

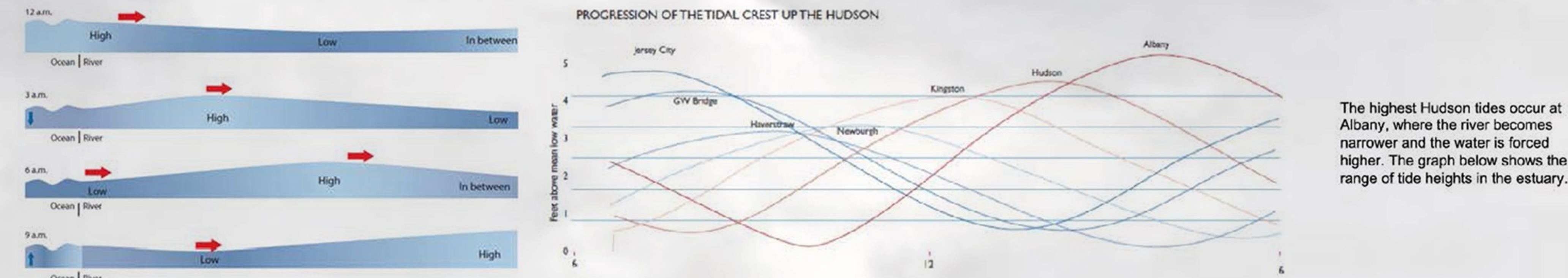
Marshland Horizon

What is Tide

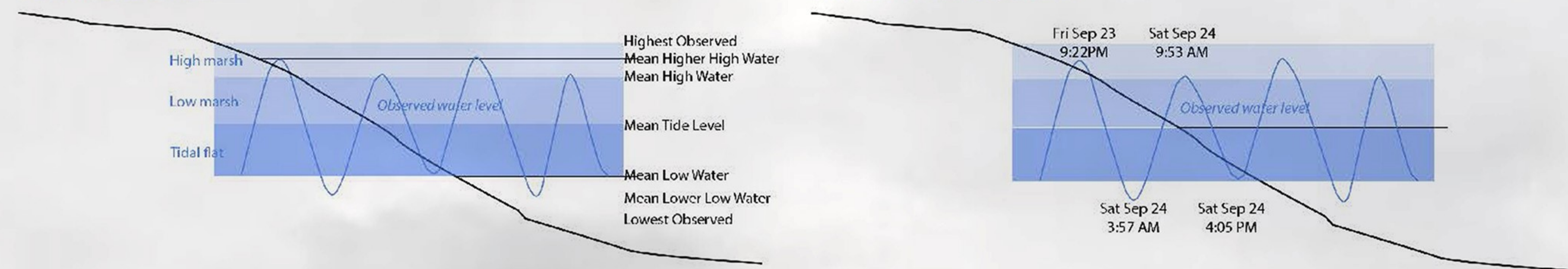
How is tidal formed:

They are caused by the pull of the moon and the sun on the water in the open ocean; they go up and down about twice a day, with high water coming about 6 hrs and 18 hrs after the moon is at its highest; and they have a regular but complicated shape that results from superimposing roughly 65 simpler tidal waves.

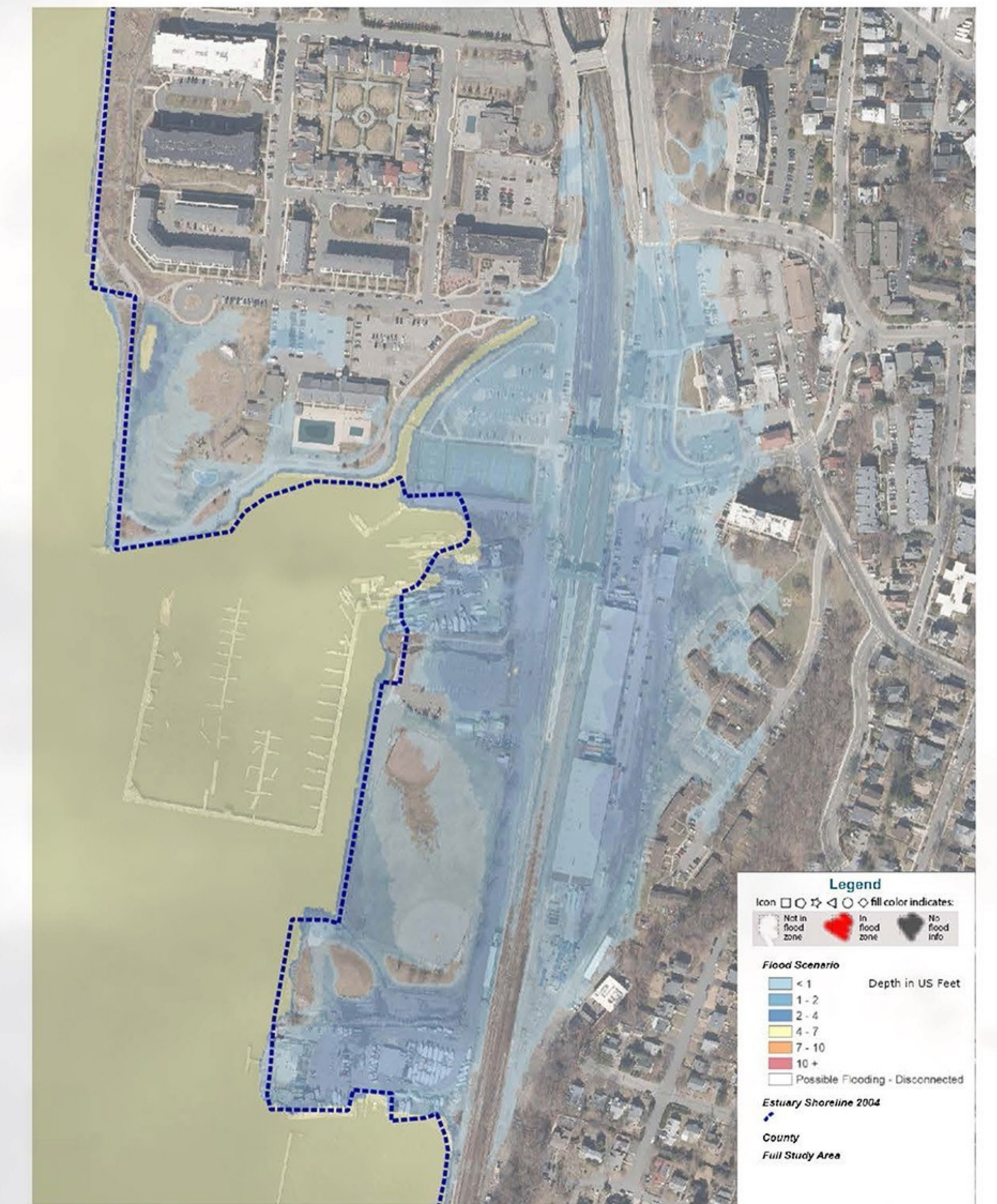
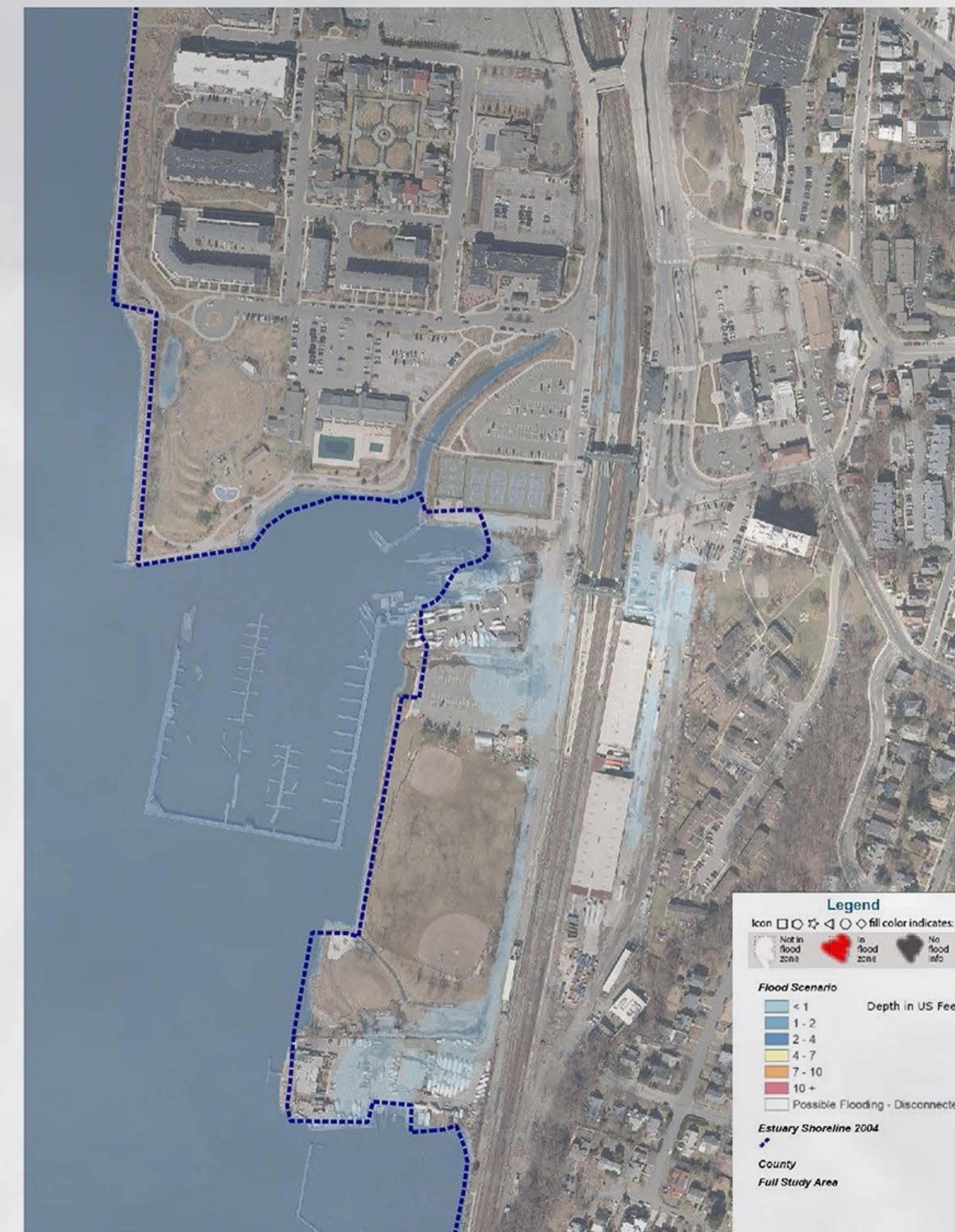
The tide producing force depends on the position of the sun and the moon. It is greatest when they are in line on the same side of the earth; less when they are in line on opposite sides;



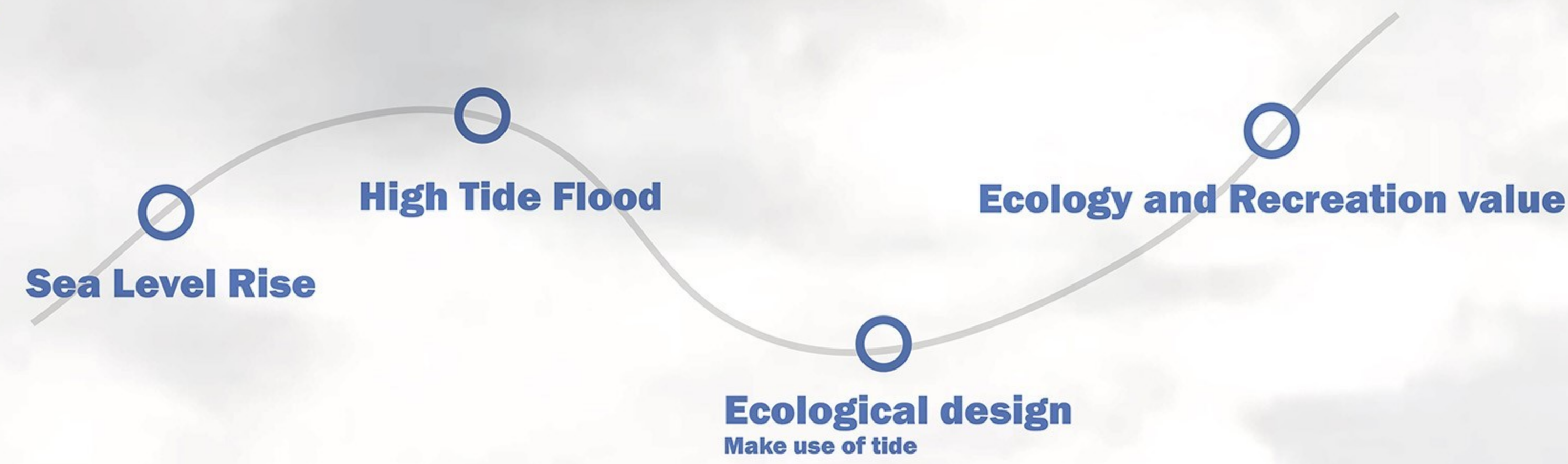
Tidal Datums



Sea Level Rise Inundation Map

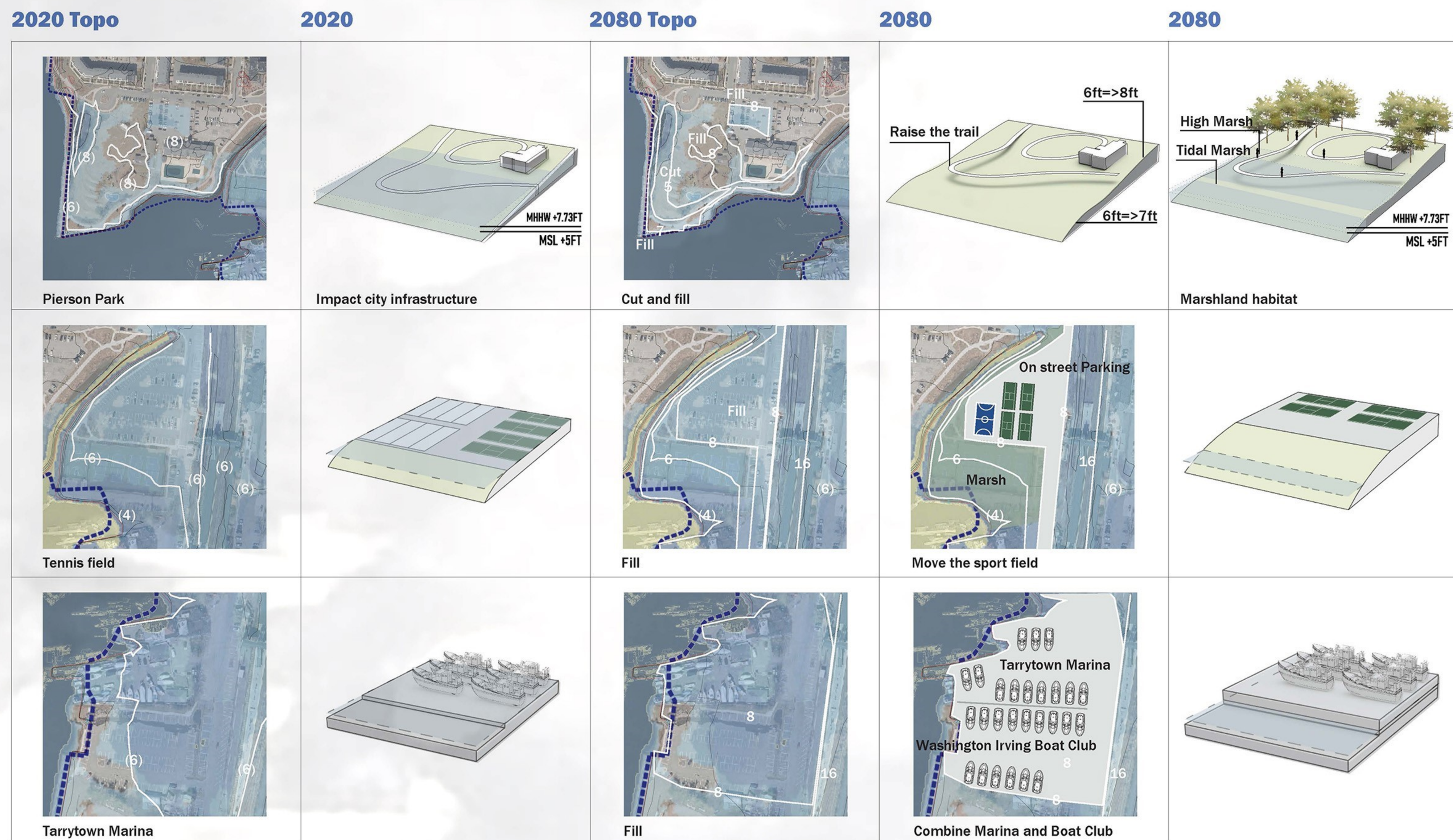
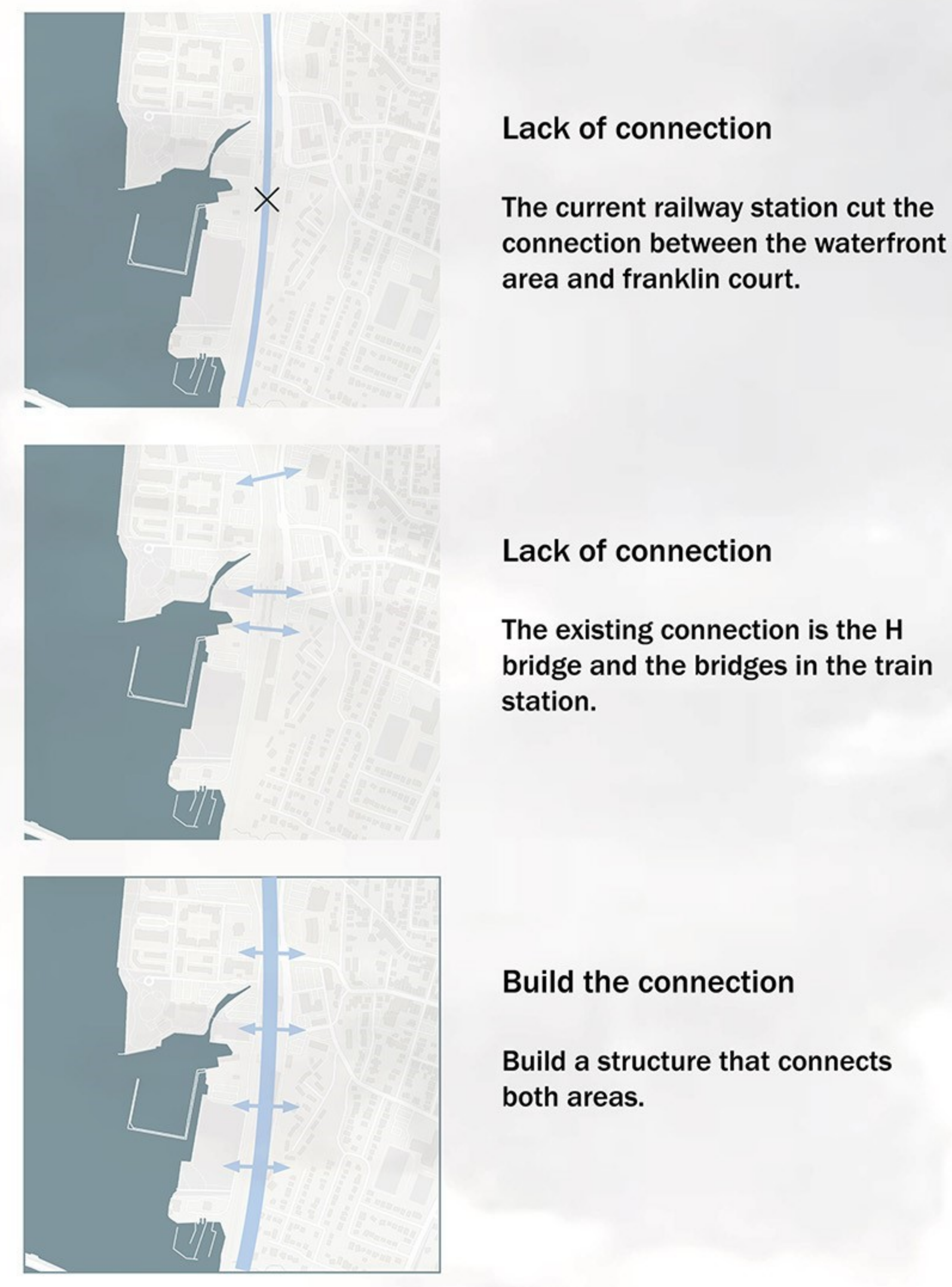
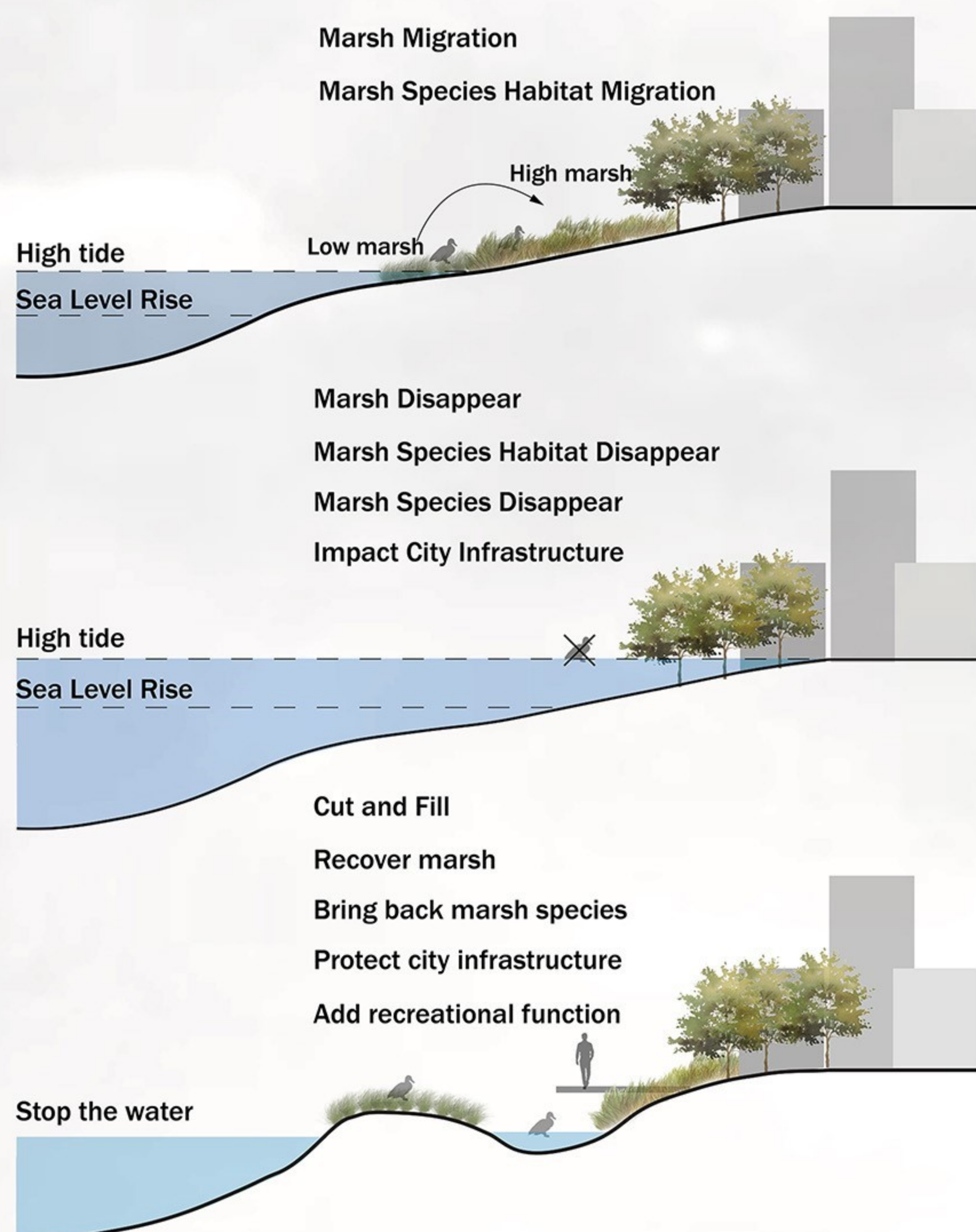


Concept



Design Strategy: Cut and Fill

Issues and possible strategy





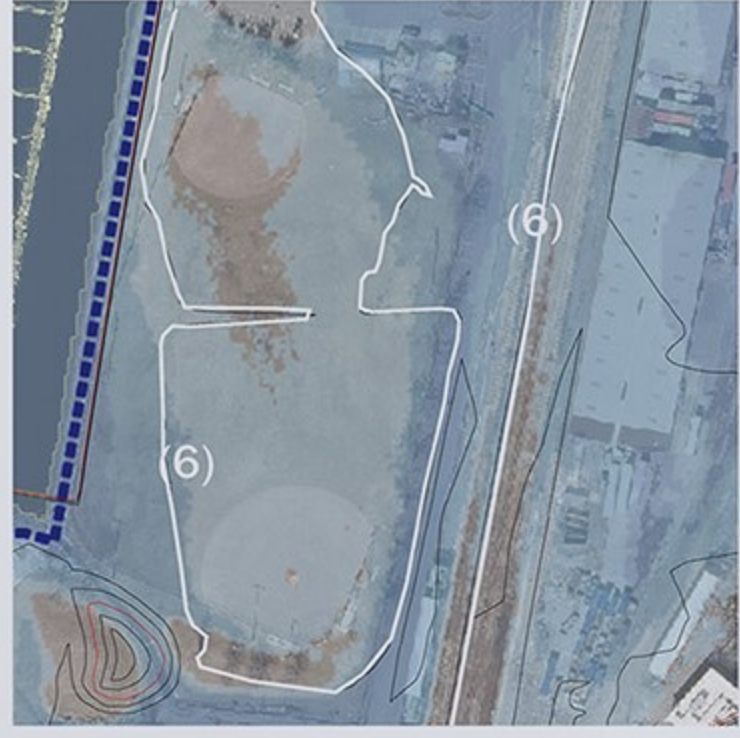
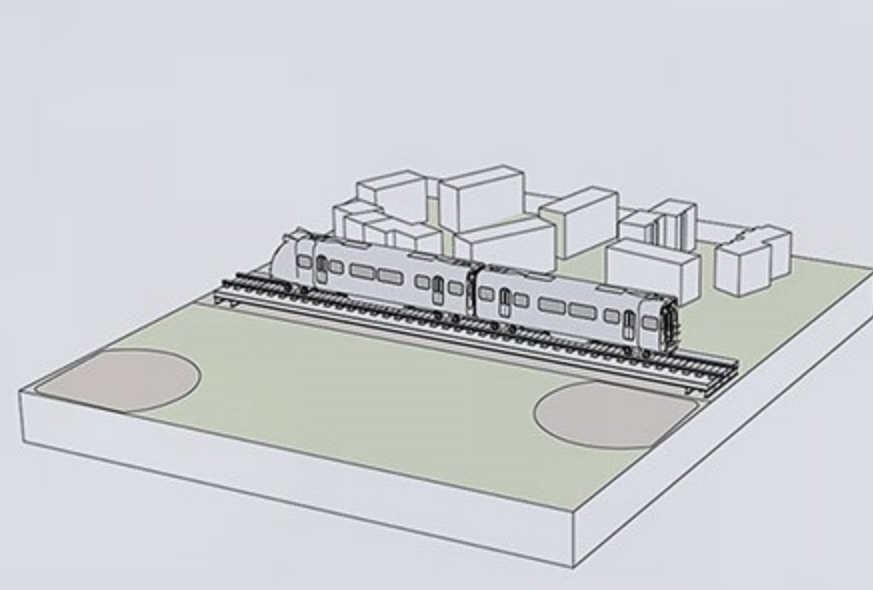

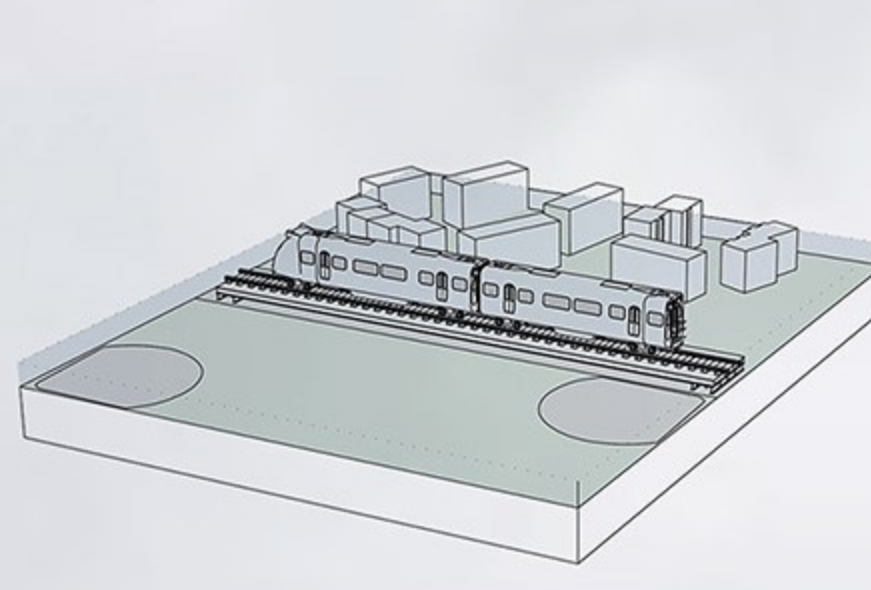
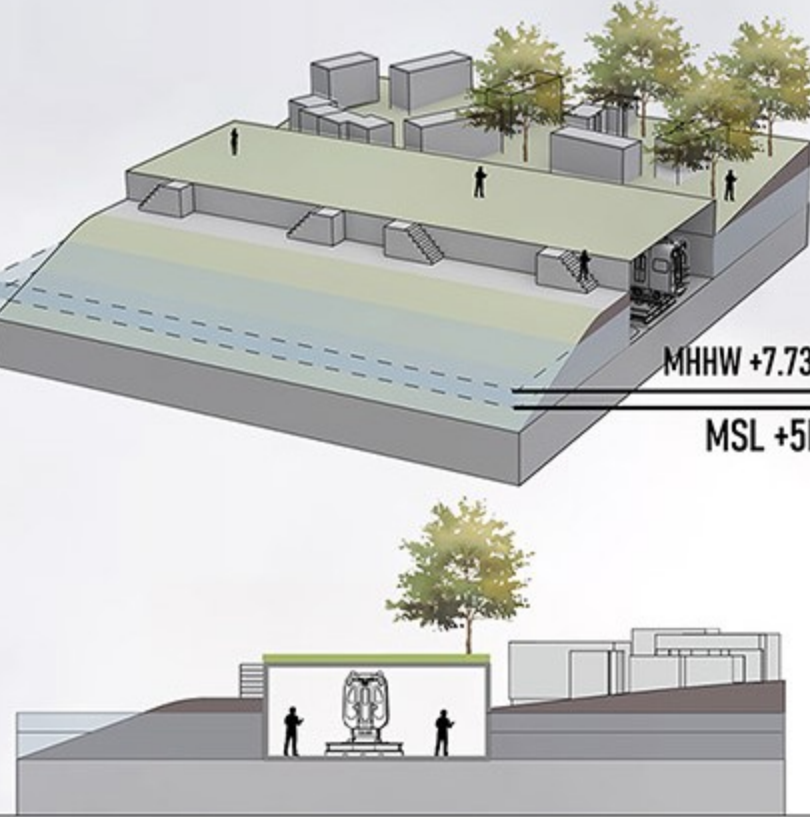
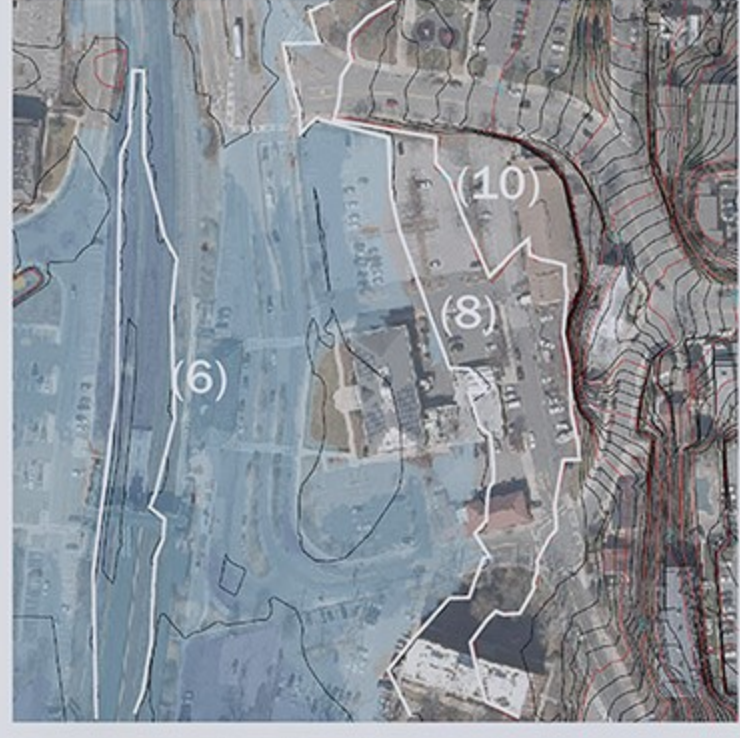
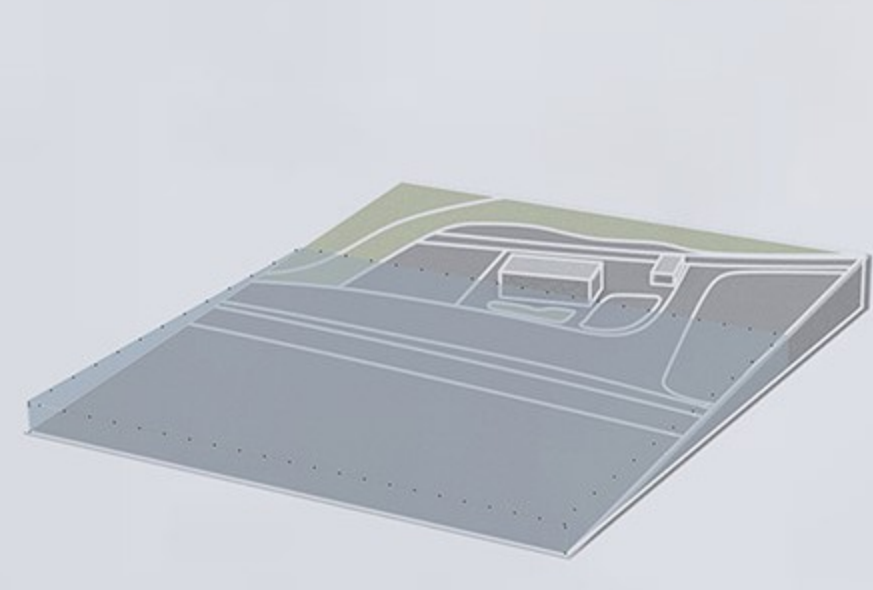
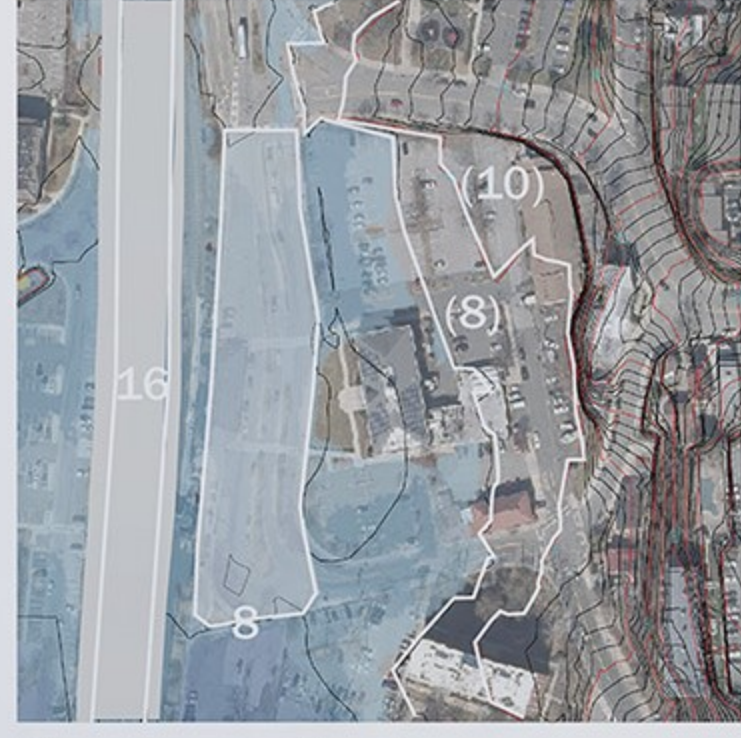
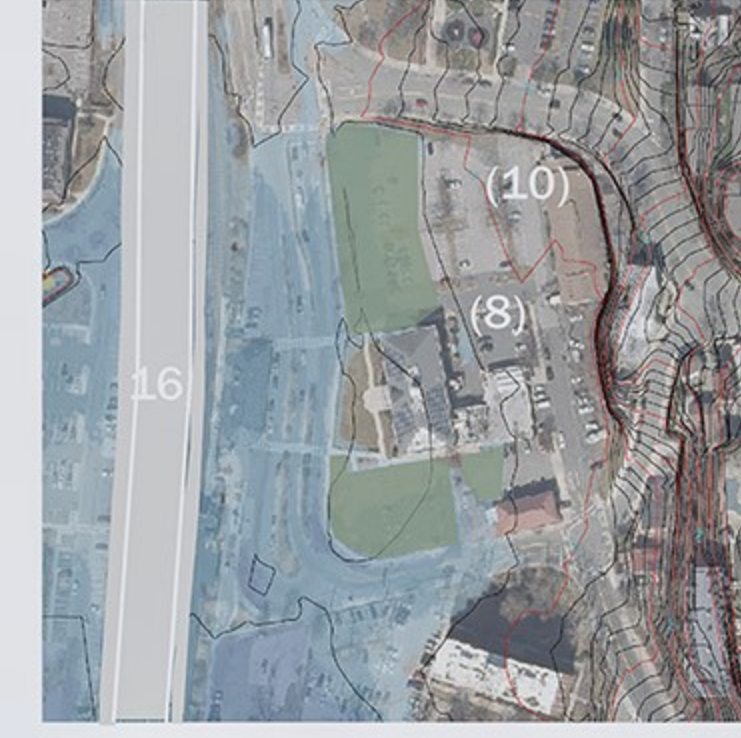
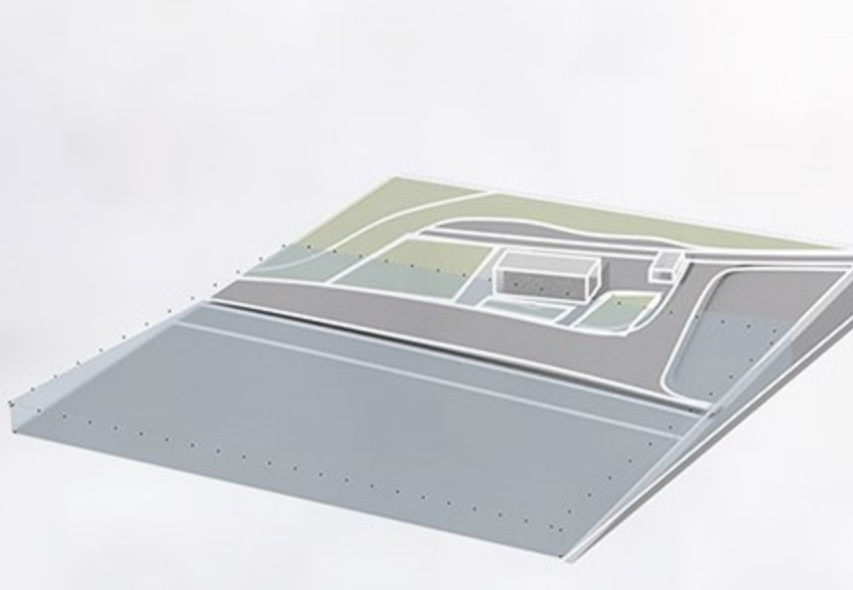
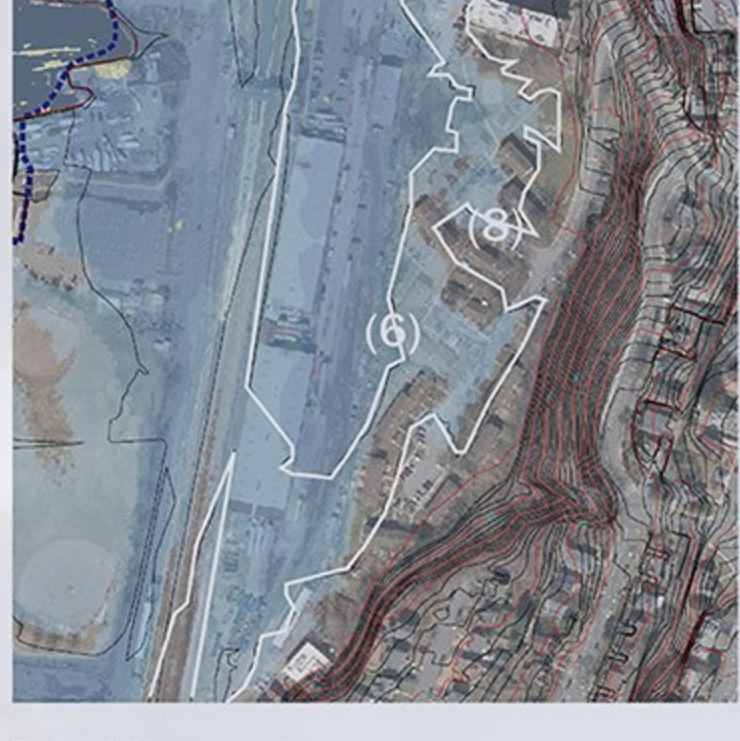
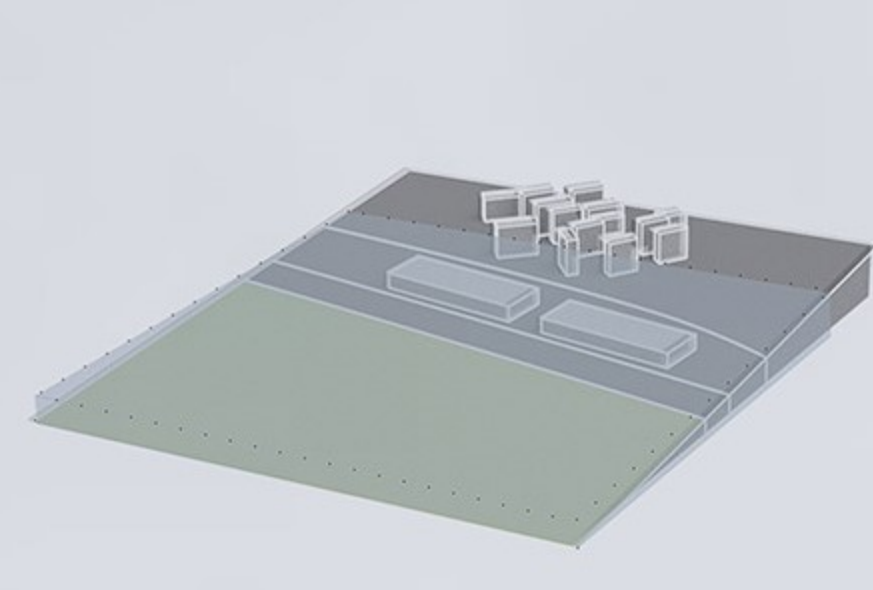


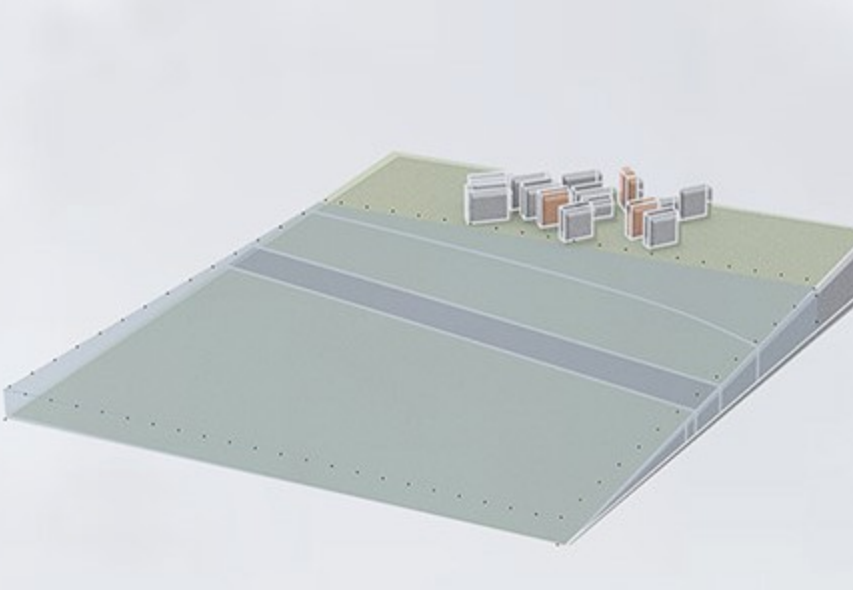
- 1. Pierson Marshland Park
- 2. Sport Field
- 3. Tarrytown Marina
- 4. Washington Irving Boat Club
- 5. Street Parking
- 6. Tarrytown Train Station Park
- 7. Losee Marsland Park
- 8. Franklin Court
- 9. Franklin Court Park

N

0ft 200ft 400ft 600ft

Marshland Horizon

Design Strategy: Cut and Fill

2020 Topo	2020	2080 Topo	2080	2080
 Losee Park + railway		 Cut and fill		
 Tarrytown Police Department		 Structure + raise the road	 Turn some parking lots to green spaces	
 Franklin court		 Fill	 Add green spaces + relocate houses	

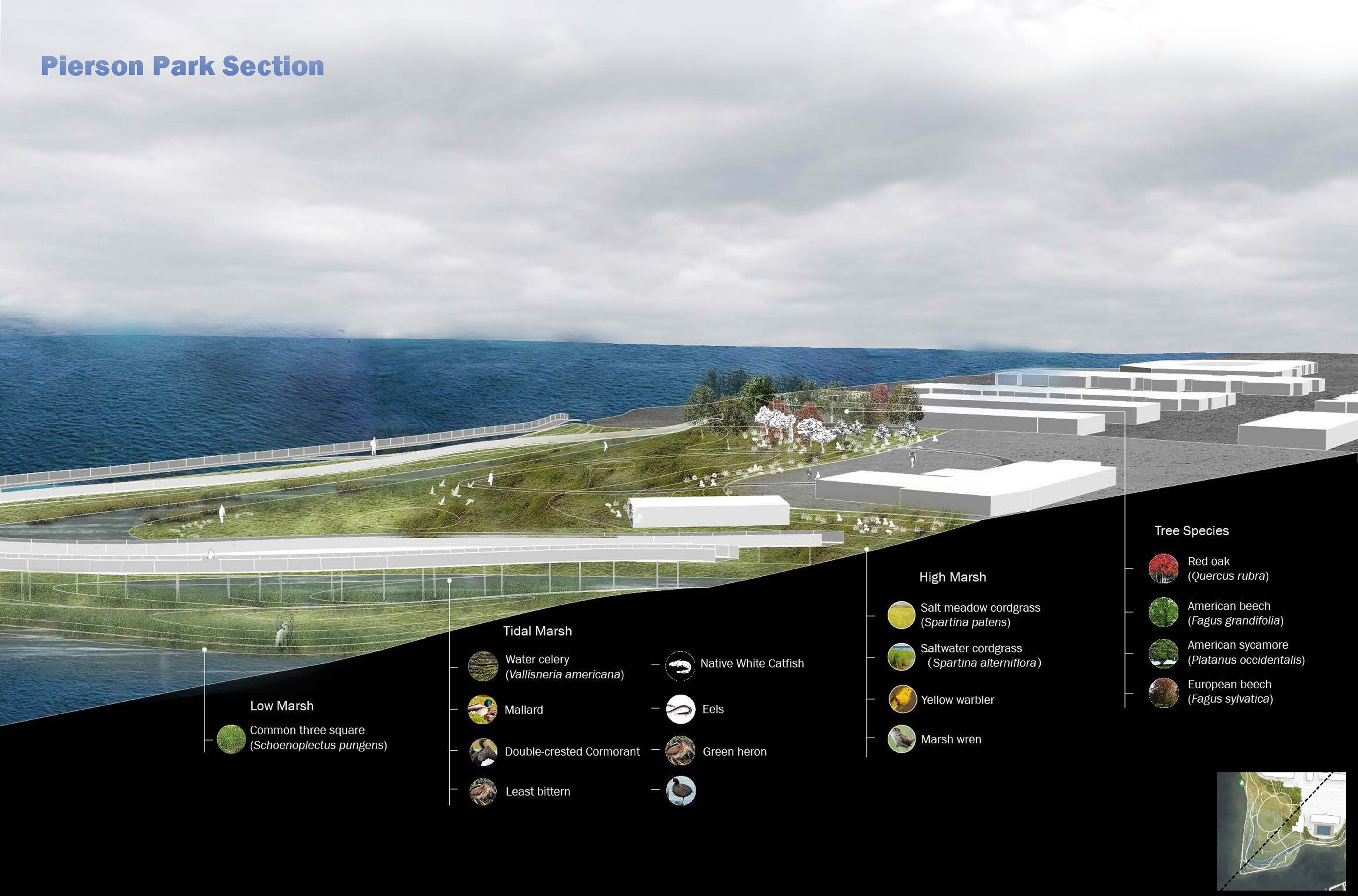
Concept



Franklin Court Park



Pierson Park Section



- Low Marsh**
- Common three square (*Schoenoplectus pungens*)

Tidal Marsh

- Water celery (*Vallisneria americana*)
- Mallard
- Double-crested Cormorant
- Least bittern
- Native White Catfish
- Eels
- Green heron

High Marsh

- Salt meadow cordgrass (*Spartina patens*)
- Saltwater cordgrass (*Spartina alterniflora*)
- Yellow warbler
- Marsh wren

Tree Species



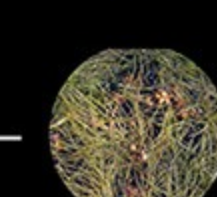
- Red oak (*Quercus rubra*)
- American beech (*Fagus grandifolia*)
- American sycamore (*Platanus occidentalis*)
- European beech (*Fagus sylvatica*)







Losee Park + railway station






Low Marsh

-  Widgeon-grass (*Ruppia maritima*)
-  Clasping-leaved pondweed (*Potamogeton perfoliatus*)
-  Sago pondweed (*Stuckenia pectinata*)

Tidal Marsh

-  Pipeworts (*Eriocaulon spp.*)
-  Pygmyweed (*Crassula aquatica*)
-  Atlantic mudwort (*Limosella australis*)
-  False pimpinell (*Lindernia dubia*)

-  Eelgrass (*Zostera marina*)
-  Sea lettuce (*Ulva lactuca*)
-  Hollow green algae (*Enteromorpha intestinalis*)

High Marsh

-  Salt marsh bulrush (*Schoenoplectus robustus*)
-  Olney three-square (*Schoenoplectus americanus*)
-  Big cordgrass (*Spartina cynosuroides*)
-  Seaside goldenrod (*Solidago sempervirens*)

Tree Species

-  Red oak (*Quercus rubra*)
-  American beech (*Fagus grandifolia*)
-  American sycamore (*Platanus occidentalis*)
-  European beech (*Fagus sylvatica*)

