HEALTH + EFFICIENCY

Moises De La Cruz

PERSONAL PORTFOLIO, FEATURING THE TALENTS OF

Jurgis Vaišvila

Jennifer Long

Kaylee Hernandez

Krystal Bacon

Eva Wieczorek

Elle Gallmann

starting with a skeleton...

...then populating it.

Over the course of this studio, I saw my role develop from one formed by timidity to a more organizational one. I tried to offer answers to design questions whenever prompted at first, and ultimately began proposing a variety of design changes from minute details to full-scale parti.

As it often does, my familiarity with Rhinoceros prompted me to take the lead in compiling digital models into one unified file, with which the team took sections, renders, and more. Working somewhat independently due to the remote format of the class, I was able to spend time in-depth developing my workflow in both Rhino and the Enscape render engine, which has become an invaluable tool for previewing design ideas in real time and quickly developing improvements as needed. More details on this process will be discussed later in the portfolio.

I of course could not have accomplished quite as much without the crucial contributions of the rest of Atelier STRIPES. From modeling framing plans for me to insert into the main file, to cleaning line work when the final review crunch got real, my fellow architects were an integral part of the design, modeling, and representation process. The engineering team, meanwhile, was the source of our framing plan as well as the resident source of expertise when it came to proposing how to construct the project and structural nomenclature.

Moreover, the entirety of the team were often more ideologically aligned than not. Coming up with creative solutions to practical problems and impractical solutions to creative problems seemed to come naturally to Atelier STRIPES; during brainstorm sessions Zoom was no match for each member's willingness to share input and build upon others' ideas with surprising enthusiasm. For this reason, it is impossible to credit any one member or group of us with the design of the building itself; the Health & Efficiency House is very much an iterative and communicative proposal which arose from the combination and integration of each team member's individual contributions.

Health + Efficiency House design: Atelier STRIPES
most visual work presented will be my own; contributions from other members will be noted.

TIMELINE | HEALTH + EFFICIENCY HOUSE

Atelier STRIPES

The Glass House. Past, present & future. A Wardian case.

the UNDERSIDE of POWER


Kaylee Hernandez

2121
??????????


Jurgis Valavila

2021
Health • Efficiency House


Anna Sturnio

Gitanas Nausėdaa's Home

On 17 September 2018, Nausėda announced his candidacy for the 2019 Lithuanian presidential election, which he on 26 May. He was officially inaugurated on July 12th. By the time he had spent a month in office, Nausėda was considered to be the most **trusted politician** in Lithuania according to polls conducted by the **Lithuanian National Radio and Television.**

Nausėdos Namai is where the current Lithuanian leader lives. The house is essentially a regular enclosed home, encapsulated in an larger **glass case.**

2019
Gitanas Nausėdaa is Elected


Eric Griffin, NYT

The glass house entered the 21st century with this rural NY project made out of steel but with **engineered lumber**. Like its predecessors, it sits in a secluded field and purports to avoid architectural '**symbolism** & **metaphor**' in delivering an **authentic** material experience.

2018
Wuchrer House


Iwan Baan

'INTERVENTION' IN SYRIA & IRAQ 2014-

2011
House NA

Toki Sou Fujimoto project was influenced by the structure of trees and the idea of integrating **outside nature with indoor space**. The greenhouse-esque building is made of loosely defined rooms at irregular floor heights, and was described as an attempt to build a "relationship between people and universe, **modifying visual perception and habits.**"


Frank Herfort, 2017

2013
Edward Snowden Leaks NSA Info

The secrets of the government's massive spying apparatus were revealed when former NSA employee **Edward Snowden** leaked documents detailing the close relationship between AT&T and the invisible power in America. In addition, the network which had only been hinted at previously was revealed to be a global collaboration between superpowers known as the **Five Eyes Alliance**, and most of the largest **tech companies** were implicated in working with the NSA to supply information on their users. For exposing to the public that most (if not all) of their interactions with the internet were closely monitored and recorded behind closed doors, Snowden was accused of violating the **Espionage Act**. He then defected to Russia, after being denied asylum from numerous other countries under pressure from then-Vice President Joe Biden in an act of what Snowden called **"using citizenship as a weapon."**

2009
Gravity is a Force to be Reckoned With

Inigo Manglano-Ovlle's **'Gravity is a Force to be Reckoned With'** is displayed at the MASSMOCA Based on Zamyatin's **'We,'** Manglano-Ovalle's art installation at the Massachusetts Museum of Contemporary Art exhibits a scaled- down version of Mies Van Der Rohe's **50x50** house.


Photographer anonymous

2006
Urban Glass House

Photographer unknown
Courtesy of SK Development

The Urban Glass House is a condominium building designed by American architect **Philip Johnson** located in the Hudson Square neighborhood of Manhattan, New York City. Completed in 2006, it was Johnson's final project, as he did not live to see construction finished.

2007
Global Financial Crisis

IRAQ WAR 2003-2011

WAR IN AFGHANISTAN 2001-

NSA Creates Room 641A

Using the hazy legality of previous surveillance law, the NSA equips fiber optic splitters in small rooms within various AT&T **data routing centers** across the U.S., which collectively handle a large chunk of the world's telecommunications. The splitters invisibly divert the data through government computers which allow the NSA to **intercept**, **transcribe**, and **record** the contents of every phone call, message, or internet query that passes through them. The system is also capable of scanning this data for **specific keywords** as directed. **San Luis Obispo** plays an important role in this nationwide surveillance system, as a plurality of the world's trans-pacific internet traffic flows through undersea cables beneath **Montana de Oro Park** and are passed by a local switching station up to AT&T's cubic **windowless building** in San Francisco.

"Our Road to Communism" (1950) Alexei Ivanov (Courtesy Wende Museum)

1991
Collapse of the Soviet Union

GULF WAR 1990-1991

2002
Department of Homeland Security Established

With destruction of the **Berlin Wall** beginning two years before, control of the press was relaxed and thousands of political prisoners and dissidents were released. Gorbachev removed the constitutional role of the Communist party, leading to the eventual **dissolution** of the Soviet Union on 26 December 1991.


Photographer unknown

1981
Executive Order 12333

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SOVIET-AFGHAN WAR 1979-1989


Bill Ballenby

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"The spectre is Haunting..." Aleksandr Arnakh, 1930 (Courtesy Wende Museum)

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Eric Bolle Hichel, Mikaelsky, Shkapotskyy & Dmytrychko (1964)

1972
The IBM Plaza

This building was Mies' second tallest project, and his last in the States. From the start it displayed a prominent discrepancy between the building's **high tech**, computer climate-controlled ambitions and its **asbestos-ridden** reality which persists today. Mies was not able to see the building completed, as he died in 1969.

Photographer unknown

1967
The Moscow Pavilion

Dario Escobar

Mikhail Posokhin embraced **Soviet Modernism** in this structurally expressive pavilion for Expo 67 in Montreal. While the majority of public housing in the USSR had become robustly opaque, the pavilion expressed an archetypal sense of **openness**, pointed in an optimistic upward curve.

Photographer unknown

1973
The World Trade Center

Above the sweltering inequality below, American society's elites were organising power on a global scale. The prominence of trade both physical and fiscal (**speculative markets**) allowed for constant expansion which the U.S. was happy to indulge with **easy loans** from the central bank and a 'hands-off approach to control. The modern form of power therefore became **privatized** - hidden behind the actions of private companies that were restricted only by **laissez-faire** policies that essentially amounted to an honor system. The **World Trade Center** completed in 1973 was the perfect fit for the new seat of power - forcing the relocation of existing residents who preceded it to steal the title of world's tallest from the Empire State. Its severe vertically unbranded structural indulgence and 5 separate elevator systems linked by panoramic '**sky lobbies**,' yet was prescribed narrow 18" windows due to architect Minoru Yamasaki's **fear of heights**.

"New York, New York" Bang Kwong Chi, 1970

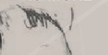
1964
Ken Kesey Kicks Off the Counterculture

The now famous 60's "**hippie**" culture emerged out of the legacy of Beat poets and artists from the decade before. Author **Ken Kesey** passed the baton to his zany and controversial band of Merry Pranksters with a collective bus odyssey across the U.S. supplied with **acid** and amphetamines to fuel their engines. Kesey had once participated in government testing of **hallucinogens**, and the substances which had inspired much of his writing, he now envisioned as having the power to awaken a cultural revolution and challenge the **conformity** of American culture.


Still from "Going Further" (2018) Kent, O'Neill, Pickett

1965
Reforms Fail to Organize the USSR's Unstable Growth

In the 70s and 80s, many utilitarian-leaning '**brutalist**' buildings came to dominate Soviet architecture, sometimes invoking an imaginative and otherworldly style that might be read as a **gravity-defying** escape from the earthly disappointments which were sweeping the society. Expressing the loneliness of the late USSR, these projects and their sky glaring invoke a longing sense of being **inside-looking-out**.


Hotel Panorama, Zdanski Brok (1969) Photographer unknown

1953
Project MKUltra


Kansas Historical Society, 1999

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1961
Mass Production of Khrushchyovka


Flickr User @crackajaxx, 2010

Now-ubiquitous, these **mass housing projects** of the USSR were planned by Soviet committees as a means to temporarily satisfy rising demand as the government continued transplanting the rural population into new would-be urban centers. "Communism in 20 years" became the slogan of Stalin's successor **Nikita Khrushchev**, signaling that life would improve once the country caught up to west and was able to form a classless and stateless communist society.

1958
Seagram Building


Photographer unknown
Courtesy of Emporismews.com

Seagram is one of the most notable examples of the **functionalist** aesthetic and a prominent instance of corporate modern architecture. Mies was given an **"unlimited"** budget by the Montreal-based Seagram Corporation, adorning the building's exterior with stark glass curtain wall and simple plaza to satisfy zoning requirements for its extraneous height.

1970
Kent State & Jackson State Killings


Photographer unknown
Courtesy of Kent State University

VIETNAM WAR 1955-1975

Inequality Expands In The West


Martha Cooper, 1981

As the bottom, society's deepest wounds became transparent on the streets of New York, where the tension between **have** and **have not** was accentuated by cycles of rebellious violence and repression. Like so many other densely populated parts of the U.S., black and poor tenants were constantly handed the short end of New York's economic prosperity, and **systematically** denied opportunities to build generational wealth by remnant property & finance laws written through decades of segregation.

1940s
The Red Scare

Herbert K. White, 1952

A **paranoia** swept U.S. government and culture as the 'threat' of communism loomed in the east. The **House Un-American Activities Committee** (headed by Senator Martin Dies), and Senator **Joseph McCarthy** lead numerous investigations and trials implicating officials and private citizens in conspiracies if there was any suspicion of ties to fascism or communism.

1930s
The Rise of Stalinism

Worth Brass, 1931

The optimistic age of Lenin was short - only a few years - before Stalin rose to power and sidelined the government's role in censorship. Having usurped **ultimate control** in the USSR, Stalin turned his **paranoid** attention outwards and enacted rapid industrialization reforms to prepare for war with the west while imprisoning and murdering dissidents to enforce **ideological uniformity**.

Empire State & Great Depression

While the New York skyline was embellished with the world's peak, the Empire State Building, most of America experienced devastating **economic downturn** as the stock market tumbled as a byproduct of **speculative trading**, and the Dust Bowl brought an era of ecological disaster fueled by the rise of **mechanized farming**.


Photographer unknown

1951
The Farnsworth House

Casa de Vidro

Peter Scholes, 1951

Located in the tree-lined outskirts of São Paulo, **Casa de Vidro** is an icon of Brazilian modern architecture and the former home of Italian architect **Lina Bo Bardi** and her husband Pietro Maria Bardi.

The Farnsworth House was designed by Mies van der Rohe and built between 1945 and 1951. The one-room weekend retreat sits in a rural forest near Chicago, and was quickly realized to be a mistake by its chief inhabitant, who despised the way it made her a **spectacle** for curious trespassers. She eventually filed a lawsuit against Mies, which became a part of the larger hysteria of **McCarthyism**, and the building was derided by some as a "communist-led effort" to undermine **traditional** American residential styles. To this day, the building remains troubled by a history of **frequent flooding** due to its location on the Fox River floodplain.

1948
The Glass House


Photographer unknown

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WORLD WAR TWO 1939-1945

KOREAN WAR 1950-1953

1914
The Glass Pavilion


Photographer unknown (public domain)

Created by **Bruno Taut**, this prismatic glass dome structure at the Cologne Deutscher Werkbund Exhibition. The structure was made at the height of **German Expressionism**, an avant-garde art movement that pioneered genres like futurism and horror, constrasting wildly with realism.

WORLD WAR ONE 1914-1918

RUSSIAN CIVIL WAR 1917-1922

1922
Bolshevik Victory

"Smoke of chimneys is the breath of Soviet Russia" Artist unknown (public domain)

1929
The Barcelona Pavilion

Moisej Jatyk

Designed by **Ludwig Mies van der Rohe** and **Lilly Reich**. This was the competition winner for the 1929 International Exposition in Barcelona, Spain. The pavilion was said to represent "the new Weimar Germany: **democratic**, culturally progressive, prosperous, and **thoroughly pacifist**, a self-portrait through architecture."

1842
The Wardian Case

With the invention of a successful method for keeping plants in harsh environments (from overseas journeys to the **coal-blackened skies** of London), the Wardian case essentially kickstarts the modern era of **global ecological commerce** and allows the world's biodiversity to be shared with ease.

Artist unknown

1851
The Crystal Palace

AMERICAN CIVIL WAR 1861-1865

The Great Exhibition of 1851. The Crystal Palace was created out of cast iron and plate glass. **Joseph Paxton**, a **gardener** by trade, developed a 'ridge-and-furrow' structural system for **greenhouses** which allowed for the use of glass in such a novel way.

Competitors winner, the

1874
Greenhouses of Laeken

Emma Thomson, 2015

This exotic Belgian royal property was commissioned by **King Leopold II**, who amassed a fortune by founding the Congo 'Free' State and **extracting** its rubber resources through forced labor. The greenhouses brought the outside indoors for year round enjoyment, but were only made accessible to the public for **3 weeks** per year.


"The captain of the Soviet Union leads us from victory to victory" Boris Efimov, 1933

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1981
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Photographer unknown

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Brezhnev & Nixon at SALT Talks, 1979 Associated Press

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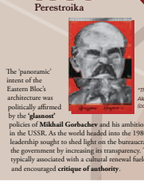
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Peter Palumbo Buys the Farnsworth House

Mies' crown achievement of **International Style** was purchased for restoration by The Right Honorable Peter Garth Palumbo, Baron Palumbo, a **wealthy conservative Lord** from Great Britain. In his earlier years the property magnate had idolized van der Rohe, and once commissioned him on the design of a controversial housing project called **Mansion Square House**, which was indeed a massive cube not unlike the Seagram Building.

Werner Blosser, 1964

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Hacking Hits the Mainstream

Bill Ballenby

In a strange callback to the 60s, two countercultural trends went head to head in '89. **John Perry Barlow** - lyricist for the Grateful Dead and self proclaimed **'cyberlibertarian'** - had made a name for himself promoting virtual reality as a new frontier for the masses to escape into in pursuit of a utopian cyber democracy. Two young hackers under the aliases **Acid Phreak** and **Phiber Optik**, however, wanted to show him that such a society would be impossible given the hidden control that corporations already exercised over the young internet. They accessed and leaked his **credit history** from **TRW** (who once built missiles and spacecraft for the Cold War) as a public 'gotcha' to argue that his utopia could just as easily become a dystopia.

Peter Palumbo Buys the Farnsworth House

Mies' crown achievement of **International Style** was purchased for restoration by The Right Honorable Peter Garth Palumbo, Baron Palumbo, a **wealthy conservative Lord** from Great Britain. In his earlier years the property magnate had idolized van der Rohe, and once commissioned him on the design of a controversial housing project called **Mansion Square House**, which was indeed a massive cube not unlike the Seagram Building.

Werner Blosser, 1964

2006
Urban Glass House


Photographer unknown
Courtesy of SK Development

The Urban Glass House is a condominium building designed by American architect **Philip Johnson** located in the Hudson Square neighborhood of Manhattan, New York City. Completed in 2006, it was Johnson's final project, as he did not live to see construction finished.

NSA Creates Room 641A

Using the hazy legality of previous surveillance law, the NSA equips fiber optic splitters in small rooms within various AT&T **data routing centers** across the U.S., which collectively handle a large chunk of the world's telecommunications. The splitters invisibly divert the data through government computers which allow the NSA to **intercept**, **transcribe**, and **record** the contents of every phone call, message, or internet query that passes through them. The system is also capable of scanning this data for **specific keywords** as directed. **San Luis Obispo** plays an important role in this nationwide surveillance system, as a plurality of the world's trans-pacific internet traffic flows through undersea cables beneath **Montana de Oro Park** and are passed by a local switching station up to AT&T's cubic **windowless building** in San Francisco.


Photographer anonymous

IRAQ WAR 2003-2011

WAR IN AFGHANISTAN 2001-

2002
Department of Homeland Security Established

research: Atelier STRIPES
timeline graphic: Elle Gallman & Moises De La Cruz

The first project of the quarter was our historical timeline, designed to read as a complex map/game board chronicling a sparsely interconnected history of power and transparency. Historical deceit and hubris ranging from monarchical 'public' greenhouses & ideological fear mongering to 'forever wars' & top secret brainwashing and surveillance programs combined to form a *point*-ed critique of our cyclical global politic and its addiction to capital over the last 200 years.

Research & Map by:

Jurgis Valavila
Jennifer Long
Elle Gallman
Eva Wieczorek
Kaylee Hernandez
Krystal Bacon
Moises De La Cruz

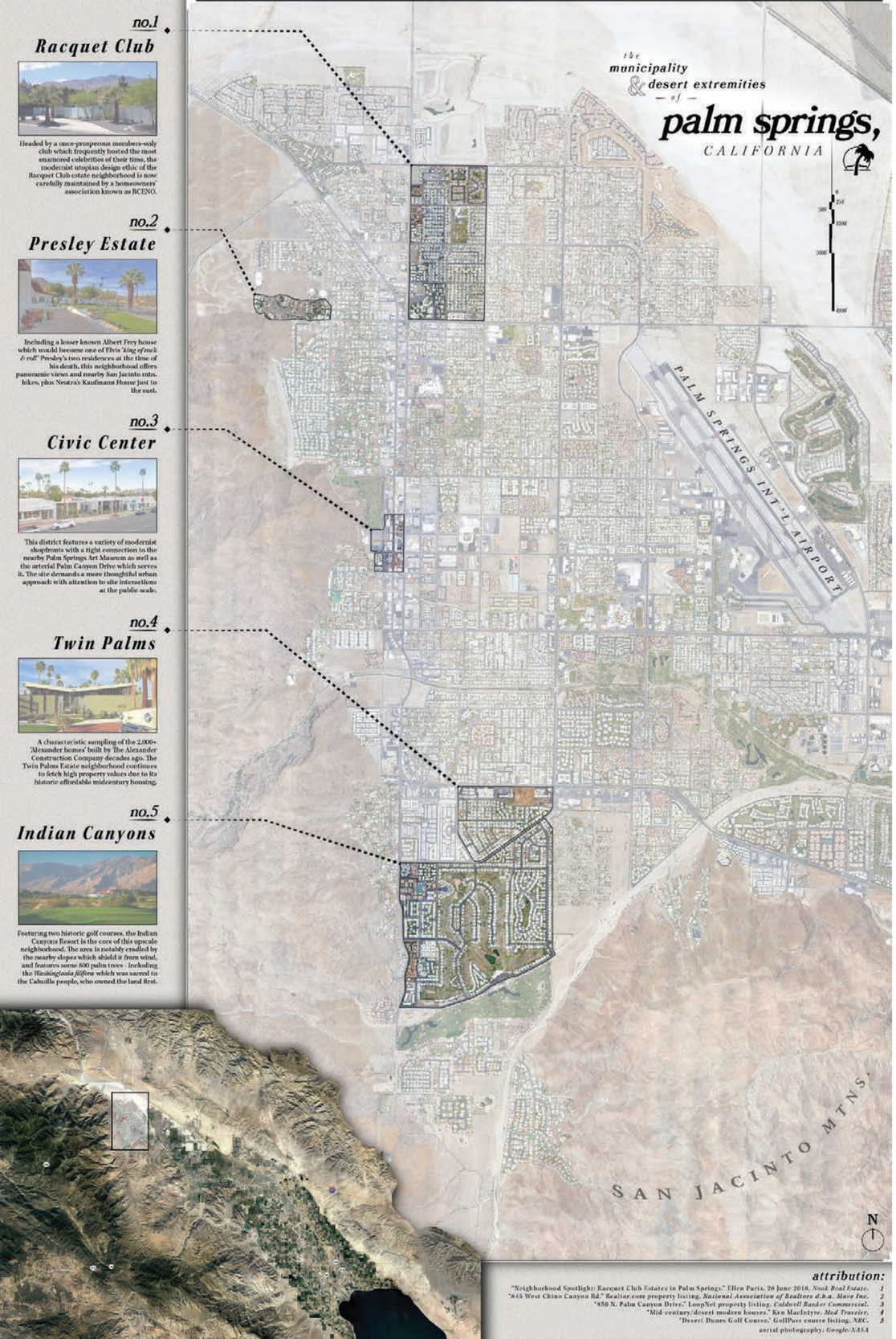
SITE RESEARCH

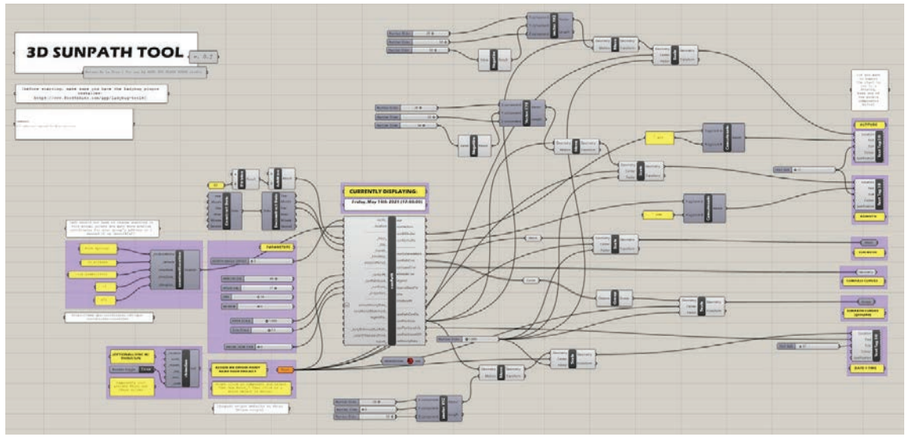
HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

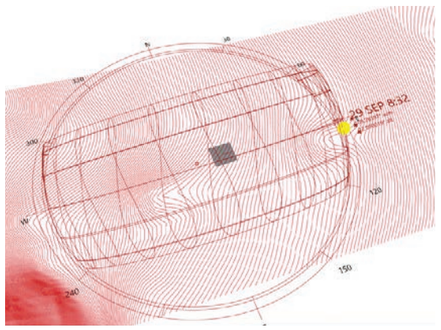
As the design process launched, architects were also tasked with collecting site and context data for the benefit of their peers. Students were given several potential neighborhoods to develop within, though most chose the Presley Estates as Atelier STRIPES did.

Along with aggregating some baseline information about the geographic conditions in the Palm Springs area, I managed to uncover technical reports on soil conditions (mostly favorable underneath all of the alluvial sand!), research into the source of a geothermal spring in downtown, and facts about each of the siting options. Through this process, I was brought to an awareness of the Cahuilla people who formerly inhabited the area, who were in fact organized around the Agua Caliente spring. More than collecting numbers for seismic design, what I enjoyed most about the site research process was aggregating fascinating details about the area and its experience, which helped to inform what sort of project our team would eventually develop.

city plan featuring Google Earth imagery;
photo attributions on poster







During these early weeks I also assisted the site contour team by putting together a sunpath analysis tool for the studio to use in Grasshopper. This was an expansion of a similar tool I had developed during fall quarter of this academic year, and allowed peers to input any date and extract a fully-customizable 3-dimensional sunpath orb superimposed on their Rhino model. Knowing that others would have to interpret my mess of a program, I attempted to organize the Grasshopper file with callouts, labels and groups as much as possible.

SITE IMPRESSIONS

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

Upon our team choosing the neighborhood in which to develop, I began to ruminate on how best to approach the design prompt. How would we site a perfectly square home in such a hilly mess of contours? How might our orientation affect daylighting? What sorts of views could we diffract through our glass box?

The answer, it turned out, was already in situ. Our team hopped onto Zoom for a brainstorm session, with Google Earth for assistance. We immediately gravitated to the address 1075 W. Cielo Drive, for how the existing house seemed tucked up right against the San Jacinto mountains with a convenient hiking trail nearby. The house was also rotated to what seemed to be a perfect 45° oblique w/r/t North, and we felt that this strategy seemed tried-and-true.

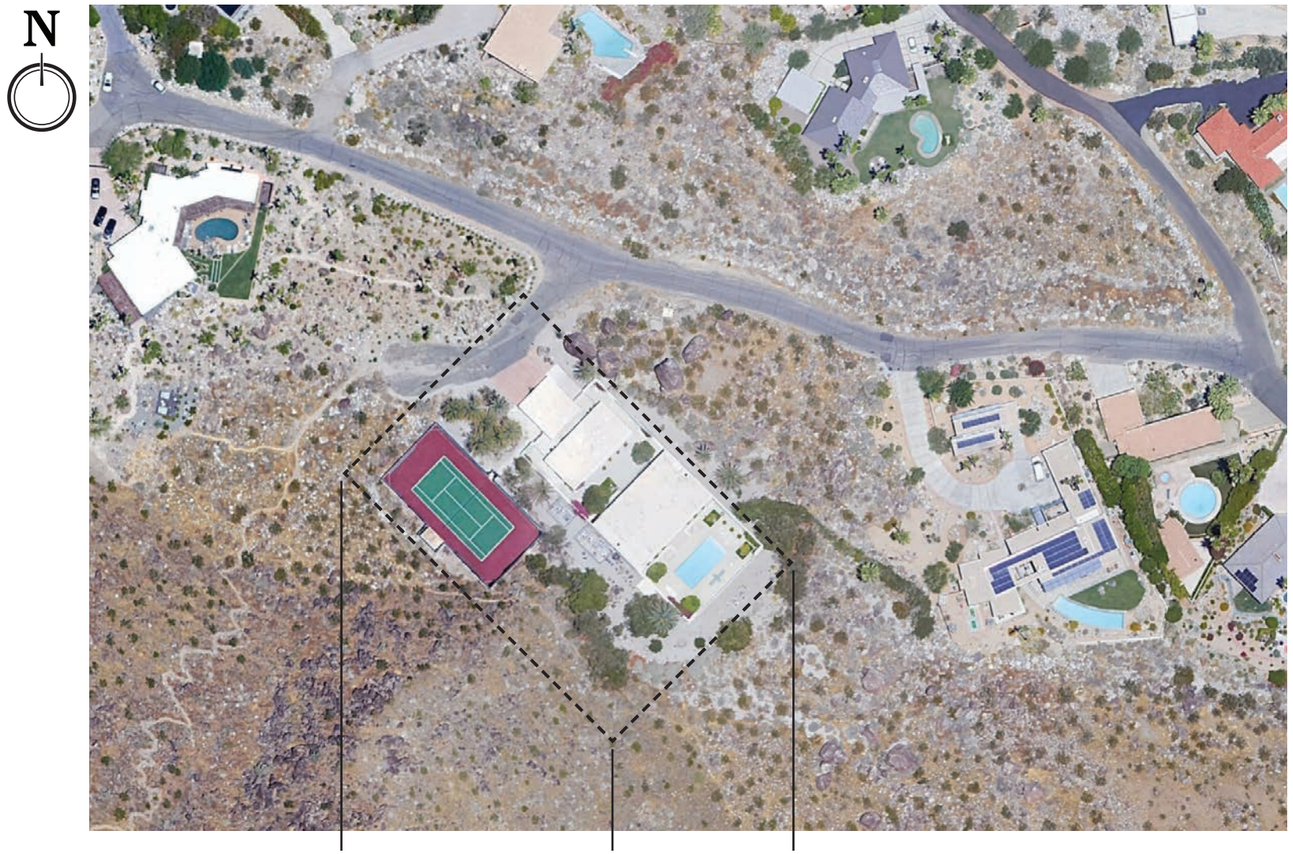
Internally, I began to speculate on how this sort of cardinal arrangement could affect the interior experience. Drawing on past studies of feng shui, I imagined what sort of energy we would most like to project onto each 'quadrant' of the square, since the corners seemed destined to become organizational waypoints:

1. *North* was most obvious. The driveway already seemed perfectly aligned here, and the experience of viewing a house in the hills with the afternoon sun floating behind promised a satisfying arrival and departure in afternoons and mornings, respectively.

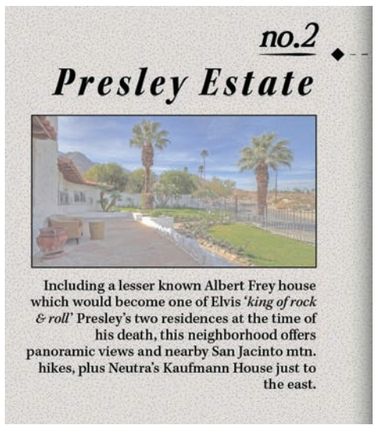
2. *West* was most tucked into the rear of the site, with the house as a buffer and the mountains as a cradle. This appeared to be a convenient spot for more personal, self-directed energy – a place for eating and sustaining health?

3. *South* offered expansive views, but with enough of the hillside present to frame a perspective facing downhill and towards the city proper. Imagining the aspirational power of a great view, this had to be the work space.

4. *East* also faced downhill, but maintained a more direct relationship with the surrounding neighborhood. With its high visibility to the home's most immediate admirers, this was to be the ideal hub for inviting others into the experience and displaying the pride of leisure: the den.



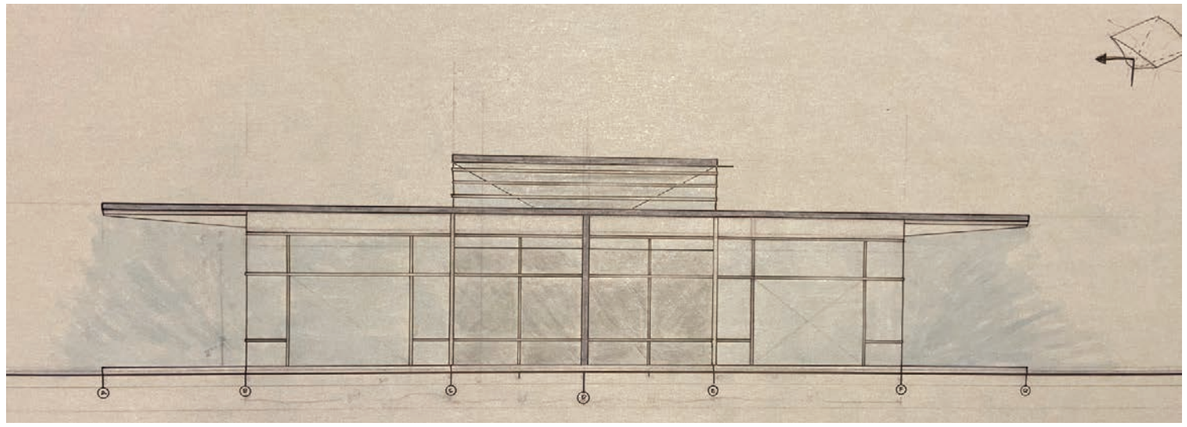
The clients' property in this wealthy hillside neighborhood of Palm Springs motivated an intense site response guided by grandeur, sophisticated indulgence, and aesthetic voyeurism. Replacing an existing structure here requires a continuation of modernist placemaking principles, while maintaining a subtle Californian atmosphere.


no.2
Presley Estate

Including a lesser known Albert Frey house which would become one of Elvis '*king of rock & roll*' Presley's two residences at the time of his death, this neighborhood offers panoramic views and nearby San Jacinto mtn. hikes, plus Neutra's Kaufmann House just to the east.

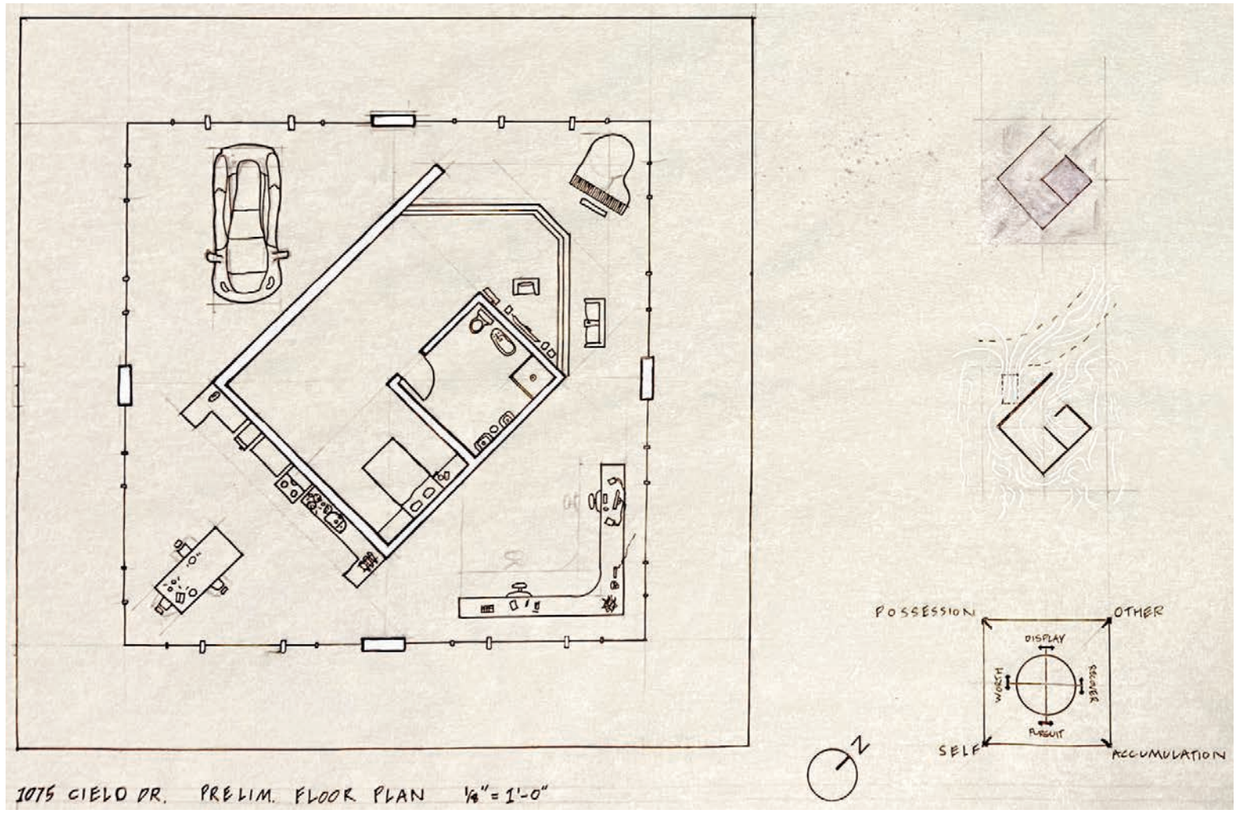
Early in the design process, two ideas dominated: first was a notion of ‘squaring the square’: embedding a diamond within the larger square plan of the Core House in order to break some of the rigidity implied by a pure square grid. Early framing designs by Eva and Jen incorporated this idea into the framing plan as we anticipated a central skylight which would direct light in some way towards the center of the large floor area.

Jurgis was the first to synthesize this strategy with the second big idea, with his compelling ‘spiral’ room idea inspired by the earlier timeline’s visual flow. His model of the whole house gave the team inspiration for daylighting and the implications of such a figure and its position within the floor plan.

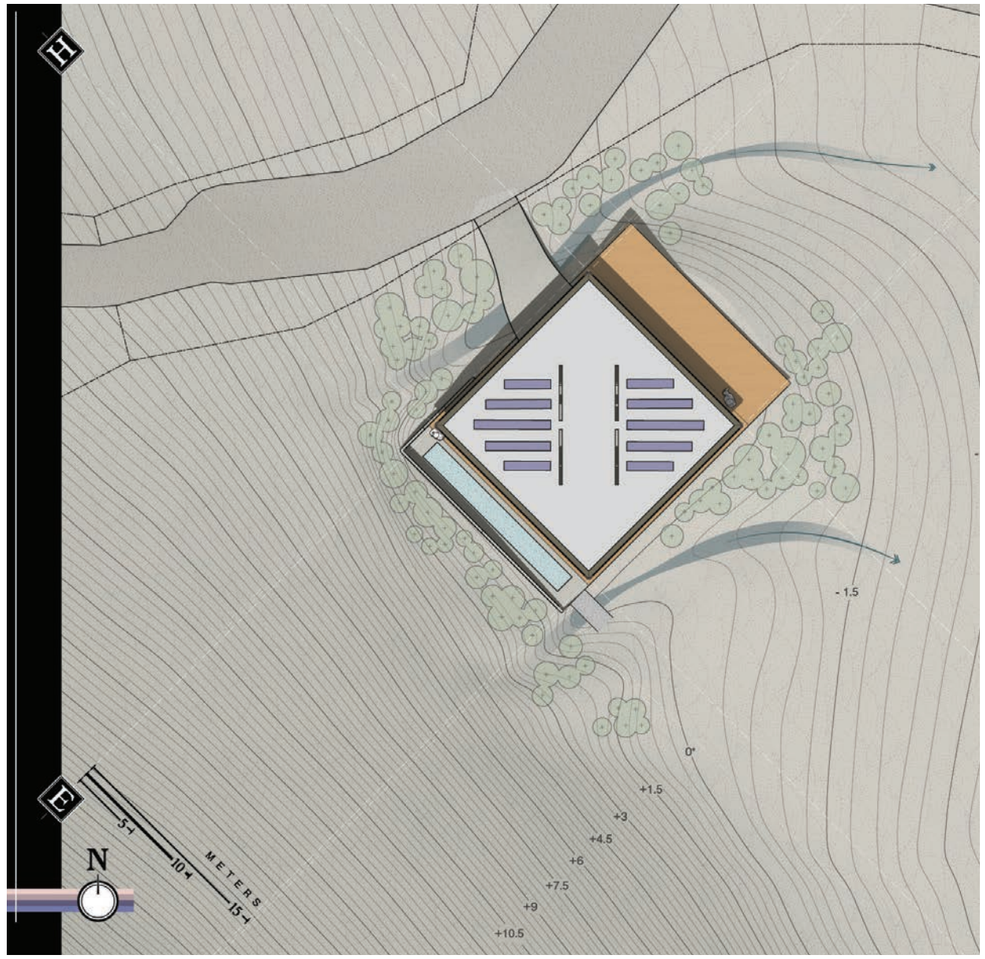


At the time, the group also toyed with the idea of breaking Mies’ sacred horizontal roof plane with a central skylight, chiefly inspired by the suggestion of an eventual ‘final fantasy’ that would tie the timeline together with science fiction and dystopian fantasy. The top skylight was to be an immense prism, inspired by a camera pentaprism, which would reject sunlight from directly above in favor of clearly mirrored panoramic views from the surrounding site. This light would transmit the diffuse desert albedo while provoking conversation fodder around surveillance – would the clients be watching the neighborhood from their secluded central core, or would it be vice versa?

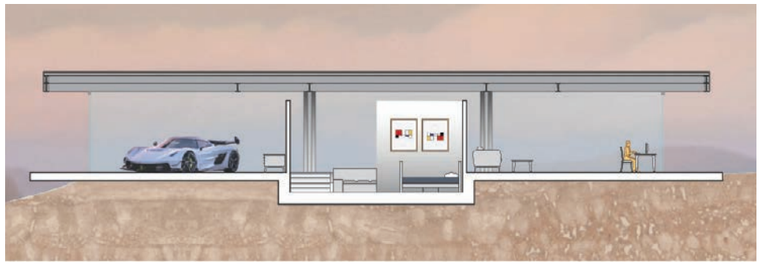
Ultimately, this idea was deemed too disruptive for the minimalist ambitions of the project.

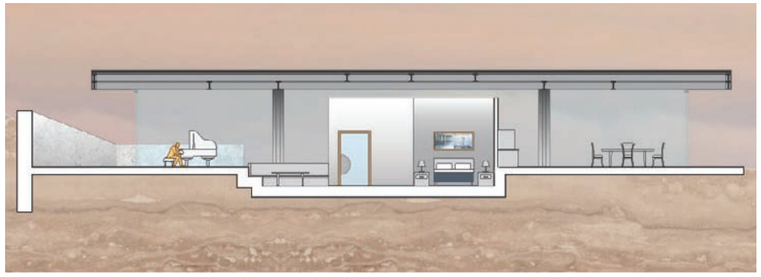


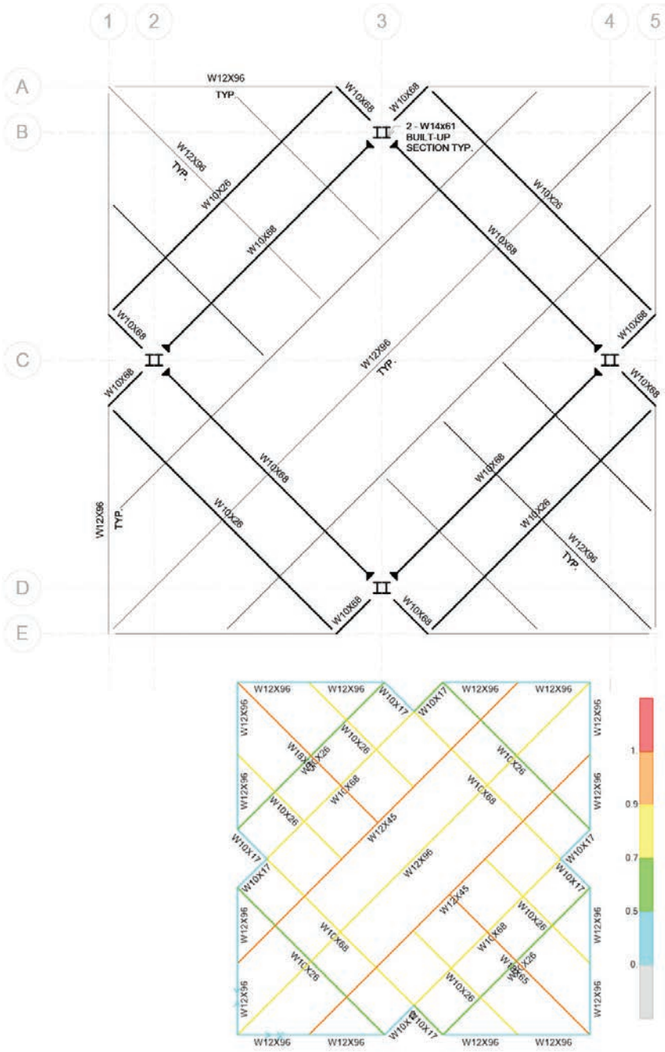
Above is a floor plan that served as drafting practice primarily, but which helped to establish the general layout of programs in the house. The main difference is the orientation, which would change with the next iteration. An early precursor to the final parti is also visible on the bottom right.



site plan: Moises De La Cruz
sections: Elle Gallman
framing configuration: Eva Wieczorek
framing plan + analysis: Krystal Bacon

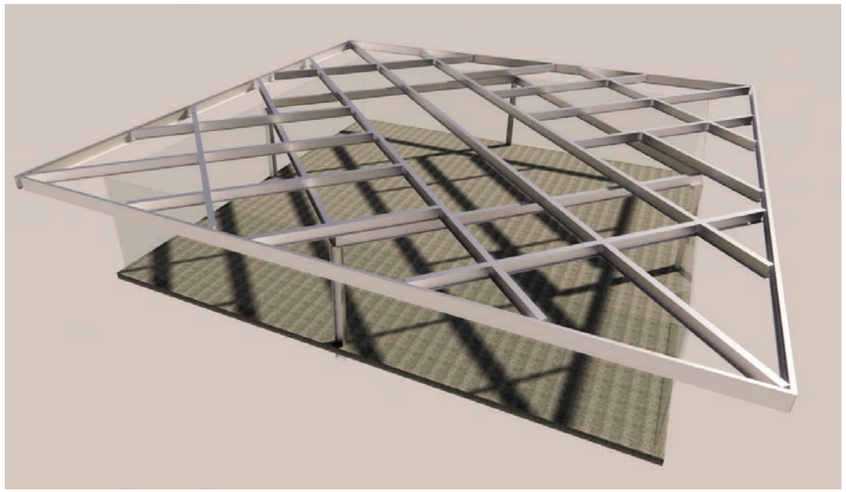




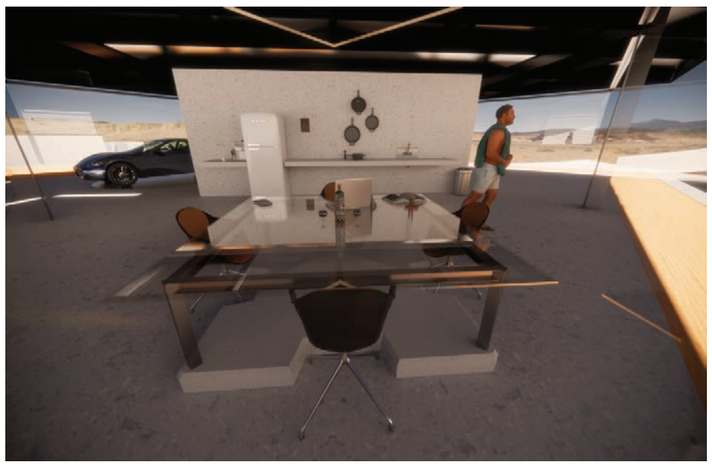


Around the halfway-point of the quarter, Atelier STRIPES presented their progress on the House to a panel of jurors from Cal Poly and beyond. At that time, the site was only developed to a point of suggesting entry conditions and relationships between landscape & home, but a clear parti was being established. Key ideas to express to the reviewers were the spiral circulation about the floor plan and the highly regular program geometries arranged by quadrant. The group's sections allowed for meaningful conversation about how the project might be experienced from within, especially with the recessed lower floor which seemed to be the House's most successful move thus far. Some elements which would ultimately be modified or removed were the woefully-narrow pool and walkways, and the planned photovoltaic panels which ultimately spoiled the horizontality of the roof, when modeled in 3D some weeks later. Instead, the position of the House within the site would be solidified, while a multitude of elements – the dry creek beneath the entryway to the gardens surrounding – would be clarified and modeled in Rhino with greater resolution.

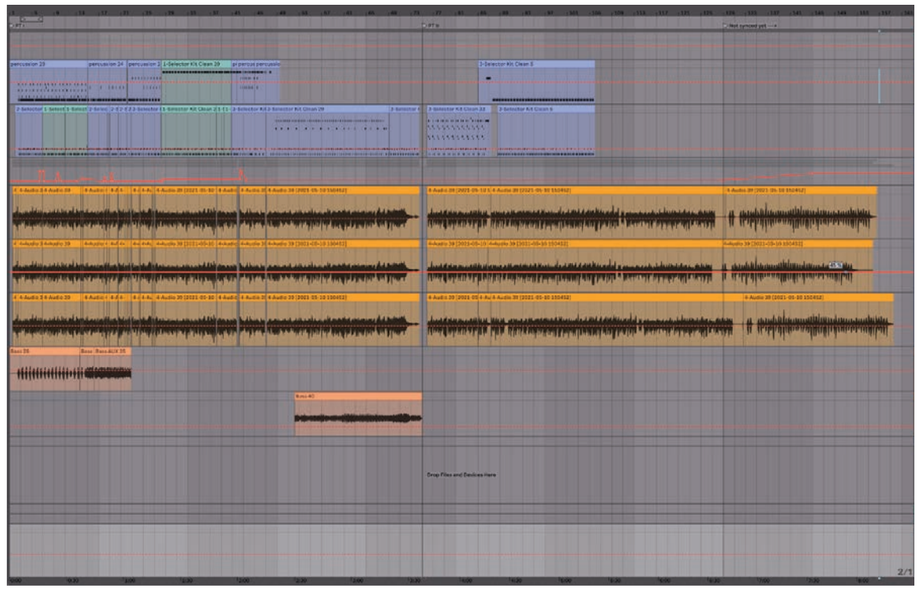
MID-REVIEW : post-mortem

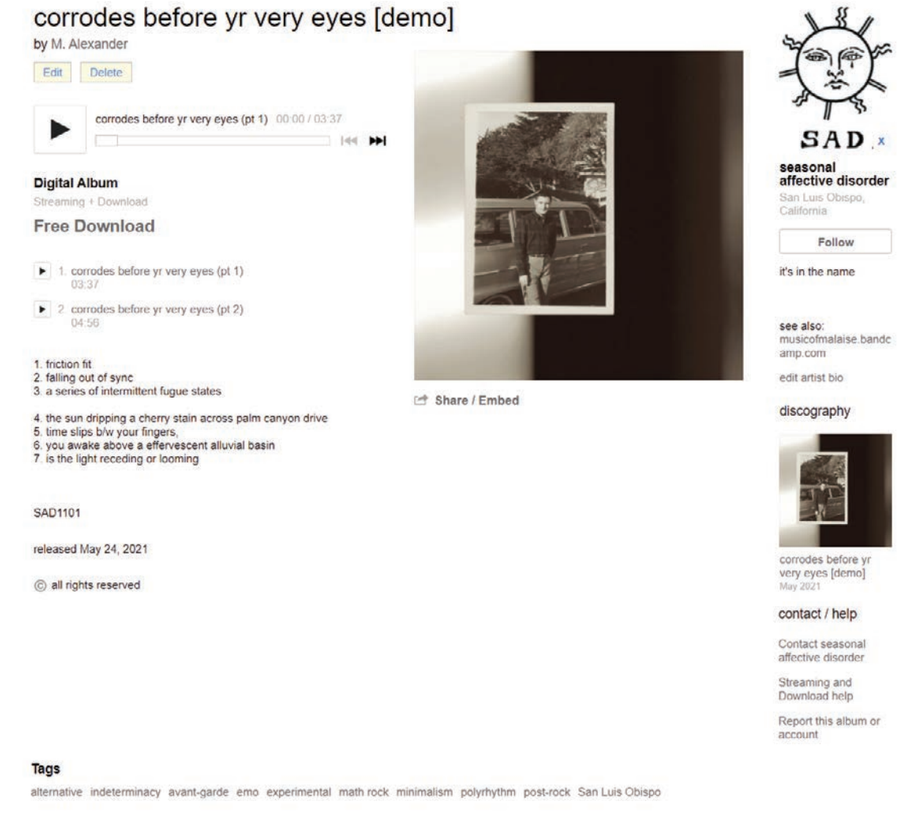


structural modeling + render: Jurgis Vaisvila
renders: Moises De La Cruz



At mid-review, the team was given insightful critique which ultimately pushed us to refine the building even more acutely. Reviewers pointed out that the current framing layout likely would not function as ideally as the team hoped, and the interior condition also needed greater development. While the team felt slightly deflated after the mid-review push, the next few weeks would see us attack the project with renewed enthusiasm, fueled by inspiring preliminary renders, creative artifacts based on our studies, and – still to come – a brand new framing layout to carry the tertiary development home.





In developing an artifact to loosely accompany the house, I was inspired by some of my recent listening enjoyment, from Rush's *Moving Pictures* (1981) to The Who's *Quadrophenia* (1973). Both are albums from bands I was familiar with by name, but had not yet taken the time to acquaint myself with. From the former, I drew particular inspiration from the prog-rockers' intense compositional complexity and skilled playing, while retaining a sense of accessibility that evades some of my other avant garde role models like Steve Reich. From the latter, I appreciated the use of self-reference, repetition, and an overarching narrative to build a unique atmosphere around what was already a groundbreaking rock sound. The 4-fold multiple personality concept which underpins the album was also a satisfying nod to the hyper-sacred square that was being explored architecturally through the studio.

I decided that I would try to compose a song inspired by many of the creative ideas which were all flowing through the studio's prospectus. Though I didn't have a plan going into it, I sat down late one night with guitar in hand and Orange amp hooked up to my audio interface. I fiddled with some harmonics around the 12th and 16th frets, decided how the pattern would sound, and pressed record before jamming around the two notes for a good 10 minutes. Much of the work happened in my DAW, however – I spent a good few hours coming up with a series of distinct drum patterns to compliment the guitar, then a few more to go through and align my mistimings by hand. Ableton Live provides wonderfully flexible software tools for fixing up audio, and over the years I've loosened my ritual fear of fix-ups. For a song which I hoped would express a Taylorist sense of rigidity and disillusionment with it, a robotic perfection was in fact aligned with the artistic vision.

The final instrumental track spans roughly 9 minutes, and is split into two suites telling a story primarily through its track titles. In the first half, a mute and unnamed protagonist (who may even be the listener) breaks free of the oppressive mold of their precisely-timed societal obligations, but overcomes significant hallucinogenic trauma to do so. In the second half, the track loosens further as they embark on a drive through a twilight drive through Palm Springs, growing less and less in touch with reality throughout. The track is listed on Bandcamp under catalog number SAD1101 on my personal 'bedroom' label, Seasonal Affective Disorder.

As mentioned previously, I took on the role of Rhino compiler and modeler throughout the quarter. Thought the intensive hours of detailing likely don't make for a compelling narrative, I would like to detail some of the meaningful workflows and design tips I've picked up in this quarter and quarters previous, which were essential to (mostly) meeting deadlines in this studio.

START WITH AN ORIGIN

It remains to be determined exactly how many headaches have been avoided by determining the location of the house on the site early, and establishing a digital 'origin point' at the dead center of the house. This made importing others' work (assuming they used the same origin) painless and efficient.

MOUSE MACROS

Though they always sport 'gamer' features, a great side effect of equipping a workstation with a gaming mouse is that their copious extra buttons and switches inspire optimization. Using software, it's relatively straightforward to map different combinations of keystrokes (macros) to these triggers, removing the hassle of each *ProjectOSnap* and making baseline commands like *Move*, *Copy*, *Rotate*, *Rotate3D*, and *Undo* as accessible as the flick of a finger while orbiting around a 3D space.

NAMED POSITIONS, CPLANES, & VIEWS

Long ignored, I finally found wonderful uses to more niche tools in Rhino, like the ability to assign saved positions/orientations to groups of objects and recall them on the fly. This was especially useful for manipulating doors and window panels to test combinations of arrangements, while maintaining the ability to return them all to their closed position with a single click. Construction planes (digital work surfaces) can be saved in a similar way, which proved essential for modeling a square project at an oblique with site north. Orthographic manipulations that respect true north can be easily commanded using the default CPlane, while orthographic modifications of the house are hastened by switching to one set at a 45° angle. And of course, saved views allow for easily returning to preliminary render spots once the modeling work is done.

LEAVE THOSE CONSTRUCTION LINES

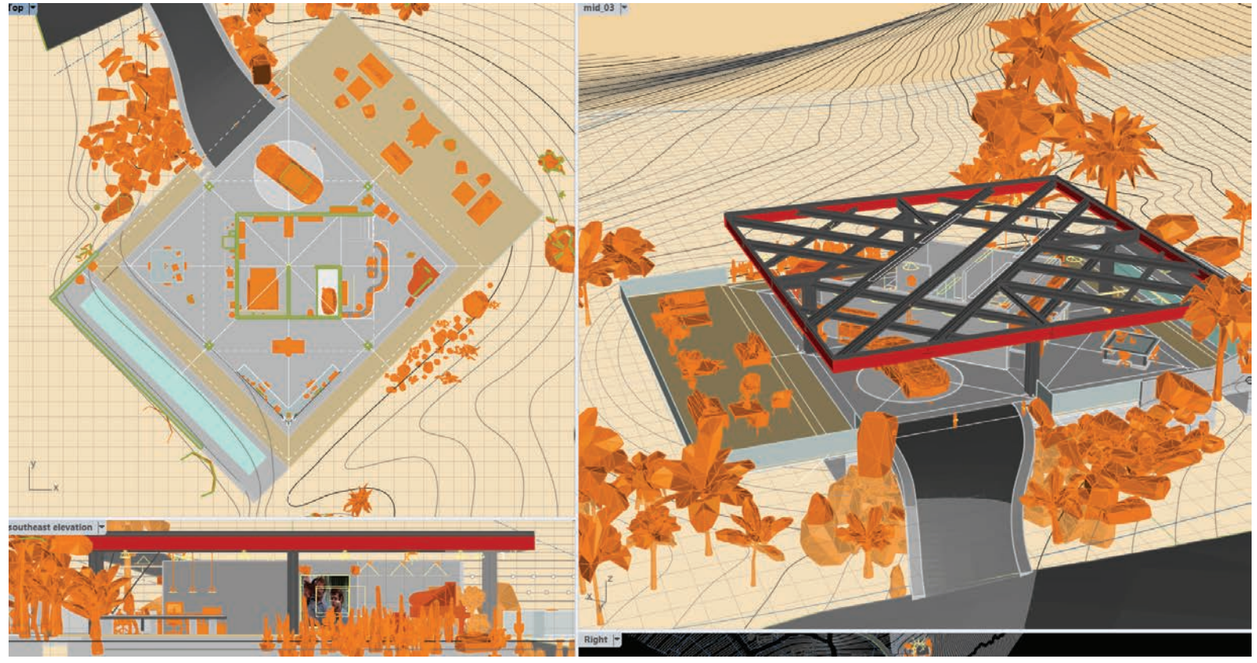
I've realized just how these beloved tools of the draftsperson can remain just as useful in our digital world. Keeping a separate layer for all construction lines and selectively keeping some of them makes for easy diagrams later down the line, but also fills the space being designed with conveniently accessible references to other geometries, enforcing a sort of consistency with big and small moves alike.

GROUP, REMOVEFROMGROUP, ADDTOGROUP

When working with a variety of building systems, it can be easy to let the presence of hundreds (if not thousands) of individual objects grow daunting, especially outside of dedicated BIM software. During the modeling process, I learned to take great care in the grouping of objects as well as the nesting of these groups, so sub-selections can easily be pulled out, changed, and added back in using the requisite commands. This has the additional benefit of allowing entire building systems to be selected as one, and understood as such when it comes time to share them.

SAVE EVEN MORE FREQUENTLY

When a Rhino file grows to be almost a gigabyte in size and you're attempting to render with raytracing on an aging graphics card, the importance of this mantra truly underlines itself.



ADDITIONAL 3D CONTENT:

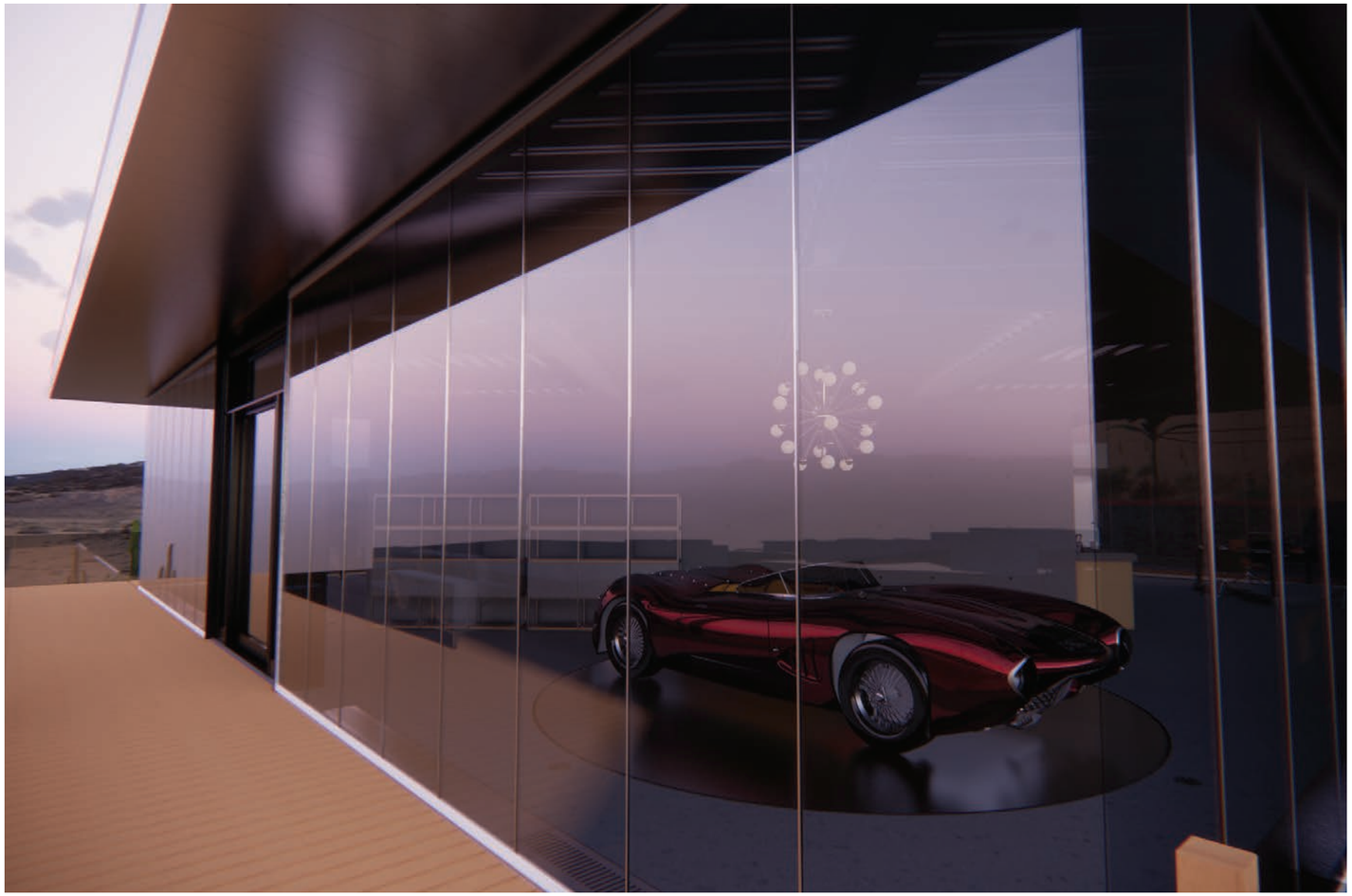
'red barchetta' model: Anirudh Bhalekar via grabCAD.com (2020)

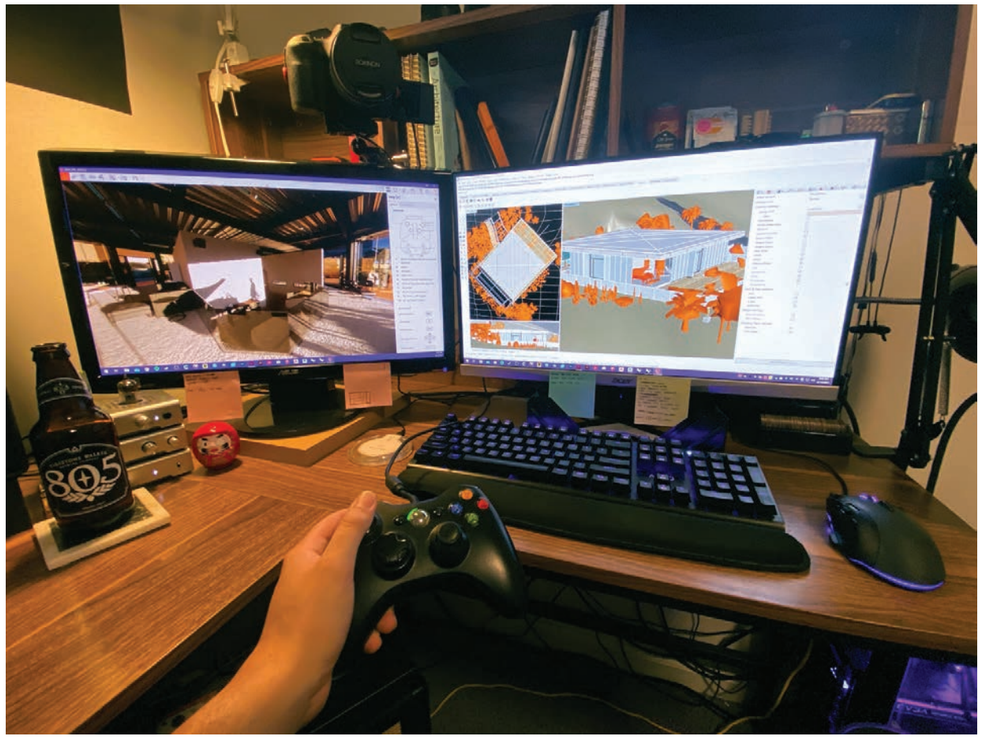
grand piano model: user 'LavaWave' on Archibase.co

lambretta scooter: user 'keith' via grabCAD.com (2013)

The sentiment is probably unnecessary, but I have to point out that enthusiasm for modeling remains one of my primary motivators in a project like this. It's always much easier to wake up at 7am on a Monday to work on an architectural proposal if you've gone to bed Sunday night dreaming of how to best assemble a superfluous skylight in the project's bathroom.

ENSCAPE | HEALTH + EFFICIENCY HOUSE
Atelier STRIPES





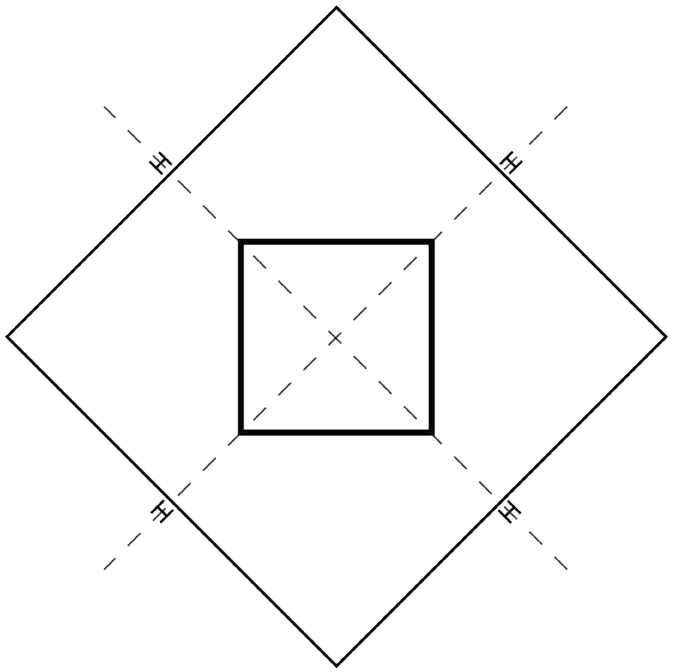
'the cockpit' - coordinates unknown

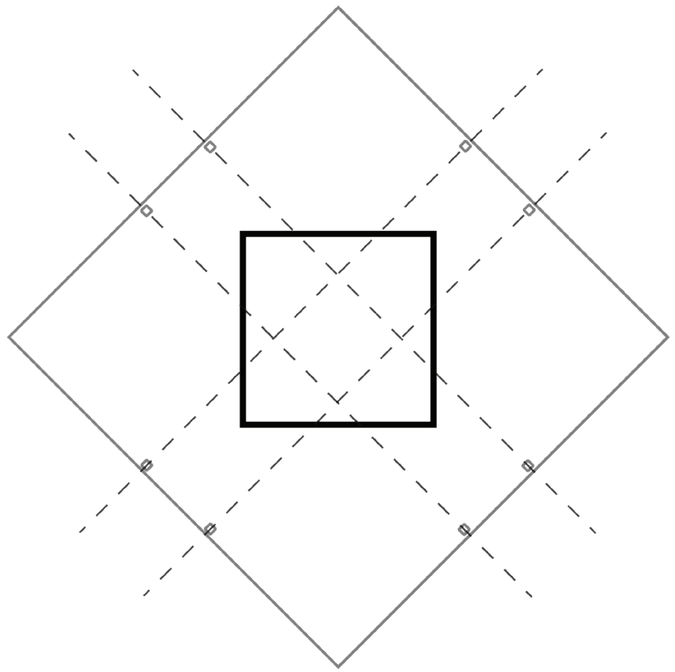
Another essential piece of my toolkit this quarter was Enscape. This rendering plugin is one of the most flexible and beautiful I've used with Rhino so far, but most importantly: the user experience is tightly integrated with its parent application. Enscape's expansive library of entourage and furnishings are represented by meshes within Rhino, allowing them to be easily manipulated and composed. The presence of life's domicile essentials in this model library also provides fodder for interior design ideas as early in the design process as desired. The most useful feature of Enscape and its raytraced goodness is the real-time update feature. The plugin intelligently updates whenever changes are made in the Rhino model with astounding quickness, even while the user – either myself or a lucky third party – controls the first person view using a game controller. The relatively low latency between design changes and tangible sensory response suggests a world of possibilities for collaborative design, and Enscape was useful on more than one occasion to share progress updates with the rest of Atelier STRIPES. The reliably gorgeous render engine even has the capacity to make rudimentary animations, tracking the camera through a series of coordinates (which can themselves be exported for later) and producing a compelling project 'trailer' in mere hours – this strategy was a game-changer for mid-review.

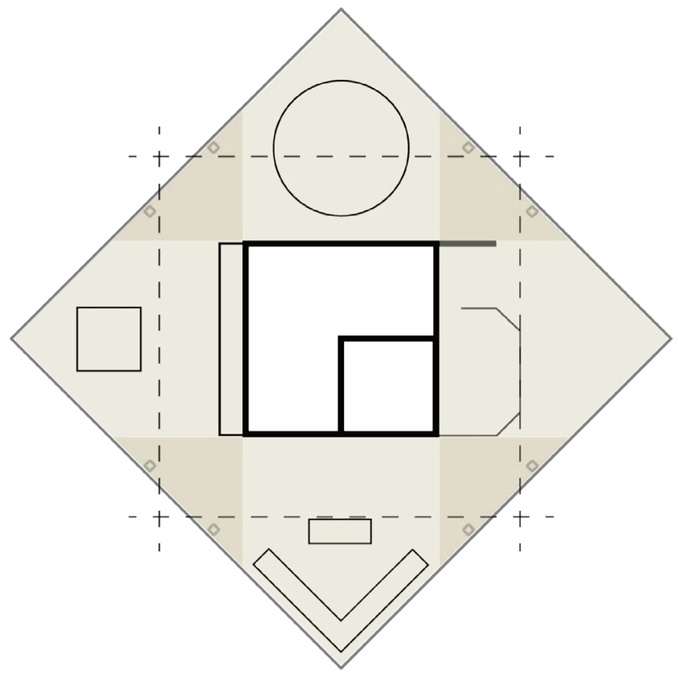
HEALTH + EFFICIENCY HOUSE

Atelier STRIPES

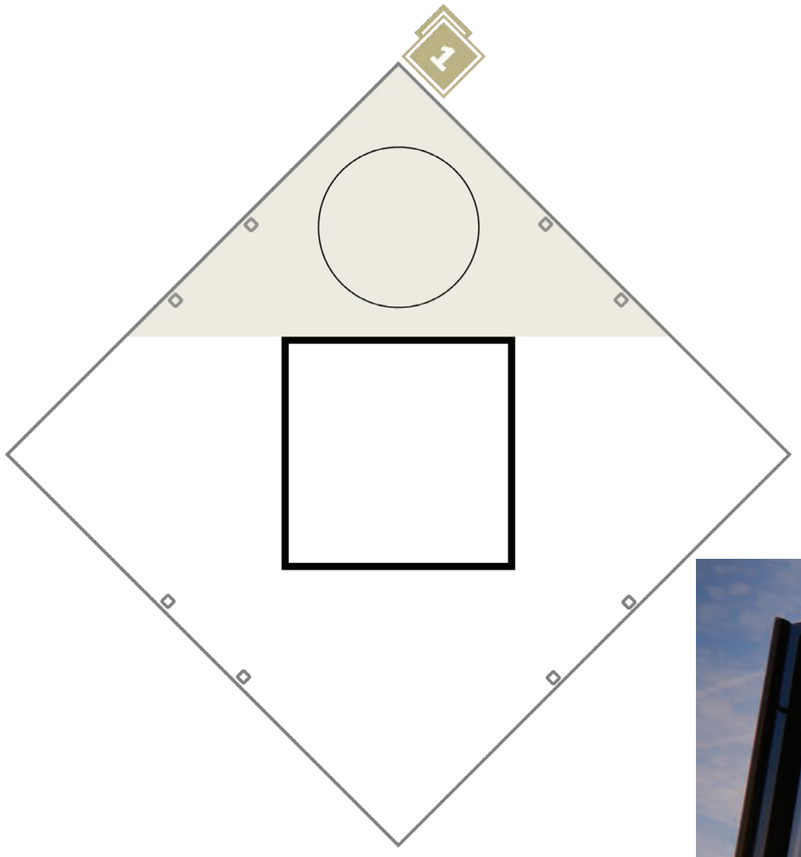
FINAL REVIEW







The finalized Health & Efficiency parti revolved around a gesture of embedding one square within another – using a 45 degree offset between the two to disrupt their simplicity and create four triangular quadrants with symbolic meaning to the clients' daily routine. The structure starts with Mies' mid-wall columns, but splits this gravity system into two members on each face. This serves to create 'soft' corridors to partition space, and portal frames for each corner of the interior core to gesture through as an expression of openness that reaches past the edge of the building.

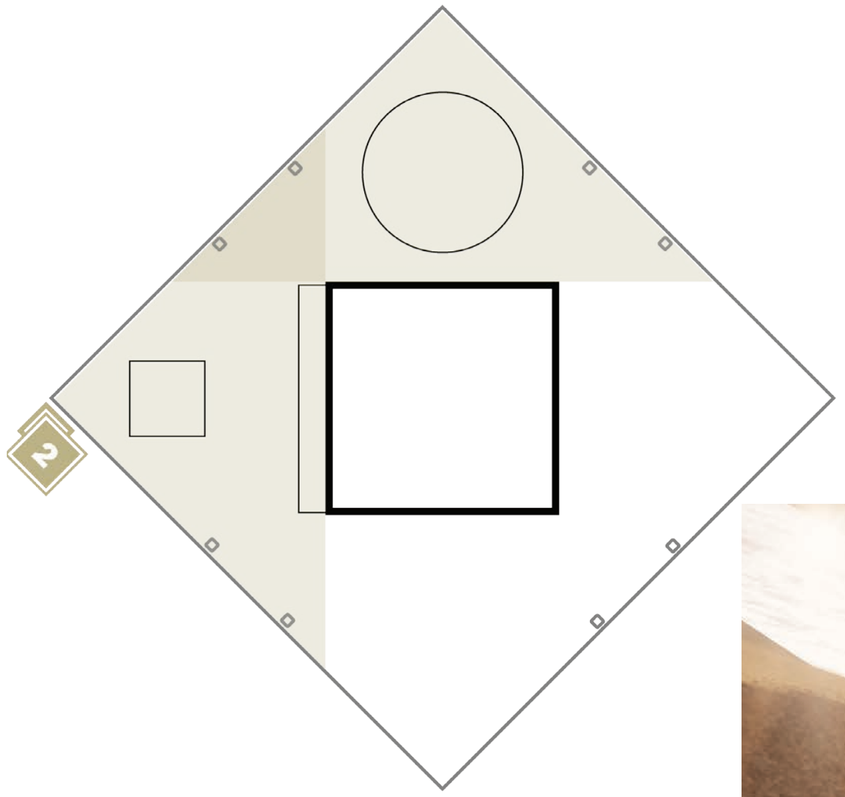


GARAGE : possession

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

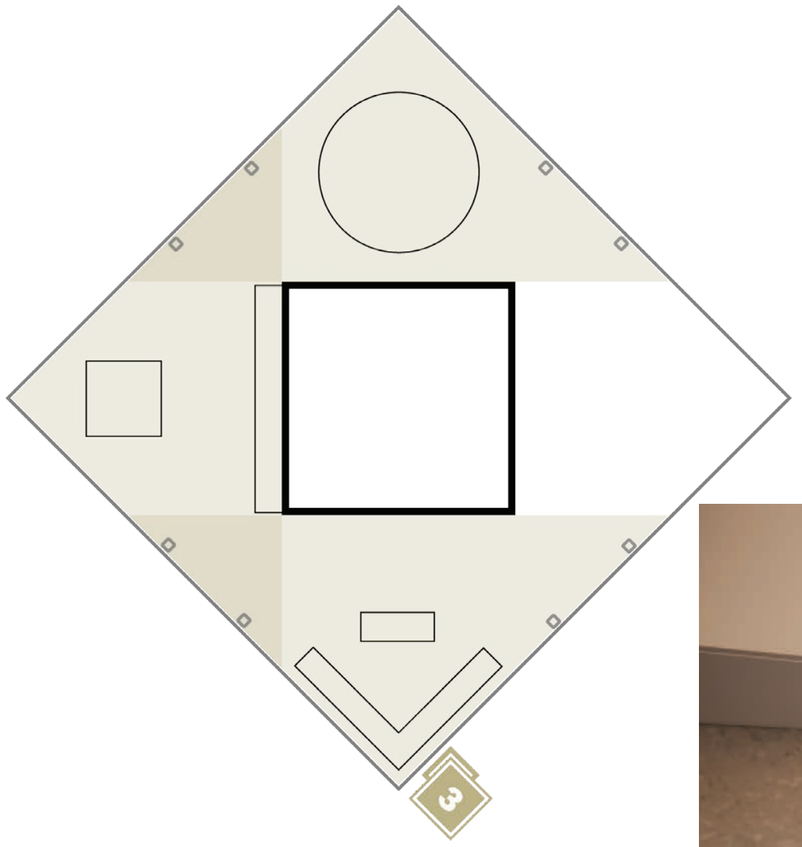
For our hard-working clients, the fruits of their labor ultimately motivate the need for a custom home in the first place. That's why the garage is freed from a servile role to become an integral part of the interior experience. The centerpiece of this quadrant is a turntable which allows Corey and Miguel to showcase their prized Aston Martin DB4 GT Zagato for friends, the neighborhood, or just themselves...as well as to pull in and out of the home with ease. The garage forms the crucial start and end points of two mirrored journeys that our clients will take each day to depart for work and return to their beloved abode, following a spiral path inspired by the flow of our earlier timeline.

KITCHEN : self

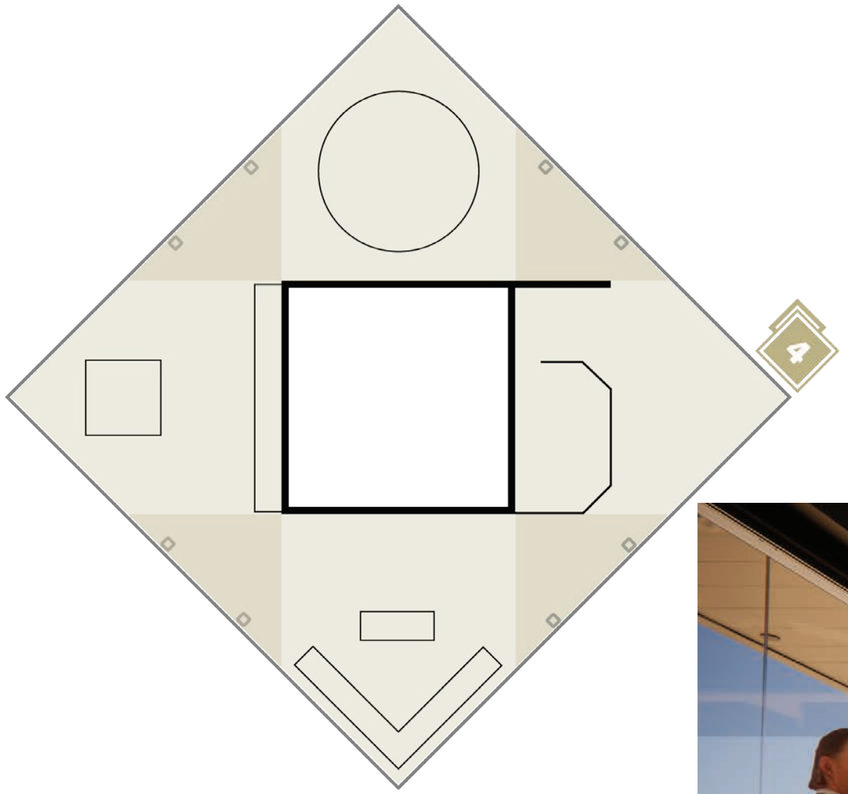


The kitchen is the next step in that path, representing the immediacy of self-maintenance which is crucial to the ‘health’ in “Health + Efficiency.” The kitchen offers an intimate connection to the rear pool and a custom dining table with an industrial aesthetic to match that of the house.

OFFICE : accumulation

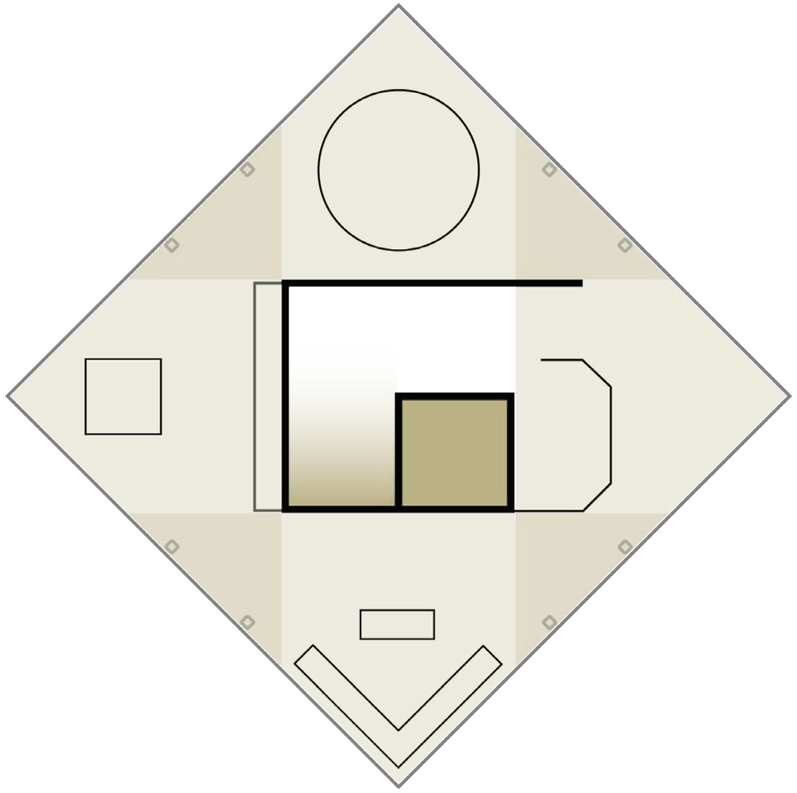


The home office also plays an essential role in ‘efficiency,’ offering an inspiring waypoint for answering emails and hosting business meetings alike. This space is connected to the pool as well as the sweeping remainder of the property, and symbolizes the accumulation of wealth as a complement to the showcase of that wealth in the opposing garage quadrant.

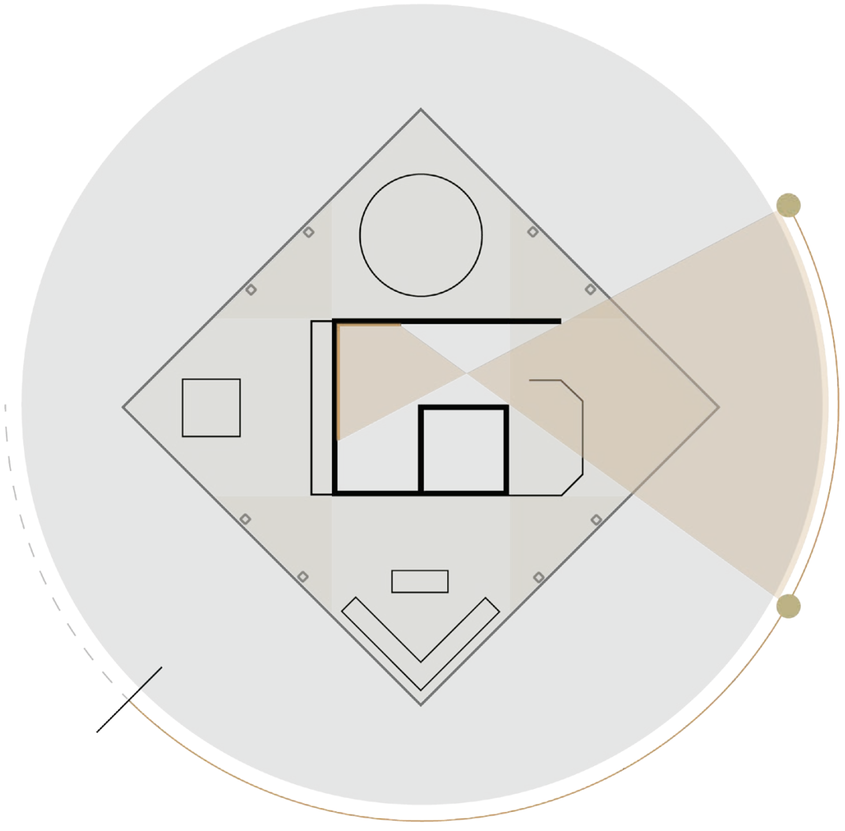


The fourth and final quadrant pairs with the kitchen on the opposite side. Whereas the kitchen is tucked closer to the back of the site as an expression of private self care, the den features a recessed conversation pit and sweeping views of the neighborhood as if to reach out and include others in Corey and Miguel's optimized lifestyle.

CORE : private



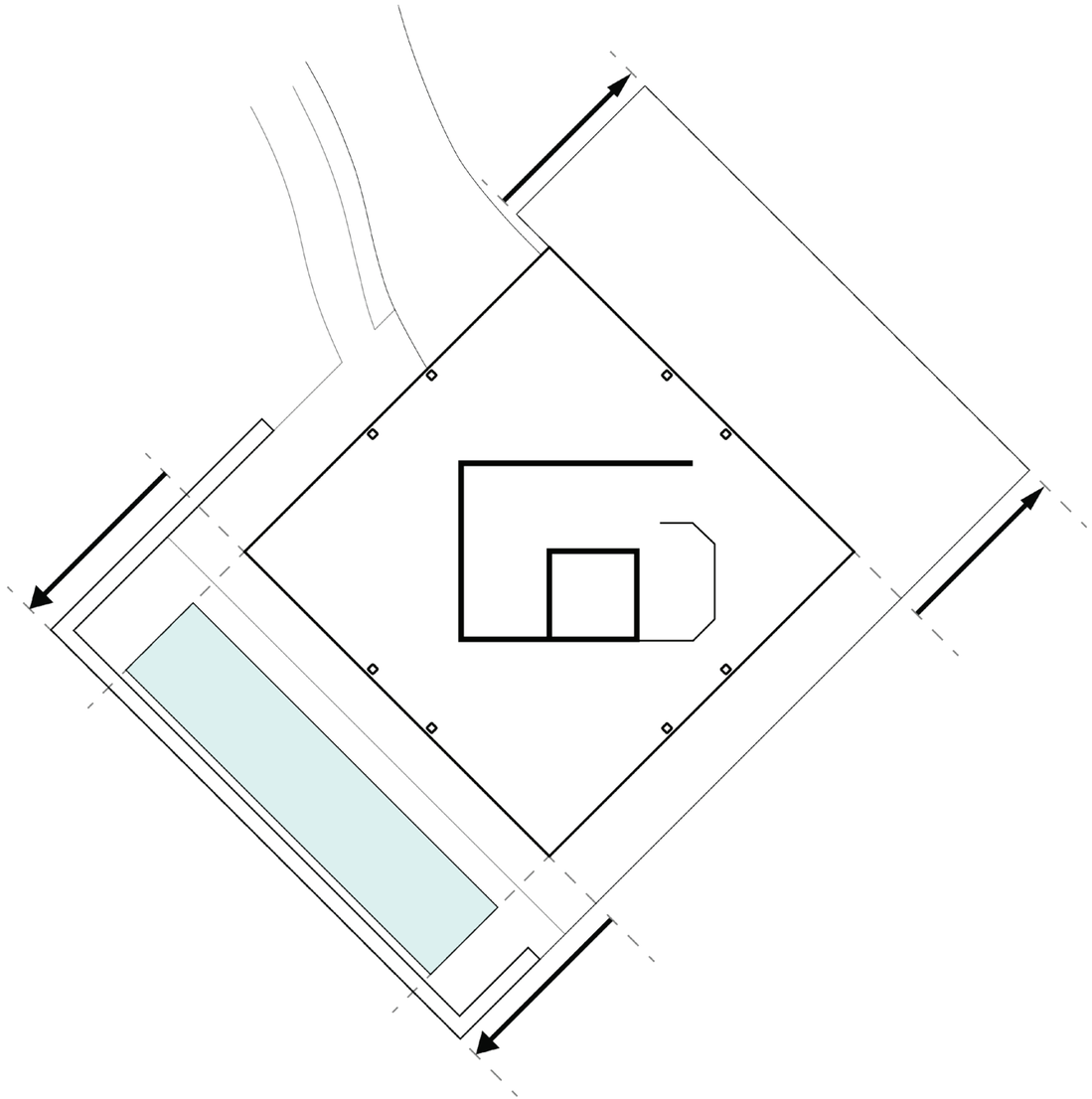
The central core of the House features the bedroom and bathroom, both recessed to match the elevation of the adjacent conversation pit. In this way the project is meant to feel more vertically expansive as one winds into its most secluded spaces in order to play with our expectations regarding privacy.

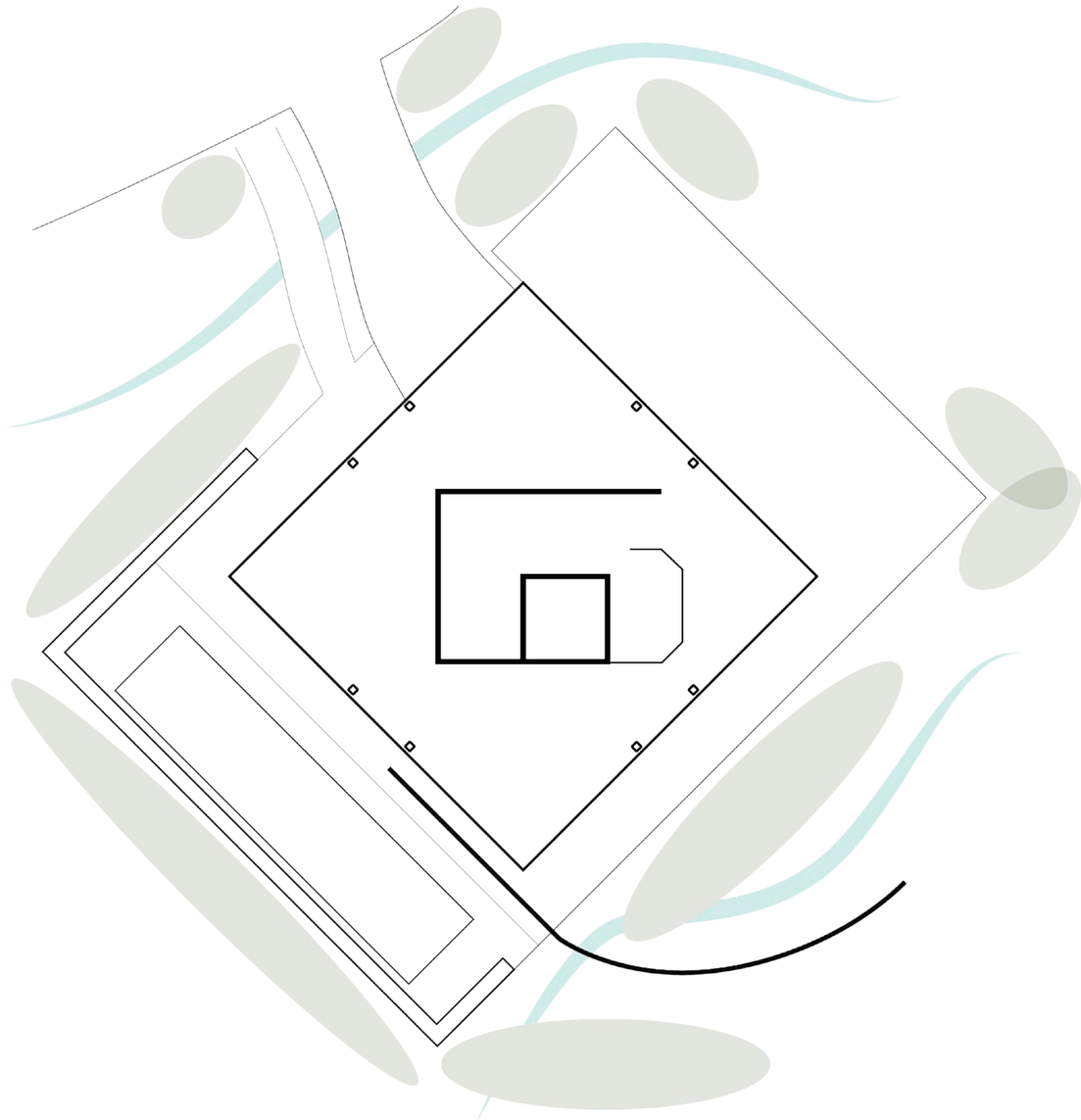


The central core was specifically opened on its east face to allow morning sun to bathe the inner wall of the bedroom all year round, offering a potent and natural wake-up prompt for our clients who love the morning for the productivity it promises each day. The ambition was for the project to be relatively shielded from hot afternoon sun by the neighboring mountains, so that the morning glow and noon light would become the full focus of the home's solar response.

SITE PARTI

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES





Our team's approach to the site was to use the steep topography and foliage as a means of enveloping the house. The plan is very much about an 'expansion' outward from the hillside towards the horizon and the rest of Palm Springs below, so that the house is both a place for great views and a picturesque landscape itself.

site/floor plan: Jurgis Vaisvila & Moises De La Cruz

FLOOR PLAN

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

Shown in greater detail here, the site is engineered to embed more private backyard spaces in the base of the hillside on the west, while expanding on the east with a wood deck. 8 foot wide walkways connect the two ends on the north and south, and a matching walkway also brings visitors up to the front door from the surface road. Foliage covers the long ends of the site to create a sense of elevated seclusion for the house itself.

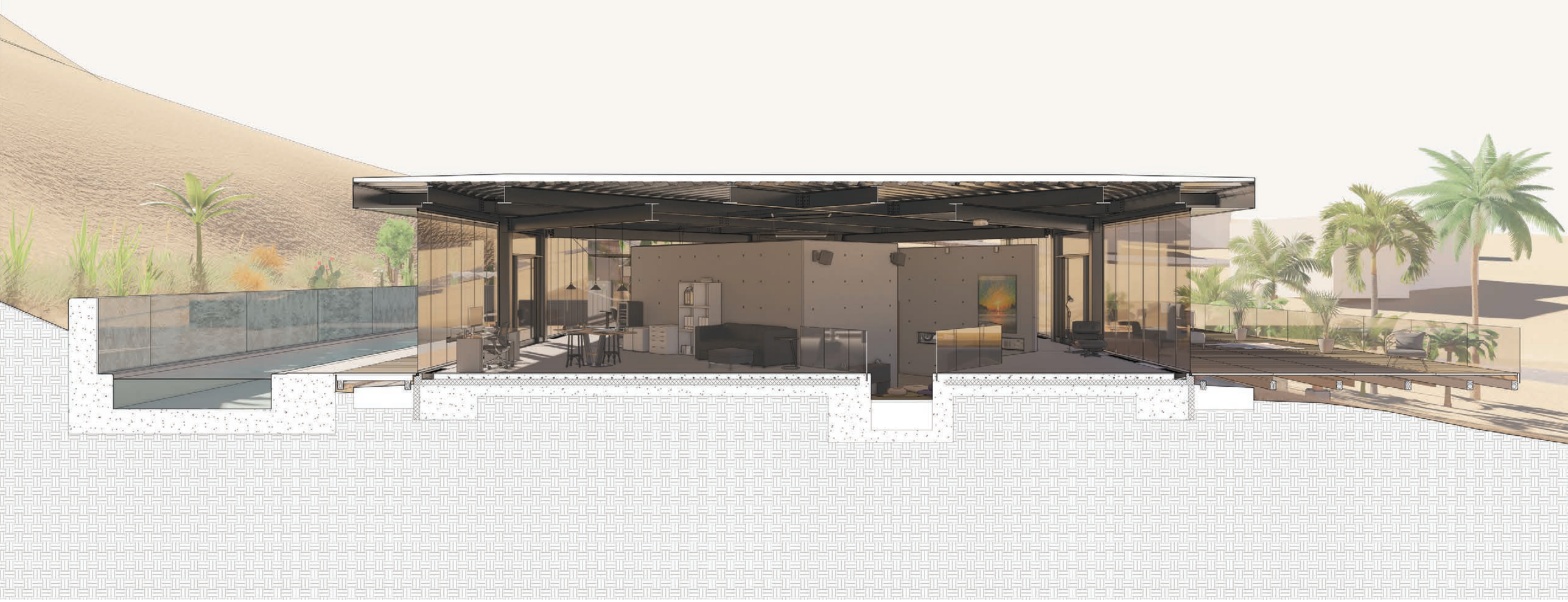
ENTRY SEQUENCE

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

This entry section shows the experience of entering the building in greater detail. Both the driveway and footpath rise above a dry creek doubling as drainage for the infrequent drizzle, directing water and prying eyes away from the embedded backyard and towards the main entrance that seems to expand towards the distant horizon framed by the home.

entry section: Elle Gallman & Moises De La Cruz

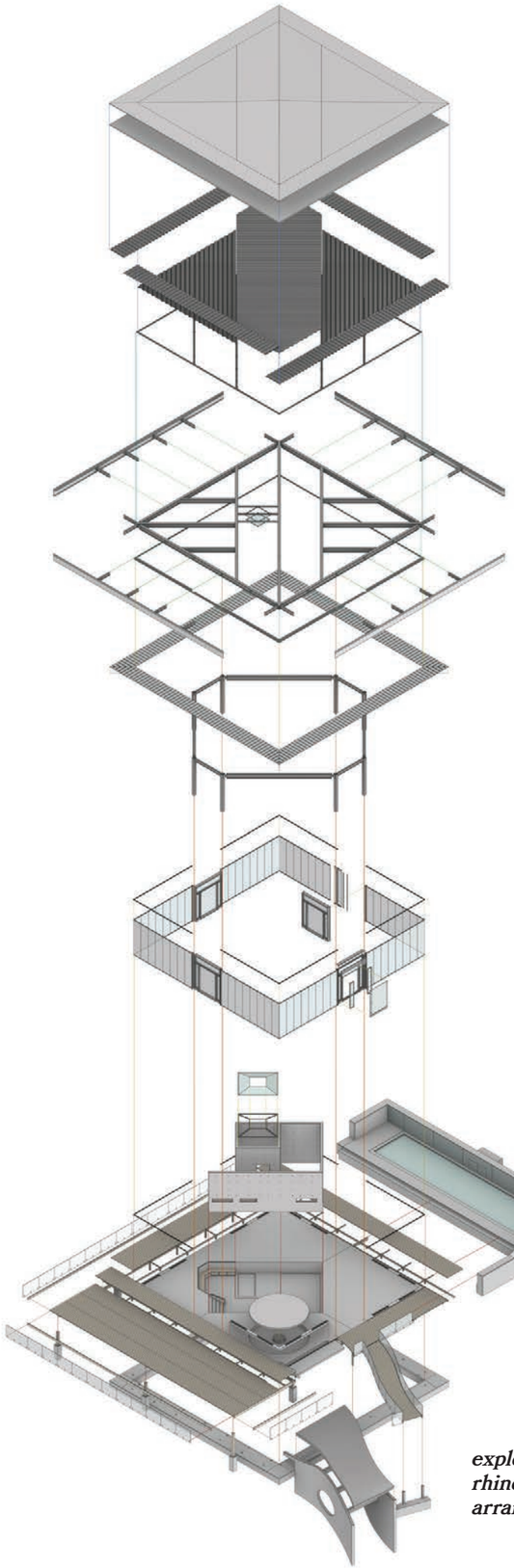
The project's sectional strategy of embedment and expansion is most obvious in the east-west section, where the topography is held by a low retaining wall in the back and allowed to drop off swiftly on the opposite side.

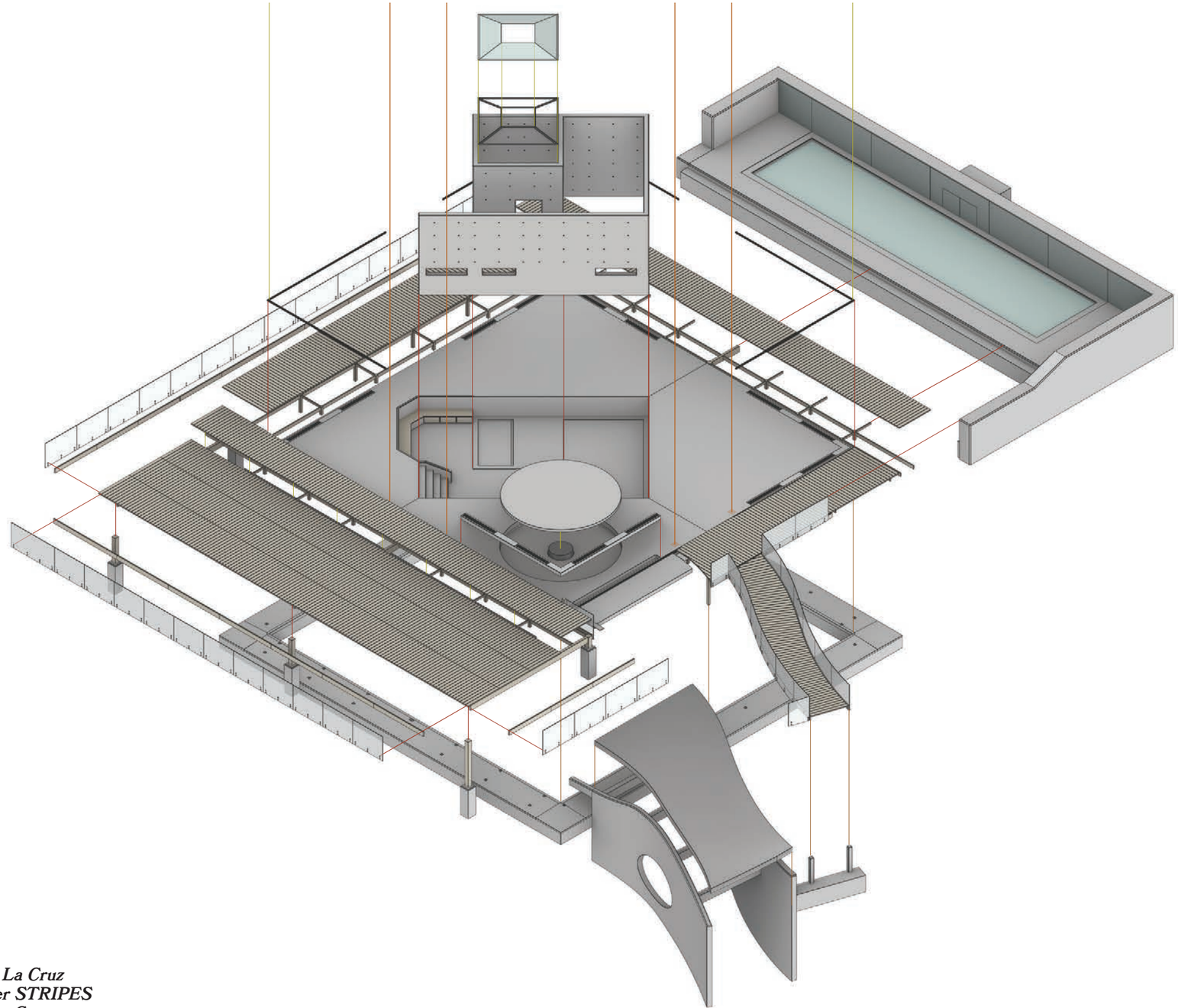


section: Moises De La Cruz & Jurgis Vaisvila

With the context of the mountain behind, we hope that this arrangement truly gives a sense that Health + Efficiency has become one with its environment, despite its expressive and highly industrious steel construction. The next section will feature the Atelier STRIPES engineering department, for their in-depth explanation of how the parti became structural.

STRUCTURAL OVERVIEW

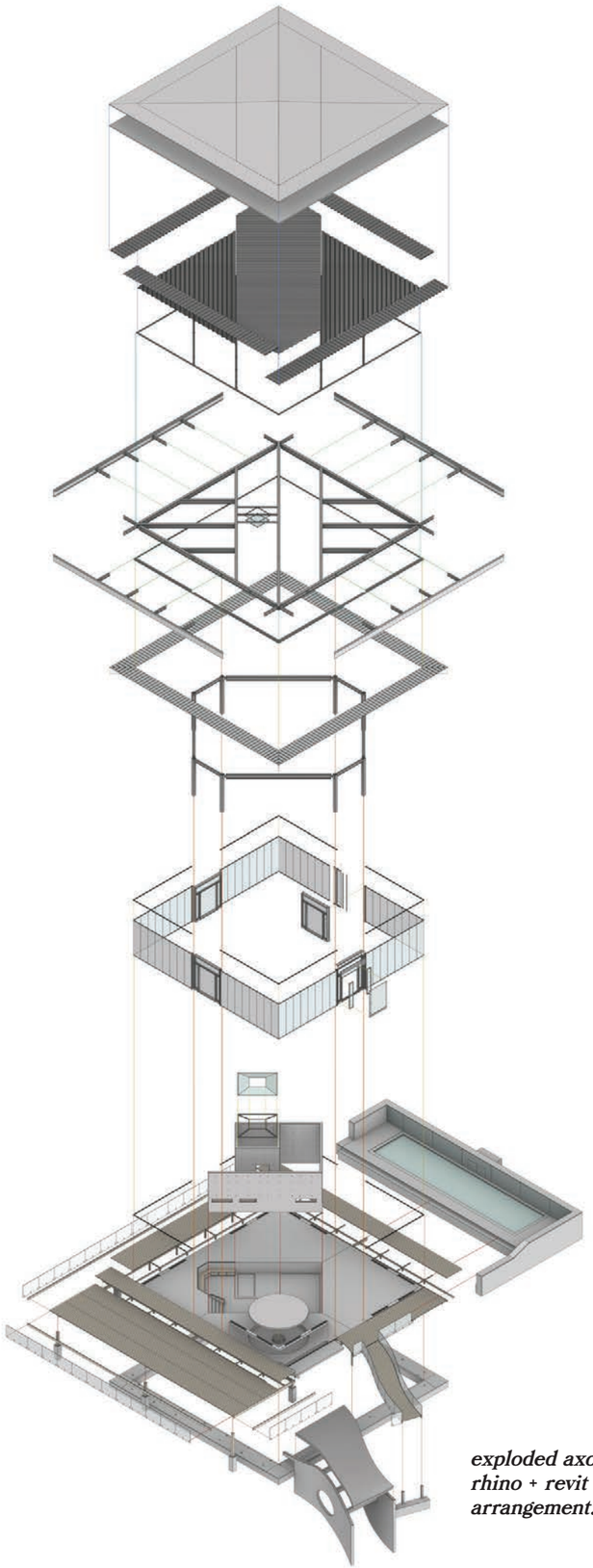


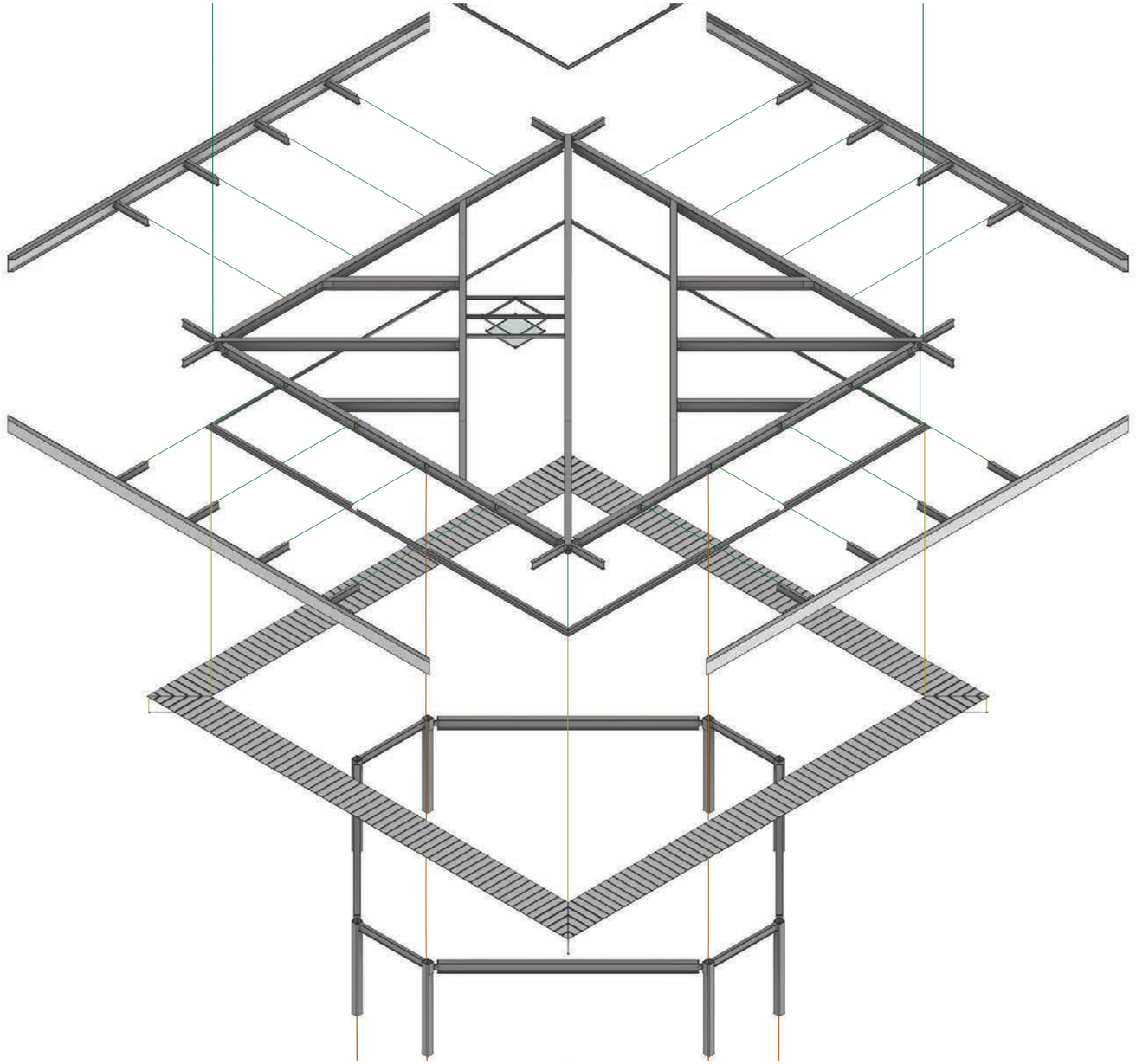


exploded axon: Moises De La Cruz
rhino + revit models: Atelier STRIPES
arrangement: Moises De La Cruz

STRUCTURAL OVERVIEW

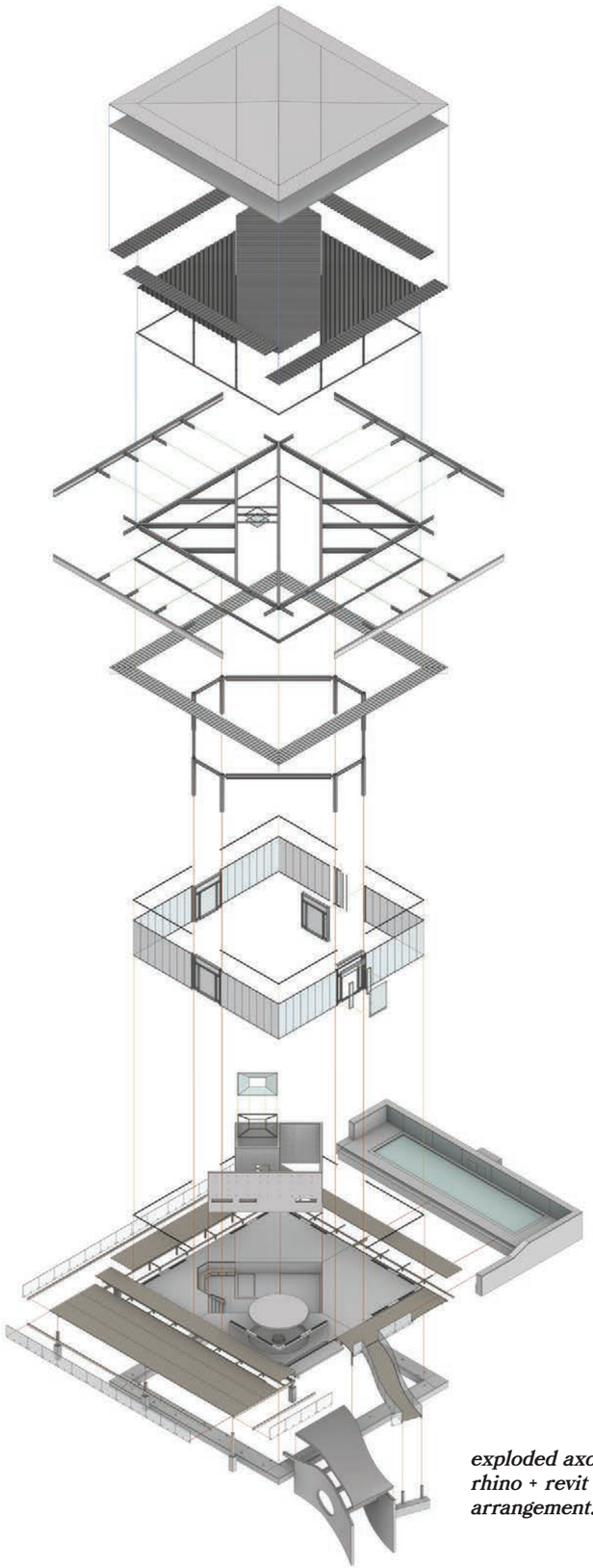
HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

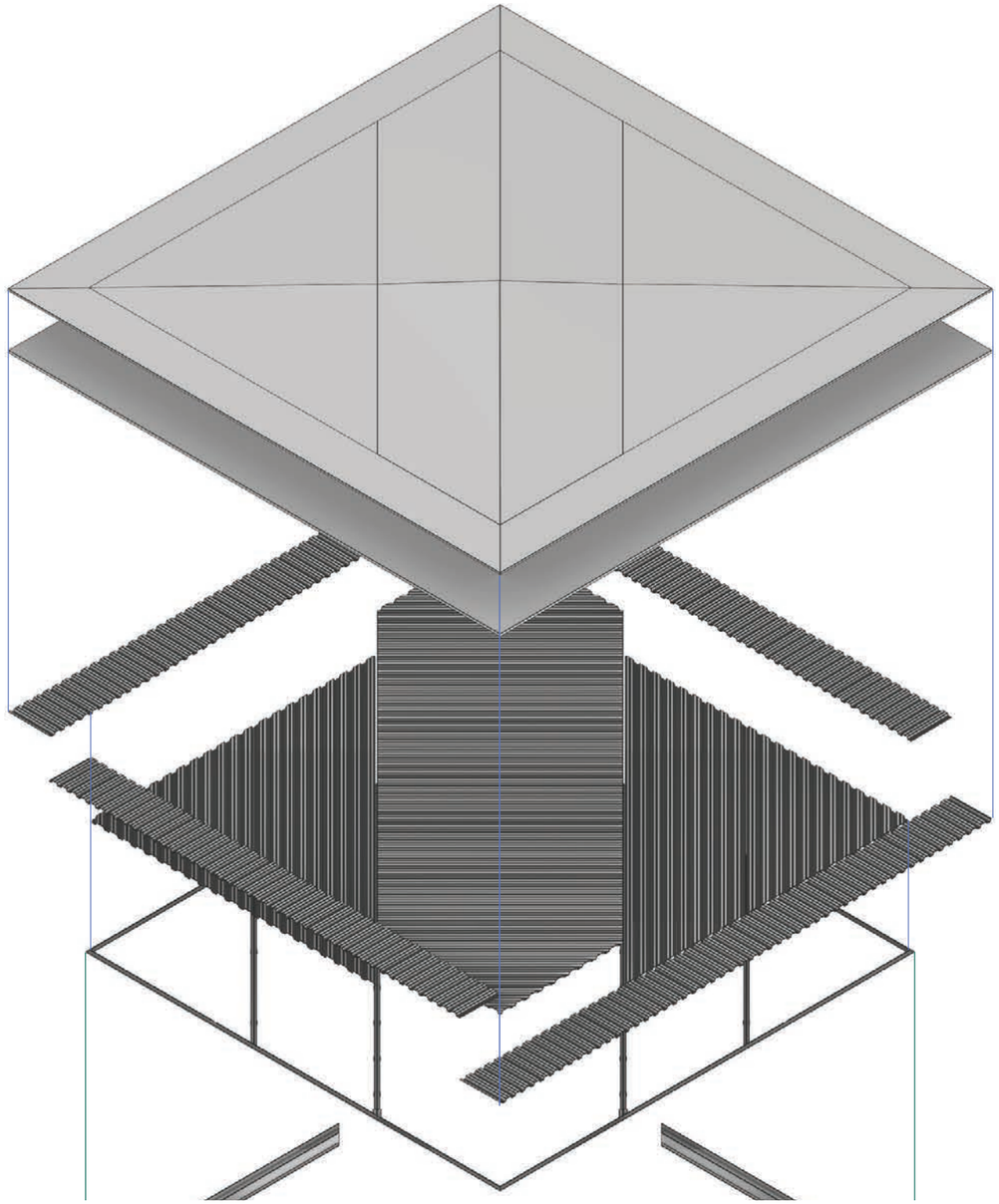




exploded axon: Moises De La Cruz
rhino + revit models: Atelier STRIPES
arrangement: Moises De La Cruz

STRUCTURAL OVERVIEW

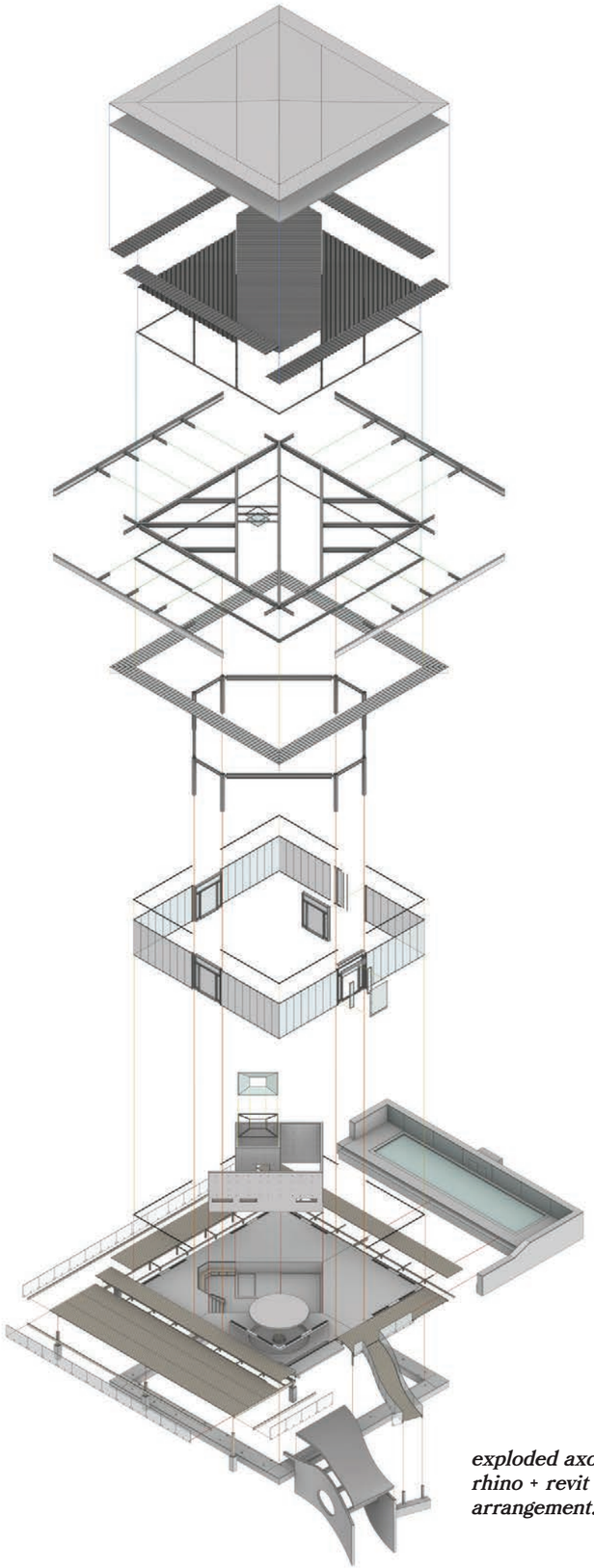


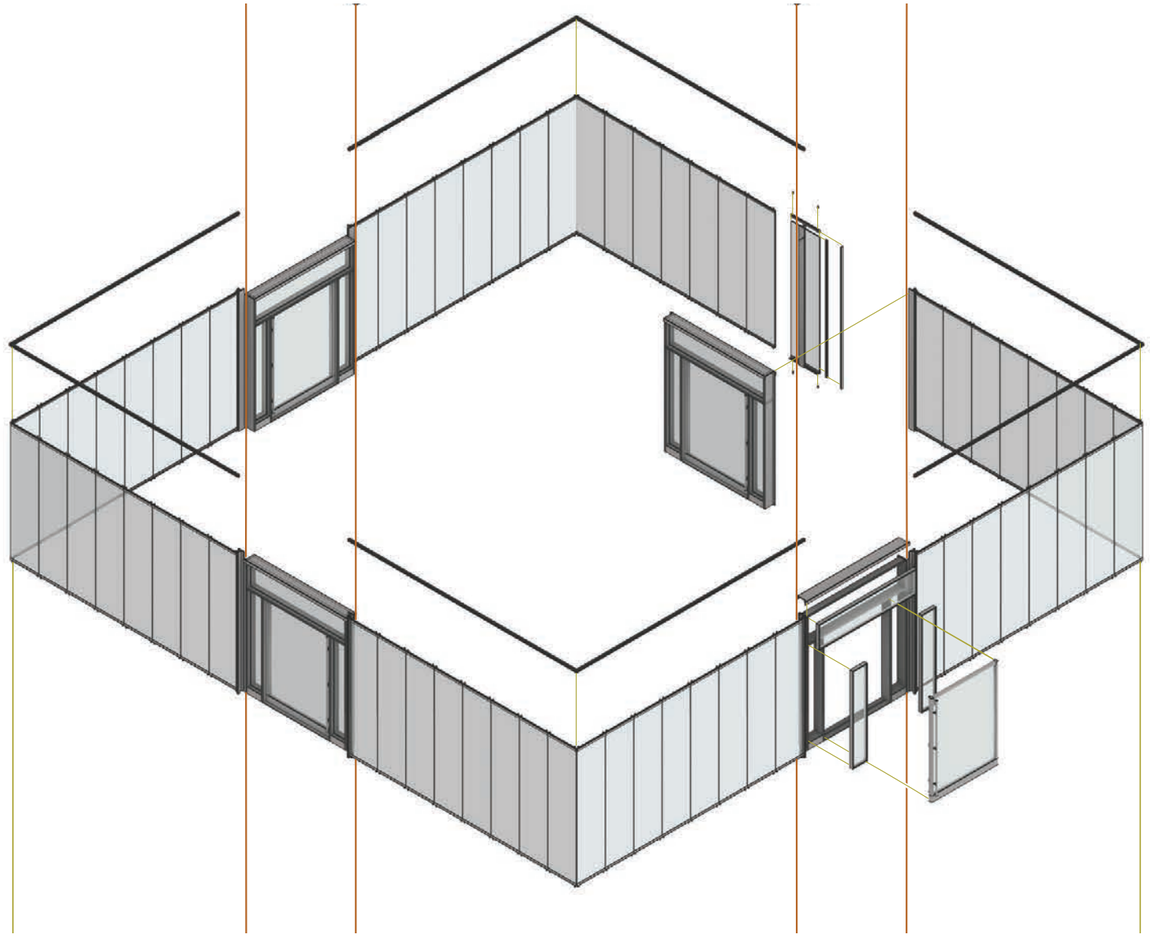


exploded axon: Moises De La Cruz
rhino + revit models: Atelier STRIPES
arrangement: Moises De La Cruz

STRUCTURAL OVERVIEW

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

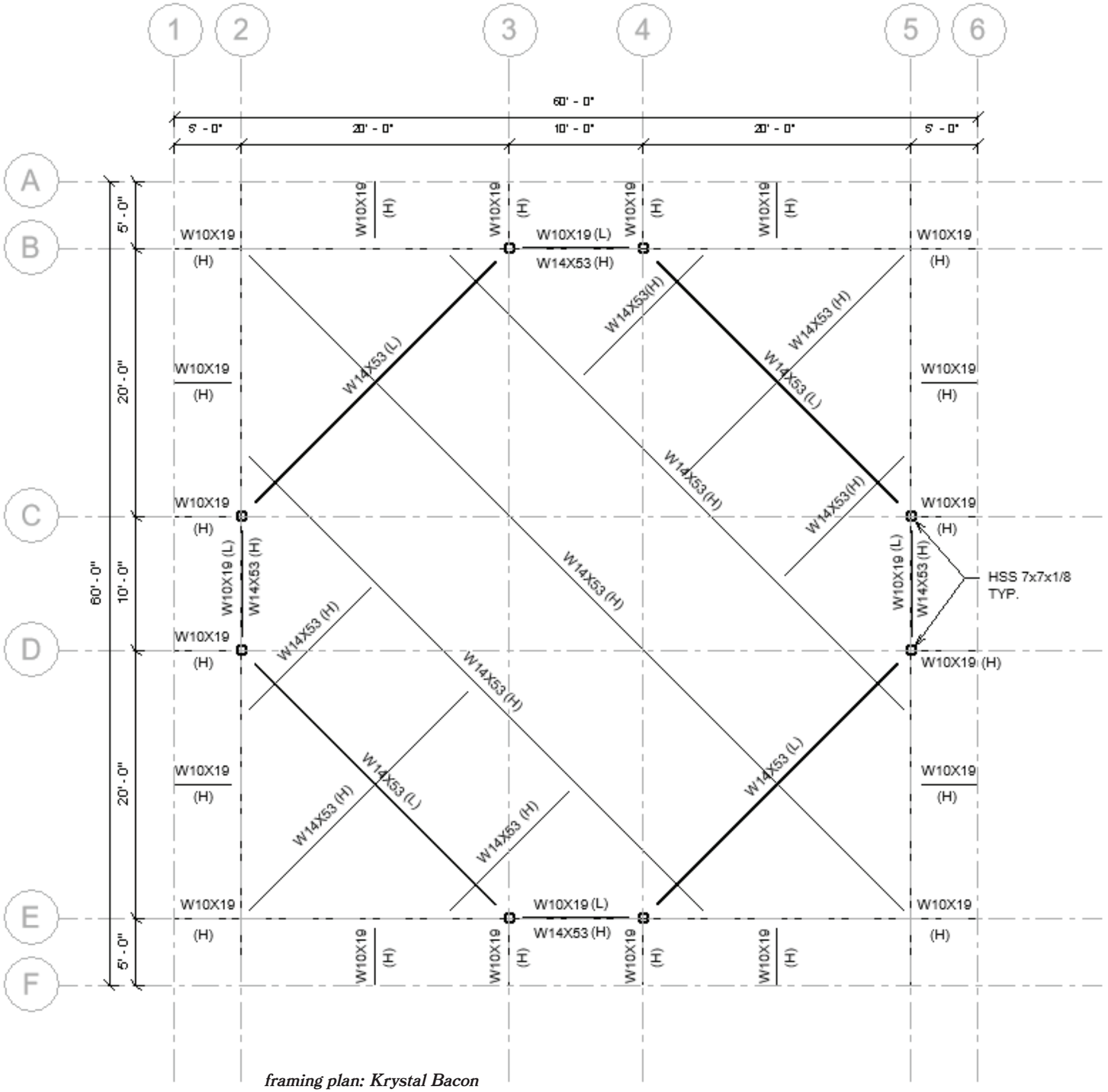




exploded axon: Moises De La Cruz
rhino + revit models: Atelier STRIPES
arrangement: Moises De La Cruz

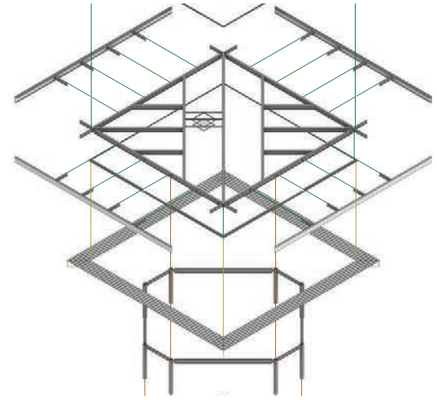
FINAL FRAMING PLAN

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES



framing plan: Krystal Bacon

(H) HIGH
(L) LOW



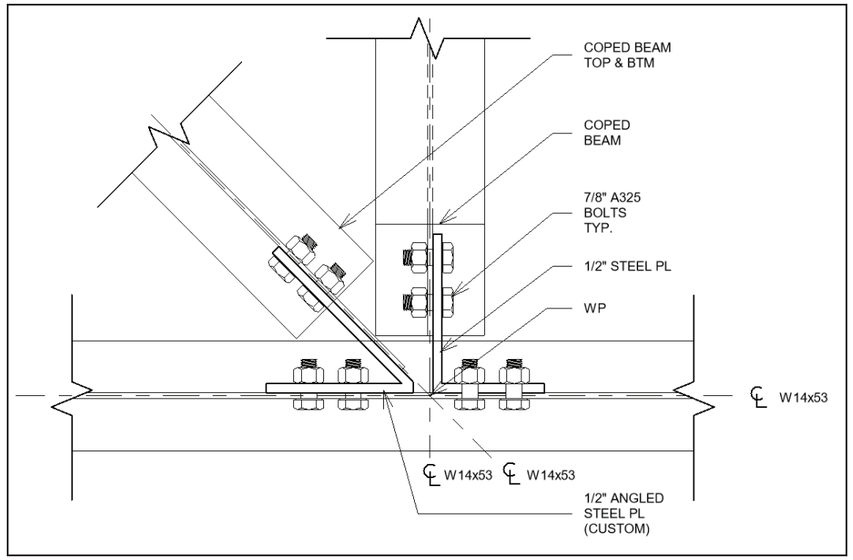
"The engineers in training on the team had faced many challenges given a Miesian aesthetic was asked for the project. Lacking a typical configuration of columns being located at the corners of the building, our framing layout became much more interesting. The initial framing plan lacked thorough consideration for load flow and constructability issues. The final framing configuration identified these issues and solved most, but as with every step of the design process, more issues arose. Given the time constraint of the studio, our team was not able to continue with revisions but instead reflect on some of those issues."

- Krystal Bacon

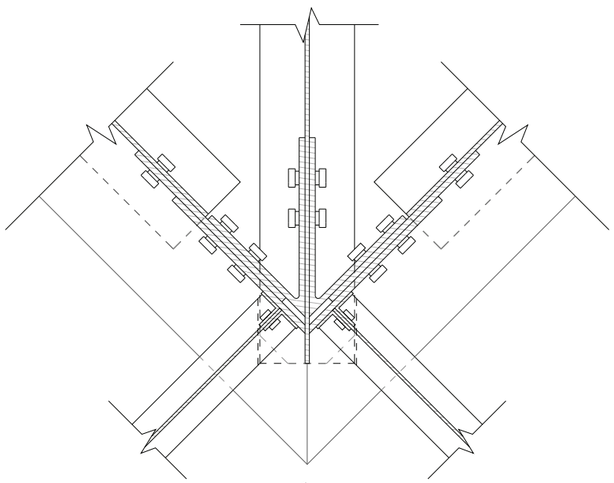
Here we see the updated framing layout. Previous choices led to confusion and inefficiency, which is the main reason why we made some significant changes.

CORNER PROBLEM

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

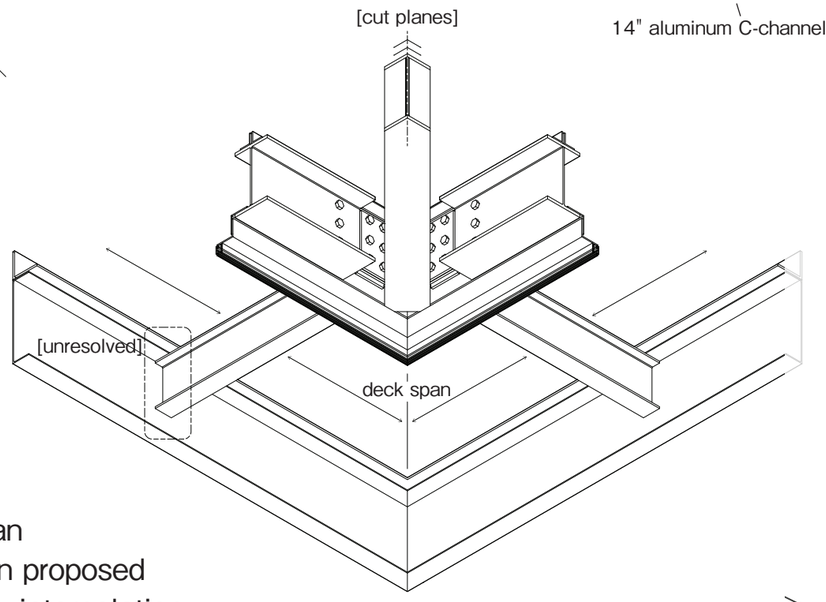


corner detail: Krystal Bacon

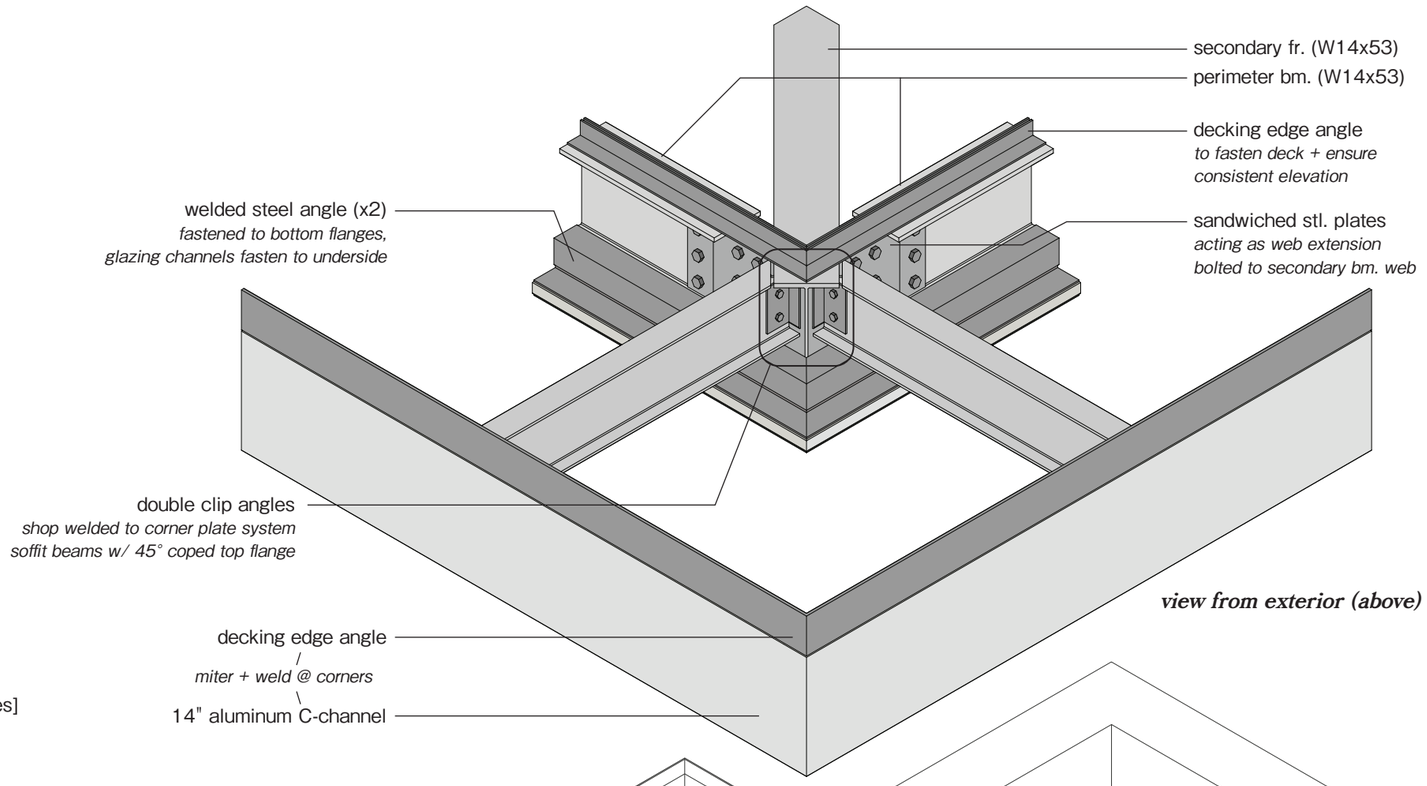


plan

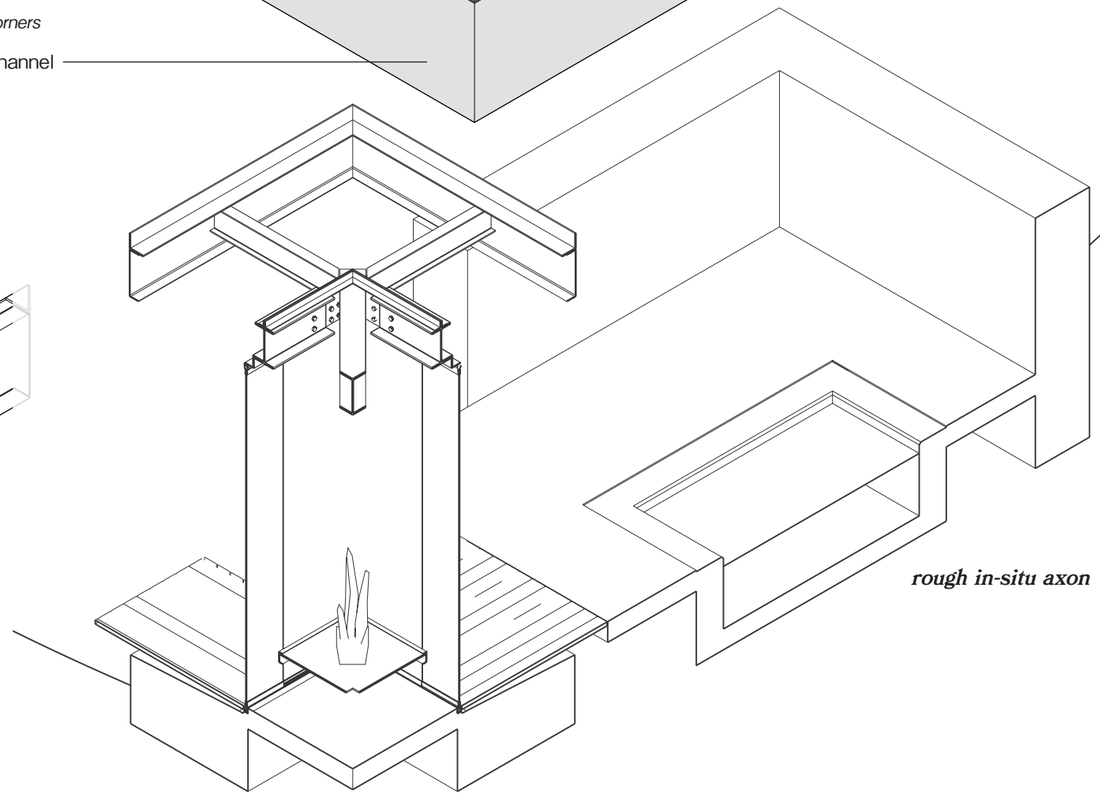
As the framing layout began to coalesce, we realized that our corner would require an ove-rengineered solution if it was to meet the standards of a Miesian endeavor. On the top left is the connection proposed by Krystal, and on the rest of the page, my interpolation which attempted to use flange coping and carefully-located hardware to achieve satisfying symmetry and visual cleanliness.



view from interior

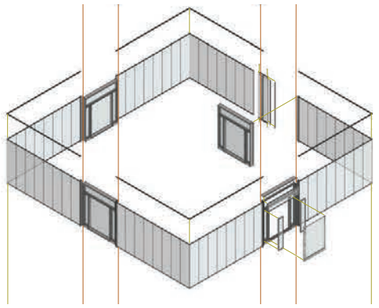


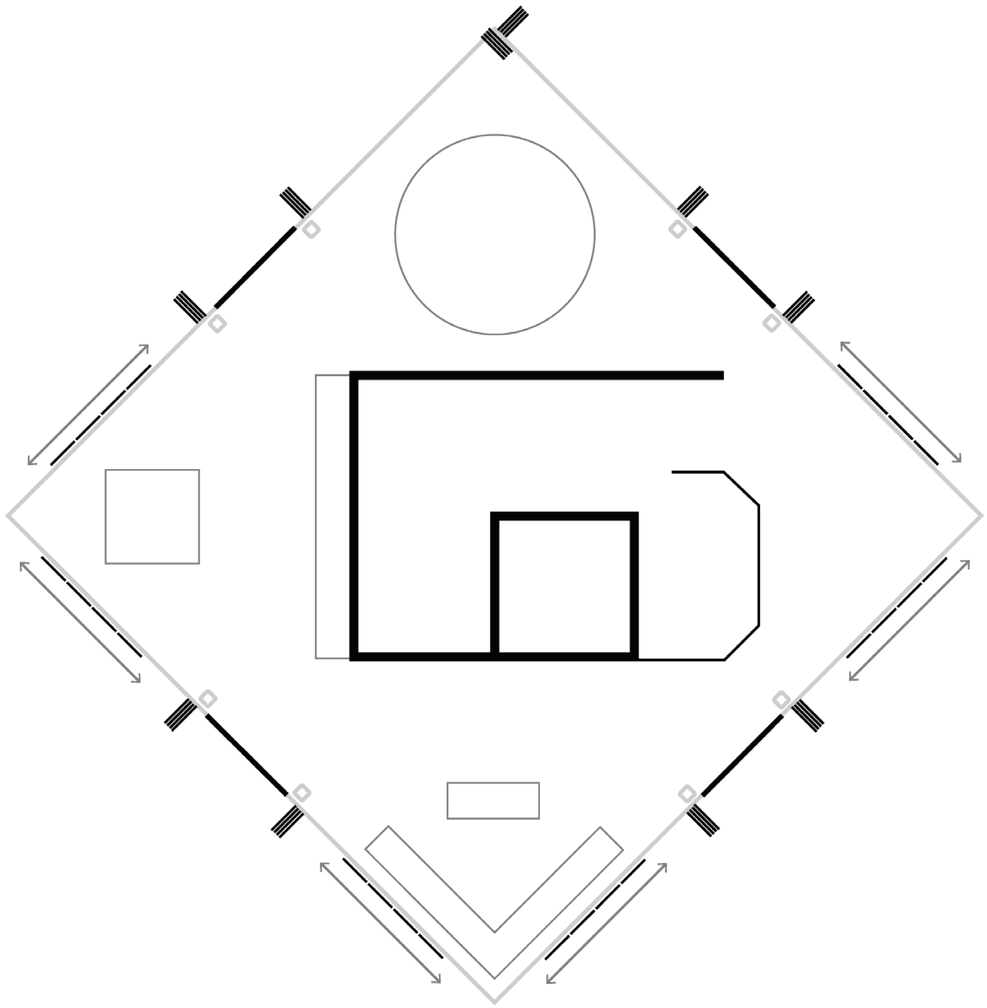
view from exterior (above)



rough in-situ axon

GLAZING PARTI : frameless panels

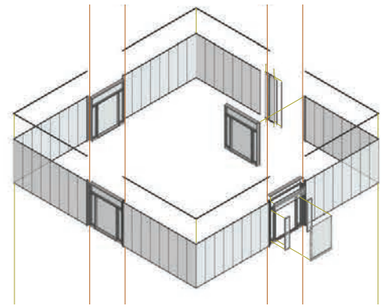


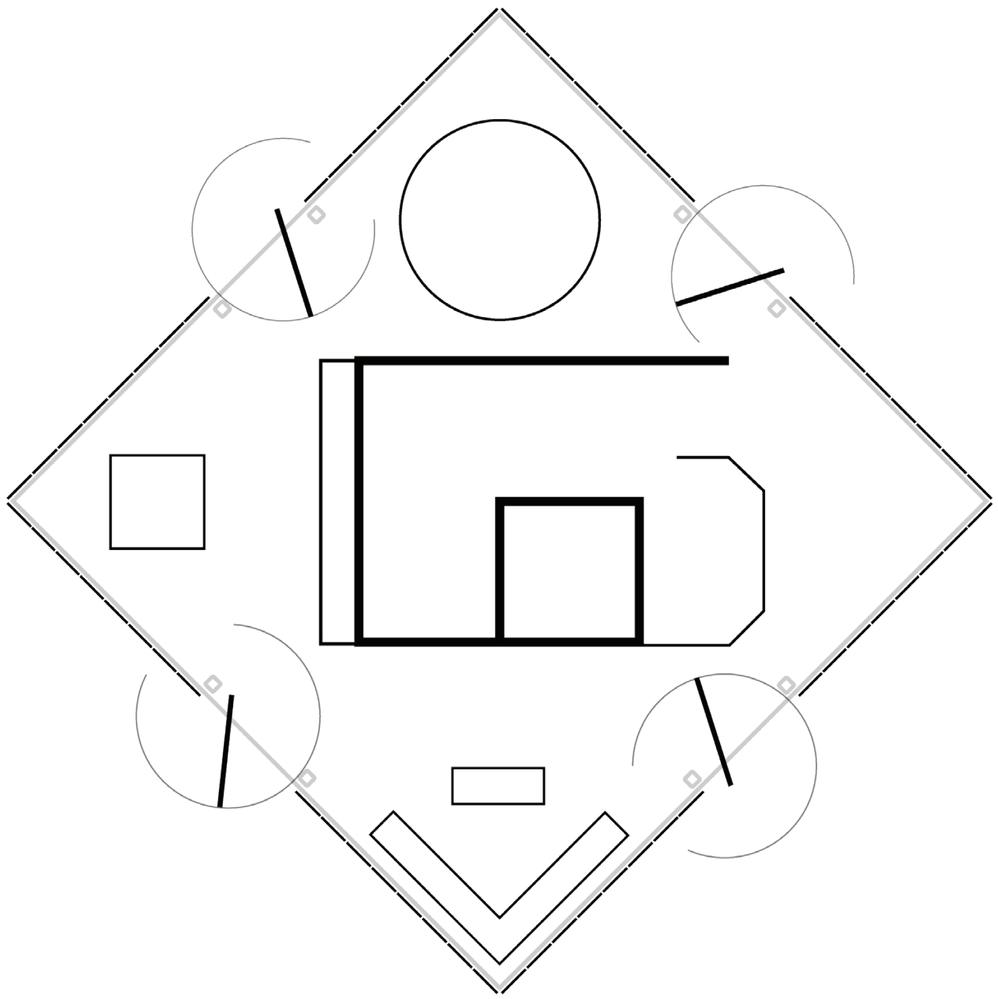


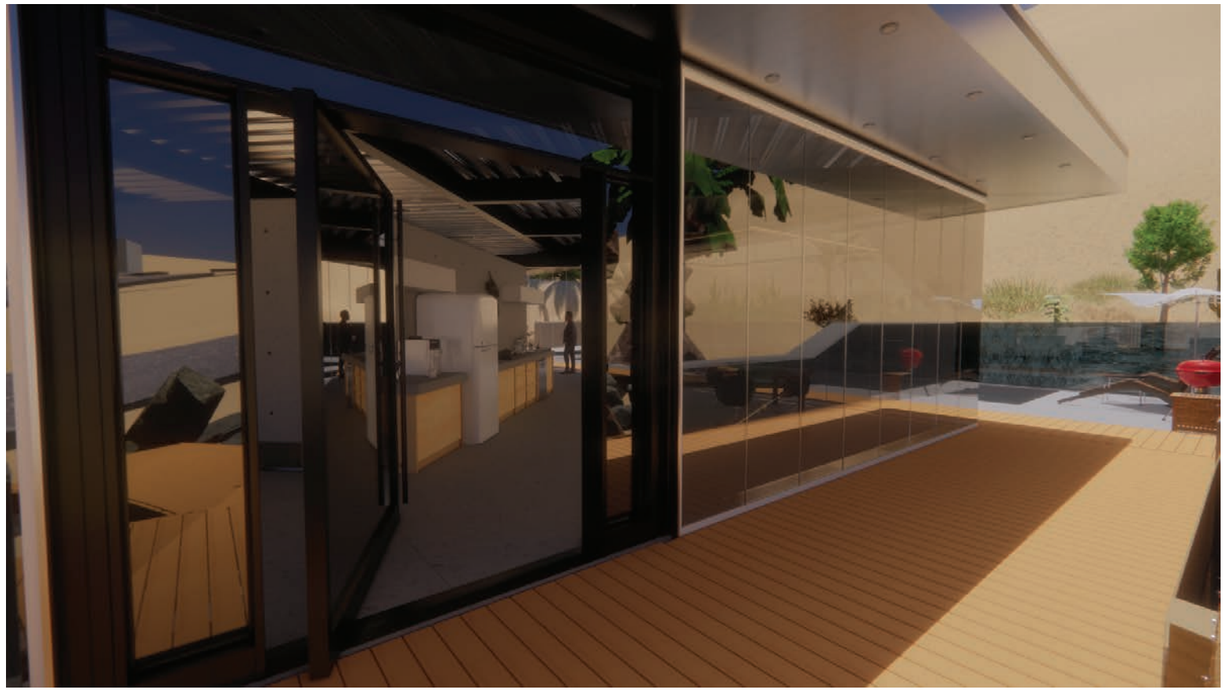
parti diagram + render: Moises De La Cruz
product logo © Cover Glass USA

Last, but certainly not least, the glazing strategy. Nearly every glass surface on the building envelope is designed to be operable, and this is made possible by two exciting systems we spec'd from west coast suppliers. The first is a system of 'frameless' panels provided by CoverGlass down in Costa Mesa. Each wall on either side of the gravity system is equipped with eight panels. With the exception of the motorized garage system, each wall allows up to 4 panels to be folded together magnetically next to the columns, so that the remaining panels can be arranged however the client desires. This includes the coveted open corner, which CoverGlass is able to accomplish thanks to discreet translucent interlocking channels on each pane which even weatherproof the assembly when closed.

GLAZING PARTI : pivot doors







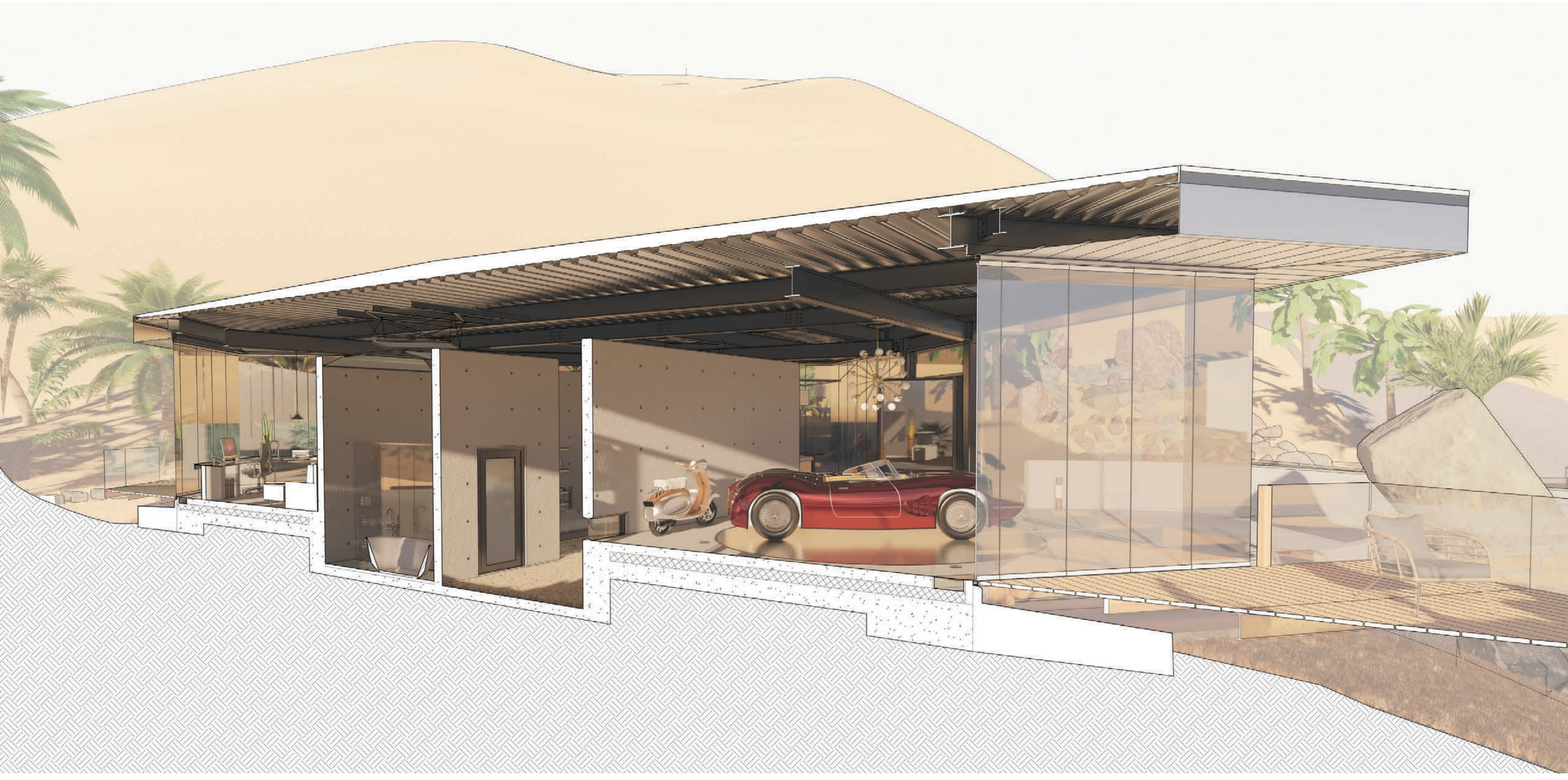
parti diagram + render: Moises De La Cruz
product logo © Red Horse Fenestration, Inc.

Between the two columns on each wall, we've designed a custom pivot door to be fabricated by Red Horse, who are based out of Reno. These monolithic glass doors rotate around an offset pivot that allows users to feel as if they're effortlessly slipping through another wall of the house rather than a traditional door. The sturdy tube steel frames favored by Red Horse were also a perfect visual fit for the rest of the house structure.

section: Moises De La Cruz & Jurgis Vaisvila

SECTION B-B

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES



In section, these systems all work together to accentuate the power of clean and orthogonal flat surfaces within the modernist way of life. This section also showcases the floor-height windows which allow our clients to see directly from the lower floor into their garage at any time, so that their prized possessions are never too far from theirs or their visitors' admiring gaze.

section: Moises De La Cruz & Jurgis Vaisvila

SECTION C-C

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

Living with Health + Efficiency, we hope that our clients (and any building occupants that follow) will grow even more attuned to the kind of optimized, clockwork commitment to self-care and productivity that has come to define our generation's lifestyle pursuits. We hope that you were also able to envision yourself inhabiting the home, filling it with your own aspirations and accumulations as Corey and Miguel dreamt of.

FINAL FANTASY

HEALTH + EFFICIENCY HOUSE
Atelier STRIPES

The final fantasy (described in greater detail in Atelier STRIPES' comprehensive portfolio packet) was an attempt to tie the conceptual knot involving our studies at the start of the quarter with overarching themes of excess, transparency, and surveillance. With a backstory involving a dystopian commune housing thousands of individuals in suspended glass boxes above the future Palm Springs desolation, this piece of speculative fiction was meant to tackle a lot of different concepts. Climate change, mass surveillance, social isolation, and class consciousness... our audience was invited to consider whether the whimsical mile-wide authoritarian construct of the year 2121 would really be so ridiculous, given present-day trajectories of wealth distribution and government trustworthiness. Still an unresolved question, Atelier STRIPES had to beg it regardless: how far off was Yevgeny Zamyatin in depicting the future of security almost 100 years ago, when today we are each equipped with a personal device with which to broadcast every waking moment to an anonymous audience?

And who's to say if this is good or bad?

CONCLUDING REMARKS

open.spotify.com/playlist/4swH0tujTFysF035gt81oQ?si=0524930abae84f87

When the dust settled, I was extremely happy with what Atelier STRIPES managed to come up with in this 10 week span. I'm not without regrets, naturally: I would've liked to develop a cogent HVAC and solar shading system to better hone the climatic comfort in the house (or at least create a semblance of it), as well as countless other things... But ultimately I hope that the details we chose to delve into and depict ended up being smart ones. The studio format was challenging at numerous points, but ultimately a rewarding taste of just how rigorous an interdisciplinary design pursuit can be. I was constantly impressed when, at times, the engineering team expressed a more keen sense of architectural creativity than the architects. It seems clear that anyone is capable of producing great work when they're paired with peers who respect their ideas (and vice versa), and a project which commands their enthusiasm.

We couldn't have done it without the commitment of our professors either. I can easily recall on many occasions cracking a fond smile at one of Meredith or Ed's comments which resonated, or at the rapport it must have taken to assemble such an enriching panel of case studies, mentors, and jurors. Co-teaching such a course must have been especially difficult, and in spite of COVID-19 and the spring quarter malaise which was to inevitably take hold, a cursory glance at our studio's final review deliverables is a clear indicator that the Algorithm hedged its bets very carefully, and assembled a great confluence of creative minds all throughout the Glasshaus Experiment. I hope that this is not the end of its script, and likewise I hope that we all carry on in the collaborative spirit from this point on, towards the sun like some grand inspired architectural Integral.