering for large groups.

Indoor Stalls with dirt floors ____ horses.

Stall Barn Indoor:
- Covered, size, low maintenance.
- Dirt floors replaceable.
- Versatile for all animals.

Arena:
- Size, width good team roping, seating and footing for rodeo (not livestock).
- Tie up under seating versatile for access, storage.
- Storage – need more small spaces (dust control).
- Watering/Cleaning – difficult with electrical and fire alarm.
- Good temperature control stays cool.
- Animal control works well.

Programs:
- Degree Flexibility: Hands on internships.
- Cooperative Spirit: Equine AG Rodeo work together.
- AG Business/Animal Science: Most active/consistent.
- IHSA Team: Brings people to school.
- Ranch Team: Events, brings people in.
- Rodeo Team: Time in facility helps to be better.

Toss:
- Dust.
- Dirt floors in stalls – cleaning multiple times a day.
- Urine build up, bad ventilation.
- Windows difficult to access.
- Hard to keep dry.
- One preference concrete with mats.
- Dark, little daylight.
- Drag: Old constant maintenance.

Drainage for Livestock Pens:
- Alleyway in back.
- Drain gets clogged.

Bulky Temp Stalls:
- Heavy hard to put up (good for flexibility).
- Bucking Chutes: Not holding together when animals move around.

Make shift horse stalls:
- Extra boarding.
- Not safe set up.

Outdoor Arena:
- Not used much for school.
- Huge dust problem.
- 300 gal tank on drag.
- Standing water.
- Stairway access from floor.

Livestock Holding Facilities:
- Would like more.
- Can't work safely.

END OF MEETING MINUTES

The foregoing is the author's understanding of the content of this meeting. If the attendee's understanding differs from the above, please respond to the author within ten working days.

CUSHING TERRELL

CTA

Subject: LCCC Ag & Equine Master Plan Page: ____ of ____

Project No.: ____ By: ____ Date: __/__/__

Project Name: Visioning Kick Off

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PIONEERING ENVIRONMENTS

2019.09.16

LCCC Ag & Equine Assessment, Temple Grandin

Notes:

Expand stalls

- Along same run, with a different type of construction than existing (not-pre-stress)
- Duplicate footprint throughout
- For versatility of animals, provide same size throughout, install expanded metal mesh at bottom 6’ to house smaller animals (pigs and goats), but use expanded metal so hooves and horns don’t get caught.
    - Use flat expanded metal – use normal/standard widths so no sharp edge cuts
    - Versatility allows for ebb and flow of show stock and rough stock
    - Add more “pig pens” – 20 heads per pen – field fabricated
    - 100sf per head to allow ground to dry, 12sf for short term holding
    - New pens to be designed with decent alleys (12’) to accommodate any animal size, any time
    - 2 animals per stall area – alleys feed to both a large and small animal squeeze chute for flexibility
- Consider planning for separate facilities (stall buildings) for rodeo and equine
- Provide separate quarantine area

Provide Hay/Grain Storage

Keep existing roads – add gates – overlap gates by 2’ with drop locks

Trailer parking

- Flood zones provide a good area for trailer/RV parking – need RV hookups
- Large area needed to accommodate events
- Ideally animals are unloaded onto grass/non-paved surface

Arena Expansion

- Opportunity to put it on east end
- This would accommodate rodeo events at the same time, still a lot of flexibility between old and new facilities and the site won’t be boxed in

Classrooms

Animal Science Lab

- Separate animal science from classrooms – mudroom
- Provide more drainage (argument for building new)
- Trench drains would be ideal

Drainage needs to be improved, especially at barns

Control vehicular traffic through the site

Organize expansion in phases – ideally plan to maintain operations during construction

For animal movement – see Kuner feedlot

- Cattle handling
- See Temple’s sketch overall 50’-60’ long x 12’ radius to turn animals – 3 gates for controlling movement (12’ wide alleys, 10’ smallest radius, 12’ max)
- For similar facilities – see Adams Atkins Arena at CSU’s ARDEC Campus, see meats lab
    - Adams Atkins Arena includes horse stalls inside the arena – for benchmarking – this is the “Chevrolet” of arenas
    - Includes high roof and good ventilation

Technical animal handling

- Gate in / gate out
- 12’ alley with 14’ gate – still covered when opened on an angle
- Gate hinges – weld collar on the inside
- Wash rack design and destination – be aware of environmental laws, trench drains, discharge to (city sewer?)
- Specialized concrete floors (show cattle, indoor) – stamped concrete with metal mesh pattern – good in vet office areas, good longevity, better for animal footing
- Use permanent rails (field fabricated, welded panels) in versatile pens, but portable sheep pens/chutes work great – provide space to store them when not in use – see Sydell portable corral system, Premier1Supplies.com for portable sheep pens
- Animals like to return to where they came from – work the pivot
- See Sidwell sheep in Eaton, CO as reference
- Existing east stall is well constructed but the panels are terrible

Be aware of the wind – note wind tunnel effect, snow drifting

LCCC wants to build the precedent for other facilities

Can we build this in a scalable way?

MEETING MINUTES

PROJECT: LCCC AG & Equine Master Plan

MEETING MINUTES RECORDED BY: Jim Beal

MEETING PURPOSE: AG Session

MEETING DATE: October 16, 2019

Hold Panel Storage.
- Panel trailers?

Rose:
- Some advantages to keep wet labs in Science Building.
  - Similar equipment/science collaboration.
- Use half of ASC for Necropsy and other half for wet labs?

Confine AG Environment in New Mexico.
- Growing plant foods.

Want a better room than PF307.
- White boards.

The Greenhouse requires whole new program and different faculty.
- Talk to Bill Zinc about demand to grow plants.
- Multi-use Facility.
  - Offices.
  - Wet Lab.

Faculty offices should be co-located with use.

3 Horses/Student?
40 is maximum rodeo ____ we need.
Wet Lab – more like a Biochem Lab.
Team based learning for 24-30 students.

Pathfinder 305:
- Active learning.

Four new active learning classrooms:
- 24-30 students.

MEETING MINUTES (Continued)

"For our courses a computer lab is not a good ____"

Multi-use Live Stock:
- Similar to 4-A.
  - 60' W x 120' L
  - 120' x 120' for whole building
  - 1/2 dirt, 1/2 concrete

EQUINE

Equine Teaching Horses:
- 52 inside.

3-50' Round pens are better than 2-60'.
- 40' is still good.

Colts in barn.
IHSA along outside of barn.
Ranch horse in ____ next to new arena.
Rodeo east of _____.

RODEO

Need horse quarantine.
Need cattle quarantine.

Practices need to be in afternoon so Academics can happen in morning.

Ideally new large Arena would be 20' wider than existing.

Plan for 400 trailers worst case:
- How many can we fit?
- Park on pasture as needed?

Rodeo Trainers: 40.
Ranch Horse Trailers: 15.
Found 1 tree along road.
- Horses get out.

Run hay lockers down middle of stall sheds?
Hay lockers for students:
- 6' x 12' (confirm with Bruce).

No bucking chutes in new Arena.
Wash Racks and Tie Runs in new Arena:
- No window stalls.

R___ fence to a trap:
- Bring water to each pasture.

END OF MEETING MINUTES

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MEETING MINUTES

PROJECT: LCCC AG & Equine Master Plan

MEETING MINUTES RECORDED BY: Jim Beal

MEETING PURPOSE: C.S.U. Tour

MEETING DATE: October 15, 2019

Picket Arena (from Google Earth: 150'W x 200' Seating 45'-50' Wide)

The new Temple Grandin Building will be 160 x 80, $5.8M.

CSU has 15 Program Horses:
- Western - leased.
- English - owned.

40 other horses (didn't get type)

30 Polo Ponies:
- JV and Varsity teams.

10 Therapy Horses:
- Not CSU's.

20 from "Right Horse" Initiative:
- Rescue program for adoption.
- Class to rehabilitate.

Everything must be ADA Compliant:
- Pay attention to the material leading me into barns.
- Industry people access.

5-7 POW Program Horses.
Not more than with xxx young horses.
Horses need daylight.
They want to see and talk to other horses.
Polylast – rubber surface in Arena.

Wish the arena was 10 foot longer in the AA Arena.
Negative xxx stalls are in Arena.
Noisy.

Terms Tech Stalls:
- Used prefort poly xx for stalls all the programs are physically separate.
- ISO pens.

Hands on Education
Legends of Ranching Barn.
Don't use wood in stalls due to bid Security.
Concrete floors are better than asphalt for durability.
Bottom xxx too low – 10', should be 14-15' high.

Insulated steel panels on arena renovation.

CSU's goal is 8-10 students in riding classes.

CSU is about built cut.

LCCC thoughts:
- Liked the idea of a classroom in Arena.

Colt Training:
- Need round runs and enough space to ride in multi-purpose arena.

Teaching spaces in AA Arena is too small. 60' x 175'.

Like clerestory windows.

END OF MEETING MINUTES

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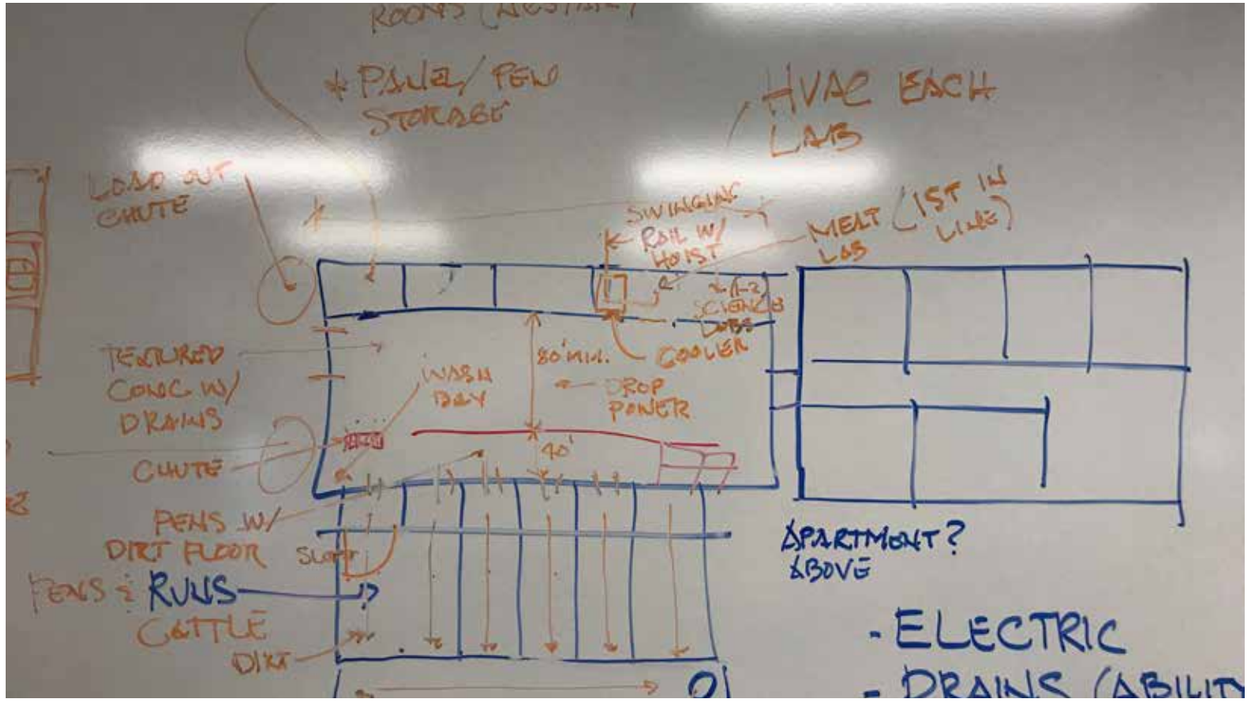
CUSHING TERRELL


* PANEL/ PEN STORAGE
HVAC EACH LAB
LOAD OUT CHUTE
SWINGING RAIL W/ HOIST
MELT LAB (1ST IN LINE)
TEXTURED CONC W/ DRAINS
WASH BAY
80' MIN.
DROP POWER
COOLER
40'
CHUTE
PENS W/ DIRT FLOOR
SLOPE
PENS & RUNS
CATTLE
DIRT
APARTMENT? ABOVE
- ELECTRIC

MEETING MINUTES

PROJECT: *LCCC Ag & Equine Master Plan

MEETING MINUTES
RECORDED BY: *Jim Beal

MEETING PURPOSE: *Meeting w/ Advisory Groups

MEETING DATE: *11-21-19

ATTENDEES: *see sign in sheet
*
*

Update on Master Planning process and current direction.

Priorities
Need indoor arena because of the additional # of animals on campus
The highest priorities should provide the best programmatic flexibility
- Help build the current programs

New Arena
The tractor / equipment could be shared between arenas
- 12' wide and as high as possible

Could the new arena be smaller than the old?
Could animal science lab just be a maintenance area?
The new arena needs to be wider than existing for team roping
If the new arena were too big, could always panel it off to make it smaller
No stalls in the new arena
we don't need that much more building than actual arena footage
round pens could be portable and stay inside proper arena. Arena could be shorter
1/2 of the horse stalls at the same time as the new arena
70 more horses right now
put the first row in
#1 - arena, stalls, and parking, and livestock addition
#2 / #3 - greenhouse / horticulture program (no other school has one in WY)
develop programs that draw students
#3 / #2 - multi use livestock
ask the advisory board about priorities

trailer spaces should happen in conjunction with horse stalls
ASL expansion goes away - don't need with arenas connected together

END OF MEETING MINUTES

The foregoing is the author's understanding of the content of this meeting. If the attendee's understanding differs from the above, please respond to the author within ten working days.

CUSHING TERRELL

cc:

MEETING MINUTES

PROJECT:	*LCCC Ag & Equine Master Plan
MEETING MINUTES RECORDED BY:	*Jim Beal
MEETING PURPOSE:	*Meeting w/ Ag, Equine, & Rodeo Programs & President's Cabinet
MEETING DATE:	*11-21-19
ATTENDEES:	*see sign in sheet * *

General comments:

- There are minor differences in cost between the schemes
- Only need one quarantine - locate remote, put on northeast corner
- From a scientific perspective, biosecurity is the same each scheme
- Need more turnout pens next to stalls
- New arena would be equine focused but needs to be flexible for many uses / old arena would be rodeo focused
- Like classrooms inside new arena
- Design for what we do today, day to day and not the intermittent events

Site Option #1

- The National Wester Complex is not an apples to apples comparison w/ LCCC
- Addresses the infrequent events well, but this scheme is not preferred because it does not address the day to day activities the best.

Site Option #2

- Stalls on #2 is preferred - like having 3 sets of outdoor stalls instead of 2 on #2
- Horse stalls on #2 preferred
- Presentation from the highway needs to be addressed

Site Option #3

- The preferred scheme with modifications.
- Expanding the small arena / Animal Science Lab is a small priority because the arenas are connected
    - Could animal science lab just be a maintenance area?

- Pros
    - Closeness of the classrooms for educational purposes

    - Keeping outdoor arena is a positive
    - Easier supervision for faculty
    - Efficient management and can share equipment

- Cons
    - Need quick unloading next to indoor arena (in place of turn out pens)
    - 18 trailer parking spaces next to road not necessary
    - Short term, move in / move out parking for truck & trailers is not resolved
    - Programs are still on top of each other like now, but the positives outweigh the negatives of the congestion
    - Presentation from the highway needs to be addressed
    - Need to pay attention to where entrances are

Priorities

Faculty / Student Priorities:

New Indoor Arena is the highest priority
Horticulture - marketability is good right now, a high priority (no other school has one in WY)
The indoor arena is a priority because of the additional # of animals on campus
The highest priorities should provide the best programmatic flexibility

- Help build the current programs

New Arena
#1 Priority - arena, stalls, and trailer parking, and livestock addition

- The tractor / equipment could be shared between arenas
    - 12' wide and as high as possible
- Could the new arena be smaller than the old?
- The new arena needs to be wider than existing for team roping
- If the new arena were too big, we could always panel it off to make it smaller
- No stalls in the new arena
- We don't need that much more building than actual arena area
- The round pens could be portable and stay inside proper arena, and therefore the arena could be shorter.

Build 1/2 of the horse stalls at the same time as the new arena

- 70 more horses right now
- Maybe put the first row in

Future trailer spaces should happen in conjunction with future horse stalls
#2 / #3 Priorities - greenhouse / horticulture program develop programs that draw students
#3 / #2 - multi use livestock

President's Cabinet Priorities

Parking

- Currently parking is at capacity and the County requires that parking that is lost must be replaced.

Address the safety issues with the rodeo chutes
Look at the operations / maintenance cost for a greenhouse vs. multi-use livestock facility
Centralized HVAC for the classroom building

thank you.

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