Gibson Park Resiliency Project

City of Revere – Riverside Neighborhood

October 18, 2023

FOR INTERPRETATION

Spanish interpretation is available for this meeting. Please select your preferred language option at the bottom of the screen by clicking on the globe symbol  and the language you would like to hear. (Mobile users: Tap the ellipses icon  and then "Language Interpretation.")

Optional: To hear only the interpreted language, click Mute Original Audio.

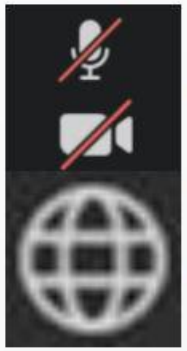
PARA LA INTERPRETACIÓN

Hay interpretación al español disponible para esta reunion. Seleccione la opción de idioma que preferiera en la parte inferior de la pantalla haciendo clic en el símbolo del globo  y el idoma en el que desea escuchar la audiencia.

Opcional: Para escuchar únicamente el idioma interpretado, haga clic en Mute Original Audio (Silenciar Audio Original).

ZOOM TIPS
CONSEJOS PARA ZOOM

Your controls should be available at the bottom of the screen. Clicking on these symbols activates different features:

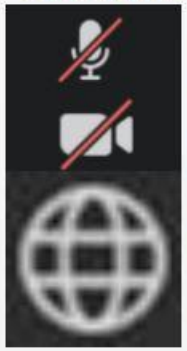


Mute/unmute

Turn video on/off

To select language/mute original

Los controles están disponibles en la parte inferior de la pantalla. Al hacer clic en estos símbolos se activin diferentes funciones:



Silenciar/hablar

Encender/apagar el video

Para cambiar el canal de audio entre español e inglés

Project Team

Elle Baker, Open Space and Environmental Planner

Frank Stringi, City Planner

McAllister Marine Engineering, LLC

John McAllister, Civil Engineer

Copley Wolff Design Group - Landscape Architecture

Sean Sanger and Abigail Derick

Collins Engineers- Marine Structural Engineering

Zach Jenkins

Design Lab Architects – Boathouse Architectural

Andrew Brookes, Sam Batchelor, and Rand Allison

LEC Environmental - Environmental Resources

Claire Hoogeboom

EKI Environment & Water, Inc. – Environmental

2020 MASTER PLAN

Revere Riverfront Master Plan

- Took place 2020-2021
- Community based
- Inspiration and guideline for this project
- Adopted by City Council

LOCUS

Project Includes Three City Parcels:

- Gibson Park, 1 Hayes Avenue
- Former North Shore Boatworks Property, 29 Thayer Avenue
- The length of the shoreline along Avenue
- Neighborhood is an Environmental Justice (EJ) Community

Photo by MME

Locus- Hayes, Thayer and Mills Avenue, Revere, MA
Base Map : MA GIS Ortholmagery

Existing Conditions of Project Area

Looking South from Gibson Park

Looking South from Northern Portion of the Park

PROJECT HISTORY

- The Project was developed from a several year-long public input process and has been identified as a priority by the City and the Residents of the Riverside Neighborhood. First identified during the 2020 Riverfront Master Plan process
- Residents stated three major concerns:
  - Persistent flooding in the area, particularly around high tides and heavy precipitation – Situation is exacerbated by climate change and sea level rise
  - Lack of formal access to the watersheet for community
  - Limited water-based recreational opportunities in the area, for all ages and abilities
- Project evolved from just resiliency at Gibson Park to expand along Mills Avenue as the three parcels are interdependent in terms of flood resiliency and risk reduction.

Flooding at Mills Avenue and River Avenue

Photo Credit: Loretta LaCentra

UPDATED LAYOUT

ADDRESSING FOUR KEY GOALS

- Creating Resiliency – Providing resiliency to the Neighborhood and the Park itself.
- Serving the Community – Allowing for activities for all users of the community.
- Addressing Historic High Tide Flooding –Provide a solution for the historic high tide flooding that occurs in the northern end of the Riverside neighborhood
- Remediating impacted soils remnant from industrial activities at the former North Shore Boatworks property

PARK DESIGN ELEMENTS

Recreational Opportunities

- Upgraded park features to benefit the local community and users
- Floating dock for non-motorized vessels to allow public access to watersheet
- Features to support a community rowing program
- Resiliency measures blended into park features with co-benefits
- Elevated boardwalk/deck to provide public access to watersheet and wonderful views
- Provides both active and passive recreation opportunities
- New multi-purpose natural turf field materials

PARK DESIGN

- Provides for both active and passive uses
- Use of nature-based solutions for resiliency
- Educational components
- Bring a vibrant asset to this community

PARK DESIGN

Multi-purpose field

FLOODING AND STORMWATER MANAGEMENT – NATURE BASED

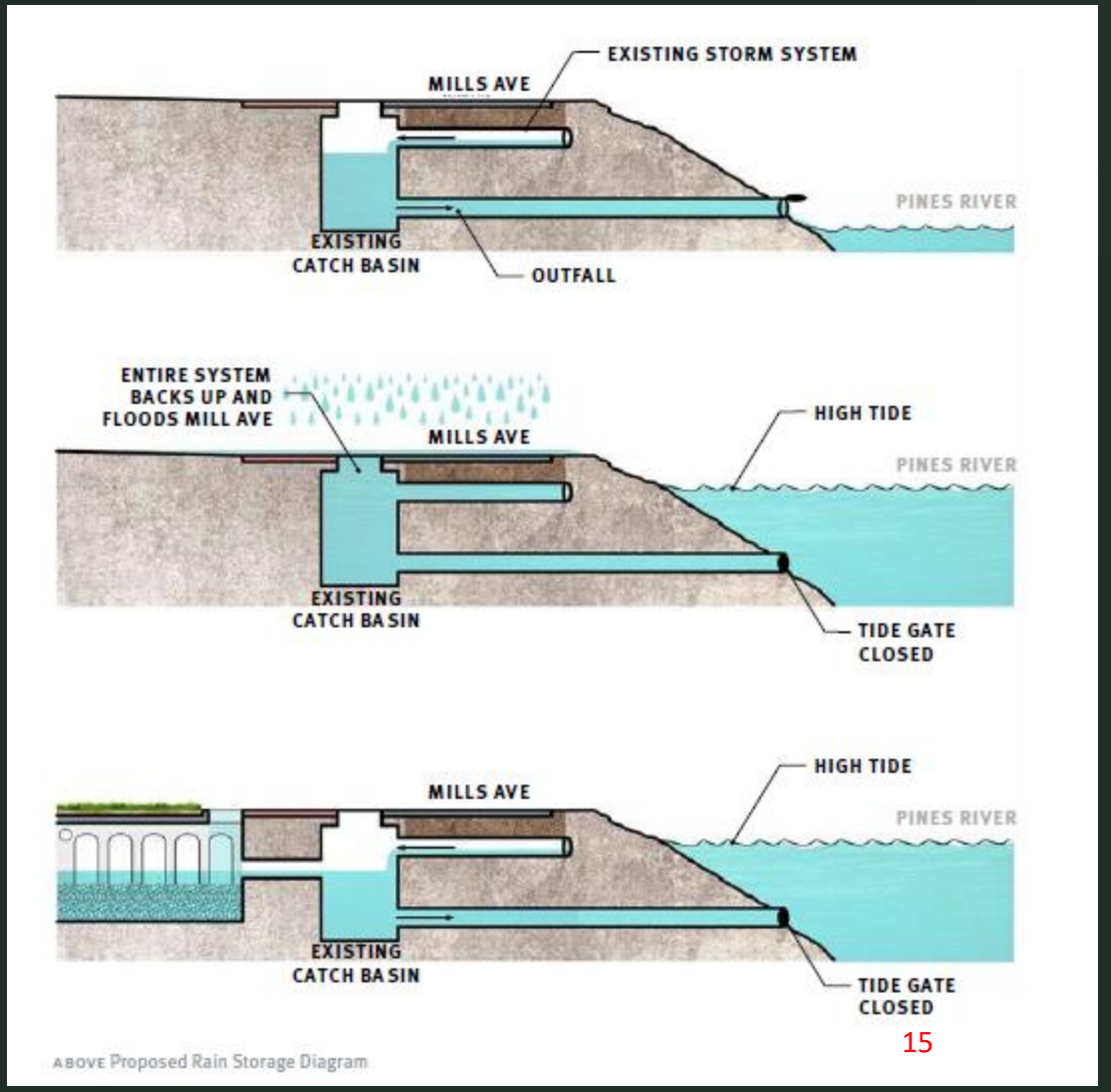
Innovative Design Features

- Off-site (from the neighborhood) – subsurface storage and recharge – will mitigate neighborhood flooding
  - Use the space under the multi-purpose field and new courts
  - Retain water during higher ends of the tidal cycle
  - Install dual sized pump chamber with controls to move water, one set of pumps for more common storm events, and a larger set for major storms – capture, treat and temporarily store stormwater
  - Provide surge-water storage for larger storm events
- On-site – decentralized low impact strategies
  - Raingardens and bioswales
  - Treat runoff close to the source, cleans the water, and slows it down
  - More aesthetic appeal versus a catch basin or detention basin
- Reduction of Impervious Area – 30% overall

FLOODING AND STORMWATER MANAGEMENT – NATURE BASED

Innovative Design Features

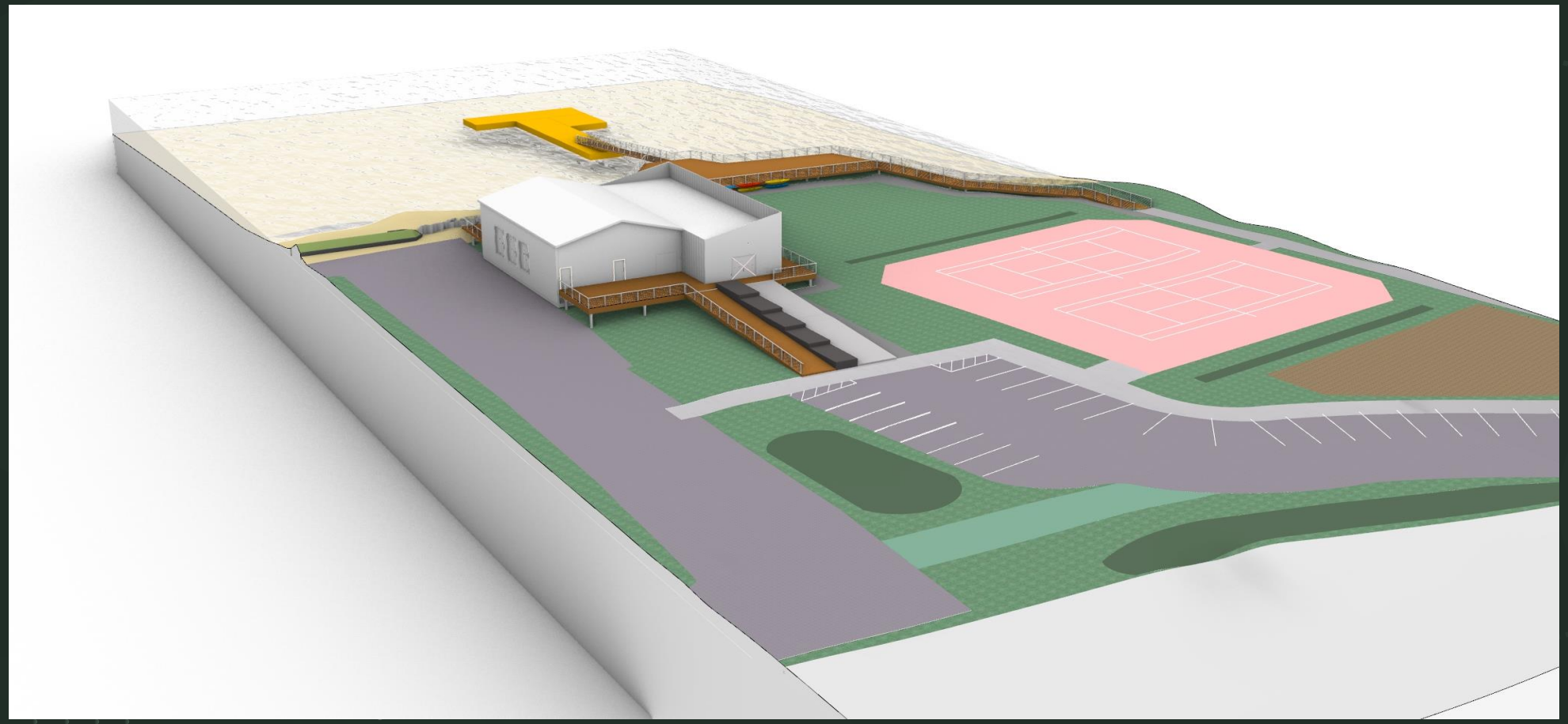
- Offline Storage – Allows the water to be contained underneath the field during the higher end of the tidal cycle when the outfalls are submerged.



ABOVE Proposed Rain Storage Diagram

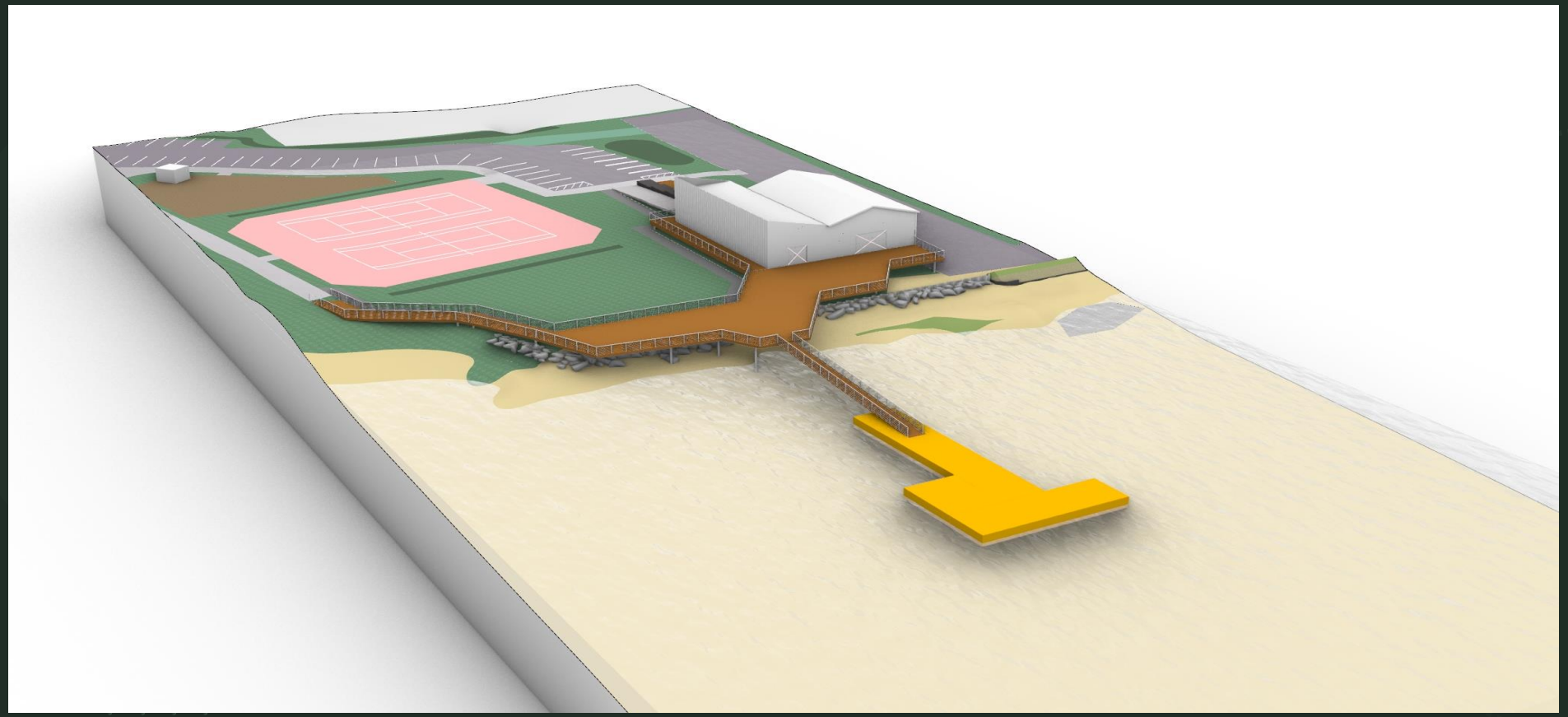
29 THAYER AVE SITE

- **Expand Gibson Park and recreational opportunities**
- **Rebuild the facility to support a Community Boating Center (Non-Motorized) including a community space and rowing facility**

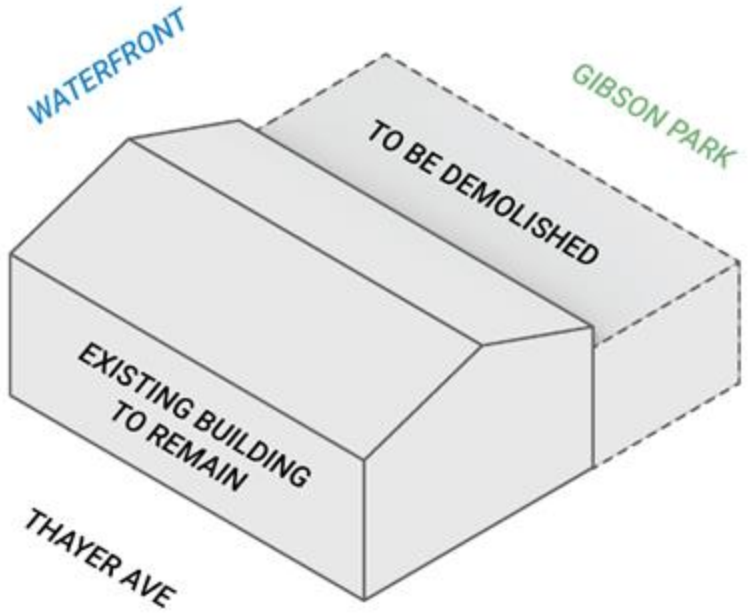


29 THAYER AVE SITE

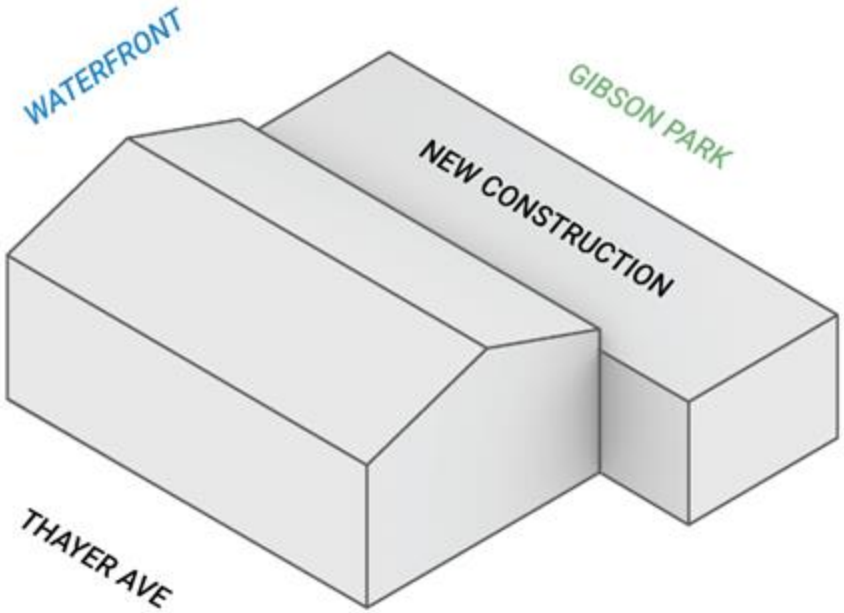
- **Provide public access to the watersheet**



BOATHOUSE FACILITY – BUILDING ALTERATIONS

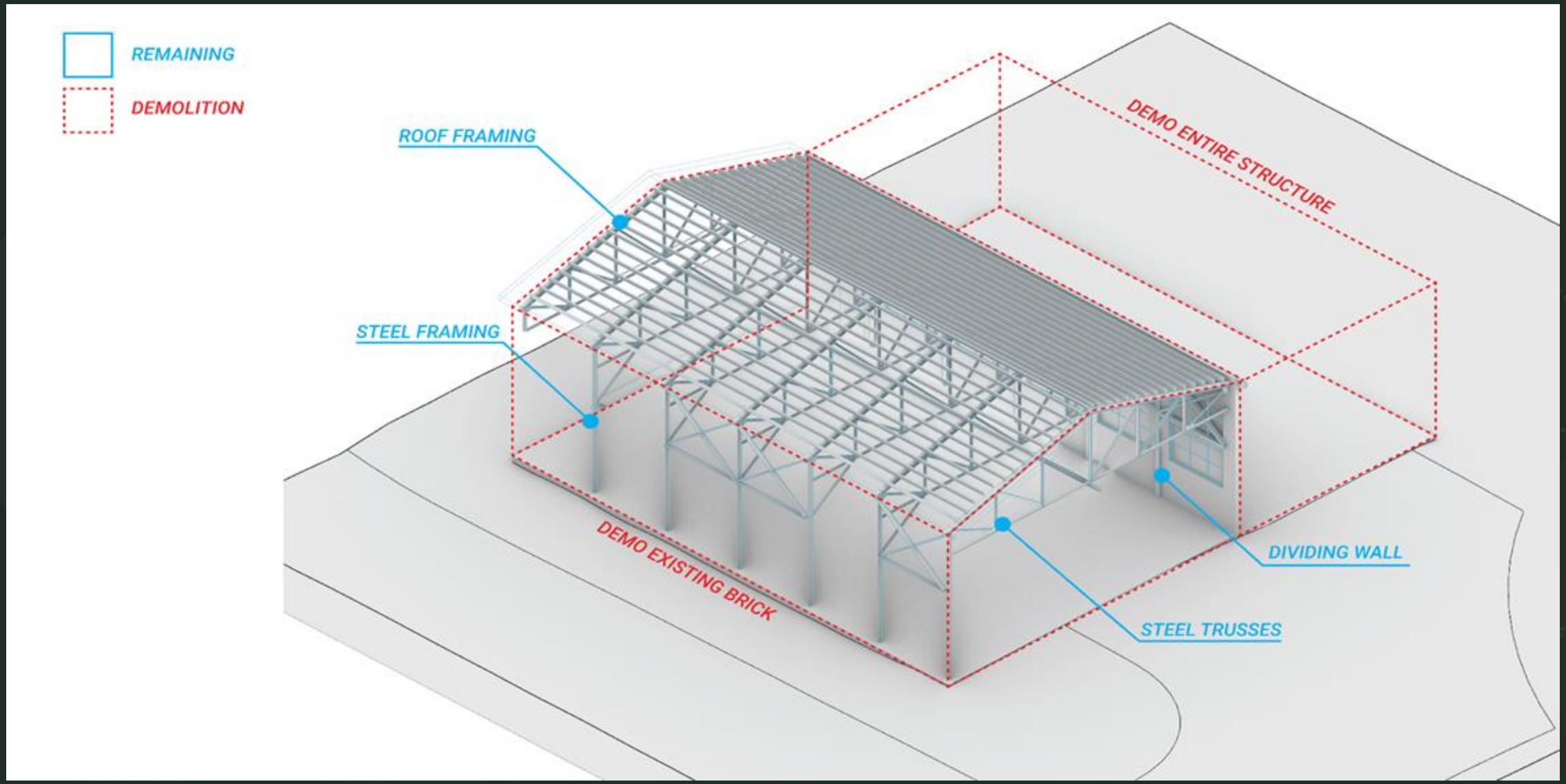


EXISTING CONSTRUCTION
4200 SQFT



NEW CONSTRUCTION
4200 SQFT

BOATHOUSE FACILITY



BOATHOUSE FACILITY

BOATHOUSE FACILITY

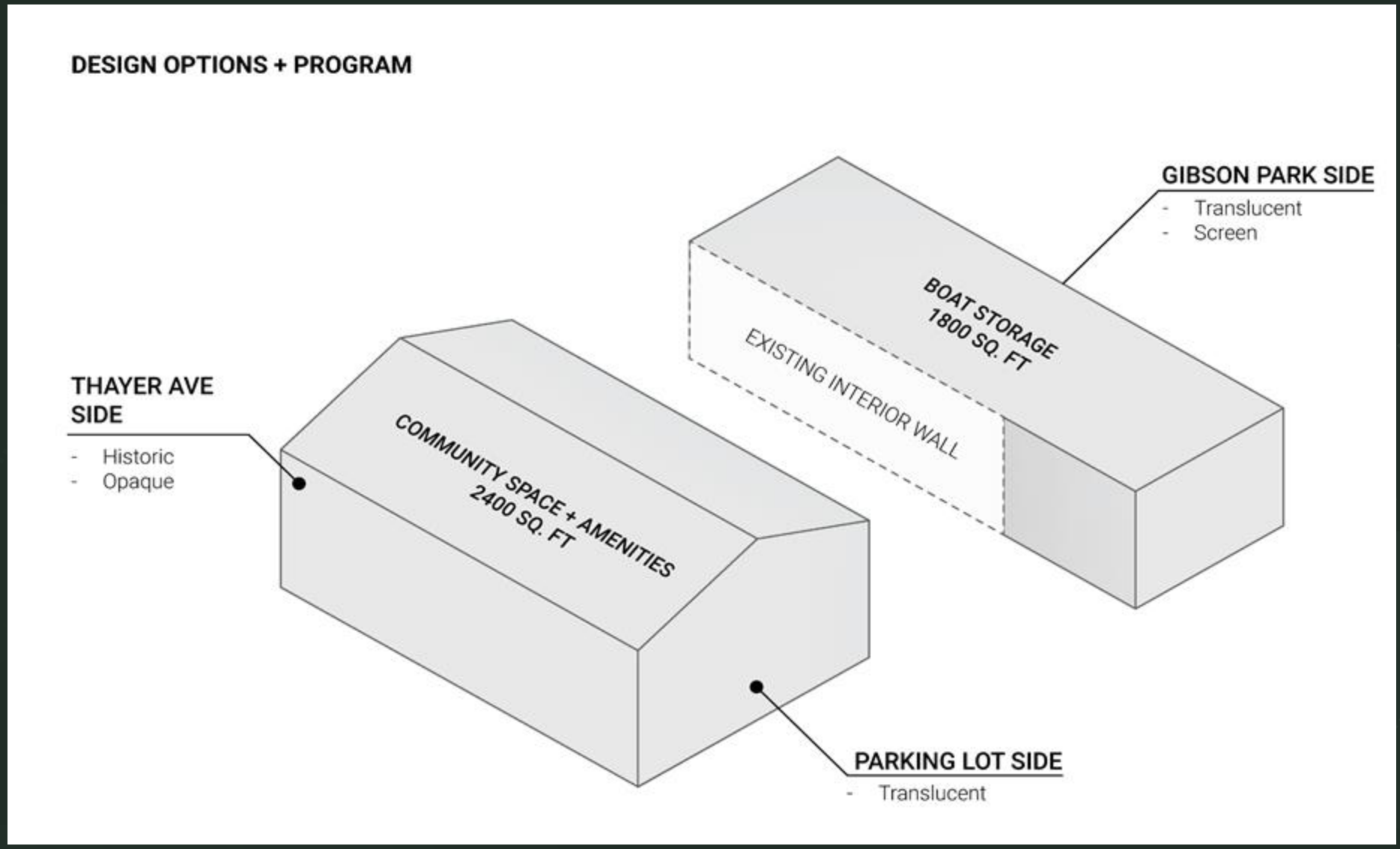
INTERIOR DESIGN LAYOUT

PROPOSED PROGRAM REQUIREMENTS

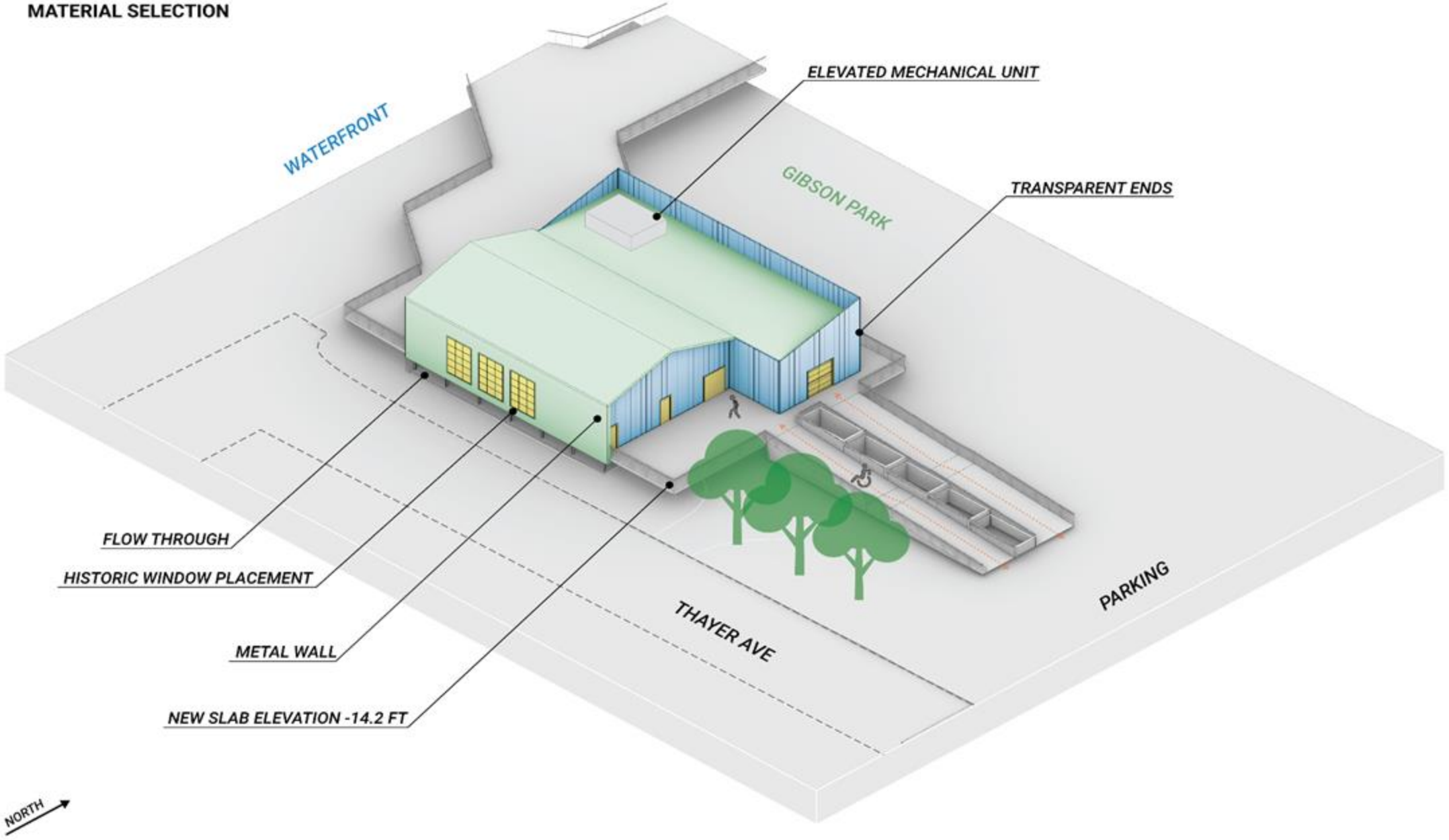
- ❑ FLEXIBLE COMMUNITY SPACE
  - ❑ 80-90 PERSON CAPACITY
  - ❑ FLEXIBLE SEATING AND WORKOUT EQUIPMENT
  - ❑ KITCHENETTE W/ STORAGE AND SINK
- ❑ STAFF OFFICE
  - ❑ SPACE FOR TWO DESKS, DOCUMENT STORAGE, ETC.
- ❑ BATHROOMS W/ STALLS
  - ❑ DIRECT ACCESS TO EXTERIOR
- ❑ CHANGING SPACE
- ❑ WALL OF LOCKERS
- ❑ BOAT STORAGE
  - ❑ WORKSHOP STATION
  - ❑ STORAGE FOR ROWING EQUIPMENT

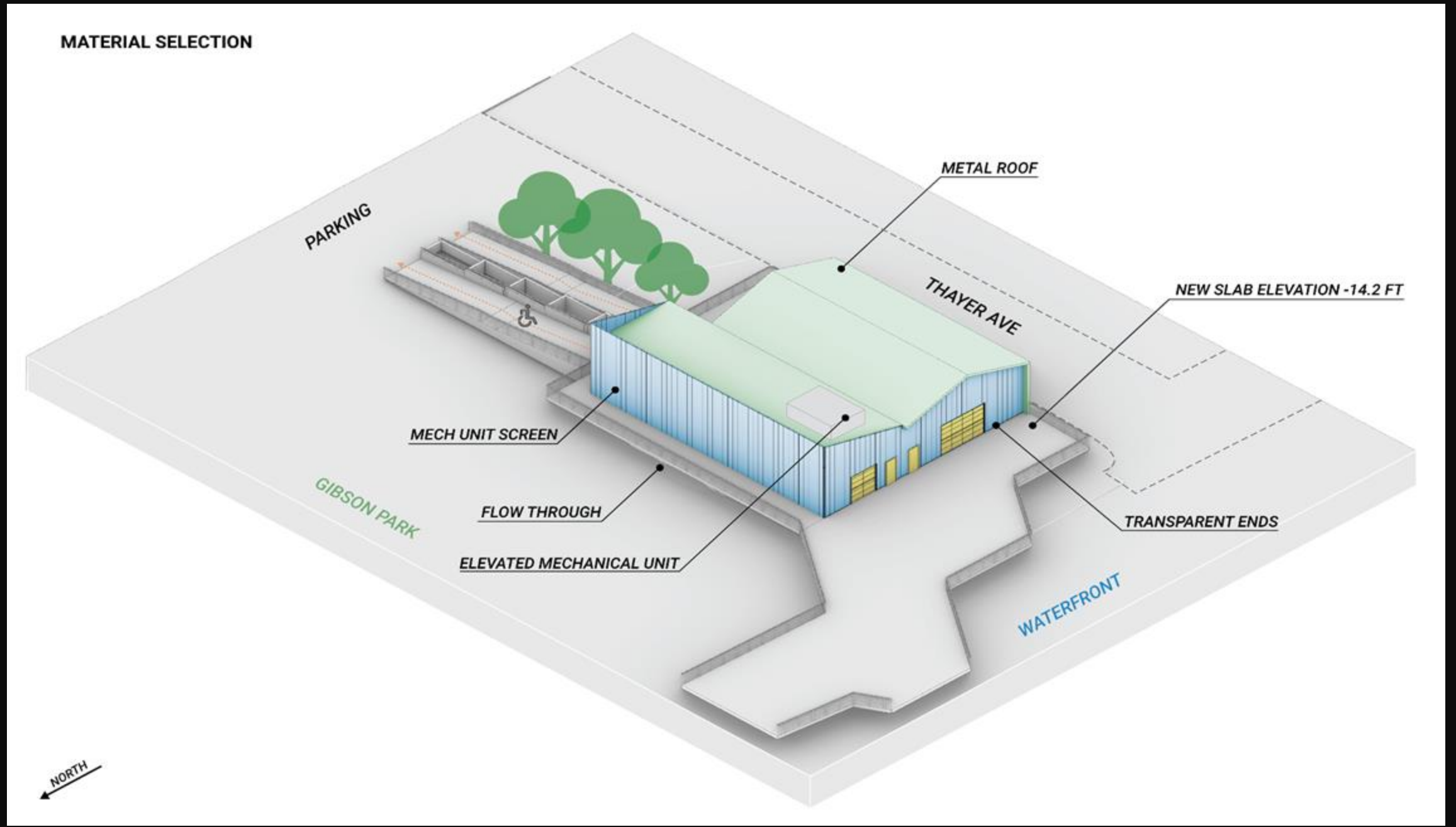
INTERIOR LAYOUT

BOATHOUSE EXTERIOR DESIGN ELEMENTS



MATERIAL SELECTION




MATERIAL SELECTION
METAL ROOF
PARKING
THAYER AVE
NEW SLAB ELEVATION -14.2 FT
MECH UNIT SCREEN
GIBSON PARK
FLOW THROUGH
TRANSPARENT ENDS
ELEVATED MECHANICAL UNIT
WATERFRONT
NORTH

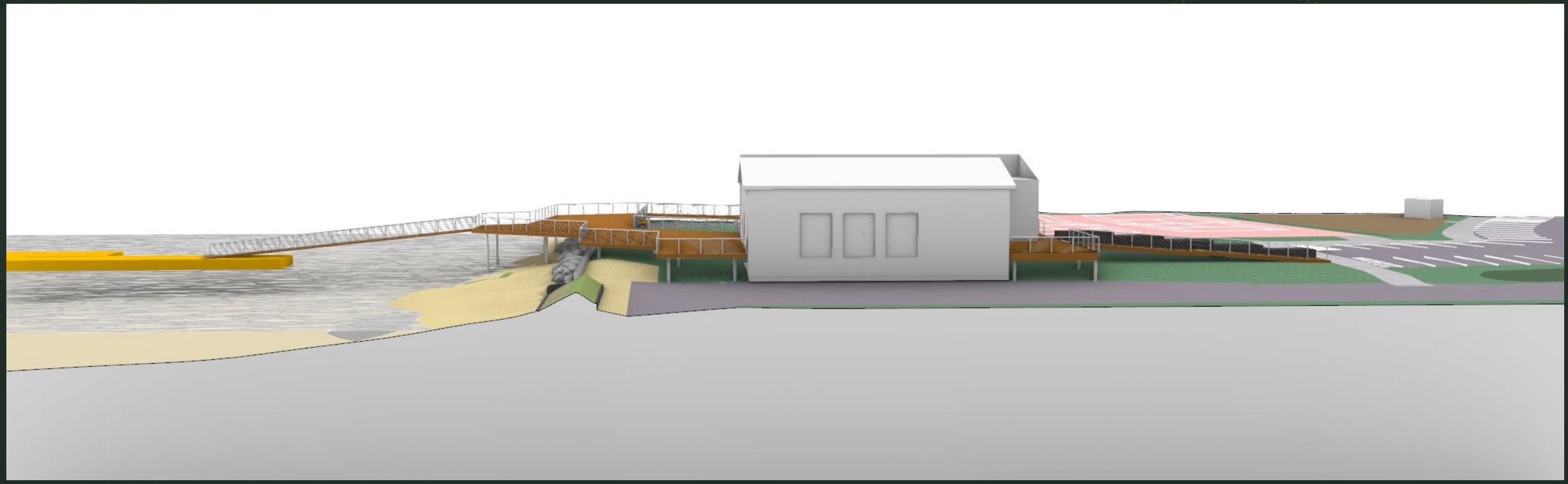

REVERE
COMMUNITY
BOATHOUSE

PUBLIC ACCESS TO THE RIVERFRONT

Public access point in Revere

Rowing and Kayak Launch

- **Low freeboard floats for crew skulls, canoes, paddle board and kayak launching**



Flooding

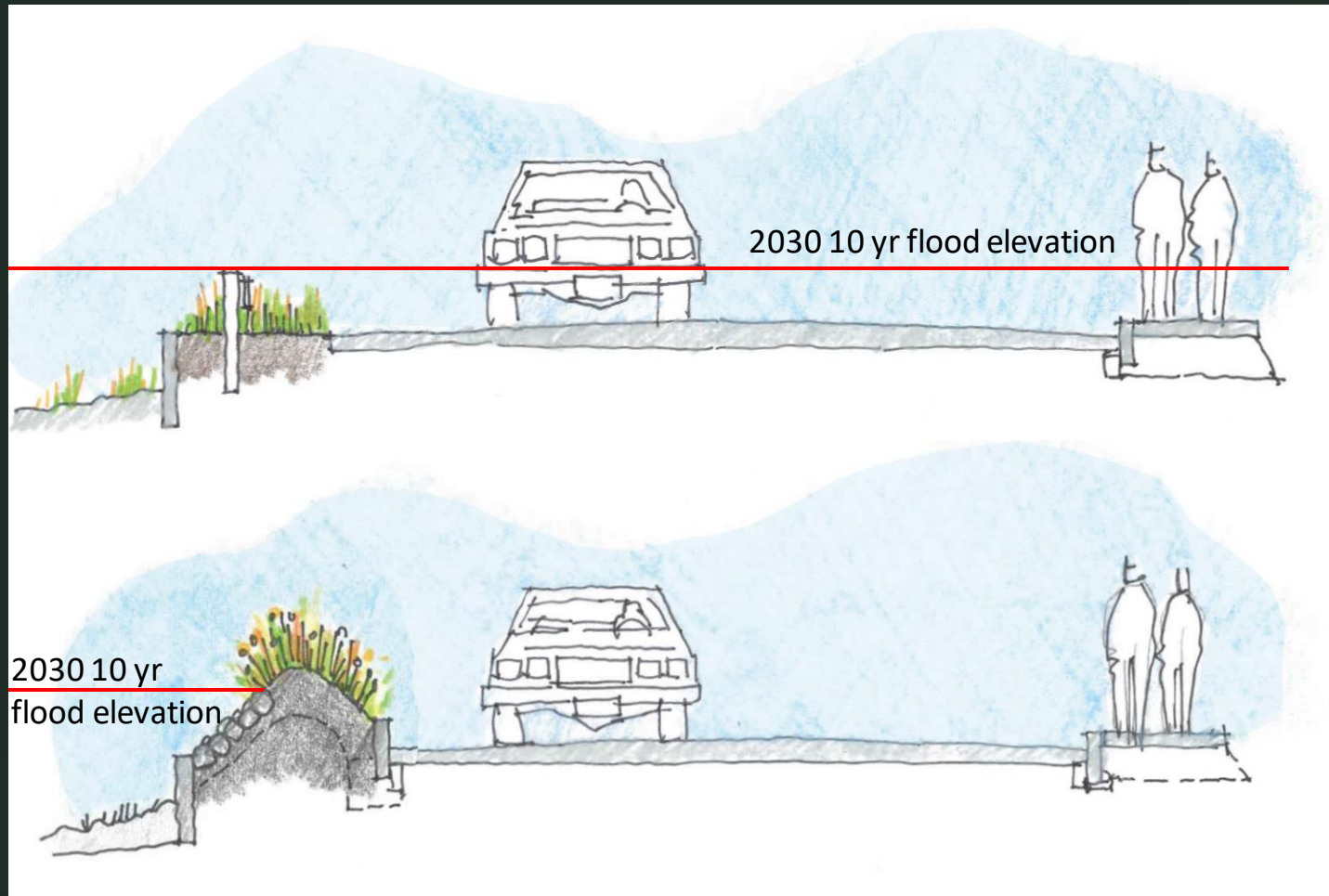
- December 23, 2022 storm event example
- Portions of Mills Ave and the Boatworks flood several times a year
- With climate change and global warming, it is only going to get worse with time

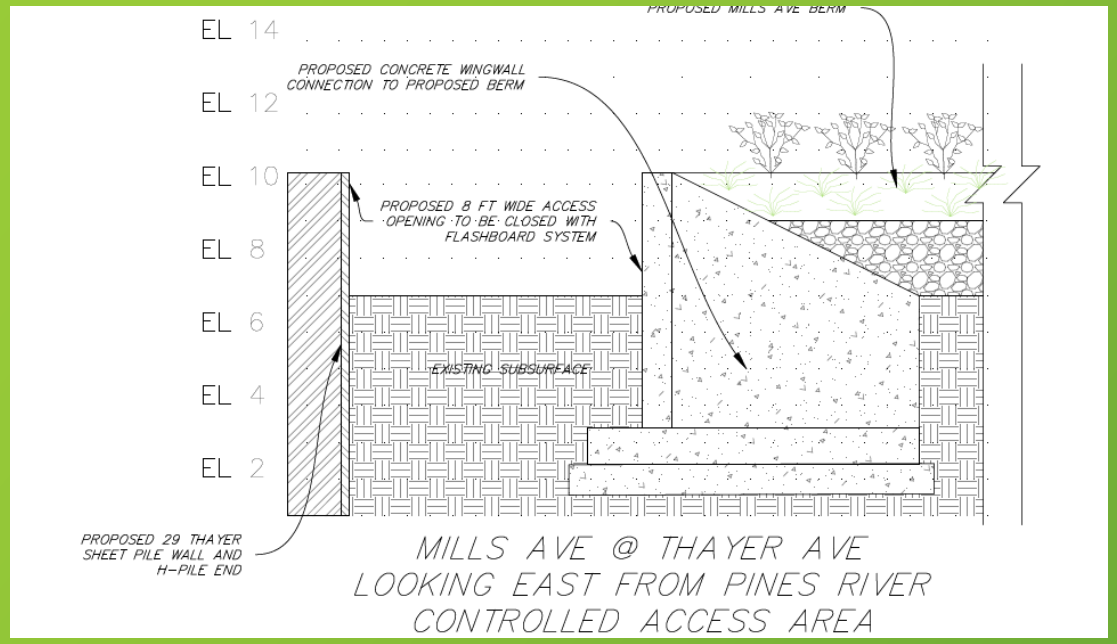
RESILIENCY STRATEGIES

CREATE COBBLE AND VEGETATED BERM ALONG MILLS AVENUE

- Designed to the MC-FRM 2030 10-year storm standard

Mills Ave – January 2022





RESILIENCY STRATEGIES

- One continuous berm along the Mills Ave shoreline will be most effective against flooding
- One access point @ Thayer and Mills will be controlled with a flashboard system
- Three other maintenance points will be reinforced but maintain berm form for increased flood risk reduction

ENVIRONMENTAL RESOURCES

- Wetland resource areas within the project area include:
- Land under the Ocean,
- Coastal Beach,
- Coastal Dune,
- Barrier Beach (including both Coastal Beach and Coastal Dune),
- Land Containing Shellfish,
- Fish Runs,
- Salt Marsh,
- BVW, Isolated Vegetated Wetland, and Riverfront Area.
- The entire project area is located within Land Subject to Coastal Storm Flowage and the Rumney Marsh Area of Critical Environmental Concern.

- The Rumney Marsh ACEC Designation has an exclusion along the Pines River stating "*The Pines River is predominantly a recreational boating area and taken within the context of the Saugus/Pines system, it is the more appropriate location to allow the development of new or expanded recreational boating facilities. "*

Resource Area Permitting Required

Revere Conservation Commission

Order of Conditions under the Local Wetland Bylaw

MEPA

ENF, DEIR, & FIER

Mass DEP

- Order of Conditions-Wetland Protection Act
- 401 Water Quality Certification
- Chapter 91 License
- Uniform Hazardous Waste Manifest

U.S. Army Corps of Engineers (ACE)

- Clean Water Act 404 Permit

US ACE

- Rivers and Harbors Act of 1899 Section 10

FEMA

- Floodplain determination

EPA

- Permit under the National Pollutant Discharge Elimination System (NPDES) program

CONSTRUCTION CONSIDERATIONS

- Construction Vehicle Traffic will need to use Mills Ave until the round-about is completed and during Mills Ave construction

- Specifications will limit speeds and time of passage

- 29 Thayer Ave Property will be the Staging Area
- Project could take up to 18 months to complete

OPEN DISCUSSION

Follow project updates at https://www.revere.org/ongoing-initiatives