

Rebalancing The Port of Galilee

A Project by the 2022 Sustainable Design Studio at The University of Rhode Island

Prepared for the Town of Narragansett

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Executive Summary

Rebalancing the Port of Galilee was the Fall 2022 URI Landscape Architecture 444 Design Studio's chosen project. It is not the first time that this studio selected the Village of Galilee. Six years before, a class of undergraduate and graduate students were tasked with developing resilient and sustainable solutions to address climate change and physical conditions affecting the commercial fishing port and its surroundings. That class made recommendations and produced an illustrated report of ideas and visions. This year's class returned to Galilee and in collaboration with the Town of Narragansett, RIDEM, and stakeholders, again focused on the Port, which is experiencing greater and more frequent impacts caused by a changing climate and sea level rise (SLR). This year's class performed an in-depth analysis of existing conditions and worked to design future development scenarios incorporating the principles of resilience and sustainability.

This report details the process and steps undertaken by the students throughout the Fall 2022 semester starting with the site analysis phase. During this phase, students toured the project site at a kick-off meeting with representatives from the town of Narragansett, RIDEM, and other stakeholders. This introduced the students to the physical site and critical issues facing the Port and allowed them to begin collecting and analyzing data. A summary of this phase was provided at a public engagement workshop where stakeholder input was solicited and used to develop a list of issues and actions that might be undertaken in the near future.

Students used the data and input collected during the site analysis phase and public engagement workshop to inform their ideas developed during the design phase. This report culminates with a presentation of the final re-development designs for the Port that focus on how to adapt to SLR and future climate change impacts. Three master plans illustrate different suggestions for how to address the following issues and development ideas: circulation, parking structures, the marsh and energy sources, reduced pavement, new mixed-use development, green infrastructure, a fish market, safe pedestrian walkways and boardwalks, and bike paths for bicyclists. The final designs were presented to the Town of Narragansett, RIDEM, and stakeholders at a second public workshop at the end of the semester where students were also available to answer questions. Final designs and a copy of this report will be provided to the Town of Narragansett and RIDEM to help guide future planning efforts. The report will also appear on the URI Landscape Architecture website. URI.edu/lar/.





INTRODUCTION

Map of Galilee
The Project
Precedent Images

Map of Galilee





The Project

Narragansett, RI

The town of Narragansett is in southern Rhode Island and at the entrance of Narragansett Bay. The town is located on the ancestral lands of several Native American Indian tribes including the largest, the Narragansett Indian Tribe.¹ Historically the land in Narragansett has primarily been used for agriculture and fishing. Today the town of Narragansett is a top tourist destination with its expansive beaches and popular restaurants such as the Coast Guard House.



The Towers and The Coast Guard House.



The Narragansett Town Hall.



Shopping Plaza in Narragansett.

Port of Galilee

Located in the town of Narragansett, Rhode Island, the Port of Galilee has grown into an important economic booster for the state. The port is home to the state's largest commercial fishing fleet with over 300 fishing vessels that take in over 44 million pounds of seafood annually.² The fisheries and seafood businesses in the State of Rhode Island support more than 4,300 jobs while adding nearly \$420 million economy-wide.³



Salty Brine Beach



Dockage in the Port showing the Block Island high-speed ferry

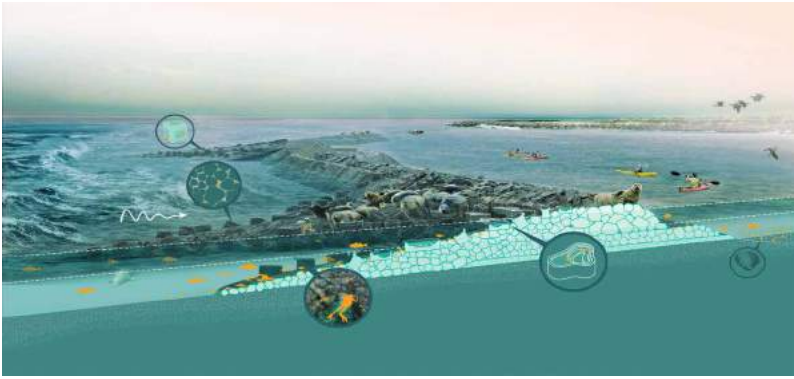


Galilee Salt Marsh



The Portside Restaurant on Great Island Road

Precedent Images



Schematic of a living breakwater

Living Breakwater:

Developing a system similar to a living breakwater would provide the benefit of protecting the shoreline in the Port. With the newly developed breakwater, the sediment in the waves would be broken up, causing less erosion to the beaches in Galilee. Protecting the shoreline is one of many goals in promoting a resilient port.



Example of a boardwalk through a saltmarsh

Marshwalk:

With the current bird sanctuary, the community has a limited ability to take in the natural beauty of the marsh's landscape. Adding in a boardwalk will allow visitors of the area to enjoy a peaceful, yet informative walk-through of saltmarsh and bird sanctuary in Galilee.



Graphic showing waterfront views attracting tourists

Port Viewing Areas:

Providing additional waterfront views may entice visitors to stay in the area longer and interact with the attractions. Creating an open space will also benefit the Port by adding resiliency in the form of vegetation capable of collecting and treating runoff generated by storms.



An example waterfront seafood market

Fish Market:

With Galilee bringing in just shy of 70% of the seafood for the state of Rhode Island,² building a marketplace will provide additional opportunities for the community to purchase seafood right by the docks and directly from fishers. Furthermore, the market will entice visitors to Galilee during the offseason providing direct economic benefit to the Port.



A waterfront bikepath running adjacent to traffic

Bike Path:

Adding a bike path to the Port of Galilee could benefit the local community just as the Town of South Kingstown, has proven with its bike path. Developing a system that connects it from Narragansett through South Kingstown will provide additional opportunities for people to visit the Port and could decrease the total amount of cars circulating through the area.



Solar panels on a green rooftop

Solar Panels

In addressing the goal to build a more resilient port, future development projects could use blue-green roofs. With offshore renewable energy being contentious within the commercial fishing industry, adding rooftop solar panels within the Port could be a more palatable way to promote renewable energy. Additionally, a green roof can decrease runoff thereby minimizing pollutants entering the ocean.





SITE ANALYSIS

Welcome to Galilee
Culture, Views, and History
Natural Environment
Maps

Site Analysis

The site analysis phase of the project consisted of students visiting and researching the site uses, features, and conditions. This allowed the students to familiarize themselves with how the Port of Galilee developed over time and learn how the Port operates, how various stakeholders and visitors use the site, what type of natural environmental features exist, and what current development looks like.

During this phase the students divided into the following five sections: an overview of Galilee; the culture, views, and history; the natural environment; the built environment; and regulations and zoning.

The students presented their findings at a public workshop to allow stakeholders the opportunity to provide feedback, ensure that their information was accurate and that there were no knowledge gaps.



Traffic conditions on Great Island Rd.



Dockside renovations within the port

Climate Change

The Port of Galilee is uniquely surrounded by water or wetlands making it vulnerable to natural hazards. It is expected that this vulnerability will be exacerbated in the near and long-term future by climate change impacts such as sea level rise, changes in sea-surface salinity, and an increase in the frequency of storms and precipitation.⁴ Without proper planning, policies, and practices to combat climate change, ports are likely to suffer economically. Economic consequences include direct impacts from infrastructure damage and indirect consequences from disruptions to port operations that impact the port supply chain. These impacts are likely to vary geographically making it necessary for port managers to consider localized resiliency planning, which is largely not transpiring presently. This may be due in part to the inherent uncertainties associated with climate change projections, high costs, and a lack of appropriate cost-benefit analyses on different investment and infrastructure planning options. As a result, ports like the Port of Galilee are relegated to operate in a continual triage mode repairing infrastructure as it becomes critical for operations and safety.

The intent of the designs presented in this report is to assist Port of Galilee managers and stakeholders by offering a suite of future development options that consider climate change impacts by incorporating resilient design features. Additionally, each design plan presented can be considered as a whole, or individual design features within a plan can be regarded separately as planning and resources allow.

Welcome to Galilee

Planter along sidewalk



Dockside with the new bulkhead development

Jimmy's Port Side Restaurant



The Port of Galilee in Narragansett, RI is the state's largest commercial fishing port. As home of the Block Island Ferry headquarters, the port serves as a transportation hub between Block Island and the mainland ferrying essential cargo, vehicles, and passengers.⁵ In the summer months as tourists seek out summer vacation housing and ferry passage to travel to Block Island, the port is plagued with congestion, traffic, and limited parking. Galilee also serves as a tourist destination with its various retail shops, restaurants, bird sanctuary, salt marshes, and beaches.



Lighthouse Inn



Open space with vegetation



Block Island Ferry loading dock

Its low elevation and surrounding water bodies often result in localized flooding and make the Port vulnerable to severe storms and climate change impacts. Flooding events can often lead to the two access roads to the Port being closed to traffic, which poses a substantial safety threat to the local community, particularly the residents of Great Island. Rebalancing the port to facilitate harmony between the built and natural environments through sustainable design would help ensure the longevity of the Port in the face of climate change.

Historical and Cultural Events

The Narragansett Indians and Colonization

The Narragansett Indians have existed in the region for more 30,000 years and were one of the most powerful tribes in Rhode Island at the time of the first European settlement in 1635.¹ For many years they maintained a relationship with the newly established colonists who first secured land use rights from the tribe in 1636 when Roger Williams successfully acquired Providence. Conflicts over land use and ownership lead to many wars including King Phillips War and the Great Swamp Massacre in 1675 that nearly decimated the tribe.

For the next three hundred years the Narragansett Indian tribe would show great perseverance in their fight to reclaim their ancestral rights.¹ In 1978 the tribe successfully settled a lawsuit against the State of Rhode Island and 1,800 acres of land were returned to the Tribe. In 1983, the tribe successfully gained federal recognition from the Department of Interior Bureau of Indian Affairs. Today the Narragansett Indians continue their mission to foster family, education, and culture among their tribal members.



Colonists interacting with indigenous tribes



Narragansett indian tribal celebration

The Development of a Fishing Port

The Port of Galilee has a long history dating back to 1806 with the construction of a wooden lighthouse in Point Judith.⁶ The wooden lighthouse was replaced with the existing stone lighthouse in 1816. By 1900 the Port of Galilee was one of the largest commercial fishing ports on the East coast and in 1902 it was named Galilee by Thomas Mann, a fisherman from Nova Scotia. Development in the Port continued to support the growing commercial fleet throughout the 1900's with the construction of a 3-mile breakwater, the dredging of an anchorage basin, construction of wharfs, and construction of the Galilee Escape Road. In the 1990's big changes in the Port included the restoration of the Galilee Bird Sanctuary and Salt Marsh and the establishment of the Block Island Ferry headquarters.^{8,9} These changes led to the evolution of the Port to its status today as a multi-use working waterfront. The Port supports RI's largest commercial fishing fleet, serves as a transportation hub for Block Island, provides mainland access for the residents on Great Island, and is a summer tourist destination attracting visitors to the Port's beaches, vacation rentals, fishing opportunities, and restaurants.

As a coastal port and working waterfront, the Port is susceptible to severe flooding and infrastructure damage from severe storms. The Great Gale Hurricane in 1815, the Hurricane of 1938, Hurricane Carol in 1954, and super-storm Sandy in 2011 have all had significant impacts on Port infrastructure and operations.^{6,9} The Port continues to be vulnerable to severe weather, flooding, and sea level rise.

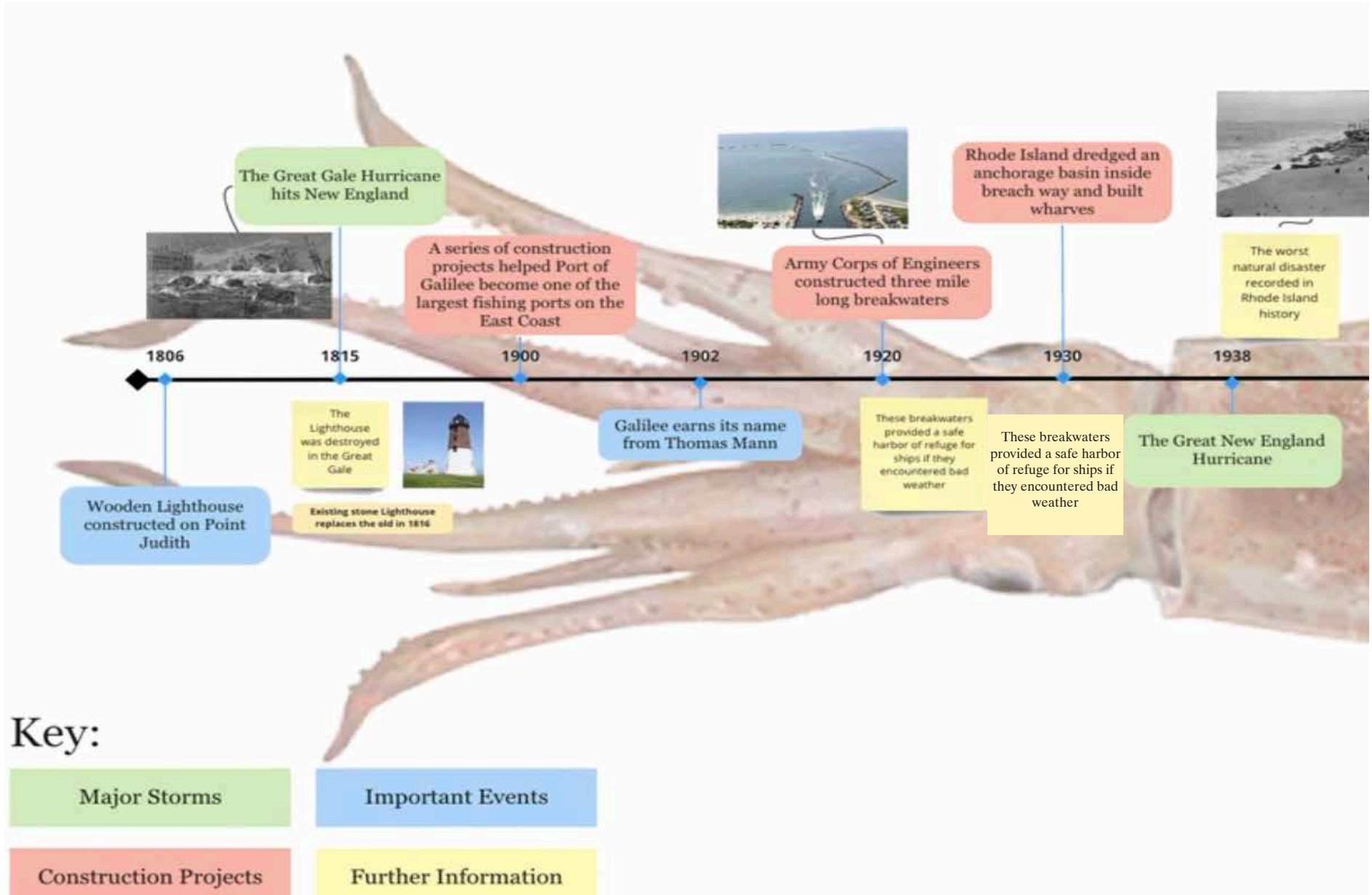


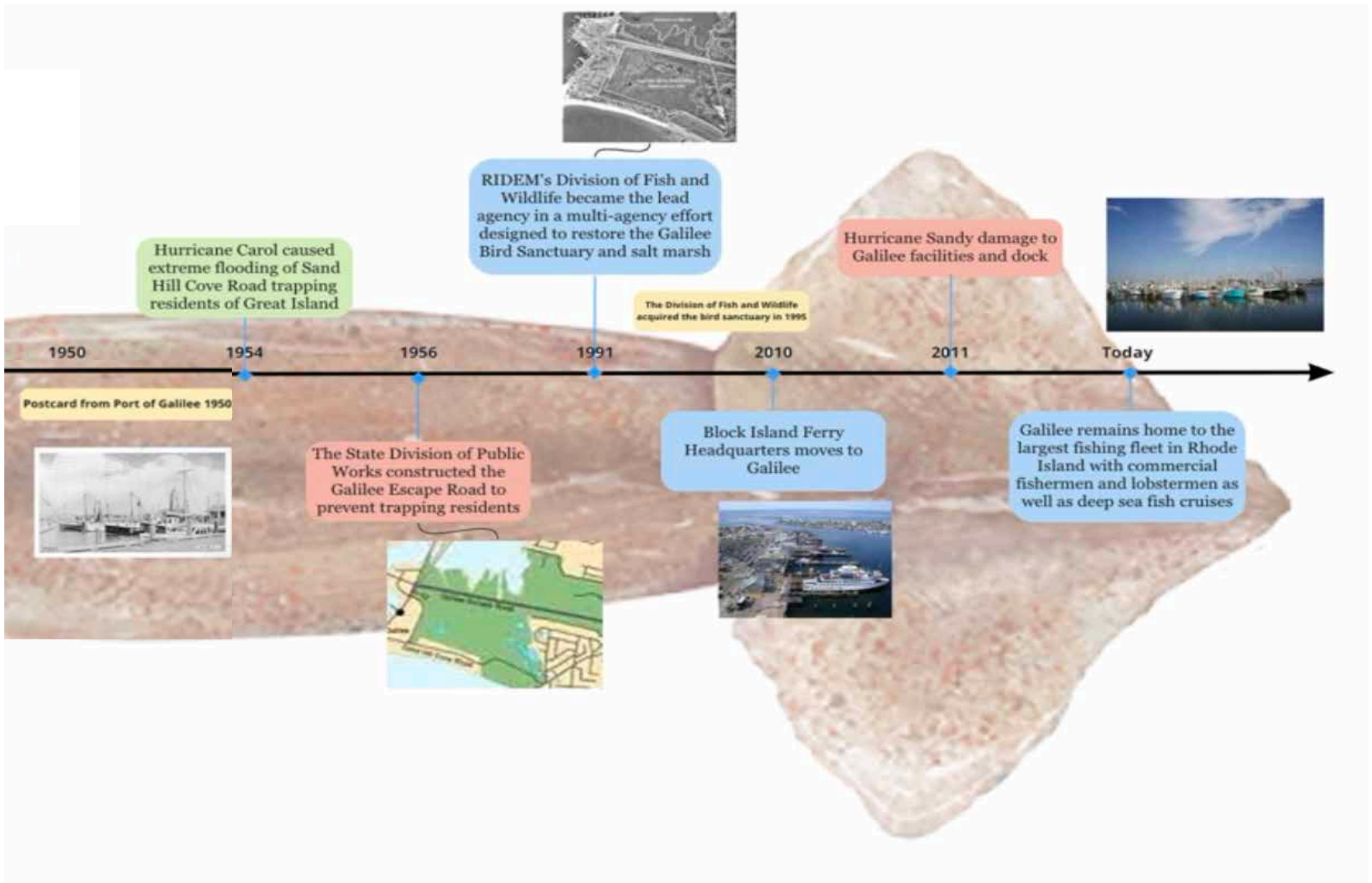
Storm damage to Coastguard House in Narragansett



Commercial fishing vessels in the Port

Historical Timeline





Natural Environment

The bodies of water surrounding the Port of Galilee are not only essential to supporting the diverse ecosystem of the Bird Sanctuary and salt marsh, but also make the Port susceptible to extreme flooding. High tides often result in localized flooding of parking lots and the submergence of docks in the Port.⁹ A lack of adequate drainage and filtration poses a continual problem in the Port that is likely to worsen with the National Oceanic and Atmospheric Administration (NOAA) predicted sea-level rise (SLR) of 3.25 feet by 2050.¹⁰ Flooding and damage to critical infrastructure remain the top threats to Port operations. As a commercial fishing port, the Port of Galilee is an important economic generator to the state of Rhode Island. In 2021, 43,916,203 pounds of seafood totaling \$71,079,310 were landed in RI with 69.27% of those landings coming from the Port of Galilee.²



Clapper Rail, *Rallus crepitans*



Saltmarsh Sparrow, *Ammospiza caudacuta*



Lesser Yellowlegs, *Tringa flavipes*

The Galilee Bird Sanctuary is owned by the state of Rhode Island and RIDEM. The sanctuary provides protected breeding habitats for salt marsh and shore birds. The birds prey on the sea life that inhabits the marsh; such as killifish and mummichogs.

Galilee Landforms



Sea Level Rise

Water Depth



Low-lying Areas



Current Sea Level



Sea Level Rise – 3 feet

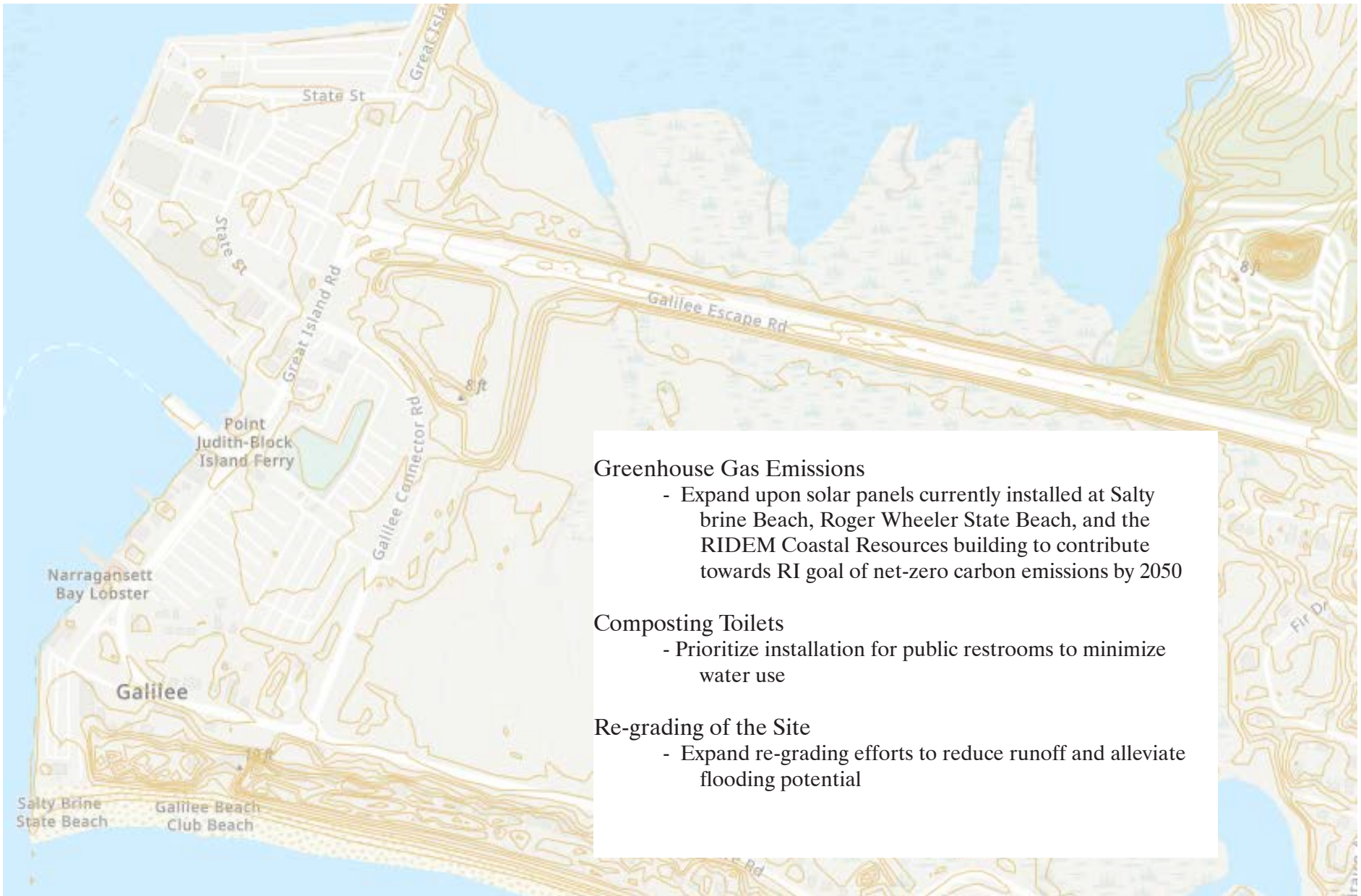


Sea Level Rise – 6 feet



Sea Level Rise – 10 feet

Areas for Change



Built Environment

As a mixed-use working waterfront, the Port of Galilee serves many roles. Although its primary function remains as a commercial fishing port, the location of the Block Island Ferry headquarters in the Port attracts a large number of tourists during the summer months. This leads to congestion and traffic that make navigating the Port difficult and poses a risk for pedestrians and cyclists. Approximately 23.75 acres of the Port are dedicated to 3,800 parking spots, with an estimated 2,010 of those used for Block Island Ferry parking.¹¹ The vast amount of real estate currently allocated to parking leaves little room for new development opportunities focused on increasing local tourism. Additionally, these parking areas contribute to excessive runoff that may cause erosion, flooding, and water pollution. The long-term nature of the commercial leases within the Port, 20 – 40 years long, also make it difficult for new businesses to establish themselves in the Port.⁹ The 5.03 acres of land that makeup the old Lighthouse Inn remain the primary option for future development in the Port.

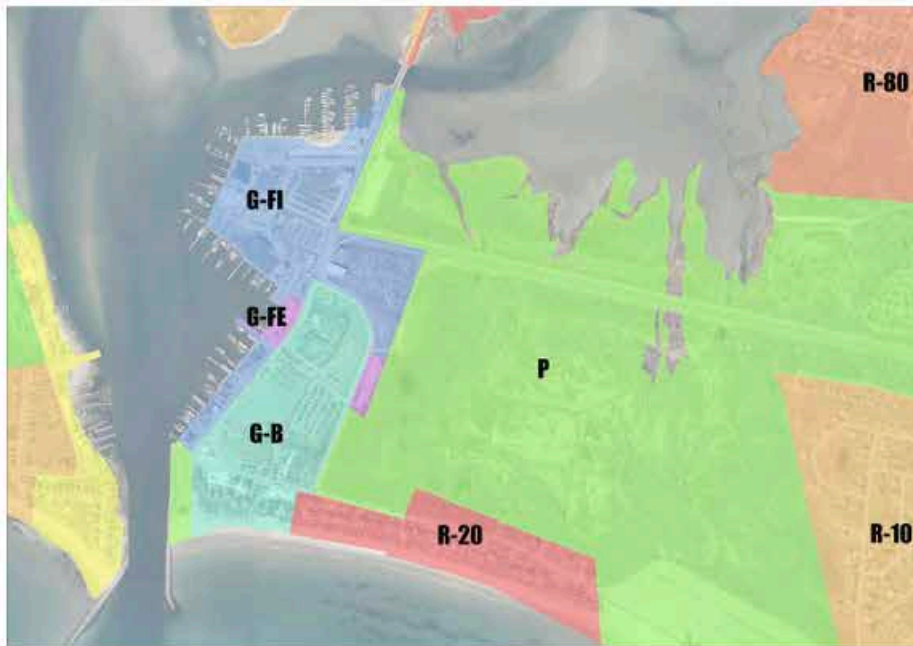
Building Usage Base plan



Parking by Acreage



Regulations and Zoning



G-FI: Fishing
G-B: Business
G-FE: Ferry
P: Public Use
R-10, R-20, R-80: Residential



State Private Federal Unbuildable

Lighthouse Inn

The former Lighthouse Inn in Galilee was built around 1968 and occupies 5.03 acres of commercial property consisting of three parcels.¹³ The hotel consisted of 62,543 square feet of space comprised of 100 hotel rooms, a restaurant, a bar, and a covered swimming pool. The property is owned by the State of Rhode Island, managed by the RI DEM, and has been under lease to a private Rhode Island limited liability corporation (PRI X, L.P.) since 2005 when they assumed the original 1990 lease through bankruptcy proceedings. Although the hotel structure still stands, it has been closed since 2015.

Since the hotel's closure in 2015, PRI has used the non-developed portion of the property to operate a pay-to-park parking lot.¹³ According to PRI, the hotel would require substantial financial investment due to its lack of elevators, not being ADA compliant, having no central heating or air conditioning, and having small and outdated bathrooms. Although PRI has put forth several proposals for the re-development of the property, no projects have moved forward to date. As a result, PRI in cooperation with RI DEM, issued a request for proposals for the re-development and use of the property (RFP).

The RFP was open from October 1, 2021, through November 15, 2021.¹³ RI DEM issued a press release on March 31, 2022, stating that a review team consisting of RI DEM and RI commerce staff deemed none of the proposals submitted through the RFP as viable.¹³ A subsequent press release issued on July 15, 2022, declared RI DEM's intent to halt on the re-development of the property in order to conduct a Hazardous Building Materials Assessment.¹³ Specifically, the assessment would evaluate the extent of hazardous materials on-site and the cost for remediation should the building be demolished or re-developed.

RI DEM has yet to release the findings of the Hazardous Building Materials Assessment as of this report writing.



Front view of Lighthouse Inn Property as seen on Great Island Road.



Back view of the property, northeast corner.



Access road to RI DEM Coastal Resources Office next to the Lighthouse Inn.



Parking area at the back of the property and along the Galilee Connector Road.





PUBLIC ENGAGEMENT

Activity One - SWOT

Group 1

Group 2

Group 3

Activity Two - Visualizing Galilee

Group 1

Group 2

Group 3

Activity 1 - S.W.O.T. Session

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) exercise was carried out by students during a public workshop to solicit input from workshop participants.

The strengths acknowledge what works well within the Port and therefore should be preserved or expanded on. Weaknesses identify what port conditions are problematic and should be addressed in the redesign. Opportunities asks participants what type of new development they would like to see incorporated into the new design. Threats characterize future risks and hazards that may jeopardize port resilience and longevity.



STRENGTHS

- Port of Galilee itself
- Fishing industry
- Mixed businesses
- Ferry
- Accommodations: beaches, stores, restaurants
- Village center
- Geographic location
- Good access to roads and water (boats)
- Romance between fishing and stores

WEAKNESS

- Seasonal activities
- Surface parking only
- Confusion from signage
- Lighting
- Safety conflicts (processing and pedestrian)
- Edges (sidewalks)
- Congested area
- Minimal amount of information on history of port
- Elevation
- Escape road hazard
- Storm water management
- Damaged utilities
- Poor soil
- Lack of identity

OPPORTUNITY

- Lion's Club educational opportunities
- Fish market
- Adjust circulation
- Promote businesses during offseason
- Parking garage
- Redesign commercial fishing section
- Update signage, add art
- Museum
- Bay campus connection, housing for research
- More bike parking
- More public access
- Easier access for trailer access on boat ramp parking
- Overhead package movement
- Utility road for processing and packaging
- Hotel or park
- Pedestrian walkway to marsh
- Make Galilee a historic district
- Transit shuttle
- More amenities
- More dark sky initiative lighting
- Improve soil for vegetation
- Look at plant pallet

THREAT

- Lack of environmental development (seasonal issue)
- Traffic pattern June-Oct, death threats
- Pedestrian hit risk
- No housing, long term housing
- Gentrification
- Unwillingness to compromise
- Lack of resiliency
- Different perspectives (art, function, environment)
- Sea level rise

Activity 2 - Visualizing Galilee

A visualization exercise for stakeholders to express the importance of various activities, land uses, and structures.

A series of posters displaying graphical examples of activities, land uses, and structures were placed throughout the public forum. Students asked participants to place a green sticker next to the item they viewed as most important for Galilee and a red sticker next to the item they felt was least important. Sticky notes were supplied for stakeholders to write specific examples that were not already depicted on the posters. Students took notes of the conversations around each tabletop.



MARSH AND EDUCATION

Want to see

- Marsh walkway
- Open green space
- Viewing platform

Mixed Feelings

- Nature education center

Don't want to see

- Outdoor classroom

PARKING

Want to see

- Long term/short term fisherman only parking
- Parking garage/mixed use
- Green parking lots
- No parking on escape road
- More on street parking for residents
- New road to dissect mega block parking lot
- Parking hub
- Multi-use Uber/Lyft "que"
- Public transit center
- "OFF" site parking

Mixed feelings

- 3 level parking garage with storage for offseason

Don't want to see

- surface parking, solar carport
- traffic lights, two way traffic,
- outdoor classroom, adventure course, recreational boating

FISHING PORT

Want to see

- Fish market at recreational parking lot/processing
- Offshore seaweed farming (sugar kelp) (done in wintertime)
- Fisherman equipment store, recreational fishing as well (perhaps if it included nature type activities, birding supplies, canoes, snowshoes for winter)
- Museum
- Historic ship in water to explore – could go with museum?
- Promote/highlight commercial fishing could go with museum?

MAIN STREET

Want to see

- Uniform signage
- "hub" at center
- Shallow cove
- Bike path/bike lane/bike center
- Rooftop bar/restaurant
- Safety for bikers and pedestrians

Don't want to see

- Traffic lights
- Two way traffic *
- Food trucks

RECREATION

Want to see

- Museum
- Historic ship in water to explore
- Promote/highlight commercial fishing
- Nature trail/bike path
- Public green space/park

Don't want to see

- Adventure course
- Recreational boating

COMMERCE

Want to see

- Mixed use hotel
- Higher density development along Great Island Road
- Plaza at ferry terminal (mixed use and rooftop bar and storefront redesign)
(Food truck festival when parking lots are empty)

Mixed Feelings

- Food trucks

Don't want to see

- Surface parking
- Strip retail
- Street parking





DESIGN PROCESS

Design Goals

Workshop

Group One: “Resolve, Reconnect, Renew, and Rebuild”

Group Two: “Livable, Sustainable Port”

Group Three: “The Galilee Resiliency Project”

Design Goals

The class developed three master plans for the project site. While all three plans had separate designs, there were many similarities between them.

From the workshop sessions, the class understood the three main drivers for their designs.

1. Circulation
2. Parking
3. Open accessibility

Workshop



Work session with professionals:
Purpose: Motivation, Inspiration and Communication.

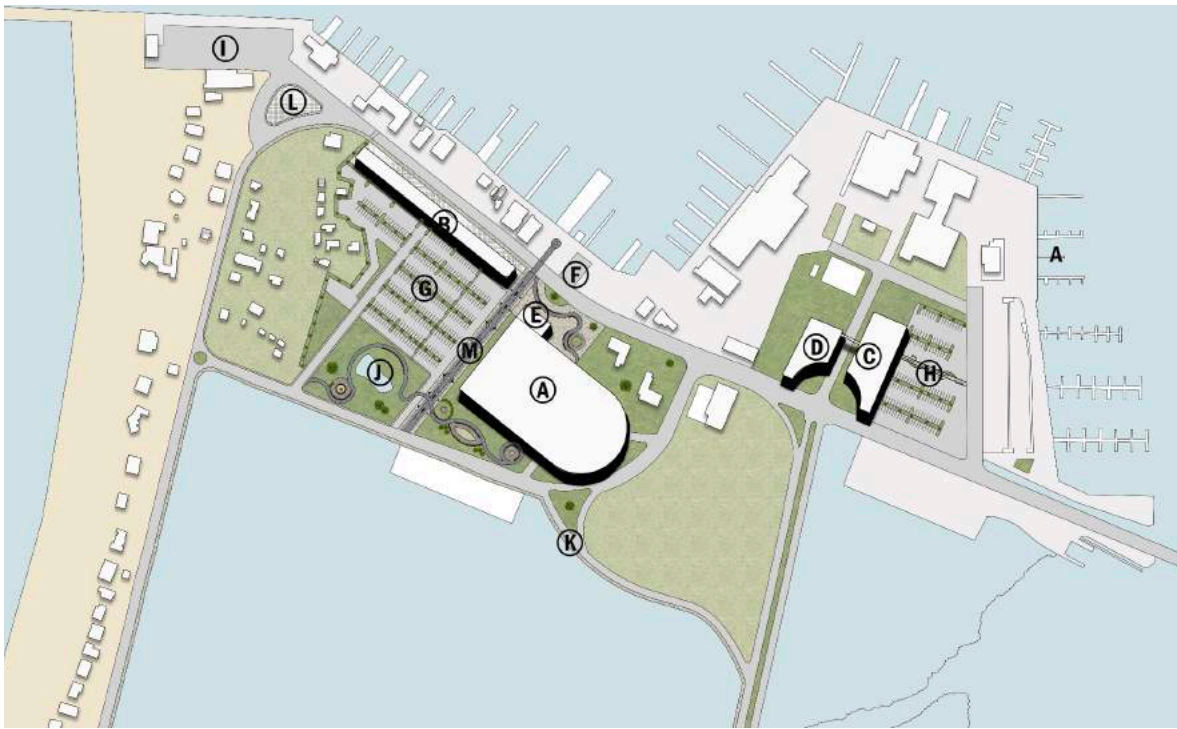
Master Plans

Resolve urban issues through nature
Reconnect with the town's fishing roots
Renew and protect existing attributes
Rebuild sustainably



GROUP ONE "Resolve, Reconnect, Renew, Rebuild"

GROUP TWO “A Livable, Sustainable Port”



Legend:

- A - Garage + DEM Office
- B - Mixed Land Use Hotel
- C - Fish Market
- D - Convention Center
- E - Block Island Ferry Ticket Area
- F - Drop-off for Block Island Ferry
- G - Sustainable Hotel Parking
- H - Fisherman Parking
- I - Beach Parking
- J - Lazy Walkway
- K - Bike Path
- L - Fountain
- M - Pedestrian Theme Park



GROUP THREE “The Galilee Resiliency Project”

Legend:

- A - Equipment Storage
- B - Processing Area
- C - Parking Garages
- D - Open Space
- E - Marsh Lookout
- F - Mixed-Use Hotel
- G - Promenade
- H - Connector Walkway
- I - Block Island Ferry Terminal
- J - Research Center
- K - George's Parking
- L - Proposed Seafood Festival

Parking in the Port

A multi-use parking structure was included in each group's design. Surface parking would be reallocated to the structure and remove existing impervious pavement parking lots to create opportunities for new development. The parking garage would also add an additional 500 parking spaces and increase overall parking by 13%. Solar panels incorporated into the roof of the parking garage would generate enough electricity to power 250 residential homes in Rhode Island and help the state achieve its aggressive goal of 100% renewable energy by 2030.

Group One's design included building a new restaurant with a rooftop patio in a portion of the parking structure. The rooftop patio will offer expansive and unobstructed views of the Galilee Bird Sanctuary and Salt Marsh. A green roof adjacent to the rooftop patio offers aesthetic value and a place to recreate for restaurant patrons. The green roof with a diverse plant palette will help absorb rainwater and reduce stormwater runoff and flooding and can improve biodiversity.



GROUP ONE "Resolve, Reconnect, Renew, Rebuild"



GROUP TWO "A Livable, Sustainable Port"



GROUP THREE "The Galilee Resiliency Project"

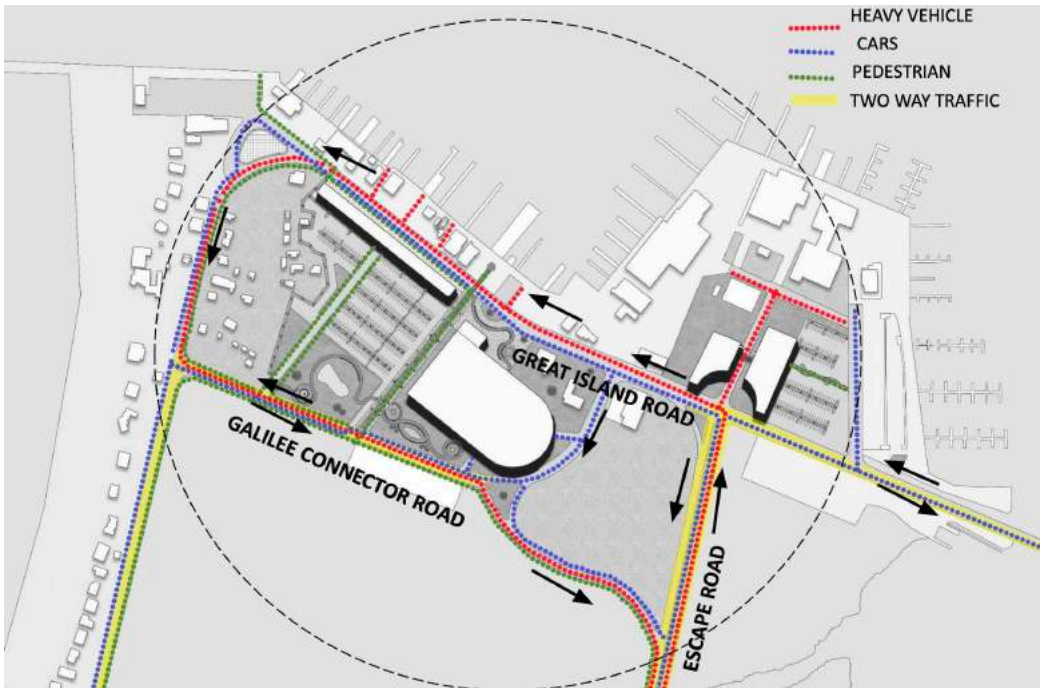


GROUP ONE: Perspective view of the Gailee Connector Road and the multi-functional parking garage

Circulation

A redesign of the circulation pattern within the Port of Galilee will allow for better movement throughout the site. One significant problem with the current layout is that traffic to the Block Island Ferry is considerable and leads to conflicts between trucks, cars, and pedestrians. Providing a separate access road for large tractor trailer trucks could decrease the congestion on Great Island Road. While focusing on a new circulation pattern, the main goals of the designs were creating easy movement and providing safety to pedestrians.

These new road layouts provide a significant change to the traffic flow through the port. Maintaining one-way traffic on Great Island Road, while also converting the Galilee Connector Rd. to a two-way street, will provide additional movement for cars passing between the Escape Road and Sand Hill Cove Road. Additionally, by allowing cars to turn left onto the Galilee Connector Road, several of the Block Island parking lots become accessible without having to travel down Great Island Road.



Three different proposed circulation schemes that show the possibilities of change for the port



Rhode Island Seafood

As home to Rhode Island's largest commercial fish port, Galilee brings in over 43 million pounds of seafood annually.² Developing a seafood market in the Port was one of the ideas suggested by stakeholders during the Visualizing Galilee exercise that would supply a place for commercial fishermen to sell their daily catch directly to consumers. This would provide an advantage for fishermen by allowing them to fetch a better price for their product, offer easy access to local seafood for residents and tourists, and help the environment by reducing trucking, packaging, and processing.

The ability to purchase seafood directly from fishermen in the Port of Galilee provides consumers the reassurance of knowing that their fish is fresh and local. This experience also creates connectivity between the food source and the consumer. Building this relationship will help ensure the prosperity of RI's commercial fishing sector which contributes over 3,100 jobs and \$538 million in gross sales.



Proposed fish markets
selling locally caught
seafood



Walkways and Open Space

The current walkability through the Port of Galilee is restricted to sidewalks with limited crosswalks. Additionally, the current layout and traffic patterns in the Port limit the ability of visitors to move safely throughout the area. During the summer months when congestion is at its peak, a daily crossing attendant directs traffic at the main crosswalk on Great Island Road to help pedestrians safely cross the street, most of whom are traveling to or from the Block Island Ferry. By creating a simple system of walkways through the site, visitors will have an added sense of safety and enjoyment while visiting.

The design plans offer a diverse system of pathways that allow visitors to interact more with the local community. From a lazy walkway weaving throughout open areas, to promenades situated along the buildings and water, Galilee will now be able to promote additional attractions for seasonal tourism.



Boardwalk connecting Great Island Rd. and Galilee Connector Rd.



Proposed marshwalk overlooking Galilee Salt Marsh



Proposed lazy walkway throughout the port

Final Thoughts

Final design plans were presented to stakeholders at a public meeting held on December 20, 2022, at the Narragansett Town Hall. Students presented an overview of each design plan and then were available for further discussion and questions. James Tierney and Mike Deluca from the Town of Narragansett and Dr. Jason McNamee from the RIDEM all conveyed their appreciation for the designs. Following this meeting, representatives from Narragansett and RIDEM have been in discussion on how to move forward with the Lighthouse Inn property as well as how to incorporate some of the design elements presented by the class into future development projects.

It is recognized, and was the full intent of the students, to present a variety of design options that included creative, functional, realistic, and financially viable options for redeveloping the Port and its streets, while enhancing and maintaining a powerful Rhode Island industry.

As a result, the students fully anticipate that while not every design feature will be incorporated into future development projects, the Town of Narragansett and RIDEM will collectively work together to implement the designs and features that meet the future goals and objectives of the Port of Galilee and its surrounding community.



References

1. Early History. Narragansett Indian Tribe <https://narragansettindiannation.org/history/early/>.
2. Rhode Island Department of Environmental Management Division of Marine Fisheries. Rhode Island Annual Fisheries: Report: 2021. 41 https://dem.ri.gov/sites/g/files/xkgbur861/files/2022-08/AnnualRpt_2021.pdf (2022).
3. Sproul, T. & Michaud, C. The Economic Impact of Rhode Island's Fisheries and Seafood Sector: (2018).
4. Becker, A., Ng, A. K. Y., McEvoy, D. & Mullett, J. Implications of climate change for shipping: Ports and supply chains. WIREs Clim.Change 9, (2018).
5. Becker, A., Wilson, A., Bannon, R., McCann, J. & Robadue, D. Rhode Island's Ports And Commercial Harbors: A GIS based Inventory Of Current Uses And Infrastructure. 177 https://www.crc.uri.edu/download/coast_ph_report.pdf (2010).
6. Galilee, Rhode Island - History. <https://www.woonsocket.org/galhist.html>.
7. Galilee, Rhode Island. Wikipedia (2021).
8. Galilee Bird Sanctuary - Rhode Island, US - Birding Hotspots. <https://birdinghotspots.org/hotspot/L775716>.
9. Costa, D. Personal Communication. (2022).
10. RI CRMC. Rhode Island Coastal Resources Management Council Shoreline Change Special Area Management Plan (SAMP). https://www.beachsamp.org/wp-content/uploads/2018/07/BeachSAMP_Ch2_Trends_061218_CRMCApproval.pdf (2018).
11. Port of Galilee Master Development Plan.
12. Town of Narragansett Comprehensive Plan: Baseline Report. 2392017).
13. Rhode Island Department of Environmental Management. Request for Proposals: For the development and use of up to 5.03 acres of land situated in the Port of Galilee. 51 (2021).
14. RI.gov. DEM Announces Next Steps for Redevelopment of Lighthouse Inn Property in State Port of Galilee. <https://www.ri.gov/> (2022).
15. RI.gov. DEM Pauses on Lighthouse Inn Redevelopment Plans to Conduct Hazardous Building Materials Assessment. <https://www.ri.gov/> (2022).

Photography

- Drone photos taken by Seth Boyce
- Workshop photos taken by AJ Anderson
- A. Photograph taken by Hayden McDermott
- B. Narragansett discusses housing limit - The Good 5 Cent Cigar (rhodycigar.com)
- C. Narragansett, RI Vacation Rentals: house rentals & more | Vrbo
- D. Town of Narragansett | Narragansett, RI 02882 (southcountyrri.com)
- E. 91 Point Judith Rd, Narragansett, RI 02882 - Salt Pond Shopping Center | LoopNet
- F. Photograph of Salty Brine Beach and Salt Marsh taken by Andrew DiPetrillo
- G. Photograph of Jimmy's Port Side Restaurant taken by Hayden McDermott
- H. Photograph of Boat's taken by Maria Church
- I. SCAPE's Living Breakwaters project begins in-water construction off of Staten Island (archpaper.com)
- J. Nature's Song - An Interactive Outdoor Music and Sound Museum | ASLA 2022 Student Awards
- K. Things to do in Chincoteague, recommendations by Miss Molly's Inn (missmollys-inn.com)
- L. My hometown's cycling lanes, 23km of beach-side 2-lane awesomeness : bicycling (reddit.com)
- M. Green Roofs and Solar Energy | ZinCo Green Roof Systems \ (zinco-greenroof.com)
- N. Chatham Pier Fish Market (toasttab.com)
- O. Photos taken by Hayden McDermott
- P. <https://narragansettindiannation.org>
- Q. https://www.allaboutbirds.org/guide/Clapper_Rail/overview
- R. https://www.allaboutbirds.org/guide/Lesser_Yellowlegs
- S. https://commons.wikimedia.org/wiki/File:Saltmarsh_sharp_tailed_sparrow.jpg
- T. Map made by Cameron Folgo
- U. Graphics made by Sristhi Jain
- V. Graphics made by Maria Church
- W. Photos by hayden McDermott
- X. Rhode Island Monthly
- Y. The Providence Journal
- Z. Eating with the Ecosystem