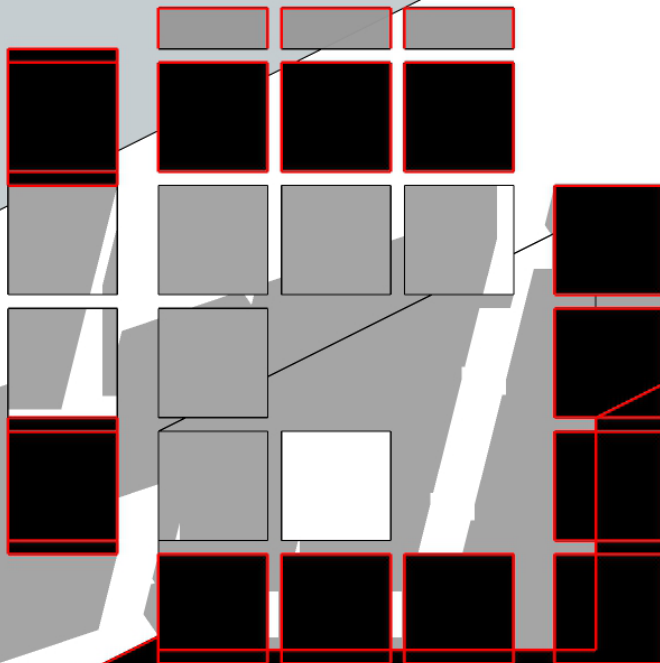


# SYNAGOGUE AYIN





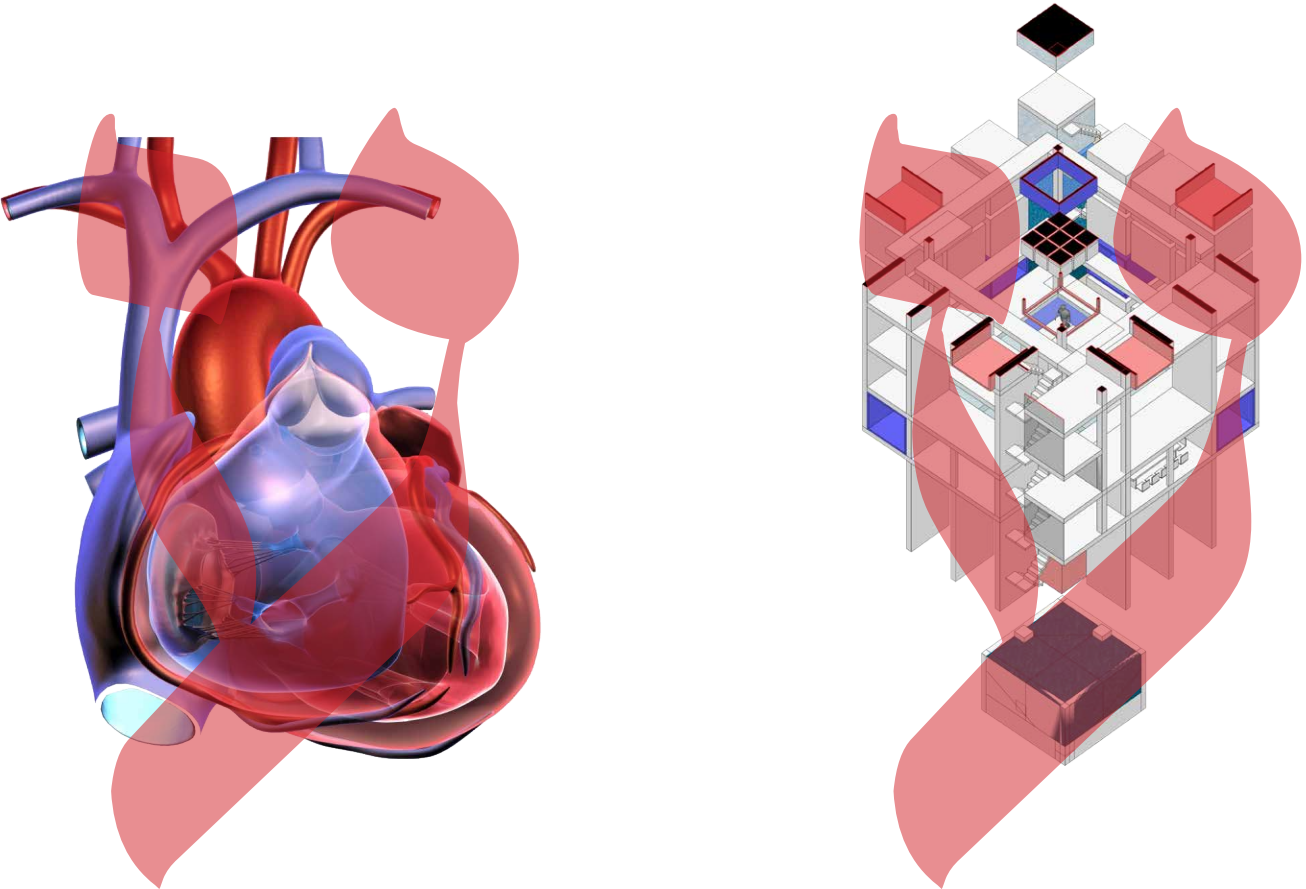
# לחיים

*L' CHAIM to life*

dedicated to  
Ed Weiss and Marilyn Turtz  
and of course David and Charlie

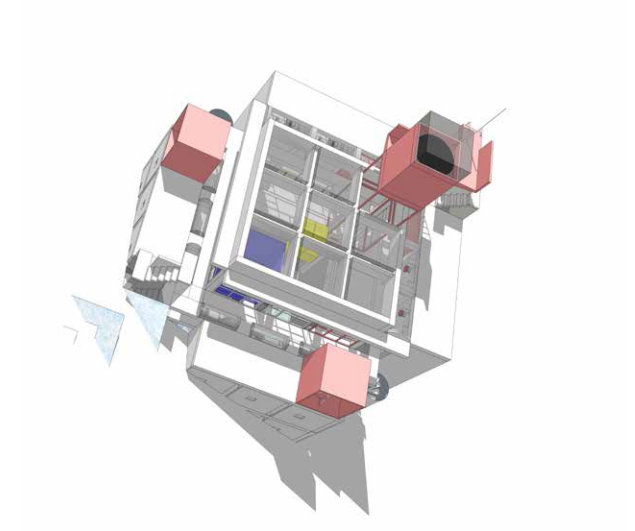
*and to the memory of poet William La Riche  
"the way of the stream cutting through rock,  
the way of the reed bending in wind,  
the way of the swallow with twigs for nascent nest,  
... and the way of the architect  
who slowly makes his city an agreement among rooms"*

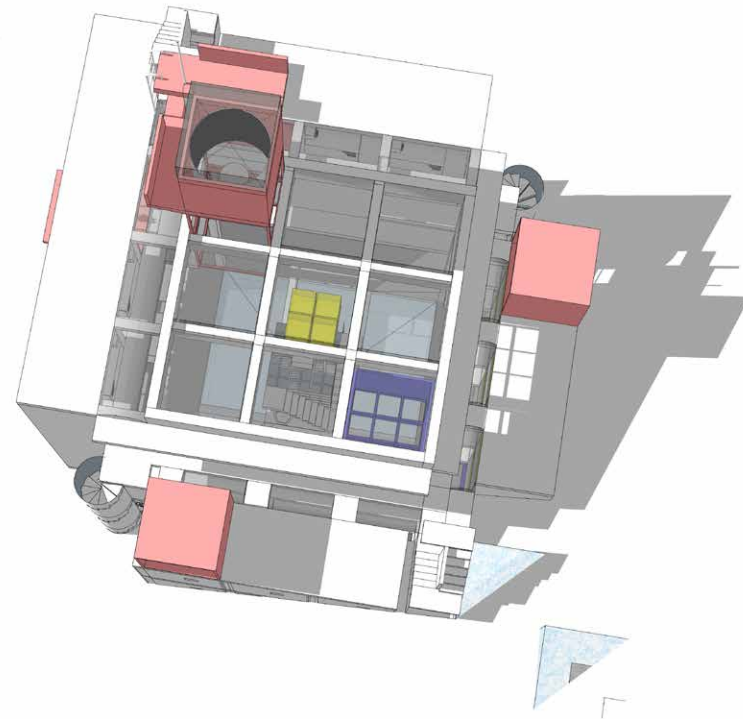
lifesavers all



# SYNAGOGUE AYIN

AYIN is a backpackers' lodge and lookout. Coming down from a ridgeline mountain trail we may find this synagogue at the source of a hillside spring, carved into the slope but also perched on high like a forest fire tower. This Look Out scans the landscape for both sustainability and emergency. Today's most dire emergency may be the disappearance of snow-capped alpine glaciers. Prayer in this space is both Seeing and Doing. Spring water is cooled by heat exchanger to rebuild and expand receding snow and ice coverage at this upper elevation and thus repair our changing climate. While this slow work proceeds, 12 resident Seers rebuild and repair the World-- Tikkun Olam. Such action requires both vision and insight. Thus Synagogue AYIN is a Look In as well as a Look Out. Seeing while somewhat Snowblind is a fading art.



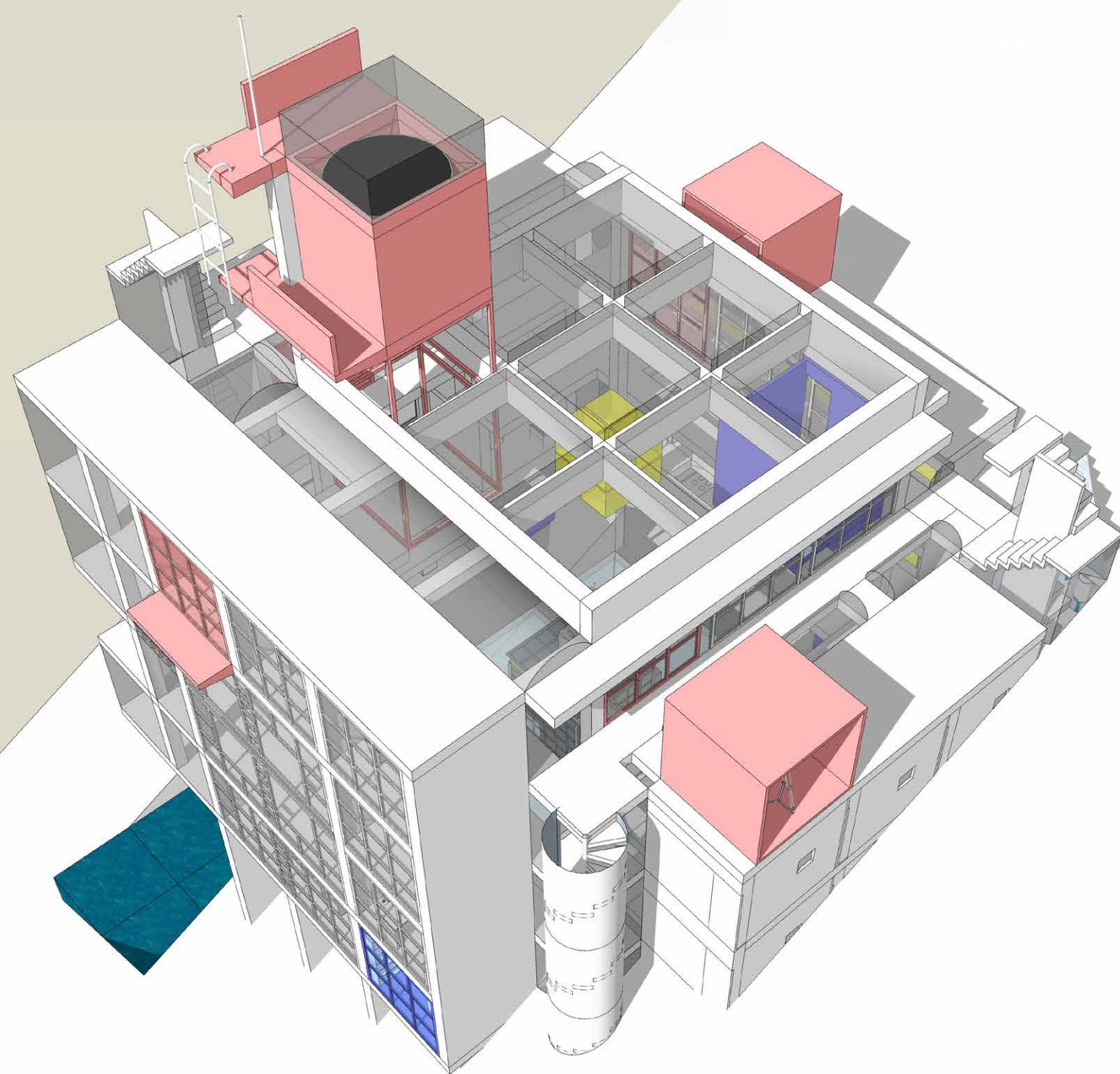


AYIN is the 16th letter of the Hebrew Aleph Bet.

AYIN is both name and icon for EYE. Traditionally every synagogue must have a window to the community. Engagement through both outward observation and inward contemplation are essential in the Jewish tradition. Many professions and occupations depend on seeing as a form of prayer including most obviously meteorology-- observation of the weather. But other forms of "weather" observation include astronomy, geology, hydrology, and biology, as well as climatology, forestry, archaeology, painting, poetry, and architecture, and just living itself.

The work is staffed by 12 people. As at the South Pole outpost, here each person may have a Seeing specialty, and will also take part in shared activities, like cooking, service, scholarship. and joy. in addition to observation spaces, arranged as pairs of in-out XYZ zones, the program includes room for offices, conferences, sleeping quarters, cooking hygiene and bathing facilities, as well as multi-media library, gallery, storage, and bar.

The space is a study of plan/section simultaneity, XYZ tension and compression (IN and OUT) and investigation of the locale of a NE/SW running ridgetop above the tree line. The form is the intersection of two 4 x 4 x 4 cubes each of which is therefore originally composed of 64 volumes, but their intersection and subtraction, with needed adjustments yields 70 cubes of 8' x 8' x 8' or 512 cubic feet each. Exterior office boxes are *brises soleil* that temper light while cooling the interior central volume even as it stays warm from the ground. The central atrium provides for community gathering as well as religious services. The building is not ADA compliant. No wheelchairs get up here! Bionic exoskeletons are imminent. So no elevators are provided. If needed a walking crane-hoist may be installed in the ceiling.



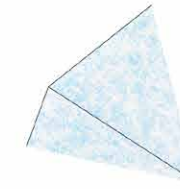
## SKY LIGHT

Heaven window  
rooftop telescope  
tube in cube sees past  
Sun, our neighbor star.

Solar roof 9-square  
skylights are amorphous  
silicon photovoltaic  
translucent glass,  
programmable  
to proportion visible  
light to energy harvest  
as needed.

Reflected light  
off opposite mountain  
onto north facade  
may offer solar energy,  
since facade  
window glazing  
may also be made  
of this material.

For *Ner Tamid*,  
Eternal Light 2-cube  
at ceiling center,  
even least energy,  
dimmiest photon packet,  
should suffice-- cosmic  
background radiation!



## MOUNTAIN FOUNTAIN

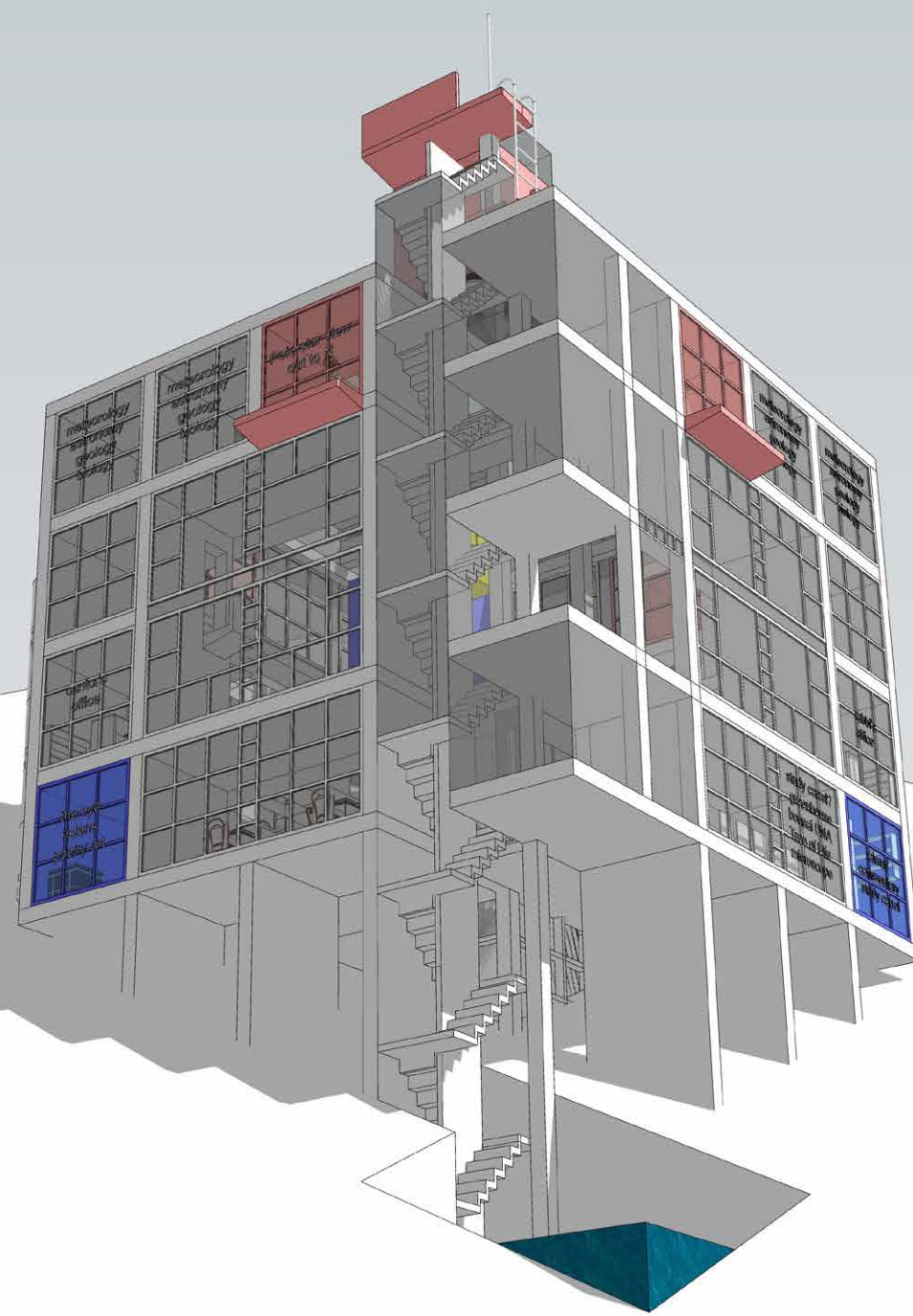
AYIN is also associated with FOUNTAIN. Insight reveals a fountain of wisdom as the soul's eye sees the blessings of unity and sanctity. While sheep look toward the shepherd, the shepherd watches the flock.

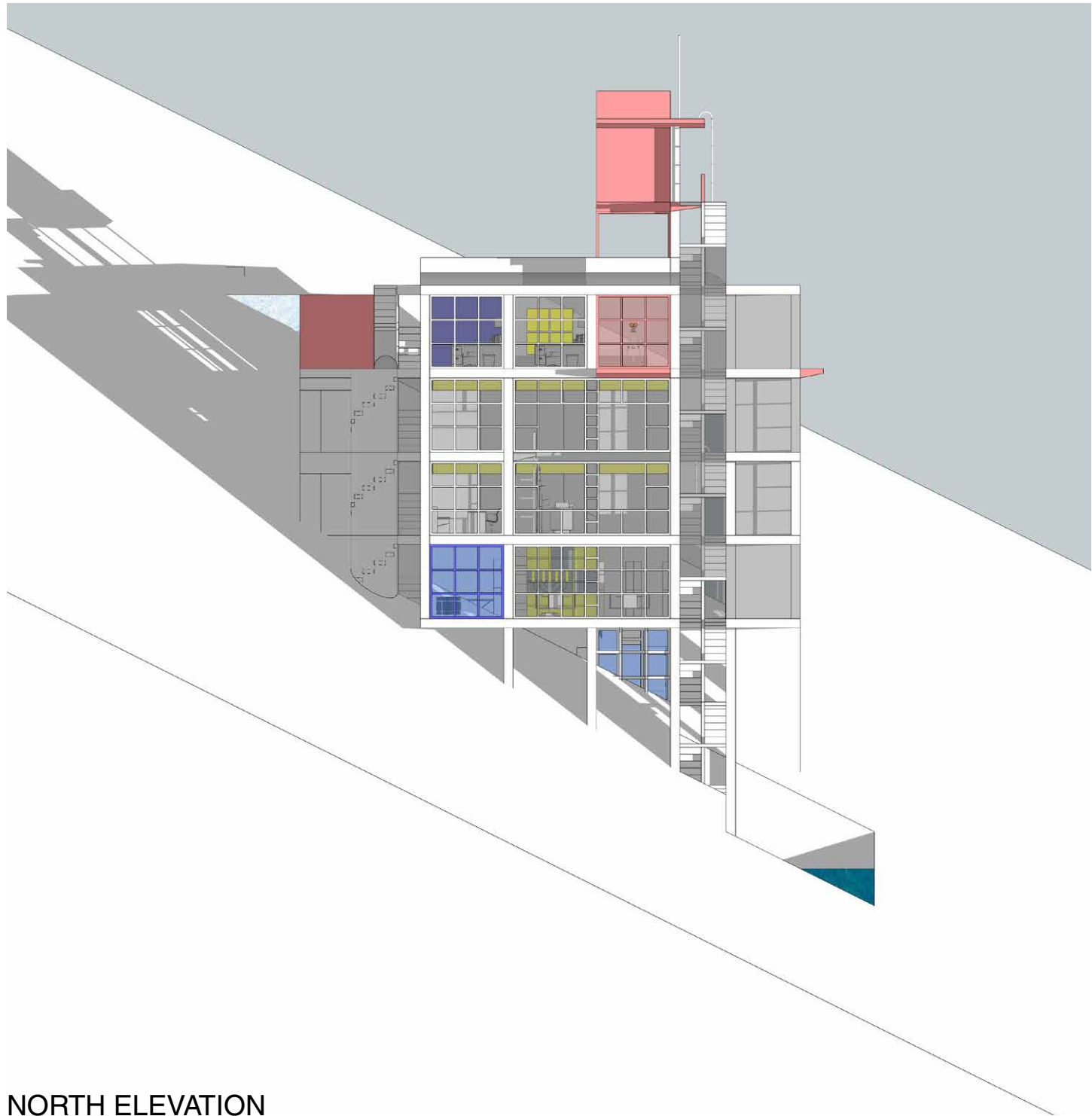
*carved-in niche inside out center edge  
waterfall cliff bower fount of knoll hedge  
hanging tower wonder full know ledge*

The slope is excavated to the level of the Spring which gushes forth from its aquifer and water table perched above the elevated impervious zone of rock that holds accumulated rain and glacial meltwater.

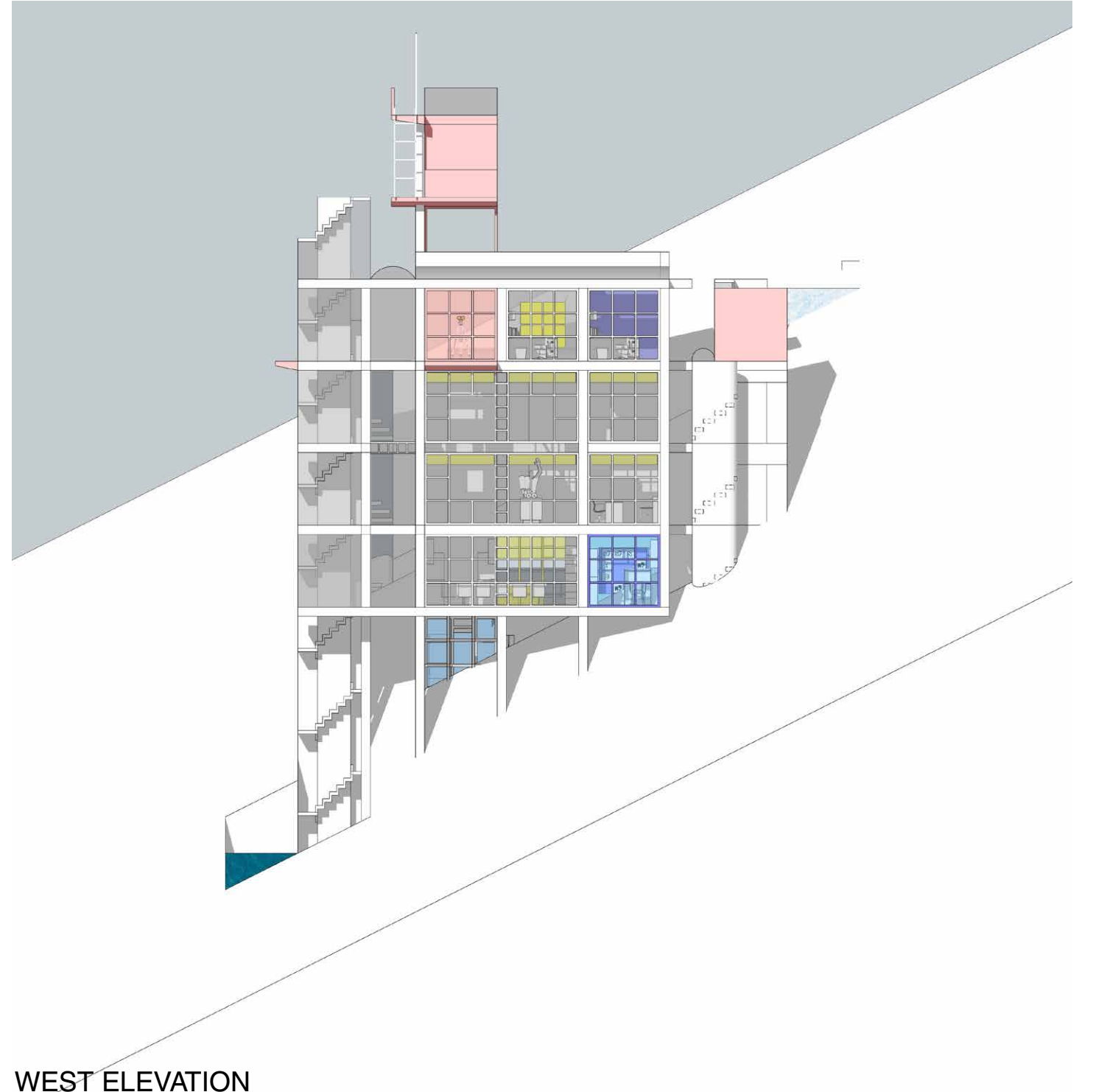
A heat exchanger removes heat from this water and directs excess heat to the radiant heating flooring system below the central space, while a water pump lifts the cooler water to a tank level above the original outflow. An exterior heat pump completes the ice-making apparatus. Ice floats above water. Several stages of this confined interior reverse "icefall" may produce ice to replenish retreating or even lost glaciers.

This system uses the subsoil constant temperature of about 54 degrees to minimize extreme energy expenditures in heating or cooling. Ambient building environment stays warm even in high-altitude chill, while the heat that drives this warmth is taken to freeze Spring water and create a new snow cap. A fountain "bubbler" directly below the *Bimah* acts as control valve for the tempering radiant floor. Pipes in the radiant floor can drain into the pool carved into the hill below the footings of the structure. At the shady northwest corner of the site, this pool may become a hot tub.





NORTH ELEVATION



WEST ELEVATION



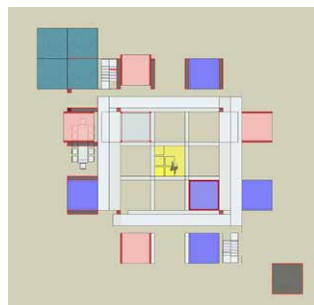
## LOOK OUT!

Seeing, along all 3 axes,  
in all 6 directions looking outward,  
east/west, north/south, and up/down,  
observers in AYIN watch worlds to SEE.

Astronomer observes the sunset  
in the west and the first 3 visible stars  
that mark a Jewish new day.  
These will be in the east, the sky darkest  
sky furthest from the setting sun.  
Cosmology may begin from the Pole Star.

Meteorologist sees weather,  
Hydrologist sees water-ice form and melt,  
Geologist sees planet our home,  
Biologist sees life and conserves  
its precious gift in all forms.  
Excavating, Archaeologist  
becomes spelunker and miner to explore  
the cave for heritage and treasure.

Lookouts' crow's nests  
are supplied with instruments  
(binoculars telescope, *patiche*, etc)  
and diary for data recording.



## (LOOK IN)

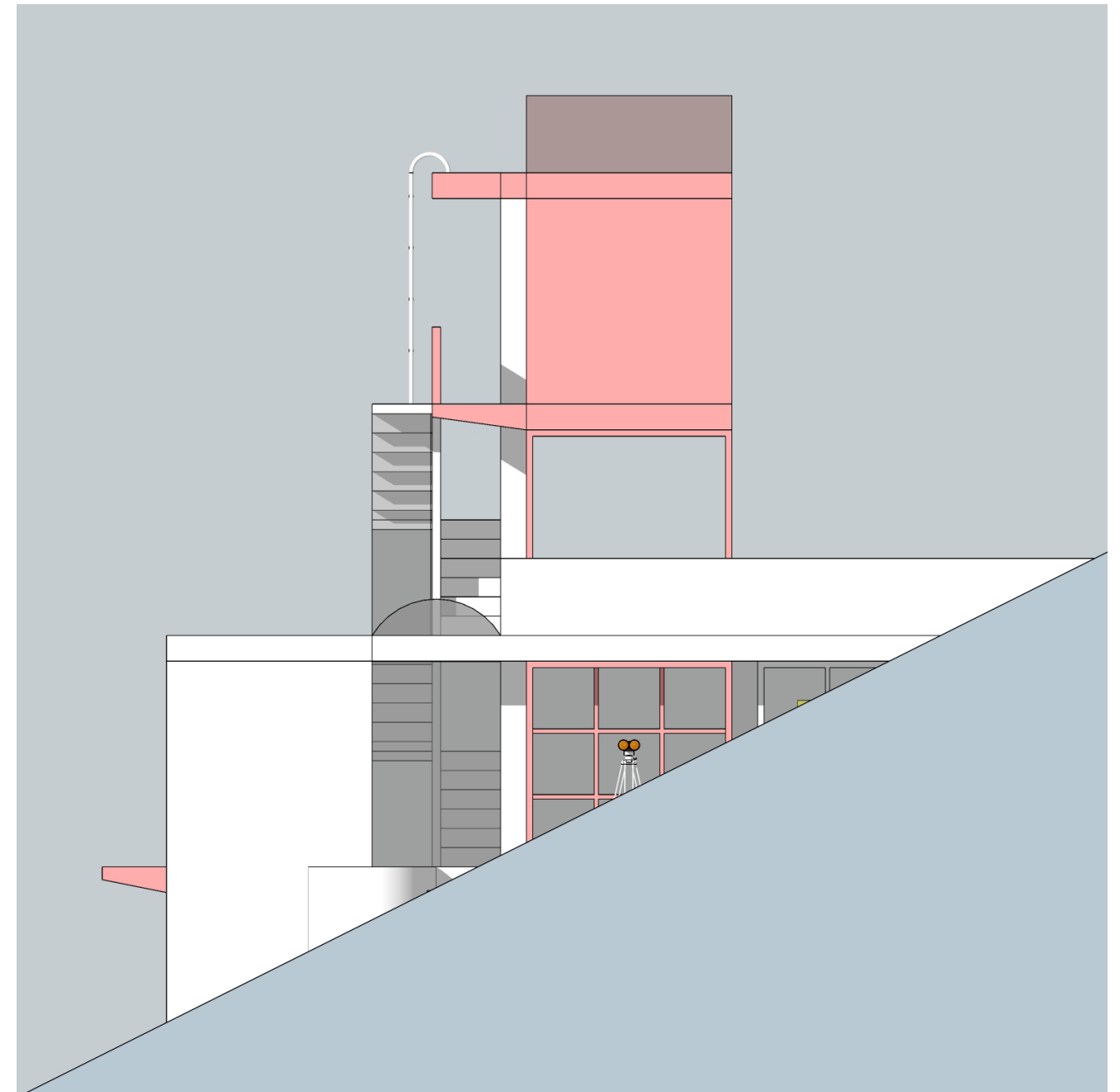
The 3 perpendicular axes  
also hold the 6 Looking Inward spaces.

East-west is time, axis of continuity.  
Sun rises and sets. Tradition.  
Facing east, *Aron ha Kodesh*, Holy Ark,  
holds the Torah, scrolls of the Law.  
Opposite westward is the Study Carrel,  
locus for commentary, the Talmud.  
Library sits south between them,  
prayer direction for seeking wisdom.

North-south is the span of light and shade.  
This is the axis of contrast-- music and art.  
Here spirit becomes body as vibrating space.  
Cantor's space looks inward from the south  
with music stand and keyboard.  
North and opposite looking inward  
finds The Eye Listens, gallery of arts.  
A Poet's Chair faces Cantor's music space.

The energy axis, Up/Down, is a continuum  
of transformation, from gravity to radiance.  
Below, looking inward and up,  
lies the place for psychoanalysis,  
the Jewish version of Confessional.  
Above, gazing inward and down,  
hangs the meditation space.  
Bachelard's topography  
from cellar to garret.

inward seers, insight seekers:  
prayer scholar soul watchers,  
musician poet artist heart watchers,  
psychologist meditator mind watchers.



LOOK OUT BINOCULARS PEEK OVER SOUTH RIDGE

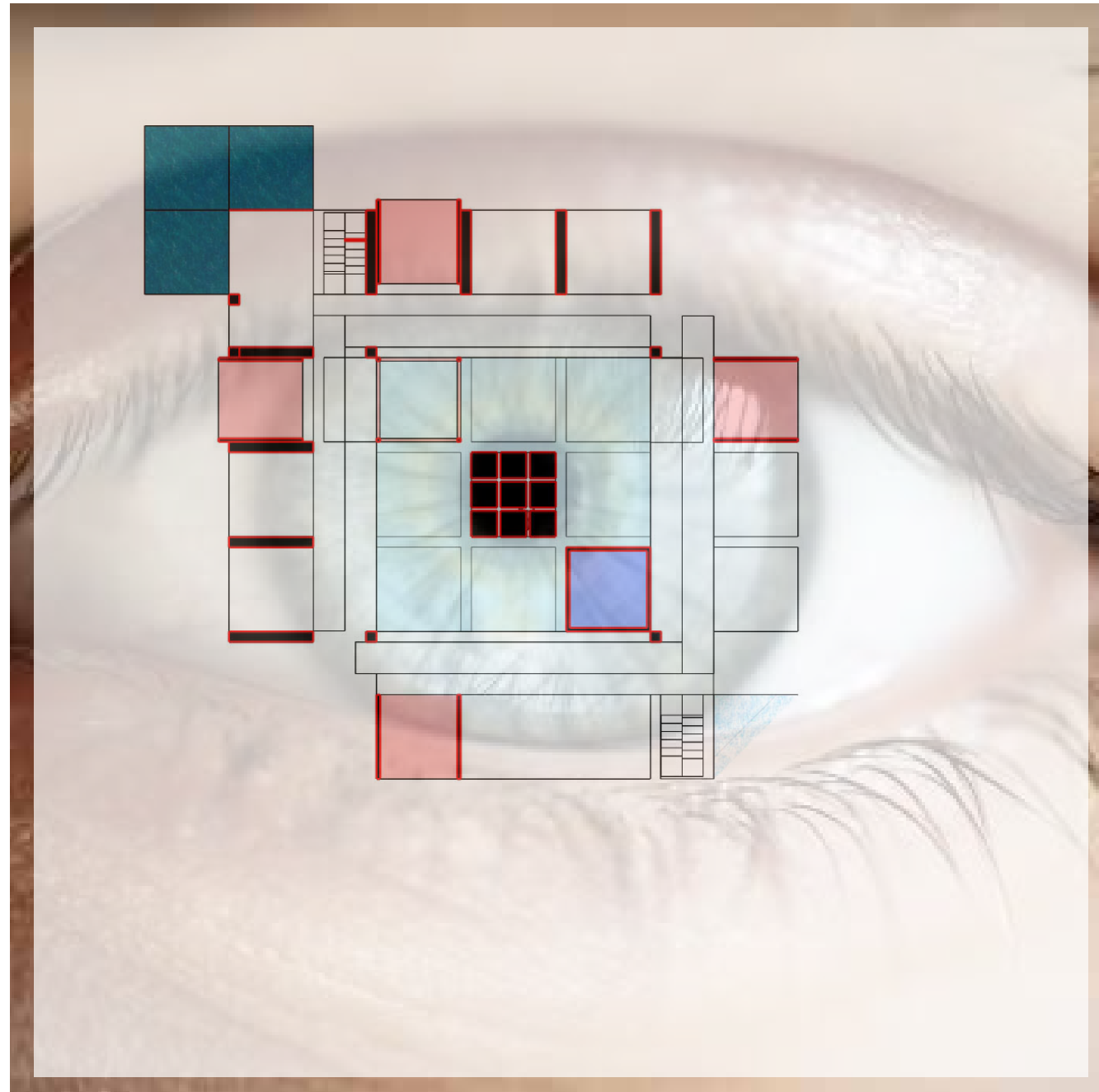


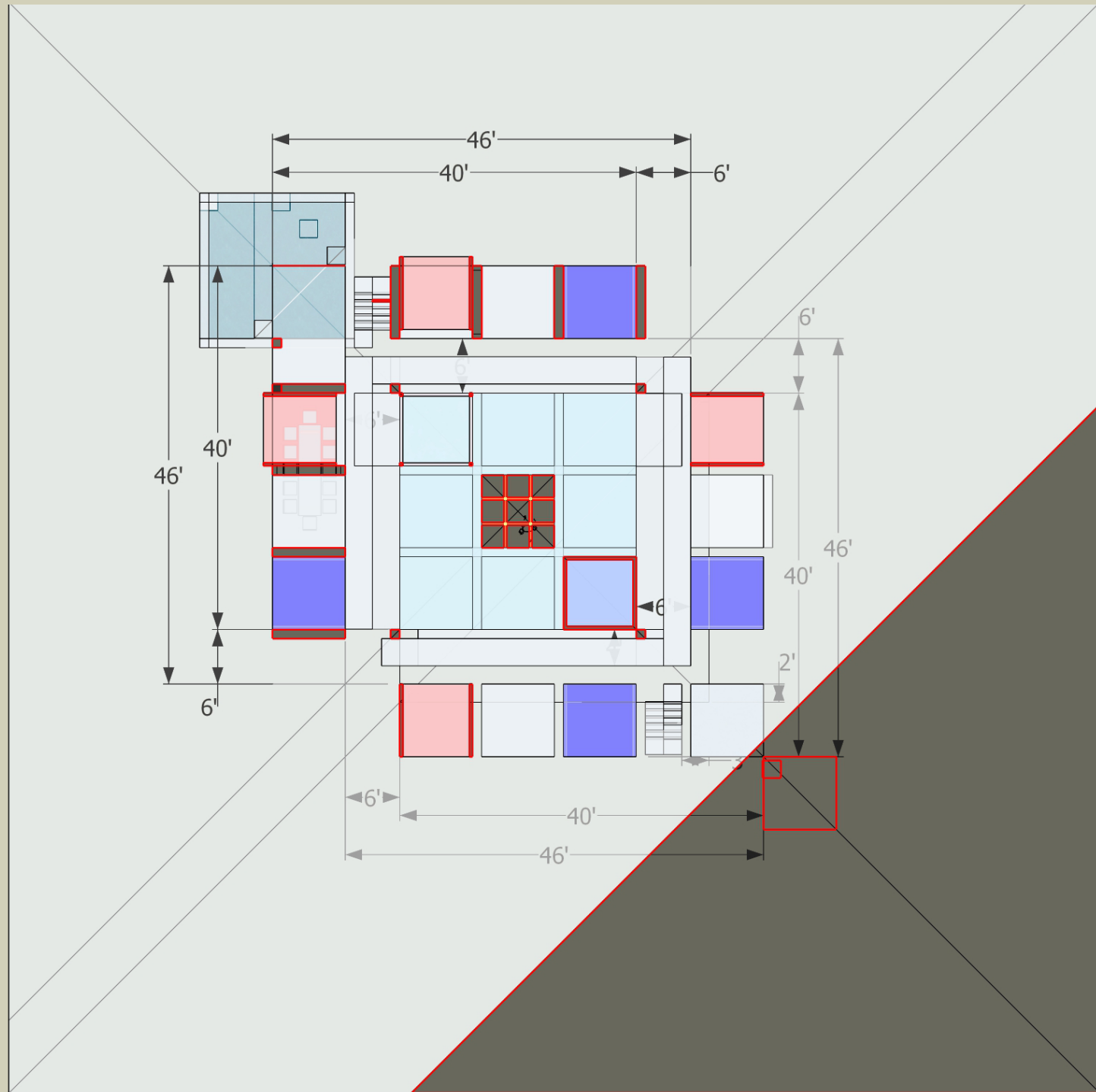
“ The eye is the world: the white represents the ocean,  
and the iris the land; the pupil is Jerusalem...”

Munk, *Wisdom of the Hebrew Alphabet*

Above all AYIN means EYE.

Its letter form is the archaic symbol and image for eye, and its sound EYE-IN, is consistent through many languages to signify the visual organ, our EYE. Not only the English *eye*, but also in French *oeil*, German *Auge*, Chinese (*yǎn*) Danish *øje*, in Arabic, عَيْن (*ayan*), among many others? If 90% of our brain is devoted to optical processing, is this widespread constant any wonder?



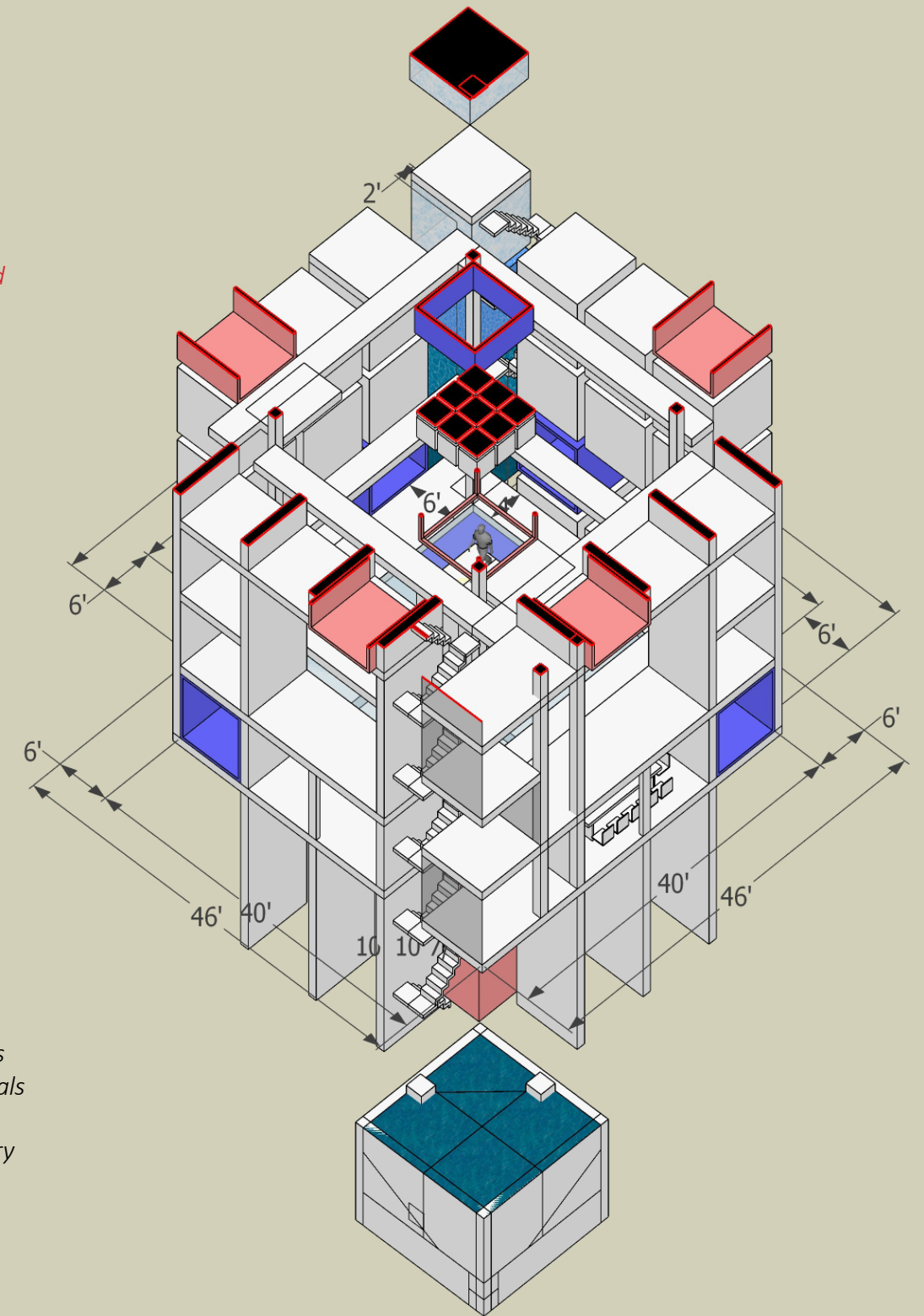


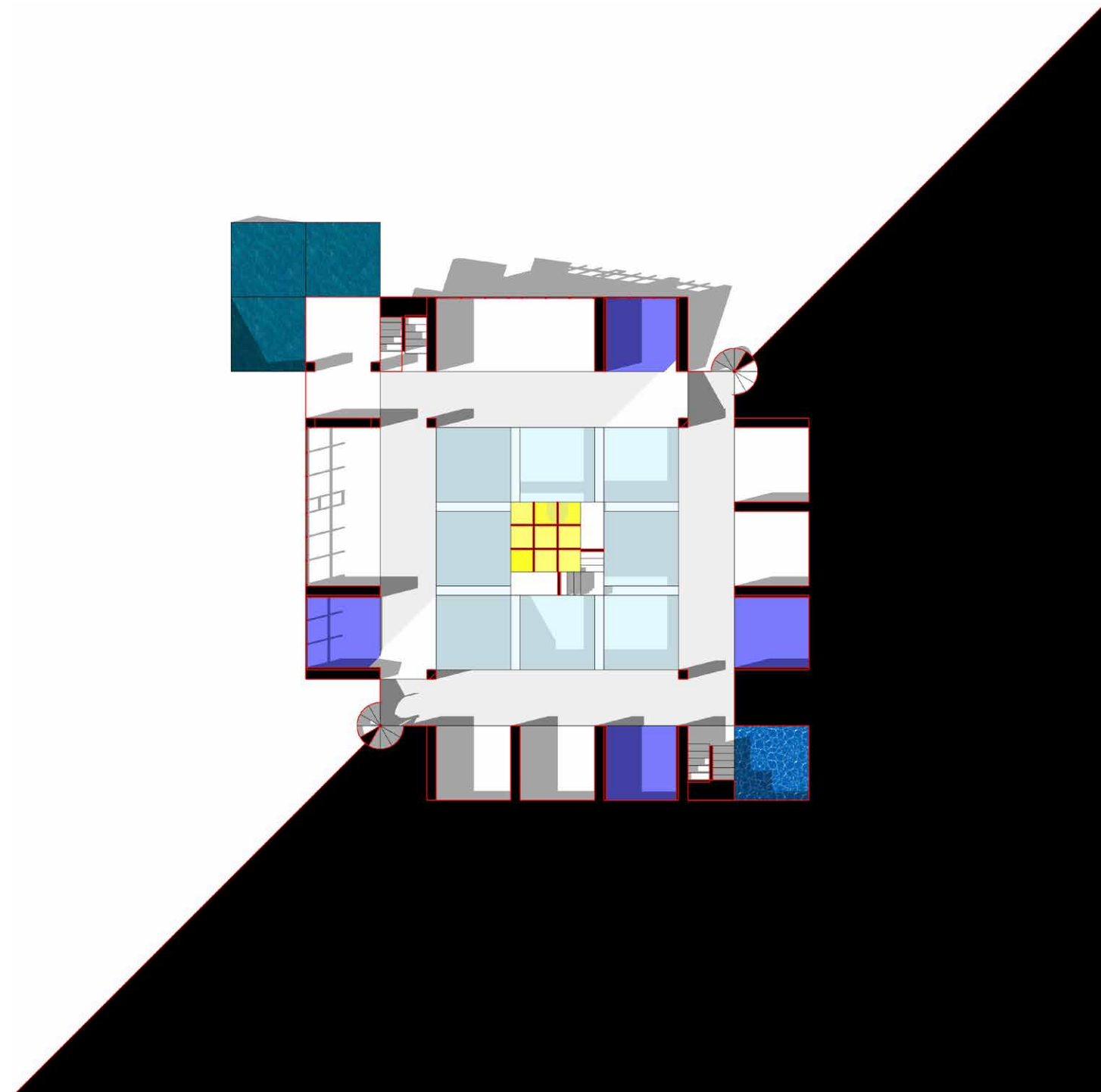
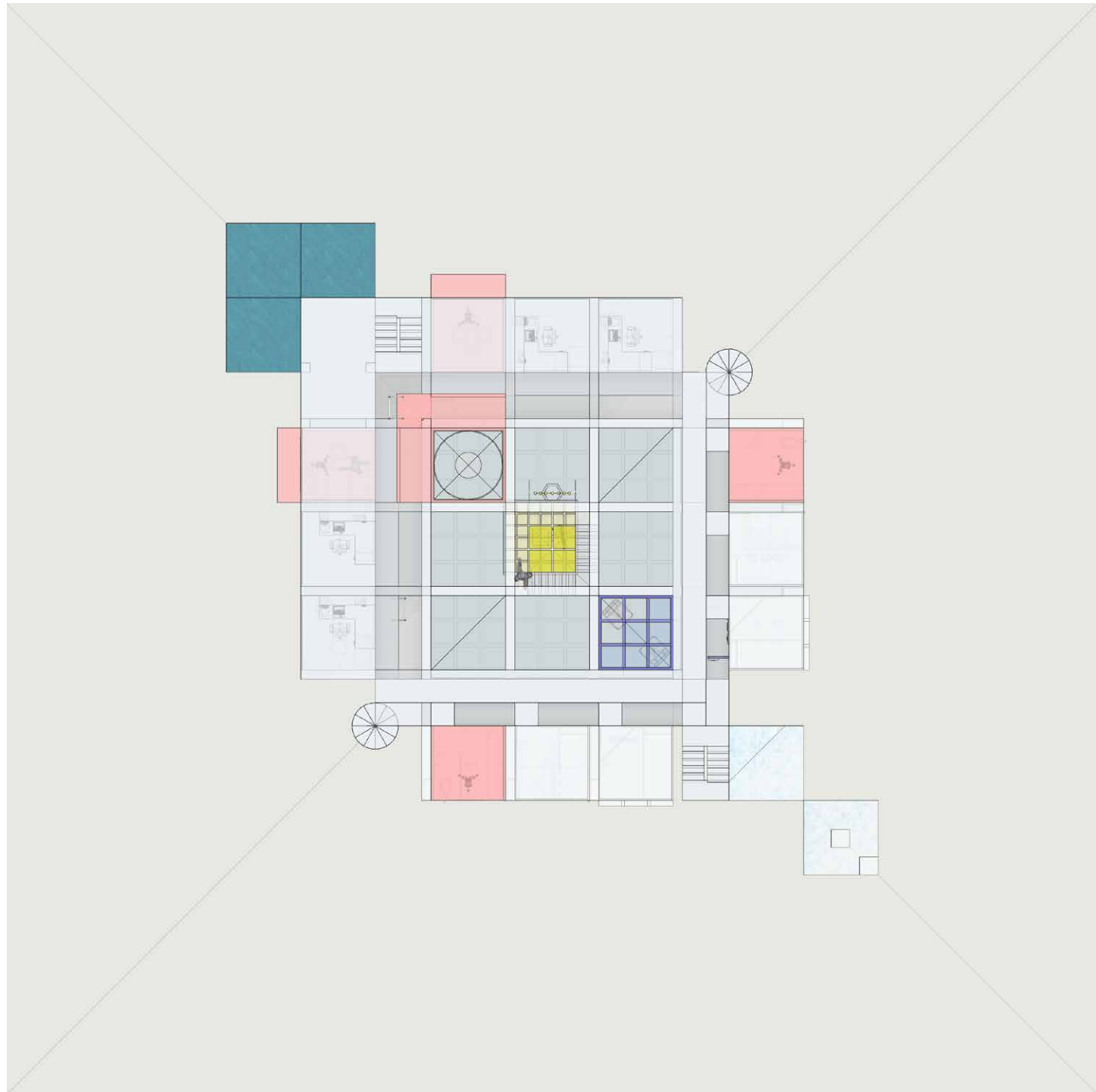
*Look Out Spaces*  
 redwood walls  
 red floor tiles  
 red ceiling  
 rose tinted glass  
 windows open out  
 onto balcony as needed

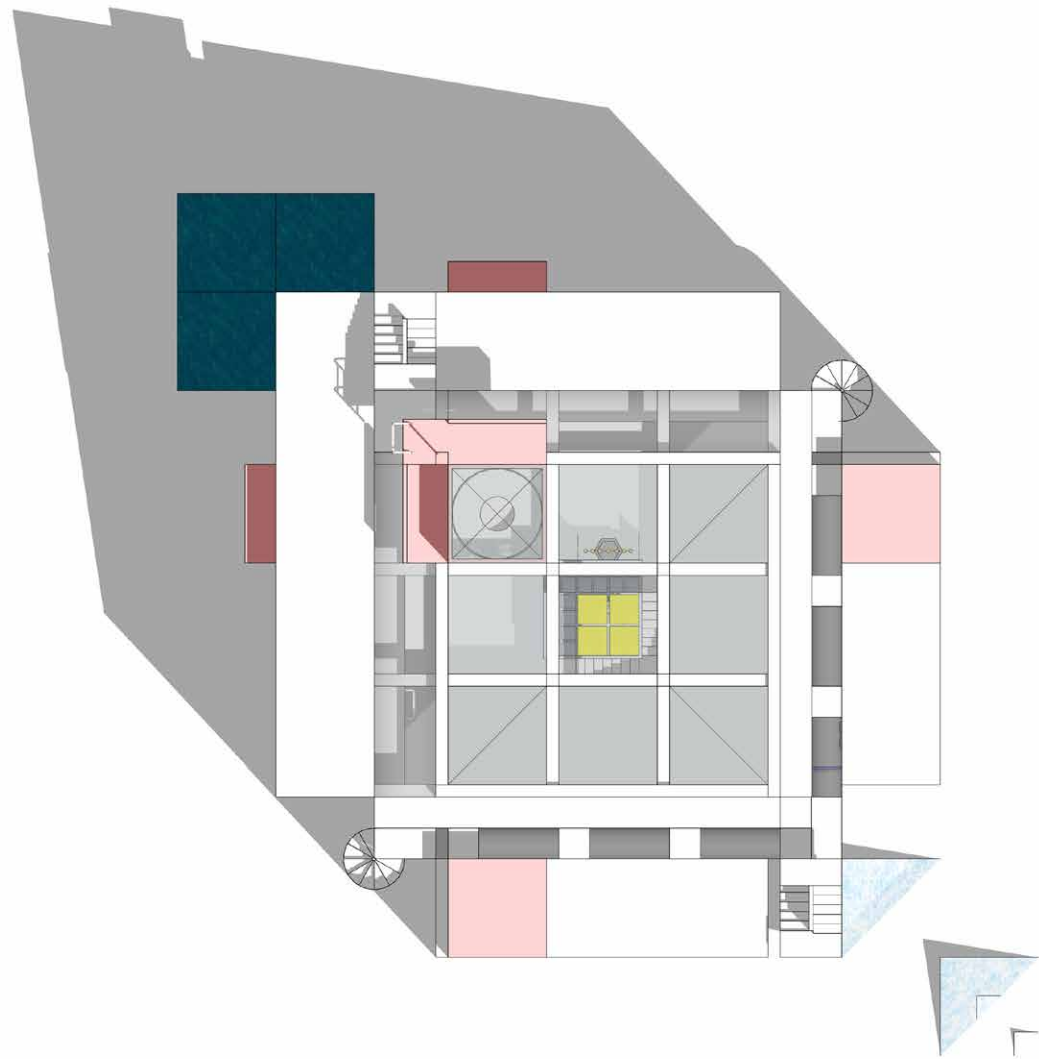
*Look In Spaces*  
 blue lining  
 blue carpet  
 blue acoustic  
 soundproofing  
 walls and ceiling  
 frosted (blue)  
 glass return  
 the gaze inward

*Dimensions*  
*Proportions*

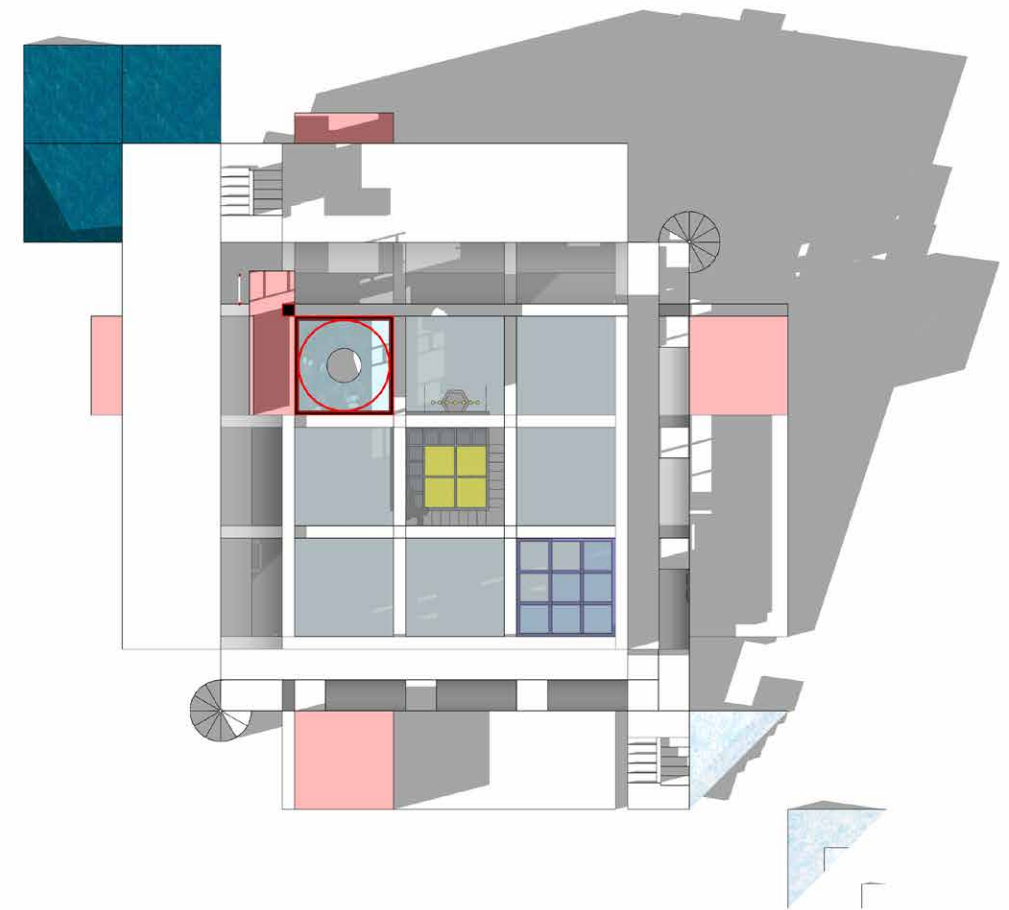
*a tartan of 8 foot cubes*  
*spaced by 1 foot intervals*  
*in plan and section*  
*keep diagonal symmetry*  
*perpendicular*  
*to the north slope*  
*on a NE/SW ridge*



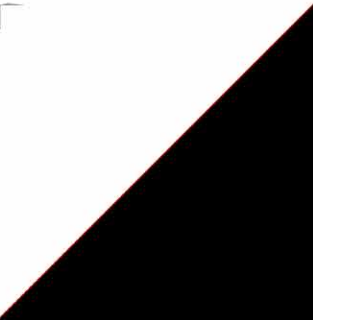


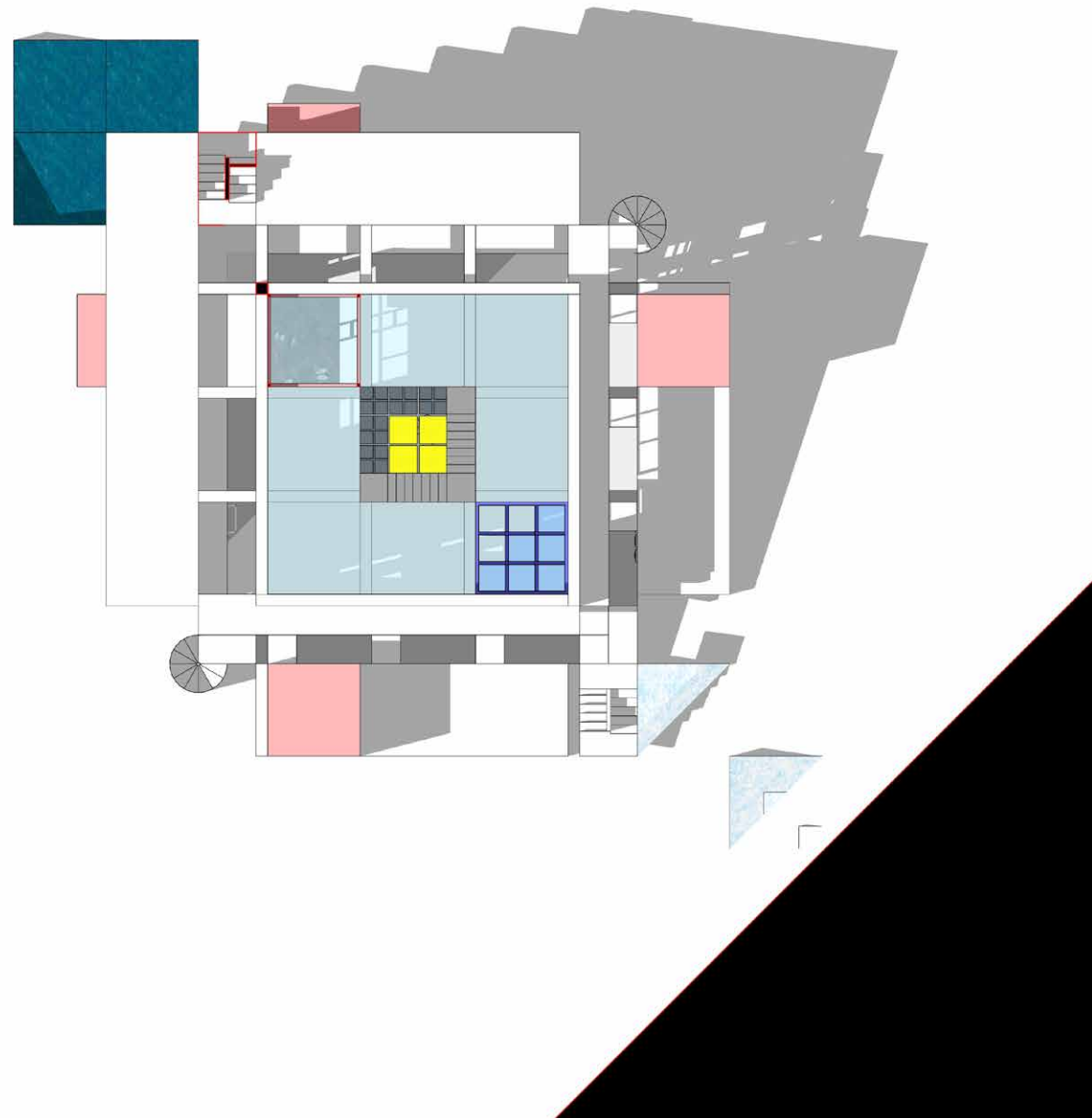


PLAN TOP 11 AM JUNE 21 SUMMER SOLSTICE UTC - 7 HRS



PLAN +5 ROOF 3:13PM JULY 13 UTC -7 HRS

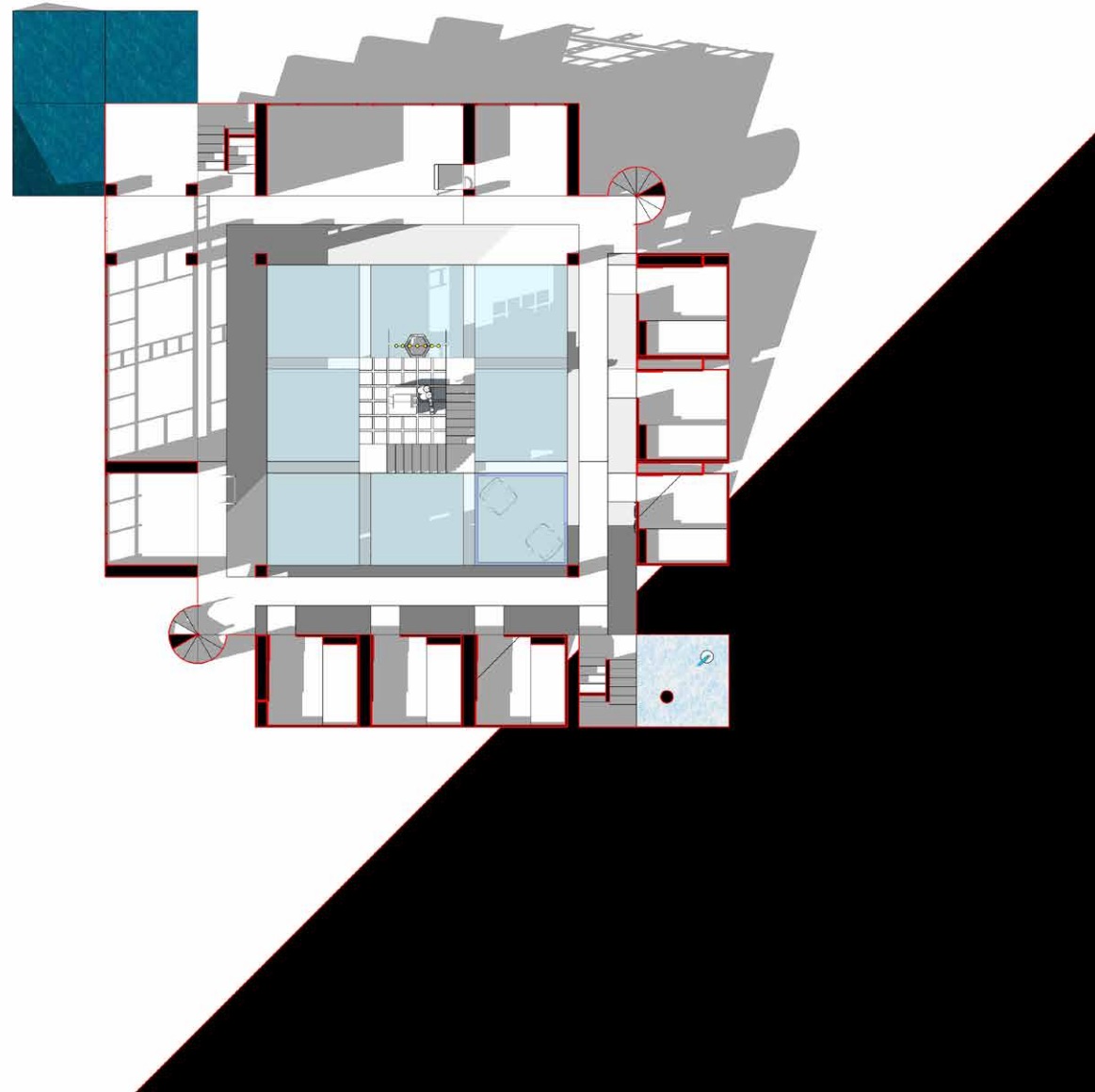




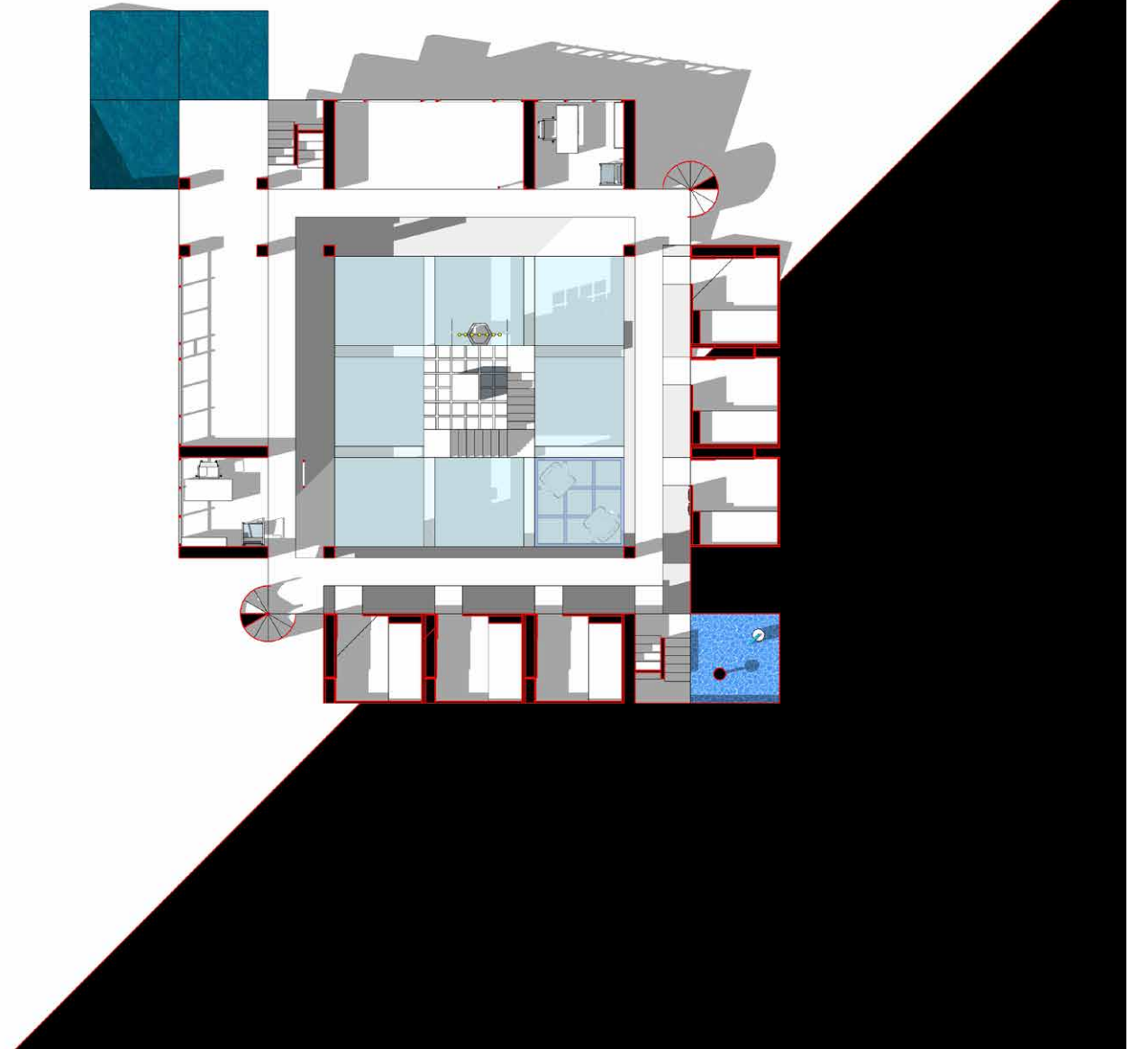
PLAN +4



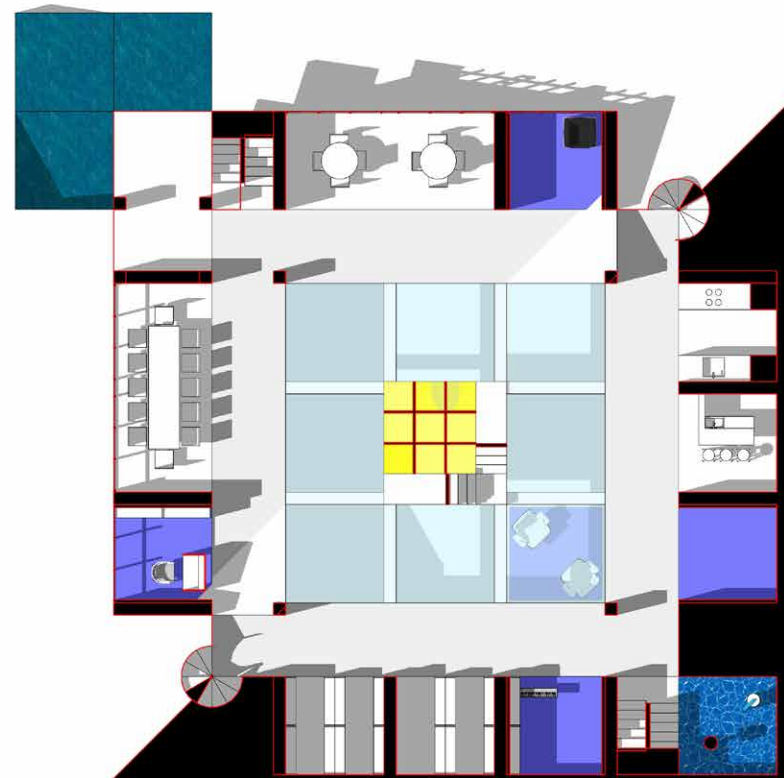
PLAN +3



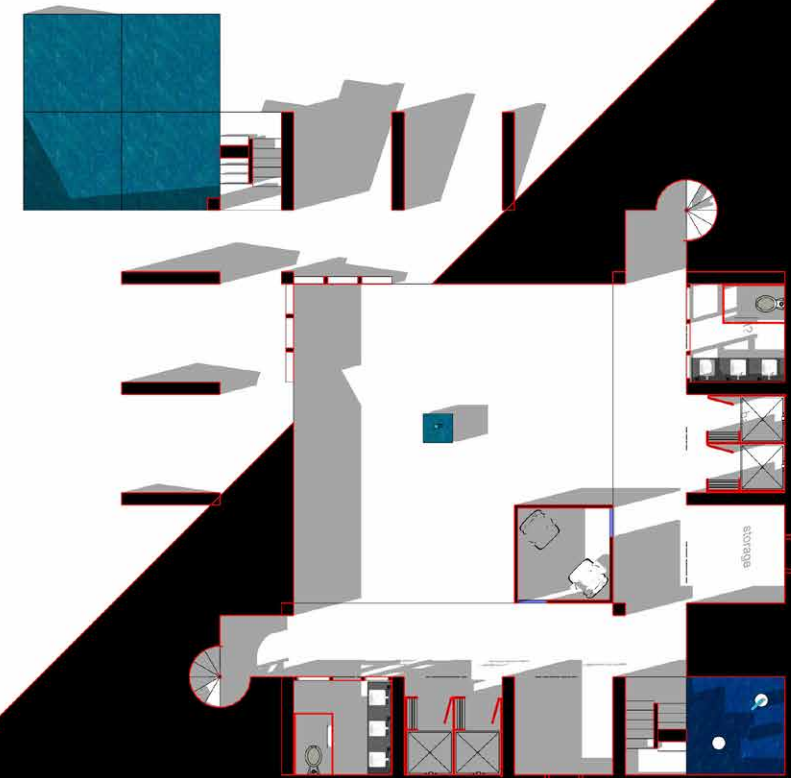
PLAN +2



PLAN +1

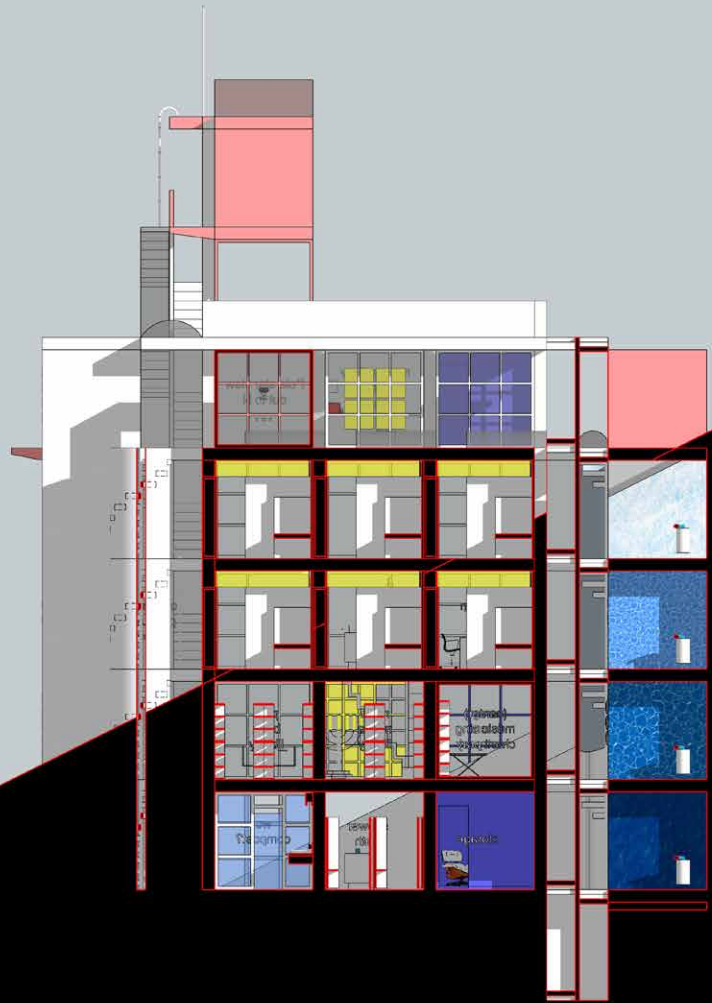


PLAN 0

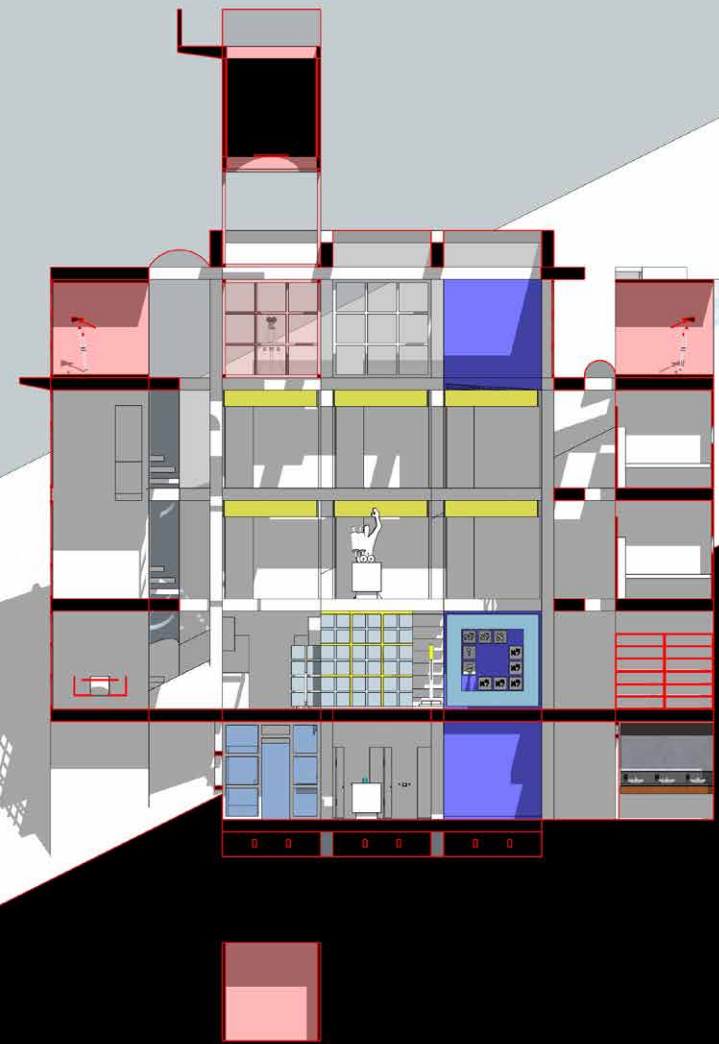


PLAN -1





SECTION W E



SECTION N S



LIGHT WEIGHT

dreaming  
of immortality

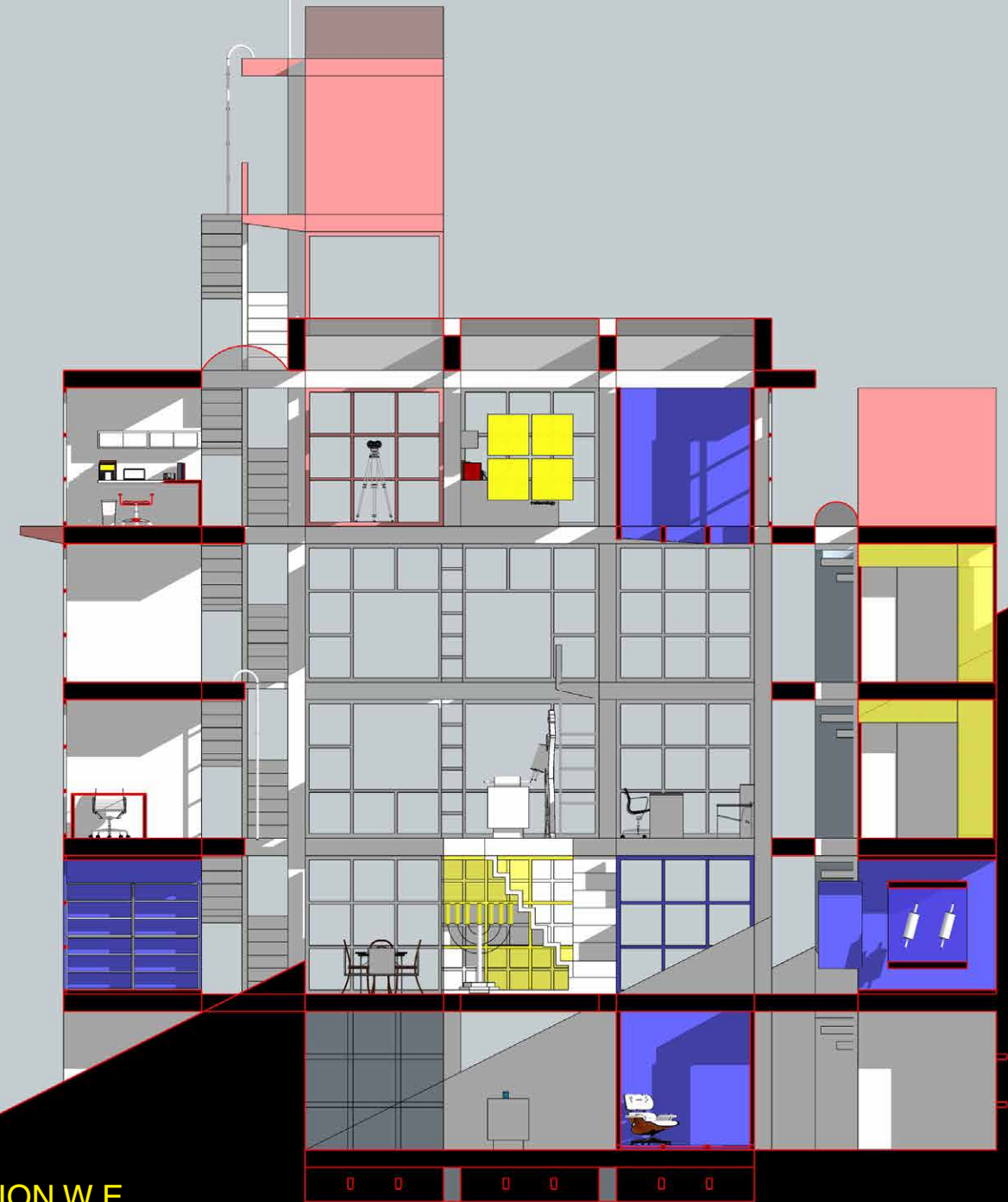
loftiness and depth  
radiance and gravity  
heaven and earth

sound is profound  
even air has weight

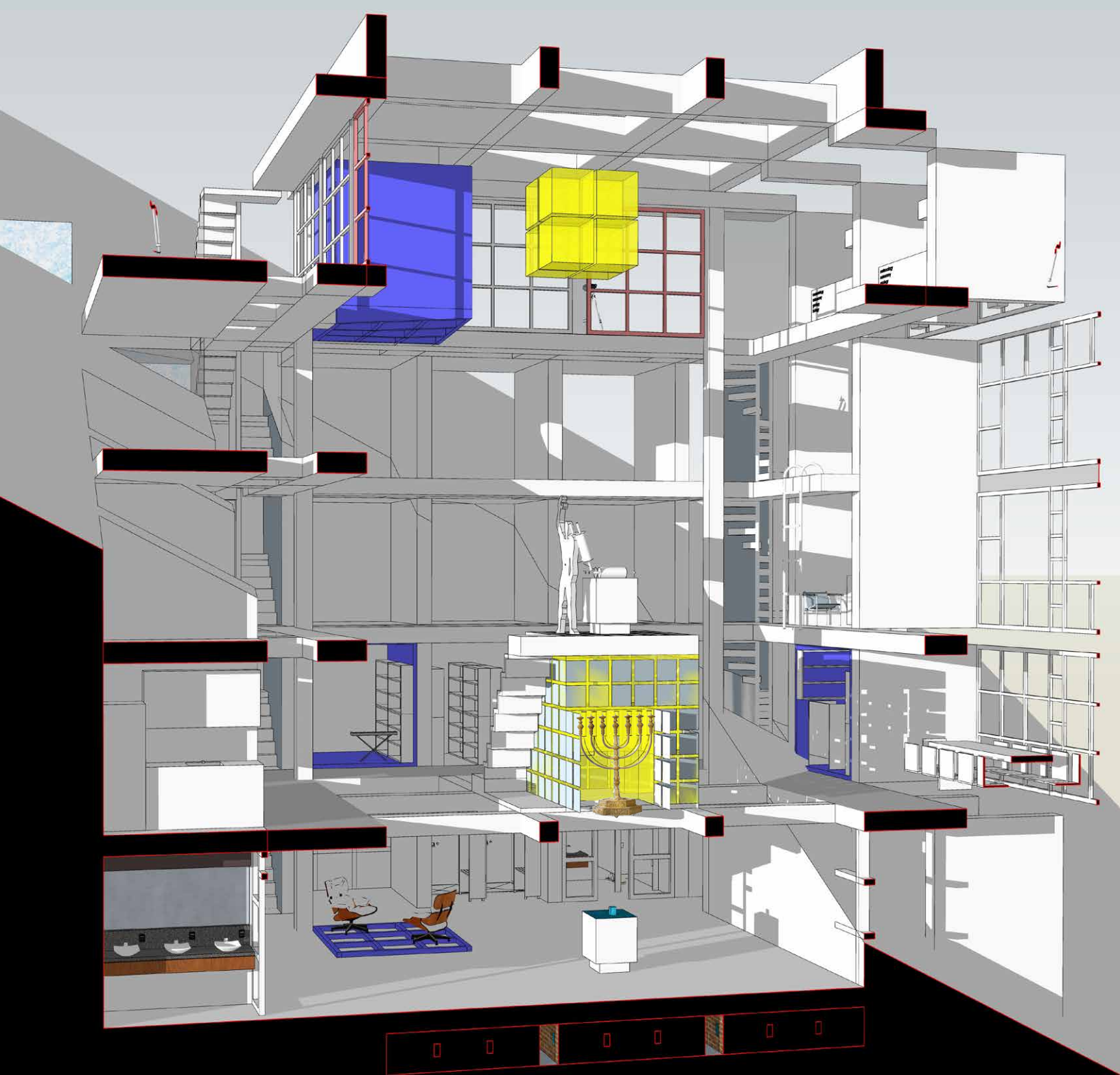
enlightenment  
insight outlook

light matters  
centered song  
midpoint sight

blue and red  
star cave  
sun time  
alive and well  
seeking in and out  
law or comment  
meditate or talk  
play and sing  
the Eye listens



SECTION W E



## LIGHT

Just below the ceiling hangs the *Ner Tamid*, the Eternal Light, honoring the Divine Presence. It is a 2 x 2 array of 8 cubes centered in the plan of the building. Fusion-born photons flee the sun and ride into the black void of space. A very few will intercept Earth where some may even strike the photovoltaic envelope around AYIN to provide the energy needed to perpetually illuminate its *Ner Tamid*, a fittingly direct transformation of the sun's virtually eternal radiance.

The western world's oldest continuously religious symbol is Judaism's *Menorah*, which once stood in the Holy Temple of Jerusalem. A frieze on the Arch of Titus in Rome depicts the Menorah taken after the destruction of the Second Temple and Jerusalem in 70 CE. While the *Ner Tamid* traditionally replaces the lost original Menorah, there is no reason not to have both. Their meaning and the sources of their light differ in an illuminating way. Earth's biota absorbs solar photons creating molecular chemical changes via photosynthesis. Eventually plants like olive trees may produce oil, which burn to create a new flow of photons. Thus Menorah provides light by releasing photons woven into the fabric of earthbound matter. Fossil oil, petroleum, is the product of gravitational compression of eons of accumulated surface debris transformed into new chemical structures. Oils from living plants like olives are a more benign source of fuel for the Menorah.

*Exodus* specifies that the ancient Hebrew lampstand used in the portable sanctuary set up by Moses in the wilderness and later in the Temple in Jerusalem was to be made of pure gold. Fresh olive oil of the purest quality was burned daily to light its lamps. In Jewish oral tradition, the Menorah stood 18 handbreadths high, or approximately 1.62 metres (5.3 ft), as does AYIN's. This is almost exactly 2/3 of the 8' module of AYIN. The *menorah* symbolizes an ideal of universal enlightenment and wisdom. It is also said to symbolize the

burning bush seen by Moses. Christians have interpreted the seven lamps as the branches of human knowledge, as well as the seven classical planets. The Taoist Seven-Star Lamp *qi xing deng* 七星燈 is a seven-lamp lit by oil to represent the seven stars of the Big Dipper. The Arch of Titus Menorah has on its base a mythical bird *Ziz* (Hebrew: זיז), said to be large enough to be able to block out the sun with its wingspan, a vivid depiction of the tension between light and matter.

Chanukah, the Jewish Festival of Lights, celebrates the Maccabean Revolt against the Seleucids in 167-160 BCE, and the miracle of the oil that occurred during the rededication of the Temple in Jerusalem. According to the Talmud, there was only enough sealed and thus consecrated olive oil left to fuel the Menorah's eternal flame in the Temple for one day. Miraculously, the oil burned for eight days, which was enough time to make new pure oil. Is there a stronger parable for the virtue using renewable and conservation of all resources and the glowing golden age that may follow the repair of the Earth? While the Eternal Light shines down, the Oil Lamp glows up. AYIN's atrium, illuminated by both sources, becomes a vessel and fountain of light.

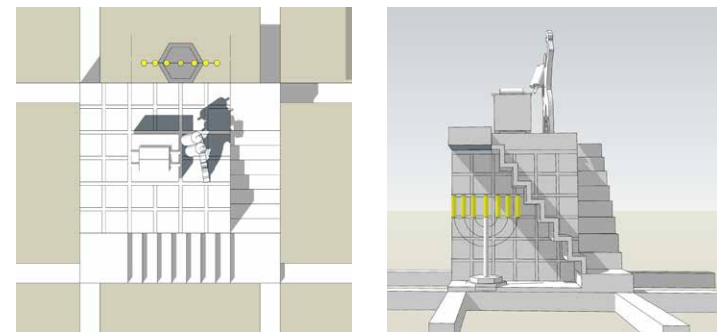


## SOUND

The one defining prayer of Judaism is the SHEMA, a call to listen. HEAR O ISRAEL! Sound is sensual. Transmitted vibration, it is one body shaking another. Resonance makes music and dance, a shaking together. Light conquers space without aging, but sound takes *time*. Like the altar in Jerusalem's Holy Temple, AYIN'S *Bimah* is in the center of the sanctuary.

Sound needs matter, weight, depth. For daily recitation and prayer the Torah is removed from the Holy Ark and placed on the Bimah, a raised reader's platform. AYIN's Bimah exceeds by one the allowable 6 (big) steps up from main floor, counting treads, not risers, if we don't count base or cap steps. Legalisms! Climbing against gravity up into the resonant cavity hewed from the mountain, the leader's voice is at the center of the space.

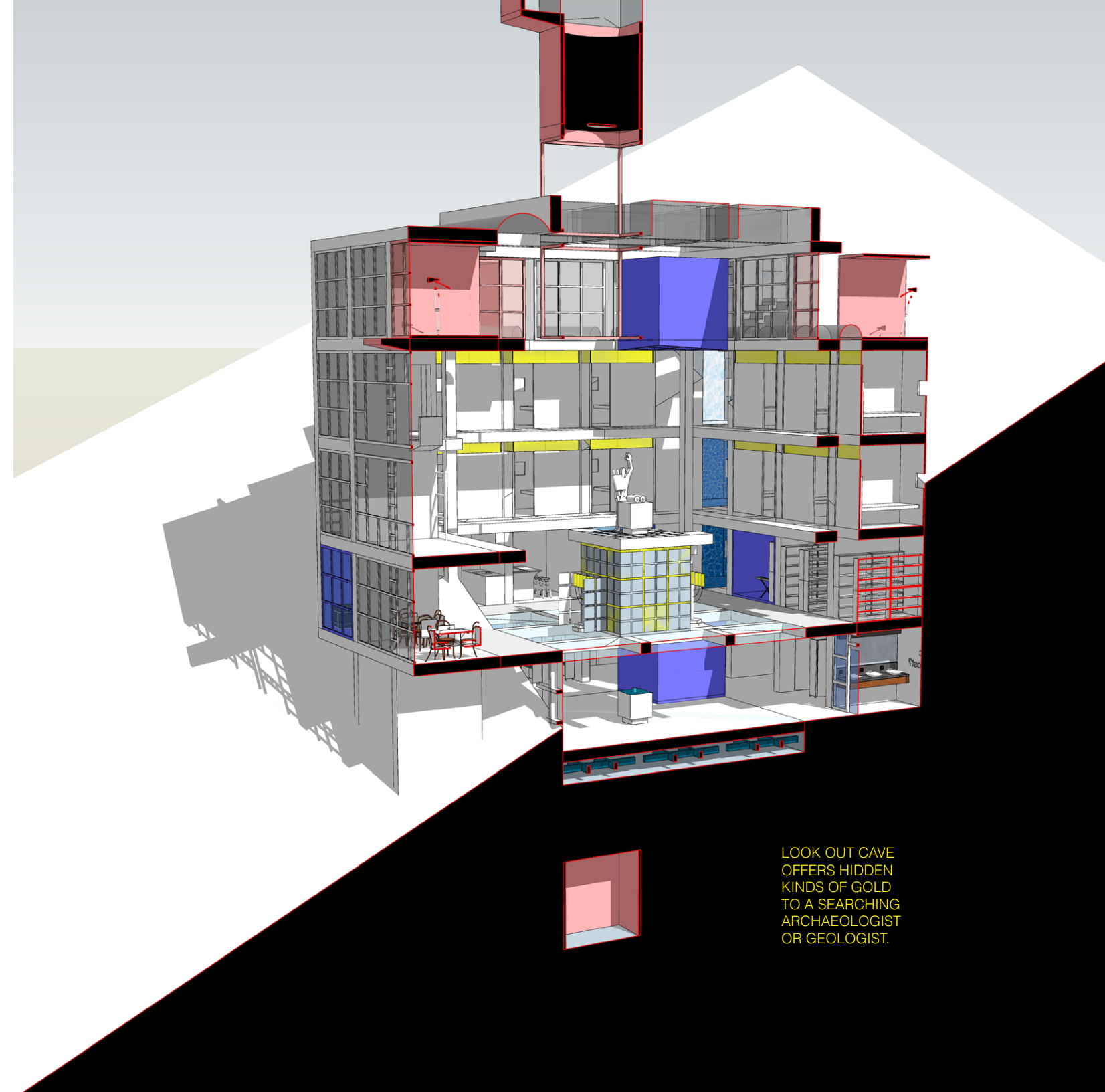
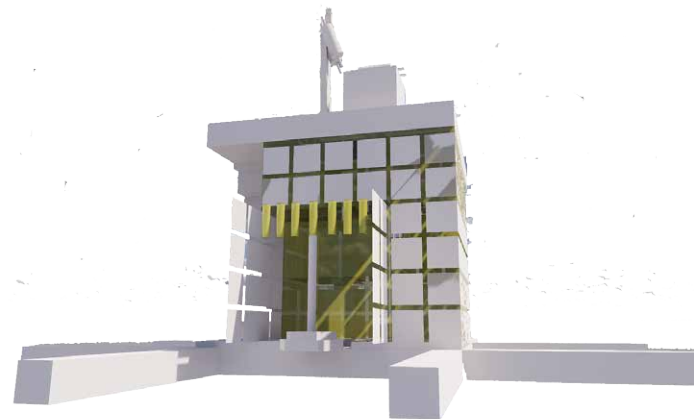
The Bimah may also be a storage of treasures. Someday should even a microscopic remnant of the original Menorah be found, like the Holy Rood it might become a venerated relic. Any new local menorah may then contain just a few atoms of the original Menorah-- and thus be a "literal" symbol of continuity and renewal. AYIN's Bimah has room for a full-scale replica of Moses' desert Menorah. May our wandering in the current global crisis desert be less than 40 years!!



Should there be 40 days and nights of rain and clouds obscuring the sun, Menorah can become emergency reserve to the building's solar collectors. The Bimah could charge or refill the Menorah with stored consecrated oil as the needed lighting fuel supply. The Bimah is AYIN'S gas station, finding sanctity and validity in utility. We voluntarily go to the gas station, but like Homer Simpson many resent being *forced* to go to church. Who *needs* it?

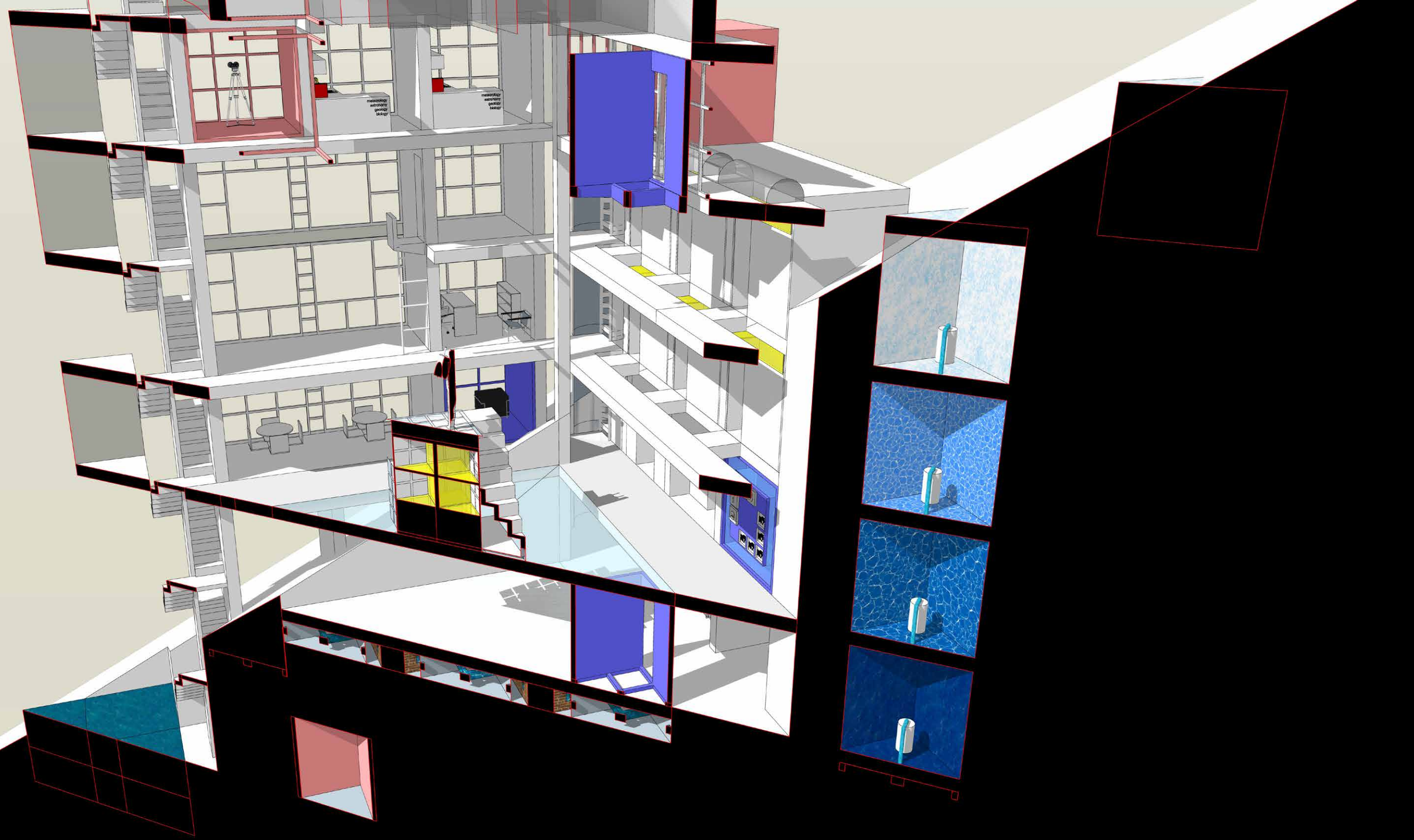
The Temple Institute in Jerusalem in 2007 created a life-sized menorah, for use in a future Third Temple, ready to be pressed into service should the need arise. It is made of one talent, interpreted as 45 kg (100 lb!!) of 24 karat pure gold, hammered out of a single block of solid gold. For today's scattered synagogues like AYIN, who knows what matter may reveal the sought-for gold?

The design of this Bimah attempts to resolve the struggle between central void and central matter, specifically as an interplay of 4-square and 9-square geometries. Crucial was the inclusion of the 1 foot floor beam grid, allowing the 8 foot module to engage a 10 foot interval.



LOOK OUT CAVE  
OFFERS HIDDEN  
KINDS OF GOLD  
TO A SEARCHING  
ARCHAEOLOGIST  
OR GEOLOGIST.

**TECHNICAL  
CONCERNS**

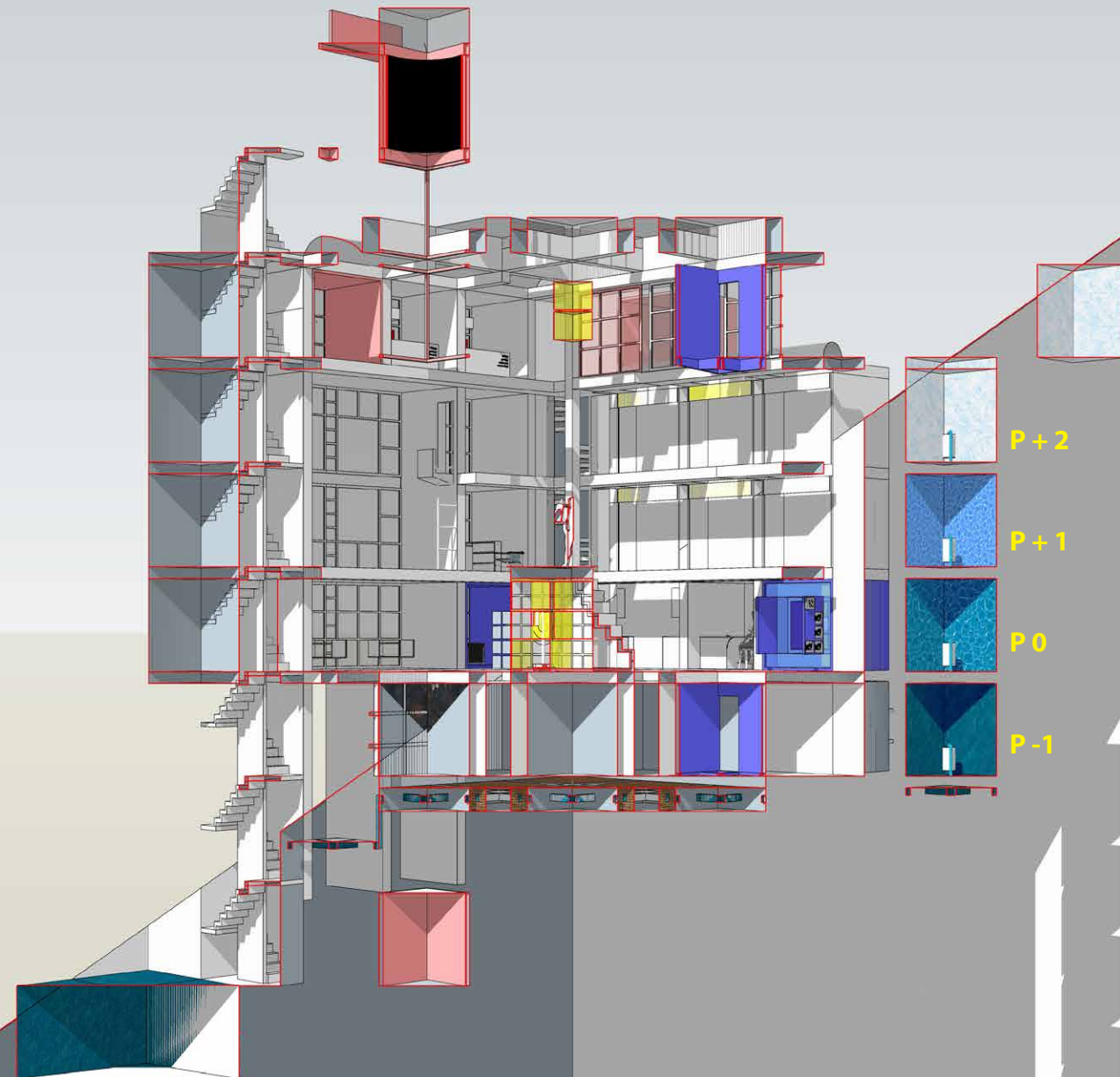


## HVAC: Mountain Spring Enters The *Lowest* Level Of Ayin

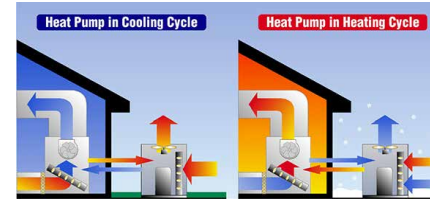
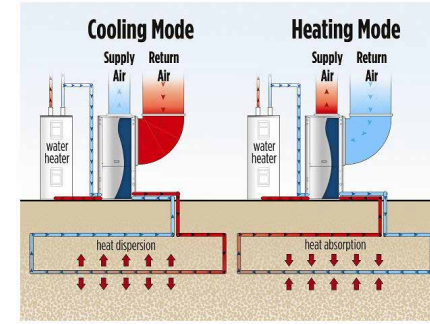
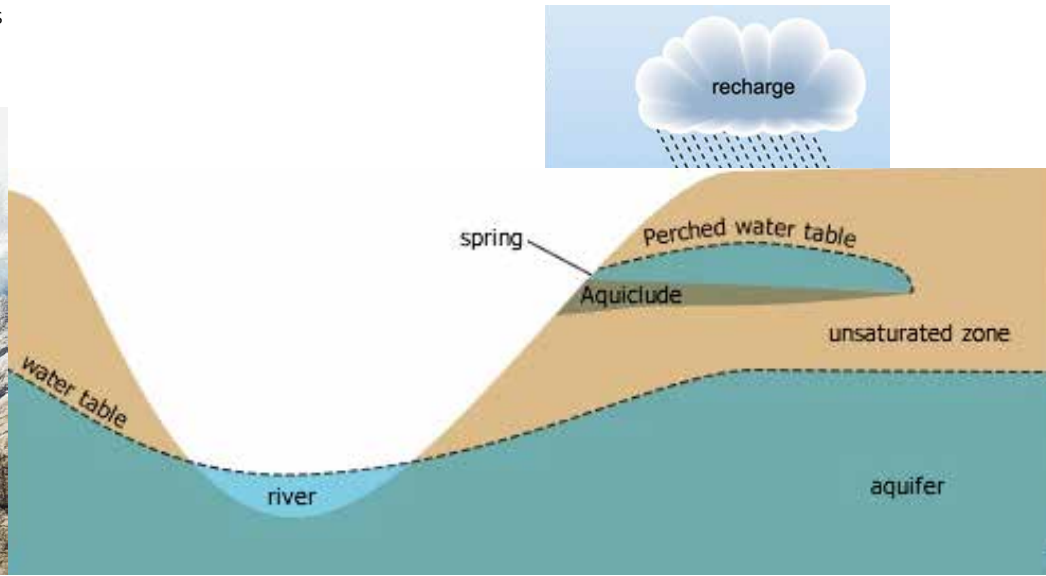
Cold water sinks, but ice rises. Building envelope solar collectors harvest the sun's energy to cool incoming spring water via heat exchangers and for pumps to move the water to cooling chambers above. Cold spring water at approximately 54° F enters at level P - 1, where it is cooled to 46 degrees, then pumped up to level P 0 where it is cooled to 38°, then pumped up to Level P + 1, where it is cooled to 32°, finally pumped up to level P + 2 where it is frozen into ice. The last chamber is an ice maker which removes the latent heat from this cold water phase-change it into ice. Ice that forms in this coldest topmost ice-box chamber is then put back out onto hillside, to seed and promote new glaciers.

The heat removed from the spring water through its successive stages of cooling is directed into the central space of AYIN via a small fraction of the spring water that is diverted into the sub-floor radiant heating system below. The earth tempered and insulated radiant floor, already buffered by the 54° ambient rock temperature, can raise the temperature of the space at least up to 76°, well beyond the ideal comfort temperature of 68 to 72 degrees. The 5 -story central space may act like a chimney to promote cooling ventilation in hot weather as needed.

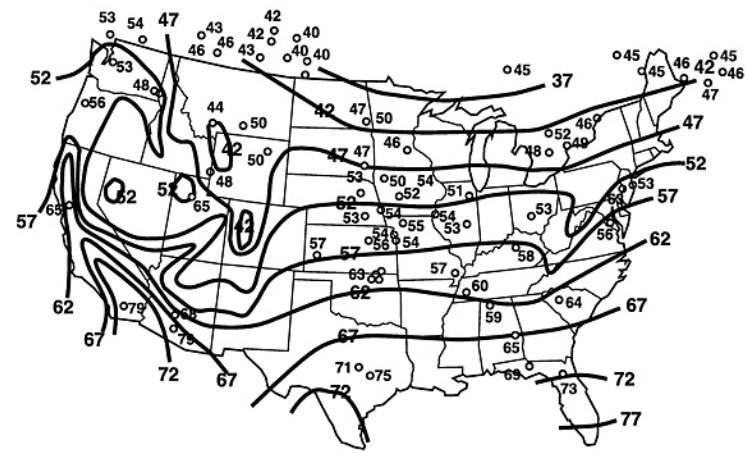
The first small stack of ice Cubes created may be placed uphill above AYIN. At sufficiently high altitudes, newly replenished ice has a chance of surviving winters. In the past, such high altitude zones were cool enough for glaciers once, so now as new ice alters local microclimate with its higher albedo to reflect the sun's UV rays and ability to absorb heat as it resists phase change before melting, we may hope that more ice will last all year-- even through the summer. If the new ice is covered to insulate as needed, perhaps ice may build up year-round, and eventually flow around AYIN, spawning new young glaciers.



Fresh snow and blue glacier-fed lakes above the clouds. Southern Alps, NZ

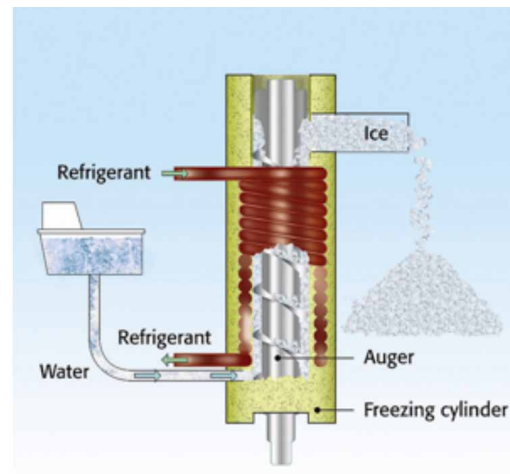


HEAT PUMP CYCLES  
AMBIENT GROUND OR AIR TEMPERATURE

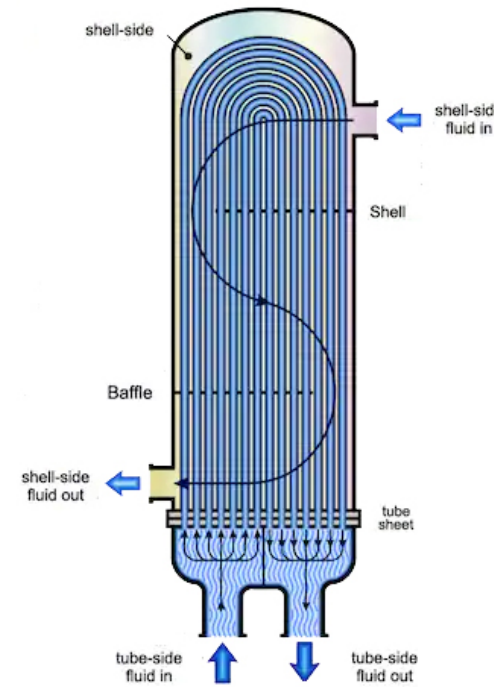


MEAN ANNUAL EARTH TEMPERATURE OBSERVATIONS AT INDIVIDUAL STATIONS  
SUPERIMPOSED ON WELL-WATER TEMPERATURE CONTOURS.

“For example,” Kelly offers, “let's say in Kansas City, the underground temperature is 55 degrees. In summer, the air temperature is 100 degrees, and in winter it's 20, but underground it's still 55. It's not that hard to get that constant temperature out of the ground so you can heat in winter and cool in summer.” (ARCHITECT, JAIA April 2011)



ICE MACHINE



HEAT EXCHANGER

AYIN'S Fountain is a Mountain Spring.

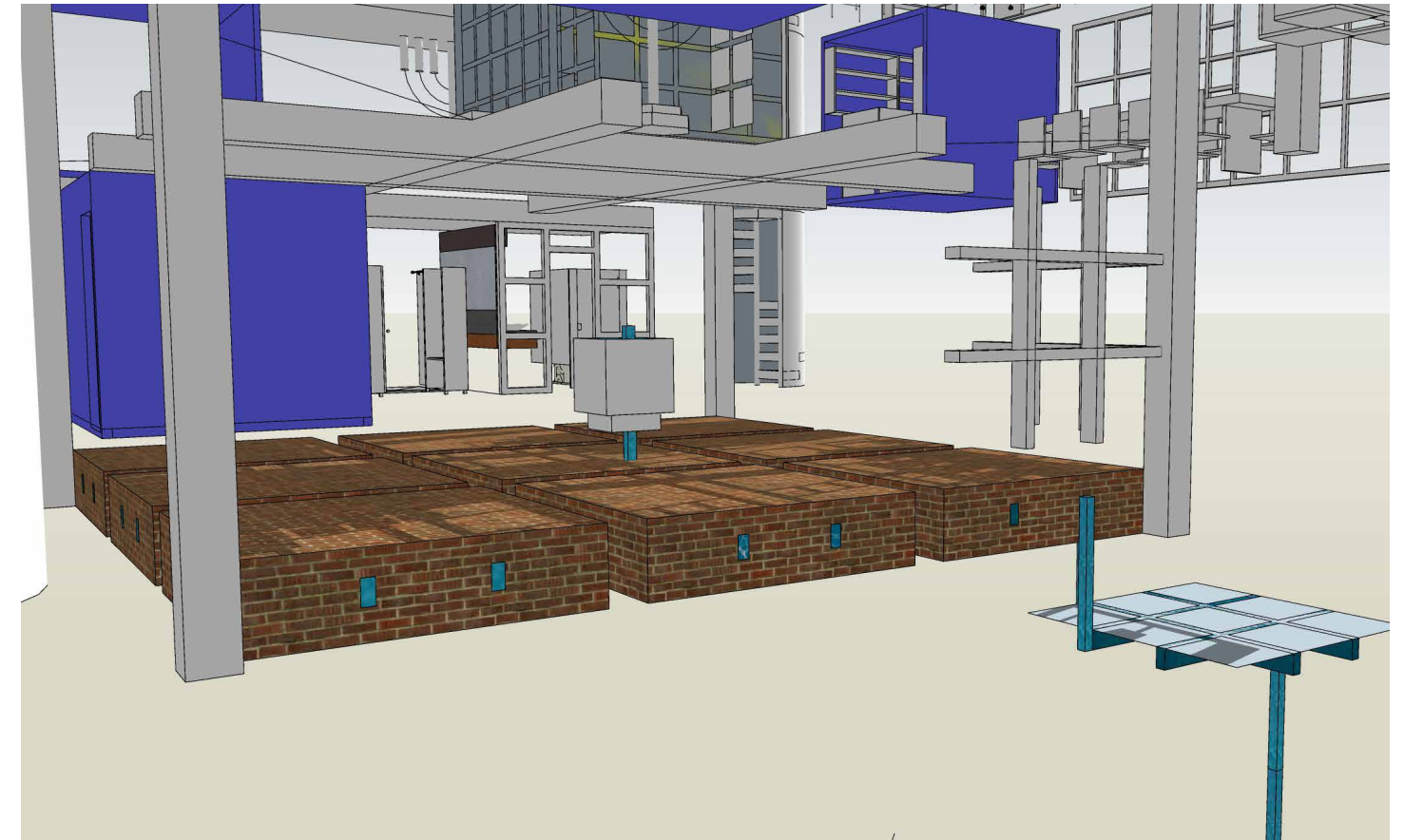
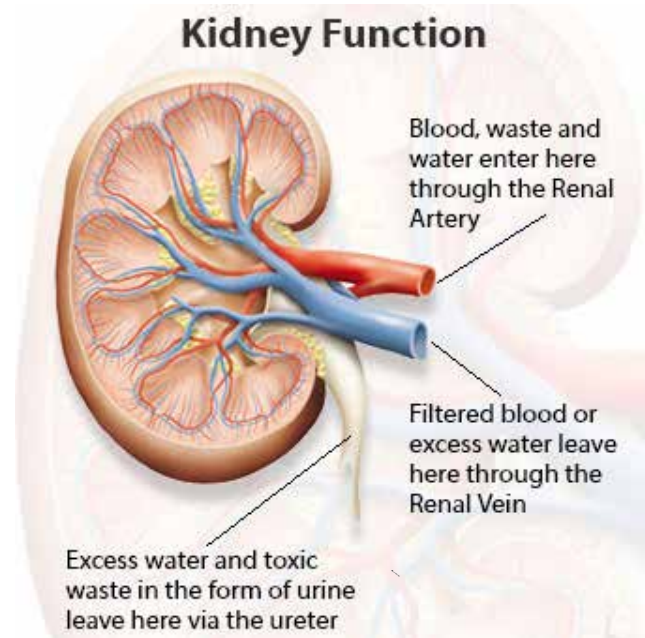
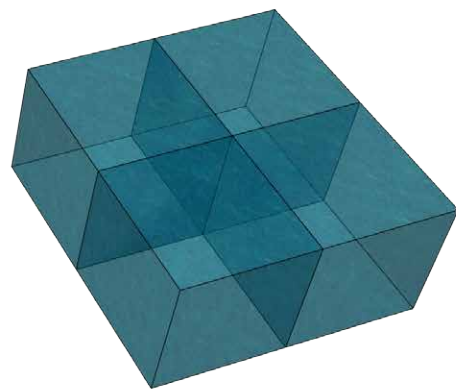
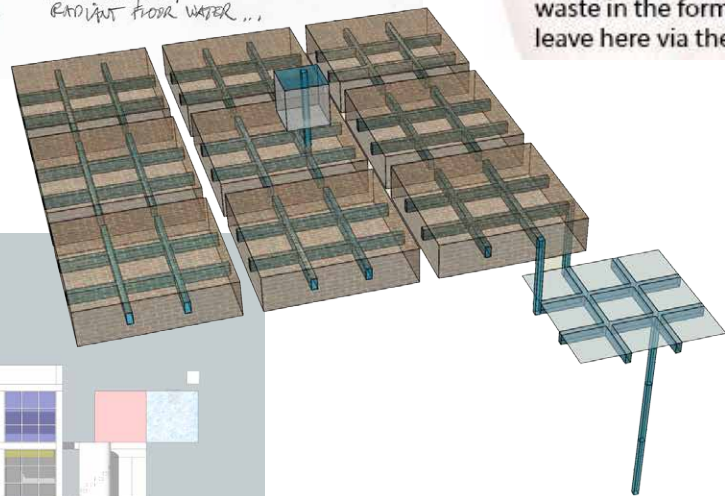
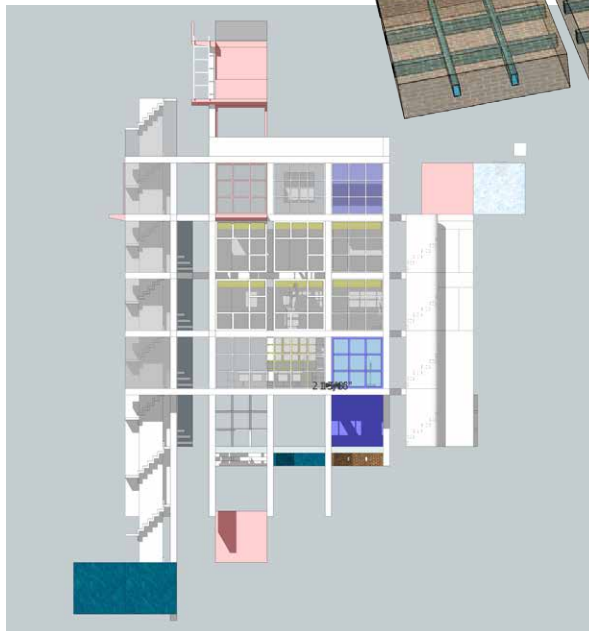
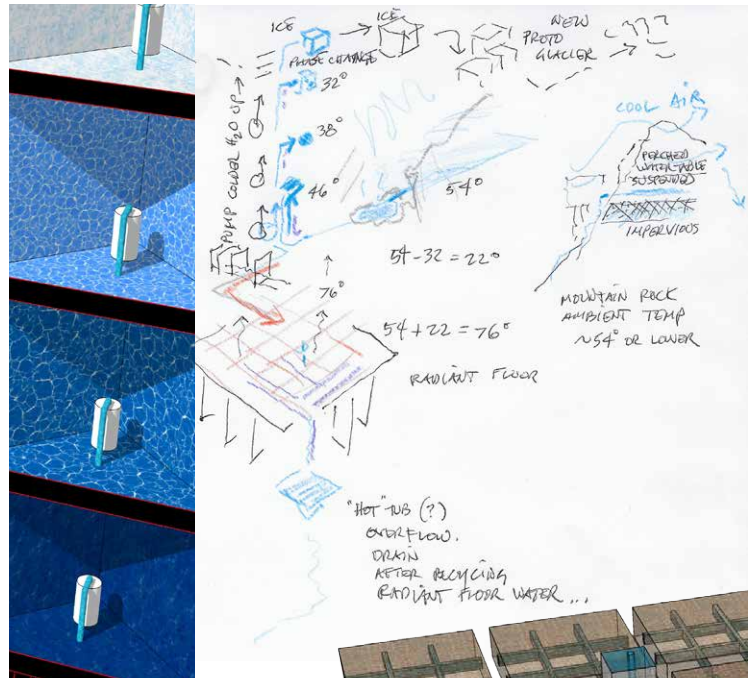
When a strata of rock above an elevated impervious zone (an aquiclude) becomes saturated from rain recharge and glacial melt it creates a perched water table. When erosion intersects this perched water table a Spring is formed. This may join other drainage downstream to create brooks, creeks, eventually rivers. If there is no outlet, glacial lakes, cirques, or tarns may occur-- suspended water pure and deeply blue or milky with fine-ground glacial till.

As the Earth's climate warms, less of its fresh water is stored in this seasonally melting perennially frozen high-altitude valuable resource. Along with ocean acidification and diminishing polar caps, this waning of icy mountaintops is a crisis that must be addressed.

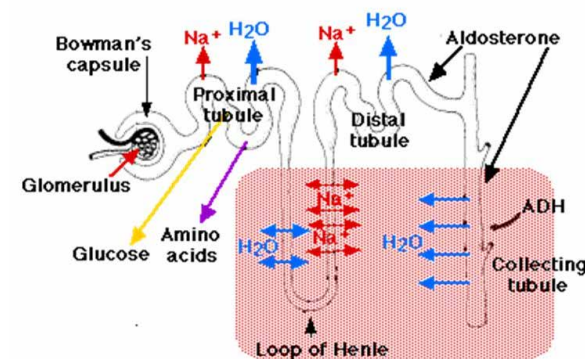
Unfortunately, it is not just a question of making water colder. Phase change from icy water to actual frozen crystal requires lots of energy. However, a warming earth has a potential resource for cooling in the excess heat itself. Heat pumps and heat exchangers (and refrigerators) work by using energy to drive compressors to chill a medium. The cycle continues, bit by bit an insulated space cools-- just as in your own freezer.

Below grade, earth maintains a more or less constant temperature, no matter what the weather above. A mean temperature of 54 degrees F is not rare as maps can show. Thus a heat pump can use this ambient latent heat as a starting point for cooling hot air or water in the summer and warming cold air or water in the winter.

AYIN seeks to continuously cool the Spring water year round, so as to create a preponderance of ice-- the high albedo of ice will reflect sunlight and enhance the cooling/chilling process to further cultivate the growth of ice. Eventually the earth may cool down once again, and we shall find a balance of cold and hot to return to the more moderate (and less extreme) climates of cool and warm. Then for AYIN, maintenance will be the Observation work, rather than Repair. Such is the dream of the messianic days.



How the nephron works

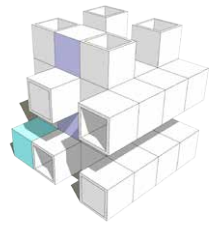


The radiant floor acts as a regulating “kidney” that manages liquid flow while maintaining temperature. Valves regulate pressure and temperature, adjusting thermal flow through the floor system of air ducts, water pipes, and solid rock storage. Venting to the exterior permits siphoning and drainage into a hill-cut pool downslope to the northwest of the building. This pool might serve as a hot tub in winter.

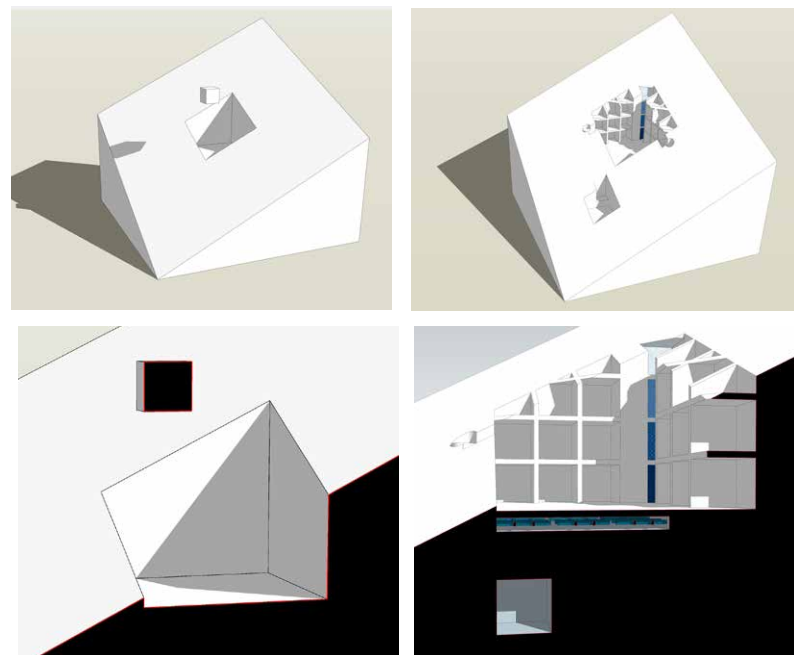
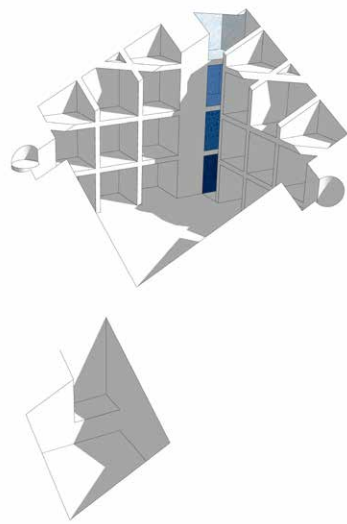
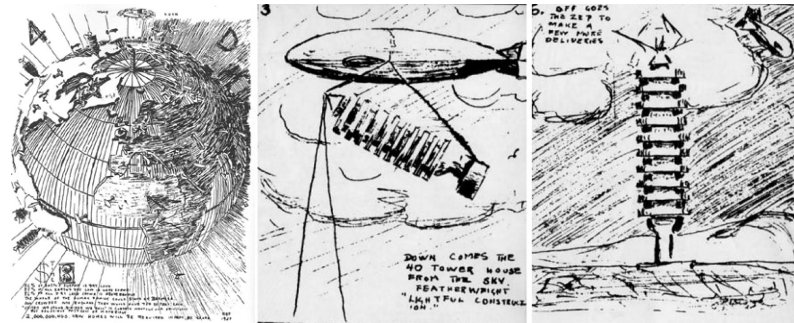
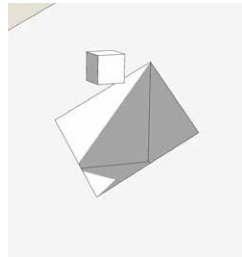
In the building’s “kidney” floor filter, “toxic waste” is the excess heating or cooling of the building. “Excess water” is a function of the rate of effluent flow of the spring.



## SITE STRATEGY



Drop a fabric of XYZ tubes into a volume with a sloping surface via cut and fill. Evolve simple cut and fill into more complex "honeycomb" fabric of uncarved piers and eroded caves. We can imagine laser cut walls from drones to carve the site just as Bucky Fuller's 1927 Time-Lock 4D Dymaxion dirigible bombs made crater foundations for airlifted aluminum apartment houses in the roadless wild... and we can plan to backpack in the rest.



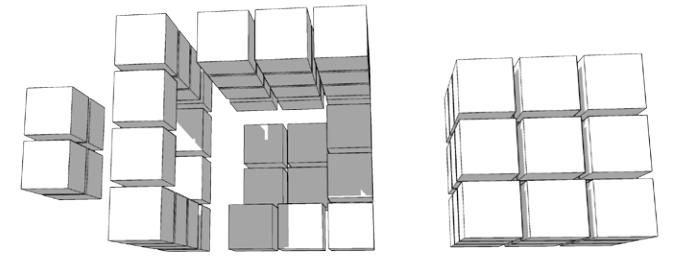
FIRST

LAST

## VOLUMETRIC ARGUMENT

An intersection of Inner and Outer inverted against the landscape slope.

AYIN is the NUMBER 70 in the Gematria.



## CUBE COUNT

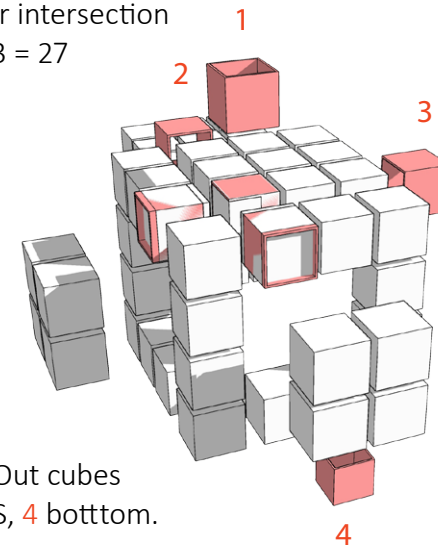
2 cubes, each  $4 \times 4 \times 4 = 64$ .

Subtract their intersection

each  $3 \times 3 \times 3 = 27$

$64 - 27 = 37$

$2 \times 37 = 74$



Add 4 Look Out cubes  
1 top, 2 E, 3 S, 4 bottom.

Remaining 2 Look Out cubes are already in frame, just as 6 Look In cubes are already counted in the 64 - cube volumes.

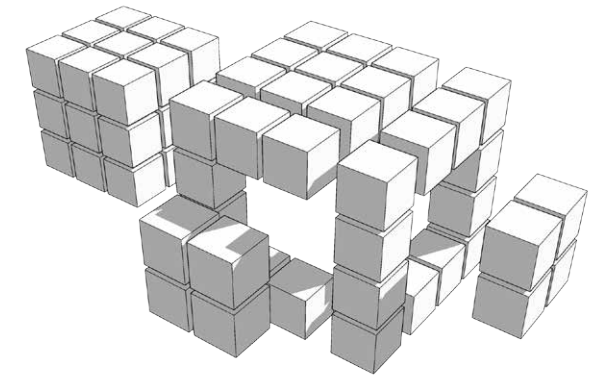
$64 - 27 - 4 = 33$

$33 \times 2 = 66$

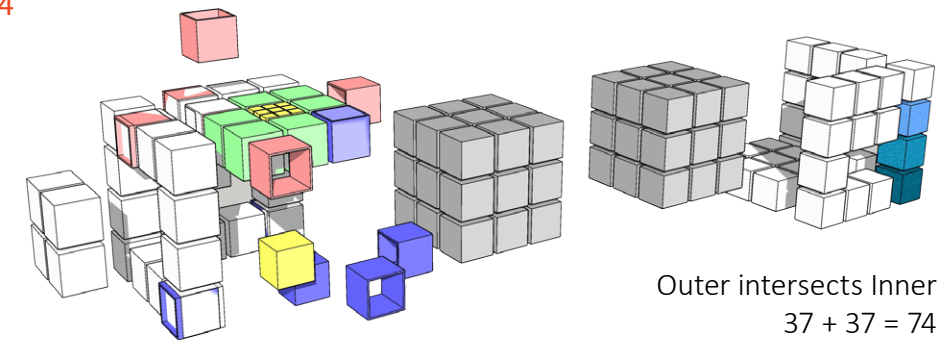
$+ 4 = 70$

QED

$(4 \times 4 \times 4 = 64) - (3 \times 3 \times 3 = 27) = 37$



2 picture windows lose 8 cubes  
 $(2 \times 2) \times 2 = 8$



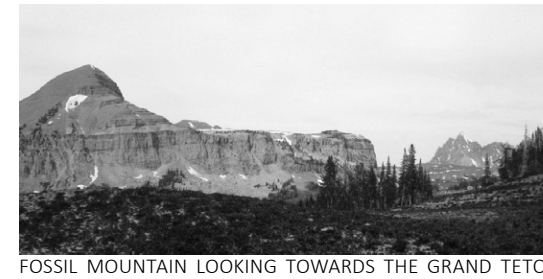
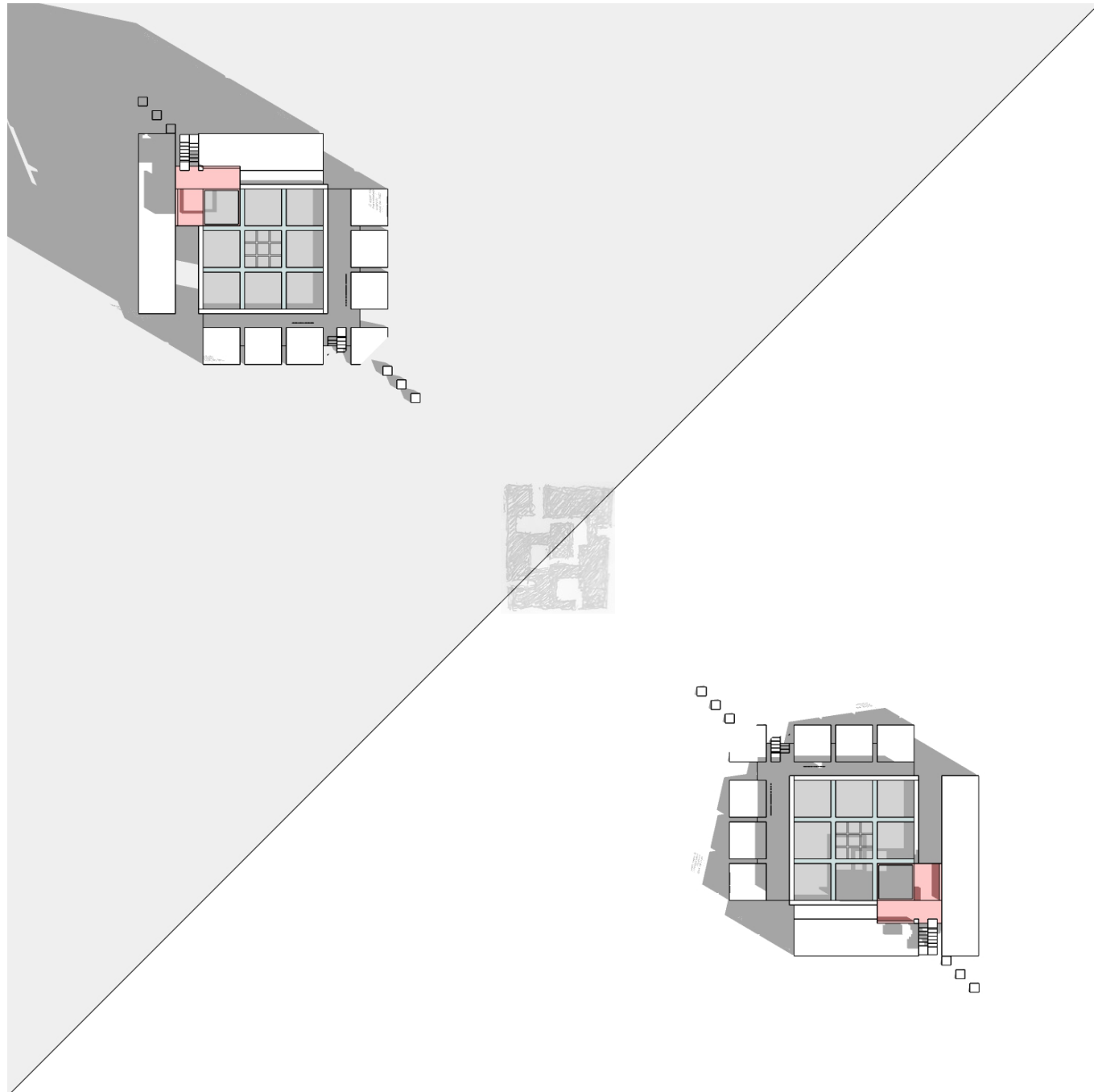
Outer intersects Inner

$37 + 37 = 74$

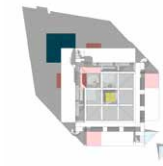
Add 4 Outer cubes

$74 - 8 + 4 = 70$

QED

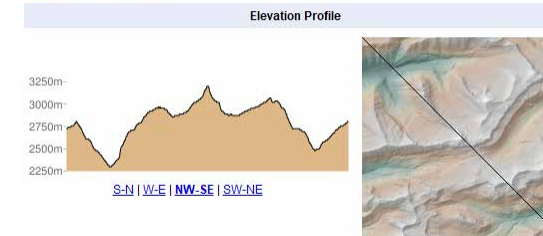


FOSSIL MOUNTAIN LOOKING TOWARDS THE GRAND TETON



11 AM JUNE 21 SUMMER SOLSTICE UTC - 7 HRS  
UTC - 7 HRS IS MORE OR LESS ROCKY MOUNTAINS IN THE USA

[View article on wikipedia.org](#)



## LOCATION

Cast shadows determine that the site is in the UTC -7 Hrs time zone, the Mountain time zone in the USA, which includes the Rocky Mountains.

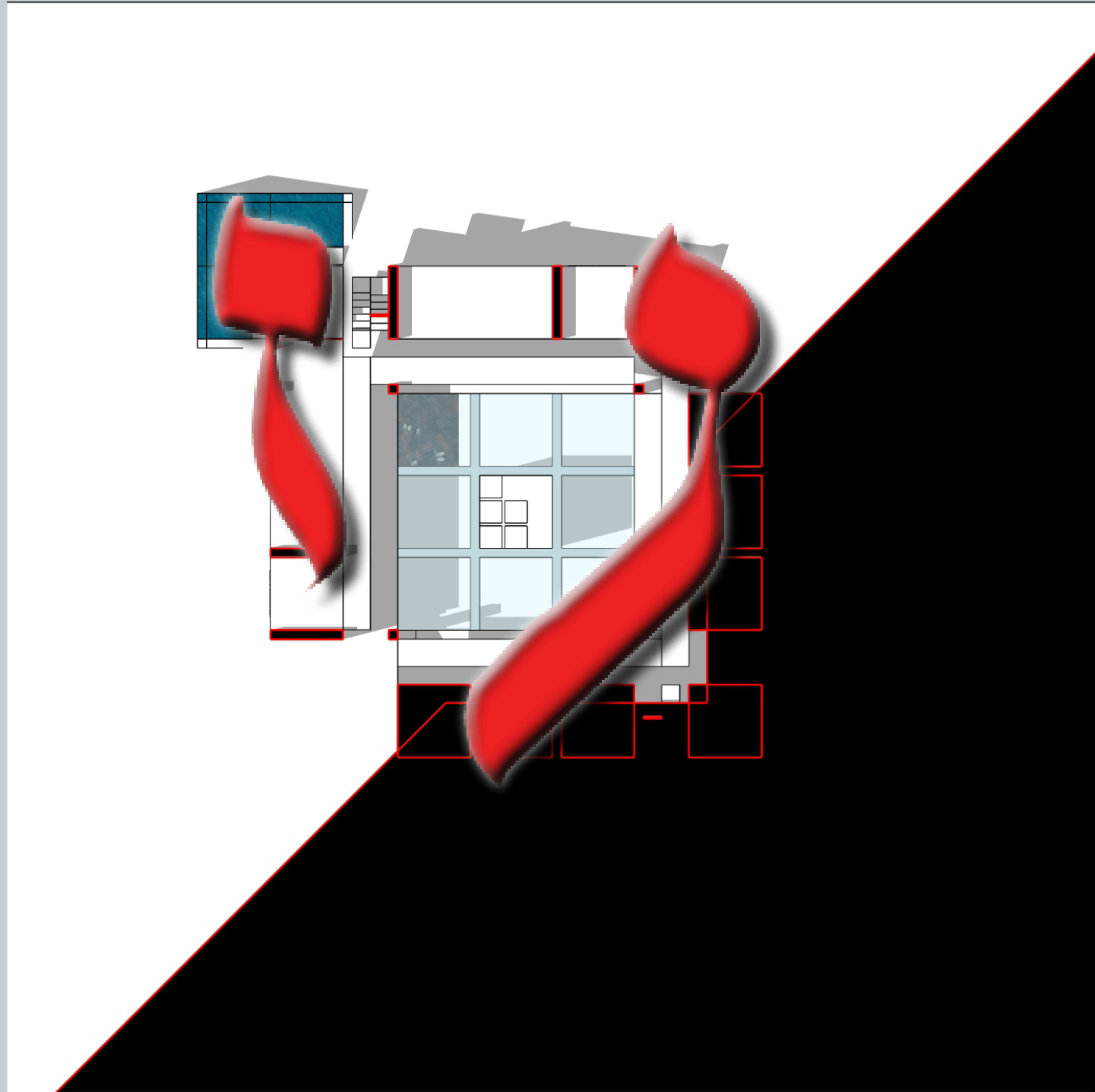
The project is prototypical. The design site is generalized to a NE to SW ridge. One of many many possible sites is Fossil Mountain, WY.

Fossil Mountain, elevation 10,916 feet, is located in the Teton Range, within the Jedediah Smith Wilderness of Caribou-Targhee National Forest, Wyoming. It is a few miles west of the Teton Crest Trail in the Grand Tetons, which itself runs SW to NE-- just what we need!

Bottom images from Google Earth show cross-section and air view of the site. The top photo was taken near Pass Lake, from about a mile SE of Fossil Mountain, looking toward The Grand Teton. This page was compiled while listening to Joe Pass, *The Shadow of Your Smile*.

## FURTHERMORE, A PAIR OF EYES

To observe all the surrounding landscape must require A PAIR OF EYES on both slopes of the mountainside. The two slopes, sunny and shady, yang and yin. One faces NW, other faces SE, as the ridge between them runs NE to SW. Two towers-- a pair of EYES to see the whole world. Between them lies a tunnel and labyrinth cave, analog to the optic chiasma linking both eyes to the brain-- the gift of parallax and binocular vision.



**VAV supported by NUN**

Rabbi Yitzchak Ginsburgh's essential *Alef-Bet: Jewish Thought Revealed through the Hebrew Letters* discusses the form and meaning-- the *character* of the letter AYIN



**FORM:**  
 An elongated *nun* with an enwedged *vav* or *zayin*.  
 The vessel of the *nun* receives god's blessing, the *vav*.  
 The 2 eyes and optic nerve entering the brain. The right eye looks up at the *samech*, the left eye looks down at the *pei*.

**Worlds:** a poor man receiving physical sustenance. Right eye looking up at the sky, left eye looking down at the earth.  
**Souls:** the right eye dances, the left eye speaks.  
**Divinity:** the right eye looks up at God's Transcendent Light; the left eye looks down at the Word of God.

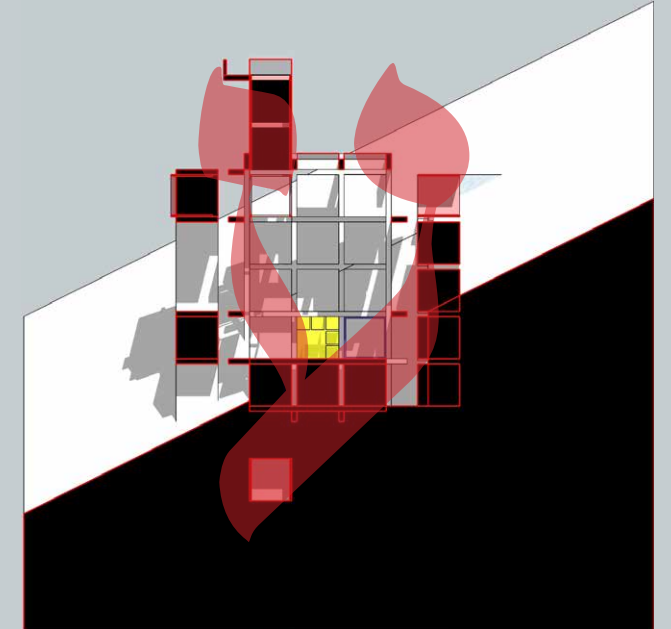
**NAME:**  
 eye; color; fountain; in Aramaic: sheep

**worlds:** Physical vision; color spectrum; a fountain. The fountain of wisdom and the ability to perceive wisdom.  
 The sheep looking toward the shepherd;  
 the shepherd watching his sheep.

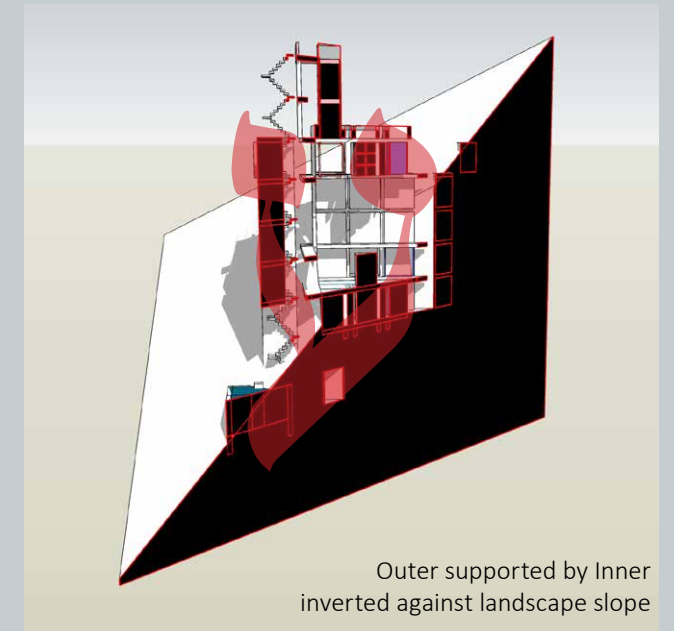
**Souls:** The eye of the soul looking at unification, sanctity, and blessing.

**Divinity:** The silent prayer: heart above and eyes below.

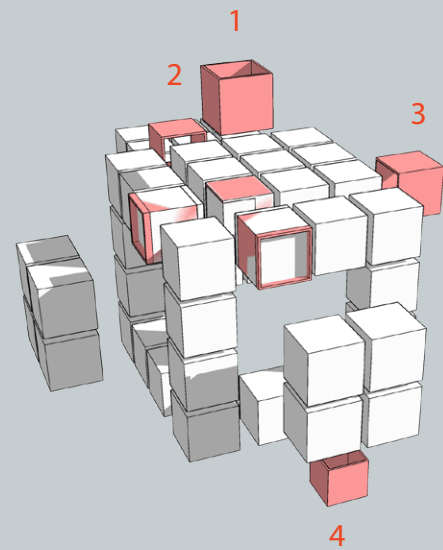
At the level of Worlds, the right eye of the AYIN looks up at the "surrounding" sky, the "outer space" of the *samech*, reflecting on the greatness of the Creator. The left eye looks down at the open mouth, the *pei*, of the earth, reflecting upon the lowliness of man.



See the AYIN  
 <-- In plan (s) and in section (s) ^



Outer supported by Inner  
 inverted against landscape slope



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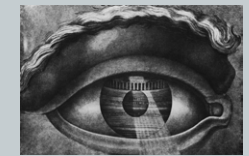
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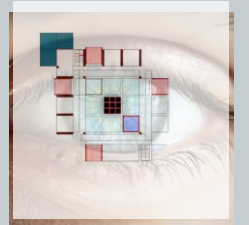
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THIS BOOK IS 70 PAGES PLUS COVERS



Claude-Nicolas Ledoux, *Oeil Reflétant l'intérieur du Théâtre de Besançon, 1784*  
Courtesy Bibliothèque Nationale de France



two who really see



MARILYN TURTZ



ROBERT SLUTZKY



AMORPHOUS SILICON TRANLUCENT PHOTOVOLTAICS

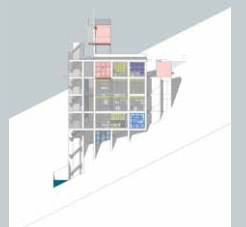
as of 9:45 AM, February 2, 2019,  
AYIN IS COMPLETE.

I SEE.

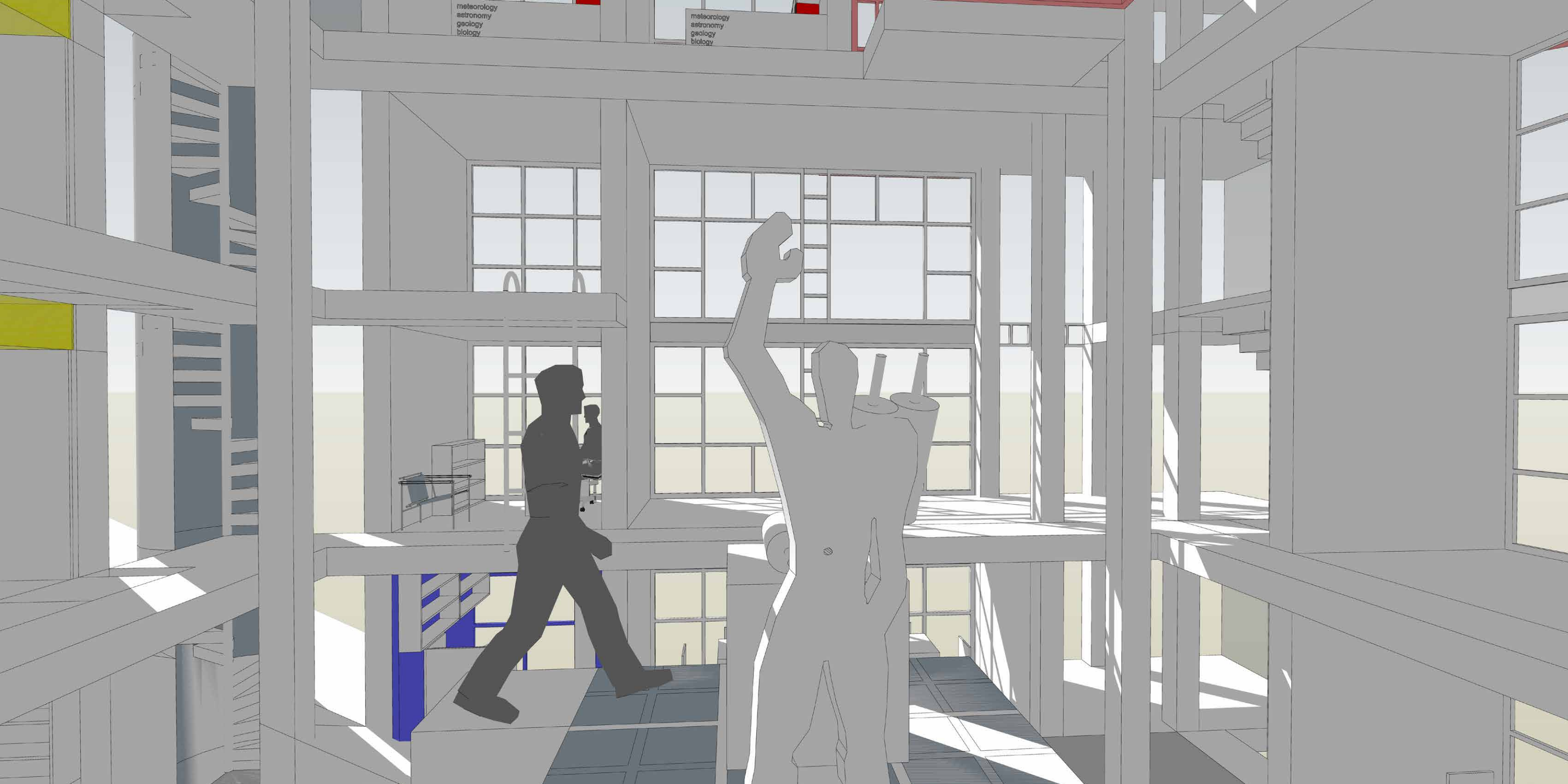
I SEE



TAO

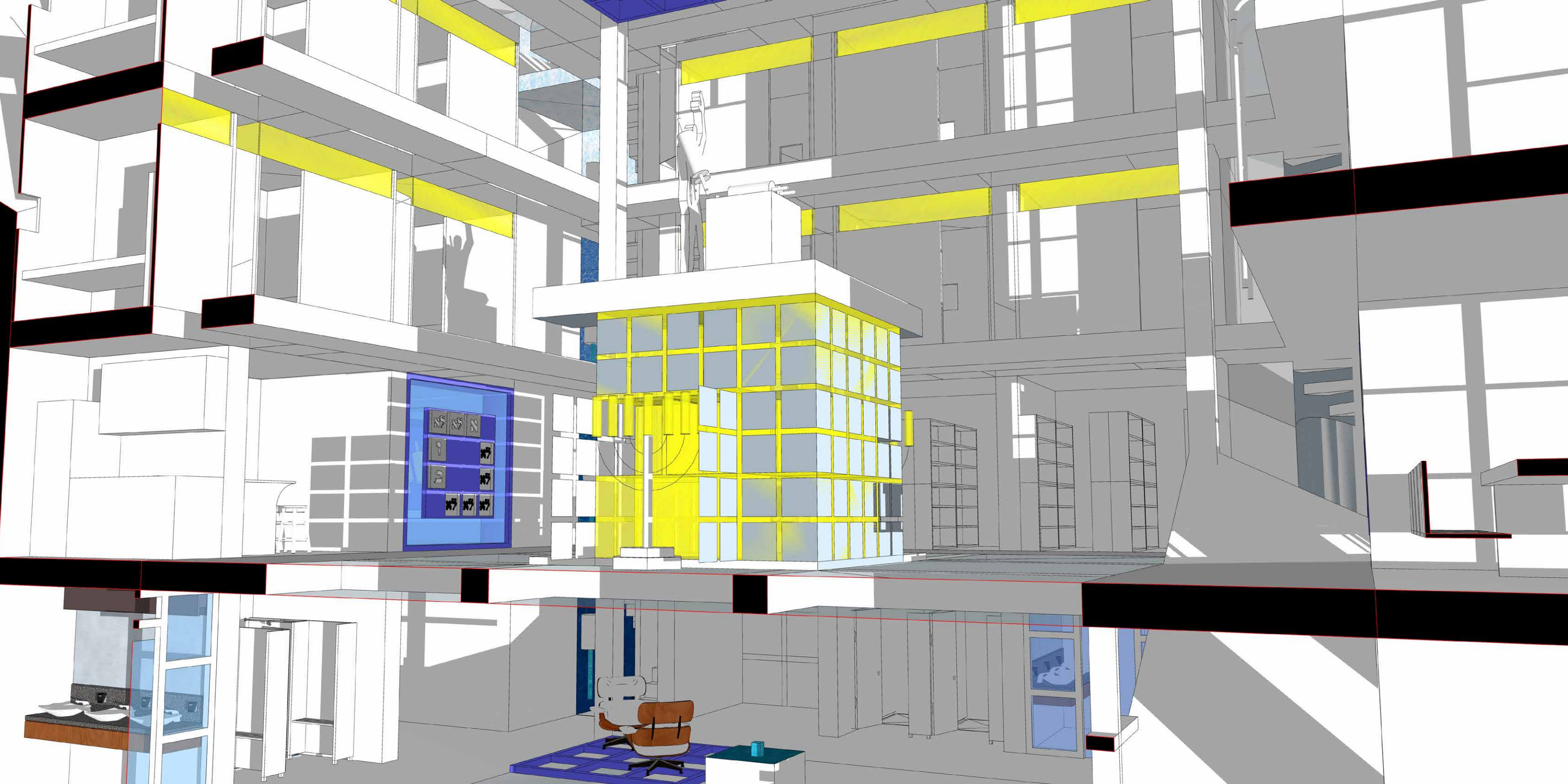


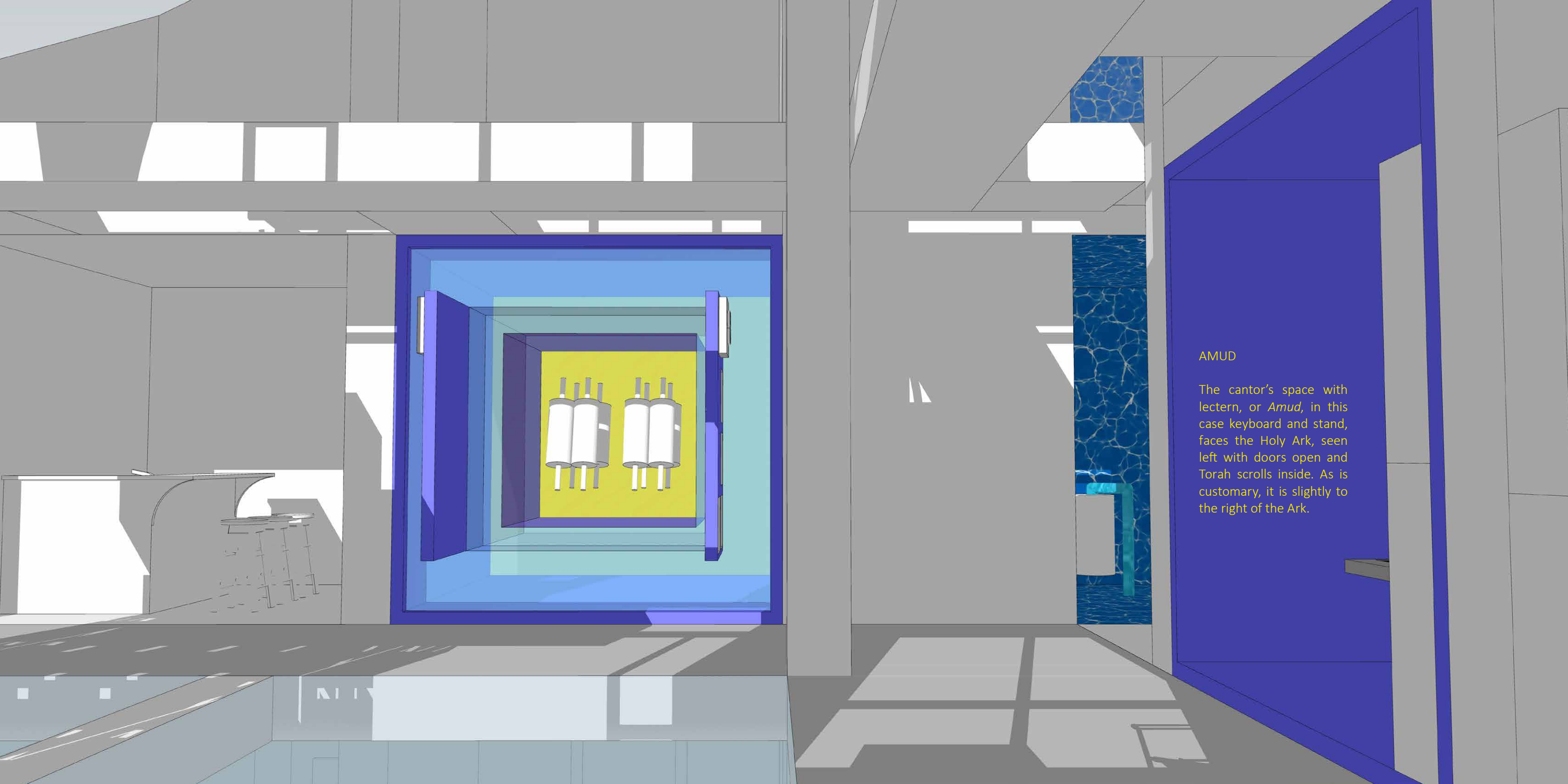
T'IEH



meteorology  
astronomy  
geology  
biology

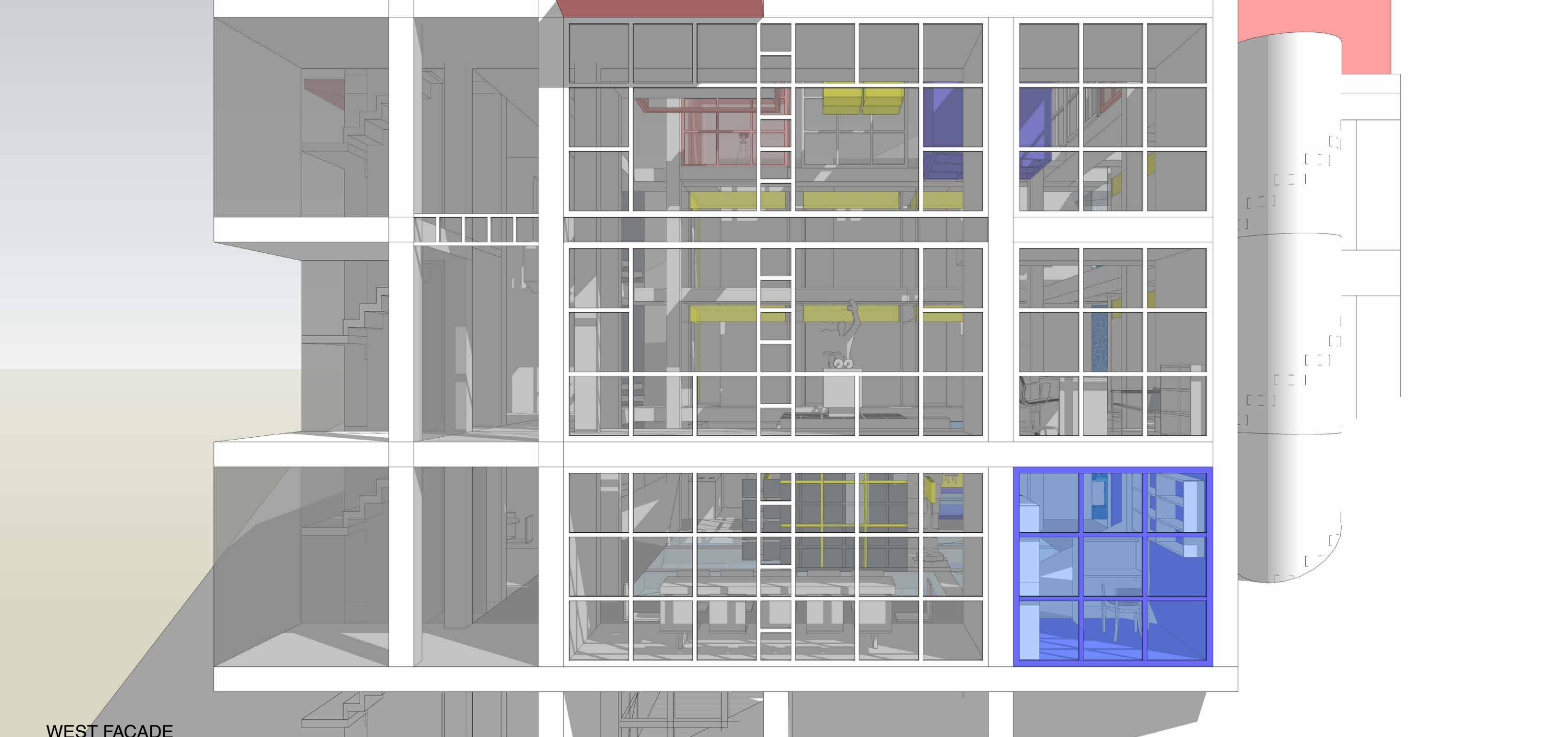
meteorology  
astronomy  
geology  
biology





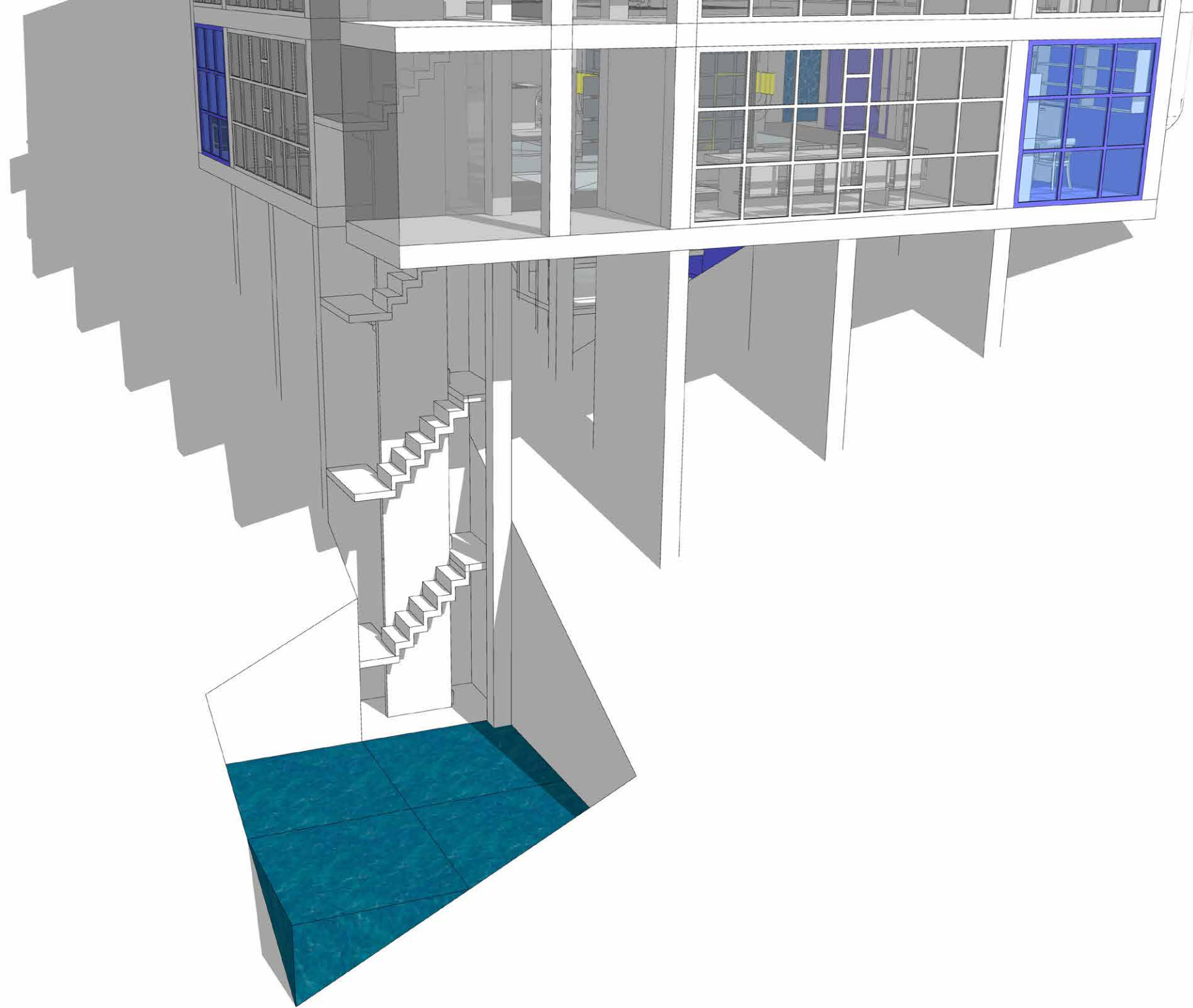
#### AMUD

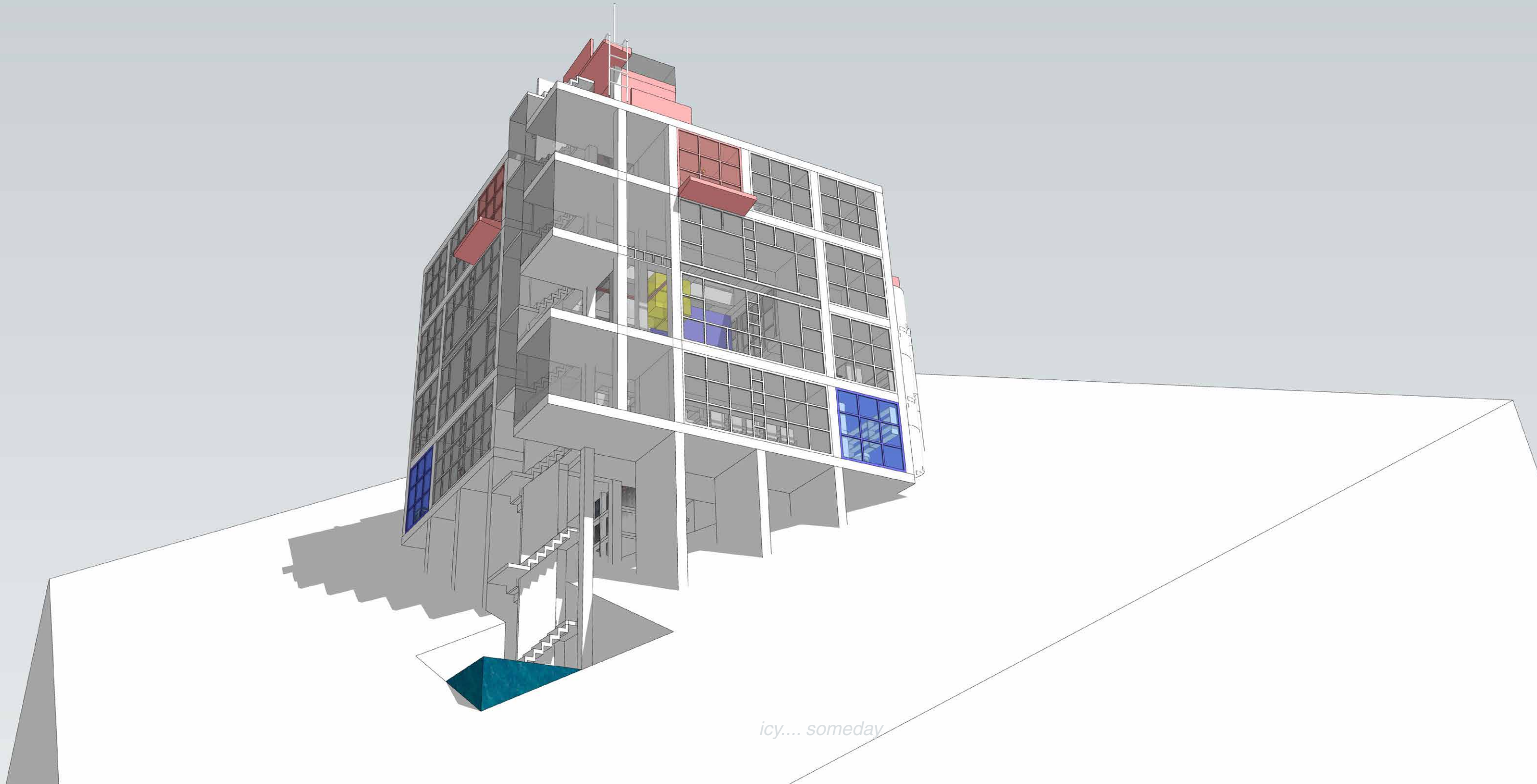
The cantor's space with lectern, or *Amud*, in this case keyboard and stand, faces the Holy Ark, seen left with doors open and Torah scrolls inside. As is customary, it is slightly to the right of the Ark.



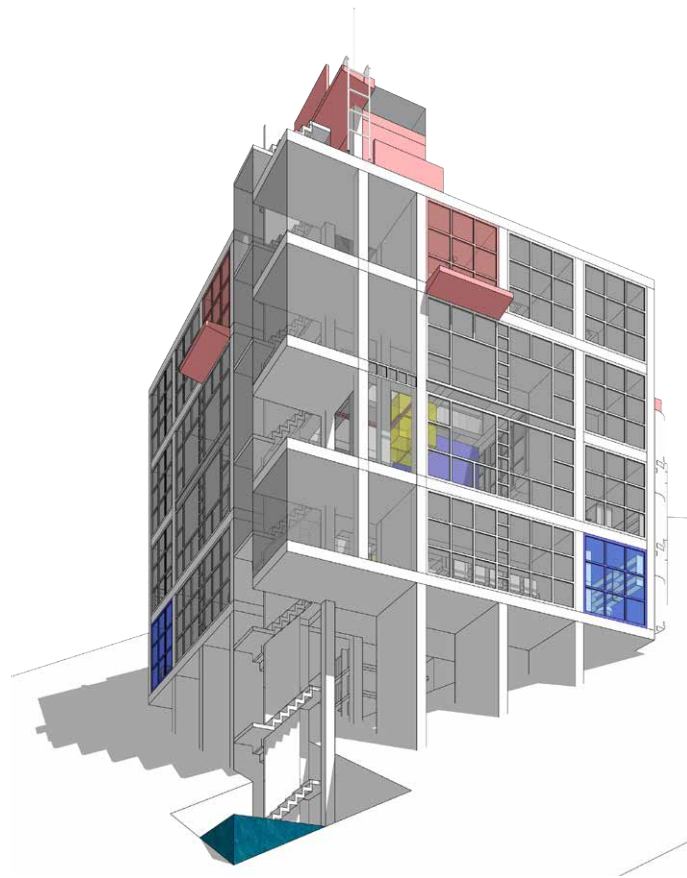
WEST FACADE



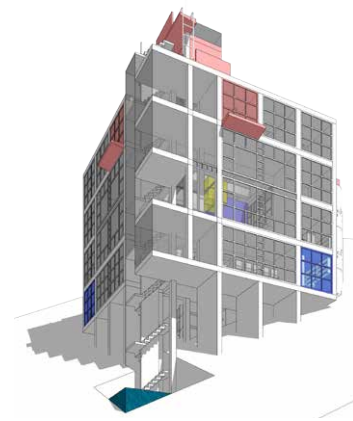




*icy... someday*



I SEE





L U S H  
L I G H T  
P R E S S  
© 2 0 1 9

