



# North Weymouth Beach Connection

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General Public Informational Meeting  
Tuesday, February 27, 2018

Presenters:

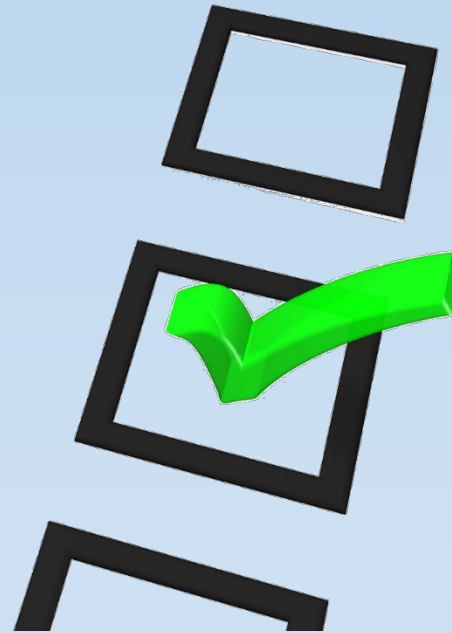
Robert Luongo, Planning & Community Development Director  
Jay Norton, Coastal Engineering Co., Inc.  
Roger Michniewicz, Coastal Engineering Co., Inc.  
Danielle Desilets, Kyle Zick Landscape Architecture





# Agenda

- Welcome & Introductions
- Project Background & Schedule
- Overview of Beach Connection
- Overview of Coastal Bank Restoration
- Next Steps
- Discussion







# Purpose of Tonight's Meeting

- Connection of the Town's two public saltwater beaches
- Construction of a pedestrian walkway
- Public access to waterfront, including ADA compliance
- Enhance recreational opportunities
- Restoration of coastal bank







# Project Background & Schedule

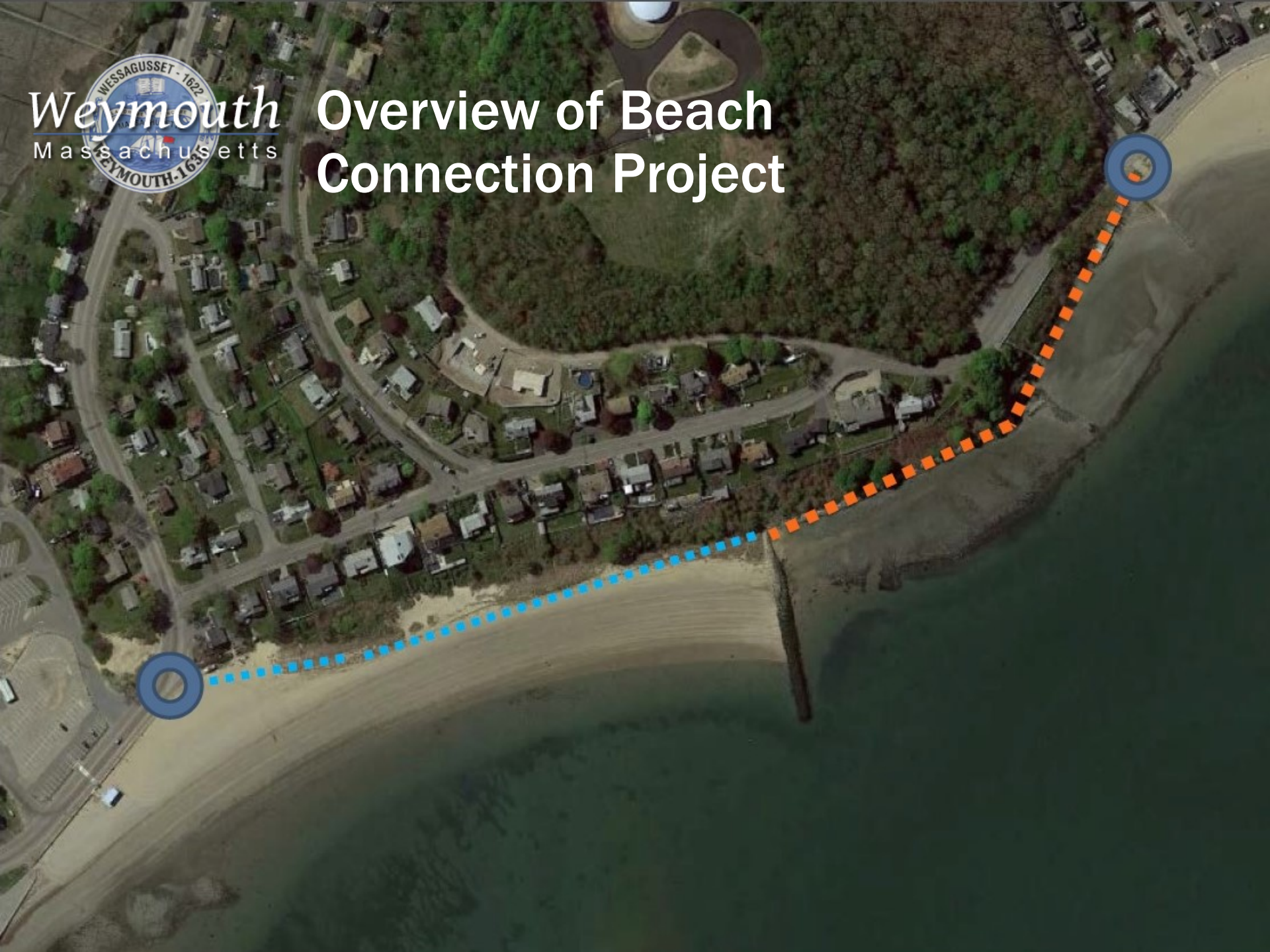
- Spring 2017 – Town awarded \$184,000 grant from Seaport Economic Council to design an accessible pedestrian beach connection.
- Awards are intended to stimulate local and state “blue economy” and protect/improve coastal assets.
- Summer 2017 – Coastal Engineering Co. contracted for feasibility, design, permitting, and construction oversight.







# Overview of Beach Connection Project







# Birds Eye Views





Weymouth  
Massachusetts

WESSAGUSSET - 1622  
WEYMOUTH - 1630

This is an aerial photograph of Weymouth, Massachusetts. The image shows a large harbor filled with numerous sailboats. A sandy beach is visible on the left side of the harbor. The town of Weymouth is situated on the right side of the harbor, with a dense forest of green trees. In the background, the city of Boston is visible across the water. The text 'Weymouth Massachusetts' is overlaid on the top left of the image, and a circular seal with the text 'WESSAGUSSET - 1622' and 'WEYMOUTH - 1630' is also present.









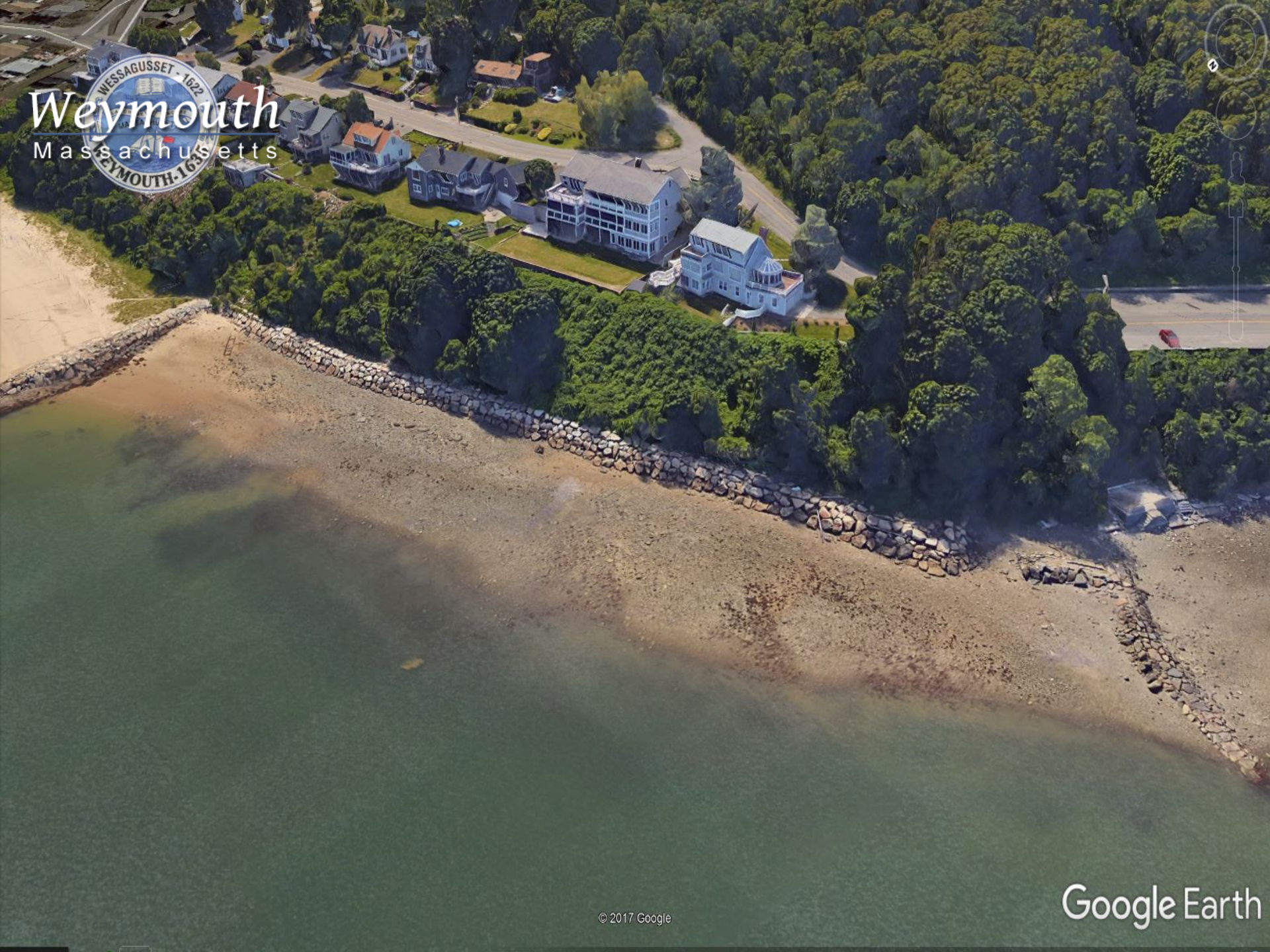
© 2017 Google

Google Earth













# Revetment

- Construct new revetment using existing and new “rip rap” for stability.
- Revetment will include built-in granite stairs to beach.
- Stair access to beach is proposed in two areas.
- Revetment will also address erosion issues, protection of public parking and Town infrastructure



Weymouth  
Massachusetts







## Existing damaged revetment





## Existing revetment and rocky intertidal shore

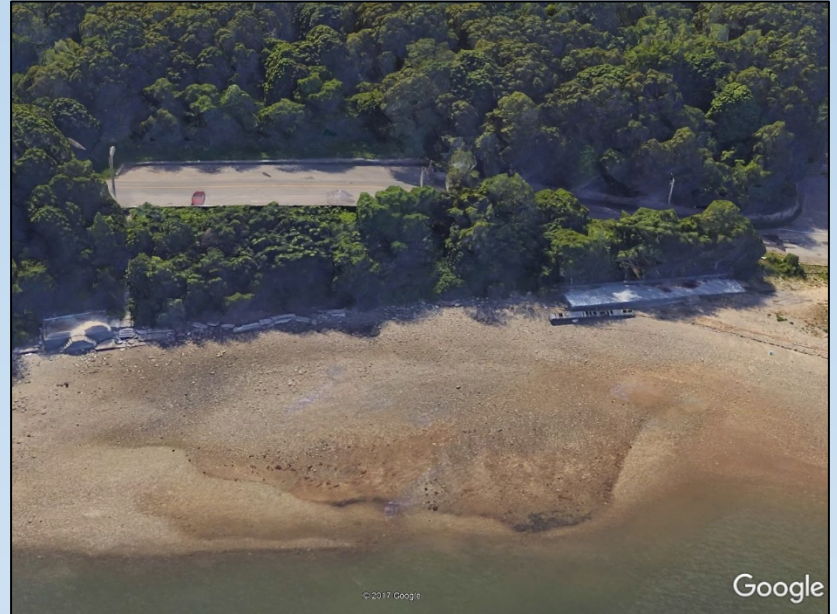






# Proposed Boardwalk

- Remove existing concrete foundations in the intertidal zone. Re-occupy footprints for gathering areas
- Remove debris, clean up shoreline
- Construct concrete piers for structural support of new boardwalk.
- Construct timber boardwalk that is ADA compliant.







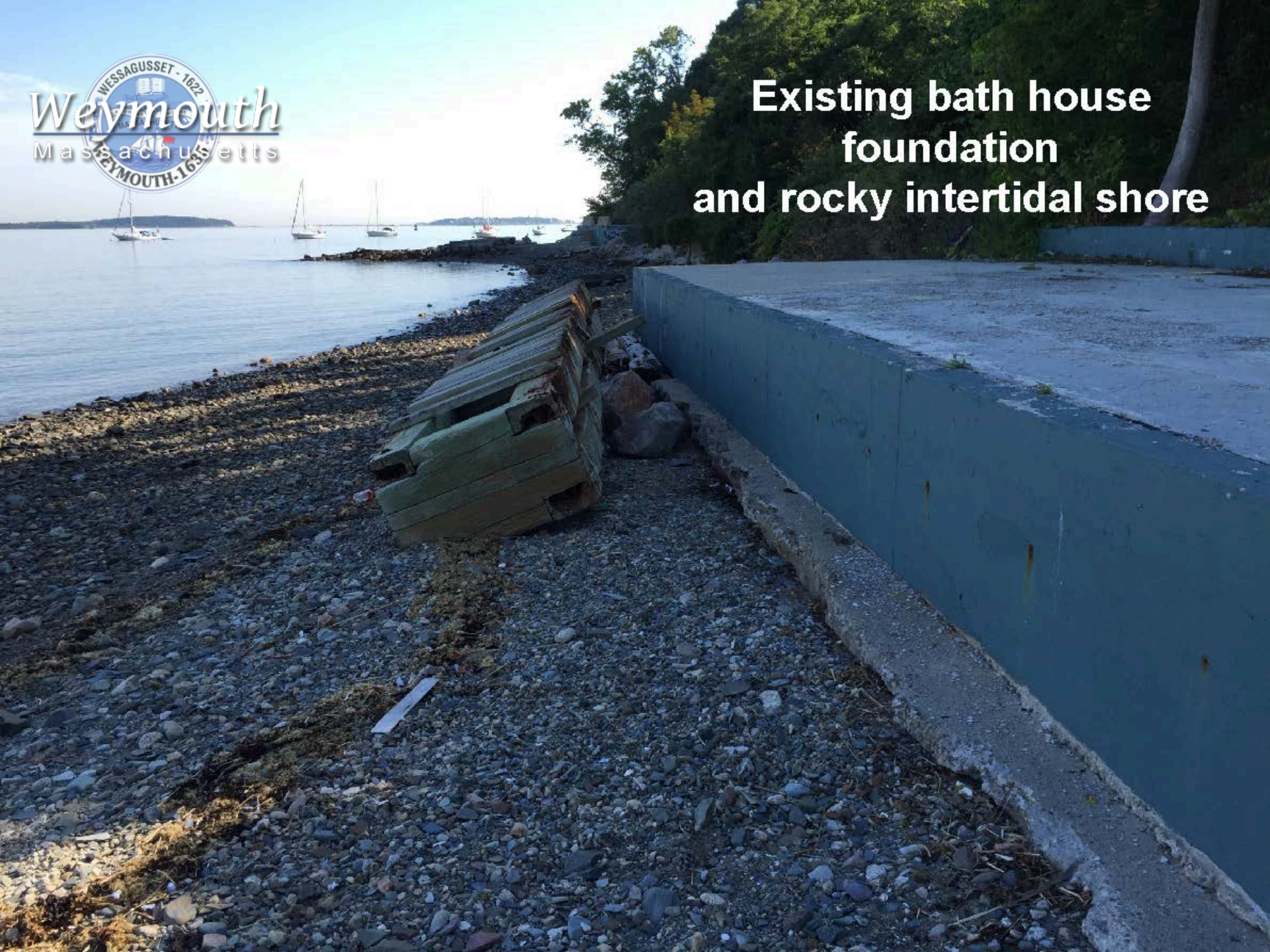
# Span of Proposed Boardwalk







**Existing bath house  
foundation  
and rocky intertidal shore**





# Old bathhouse foundation







## Walkway







## Alignment





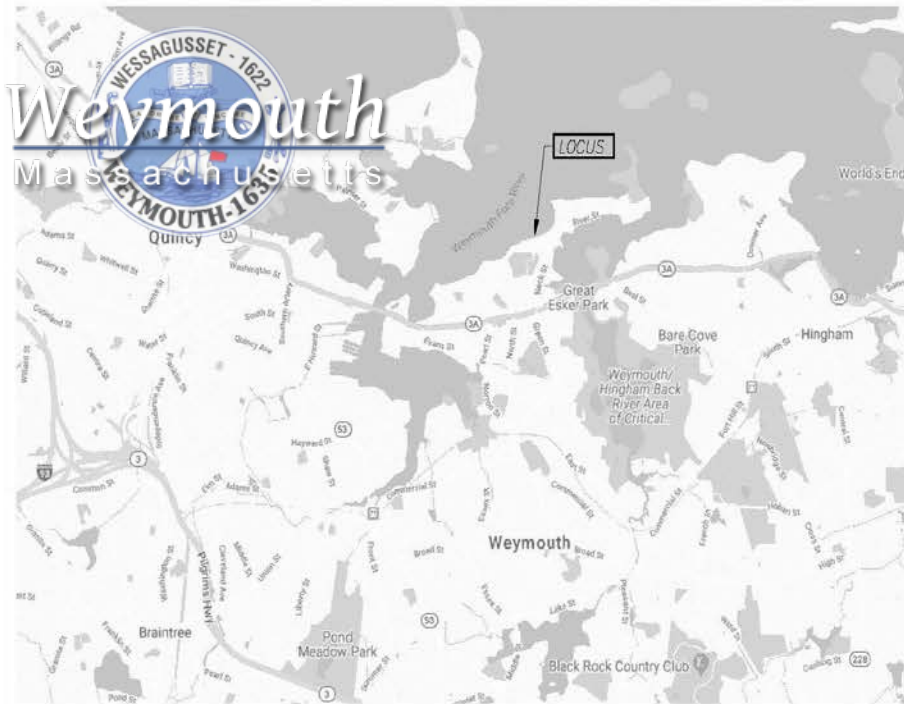


# Limits of Boardwalk

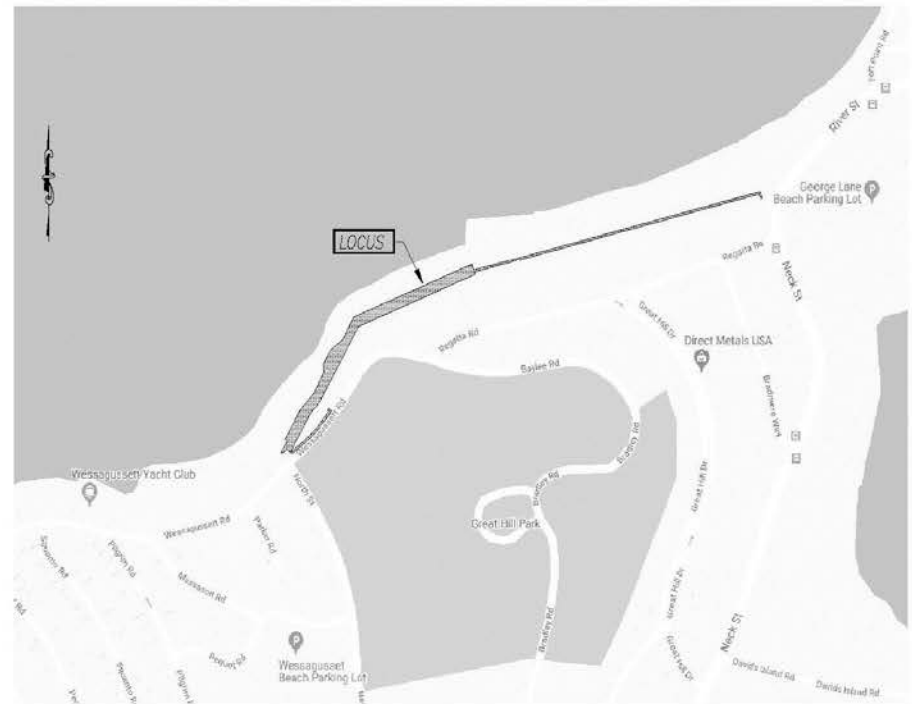
**Existing groin between the  
sandy coastal beach and the  
rocky intertidal shore**







MASSACHUSETTS  
SCALE 1" = 2500'



MASSACHUSETTS  
SCALE 1" = 200'

# PROPOSED SITE DEVELOPMENT PLAN TOWN OF WEYMOUTH WESSAGUSETT ROAD, REGATTA ROAD AND RIVER STREET 12-18-17

**CIVIL ENGINEER:**  
COASTAL ENGINEERING CO., INC.  
260 CRANBERRY HIGHWAY  
ORLEANS, MASSACHUSETTS 02653  
(508) 255-8511

**APPLICANT AND DEVELOPER:**  
NAME  
ADDRESS  
ADDRESS

**OWNER:**  
NAME  
ADDRESS  
ADDRESS

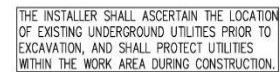
## DRAWING INDEX

C3.2.1 OVER VIEW  
C3.2.2 SITE PLAN  
C3.2.3 LIGHTING PLAN  
C3.2.4 SITE DETAILS  
C3.2.5 SITE DETAILS

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PLAN BOOK 204, PAGE 1280

BASE PLAN PREPARED BY:  
JAMES W. SEWELL COMPANY  
136 CENTER STREET  
P.O. BOX 433  
OLD TOWN, ME. 04468  
PHONE 207-827-4456

BASED UPON AERIAL IMAGERY PERFORMED IN  
MAY 2017

FLOOD NOTE:

FLOOD ZONES VE (EL. 15), VE (EL. 16),  
VE (EL. 18), VE (EL. 20) AND AE (EL. 12)  
AS SHOWN ON FEMA FIRM PANEL  
825021C0089F  
EFFECTIVE: JUNE 9, 2014

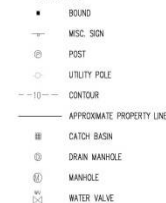
DATUM NOTE:

ELEVATIONS SHOWN HEREON ARE BASED  
ON THE NORTH AMERICAN VERTICAL  
DATUM 1988 (NAVD 1988)

MHW EXTRAPOLATED FROM  
BOSTON AND DUXBURY  
NOAA TIDE SHEETS

LEGEND

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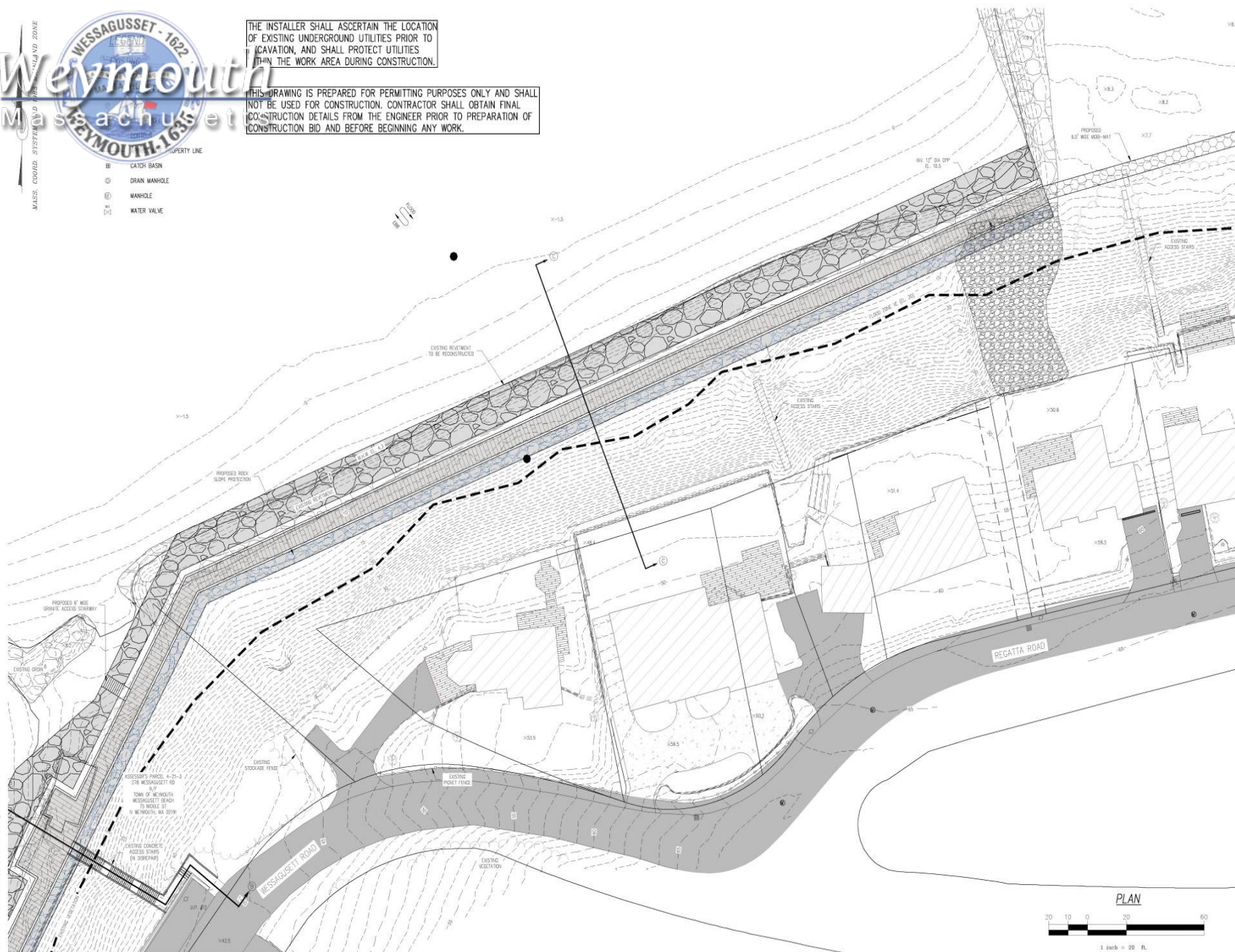
1 OF 6 SHEETS  
PROJECT NO. C18729







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1 inch = 20 ft.



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**DRAFT**

| PROJECT      | TOWN OF WEYMOUTH         | Weymouth, MA |
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| REGATTA ROAD | PLAN SHOWING PROPOSED    |              |
| SHEET TITLE  | SITE IMPROVEMENTS AREA 2 |              |

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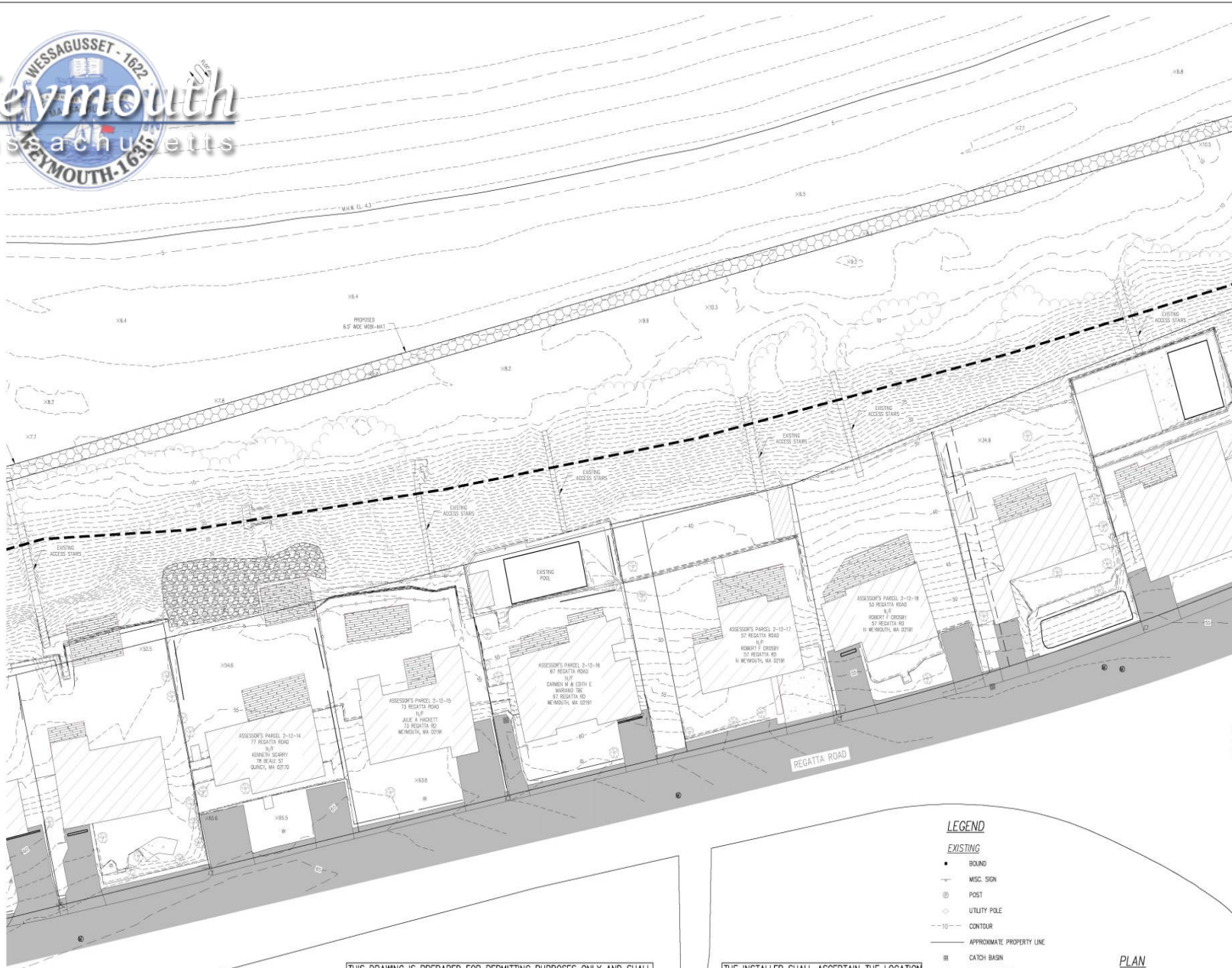
3 OF 6 SHEETS

PROJECT NO. C18729.00





MASS. COAST. SYSTEMS ZONE



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THE INSTALLER SHALL ASCERTAIN THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION, AND SHALL PROTECT UTILITIES WITHIN THE WORK AREA DURING CONSTRUCTION.

**LEGEND**

**EXISTING**

- BOUND
- MISC. SIGN
- POST
- UTILITY POLE
- CONTOUR
- APPROXIMATE PROPERTY LINE
- CATCH BASIN
- DRAIN MANHOLE
- MANHOLE
- WATER VALVE



COASTAL engineering co.

200 Century Hwy. Suite 200, Weymouth, MA 02193

TEL: 781-929-1100 FAX: 781-929-1101

WWW.COASTAL-ENG.COM

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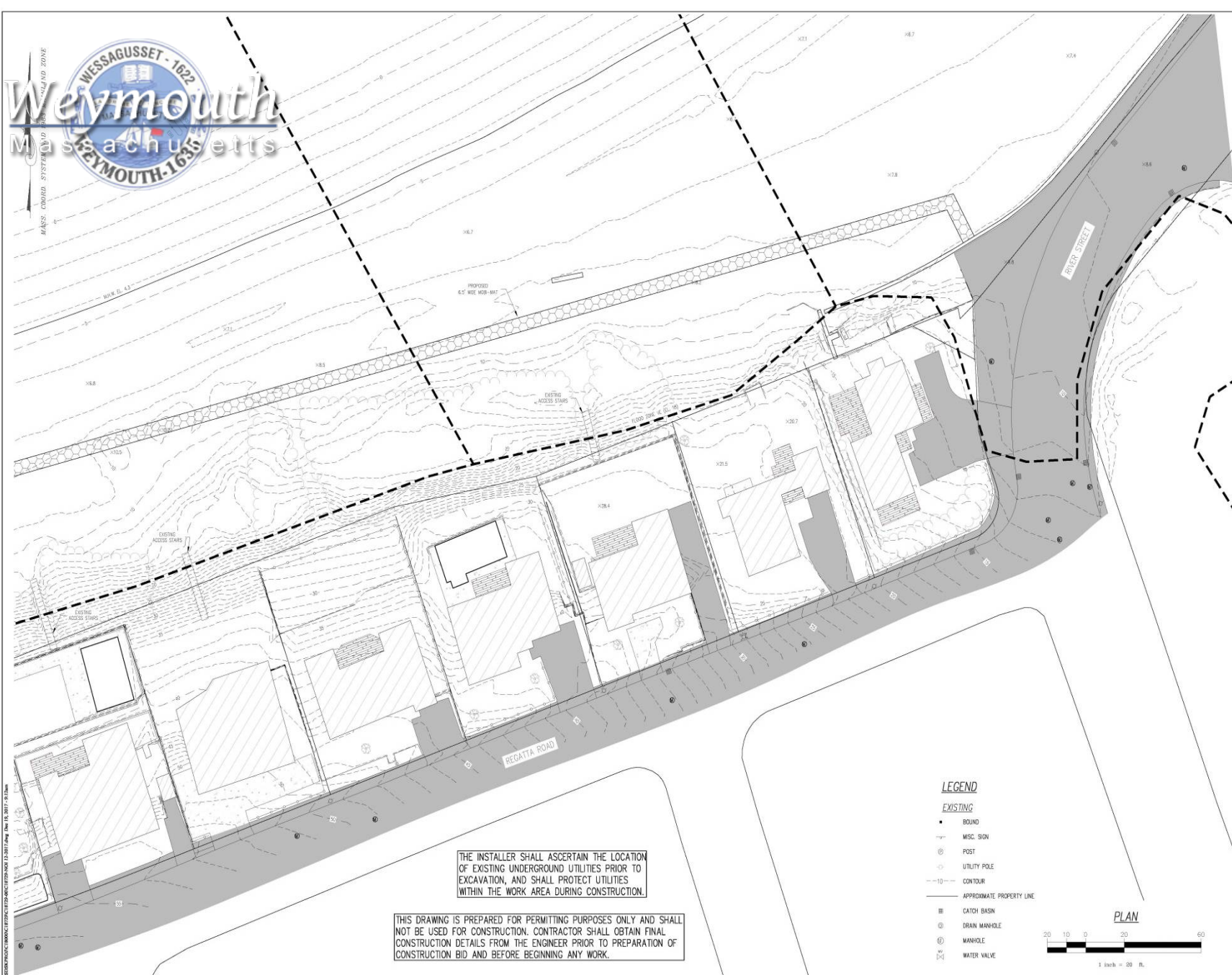
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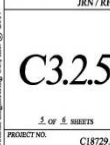
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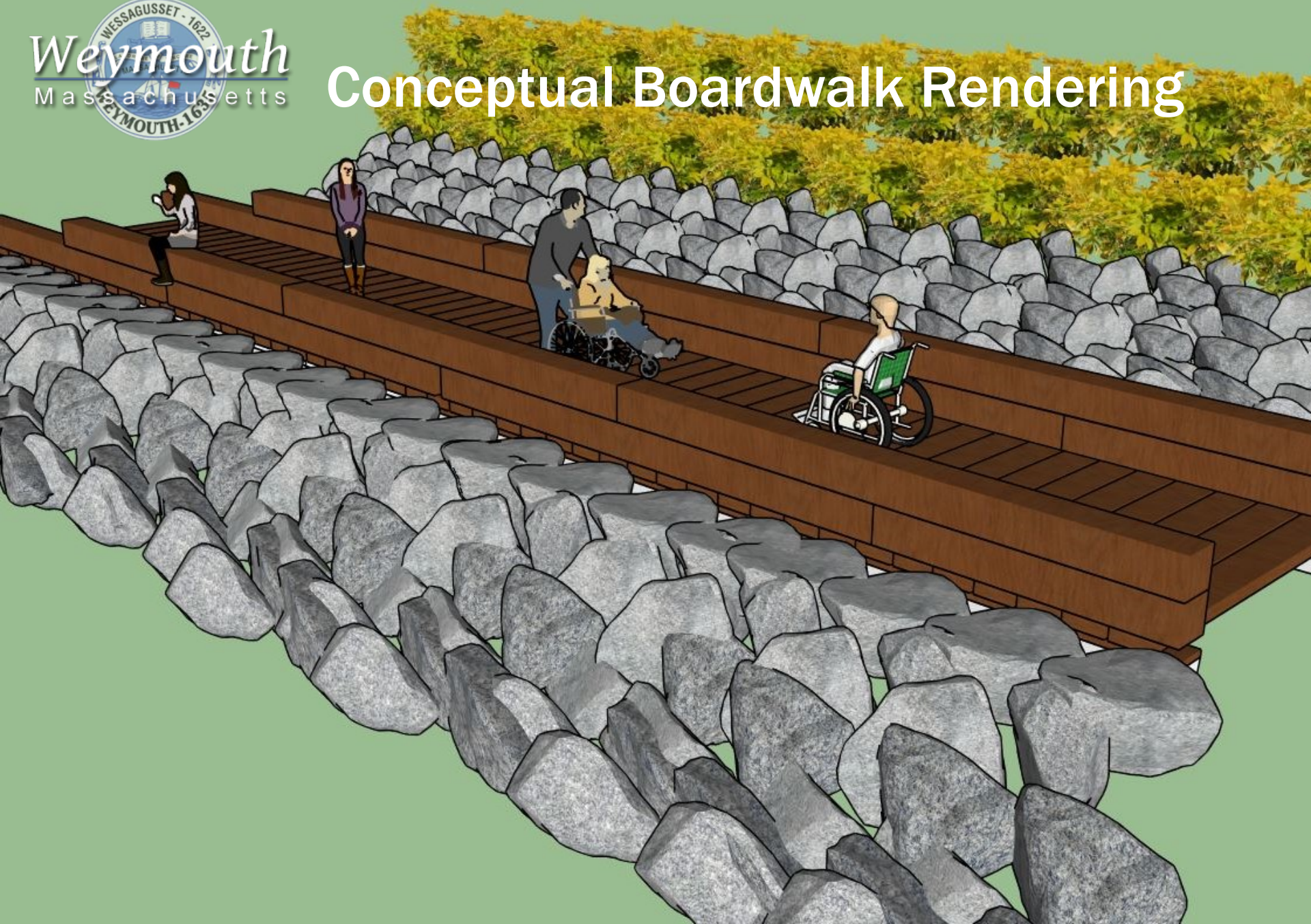
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# Conceptual Boardwalk Rendering











# Proposed Beach Mats

- Beach mats are proposed along existing sandy coastal beach.
- Mats are accessible, durable, and seasonal.
- Project will address erosion and provide beach grass restoration.







# Span of Proposed Beach Mats



Jackknife Ledge





**Existing sandy coastal beach**



## Alternative walkway: beach mats





**Beach grasses**







# Proposed Concrete Stairs

- Existing stairs are in poor condition.
- Replace existing stairs with new pre-cast concrete staircase.

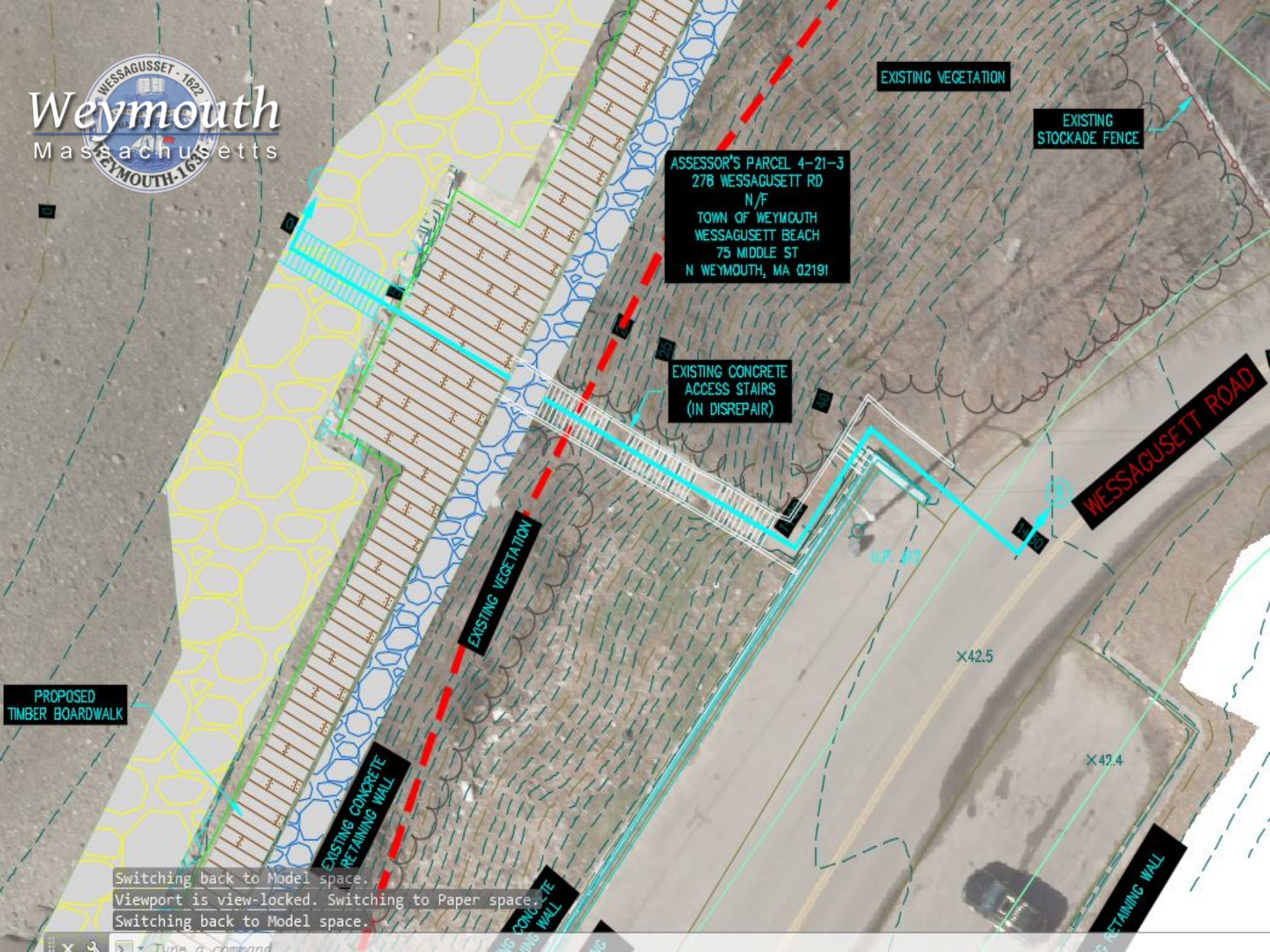




**Existing concrete stairs  
to be repaired**







EXISTING VEGETATION

EXISTING STOCKADE FENCE

ASSESSOR'S PARCEL 4-21-3  
27B WESSAGUSETT RD  
N/F  
TOWN OF WEYMOUTH  
WESSAGUSETT BEACH  
75 MIDDLE ST  
N WEYMOUTH, MA 02191

EXISTING CONCRETE  
ACCESS STAIRS  
(IN DISREPAIR)

WESSAGUSETT ROAD

EXISTING VEGETATION

EXISTING CONCRETE  
RETAINING WALL

PROPOSED  
TIMBER BOARDWALK

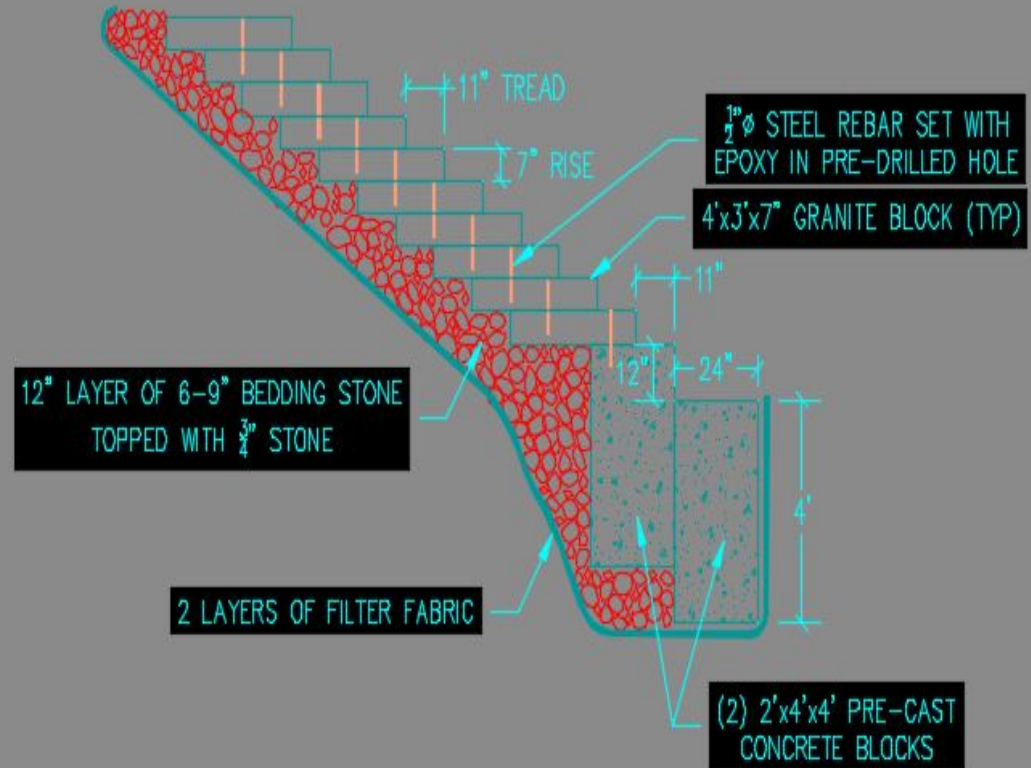
X42.5

X42.4

RETAINING WALL

Switching back to Model space.  
Viewport is view-locked. Switching to Paper space.  
Switching back to Model space.





## GRANITE STEPS DETAIL

SCALE: 1" = 5'









# Proposed Sidewalk and Accessible Parking

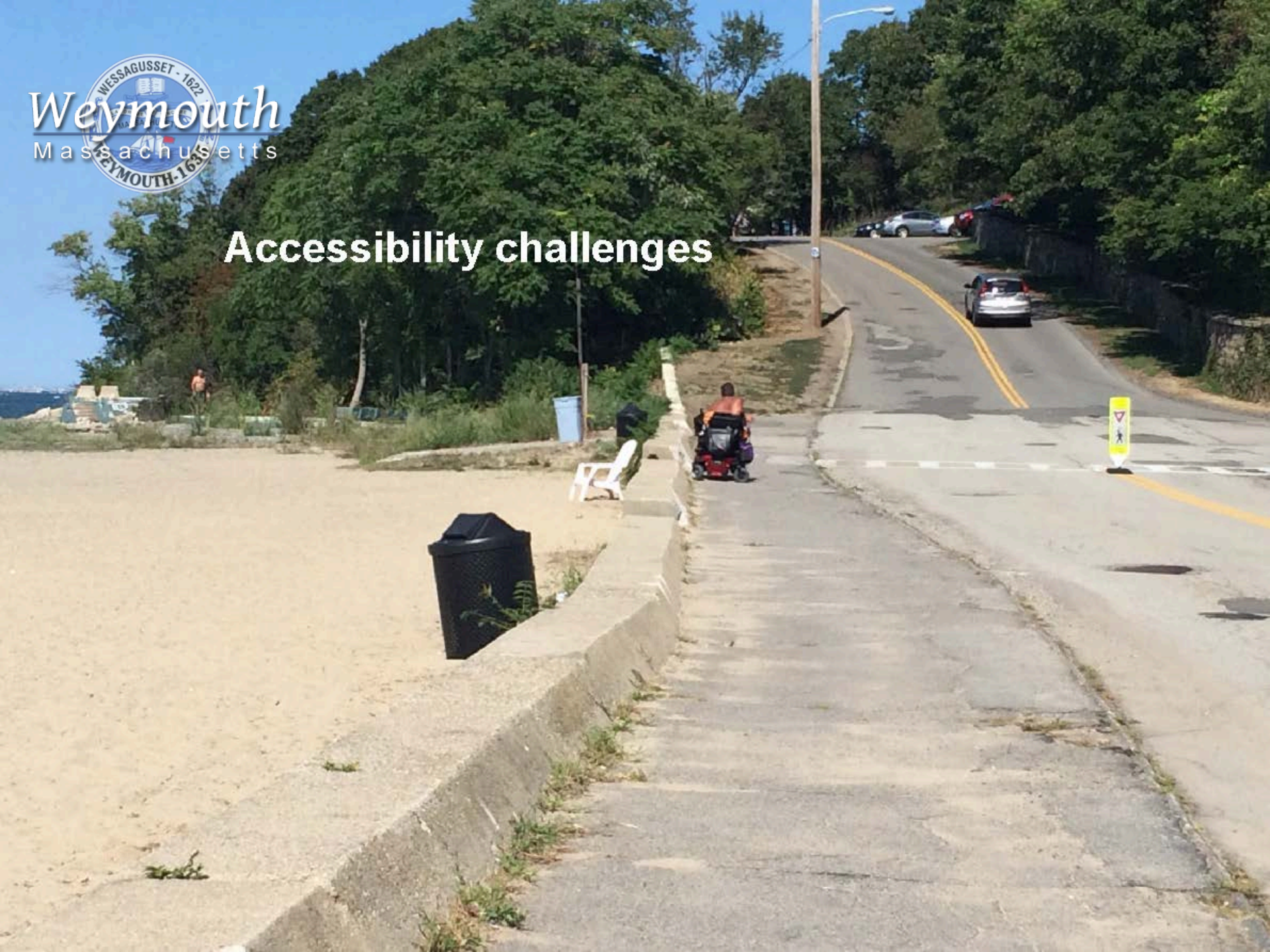
- Construct sidewalk to run from public concrete stairs at “shelf” to boardwalk entrance.
- Construct new ADA-compliant parking space at boardwalk with signage for handicapped accessibility.







## Accessibility challenges





Sidewalk needs

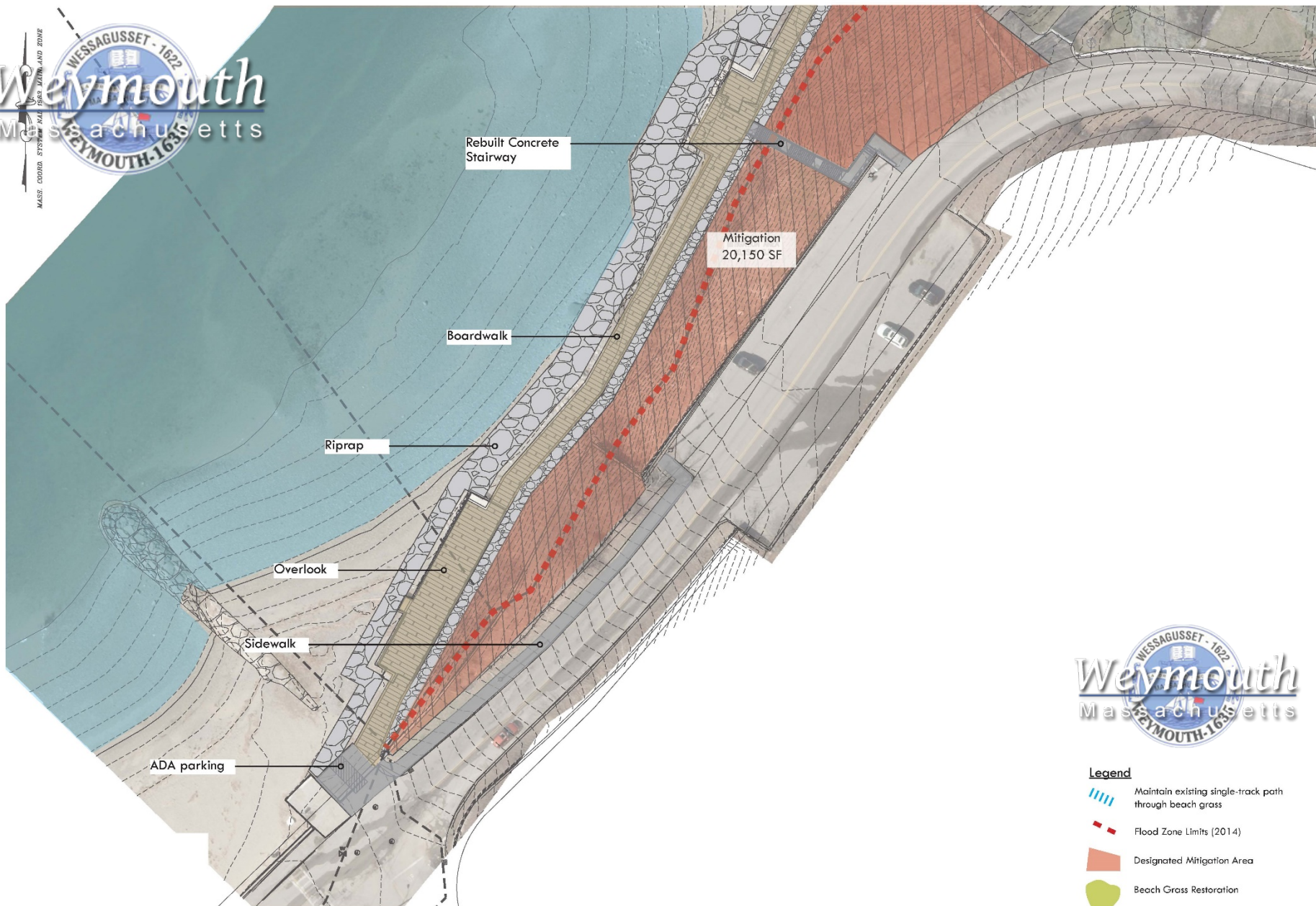




# Parking options







**Legend**

-  Maintain existing single-track path through beach grass
-  Flood Zone Limits (2014)
-  Designated Mitigation Area
-  Beach Grass Restoration
-  Native Tree/ Specimen Tree

PLAN



1 inch = 20 ft.





# VEGETATION MANAGEMENT





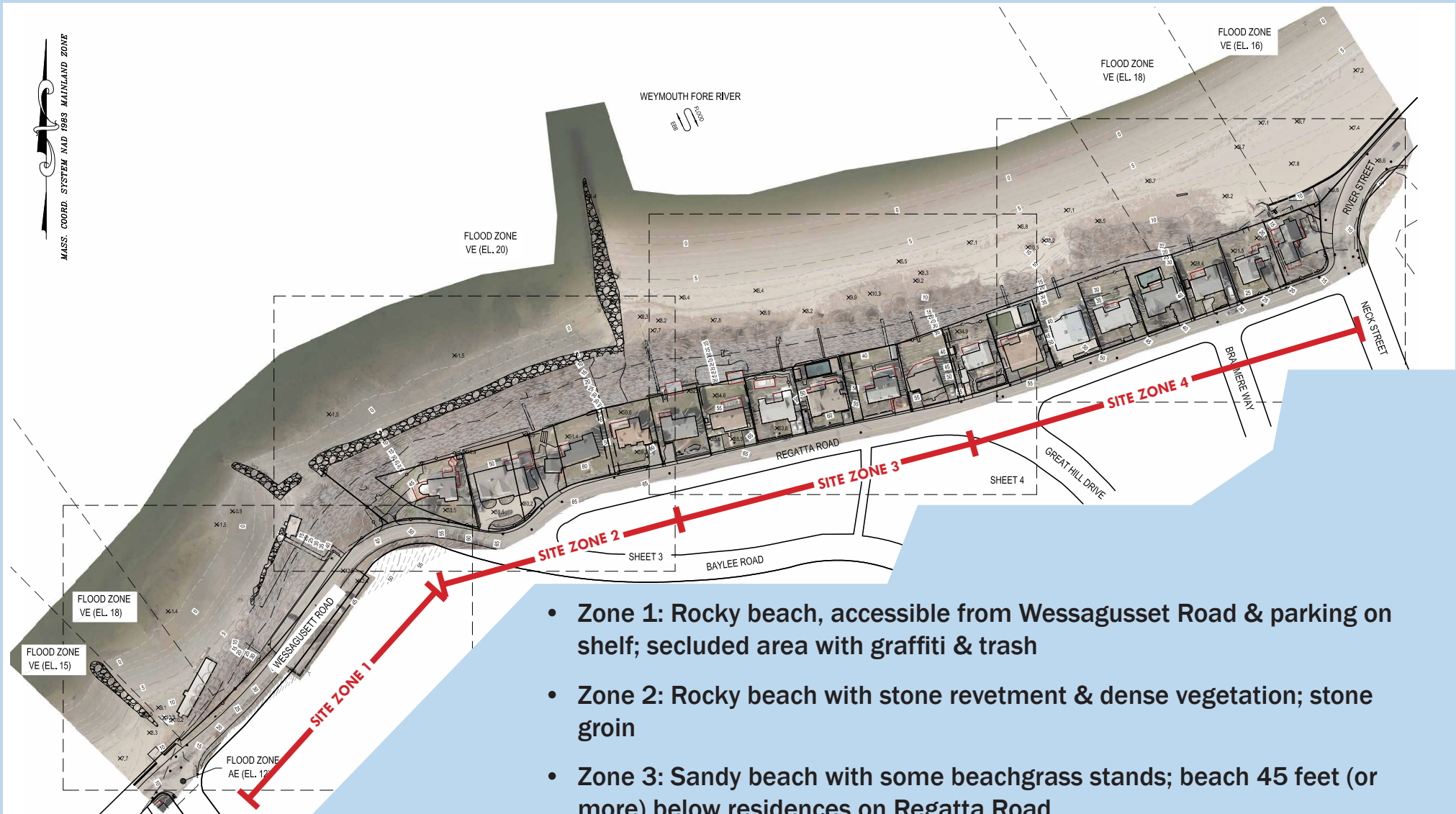
# Site & Vegetation Assessment



- Site Assessment
- Vegetation Assessment
- Vegetation Management Plan
- Coastal Bank Restoration Guidelines



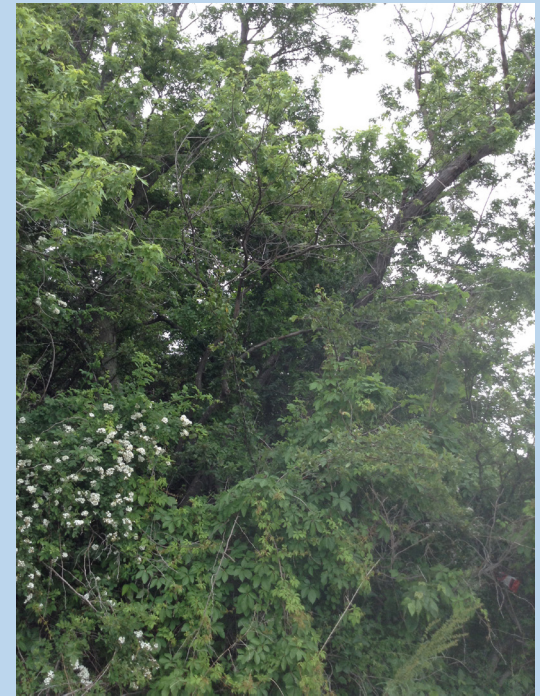
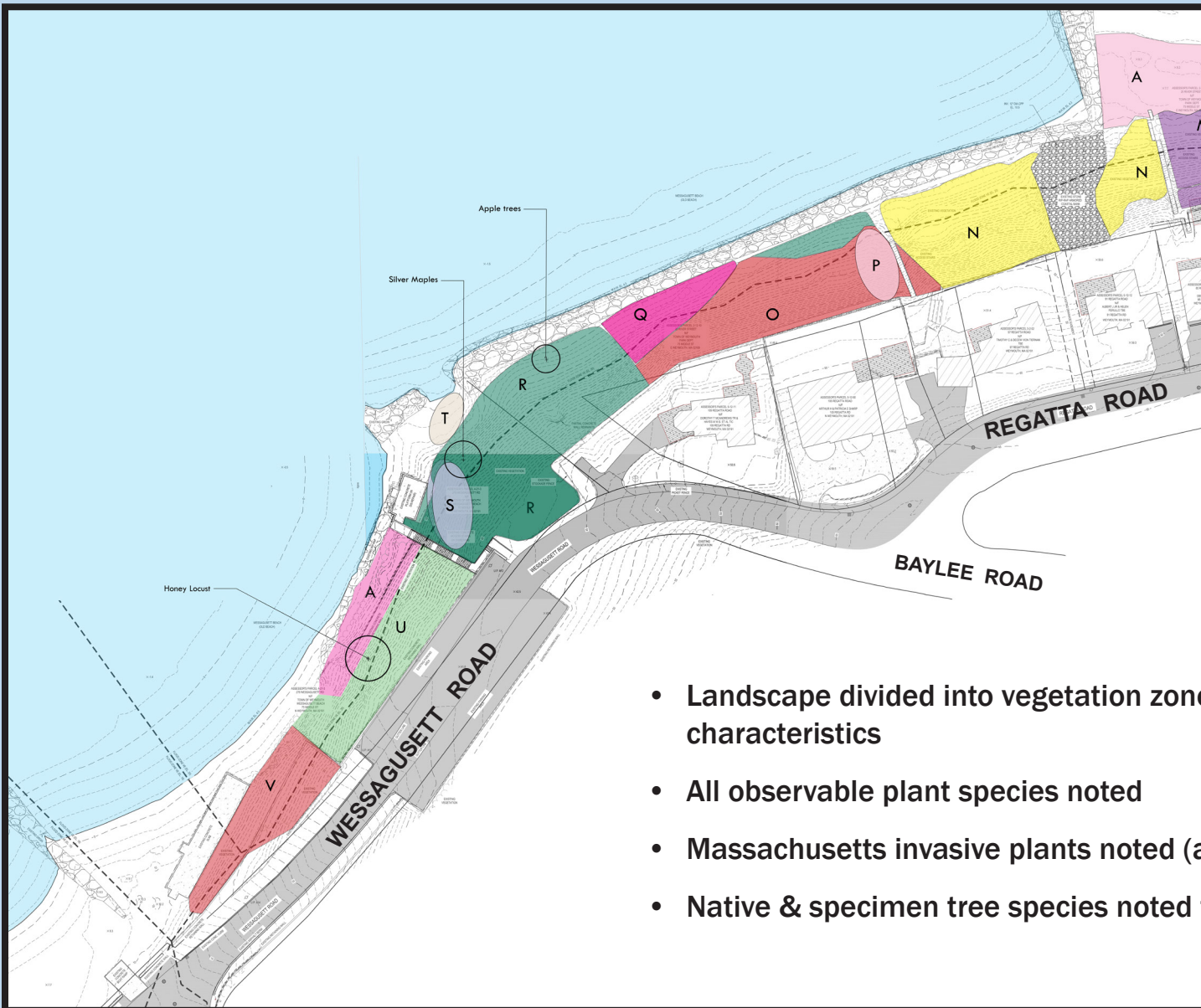
# Site Assessment



- Zone 1: Rocky beach, accessible from Wessagusset Road & parking on shelf; secluded area with graffiti & trash
- Zone 2: Rocky beach with stone revetment & dense vegetation; stone groin
- Zone 3: Sandy beach with some beachgrass stands; beach 45 feet (or more) below residences on Regatta Road
- Zone 4: Sandy beach, very open and level; limited beachgrass



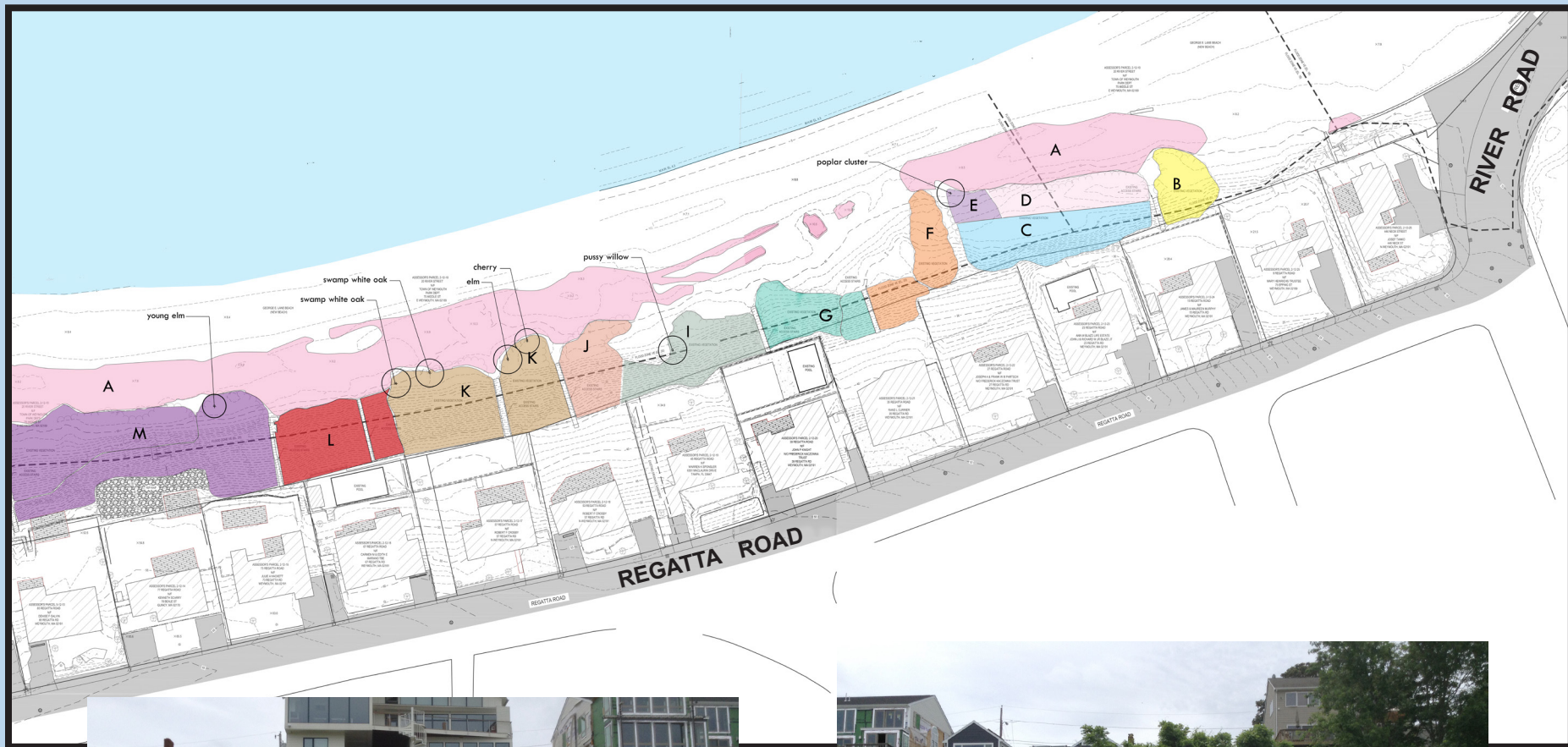
# Vegetation Assessment



- Landscape divided into vegetation zones based on vegetation characteristics
- All observable plant species noted
- Massachusetts invasive plants noted (approximately 85% coverage)
- Native & specimen tree species noted to be protected



# Vegetation Assessment





# Vegetation Management

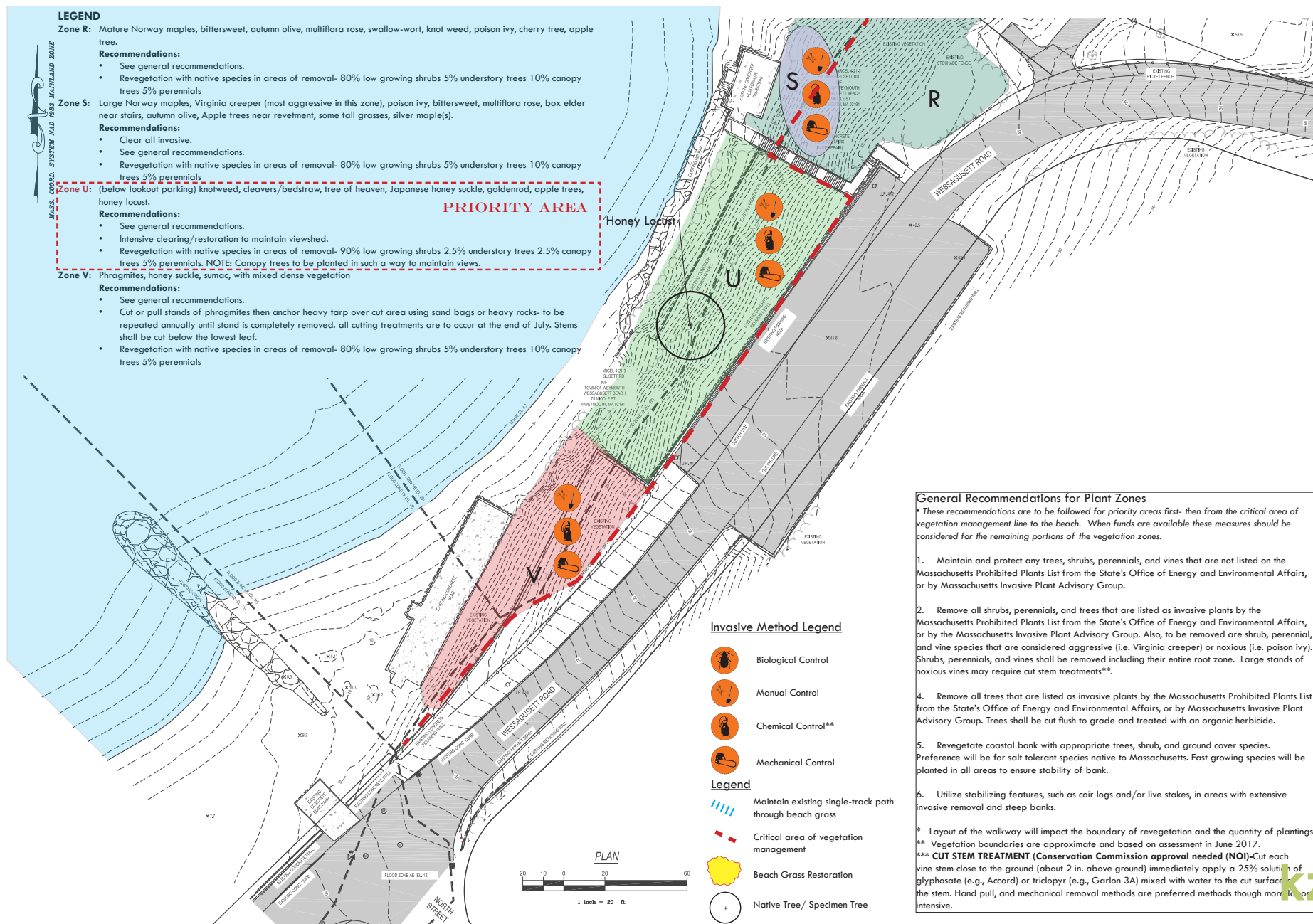


## Design guidelines

1. Maintain any plants that are not invasive species
2. Remove all invasive & aggressive plant species
  - a. Trees to be cut flush to grade
  - b. Shrubs, vines & herbaceous removed including roots
3. Re-vegetate coastal bank
  - a. Preference for salt tolerant, native species
4. Bank stabilization features as necessary

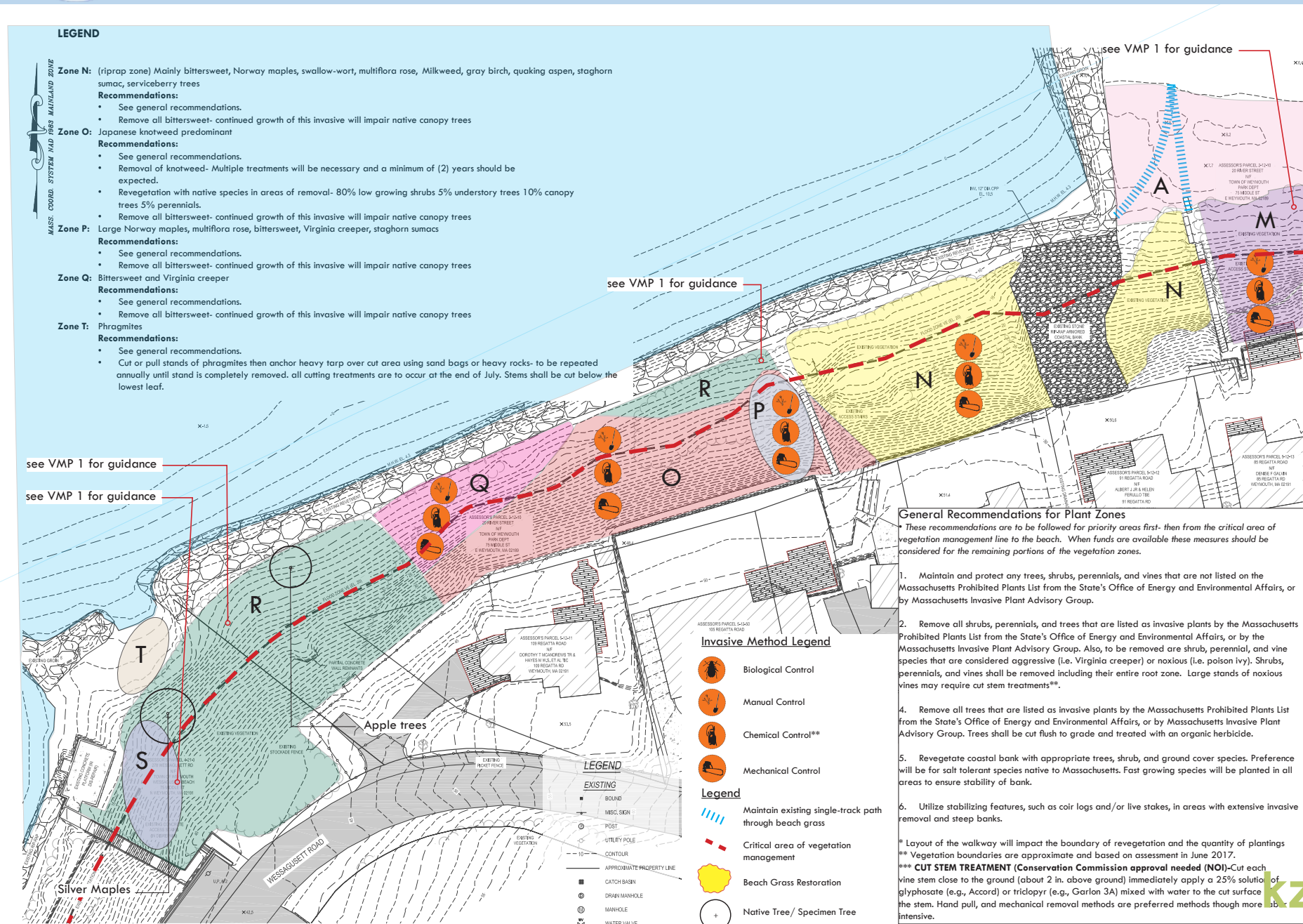


# Vegetation Management





# Vegetation Management





# Vegetation Management

## LEGEND

### Zone A: American beachgrass

#### Recommendations:

- See general recommendations.
- Replant beach grass as necessary (3) culms per hole- spacing 18" x 18" @ 8" deep or 1,350 culms per 1000 square feet

### Zone H:

Young Norway maples, young tree of heavens, Virginia creeper, multiflora rose, bittersweet, garlic mustard. Lots of dead limbs and tree debris

#### Recommendations:

- See general recommendations.
- Remove all bittersweet- continued growth of this invasive will impair native canopy trees
- Remove and discard all dead limbs and tree debris

### Zone I:

Dense bittersweet, tree of heaven, multiflora rose, young Norway maples Weeping willow at toe of bank

#### Recommendations:

- See general recommendations.
- Remove all bittersweet- continued growth of this invasive will impair native canopy trees

### Zone J:

Dense bittersweet, large Norway maples (9" caliper max. average), tree of heaven Cherry trees, tree at stairs, large cherry milkweed in beach grass

#### Recommendations:

- See general recommendations.
- Remove all bittersweet- continued growth of this invasive will impair native canopy trees
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

## PRIORITY AREA

**Zone K:** Multiflora rose, dense Norway maples & tree of heaven, bittersweet, staghorn sumac, swamp white oak on slope, hackberry, elm at toe of bank

#### Recommendations:

- See general recommendations.
- Remove all bittersweet- continued growth of this invasive will impair native canopy trees
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

### Zone L:

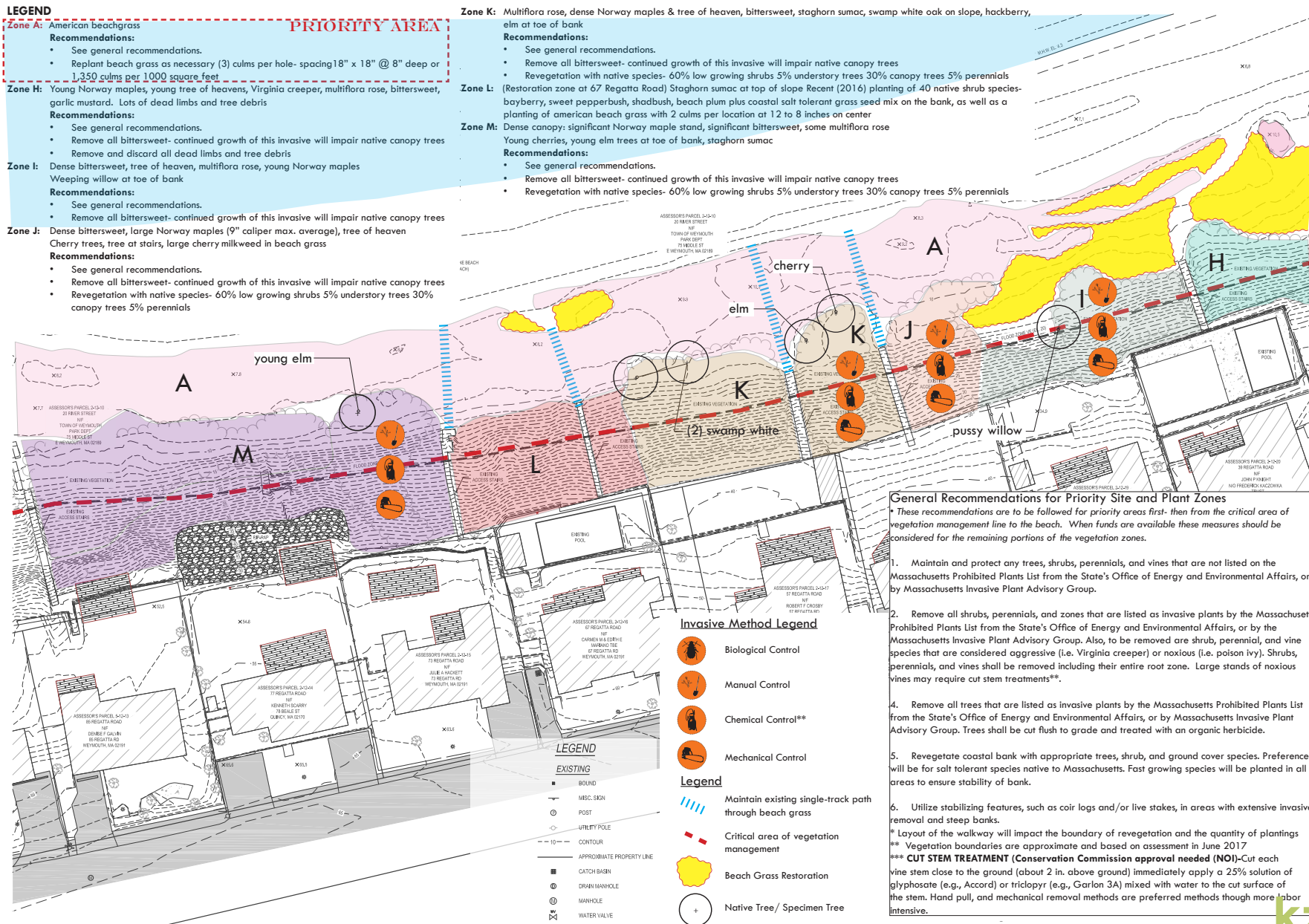
(Restoration zone at 67 Regatta Road) Staghorn sumac at top of slope Recent (2016) planting of 40 native shrub species- bayberry, sweet pepperbush, shadbush, beach plum plus coastal salt tolerant grass seed mix on the bank, as well as a planting of american beach grass with 2 culms per location at 12 to 8 inches on center

### Zone M:

Dense canopy: significant Norway maple stand, significant bittersweet, some multiflora rose Young cherries, young elm trees at toe of bank, staghorn sumac

#### Recommendations:

- See general recommendations.
- Remove all bittersweet- continued growth of this invasive will impair native canopy trees
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials





# Vegetation Management

## LEGEND

### Zone A: American beachgrass

#### Recommendations:

- See general recommendations.
- Replant beach grass as necessary (3) culms per hole- spacing 18" x 18" @ 8" deep or 1,350 culms per 1000 square feet

### Zone B: Dense Norway maple

#### Recommendations:

- See general recommendations
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

### Zone C: Phragmites, Oriental bittersweet, mixed invasive vines and shrubs

#### Recommendations:

- Removal of Phragmites should be considered- Multiple treatments will be necessary and a minimum of (2) years should be expected
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

### Zone D: Norway maples, mixed invasive zones, Tree of Heaven

#### Recommendations:

- See general recommendations
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

### Zone E: Quaking aspen stand, less than 20' tall, Autumn Olive

#### Recommendations:

- See general recommendations
- Remove autumn olive stand
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

### Zone F: Autumn olive, tree of heaven, multiflora rose, pale swallow-wort, 2 cherry trees at toe of bank

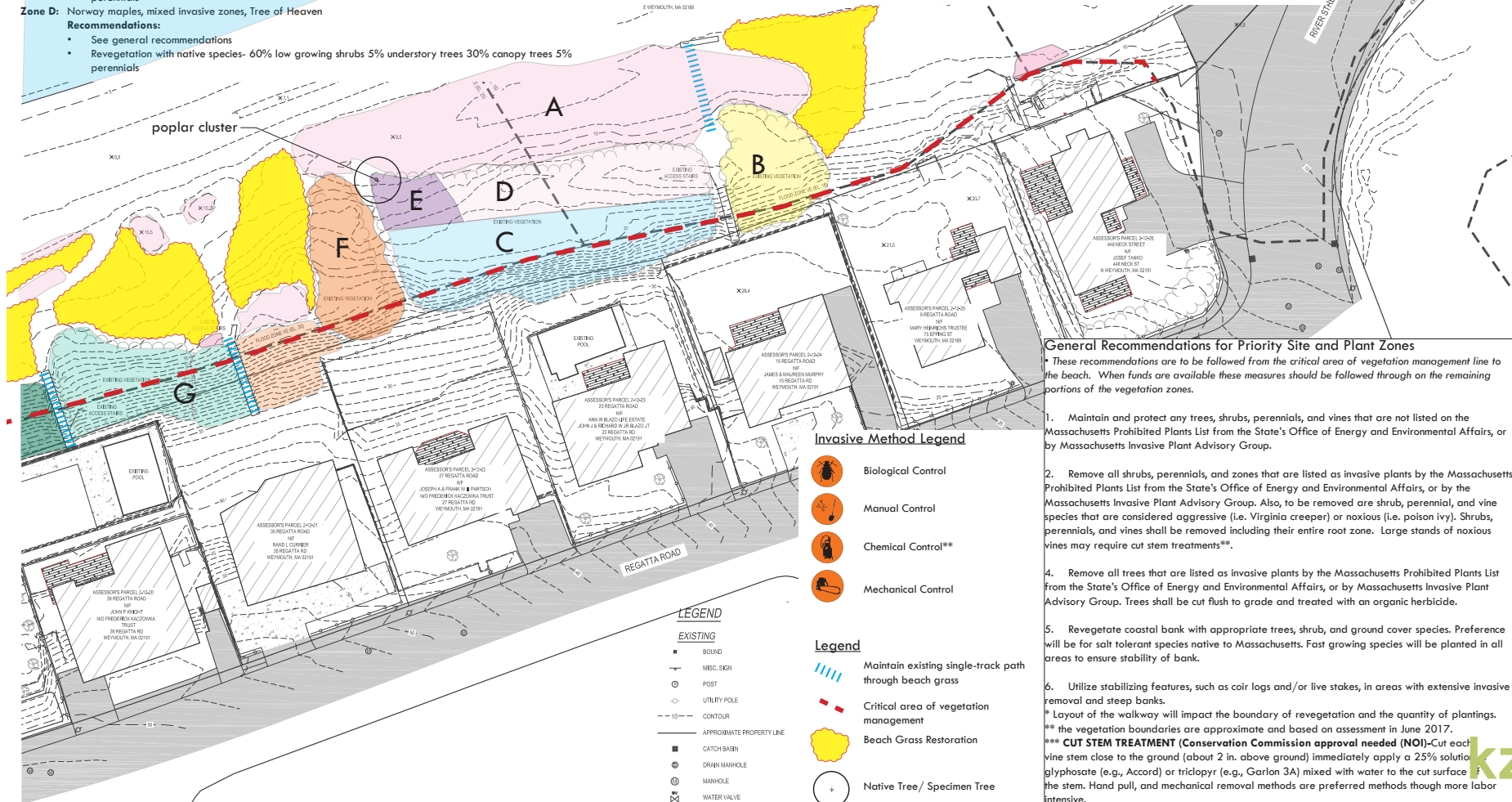
#### Recommendations:

- See general recommendations
- Remove autumn olive stand
- Remove all instances of Tree of Heaven-see general recommendations for method of removal
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials

### Zone G: Multiflora rose, young Norway maples, Virginia creeper, Pussy willow, and 2 cherry trees at toe of bank, wildflowers

#### Recommendations:

- See general recommendations
- Removal of Multiflora rose should be considered- Multiple treatments will be necessary and a minimum of (2) years should be expected. It is best to treat Multiflora stands as early as possible- as large stands become difficult to control
- Revegetation with native species- 60% low growing shrubs 5% understory trees 30% canopy trees 5% perennials





# Coastal Bank Restoration



## Restoration guidelines

1. Vegetation coverage to be 75% after 5 years
2. 100% of disturbed areas to be restored
3. Shrubs to be 45%-60% of coverage
4. All disturbed areas to be seeded
5. Slopes over 3:1 to have erosion control blanket
6. Beachgrass areas to be fully restored



# Coastal Bank Restoration

## Proposed plant palette (select species)



Sweetgum



Birch trees



Black cherry



White oak



Serviceberry



Sweetfern



Virginia rose



Seaside goldenrod



Big bluestem





# Next Steps

- Regulatory Permitting
  - Local Conservation Commission
  - MA DEP Waterways
  - Massachusetts Environmental Protection Agency (MEPA)

