

Canal San Fernando Buenos Aires, Argentina



ARCH 700 - Urban Design Studio
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Fall 2019





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Introduction



The San Fernando Canal

The San Fernando Canal, is part of the Lujan Riverfront, situated in the northern region of greater Buenos Aires, Argentina. Historically, the area included industrial uses, commercial shipyards, private marinas and yacht clubs and associated water- related uses. The area is served with two regional train lines, the Tigre Station and the Delta stations.



Site Context

The San Fernando waterfront today is dominated by waterfront industrial businesses, private marinas, boat-yards and abandoned warehouse facilities. To the south of the site is a gridded neighborhood of mostly mixed use buildings, small retail and single family homes. To the west of the canal, is a squatter neighborhood consisting of small single family typically self built homes and a few fields used for communal activities. Also in this area are some newly built apartments that offer affordable options to residents in the area. A new development of apartment complexes and condominiums is under development further beyond the canal promising new housing options and opportunities for development in the area. The area is well-served by transit with two lines running to the center of Buenos Aires.

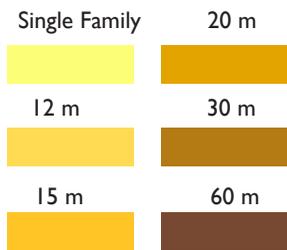




Existing Figure Ground



Site Analysis



Site Density Diagram

The streets and blocks of the gridded part of the area exhibit fairly consistent density and neighborhoods of about two to three stories, with taller buildings on streets and the canal edges up to six stories in height with a variety of uses. The studio extended this pattern of design for the site, replicating and extending the existing pattern and continued the intensity of development upward towards the waterfront .

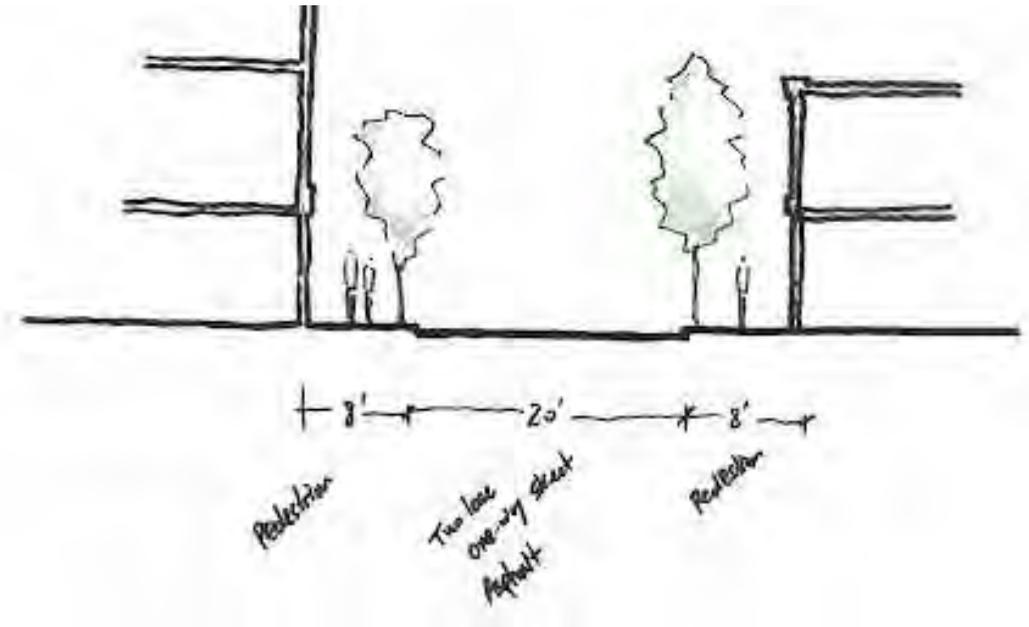
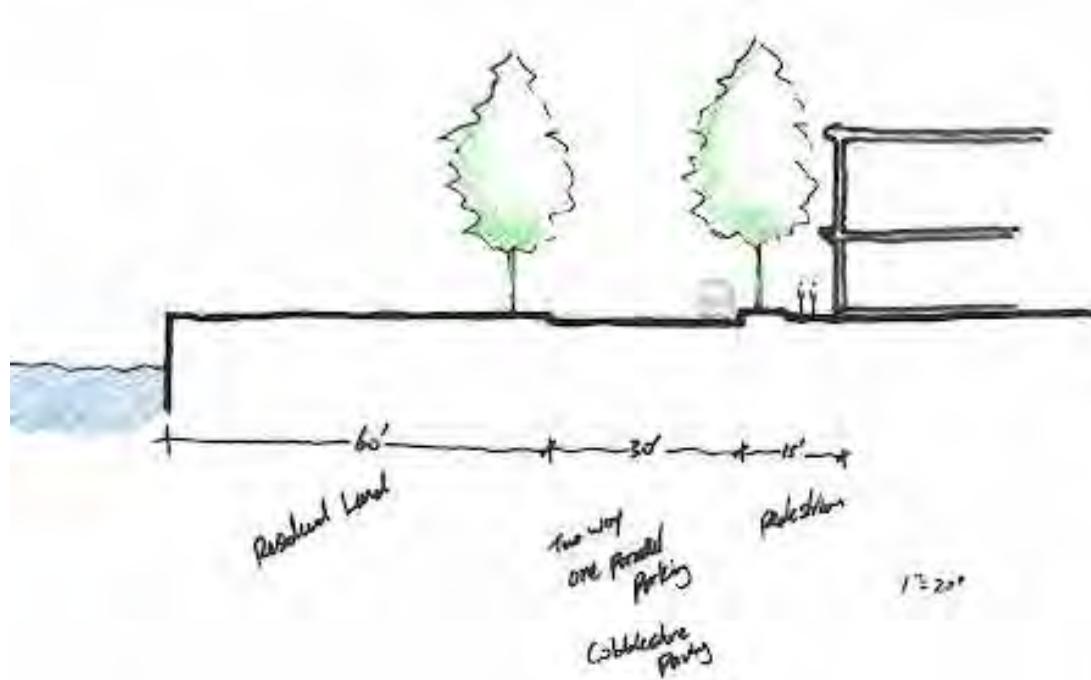




Street View Along the Canal



View of a Typical Retail Mixed - Use Street

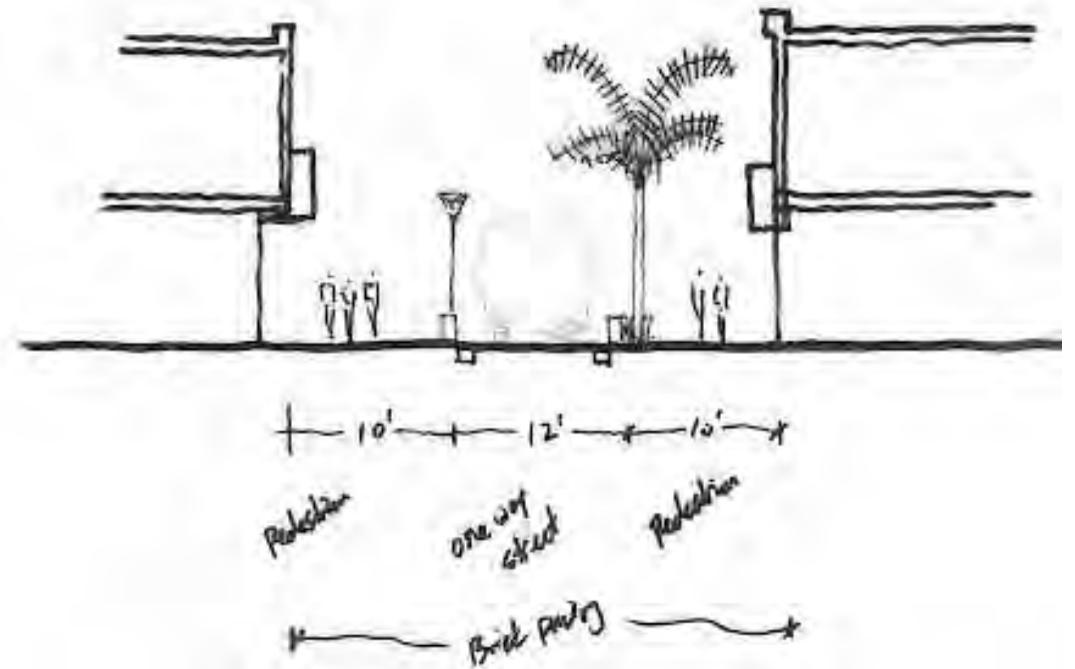
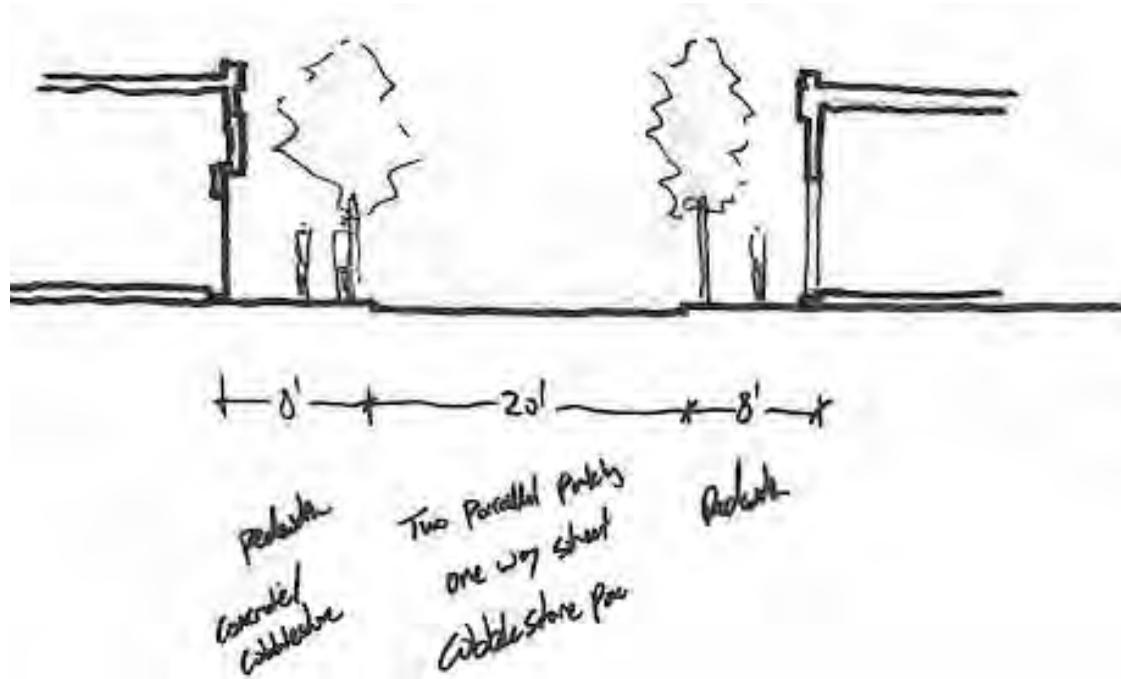




View of a Typical Retail and Small Warehouse Street



View of a Typical Retail Street





Problem Definition

The San Fernando Canal Major Issues

Industrial maritime uses currently dominate the area with little access for the residents to the river and the canal for community benefit. In many areas, under-utilized industrial buildings block access and this contributes to issues such as :

- Disconnect Between People+Water
- Edge conditions- transition between water|urban
- Water Quality and Access
- Lack of Public Green Spaces
- Public Parks
- Gathering Places Along Water
- Lack of Urban identity
- Lack of Diversity in Program
- Social Infrastructure

Many of these issues impact both the individual and have a negative impact on the well being of those in the overall community. For example, available water is not of the best quality, and for poor communities that rely on this water, it is a major public health problem.

- Inadequate Infrastructure
- Poor Quality Housing
- Limited and inadequate Utilities
- Lack of Public Services
- Climate Change + Sustainability
- Sea Level Rise and Annual Flooding
- Storm-water runoff



View of poor water conditions
Credit: Daniel Gutman/IPS





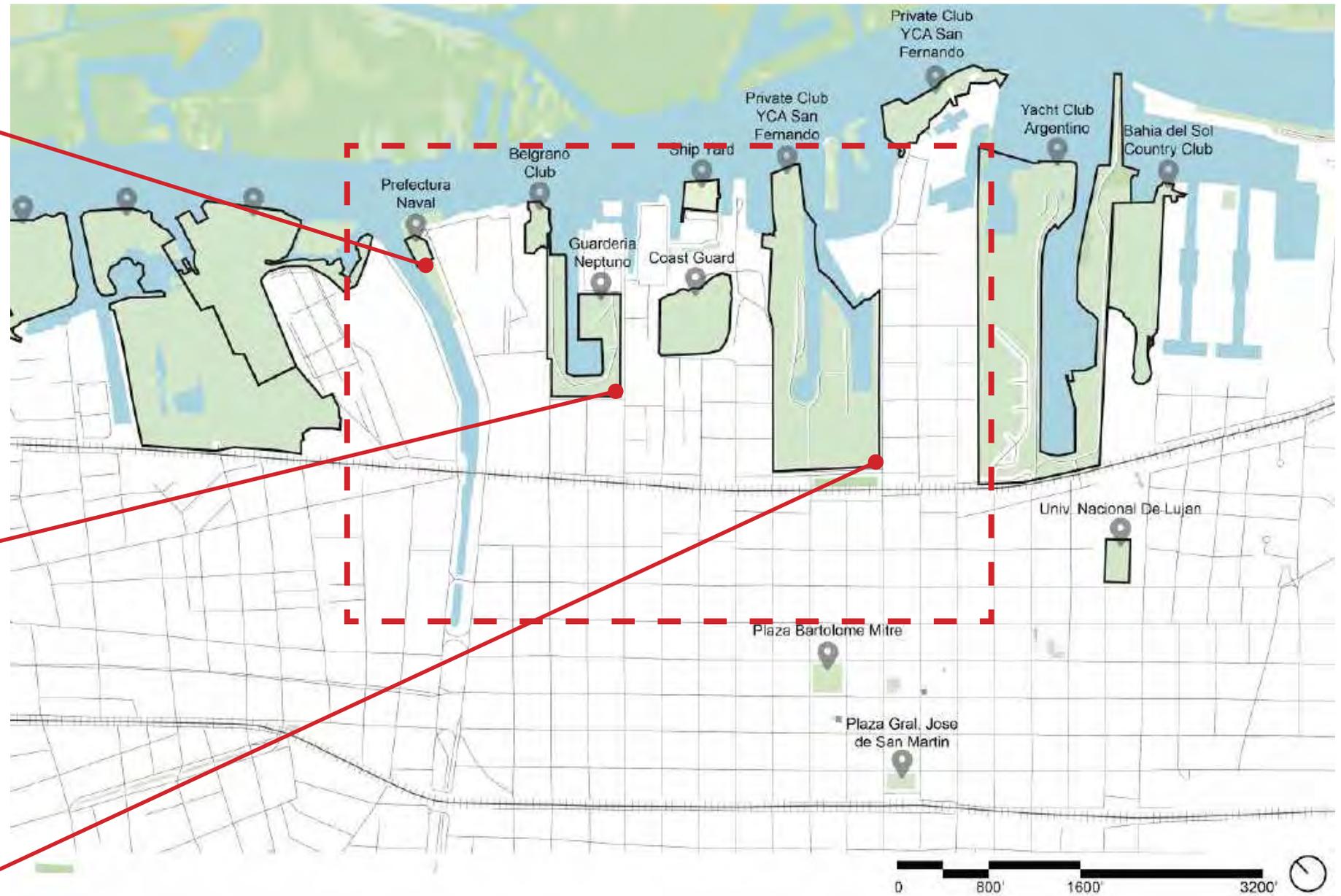
At the edge of the Canal



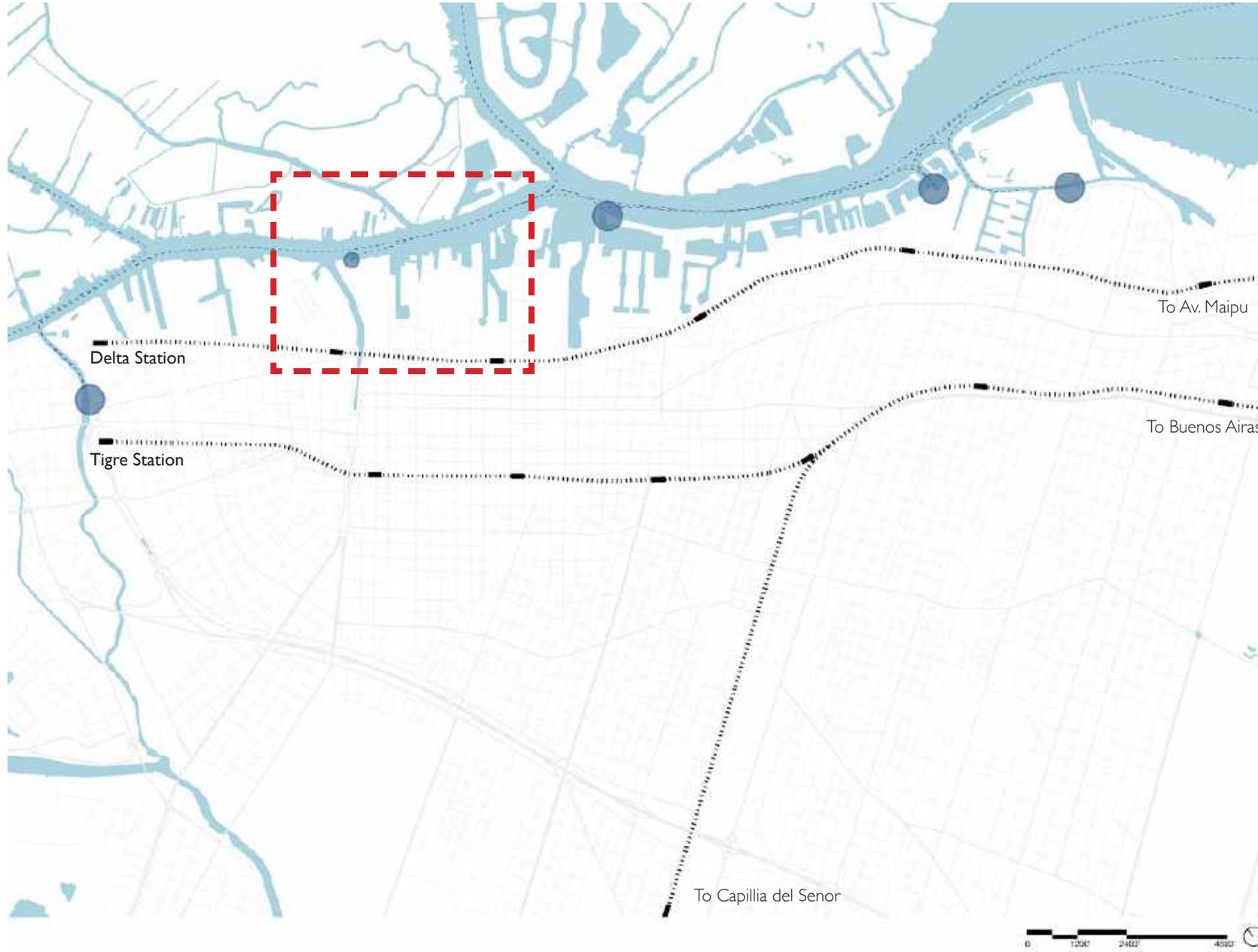
Entry to light industrial sites



Typical street scape



Map of Private Open Spaces on the Waterfront



Regional Train Routes

Tren de La Costa

- Run's every 30 minutes between 8am - 10 pm
- Does not connect directly to downtown Buenos Aires

Trenes a Tigre

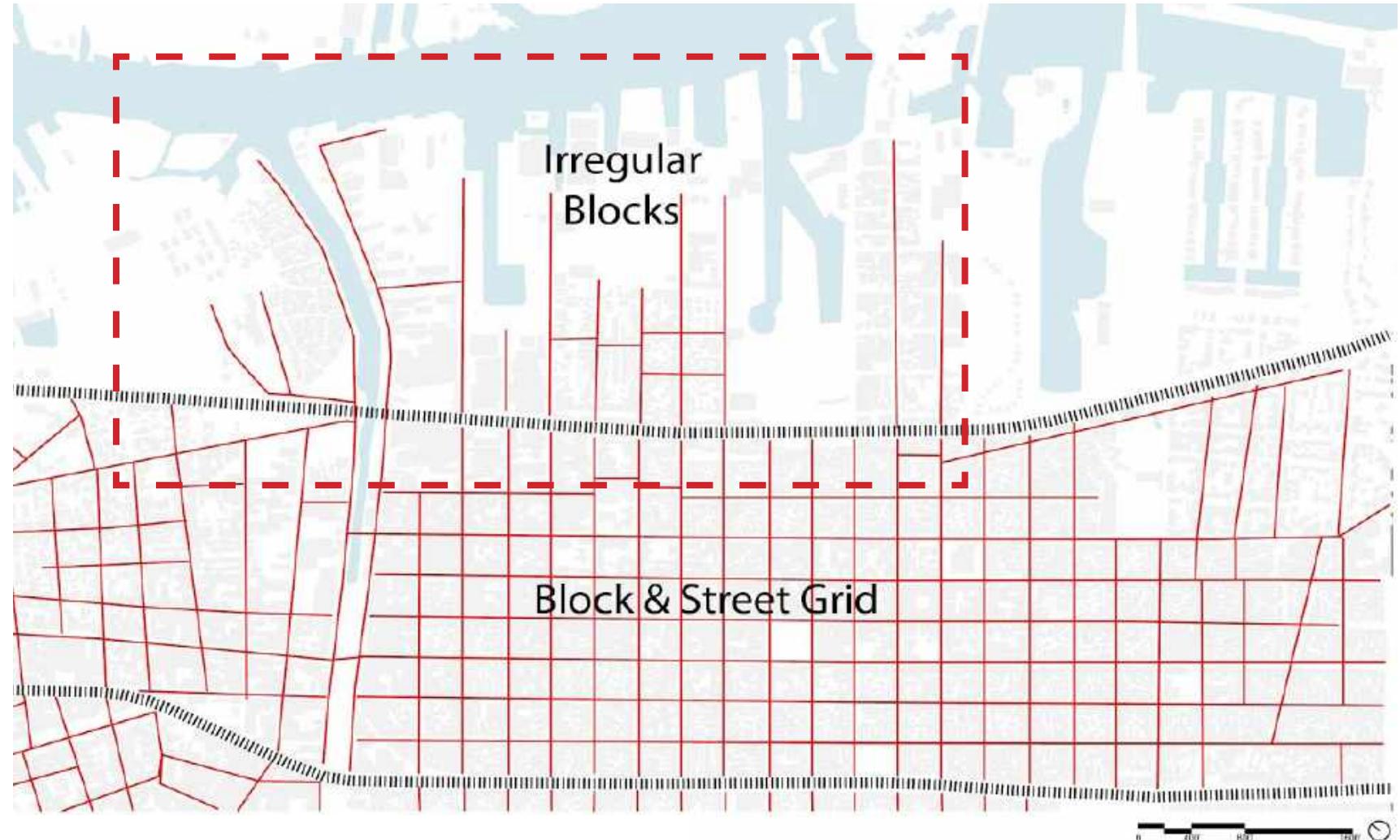
- Runs every 15 mins between 5 am - 10 pm
- Connects directly to downtown Buenos Aires



Solutions for the San Fernando Canal

Many of these issues impact both the individual and have a negative impact on the well being of those in the overall community. For example, available water is not of the best quality, and for poor communities that rely on this water, it is a major public health problem.

- Maximize potential of T.O.D.
- Regional Train
- Local and Regional Bus
- Focus on Pedestrians
- Water Transportation
- Maintain Maritime Industry
- Create Destination
- Place making
- Activating the Waterfront
- Diversifying Housing Stock
- Creating View Corridors
- Environmental Revitalization
- Sea Level Rise
- Mitigate runoffs and flooding
- Cultural Identity
- Natural Environmental Qualities



CANAL SAN FERNANDO



Design Scheme A Weaving Urban Fabric

Team Members
Hannah Grady
Andrew Mazer
Taina Peters





Site Plan



Place making Diagram



New Street Systems



Street Systems



Public Green Spaces



Connector Streets Across the Canal

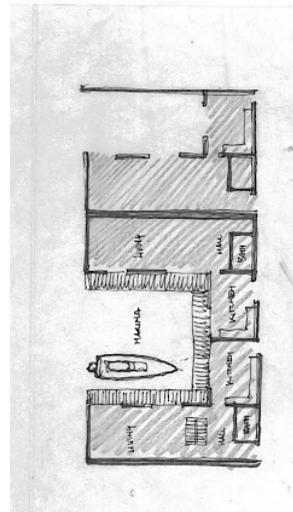
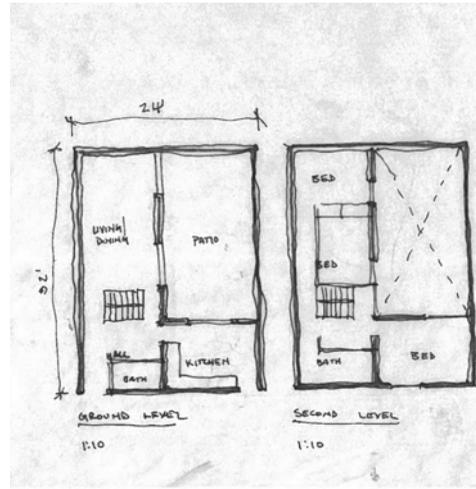


Connector Streets Across the Tracks to Waterfront

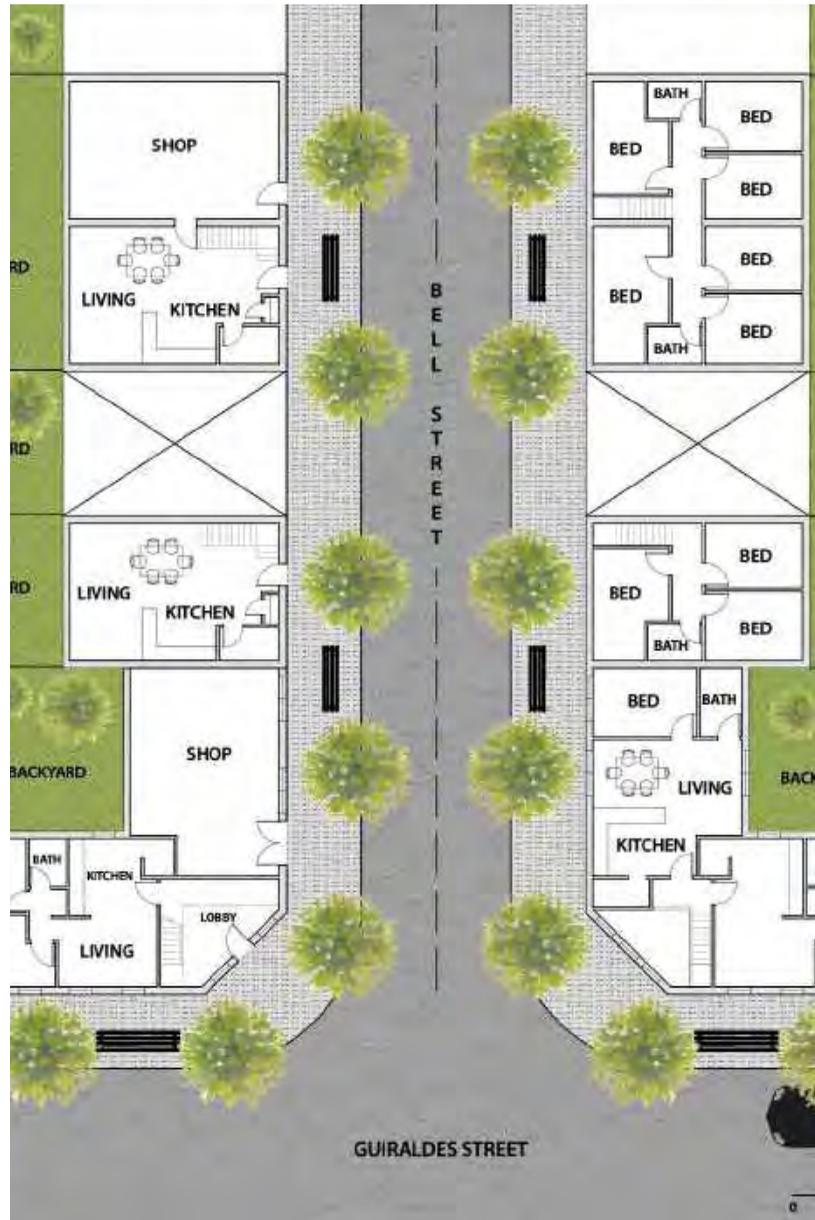




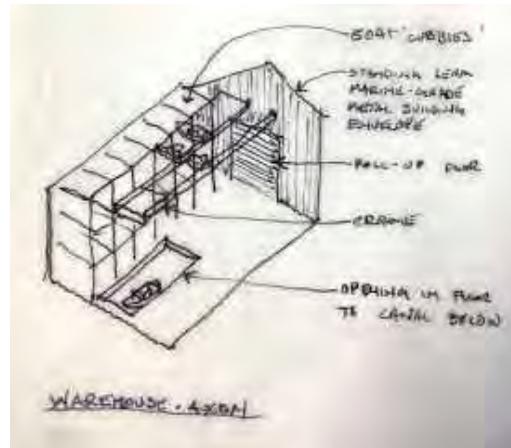
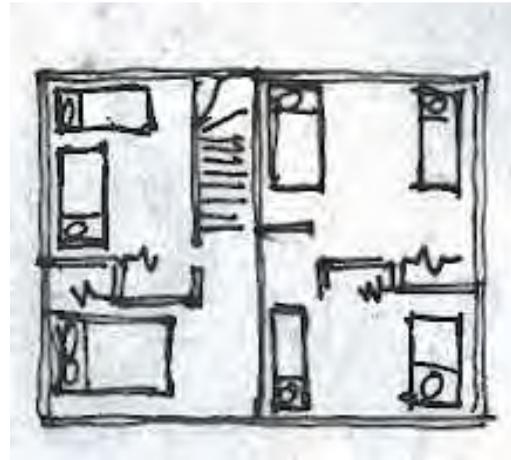
Site Plan of Mixed use Block



Site Plan of Mixed use on Water Living Option

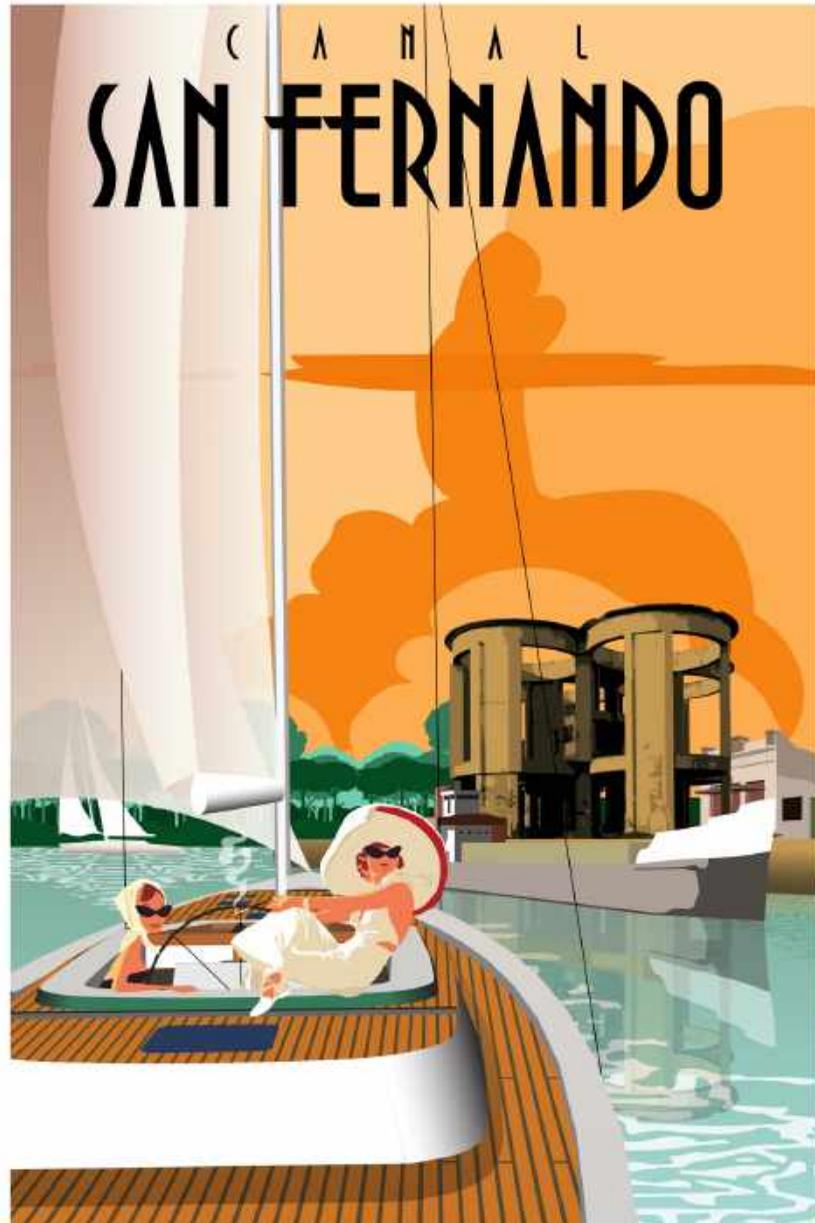


Site Plan of Mixed use Block



Site Plan of Mixed use Block





Design Scheme B

Activate Existing Assets

Team Members

Rachel Cain
Deane Townsend
Victoria Urdaneta

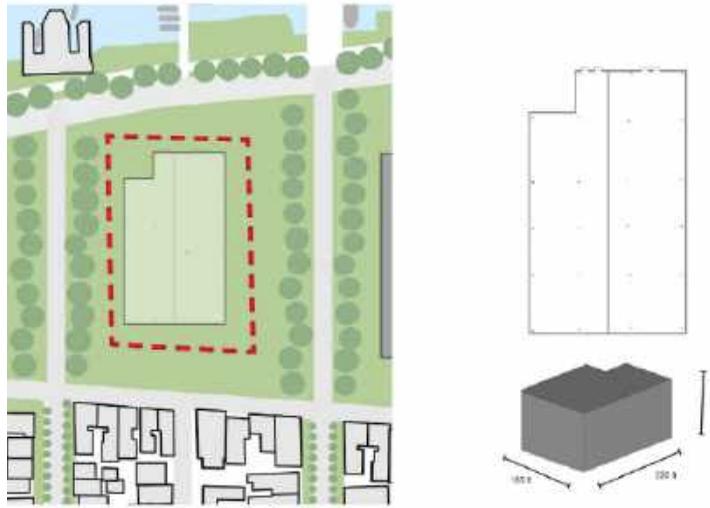


Site Plan





Place making Diagram



Existing Warehouse Renovation Typology

This space type can be used for new restaurants, art exhibits and more. The building can also serve 2 separate activities simultaneously.



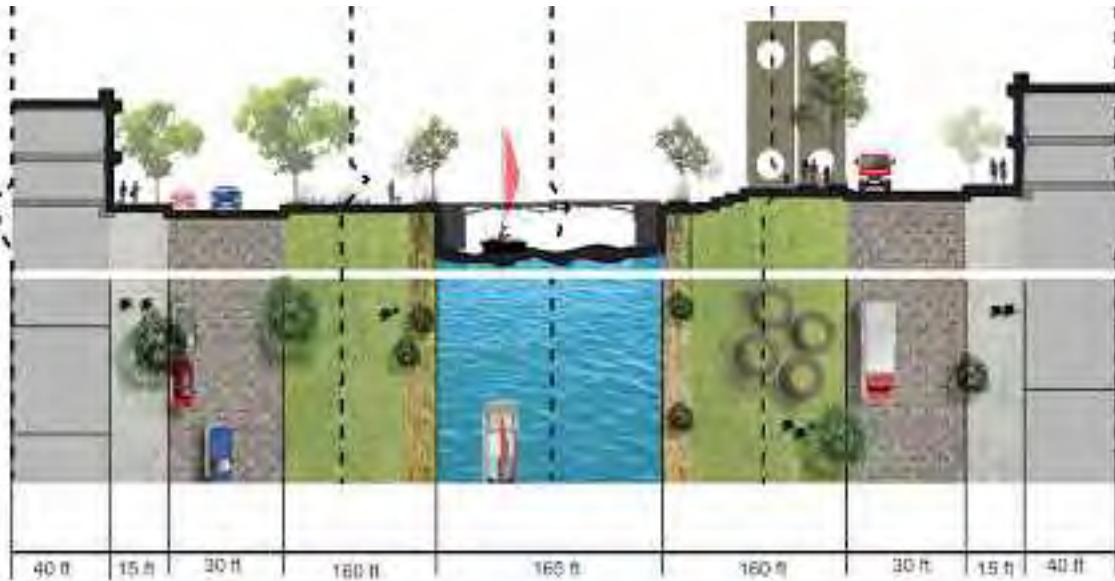
Retail Typology

This typology exists mainly on the canal, and holds strictly retail.



Residential Typology

The row home typology not only introduced a different housing option for the area, but also provides a greater density.



Section of Market on Canal



Section of Market and Residential Street



Section of Residential Mixed-use Block



Section of Typical Residential





Phase 1

- Build up the Canal
- Add retail along water



Phase 3

- Renovate buildings on waterfront
- Activate water with amenities



Phase 2

- Introduce new Housing Options
- Expand on existing Apt. Options



Phase 4

- Mimic vegetation type of Delta for sustainability
- Integrate with existing community



Design Scheme C

Uniting and Connecting Communities

Team Members

Collin Hassup

Amber Robbs

Gojin Paris Sim





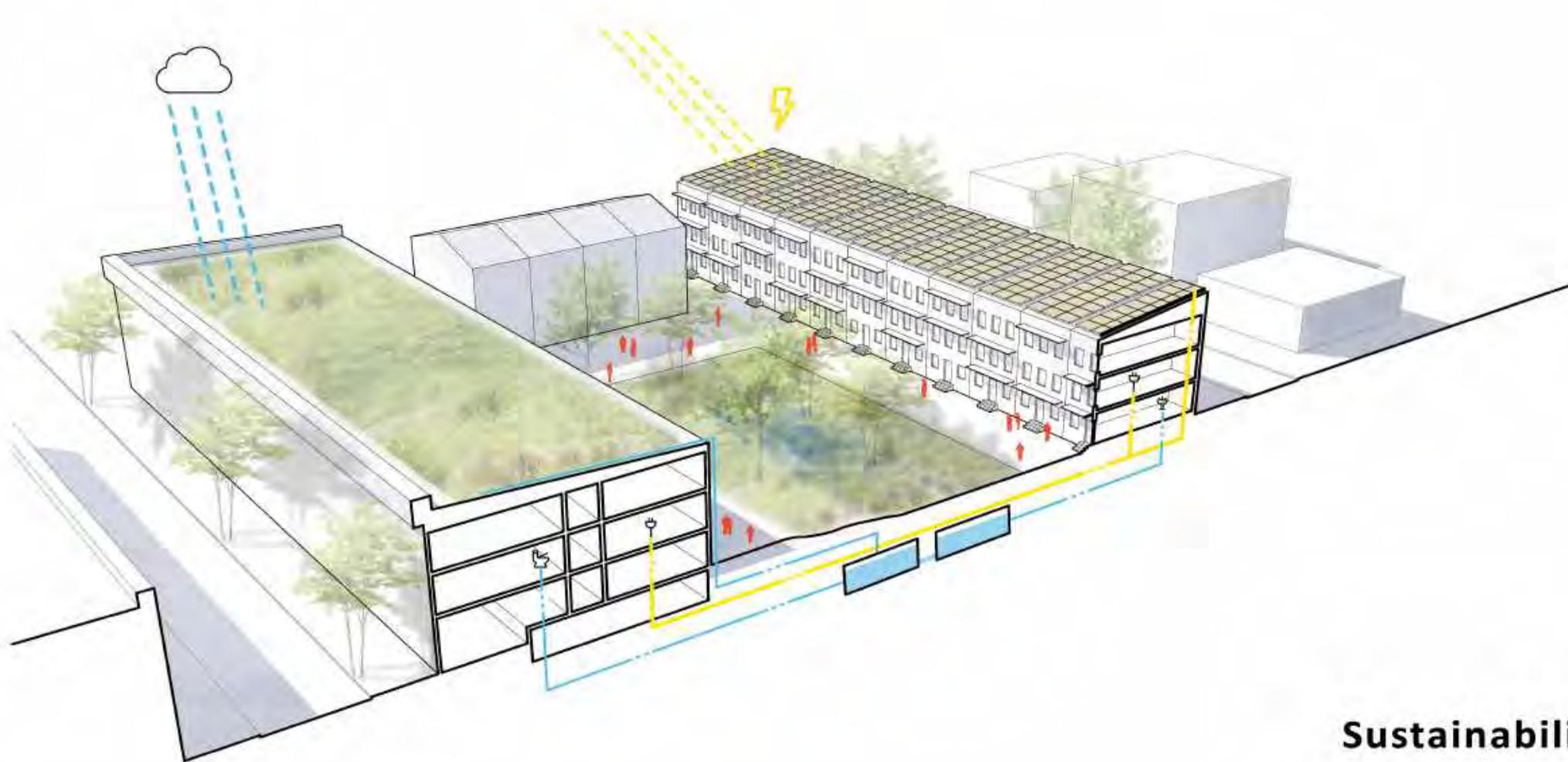
Site Plan





Place Making Diagram

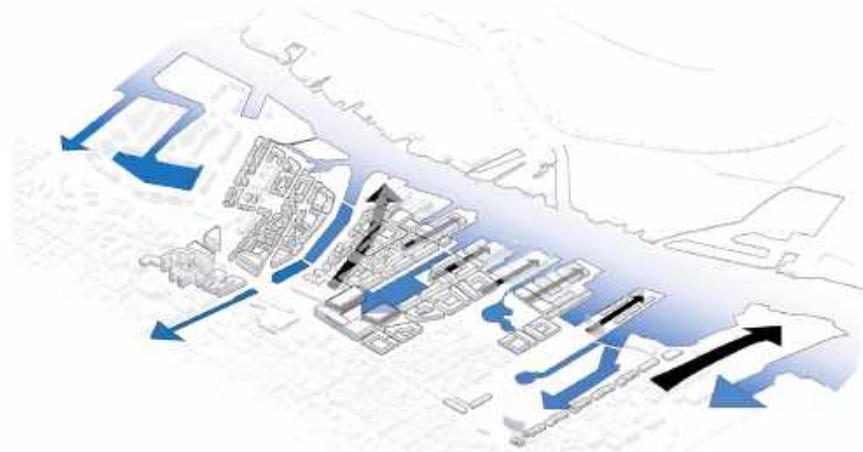




Sustainability Strategy

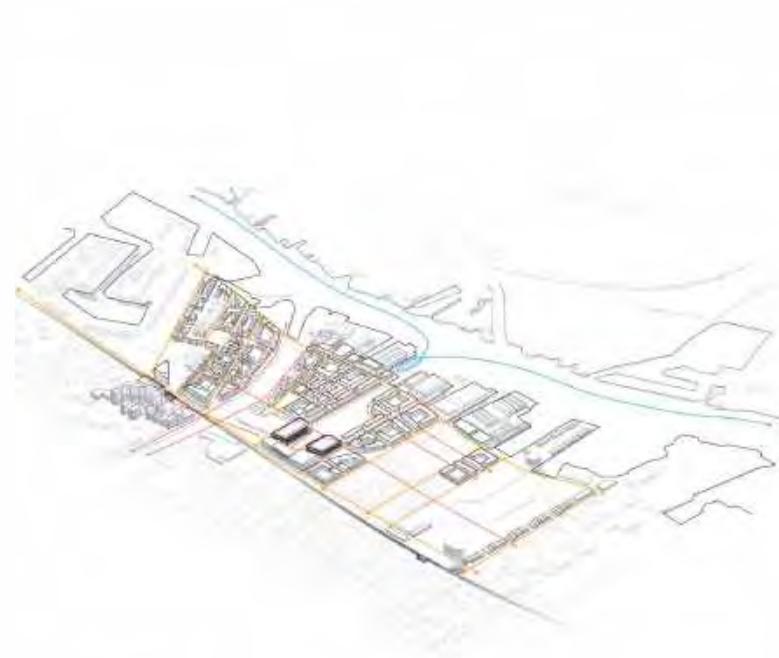
Mixed-program blocks will integrate careful designs to direct the flow of waterfall, capture solar energy and natural ventilation to courtyards and units.

Design Strategies



Water

Deep water penetrations into land create unique opportunities to connect residents to water and increase the value of development.



Transit

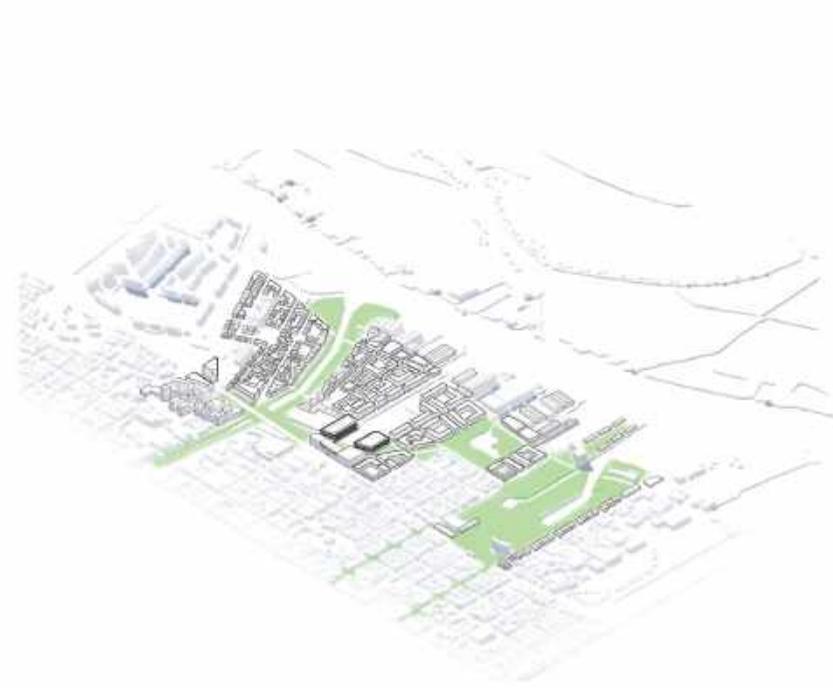
Adequate public transit network throughout the development including new ferry station and pedestrian friendly streets.





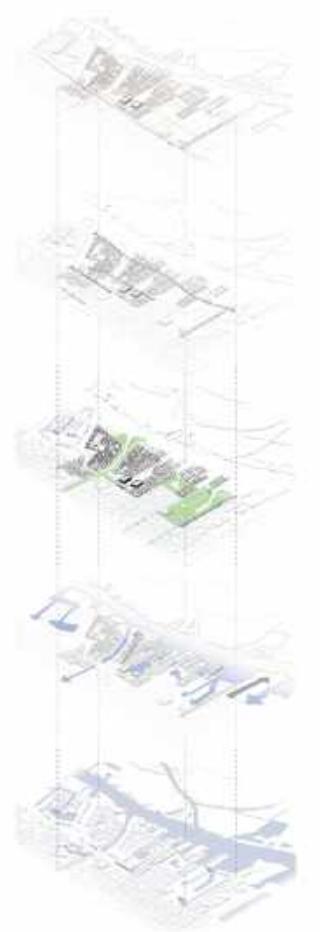
Connection

Integrating historic San Fernando grids out to water with natural flow of waterfront grids to enhance the connection.

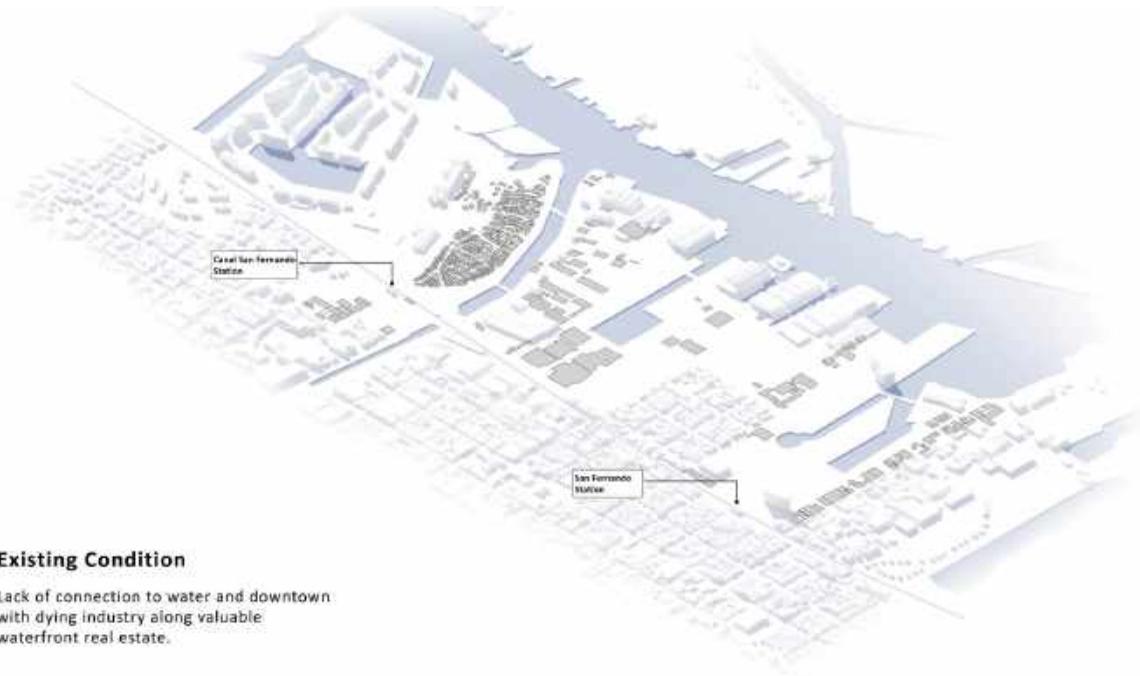


Green

Green corridors along The Canal and Club bring people out to the water.

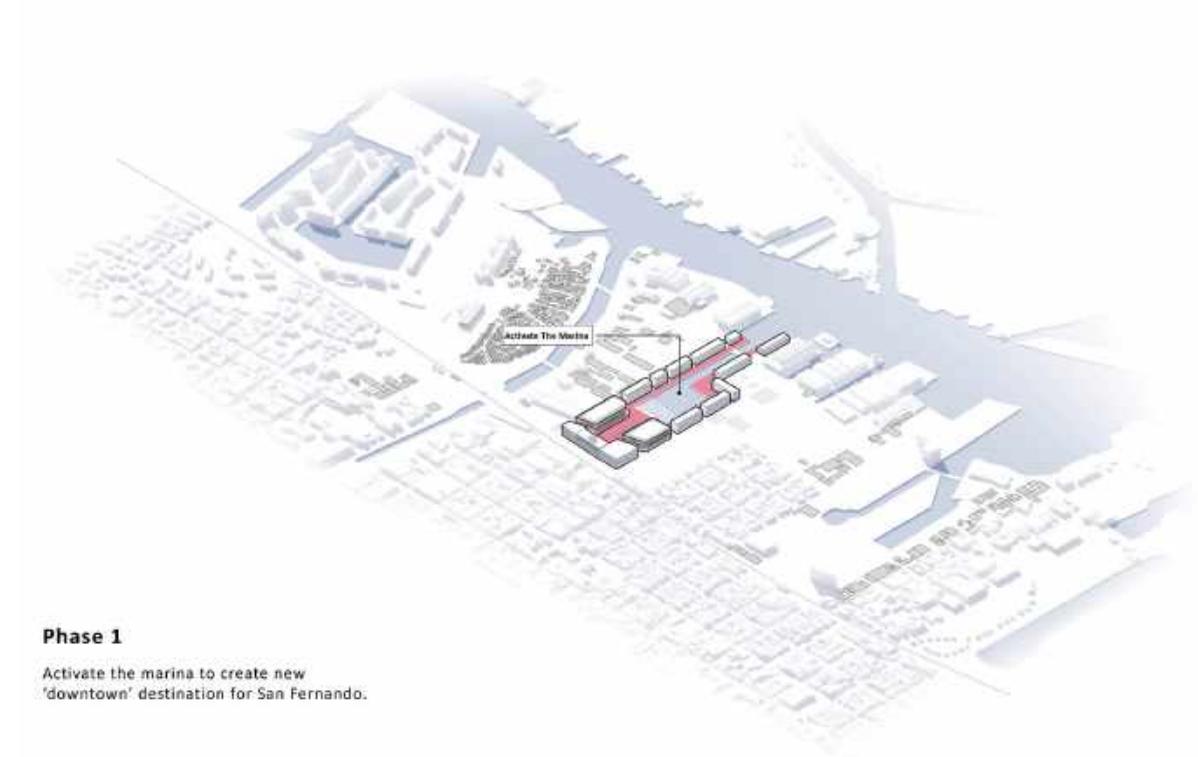


Phasing Strategies



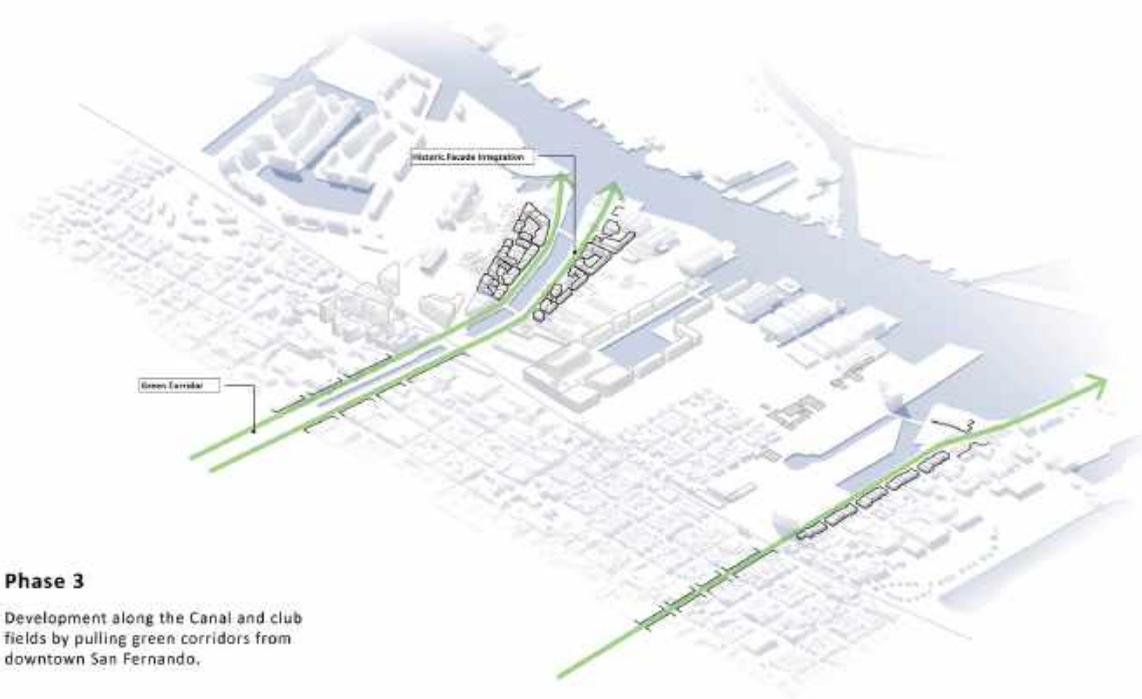
Existing Condition

Lack of connection to water and downtown with dying industry along valuable waterfront real estate.



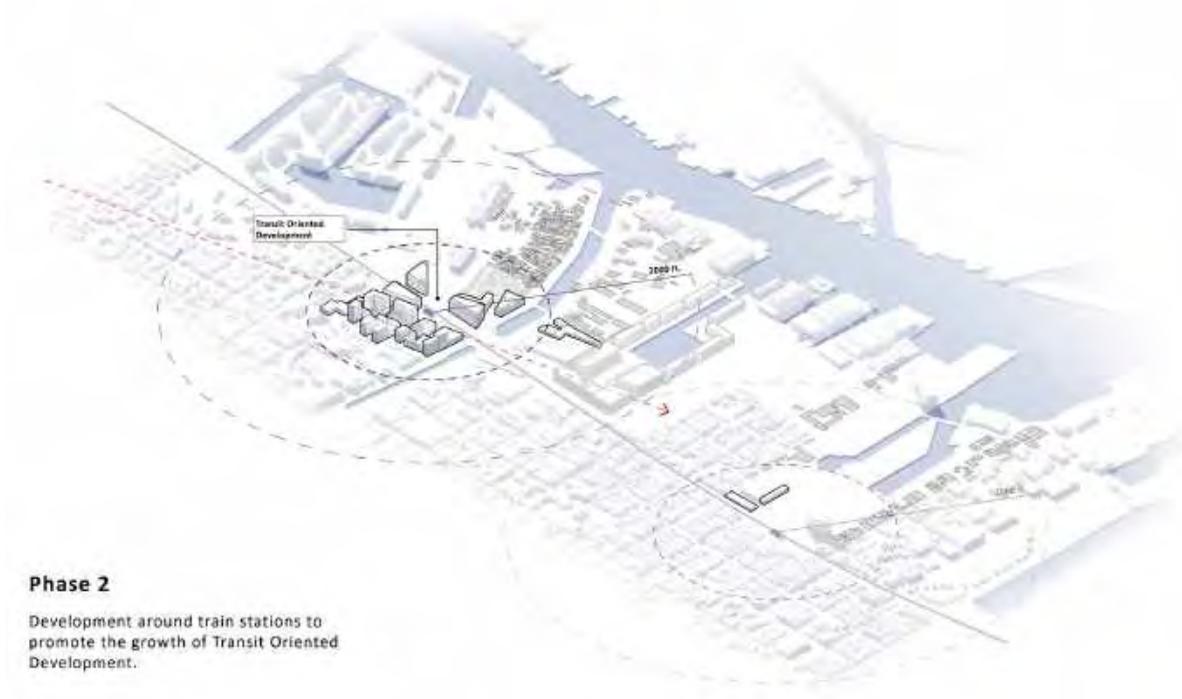
Phase 1

Activate the marina to create new 'downtown' destination for San Fernando.



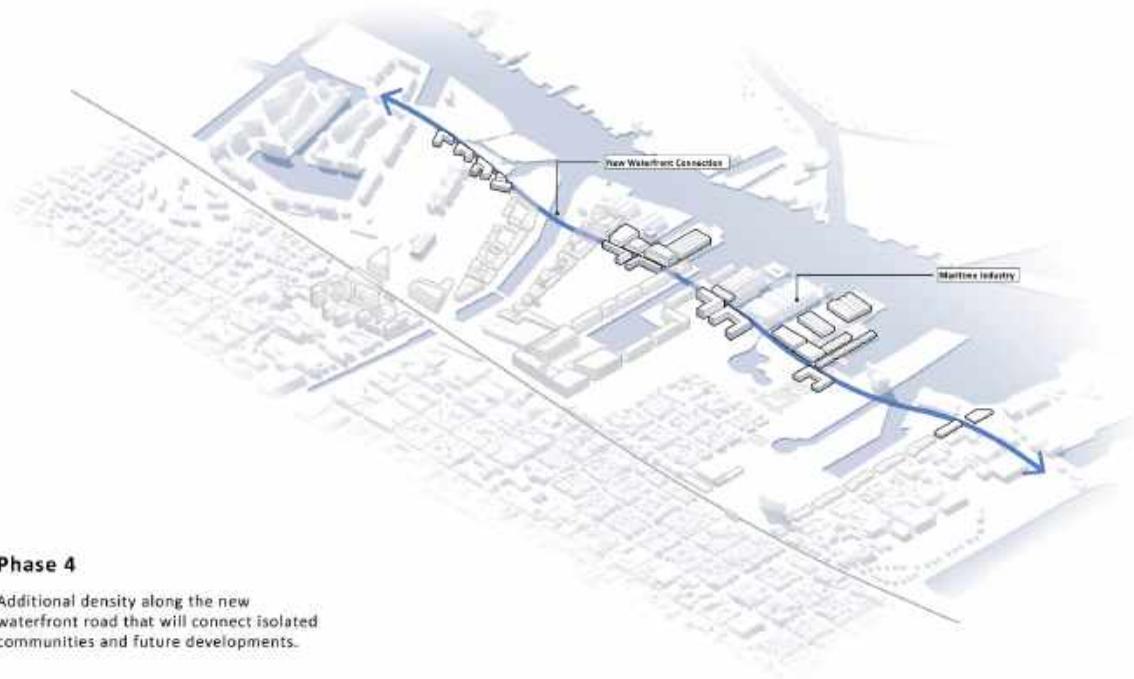
Phase 3

Development along the Canal and club fields by pulling green corridors from downtown San Fernando.



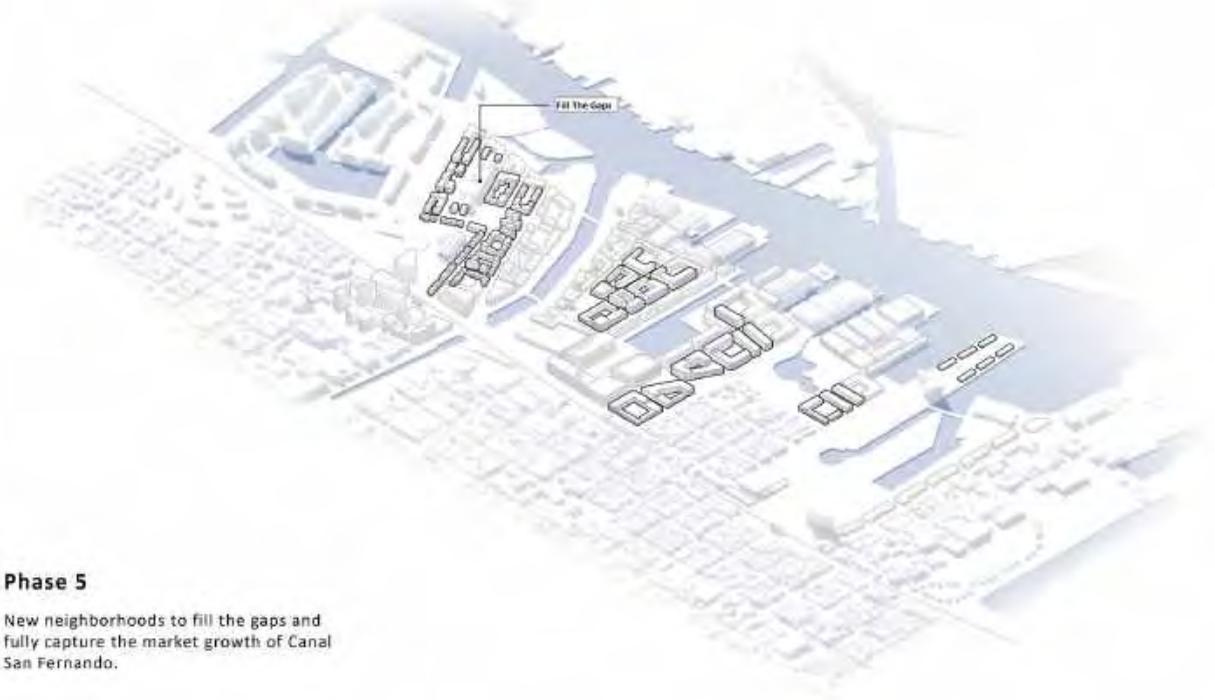
Phase 2

Development around train stations to promote the growth of Transit Oriented Development.



Phase 4

Additional density along the new waterfront road that will connect isolated communities and future developments.

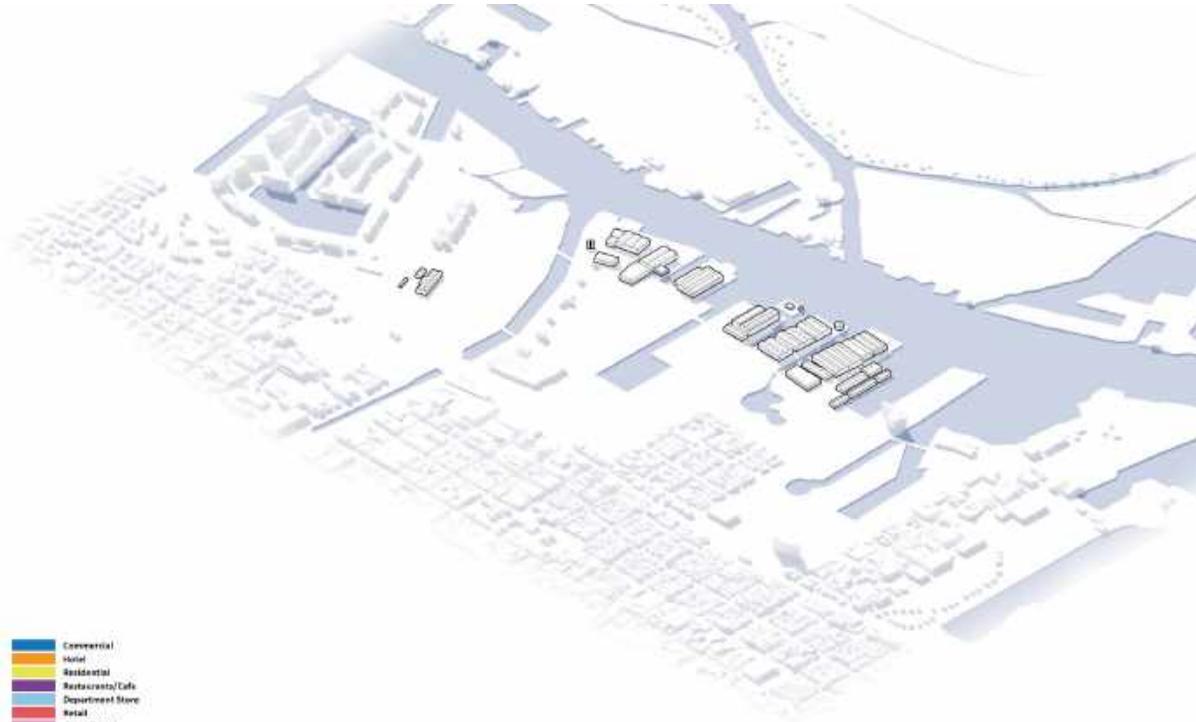


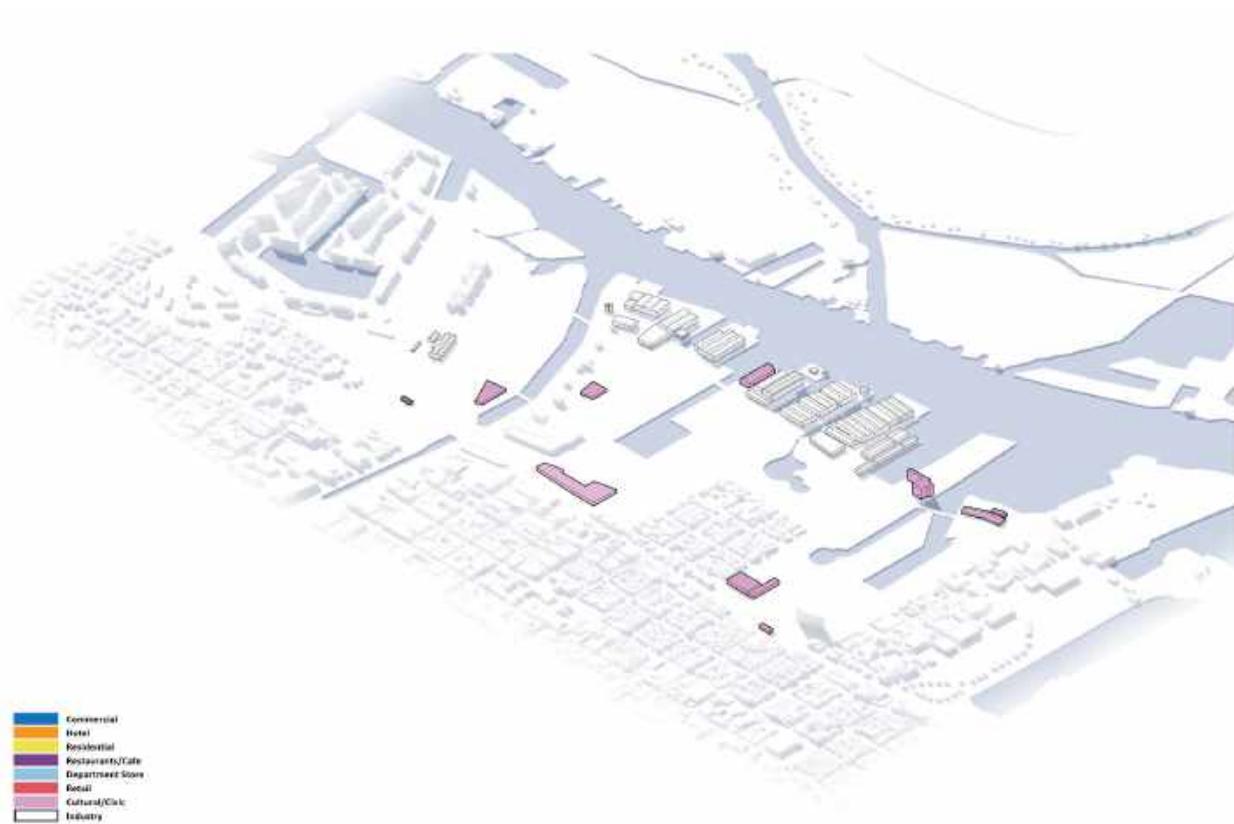
Phase 5

New neighborhoods to fill the gaps and fully capture the market growth of Canal San Fernando.

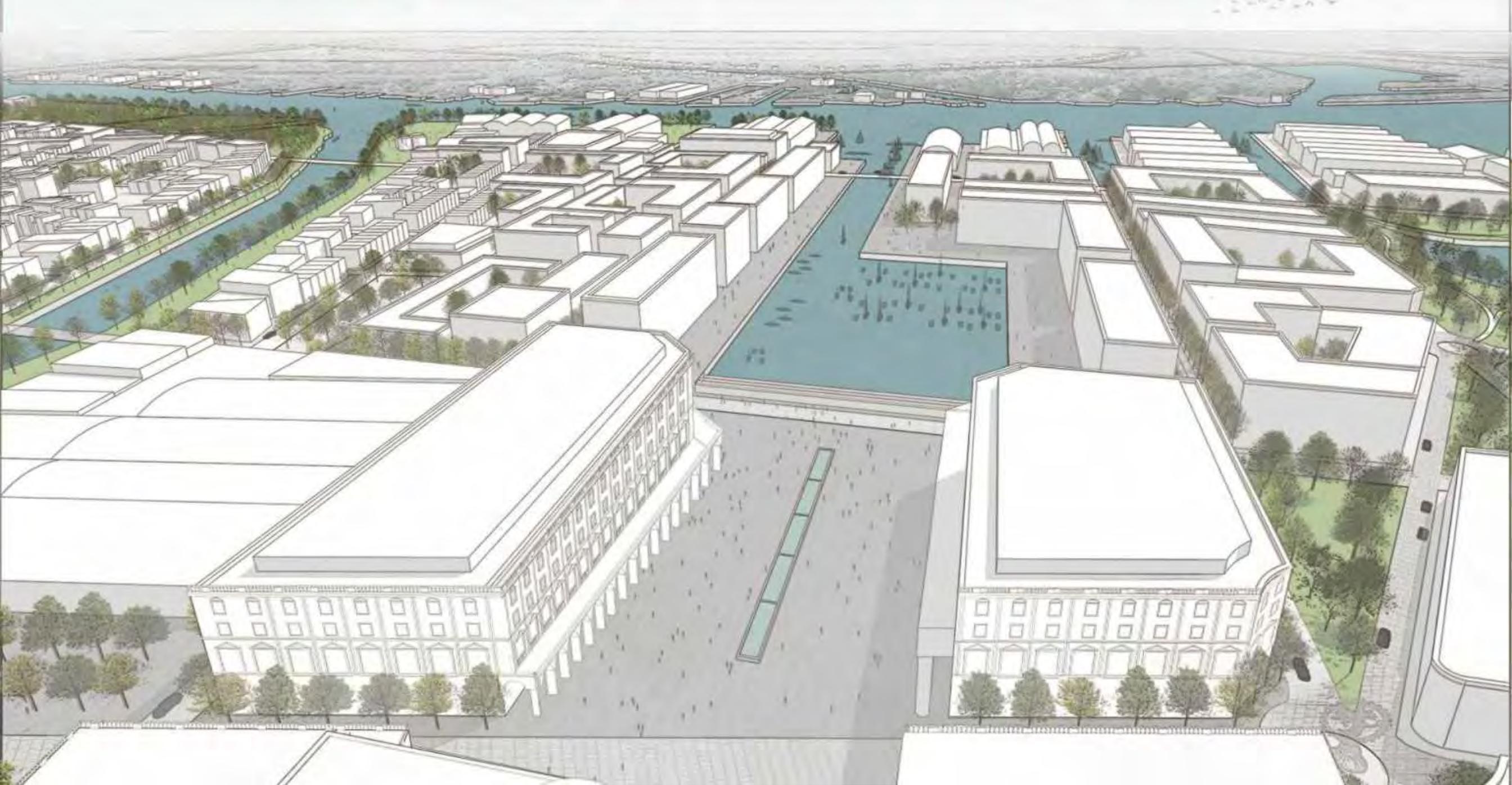


Program Build - Out











Buenos Aires, Argentina - Redevelopment of the San Fernando Canal

