South Entry of Denali and Kilimanjaro

ARMAND HAMMER UNITED WORLD COLLEGE CAMPUS CORE MASTERPLAN

CASTLE + ACADEMIC QUAD ADAPTIVE REUSE FEASIBILITY STUDY

FEBRUARY 2022

DRAWNXDESIGN, LLC

TAB A
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A - PROJECT INDEX

TAB B
PROJECT DESCRIPTION

Courtyard view standing in front of Mont Blanc looking East

Allan Affeldt and Conor Reichert began exploring the adaptive reuse of the UWC Castle as dormitories and administrative offices in the spring of 2021. The study went through seven major revisions of spatial organization with feedback from the Senior Leadership Team (SLT) and Executive staff. The Design Team was composed of Allan, Conor, UWC executive staff and SLT, and associated architects and engineers. Our objective was to create a specific design for the Campus Core - residential, academic and administrative - that could be thoroughly refined and critiqued by UWC staff and board, and that would enable sound engineering and reasonable cost estimates. This would in turn provide the board and staff a way past our current annual patching and repairs to instead create a more functional, beautiful, sustainable and inspiring campus.

The work expanded to include a specific feasibility study for adaptive reuse of both the Castle and the existing dormitories. Working with the SLT we worked from high-level use objectives to preliminary sketches, and from programming models to the iteration presented in this document. We as a team have a deep understanding of the unique opportunities and constraints presented by the history and existing buildings of the UWC Campus. We have studied the myriad background documents and work of prior teams and consultants in developing this current plan.

Creating a narrative response to the campus challenges is relatively simple. What is complex is figuring out how to make the many competing demands and desires of the College work together on this complex site. You will see from our plans that we have thought deeply through this challenge, and have come up with a visionary and beautiful integrated solution – a solution that will be a unique and catalytic enhancement to the UWC Campus and the community of Las Vegas.

Please refer to the project description below for:

- Our understanding of, and approach to, achieving UWC's vision and goals for the campus as described in the 2019 Master Plan.
- Our approach for ensuring the incorporation of socially and environmentally responsible design in the new Campus Core.
- Our approach for creating inspiring and functional residential, academic and administrative spaces within the constraints of the existing structures and their specific inherent qualities, limitations and opportunities.
- Our approach to working collaboratively with the SLT and UWC board to creatively and responsibly manage the refinement of plans and costs for the Campus Core.
- Our vision for leveraging adaptive reuse to create a dynamic, cohesive and sustainable campus.

Together, these objectives and processes have led to the current design concepts, narrative and images.

TAB C
PROGRAM AND DESIGN APPROACH

C - PROGRAM AND DESIGN APPROACH

INTRO

Our plans envision reuse of the basement, 2nd, 3rd and 4th floor of the Castle as dormitory spaces, with administrative offices on the first floor South and West wing. Executive offices will be located in the 4th floor Tower spaces. The 4th floor attic South and West wings will be redesigned as study halls. For the Academic Quad we propose adaptively reusing the shells of the four dormitory buildings. New narrower floor plates will be installed at the existing bond-beam levels as part of a new interior structural system. New halls will be added on some exterior walls along with bridging structures between each pair of buildings to meet code, maximize use of existing structures, and create dynamic new circulation spaces.

GUIDING PRINCIPLES

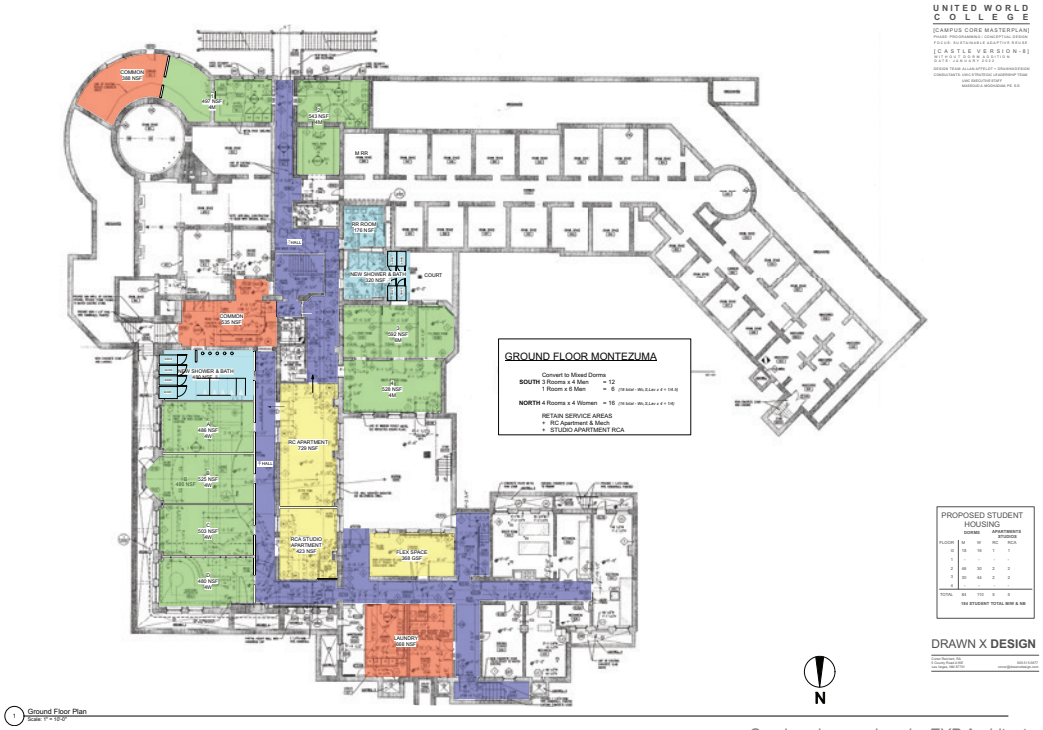
The plan proposed will:

- Promote consolidation of uses within the Castle and Quad, and improve connectivity between them
- Create environmentally sustainable spaces that utilize existing buildings (as an alternative to demolition and replacement)
- Ensure a mix of uses that engage open-spaces and provide enhanced campus security
- Respect and work creatively with the form and framework of the existing buildings
- Create active ground floors with integrated indoor/outdoor spaces wherever possible
- Provide sight lines through to key buildings and exterior space to enhance legibility, functionality, wayfinding and the distinctive historic character of the campus.

CASTLE ADAPTIVE REUSE

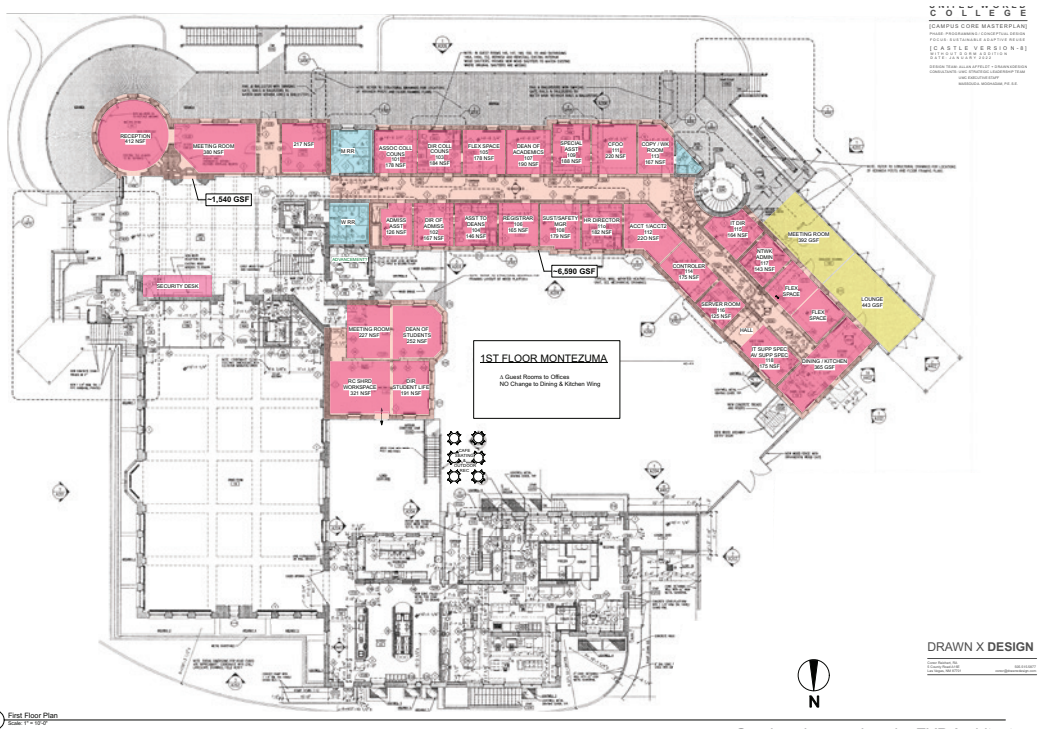
The Design Team began with the Upper Campus (UC) to answer the question: Can we relocate the student population here as called for in the 2019 Master Plan? And if so, can it be done maximizing use of existing buildings? By better utilizing all the available space in the Castle our plan enables us to fit 170+ students. To house the current student population on the UC will require an addition to be constructed, either adjacent to the Castle or somewhere nearby. We strongly feel that a connected new wing is the superior option.

We have created two versions of the Castle layout: one with the adjacent addition and one without. The addition as proposed allows for a partially open plan at 1st floor with views and connection to the courtyard, and with additional space for Student Life and Student Health. Floors two and three of the addition will each provide ten double rooms (twenty new beds per floor). This adds a total of forty additional student beds for a total capacity of 210+ students; additional floors are possible if more capacity is desired. The addition also adds a second elevator and completes circulation on each floor for enhanced access and security. Both plans utilize the existing Castle ground, 2nd and 3rd floors for dormitory space, 1st floor for administration, and 4th floor for Executive Offices and student commons - study and work spaces. The plans below show the two versions: with and without the addition. Please Refer to Appendix “D” for full size drawings.



Castle Ground Floor, without Addition

Overlay plan on plans by EYP Architects



Castle 1st Floor, without Addition

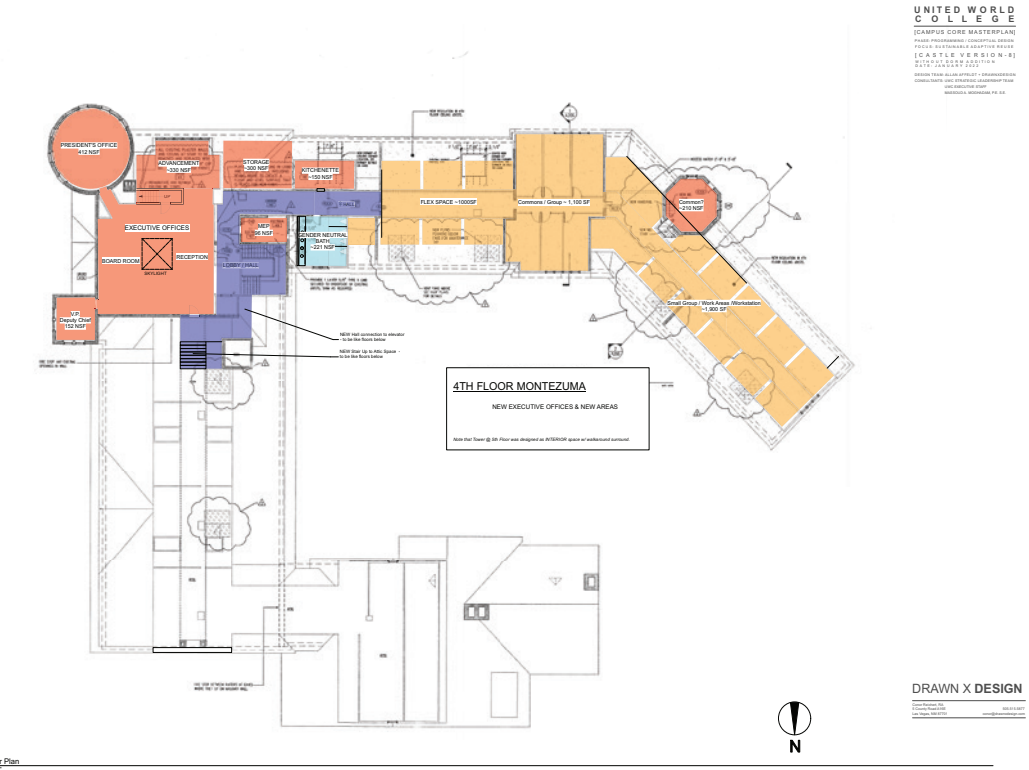
Overlay plan on plans by EYP Architects

Castle 2nd Floor, without Addition

Overlay plan on plans by EYP Architects

Castle 3rd Floor, without Addition

Overlay plan on plans by EYP Architects

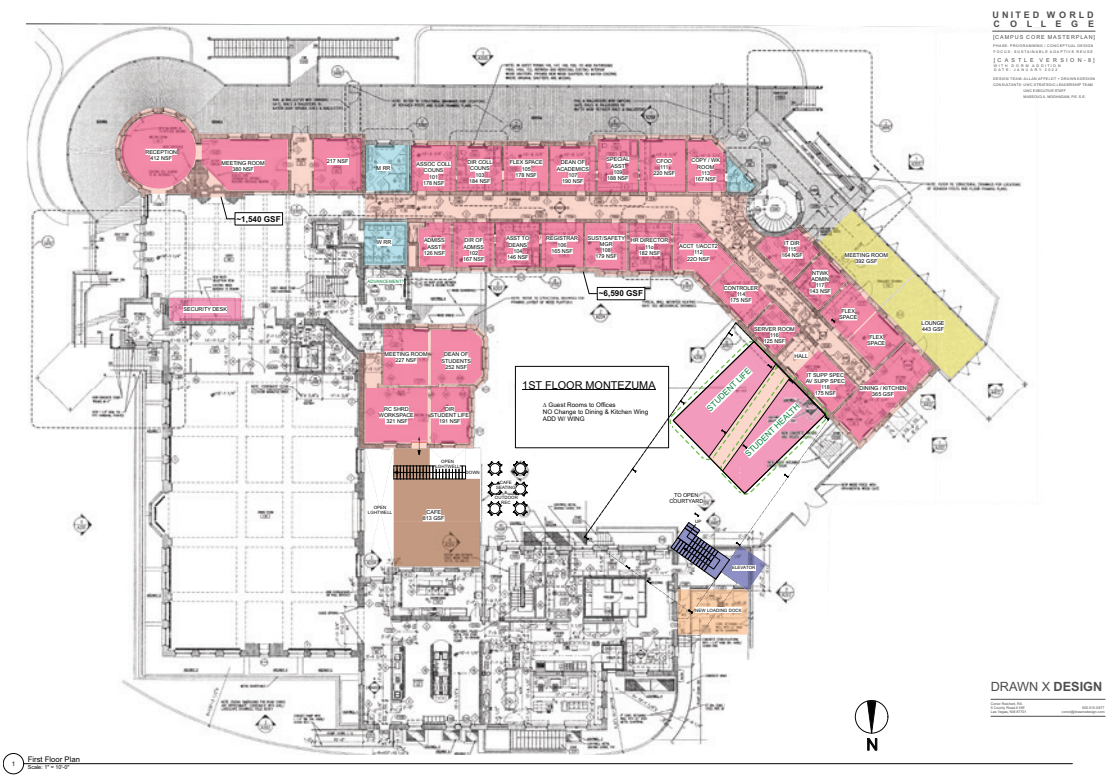


Castle 4th Floor, without Addition

Overlay plan on plans by EYP Architects

Castle Ground Floor, with Addition

Overlay plan on plans by EYP Architects



Castle 1st Floor, with Addition

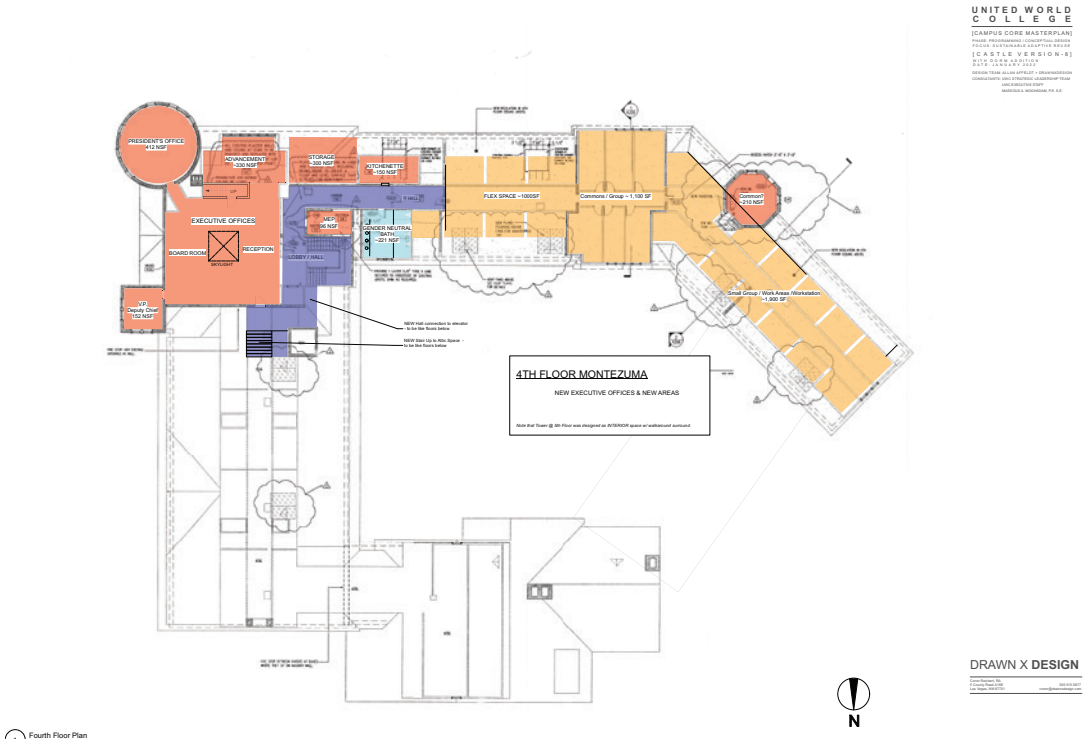
Overlay plan on plans by EYP Architects

Castle 2nd Floor, with Addition

Overlay plan on plans by EYP Architects

Castle 3rd Floor, with Addition

Overlay plan on plans by EYP Architects

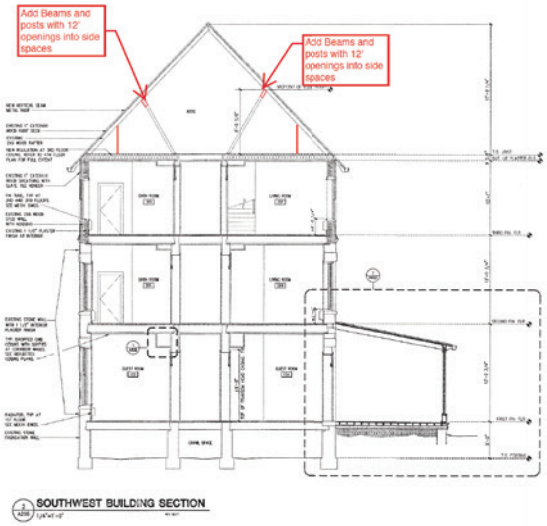


Overlay plan on plans by EYP Architects

Castle 4th Floor, with Addition

CASTLE STRUCTURAL CONSIDERATIONS

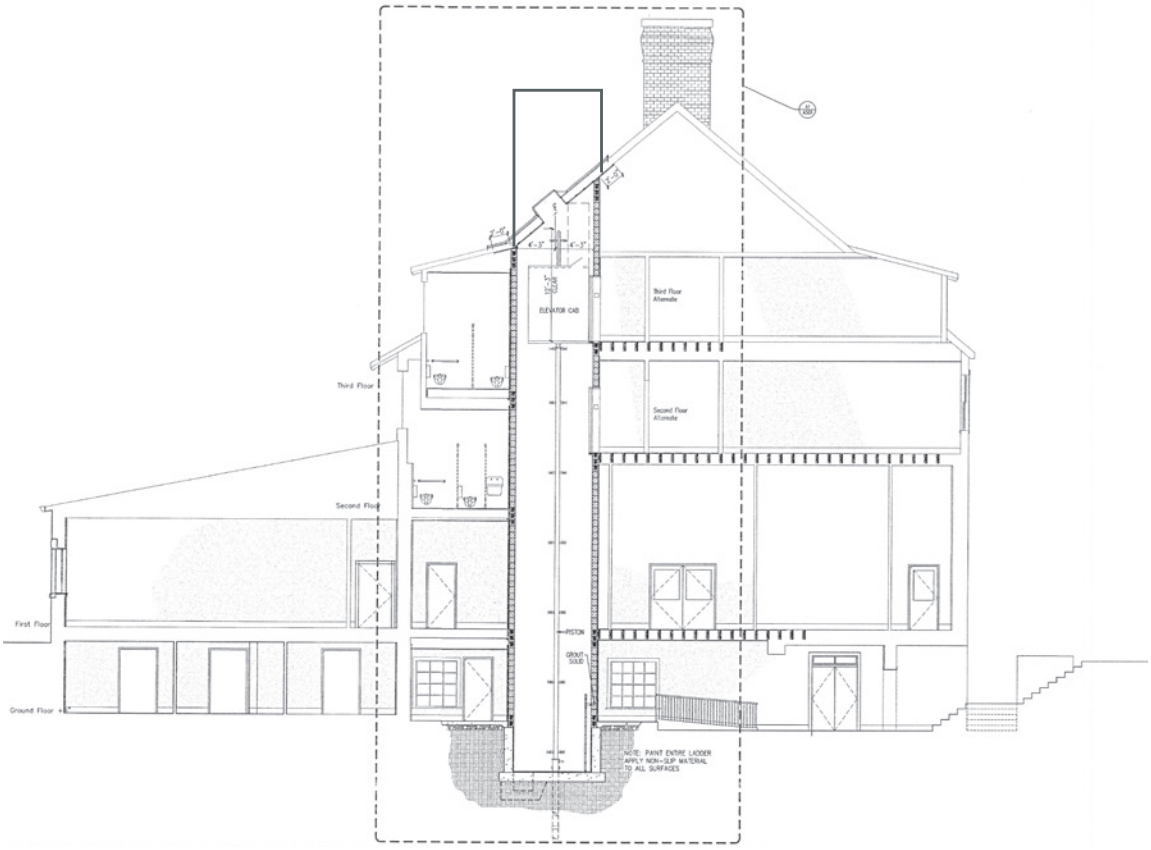
The Ground, 1st, 2nd and 3rd floors of the Castle were originally designed as hotel and service rooms so adapting them to dormitory spaces poses no challenges for the existing structural systems. The 4th floor consists of Southeast tower spaces that were used in the original hotel, and undeveloped attic wings East (above the dining room) and South/Southwest (overlooking the Lower campus LC). The attic space has been determined to have a fifty pound per square foot loading capacity so it can be developed as common space with typical classroom loading (classroom structural load is usually set at 50 psf). The East attic has complex cross bracing throughout so using that space would require a new structural system, new dormer windows, new exterior stair etc. The pentagonal framing in the South attic on the other hand can be adapted to create a series of 12' wide spaces opening to the central circulation aisle. Steel moment-frames can be used to open up the existing brick shear wall between the South and West attic volumes to create a connection through both wings. Please refer to Appendix "A" for the Structural Engineer's Preliminary Report.



Castle Fourth Floor Joist removal / support plan for creating usable spaces in the South Attic

CASTLE STRUCTURAL CONSIDERATIONS ACCESS

There is existing stair access to the 4th floor Tower spaces off the main (central) stairway. The elevator can reach this floor by extending the design of the elevator shaft on the floors below. This can be done with either core-filled and reinforced CMU or through cold-formed metal framing. The 4th floor elevator shaft will extend through the roof, but can be covered in a brick decorative facing to mimic the style of the adjacent chimney (as on the recent Castañeda Hotel restoration project). The Design Team should coordinate loading requirements with the Elevator manufacturer to ensure all shear, torsion and vertical forces are accounted for in the design of the extension. The existing hydraulic elevator should be eliminated and replaced with an MRL Traction Elevator for simplicity of upgrading and installation.



Elevator tower extension should be detailed similar to chimney in background

CASTLE CODE CONSIDERATIONS

The Stair tower at Southwest already goes to the 4th floor and can be improved to provide access to the new Study Hall spaces. The Castle currently has no fire and smoke-protected exit stairs, except the Southwest tower stairway which provides some degree of containment / separation. A compelling argument can be made for maintaining these access options because the Castle is a historically significant building designed for residential use. However, per the Code Analysis Memo provided on 11 February 2021, there are several areas in the castle that do not meet code requirements for egress. We concur with the findings in the report and suggest, as they have, that new stair towers may be required on the North of the East Wing (North of the Ballroom) and perhaps also for the South/Southwest Wing. The hall width and head-height clearance on the stairs connecting the 2nd and 3rd floors over the ballroom and kitchen also do not meet current code requirements. The Castle is a registered historic building, so the final decision on stair towers and changes required to allow the proposed uses falls to the local Authority Having Jurisdiction (AHJ, per the 2018 International Existing Building Code (IEBC) Chapter 12 “Historic Buildings’’). Code approval for Castle work will require review by the regional NM Construction Industries General Construction Inspector along with the regional State Fire Marshal. These two authorities should be consulted immediately upon the decision to proceed with Design Development to determine any required modifications or additional access stairs.

CASTLE MEP CONSIDERATIONS

A hydronic heat-only system as currently employed in the building is recommended, or mini-splits if air conditioning is desired. This requires that all areas have operable windows for ventilation. The 4th floor usable space must be maintained as an open throughout to access existing windows and ventilation on the South face and terminal Northwest wall. A very dramatic space can be created in the current undeveloped attic where the South wing turns Northwest; existing windows here provide ample access to ventilation and daylight. Insulating the floor cavities on the 4th floor and against the vaulted ceilings will help tremendously in achieving comfortable and efficient spaces.

Plumbing and Electrical systems will require examination to determine what infrastructure capacity upgrades (if any) are needed to tie the proposed new uses into the existing systems. This will require analysis to a Design Development level so that the loading, discharge and pressure rates can be accurately quantified and calculated. We believe there likely are existing chases and access ways for plumbing and services throughout the Castle that will enable minimally intrusive installation of new MEP systems.

CASTLE FIRE PROTECTION CONSIDERATIONS

The building is already fully sprinklered from the last phase of renovations. There will be upgrades and modifications to the fire suppression piping as the spaces get reconfigured but we will not know the full extent of required work until the plans reach a Design Development level. In the attic all fire suppression lines will require relocation for access and distribution of sprinklers in ceiling spaces as required by code. We strongly recommend bringing on a Fire Protection (FP) specialist at the onset of Design Development to get a global view of the systems and any constraints or challenges the proposed uses may face.

CASTLE PARKING CONSIDERATIONS

There are some areas for additional parking around the castle but the best by far is the existing tennis courts. If new courts were built in the lower campus athletic fields, the existing courts could be converted to a large parking lot with 60-80 spaces. This would require new curbs, approach ramps, striping and parking bumpers, but likely little or no changes to the pad. The West castle parking lot can be extended along the West access road to allow for an additional 20-30 parking spaces depending on the amount of earth work required. A civil engineer should be engaged during Design Development to conduct a traffic, parking, circulation and runoff study, and to develop parking options, calculations of work required and probable costs.

CASTLE SUSTAINABILITY

Old buildings are wrongly assumed to be inherently inefficient. By smartly employing modern insulating techniques & MEP systems historic structures can be made as efficient as new construction. Sustainable infrastructure solutions for adaptive reuse are readily at hand. Use of natural light and ventilation is paramount in reducing energy use - AC systems are highly inefficient when compared to natural ventilation. New lighting should be LED fixtures with high CRI ratings and adjustable temperatures. All plumbing fixtures should be low flow, with dual flush toilets. High efficiency boilers combined with possible solar hydrothermal or geothermal systems should be considered. But the single greatest sustainable savings comes from smartly reusing existing buildings instead of new construction - if you can make a historic building work for current needs. This plan proves that we can complete and adaptively reuse the Castle in an inspiring, elegant and functional way to sustainably meet UWC’s residential and administrative objectives.

CASTLE PROBABLE COST ESTIMATE

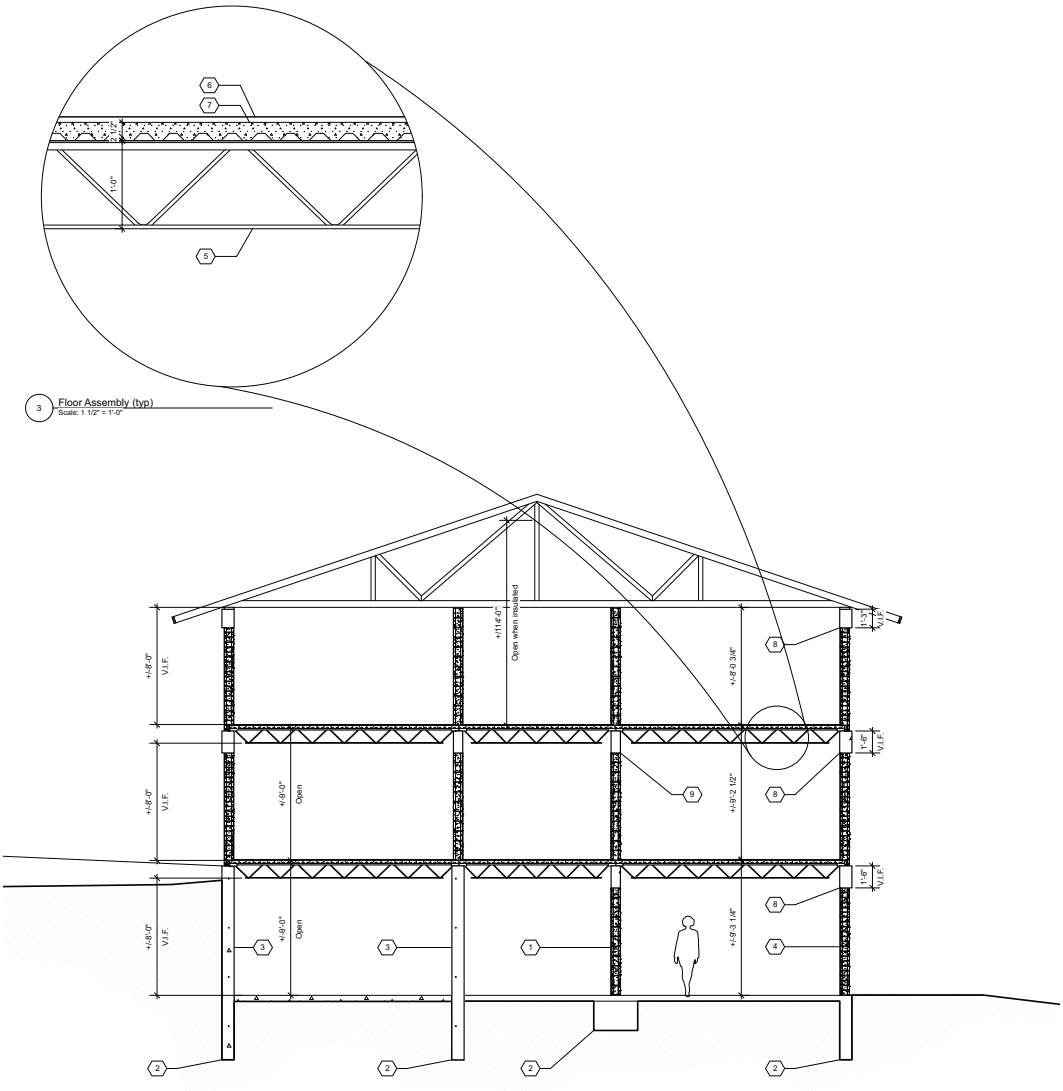
Please Refer to Appendix “B” For Preliminary Castle Price Estimate

ACADEMIC QUAD ADAPTIVE REUSE

The existing four buildings (B1-B4 on the lower campus) provide an intriguing opportunity for adaptive reuse. As currently configured, each of these has a three-story double-loaded corridor plan with dark, narrow and winding passage ways and ceiling heights of 7’8”. However, the impressive concrete foundations and masonry shells are in excellent shape with no indications of cracking, settlement or other structural issues. The Design Team’s first task was therefore to understand the existing structural system to determine if and how to reuse the building shells.

Building Section of Existing Dorm building
Typical of all 4 buildings

Keynotes:
1. *8” CMU Wall*
2. *Unknown foundation*
3. *8” C.I.P. conc. wall*
4. *8” burnished CMU wall*
5. *12” deep bar joist*
6. *Carpet & pad*
7. *2-1/2” Thick Conc. Slab over steel decking*
8. *Conc. Bond Beam*



ACADEMIC QUAD STRUCTURAL CONSIDERATIONS

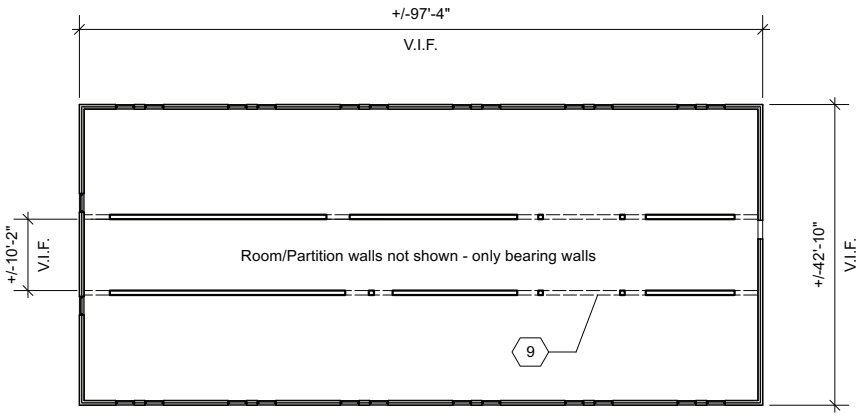
Our investigation into the existing structure determined that the current floor plate configuration is composed of three sets of 12” bar joists running North/South, interior CMU/concrete walls running East/West, and continuous concrete bond beams wrapping the entire building at each level. Refer to Appendix “D” for full size drawings.

The current joist system, if exposed, would leave around 9’ clear from floor to ceiling and 8’ clear from floor to bottom of bar joists. The current ceilings are so low because there is additional framing structure hung from the bar joist to carry the gypsum board ceilings and glued-on acoustic tiles. Together these create an 18” ceiling/floor assembly and the resulting 7’8” ceiling height.

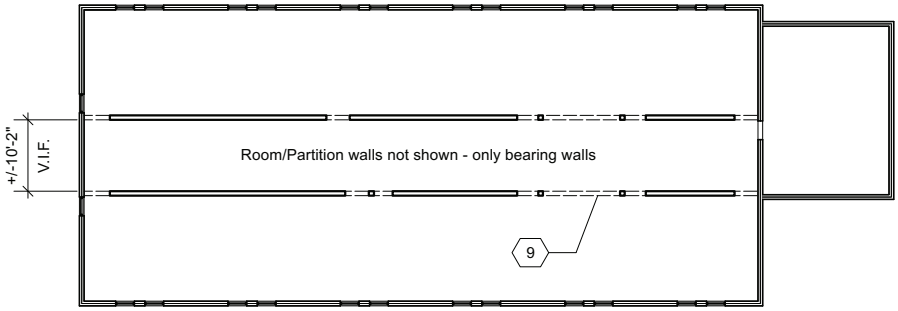
ACADEMIC QUAD STRUCTURAL CONSIDERATIONS

Structural System of Existing Dorm building Typical of all 4 buildings

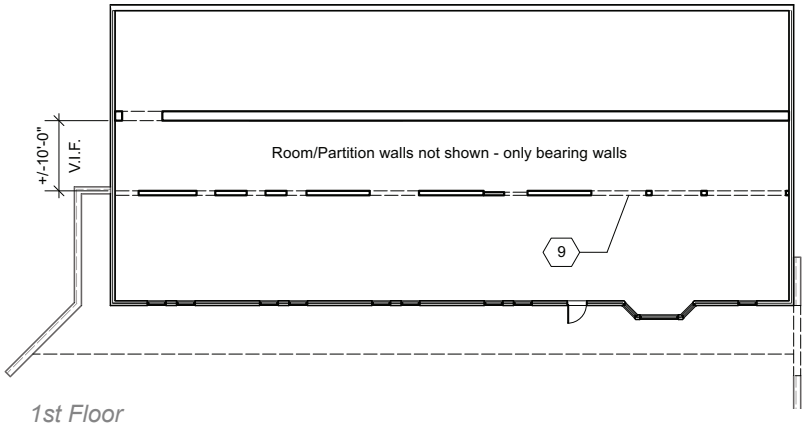
Keynote:
9. Existing header beam over hall openings



3rd Floor



2nd Floor



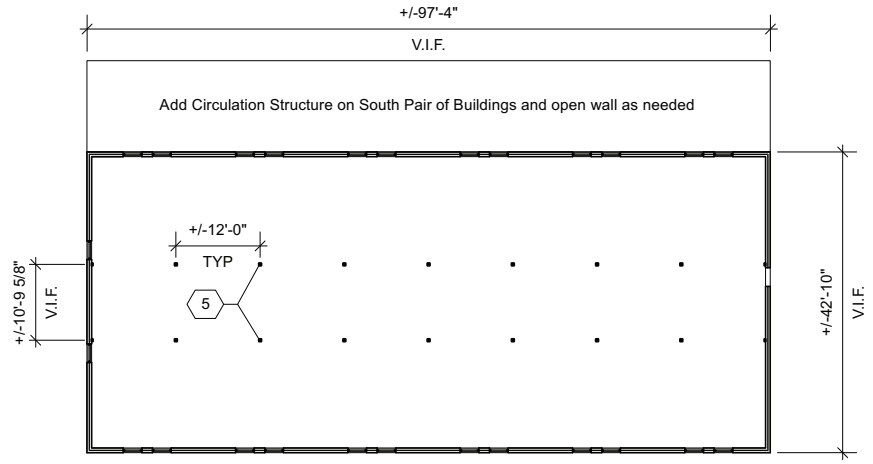
1st Floor

NOTE: WITHOUT EXISTING BUILDING DRAWINGS - WE RELY ON FIELD MEASUREMENTS, PREVIOUS AS-BUILTS AS PROVIDED BY UWC AND THE DRAWING SET OF THE SIMILAR PAIR OF BUILDINGS ORIGINALLY BUILT AS THE "PHILOSOPHATE" DORMITORIES BY PACHECO AND GRAHAM ARCHITECTS 9/8/1965. SEEMINGLY USED CURRENTLY AS THE ZEINAL-ZADE SCIENCE CENTER & GEIER CENTER FOR TECHNOLOGY

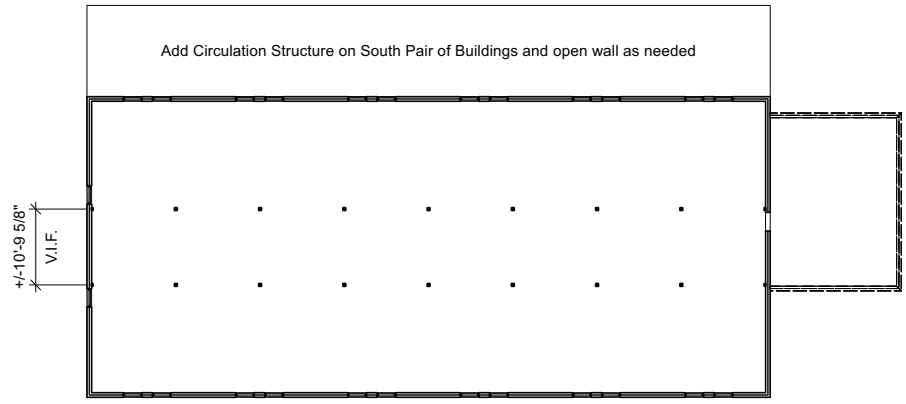
ACADEMIC QUAD STRUCTURAL CONSIDERATIONS

Possible Structural System retaining existing Joist systems (concept rejected) Typical of all 4 buildings

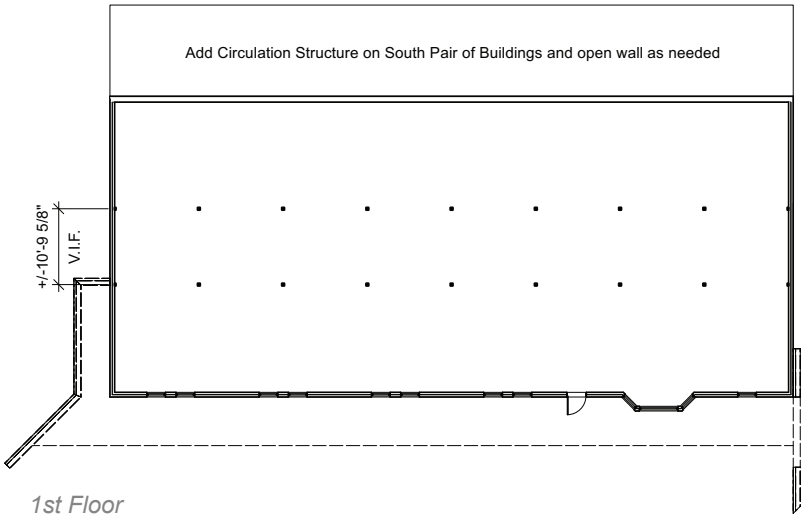
Keynote:
5. NEW Steel columns 12' O.C. with East-West running beams to support existing bar joists and floor plates



3rd Floor



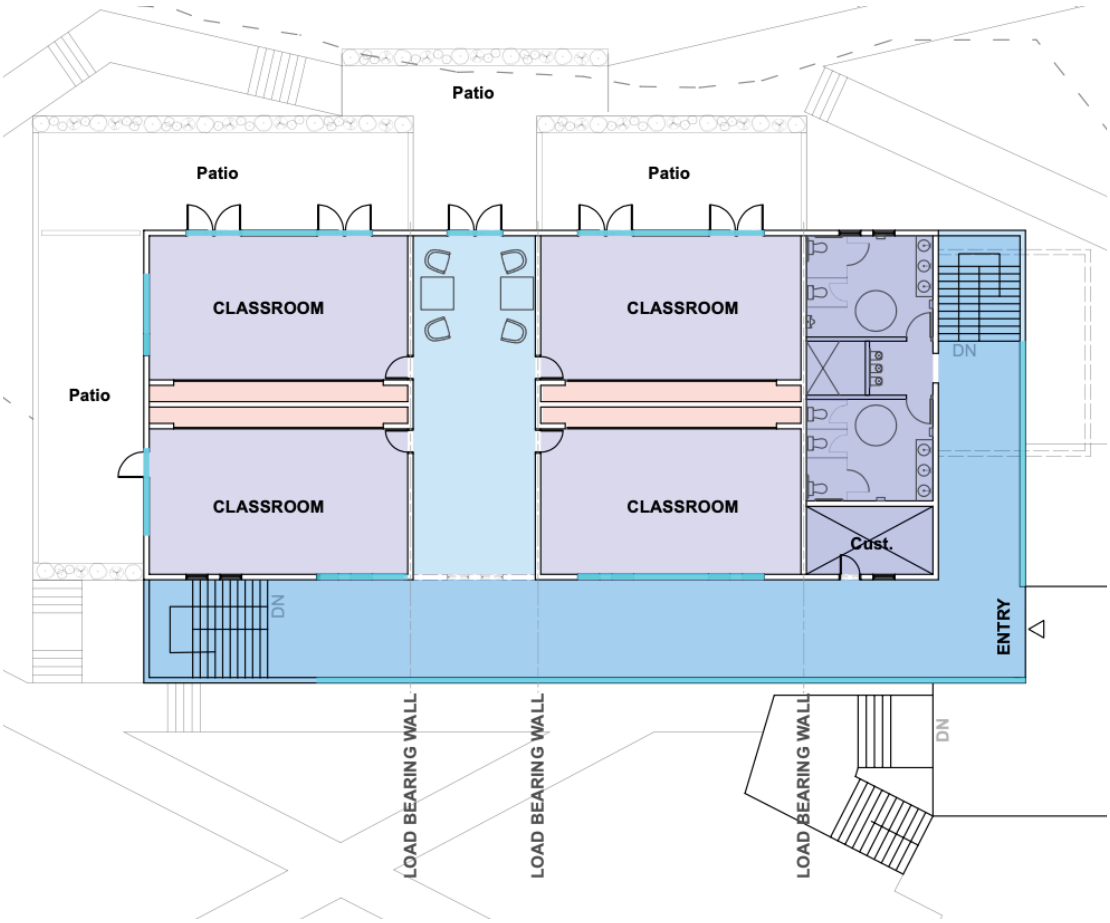
2nd Floor



1st Floor

Initially the Design Team studied retaining the existing floor plates and joist system, but creating the desired large classrooms and labs would have required an extensive grid of structural columns and beams. This poses difficult constructability issues with respect to bracing the existing floor plates while removing the existing CMU bearing walls, but that must be done in order to install a column & beam structural system. Such a structural system would result in a field of columns 12' O.C. (on center) and variously throughout the rooms. This concept would work, but we rejected it as a very inelegant solution.

ACADEMIC QUAD STRUCTURAL CONSIDERATIONS



Proposed Structural System with new N-S Load Bearing Partitions and long span deck system. Typical of all 4 buildings

After much consideration and discussion with the Structural Engineer a solution was arrived at that replaces the existing interior floor plates and joists with a new structural system. The proposed system uses load-bearing walls (either CMU or a combination of CMU / steel post & beams) running North/South (the short axis) to support a long-span decking system such as Newmill Versa-Deck®. The proposed decking system can achieve spans of 30-40 feet with a total vertical thickness of only 7.5". The new decking would bear on the existing perimeter concrete bond beams and new minimally-intrusive interior walls, and would create an increase in floor to ceiling heights to 8'-7". Additionally the dovetail design allows for easy attachment of lighting and fire-protection systems as well as acoustic treatments and is quite elegant when simply left exposed and painted - see image below.

Exposing the roof trusses on the 3rd floor will enable the creation of extensive north-facing skylights and light-wells for daylighting throughout the buildings, while simultaneously enabling ceiling heights at the ridge peak nearing 14' above finished floor.

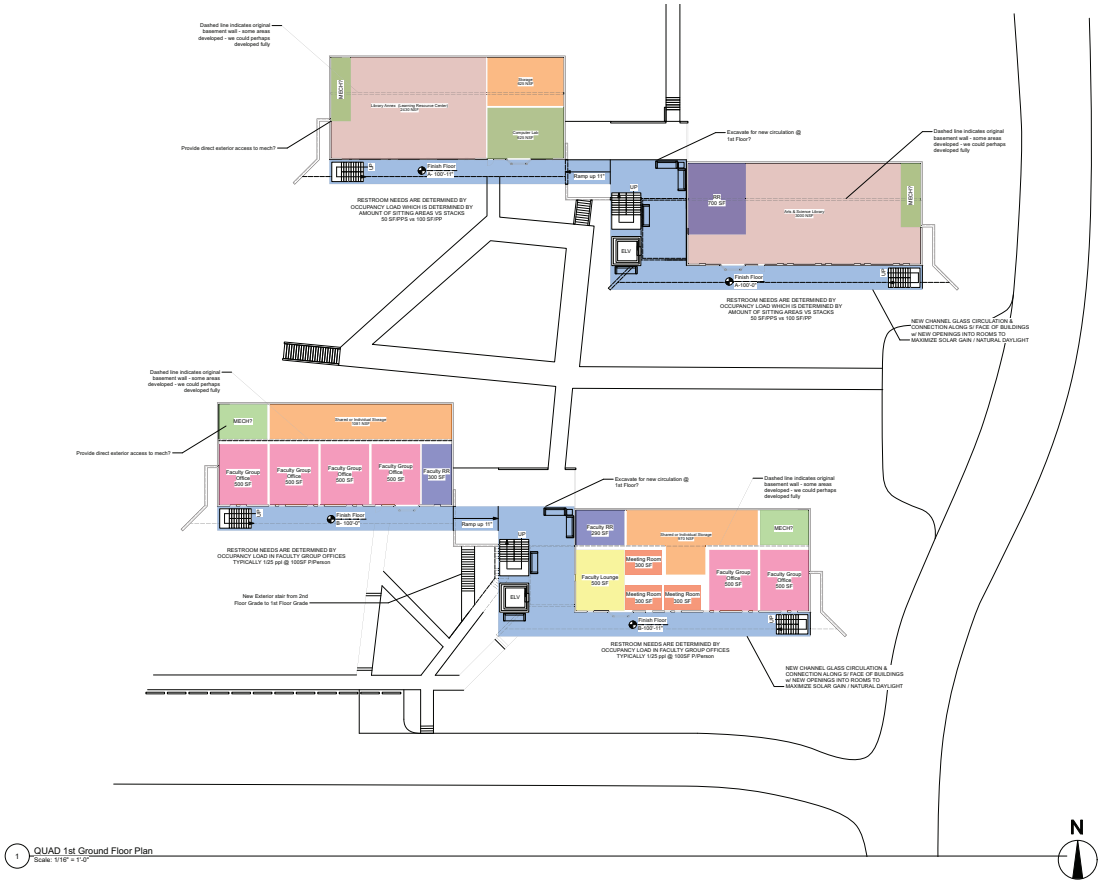
Example photo of Long Span Versa-Deck system left as exposed ceiling. Image from newmill.com

ACADEMIC QUAD PROGRAMMING EXERCISE

Next, to create the new classroom, lab and faculty office layouts, the SLT provided the Design Team with a programming guide specifying the desired spaces for the Academic Quad (see table below). The Design team used these academic and spatial objectives to generate the initial digital plan layout V-1. The V-1 drawings were produced along with a model for SLT critique in December 2021. The model consisted of removable floor plates and simple colored programming blocks. This enabled the SLT to experiment with and generate desired associations of spaces.

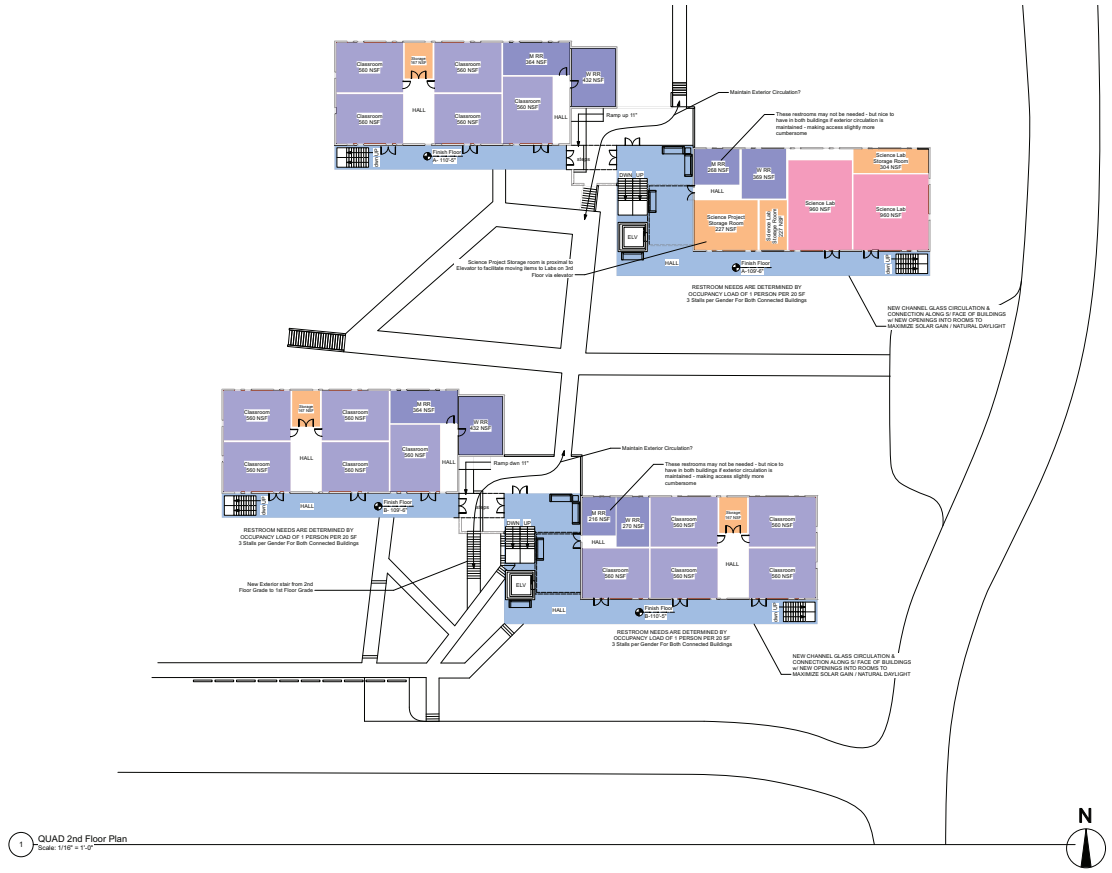
Levels 2 and 3		
Optimum class size	16 students	
Classrooms*	27	560 sq ft / classroom
Science labs*	5	960 sq ft / lab
**Recommended to keep room proportions b/w 1:1 and 3:2 (L:W)*		
Science lab storage/prep room	5	200 sq ft / storage room
Science project storage rooms	1	250 sq ft
Student bathrooms	?	?
Level 1		
Library or Learning Resource Ctr	1	?
Books and supporting spaces (e.g., office, tables/chairs, etc)		?
Acad support / study / group wk rooms		?
Computer lab and help desk		600 sq ft
Faculty group offices/resource centers	6	500 sq ft / group office
Meeting rooms	3	300 sq ft / mtg room
General academic storage rooms	3	200 sq ft / storage room
Faculty lounge	1	350 sq ft
Faculty bathrooms	4	?

Programming requirements as provided by UWC.



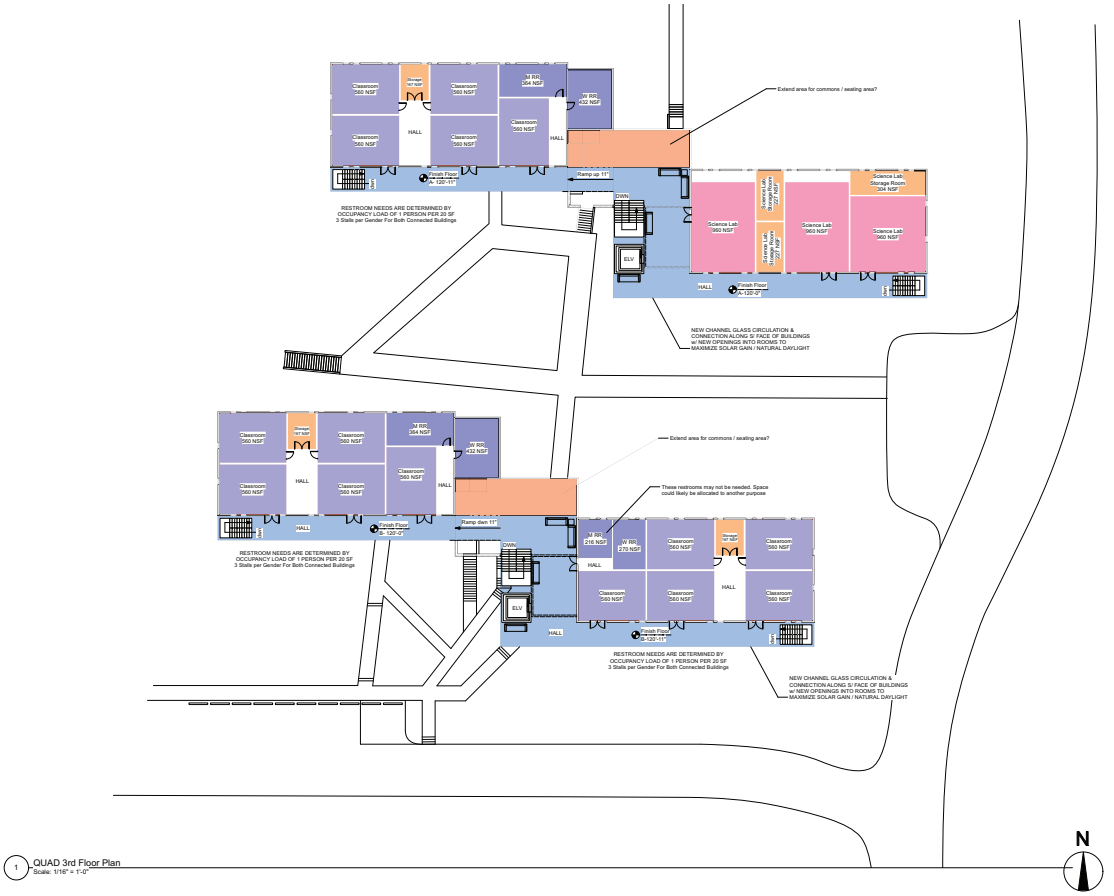
V1. Programming 1st floor plans

ACADEMIC QUAD PROGRAMMING EXERCISE



1 QUAD 2nd Floor Plan
Scale: 1/16" = 1'-0"

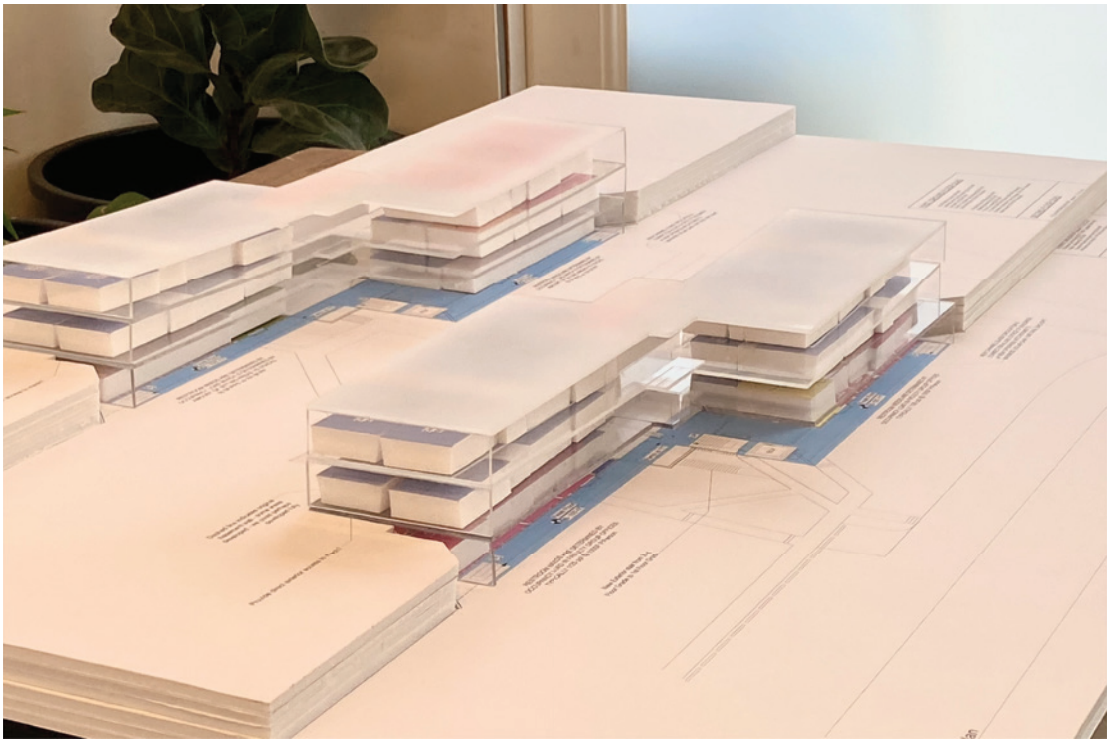
V1. Programming
2nd floor plans



1 QUAD 3rd Floor Plan
Scale: 1/16" = 1'-0"

V1. Programming
3rd Floor Plans

ACADEMIC QUAD PROGRAMMING EXERCISE

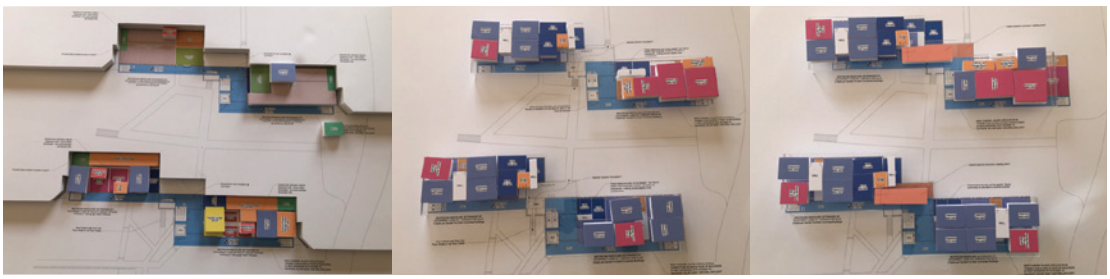


Physical Programming Model

Using these physical models the SLT team created two versions of organization which we called A & B:

SLT Generated Version A Model

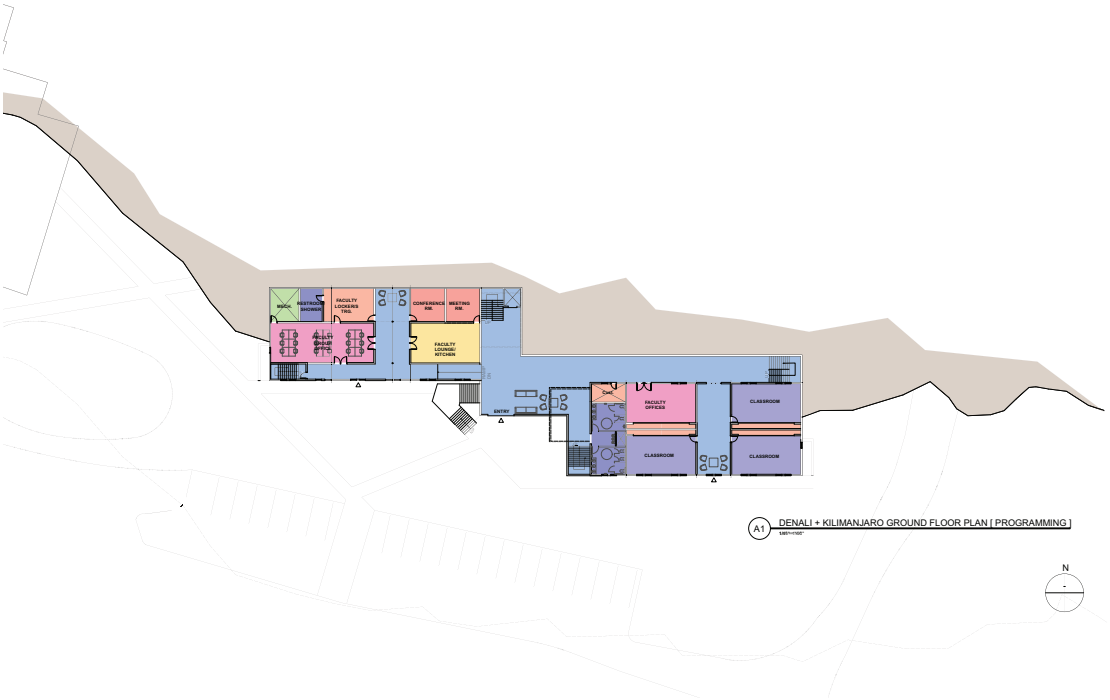
Version A was a centralized arrangement with all faculty offices on the ground floor.



SLT Generated Version B Model

Version B had a decentralized arrangement with faculty offices interspersed throughout the buildings and amongst the classrooms.

ACADEMIC QUAD PROGRAMMING EXERCISE

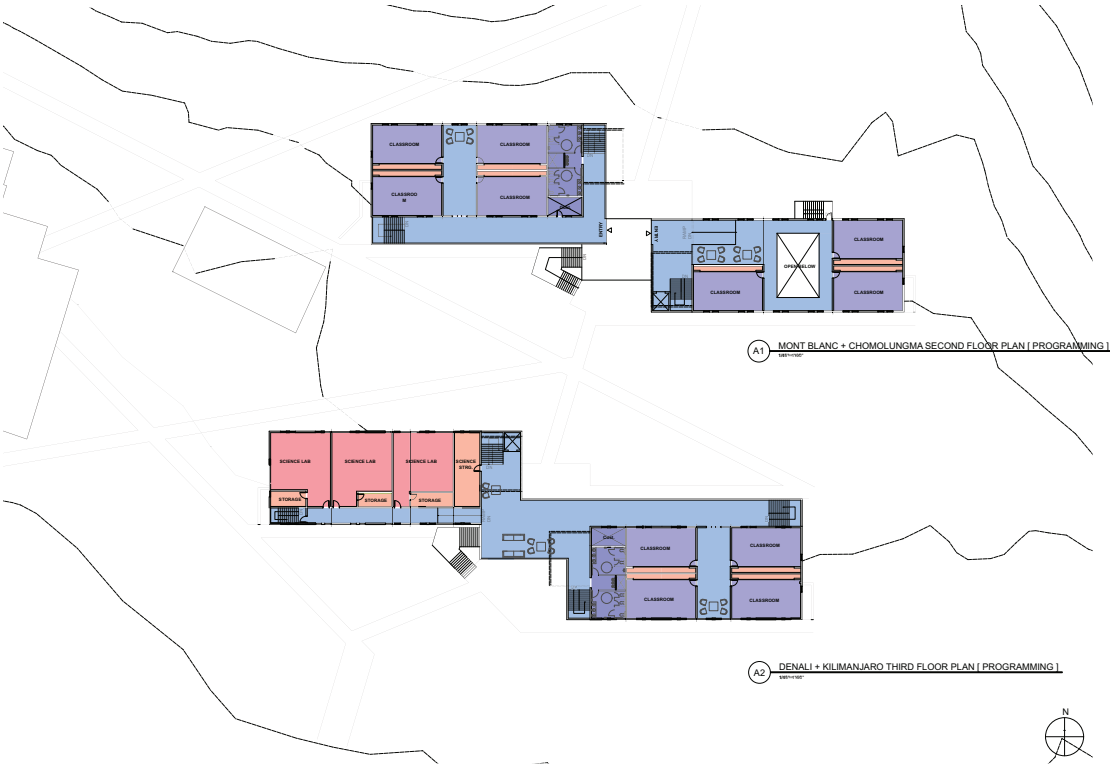


Refinement of SLT Generated Version A D+K 1st Floor

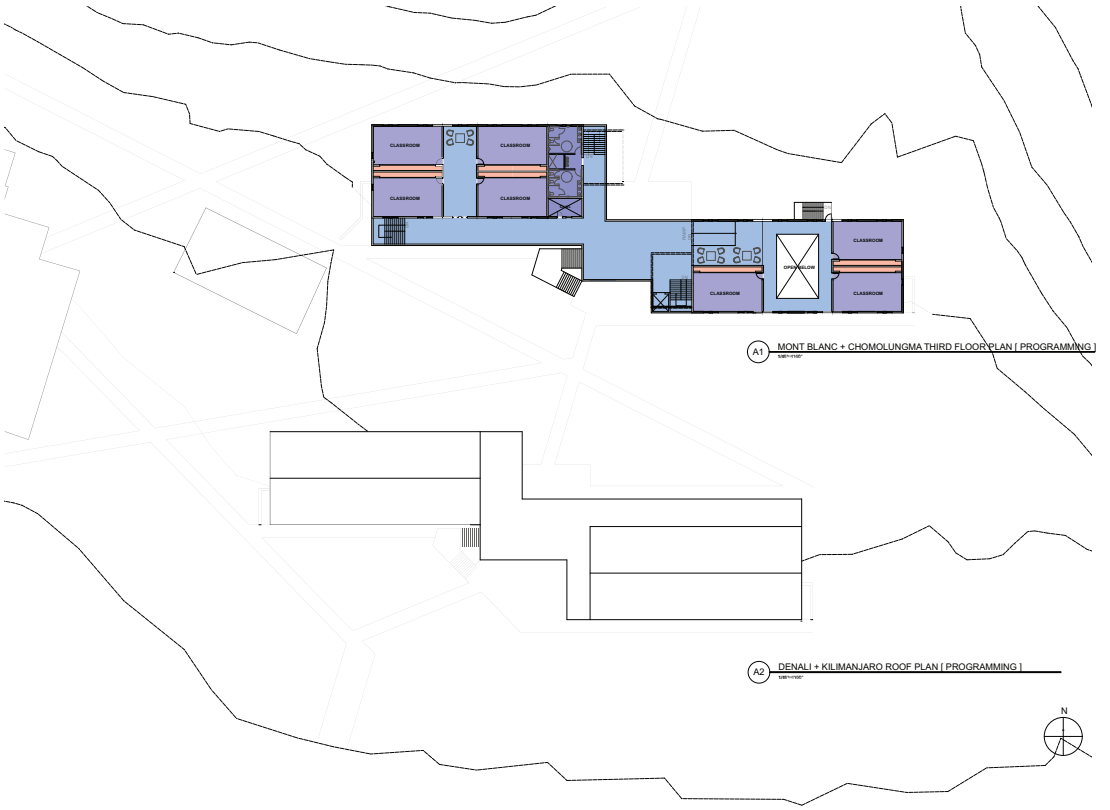
The first Programming model was simply an exercise of space fitting - could we get all the desired uses within the existing volumes? The answer was 'yes', but with building modifications for circulation and code. While developing drawings of Versions A & B, the Design Team also began examining how to organize the desired uses within the flexible structural system we had devised. To minimize construction expense we needed to respect the existing shell and rhythm of window openings. To meet programming objectives we needed to organize the spaces to maximize natural light and ventilation, and to maximize interaction with outdoor spaces. We also needed to stack partition walls for ease of constructibility and to harmonize with the existing structure. Note that the plans from here on are staggered to show the true relationship of each level to the courtyard and how the levels interact with the sloped site.

Refinement of SLT Generated Version A MB+C 1st Floor D+K 2nd Floor

ACADEMIC QUAD PROGRAMMING EXERCISE



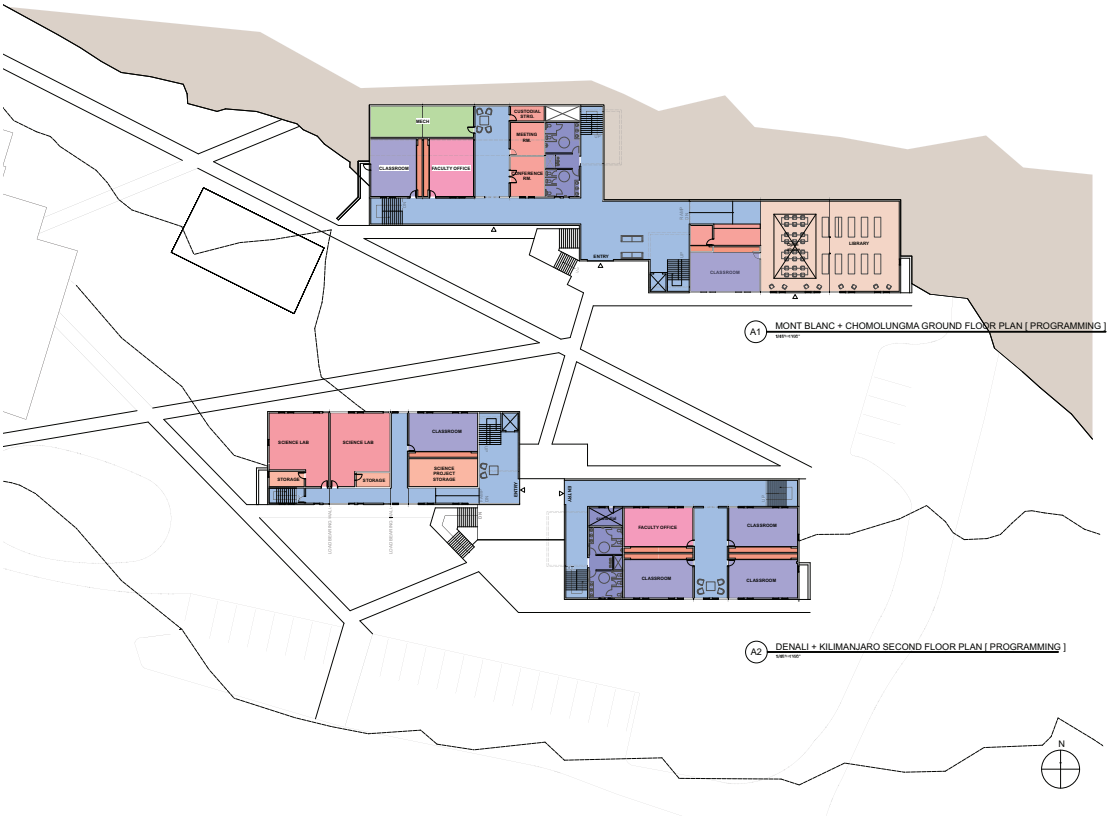
Refinement of SLT
Generated Version A
MB+C 2nd Floor
D+K 3rd Floor



Refinement of SLT
Generated Version A
MB+C 3rd Floor

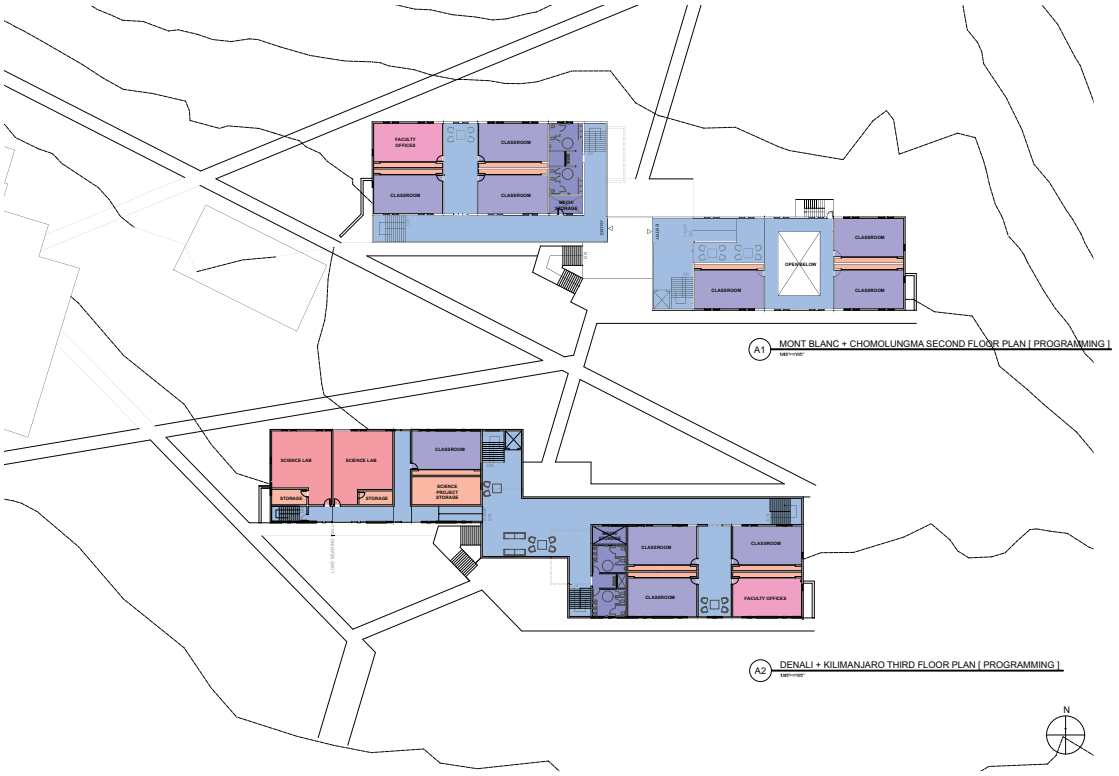
ACADEMIC QUAD PROGRAMMING EXERCISE

Refinement of SLT
Generated Version B
D+K 1st Floor

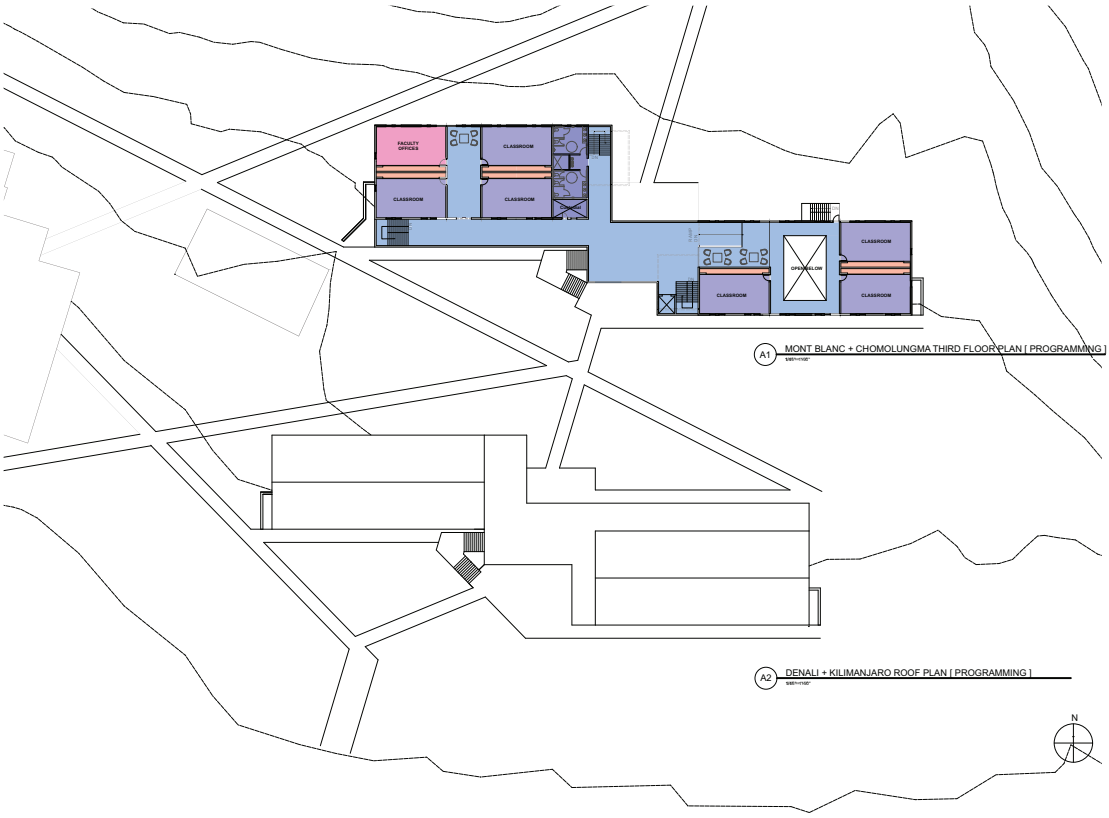


Refinement of SLT
Generated Version B
MB+C 1st Floor
D+K 2nd Floor

ACADEMIC QUAD PROGRAMMING EXERCISE



Refinement of SLT
Generated Version B
MB+C 2nd Floor
D+K 3rdv Floor



Refinement of SLT
Generated Version B
MB+C 3rd Floor

ACADEMIC QUAD PROGRAM CONCLUSION

ACADEMIC QUAD V-5 SPACE ALLOCATIONS

GROUND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

1 Conference / Meeting Room @ 450 NSF
1 Shared Group Faculty Office @ 900 NSF
1 Faculty Lounge w/ Kitchen @ 620 NSF
1 Faculty Lkr Room / Storage / RR / Shower @ 500 NSF
1 Shared Group Faculty Office @ 1250 NSF
Meeting / Conference @ 530 NSF
Faculty Kitchen Breakroom @ 346 NSF
Common Spaces / Circulation ~ 4,900 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library: 2,600 NSF
Library Office & Counter @ 381 NSF
Computer Lab / help desk @564 NSF
3 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
1 Faculty Group Office @ 560 NSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

Common Spaces / Circulation ~ 4,300 GSF

SECOND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
2 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
2 Science Lab Storage @ 190 NSF
1 Science Project Storage Room @ 250 NSF
Common Spaces / Circulation ~ 4,170 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library / Study Space: 2,776 NSF
5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 3,330 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

THIRD FLOOR QUAD

MONT BLANC + CHOMOLUNGA

4 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
3 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
3 Science Lab Storage @ 190 NSF
Common Spaces / Circulation ~ 4,600 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library / Study Space: 1,450 NSF
7 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 4,200 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

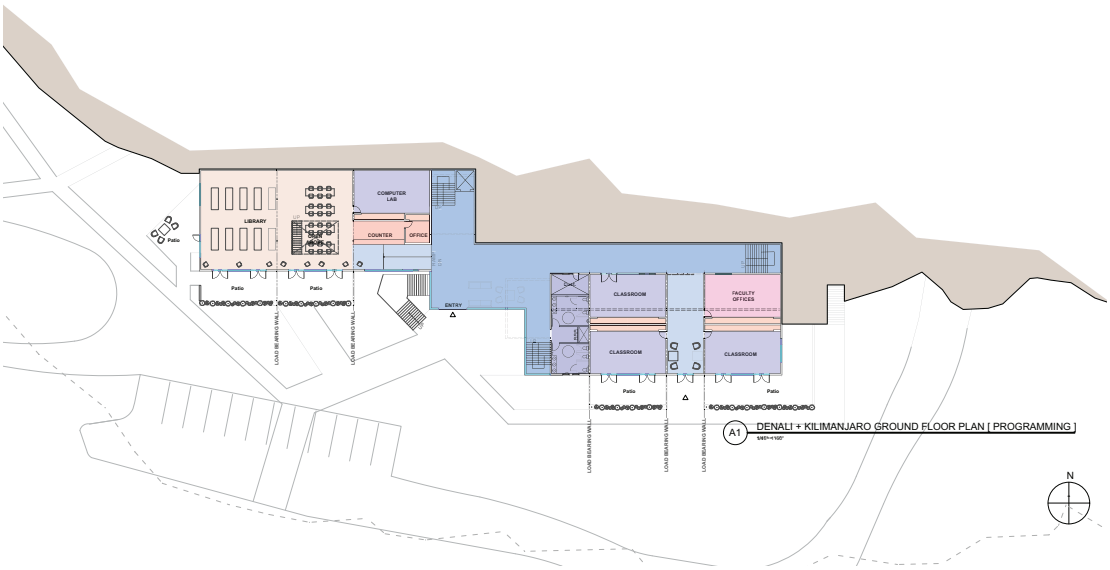
Existing building elevation and proposed large window

The December SLT meeting determined that the 27 classrooms outlined in initial programming requirements could be reduced to 24. The A and B versions were reviewed at an SLT meeting on 11 January 2022. The Design team was given direction to further develop version A (centralized organization), with a particular objective of studying if and how these new proposed spaces could be made beautiful and inspiring.

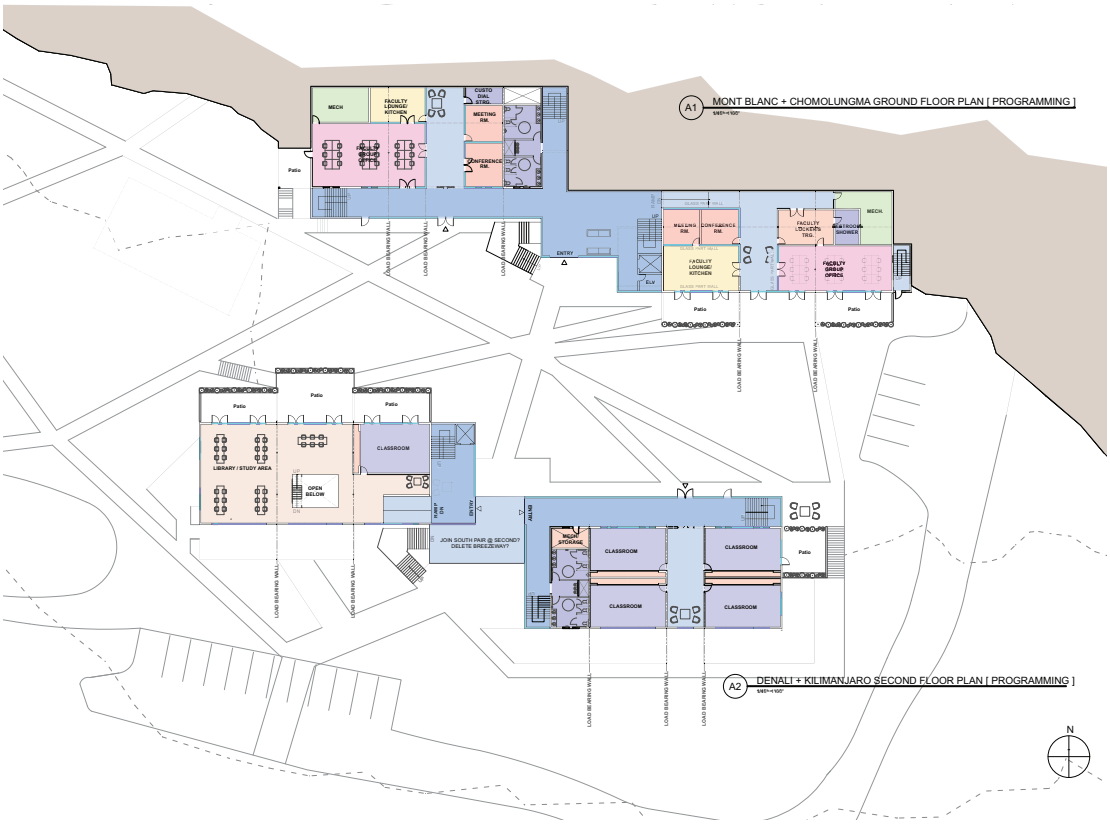
Several floors of each building could potentially open onto adjacent exterior space, so it was decided to provide large glazing to patios wherever possible to create indoor / outdoor classrooms, labs and common spaces. By reversing the structural system to have the floor plates span East/West rather than North/South, the North and South faces of the buildings will be able to have far larger openings along those faces, potentially spanning multiple window bays and from bond beam to floor. This enables us to create dramatically flowing and open spaces with access to far more natural light and natural ventilation than before. By employing the proposed North/South structural bearing walls, the East/West interior partitions can be translucent or even transparent by employing interior glazing systems, which further will enhance interior access to natural daylight and ventilation. The new third floor rooms as proposed also have exposed ceilings to the roof pitch with extensive skylights and light-wells to bring daylighting throughout the academic spaces.

ACADEMIC QUAD PROGRAM CONCLUSION

Version 5 Academic Quad Programming Plans. Please see Appendix “D” for full size drawings.

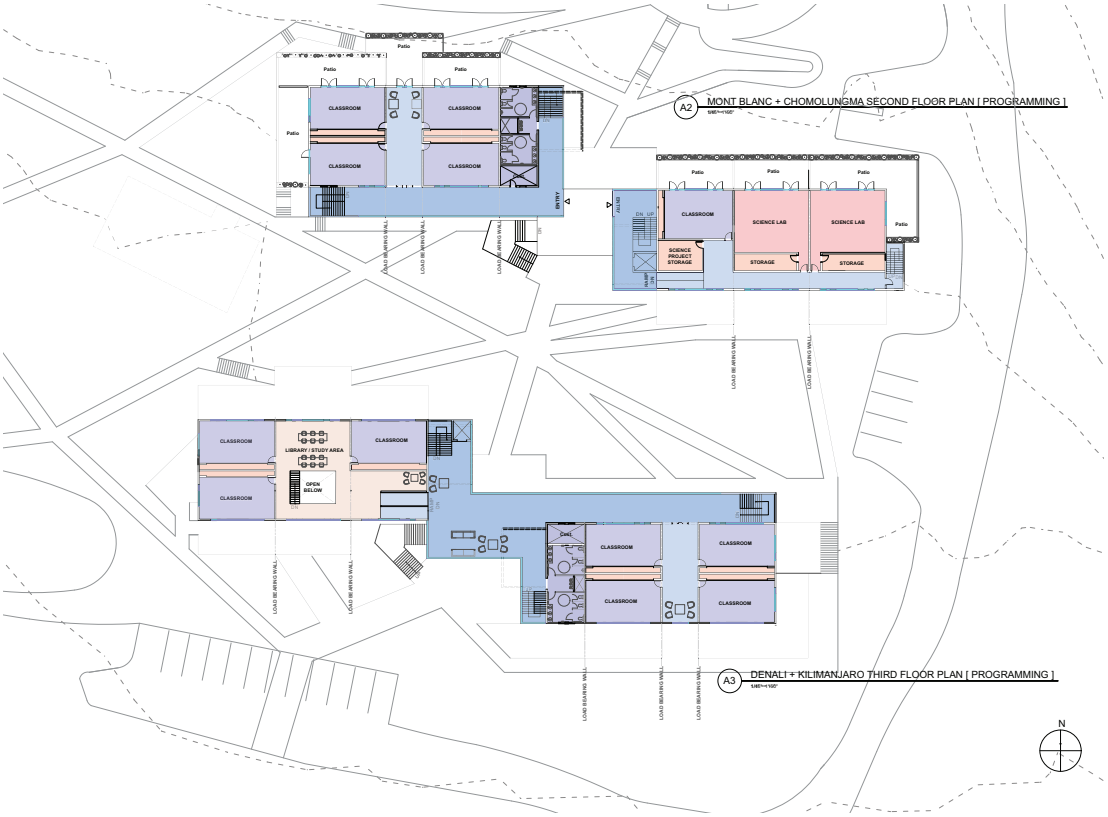


ACADEMIC QUAD V-5
D+K 1st Floor

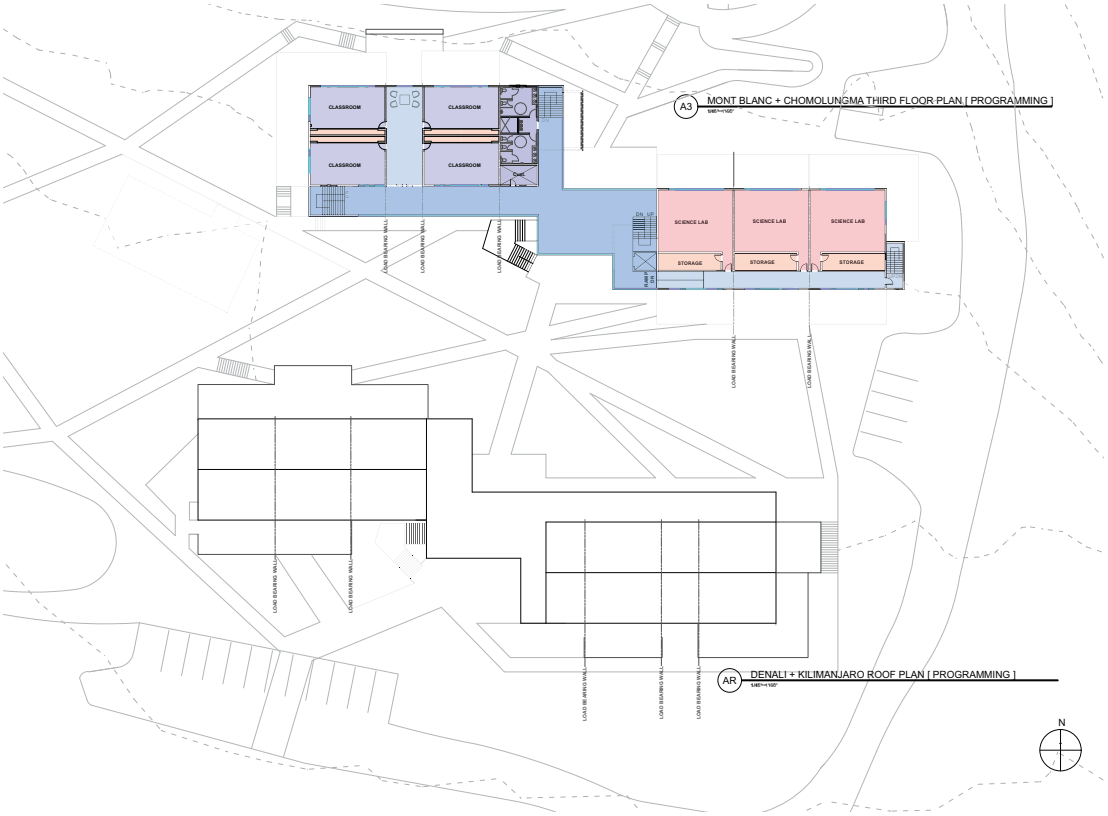


ACADEMIC QUAD V-5
MB+C 1st Floor
D+K 2nd Floor

ACADEMIC QUAD
PROGRAM
CONCLUSION



ACADEMIC QUAD V-5
MB+C 2nd Floor
D+K 3rd Floor



ACADEMIC QUAD V-5
MB+C 3rd Floor

ACADEMIC QUAD PROGRAM CONCLUSION

ACADEMIC QUAD CODE CONSIDERATIONS

The V5 plan shows stair towers at the end of the buildings and two in each connecting addition - one as a grand stairway (and elevator) and the other as an exit stair tower. How many stair towers are required will be determined during Design Development once a final layout of the interior spaces is determined, which will enable associated loading calculations and egress requirements. The Design Team foresees no code related obstacles to Quad adaptive reuse.

ADEMIC QUAD MEP CONSIDERATIONS

As with the Castle, using a hydronic heat only-system as currently employed in the existing building would be prudent. This requires that all areas have operable windows for ventilation which are provided in this current V-5 plan. Insulating the interior CMU walls and up against the exposed trusses will help tremendously in achieving comfortable spaces. Additionally, if thermal performance models indicate additional insulation is to be provided various options exist to cover either or both faces of the wall assemblies. Plumbing and Electrical systems will be all new. The dormitories were built with far less efficient lighting and mechanical systems than are available today so the existing infrastructure likely has sufficient capacity for handling the proposed usage; this too will be definitively analyzed by the MEP consultants during the Design Development Phase. The current buildings are fully sprinklered and may have sufficient infrastructure capacity for new fire-protection systems that will be employed throughout the building pairs. The South-facing roof slopes of the existing Quad buildings are ideal for photovoltaic systems to offset electrical demand, while the North-facing roof slopes are ideal for skylights and passive daylighting. Maximizing natural light and ventilation can greatly reduce associated energy costs and create a brighter, healthier learning environment

In V5 the library has been moved to the Southwest building of the Quad. This places the library at the center of the lower campus, with visibility from the campus entry sequence and from the Castle. This is the ideal location if a signature contemporary design is desired, which we strongly support.

ACADEMIC QUAD PARKING CONSIDERATIONS

There is ample opportunity for parking adjacent to the lower campus, which will also reduce the excessive maintenance costs of the over-large playing fields. Permeable paving surfaces could be employed, as well as a photo-voltaic canopy. A civil engineering traffic, parking, circulation and runoff study should be done during Design Development to propose parking options, with calculations of work and probable costs.

ACADEMIC QUAD SUSTAINABILITY

The existing four buildings contain a tremendous amount of embodied carbon - all the earthwork, compaction, concrete footings and CMU / concrete walls required a significant amount of energy to produce and construct. By saving the building shells and repurposing them through adaptive reuse, not only is a large amount of carbon spared from entering the atmosphere, but there are also large cost and time savings. Shell costs can easily be 25% of the cost of a new construction project. With the volatility of today's construction market we cannot say with certainty what the savings will be, but we can say with certainty that it will be a significant percentage of overall costs.

The proposed Quad solution - with its emphasis on maximizing daylight, ventilation and connection to the outdoors - can be easily reconfigured and adapted as the design is refined. The Design Team has worked with the constraints of the existing Quad buildings to generate a readily-constructible solution and enable the development of inspiring new academic spaces. The version presented here (V-5) is not the final design but rather a proof of concept: a proof that we can create a beautiful and sustainable new academic campus by leveraging the foundation, layout, shell and infrastructure of the existing Quad buildings.

ACADEMIC QUAD CLOSING THOUGHTS

In summary: The constraints imposed by the existing buildings and the specific SLT objectives are elegantly resolved in these plans for the LC Lower Campus. Our iterative design process and deep understanding of the existing buildings and prior plans enables us to creatively give new life to our historic Quad in a way that is thoughtfully sustainable, minimally disruptive, and highly cost effective. These plans will be further refined in the Design Development phase. We look forward to working with you to bring this vision to fruition.

Please see Appendix "D" for full size drawings.

ACADEMIC QUAD PROBABLE COST ESTIMATE

Please Refer to Appendix "C" for preliminary Academic Quad cost estimate.

ACADEMIC QUAD
SECTION RENDERS

Building section through Denali Library mezzanine space

Building section through Kilimanjaro classrooms

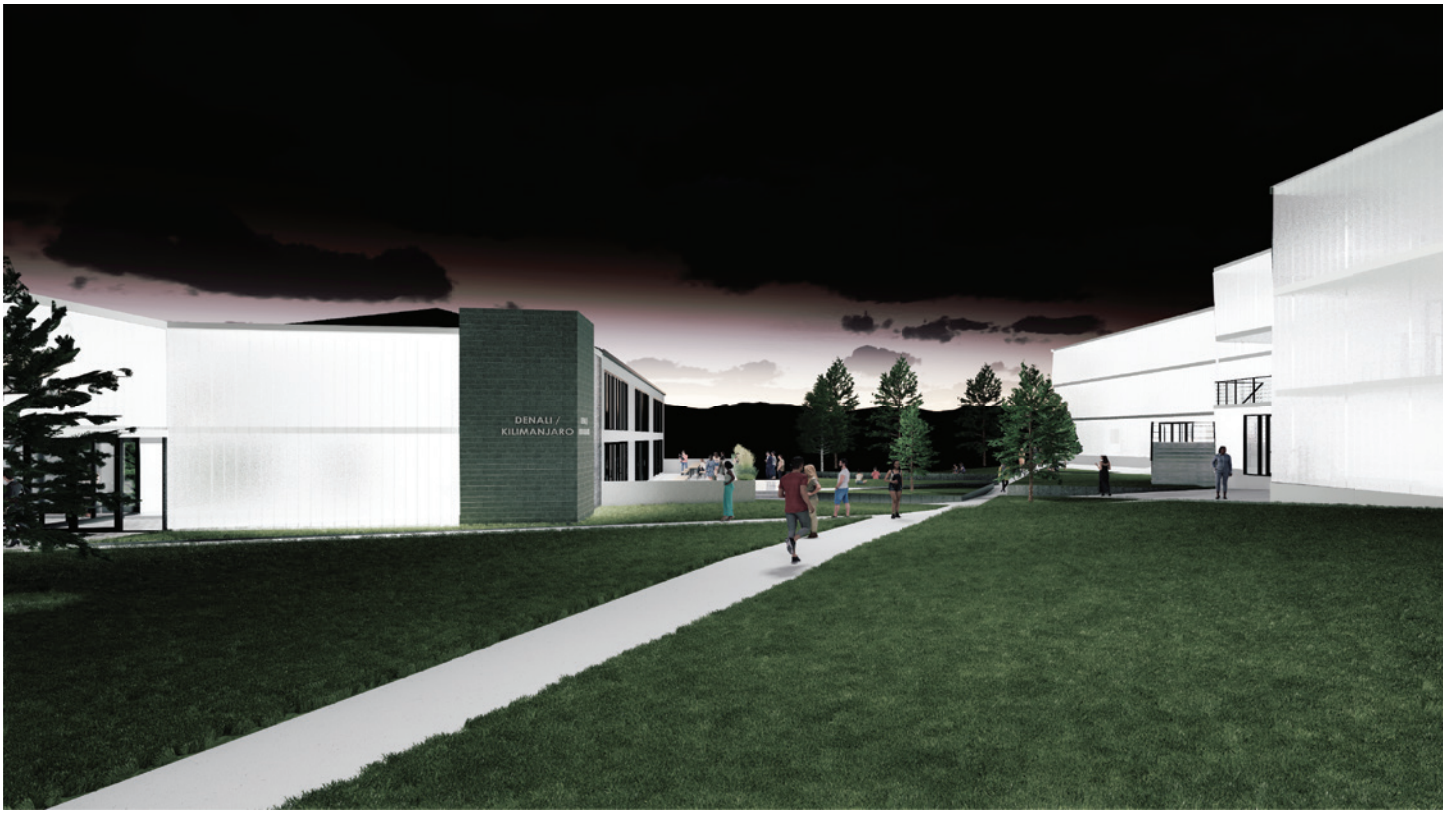
ACADEMIC QUAD
EXTERIOR RENDERS

Nighttime view in front of Denali Looking NE at entry breezeway between Denali and Kilimanjaro

Courtyard view standing in front of Mont Blanc looking East

ACADEMIC QUAD
EXTERIOR RENDERS

Courtyard view looking SE at Denali Patio



Nighttime view in courtyard looking W

ACADEMIC QUAD
EXTERIOR RENDERS

Standing in breezeway between Mont Blanc and Chomolungma looking SW at Denali

ACADEMIC QUAD
INTERIOR RENDERS

Denali 2nd floor looking NW into study / library

ACADEMIC QUAD
INTERIOR RENDERS

Standing in Denali ground floor library space looking SW at mezzanine

Denali third floor study area looking W

ACADEMIC QUAD
INTERIOR RENDERS

Typical classroom / lab space at ground and second floor

Typical classroom / lab space at ground and second floor

ACADEMIC QUAD
INTERIOR RENDERS

Typical classroom / lab space at third floor

Typical corridors with E-W running non bearing glass partition wall

ACADEMIC QUAD
INTERIOR RENDERS

Typical interior hall between spaces ground and second floor

Typical group faculty work spaces on ground floor

ACADEMIC QUAD
EXTERIOR RENDERS

Daytime view in front of Denali Looking NE at entry breezeway between Denali and Kilimanjaro

Nighttime Courtyard standing in front of Mont Blanc looking East

TAB D
PROJECT TEAM

Design Team and Partnerships

DESIGN:
Allan Affeldt, Team Lead

DRAWNXDESIGN,llc Architect
Stephen Conor Reichert, RA. Principal
Daniel Aguilar, PM / Designer
Diego Carbajal, PM / Designer

Catastrophe, LLC Design Consultants
Alma Flores, Designer

STRUCTURAL ENGINEERING:
Cyrus Consulting, INC.
Massoud A. Moghadam PE., Senior Consulting Structural Engineer

UWC:

UWC Executive Staff
Dr. Victoria Mora, President
Steven Dichter, Board Chair
Taylor Gantt, Chief Finance & Operations Officer
Todd Austin, Special Assistant to the President for Strategic Initiatives

Senior Leadership Team
Victoria Mora, President
Todd Austin, Special Assistant to the President for Strategic Initiatives
J. Taylor Gantt, Chief Finance & Operations Officer
Mark Hodde, Chief Advancement Officer
Alexis Mamaux, Dean of Academics
Naomi Swinton, Dean of Studentes

TAB E
TEAM RESUMES

DESIGN
TEAM LEAD

ALLAN AFFELDT, Developer

Professional Experience
Allan is the foremost developer of challenging historic properties in the Southwest. Allan has completed many complex financial transactions including the only project in New Mexico to receive both New Markets and Historic Tax Credits.

Allan owns and restored La Posada - Mary Colter's 1930 Santa Fe Railway hotel in Winslow, Arizona (laposada.org). La Posada is one of the most beloved restorations in the Southwest, and has been featured in stories around the globe. The CARS movie storyboards were done at La Posada.
In 2014 Allan purchased the Plaza Hotel (1882) and Castaneda Hotel (1898) – both in Las Vegas NM. The Plaza was the fanciest hotel in New Mexico when it opened. Of course, Las Vegas was the biggest city in New Mexico then too. Allan resurrected The Plaza from bankruptcy. The Castaneda was the Santa Fe Railway's first trackside hotel. It was closed for seventy years, and generally considered unsavable. It reopened in 2019 after a total restoration, and is surely the most highly lauded historic rehabilitation project in New Mexico. Coverage has ranged from CBS Sunday Morning to New Mexico Magazine, Albuquerque Journal to Los Angeles Times.

Allan is married to the artist Tina Mion (tinamion.com). Allan, Tina and their standard poodles Goya and Velasquez live in a wing of La Posada, a wing of the Castaneda and sometimes in Sedona.
In 2017 Allan acquired the Legal Tender in Lamy. This is the oldest bar & restaurant in New Mexico, and had been mostly closed for more than a decade. The Legal Tender reopened to great acclaim in September 2019.

Allan also has extensive background in international conflict resolution. In the 1980's – while working on a PhD in Semantics at University of California Irvine – Allan organized many of the first American-Soviet initiatives: the International Peace Walks, the first stadium concert in Russian history (4 July 1987, co-produced with the legendary Bill Graham and Steve Wozniak), the first demonstration in Red Square, live broadcast of American Top 40 from Moscow etc. Commentators ranging from Ronald Reagan's Soviet Ambassador to the Nobel Peace Prize Commission credited this work with helping to end the Cold War.

Allan is founder of the Winslow Arts Trust, a 501-c3. Allan and Tina have purchased and donated works of art ranging from the Hubbell Rug (largest single-loom Navajo Rug ever woven, 1930 - 1935) to contemporary works by Ed Ruscha and James Turrell, to the Santa Fe Railway's first dome car (1950, containing the legendary Turquoise Room). From 2016 – 2018 they restored the depot at La Posada as a museum dedicated to the fine arts of Route 66 and the Santa Fe Railway.

Allan was twice elected Mayor of Winslow. He has served on many boards including the Arizona Humanities Council, Arizona Citizens for the Arts, Museum of Northern Arizona, Lowell Observatory, El Rancho de las Golondrinas etc

DESIGN
DRAWNXDESIGN,llc

STEPHEN CONOR REICHERT, RA Principal

DRAWNXDESIGN,LLC LAS VEGAS, NM

Having moved to Albuquerque to earn his MArch in 2011, he remained there for 3 years after graduating working on a multitude of projects throughout NM ranging from small residential, large public works, to federal projects through the GSA. In 2017 he and his wife moved to Las Vegas where he teamed up with Mr. Affeldt to restore historic buildings in Northern New Mexico and breathe life back into edifices long left to ruin.

Professional Experience
NM Architect / Designer / Project Manager

Construction Coordinator:
Castañeda Hotel, Las Vegas NM Legal Tender, Lamy NM

Project Manager / Architectural Designer @ Studio Collaboration, llc. Albuquerque, NM
Public Works:
Wayfinding Project. (PM) Central New Mexico Community College
Roswell Federal Courthouse / Columbus LPOE (PM) GSA
Albuquerque Public Schools (APS) Berna Facio Professional Development Center.

Project Manager / Architectural Designer @ Sam Sterling Architecture, llc Albuquerque, NM
Noted Projects – Public Works:
Escuela del Sol Montessori (EDS) Masterplan. Albuquerque, NM, 2015-16
Bernalillo County East Mountain Transfer Station Office, Tijeras, NM, 2015-16

Education
Master of Architecture, UNM, Albuquerque, NM

Awards: AIA Albuquerque - 2017 CNM Wayfinding (PM w/ Studio Collaboration, llc)
AIA Albuquerque - 2019 APS Berna Facio PDC (PM w/ Studio Collaboration, llc)

DANIEL AGUILAR, Project Manager / Designer

DRAWNXDESIGN, LAS VEGAS, NM

Daniel graduated from UNM as a Distinguished Graduate with a Master's in Architecture. He has been an intern architect working on projects that provided experience to residential design and construction, as well as remodeling and re-purposing of residential dwellings and commercial projects. Daniel became an independent design consultant in 2018 and has collaborated with numerous firms including Studio eM, Muller Architects, and Wurzburger Architects. Having worked as a consultant for Drawnxdesign, for the past year he became an employee in 2022.

Professional Experience
Designer / Project Manager @ DrawnxDesign
Koldyke Ranch Project, Romeroville, NM

Designer / Project Manager @ Studio eM
Fasanella Residence, Corrales, NM

Designer @ eM
McCormick Residence, San Jose, NM

Education
Master of Architecture, UNM, Albuquerque, NM

DESIGN
DRAWNXDESIGN,llc

DIEGO CARBAJAL, Designer
DRAWNXDESIGN, LAS VEGAS, NM

Having attained a Master of Architecture @ UNM SA+P, Diego has dedicated his life to the study of Architectural theory i.e. the philosophical, psychological, social, and aesthetic impact that Architecture's has on the individual and on society as a historical whole. Diego has worked on several projects where the utmost attention to the conceptual development has served as catalyst for the creation of sophisticated spatial-design solutions; the intention is to present designed spaces that generate within the individual, an ability to undergo a spatial experience that transcends use.

Professional Experience

Designer @ Studio EM Design, llc. Albuquerque, NM
Residential Works:
Fasanella Residence. Albuquerque, NM, 2018-19
McCormick Residence. San Jose, NM, 2018-19
Abiquiu Mountain Residence. Abiquiu, NM, 2019-20

Designer/Project Manager/Principal @ ADDdsign, llc. Albuquerque, NM
Landscape Design:
Jimenez Residence - Elemental Yard. Albuquerque, NM. 2020
Pino Ridge Mountain Outlook. Albuquerque, NM, 2021
Residential Works:
Durso Residence. Coeur d'Alene, ID, 2019-20
Bahareque House. La Paz, Colombia, 2020-21
Borregos House. Chihuahua. Mexico, 2020 – On Going

Designer/Project Manager @ DRAWNXDESIGN, llc. Las Vegas, NM
Residential Works:
Koldyke Ranch. Las Vegas, NM, 2021- On Going

Education
Bachelor of Arts in Architecture, UNM, Albuquerque, NM.
Master of Architecture, UNM, Albuquerque, NM.

Awards: Antoine Predock Scholarship – 2014
AIA Graduate Silver Certificate – 2014

DESIGN
CATASTROPHE, LLC

ALMA FLORES, Owner / Designer
CATASTROPHE, LLC ALBUQUERQUE, NM

Passionate and skilled architectural designer bringing several years of experience planning, developing, and implementing exceptional architectural designs. Committed to high quality details and limit explorations.

Professional Experience
Architectural designer @EM Design llc. Albuquerque NM
Corrales Residency / Albuquerque NM
McCormick Residency / San Jose NM

Education
Lic. en Arquitectura, Chihuahua Mex.

STRUCTURAL ENGINEERING
CYRUS CONSULTING INC.

MASSOUD A. MOGHADAM, Principal, Senior Consulting Structural Engineer
CYRUS CONSULTING, INC SANTA FE, NM

Massoud Moghadam has worked in many different branches of the building industry and his professional experience includes a wide range of different structural systems in reinforced concrete, steel, masonry, wood, adobe and carbon fiber composites. He has provided structural design and forensic engineering services to numerous clients throughout the United States. Since 1991 he has investigated many construction disputes and has served as an expert witness for those projects.

Professional Experience
Licensed Professional Engineer in Minnesota, Iowa(lapsed), New Mexico, Texas and Wisconsin

1995 - Present
Senior Consulting Engineer, Owner of Cyrus Consulting, Inc. Santa Fe, New Mexico
-Structural Design (commercial, industrial and government structures)
-Building Consulting and Investigations
-Condition Studies, Damage Assessment, Disaster Investigation and Forensic
-Fire and Disaster Investigation for Insurance Industry
-Restoration Planning and Management
-Investigation and Condition Study of Dam Structures
-Expert Witness and Litigation
-Seismic Design for Building Components at Los Alamos National Lab, New Mexico
-Erection Planning for Steel Trusses Weighing up to 300 tons, Air Force Base in Arizona

1993 - 1995
Structural Engineer at Clark Engineering Corporation, Minneapolis, Minnesota
-Structural Consulting and Investigations
-Building Restoration
-Structural Design for Restoration and New Projects
-Project Engineer for Evaluating of Parking Structures and Buildings

1989 - 1993
Civil Engineer at Twin City Testing Corporation, St. Paul, Minnesota
-Structural Consulting for Restoration Projects
-Preparing Construction Documents & Specification
-Project Engineer for Evaluating/Testing of Parking Structures, Buildings, Building Components and Roofing.
-Quality Assurance Lead Person for Construction Material Department

Education
Master of Science – Civil Engineering (Structural)
University of Minnesota – Minneapolis, Minnesota, 1983
Bachelor of Science – Civil Engineering (graduated with honors)
Illinois Institute of Technology – Chicago, IL, 1980

APPENDIX A
STRUCTURAL ENGINEER REPORT

CYRUS CONSULTING, INC.

2727 Paseo De Tularosa * Santa Fe, New Mexico * Ph: (505) 438-2867 * Email: mamoghadam1@yahoo.com

TO: Dr. Victoria Mora
President of UWC-USA
Armand Hammer United World College
P.O. Box 248
Montezuma, New Mexico

DATE: January 24, 2022

PROJECT NO: 2112-850

PROJECT: Montezuma Castle and
Four Dormitory Buildings
United World College
Montezuma, New Mexico

Structural Feasibility Study of Five Buildings

INTRODUCTION:

This report presents the results of my structural feasibility study of five buildings at United World College campus in Montezuma, New Mexico. The scope of my work was limited to:

1. Performing a review of background information which included a study of the original design and the existing conditions.
2. Performing a structural feasibility study to determine use and occupancy type based on loading for:
   - A) The attic space above the third floor on the south and east wings of the Montezuma Castle as well as determining the extent of structural capacity of elevator and stair access into the attic area.
   - B) The 4 quads (dormitory buildings) with consideration of repurposing the buildings for classroom, lab and library space. Also, determining a general loading capacity for each level of the buildings.
3. Providing the results of the feasibility study in a written report that include the general load capacities for different areas, capabilities & options for usage of the spaces. Also, including recommendations for increasing load capacities for the desired usage.

The above scope of work was authorized by Mr. J. Taylor Gantt on December 3, 2021.

EXECUTIVE SUMMARY:

Based on the background information, visual observations, review of original drawings, calculations, previous experience, and research of present construction requirements and costs my opinions are as follows:

Montezuma Castle

- Change-of-use and taking advantage of a large space not utilized at the present, in a beautiful and historical building is a great idea and does not need much justification.

- The economic factors for utilizing the space are many. The main portion of the primary structure for this usable space is in good condition. The majority of the needed work items to change this area into a usable space would cause no disruption to the rest of the building.

- Based on my calculation of the existing framing structure, the present floor structure is capable of supporting live loads of up to 50 psf which is adequate for study room spaces.

- The present stairway and elevator accesses are structurally adequate to be extended to the present attic space.

- Different options and the minimum required structural work needed are covered in the "RESULTS" portion of the report.

Quad Dormitory Buildings

- Considering their age, structures of the existing quad dormitory buildings appear to be in a very good condition. The major portion of the structures are capable of supporting loads for the proposed idea of changing the building into spaces for library and classes.

- Making a decision whether to use the existing structures or completely tear them down and build new is a complex decision. Change-of-use for the quad dormitory buildings can be very rewarding both financially and logistically with creative design for renovation and restoration. The amount of time and money spent replacing the existing buildings with new structures will be substantial.

- The environmental benefit factors for remodeling and repurposing the existing structures versus replacing are significant. It is important to factor in the energy costs of demolition, transporting waste, landfill waste and carbon emissions. Eliminating the need for total demolition, waste disposal, excavation and rebuilding new foundation is an environmental gain which may receive additional LEED points.

- The economic benefit factors for utilizing the existing structures are many. Considering all the work needed to replace the buildings, I estimate up to 50% of the total cost can be saved by utilizing the existing structures. The large portion of the cost saving will be in work items such as demolition, disposal, surveying, architectural, engineering, excavation, earthwork, utilities, foundation, main structure and exterior landscaping. Saving design time, obtaining necessary permits for new building construction and reducing construction time are major factors for comparing renovation versus replacement.

- Costs and supply chain issues for construction material and labor must also be considered.

- A more comprehensive description of the existing building and options for repurposing of these structures are covered in the "RESULTS" portion of the report.

RECOMMENDATIONS:

My recommendations for utilizing the attic space in Montezuma Castle and repurposing the dormitory buildings are as follows:

Montezuma Castle

1. Architectural plans for accessing and utilizing the attic space should be drawn based on the floor capacity and slanted or vertical partition walls.

2. Upon the approval of the architectural plans by the owner, structural design should be performed and drawings & details should be developed.

Quad Dormitory Buildings

3. Initial architectural plans for repurposing and extending hallways on the exterior sides of one of the buildings should be developed. Both options of floor strengthening and floor replacement should be considered and the more efficient option chosen.

4. Upon the selection of the option and approval of the architectural plans by the owner, structural design should be performed and drawings & details should be developed.

Note: It shall be noted that these initial recommendations are not actual design for construction and are solely based on my observations and previous experience with similar conditions and restoration.

BACKGROUND INFORMATION:

The following background information and drawings were provided by Mr. Stephen Conor Reichert of Drawn X Design:

a- UWC Castle Drawing (4^{th} floor Montezuma for area to be investigated, 1 sheet, pdf file)

b- UWC Montezuma Castle (Renovations to Montezuma Castle by Einhorn Yaffee Prescott, dated July 13, 2000, 7 sheets architectural and 18 sheets structural, pdf files)

c- UWC Denali House (Existing Apartment Floor Plan by Heller Drafting, dated 03/11/2014, 2 sheets, pdf file)

d- UWC Dormitories (Buildings B-3 and B-4 by flatow moore bryan & associates, dated 2/26/82, 8 sheets, pdf file)

e- UWC Dormitories (Buildings B-1 and B-2 by flatow moore bryan & associates, dated 3/01/83, 5 sheets, pdf file)

f- UWC Dormitories (Dormitory Interior Finish Improvements by John T. Midyette III & Associates, Architects, dated 4/24/2002, 6 sheets, pdf file)

g- UWC Montezuma Castle (Renovations to Montezuma Castle by Einhorn Yaffee Prescott, dated July 13, 2000, Sheet A206, pdf file)

h- UWC QUAD (Project Q typ bldg section by DRAWN X DESIGN, dated 17 December 2021, 2 sheets, pdf files)

i- UWC QUAD (Proposed Building Structural System by DRAWN X DESIGN, dated 17 December 2021, 4 sheets, pdf files)

j- UWC QUAD (Proposed Building Structural System by DRAWN X DESIGN, dated 3 January 2022, 1 sheets, pdf file)

RESULTS:

Field observations were performed on November 15, 2021. A brief description of the more significant results of my observations, reviews, calculations and research are as follows:

Montezuma Castle

- The main portion of the primary structure for this usable space is in good condition. The majority of the needed work to change this area into usable space, are interior work items with no disruption to the rest of the building.

- Based on my calculation of the existing framing structure, the present floor structure is capable of supporting live loads of up to 50 psf which is adequate for study room spaces.

- If the existing mid-span rafter supports are to be left in place, slanted dividing interior walls may be constructed using rafter supports as studs. New headers will be needed to be installed at the opening locations. Additional floor joists may be required at areas with other new partition walls.

- If the existing mid-span rafter supports are replaced with beams and vertical wall/column supports, a double 1-3/4"x 9-1/2" microlam can span up to12' for openings. The floor structure at each vertical wall/column support may require four 1-3/4"x 9-1/2" microlams along the floor joists to carry and distribute the loads.

- The minimum required structural decking for the floor is ¾" OSB.

- Rigid spray foam may be used between the roof joists for both thermal insulation and strengthening the roof structure (creating a sloped diaphragm).

- Installing steel framing at openings into the existing brick shear walls will be required.

- The present stairway and elevator accesses are structurally adequate to be extended to the present attic space. Based on load carrying capacity and/or fire protection requirements, the extension portion may be constructed using solid reinforced concrete, reinforced concrete masonry unit(CMU) or cold formed steel framing.

Quad Dormitory Buildings

- Considering their age, structures of the existing quad dormitory buildings appear to be in a very good condition. The major portion of the structures are capable of supporting loads for the proposed idea of changing the building into spaces for library and classes.

- A short research in today's construction costs found that the amount of time and money to be spent for replacing the existing buildings with new will be substantial.

- The environmental benefit factors for remodeling and repurposing the existing structures versus replacing also are very significant. Eliminating the need for total demolition, disposal, excavation and rebuilding new foundation is a great environmental gain and/or earning LEED points.

- The economic factors for utilizing the existing spaces are many. Considering all the work needed to replace the buildings, I estimate up to 50% of the total cost can be saved by utilizing the existing structures.

- Based on the sizes, dimensions and spacing of the structural members (2-1/2" composite concrete form deck supported on 12"-high steel bar joists which are bearing on mainly concrete and concrete masonry unit walls), my calculation found that the structurally supported floors are capable of carrying 50 psf live loads. This capacity is adequate for classrooms load requirements.

- Maximum span for the existing bar joists supporting floors is 16 feet. Therefore, short spacing between the support walls is not adequate for a typical size classroom. In order to plan for desired size rooms, in addition to removing of all non-load bearing interior walls, all interior load bearing walls need to be removed and replaced with steel beams and steel columns. As an initial design consideration, the load bearing walls can be replaced by two rows of 4×4 steel square tubing columns spaced at approximately 12' on center and two lines of W12x14 steel I-beams supported on the steel square tubing columns.

- An alternative option to removing of the interior walls and keeping the structural floors will be the removal and gutting of the entire interior structure and replacing it with new long-span composite decks (such as 8"-thick and spanning up to 36') and concrete masonry unit (CMU) load bearing walls with no need for steel beams and columns. The new CMU load bearing walls also can double function as the needed interior partition walls. If shorter spans are selected, Versa Deck Composite brand has products that can span up to 28', are as thin as 4" and are recommended for office and academic spaces with no need for suspended ceilings. The interior CMU walls also will function as shear walls and most likely will satisfy the seismic requirements by the new codes.

- In order to expand square footage, improve building condition and simplify demolition & construction work inside buildings, a large section of the roof structures may need to be removed. This also provides an opportunity for raising the ceilings of the third floors. Expanding the building footprint area by constructing hallways along the buildings appears to be a good solution to resolve classroom size problems, and improve and modernize the overall looks of the buildings. The existing exterior load bearing walls will carry the major portion of the building loads. Therefore, a light steel framing and glass system with a turndown footing most likely will satisfy the required load carrying capacity of the new exterior walls.

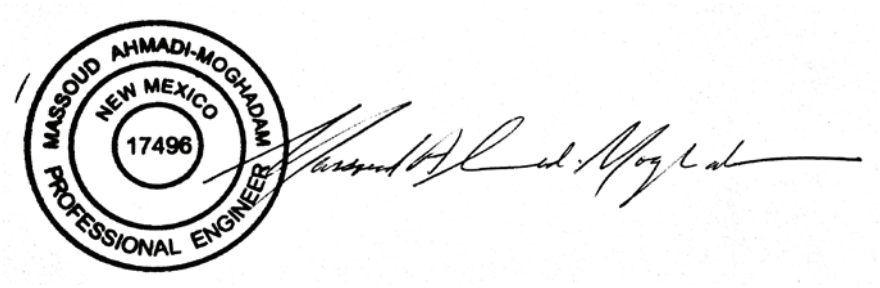
- Step footings and retaining walls may exist at the basement/ground level of the buildings. Excavating, removal, repair and replacement for the walls and footings at such locations may be performed by securing the existing structure to remain and by performing the construction work in small sections.

REMARKS:

It should be noted that the purpose of this work was a feasibility study and did not include any testing or actual design. A summary of my findings, results, opinions and recommendations as presented in the "Executive Summary" section of this report, indicates I performed my work in such a manner to have reasonable confidence of the stated conditions.

If you have any questions regarding this report, please contact me at (505) 920-8254 or mamoghadam1@yahoo.com.

Cyrus Consulting, Inc.



Massoud A. Moghadam, P.E.
Senior Consulting Structural Engineer

APPENDIX B
CASTLE ADAPTIVE REUSE COST

UWC CASTLE CMP PRELIMINARY COST OVERVIEW

Only Interior Work in Castle Estimated

1-Oct-21

REV 1.23.2022

	Minimal Work $100.00 SF (up To)			Moderate Work $175.00 SF			Undeveloped Areas $300.00 SF			High Intensity $500.00 SF		
GROUND FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	4,491	$449,100.00	Halls & Common	4,545	$795,375.00	Dorms	1,152	$345,600.00	RC	1,660	$830,000.00	Rest Rooms and Laundry
TOTAL AREA	**11,848**		**TOTAL COST**	**$2,420,075**		**COST/SF AVERAGE:**	**$204.26**					
FIRST FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	4,766	$476,600.00	South Wing Offices	1,692	$296,100.00	RC Workspace, Dean of Students						
TOTAL AREA	**6,458**		**TOTAL COST**	**$772,700**		**COST/SF AVERAGE:**	**$119.65**					
SECOND FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	7,083	$708,300.00	South Wing Dorms, Common and Dorms Over Ballroom				5,433	$1,629,900.00	RC Apartments, RCA, NorthWing Dorms	1,673	$836,500.00	Rest Rooms
TOTAL AREA	**14,189**		**TOTAL COST**	**$3,174,700**		**COST/SF AVERAGE:**	**$223.74**					
THIRD FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	7,151	$715,100.00	South Wing Dorms, Common and Dorms Over Ballroom				4,275	$1,282,500.00	RC Apartments, RCA, NorthWing Dorms	1,696	$848,000.00	Rest Rooms
TOTAL AREA	**13,122**		**TOTAL COST**	**$2,845,600**		**COST/SF AVERAGE:**	**$216.86**					
FOURTH FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
							8,163	$2,448,900.00	Executive Offices & NEW ATTIC SPACE	221	$110,500.00	Rest Rooms
TOTAL AREA	**8,384**		**TOTAL COST**	**$2,559,400**		**COST/SF AVERAGE:**	**$305.27**					

TOTAL NET BUILDING AREA		**TOTAL BUILDING COST**	
TOTAL AREA	**54,001**	**TOTAL COST**	**$11,772,475**
		CONST COST/SF AVERAGE:	**$218.00**

BUILDING COST	**$**	**11,772,475**
Soft Costs *	**$**	**2,354,495.0**
GRAND SUB-TOTAL	**$**	**14,126,970**
NMGRT	**$**	**1,186,072**
GRAND TOTAL	**$**	**15,313,042**
COST SF	**$**	**283.57**

Soft Costs: **20% for MEP,ARCH, CIVIL - DESIGN & CA**
NMGRT: **8.395800%**

UWC CASTLE CMP PRELIMINARY COST OVERVIEW

Interior Work in Castle Estimated W/ New Dorm Addition

1-Oct-21

REV 1.23.2022

	Minimal Work $100.00 SF (up To)			Moderate Work $175.00 SF			Undeveloped Areas $300.00 SF			High Intensity $500.00 SF			New Construction $450.00 SF		
GROUND FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	4,491	$449,100.00	Halls & Common	4,545	$795,375.00	Dorms	1,152	$345,600.00	RC	1,660	$830,000.00	Rest Rooms and Laundry	1,086	$488,700.00	Rec
	TOTAL AREA	**12,934**		**TOTAL COST**	**$2,908,775.00**		**COST/SF AVERAGE:**	**$224.89**							
FIRST FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	4,766	$476,600.00	South Wing Offices	1,692	$296,100.00	RC Workspace, Dean of Students							2,426	$1,091,700.00	Rec, NEW WING
	TOTAL AREA	**8,884**		**TOTAL COST**	**$1,864,400.00**		**COST/SF AVERAGE:**	**$209.86**							
SECOND FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	7,083	$708,300.00	South Wing Dorms, Common and Dorms Over Ballroom				5,433	$1,629,900.00	RC Apartments, RCA, NorthWing Dorms	1,673	$836,500.00	Rest Rooms	3,216	$1,447,200.00	NEW WING
	TOTAL AREA	**17,405**		**TOTAL COST**	**$4,621,900.00**		**COST/SF AVERAGE:**	**$265.55**							
THIRD FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
	7,151	$715,100.00	South Wing Dorms, Common and Dorms Over Ballroom				4,275	$1,282,500.00	RC Apartments, RCA, NorthWing Dorms	1,696	$848,000.00	Rest Rooms	3,216	$1,447,200.00	NEW WING
	TOTAL AREA	**16,338**		**TOTAL COST**	**$4,292,800.00**		**COST/SF AVERAGE:**	**$262.75**							
FOURTH FLOOR	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**	**AREA SF**	**COST**	**NOTES**
							8,163	$2,448,900.00	Executive Offices & NEW ATTIC SPACE	221	$110,500.00	Rest Rooms			
	TOTAL AREA	**8,384**		**TOTAL COST**	**$2,559,400.00**		**COST/SF AVERAGE:**	**$305.27**							

TOTAL NET BUILDING AREA

TOTAL AREA 63,945

TOTAL BUILDING COST

TOTAL COST $ 16,247,275

CONST COST/SF AVERAGE: $254.08

BUILDING COST	**$**	**16,247,275**
Soft Costs *	**$**	**3,249,455.0**
GRAND SUB-TOTAL	**$**	**19,496,730**
NMGRT	**$**	**1,636,906**
GRAND TOTAL	**$**	**21,133,636**
COST SF	**$**	**330.50**

Soft Costs: **20% for MEP,ARCH, CIVIL - DESIGN & CA**

NMGRT: **8.395800%**

APPENDIX C
QUAD ADAPTIVE REUSE COST

UWC ACADEMIC QUAD CMP PRELIMINARY COST OVERVIEW

Edited 1/24/22

AREAS [NET SQ FT]

LEVEL	BUILDING	Classroom	Library	Library Counter and Office	Computer Lab	Faculty Group Office	Faculty Lounge W/Kitchen	Faculty locker room	Meeting / Conference Room	Science Lab	Science Lab Storage	Sci. Prj. Storage Room	RR (W/M)	MECH	Interior Circulation	NET SPACE UTILIZATION	**Total GSF per Building/Level**	**NEW GSF of Circulation Added to Pair**
Ground level	Denali		2,700	315	720										370	4,105	4,170	3,512
	Kilimanjaro	2,070				700							730		650	4,150	4,170	
	Mont Blanc					1,300	370		560				730	485	688	4,133	4,170	3,386
	Chomolungma					994	635	350	480				160	385	1,160	4,164	4,170	
	D+K	2,070	2,700	315	720	700							730		1,020	8,255	8,340	3,512
	MB+C					2,294	1,005	350	1,040				890	870	1,848	8,297	8,340	3,386
	Grd L TOTAL	**2,070**	**2,700**	**315**	**720**	**2,994**	**1,005**	**350**	**1,040**				**1,620**	**870**	**2,868**	**16,552**	**16,680**	**6,898**
Second Level	Denali	665	3,218												250	4,133	4,170	800
	Kilimanjaro	2,750											530	145	650	4,075	4,170	1,820
	Mont Blanc	2,865											645		660	4,170	4,170	1,820
	Chomolungma	680								1,782	500	262			935	4,159	4,170	800
	D+K	3,415	3,218										530	145	900	8,208	8,340	2,620
	MB+C	3,545								1,782	500	262	645		1,595	8,329	8,340	2,620
	2nd L TOTAL	**6,960**	**3,218**							**1,782**	**500**	**262**	**1,175**	**145**	**2,495**	**16,537**	**16,680**	**5,240**
Third Level	Denali	2,125	1,750												250	4,125	4,170	3,512
	Kilimanjaro	2,800											690		650	4,140	4,170	
	Mont Blanc	2,800											700		670	4,170	4,170	3,386
	Chomolungma									2,650	785				730	4,165	4,170	
	D+K	4,925	1,750										690		900	8,265	8,340	3,512
	MB+C	2,800	0							2,650	785		700		1,400	8,335	8,340	3,386
	3rd L TOTAL	**7,725**	**1,750**							**2,650**	**785**		**1,390**		**2,300**	**16,600**	**16,680**	**6,898**

COST PER LEVEL PER BUILDING

			$ 300.00	SF COST ESTIMATES		$ 450.00			
LEVEL	BUILDING	Remodel Areas (GSF)	Remodel Cost / SF	Projected Remodel Costs	NEW Construction Areas (GSF)	NEW Construction Cost / SF	Projected NEW Const. Costs	Projected Total Const. Costs	Total Building Area
Ground level	Denali	4,170	$ 300.00	$1,251,000					
	Kilimanjaro	4,170	$ 300.00	$1,251,000					
	Mont Blanc	4,170	$ 300.00	$1,251,000					
	Chomolungma	4,170	$ 300.00	$1,251,000					
	D+K	8,340	$ 300.00	$2,502,000	3,512	$ 450.00	$1,580,400	$4,082,400	11,852
	MB+C	8,340	$ 300.00	$2,502,000	3,386	$ 450.00	$1,523,700	$4,025,700	11,726
	Grd L TOTAL	**16,680**		**$5,004,000**	**6,898**		**$3,104,100**	**$8,108,100**	**23,578**
Second Level	Denali	4,170	$ 300.00	$1,251,000					
	Kilimanjaro	4,170	$ 300.00	$1,251,000					
	Mont Blanc	4,170	$ 300.00	$1,251,000					
	Chomolungma	4,170	$ 300.00	$1,251,000					
	D+K	8,340	$ 300.00	$2,502,000	2,620	$ 450.00	$1,179,000	$3,681,000	10,960
	MB+C	8,340	$ 300.00	$2,502,000	2,620	$ 450.00	$1,179,000	$3,681,000	10,960
	2nd L TOTAL	**16,680**		**$5,004,000**	**5,240**		**$2,358,000**	**$7,362,000**	**21,920**
Third Level	Denali	4,170	$ 300.00	$1,251,000					
	Kilimanjaro	4,170	$ 300.00	$1,251,000					
	Mont Blanc	4,170	$ 300.00	$1,251,000					
	Chomolungma	4,170	$ 300.00	$1,251,000					
	D+K	8,340	$ 300.00	$2,502,000	3,512	$ 450.00	$1,580,400	$4,082,400	11,852
	MB+C	8,340	$ 300.00	$2,502,000	3,386	$ 450.00	$1,523,700	$4,025,700	11,726
	3rd L TOTAL	**16,680**		**$5,004,000**	**6,898**		**$3,104,100**	**$8,108,100**	**23,578**

BUILDING PAIR COSTS

	Remodel Areas (GSF)	Remodel Cost / SF	Projected Remodel Costs	NEW Construction Areas (GSF)	NEW Construction Cost / SF	Projected NEW Const. Costs	**Projected Total Const. Costs**	**Total Building Area**
D+K	25,020	$ 300.00	$7,506,000	9,644	$ 450.00	$4,339,800	**$11,845,800**	**34,664**
MB+C	25,020	$ 300.00	$7,506,000	9,392	$ 450.00	$4,226,400	**$11,732,400**	**34,412**

TOTAL COST FOR ALL BUILDINGS

Remodel Areas (GSF)	Remodel Cost / SF	Projected Remodel Costs	NEW Construction Areas (GSF)	NEW Construction Cost / SF	Projected NEW Const. Costs	**Projected Total Const. Costs**	**Total Building Area**
50,040	$ 300.00	$15,012,000	19,036	$ 450.00	$8,566,200	**$23,578,200**	**69,076**

BUILDING COST	**$23,578,200**
Soft Costs *	**$4,715,640**
GRAND SUB-TOTAL	**$28,293,840**
NMGRT	**$2,375,494**
GRAND TOTAL	**$30,669,334**
COST SF	**$443.99**

*Soft Costs: **20% for MEP, SE, ARCH, CIVIL - DESIGN & CA**
NMGRT: **8.3958%**

ENTIRELY NEW BUILDING @ $450 / SF

TOTAL SF	COST SF	BUILDING COST
69,076	$450	$31,084,200
	Soft Costs *	$6,216,840
	GRAND SUB-TOTAL	$37,301,040
	NMGRT	$3,131,721
	GRAND TOTAL	$40,432,761
	COST SF	$585.34

NET SAVINGS REUSING EXISTNG BUILDINGS

NEW BUILDING COST	**$40,432,761**
ADAPTIVE REUSE COST	**$30,669,334**
$ SAVINGS	**$9,763,426**
% COST INCREASE FOR ALL NEW BLDG(s)	**32%**

APPENDIX D
SUPPLEMENTAL DRAWINGS

DRAWN X DESIGN

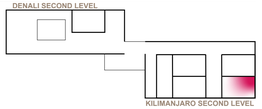
Conor Reichert, RA
5 County Road A16E
Las Vegas, NM 87701
505.515.5877
conor@drawnxdesign.com

DEANLI / KILIMANJARO SOUTH ENTRY

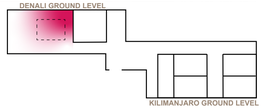
CORRIDORS

INTERIOR CIRCULATION COORIDOR

CLASSROOM



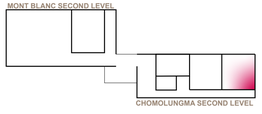
LIBRARY



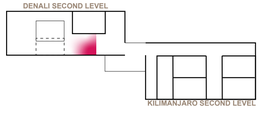
DEANLI NORTH PATIO

FACULTY OFFICES

CLASSROOM / LAB



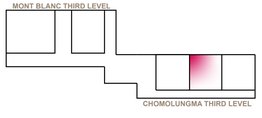
STUDY HALL



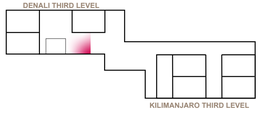
WEST COURTYARD

HALLWAYS

SCIENCE LAB



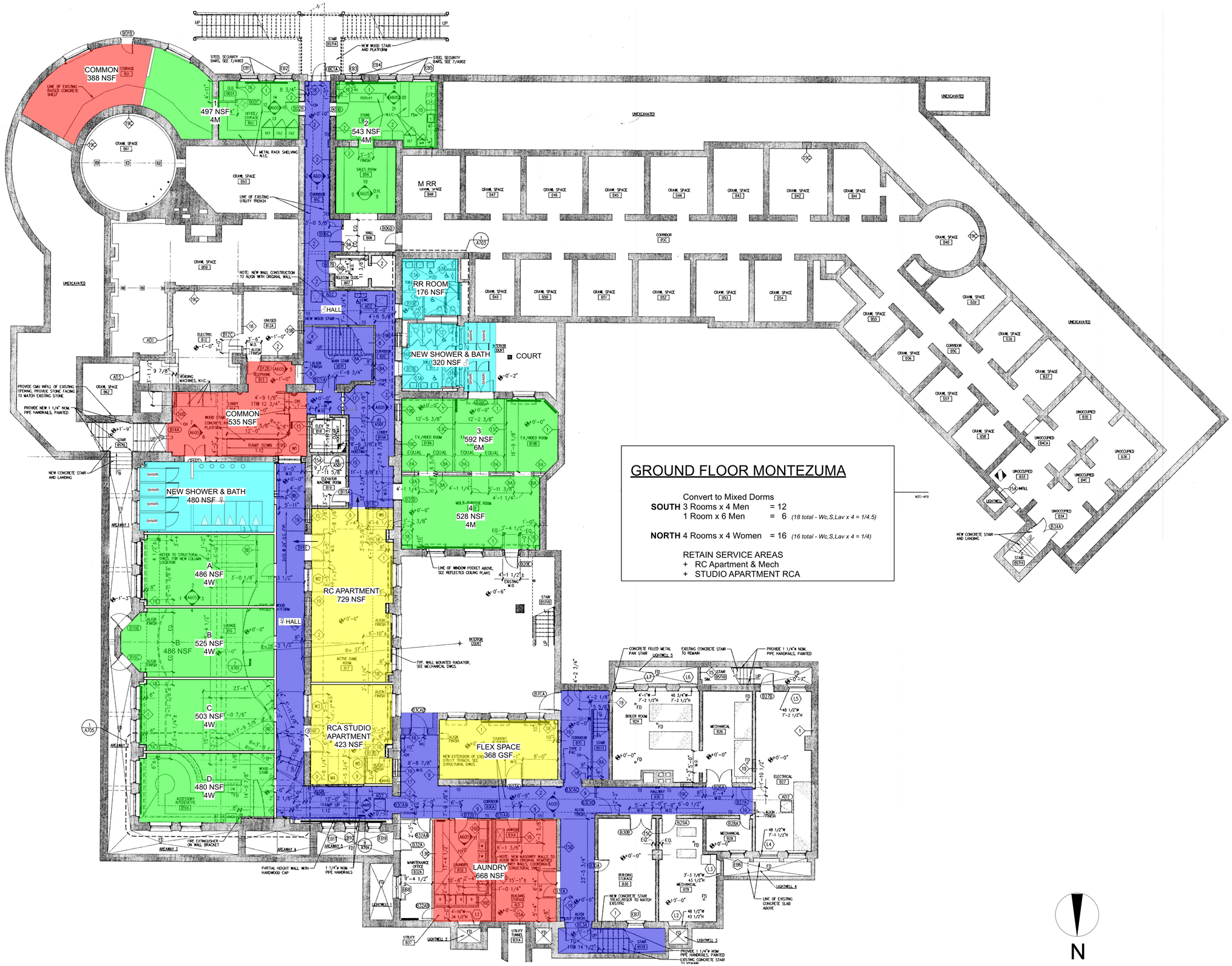
STUDY / CLASSROOMS



U W C [Q U A D]
P R O J E C T Q CONCEPTUAL PERSPECTIVE

25 CASTLE LN.
Montezuma, NM 87731
DATE: JANUARY 2022

DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN
CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM
UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.



GROUND FLOOR MONTEZUMA

Convert to Mixed Dorms

SOUTH 3 Rooms x 4 Men = 12
1 Room x 6 Men = 6 *(18 total - Wc,S,Lav x 4 = 1/4.5)*

NORTH 4 Rooms x 4 Women = 16 *(16 total - Wc,S,Lav x 4 = 1/4)*

RETAIN SERVICE AREAS
+ RC Apartment & Mech
+ STUDIO APARTMENT RCA

PROPOSED STUDENT HOUSING

	DORMS		APARTMENTS STUDIOS	
FLOOR	M	W	RC	RCA
G	18	16	1	1
1	-	-	-	-
2	46	30	2	2
3	30	44	2	2
4	-	-	-	-
TOTAL	84	110	5	5

184 STUDENT TOTAL M/W & NB

DRAWN X **DESIGN**
Conor Reichert, RA
5 County Road A16E
Las Vegas, NM 87701
505.515.5877
conor@drawnxdesign.com

1 Ground Floor Plan
Scale: 1" = 10'-0"

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN
FOCUS: SUSTAINABLE ADAPTIVE REUSE

[CASTLE VERSION-8]

WITHOUT DORM ADDITION
DATE: JANUARY 2022

DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN
CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM
UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.

1ST FLOOR MONTEZUMA

Δ Guest Rooms to Offices
NO Change to Dining & Kitchen Wing

~1,540 GSF

~6,590 GSF

RECEPTION 412 NSF
MEETING ROOM 380 NSF
217 NSF
M RR
ASSOC COLL COUNS 101 178 NSF
DIR COLL COUNS 103 184 NSF
FLEX SPACE 105 178 NSF
DEAN OF ACADEMICS 107 190 NSF
SPECIAL ASST 109 188 NSF
CFOO 111 220 NSF
COPY / WK ROOM 113 167 NSF
W RR
ADMISS ASST 126 NSF
DIR OF ADMISS 102 167 NSF
ASST TO DEANS 104 146 NSF
REGISTRAR 106 165 NSF
SUST/SAFETY MGR 108 179 NSF
HR DIRECTOR 110 182 NSF
ACCT 1/ACCT2 112 220 NSF
IT DIR 115 164 NSF
NTWK ADMIN 117 143 NSF
CONTROLER 114 175 NSF
SERVER ROOM 116 125 NSF
HALL
IT SUPP SPEC/ AV SUPP SPEC 118 175 NSF
MEETING ROOM 392 GSF
FLEX SPACE
FLEX SPACE
LOUNGE 443 GSF
DINING / KITCHEN 365 GSF
SECURITY DESK
MEETING ROOM 227 NSF
DEAN OF STUDENTS 252 NSF
RC SHRD WORKSPACE 321 NSF
DIR STUDENT LIFE 191 NSF
ADVANCEMENT
CAFE SEATING
OUTDOOR REC
DINING ROOM 136
LOWER COURTYARD

NOTE: IN GUEST ROOMS 145, 147, 148, 150, 151 AND BATHROOMS 146A, 149A, 152, REFINISH AND REINSTALL EXISTING INTERIOR WOOD SHUTTERS. PROVIDE NEW WOOD SHUTTERS TO MATCH EXISTING WHERE ORIGINAL SHUTTERS ARE MISSING.

NOTE: REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF VERANDA POSTS AND FLOOR FRAMING PLANS

RAIL & BALLUSTERS WITH SWINGING GATE, RAILS & BALLUSTERS TO MATCH MAIN VERANDA RAILS & BALLUSTERS

NOTE: REFER TO STRUCTURAL DRAWINGS FOR FRAMING LAYOUT OF WOOD PLATFORM

TYPICAL WALL MOUNTED HEATING UNIT, SEE MECHANICAL DRAWINGS

NOTE: RADIAL DIMENSIONS FOR ROAD CURBS ARE APPROXIMATE. COORDINATE WITH CIVIL/ LANDSCAPE DRAWINGS, FIELD VERIFY

N

DRAWN X **DESIGN**
Conor Reichert, RA
5 County Road A16E
Las Vegas, NM 87701
505.515.5877
conor@drawnxdesign.com

1 First Floor Plan
Scale: 1" = 10'-0"

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN
FOCUS: SUSTAINABLE ADAPTIVE REUSE

[CASTLE VERSION-8]

WITHOUT DORM ADDITION
DATE: JANUARY 2022

DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN
CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM
UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.

2ND FLOOR MONTEZUMA

SOUTH 15 Rooms x 2 Women = 30 *(50 Total - Wc,S,Lav x 10 = 1/5 w NEW HALL)*

E & N 10 Rooms x 4 Men = 40
1 Room x 6 Men = 6 *(46 Total - Wc,S,Lav x 8 = 1/5.75)*
2 RC Apartments
2 RCA Studio / Room

DRAWN X **DESIGN**

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1 Second Floor Plan
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UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN
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[CASTLE VERSION-8]

WITHOUT DORM ADDITION
DATE: JANUARY 2022

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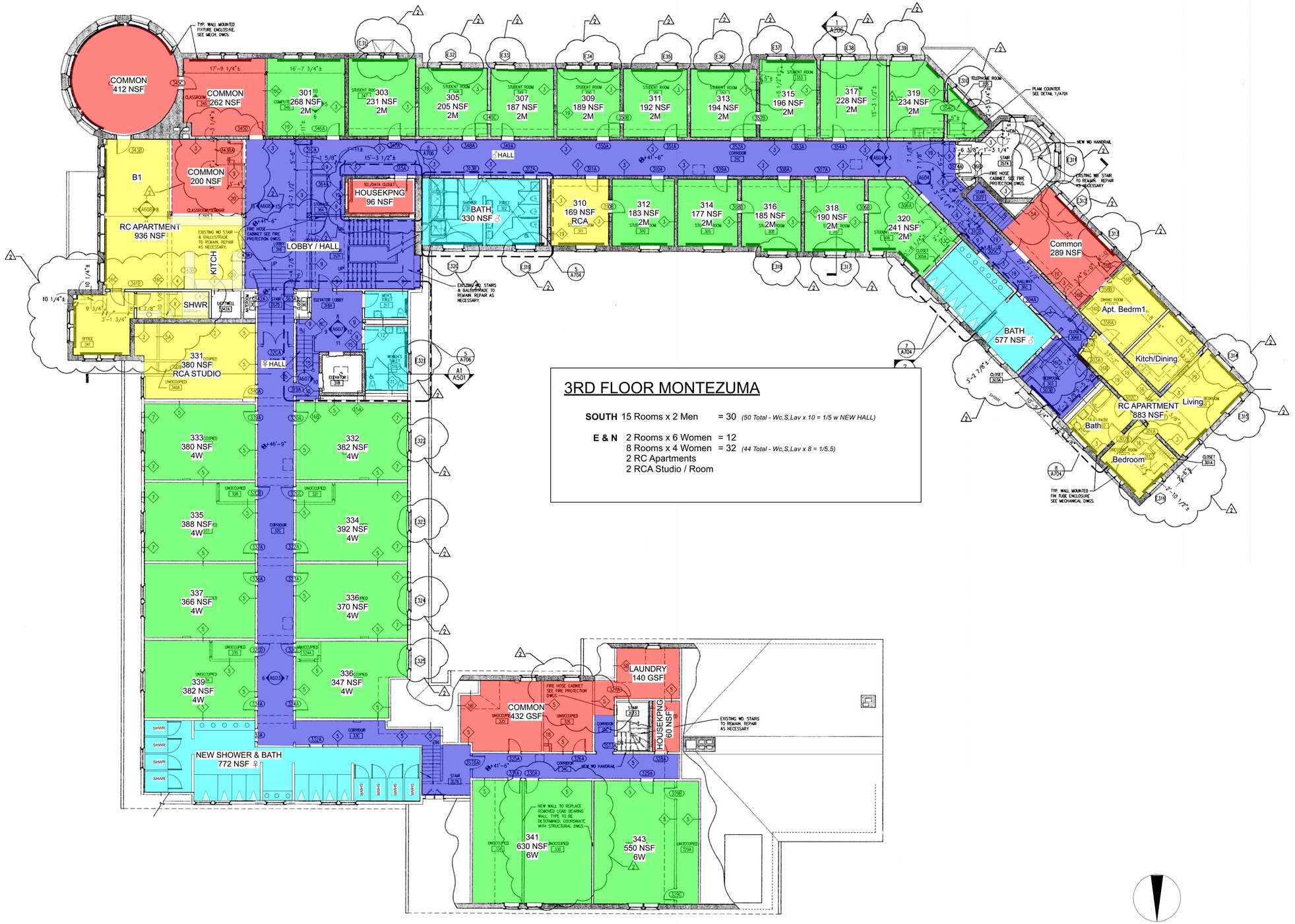

3RD FLOOR MONTEZUMA

SOUTH 15 Rooms x 2 Men = 30 *(50 Total - Wc,S,Lav x 10 = 1/5 w NEW HALL)*

E & N 2 Rooms x 6 Women = 12
8 Rooms x 4 Women = 32 *(44 Total - Wc,S,Lav x 8 = 1/5.5)*
2 RC Apartments
2 RCA Studio / Room

1 Third Floor Plan
Scale: 1" = 10'-0"

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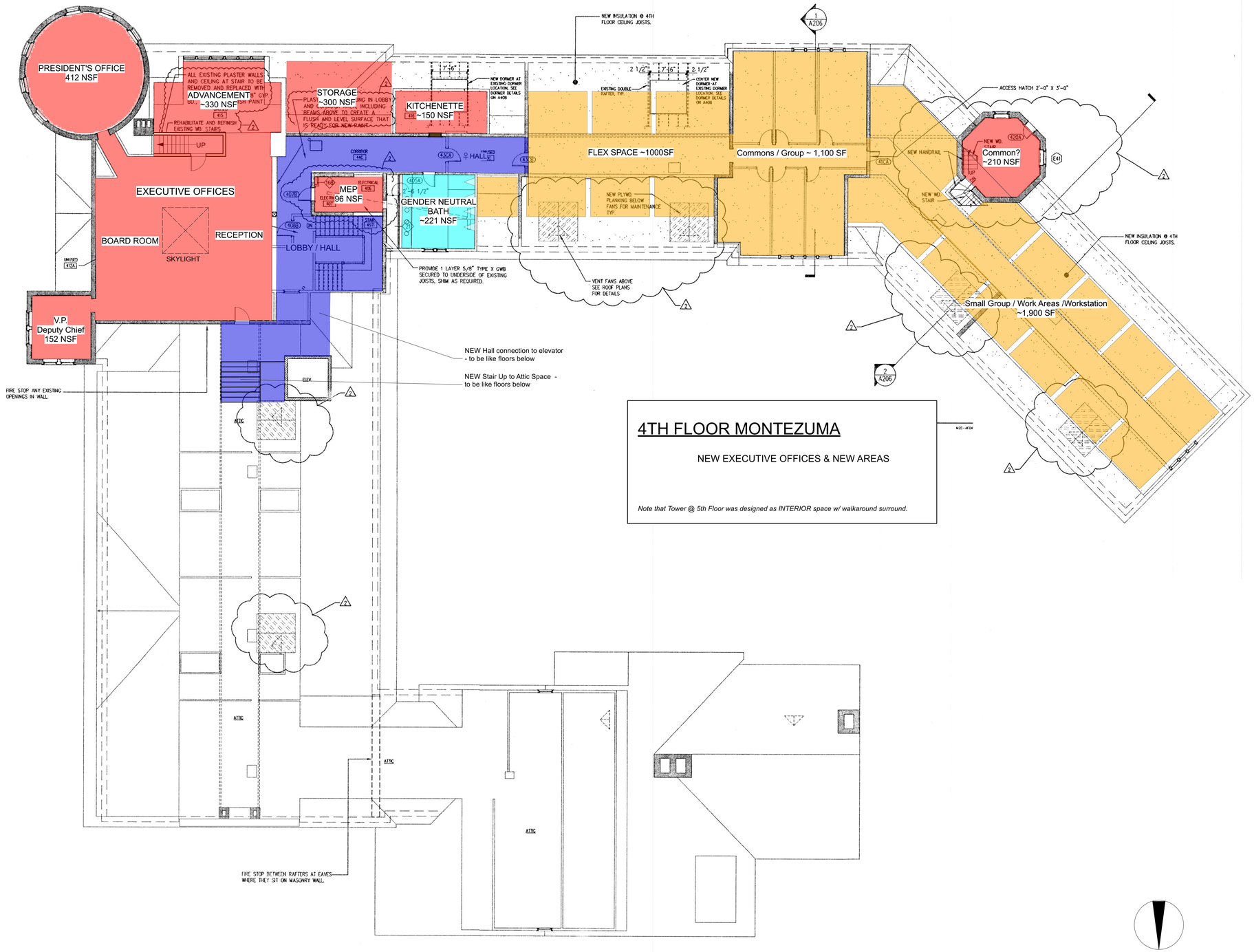

4TH FLOOR MONTEZUMA

NEW EXECUTIVE OFFICES & NEW AREAS

Note that Tower @ 5th Floor was designed as INTERIOR space w/ walkaround surround.

N

1 Fourth Floor Plan
Scale: 1" = 10'-0"

DRAWN X **DESIGN**

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UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN

FOCUS: SUSTAINABLE ADAPTIVE REUSE

[CASTLE VERSION-8]

WITH DORM ADDITION

DATE: JANUARY 2022

DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN

CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM
UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.

GROUND FLOOR MONTEZUMA

Convert to Mixed Dorms

SOUTH 3 Rooms x 4 Men = 12
1 Room x 6 Men = 6 *(18 total - Wc,S,Lav x 4 = 1/4.5)*

NORTH 4 Rooms x 4 Women = 16 *(16 total - Wc,S,Lav x 4 = 1/4)*

RETAIN SERVICE AREAS
+ RC Apartment & Mech
+ STUDIO APARTMENT RCA

PROPOSED STUDENT HOUSING

	DORMS		APARTMENTS STUDIOS	
FLOOR	M	W	RC	RCA
G	18	16	1	1
1	-	-	-	-
2	46	50	2	2
3	50	44	2	2
4	-	-	-	-
TOTAL	114	110	5	5

224 STUDENT TOTAL M/W & NB

N

1 Ground Floor Plan
Scale: 1" = 10'-0"

DRAWN X **DESIGN**

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UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN
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[CASTLE VERSION-8]

WITH DORM ADDITION
DATE: JANUARY 2022

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CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM
UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.

1ST FLOOR MONTEZUMA

Δ Guest Rooms to Offices
NO Change to Dining & Kitchen Wing
ADD W/ WING

~1,540 GSF

~6,590 GSF

RECEPTION 412 NSF
MEETING ROOM 380 NSF
217 NSF
M RR
ASSOC COLL COUNS 101 178 NSF
DIR COLL COUNS 103 184 NSF
FLEX SPACE 105 178 NSF
DEAN OF ACADEMICS 107 190 NSF
SPECIAL ASST 109 188 NSF
CFOO 111 220 NSF
COPY / WK ROOM 113 167 NSF
W RR
ADMISS ASST 126 NSF
DIR OF ADMISS 102 167 NSF
ASST TO DEANS 104 146 NSF
REGISTRAR 106 165 NSF
SUST/SAFETY MGR 108 179 NSF
HR DIRECTOR 110 182 NSF
ACCT 1/ACCT2 112 220 NSF
IT DIR 115 164 NSF
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CONTROLER 114 175 NSF
SERVER ROOM 116 125 NSF
MEETING ROOM 392 GSF
FLEX SPACE
FLEX SPACE
LOUNGE 443 GSF
HALL
IT SUPP SPEC/ AV SUPP SPEC 118 175 NSF
DINING / KITCHEN 365 GSF
SECURITY DESK
ADVANCEMENT
MEETING ROOM 227 NSF
DEAN OF STUDENTS 252 NSF
RC SHRD WORKSPACE 321 NSF
DIR STUDENT LIFE 191 NSF
STUDENT LIFE
STUDENT HEALTH
OPEN LGHTWELL
CAFE SEATING
OUTDOOR REC
CAFE 813 GSF
OPEN LGHTWELL
ELEVATOR
NEW LOADING DOCK
TO OPEN COURTYARD
DINING ROOM
KITCHEN
SERVERY
FREEZER
COOLER
OFFICE
RAMP DOWN 1:12
RAMP DOWN 1:20
RAMP DOWN 1:10
NOTE: IN GUEST ROOMS 145, 147, 148, 150, 151 AND BATHROOMS 146A, 149A, 152, REFINISH AND REINSTALL EXISTING INTERIOR WOOD SHUTTERS. PROVIDE NEW WOOD SHUTTERS TO MATCH EXISTING WHERE ORIGINAL SHUTTERS ARE MISSING.
NOTE: REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF VERANDA POSTS AND FLOOR FRAMING PLANS
NOTE: REFER TO STRUCTURAL DRAWINGS FOR FRAMING LAYOUT OF WOOD PLATFORM
TYPICAL WALL MOUNTED HEATING UNIT, SEE MECHANICAL DRAWINGS
NOTE: RADIAL DIMENSIONS FOR ROAD CURBS ARE APPROXIMATE. COORDINATE WITH CIVIL/ LANDSCAPE DRAWINGS, FIELD VERIFY
NOTE: COORDINATE CLEAR HOISTWAY DIMENSIONS WITH ELEVATOR MANUFACTURER
RAIL & BALLUSTERS WITH SWINGING GATE, RAILS & BALLUSTERS TO MATCH MAIN VERANDA RAILS & BALLUSTERS
VERANDA
NEW MILLWORK IN TO REPLACE MISSING
NEW FURNITURE
EXISTING TILE HEARTH TO BE REPAIRED
MANTLE AND OVERMANTLE, REPAIR / RESTORE FIREPLACE HEARTH
NEW WOOD RECEPTION DESK
EXISTING WOOD MAILBOX TO REMAIN
EXIST. WOOD STAIR AND HANDRAILS
NEW CONCRETE STAIR: TREADS @ 11"
NEW 1 1/4" NOM. DIA. PIPE HANDRAIL PAINTED
WOOD GUARDRAILS
WOOD BRIDGE
LIGHTWELL 5
LIGHTWELL 4
LIGHTWELL 3
LIGHTWELL 2
LIGHTWELL 1
METAL GUARDRAILS
CONCRETE RAMP WITH 1 1/4" NOM. DIA. HAND/ GUARD RAILS
REPAIR AND REFINISH EXIST. WOOD STAIR 1ST FL. TO 3RD FL.
FIRE EXTINGUISHER ON WALL BRACKET
CASED OPENING
NEW CONC. FILLED METAL PAN STAIR 1ST FL. TO GROUND FLOOR
CONCRETE STAIR/PLATFORM WITH 1 1/4" NOM. DIA. HAND/ GUARD RAIL
CONC. RETAINING WALL WITH 42" HIGH METAL GUARDRAIL
NEW CONCRETE TREADS AND RISERS
NEW WOOD AREAWAY ENTRY DOOR
NEW WOOD FENCE WITH ORNAMENTAL WOOD GATE
CONCRETE WALK
6" DIA. CONC. / STEEL PIPE BO
AREAWAY 1
AREAWAY 2
AREAWAY 3
AREAWAY 4
AREAWAY 5
AREAWAY 6
AREAWAY 7

N

DRAWN X **DESIGN**

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1 First Floor Plan
Scale: 1" = 10'-0"

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN
FOCUS: SUSTAINABLE ADAPTIVE REUSE

[CASTLE VERSION-8]

WITH DORM ADDITION
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DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN
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UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.

2ND FLOOR MONTEZUMA

SOUTH 15 Rooms x 2 Women = 30 *(50 Total - Wc,S,Lav x 10 = 1/5 w NEW HALL)*

E & N 10 Rooms x 4 Men = 40
1 Room x 6 Men = 6 *(46 Total - Wc,S,Lav x 8 = 1/5.75)*
2 RC Apartments
2 RCA Studio / Room

WEST ADD WOMENS & NON-BINARY HALL
10 Rooms x 2 = 20
+NEW STAIR & ELEVATOR

NOTE:
SLOPE AT VERANDA ROOF VARIES WITH WIDTH OF VERANDA. SLOPE IS DETERMINED BY HEIGHT OF BEAM AT OUTER EDGE AND REUSE OF EXISTING RAFTER POCKETS IN BLDG. EXT. STONE.

NEW 960 GSF ROOF DECK OVER CAFE & REC
CAN ALSO INCLUDE ROOF OVER STUDENT LIFE

NEW Women's & Non-Binary Wing

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UNITED WORLD COLLEGE

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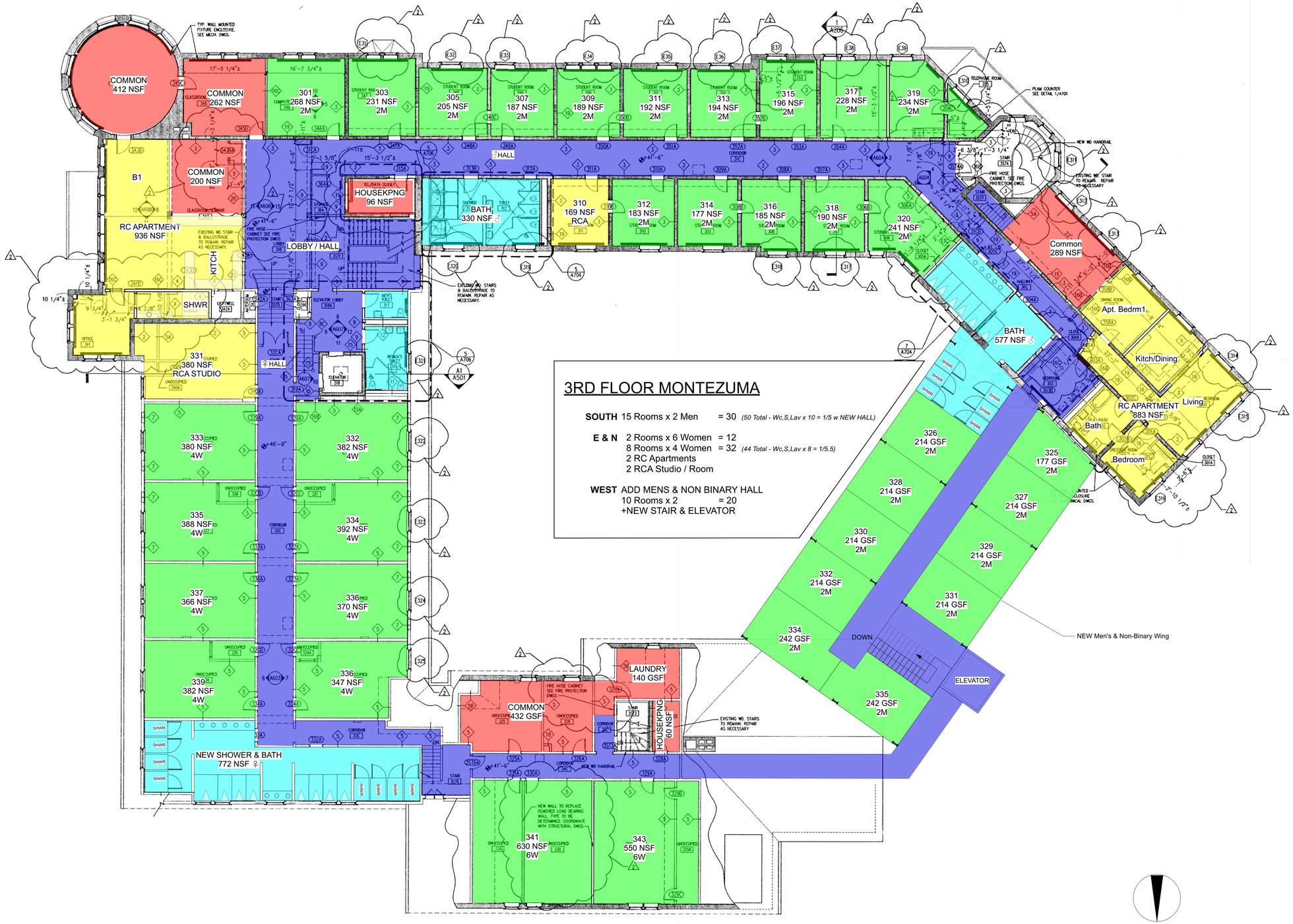

3RD FLOOR MONTEZUMA

SOUTH 15 Rooms x 2 Men = 30 *(50 Total - Wc,S,Lav x 10 = 1/5 w NEW HALL)*

E & N 2 Rooms x 6 Women = 12
8 Rooms x 4 Women = 32 *(44 Total - Wc,S,Lav x 8 = 1/5.5)*
2 RC Apartments
2 RCA Studio / Room

WEST ADD MENS & NON BINARY HALL
10 Rooms x 2 = 20
+NEW STAIR & ELEVATOR

N

1 Third Floor Plan
Scale: 1" = 10'-0"

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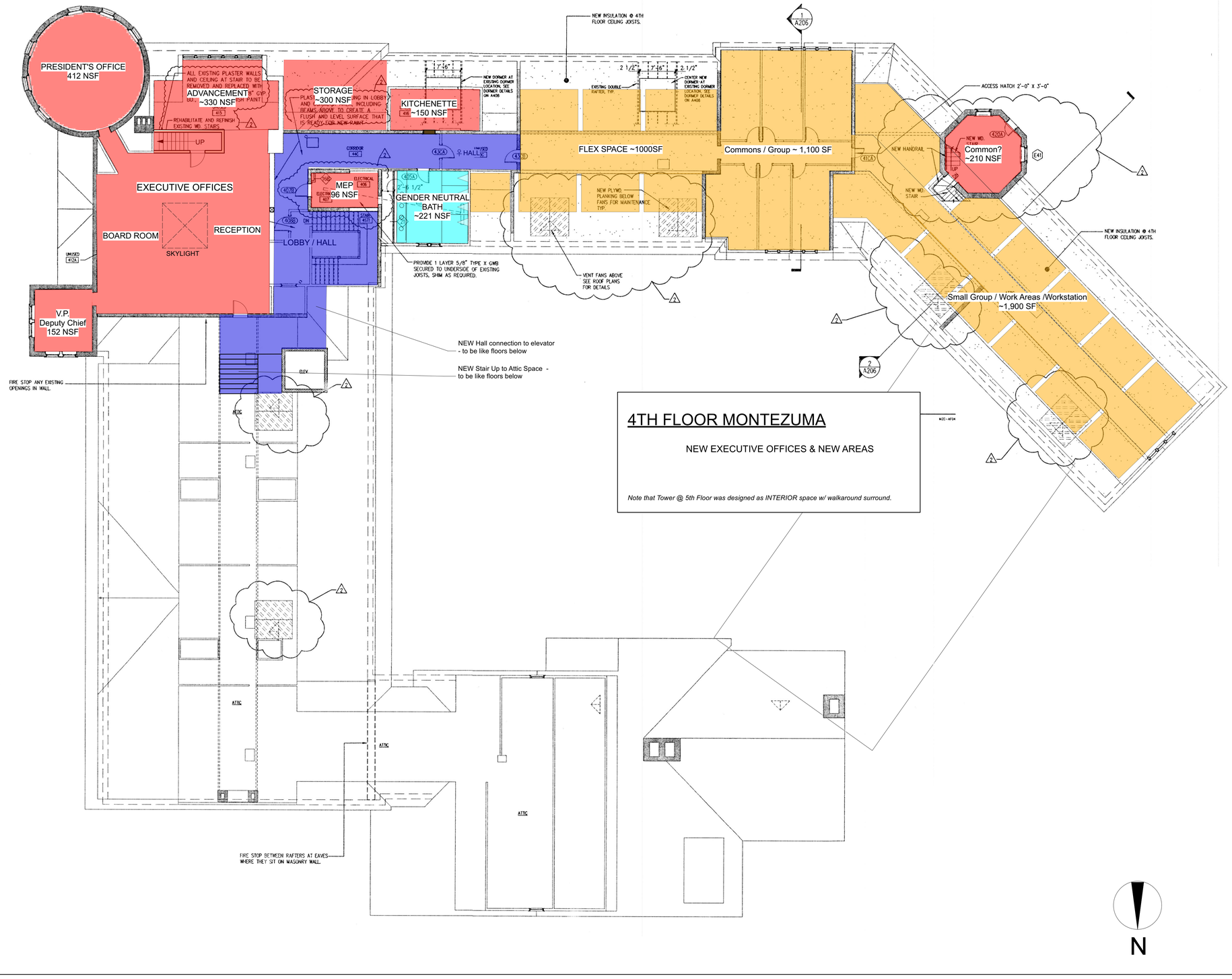

4TH FLOOR MONTEZUMA

NEW EXECUTIVE OFFICES & NEW AREAS

Note that Tower @ 5th Floor was designed as INTERIOR space w/ walkaround surround.

N

1 Fourth Floor Plan
Scale: 1" = 10'-0"

DRAWN X **DESIGN**

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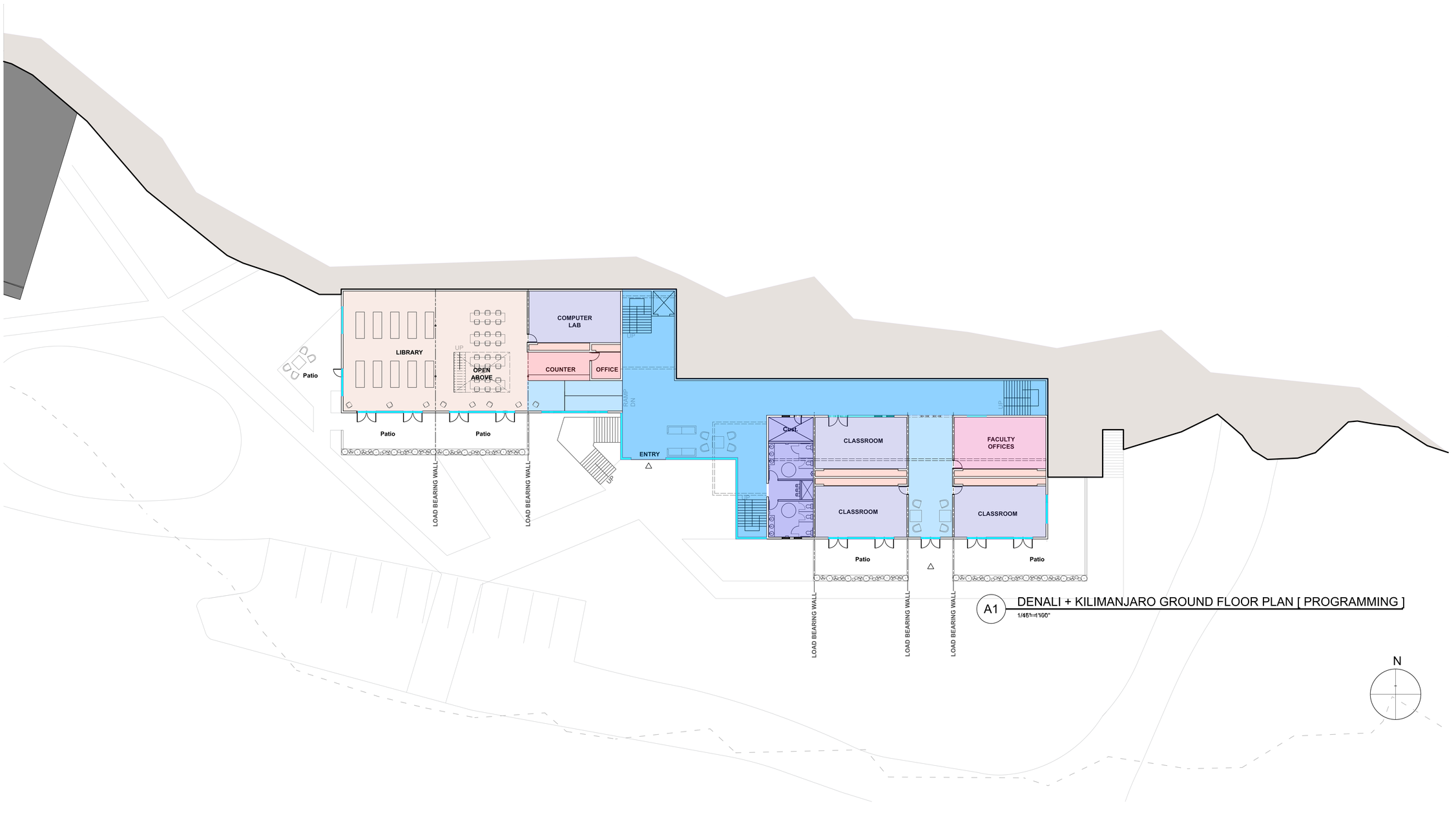

A1 DENALI + KILIMANJARO GROUND FLOOR PLAN [PROGRAMMING]

1/45"=1'00"

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN

FOCUS: SUSTAINABLE ADAPTIVE REUSE

[ACADEMIC QUAD VERSION-5]

DATE: JANUARY 2022

DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN
CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM
UWC EXECUTIVE STAFF
MASSOUD A. MOGHADAM, P.E. S.E.

THIRD FLOOR QUAD

MONT BLANC + CHOMOLUNGA

4 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
3 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
3 Science Lab Storage @ 190 NSF
Common Spaces / Circulation ~ 4,600 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library / Study Space: 1,450 NSF
7 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 4,200 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

SECOND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
2 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
2 Science Lab Storage @ 190 NSF
1 Science Project Storage Room @ 250 NSF
Common Spaces / Circulation ~ 4,170 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library / Study Space: 2,776 NSF
5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 3,330 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

GROUND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

1 Conference / Meeting Room @ 450 NSF
1 Shared Group Faculty Office @ 900 NSF
1 Faculty Lounge w/ Kitchen @ 620 NSF
1 Faculty Lkr Room / Storage / RR / Shower @ 500 NSF
1 Shared Group Faculty Office @ 1250 NSF
Meeting / Conference @ 530 NSF
Faculty Kitchen Breakroom @ 346 NSF
Common Spaces / Circulation ~ 4,900 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library: 2,600 NSF
Library Office & Counter @ 381 NSF
Computer Lab / help desk @564 NSF
3 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
1 Faculty Group Office @ 560 NSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

Common Spaces / Circulation ~ 4,300 GSF

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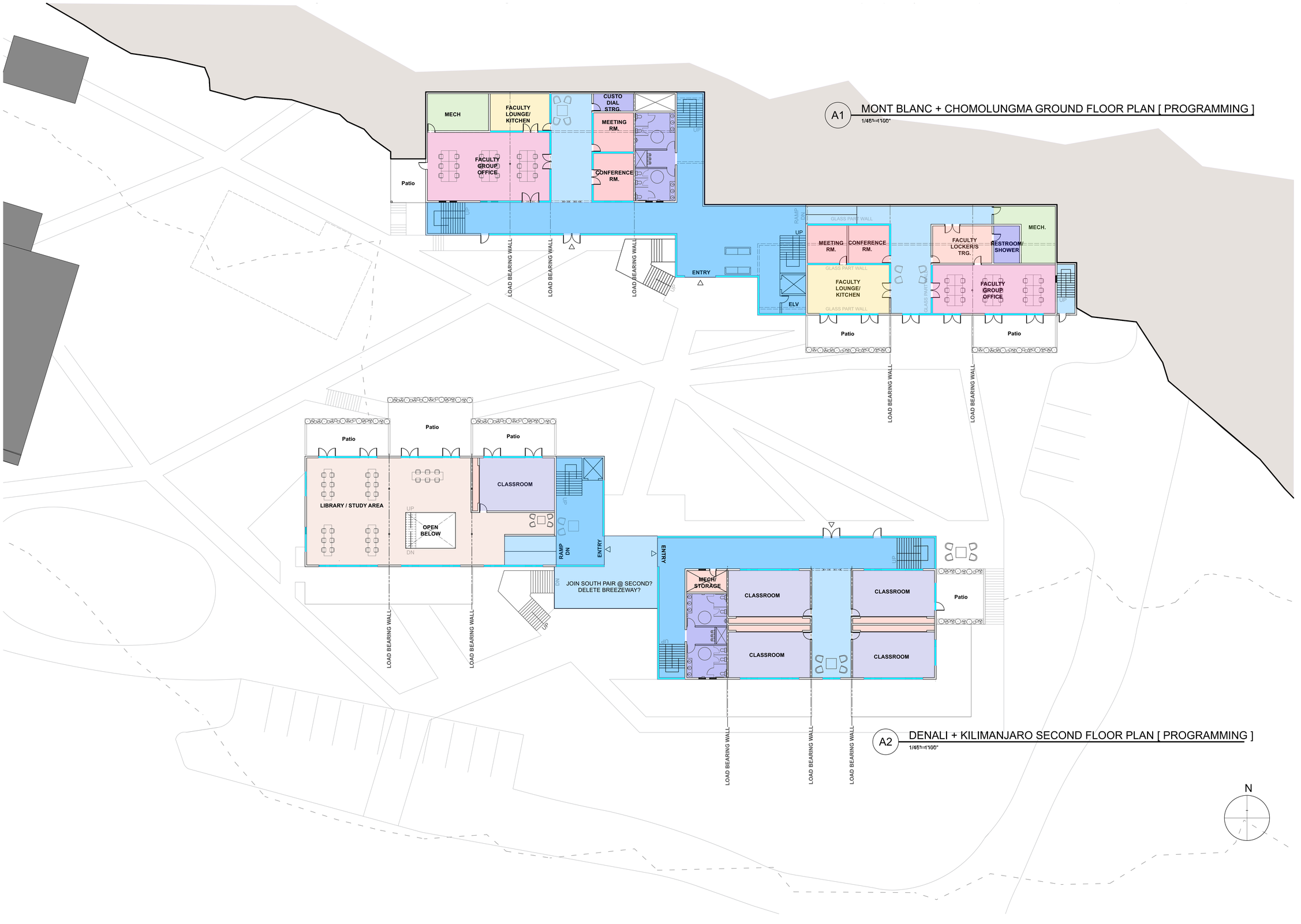
A 1.0
PROGRAMMING PLAN



A1 MONT BLANC + CHOMOLUNGMA GROUND FLOOR PLAN [PROGRAMMING]
1/46"=1'00"

A2 DENALI + KILIMANJARO SECOND FLOOR PLAN [PROGRAMMING]
1/46"=1'00"

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]
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[ACADEMIC QUAD VERSION-5]
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SECOND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

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1 Science Project Storage Room @ 250 NSF
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DENALI + KILIMANJARO

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5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
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TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

GROUND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

1 Conference / Meeting Room @ 450 NSF
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1 Faculty Lounge w/ Kitchen @ 620 NSF
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1 Shared Group Faculty Office @ 1250 NSF
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2 RR (M/W) w 3 Fixtures Each
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DENALI + KILIMANJARO

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2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

Common Spaces / Circulation ~ 4,300 GSF

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A 1.1
PROGRAMMING PLAN

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN

FOCUS: SUSTAINABLE ADAPTIVE REUSE

[ACADEMIC QUAD VERSION-5]

DATE: JANUARY 2022

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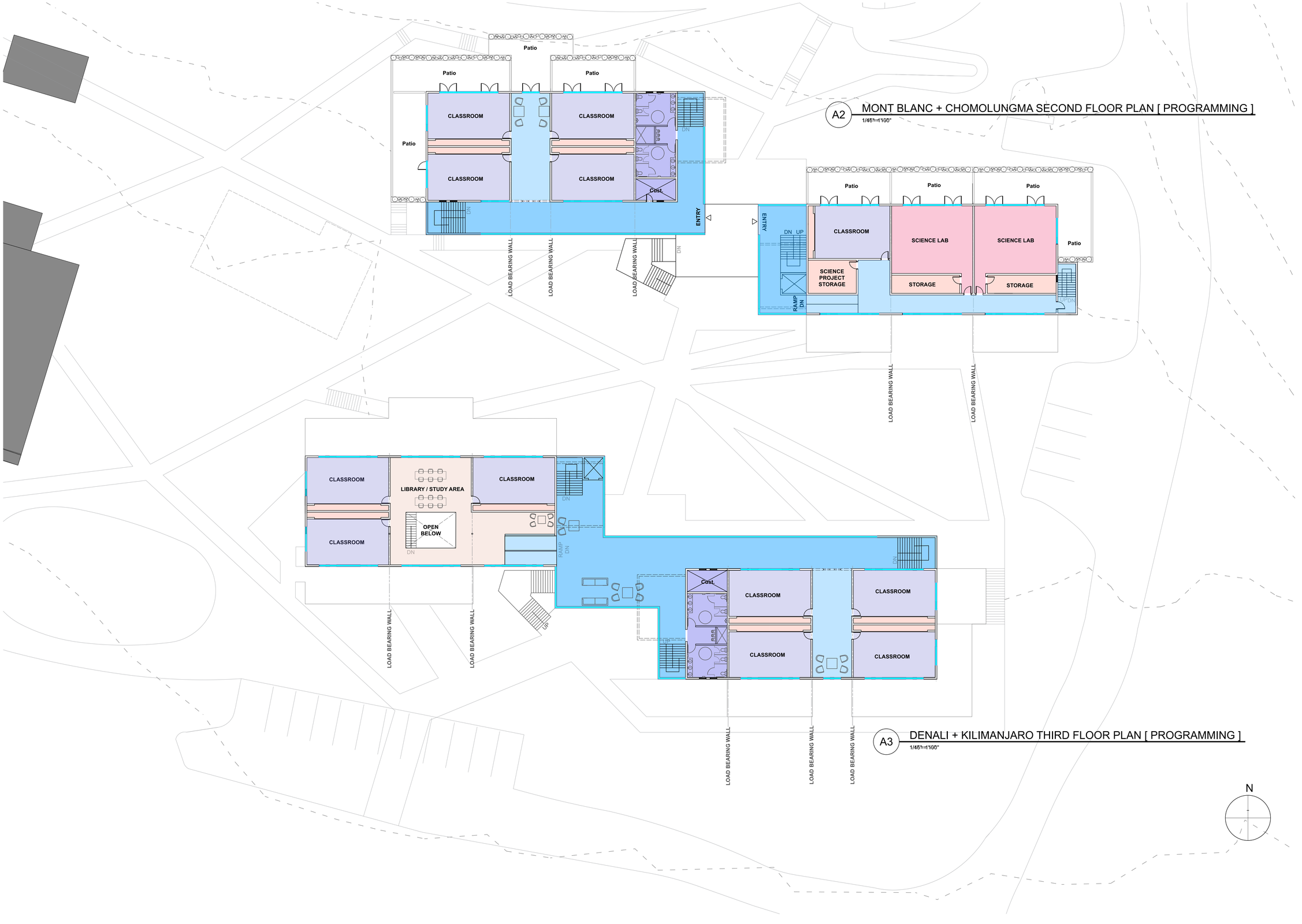

A2 MONT BLANC + CHOMOLUNGMA SECOND FLOOR PLAN [PROGRAMMING]

1/46"=1'-0"

A3 DENALI + KILIMANJARO THIRD FLOOR PLAN [PROGRAMMING]

1/46"=1'-0"

THIRD FLOOR QUAD

MONT BLANC + CHOMOLUNGA

4 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
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Common Spaces / Circulation ~ 4,200 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

SECOND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
2 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
2 Science Lab Storage @ 190 NSF
1 Science Project Storage Room @ 250 NSF
Common Spaces / Circulation ~ 4,170 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

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Library / Study Space: 2,776 NSF
5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 3,330 GSF

2 RR (M/W) w 3 Fixtures Each
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GROUND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

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1 Faculty Lounge w/ Kitchen @ 620 NSF
1 Faculty Lkr Room / Storage / RR / Shower @ 500 NSF
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Faculty Kitchen Breakroom @ 346 NSF
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2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

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3 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
1 Faculty Group Office @ 560 NSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

Common Spaces / Circulation ~ 4,300 GSF

DRAWN X DESIGN

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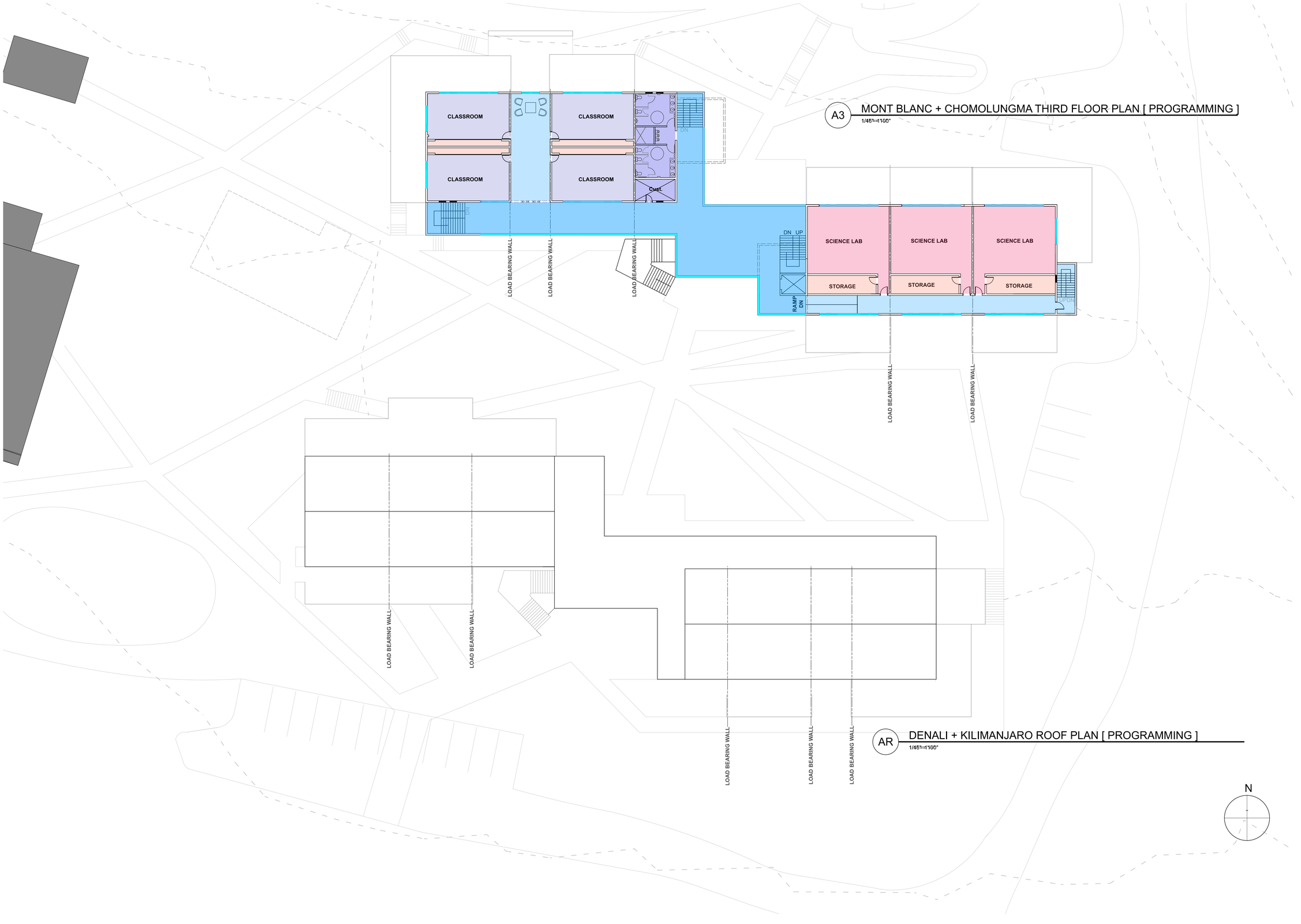
A 1.2

PROGRAMMING PLAN



A3 MONT BLANC + CHOMOLUNGMA THIRD FLOOR PLAN [PROGRAMMING]

1/46"=1'-0"

AR DENALI + KILIMANJARO ROOF PLAN [PROGRAMMING]

1/46"=1'-0"

UNITED WORLD COLLEGE

[CAMPUS CORE MASTERPLAN]

PHASE: PROGRAMMING / CONCEPTUAL DESIGN

FOCUS: SUSTAINABLE ADAPTIVE REUSE

[ACADEMIC QUAD VERSION-5]

DATE: JANUARY 2022

DESIGN TEAM: ALLAN AFFELDT + DRAWNXDESIGN

CONSULTANTS: UWC STRATEGIC LEADERSHIP TEAM

UWC EXECUTIVE STAFF

MASSOUD A. MOGHADAM, P.E. S.E.

THIRD FLOOR QUAD

MONT BLANC + CHOMOLUNGA

4 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
3 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
3 Science Lab Storage @ 190 NSF
Common Spaces / Circulation ~ 4,600 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library / Study Space: 1,450 NSF
7 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 4,200 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

SECOND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
2 SCIENCE LABS @ 860 NSF between 1:1 & 2:3 w:d
2 Science Lab Storage @ 190 NSF
1 Science Project Storage Room @ 250 NSF
Common Spaces / Circulation ~ 4,170 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library / Study Space: 2,776 NSF
5 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
Common Spaces / Circulation ~ 3,330 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

GROUND FLOOR QUAD

MONT BLANC + CHOMOLUNGA

1 Conference / Meeting Room @ 450 NSF
1 Shared Group Faculty Office @ 900 NSF
1 Faculty Lounge w/ Kitchen @ 620 NSF
1 Faculty Lkr Room / Storage / RR / Shower @ 500 NSF
1 Shared Group Faculty Office @ 1250 NSF
Meeting / Conference @ 530 NSF
Faculty Kitchen Breakroom @ 346 NSF
Common Spaces / Circulation ~ 4,900 GSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

DENALI + KILIMANJARO

Library: 2,600 NSF
Library Office & Counter @ 381 NSF
Computer Lab / help desk @564 NSF
3 CLASSROOMS @ 560 NSF between 1:1 & 2:3 w:d
1 Faculty Group Office @ 560 NSF

2 RR (M/W) w 3 Fixtures Each
TOTAL RR = 6 @ 50ppl / RR = 300 ppl capacity

Common Spaces / Circulation ~ 4,300 GSF

DRAWN X DESIGN

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A 1.3

PROGRAMMING PLAN