Student Housing Phase VI
CMU7139-13
Colorado Mesa University

Design Program / Facilities Program Plan

Design west architects
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Salt Lake City, Utah
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Summary</td>
</tr>
<tr>
<td>II</td>
<td>Justification</td>
</tr>
<tr>
<td>III</td>
<td>Relation to Strategic and Facility Master Plan</td>
</tr>
<tr>
<td>IV</td>
<td>Site requirements</td>
</tr>
<tr>
<td>V</td>
<td>Building Concept</td>
</tr>
<tr>
<td>VI</td>
<td>Project Cost Estimate and Schedule</td>
</tr>
<tr>
<td>VII</td>
<td>Financial Explanation</td>
</tr>
</tbody>
</table>
I SUMMARY

Statement of the Problem

• From 2009 to 2013, the student body at Colorado Mesa University (CMU) has grown from 6665 to 9325, an average growth rate of 10% per year.
• 60% of all students are from outside Mesa County and must find lodging in Grand Junction.
• 63% of all students are freshmen and sophomores.
• CMU has a policy which encourages freshmen and sophomores to live on campus, to the greatest extent possible.
• CMU does not have sufficient on-campus housing to meet that demand.

Existing Conditions

As of fall 2013, CMU had 2,251 beds on campus in the following housing options:

- Apartments: 467 Beds
- Suites: 471 Beds
- Semi Suites: 508 Beds
- Traditional: 805 Beds

ASL Demand Study

• In the fall of 2013, Anderson Strickler LLC (ASL) was engaged by CMU to identify the number of students currently living off campus, who would choose to live on campus, if CMU were able to offer their desired housing type, at an affordable price.
• ASL projected that 562 students (the midpoint of a range between 360 and 765 students) would live on campus, if the appropriate housing were available.
• Students living off campus generally prefer apartment style living.
• Students living on campus reported the highest satisfaction with Monument Hall, which is a semi-suit (shared bathroom) residence hall.

CMU Response to ASL Demand Studies

• ASL has prepared six (6) Demand Studies for CMU since 2005. CMU has responded to ASL’s projected demands remarkably well.
• Since 2005, CMU has constructed 1,312 Residence Hall beds on campus.
• With the opening of Garfield Residence Hall in 2013, CMU was behind ASL’s recommendations by only 50 beds.
• Unfortunately the demand has jumped from 300 beds in 2005 to 562 beds in 2013.
• In November 2013, the CMU Trustees approved the design and construction of 214 new beds, for completion in 2015.
• Even considering the 214 proposed beds, CMU is in need of an additional 398 beds to meet the ASL projection.
Master Plan

• In 2012, CMU approved a four (4) building housing project, then identified as Renaissance Village, to be constructed, just south of the athletic fields, on both sides of Cannell Avenue. The project was intended to house 900 students.
• The Garfield Residence Hall, completed in 2013, was the first phase of that proposed development.
• It was anticipated that the proposed housing project would be located directly south of Garfield Hall, for completion in the fall of 2015.
• CMU administration recently advanced that schedule. 100 beds should be constructed for occupancy in fall 2014. The remainder should be brought on-line in January 2015.

Building Concepts

• The site slopes to the south-west and lends itself to a possible basement under a south wing.
• Favorable student response to the Monument Hall style semi-suite design, suggested that the proposed project replicate that bedroom layout.
• A workshop with students suggested that the traditional Garfield Hall floor plan might be preferable.
• Options discussed included a residence hall with one wing replicating Garfield Hall and one wing replicating Monument Hall.
• The addition of apartments for faculty was also discussed.

Recommended Program

The final approved Program was as follows:

Design: Replicate the traditional housing of Garfield Hall

Scope: A: West wing: four (4) floors 99 beds
     B: South Wing: four (4) floors plus a basement 135 beds
     Total Beds 234 beds

Project Budget: $16,000,000

Schedule: Complete Wing A by August 1, 2014
          Complete Wing B by January 12, 2015
II JUSTIFICATION

A. Growth

The following Student Profile Chart indicates:

- 40% growth in the CMU student body from 2009 to 2013.
- First and second year students represent 63% of the student body.

<table>
<thead>
<tr>
<th>Registration Status</th>
<th>2009</th>
<th>2010</th>
<th>Increase</th>
<th>2011</th>
<th>Increase</th>
<th>2012</th>
<th>Increase</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>2806</td>
<td>3371</td>
<td>565</td>
<td>3761</td>
<td>390</td>
<td>3615</td>
<td>-146</td>
<td>3563</td>
</tr>
<tr>
<td>Sophomore</td>
<td>1546</td>
<td>1870</td>
<td>324</td>
<td>2072</td>
<td>202</td>
<td>2326</td>
<td>254</td>
<td>2312</td>
</tr>
<tr>
<td>Junior</td>
<td>809</td>
<td>932</td>
<td>123</td>
<td>1050</td>
<td>118</td>
<td>1169</td>
<td>119</td>
<td>1287</td>
</tr>
<tr>
<td>Senior</td>
<td>1220</td>
<td>1295</td>
<td>75</td>
<td>1354</td>
<td>59</td>
<td>1387</td>
<td>33</td>
<td>1566</td>
</tr>
<tr>
<td>Other</td>
<td>187</td>
<td>194</td>
<td>7</td>
<td>529</td>
<td>335</td>
<td>449</td>
<td>-80</td>
<td>529</td>
</tr>
<tr>
<td>Under Graduate Sub-Total</td>
<td>6568</td>
<td>7662</td>
<td>1094</td>
<td>8766</td>
<td>1104</td>
<td>8946</td>
<td>180</td>
<td>9257</td>
</tr>
<tr>
<td>Graduate Sub-Total</td>
<td>97</td>
<td>84</td>
<td>-13</td>
<td>60</td>
<td>-24</td>
<td>64</td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>6665</td>
<td>7746</td>
<td>1081</td>
<td>8826</td>
<td>1080</td>
<td>9010</td>
<td>184</td>
<td>9325</td>
</tr>
</tbody>
</table>

Table 1
B. Policy

To the greatest extent possible CMU encourages first and second year students to live on-campus. However, the Policy is influenced by the following realities:

- 60% of CMU students live outside Mesa County and must find lodging in Grand Junction.
- CMU does not have enough on-campus housing to accommodate these students.
- CMU permits waivers for students who live with parents or relatives or who own their own home.
- The lack of sufficient on-campus housing requires CMU Housing staff to conduct a lottery to select students who MUST find accommodations off campus.
C. On-Campus Residence Halls

The following chart indicates that, as of the start of the 2013-2014 school year, there were 2,251 beds on campus. Subsequently CMU administrators announced that Elm Hall would be taken off-line and modified to office space, which reduced the on-campus bed count to 2209.

<table>
<thead>
<tr>
<th>BUILDING</th>
<th>TOTAL</th>
<th>TYPE</th>
<th>BEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolman Hall</td>
<td>195</td>
<td>Double</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singles</td>
<td>10</td>
</tr>
<tr>
<td>Elm Hall</td>
<td>42</td>
<td>Double</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singles</td>
<td>2</td>
</tr>
<tr>
<td>Pinon Hall</td>
<td>201</td>
<td>Double</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singles</td>
<td>12</td>
</tr>
<tr>
<td>Rait Hall</td>
<td>201</td>
<td>Double</td>
<td>189</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singles</td>
<td>12</td>
</tr>
<tr>
<td>Monument Hall (Jack-n-Jill)</td>
<td>180</td>
<td>Double</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RA-Single</td>
<td>6</td>
</tr>
<tr>
<td>Walnut Ridge Apartments (3 or 4 per)</td>
<td>120</td>
<td>Double</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singles</td>
<td>48</td>
</tr>
</tbody>
</table>

Total On-Campus Housing pre 2006: 939

<table>
<thead>
<tr>
<th>Year</th>
<th>Reporting Date</th>
<th>Total Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>300 ASL Report</td>
<td>300</td>
</tr>
<tr>
<td>Fall 2006</td>
<td>287 Grand Mesa Hall</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>(suites w/ living rooms, 6-9 / suite)</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Super single</td>
<td>55</td>
</tr>
<tr>
<td>2006</td>
<td>360-535 ASL Report</td>
<td>360-535</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>304 North Avenue Hall (all w/ living rooms)</td>
<td>128</td>
</tr>
<tr>
<td></td>
<td>Suites - 184 (6 / suite)</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Apartments - 120 (6 / apt.)</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>A-Single</td>
<td>40</td>
</tr>
<tr>
<td>2009</td>
<td>372 ASL Report</td>
<td>372</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>328 Bunting Hall</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>(suites w/ no living room, 4 / suite)</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Stacked Double</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Singles</td>
<td>54</td>
</tr>
<tr>
<td>Fall 2012</td>
<td>185 Orchard Avenue Apartments (3 or 6 per)</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>Double</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>Singles</td>
<td>63</td>
</tr>
<tr>
<td>2012</td>
<td>386 ASL Report</td>
<td>386</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>208 Garfield Hall 1</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Traditional Dormatory</td>
<td>8</td>
</tr>
<tr>
<td>Nov-7-13</td>
<td>562 ASL Report</td>
<td>562</td>
</tr>
</tbody>
</table>

Table 2

Total Beds On-Campus - 2013: 2251
D. Demand

CMU engaged Anderson Strickler LLC (ASL) in 2013 to update their biannual Demand Study. ASL concluded the following:

- If CMU students currently living off campus had their desired housing, 562 (the midpoint of a range between 360 and 765) students, who lived elsewhere in the fall 2013 semester, would have preferred to live on campus.

- Of all survey respondents living on campus due to the freshman-sophomore living requirement, 51% would have lived there regardless of the living requirement.

When demand is sorted by preferred units, the unit mix looks like that in Table 4. The unit mix is based on students' preferred unit type; it does not take into account units that might be acceptable if their first-choice unit was not available. The unit mix indicates that most students are looking for housing with single bedrooms in suite or apartment-style housing.

<table>
<thead>
<tr>
<th>Class</th>
<th>Full-Time Off-Campus Enrollment</th>
<th>Definitely Interested</th>
<th>Might Be Interested</th>
<th>Potential Incremental Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>1,401</td>
<td>10%</td>
<td>70</td>
<td>140</td>
</tr>
<tr>
<td>Sophomores</td>
<td>1,446</td>
<td>12%</td>
<td>85</td>
<td>197</td>
</tr>
<tr>
<td>Juniors</td>
<td>1,031</td>
<td>10%</td>
<td>52</td>
<td>119</td>
</tr>
<tr>
<td>Seniors</td>
<td>1,164</td>
<td>7%</td>
<td>39</td>
<td>107</td>
</tr>
<tr>
<td></td>
<td>5,042</td>
<td>7%</td>
<td>246</td>
<td>562</td>
</tr>
</tbody>
</table>

Table 3

When demand is sorted by preferred units, the unit mix looks like that in Table 4. The unit mix is based on students' preferred unit type; it does not take into account units that might be acceptable if their first-choice unit was not available. The unit mix indicates that most students are looking for housing with single bedrooms in suite or apartment-style housing.

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Academic-year Rent</th>
<th>Interested Student Preference</th>
<th>Potential Incremental Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>$5,385</td>
<td>11%</td>
<td>64</td>
</tr>
<tr>
<td>Semi-Suite</td>
<td>$5,651</td>
<td>11%</td>
<td>64</td>
</tr>
<tr>
<td>Suite-DBL BR</td>
<td>$5,866</td>
<td>9%</td>
<td>53</td>
</tr>
<tr>
<td>Suite-SGL BR</td>
<td>$6,949</td>
<td>27%</td>
<td>152</td>
</tr>
<tr>
<td>Apartment-DBL BR</td>
<td>$6,732</td>
<td>14%</td>
<td>76</td>
</tr>
<tr>
<td>Apartment-SGL BR</td>
<td>$7,422</td>
<td>27%</td>
<td>152</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
<td><strong>562</strong></td>
</tr>
</tbody>
</table>

Table 4
On-campus students are also generally satisfied with the exception of those living in Elm Hall, the oldest campus residence. When “very satisfied” and “satisfied” are combined, the highest level of satisfaction comes from those living in Orchard Avenue Apartments, Pinon Hall, Monument Hall, Grand Mesa Hall, Garfield Hall, and Bunting Hall.

ASL has prepared six (6) Demand Studies for CMU since 2005. CMU has been remarkably responsive to the ASL recommendations as shown in the following Table. The table indicates that from 2005 to 2015 CMU will have constructed 1540 beds. However, the table also indicates that CMU needs and additional 398 beds now.
The following drawing shows the location of the proposed Garfield II Residence Hall in red within the campus master plan. The building will be physically connected to the Garfield I Residence Hall which was completed in the fall of 2013.
Garfield I & II Residence Halls are part of a Master Plan for approximately 900 beds which was developed in 2012. The next two phases of housing are shown in dark blue, located to the west across Cannell Avenue.

It is anticipated that all four buildings will be architecturally compatible.
IV SITE REQUIREMENTS

The Garfield II Residence Hall project has specific site constraints:

- The building will be physically connected to Garfield Hall I on the north and constrained by the development of the Elm Street walkway and a proposed rugby field on the south.
- Whereas the Garfield II footprint was anticipated to match the dimensions of the Garfield I floor plan, the constraints on the south will require a reduction in length of the east wing of Garfield II.

The existing grade on the site slopes down to the south and west and represents specific design opportunities.

- The grade at the main entry of Garfield II will be approximately three (3) feet below the grade at the main entry of Garfield I. It is anticipated that the entry to Garfield II will be on a raised platform.

- The main floor of the west end of the south wing of Garfield II will be at least five (5) feet above natural grade. The possibility of a basement to house an additional 26 students should be investigated.
V BUILDING CONCEPT

A. Student Housing Preferences
Respondents to the ASL survey were shown four floor plans and asked to rank each as “preferred,” “acceptable,” or “would not live there.” The rental rates and floor plans tested are shown in Table 5. The rents assume that all units are furnished and that rent includes utilities, Internet, and basic cable television. Rents do not include meal plan charges, and assume an academic-year housing contract.
(Floor plans show concepts only and are not to scale.)
B. Program Work Session

Student responses to the ASL survey, indicated that Monument Hall received the highest satisfaction rating from students living on campus. Monument Hall is represented in Table 5 as a Semi-Suite design.

Some CMU administrators suggested that Phase II of Garfield Hall should be a semi-suite design similar to Monument Hall. Others suggested that Garfield II should replicate Garfield I, which is a traditional residence hall design.

On November 21, 2013, a Work Session was conducted with CMU students in order to test student preference to the Monument Hall vs Garfield Hall housing options.

Conclusion: Design West will prepare options for review by CMU:

Design: Garfield Phase II should include the following within the footprint available:
- One wing designed as a Traditional Hall
- One wing designed as a Monument Style Hall.
- Possible inclusion of faculty housing

Project Budget: $12,000,000
Schedule: Completion by July 1, 2015.

Scope: President Foster would like to explore possibility of building additional housing
C. Design Alternatives

The following plan options were reviewed, including the possibility of five (5) or six (6) story buildings.

A Monument Hall style floor plan was proposed. The “Jack ’n Jill” bedroom/bath fit comfortably within the Garfield I dimensions.

Combinations of the traditional Garfield floor plan and the Monument Hall “Jack ’n Jill” bedroom/baths were considered.

Also considered was the addition of apartments for faculty and/or visiting parents.
D. Approved Plan

The final design directive from CMU administration was as follows:

Design: Replicate the traditional housing of Garfield I

Scope:
A: West wing: four (4) floors
   99 beds
B: South Wing: four (4) floors plus a basement
   135 beds
Total Beds 234 beds

Project Budget: $16,000,000

Schedule:
Complete Wing A by August 1, 2014
Complete Wing B by January 12, 2015
E. Unit Plan

Each floor of each wing in the proposed project will have the following program spaces:

- 12 to 13 Double Occupancy Bedroom
- 1 Resident Assistant Bedroom/Office
- 2 Congregate Bathrooms
- 1 Community Lounge
- 1 Laundry
- 1 Study Hall

Each floor will have one community Kitchen.
F. Building Floor Plans

- Upper Floors Plans
- Main Floor Plan
- Basement Floor Plan
G. General Building Performance Requirements

SITE IMPROVEMENTS REQUIRED

Basic Site Requirements:

- Site Standards: All site related elements will comply with Colorado Mesa University’s Campus Master Plan and Design Standards.

Accessibility Site Circulation:

All buildings will be accessible and meet accessibility requirements of local and state jurisdictions. The site grading must be dealt with in the site design to provide barrier free circulation for accessibility and visibility of all buildings and amenities. CMU will comply with all applicable code requirements.

At least two (2) points of access and egress from each building shall be accessible. Anticipated paths from accessible parking to building entrances and into each building shall be accessible. The main entrance to each building is encouraged to have push-pad entry assist doors for visitability, and elevators are programmed for accessible access to all levels of the buildings.

Stairs may need to be provided at secondary entrances or sidewalks. These are to be provided as dictated by the site design meeting code requirements of proper railing and stair configuration.

Ramps and accessible curb cuts with truncated domes and dimensions as outlined by code are to be provided to assure a barrier-free site.

NEW UTILITIES REQUIRED

It is anticipated that Sewer, Water, Gas, Electric, and Telephone services will be readily available.

BUILDING SYSTEMS

Structural

The proposed housing will be a wood structure, composed of wood trusses for both roof and floor framing. The exterior walls shall be made of 2 x 6 studs. The vertical lateral resistance elements shall be made of wood shear walls using the 2 x 6 studs and 7/16” and 15/32” OSB sheathing.

The foundation system shall be made of perimeter and interior grade concrete beams supported on steel screw piles which penetrate the soil as per the soils report requirements. The spacing of these piles will be based on the load capacity of the soils and piles. In addition the main floor concrete slab shall be designed as suspended slab which will be supported by the interior and exterior grade beams.

Mechanical/Plumbing

The mechanical systems shall consist of a ground coupled water source heat pump system connected to a well field. Each residential suite shall be served by a heat pump fan coil unit to provide both heating and cooling to the individual rooms in each suite. The well field loop shall be used as the heat sink for these heat pump fan coil units. A boiler shall be connected to the well field loop and utilized to provide supplemental
heat for the system. A cooling tower shall be connected to the well field loop and utilized to provide supplemental cooling for the system. Base mounted pumps shall circulate the fluid through the well field loop and through the buildings. Ventilation air for each suite shall be ducted from the outside and connected to the return air ductwork at each heat pump. Bathroom exhaust fans shall be ducted to the exterior of the building.

Domestic hot water shall be generated utilizing gas fired boilers and storage tanks. (Engineers will consider use of the well field if practical and economical) The domestic hot water shall be circulated through the building utilizing circulation pumps. All fixtures shall be provided with domestic water supply piping as well as waste and vent piping as required. A complete fire sprinkler system shall be provided for each building.

Electrical & Security
The electrical system shall conform to the latest applicable rules of the National Electrical Code, NFPA 70, as outlined below.

Service Entrance
Each building will consist of a Main Distribution Panel with copper or aluminum conductors in raceway to panelboards located in each apartment’s mechanical closet. Panelboards serving the residential units shall have feed through lugs with full size bolt-on circuit breakers. Additional spaces will be provided for future expansion.

Branch Circuits
Branch circuit conductors shall be copper metal clad cable with ground not smaller than No. 12 AWG. Nonmetallic sheathed cables (Type NM) with ground conductors shall be installed in areas permitted by NFPA 70. All wiring shall be concealed except as required for connection to equipment. Lighting and convenience outlets shall be on the same circuit in residential apartments. All living units will contain residential grade wiring devices, and all common areas will contain commercial grade wiring devices. The location and number of convenience outlets shall conform to the latest applicable rules of the National Electric Code.

Laundry Area
One outlet for ironing (on a separate circuit) shall be provided in addition to the washer and dryer requirements. Dryer outlets shall be a 30 ampere 125/250 volt, 3 pole, 4 wire, NEMA 14-30R outlet.

Bedrooms
All branch circuits that supply 125-volt, single phase, 15 and 20 ampere outlets installed in bedrooms shall be protected by an arc-fault circuit interrupter(s). This applies to receptacle, smoke detector, and lighting circuits installed in the bedrooms.

Study Areas
Convenience outlets will be provided for computers and general office equipment in study areas.

Lighting Fixtures
All fluorescent and compact fluorescent lamps shall have a color rendering index of 76 or above and a color temperature between 3400 and 4500K. Emergency battery packs supplied in selected fluorescent fixtures shall provide emergency lighting.

Residential Living Areas
Interior light fixtures in apartments shall be economical, surface mounted units which will be provide with self-ballasted compact fluorescent lamps.

Residential Common Space and Office Areas
Common areas, including hallways, stairwells, and lobbies will have fluorescent fixtures with
electronic ballasts and T-8 fixtures. All lighting fixtures in common area space will be fluorescent fixtures with electronic ballasts.

Exterior Areas
Exterior fixtures will conform to existing campus standards, matching fixtures and poles used in previous project.

Telephone/Data System
Residential Areas
One network jack per pillow will be provided in each living room next to the cable television jack for student use. The campus wide local area network will be distributed throughout the residence halls. A network jack will be provided at specified wireless access point locations.

Office Areas
Telephone and networking provisions will be provided for each workstation and private office.

Lobby
Courtesy phone will be provided in community center.

Building Main Entries
Each building primary entrance will incorporate a call-up system that utilizes the building telephone system.

Cable Television
Residential Areas
Cable television jack will be provided in living room, and in each bedroom in an accessible location.

Multi-Purpose Activity Space
Cable TV interface will be provided for projector and sound system.

Security System
A security system for student safety will be installed in cameras covering lobby areas and building entrances/ exits.

Fire Alarm System
Non-coded, addressable-analog system with manual and automatic alarm initiation will be furnished for all common areas and comply with the latest edition of NFPA 72.

Smoke Detector
Residential Smoke detectors shall be wired to un-switched 120-volt AC circuit in each living unit. Detectors will be Ion type. Smoke detectors shall be located and connected in accordance with the latest edition of NFPA 72. Residential smoke detectors will not be connected to building addressable system per code. Residential Smoke detectors shall be connected so that all unit detectors alarm when any individual detector goes into alarm. Units that are designated ADA compliant shall include visual strobe alarm attachments.

Building Access Controls
Online card reader access will be provided at all exterior residential entrances. Interior residential rooms/pods will be provided with offline card readers. All electronic access components will conform to the Campus Access Control Standards.
ARCHITECTURAL DESIGN FEATURES

The following architectural design features should be considered during the design process:

State Energy Conservation Requirements:
The project will be designed in accordance with the requirements of the State of Colorado and will strive to achieve the highest possible High Performance Standards.

Ceiling Height:
The ceiling height shall be a minimum of 8'-0" at all bedroom spaces, cluster lounge / lobby / gathering places though higher ceilings are encouraged. The bedroom spaces must be 8'-0" high. Structural and mechanical duct distribution systems are encouraged to be designed to allow for 8'-0" ceilings throughout bedroom spaces.

Bathroom areas, corridors, support spaces, laundry rooms, etc. likewise to be 8'-0" ceiling height.

Durable Materials:
Durable materials are highly desired to be used with stone and brick exteriors at impact zones, and impact resistant sheet-rock in corridor and circulation areas, or the use of OSB sheathing full height at corridor walls prior to installation of gypsum board to address impact resistance within corridors. Tile floors and wainscots in bathrooms are encouraged for durability at wet areas and bathroom. It is highly preferred to increase and offer the design of more durable materials throughout the spaces for a low maintenance / high durability life-cycle of the building.

Carpet tile systems are encouraged and preferred, instead of rolled carpet goods as they are easier to maintain and replace if stained or ruined, without the removal of the carpet throughout the entire room or space.

Use of Color:
The interior surfaces are encouraged to offer multiple color schemes in floor coverings, wall surfaces, etc. in corridors and common spaces as well in housing units to add variety and enliven the living spaces.

Foundation systems:
Due to the soil conditions, deep pile foundations are likely per soils report requirements.

ADA and Fair Housing Requirements:
Since it is anticipated that all floors be serviced by an elevator, all units / bedrooms throughout the building will be required to meet code for accessibility, adaptability, and visit-ability standards and guidelines. Also, student housing falls under requirements of Fair Housing Guidelines and as such will be required to meet door widths, clear floor space and height requirements throughout.

Some of these requirements include (but not inclusive):

1. 2'-10" door width for 32" clear passage width at all passage doors.
2. Lever hardware at all doors.
3. ADA rated non-grasping faucets.
4. 30" x 48" clear floor space at showers, toilets, vanities, kitchen sinks and appliances (at common kitchens). Such clear floor space to be outside of door swing areas and centered on plumbing fixtures or appliances.
5. 18" height to outlets.
6. 44" height to thermostats.
Fully accessible units with grab bars at toilets and showers, fold-down transfer shower seats, adjustable shower head and controls, etc., meeting fully accessible living spaces per building codes and accessible standards adopted by the State of Colorado, shall be provided. It is the desire of CMU that the required amount of the fully-accessible units be located at the main level as is possible, and near the main entrances to accommodate students with accessibility needs.

By no means is this section of this report meant to be inclusive of all requirements relating to accessibility. Instead, it is the intent to bring to the designer’s attention the need to address these issues within the confines of good design to meet all legal and enforceable requirements addressing accessibility, adaptability, and visit-ability throughout the building(s).

**Fire Alarm Systems:**
The buildings shall require a central panel for fire alarm meeting code and fire marshal requirements.

**Exterior Finish Considerations**
Architectural style is encouraged to be harmonious with other campus Garfield I Residence Hall.

**Exterior Building Materials:**
The design is encouraged to have a 100% brick and stone solution full height with brick color to be compatible with Garfield I Residence Hall. Stucco systems (traditional 3-coat stucco, EIFS synthetic stucco systems, etc.) of any kind are discouraged.

Vinyl and aluminum windows (for individual windows) and storefront aluminum glass and curtain wall systems with aluminum full-light doors are acceptable and encouraged.

A hierarchy of window design are encouraged on the buildings as well. CMU desires natural lighting to be a driving force behind the design with sustainability principles governing the articulation of lighting into the common spaces, the corridors and other interior portions of the building and should be viewed as good design practice.

Architectural grade 50-year asphalt shingles are anticipated to be the roofing system with aluminum fascia and soffit. Standing seam metal roof systems and color schemes of aluminum fascia and soffit are open to the design aesthetics.

**Building Massing:**
The overall design of the buildings is desired to match Garfield I Residence Hall.

**Code Analysis:**
The buildings shall meet all requirements of the current building codes enforced by the State of Colorado at the time of design and construction.
## VI  PROJECT COST PROJECTION AND SCHEDULE

Garfield II Residence Hall  9-Jan-14

### PROJECT COST PROJECTION

<table>
<thead>
<tr>
<th></th>
<th>Beds</th>
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<th>Area</th>
<th>Unit Cost</th>
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### PROJECT SCHEDULE

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<th>Completion</th>
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<td>15-Jan-14</td>
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<tr>
<td>Construction - Phase II A</td>
<td>9-Dec-13</td>
<td>1-Aug-14</td>
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<tr>
<td>Construction - Phase II B</td>
<td>1-Apr-14</td>
<td>12-Jan-15</td>
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## VII  FINANCIAL EXPLANATION

It is the intent of Colorado Mesa University to finance this project primarily with auxiliary system revenue bonds, complimented with a minimal amount of auxiliary system reserves.