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Colorado State University is requesting approval of the program plan for the Meridian Village Housing Development. The project will construct approximately 1,400 to 1,600 beds in two phases, with associated dining and infrastructure improvements geared toward returning students and student success. Phase I will construct approximately 1,100 beds and improve pedestrian and bicycle transit around the project site with the redevelopment of a portion of Hughes Way and the realignment of Meridian Avenue to the east side of the project site. Parking to accommodate the additional students will be provided with improvements to Hughes Way and the Braiden Hall Parking Lot. To alleviate some of the dining capacity burden on the Meridian Village site, Phase I will also include upgrades to the existing Ram’s Horn Express (REX) in Academic Village by adding an express pick-up component. Phase II will construct an additional 300 - 500 beds as well as a new dining center, dependent on continued demand for on-campus housing for new and returning students.

The Meridian Village project will redevelop the existing Newsom and Aylesworth Hall sites into a new residential village concept, addressing current deficits in both housing and dining capacities. Newsom and Aylesworth Halls are currently low-density developments and, while they served CSU well for over fifty years, they have become outdated, inefficient and maintenance intensive buildings with ever-increasing operational costs. Meridian Village will build additional capacity for housing and dining, while staying centered on Housing & Dining Services’ Vision, Mission and Priorities, and contributing to CSU’s student success initiatives.

**Meridian Village will be designed to accomplish the following big-picture goals:**

1. Accommodate housing capacity for all first-year students.
2. Allow for greater accommodation of returning students, building on recent University Housing initiatives and a commitment to student success goals.
3. Foster the CSU Principles of Community: inclusion, integrity, respect, service, and social justice.
4. Accommodate additional housing and dining capacity to provide swing space in times of campus-wide housing shortages.
5. Focus on furthering cross-disciplinary academic integration within the residential experience beyond program specific opportunities.
6. Update housing inventory through the replacement of aging facilities with significant deferred maintenance backlogs.
7. Promote accessibility for a socio-economically diverse student body.
8. Promote occupant health and wellness.
9. Provide for financial self-sustainability of the housing and dining system, critical for continued reinvestment.
10. Demonstrate and integrate sustainability from an environmental and social, student-engagement, and educational lens.

Approximately 20% of current residence hall students have returned to the residence halls after their required first year, which is growth of 5% over the past seven years. This growth has been hard earned, as many efforts were put forth to change the "one and done" culture that used to surround residence hall living. Students have indicated that cost, location, and where friends choose to live are primary drivers for why they choose to stay on campus beyond their first year. Location, access to parking, amenities, and quality property management are important to students. By paying attention to these factors, more returning students currently live on campus than was seen seven years ago.
Aggie Village apartments, which opened Fall 2016, was the first on-campus apartment community designed for undergraduate students who had completed their one-year live on requirement. Demand for Aggie Village has exceeded capacity every year of operation, with many residents choosing to return for multiple years. The development of Meridian Village will provide enough space to house all first-year students and a strong second-year residential program, which will then allow Aggie Village to better meet the on-campus housing demand of juniors, seniors, and graduate students.

The construction of Meridian Village will alleviate large deferred maintenance backlogs in Newsom and Allison Halls. Newsom Hall is the location for Phase II of Meridian Village and Allison Hall is slated for deconstruction following the completion of Meridian Village. Recent studies using the Association of Physical Plant Administrator (APPA) standards rate each of these buildings as a Level 5 in Crisis Response. These buildings have also been evaluated as having a Facilities Condition Index (FCI) of “poor”. These studies indicate that the reinvestment to these buildings over the next 10 years would be over $23M to bring their condition to the APPA “Good” status, while having an annual maintenance budget just under $1M per building per year of operation.

- Aylesworth $12M DMB FCI 37%
- Newsom $11.7M DMB FCI 36%
- Allison $16M DMB FCI 48%

The estimated budget range for the entire project is $200M-$205M for approximately 1,400 beds and $219M - $224M for approximately 1,600 beds, with Phase I estimated at $130M-$140M in both scenarios. A design-build (DB) team has been selected and has worked with Housing & Dining Services to develop the program plan. The DB team will move into design and construction after Board of Governors approval. The project will be financed with bonds supported by Housing & Dining services, as well as funding from the students and university for transit infrastructure enhancements. With Board of Governors approval completion of Phase 1 is expected in Aug 2022. See section 4.4 for a detailed graphic schedule.
2.1 HOUSING & DINING SERVICES HISTORY, ROLE and MISSION

COLORADO STATE UNIVERSITY – WHO WE ARE
Founded in 1870 as the Colorado Agricultural College, Colorado State University is now among the nation’s leading research universities; employing approximately 1,600 faculty members in support of the 32,000 undergraduate, graduate, and professional students enrolled at the university.

Colorado State University Mission: Inspired by its land-grant heritage, Colorado State University is committed to excellence, setting the standard for public research universities in teaching, service, and extension for the benefit of the citizens of Colorado, the United States, and the world.

COLORADO STATE UNIVERSITY VALUES
• Be accountable
• Promote civic responsibility
• Employ a customer focus
• Promote freedom of expression
• Demonstrate inclusiveness and diversity
• Encourage and reward innovation
• Act with integrity and mutual respect
• Provide opportunity and access

HOUSING & DINING SERVICES – WHO WE ARE
A member of the Division of Student Affairs, Housing & Dining Services (HDS) is a multifaceted auxiliary organization responsible for management, finance, administration, and program development of all on-campus housing facilities, including residence halls, university apartments, residential dining, and the CSU Mountain Campus. Areas within HDS include the RamCard Office, Communications and Sustainability, HDS Facilities, HDS Human Resources, Technology Services, Workplace Inclusion and Talent Management, Outreach and Special Projects, and Administration.

Approximately 450 full-time staff and 1,700 hourly and student staff serve the nearly 8,000 students who live on campus, as well as numerous campus and community guests.

Housing & Dining Services Mission: We create dynamic housing and dining experiences that enhance personal growth and global engagement.

• Division of Student Affairs Mission: The Division of Student Affairs fosters a campus community that supports students in the development of their unique potential, inspiring them to be active learners, successful graduates, and engaged global citizens.

Housing & Dining Services Vision: To create the best living and learning experience in higher education.

• Division of Student Affairs Brand Promise: We inspire and support active learners, successful graduates, and engaged global citizens

Our priority is providing our residents and guests with safe living environments, quality dining, and exceptional out of classroom experiences. We accomplish this through sound fiscal
and operational management strategies, and an emphasis on the development of programs and services that are designed to enhance personal growth and global engagement.

**HOUSING & DINING SERVICES VALUES**
- Customer Service First
- Commitment to Students and Staff
- Integrity, Respect, and Teamwork
- Inclusiveness and Diversity
- Innovation
- Stewardship

**HOUSING & DINING SERVICES KEY PRIORITIES**
- Provide excellent services to students, staff and customers.
- Create thriving, healthy work environment for our staff.
- Develop and enhance innovative programs, experiences, and residential learning communities in support of university priorities.
- Be responsible stewards of our fiscal, physical, environmental, and human resources

**2.2 PROGRAM NEEDS and TRENDS / FUTURE OPPORTUNITIES**

**HOUSING & DINING SERVICES MASTER PLAN**
To support the University’s goals around recruitment and retention, HDS has developed a master plan to guide new construction and renovation projects for the next 3 to 15 years. The master plan is comprehensive, encompassing multiple construction and renovation projects for new and existing halls, apartments, dining centers, and the Mountain Campus. HDS is committed to sustainability and has made green building and LEED Gold certification a priority on all new construction and renovation projects. This information, including the development of Meridian Village, has been included in the most recent version of the Colorado State University Physical Development Master Plan “Roadmap for the 21st Century” issued in December 2014. [https://www.fm.colostate.edu/sites/default/files/2014_Masterplan.pdf](https://www.fm.colostate.edu/sites/default/files/2014_Masterplan.pdf)
Due to current deficits in both housing and dining capacities on CSU’s main campus, the Meridian Village project was initiated to redevelop the existing Newsom and Aylesworth Hall sites into a new residential village concept. Newsom and Aylesworth Halls are currently low-density developments and, while they served CSU well for over fifty years, they have become outdated, inefficient and maintenance intensive buildings with ever-increasing operational costs. The purpose of Meridian Village is to build out additional capacity for housing and dining accommodations while staying centered on HDS’ Vision, Mission, and Priorities.

STRATEGIC DRIVERS
A Strategic Asset Value (SAV) workshop was conducted by Brailsford & Dunlavey with University stakeholders to identify and prioritize the strategic objectives that the Meridian Village project must address to help advance the University’s permanent mission and strategic objectives. The SAV story guides the subsequent research and recommendations.

ON-CAMPUS HOUSING AND STUDENT SUCCESS
• Focus on furthering cross-disciplinary academic integration within the residential experience beyond program specific opportunities.
• The new development must foster community through intentional neighborhood creation with associated support services and amenities.
• Foster indoor connections to outdoor spaces and adjacent student life facilities to promote student health and wellness.

Housing & Dining Services plays an integral role in student success by cultivating student learning, providing student support, and developing student leaders and student employees to meet the university strategic goals, diversity and inclusion plans, and overall mission and vision of CSU. This is accomplished by maintaining HDS buildings at a high standard, insuring high levels of cleanliness, providing spaces that support both community development and academics, and through the work of University Housing staff. These staff members provide exceptional support to the students in the residence halls in multiple ways; (1) Working with academic partners in 11 different Residential Learning Communities (RLCs), (2) Partnering with others across campus on five different themed communities, and (3) Through the development of a Residential Curriculum program “Live and Learn”, which provides residence hall staff members with materials that support campus-wide student success initiatives while also meeting the developmental needs of the students.

These efforts have culminated in residence hall students obtaining higher grade point averages across all undergraduate class groups when compared to their off-campus counterparts. Recent data shows that students who live on campus have higher GPA’s and are more likely to graduate than students who live off campus. In addition, residence hall students persist in their work towards a degree at a higher rate than those who live off campus and more likely to graduate in four years.

WHY STUDENTS CHOOSE TO STAY ON CAMPUS
• CSU is committed to ensuring adequate supply for the live-on requirement and enhance the second-year student experience.
• To allow for greater accommodations of returning students,
facility and program quality must take advantage of Meridian Villages’ location and access to campus amenities to compete with off-campus housing options.

- University Housing should provide a deliberate and differentiated sophomore experience, which is currently missing from the program.

Students have indicated that cost, location, and where friends choose to live are primary drivers for why they choose to live on campus beyond their first year. Data also indicates that location, access to parking, amenities, and quality property management are important to students. By paying attention to these factors HDS has been successful in attracting more students to live on campus over the past seven years.

These factors were applied to the development of Aggie Village apartments, which opened Fall 2016, and was the first on-campus apartment community designed for undergraduate students who had completed their one-year live-on requirement. Demand for tenancy at Aggie Village has exceeded capacity every year of operation, with many residents choosing to return for multiple years.

Through the development of Meridian Village, it is planned to provide enough space throughout the residence halls system to provide housing for all first-year students as well as a strong second-year residential program, which will then allow Aggie Village to better meet the on-campus housing demand of juniors, seniors, and graduate students.

ENROLLMENT GROWTH AND MERIDIAN VILLAGE CAPACITY
- Primary residents will be first and second-year students but should allow for flexibility to respond to changing enrollment patterns and student preferences.
- Meridian Village should accommodate additional housing and dining capacity that will serve as swing space to account for campus-wide housing shortages.

As of fall 2018, CSU captures approximately 26% of its student population in the on-campus residence halls. With the first-year live-on requirement, 98% of first-year students reside on campus. First-year students occupy 71% of CSU’s housing supply, leaving 29% for returning undergraduate and graduate students. While enhancing the sophomore experience with a distinct second-year program was identified as a strategic priority of the institution, CSU’s current housing offerings provide limited options for this environment with only a 13% capture rate. CSU’s second-year capture rate is below the level typically seen at comparable institutions.

The initial sizing of Meridian Village at 1,400 beds will add to the on-campus housing supply. This preliminary bed count, however, will only amount to 600 net new beds with Newsom and Allison Halls scheduled to close as phases 1 & 2 of the Meridian Village project open. The 600 net new beds will only allow CSU to maintain current capture rates if projected headcount enrollment growth of 1.25% through fall of 2024 is realized. While the overall bed supply will increase, the proportion of returning students living on campus will actually remain consistent, not allowing for the achievement of this goal.

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Capture Rate</th>
<th>Housing Residents*</th>
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<tbody>
<tr>
<td>First-Time FR</td>
<td>5,324</td>
<td>98.0%</td>
</tr>
<tr>
<td>SOPH</td>
<td>6,566</td>
<td>13.4%</td>
</tr>
<tr>
<td>JUN</td>
<td>5,465</td>
<td>9.5%</td>
</tr>
<tr>
<td>SEN</td>
<td>7,026</td>
<td>6.4%</td>
</tr>
<tr>
<td>GRAD / Other</td>
<td>4,311</td>
<td>6.4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28,691</td>
<td>25.6%</td>
</tr>
</tbody>
</table>

*excluding graduate and family apartments
Given the competitiveness and growth in the off-campus market surrounding CSU and the strategic priorities of the institution to offer more options for returning students to boost retention rates, capacity for the Meridian Village project is factoring a 15% on-campus capture rate for second-year students pending future enrollment and housing demand. At the projected enrollment levels this would require an overall capacity need within Meridian Village at approximately 1,600 beds.

**AFFORDABLE STUDENT HOUSING**

- Pod style units and arrangements that can attract a mix of students and affordability levels should be considered.

The availability of private student-oriented housing built in Fort Collins since 2010 currently exceeds 2,200 beds while demand for on-campus housing remains strong. As reference above, more students are returning to live on campus beyond their first year, and demand for the Aggie Village apartments remains high.

Off campus student housing properties that lease by the bed to single students are reporting increases that range from 0%-6%, with those properties closest to campus reporting an actual increase of 5%. Proximate, student-oriented properties are renting at a premium price point while maintaining low vacancy rates.

The lowest monthly rate reported from most recent survey data of off-campus properties was $609/month, and the highest reported monthly rate was $1,895/month. By comparison, the lowest residence hall room rate at CSU, utilizing nine months for the academic year, for 2019-2020 is proposed at $664/month, and the highest residence hall room rate is proposed at $1,098/month.

**FINANCIAL STABILITY WHILE MEETING DEMANDS**

- Financial self-sustainability of the housing and dining system is critical for continued reinvestment.
- Projects do not need to stand alone but must maintain a healthy system-wide performance.

Housing & Dining Services is a fully self-funded auxiliary and serves as a strong campus partner not only by providing support for student success initiatives, but also in providing financial support to the broader university. In FY18 HDS paid just over $12M (14.7% of revenue) in University Annual Services and provided $1.7M (1.9% of revenue) in direct support of Division of Student Affairs initiatives, residential academic partnerships, and campus programmatic support. Because the services offered are all self-operated, HDS is able to commit these resources back to the university rather than having them directed to an external partner’s bottom line.

The construction of Meridian Village will alleviate large deferred maintenance backlogs in Aylesworth, Newsom and Allison Halls.
Originally built as a residence hall but soon thereafter converted, Aylesworth Hall, the location of Meridian Village Phase I, has been providing office and classroom space for many decades. Newson Wallace Hall is the location for Phase II of Meridian Village and Allison Hall is slated for deconstruction following the completion of Meridian Village. Recent studies using the Association of Physical Plant Administrator (APPA) standards rate each of these buildings as a Level 5 in Crisis Response. These buildings have also been evaluated as having a Facilities Condition Index (FCI) of “poor”. These studies indicate that the reinvestment to these buildings over the next 10 years would be over $23M to bring their condition to the APPA “Good” status, while having an annual maintenance budget just under $1M per building per year of operation.

- Aylesworth $12M DMB FCI 37%
- Newson $11.7M DMB FCI 36%
- Allison $16M DMB FCI 48%

**KEY FINDINGS**

Brailsford & Dunlavey’s qualitative and quantitative analyses revealed the following key findings related to Meridian Village’s financial performance and impact to the existing housing and dining system.

**Key Finding - Project Size:** The initial assumption of 1,400 beds on the Meridian Village site supports existing capture rates but does not support continued enrollment growth or the creation of a more intentional second-year residential experience. It is believed that an additional 200 beds will be needed to address CSU’s long-term goals and could help financial performance if built efficiently.

**Key Finding - HDS Financials:** The current system is financially healthy and has been supported by strong occupancies and will be able to maintain a 1.20 debt coverage ratio after the development of Meridian Village.

**Key Finding - Meridian Village Performance:** Various strategies including programmatic adjustments, phasing, increased bed count, and system-wide rental rate increases have been considered in determining the financial performance of Meridian Village and maintenance of the targeted debt coverage ratio.

**PLANNING FOR THE FUTURE**

As a fully self-funded auxiliary, it is important that HDS not only look at the near future for planning, but that a deeper planning horizon also be evaluated including consideration of options to manage for enrollment and market fluctuations. Following are some of the strategies that have been developed and are being employed to prepare for future possibilities:

- Right-sizing renovation and capital development projects; continuing to look at market data to ensure projects are built to meet housing and dining demands without over or under building.
- Offering multiple price points within rental and dining rates to provide housing and dining options for students from various socio-economic backgrounds, and to allow for greater pricing flexibility in the future.
- Assessing and planning for building and infrastructure improvements to gain better efficiencies in operation and maintenance costs.
- Developing multiple strategies for utilization of campus housing in the event of an enrollment decline, such as:
  - Increasing the amount of housing offered to transfer students,
  - Providing housing for conferences and events throughout the academic year,
  - Offering residence hall housing to Front Range Community College Students,
  - Offering housing to CSU employees in Aggie Village Apartments.
  - Providing flexible living options to support changing student preferences and profiles.
2.3 RELATION TO ACADEMIC OR INSTITUTIONAL STRATEGIC PLANS

COLORADO STATE UNIVERSITY STRATEGIC PLAN

By providing strategic directions for planning at Colorado State, the University Strategic Plan outlines the institution’s major priorities and the university-level outcomes against which our performance will be measured. The University’s three-year planning cycle is designed to assure wide-based campus input into institutional planning and priorities and to support budgeting that is tied to those strategic planning efforts in a transparent and coherent way. It includes a regular schedule for periodic updates of the strategic plan to reflect new priorities, new environments, new opportunities, and new ideas.

The Colorado State University Strategic Plan is organized around five broad objectives:

1. We will champion student success.
2. We will make a global impact and translate discoveries into products of knowledge, creative artistry, and innovation.
3. CSU will engage with people and communities to solve problems, share knowledge, and support progress.
4. CSU will be a rewarding, inspiring, productive, and inclusive community for all employees – and enhance faculty as its foundation.
5. CSU will be accountable, sustainable, and responsible.

Consistent with the university’s mission statement, the broad objectives reflect the University’s heritage commitments to teaching and learning, research and discovery, and engagement and service. The fourth section addresses our responsibility to create a university community that effectively embodies our Principles of Community. Finally, we are determined to develop financial and other resources that are critical to supporting CSU’s mission, in a transparent way consistent with a dedication to accountability.

In total, CSU has identified 11 specific goals related to these objectives and a number of strategies related to achievement of the goals.

1. Access: Deliver on the commitment to inclusive access.
2. High Quality Academic and Co-Curricular Programs: Provide excellent undergraduate and graduate curricular and co-curricular programs, consistent with the full potential of a residential research university, our land-grant mission, the strengths of our faculty and staff, and the needs of our global society.
3. Student Learning Success: Engage students in educational experiences that provide opportunities for deep learning that students can retain and apply before and after graduation. Increase retention, persistence, and graduation rates while eliminating gaps among student populations and reducing time to degree completion.
4. Research & Discovery: Foster and disseminate research, creative artistry and scholarly accomplishments. Nurture and sustain research infrastructure that supports growth of research, artistry, and scholarly accomplishments.
5. Engagement: Collaborate with stakeholders (campus-wide, local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity that increases CSU’s relevance and value to the State of Colorado.
6. Public Interaction/Strategic Partnerships: Enhance community and cultural quality of life through sharing the intellectual life of the university, the arts, and intercollegiate athletics.
7. Excellence in Hiring, Professional Development, Employee Engagement: CSU will recruit and retain the highest quality Faculty, Administrative Professionals, State Classified personnel, and students at appropriate levels that collaborate with other units in the University community to help our students and staff be successful.
THE DIVISION OF STUDENT AFFAIRS STRATEGIC PLAN

In preparing for the 2016-2019 Division of Student Affairs Strategic Plan, the Division of Student Affairs was guided by its mission, brand promise, and Principles of Community. Additionally, the division's departmental strategies are based on the University Strategic Goals in the Colorado State University Strategic Plan. Associated with the programs and services provided by the student affairs departmental staff, this strategic plan provides specific strategies, assessment metrics, designated leadership, and timelines for each of the division's strategic goals.


This Division consists of nine Student Affairs Clusters:
• CSU Health Network  
  o Counseling Services  
  o Health Education and Prevention  
  o Medical Services  
• Campus Life  
  o Adult Learner and Veteran Services  
  o Fraternity & Sorority Life  
  o Off-Campus Life  
  o Parent & Family Programs  
  o Student Case Management  
  o Student Legal Services  
  o Student Resolution Center  
• Campus Recreation  
  o Student Recreation Center  
  o Fitness and Activity Classes  
  o Intramural Sports  
  o Sport Clubs  
  o Outdoor Programs  
• Lory Student Center  
  o CSU Bookstore  
  o Business Services  
  o Dining Services/Catering  
• Housing & Dining Services  
  o CSU Mountain Campus  
  o Communications & Sustainability  
  o Conference & Event Services  
  o HDS Facilities  
  o HDS Technology Services  
  o Outreach and Projects  
  o RamCard Office  
  o Residential Dining Services  
  o University Housing  
  o Workplace Inclusion & Talent Management  
• Support & Safety Assessment  
  o Support & Safety Programs  
  o Title IX Programs  
  o Interpersonal Violence Response  
  o Security Clearance Programs  
• Academic Support  
  o Academic Advancement Center  
  o Career Center  
• Student Diversity Programs & Services  
  o Asian Pacific American Cultural Center  
  o Black/African American Cultural Center  
  o El Centro  
  o Pride Resource Center  
  o Native American Cultural Center  
  o Student Disability Center  
  o Retention Specialist  
  o Women & Gender Advocacy Center  
• Collaborative for Student Achievement  
  o Key Communities  
  o Community for Excellence Scholar Programs  
  o Undeclared Student Advising  
  o Outreach & Support  
  o Health Professional Advising
HDS has contributed to the following goals and strategies, which have made their way into considerations for the Meridian Village project in multiple ways.

1. Access: Provide professional development opportunities for students through internships, assistantships, and practicum.
2. Student Learning Success: Increase persistence and retention rates through high impact practices connected to the on-campus living experience.
3. Public Interaction/Strategic Partnerships: Provide a comprehensive on-boarding program that welcomes and acclimates new employees to the culture and expectations of HDS.
4. Physical Resources: Support University Growth Initiative through on-campus housing inclusive of the live-on requirement and the City of Fort Collins Student Housing Action Plan (SHAP) commitment to house 20-25% of students on campus.

2.4 RELATION TO OTHER PROGRAMS OR AGENCIES

STUDENT SUCCESS INITIATIVES

The following are programs, partnerships, and results that speak to programmatic efforts for which University Housing is a contributing partner:

Early Performance Feedback (University Initiative) relates to research around growth, mindset, grit and resiliency, Dweck and Duckworth respectively, are the basis for this campus-wide initiative to support student success in academic achievement.

- RAs and A/RDs made outreach to 1,287 students (Fall 2017) with academic difficulties; 418 students had meetings with their RA.
- RAs and A/RDs made outreach to 1,146 students (Spring 2018) with academic difficulties; 298 students had meetings with their RA.

Taking Stock (University Initiative) supports research (Astin, 1977; Bean & Eaton, 2001; Tinto, 1993) on transition, coping, resiliency, sense of belonging and more.

- In Fall 2018, 4,622 students took the Taking Stock Survey; 91% completed the survey, 85% of these students met with their RA.
- In Spring 2018, 4,592 returning students were invited to take the survey; 69% completed the survey, 2,420 students met with their RA to reflect on fall semester and set goals for spring semester; this was a significant increase from the previous year.

First 4 weeks (University Initiative) research states the 1st four weeks of each semester are critical for a student’s success in college.

- 97% of students report being aware of academic resources on campus (student success).
- 94% of students report knowing the steps to take to get involved on campus (transition, involvement).
- 96% of students report a sense of belonging at CSU.
- 95% of students report being aware of diversity/multicultural programs at CSU.

Skyfactor – Student Satisfaction Surveys of University Housing Residence Halls (November 2018) were conducted through Skyfactor. Results highlight satisfaction and self-reported learning and ability based upon national standard outcomes. The following highlights results that indicate a relationship to University strategic goals of creating a welcoming, valuing, and affirming space for all students, faculty and staff; and the impact of housing programs that are integrated with the campus mission, vision and values.
- 81.4% of residents are slightly to very satisfied with student staff promoting tolerance of others
- 87.2% and 87.4% of residents report living on campus enhances their ability to resolve conflicts and improve interpersonal relationships respectively.
- 86.9% of residents agreed that living on campus has helped them understand other residents by “putting yourself in their place” and 88.4% benefited from “interactions with residents who are different from you”.

**Athletics** – Because of the proximity of the Meridian Village site to Canvas Stadium it has been important to consider game day needs and impacts. One of the expectations of the project is that a 100 foot view corridor will be maintained from the great green to the stadium entrance. Athletics has been consulted to understand their needs and requests.

**SUSTAINABILITY INITIATIVES**

The following organizations and resources are being utilized on the Meridian Village project to achieve HDS and the project’s sustainability initiatives.

**LEED Certification** - HDS has adopted the standard to approach every renovation and capital development project with a priority to achieve LEED Gold certification.

**STARS – Sustainability Tracking and Rating System**

**Recycling and Waste Diversion** – Ram Recycle, Solid Waste, Surplus Property

**Green Dining and Composting** – Organic or locally grown, trayless dining, compostable to-go containers, food donations, pulpers, composting, recycled cooking oil, HDS Green Dining initiatives.

**Pollinator Friendly Campus Committee** – incorporates and promotes pollinator friendly habitats across campus and creates engagement opportunities to help educate people about the benefits of supporting local pollinators.

**President’s Sustainability Commission** – Promote and facilitate the effective integration of sustainability across all aspects of the University.
CLIMATE ACTION PLANS

in 2008, CSU became a signatory of the American College & University Presidents’ Climate Commitment (ACUPCC). The goal of this effort is for university campuses to reduce Greenhouse Gas (GHG) emissions to the point of carbon neutrality. In short, the commitment requires participating campuses to take the following steps in pursuit of climate neutrality.

• Develop a comprehensive plan (a Climate Action Plan) to achieve climate neutrality.
• Make the action plan, inventory, and perform and make available periodic progress reports.

CSU completed their first Climate Action Plan (CAP) in September 2010, which is updated on an annual basis. The CAP outlines how and when CSU will achieve climate neutrality.

Reference: https://www.fm.colostate.edu/reports

HDS CLIMATE ACTION PLAN

In support of the CSU Climate Action Plan, HDS has created a Housing & Dining Services Climate Action Sub-Plan. As the largest department on campus, housing more than 8,000 students and growing, HDS plays a significant role in the campus’ commitment to reducing net carbon emissions by 75% by 2030 and 100% by 2050. Considerations to buildings’ operational and maintenance efficiencies, establishing building performance criteria, renewable energies and energy consumption, and utilizing sustainable and clean materials for construction are all considerations of the Meridian Village project.


Current and annual efforts are captured in Housing & Dining Services Annual Sustainability Report.
2.5 EXISTING PROGRAMMATIC / OPERATIONAL DEFICIENCIES

The construction of Meridian Village will alleviate large deferred maintenance backlogs in Newsom and Allison Halls. Newsom Hall is the location for Phase II of Meridian Village and Allison Hall is slated for deconstruction following the completion of Meridian Village. Recent studies using the Association of Physical Plant Administrator (APPA) standards rate each of these buildings as a Level 5 in Crisis Response. These buildings have also been evaluated as having a Facilities Condition Index (FCI) of “poor”. These studies indicate that the reinvestment to these buildings over the next 10 years would be over $23M to bring their condition to the APPA “Good” status, while having an annual maintenance budget just under $1M per building per year of operation.

- Aylesworth $12M DMB FCI 37%
- Newsom $11.7M DMB FCI 36%
- Allison $16M DMB FCI 48%

2.6 CURRENT ENROLLMENT / CASELOAD

FIRST-YEAR LIVE-ON REQUIREMENT

CSU requires that all newly admitted first-year students and transfer students with fewer than 15 post-high school credits, who are single, under 21 years of age, and not living with their parents in the Fort Collins area, live in University residence halls for the first two consecutive terms of their attendance. To fulfill the HDS vision of creating “the best living and learning experience in higher education” it is imperative that we understand the ways that residence halls support these students who are required to live on campus. In addition, we have an obligation to support the university’s student success initiatives beyond their first year, and as such it is critical that we also understand what we can do to provide the facilities and supports that are most impactful for returning students. To this end, regular assessments are conducted to gauge student satisfaction with our on-campus living facilities, to understand the factors that contribute to their satisfaction (as well as to their dissatisfaction) with living on campus, what can be done to improve satisfaction, and to better understand why students choose to return to campus. Currently, approximately 20% of the residence hall population is returning students, which is up 5% over the past 7 years.

FACTORS INFLUENCING RETURNING STUDENTS

As we worked through the program plan development for Meridian Village, we carefully looking at data to ensure that what we build meets these needs both for today’s students as well as projecting for future students.

In October 2018, a Student Rental housing Survey was conducted in conjunction with Off Campus Life. From the survey participants, 75% were living in off-campus housing and 25% were living in on-campus housing. Four sections of the survey that are especially relevant to the Meridian Village analysis are presented below:

- Students were asked to identify factors that are extremely important to them when choosing a rental. The top five factors were:
  o Price of Rental (65%)
  o On-site Parking (55%)
  o Proximity to Campus (46%)
  o Amenities in Unit (40%)
  o Quality Property Management (40%)

- The top five factors identified by students that would encourage them to live on campus next year were:
  o More affordable housing options (28%)
  o Availability of on-campus apartments (15.5%)
  o Designated upper-class hall on campus (15%)
  o More flexible dining plan (14%)
  o Ability to have a pet (13%)

- The factors that were identified as most important in the decision to move off campus were:
  o Cost was too high (28%)
Desire to have more freedom (25.5%)  
Desire to live in an off-campus house or apartment (24%)  
Desire to have a pet (10%)  
Requirement for a meal plan (7.5%)  

Students were asked, “If there was an option for returning student (i.e. second year and higher) to live on campus in a hybrid of a residence hall room and apartment, such as a single studio or pod, how interested would you be?”  
45.39% of the students surveyed were either moderately or extremely interested in this option.

Students were asked, “Which factors are important to you in deciding to live on campus for another year?”  
Top three factors were cost, location, and where friends choose to Live  
From this data we can see that proximity is important to our students, which confirms the value of the location of the Meridian Village project. In addition, we understand that it is critical to our students that cost, availability of parking, quality of the facility, and room type be considered as we design Meridian Village as a part of the overall on-campus housing plan. The interest in a “hybrid” option supports the decision to explore this type of living and community space in Meridian Village.

Resident Instruction Historic Growth:  
- 5-year average annual growth: 1.2%  
- 5-year total enrollment growth: 6%  
- 10-year average annual growth: 1.4%  
- 10-year total enrollment growth: 13%  

Strong Freshman Growth Since 2015:  
- Average annual growth: 5%  
- Total enrollment growth: 12%  

Current Enrollment Projections:  
- Number of high school graduates in Colorado is projected to rise annually until 2024-2025.  
- After 2024-2025, the number of graduates is projected to slightly decrease and then flatten.  
- Currently, a 1.25% annual enrollment growth through Fall 2024 is projected. This is largely dependent on continued growth of the out-of-state population.

Over the past four years, the first-time full-time fall class has grown more than 12%, including a more than 30% increase of non-resident students. It is expected to that this growth will begin to slow, with the goal growth for the 2019 class being 2%.

Through 2025 it is anticipated that resident growth should average 40 more students per year with the low years coming in 2022 and 2023. A rebound is then anticipated until 2026 when there is an anticipated decrease through 2029, at which point small increases should begin again.

Approximately 20% of our current residence hall students have returned to the residence halls after their required first year, which is growth of 5% above where we were seven years ago. This growth has been hard earned as many efforts were put forth to change the “one and done” culture that was surrounding residence hall living at that time.

If first year growth projections hold, demand for on-campus housing will exceed capacity in both Fall 2020 and Fall 2021.
It is imperative that the number of returning students not be reduced during this time so that the momentum in growth of students returning to the halls is not lost.

As such, we will look to reduce the number of transfer students that we house to accommodate the demand for housing until Meridian Village Phase I (the Aylesworth Hall site) is complete, which is currently anticipated to be August of 2022.

By retaining the number of returning students who live on campus while building returning student excitement for the new housing that will be available in Meridian Village, we will be able to maintain high occupancy level when first year student classes decrease. As mentioned by Brailsford & Dunlavey (B&D) in their financial analysis of February 2019, “To allow for greater accommodation of returning students, facility and program quality must take advantage of Meridian Village’s location and access to campus amenities in order to compete with off-campus housing options.”

FORT COLLINS HOUSING MARKET ANALYSIS
HDS conducts annual market analysis and rental comparisons on selected Fort Collins student housing properties that are leased by the bed to single students. The following information was gathered during our spring 2019 analysis. Current data indicates that all rental rates are increasing in Fort Collins and in the Northern Colorado region:
• Denver-Aurora-Lakewood CPI reports housing rent up 2.9% over March of 2018.
• Trulia.com shows median rents in Fort Collins have increased 4.2% since May 2018.
• Rentcafe.com reports the average rents in Fort Collins increased 6% since May 2018.

A rental comparison of 16 student housing properties found that:
• Off-campus student housing properties are reporting actual increases that range from 0%-6.9%.
• There are a small number of private sector rents which declined in price -1.5%. These are market adjustments in new properties entering the market during their year two.
• Student housing properties in closest proximity to campus are reporting actual increases of 5%.
Deposit amount, application fees, and parking costs vary across the off-campus properties. Rental rates and associated increases also vary based on several factors, including:

- Operational costs
- Amenities provided
- Utilities provided
- Furnished or unfurnished spaces
- Style of apartment (studio, 4-bedrooms, private bath, etc.)

The lowest rental rate reported from our most recent survey of off-campus properties was $609/month, and the highest reported rental rate was $1,895/month.

By comparison, the lowest residence hall room rate at CSU, utilizing nine months for the academic year, for 2019-2020 is $664/month, and the highest residence hall room rate is $1,098/month. The CSU residence hall rates are for fully furnished rooms and are inclusive of utilities such as heat, electricity, water, sewer, trash, recycling, and high-speed Internet, in addition to all of the other amenities and services that come with living on campus.

ON-CAMPUS DINING
Whiles students who live in off-campus housing must arrange for their own food either through shopping for and preparing their own meals and/or dining out, students who live in the CSU residence halls are required to purchase a meal plan. Three different meal plans are offered to first-year students (Any 10, Any 14, or Any 21 meals per week) and an additional meal plan is offered to returning students (Any 5). In addition, the Any 21 plan can be increased to the Any 21 Upgrade plan, which provides up to 12 meal swipes per day for an additional fee.

Per semester meal plan costs for the 2019 academic year are as follows:
- Any 10 - $2,434
- Any 14 - $2,953
- Any 21 - $3,227
- Any 5 - $1,419
- Any 21 Upgrade - $340

The meal week begins on Saturday morning and ends Friday night. Meals do not roll over to the next week, but each meal plan also includes:
- $150 RamCash each semester, which can be used in the HDS Dining express venues, throughout the Lory Student Center, and for a variety of different campus services.
- 20 bonus meals to be used when students run low on weekly meal swipes or to use for visiting friends or family members
- To-Go meals
- Free meals for parents and legal guardians twice every two weeks at any of the dining centers when accompanied by their student.
- The ability for a residence hall student to treat a faculty member to academic advisor to a free lunch at any of our dining centers on Wednesdays.

2.7 PHYSICAL CONDITION (EXISTING CONDITIONS) / FUNCTIONALITY OF SPACE

Intro: The following information presents the existing characteristics and challenges of the proposed project site and site components that are influencing the project scope.

EXISTING SITE STATISTICS

Features - The Meridian Village project site is approximately 12.2 acres in total, with an abundant, mature tree population and simple landscape. The site is bordered by Hughes Way and the intramural fields to the north, Braiden Hall and the Braiden parking lot to the east, Pitkin Street and the CSU Canvas Stadium to the south, and finally Academic Village to the west. Contained within these borders exists two buildings; Newsom and Aylesworth Halls. Each is fronted by a cul-de-sac approach to their main entries with various bike parking areas located around the building perimeters. The site is split through the middle by roadway and parking areas. Meridian
Avenue connecting Hughes Way and Pitkin Street, services vehicles, a buffered bikeway, a bus route, and the Stadium approach for game day festivities. The Aylesworth parking lot, running parallel to Meridian Avenue, provides parking capacity and another north-south connection between Hughes Way and Pitkin Street.

The Buildings - Value of Existing Structures: The project site contains two existing buildings, Aylesworth and Newsom Halls. Built in the mid-1950’s within 18 months of each other, these buildings have identical footprints and interior layouts, and therefore similar values and deficiencies.

Aylesworth Hall, the location of Meridian Village Phase I, was originally built as a residence hall but has been providing office and classroom space since the university assumed use of the facility in Fall 1970. Aylesworth and its surrounding landscape sit on 5.1 acres and is comprised of 85% office space and 15% academic space within 104,510 gross square feet (gsf). A recent assessment performed by Facilities Management has established that this building has a Facility Condition Index (FCI) rating of 37% and a Deferred Maintenance Backlog (DMB) of approximately $10M, while the Current Replacement Value (CRV) is $18.6M.

Newsom Hall, the location of Meridian Village Phase II, was originally built in 1954 and is still used as student housing today. Newsom and its surrounding landscape sit on 5.1 acres and is comprised of 80% student housing, 10% office space, and 5% meeting space within 104,510 gsf. A recent assessment performed by HDS has established that this building has an FCI rating of 48.3% and a DMB of approximately $13.37M, while the CRV is $27.29M. Newsom currently houses 401 occupants and has a Net Operating Income (NOI) of $473,100 annually.

The Meridian Village project will also impact a third building, Allison Hall. Originally built in 1957, Allison Hall is located on the north side of main campus in the shadow of the College of Business. Allison currently houses 402 occupants and has a Net Operating Income (NOI) of $485,000 annually. The Location of Allison Hall between CSUPD in Green Hall to the west, and the College of Business in Rockwell Hall to the east, tends to separate this residence hall from other residence hall buildings, creating a challenge when trying to integrate these students into a larger residence hall community and getting residents to utilize the dining center here. The hall and its surrounding landscape sit on 3.67 acres and is comprised of 80% student housing, 15% dining space, and 5% office space within 98,023 gsf. A recent assessment performed by HDS has established that this building has an FCI rating of 48.3% and a DMB of approximately $13.37M, while the CRV is $27.68. With the amount of deferred maintenance approaching almost 50% of the building’s replacement value, Allison becomes a good candidate for a total rebuild or redevelopment of the site.
EXISTING CONDITIONS

1. VIEW LOOKING EAST ALONG HUGHES WAY
2. VIEW LOOKING WEST ALONG HUGHES WAY
3. VIEW LOOKING WEST ALONG PITKIN ST
4. VIEW LOOKING EAST ALONG PITKIN ST
EXISTING CONDITIONS

1. VIEW LOOKING NORTH WEST ALONG EXISTING MERIDIAN

2. VIEW LOOKING NORTH ALONG EXISTING MERIDIAN

3. VIEW LOOKING SOUTH EAST ALONG EXISTING MERIDIAN

4. VIEW LOOKING SOUTH WEST ALONG EXISTING MERIDIAN
MERIDIAN VILLAGE PROJECT OPPORTUNITIES

The development of Meridian Village is anticipated to build enough capacity to allow for Housing & Dining Services to vacate Allison Hall without compromising capacity needs. This will in turn provide the College of Business the opportunity to expand their program to the existing Allison Hall site, a move that has been in the campus master plan for several years now.

The construction of Meridian Village will also alleviate large deferred maintenance backlogs in Aylesworth, Newsom and Allison Halls. Recent studies using the Association of Physical Plant Administrator (APPA) standards rate each of these buildings as between a Level 4- Reactive Management and Level 5- Crisis Response. These buildings have also been evaluated as having a Facilities Condition Index (FCI) of "Poor". These studies indicate that the reinvestment to these buildings over the next 10 years would exceed $33.14M to bring their condition to the APPA “Good” status, while having an annual maintenance budget just under $1M per building per year of continued operation.

- Aylesworth $12M DMB FCI 37% Condition: Poor
- Newsom $11.7M DMB FCI 36% Condition: Poor
- Allison $16M DMB FCI 48% Condition: Poor

Transportation Infrastructure - Roads: The three primary road sections that border the site continue to show their age and create traffic flow congestion as the deferred maintenance backlog and traffic volumes increase year by year through this area of CSU’s main campus. Pitkin Street has seen recent improvements over the last four years with adjacent redevelopment projects (CSU Canvas Stadium), utility upgrades, and pavement maintenance projects. Meridian Avenue and Hughes Way have received some attention in recent years through approved pavement maintenance funding for small repair efforts. However, their conditions continue to degrade without dedicated annual maintenance funding available for major repairs. With the realignment of the Meridian Avenue section that once existed between Pitkin and Lake Streets under the CSU Canvas Stadium project, the remaining section of Meridian Avenue between Hughes Way and Pitkin sees high traffic volumes on a day-to-day basis as the only north-south connection available to the public to this northwest quadrant of campus. Increased bike and pedestrian counts and the lack of infrastructure dedicated to these modes of transportation add to the difficulty in maintaining an acceptable level of service while keeping everyone safe as they navigate through the intersections surrounding the site.

Parking - As a highly pedestrian-focused and bike-friendly campus, parking for vehicles continues to be a daily challenge for faculty, staff, students, and campus visitors. The Meridian Village site is adjacent to the Braiden Hall parking lot (permitted to resident students), the Morgan Library lot (metered parking for visitors and permitted to faculty and staff), the Hartshorn parking lot (permitted to commuter students), the Aylesworth Hall parking lot (permitted to faculty and staff), the Newsom Hall cul-de-sac (permitted to resident students), and Hughes Way (permitted to commuter students and resident students). The Meridian Village project is anticipated to add 600-800 new beds to the overall on-campus housing capacity; campus development standard is to build 20% of occupancy for parking spaces, this equates to 120-160 additional parking spaces needed when Meridian Village is fully occupied.

Bikes and Pedestrians - Recent traffic studies have been performed to evaluate existing quantities of traffic flows (bikes, cars, skateboards, and scooters) throughout main campus and around the Meridian Village project site. Currently, a bike lane exists within the roadway along Pitkin, Meridian, and Hughes Way and the project site is surrounded by 6’-8’ sidewalk, which does not accommodate two-way traffic for both bikes and pedestrians safely with the volumes that are present in this area of campus. An Alternative Transportation and Fee Advisory Board was recently created to be an advocate and sponsor for these efforts. Funds have been invested during the
last two years to provide dedicated bike and pedestrian paths and improve ADA accessibility. Again, because this project is anticipated to add 600-800 new students to this area of campus, the project will look to improve pathways for all modes of transportation within and around the project site.

MERIDIAN VILLAGE PROJECT OPPORTUNITIES

- Realign Meridian Avenue to the east side of the project site, thereby providing more area for a denser site capacity for the project, improving traffic flows around the project site, providing a formal bus stop, and providing a brand-new road for the campus community and eliminating deferred maintenance backlog for pavement maintenance of this roadway section.
- Redevelop the Meridian and Pitkin St intersection which will accommodate current traffic flows on campus (vehicles, buses, and bikes) and additional traffic load of the new students that will occupy Meridian Village.
- Redevelop Hughes Way to accommodate on-street diagonal parking for additional residents that will occupy Meridian Village, address some of the deferred maintenance backlog by improving the existing condition of this arterial roadway, and providing a safe and efficient pedestrian and bikeway connection along the north side of the project site to the academic spine.
2.8 TOTAL NEW SPACE REQUIREMENTS

BASE PROGRAM

The base program will include a minimum of 1400 new revenue beds, with approximately 80% of the total beds configured as double occupancy, community bath, Pod style layouts. The remaining 20% of the beds will be in a double occupancy, community bath, traditional hall configuration. Within each residential community, a single RA unit (with in-suite bathroom) and a single ADA room (with in-suite bathroom) will be provided. All resident rooms will have shared access to a range of student amenity spaces; large community lounges (with kitchens), small floor lounges, group study rooms, laundry, mail and support services. Additionally, two staff apartments will be provided within each residence hall for an on-site resident director and assistant resident director. See space program for detailed residential allocation.

See Dining Narrative for detailed description of new Community Hub / Dining Building included within the base program.

Base Program

(1,400 BEDS + 40 RA’s)

RESIDENTIAL PROGRAM
## Base Program

### COMMUNITY USE PROGRAM

<table>
<thead>
<tr>
<th>Use</th>
<th>Area</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Mailroom</td>
<td>1,550 NSF</td>
<td>1,550 Mail / Package Delivery</td>
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<td>Gross Up 30%</td>
<td>465</td>
<td>2,015 BGSF</td>
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### Dining - Base Scope

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<tr>
<th>Use</th>
<th>Area</th>
<th>Notes</th>
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<tr>
<td></td>
<td>39,891</td>
<td>Refer to Dining Program for Additional Information</td>
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<td>BGSF</td>
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### BASE SCOPE PROGRAM SUMMARY

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<tr>
<th>Use</th>
<th>GSF</th>
<th>SF/RES</th>
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<tbody>
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<td>1440 Bed Residential Program</td>
<td>392,135</td>
<td>272 sf/res</td>
<td>1440 Beds (includes 40 RA's)</td>
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<tr>
<td>Community Building Space</td>
<td>2,015</td>
<td>1 sf/res</td>
<td>Included in Community Hub</td>
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<td>Dining Space</td>
<td>39,891</td>
<td>28 sf/res</td>
<td>See Dining Program for Additional Information</td>
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<tr>
<td>Total Resident GSF</td>
<td>434,041</td>
<td>301 sf/res</td>
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## Alternates Program
(200 BEDS + 6 RA's)

### RESIDENTIAL PROGRAM

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<tr>
<th>Component</th>
<th>Budgetary Basis</th>
<th>Notes</th>
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<tr>
<td>Student Rooms</td>
<td>Traditional Community</td>
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<tr>
<td>Studio (bathroom)</td>
<td>200</td>
<td>21</td>
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<tr>
<td>Electrical/other groups</td>
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<tr>
<td>POE 2 Community</td>
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<tr>
<td>Double (bathroom)</td>
<td>196</td>
<td>2</td>
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<tr>
<td>Single (no bathroom)</td>
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<tr>
<td>POE 2 Community Bathrooms</td>
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<td>Studio (bathroom)</td>
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<tr>
<td>Single (no bathroom)</td>
<td>200</td>
<td>2</td>
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</table>

### Resident Apartments (100%) | |
| 102 | 23,566 NSF | | |
| Total project residential GSF | 50,747 | 247 | sf/res |
## Alternates Program

### COMMUNITY USE PROGRAM

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<td>HDS Offices</td>
<td>12,000</td>
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<tr>
<td>Greenhouse</td>
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### Community Space Program

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<tbody>
<tr>
<td>Spoke 2</td>
<td>500</td>
<td>At a minimum, double capacity of Spoke at Pavilion</td>
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<tr>
<td>Meeting Room</td>
<td>1,500</td>
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<tr>
<td>Project Multi-Purpose Room</td>
<td>5,000</td>
<td>ACE program, maker space, creative suites</td>
</tr>
<tr>
<td>Storage</td>
<td>1,000</td>
<td>Bike, General</td>
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<tr>
<td></td>
<td>8,000</td>
<td>NSF</td>
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<table>
<thead>
<tr>
<th>Gross Up 30%</th>
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<td>10,400</td>
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## ALTERNATES SCOPE PROGRAM SUMMARY

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<th>Use</th>
<th>GSF</th>
<th>SF/RES</th>
<th>Notes</th>
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<tbody>
<tr>
<td>206 Bed Residential Program</td>
<td>50,747</td>
<td>247 sf/res</td>
<td>200 Beds (Includes 6 RA's)</td>
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<tr>
<td>HDS Office Space</td>
<td>12,000</td>
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<tr>
<td>Greenhouse</td>
<td>3,000</td>
<td>n/a sf/res</td>
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</tr>
<tr>
<td>Community Building Space</td>
<td>10,400</td>
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<td>Included in Community Hub</td>
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<tr>
<td>Total Resident GSF</td>
<td>76,147</td>
<td>n/a sf/res</td>
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### JUSTIFICATION

#### DINING PROGRAM - MERIDIAN VILLAGE

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Space Unit</th>
<th>Total Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>13.3</td>
<td>1,995</td>
</tr>
<tr>
<td>204</td>
<td>11.9</td>
<td>2,428</td>
</tr>
<tr>
<td>123</td>
<td>11.0</td>
<td>1,353</td>
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<tr>
<td>75</td>
<td>14.3</td>
<td>1,110</td>
</tr>
<tr>
<td>40</td>
<td>14.8</td>
<td>592</td>
</tr>
</tbody>
</table>

Seating Sub-Total for Dining and In Building Footprint: 553 seats, 7,478 square feet

### Food Service HA - Residence Only

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Space Unit</th>
<th>Total Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>1</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>1</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>1</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>1</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>1</td>
<td>800</td>
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<tr>
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<tr>
<td>2</td>
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<td>300</td>
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<tr>
<td>1</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>8</td>
<td>125</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Restaurant & Serving Venues Sub-Total: 7,300 square feet

### FOH Support Spaces

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Space Unit</th>
<th>Total Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>1</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>2</td>
<td>400</td>
<td>800</td>
</tr>
<tr>
<td>1</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>2</td>
<td>400</td>
<td>800</td>
</tr>
</tbody>
</table>

FOH Support Space Sub-Total: 3,773 square feet

**Front of the House Total:** 18,607 square feet
### Base Bid: 552 Seats for 1,400 Beds

<table>
<thead>
<tr>
<th>Unit</th>
<th>Total Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td></td>
</tr>
</tbody>
</table>

#### Back of the House

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Kitchen &amp; Clean-up</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walk-In Refrigeration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cooler - Level 1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Cooler - Level 2</td>
<td>325</td>
</tr>
<tr>
<td></td>
<td>Refrigerator - Level 1</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Refrigerator - Level 2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td><strong>Refrigeration Sub-Total</strong></td>
<td><strong>1,585</strong></td>
</tr>
<tr>
<td>B</td>
<td>Dry Goods Storage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage Spaces</td>
<td>1,600</td>
</tr>
<tr>
<td></td>
<td><strong>Dry Goods Storage Sub-Total</strong></td>
<td><strong>1,600</strong></td>
</tr>
<tr>
<td>C</td>
<td>Paper Good Storage, Event Storage, Misc., &amp; BIB Storage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paper</td>
<td>Dish Storage</td>
</tr>
<tr>
<td></td>
<td>Chemical Storage</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Event Storage</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>BIB Room</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Paper Good, Event, Misc., BIB Storage Sub-Total</strong></td>
<td><strong>700</strong></td>
</tr>
<tr>
<td>D</td>
<td>Kitchen Production Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prep Prep Space</td>
<td>1,300</td>
</tr>
<tr>
<td></td>
<td>Final Prep Space</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td><strong>Kitchen Production Area Sub-Total</strong></td>
<td><strong>1,600</strong></td>
</tr>
<tr>
<td>E</td>
<td>Catering Staging/Prep Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prep/Stage Storage (dish, beverages, etc)</td>
<td>750</td>
</tr>
<tr>
<td></td>
<td>Catering Storage</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td><strong>Catering Stage/Prep Area Sub-Total</strong></td>
<td><strong>1,000</strong></td>
</tr>
<tr>
<td>F</td>
<td>Pot Wash Area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Three Basin Sink - Level 1</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Three Basin Sink - Level 2</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Potwash Machine</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Cart Storage</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Drying Area</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td><strong>Pot Wash Area Sub-Total</strong></td>
<td><strong>385</strong></td>
</tr>
<tr>
<td>G</td>
<td>Warewashing: Tray Drop / Dish Room</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dish Machine</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>Traywasher</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Waste Management System</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Recycle Station</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Drying Area</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td><strong>Warewashing: Tray Drop / Dish Room Area Sub-Total</strong></td>
<td><strong>1,080</strong></td>
</tr>
</tbody>
</table>

#### 1.0 Dining Services Support

<table>
<thead>
<tr>
<th>Description</th>
<th>Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Space</td>
<td></td>
</tr>
<tr>
<td>Office Support</td>
<td></td>
</tr>
<tr>
<td>Receiving</td>
<td></td>
</tr>
<tr>
<td>Trash</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL DINING SERVICES SUPPORT** | **2,888**

**TOTAL NSF SF** | **29,549**

**35% non-assignable (restrooms & greenhouse excluded)** | **10,342**

**TOTAL BUILDING TOTAL** | **39,891**
## JUSTIFICATION

### DINING PROGRAM - RAM'S HORN EXPRESS

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front of the House</td>
<td>Lobby Seating for Grab and Go</td>
<td>Part of this seating could be located to the left of the desk.</td>
</tr>
<tr>
<td></td>
<td>Cashiering Stations</td>
<td>Express Order and Pick Up</td>
</tr>
<tr>
<td></td>
<td>Order Kiosks (5)</td>
<td></td>
</tr>
<tr>
<td>Seating Sub-Total for Dining and In Building Footprint</td>
<td>Current space is about 1487 sf and includes beverages; pick up counter/assembly for pick up</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soup; Salad, Sandwich menu (5 salads, 8-10 sandwiches, 3 soups); breakfast service</td>
<td>Current store is about 1350 sf and includes coffee &amp; beverages</td>
</tr>
<tr>
<td>1.02 The Restaurants - Place Holders Only</td>
<td>Walk-in cooler/freezer with convenience doors and storage</td>
<td></td>
</tr>
<tr>
<td>1.04 Kitchen &amp; Cleanup</td>
<td>Existing back of house storage spaces remain: 777sf of walk-in cooler/freezer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Current lower level walk-in space for retail = 168 sf. Net gain of walk-in cooler space = 332 sf + above as part of service area</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Existing back of house dry storage room remain: 586 sf</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small dry storage areas in back of house total of 208 sf may be incorporated into new dry storage area. Net gain of dry storage = 592 sf</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Current DW is 98 sf</td>
<td></td>
</tr>
</tbody>
</table>

### Footprint Breakdown

- Minimum Footprint available (does not include seating left desk area): 7164 sf
- Meals per Day = 3150 for residential
- Retail Transactions per Day = 3000 estimated
- Storage strategies will need to include HD shelving and frequent deliveries
- 2017 Fall Residential Meals/Day 9/11 - 9/15 peak day = 3504
- 2017 Fall Retail Transactions 9/11 - 9/15 peak day = 2516
- 10% increase in carry out = 350.4
- Projected Retail Transactions = 2866.4
- Projected Adjustment in Residential Transactions = 1153.6

### Storage Breakdown

- Existing Total Building Storage: 1085 SF
- Revised, Based on Above: 1,677 SF
- Net GAIN in Storage: 592 SF

### Building Storage

- Dry: 1085 SF
- Wet: 2,134 SF
- 381 SF
- Projected Net GAIN: 1,274 SF

- Includes pathway/cashiering to second floor.
DINING PROGRAM ADJACENCIES
MERIDIAN VILLAGE PROGRAM SUMMARY - RESIDENTIAL DINING

PRE-ENTRY QUEUING AND ACCESS CONTROL
Approach: The access to the foodservice spaces will include the shaping of the spaces required to throttle incoming and exiting traffic through logical control points. These control points should enhance supervision of those entering and exiting the spaces. It is also anticipated that these control points will include options for securing access. Customers will use their meal plan to access the restaurant at point of sale terminals located at a centralized cashier station. The pre-entry lobby areas should provide the space to handle the peak demand period, when there is a potential for 150 diners to be in the queue waiting to enter the restaurant. The entrances to the restaurants should create a sense of arrival.

Restrooms and access to handwashing facilities are important components of the entry area.

Equipment: Point of sale (POS) registers, digital menu display, security cameras and security for POS

Finishes: The décor of the entry communicates to the customers that this will be a restaurant experience.

COMMUNITY HUB PRELIMINARY CHARACTER

DINING
Approach: Dining areas will take advantage of the vistas to the green spaces surrounding the building and, of course, to natural light resulting from windows. As much as possible, the dining areas will be developed to improve the connection with the adjacent campus environs, to other building elements (lower level main streets and programs) and to offer a view of the preparation of the fresh food.

The dining areas should offer variety in both seating and table styles. This will have great appeal to the student customer -- whether they are accompanied by friends, dining as individuals or in concert with a larger group. Seating configurations will include intimate spaces, where students can enjoy a quieter moment, and active dining places, to allow students to “see and be seen.”

Seating and table options should include community tables for up to 16 persons; rectangular tables for 2 and 4 people; bar counter seating; bar height tables; booths; community tables, and banquette seating. In some areas of the dining spaces, the table arrangement will allow for the grouping of rectangular tables to accommodate larger groups of students. This will encourage socialization and community building.

A 75-seat semi-private dining room, will provide space for meetings at various times of the day. When not used for meetings, it will be available for general dining. To keep this space visible to patrons, the room will include glass walls, garage doors and/or movable walls.

Equipment: Tables, chairs, booths, banquettes, power at tables, wireless routers

Finishes: The décor of the seating area may relate to the character of adjacent Micro-Restaurants™. In consideration of the menu items consumed in the dining areas, colors and materials should be selected for their resistance to staining and damage.
Variety is sought in material and finish selection. Specialty lighting should set the stage for the restaurant dining experience.

**MERIDIAN VILLAGE: THE RESTAURANTS**

Each Micro-Restaurant™ is envisioned to have its own identity, each creating a unique destination within the facility. Specialty lighting is a critical component of creating restaurant ambiance. Examples of these approaches include counter seating with views of production; visible flames from dining; specialty production equipment; and customizable and display cooking menu options. Each restaurant may include the option to offer a full-plate menu (salads, sides, condiments and entrées).

Equipment for each Micro-Restaurant™ will be provided to support production and service. Individual restaurants will have their own character/brand identity. Graphics, signage, lighting, character and experience vary by restaurant. Lights should be dimmable, by restaurant and provide contrast throughout the space. Restaurant and menu signage may require power, data and lighting to illuminate signage. Some restaurants may have music needs. Select restaurants will remain open for extended hours of service. Those restaurants that are closed should not detract from the customer experience at those restaurants that remain open. Finishes for all Micro-Restaurants™ must be cleanable and durable, yet create restaurant character and appeal.

**BBQ | SMOKE | GRILL**

Approach: The attraction of this restaurant will be the ever-popular and broad menu offerings of: burgers, chicken, barbecued smoked meats, macaroni and cheese, sandwiches, fries, et cetera. Display preparation will be the focus, with most of the charbroiling and grilling equipment located in front of the customer. Multiple condiments and sauces will be conveniently located at this restaurant. Staff will be supported with equipment designed to store, hold and/or display finished and raw products. Customers will be able to place orders or retrieve items from the cooked products displayed on heated and/or from chilled counters, as appropriate. The grill production equipment could provide “simply prepared” items for the salad bar (e.g. grilled chicken, grilled veggies), creating options for students who have allergies or want to eat foods with little or no seasonings and sauces.

Visible to Dining: Chargrill, griddle, sandwich assembly

**MEXICAN / LATIN**

Approach: Mexican foods based assemble-to-order concepts, such as Chipotle® and Qdoba® continue to be very popular on college campuses. This concept will capitalize on this trend. The menu will include assemble-to-order foods (beef, chicken, rice, greens, fillings), chips and salsa. The chips and meats/veggies are to be prepared in the main kitchen. Condiments to be prepackaged or served to the customer. A separate production line for the assembled-to-order concept will be needed to support the web/app-based ordering.

**DELI | SALAD | SOUP**

Approach: Soups and salads will be located prominently near the entrance to reinforce healthy food options. The salad bar includes hand-cut fruit and make-your-own tossed salad with
assorted fresh greens, fruits and vegetables, meat and dry toppings. The deli will be located adjacent to soups and salads and will offer customized cold deli sandwiches, such as, fresh tortilla wraps and sub sandwiches. The design must create an ergonomically efficient restaurant and generate a fast speed of service.

Visible to Dining: Fresh produce display units, hand-cutting of fruit, bread display, specialty made-for-you sandwich station

Note: If a greenhouse is included in the program, garden growing units or growing towers will be visible by students dining in the salad and deli concept.

Equipment: Bowl/plate chiller, food processors, under-counter refrigerators, sloped cold wells, reach-in refrigerator, prep sink, under-counter warmers, heated shelf, frost top, work table, bread display, refrigerated preparation tables, high speed panini press, ventilation hood with fire suppression, proofer/oven, soup warmers, cold wells, reach-in refrigerator, prep sink, under-counter warmers, hot wells, work table and hand-sinks

ITALIAN | PIZZA
Approach: Pizza, a staple in many college students’ diets, will be featured at this restaurant. Customers will also be able to witness the rotation of pizzas in the oven while baking. Hot, appealing pizzas will emerge from the oven, visible to students. Breadsticks and breads with marinara and cheese sauce may also be featured on this menu. Pizza assembly will occur in the concept.

Visible to Dining: Elements that will be visible to dining include a pizza oven and flames, pizzas bubbling in the oven, pizza assembly.

Equipment: Hearth oven, ventilation hoods with fire suppression, combi oven, pasta cooker, trunnion kettle, under-counter warmers, pizza dough sheeter (depending on the type of pizza crust), roll-in freezer, preparation sink, worktables, food display equipment (hot induction, cold and ambient temperature), soup kettles, breath protection, hand-sinks, walk-in refrigeration.

VEGAN | VEGETARIAN
Approach: The attraction of this restaurant will be its plant-based menu offerings. This location should be able to serve all day parts and will be supported with equipment designed to store, hold and/or display finished and raw products. Customers will be able to place orders or retrieve items from the cooked products displayed on heated and/or from chilled counters, as appropriate.

Visible to Dining: Range, demonstration area

Equipment: Charbroiler, range, griddle, pasta cooker, fryer, steamer, trunnion kettle, cold well, hot display, ventilation hoods with fire suppression, undercounter dishwasher, work table, walk-in refrigerator/freezer, undercounter warmers, bread rack, condiments, utility sink and hand-sink.

POP UP RESTAURANT | DEMONSTRATION
Approach: This is a very flexible production station to showcase a rotating menu to include international fare, street foods and American cuisine. Display preparation will be the focus, with the ability to provide a demonstration or teachable moment from this venue. A different cuisine will be featured on either a daily or weekly rotation and the menu will include hot items and appropriate cold accompaniments. The station will facilitate an assemble-to-order entrées.

Visible to Dining: Chef’s cooking suite to include a range, griddle, charbroiler rotisserie, et cetera

Equipment: Equipment may include rotisserie, specialty display charbroiler, griddle, fryer, combi oven (with smoker), Comal, rice cooker/warming cart, cold display, refrigerated base, cold
pans for preparation support, hot food display, induction soup wells, hot wells, ventilation hood with fire suppression, walk-in refrigeration, reach-in glass door refrigerators, refrigerated bases, work tables, hand-sink, and a utility sink.

BAKERY/DESSERTS
Approach: Students will enjoy ice cream, topped off with their favorite toppings, at a sundae bar. Market-style display of fresh baked desserts, and warm cookies contribute aromas and visual appeal to excite the senses. This will be primarily a counter service area with the kitchen bakery providing support for the service.

Visible to Dining: Fruit display, fresh baked desserts, refrigerated desserts

Equipment: Self-serve refrigerated display, soft serve ice cream dispensers, topping station, hot display, self-serve ambient temperature display, hand-sink, utility sink.

ALLERGEN FARE
Approach: This area will provide special diet menu items to students who have a food allergy. Dedicated equipment will eliminate opportunity for cross-contamination with products containing allergens to occur in production and service. There is a desire to locate this near kitchen or an area with staff who can ensure that products are stocked.

Visible to Dining: View of Allergen Fare area.

Equipment: Equipment includes a reach-in counter-top refrigerator, toaster, microwave, waffle iron, waffle dispenser, and cereal display.

BEVERAGES (2 LOCATIONS)
Approach: Today’s students expect a wide variety of beverage offerings. Self-serve beverage stations with dedicated backup supply storage, located near the dining areas, will offer soft drinks, juice, milk (cow’s, soy, and almond), brewed tea, non-carbonated specialty beverages, coffee and condiments. Beverage locations will be screened from dining and entrance sightlines as much as possible.

Equipment: Soft drink and ice dispensers, coffee brewers, juice dispensers, hot chocolate dispensers, milk dispensers, water dispenser (still, ambient and sparkling).

MERIDIAN VILLAGE: QUICK-SERVE OPTION
QUICK SERVE GRAB AND GO
Approach: This grab and go space will be located on the first floor adjacent to the lobby for convenient access for students on the way to and from class, during study breaks and socialization in the evening hours and late night. This concept will be supported by the kitchen on level two and by walk-in units in the retail operation. This location may be an option to support the late-night meal service. Menu items may include pre-made sandwiches, soups, dinner salads, 6” sub sandwiches, soups, dinner salads, side salads, potato chips, fruits, cookies, fountain and bottled beverages, and a variety of sweet and salty snacks.

Visible to Students: Store front

Equipment: Soft drinks and juice dispensers, coffee maker, tea brewer, under-counter refrigeration, hand-sink, utility sink, three-compartment sink, under-counter dishwasher, refrigerated display cases, merchandising shelves, and frozen and refrigerated walk-in storage.

MERIDIAN VILLAGE: DINING BACK OF HOUSE
SUPPORT SPACES
Approach: The staging area will support catered service for
meetings, events and meals and will be adjacent to the kitchen on level two.

Finishes: The interior finishes of all the back of house spaces, including kitchen, warewashing, and dock will be selected for ease of maintenance. The production kitchen and warewashing could have some finishes in colors, creating a more appealing work environment. Lighting levels throughout the back of house spaces will be bright, to reduce eye fatigue. Catering Staging

Equipment: Roll-in refrigerators, ice maker/bin, coffee brewers, water/filling station, storage racks, hand-sinks, three-compartment sink with scrapping table and disposer or basket collector, floor troughs, plating tables, heat lamps, speed racks and a mop sink closet are needed for this support function.

PRODUCTION KITCHEN
Approach: The kitchen will be primarily used for pre-preparation of foods, with most of the final preparation and assembly occurring in front of the customers in each Micro-Restaurant™. The kitchen will be developed with separate, designated work spaces, for hot, bakery, retail production and cold food production. Bakery desserts, salads, snacks and sandwiches sold in the retail operation will be produced and packaged for sale in the kitchen.

The kitchen will include larger walk-in cooler and freezer storage; dry storage; and cart storage. Wherever possible, range cooking equipment will be located against the perimeter walls. This will improve sightlines and supervision.

The kitchen is located adjacent to the servery/residential dining area of the building. An elevator will be utilized to transport products between the floors.

Equipment: Food processors, choppers, mixers, compost bins, produce washing sink, ice machine, convection ovens, combi ovens, smoker, fryers, griddle, tilting kettles, braising pan, pasta re-thermalizer, range, rotating rack oven, proofer, ventilation hoods with fire suppression, handsinks, preparation sinks, can opener, blast chiller, slicer, buffalo chopper, knife sharpener, ingredient bins, packaging machine, reach-in and walk-in refrigeration and freezers; dry good storage, mobile warmers, blast chiller, bag in box storage racks, high density storage racks, mobile storage racks and dunnage racks.

WAREWASHING
Approach: The warewashing drop-off point will be conveniently located for ease of customer access. An accumulator will be used to transport the dishes from the drop-off point to the dishroom. Wherever possible, sightlines to warewashing will be screened and acoustic challenges will be minimized. The dishwashing functions will be supported by equipment designed to facilitate the efficient cleaning of dishes and pans.

Proper drainage, water resistant wall surfaces and hose reels will enable staff to clean the equipment and room efficiently and thoroughly.

Adequate ventilation is needed to remove heat, steam and moisture from the air.

Equipment: These include a flight type (high capacity) dish machine with a blower dryer, accumulator, scrapping stations, dish carousel, agitating soak tanks, silverware sorting table, and an agitating pot sink. A custodial closet with a mop sink and storage for cleaning supplies and products will be located near this area. A pulper system will be used to minimize waste volume and may have an extractor located near the dock (connected with slurry lines from the trough-veyor, potsinks and perhaps a production sink).
DOCK AND RECEIVING
Approach: A centralized loading dock on Level 1 will be included as a part of the general support spaces for the building. The dock will be designed to handle large semi-truck receiving and trash disposal functions for the foodservice and the balance of the building occupants.

Equipment: There will be a need to locate bulk CO2 tanks for the soda systems; central oil waste collection systems, a power wash station (cart wash), floor cleaning machines, battery charging stations, flatbed trucks, pallet jack, milk crates, bread racks, compost bins (in a walk-in cooler) and other miscellaneous items in this program space.

The receiving areas will have a receiving office/standup desk with electrical and phone; hand-sink and a utility sink. An oversized door located off of an ADA-compliant, sloped ramp, will accommodate deliveries made with two wheeled dollies. Air curtains will assist in keeping pests from entering the building. Outdoor dock storage needs include space for parking spots for service vehicles, trash, grease bins, compost bins, recycling bins, and drainage.

OFFICES, STORAGE AND BUILDING SUPPORT
Approach: Offices to support the dining management team will be located near the production kitchen and serving areas. Employee support spaces include locations for clocking in and out, accessing communication, changing rooms, restrooms and lockers. Custodial closets should be strategically located to provide support for cleaning and maintaining the various areas of the dining program.

Included support of the building will be a small laundry for washing kitchen soft goods, and storage for uniforms and special event supplies.

Equipment: Lockers, power, time clocks, commercial washer, commercial dryer, sink, worktables, storage racks, data and phone lines.
As a logical part of the early cost estimating process, it is necessary to make assumptions regarding the information included in the cost summary. This section presents the order of magnitude cost estimates, based on the initial planning for the project, followed by a list of the assumptions used in determining this initial dining services cost.

1. Cost Estimate:
   - Micro-Restaurant Décor Needs $ 600,000
   - Signage (for menus and concept names only) $ 200,000
   - Food Service Equipment $3,823,750
     - Kitchen, Warewashing and All Storage Areas
     - Dock, Receiving, Staging Refrigeration
     - Restaurants and Self-Service Areas

2. What Is Included in The Food Service Equipment Contractor’s Scope of Work: (Thus, Included in The Foodservice Equipment Budget)
   - Walk-in refrigerators and freezers and the refrigeration systems required (including piping of refrigerant lines, evacuation and charging of lines).
   - Membranes on top of walk-in refrigerators and freezers.
   - Closure panels for walk-in refrigerators and freezers (to ceiling and walls).
   - Structural floors for walk-in refrigerators and freezers (only if located above the floor).
   - Loose racks, gondolas and displays.
   - Slat wall built into counters.
   - Food service hood ventilation hood canopies, NOT ductwork.
   - Stainless steel wall coverings under hood ventilation canopies - If tile is specified for the walls, tile is not part of the FEC scope of work. Non-combustible tile backer board/cement board that covers the walls surrounding the hood is NOT in the FEC’s scope.
   - Fire protection equipment for the foodservice equipment located below the hood canopies.
   - Faucets, floor troughs, lever-style drain assemblies, back-flow preventers, vacuum breakers specific made a part of specific food service equipment.
   - Stainless steel window frame and buck at the dish conveyor/accumulator customer dish drop-off point.
   - All Micro-Restaurant™ and conventional foodservice equipment casework; beverage station casework - This includes the counters, counter finishes, and equipment (breath protection, heated and chilled displays, et cetera)
installed into same.
• Hand sinks.
• Point-of-Sale cashier counters (but not the actual point-of-sale registers).
• Installation and freight for foodservice equipment.
• Calibration of all new equipment.
• Training on the more complex pieces of equipment, to the Owner’s satisfaction.
• Production of shop drawings, field measurements and as-built drawings.
• Attendance at progress meetings where foodservice equipment needs are on the agenda.
• Supervision of the equipment installation.
• Counsel, from other trades, regarding how the equipment utility connections are made.

3. What Is Not Included in The Food Service Equipment Contractor’s Scope or in the FS Documents: Details about what is NOT covered in the budget and FEC’s scope include:
• Walls, soffits, ceilings, general flooring, kitchen/back-of-house flooring, hood surrounds, partitions, artwork, decorative features, and other building elements that are not part of the casework application. The cost of the casework materials will be in the FS budget and fabrication of the casework will be in the FEC scope.
• Non-equipment finishes specifications including all casework finishes (countertop, façade, base material). The specifications should be included in the architectural finish legend. The foodservice designer will reference these specifications in their casework details and documentation, but the material specification will be provided, commonly, in the architectural specification.
• Slat wall affixed to walls and built-in wall displays.
• Sizing, location and layout of refrigeration condensers and rooms (normally by the MEP consultant).
• Material, installation and connection of all electric, mechanical and plumbing needs for equipment (after FEC sets equipment in place, cleans and readies equipment for connection by the electrical, mechanical and plumbing trades).
• Furnishings (booths, tables, fixed stools, chairs, et cetera).
• Walk-in cooler floor preparation (recesses/sand beds/insulated subfloors). When a walk-in has a finished floor that must match the main flooring in the adjacent area, an insulated panel-style floor is not included in the FEC’s scope.
• Fire protection for the building spaces.
• Interconnection of the hood fire protection system with any building systems.
• Interconnection of any alarms or monitoring systems with campus or building alarm systems.
• Liquid waste lines or piped slurry lines running from dish tables, pot sinks, pulpers to remote extractors and biodigesters.
• Exterior building ports for CO2 and grease reclamation.
• Carbonated beverage systems (CO2 tanks, syrup lines, and the oversized often metal conduit to run the syrup lines in between the supply and dispensing units). An exception to this may be the bulk CO2 tanks.
• In-wall structural reinforcement.
• Cement board or tile backer board around hoods and wet areas.
• Mop sinks.
• Paper towel, soap and chemical dispensers and lines.
• Dishmachine, potsink, chemical dispensers and lines.
• Food service ventilation ductwork, roof-top fans, make-up-air and ventilation pre-heat furnaces or a/c needs; pollution control scrubbers. Interconnection of electrical control systems for hood ventilation system, hood controls and energy management systems.
• Hydration stations, water bottle filling stations, water fountains and public hand washing stations.
• Insulated subfloors below walk-in refrigerators & freezers.
• Fire chases or barriers for HVAC ducts, utility lines, syrup lines and slurry lines.
• Graphics and signage are not in the FEC work. Unless otherwise noted, signage and graphics are usually designed under a separate contract.
• Electric and data for graphics and signage.
• Waterproof membranes under floors.
• Acoustic isolation.
• Lamps, fixtures, installation, controls and power for all lighting.
• Grease traps and interceptors, plumbing for same.
• Reinforcement of walls or ceiling for wall or ceiling mounted racks.
• Pallet jacks.
• Dock carts (both flatbed and two-wheel dollies).
• Scissors lifts.
• Dumpsters and compactors.
• Truck bay seal.
• Truck bay dock leveler.
• Dock lifts.
• Bumper guards for docks or walls.
• Bumper rails should be on all corners in back of house as well as horizontal rails along the wall (chair rails).
• Security lighting.
• Pots and pans (small wares).
• Office equipment for food service offices.
• Data and intercom links between offices, venues and cashiers.
• Music systems and speakers.
• TV monitors.
• Security closure apparatus (sliding doors, garage doors or gates).
• Fire extinguishers.
• Smoke detectors.
• Kitchen traffic doors.
• Employee lockers and restroom equipment.
• Point-of-Sale hardware, software for cashier machines, and cashier printers.
• Time clock systems.
• Commercial washers and dryers.
• Steam boilers, if required.
• Centralized water filtration systems.
• Window treatments.
• Chairs, tables and other furnishings.
• Menu Display (part of signage budget).
• Non-combustible walls under hoods.
• Compost and sanitizing buckets.
• Markups by the General Contractor.
• Taxes.

4. Notes about the Food Equipment Budget: Micro-Restaurant™ Character

The budget allowance for Décor represents the cost associated with elevating each Micro-Restaurant™ complexity from a common high school level of finish (basic PLAM box counters, paint, task lighting) to a more restaurant-like outcome. This allowance focuses on décor items, such as more durable and attractive counter finishes, pendant and décor-oriented lighting at each venue (although not recessed task lighting), tile on venue walls, hood surrounds, soffits and other elements that have proven interest with students and other customers. As the project planning progresses, and the design team and University work out the plans for these specific elements, the décor allowance is then re-allocated across many architectural cost silos, e.g. lighting, tile, paint, counter casework, et cetera.

5. Menu and Micro-Restaurant Name Signage (not building signage)

The allowance for foodservice signage is simply a placeholder for an as-yet-to-be-developed signage solution. This allowance pays for signage that is used to communicate menus and restaurant names. Without this commitment, we often find that the operator, lacking the signage needed to communicate menu and price, will
be forced to come up with a cost-free solution, which frequently results in a non-aesthetically pleasing solution, such as taping paper signs to the breath protectors and adjacent walls.

**RAM’S HORN DINING CENTER: LEVEL 1 - QUICK-SERVE RETAIL MARKET**

**QUICK-SERVE GRAB AND GO**
Approach: This grab and go space will be located on the first floor adjacent to the lobby for convenient access for students on the way to and from class, during study breaks and socialization in the evening hours and late night. This concept will be supported by an adjacent kitchen and by walk-in units in the retail operation. This location may be an option to support the late-night meal service. Menu items may include pre-made sandwiches, soups, dinner salads, 6” sub sandwiches, soups, dinner salads, hamburgers, grilled sandwiches, pizza French fries, side salads, potato chips, fruits, cookies, fountain and bottled beverages, espresso coffee, and a variety of sweet and salty snacks.

Visible to Students: Store front

Equipment: Soft drinks and juice dispensers, coffee maker, tea brewer, espresso machines, under-counter refrigeration, hand-sink, utility sink, three-compartment sink, refrigerated display cases, merchandising shelves, and frozen and refrigerated walk-in storage.

**RAM’S HORN DINING CENTER: DINING BACK OF HOUSE SUPPORT SPACES**
Finishes: The interior finishes of all of the back of house space, including the prep kitchen and warewashing will be selected for ease of maintenance. The production kitchen and warewashing could have some finishes in colors, creating a more appealing work environment. Lighting levels throughout the back of house spaces will be bright, to reduce eye fatigue.

**PRODUCTION KITCHEN, LEVEL 1**
Approach: The kitchen will be primarily used for preparation of foods for the quick-serve retail location and will be located adjacent to the retail servery area.

The kitchen will be developed with separate, designated work spaces, for hot and cold food production. Salads, snacks and sandwiches sold in the retail operation will be produced and packaged for sale in the kitchen.

The kitchen will have access to a walk-in cooler and freezer storage; dry storage; and cart storage. Wherever possible, range cooking equipment will be located against the perimeter walls. This will improve sightlines and supervision.

Equipment: convection oven, combi oven, fryers, griddle, charbroiler, conveyor oven, ice machine, range, panini press, ventilation hoods with fire suppression, hand-sinks, preparation sinks, can opener, slicer, knife sharpener, reach-in and walk-in refrigeration and freezers; dry good storage, mobile warmers, bag in box storage racks, high density storage racks, mobile storage racks and dunnage racks.

**WAREWASHING**
Approach: The dishwashing functions will be supported by equipment designed to facilitate the efficient cleaning of dishes and pans. Wherever possible, sightlines to warewashing will be screened and acoustic challenges will be minimized.

Proper drainage, water resistant wall surfaces and a hose reel will enable staff to clean the equipment and room efficiently and thoroughly.

Adequate ventilation is needed to remove heat, steam and moisture from the air.
Equipment: These include a door-type dishmachine, scrapping table, and drying table. A custodial closet with a mop sink and storage for cleaning supplies and products will be located adjacent to the dishroom. A pulper system may be used to minimize waste volume and may have an extractor located near the dock (connected with slurry lines from potsinks and perhaps a production sink).

RAM’S HORN DINING CENTER: FOODSERVICE EQUIPMENT BUDGET ESTIMATE

Below is the order of magnitude cost estimates for Ram’s Horn Dining, based on the initial planning for the project. The list of the assumptions under the Meridian Village costs estimates were used to determine the costs for the changes at Ram’s Horn Dining. For assumptions used, refer to the list under the Meridian Village costs estimates section of this narrative.

Cost Estimate, Level 1:
• Micro-Restaurant Décor Needs $0,075,000
• Signage (for menus and concept names only) $0,025,000
• Food Service Equipment $1,027,560
  o Kitchen, Warewashing and All Storage Areas
  o Quick-Service Retail

Note: The cost estimates for the changes to the seating on Levels 1 and 2, and the replacement of the steam equipment and waste management system on Level 2 are not included in the above figures.

SUMMARY
Bakergroup is pleased to submit this report and looks forward to amazing facilities with the important dining amenities with long-term and great appeal to the Colorado State University students and community. We appreciate the opportunity to be a part of the foundation in the planning for this facility.
2.9 ALTERNATIVE ANALYSIS
In addition to the new space requirements there are select program alternatives. As an alternate to the base program, 200 additional new beds are being considered for the project. The incremental beds would be delivered in Phase 2 and be added onto the existing 300 bed Phase 2 Residence Hall.

Additional potential alternates within include the following programs and uses:

- 12,000 Sq. Ft. – Housing and Dining Services Administration Space
- 3,000 Sq. Ft. – Greenhouse Space
- 500 Sq. Ft. – Spoke 2
- 1,500 Sq. Ft. – Meeting Room
- 1,000 Sq. Ft. – Student Storage
- 5,000 Sq. Ft. – Student Multi-Purpose Room
- Alternate for 1400 Revenue Beds Chilled Beam System
- Alternate for additional 200 Revenue Beds Chilled Beam System

Outside of the direct alternates there would be impacts of not completing the project in its entirety. This could result in:

- Not enough housing capacity to support both new first-year students and returning students during upcoming years of growth
- Limiting residential space for returning students could have detrimental impacts on student success and retention rates
- Forcing increasing returning students into off-campus housing will put further pressures on an already competitive market putting further strain on housing supply in the community and impacting rent escalation.
- The size of the incoming first year class is impacted by the housing capacity
- If returning students are turned away to accommodate first year students it is probable students would go back to seeing on-campus housing as only for first year students, so it would

Additionally, there would be impacts of only completing Phase 1. These impacts would be:

- No additional dining space
- The site in front of stadium left incomplete
- Costs to construct outside of the listed timeframe would result in re-mobilization charges, additional inflation, etc.
3.1 ARCHITECTURAL NARRATIVE

Prospective students typically know whether or not they would like to attend a particular university within minutes of their arrival on campus. Meridian Village is well positioned at the center of campus (north of the stadium, in the heart of a residential district and with easy access to the core academic campus and the great green) to become the signature residential project for the campus, providing a first impression that will attract and retain students and further position CSU as a leader in providing innovative, wellness based, integrated student living.

Students have expectations of their residence halls to be similar to home and/or that provide a transition to independent residential living. A student’s decision to remain on campus after their freshman year is largely influenced by location, quality and uniqueness; everything that the Meridian Village redevelopment embodies.

In preparing the Meridian Village program, we see the interconnectedness of scale; rooms are part of a building, the building part of a village, the village part of CSU, CSU part of Fort Collins. All entities sharing resources and potentially thriving off of symbiotic relationships. Individual student rooms are designed around small scale building blocks that are smart, efficient, stylish and unique. Courtyards and pedestrian ways are actively and passively programmed as unique, “in-between” amenities to this project. Project edges and thresholds are articulated to engage the surrounding context and evoke a unique CSU and HDS brand all the while preserving privacy for the residential experience.

The overall program area seeks to expand and connect the CSU residential experience by introducing an integrated, walkable community with an architectural brand identification built around the CSU / HDS palette. The Meridian Village site will be designed to passively engage the public edges while maintaining internal private residential community spaces in order to maintain a site largely dedicated to students living on the site.

Designed around the concept of solutions grow from place, the Meridian Village architectural character appropriately addresses
the micro and macro contexts with strategic active ground floor spaces that address public zones and more private, passive facades at residential courtyards. All of this to be interwoven with natural elements.

Design solutions, such as passive solar interfacing and smart footprints, will add significant value. Through the filter of performance based design, we can engage the architecture in terms of space and operation in such a way that one element can contribute to multiple project benefits; in other words, doing more with less. This is the essence of sustainable design and aligns with CSU’s Climate Action Plan.

**PROJECT HIGHLIGHTS**
- The project will primarily serve freshmen students in multiple buildings across the site with a total of 1400 revenue beds (base scope) + 200 revenue beds (alternate scope) constructed over 2 phases.
- Strategic residential spaces will be designed and located to specifically appeal to returning students in an effort to increase overall on-campus student housing retention.
- A Community Hub building with additional space for large and small community activities to serve different residential communities and campus.
- An on-site dining facility as part of the Community Hub will serve the needs of the Meridian Village residents, as well as, assist in supporting the south campus needs at-large.
- Highly-efficient residential units will fully utilize floor space as well as three dimensional volume where appropriate.
- A majority of residential student space will be designed around the residential POD community living concept where smaller rooms are designed to allow for larger shared community space.
- High-performance design goals will reduce operating costs on a per student basis.
- The project will build on the success of Laurel Village and Aggie Village North with new buildings that better meet current needs and trends of the student residents.
ARCHITECTURAL PROGRAM OVERVIEW

The project will consist of a comprehensive site redevelopment of the existing Newsom and Aylseworth sites. The existing buildings and hardscape will be deconstructed to allow for the development of approximately 500,000 gross square feet of new student housing and a dining facility. Additionally, the site will accommodate integrated, pedestrian focused plazas, courtyards, lawns and exterior programmed spaces. Significant open space will be preserved to maintain and celebrate the residential experience and leverage the favorable Colorado climate.

The 1400 beds will be dispersed between several room types; primarily double occupancy rooms which will be housed either in traditional, double-loaded residential communities or “POD” residential living communities. There will also be a target of 1 RA per 35-40 students for freshmen communities and 1 RA per 50 students (max) for second year student communities.

As part of inclusive living standards and goals, within each community, a fully accessible, single occupancy room will be assigned and will be designed to contain a larger en-suite bathroom that is designed to accommodate a personal care assistant. Additionally, all gender inclusive bathroom suites will be designed for every community no matter traditional style nor POD style. These bathroom suites will contain an open, common sink area, all fixtures separated into fully private rooms and at least one fully-accessible, private bathroom group.

To help support the vitality of the residential experience, the project will also provide amenity and community programming spaces per building. Each building will be efficiently laid out by connecting all of the communities via a central vertical spine referencing a “hub and spoke” model of building design. This central hub will be comprised of shared community functions such as group lounge, kitchen, and study spaces on the bottom and top floors and shared laundry rooms (serving up to 4 communities) and a small scale creative space at the interstitial floors.

To further provide diversified community amenity space, a dining building combined with large community program space will act as the active community heart for the project.
Sited along the north edge of the site and an internal primary site circulation spine, this program will leverage the energy flowing from campus and encourage life, vitality and community interaction along the public edges.

As part of the scope of work and to serve the existing dining capacity deficiency on the south side of campus, renovation improvements will occur at the Rams Horn Dining Center within the adjacent Academic Village housing complex. The renovation will include re-design of the first floor spaces and may include expansion of the second floor seating capacity in an effort to increase the number of students served and allow for a right-sized dining center to be built in the second phase of the Meridian Village project.

FLOOR PLAN OPPORTUNITIES

In an effort to provide a unique product to CSU, while maximizing student well-being and success, residential “POD” communities will be developed which allocate personal bedroom square footage to common space square footage. Care will be maintained to right size the bedrooms by increasing the community space within each residential community, more space will be given to the community shared functions thus facilitating interaction, collaboration and access to a variety of amenities. Each POD will be built around the goals that every student room opens to community space, all communities have ample access to daylight and views and each community is composed of a variety of scales of space. The residential communities will be laid out so that stacking room types and strategic amenity spaces combine to provide smart building layouts that are both functional and provoking.
DESIGN CRITERIA

The program and design of the Community Hub building is conceived as a central gathering space serving the many social and public needs of the Meridian Village community and beyond. With the dining facility as the primary program component, opportunities should be explored to connect indoor/outdoor spaces under the notion of spatial efficiencies. In particular, part of the dining seating is contemplated as easily convertible space which can transition from dining to meeting space throughout the day. Additional program within the Hub includes a large flex space that could be adapted for community wide events while being flexible enough to accommodate smaller programmatic needs as needed. The Community Hub will also be home to the Meridian Village community mail and package room, as well as, accommodate additional community storage space.

ARCHITECTURAL CHARACTER

Using the CSU HDS palette as foundational, the buildings of Meridian Village will take cues from the existing campus HDS aesthetic while looking to reveal a unique identity, all the while evoking the Colorado landscape. Building corners will erode to reveal a delicate, transparent aesthetic and top floors will be articulated to “visually” step back to relieve persistent massing. Visual lanterns will be employed at key elements, such as stairs, to animate, intrigue and provide safe/intuitive wayfinding.

Building entries will be located internally to the site and will be celebrated and easy to find for the residents and their respective visitors. Ground floor spaces along primary circulation zones will respond to the energy flowing between the adjacent uses. Program amenity space will be thoughtfully located to activate outdoor public realms while providing a convenient service to the building residents.

Regional and sustainably minded materials will be incorporated that reflect the priorities of the Housing and Dining brand while celebrating innovation. Brick, stone, stucco, and glass will be interspersed within a delightful aesthetic balance that is made up of horizontal shading devices, extended eaves, shifting material planes, pitched roofs and gables and high performance glazed corners.

All of this will be continuously evaluated under the direction of the project economic constraints. The buildings will strike an inviting balance between building efficiencies and amenity space in student living by designing dual functionality into building elements.
EXTERIOR and INTERIOR MATERIALS

As identified in the recommendations of the Campus Aesthetic Guidelines, the proposed design will strengthen CSU’s unique sense of place, reinforce the campus built framework by sharing a common palette of material aesthetics, provide new opportunities to expand the CSU & HDS brand and optimize sustainable opportunities in materials, construction operations, and energy consumption.

This project shall comply with the Campus Aesthetic Guidelines as best applied to the goals of the Charter. Materials shall also comply with the CSU Design and Construction Standards Manual, Current Revision, 01 October, 2009, or as otherwise noted.

EXTERIOR MATERIALS
Facade components of the new construction are comprised of stone, brick veneer, metal and/or cementitious panel, stucco and glazing; potentially as pre-fabricated modular systems. Key building joints, horizontal connections and vertical circulation components will employ a light, tectonic aesthetic helping to reduce the scale, bulk, mass and visual impact of the buildings. The buildings will strike a balance between mass and tectonics that are inspired by the energy and patterns of the campus. Integration with the material palette of the existing Campus and Residence Halls will be a key design goal, though the potential use of new, high-performance materials will help create a unique personality for Meridian Village, ultimately, providing CSU with a distinctive, contemporary product. Exterior materials will also include:
• Sloped roof areas (where they occur) at the residential wings will utilize shingles;
• Exterior sun-control devices at strategic south, east and west exposures, based on energy models & ROI
• Dining facility - vocabulary of the campus buildings, specifically embracing existing patterns while evoking a modern extension of the CSU palette through transparent / light materials.

INTERIOR MATERIALS
The interior finishes will be durable and require low maintenance. Sustainable materials or materials with sustainable components shall be considered with priority. Finishes for the residential public spaces will primarily be the same as the Laurel Village interiors. The construction of interior finishes for the residential program will be typical and are proposed to include:
• Painted gypsum board on metal studs
• Impact resistant walls at strategic locations
• Carpet
• Hard surface flooring materials at the entries, kitchens and bathrooms
• Hard surface (tile) shower surrounds
• Solid surface at casework.
• Other interior finishes such as hardware, doors, and specialties will be consistent with the CSU and Housing requirements.

INTERIOR DESIGN NARRATIVE
The dining concept mimics a modern neighborhood marketplace that engages students and guests with an array of food options, aesthetics and conveniences. The design embraces this dynamic platform and is characterized by exceptional and energetic presentation of fresh ingredients. Today’s students want choices and “want it now” this dining concept will be at the cutting edge of atmosphere and expediency.
The dining space is brought to life with warm tones and contrasting textures that are enlivened by greenery and natural light. Vibrancy and global diversity are conveyed with the smells of culinary exploration. Daring architecture paves the road for subtle interiors that come to life with well executed graphics, interior signage, and furniture.

Guests will embrace several different seating postures from the single high top for the student on the move to the long communal table for students catching up or studying together over a meal. The space conveys a heightened sense of design and wellbeing with natural connections to the outdoors and the campus beyond.

Contemporary higher education dining trends were an important reference point for these recommendations. This planning effort, the analysis and the recommendations contained in this report considered these trends and their influence on the dining program, and value to the Colorado State University students and the broader campus community.

HISTORY OF THE MISSION

To fully appreciate the foodservice needs of the new dining center and renovation to Ram’s Horn Dining Center, the foodservice consultants worked closely with the project team to refine details surrounding the experiential, market and operational elements to be integrated into the foodservice options on the campus.

Information was gathered during meetings with the project planning team to identify critical planning elements, e.g. pedestrian and material pathways, plans for the other program elements of the facility and additional factors that might bear on the foodservice outcome.

The planning team reviewed their findings, discussed development options, and identified the detailed equipment requirements for restaurant and back of house support spaces.

It is worth highlighting that the University administrators and staff were very helpful in providing timely and complete support during the entire planning process. The rapid response of these administrators and their staff was much appreciated and improved this project planning result.
GENERAL CAMPUS DINING TRENDS
Very naturally, dining is a continuously evolving landscape where any facet of the dining experience can be reset to meet the ever-changing needs of the markets served. Current trends in the collegiate dining market include a focus on the how various campus dining programs shape and nourish students, build connections to a campus, and echo popular commercial and retail environments in the community.

The following is the most recent compilation of many of the important dining trends in the collegiate dining market:

• Food and menu are arguably the top contributors to the customer experience with variety the Number One request received in student surveys at all campuses. Dining programs that offer multiple restaurant-level experiences within one facility, e.g. Micro-restaurants™, have been very successful in addressing students’ desire for this all-important need for variety. This need for variety has also led to the development of chef-driven, culturally authentic menus that frequently change - much more often than the common four or six-week rotation.

• With dining experiences an embedded element of student life, on-campus dining options that offer variety, relevant menu options and a chance for students to “Go IN to Eat OUT” are broadly popular. The key in this is a commitment on the part of the campus to develop destination dining options that are market competitive with off-campus restaurants.

• Display cooking adds to students’ desire for healthy, freshly prepared foods. They seek transparency in preparation and the option of customizing their meals. The implication: kitchens are shrinking and the front-of-the house is expanding.

• Dietary restrictions – voluntary and involuntary – are on the rise. Food allergies affect anywhere from 10% to 20% of adults in the U.S., with many leading dining programs now offering allergen-free zones. Some have added allergen-free pantries where no allergens (or allergens of a certain type) may enter. Labeling of foods containing these allergens is now prominent in most dining centers.

• Religious and self-imposed dietary restrictions are also on the trend radar. And, in an effort to be more culturally sensitive, more campuses are offering dedicated Kosher and Halal dining options; and additional menuing aimed at students with vegetarian and vegan interests.

• Street food: fun and gaining in popularity for a number of reasons. Street food is often culturally authentic. Chefs can enjoy taking traditional street food and adding a gourmet spin. Typically, street food kiosks are portable and can be regularly relocated to accommodate the busiest parts of campus during certain days and time. Busy students like the convenience of being able to grab something on the run, in between classes or in between jobs.

• Restaurant level dining. Today, students seek the same restaurant-like settings for dining, socializing, and entertainment that they grew up with. Lighting, décor, and varied seating options are important to restaurant destinations. Variety counts: some students desire darker, more intimate spaces where they can “unplug” completely, while others bright areas with a lot of visibility. This variety has driving the embrace of vastly different dining environments and menu experiences, all located within a single dining facility.

• Desire for variety in seating. Seating types contribute greatly to creating variety in these spaces, from communal and large group seating to small group tables and booths and bar seating. The trend is for “residential scale” seating, avoiding design outcomes that include vacuous, large spaces filled with tables (“a sea of tables”).

• Variety in décor. In addition to providing menu variety, a restaurant-focused approach with differing décor between restaurants is matched with student desires for variety in their daily menu and dining options. Individual identities also make it possible to change out one concept as menu trends change without having to undergo a complete renovation.

• Labor saving approaches. Micro-restaurants™ support display cooking in the most efficient way.
DESIGN CRITERIA

• Demonstration kitchens or concepts are becoming more prevalent on college campuses as campuses seek to enhance the visibility of the culinary skills of their staff. This approach can serve a dual purpose: functioning both as a demo/teaching kitchen, while also providing daily, flexible “chef's features” to students.
• Dining space (indoor and outdoor) is also becoming multi-purpose space. Dining rooms by meals are morphing into entertainment venues by night.
• Transformable spaces are also popular in campus dining programs. These flexible spaces can be reserved for large or small meetings and transformed into extra dining seats when needed by incorporating movable walls in the design.
• Students no longer follow traditional meal times. They are eating smaller meals, snacking more often, and grazing throughout the day. Many seek dining options for the late night and want to be able to find what they want, when they want it - no matter what hour it is. Additionally, certain foods are not confined to particular meal parts. Students eat pizza for breakfast, omelets for dinner, and burgers and fries at 3:00 a.m.
• Between going to class, holding down a job (or multi-jobs) and attending extracurricular events, students have little time to focus on eating healthy. One solution to providing extra-busy students with on-the-go healthier meal options is to offer self-prepared meals and meal kits, such as a Blue Apron™ meal program, fully prepared meals from a convenience store and/or take-and-bake items from a mini-market.
• Collegiate dining programs are implementing a mini-market and/or (unstaffed) micro-markets in residential hall facilities. These small markets are financially successful and provide supplies, snacks and meals to those living on-campus or in nearby apartments.
• Future tech-focus. The iGen (Generation Z) faction is tech-savvy and on-the-go. These students obtain information and communicate quickly through small electronic devices. To meet this need, online menu ordering is a trend on the rise. Students can order food from their cell phone and pick-up their meal at a chosen time in a designated spot in the dining facility with little to no waiting in line.
• Students are also very keen on sustainability. The Green Report Card is a website that rates campuses on their sustainability efforts. Many prospective students consider this rating in choosing a college or university. The demand for hyper-local, sustainably sourced / organic foods continues to grow. Campus farm-to-table programs are increasing, some with campus greenhouses or farms and other through coordination with local farmers. Students want to know from where their food comes and feel good about helping others.
• Energy and water conservation and waste reduction efforts are not new, but vital efforts. Students often want to understand what a campus is doing to reduce its ecological footprint. New technologies make these pursuits more feasible and more cost-effective, particularly in waste reduction. Many campuses are installing hydration stations where students can refill reusable water bottles instead of purchasing bottled water. Biodigesters use bacteria, enzymes, and macro and micro nutrients to break down food waste enough that it can go through water treatment instead of to the landfill. Some institutions are turning their used cooking grease into fuel for campus vehicles. Energy and water conservation can be realized through the use of LED lighting, high-efficiency appliances, and by eliminating the use of trays in dining facilities.
• When it comes to campus dining, today’s students seek food and facilities that are convenient, adventurous, and conducive to socializing. Benchmarking current and future facilities against these qualities and the trends previously described will enhance the success of its campus dining program.

MERIDIAN VILLAGE: PLANNING ASSUMPTIONS AND OBSERVATIONS - HIGHLIGHTS
• The dining center will be host to an active, dynamic dining program with food choices and amenities that are designed to be consistently appealing and relevant to student interests. The dining options that prevail should foster and reinforce the unique identity of the site in an outcome that attracts both students and the broader university community to the site.
• It is strategic that this facility becomes a desirable destination site for restaurant-level dining, for non-meal period socialization and as a showpiece for campus tour groups.
• The food offerings and dining experience at the student dining center must differentiate itself from the balance of the campus foodservices and appeal, specifically, to the students who live in the south housing neighborhood and attend classes in that area of campus. The University’s desire is to create appealing and unique food choices for students, while maintaining a balance with the foodservice experiences and options offered at other sites on the campus.
• The University goal is to create restaurant-style experiences that will help students connect with other students, especially during meals.
• Locally purchased, fresh, healthy, authentic, vegan and vegetarian menu options are important life-style choices for students living in this area of campus. Additionally, more and more students are requiring special diet options, such as gluten-free and nut-free meals. It is important that the strategies to serve students with an allergy provides a safe mechanism for the production and service and that the students feel that they are getting the same experience as other students, they don’t want to be isolated or feel singled out.
• Colorado State University desires to have the dining center be an inclusive and welcoming environment for all students and campus community members. The use of authentic ingredients and preparation techniques in global cuisine food offerings will not only engage and welcome students, but provide cultural learning opportunities for all students about various countries’ cuisines in fun, creative dining experiences.
• The facility will have a 552 seats in residential dining. Approximately 75 of these seats will be located in a flexible space that can be used during non-peak times of the day for students to use for studying, socializing and hanging out.
• It is anticipated that the demand for seating in the residential dining could exceed the number of seats provided. In anticipation of this, a Quick Serve Grab and Go operation will be included as part of the residential dining operation. Additionally, students may choose to dine at Ram’s Horn Dining or Braiden Dining, or schedule their time to eat around a non-peak period.
• The planning is to emphasize variety in seating. This is to be achieved by creating strategic adjacencies between dining and service environments, and by incorporating a variety of seating types that vary in both character and form. The utilization rate for seating is important in this facility, requiring a seating strategy that offers many options for individual, couple and small group seating, rather than a seating configuration that provides many long tables for large groups.
• Guests using this building will enjoy ease of circulation and logically located dining options.
• Signage, traffic flow and sightlines will be important to the outcome.
• Where possible, dining room locations should leverage desirable views of the adjacent campus and green spaces surrounding the complex. Windows with natural light should be incorporated to enhance the dining and social environments.
• The building design and operational program will achieve a minimum of LEED gold certification.
• The residential dining facility shall be capable of operating as a tray-free environment, while retaining the capability to accommodate trays, if desired.
• The dining program will be developed on two levels as follows:
  o For Dining Services support, the lowest level (Level 1)
hosts receiving, a staging area, custodial closet, cart wash area, grease and CO2 space and a receiving desk. A freight elevator is planned to move products vertically to retail and the residential dining operations. A passenger elevator will serve as a “back up” to the freight elevator, should it be out of commission.

The Grab ‘n Go concept is centrally located on Level 1, near building entrances and conveniently on the path as people travel through the building. The Grab ‘n Go seating area is adjacent to the Grab ‘n Go concept. Local storage, including provisions for storage of hot food items, will be available in the concept on level 2.

- Residential dining venues include:
  - BBQ | Smoke | Grill
  - Latin American | Mexican
  - Deli | Salad | Soup
  - Italian | Pizza
  - Vegan | Vegetarian
  - Pop Up Restaurant | Demonstration
  - Dessert
  - Allergen

- Quick serve concept is:
  - Quick-serve Grab ‘n Go

- The quick serve concept will be able to accept a web or app-based ordering process. For the assemble-to-order area, this will require a dedicated production space to create the order.

- The quick serve concept will have its own dedicated POS system. Payment for the meal is to be determined; it could be a simple meal swipe for a pre-determined amount of food or it could be retail based requiring dining dollars or cash to be used.

- Activity in the residential dining and the quick serve operations should be visible, inviting and easily accessible to the students passing through the building.

MERIDIAN VILLAGE: DEFINING THE DINING EXPERIENCE

A recognized and strong trend, especially on campuses with multiple foodservice options, is to intentionally seek to create variety at each site; a market-competitive mix of varied student dining options. For most campuses, the model for creating appealing options has centered on closely echoing the social and experiential qualities of the off-campus, retail market – with an emphasis on creating single site variety of experience and, often, a disconnect from the known and often too corporate or institutional identity of older, more traditional and now largely obsolete approaches to campus dining.

It is critical to balance customer traffic and demand between dining operations. This balance reduces workload -- in managing production processes, product flow, product costs,
control and reduction of food waste -- while simultaneously enhancing customer service. To that point: it is strategically important that the concepts selected for the student center exactly match with customer interests, while allowing for the flexibility in menu offerings required to continually adjust to maintain this balance.

Ease of movement through the spaces will enhance customer service experiences, as will any outcome that rewards customers with regular and evolving engagement in culinary activities. This includes offering unique, freshly made and inspiring authentic and healthy menu choices.

Each of the market server concepts can be considered as separate restaurant entities, with varied menu, equipment, lighting and design character – creating its own sense of identity; yet, in aggregate, striking an overall chord of harmony with the student interests at Colorado State University.

**RAM’S HORN DINING CENTER: PLANNING ASSUMPTIONS AND OBSERVATIONS – HIGHLIGHTS**

- This newly expanded quick-serve market and renovated facility will be an active, go-to-destination for students residing in south campus. The customer should sense energy and excitement as they enter the space.
- The expanded market/convenience store will accommodate a quick-serve pickup option for students desiring a grab and go meal. This convenient service option will not only fulfill the ever-growing online ordering needs of students but will also assist with quickly and efficiently serving the dining needs of the new students residing in Meridian Village after Phase 1 is completed.
- Vertical circulation through the building will primarily remain at the main staircase in the center of the facility.
- The current dining room on Level 1 will be reconfigured to allow for open seating. This newly created seating area will be a relaxing environment for students to study and/or socialize with friends. Outlets and USB ports will be available for students to “plug-in.”
- The planning will emphasize a variety of distinctly unique seating options. This will be achieved by creating strategic adjacencies between dining and service environments and by incorporating a variety of seating types that vary in both character and form. The design allows for a portion or portions of the seating areas to be condensed or expanded for hours with lower demand and weekends.
- The quick-service retail location on Level 1 will offer pre-made cold and hot sandwiches, salads, grilled sandwiches, snacks, beverages and a specialty coffee bar.
- Customers will have direct access to restroom facilities. Due to the increased traffic to this facility, additional restrooms may be included in the design.
- The reconfigured space on Level 1 will allow for additional storage. Since storage is undersized at this facility, this new storage location will be a welcomed addition to the lower level. Depending on the use of the new dry storage space, the room will include a combination of shelving styles – dunnage racks, stationary racks and mobile racks. To maximize storage capabilities of the space, high-density shelving may be used in all or a portion of the room.
• Lights in the newly renovated quick-serve retail location should be dimmable, with work areas, counters and décor lighting all dimmed separately (three circuits). Dining areas and dining area décor lighting should be separately controlled and dimmed.
• All finish materials, including light fixtures, should be easily cleaned and within reasonable distance to clean.

3.2 STRUCTURAL NARRATIVE

MAJOR PROJECT CRITERIA
Major structural design criteria for the project are as follows:
• 2015 International Building Code
• ASCE 7-010, Minimum Design Loads for Buildings and Other Structures
• CSU Design Standards

The structural design will include consideration of the following criteria:
• Floor gravity (live) loads due to occupancy uses.
• Roof gravity loads due to snow, including drifting around new roof top equipment.
• Gravity loads due to new mechanical, electrical, plumbing and architectural systems.
• Wind loading, including uplift on cantilevered elements
• Seismic loads

STRUCTURAL DESIGN CRITERIA
Specific structural design criteria are as follows:

a. Risk Category: III (Assumed occupant load > 500 in educational area)

b. Dead Loads: As calculated for structural components plus a minimum of 15psf for MEP and architectural systems.

c. Live Loads: Per ASCE7-010, summarized as follows:
   i. Residential (Private rooms) – 40psf
   ii. Residential – Public Rooms and Corridors – 100psf
   iii. 1st floor Spaces – 100psf (assembly areas, corridors)
   iv. Roof – 20psf roof live load

   v. Mechanical rooms – 100psf plus equipment

d. Snow Loads:
   i. Ground Snow Load Pg = 30psf
   ii. Exposure Factor Ce = 1.0
   iii. Thermal Factor Ct = 1.1
   iv. Snow Importance Factor Is = 1.1

e. Wind Loads:
   i. Vult = 138 MPH, Vasd = 100 MPH
   ii. Exposure C
   iii. Elevation: 5000 ft USGS
   iv. Enclosed Building
   v. Wind Importance Factor Iw = 1.15

f. Seismic Loads:
   i. Short Period Seismic Acceleration Ss = 0.185g
   ii. Long Period Seismic Acceleration S1 = 0.058g
   iii. Site Class = D (verify with geotechnical report)
   iv. Seismic Importance Factor Ie = 1.25

   g. Deflection Limits: Per IBC 2015

MAJOR STRUCTURAL COMPONENTS
The major structural components of the buildings are anticipated to be as follows:
• Based on adjacent projects near the site, foundations are anticipated to be drilled piers or spread footings. At the building perimeter, grade beams spanning to drilled piers or stem walls supported on continuous footings are anticipated for support of exterior walls and finishes.
• Slabs at Grade: Based on known performance of slabs-on-grade in surrounding buildings, a concrete slab-on-grade is anticipated for slabs at grade. In typical areas, a 4” thick concrete slab, reinforced with WWF 6X6 W2.1xW2.1 with joints at 15’ max is anticipated. In mechanical rooms slab thickness will be increased to 5”, with reinforcing proportionally increased.
• Superstructure Floor Framing: The structural system currently being considered is concrete over metal deck supported by cold-formed metal (lightgage) wall framing. Based on
the architectural layout, each exterior wall and two interior bearing wall lines are anticipated.
• Roof Framing: Roof framing is expected to be metal deck over steel bar joists supported by cold-formed metal wall framing.
• Lateral Systems: Lateral systems are anticipated to be a combination of braced cold-formed metal walls and either cast-in-place concrete or reinforced masonry shear walls at stair and elevator core locations.
• Note: Structural system being considered for the dining facility are a steel framing system with different decking options.

3.3 MECHANICAL and ELECTRICAL NARRATIVE
MECHANICAL SYSTEM DESCRIPTION
The project consists of four residential buildings and a mixed-use dining facility. There are currently three proposed HVAC systems for all four of the residence buildings. It is anticipated that the mixed-use dining facility will be a central air system with variable air volume terminal units. Below are the proposed HVAC options for the residence buildings.

HVAC SYSTEM OPTIONS
Base Option: Water Source heat pump system with ducted ventilation air from rooftop Energy Recovery Ventilators (ERVs). It is anticipated that three residence rooms will be tied together to create a zone. Additional zones will be required for common spaces and restrooms.

Cooling for the heat pump loop is to be provided from cooling towers or evaporative fluid coolers, and heating water from condensing boilers. It is anticipated that each building will be provided with a dedicated boiler room. The cooling tower or fluid cooler is to be located on the roof of each building.

ERVs with heating, cooling and heat recovery for ventilation will be located on the roof. ERVs will be ducted separately to each bedroom, restroom group, and common space. In lieu of ERVs ventilation air could be ducted from Outside Air (OA) intake louvers for each heat pump.

Option 1: Thermally activate (radiant) slab system - with ducted ventilation air from rooftop ERV’s. The thermal slab will include piping within the slab that will provide heating and cooling with the use of a six-way valve. It is anticipated that fan coil units will be required for heating and cooling of restroom groups in place of the chilled beam equipment.

Chilled water is to be provided from air cooled chillers, and heating water from condensing boilers. It is anticipated that each building will be provided with a dedicated boiler room. An air-cooled chiller is to be located on the roof of each building.

Other Options Discussed/Reviewed During Programming: Four pipe active chilled beam system with ducted ventilation air from rooftop ERVs. The chilled beam will include both heating and cooling coils with independent control valves for each coil. It is anticipated that each residence room will be an independent zone. Additional zones will be required for common spaces and restrooms. Each zone with a chilled beam element will require relative humidity monitoring/controls. It is anticipated that fan coil units will be required for heating and cooling of restroom groups in place of the chilled beam equipment.

Chilled water is to be provided from air cooled chillers, and heating water from condensing boilers. It is anticipated that each building will be provided with a dedicated boiler room. An air-cooled chiller is to be located on the roof of each building.

ERV’s with heating, cooling and heat recovery for ventilation will be located on the roof. ERV’s will be ducted separately to each bedroom, restroom group, and common space.
ERVs with heating, cooling and heat recover for ventilation will be located on the roof. ERV’s will be ducted separately to each bedroom, restroom group, and common space.

**Four pipe fan coil system** - with direct connection to the outdoors for ventilation air. It is anticipated that each residence room will be an independent zone. Additional zones will be required for common spaces and restrooms.

Chilled water is to be provided from air cooled chillers, and heating water from condensing boilers. It is anticipated that each building will be provided with a dedicated boiler room. An air-cooled chiller is to be located on the roof of each building.

**MAJOR PROJECT CRITERIA**

The applicable codes and standards for this project include the following:
- IBC (2015)
- IMC (2015)
- IPC (2015)
- IFGC (2015)
- NFPA (applicable years/section)
- IECC (2015)
- IFC (2015)
- CSU Technical Design Standards
- Poudre Fire Authority (AHJ)
- Department of Public Health and Environment
- LEED v4 Rating System

Project goals include the following:
1. **Sustainability**
   - LEED version 4 NC Gold
   - Energy Efficiency
   - Water Efficiency
2. **Budget**
   - See probable construction cost section of report.

**SUSTAINABLE DESIGN STRATEGIES**

Sustainable design strategies at the Programmatic level of the project include the following. Further study will be required during the design to finalize what will be included in the project.

1. High performance building envelope
   - East-west oriented building (where achievable)
   - R-25 walls
   - U-0.28 / SHGC-0.23 glazing
   - R-38 roof
2. Ultra High Efficiency plumbing fixtures
   - 1.28 gpf tank type water closets
   - 0.5 gpf urinals
   - 0.5 gpm lavatory aerators
   - 1.25 gpm shower heads
   - 1.0 gpm kitchen sink aerators

**CONTROLS**

Each zone will be provided with its own thermostat and individual means of control. Basis of terminal units at the rooms is one unit per three bedrooms. Temperature set points will be controlled with +/-3 degrees F control by the users from the thermostat. Unoccupied setback temperature programming will also be available for each individual zone such that lighting vacancy sensors will provide a means to set the mode into unoccupied. BAS will control and monitor the plant side of the HVAC and plumbing systems.

Weather design data is as follows:
- Winter ambient design temperature: -10 degrees F DB
- Summer ambient design temperature: 95/63 degrees F DB/ WB

Indoor design space temperatures are:
- Winter (occupied/unoccupied): 68/60 degrees F
- Summer (occupied/unoccupied): 75/82 degrees F
Additional controls will be required for the chilled beam and thermally activated slabs to monitor space relative humidity (dew point). These controls will disable cooling if the dew point rises to a point that will cause condensation. Note: Additional structure and finish options need to be considered for either the chilled beam or thermally activated floor options.

**PLUMBING**
The domestic water service for the project will be sized using CSU provided empirical data for water piping and DHW equipment sizing based on fixture use for dormitories.

**FIRE PROTECTION**
The building will be designed using NFPA 13, and dry systems in attics as well as other areas subject to freezing.

**ELECTRICAL SYSTEM DESCRIPTION**
The project consists of four residence buildings composed of student apartments, and a mixed-use dining facility. The proposed Electrical system for all five buildings will include distribution, branch power, electrical lighting and controls, and special systems.

**MAJOR PROJECT CRITERIA**
The applicable codes and standards for this project include the following:
- IBC (2015)
- IMC (2015)
- IPC (2015)
- IFGC (2015)
- NFPA (applicable years/section)
- IECC (2015)
- IFC (2015)
- NEC (2017)
- CSU Technical Design Standards
- Poudre Fire Authority (AHJ)
- Department of Public Health and Environment
- LEED v4 Rating System
- BICSI Applicable Standards and Guidelines
- EIA/TIA Applicable Standards and Guidelines
- Design Brief for a Standard INTO Center, Design Manual v1.1 – May 2008

**DESIGN CRITERIA**
26 05 00 Common Work Results for Electrical
26 05 19 Low Voltage Electrical Power Conductors and Cables
26 05 26 Grounding and Bonding for Electrical Systems
26 05 29 Hangers and Supports for Electrical Systems
26 05 33 Raceways and Boxes for Electrical Systems
26 05 34 Cabinets, Boxes and Fittings
26 05 36 Cable Trays for Communication Systems
26 05 53 Identification for Electrical Systems
26 05 83 Wiring Connections
26 09 23 Lighting Control Devices
26 24 13 Switchboards
26 24 16 Panelboards
26 27 26 Wiring Devices
26 28 00 Low Voltage Circuit Protective Devices
26 32 13 Engine Generators
26 36 00 Transfer Switches
26 43 13 Surge Protective Device (SPD)
26 50 00 Lighting

Specifications for low voltage systems to be developed during design phase.

**SUSTAINABLE DESIGN STRATEGIES**
1. All lighting sources will be efficient LED type to drive energy use below code-maximum level.
2. Daylight harvesting use could exceed code-minimum requirements. Automatic dimming daylight sensors can reduce lighting levels in areas with sufficient daylight.
3. Electrical infrastructure can be designed to allow for future
addition of a photovoltaic system.

4. Strategic submetering of resident systems may be used to generate energy use data; this could then be used for ‘green’ competitions between building, wings, etc. Note: This option will continue to be explored in design and is not within the current cost model.

MAJOR COMPONENTS: ELECTRICAL DISTRIBUTION

1. Service
   a. Electrical power to the buildings will be provided by 13.2kV - 480Y/277V, 3-phase exterior pad-mounted transformers located immediately outside each building and fed from the campus medium voltage distribution loop. The transformers will be sized appropriately to serve the calculated building load.
   b. Back-up power to the buildings will be provided by diesel-powered generator(s), located outdoors and provided with sound-attenuated weatherproof enclosure(s).
   c. Service entrance equipment for each building will be located within each building’s main electrical room. Emergency transfer switches and distribution from the generator will be located in separate emergency electrical room(s), total quantity of rooms to be determined.
2. Power Distribution in Each Building
   a. Each building will be provided with a service main switchboard rated at 480/277V and will be equipped with distribution to serve loads throughout the building, with 30% spare capacity.
   b. The building switchboard will serve distribution panels fed through dry type 480V - 208Y/120V, 3-phase transformers for service to branch circuit panelboards located on each floor of the building. These panelboards will serve the building lighting, receptacle, appliance and small motor loads and will be provided with 20-30% spare capacity in first floor redevelopment areas. These can be empty breaker slots.
   c. Electrical distribution class switchboards and panelboards will be provided with 20-30% spare electrical capacity consisting of provisions for future overcurrent protective devices at first floor redevelopable areas.
   d. An emergency service entrance distribution panel will provide feeders from the emergency transfer switch to emergency panelboards located approximately every other floor to feed egress and exit lighting. A separate standby transfer switch and distribution panel will feed elevators and other designated loads.
   e. A separate service will be provided from the pad mounted transformer to serve the fire pump.
   f. Main electrical wiring will be run in conduit. MC cable is anticipated being used in areas, such as between devices within individual resident rooms.

   Aluminum wire can be used for service feeders from the building service transformer to the service entrance distribution switchgear and for feeders from the main distribution switchgear to panelboards throughout the building. Aluminum wire shall be no smaller than #1 AWG and no larger than 750 kcmil.

ELECTRICAL LIGHTING

1. Lighting systems will be designed to provide appropriate illumination levels within each space, in accordance with IESNA criteria and recommendations. Each lighting system will be designed to:
   a. Provide appropriate illumination levels for the environment or tasks to be performed.
   b. Control brightness ratios.
   c. Enhance visual comfort.
   d. Minimize direct glare and reflections.
   e. Accent the architectural details of the building.
   f. Enhance and accent merchandising displays.
   g. Maximize building occupant safety.
2. Interior Luminaires: All luminaires shall be LED type with color temperature of 3500K. All LEDs shall have a color rendering index (CRI) of 85 or greater. Unless noted otherwise, luminaires shall be provided with electronic drivers with 0-10V dimming protocol or dual level control.

Note: 0-10V dimming drivers are mostly standard on all LED fixtures. Light reduction is required by 2015 IECC (c405.2.2) for sleep areas without occ sensors or timed control. We can either provide dual level control or dimmers and will continue working through options in design whether dimming or dual level controls are appropriate.

3. Exterior Luminaires: All luminaires shall be LED type with color temperature of 4000K. Specific types, like pole-mounted area lighting, will be CSU standard models. Other architecturally unique types shall be wet location rated, vandal resistant, etc. as required.

4. Emergency Luminaires: All emergency luminaires shall be connected to the emergency generator branch. No batteries are anticipated at this time. Exit signs shall be internally lit, AC-only models. Designated emergency luminaires shall be provided with automatic load control devices to override ‘on’ in case of outage.

5. Lighting Control Strategies
   a. Individual Controls: Provide dimming and vacancy sensor lighting controls for all offices, meeting rooms, work rooms, conference rooms, academic area, public area restrooms, laundry rooms, and BOH spaces. Residence rooms receive dimming control with no sensor override.
   b. Networked Controls: Networked, intelligent relays will provide control over lighting in public lobbies, corridors, group kitchen, studies and lounges. The networked lighting controller will turn lighting in these areas on/off and dim based on Owner’s time schedule. Controller shall have full occupancy sensor coverage for override and photocell input for both exterior and interior applications.

3.4 TELECOM NARRATIVE

ELECTRICAL SPECIAL SYSTEMS

1. Fire Alarm System
   a. A general fire alarm system and Digital Voice Command (DVC) mass notification system will be provided for the facility with speakers installed throughout.
   b. The fire alarm control panel (FACP) will be located in an electrical closet in each building with grade level access. A graphic remote annunciator will be located adjacent to select entrances.
   c. The FACP will communicate with the main campus fire alarm control system. System interface must use the current University Notifier software version.
   d. Detection devices (including smoke detectors, heat detectors, and required pull stations) will be located in corridors and other select locations throughout the facility in accordance with all applicable codes.
   e. Detection devices in dwelling units will be supervised by the building main fire alarm panel.
   f. Annunciation devices will include wall and ceiling mounted strobe and speaker-strobe annunciation devices, located throughout the facility in accordance with all applicable codes.

2. Voice and Data System
   a. Equipment for the main incoming services shall be located in an entrance facility room located on a grade level or access level. This room can double as the Telecom main Equipment Room (ER).
   b. There shall be a minimum of one Telecom Room per floor. These Telecom Rooms (TRs) shall have adequate space, power, cooling, and lighting to meet CSU’s current standards as well as support the growing demand to house other low voltage systems equipment in the same spaces. The rooms
should be stacked where possible and each room shall be minimum 9’x10’ in size. Each TR shall be connected to the ER by single mode fiber optic cable and multi-mode fiber optic cable.

c. Category 6A cabling shall be required from the workstation outlets back to the nearest new TR. Each standard outlet shall consist of two cables each with outlets located throughout the building consistent with the CSU standards besides the following locations. At a base level, an office consisting of 100SF or less shall have two outlets while offices larger than 100 SF shall have two outlets with three cables each. Each room shall have an outlet in the bedroom. Lounges and other common areas shall have a minimum of one network port. Additional, more specific outlet requirements may be required in other specialty areas. The outlet requirements in these spaces shall be identified by the University throughout the design process.

d. The building shall have a dedicated wireless system to support the increasing demand for data access throughout the building.

3. Access Control System
   a. The access control system shall consist of proximity card readers and door contacts at entry/exit points as well as other select doors determined by the owner.
   b. The head end equipment shall be located in the Main Telecom Room.
   c. This system shall be tied to the campus system. In addition, this system shall be integrated with the video surveillance system.
   d. The contractor shall provide access control system consisting of conduit pathways, cabling, door devices, door power supplies, control panel, and software for the entire building.

4. Video Surveillance System
   a. The Contractor shall provide a video surveillance system consisting of conduit pathways, cabling, cameras, and video archiving equipment.
   b. Security cameras are required at entry/exits. Video archiving equipment shall be located in a separate building on campus and shall be compatible with existing campus ONSSI system.
   c. The system shall be integrated with the access control system. The cameras shall be motion triggered and the video shall be archived for 14 days.

5. Television Distribution
   a. A connection point from the main campus feed will be required in the new Main Telecom Room. From each TR RG-6 cable shall be installed at each individual outlet location.
   b. A CATV outlet may be located and further developed as the design progresses in each space.

6. Audio/Visual Systems
   a. An LCD screen with multiple input connections is anticipated in Lounge areas.

7. Distributed Antenna System
   a. A Distributed Antenna System providing coverage throughout the building is anticipated for providing first responder radio.

TECHNOLOGY RESPONSIBILITY MATRIX
GC = General Contractor
EC = Electrical Contractor
SC = Specialty Contractor
MC - Mechanical Contractor
OW = Owner

NOTE: This is a sample matrix (right) and will be finalized with CSU in design.
### 3.5 UTILITIES NARRATIVE

#### SITE WATER SYSTEM

The existing Aylesworth and Newsom Halls are currently provided with water service from CSU's water main and campus master meter. The proposed buildings will be served by this existing main for both water and fire services.

A looping water main may be required to serve fire hydrants internal to the site.

Coordination Issues: Coordination with the architect and fire sprinkler designer will need to occur to determine the building connection locations and sizing. Further analysis of the water system may be required to determine the system pressure and flows based on the new demands from the proposed buildings.

#### SANITARY SEWER SYSTEMS

The existing student housing is served by the campus's sanitary sewer main. Due to the increase in flows from the proposed buildings, this project will be required to upsize the current restrictions in the system that would prevent the sanitary sewer mains downstream from conveying the flows. The current sewer modeling has taken this development into account and has provided recommendations on the routing and improvements required for this development to take place.

Coordination issues: The location of sanitary sewer connections to the mains will need to be coordinated with the plumbing engineer.

#### STEAM, CONDENSATE, GAS, IRRIGATION and DRY UTILITIES

Coordination Issues: Coordination with CSU and the dry utilities designers will occur in order to show the horizontal line work on the utility plan and to coordinate utility crossings. Detailed design of the dry utilities and condensate lines will be performed by others.

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| Service Carrier Agreements |    |    |    |    | X  |
Steam line abandonment and capping will be coordinated with CSU and the mechanical engineer.

### 3.6 SITE IMPROVEMENTS NARRATIVE

The primary criteria for the program plan site design are as follows:

- Gathering spaces are focused around solar collecting areas with a variety of public/private levels and types. The north entry courtyard off of Hughes Way will welcome residents and visitors with clear and direct passage from the Hughes Street path into the Meridian Village project. The south entry courtyard will provide an area for stadium crowds to gather on game day. This will help to mitigate excessive crowds taking over the village on game days. The active transition court to the west connects the Academic Village project to Meridian Village – this courtyard is intended to be activated with a variety of lawn and other games. Resident courtyards to the east will each have their own unique look and feel. The two courtyards to the north will have open flexible lawn space that can accommodate a variety of activities. The courtyard along the south will interface with the eco-edge and water quality features. The outdoor courtyard near the NE corner of the community hub building will provide a flexible space for indoor/outdoor uses as well as provide space for outdoor dining, people watching and potential outdoor art work. Courtyards will be designed as appealing, restorative spaces providing recreation, group gathering, private seating and circulation, however, thoughtful cost management will be taken into account as we develop the designs further.

- Private landscape edges will be provided along all ground floor residences at a minimum of 10' in depth. Landscape edges to be provided along academic and support ground floor uses to a lesser degree. Areas adjacent cafeteria or support ground floor uses will focus on an indoor/outdoor feel. The project will maintain a green edge along the streets to the north and south. Several existing trees have been identified to remain in place – these include several within the central area and along Pitkin Street.

- The Main Village Green emphasizes the main public gathering space and is intended to be a large flexible space with passive use.
• Trash enclosure areas to accommodate resident beds. Discussions regarding this to continue based on concept of providing enclosures that are focused along the edges of the site. The goal would be to minimize the need for trash trucks to access the site along the major connection paths – they would be focused towards the emergency access path along the west and Meridian Avenue to the east.

• Walkway slopes not to exceed 5%, w/2% cross slope.
• Plant materials with 4 season presence and xeric and Colorado native plant emphasis.

MAJOR COMPONENTS
Major project components include the following:
• Entry Courtyard/Promenade at north side of the site
• Solar oriented resident courtyards
• Main Promenade/Village Green
• Gallery/Flexible Courtyard at Community Building
• Active Transition Courtyard
• Dry stream feature at east edge of Main Promenade path
• Pedestrian ‘bridges’ as threshold over dry stream
• Dining focused residential courtyard

• Gathering focused residential courtyard
• Activity focused residential courtyard
• Bike parking
• Trash collection areas

SUSTAINABLE DESIGN STRATEGIES
Sustainable design strategies include:
• Bioswales in planting areas along east of main walkway to promote water quality.
• All concrete to have SRI value of 29 or greater
• Water reduction and habitat value through the use of native plants.
• All site walls of local, native sandstone boulders.
• Recycled concrete as sub-base.
• Fly ash used within concrete mix.
• Full – cutoff light fixtures to reduce light pollution.
• Building edge planting to reduce heat gain in buildings.
CIVIL SYSTEMS SCHEMATIC DESIGN NARRATIVE

The site work associated with the Meridian Village project includes installation of new, and modifications to existing, water and fire service connections, sanitary sewer, storm drain, electric, communication lines, gas lines, and irrigation. The associated demolition of the existing utilities and structures will be addressed under a separate phase. New utility services will be extended to the proposed buildings.

Coordination with the mechanical, electrical and plumbing engineer will be necessary to locate and size all utility service connections. Coordination with the geotechnical engineer will be necessary to verify the pavement design for the driveways, parking and road improvements. A topographic survey of the entire site has been performed to more accurately evaluate the site and determine exact locations and depths of existing utilities and tie-in locations. Additional pot hole information may be required to further determine location and depth of utilities that were not able to be surveyed.

EMERGENCY VEHICLE ACCESS DIAGRAM

Fire access will be provided throughout the site and a variety of drive lane widths will be provided in coordination with Poudre Fire Authority to access the buildings within the center of the site.

DESIGN CRITERIA

Design of the utility and site improvements will be coordinated directly with CSU Facilities and the Housing & Dining staff in conjunction with CSU’s design criteria, standards and most current models. All work on site is assumed to be within the CSU campus property and no work in the City of Fort Collins right-of-way or easements is anticipated. Coordination with Poudre Fire Authority will be needed to review fire access and the design will address PFA requirements. Construction erosion control design will reference Urban Drainage in collaboration with CSU standards.

EARTHWORK

Work in this Section includes grading associated with the proposed buildings, and site improvements. The recommendations for earthwork elements will be based on the geotechnical engineer report.

The site topography tends to generally drain to the east, with an east-west ridge running down the middle that splits the site into two different drainage basins. The surrounding site has been improved with paved pedestrian access areas and pavement associated with parking. The proposed buildings will require modifications to the adjacent grades to ensure positive drainage away from building foundations and to the existing drainage conveyance system.

Coordination Issues: All site grading decisions will be coordinated with the project architect, landscape architect, geotechnical, and structural consultants involved in the pavement and building foundation subgrade. Stormwater management and erosion control plans will be prepared for the areas of disturbance. Detailed grading between proposed
buildings will be coordinated with both the architect and the landscape designer.

**FLEXIBLE PAVING**
This section includes the asphalt paving for all proposed service drives. A composite section of asphalt over an aggregate base course will be used. Heavy duty areas including drive lanes will require thickened sections. The existing asphalt paving could possibly be ground and mixed with the existing or new aggregate base course for re-use on the site.

**RIGID PAVING**
This section includes the concrete paving for all proposed service drives, sidewalks, and curb and gutter with jointing and reinforcement as specified and scheduled. A composite section of concrete over an aggregate base course will be used. Heavy duty areas including the dumpster areas will require an 8” – 10” concrete section and be reinforced with rebar.

**SIGNAGE**
Signage for the proposed access and directional signage will be provided with CSU recommendations.

Coordination Issues: Location of on-site signs will need architectural and CSU Staff coordination.

### 3.7 PEDESTRIAN, BIKE and VEHICULAR ACCESS

The primary criteria for the program plan site design are as follows:

- Major site circulation will focus along the main north/south promenade that starts at Hughes Way on the north and heads south to Pitkin Street. The other main circulation route is the east/west path that starts at the existing Academic Village to the west and directs residents to the northeastern corner near the library parking lot. This intersection will need to be studied further in order to understand bike/pedestrian and vehicle movements. Minor circulation routes come from resident courts along the east side of the project to the north/south circulation path along the re-aligned street to the east.

- Emergency access will be provided at 26’ along the main promenade and other main connection paths from the west to the northeast of the project. 20’ minimum emergency access paths will be provided off of the main promenade within each resident courtyard to within 105’ of the building to provide aerial apparatus coverage.

- Bike Parking has been accounted for on the plan – total bike parking shown is 1,392 based on a bed count of 1400 at an 80% ratio. Each bike parking area is within visible areas along major circulation routes, proportionately distributed along residential uses.

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**BIKE PARKING PLAN**
3.8 PARKING REQUIREMENTS
Facilities Management and Housing and Dining Services reviewed several options for additional student parking for the project. Options ranged from:
- Construct a parking garage on the site
- Provide student parking in a remote location
- Provide additional parking through improvements to the existing Braiden Hall parking lot and modify Hughes Way to construct additional diagonal parking on the south side.

At the request of the Master Plan Committee, a traffic consultant was engaged to study the impacts of an on-site parking garage versus the modification to Hughes Way-- specifically for impact on adjacent intersections and pedestrian safety. The consultant concluded that both options resulted in acceptable levels of pedestrian safety and service at adjacent intersections, mainly because student parking tends to be stagnant. Remote parking is currently available for students at a significantly reduced price, but it has not been a popular option.

After review of the consultant report the decision was made to pursue upgrades to Hughes Way and Braiden lots. Hughes Way is already in need of upgrades to improve bike transit and pavement condition, and the most cost effective approach is to combine that work with the new diagonal parking. This approach was approved by the Master Plan Committee in July 2018.

3.9 LEED GOAL (SUSTAINABILITY)
As one of the largest and newest residential communities on campus, Meridian Village is the ideal community to showcase high-performance healthy buildings and outdoor spaces. This new community can generate excitement and continue CSU’s legacy of sustainability on campus by including regenerative development and sustainable building concepts. These include minimizing use of resources (pursuing zero net energy, water and waste), designing for effective operations and maintenance, and indoor environmental quality using healthy materials. Living and dining spaces with thermal comfort, daylight and direct line of site to the outdoors is key to supporting healthy occupants. Additionally, the project will pursue U.S. Green Building Council’s (USGBC) LEED® for New Construction™ Version 4, Gold level certification.

A sustainability workshop was held in March of 2019 with the design-build team and CSU stakeholders. These potential sustainable strategies were highlighted by the team:
SITE DESIGN
- Social spaces
- Rainwater management
- Pollinator friendly
- Organic gardens
- Bike parking – covered, uncovered, secure
- Bike and pedestrian paths
- Low impact development
- Minimize outdoor water use

BUILDING DESIGN
- Acoustics
- Food pantry
- Spoke II bike servicing (add alt)
- Natural ventilation
- Biophilic design
- Prominent stairwell
- Community spaces

ENERGY AND WATER
- Solar PV ready
- Geoxchange
- Zero net energy
- All electric design strategies
- Daylighting
- Lighting controls
- Ultra-low flush and flow fixtures

ADDITIONAL STRATEGIES/FUTURE CONSIDERATIONS
- Building as a teaching tool
- LEED Platinum for Community Hub exploration
- Resiliency
- Reclaimed materials
- Multi-stakeholder collaboration
- Reduce operational waste
- Wellness Building Principles: Enhanced ventilation, combustion minimization, mindful eating, enhanced daylight access, movement network and circulation, mental health promotion, access to nature, restorative spaces, health promotion and community access and engagement

In April of 2019, the Eco Leaders provided student stakeholder input for the Meridian Village project which includes a focus on wellness and biophilia. Along with the Eco Leaders, a general student survey was conducted as part of Earth Day activities. Common amongst the student voices was a strong desire for greenhouse dining, net zero energy buildings, rooftop or integrated photovoltaics and geoxchange energy systems. This information will continue to be analyzed in design.

3.10 FLOOD MITIGATION ANALYSIS

STORM DRAINAGE
Work in this section includes all drainage relative the proposed buildings, sidewalks, drive and parking.
Drainage around the proposed buildings will be conveyed via surface drainage through curb and gutter, inlets, storm piping, and bioswales, and sheet flow away from the buildings. Stormwater is anticipated to be conveyed through the combined use of bioswales, detention and storm piping to existing storm lines located along the eastern edge of the site. On-site detention and water quality facilities are anticipated and will have to be incorporated into the site layout. The site design will have to account for the CSU 100-year floodplain located north, south and east of the site. It is also imperative that the floodplain basin geometry is maintained with the proposed improvements. That is, this project cannot add flows to any of the surrounding floodplain basins that isn’t already going to them. The site imperviousness will be determined to calculate the required water quality and detention, as well as look for opportunities to improve the limits of the floodplains.

STORM DRAINAGE STRATEGIES

Drainage for the site is split between two basins and generally the site is split in half - one half going to the NE, the other going to SE. Drainage will be directed to a main dry stream/bioswale along the east side of the main promenade path. Other drainage design features such as drop structures, weirs, etc will be explored further. Detention areas will be provided at the NE and SE corners of the site.

Coordination issues: Coordination with CSU will need to occur to determine the full detention requirements, and what is available in other areas of campus to use as “offsets”. Further coordination will be required to determine allowable street capacities for stormwater conveyance off site. Coordination between the CSU landscape architect and project landscape architect to determine fine grading and use of surrounding and proposed stormwater infrastructure to provide adequate conveyance and detention storage.

3.11 CSU STANDARDS

COLORADO STATE UNIVERSITY DESIGN AND TECHNICAL STANDARDS

The Meridian Village project will be designed and constructed according to the Colorado State Design and Technical Standards, as set forth and maintained by Facilities Management at Colorado State University; and will utilize the version whose issuance date corresponds with the beginning of the project’s design phase with exceptions noted.

Housing & Dining Services has created supplementary standards to the Colorado State University Facilities Management Construction Standards, referred to as Design and Technical Standards. Where a portion of the standards are modified or deleted by these Supplementary Standards, the unaltered portions of the Standards shall remain in effect. Note: this was not received for full program plan so further exploration will be required in design.
3.12 CSU INCLUSIVITY STANDARDS

Colorado State University has a unique mission in the State of Colorado. As a land grant University, we are committed to a foundational principle of inclusive excellence recognizing that our institutional success depends on how well we welcome, value, and affirm all members of the Colorado State community. Only through the inclusion of the rich diversity of students, staff, faculty, administrators, and alumni can we truly be excellent in our pursuits.

Our inclusive excellence efforts hinge on four key ideas:

**Broad and Inclusive Definition of Diversity**
We recognize that in order to be truly inclusive, we must draw attention to the depth and breadth of the diversity represented at Colorado State. Our definition includes age, culture, different ideas and perspectives, disability, ethnicity, first generation status, familial status, gender identity and expression, geographical background, marital status, national origin, race, religious and spiritual beliefs, sex, sexual orientation, socioeconomic status, and veteran status. We also recognize that the historical exclusion and marginalization of specific social groups must be addressed to promote equity.

**Inclusive and Excellence are Interdependent**
We recognize that in order to continue to stay current in the global marketplace and stay relevant in an increasingly diverse world, we must embody inclusion. To practice inclusiveness is excellence.

**Everybody is Responsible for Inclusive Excellence**
All members of the campus community (administrators, faculty, staff, students, and alumni) must recognize and assume responsibility for the climate of the university. A unit or person can drive the process, but every individual at Colorado State assumes responsibility for positive change.

**Inclusive Excellence Goes Beyond Numbers**
Historically, diversity has been gauged by demographics or numbers; we must move beyond solely numbers toward an inclusive community that embeds diversity throughout the institution in multiple area including demographics, policies, and communications; curriculum pedagogy, and student learning; recruitment hiring, and retention, evaluation and supervision.

**HOUSING & DINING SERVICES DIVERSITY and INCLUSION STATEMENT**
We are committed to creating a welcoming, inclusive, and sustainable community which values and respects all individuals. We believe students, guests, faculty, and staff are individually and collectively responsible and accountable for their learning, development, and actions. We must take initiative to engage and act in alignment with the CSU Principles of Community recognizing that we all have the right to be treated, and have the responsibility to treat others, equitably to challenge prejudice and promote justice.

**NO PLACE 4 H8**
No Place 4 H8 is a campaign that started in Housing & Dining Services and has been adopted campus-wide as a collective message. It embodies the values of CSU’s Principles of Community as a call to action for members of our community to do their part to create an inclusive community for all. As a CSU community, we value different perspectives, experiences and expression of thought. We do not tolerate hate in our spaces and any type of bias-motivated behavior is not acceptable in our spaces. Together, we can create a community where everyone is respected and valued despite our differences.
LAND ACKNOWLEDGMENT
Colorado State University acknowledges, with respect, that the land we are on today is the traditional and ancestral homelands of the Arapaho, Cheyenne, and Ute nations and peoples. This was also a site of trade, gathering, and healing for numerous other Native tribes. We recognize the Indigenous peoples as original stewards of this land and all the relatives within it. As these words of acknowledgment are spoken and heard, the ties Nations have to their traditional homelands are renewed and reaffirmed.

CSU is founded as a land grant institution, and we accept that our mission must encompass access to education and inclusion. And, significantly, that our founding came at a dire cost to Native Nations and peoples whose land this university was built upon. This acknowledgement is the education and inclusion we must practice in recognizing our institutional history, responsibility, and commitment.

PRINCIPLES OF COMMUNITY
The Principles of Community support the Colorado State University mission and vision of access, research, teaching, service and engagement. A collaborative and vibrant community is a foundation for learning, critical inquiry, and discovery. Therefore, each member of the CSU community has a responsibility to uphold these principles when engaging with one another and acting on behalf of the University.

Inclusion
We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents, and contributions.

Integrity
We are accountable for our actions and will act ethically and honestly in all our interactions.

Respect
We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

Service
We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

Social Justice
We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

3.13 CODE ANALYSIS NARRATIVE
MERIDIAN VILLAGE RESIDENCE COMMUNITY AND DINING

LOCATION
Colorado State University
Fort Collins, Colorado

PROPOSED CONSTRUCTION TYPE
Residential Option 01: Type I-B
Residential Option 02: Type II-B
- Type I-A (first floor concrete podiums)
Community / Dining Option 01: Type V-A
Community / Dining Option 02: Type II-A

PROPOSED STORIES
Maximum 6 total
Option 01: 6 stories of Type I-B steel stud and joist framed.
Option 02: 5 stories of Type II-B steel stud frame over Type 1A concrete podium.
**FIRE PROTECTION**
Automatic fire sprinkler throughout NFPA 13.

**OCCUPANCY**
- R-2 Residential
- A-3 Assembly spaces more than 750sf and/or 49 occupants per section 303
- B Business
- M Mercantile
- A-2 Dining

**OCCUPANCY SEPARATION**
1HR between A and R occupancies.
1 HR between Sleeping Units, 1/2 HR between Sleeping Units & Corridors

**FIRE SEPARATION**
0HR or as modified by Occupancy
3HR between Type 1A concrete podium and 4 stories of Type II steel stud (if using NFPA13)

**ACCESSIBILITY**
As required by ANSI 117.1
Provide 22 Type A accessible units (based upon 1600 new beds / 726 total units). Remaining units Type B as defined by ANSI.

**EGRESS**
2 minimum Required Exits per Floor

**AREA ANALYSIS BY CONSTRUCTION TYPE**

**Type I-B Construction (Residential):**
- Height: 180 feet with NFPA 13
- 12 stories with NFPA 13
- Area per Story: Unlimited
  Reference: 2015 IBC Chapter 5 (R-2)

**Type II-B Construction (Residential):**
- Height: 75 feet with NFPA 13
- 5 stories with NFPA 13

**Area per Story:** 48,000 sf
Reference: 2015 IBC Chapter 5 (R-2)

**Type V-A Construction (Community / Dining):**
- Height: 70 feet with NFPA 13
- 3 stories with NFPA 13
- Area per Story: 34,500 sf
  Additional allowable area through frontage increase
Reference: 2015 IBC Chapter 5 (A-2)

**Type II-A Construction (Community / Dining):**
- Height: 85 feet with NFPA 13
- 4 stories with NFPA 13
- Area per Story: 46,500 sf
Reference: 2015 IBC Chapter 5 (A-2)
DESIGN CRITERIA

RAMS HORN REMODEL

LOCATION
Colorado State University
Fort Collins, Colorado

EXISTING CONSTRUCTION TYPE
Community / Dining: Type II-B

EXISTING STORIES
2 Stories Existing

FIRE PROTECTION
Automatic fire sprinkler throughout NFPA 13.

OCCUPANCY
A-2 Assembly
B Business
M Mercantile
S-2 Storage

ACCESSIBILITY
As required by ANSI 117.1

EGRESS
2 minimum Required Exits per Floor

INTERNATIONAL EXISTING BUILDING CODE 2015
The renovation of the Rams Horn will comply with the
International Existing Building Code. The proposed scope of
work will comply with section 504 Alterations – Level 2, Chapter
7 of Alterations – Level 1 and Chapter 8. The scope of work will
be evaluated for the following code compliance items.

- Exiting / Means of Egress
- Plumbing Counts
- Code Compliance of new finishes
- Impacts to existing life safety systems
- Accessibility
4.4 PROJECT SCHEDULE and PHASING

With the project being located on two existing dorm sites, Aylesworth for Phase 1 and Newsom for Phase 2, both projects are predicated on the existing facilities being removed to allow for construction to start. While the Aylesworth site will not require replacement housing to be built for the demo to commence, there will be a requirement to replace 400 beds in Phase 1 to allow for the Newsom building to be demolished to start Phase 2. While it is understood that the move out of Newsom could occur mid-school year, the success of the rest of the project is predicated on the rest of the housing being available May of 2022 for Phase 1, and May of 2024 for Phase 2. Pending the Board of Governors approval the project design can start as early as August of 2019. The start of design will be 50% SD for both Phase 1 and Phase 2, moving into full design for Phase 1. Phase 1 design will also include the work to renovate Rams Horn. This will allow for full construction to start in June of 2020 and completed by May of 2022 for Phase 1. Immediately after the design completion of Phase 1 the commencement of Phase 2 will start with construction following. Deconstruction of Newsom is scheduled to start immediately after the students move into Phase 1. Construction of Phase 2 will commence after the completion of Newsom deconstruction and be completed before Fall of 2024.

Overall there are six (6) different facilities that will be constructed and or renovated. Phase 1 will include three new residential communities as well as a renovation of Rams Horns, and Phase 2 will include one new residential community and a community hub where dining and shared functions will exist.
### CSU Meridian Village

**All Work View**

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<td>956d</td>
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<td>Sep 03 21</td>
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<td>Phase 2 Design &amp; Community Hub</td>
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</table>
4.5 FINANCING

Due to the phased approach and construction noted above, it is anticipated that there will be two or more bond sales that will need to occur in order to support the project. Currently the projected bond dates for each phase is as follows:

- Phase 1 – Bond Sold 10/19
- Phase 2 – Bond Sold 10/20

Selling the bond in two different packages will allow for Phase 1 to be fast tracked from a design and construction perspective and allow for the reconciliation of the remaining scope to be included in the Phase 2 bond sale. The preliminary debt service payments as a result of these bond sales has been incorporated into a system-wide financial model developed by Brailsford & Dunlavey. The purpose of this model was to test project feasibility using the proposed program and projecting revenues / expenses for the entire Meridian Village community. B&D worked closely with HDS to ensure operating assumptions were aligned with current financial performance for the system and reflective of a realistic future condition. B&D modeled both project scenarios (1,440 or 1,646 beds) which are provided in summary form on the next two pages.
1,440 beds / $205M Project Cost (no added program elements)

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<th></th>
<th>FY2020</th>
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<th>FY2022</th>
<th>FY2023</th>
<th>FY2024</th>
<th>FY2025</th>
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<tr>
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<td>$36,470,000</td>
<td>$37,570,000</td>
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<td>$42,790,000</td>
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<td>$23,630,000</td>
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<td>$17,944,520</td>
<td>$17,797,671</td>
<td>$17,977,343</td>
<td>$17,982,890</td>
<td>$17,850,889</td>
<td>$17,860,308</td>
<td>$17,847,247</td>
<td>$17,853,125</td>
<td>$17,857,214</td>
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<td>$0</td>
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<tr>
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<td>$5,020,000</td>
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**DEBT COVERAGE RATIO**

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<th>1.27</th>
<th>1.31</th>
<th>1.36</th>
<th>1.39</th>
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<td>1.07</td>
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<td>1.06</td>
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Key Assumptions

1. $205M Total Project Cost
2. Dining in Phase 2 (467 seats)
3. 1,440 total beds (40 RA's + 1,400 revenue beds)
4. Phase 1 (fully open fall 2022) 1,131 beds & Phase 2 (fall 2024 open) 309 beds
5. Rate Increases (room & board):
   - Fall 2019 - Fall 2024: 4% (one additional year of 4% increase)
   - Fall 2025+: 3%
6. Meridian Village rental rates at an 8% premium over Laurel Village
7. Meridian Village operating expenses modeled after Laurel Village
8. FY20 budget used as the baseline
9. Operating Expenses increase at 3% annually in addition to new Meridian Village expenses
10. NO additional program elements
### 1,646 beds / $225M Project Cost (no added program elements)

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<th>FY2023</th>
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<th>FY2025</th>
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<td>104%</td>
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<td>104%</td>
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<tr>
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<tr>
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<tr>
<td>Existing Debt</td>
<td>$17,984,642</td>
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<td>Debt + Expense Coverage Ratio</td>
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<td>1.07</td>
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<td>1.09</td>
</tr>
</tbody>
</table>

**Key Assumptions**

1. $225M Total Project Cost
2. Dining in Phase 2 ($52 seats)
3. 1,646 total beds (46 RA’s + 1,600 revenue beds)
4. Phase 1 (fully open fall 2022) 1,131 beds & Phase 2 (fall 2024 open) 515 beds
5. Rate Increases (room & board):
   - Fall 2019 - Fall 2024: 4% (one additional year of 4% increase)
   - Fall 2025+: 3%
6. Meridian Village rental rates at an 8% premium over Laurel Village
7. Meridian Village operating expenses modeled after Laurel Village
8. FY20 budget used as the baseline
9. Operating Expenses increase at 3% annually in addition to new Meridian Village expenses
10. NO additional program elements
## Meridian Village Phase 1

### 7/25/2019

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<th>Estimated Costs</th>
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<td>Commissioning and Advertisements</td>
<td>245,000</td>
<td>250,000</td>
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<td>Independent Code Review, code insp, material tests</td>
<td>377,300</td>
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<td>PFA plan review</td>
<td>211,479</td>
<td>215,795</td>
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<td><strong>Total Professional Services</strong></td>
<td><strong>13,599,854</strong></td>
<td><strong>13,877,402</strong></td>
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| Construction                                  |                 |         |
| Deconstruction of Aylesworth                  | 1,895,320       | 1,934,000 | 2,030,700 |
| 1100 beds                                    |                 |         |
| New construction-291,855gsf @ $326.13/gsf    | 93,279,018      | 95,182,671 | 99,941,805 |
| Site Improvements/Landscaping                 | 4,388,801       | 4,478,368 | 4,702,286 |
| Ram's Horn renovation                         | 2,794,207       | 2,810,415 | 2,950,936 |
| **Total Construction Costs**                 | **102,817,753** | **104,916,074** | **110,161,878** |

| Equipment & Furnishings                      |                 |         |
| Fixed Equipment                              | 294,000         | 300,000 | 315,000 |
| Moveable Equipment                           | 1,078,000       | 1,100,000 | 1,155,000 |
| CSU Communications                            | 3,003,188       | 3,064,478 | 3,217,701 |
| **Total Equipment and Furnishings Costs**    | **4,375,188**   | **4,464,478** | **4,687,701** |

| Miscellaneous                                 |                 |         |
| Relocation Costs                              | 34,300          | 35,000 | 36,750 |
| Artwork and signage                           | 70,560          | 72,000 | 75,600 |
| Parking replacement or new                    | 2,585,534       | 2,638,300 | 2,770,215 |
| **Total Miscellaneous Costs**                | **2,690,394**   | **2,745,300** | **2,882,565** |

| **Subtotal Project Cost**                    | **123,483,189** | **126,003,256** | **132,303,417** |

| Project Contingency                           |                 |         |
| Project Contingency 5% for New                | 6,174,159       | 6,301,378 | 6,615,171 |
| Project Contingency 10% for Renovation        |                 |         |
| **Total Contingency**                         | 6,174,159       | 6,301,378 | 6,615,171 |

| **Budget- Sept 2019 construction start**      | **$126,657,348** | **$132,304,632** | **$138,918,588** |

| **Total Project Cost / sqft--July 2019**      | **$453.28** |         |

**COLORADO STATE UNIVERSITY**  
Facilities Planning Design and Construction
4.6 COST ESTIMATE

The project cost estimate is shown on the following pages. The summary estimate is broken out to identify the major components of the project and is also backed up by the project alternates. In addition, included are assumptions on the different building systems that were used to establish the basis of the construction pricing. The following identifies these items as well as highlights general info, anticipated construction dates, anticipated escalation, and other metrics that were used in establishing the project cost estimate.
# Program Estimate Summary

**Meridian Village**  
Colorado State University  
4240 Architecture  
Program Estimate Summary  
July 18, 2019

<table>
<thead>
<tr>
<th>Project Area</th>
<th>$</th>
<th>$/SF</th>
<th>PHASE 1a November 2021 (400 Beds)</th>
<th>PHASE 2 Spring 2024 500 Beds</th>
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4.6 COST ESTIMATE [continued]

PROJECT INFORMATION SHEET

A) General Information
Client: Colorado State University
Project Name: Meridian Village
Location: Fort Collins, Colorado
Estimate Date: 7/18/19
Milestone/Type: Concept Cost

Assumes that Meridian Village will be grandfathered in and will not be subject to SB19-196 which is scheduled to take effect on July 1, 2021.

B) Construction Dates
PHASE I
Start Date: April 2020
Completion Date: May 2022

PHASE II
Start Date: January 2022
Completion Date: May 2024

C) Phased Assumed Escalation
PHASE I: 3%
PHASE II: 7.5%

Construction System Assumptions

Foundations:
   a) Drilled Piers to grade beams that would be under the perimeter and load bearing walls. Interior for the pods would be interior piers with pier caps.

Structure:
   a) SOG with a load bearing stud system above, with the corridor and exterior being the load bearing elements. Some interior bearing columns or walls (i.e. bathrooms) for pods are included.
   b) Stair and elevator cores are assumed as load bearing CMU walls.

Exterior Skin:
   a) Mix of brick veneer, metal and/or cementitious panel, stucco, stone, glazing.

Roofing:
   a) Assumes EPDM roof at flat roofs
   b) Shingled roof for sloped areas

Interiors:
   a) Assumes drywall lid in units
   b) Assumes ACT in corridors & open pod areas
   c) Assumes carpet tile in the corridors and open areas
   d) Assumes tile in the bath and showers
   e) Assumes no doors in units and only an entry door
   f) Assumes rubber base throughout
   g) Assumes closets, wardrobes, etc. would be FFE
   h) Assumes costs for storage lockers
   i) Includes wire shelving and hanging rod in the units

Conveying Systems:
   a) MRL Elevator with standard components

Mech/Plumbing:
   a) Basis of cost was a 2 pipe water source heat pump with one terminal unit for every 3 dorm units
      i. Includes local thermostat for control of student rooms
      ii. Excludes other items such as window contacts, etc.
      iii. Includes BAS of common area spaces
   b) Copper for high pressure distribution and PEX downstream to fixtures
   c) Assumes a standard plumbing fixture package
   d) PVC lateral waste lines to cast iron waste stacks

Electrical/Low Voltage:
   a) Aluminum feeders
   b) MC Cable for residential wiring and homeruns
   c) Standard fixture package
   d) Code minimum building wide lighting controls
   e) Includes radio amp and lightning protection
f) Includes exterior façade lights

g) Assumes CSU low voltage will pull and terminate cable. Rough in only included

**General Requirements:**

- a) Weather protection allowance

**Equipment:**

- a) Blinds at all residential windows
- b) Excludes all kitchen equipment. Carried in CSU Soft Cost.
- c) Excludes all furniture items. Carried in CSU Soft Cost.

**Site:**

- a) Sod
- b) Sidewalks
- c) Limited Site Walls

**Existing Conditions:**

- a) Demo
a. SITE MAP and UTILITIES
b. RESIDENT HALL FLOOR PLANS
TYPICAL FLOOR PLAN
b. COMMUNITY "HUB" FLOOR PLANS

COMMUNITY "HUB" - UPPER LEVEL

COMMUNITY "HUB" - LOWER LEVEL
b. ELEVATIONS

BRANDING - ELEVATION COMPOSITION
RESIDENCE HALL - SEGMENTED SOUTH FACADE
BRANDING - ELEVATION COMPOSITION

RESIDENCE HALL - SEGMENTED NORTH FACADE
b. ELEVATIONS

COMMUNITY "HUB" - SOUTH FACADE

BRANDING - ELEVATION COMPOSITION
COMMUNITY "HUB" - EAST FACADE

BRANDING - ELEVATION COMPOSITION
SITE AERIAL VIEW FROM THE SOUTH
SITE AERIAL VIEW FROM THE EAST
VILLAGE GREEN OVERVIEW

c. CONCEPTUAL RENDERING
VILLAGE GREEN VIEW FROM THE "HUB"
c. CONCEPTUAL RENDERING
VILLAGE GREEN VIEW FROM TOWARD THE "HUB"
EAST RESIDENTIAL COURTYARD
d. FLOOD PLAIN MAP

COLORADO STATE UNIVERSITY
100-YEAR FLOODPLAIN
(2D MODEL RESULTS)
MARCH 2019

ELEVATIONS BASED ON NAVD88 DATUM
SOURCE: LIDAR MAY 2015
### LEED BD+C: New Construction and Major Renovation v4

**CSU Meridian Village**

**Date Registered:** TBD  
**Date Updated:** TBD  
**Goal:** GOLD

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<th>M</th>
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<td>Champion</td>
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<tr>
<td>Integrative Process</td>
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<td>LEED for Neighborhood Development Location</td>
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<td>Sensitive Land Protection</td>
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<td>Access to Quality Transit</td>
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**Project Totals (Pre-certification estimates)**

- Certified 40-49
- Silver 50-59 points
- Gold 60-79 points
- Platinum 80-110 points

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Current Yes's = Gold

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**Materials & Resources (MR) - 13 Points Available**

- **Y** - Storage and Collection of Recyclables (P)
- **Y** - Construction and Demolition Waste Management Planning (P)
- **Y** - Building life-cycle Impact Reduction
- **Y** - Building Product Disclosure and Optimization - Environmental Product Declarations
- **Y** - Building Product Disclosure and Optimization - Sourcing of Raw Materials
- **Y** - Building Product Disclosure and Optimization - Material Ingredients
- **Y** - Construction and Demolition Waste Management

**Indoor Environmental Quality (EQ) - 16 Points Available**

- **Y** - Minimum IAQ Performance (P)
- **Y** - Environmental Tobacco Smoke (ETS) Control (P)
- **Y** - Low Emitting Materials
- **Y** - Construction Indoor Air Quality Management Plan
- **Y** - Indoor Air Quality Assessment
- **Y** - Thermal Comfort
- **Y** - Interior Lighting
- **Y** - Daylight
- **Y** - Quality Views
- **Y** - Acoustic Performance

**Innovation (IN) - 6 Points Available**

- **I** - Innovation, Green Building Education
- **I** - Innovation, O+M Starter Kit
- **I** - Innovation, Purchasing Lamps
- **I** - Innovation, TBD - EP
- **I** - Innovation, TBD (Pilot)
- **I** - LEED® Accredited Professional

**Regional Priority (RP) - 4 Points Available (Zip code)**

- **I** - Optimize energy performance 24% (10pts)
- **I** - Rainwater management ≥ 85 or 90 percentile (2 pts)
- **I** - Outdoor water use reduction 100%
- **I** - Indoor water use reduction 40%