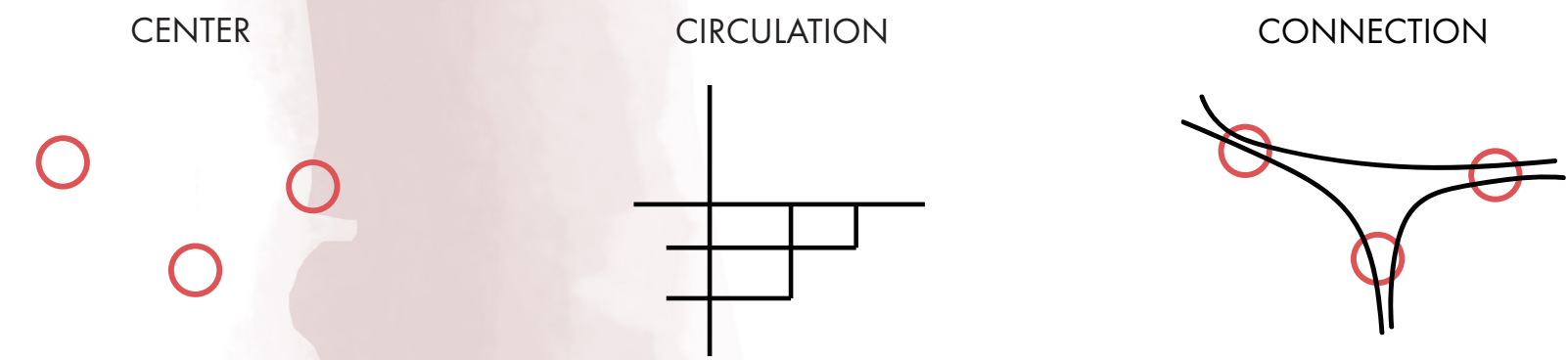
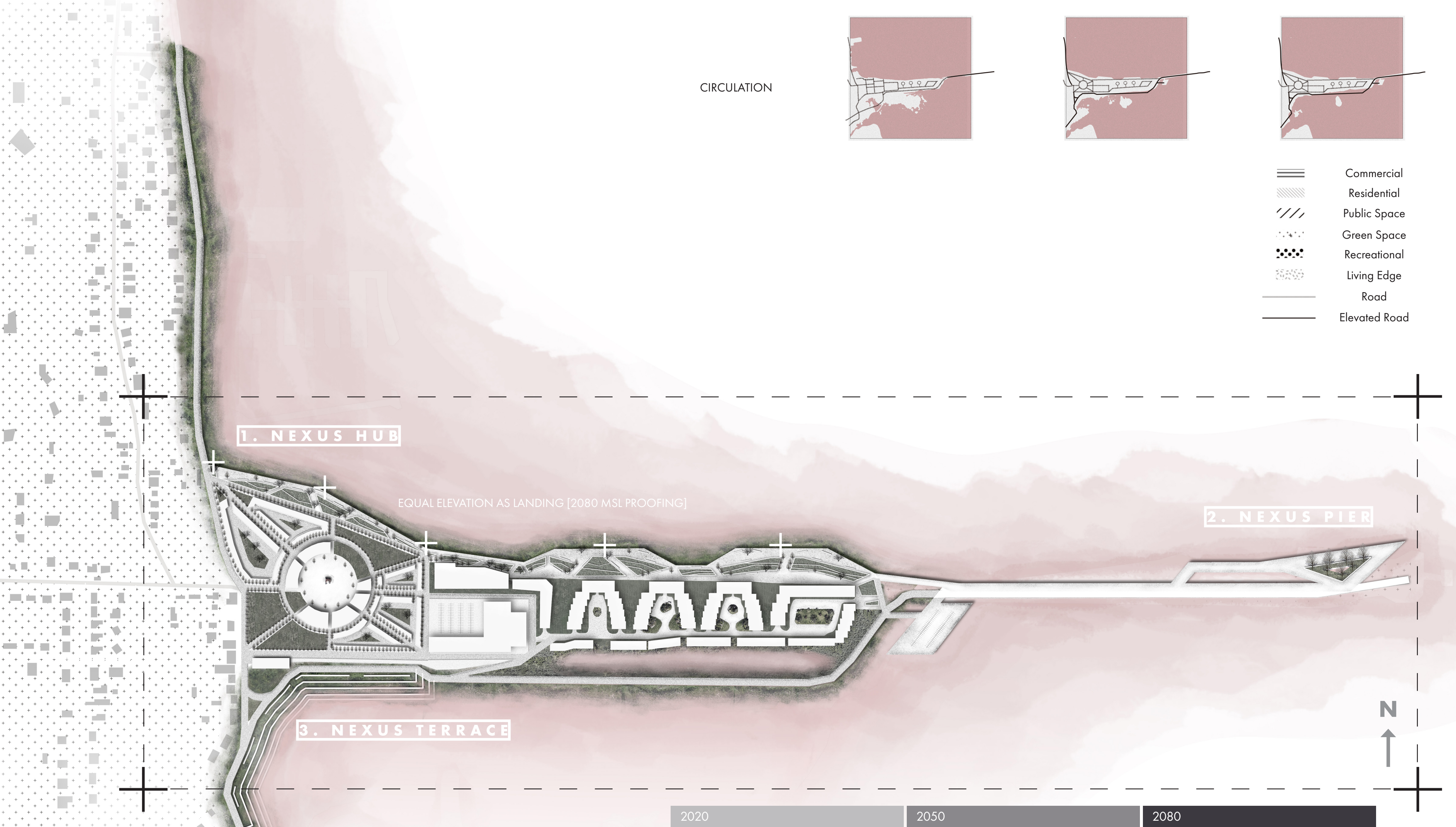
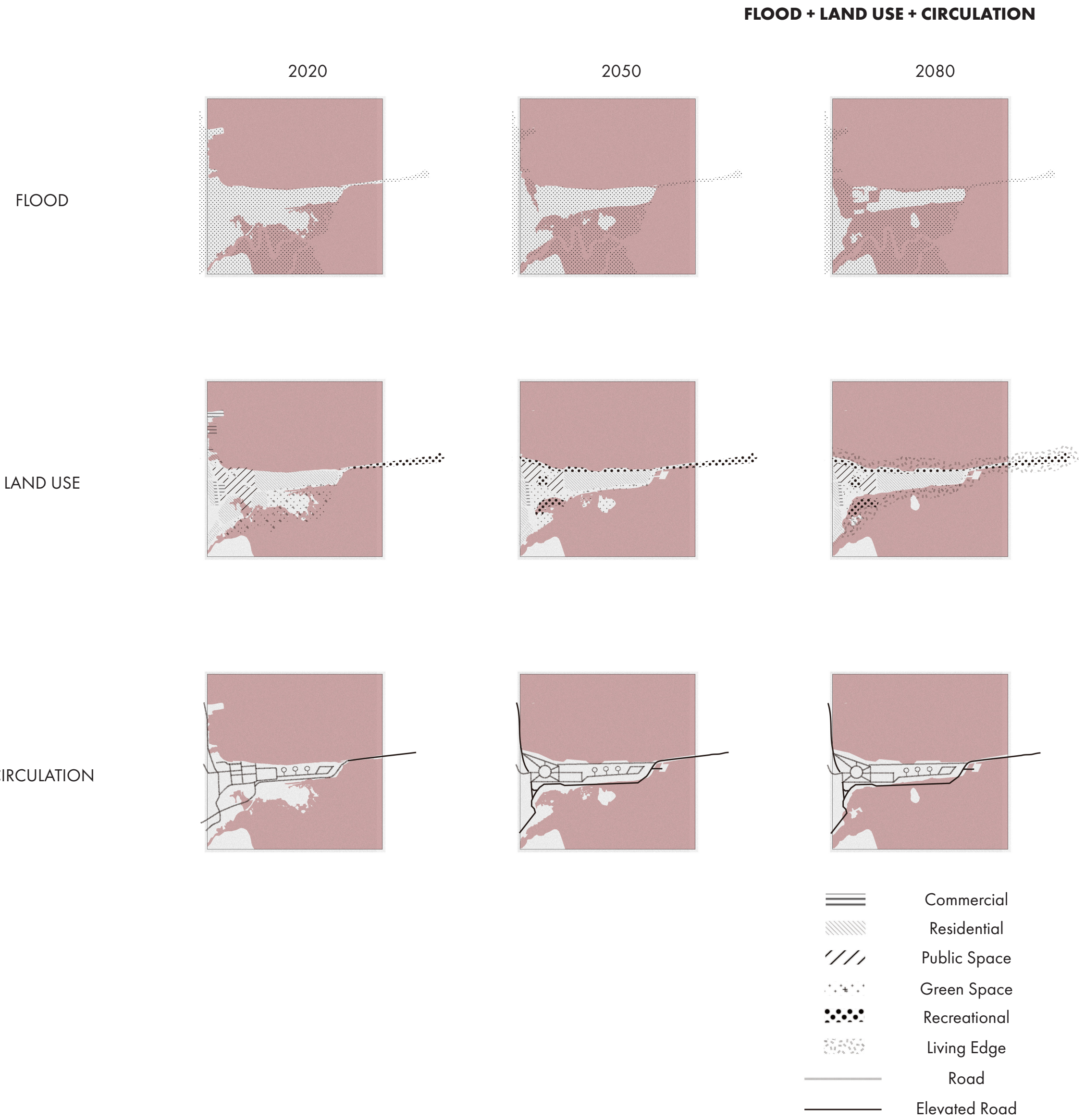


PIERMONT NEXUS



CONCEPT

Piermont Nexus will transform the flood-prone village into a safe, vital, and attractive waterfront community, by improving its preparedness for sea-level rise and extreme storm events in the next six decades; strengthening its connectivity both within and without, for mankind as well as for wildlife; and enhancing its economic and cultural competitiveness. The most significant of the three Nexuses will be established as the New Urbanist “Hub” for the Village, around its centrally located landmark, the Flywheel. The “Hub” will connect the main axes and various land uses in Piermont, will protect the downtown from flooding, and will boost the economy of the Village. To keep the “Pier” in “Piermont”, another important Nexus will be an elevated promenade installed on top of the long stretch of land that represents the Village’s identity. The new “Pier” will maintain the non-automotive access into the Hudson River while keeping out cars to ensure its safety. A third Nexus will be a terrace constructed on the receded waterfront to the south of the “Hub”. The “Terrace” will be dedicated exclusively as a wildlife habitat to promote the growth of the nature surrounding Piermont.



PIERMONT NEXUS

NEXUS - HUB

In order to prevent the flood, we come up with the idea of "Mega Slope", which aims to turn The main principles of New Urbanism and transit-oriented development is to maximize the residential, business and open space while discouraging vehicle dependence and congestion. Situated between East and West of Piermont, the heart of the town is transformed into a mixed-use urban square, accessible only by foot, that can transform to cater to different events. The urban square serves as a hub for the community, a place for people to gather for events, activities, and for emergency responses. The buildings surrounding the square are mixed-use -



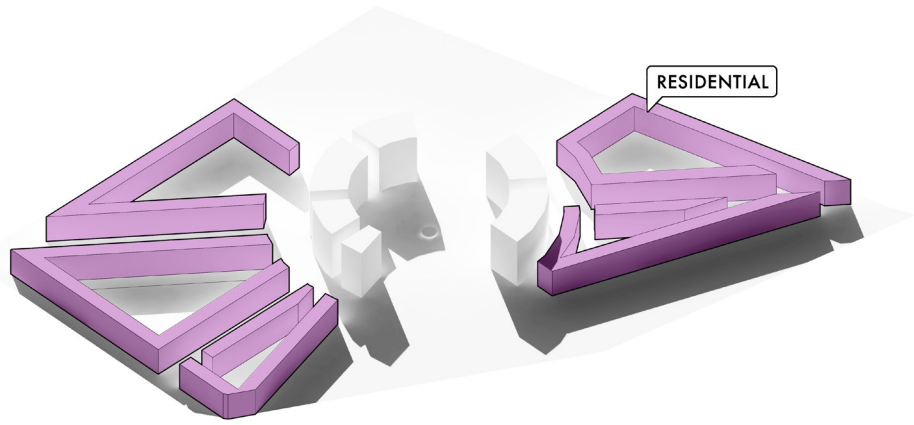
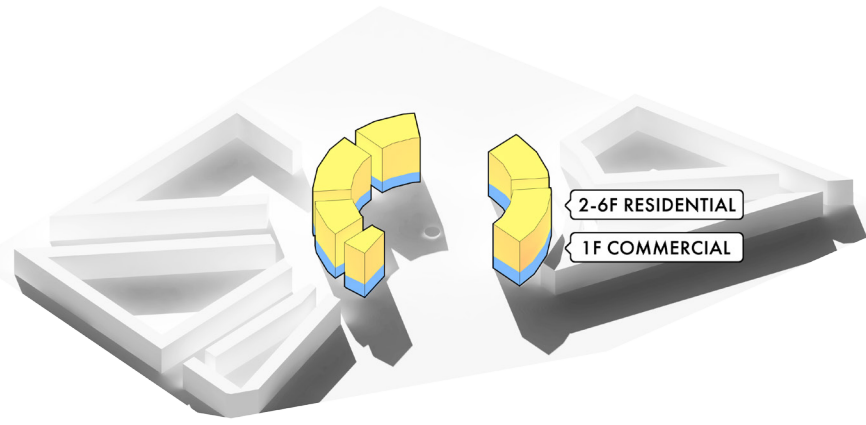
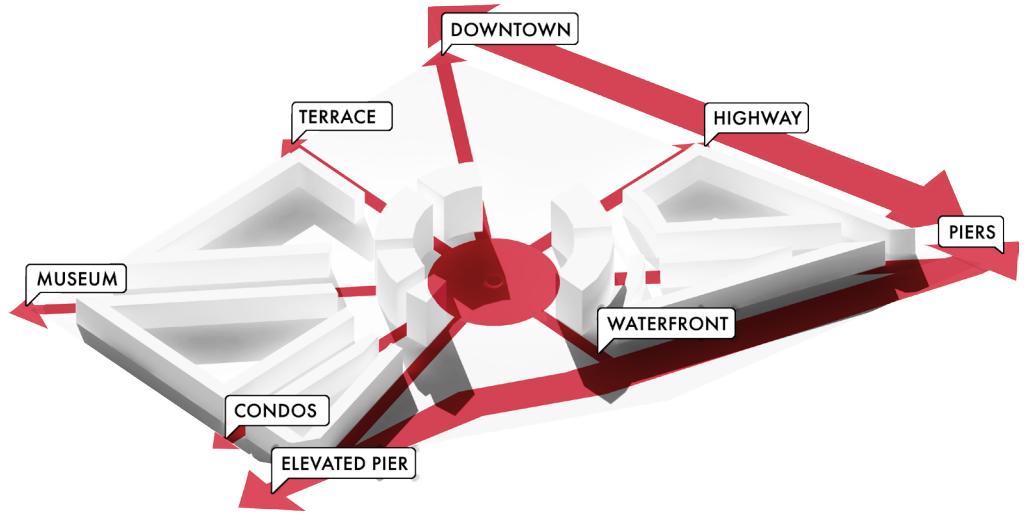
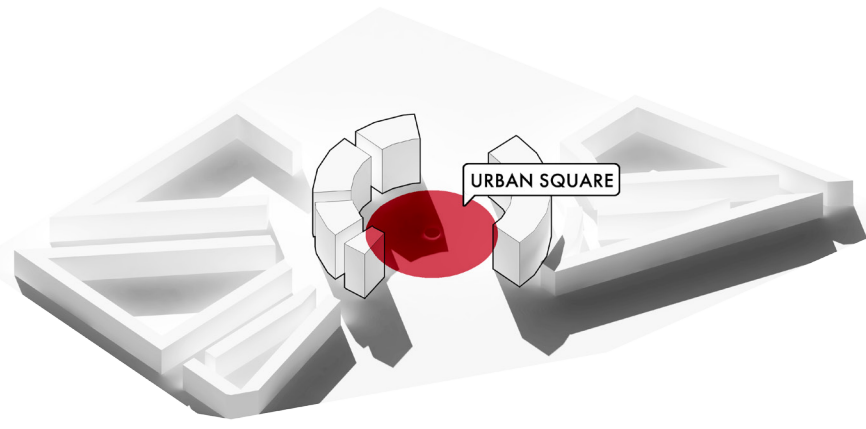
changes in area of residential zones



change in the lengths of bike paths from current



change in the lengths of walkways from current

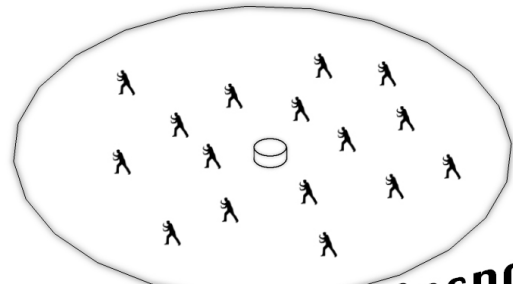


2020 2050 2080

- 2020**
 - Build a 2% mega slope** with materials from the Old Tappan Zee bridge
 - TIF** Incentivize mixed-use developments with Tax Increment Financing
- 2050**
 - Create a center of community activities and civic services** around the Flywheel
 - PUD** Attract Planned Unit Developments of neo-traditional rowhouse residences
- 2080**
 - Build a ferry terminal** to connect with NYC and other places on the Hudson
 - PPP** Deliver county-wide hub-bound shuttle services with Public-Private Partnership



Skate Rink



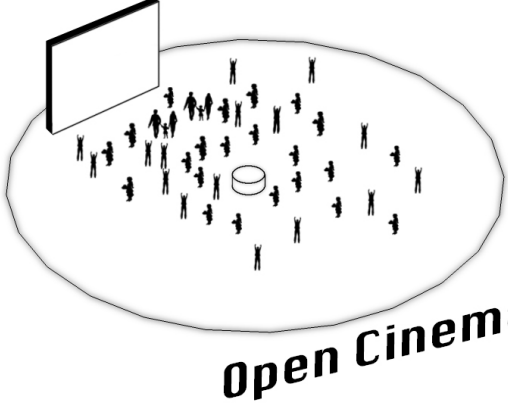
Emergency Response



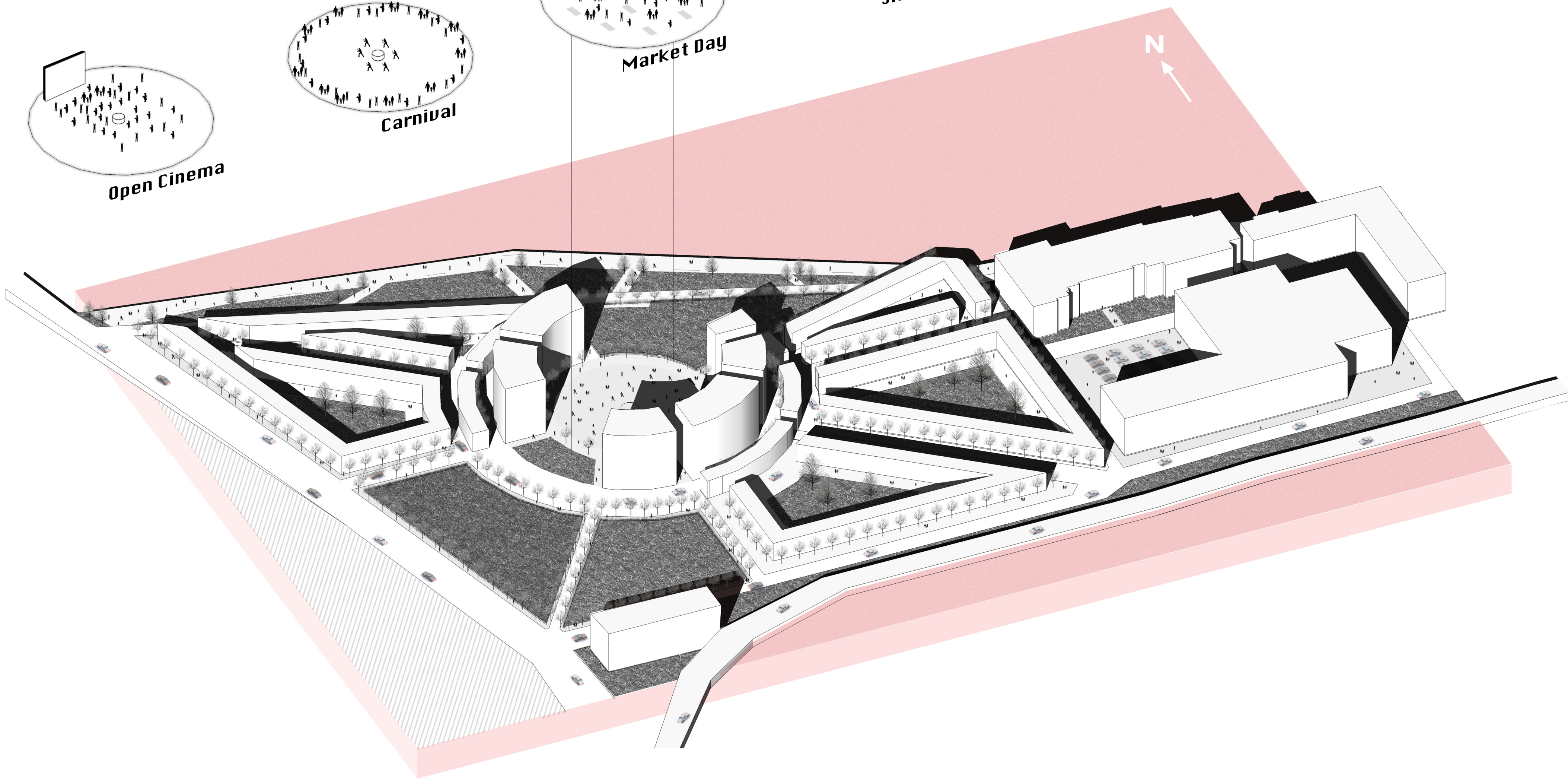
Market Day



Carnival



Open Cinema



ELEVATED ROAD WATERFRONT RESIDENCE

12' ABOVE CURRENT MSL

2-6F RESIDENCE

1F COMMERCE

RESIDENCE

2% SLOPE



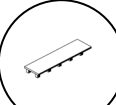
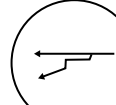




PIERMONT NEXUS

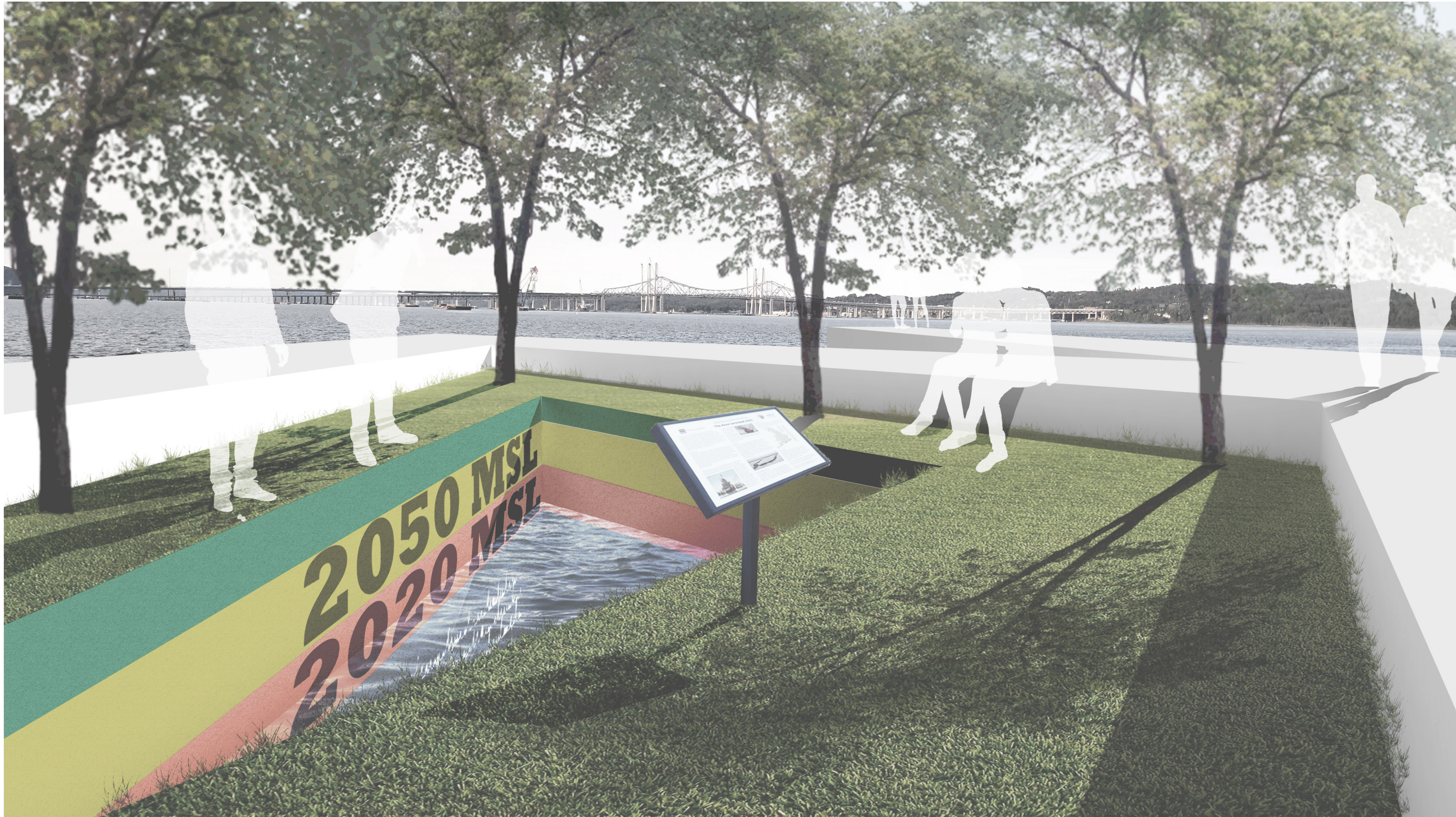
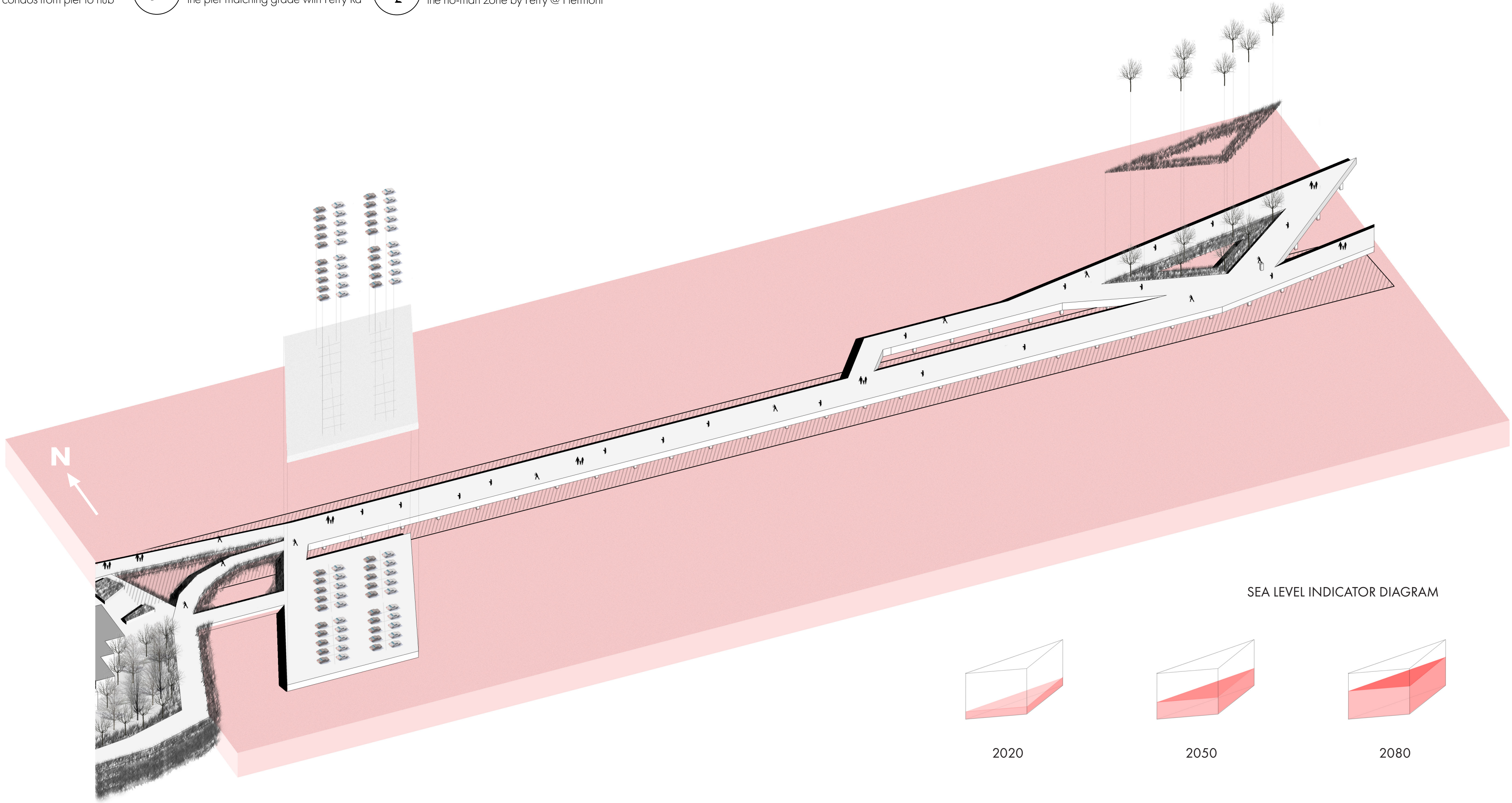
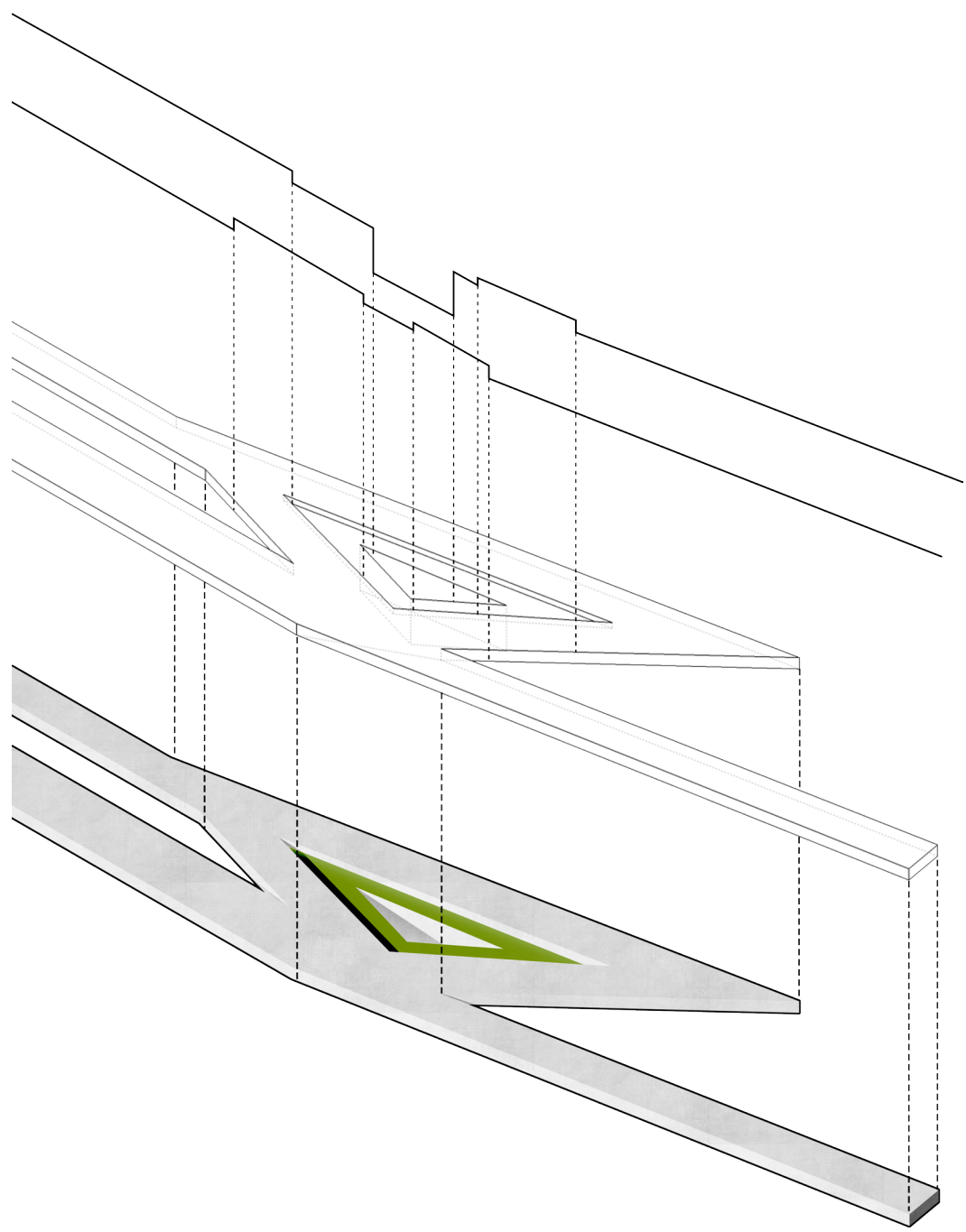
NEXUS - PIER

Piermont's identity lies heavily in the Pier which overlooks the Tappan Zee Bridge, and the townIrvington. The experience of being out in the water is a major attraction point for both tourists and residents, as it is the most popular destination filled with recreational activities - jogging, walking, biking and fishing. In order to keep the identity of Piermont and enhance the experiences that exist, a new 12' elevated pier is constructed to preserve Piermont's name, character and the activities that occur there.

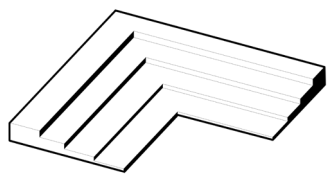


changes in lengths of protected waterfront

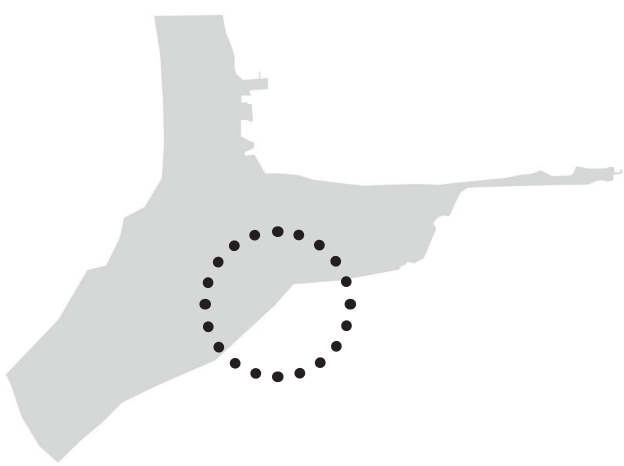
2020	2050	2080
 Build an elevated promenade on top of the pier to match grade with the hub	 Establish two cultural trails from the pier to Old Train Station & Sparkill Creek	 Build a floodable fishing facility at the end of the pier and a seafood vendor
 Form a connected car-free waterfront north of the condos from pier to hub	 Build a small parking lot at the entry to the pier matching grade with Ferry Rd	 Relocate bird habitats from the pier to the no-man zone by Ferry @ Piermont



PIERMONT NEXUS



NEXUS - TERRACE



The Terrace will be a series of artificial platforms with vegetations, built on the Southeastern corner of the elevated intersection of Ferry Road and Piermont Avenue. It will withstand the gradual sea-level rise over the next six decades, and help reduce the risk of extreme weather events confronting the "Hub" and the downtown. Natural habitats will be fostered on top of the terraces, where access by human-beings will be excluded in order to allow for uninterrupted spaces for a variety of wildlife species. The Terraces will be linked by living edges that will envelope the waterfront, providing more spaces for creatures to use either exclusively or to co-exist with mankind. Between the Terraces and the Pier, a retention pond will be constructed at the low-lying strip north of the elevated Ferry Road and south of the condo building, so as to help manage stormwater runoff in the Village.

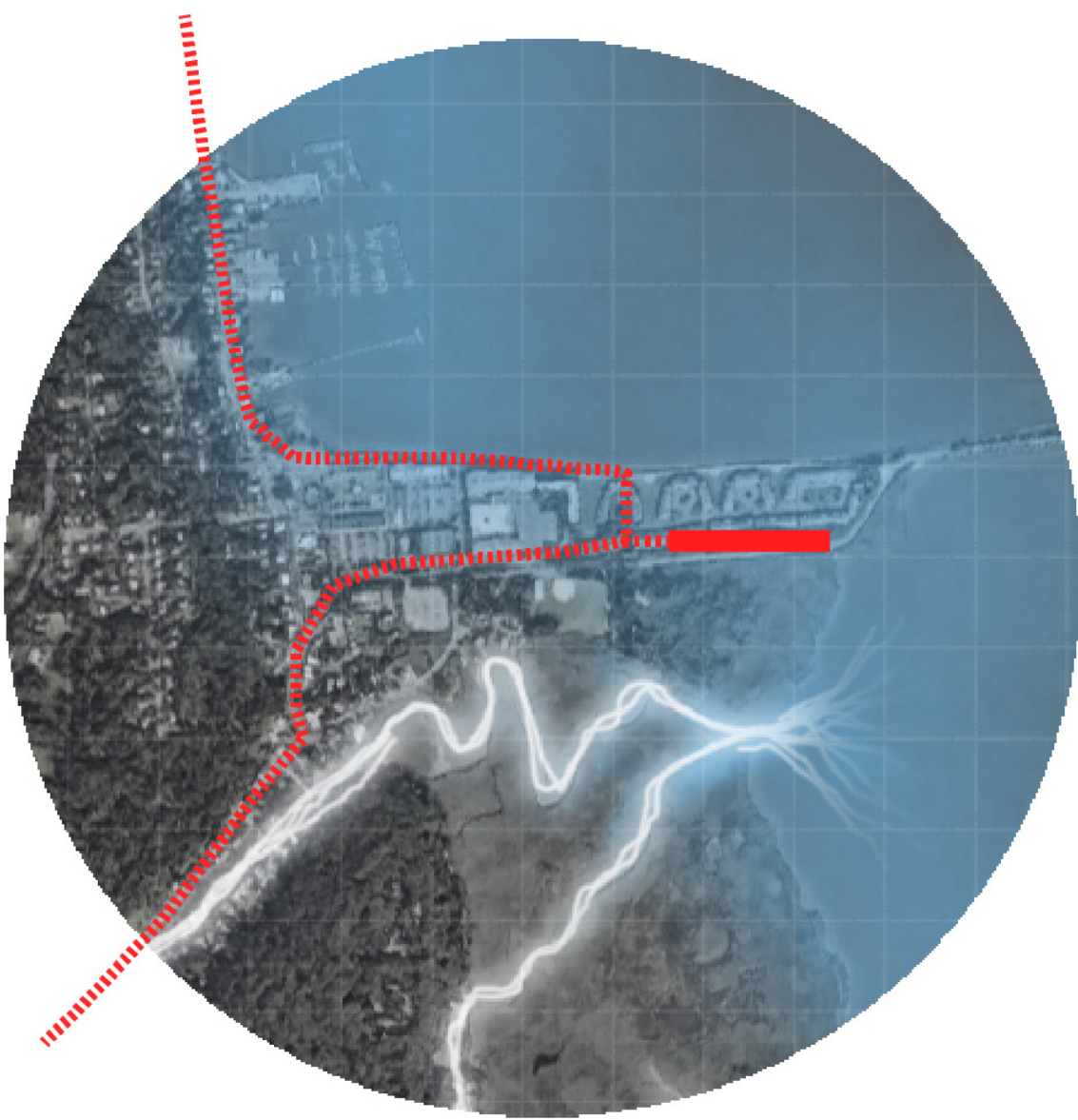


changes in area of village-owned land



changes in area of village-owned natural habitats

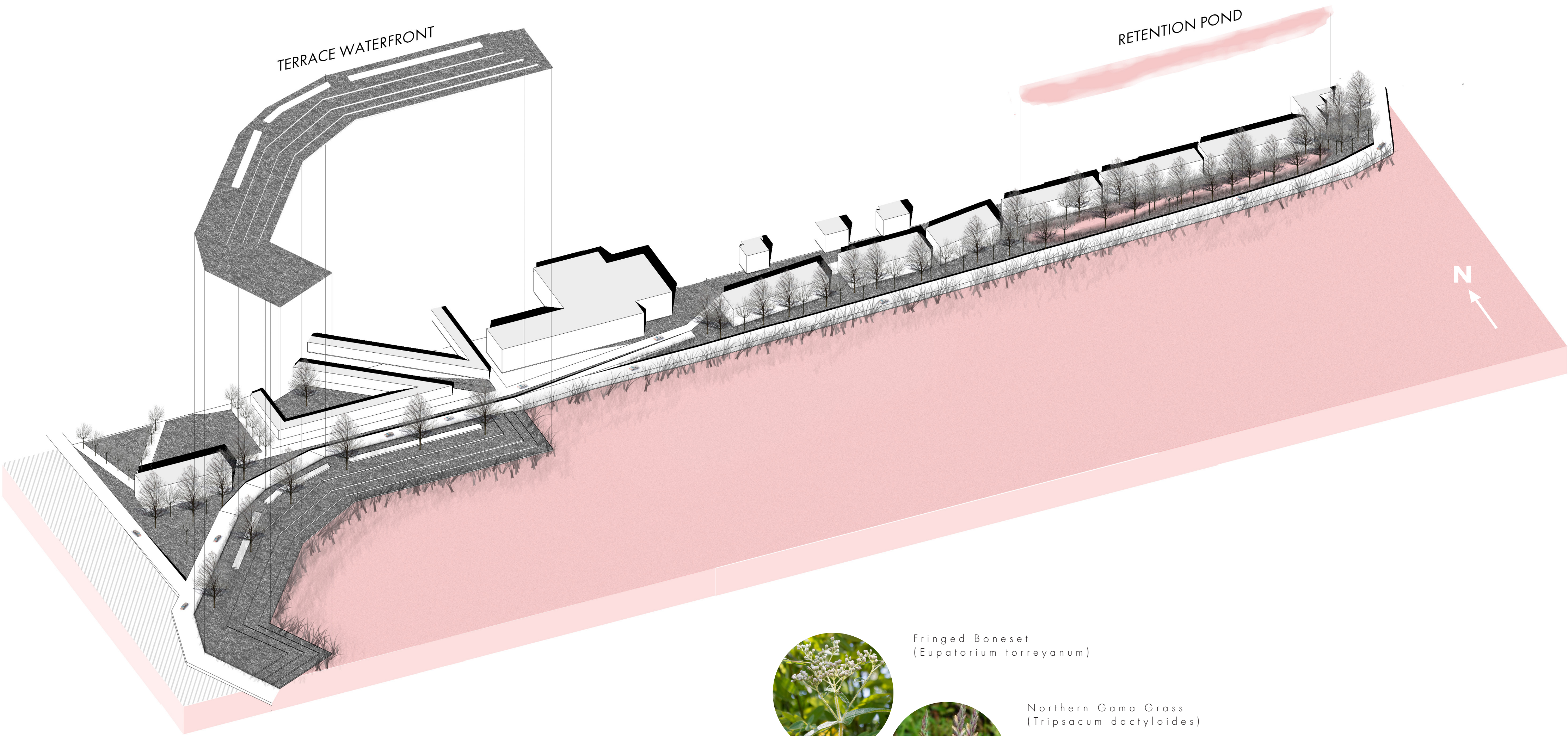
2020	2050	2080
Elevate Ferry Road and extend it to Piermont Avenue via Gair Street	Build a detention pond between the condos and the elevated Ferry Road	Envelope the waterfront with a belt of living edge for birds and other species
Encourage residents south of Ferry Rd to participate in the State's voluntary Buyout & Acquisition Programs	Construct a terraced berm by Ferry @ Piermont to serve as a wildlife habitat	Designate the terraces as wildlife-only space inaccessible by human-beings



CHANNELS /ROUTING RUNOFF

DETENTION BASIN

It is recommended that Piermont elevate a series of its roads to create barriers between the town and the village. These walls will surround the Village of Piermont and protect it from the rising tides of the Hudson River, but will make the egress of rainwater runoff challenging. To ensure that the city is not flooded by the inability of this runoff to exit the village we propose the construction of a detention basin to store the runoff. To direct runoff to this location we propose the construction of two channels, one from the north and one from the south. Along these channels we propose the installation of 74 culverts to direct some of the stormwater directly into the Hudson River before it reaches the detention basin. In combination these measures will ensure that Hudson River water does not enter the Village and that rainwater runoff is still able to discharge into the Hudson River without inundating the village.



Coastal Silverweed
(*Argentina egedii* ssp. *groenlandica*)

Seaside Gerardia
(*Agalinis maritima* var. *maritima*)

Fringed Boneset
(*Eupatorium torreyanum*)

Northern Gama Grass
(*Tripsacum dactyloides*)

Saltmarsh Bulrush
(*Bolboschoenus novae-angliae*)

Spongy Arrowhead
(*Sagittaria montevidensis* ssp. *spongiosa*)

Roland's Sea-blite
(*Suaeda rolandii*)

