



March 2, 2022
Revised March 11, 2022

Danni Goulet, PE
Coastal Resources Management Council
4808 Tower Hill Road
Wakefield, RI 02879



**RE: *RI Waterfront Enterprises (RIWE) LLC - South Quay Marine Terminal
East Providence, Rhode Island***

Dear Mr. Goulet;

RIWE respectfully submits this updated memorandum in response to the need to provide more salt marsh and coastal wetland mitigation for the South Quay Marine Terminal project.

RIWE has been actively pursuing mitigation opportunities on adjacent parcels that RIWE controls as well as nearby City-owned parcels, for which the City is willing to participate. This memorandum is intended to summarize the efforts conducted to date and parcels and options evaluated.

The intent of our efforts was to find shoreline areas that could be enhanced or developed to provide salt marsh habitat, or, where conditions are anticipated to be harsher, a vegetated living shoreline, protected by oyster reef bags. For all of the proposed areas, the work would begin seaward of mean low water where either the oyster shells or a coir log (for the salt marsh areas) would be staked and “toed-in” to provide a stable downgradient base to support the establishment and expansion of the vegetation in the upgradient areas. The vegetation will be adapted to each zone with native plantings such as smooth cordgrass in the low marsh areas, and sweet cordgrass in the harsh marsh zone. As much as feasible, we have attempted to provide areas that will allow for salt marsh migration as sea levels rise transitioning areas that are currently upgradient of mean high water to areas that will become high marsh zones.

RIWE is proposing as much as feasible to implement salt marsh, however some areas that may experience harsh conditions from excessive fetch, turbulent currents and ice flows have a lower probability of establishment, therefore, in their place, we are proposing an oyster reef with living shoreline. The oyster reef will be comprised of bagged oyster shells, staked and toed into the waterline. These bagged oyster shells will provide storm protection to the areas upgradient of it by reducing wave energy and preventing erosion behind it. These protective measure will mitigate the effects of excessive fetch and/or ice flows that are likely to occur in the targeted areas behind it.

Overall, we evaluated fourteen sites for these mitigation efforts. We looked at RIWE controlled parcels and publicly owned parcels in and around the South Quay Marine Terminal. Our evaluation included:

No.	Parcel Descriptive Name	Assessor's Parcel ID	Ownership
1	The South Quay Marine Terminal	Map 7, Block 1, Parcel 3	RIWE
2	Waterfront Drive Extension	Map 17, Block 1, Parcel 3	State of RI
3	The former Gulf/Chevron Parcel south of the South Quay	Map 18, Block 1, Parcel 1	RIWE

4	The Bowtie Parcel south of Bold Point Park	Map 6, Block 1, Parcel 5 Map 7, Block 1, Parcels 1 and 2	RIWE
5	Bold Point Park (Bold Point Park)	Map 6, Block 1, Parcel 3	City of East Providence
6	Tockwotton Park	Map 16, Block 22, Parcel 2	City of East Providence
7	Watchemocket Cove	Map 108, Block 2, Parcel 2	State of RI
8	Squantum Woods	Map 209, Block 3, Parcel 11	City of East Providence
9	Crescent Park	Map 109, Block 24, Parcels 5 and 16	City of East Providence
10	The Runnins River	Map 608, Block 2, Parcels 13 and 14	City of East Providence
11	Kettle Point Park	Map 109, Block 1, Parcel 1	City of East Providence
12	Sabin Point	Map 212, Block 3, Parcel 13	City of East Providence
13	Rose Larisa Park	Map 413, Block 12, Parcel 1	City of East Providence
14	John J. Lewis Waterfront Park	-	City of East Providence

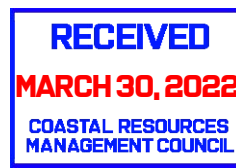
The areas that provided suitable geography and topography to support the intended efforts were as follows:

Area	Size (acres)
SQMT Southeastern Shoreline	0.83
Bowtie and Bold Point Marsh and Migration Area	1.15
Gulf Southern Marsh	0.18
Tockwotton Oyster Reef and Living Shoreline	0.45
Tockwotton West	0.30
Squantum Woods/ Boyden Heights	1.27
Crescent Park	0.25
Crescent Park 2	0.61
Kettle Point	1.19
Total	6.23



As illustrated in the tables above, RIWE has conducted an exhaustive search to locate areas which were suitable for mitigation, and which would provide maximum environmental benefit. We placed a priority upon locations which were in proximity to the SQMT but did not limit our search to that area. We also included locations which we were aware were high priorities for the City and the State for coastal restoration such as Squantum Woods and the Crescent Park locations. In addition, we did not confine our approach to salt marsh restoration but are proposing strategies which the State has identified as priorities such as creation of oyster reefs and living shorelines. Our goal was to identify mitigation improvements that enhance the resilience of the East Providence shoreline and provide benefits that extended beyond the project area, and which helped to further the realization of community environmental priorities.

A description of the intended work for each of these properties is provided below:



SQMT Southeastern Shoreline

The southern and southeastern border of the South Quay Marine Terminal property contains fringe salt marsh areas and degraded wetland areas. This area is an opportunity to provide some connectivity and enhancement to the existing resources. The slope down from the terminal is covered in large rip rap and trap rock, however some movement of that material and regrading in the area could provide space for additional resource as well as a more habitable area for marsh migration.

Bowtie and Bold Point Marsh and Migration Area

This area has opportunity for salt marsh restoration which would incorporate shoreline stabilization. Much of the shoreline at the lawn edge has eroded (a park bench previously within the lawn portion is now in rocky beach). There are also stands of invasive common reed (*Phragmites australis*) that could be removed as part of salt marsh creation on this property. Creation of salt marsh here could be sculpted with a shallow grade into the upland, allowing for marsh migration with sea level rise, and provide additional wildlife habitat and shoreline protection. Furthermore, stabilizing the shoreline near Green Jacket Shoal. This area got its name from the “abundant eel grass that used to grow on the shallow shoal and jacketed it in green”. And while we would not be working directly in the shoal area, we would be restoring the adjacent area it to its original environmental condition.

Gulf Southern Shoreline

The former Gulf property, now in control of RIWE, has a hardened shoreline filled with rip rap and trap rock stone. This area provides an opportunity for a silled-in living shoreline feature, with coastal marsh vegetation planted behind the sill. The sill would act to cut down the wave energy and protect the shoreline so that the resource area can be better established. In addition, part of the slope upland towards the bike path could be cut back to allow for migration over time with sea level rise.

Tockwotton Oyster Reef and Living Shoreline & Tockwotton West

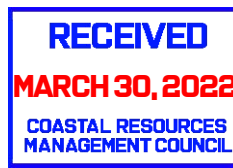
These narrow areas are exposed to turbulent flows from the River as well as ice-floes in the winter seasons, as such, the existing shoreline is partially degraded with areas of rocky beach. These harsh conditions represent an opportunity for implementing an oyster reef to provide a sill or toe and protect the shoreline by reducing wave energy. Upgradient from the oyster reef is an opportunity for some landscape sculpting to provide a living shoreline.

Squantum Woods/Boyden Heights Conservation Area

This city owned parcel is a conservation area with a healthy tidal marsh along its shoreline. Since this is already a conservation area, there is a good opportunity for work in the upland area to provide a base for marsh migration in combination with a public education element to promote the benefits of the salt marsh and the need for allowing marsh migration to keep up with sea level rise projections.

Crescent Park areas

There are two City-owned parcels in the Crescent Park/Bullock’s Cove area that provide an opportunity for upgrade and enhancement. Similar to the Boyden Heights Conservation Area strategy, these areas represent an opportunity for enhancement of the existing salt marsh areas as well landscape sculpting and planning for marsh migration as well as the public outreach/education component mentioned above.



Kettle Point

This City-owned area has opportunity for Buffer Zone management, marsh migration opportunities and providing additional public access. There are invasive species present in the vegetated buffer zone that could be removed/chemically treated, and restored as applicable with native shrubs and possible grading opportunities for migration. There are small areas with potential for salt marsh restoration, notably on the east side of the bike path.

Additional Opportunities

We confined our search to first areas adjacent or nearby to the South Quay Marine Terminal. Then we looked at parcels owned by the City of East Providence. There likely remain other opportunities that RIWE is willing to explore including City owned properties along the Runnins River, which forms the border with Seekonk, MA, State owned property along Watchemocket Cove, and the shoreline along Edgewood in Cranston. At the time of writing of this memorandum, however, these areas have not been explored enough to ensure access and/or cooperation from ownership.

Furthermore, it is RIWE's intention to include the implementation of these mitigation measures as part of a green and blue economy educational partnership which RIWE is developing with the East Providence School Department, the East Providence Boys and Girls Club and the Providence Community Boating Center. It is our expectation that youth from these programs will be able to shadow the environmental engineers as they proceed with the design of these mitigation measures and visit the sites as the improvements are put into place. The expectation is that the program participants will gain a greater understanding of the coastal environment in their community and potentially seek careers in fields in the blue and green economy.

This proposed educational partnership is just one example of the relationship that RIWE has committed itself to within the East Providence community. RIWE has a long-standing relationship with the City of East Providence, its businesses and its residents and is resolved to build upon this relationship with the SQMT project. We see these mitigation measures as an ideal opportunity to further our partnership with East Providence and other coastal environmental stakeholders.

RIWE sincerely appreciates the assistance you have provided during this process, and we hope that CRMC will give favorable consideration to this proposed mitigation.

Please feel free to contact me or RIWE's engineering consultant John McAllister (jmcallister@mcallister-eng.com) if you have any questions regarding this submission.

Best regards,

A handwritten signature in black ink that reads "Melissa Martin".

Melissa Martin

CC: Jeanne Boyle
Joe McCue
John McAllister



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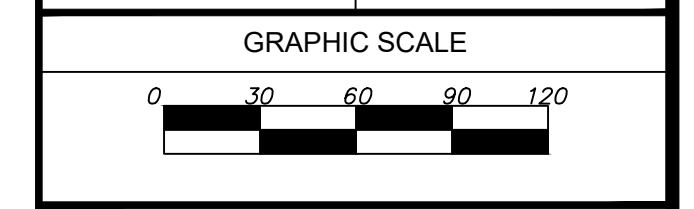
PARE CORPORATION

MCALLISTER MARINE ENGINEERING

PROJECT SOUTH QUAY PROPOSED SITE REDEVELOPMENT PROJECT	OWNER RHODE ISLAND WATERFRONT ENTERPRISES, LLC 222 BERKELEY STREET BOSTON, MA 02116
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NO.	DATE	DESCRIPTION	BY
4	2/22 /2022	MARSH MITIGATION	JBM
3	6/24 /2021	ASSENT PACKAGE	JBM
2	3/11/2021	USACE CHANNEL LIMITS	JBM
1	11/2/2020	UPDATED BATHY	JBM

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DATE	SEPTEMBER 2020
DRAWING SCALE	1" = 60'



SHEET TITLE

**SALT MARSH
MITIGATION AREAS
PLAN**

DRAWING NO.

MM-1

- NOTES:**
- THESE DRAWINGS SHOW AREAS TO BE IMPROVED AND/OR EXPANDED WITH SALT MARSH HABITAT AND/OR LIVING SHORELINES. AREAS SHOWN ARE CONCEPTUAL AND WILL BE DETAILED IN FURTHER BY WETLAND MITIGATION CONTRACTOR.
 - MITIGATION AREAS SHOWN ON THESE PLANS ARE PROPOSED IN ADDITION TO THOSE ORIGINALLY PROPOSED ON SHEETS WM-1 AND WM-2 PREPARED BY RMA GEOENVIRONMENTAL, TITLED "SOUTH KEY COASTAL WETLAND MITIGATION." DETAILS AND DESCRIPTIONS FROM THOSE PLANS SHALL TAKE PRECEDENT OVER THESE PLANS.
 - ELEVATIONS AND PROPERTY BOUNDARIES SHOWN ARE NOT TO BE CONSIDERED RESEARCHED AND SURVEYED IN.
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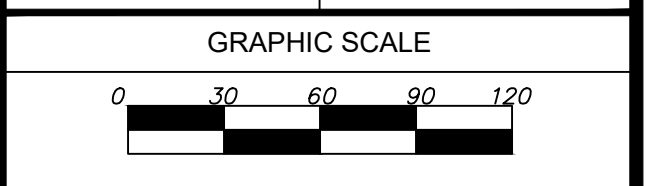


PROJECT
**SOUTH QUAY
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 REDEVELOPMENT PROJECT**

OWNER
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 222 BERKELEY STREET
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SHEET TITLE
**SALT MARSH
 MITIGATION AREAS
 PLAN**

DRAWING NO.
MM-2

2 OF 5
 PLOT SCALE 1/16"=1'-0"



SOUTHERN SQMT
 AND FORMER CHEVRON PARCEL
 SALT MARSH AREA
 0.83 ACRES

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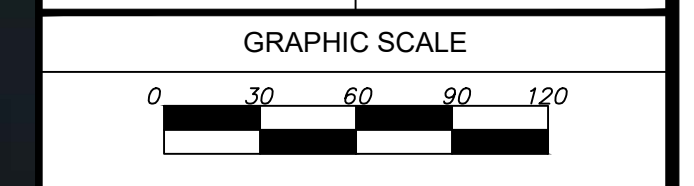
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MCALLISTER MARINE ENGINEERING

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SALT MARSH MITIGATION AREAS PLAN

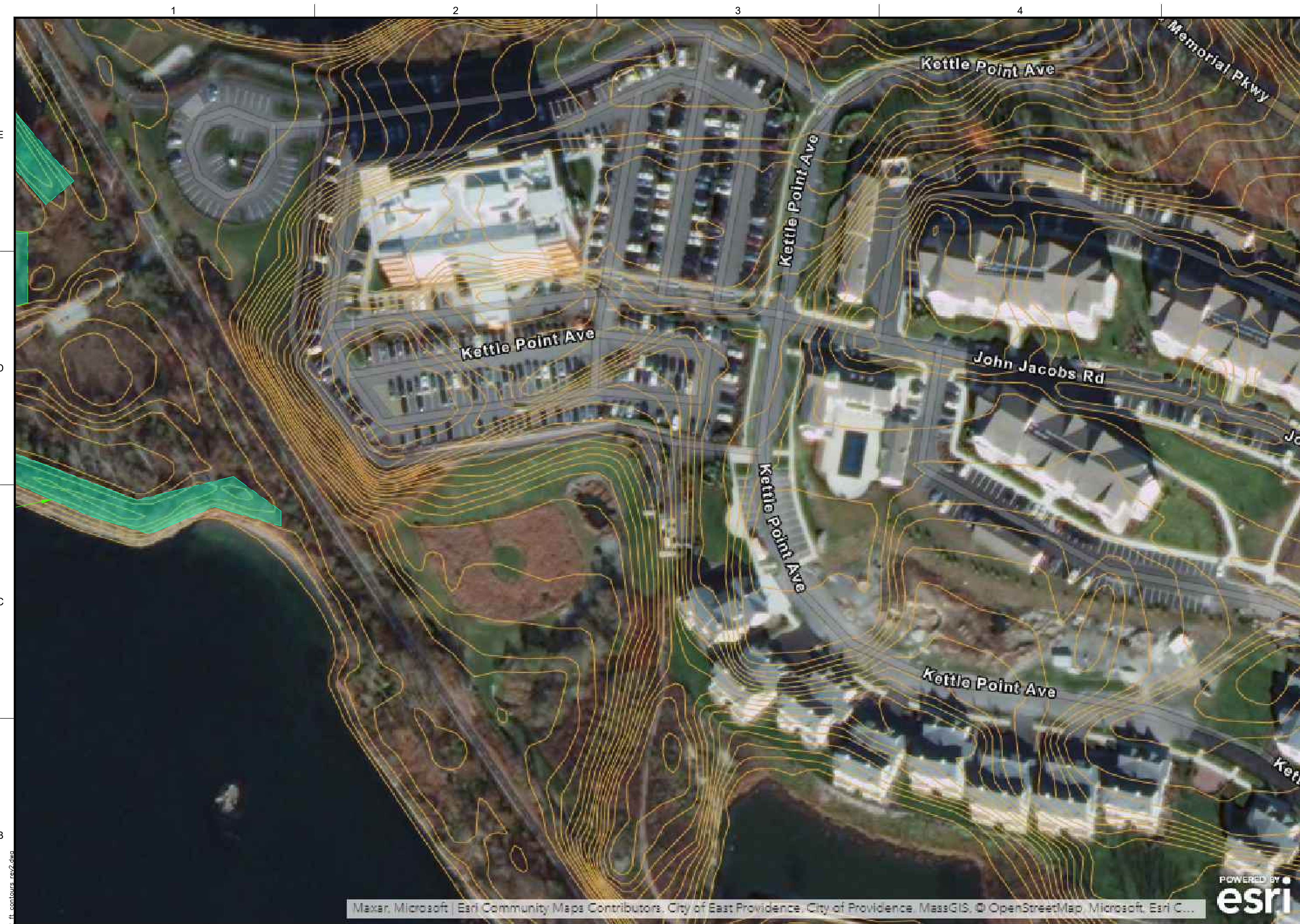
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MM-3

3 OF 5

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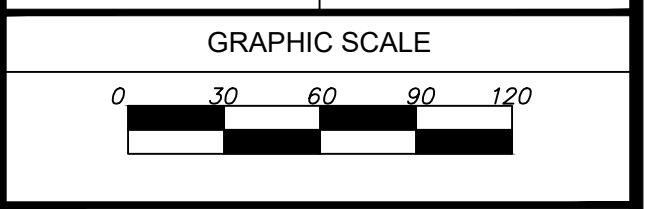


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**SALT MARSH
 MITIGATION AREAS
 PLAN**

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MM-4

4 OF 5

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A

B

C

D

E

1

2

3

4

5

6



BULLOCK COVE SOUTH
SALT MARSH ENHANCEMENT
AND MIGRATION AREA
0.61 ACRES

BULLOCK COVE NORTH
SALT MARSH ENHANCEMENT
AND MIGRATION AREA
0.25 ACRES

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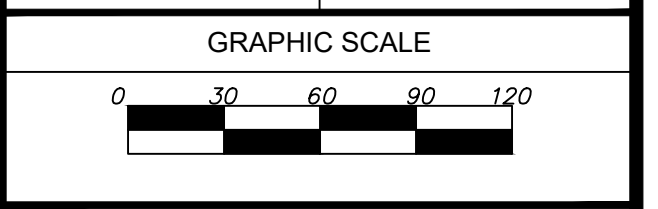
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**SALT MARSH
MITIGATION AREAS
PLAN**

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MM-5

4 OF 5

PLOT SCALE 1/16"=1'-0"

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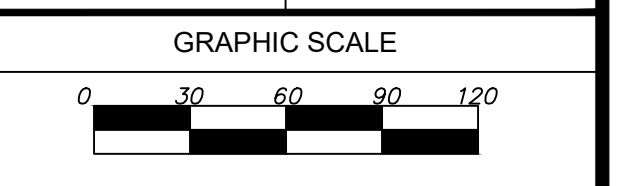


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**SALT MARSH
MITIGATION AREAS
PLAN**

DRAWING NO.
MM-6



KETTLE POINT
SALT MARSH AREA
0.05 ACRES

KETTLE POINT
BUFFER RESTORATION
AND ENHANCEMENT
0.37 ACRES

KETTLE POINT
BUFFER ENHANCEMENT
0.18 ACRES

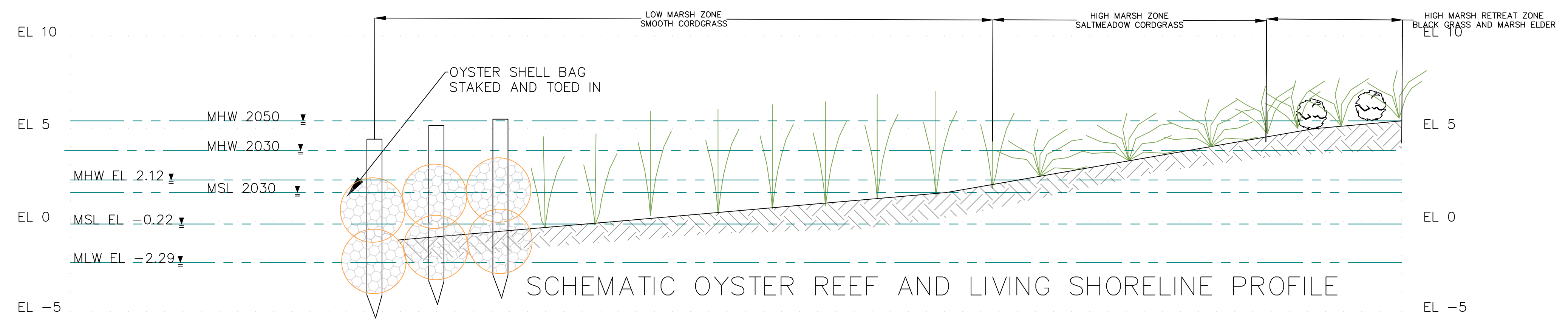
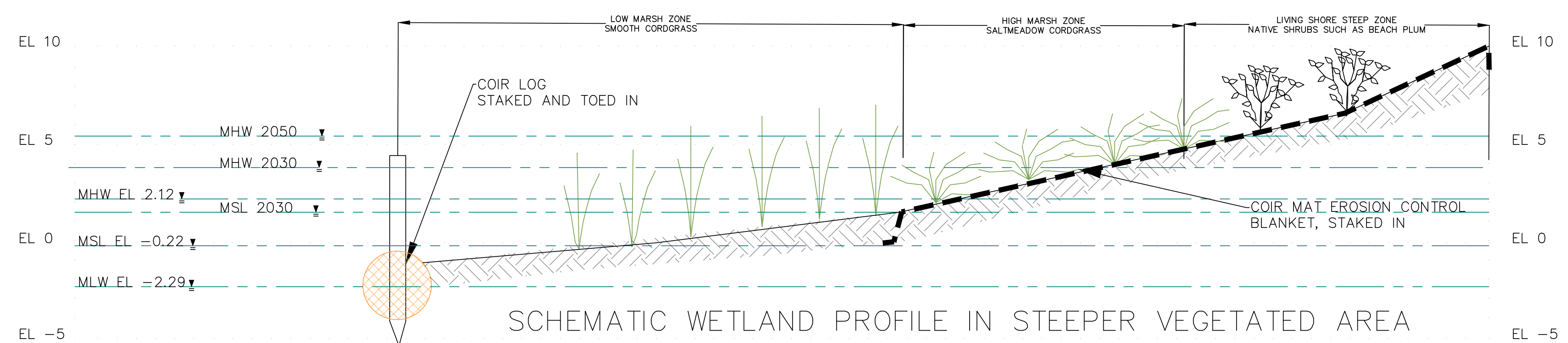
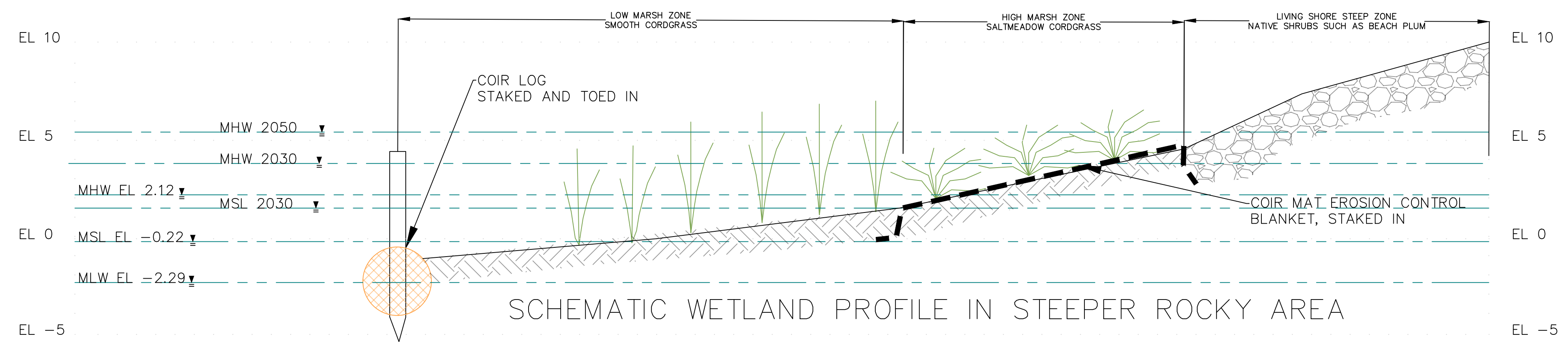
KETTLE POINT
BUFFER ZONE RESTORATION
AND ENHANCEMENT
WITH POTENTIAL
PUBLIC ACCESS PATH
0.53 ACRES

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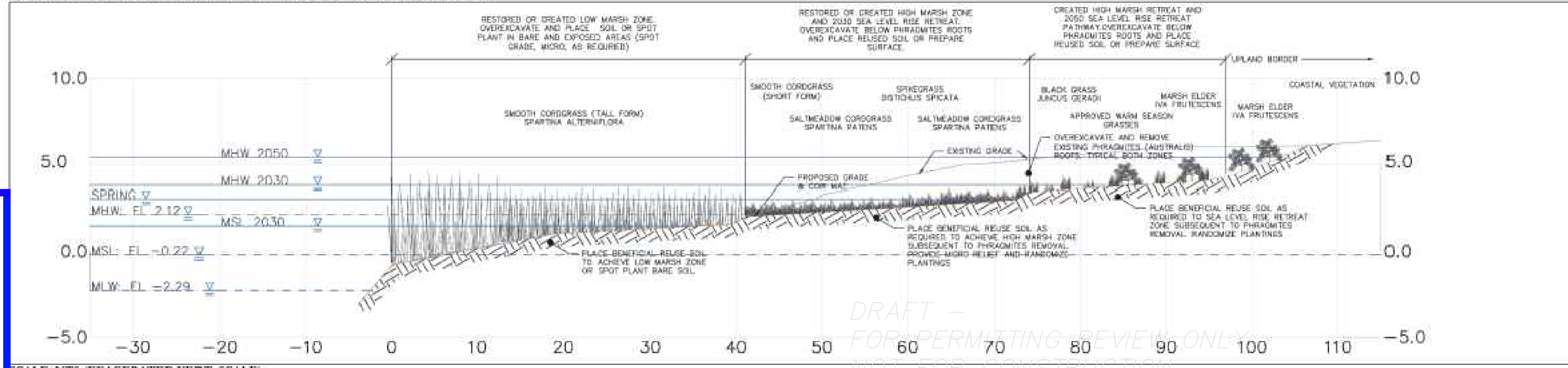
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SCHEMATIC WETLAND MITIGATION SECTION



SCALE: NTS (EXAGGERATED VERT. SCALE)
 -X: 1" = 8'
 -Y: 1" = 4'

NOTE:
 LENGTHS OF EACH ZONE WILL VARY
 DEPENDING ON EXISTING
 TOPOGRAPHY, DETAIL SHOWN HERE
 IS TYPICAL AND NOT SITE SPECIFIC

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DRAWING SCALE	1" = 8'
GRAPHIC SCALE	
0 4 8 12 16	

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**SALT MARSH
 MITIGATION AREAS
 SCHEMATIC
 PROFILES**

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MM-7



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