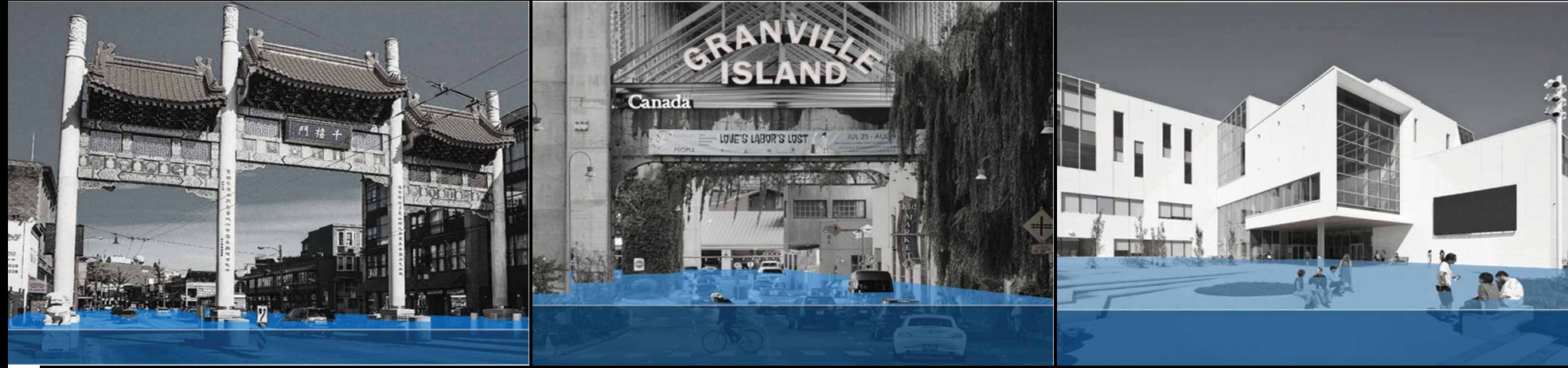


Title	An Inhabitable Wall (Thesis)
Program	Adaptive Residential & Climate Infrastructure
Zoning	Z-2
Status	Concept
Location	Vancouver, B.C.
Size	260,200 sqf
Year	2050

Canadian Architect Student Thesis of the Year Award (Runner-up)

Digital Image (Aerial View)

Digital Image (at the front of the Wall)



▲ *The big idea: The objective of this graduate project is to explore how the role of the architect and how the built environment will change and evolve over our upcoming careers. Interested in the way architecture is 'born' and how the conditions which shape that environment will affect how and what we design. Rather than being a reduction of information into a 'mono-focused' idea, this project attempts to synthesize and elaborate on complex conditions that we believe to be relevant over the coming 30 years.*

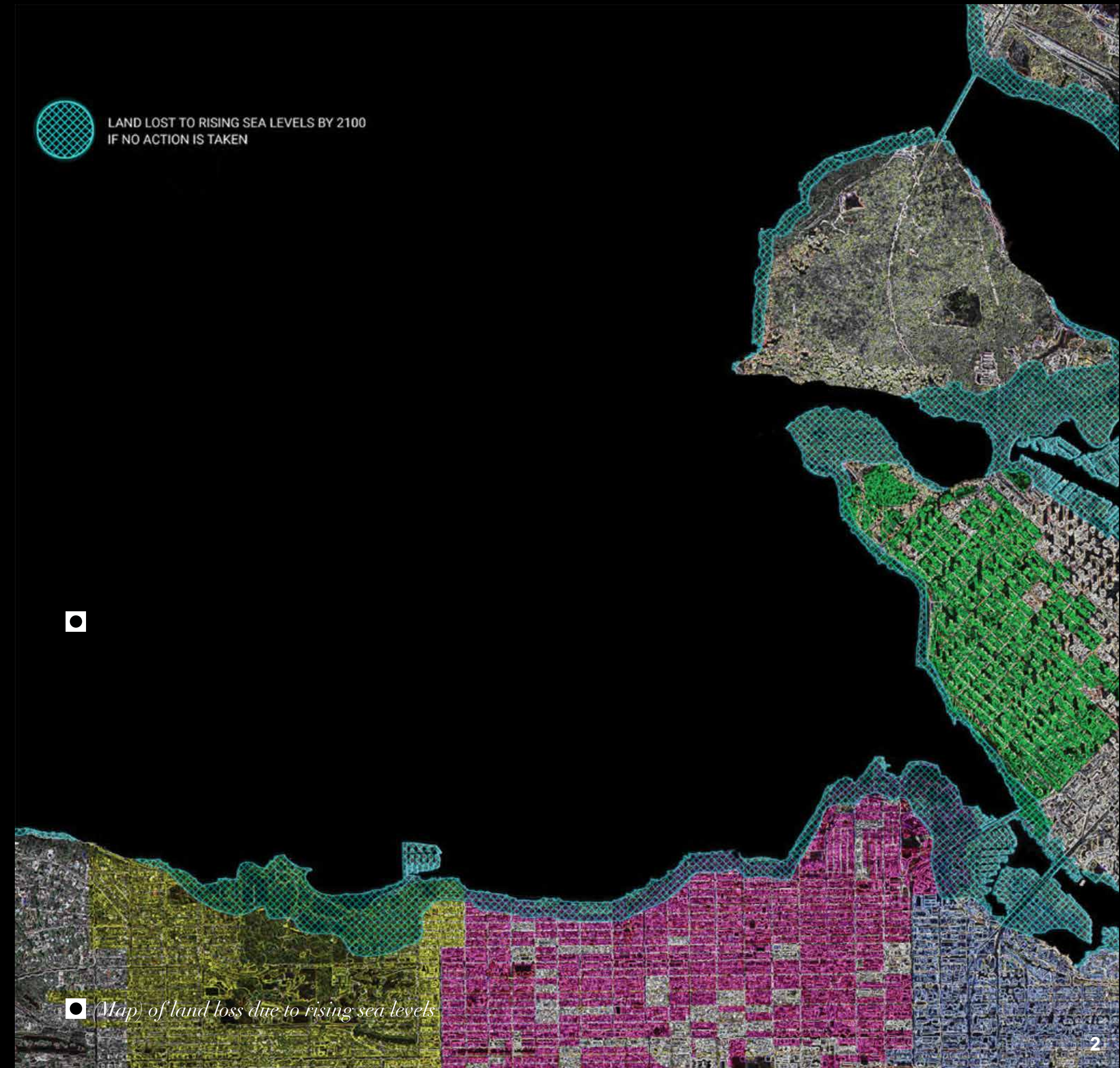
Since 2022 sea levels have risen to the point that we are losing areas of our city at an alarming rate. Lost Lagoon has reconnected to English Bay, Sunset Beach is almost permanently submerged and this is just the beginning. Data pulled from the City of Vancouver projects that by 2100 everything in the blue hatched area on the adjacent map will be under water. Even as we look inland, water will reach Emily Carr University as well as the adjacent St Paul's General Hospital.

This impending crisis has led to the design of *Vancouver's Resiliency Network*. The *VRN* is a defence infrastructure that runs from Spanish Banks to Vanier Park, it then extends across the mouth of False Creek and along the shore to the entrance of Stanley Park. Large Berms, such as the Kits Beach Berm use recreational programs such as soccer fields, skate parks, and leisure space to form a defence bar between the city and the ocean that simultaneously serves to improve the communities around it.

At the heart of the *VRN* there is a unique opportunity. The *Resiliency Network* forms a large wall across False Creek. Unlike other areas along the resiliency network that occupy land which had a prior program of park and recreational space to serve adjacent properties, this is *new land*.

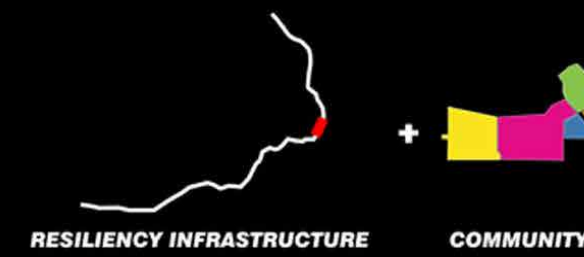
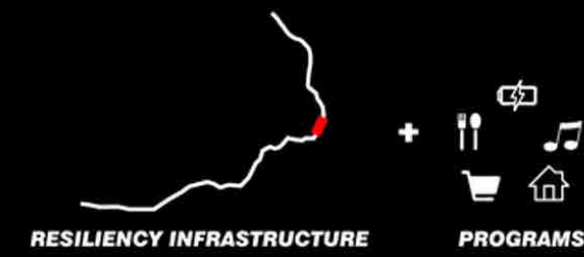
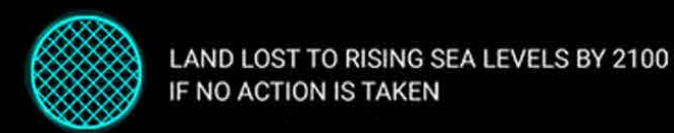
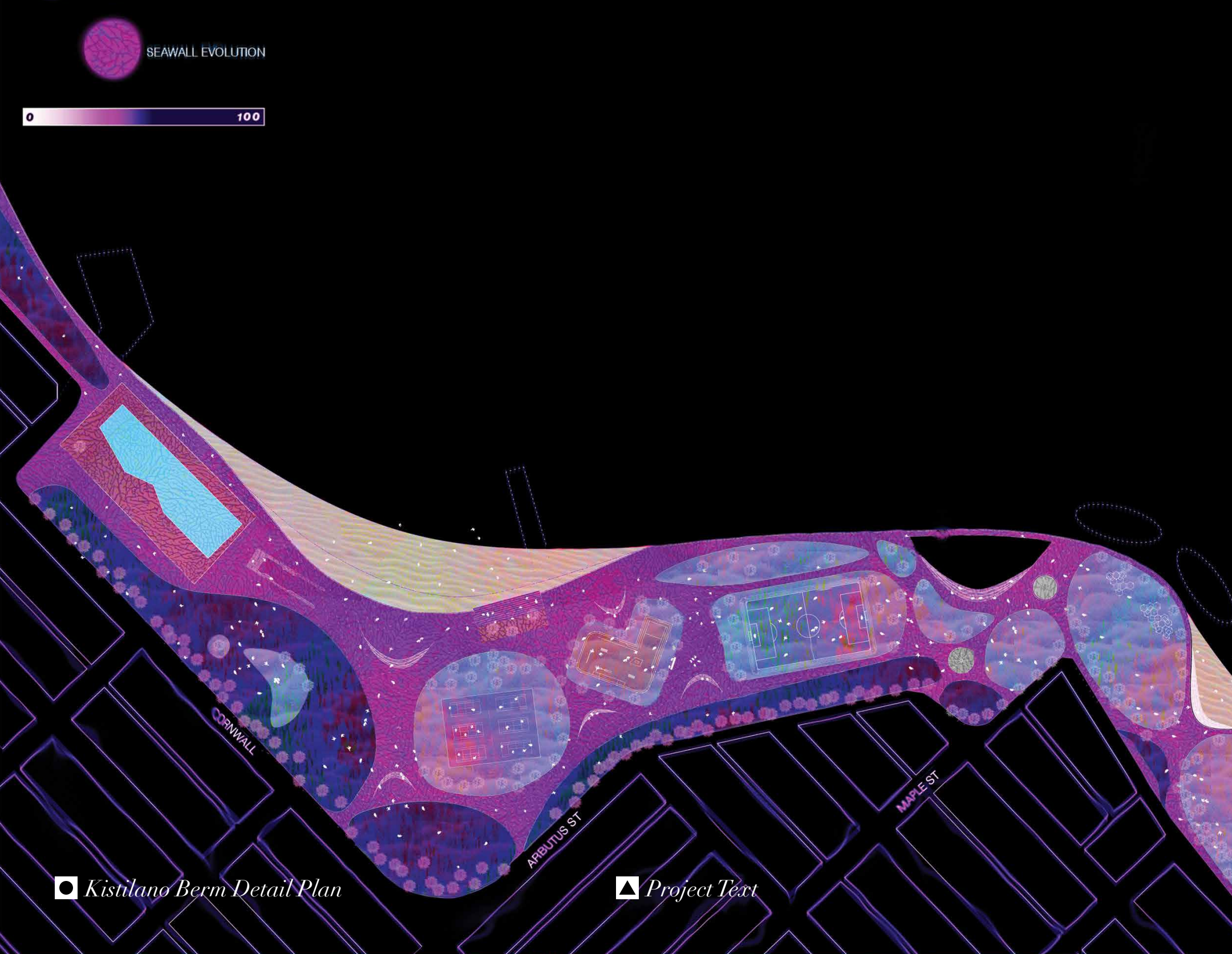
With this new land we have the opportunity to address other issues. With a continuing climate migration of people into the city and the growing severity of inequality, *The Wall* offers responses to Vancouver's second most pressing issue, affordable housing.

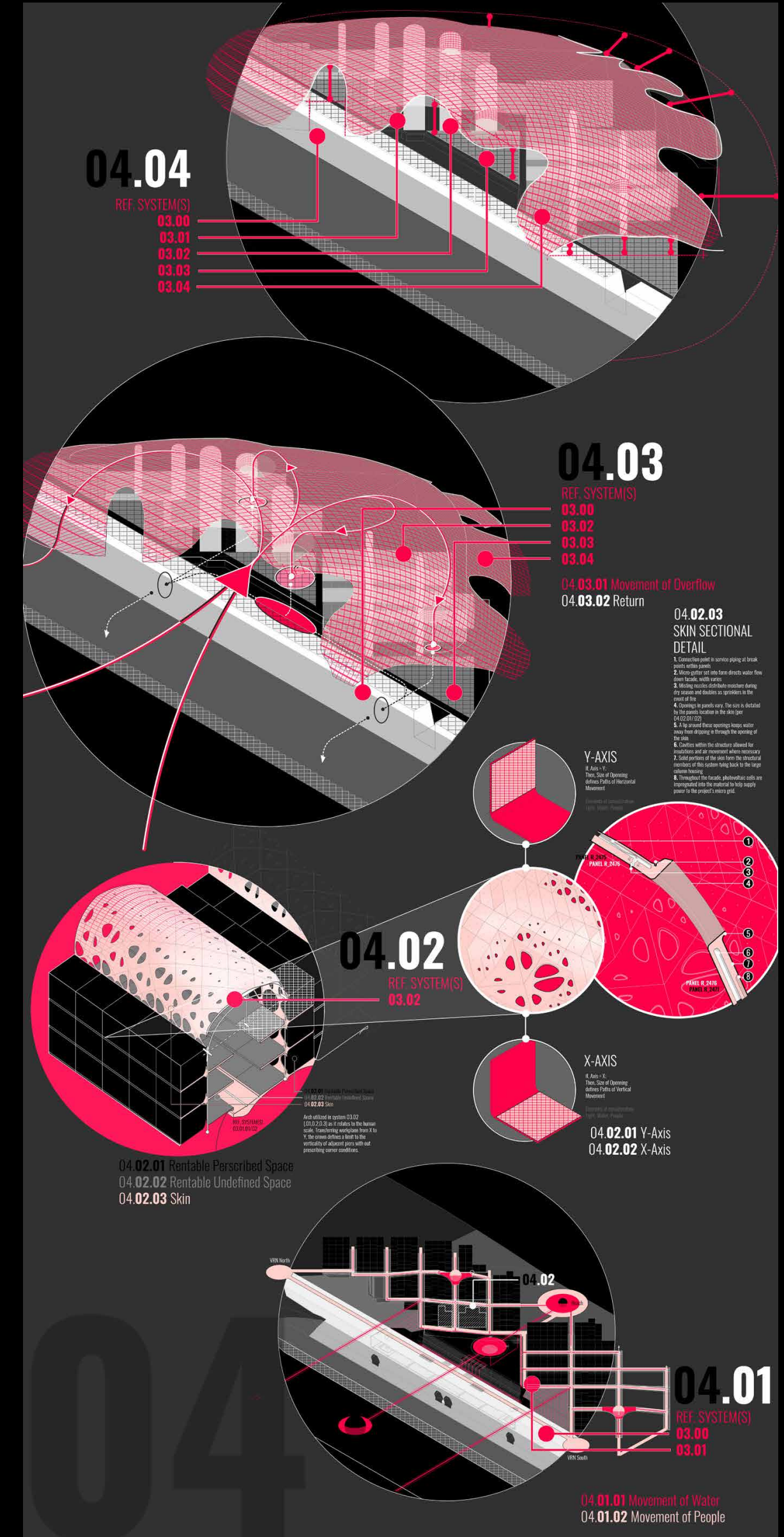
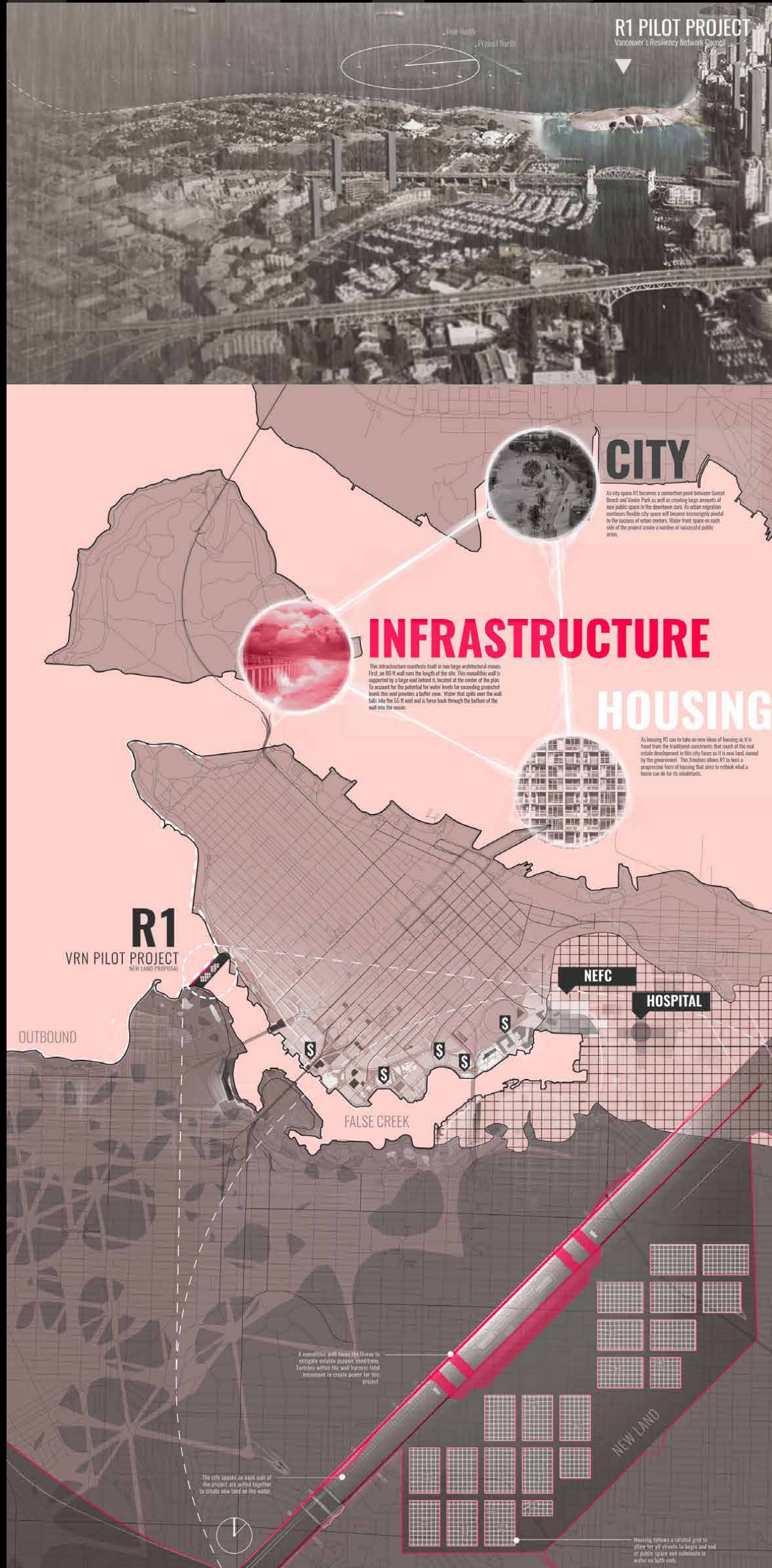
As a response to the realities of our time, *The Wall* places itself at the intersection of three systems: *infrastructure, housing, and the city*.

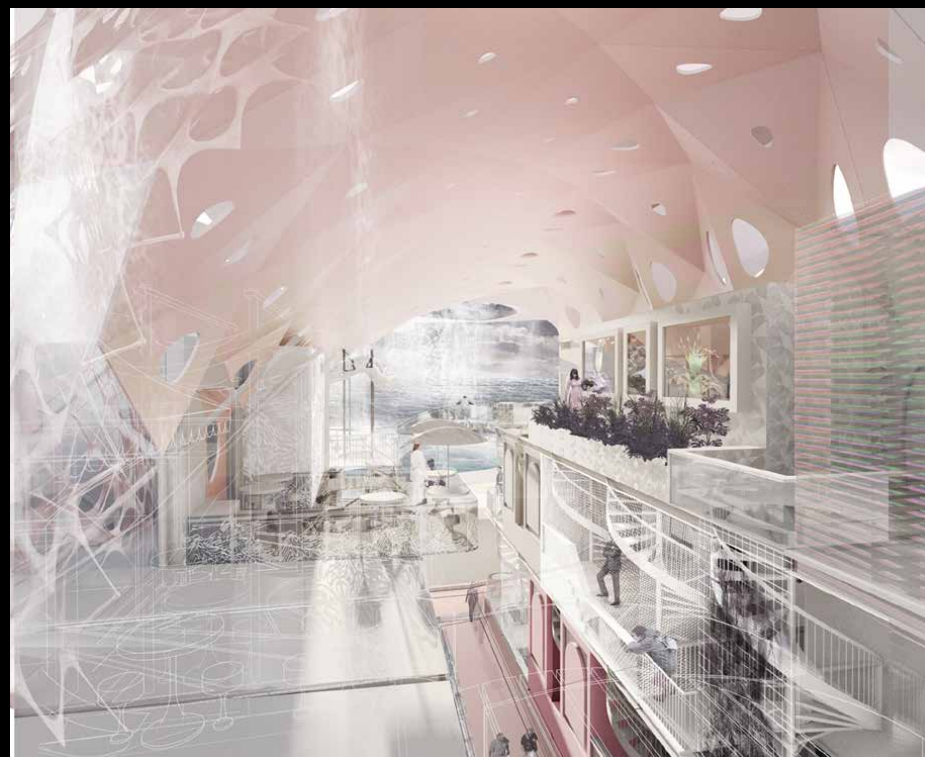
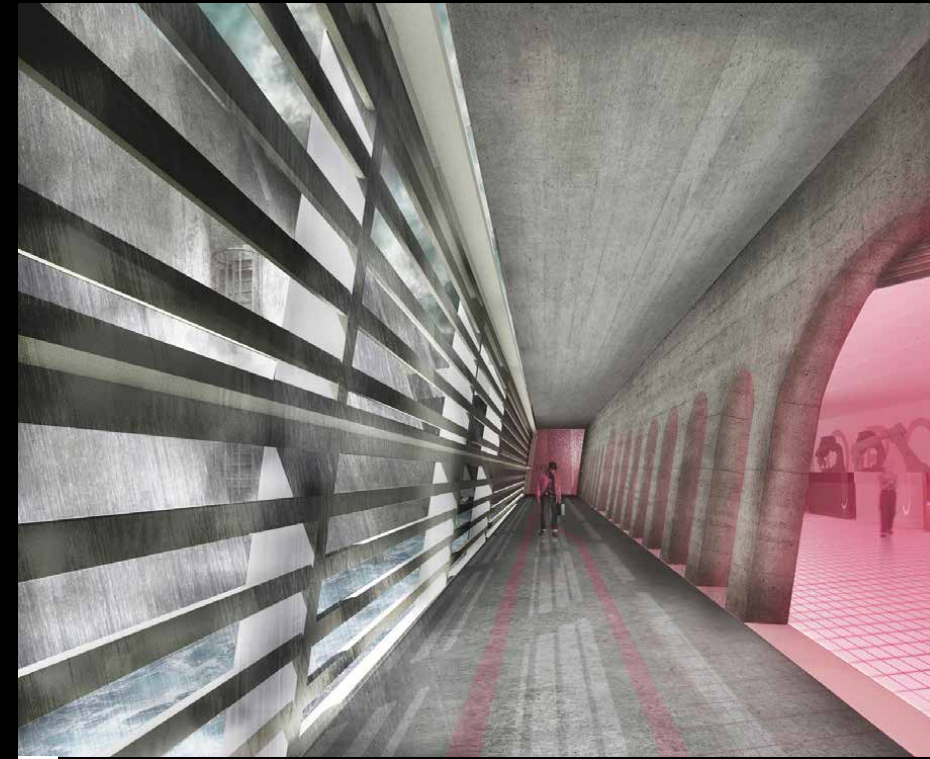
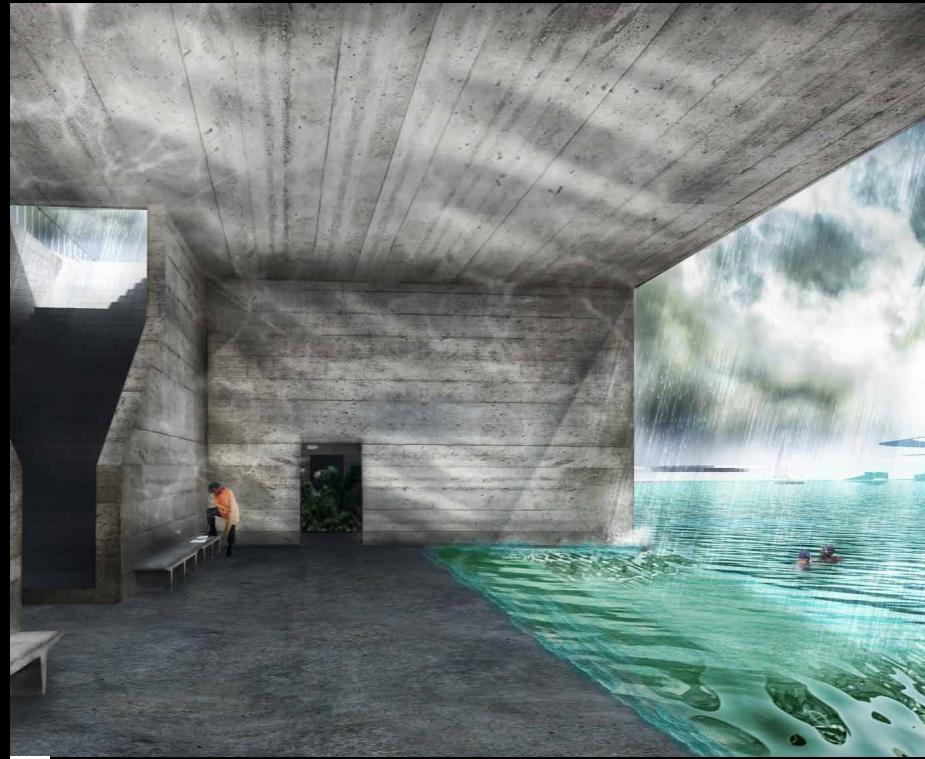


▲ These three systems act independently on the site, with the primary and most critical system the **defense infrastructure**. This system manifests itself on site as two large architectural moves. First, as we look at the site in plan we see a large monolithic bar that runs the length of the site. This wall is supported by a large void that is located at the center of the plan and extends out to the edge of the site as two long drainage lines. If water surges over the wall it rushes down into the void and into the projects water reservoir. In the event the water exceeds the intended capacity of the reservoir, large turbines located at the bottom of the wall force the water back out into the ocean. These turbines also serve to draw energy for the buildings micro grid system from tidal movement from the pacific ocean. Behind the void the second system is located. The *'Participatory Housing'* is organized on a grid east of the wall. Streets terrace down from the wall toward the False Creek Artificial Beach. Within these streets are micro grids of 3 story-stacked participatory units. These units are available on 5, 10 and 20 year leases. Each unit is comprised of a base unit of necessities and a private zone that is left intentionally blank.

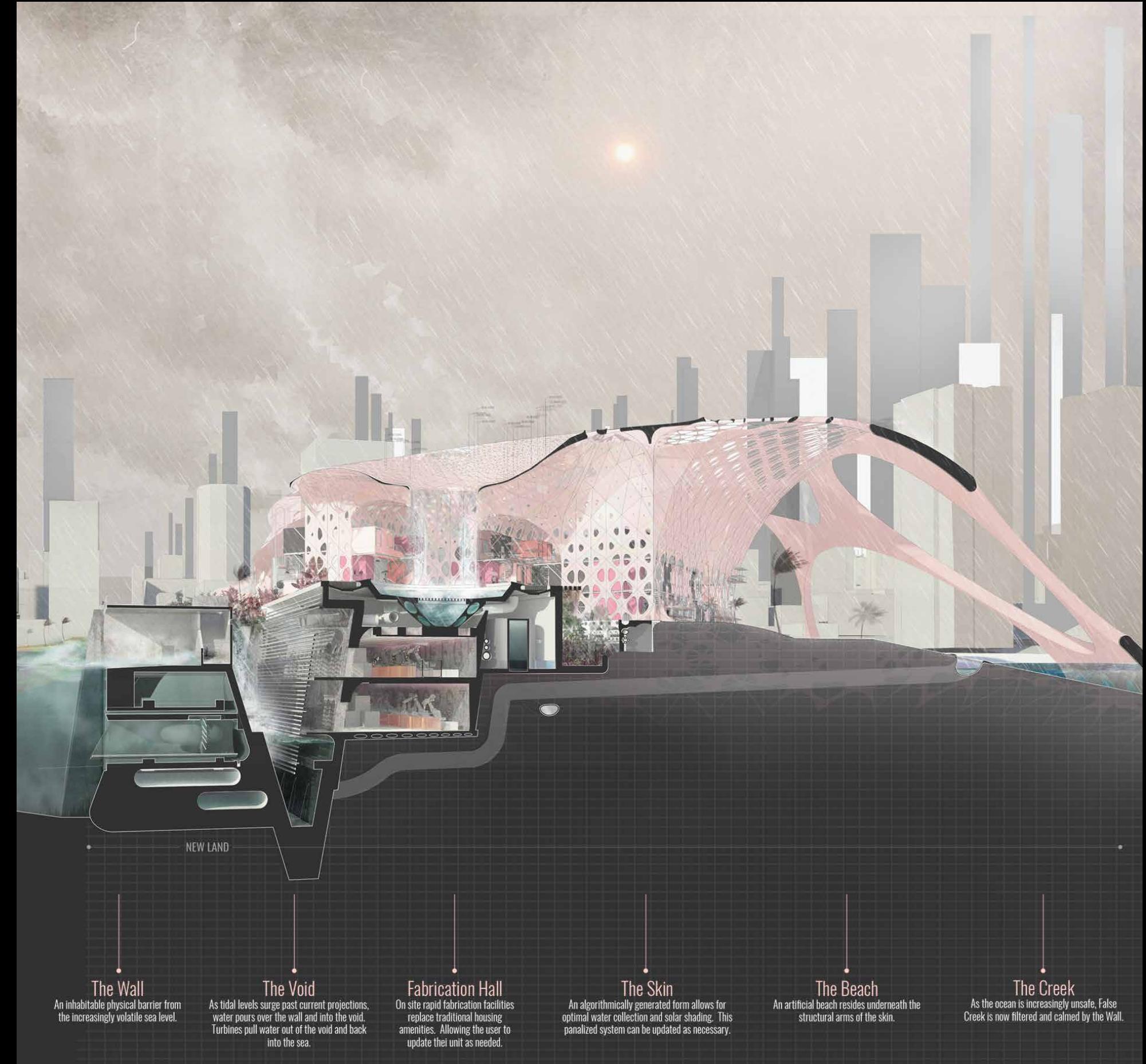
▲ A structural frame allows for inhabitants to easily develop their unit as they need. Rather than traditional amenities such as pools or gyms, a rapid fabrication center behind the void allows these units to be quickly updated as necessary. A digital database allows users to pull modular wall assemblies and furnishings to print as needed, new inputs are always welcome. **While the front of the wall is a static brutalist wall impervious to change, routed in the past, behind the void is a shimmering, shifting housing typology that is never static.** Able to adapt to our ever shifting needs. Inhabitants are welcome to re-develop their space into commercial spaces. This commercial aspect of the housing is made possible by the third system: The City. *The Wall* draws the West End and Sunset Beach Park across the water to join with Vanier Park and Kitsilano. Two of Vancouver's most vibrant neighborhoods are connected over the water to create what is to be one of Vancouver's most amazing city spaces.







▶ As the conditions of our environment become more volatile and more detrimental to our society, it is becoming imperative that Architects explore, create and design to effectively respond to these situations. It is about designing the space between these systems. It is not about attempting to resolve the conditions in isolation, but instead about how these conditions collide, and how potential systems can interact. **At the heart of this overlap is the dire need for resiliency.** A static system remains static throughout its life span. This stability means it is unable to fluctuate and react to large external forces. In the event that a static system is hit with a large external force it will break. A Resilient system on the other hand, has the potential to fluctuate greatly during its life span. Resilient systems are much better suited to absorb tremendous external and unpredictable forces. When hit with a large external force a resilient system will fluctuate greatly and potentially incur a great loss but will not break under this external pressure. A resilient system will acknowledge this loss and continue to exist and adapt whenever possible. Part of this resiliency is acknowledging that change may occur.



▶ Inside *The Wall*, spaces are used as a measurement for climate change. Built into its design is the acknowledgment of loss. This temporal space occupies above and below the top of the wall. Inside the brutalist wall there are a number of monumental spaces that give users beach like access to the Ocean. These spaces are designed in a manner that flooding into these spaces activates the space in a number of beautiful ways, such as tidal pools, other water features, and a stunning light condition. During storm surges these spaces will be temporarily flooded and lost to the effects of climate change. Water will rush through them and cascade down into the void.



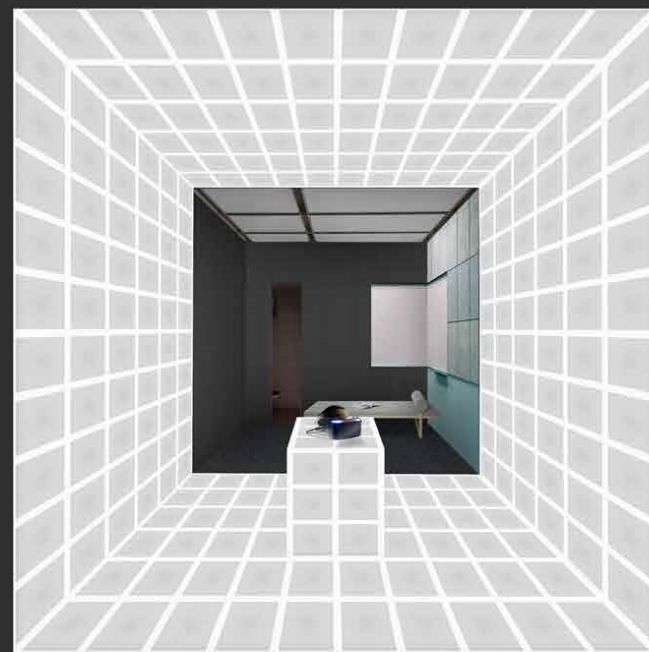
Base Unit



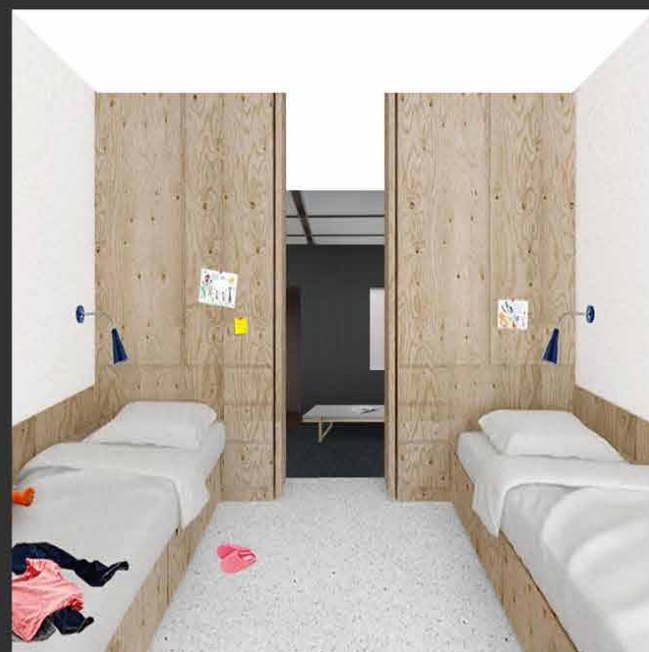
Base Unit + Art Gallery



Base Unit + Secret Garden



Base Unit + VR Room



Base Unit + Flop House



Base Unit + Mini Ramp



●

▲ Lastly the resilient system of people. Housing as a system of infrastructure to bring economy and growth of the participants to this parcel of new land promises local support and endurance amongst the challenges of our environment. Serving, simultaneously, as infrastructure, housing and city space *The Wall* generates only the initial condition of what can evolve and transform as unpredicted circumstances arise. It is the people, the people passing through, living within, or defended by this wall that keep the system alive. As designers of this pilot project we offer the city and its residents a **Resilient Architecture**.

An architecture that bends but doesn't break, takes moments of great anxiety and creates beautiful spaces and that most importantly allows for growth and mitigation of the increasingly precarious predicament of our time.

A.10



