



INFILLHAUS

Infill in the sprawling prairie environs of Edmonton – a city of suburbs and bedroom communities now more than 1,000,000 people – is relatively new; using similar bylaw standards to suburban development; transposed onto skinny urban lots.

As a result, infill dwellings are generally out of scale and unsympathetic to their inner city, mature neighborhoods. Often the same height as the biggest houses on their block with roof decks, basements and double garages, they impose shadows, block sunshine, invade privacy, even remove trees – perpetuating issues already found on redeveloped, typical 50' width lots.

Infill has yet to explore the merits of compact, flexible living and environmental responsiveness in an urban densification context – and, with a lesser reliance on the automobile. Without these deeper considerations, the suburban paradigm is simply – and often crudely – repeated on a 25' wide subdivided lot.

This proposal, originally conceived as a competition prototype, is now commissioned for a client who wishes to downsize from its existing home that will be rented in the future. The infill project will be located next door on a property that they purchased some years ago. The project envisions an 1860 SF (+ decks) single detached infill dwelling in the Norwood neighborhood of Edmonton:

The project

is **urban** and private. It places bedrooms partially into the ground, using the natural insulating capability of the earth to maintain winter warmth and a naturally cooled, summer environment. Living space is contained in a high volume and completely open pavilion, subdivided with furniture or movable screens and zoned between 'servant' and 'served' spaces by an articulated, structural tree module. This floor overlooks the street and back yard with no windows imposing onto neighboring yards. A thin, galvanised steel canopy extending over both ends of the building provides a simple, contemporary 'lid' and protection against the elements.

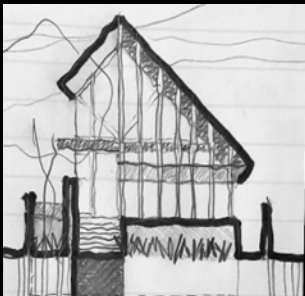
relates to the **context** of mature neighborhoods, incorporating a raised entry and a verandah that can also be enclosed as a porch – as found all over the inner city. Social interaction is encouraged by these semi-private domains where pedestrians come into contact with their neighbors. This is one of the friendly, redeeming characteristics of Edmonton's leafy, inner city neighborhoods.

significantly reduces site excavation and time of construction. Infill structures with full basements leave little space to store excavated material during construction, resulting in unsightly mounds of up to 20 feet in height that alter wind and storm drainage patterns, often eroding onto or flooding neighboring properties. This is one of the biggest issues of infill development. With a smaller footprint, smaller excavation and the use of metal clad, prefabricated wall and roof panels, construction time is significantly reduced.

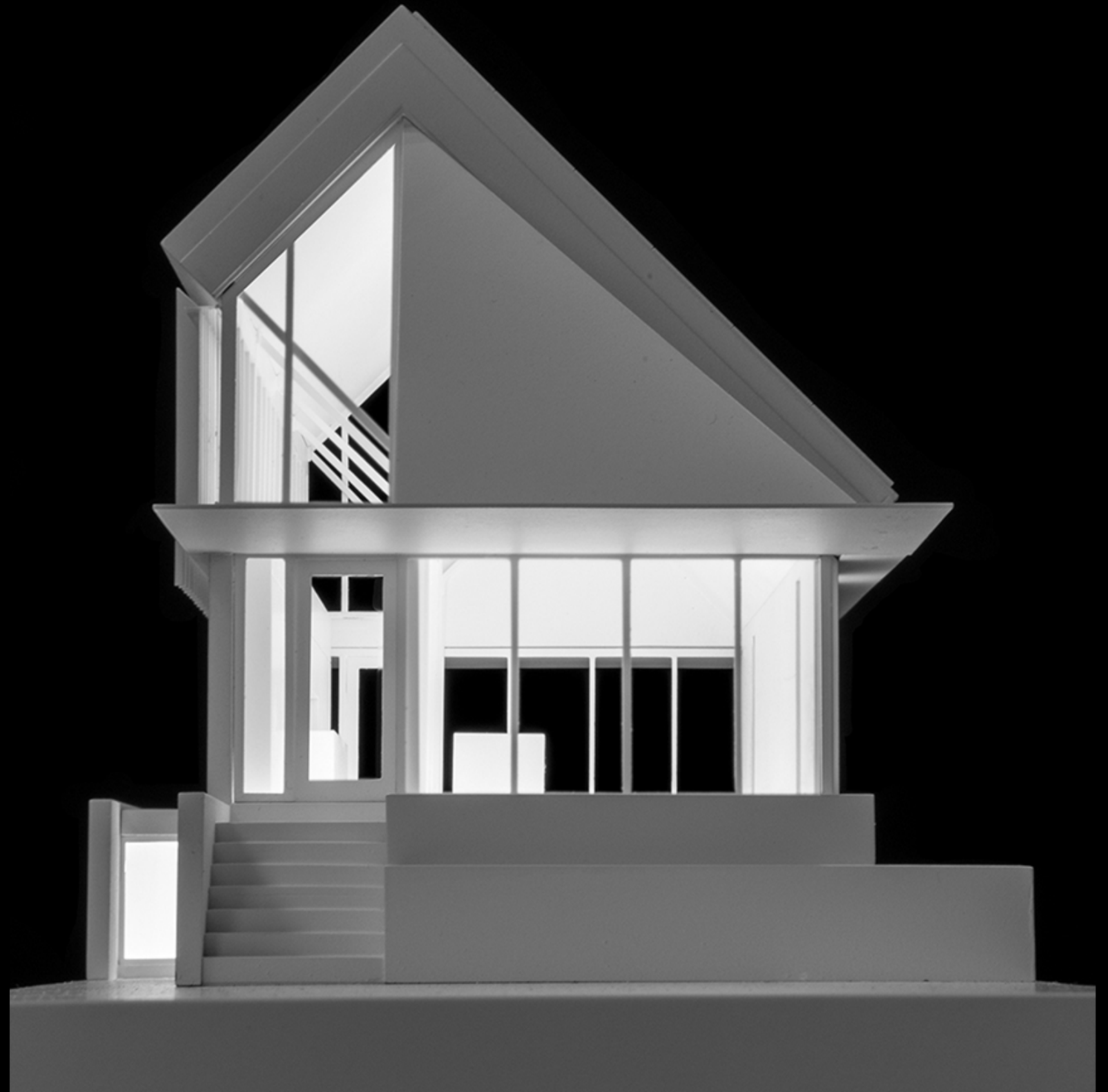
is **compact, spacious** and **flexible**. A lower building height than permitted (and casting no shadows onto neighboring properties), this is a densification model where demountable partitions and adaptability / accessibility standards promote social sustainability by enabling owners to remain for generations – 'living in place' from young urban singles, couples, growing families and finally into the senior years. Bedroom and support space can be readily altered while the open living floor enables multiple, adaptable furniture arrangements. This design begins at mid career and the owners envision living here for the remainder of their life.

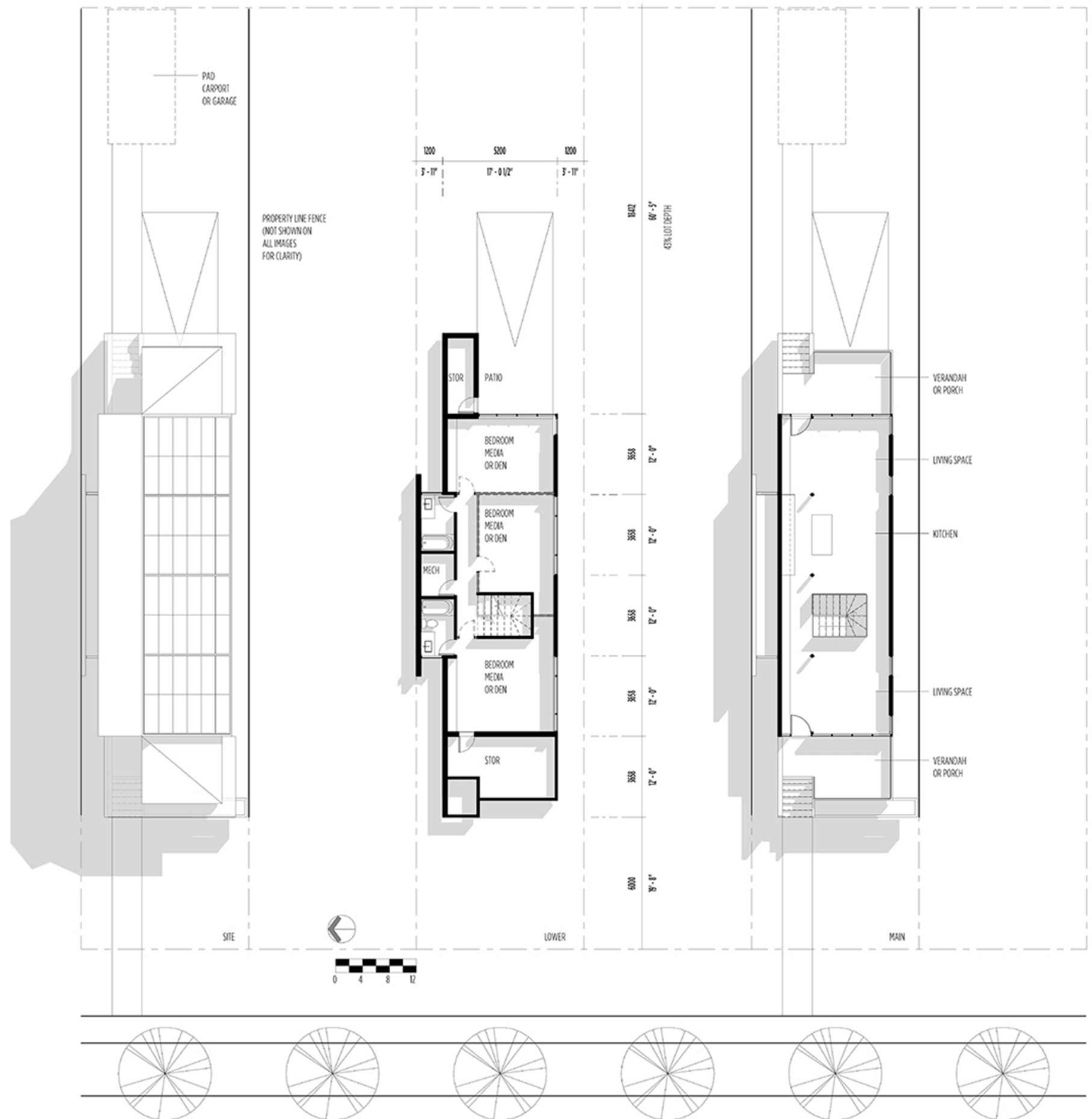
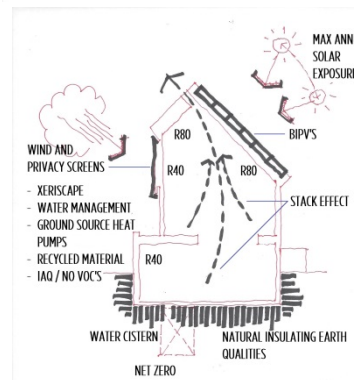
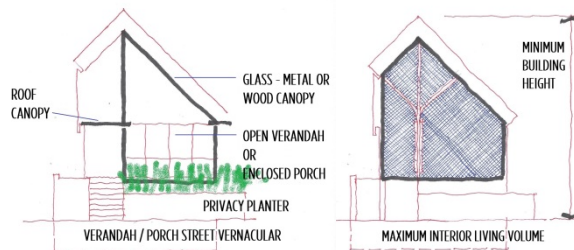
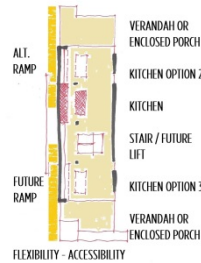
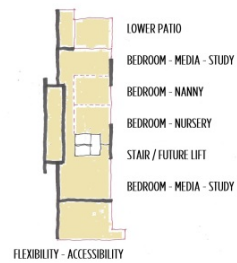
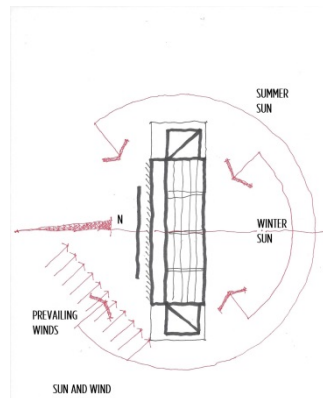
challenges the inefficiency of the traditional 4 foot sideyard suburban setback – chronically wasted land, by building a non-combustible wall up to the property line, no higher than a permitted 6' sideyard fence. This enables a contiguous, open interior and a flexible pattern for partitioning rooms that are not compromised in width or length.

aims at **net zero** annual energy consumption, incorporating such LEED standards as a durable, efficient envelope (R80 roof, R40 walls, LowE triple glazing), BIPV's (Building Integrated Photo Voltaics), tankless water heaters, water miser fixtures, rain water capture and harvesting, grey water re-use, zero VOC's, ground source heat pumps, heat recovery systems and home automation. This *begins* with basic building orientation that suits the harsh climate – efficiently tracking and capturing the sun's energy from east to west, year round.

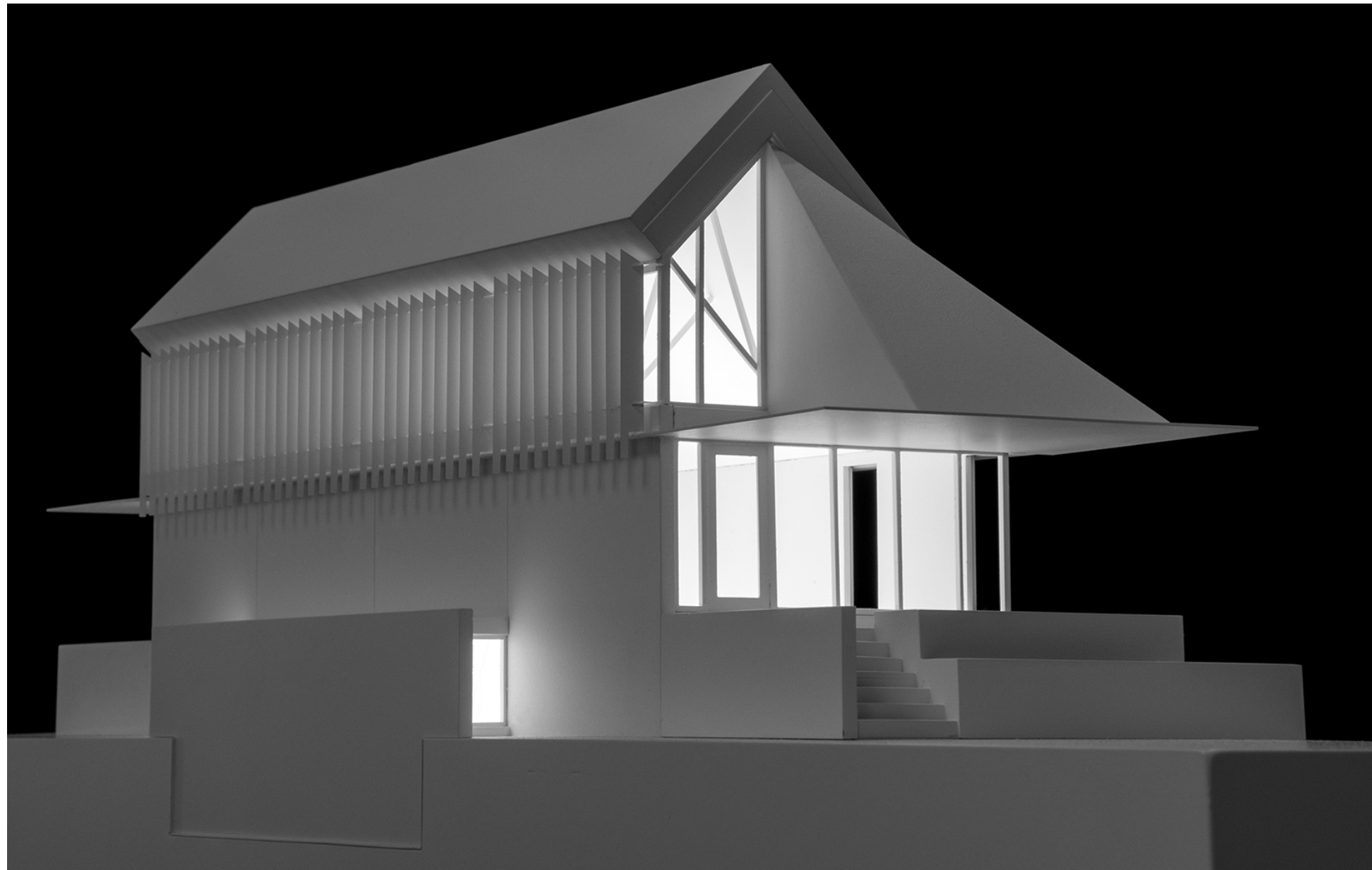


Front / West Elevation





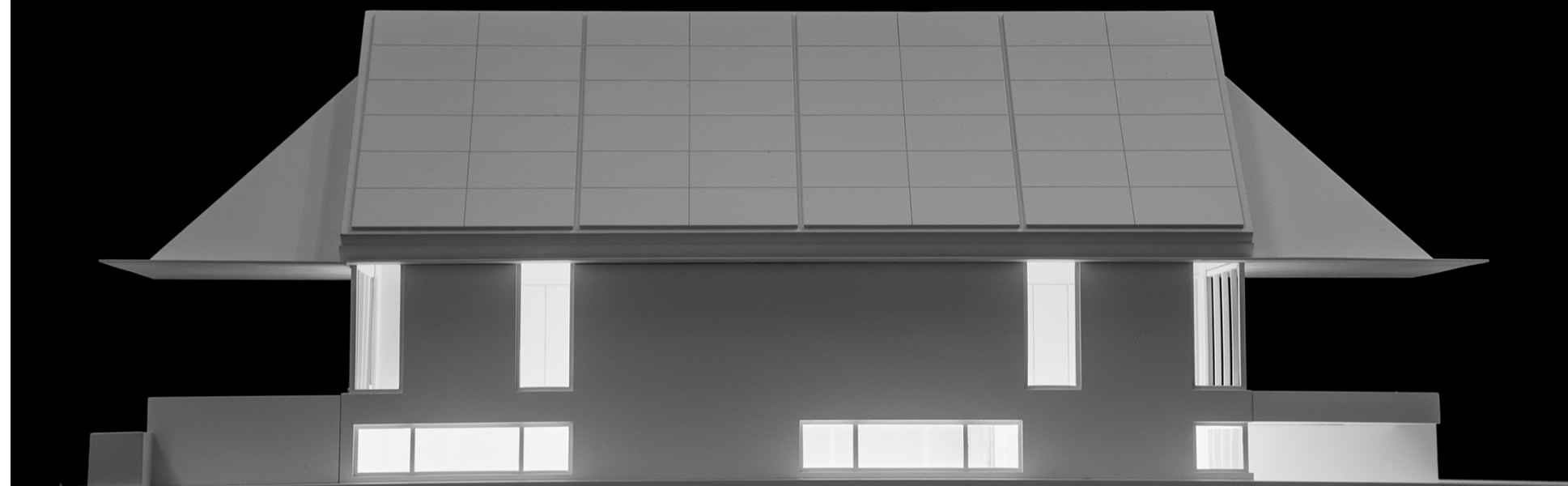
Entry Canopy and
Wind / Privacy Screens

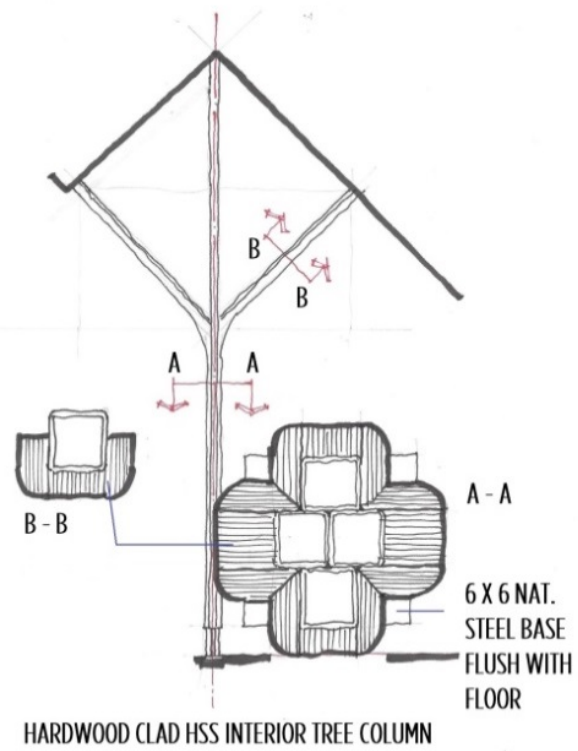


Long Section

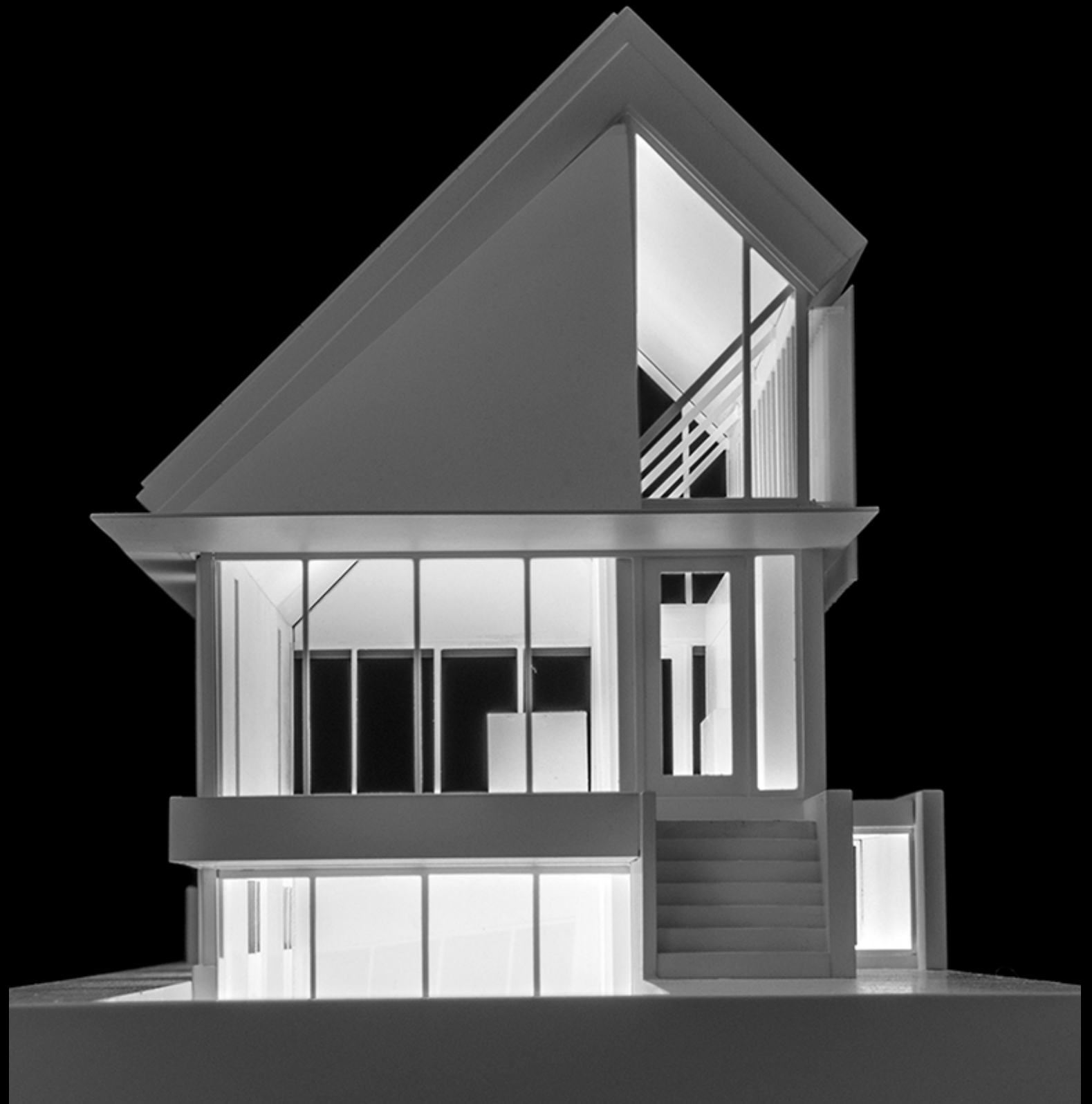


South Elevation

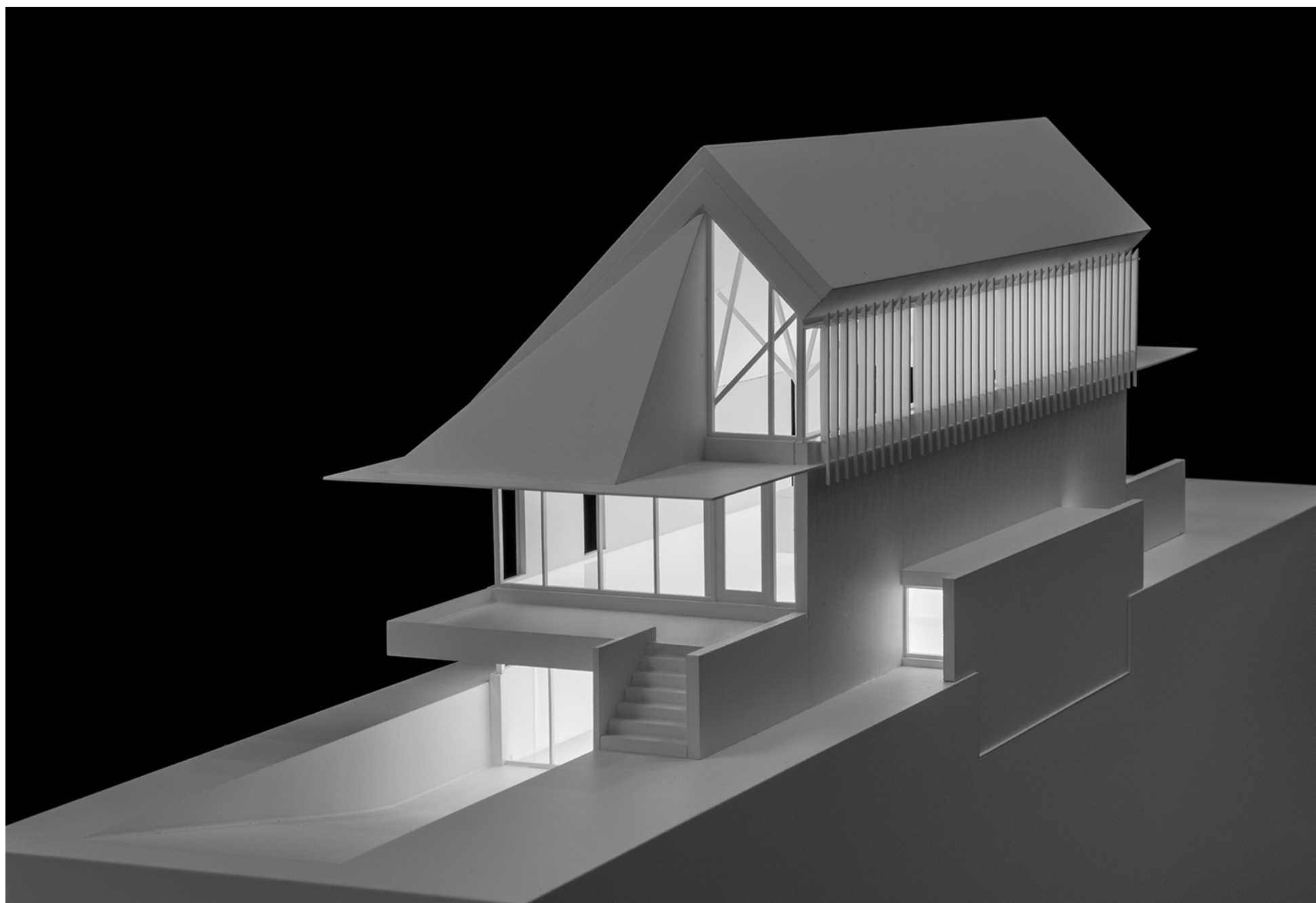




Rear / East Elevation



Rear Lower
Patio and
Sloped Grade



North Elevation

