

[c e l l]

[d e f e n i t i o n o f a c e l l]

The cell is a space that provides the living necessities for one person condensed into an introverted and reflective environment that permits little change within its confines. Its architectural specificity uses a restrictive but efficient spatial quality.

PROPOSED CELL CHARACTERISTICS

WALLS – This seems obvious but the precise definition of the private space is ultimately created by the walls and their architectural spatial qualities.

ECONOMISED SPACE – The conservation, and precise allocation of required living necessities.

PLACE TO SLEEP – The cell's primary function and largest space allocation. Security and comfort for a bed as a place to sleep is the first priority.

PLACE TO WORK – The cell's second priority and second largest space allocation. The goal is dedicating a private space to work illuminated by natural light.

WINDOW – The cell windows should have provisions for natural light, view, and ventilation with regard to the surrounding topographical and geographical qualities.

DOOR – Aside from the primary function of the door as entry, the opening itself is frequently used to increase natural ventilation. An opportunity exists to address both conditions in a single element.

STORAGE – Storage space can be seen as integrated within the cell when it plays an active role in its spatial definition.

VENTILATION – Fresh air supplied via cross-ventilation can be a distinct element within the cell raising an awareness between the differences of openings for ventilation and openings for light.

LIGHT – The cell's illumination will be natural light during the day. Task lighting for the new cell will be provided in specific discrete locations by adjustable halogen lamps.

FURNITURE – The selection of table, chair, bed, and luminaires for the cell differ than furnishings typically found in a living space in that, they are selected for a specific use and that use is focused on the individual as opposed to social multiplicative use.

MATERIALS – Materials employed in the design of the cell retain their material and tactile characteristics and are minimally manipulated by paint.

[r e n u n c i a t i o n]

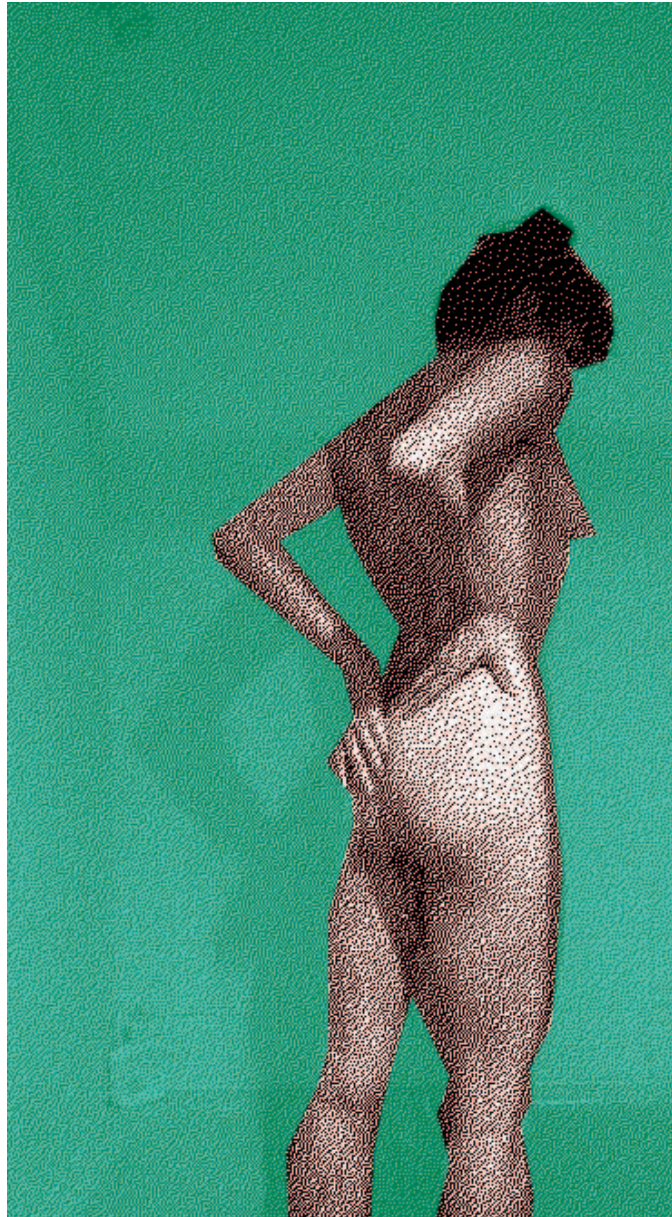
The act of renunciation is the voluntary relinquishment of an object or cultural lifestyle.

The concept for the cell is a space in which a student resides for a semester studying abroad. It contains only the basic necessities required for one's existence. This cell is developed from precedents of the monastic cell and its variants and provides the recipient primarily with a place to sleep and work.

"Love what you burn, burn what you love."

- Le Corbusier

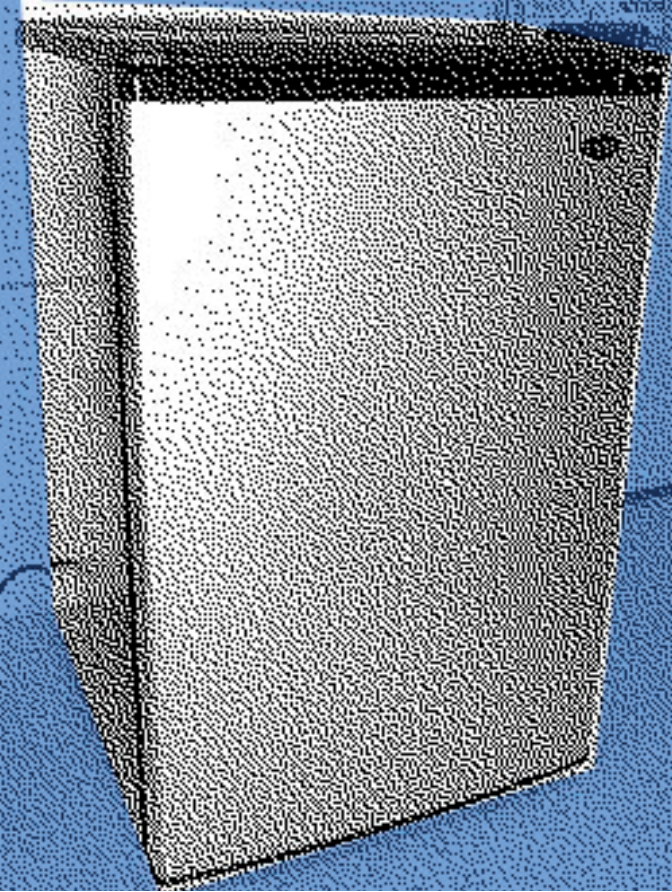
Shower – the personal generic shower is removed from the cell. In contemporary American culture the ritual of showering offers great possibilities to introduce an architectural place that consciously amplifies the act of showering.



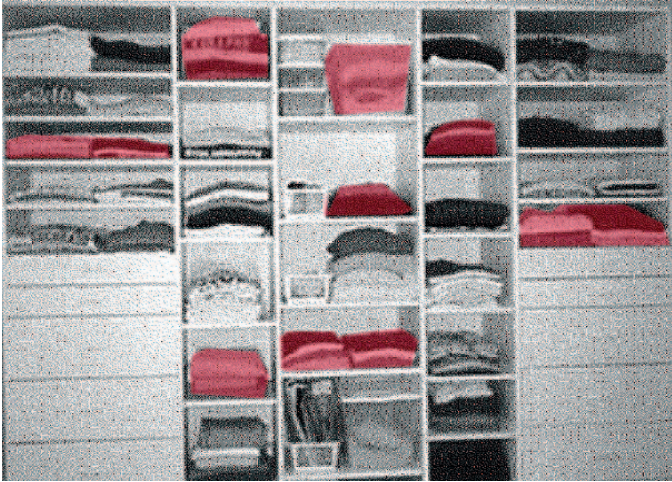
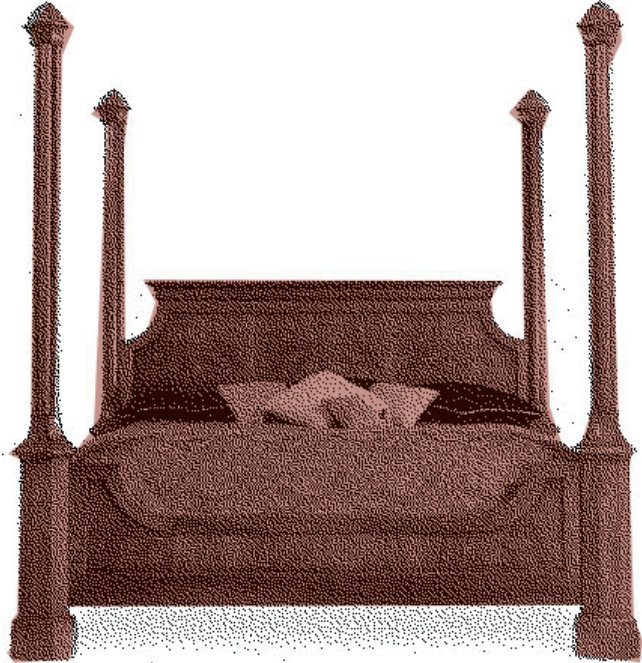
Microwave – by its removal, the immediate desire of consumption satisfaction is removed and replaced by a structured and well-prepared meal by the school's chef.



Refrigerator – another form of immediate satisfaction similar to the microwave



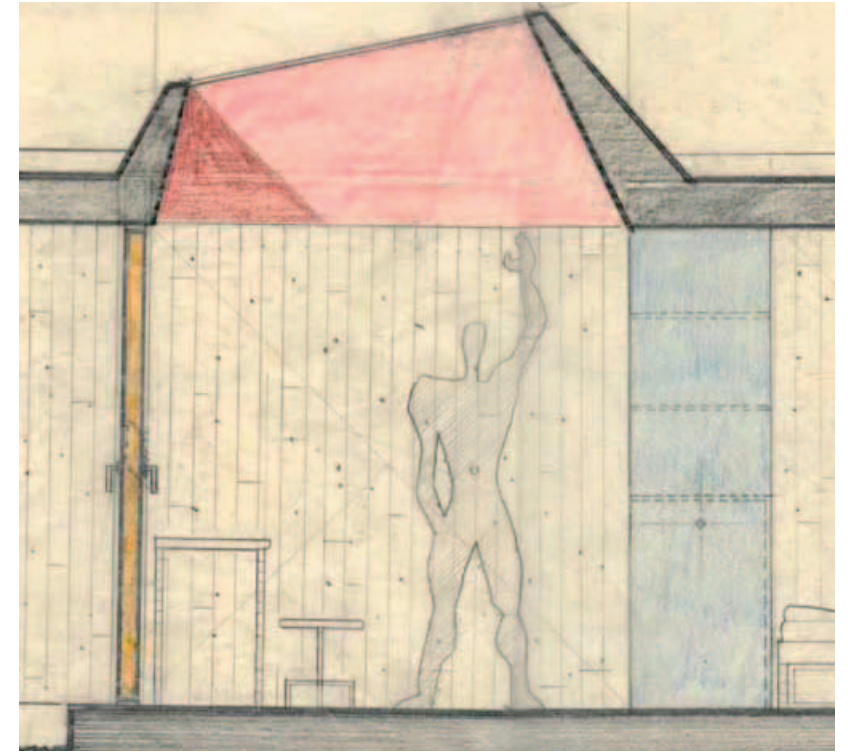
Excessive luxuries – storage space – bed – sofa – the excessive amounts of unnecessary space and luxuries that otherwise can be replaced with simpler smaller more efficient means of living as a form of a personal hierarchical selection of belongings.



[the cell]

INTERNAL SPACE – FORM

The internal space was regulated by Le Corbusier's Modulor, as the regulating unit in forming the internal spaces instead of a random arbitrary unit. The Modulor inherently anthropomorphic, makes it similar in the design to the introverted space of Corbusier's La Tourette cell. The width and height of the cell are fixed at 2,26m while the depth is defined by two modules of 2,26m and a threshold space between these two spaces of ,60m defined by the blue band. The result is two distinct spaces defined in terms of the cubic Modulor, offering a place to sleep and to work. These two spaces

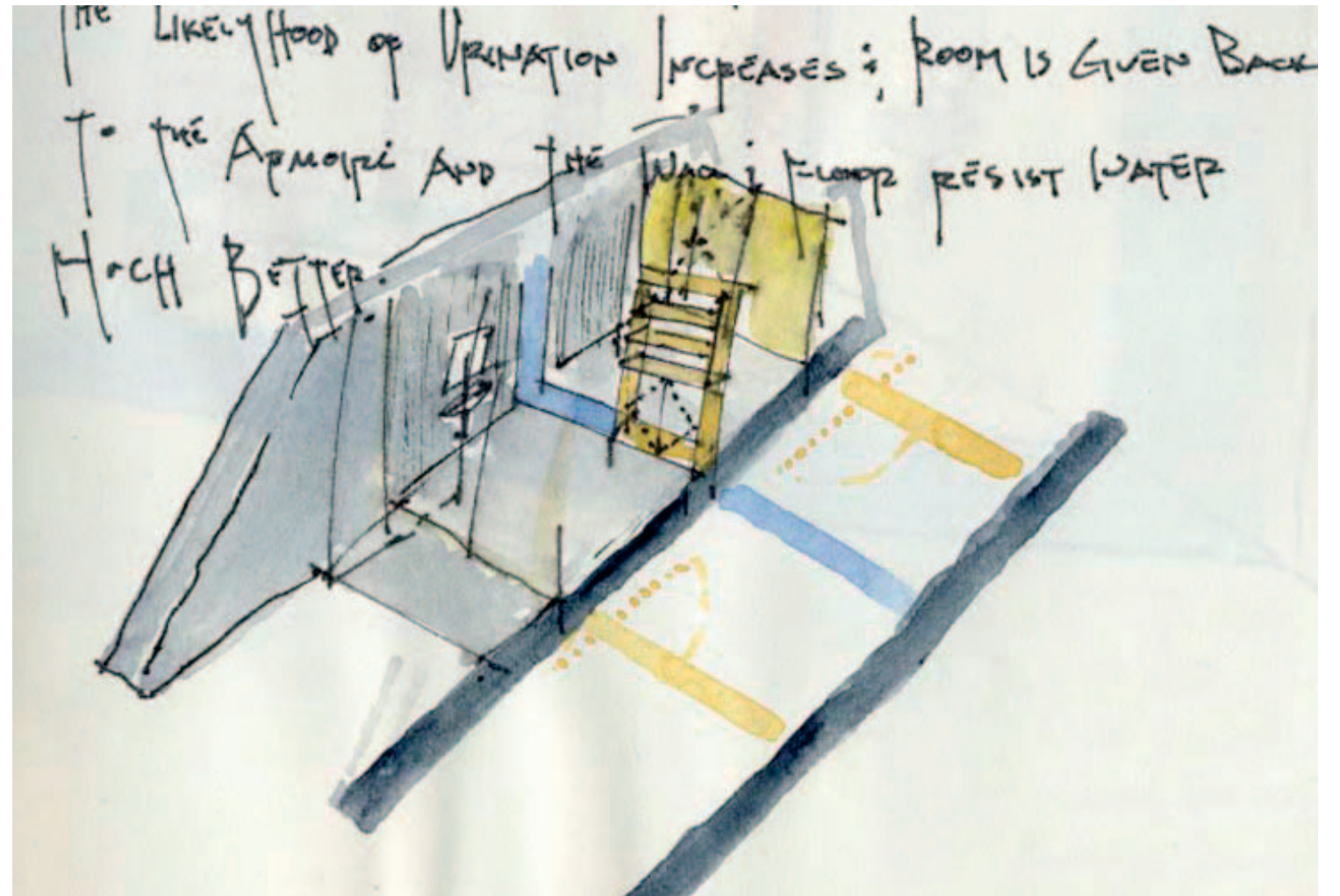


*"These figures pin down the body at the decisive points of its occupation of space: they are therefore **anthropocentric**"*

- Simon Richards, *Le Corbusier and the Concept of Self* p102

[2,26 m]

the cell cut away - watercolour study in sketchbook



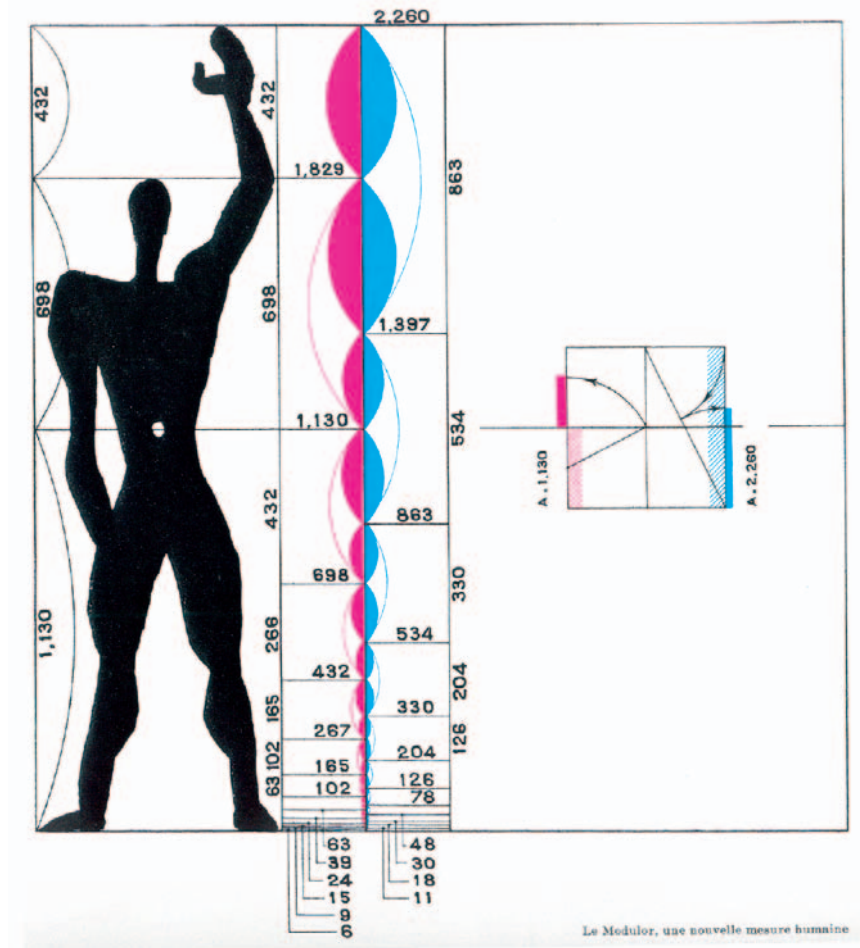
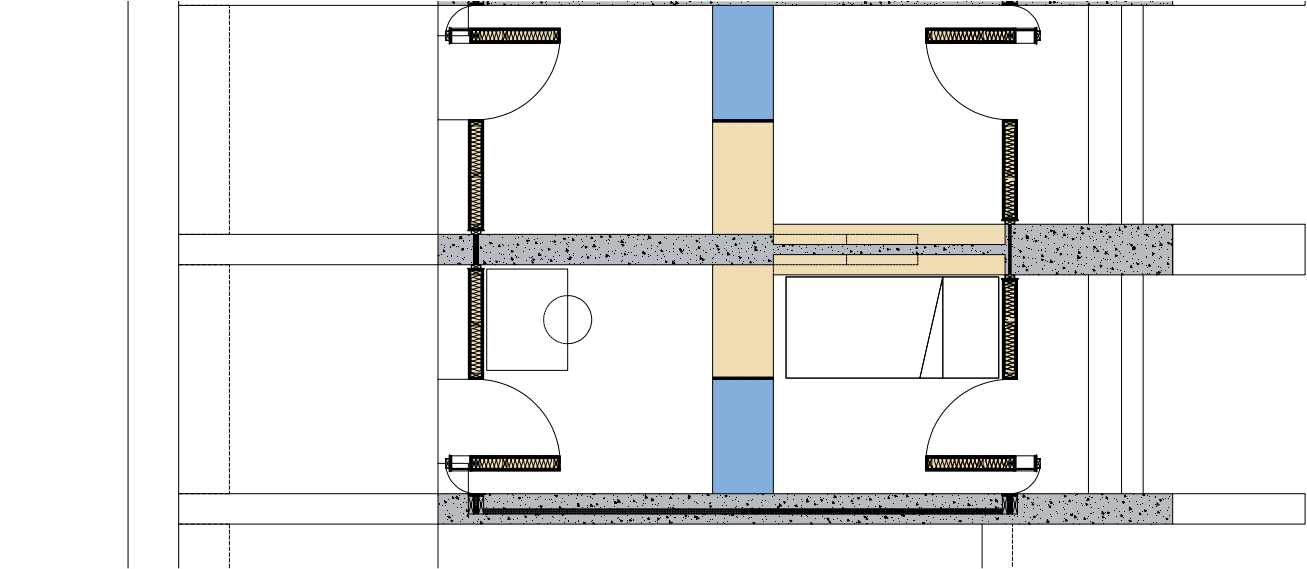
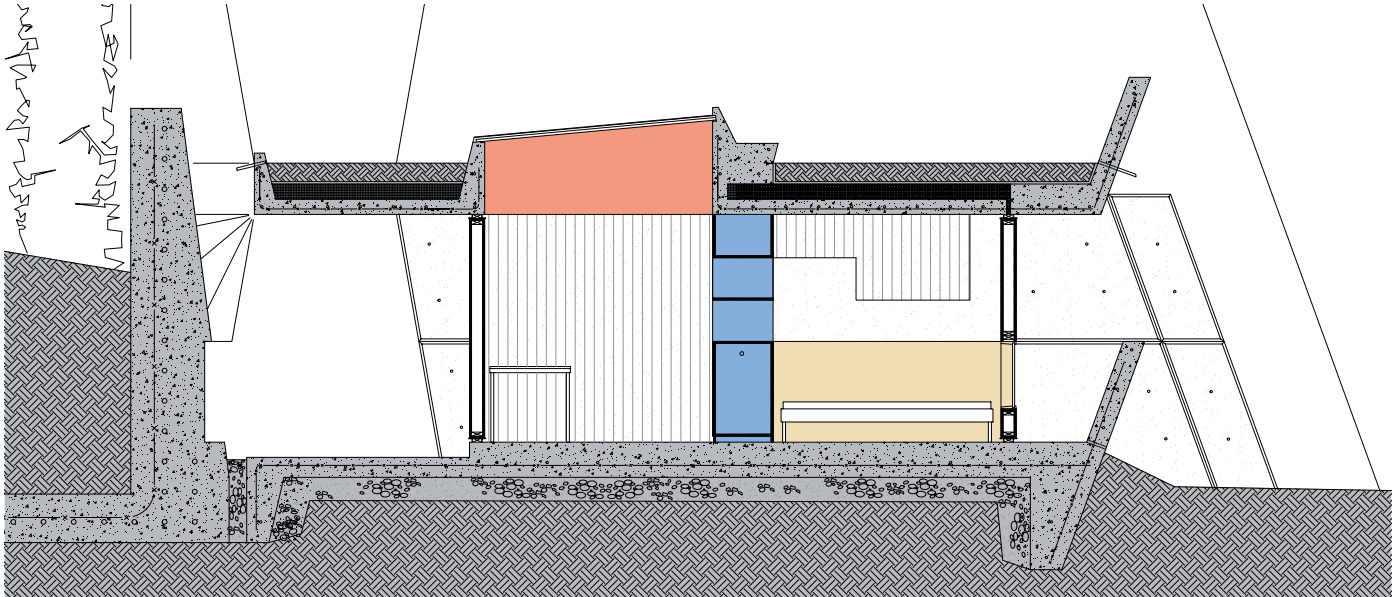


illustration from Le Modulor

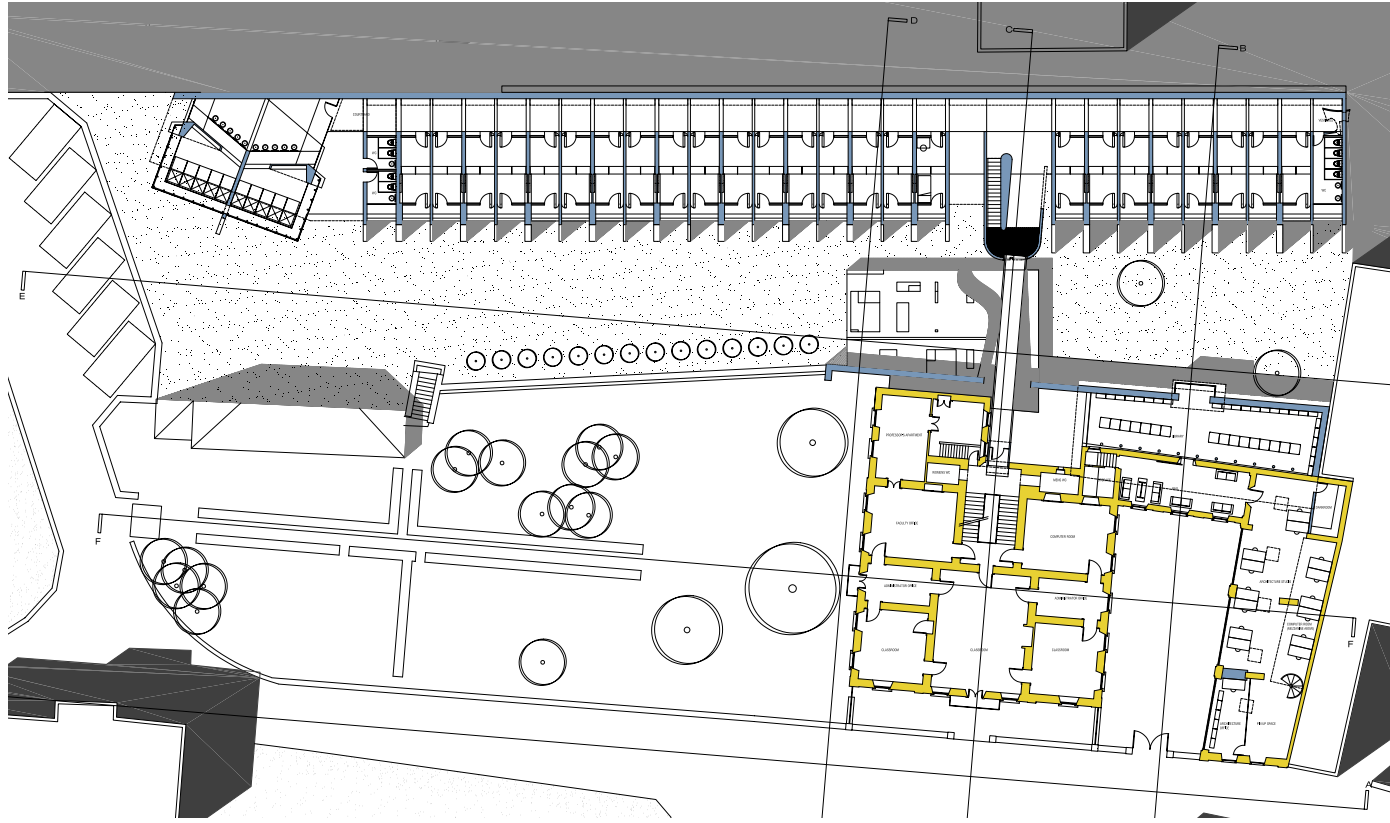


cell section



cell plan





west elevation facing front of cells



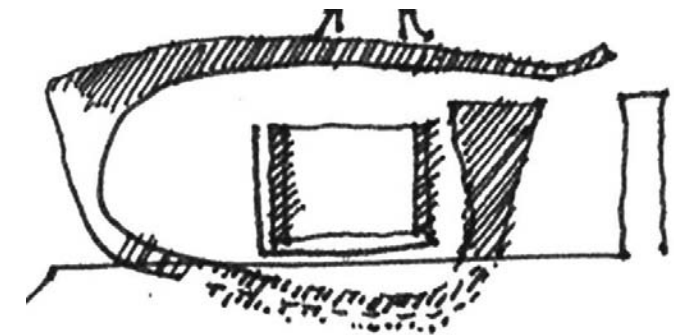
divided by a built-in armoire as a mediating element.

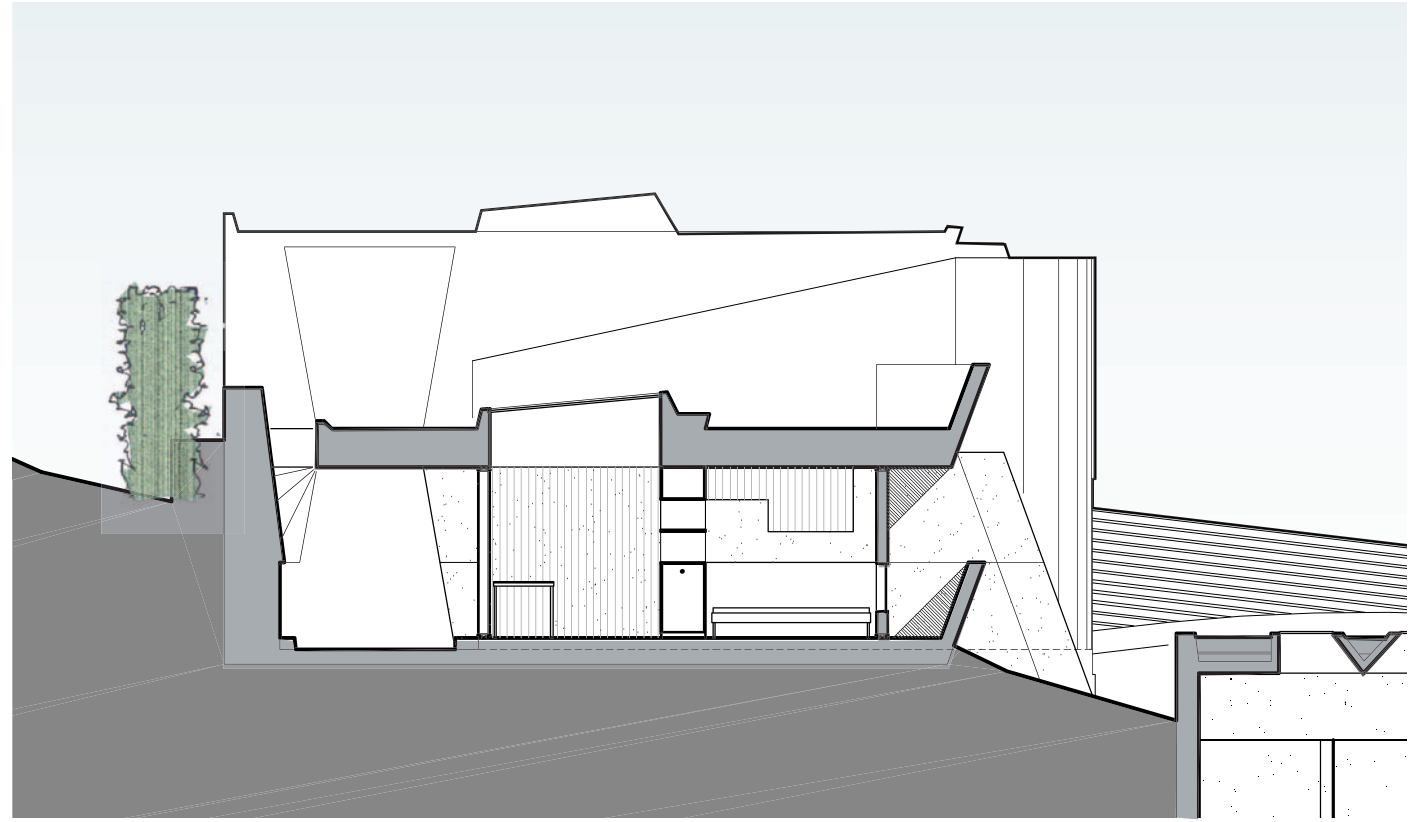
EXTERNAL SPACE – FORM

One challenge of the cells arose from the topography of the terraced hillside behind the casa. The western property line rises by 2 metres suggesting that the cells to become embedded within the hillside by also acting as a retaining wall holding back the mass of the mountain called 'San Giorgio'. The cross-section transitions from a plane that transitions to floor to retaining wall to roof. The cross-section of the cell walls create the internal divisions that are regulated by dimensions suggested by Le Corbusier's Modulor. The cells exterior appears bold and machine like, but within the context of the terraced hillside, it organically integrates itself into the contours of the topography.

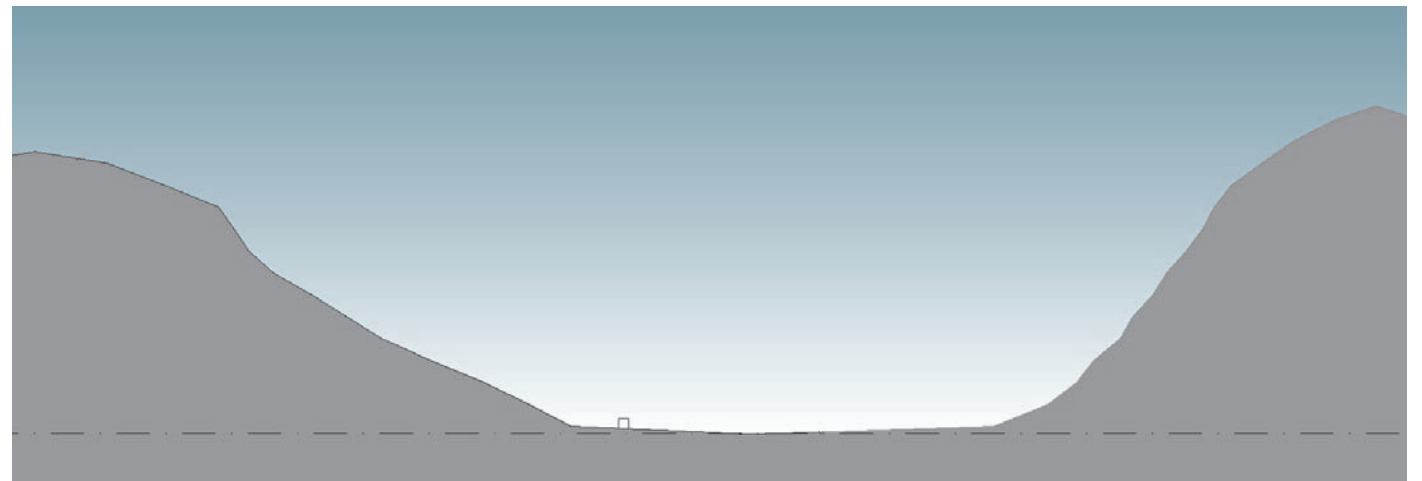
2 MODULES

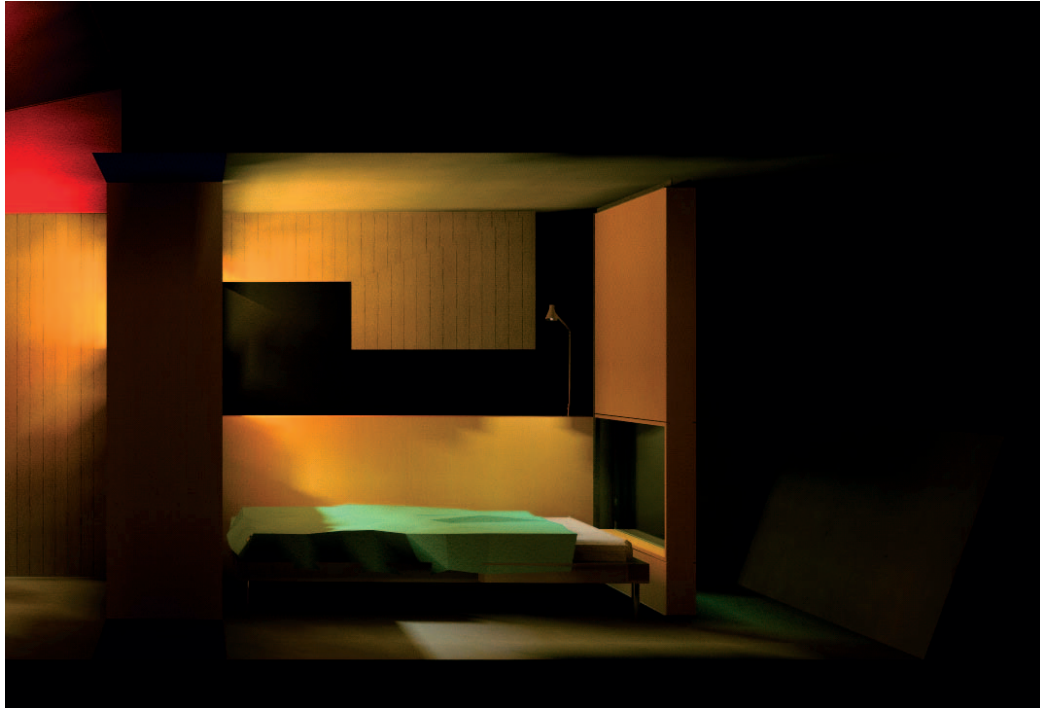
- one oriented towards Monte Generoso
- other, oriented toward San Giorgio





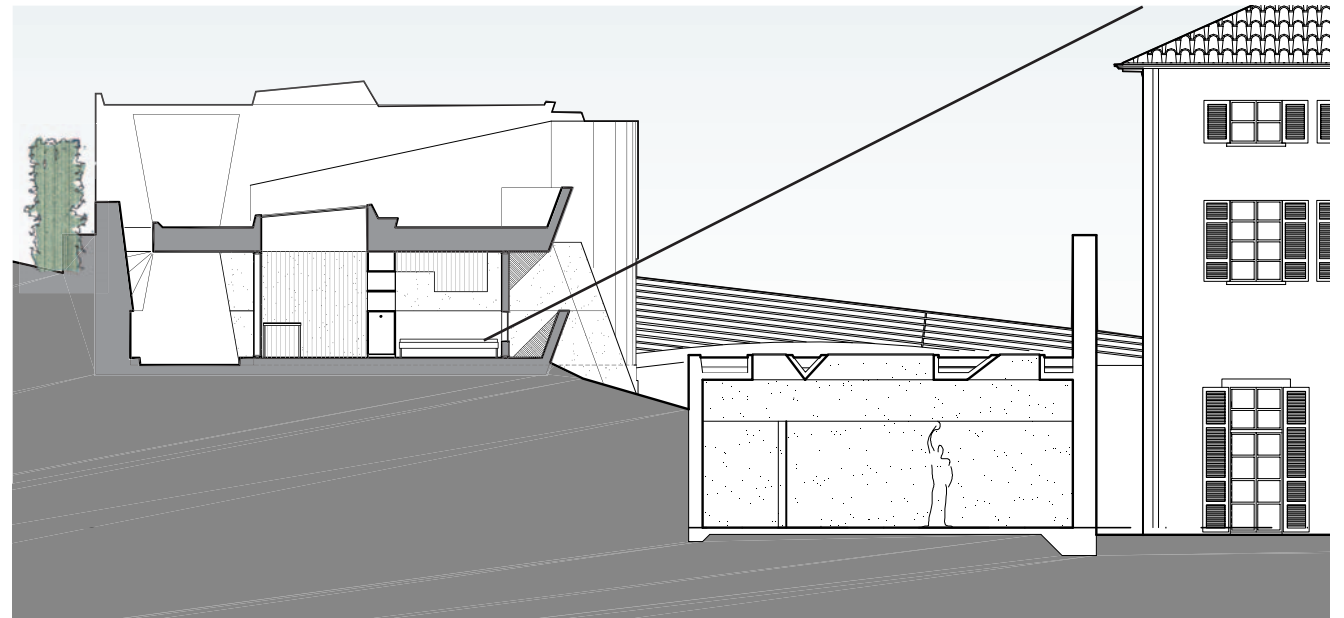
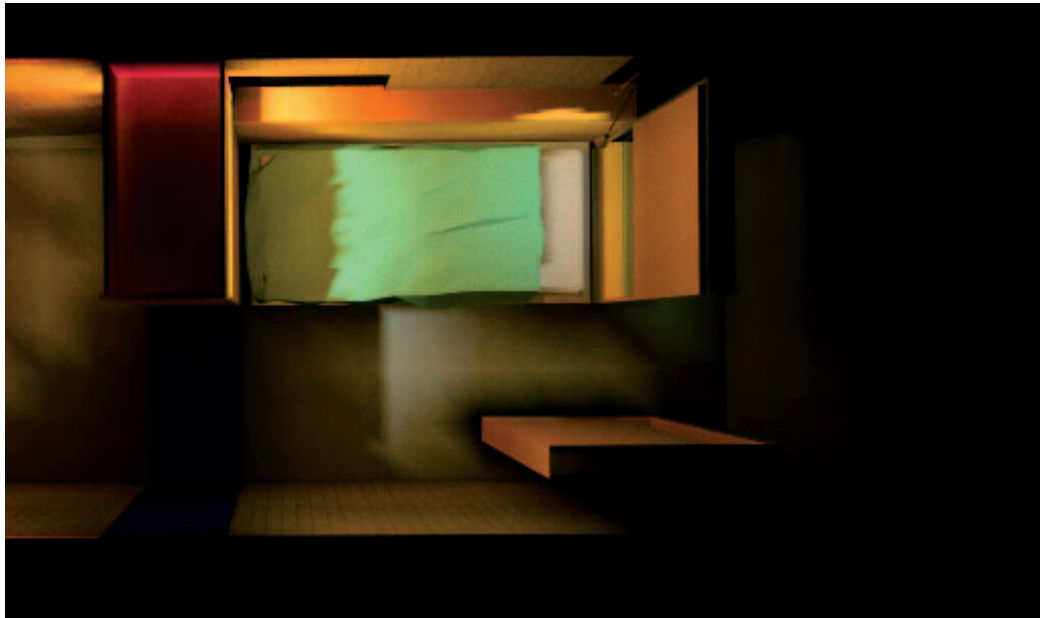
section of cell through san giorgio and monte generoso





CELL USE

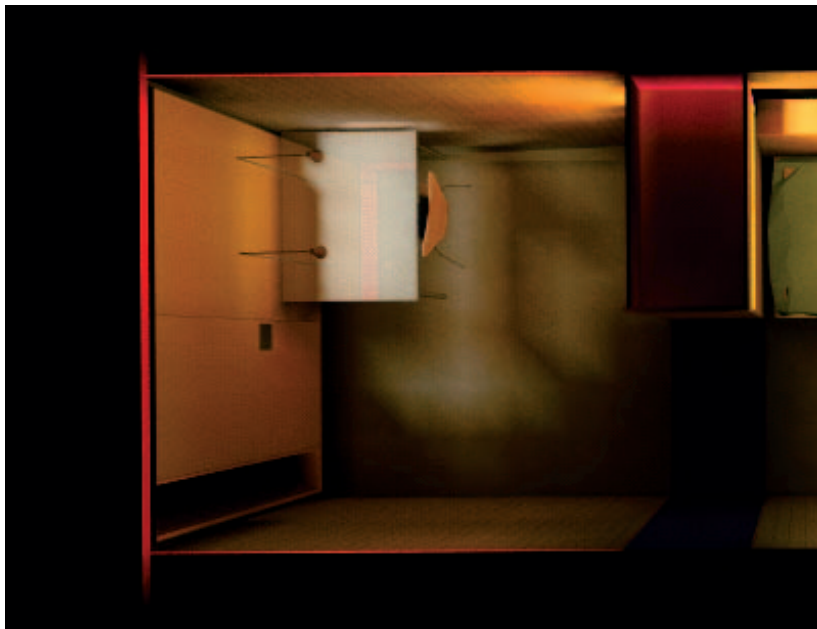
SLEEPING – To offer a place to sleep is the cell's primary role. This space is defined by one cubic Modulor, the wooden storage unit and the window at the bed's front position. The material juxtaposition proposes a secondary space by using the datum line of the windows header, balcony rail, and wall. When lying in the bed the window frames a precise view of the peak of Monte Generoso while denying the view to the town and other distractions.



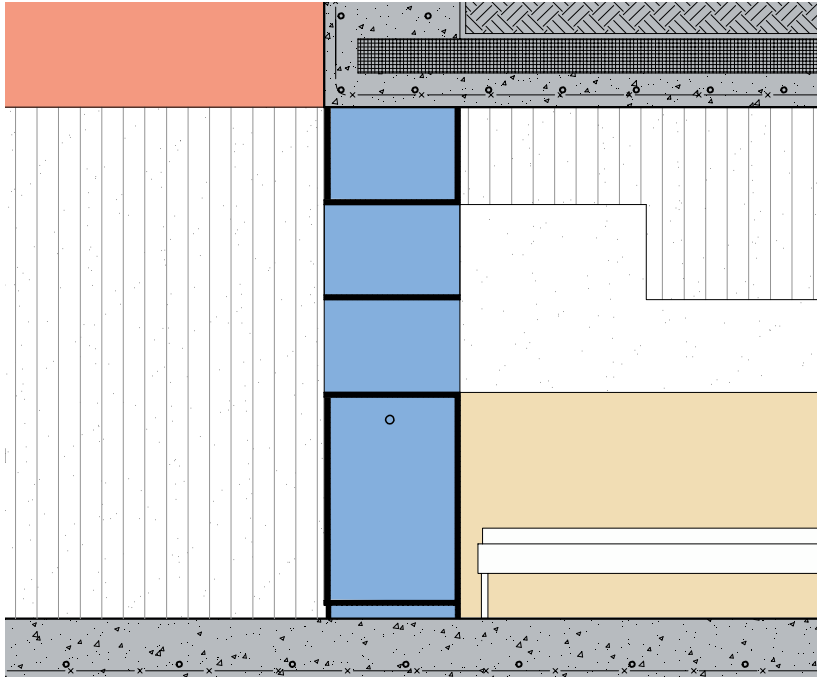




WORKING – The other important obligation of the cell is to provide space to work and self reflection. This is achieved in the Modulor space oriented toward San Gorgio. Above the desk the ceiling is replaced by a translucent skylight that allows natural light to be brought into the work space and denies view to the exterior for keeping ones focus on study.



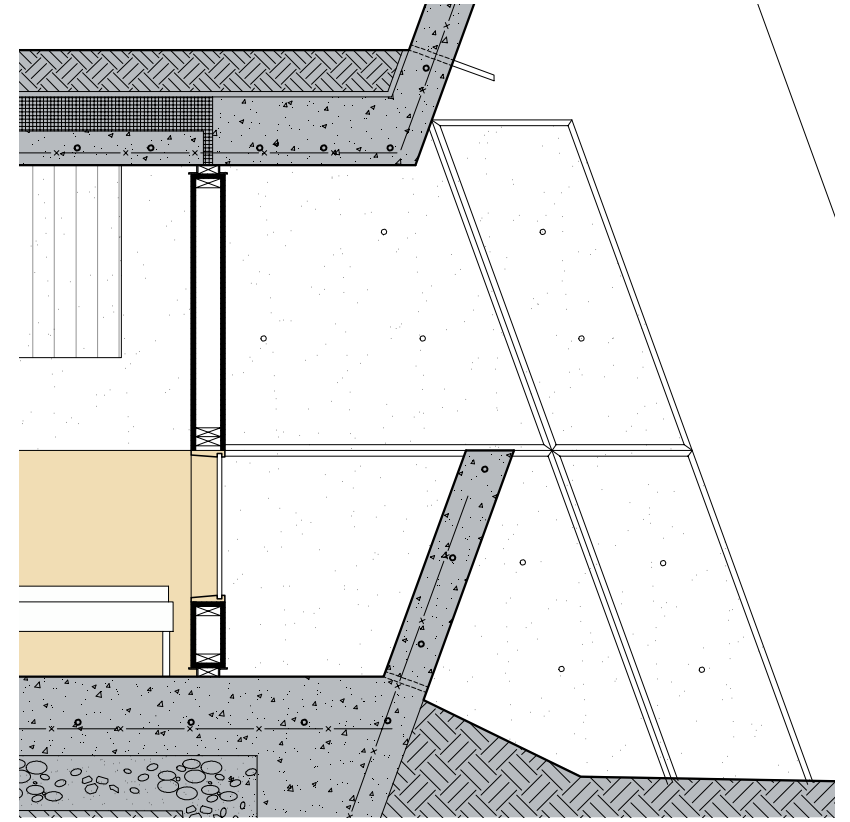


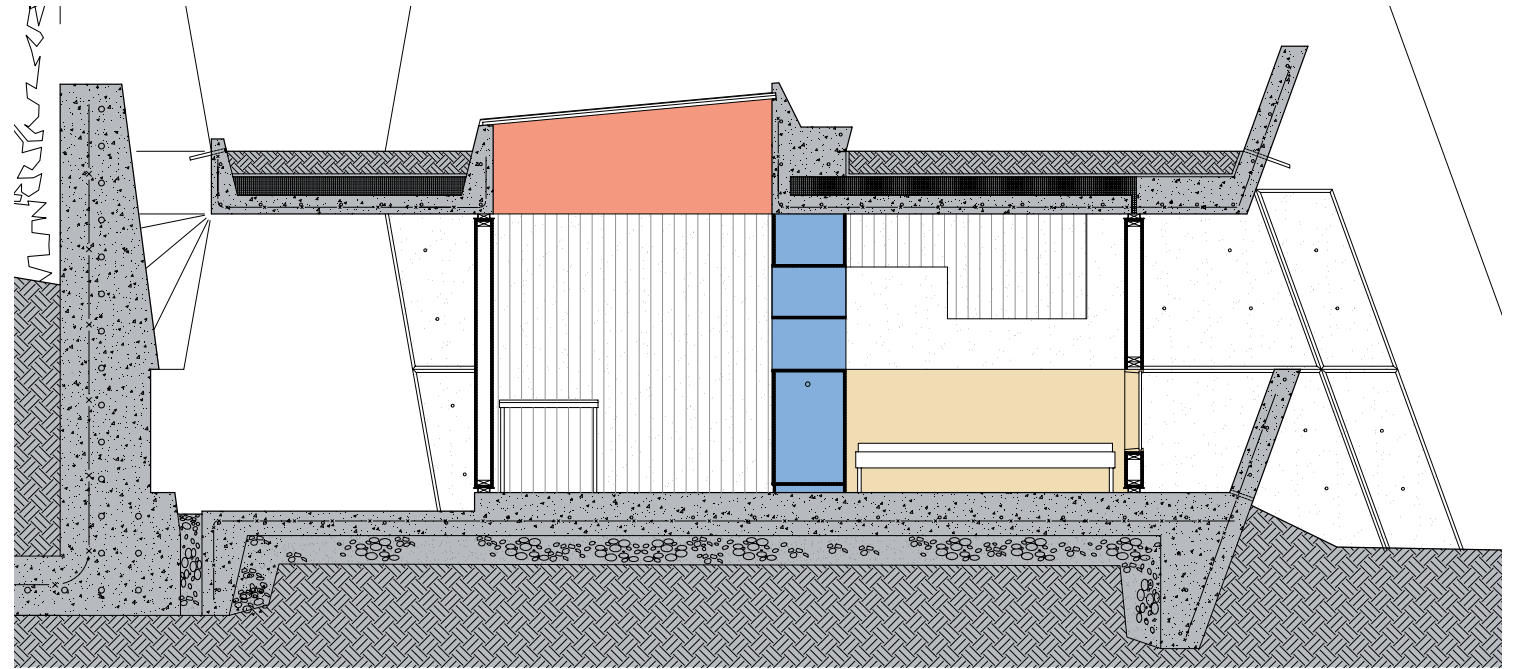


STORAGE – Dividing the Modulors is the integrated storage unit that contains all the storage requirements. The armoire portion on the bottom provides for an average of 25 large garments and two coats to be placed inside on hangars. Internal shelving of the armoire also provides space for accessory garments. The 2 shelves above can hold approximately 50 books per shelf. The top drawer can be used to lock valuables.



BALCONY – The balcony as an extension of the cell to the outside focuses on Monte Generoso. Deeply shielded on both sides by the extended walls and roof of the cell it controls the eastern and southern sunlight and maintains privacy from cell to cell. The balcony element adds an element of luxury, yet it attempts to preserve an introverted spirit.





"We have made reinforced concrete as an unbelievable creation. Its results will leave a bold mark in the history of people, as it is expressed in their monuments."

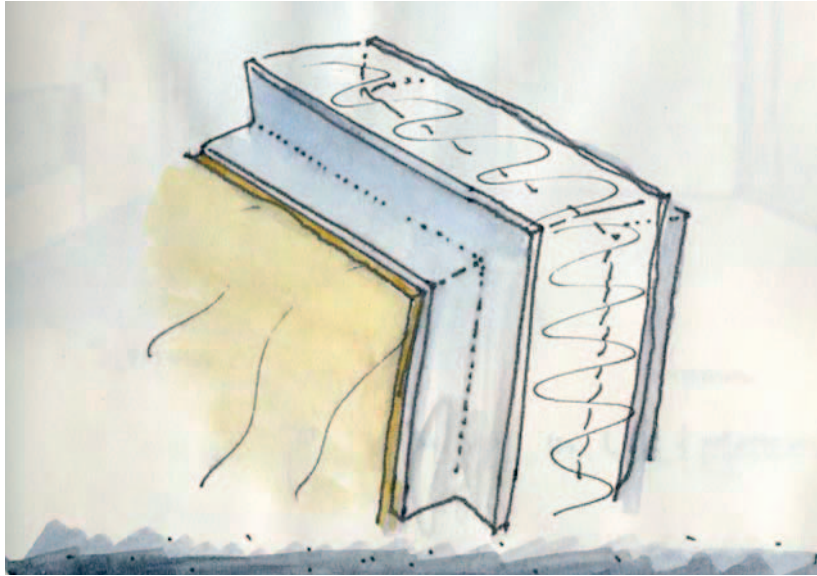
- Charles Jencks, Le Corbusier and the Continual Revolution in Architecture p45

MATERIALS

CONCRETE – Reinforced concrete was chosen as the main material for its tactile versatility and resilience. The massive reinforced concrete walls acoustically remove the cells from each other. Its primal aesthetic and tactile qualities are preserved in their natural state almost completely throughout the cell's construction. The surfaces receiving paint are kept to a minimum and used only to signify and amplify specific spatial conditions. Concrete appears quite often in the product of cell construction but is typically disguised or dematerialized by the application of paint to its surface as an attempt to treat all surfaces homogeneously. The walls are board formed signing the two primary spaces of the cell, and panel formed concrete signifying the space outside of the two primary Modulors. These two different surfaces combined with the lighting described later further amplifies the walls presence with the shadows and highlights created by the texture imbedded from its formwork. The floor and ceiling of the cell are polished and sealed for the ease of cleaning and to expand the spatial qualities of the cell through reflections. The paint chosen from primary colors and black represent the space outside the cubic volume and change the perception of space when light interacts with it. The colored surfaces reflect the color into the space while the black absorbs light and through contrast and dematerialization amplify the object interacting with it and giving it presence.

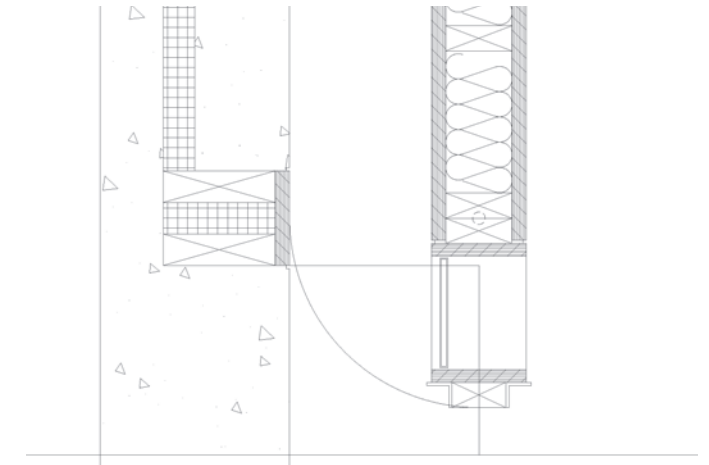
WOOD – The other primary space forming material within the cell is the wood walls and furniture unit integrated into the concrete walls of the cell. The warmth of the wood in contrast to the natural grey surface of the concrete operates as a space forming element integral with the concrete and thus different from the other furniture. The wood end walls form the wooden membranes enclosing the cell space.



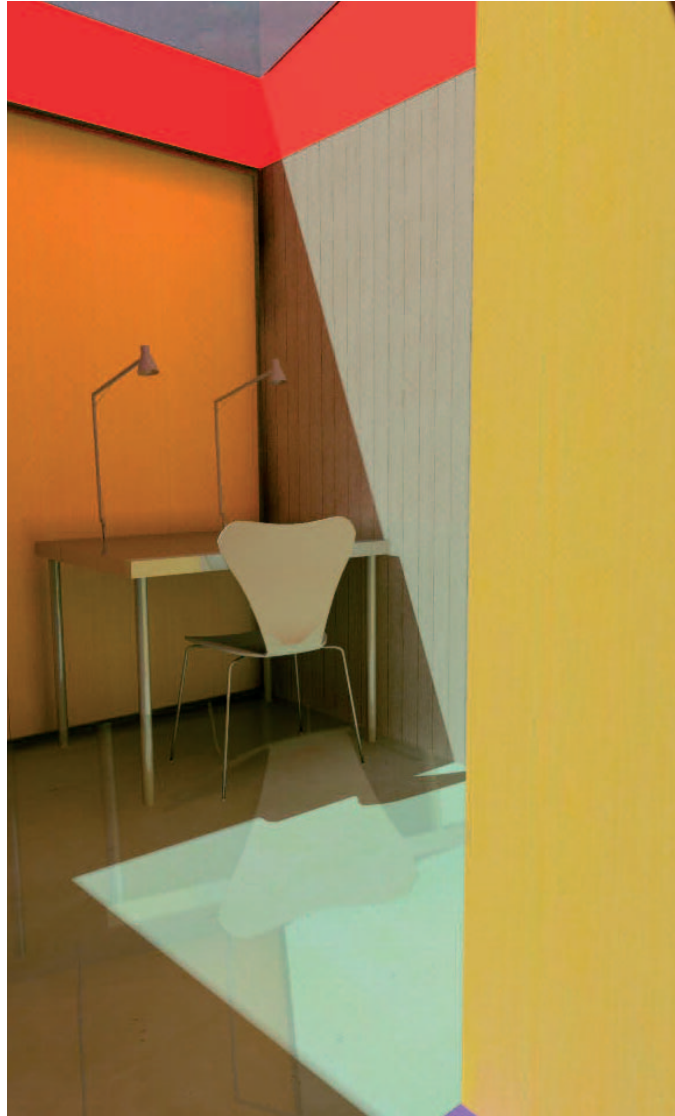


STEEL – The idea of the membrane is completed by the tectonic transition from the membrane's edge to the concrete planes forming a shadow line around the wall suspending it in air as if tightly stretched between the surfaces of concrete. The amplification of two dissimilar materials meeting each other with the steel angles happens not just at the floor but at all the linear connections makes the occupant aware that the two materials are separate entities and their space forming role.

COPPER – While originally similar in color to the wood its smooth reflective surface sets it apart from the wood as it wraps the ventilation louvers within the doors of the cell, but later oxidizes to a soft green as the patina of the copper changes its appearance through time.



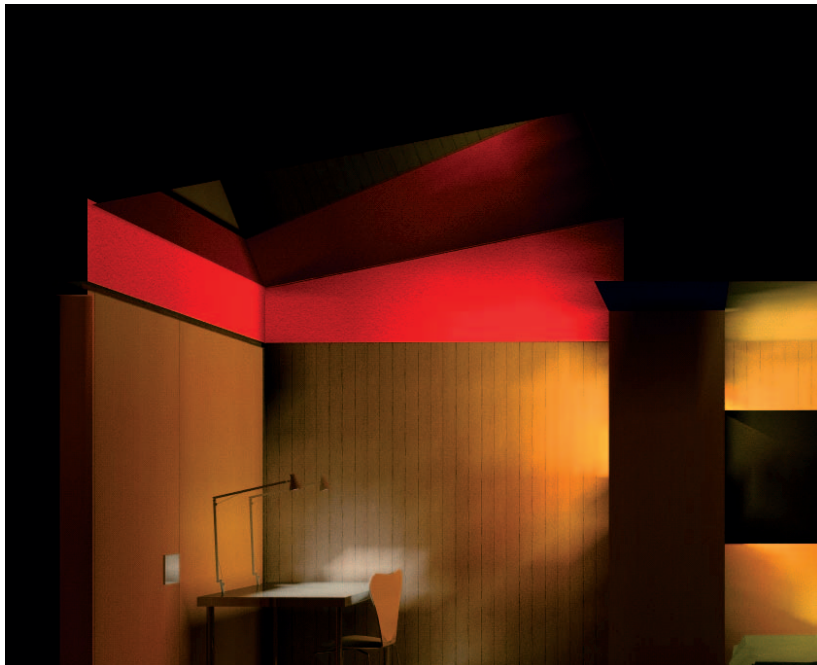
STAINLESS STEEL – The furniture entirely comprised of stainless steel reflects its environment. Mies proposes that reflective surfaces disappear by their assimilation of their environment. This architectural reduction of an otherwise strong presence of furniture augments the understanding of the Modular space.



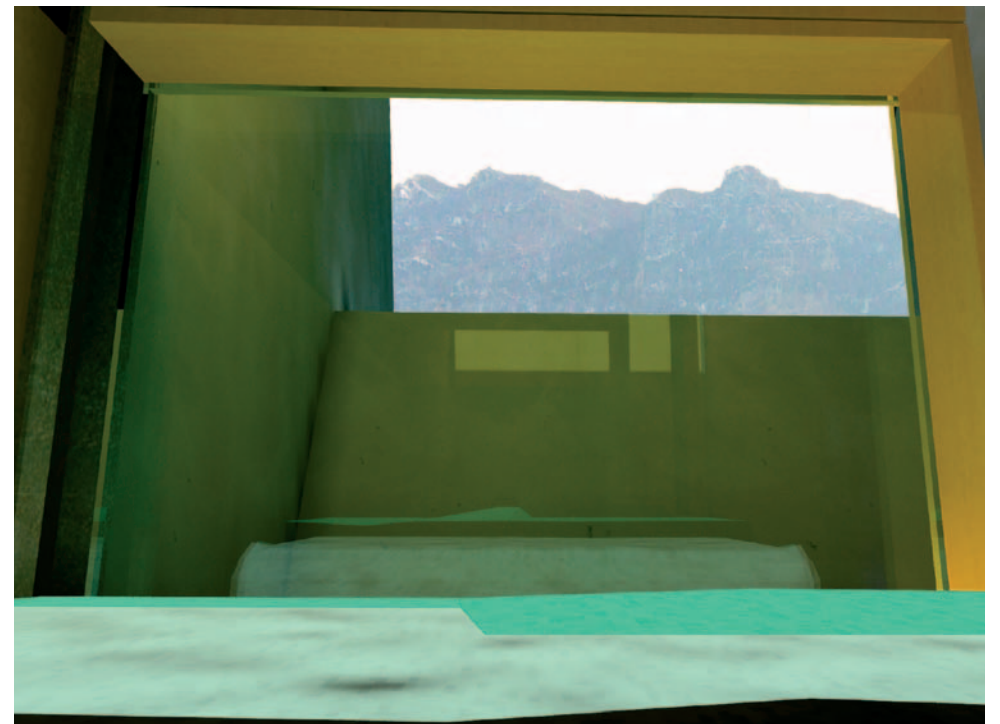
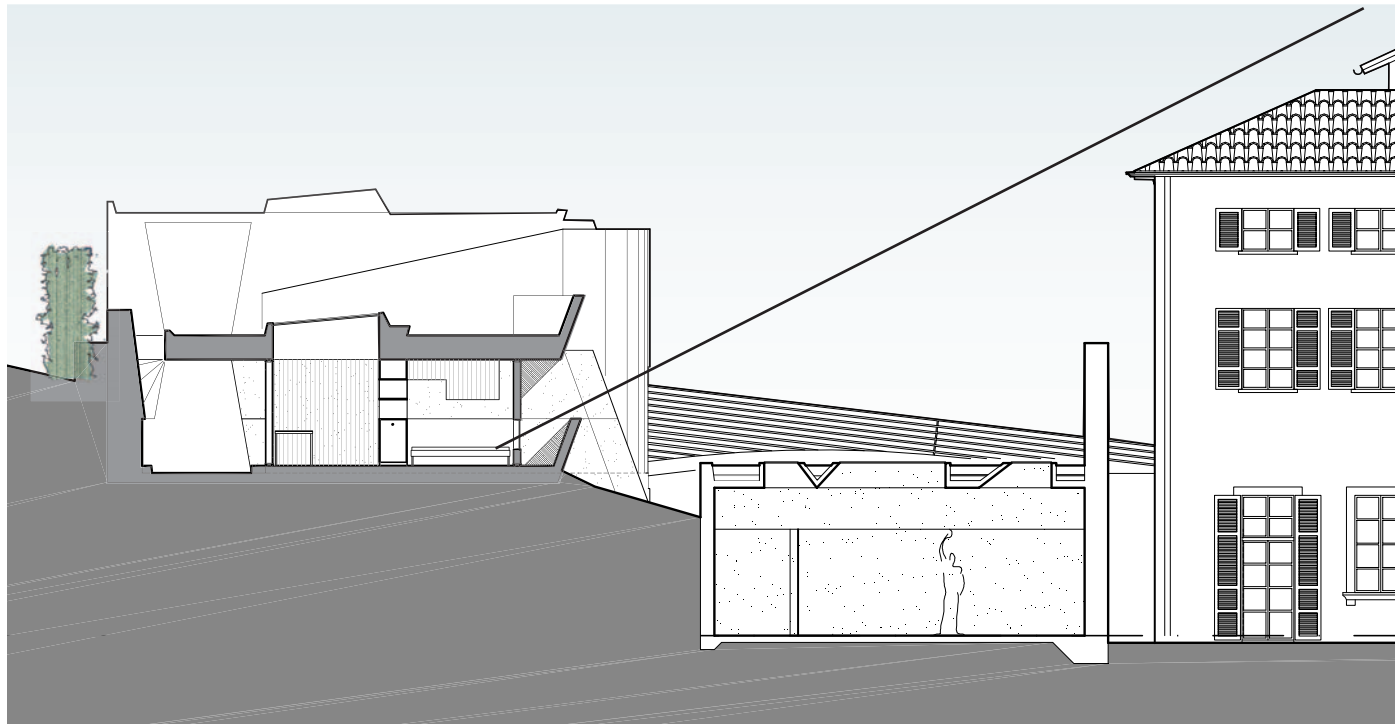
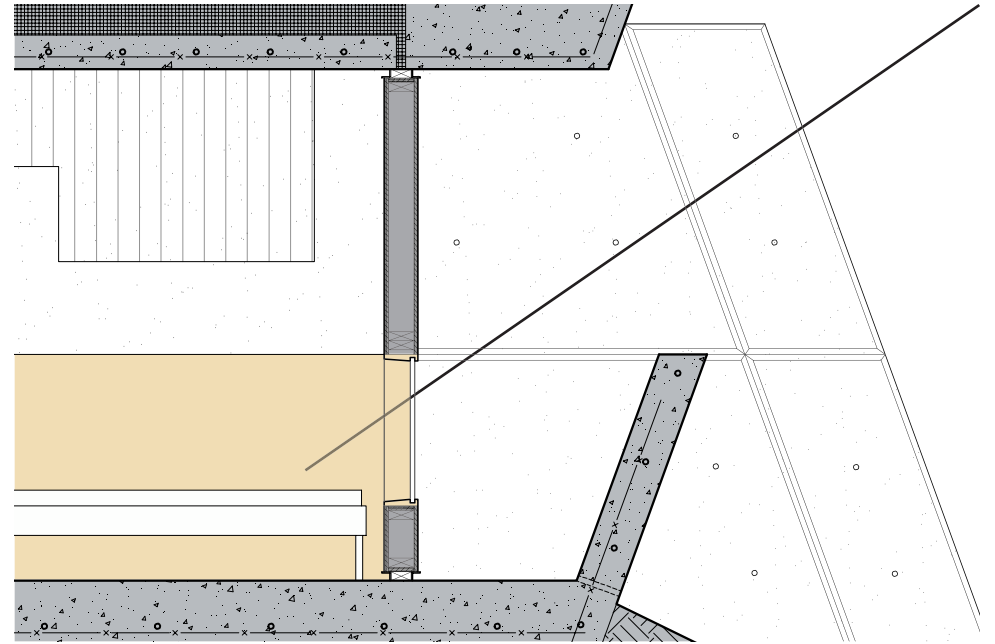


WINDOWS

LIGHT – The skylight above the working space transmits natural light onto the work surface. The translucent acid etched denies view to the outside and protects the privacy of the individual inside allowing full focus on ones work.

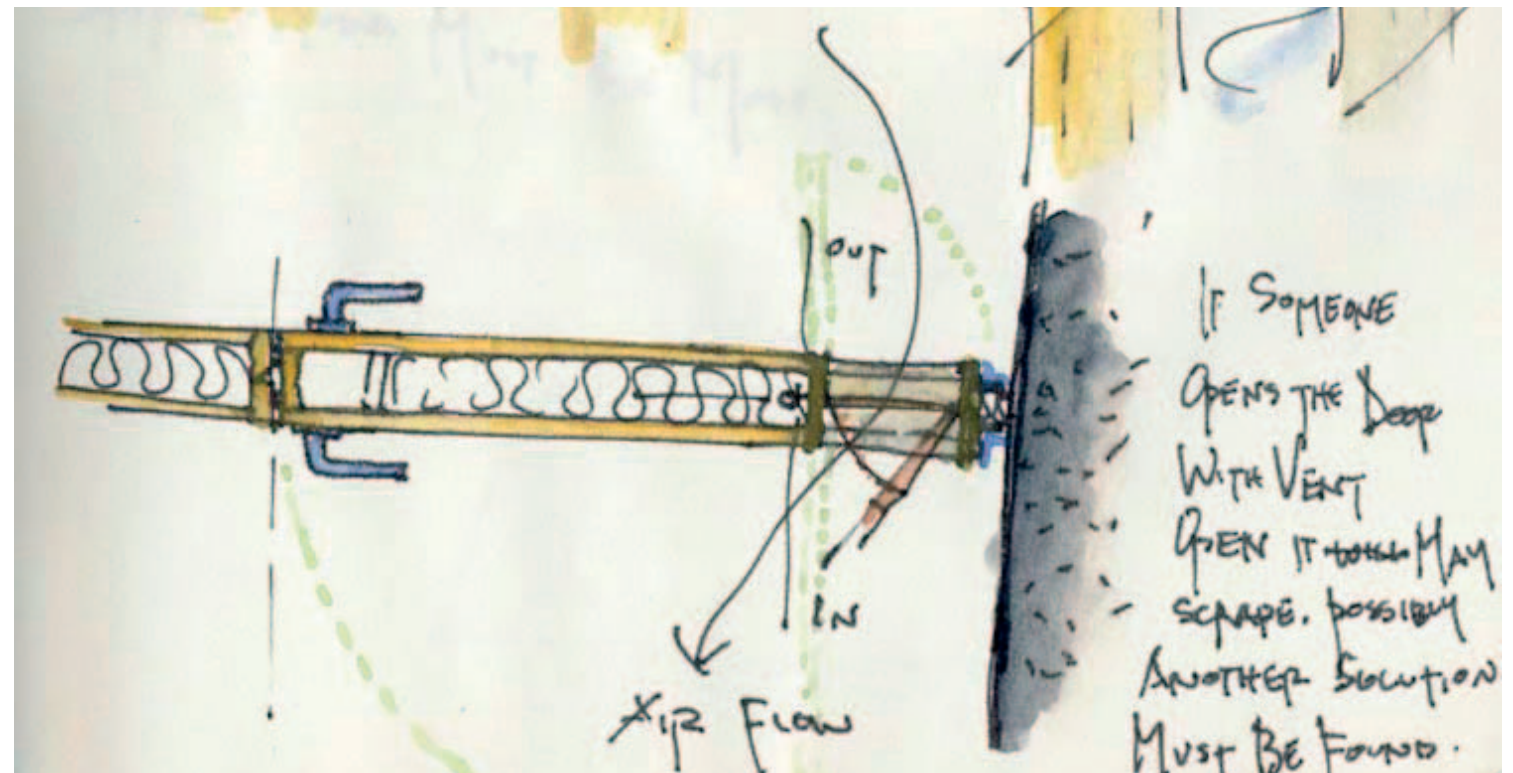


VIEW – The window at the head of the sleeping space frames the view to Monte Generoso but is placed deep enough into the cell shaft; direct natural light never penetrates into the cell at this location.



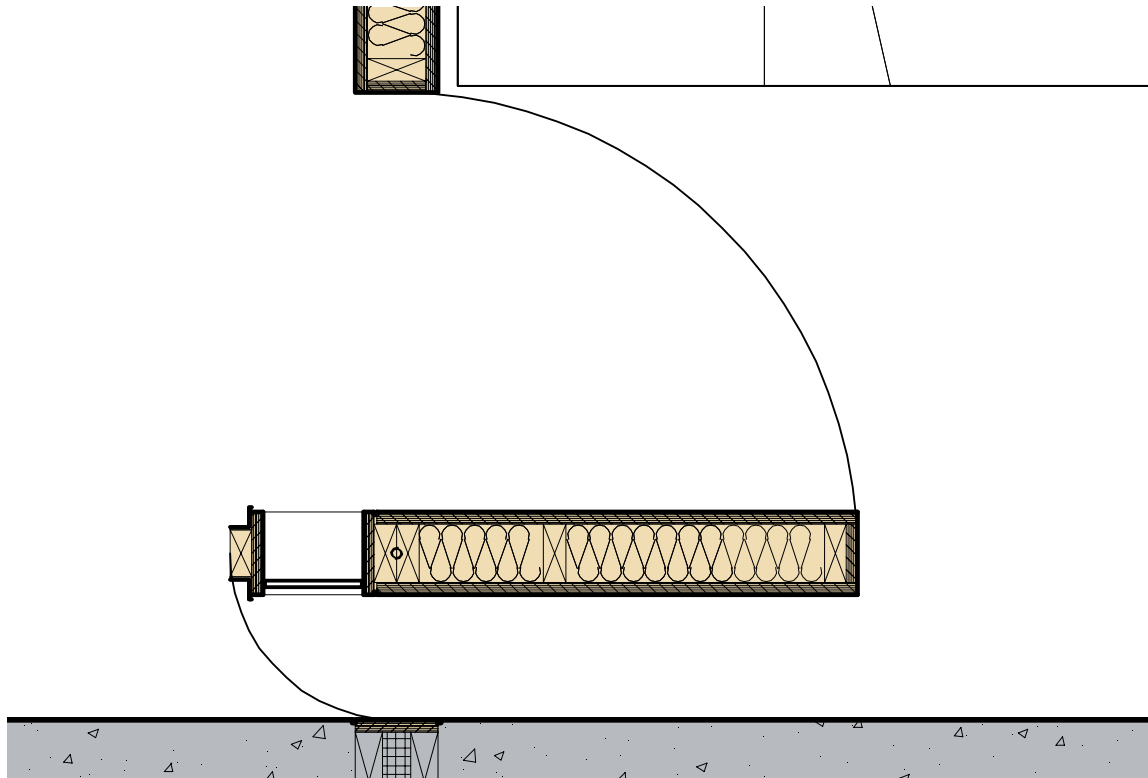


VENTILATION – The third window is dedicated to ventilation. Opaque in material (copper) it provides no view or light for the cell but is the only operable window of the three. Its operability as a part of the door/wall engages the occupant in the clearest delineation of the three and reinforces the idea of what architectural ideas each window responds to.



DOOR

The door as a necessary element of the cell is articulated as a part of the wall. The door pivots asymmetrically dedicating the larger portion to entry and the smaller part to ventilation.





FURNITURE

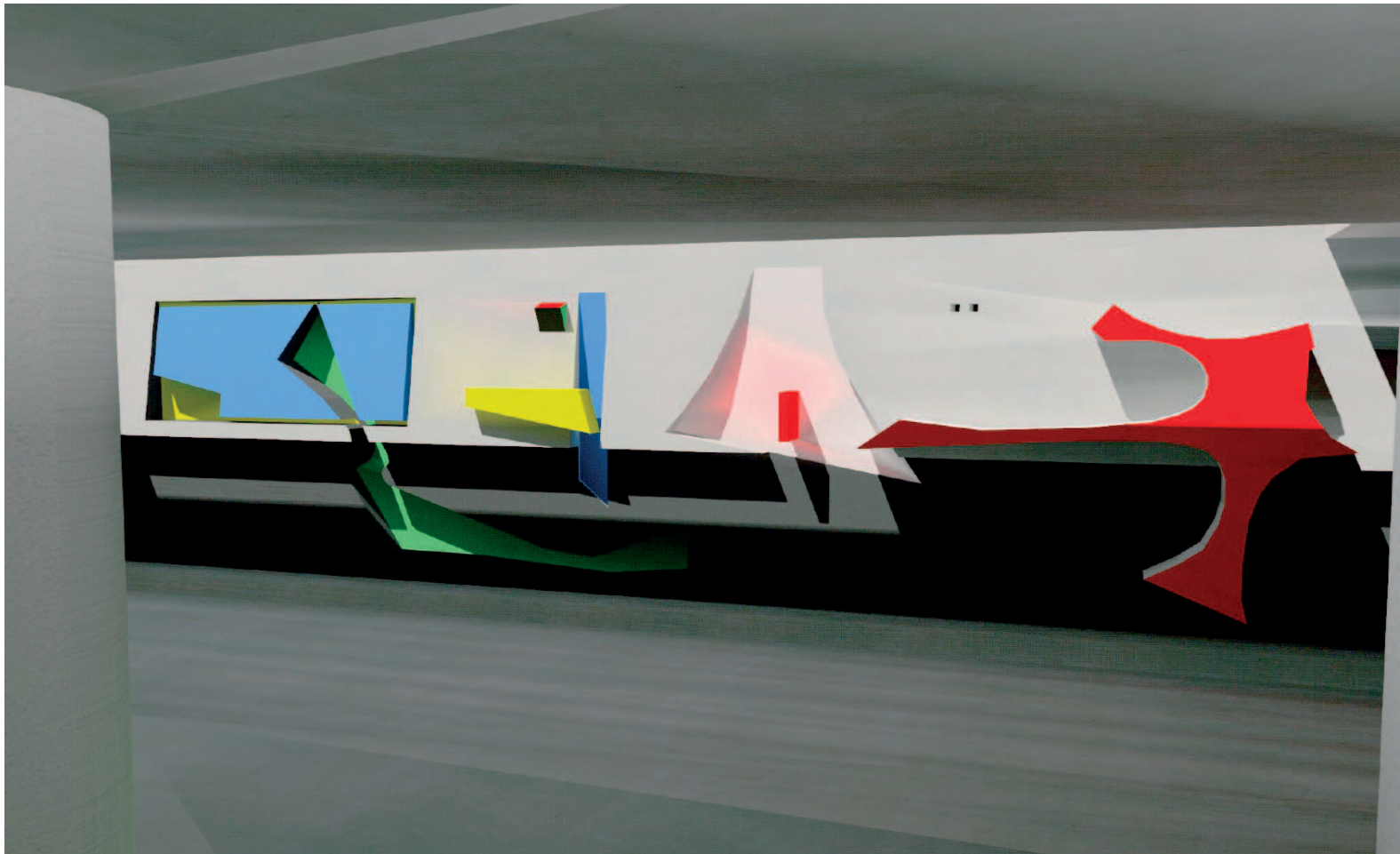
The bed, chair and desk have simple lines. As a kit of parts they belong to the two primary functions of the cell, the sleeping and working. The furniture is differentiated from the storage unit by its reduced material presence.

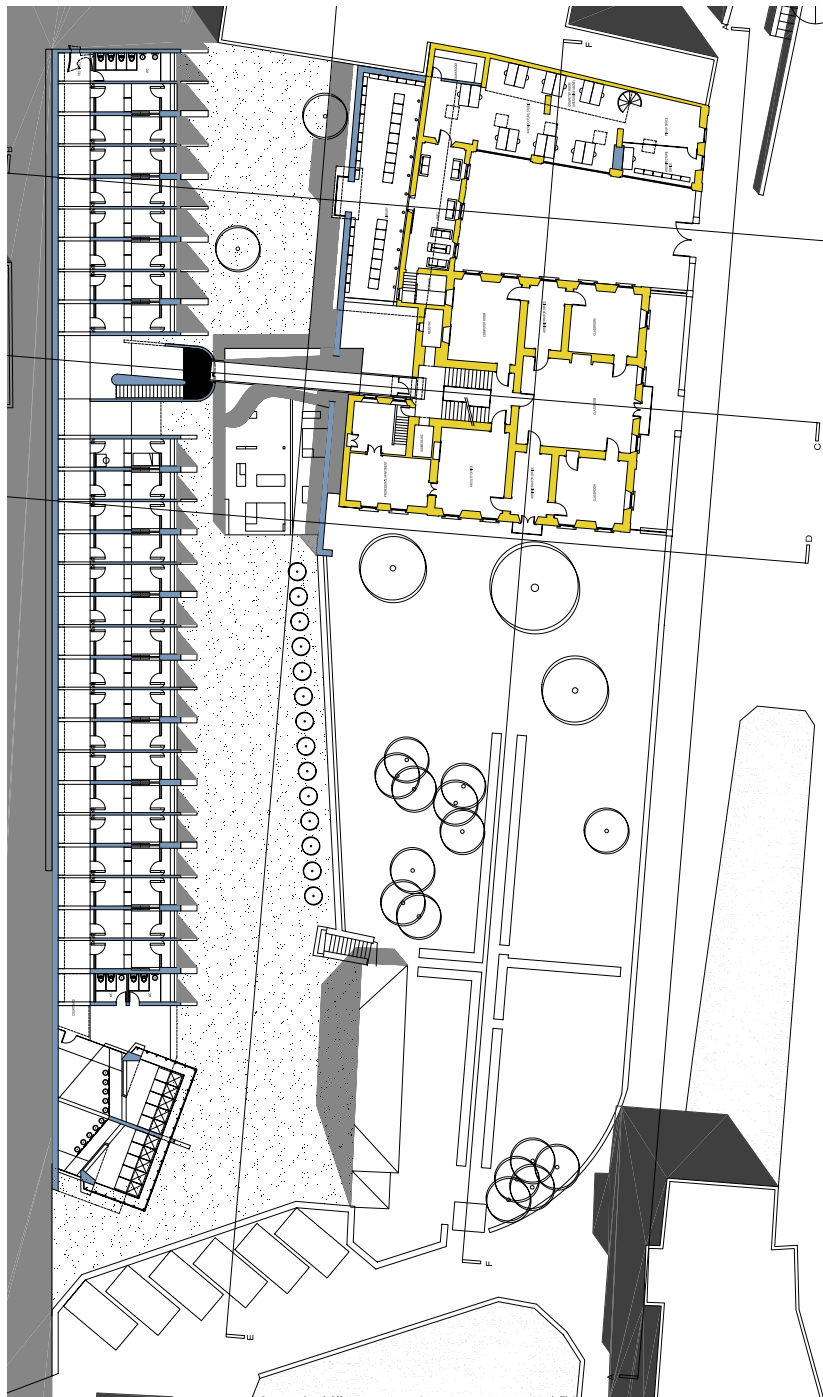
[the passage]

DEFINITION

The step down from the cell onto the is the exposed aggregate concrete is the first signifier of the transition to another space. The passageway links the cells together and forms the exterior path to the showers. The resultant space between the outer concrete shell and the cell itself. This passageway is naturally lit from a gap between the outer shell and outer cell.

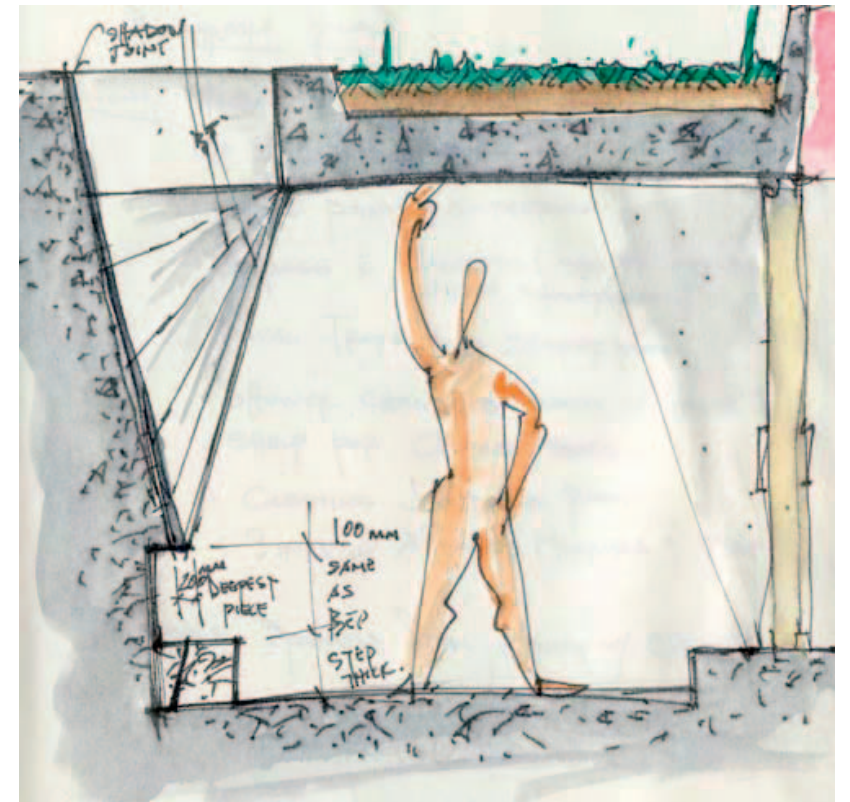
facing the retaining wall from the stairwell entering the cell complex

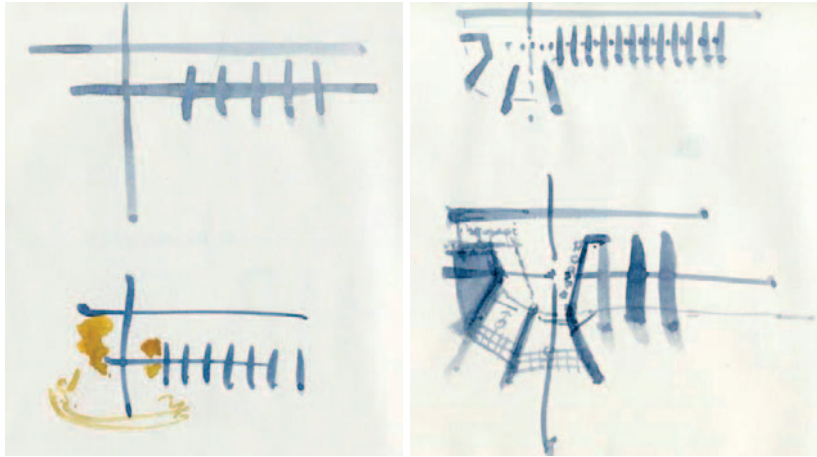




FORM

The form of the passage is the direct result of the shell's insertion into the topography. The floor deforms upwards into the wall and then deforms back overhead to form the ceiling. The retaining wall symbolically holds back San Giorgio with its battered surface but dematerializes near the ground as a relief panel cuts into the wall at 1m to de-materialize the wall and form a shadow line running the length of the passage. The passage line is kept at scale by the openings to the sky above which allow light to rake the wall until the shadow line and is modulated by the cell walls which determine the position of the skylight mullions.



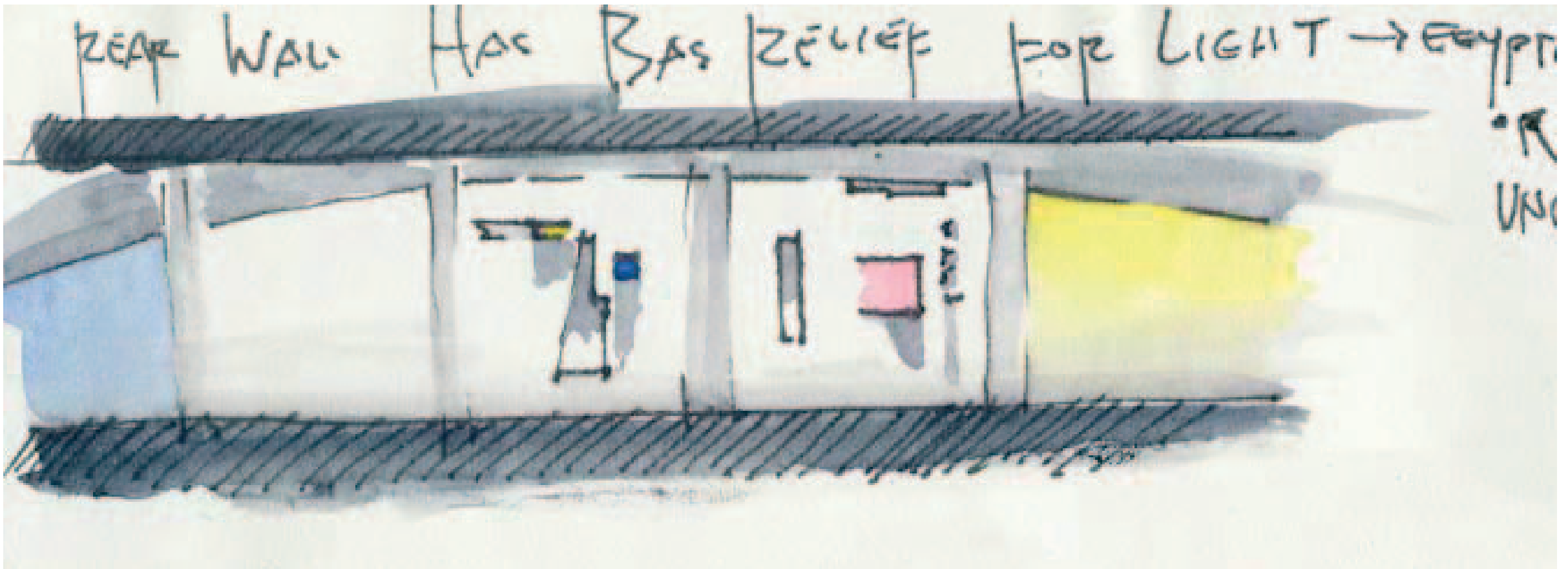


MATERIAL

The reinforced concrete floor of the passage is lower than the cell floor by 0,14m and surface is exposed aggregate concrete. This tactile transition from the cell's smooth polished floor down to the exposed aggregate signs the transitional nature of leaving the cell into the exterior passageway

LIGHT

The lighting in the passage is from openings in the ceiling above. The lights moderation happens from the mullions of the roof and allows rectangular swaths of light to rake down the wall. This dramatic lighting condition is accented by the graphic geometric openings directly above the footpath further placing light pools on the path as a guiding system.

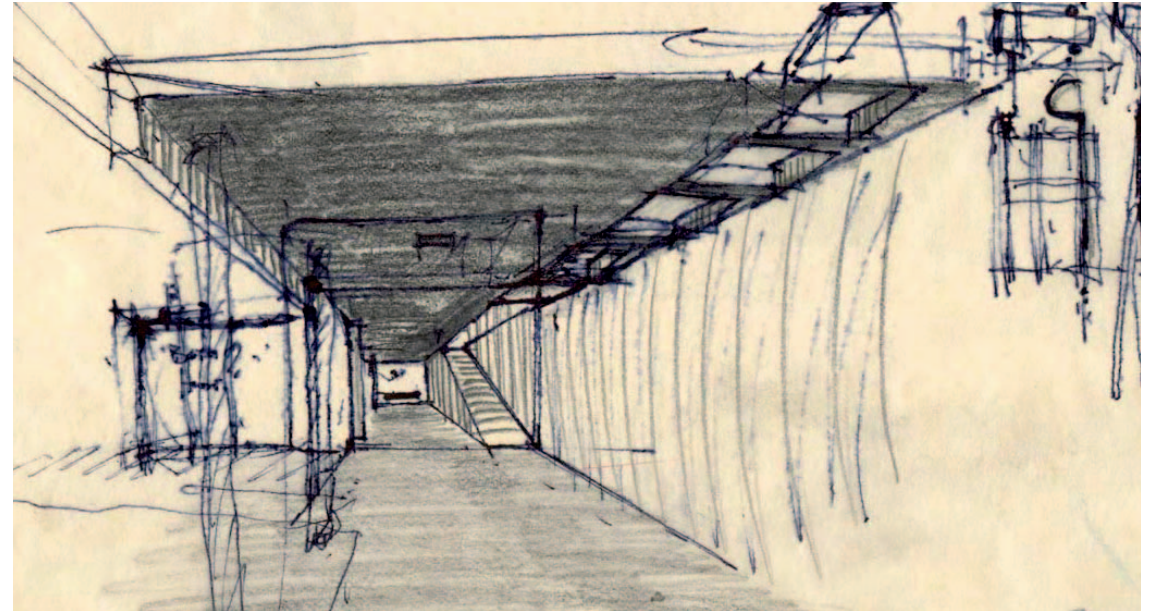


COLOR

At the stair tower, the light is allowed to rake the wall uninterrupted as the wall manipulates the light through relief and color. This serves as an entrance signifier and spatially as a knuckle to redirect movement through the passage.

ACOUSTICS

Sound containment was important with the close proximity to the neighbor's houses. This is achieved by the small openings into the ceiling trapping most of the sound within the passage. What sound does escape is directed vertically through the skylights to the sky without reflecting.



DEFINITION

This shower attempts to amplify a daily ritual that has become a distinct part of American culture.

The rotated shower area is the termination of the repetitive cell block and passage. From the entry one enters the main sink space of the shower area. Past this point one can choose a respective shower room.

The shower area is designed as a community space. After leaving the confines of the cell, the person enters the shower area as a social space. Morning sunlight penetrates into the shower diffusing itself through the two layers of etched glass serving as one of the shower's walls and ceiling. The light within the shower is reflected by the stainless steel partitions further augmenting the perception of space. The extraordinary amount of natural light within the shower space amplifies this ritual from the banal to unique. The prospect of taking a shower in morning sunlight prompted the initial response to design a shower with a glass wall. Two problems arose out of such a decision. First, the visual privacy, and second, the mechanical issues involving a glazed wall.



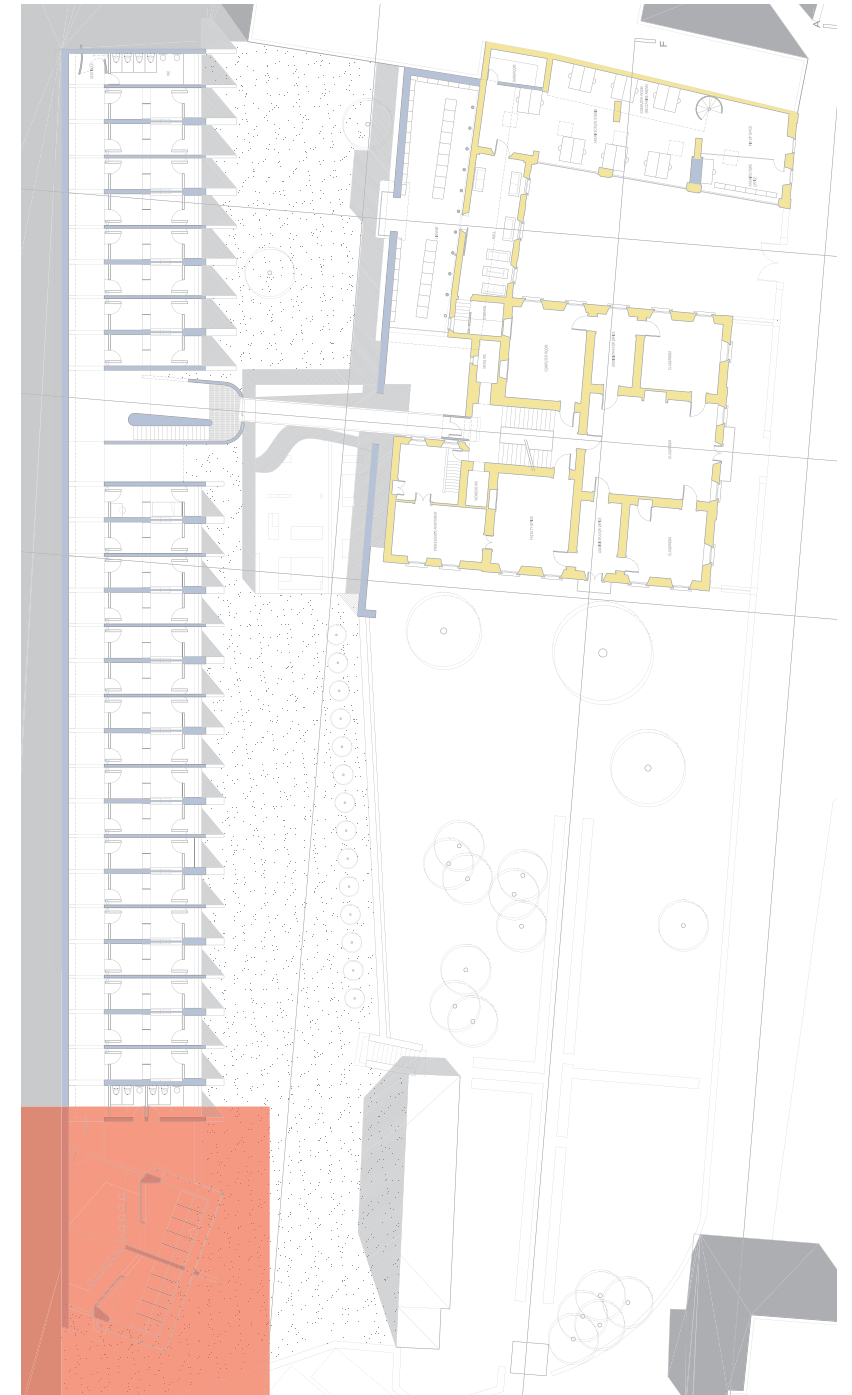
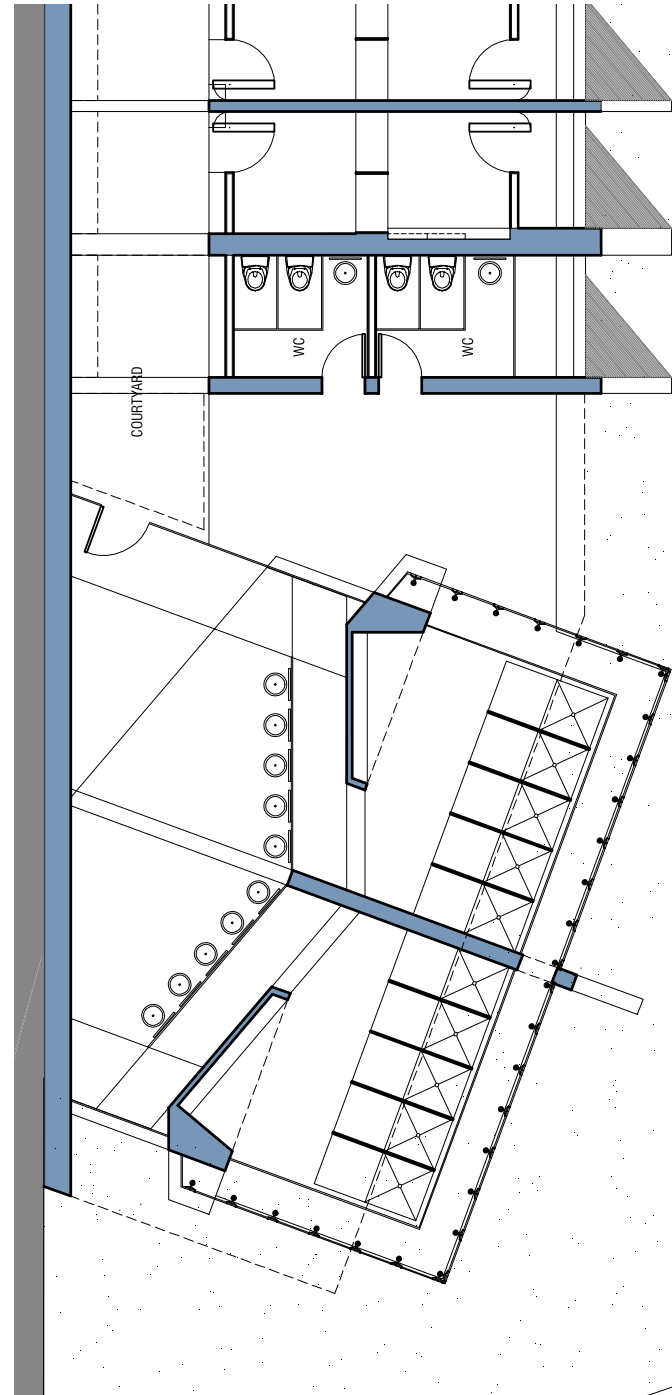
MATERIALS

CONCRETE – The floor and ceiling of the shower area are made of polished and sealed reinforced concrete for durability and maintenance.

STAINLESS STEEL – The shower area's surfaces are stainless steel panels. The highly reflective nature of the metal amplifies the morning light penetrating into the shower area and again provides an easy surface for maintenance.

GLASS – the translucent double glazed shower wall provides total visual privacy and further allows the exterior layer to be an insulating glass layer while the inner tempered plate glass layer has the utilities running through it to the service space behind it

LIGHT – The morning light penetrates the double glazing system illuminating the shower and the stainless steel walls.

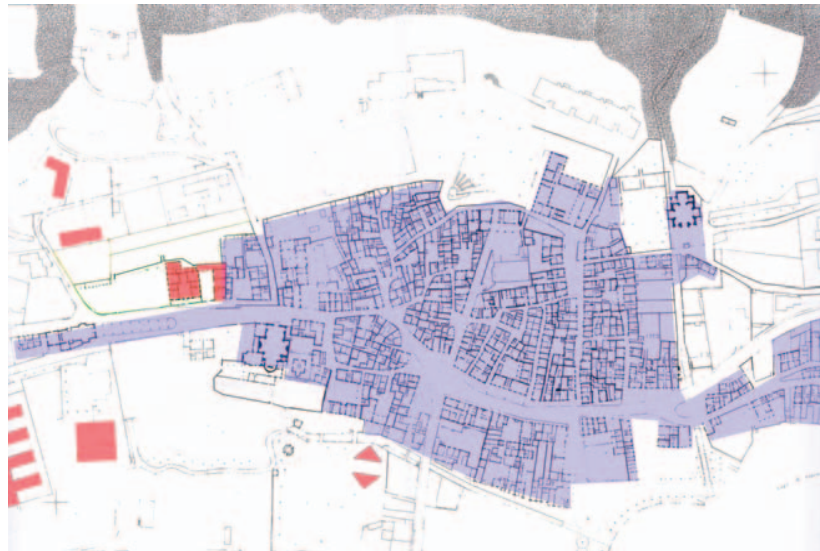


"Harmony which results from the interplay of the individual and collective life...in these we always find provision in the house for the individual to be alone, usually in the form of a bedroom, again a 'cellule' or conceptual monk's cell, a place of retreat."

- Charles Jencks, Le Corbusier and the Continual Revolution in Architecture, p.49

"Cells as a consequence of our social order, are subject to various forms of grouping . . . it is a special type of city that allows the individual to forget the fact of his having to exist in a collective"

- Simon Richards, Le Corbusier and the Concept of Self, p.35



[city]

CELLS, PASSAGE, AND SHOWERS AS A LAYER OF RIVA SAN VITALE IN THE CONTEXT OF URBAN FORM

The cell by itself cannot provide all necessities of living. This makes the addition of the shower facility linked by the passage an important component. The Casa Maderni complex itself with respect to the town now begins to emerge as not just another building within the historic fabric of Riva San Vitale, but as an important landmark and defining element of the town. It adds definition to the periphery of the nucleus by integrating the new with the old, further reinforces Riva's second major growth ring including Rochat's Kindergarden, Aurelio Galfetti's School, Giovanni Galfetti's newest house in Riva, Durisch's Middle school, and residence.

This addition to Casa Maderni and Riva continues the Mendrisiotto tradition of Corbusian influenced architecture as the new regional archetype.

Despite its strong formal appearance, it benefits from its contextual situation of the hillside and vegetation for its visual equilibrium with the casa and Riva.



