State of Rhode Island
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

Town of Narragansett
25 Fifth Avenue
Narragansett RI 02882

RE: CRMC Application 2025-06-017
Site Addresses: 139 Boston Neck Road, Narragansett
Locations: Plat: A, Lots: 133, 33, 33B, 38, 39, 40
Owner: Town of Narragansett
Project Desc: dredging of existing sand bar at mouth of Narrow River and beneficial reuse of sediment via adjacent beach nourishment

Dear Mr. Gerhard,

Thank you for your continued collaboration regarding the proposed work cited above. Staff requests the following information be submitted in order to continue the review of your proposal:

1. Please provide a location map showing proposed locations for at least two (2) water level monitors for pre/post monitoring events.

    a. Staff recommend applicant works with stakeholders who provided input during the public comment period (NRPA, Save the Bay, USFWS) to determine locations for these monitors and to potentially help implement the monitoring.

2. Please provide a brief narrative discussing the planned data collection and processing procedures from water level monitors

    a. Staff requires two (2) lunar cycles pre-dredge and two (2) lunar cycles post-dredge to ensure adequate data is collected.

3. Please provide an updated Site Plan depicting the spatial extent of dune vegetation planting. This may be achieved with polygon overlays on the Site Plan. Please include the revegetation timeline, species list, and planting timeline.

a. Any new plantings shall be native species. Recommended plantings may be found in the Maritime Dune species list in the CRMC Coastal Buffer Planting Guide.

Staff would also like to clarify the following in advance of permit issuance. Language will be finalized in the formal Assent Stipulations.

1. Applicant shall submit a pre-construction survey with updated property lines to CRMC within (3) three months of commencement of dredging.

2. A stipulation shall be added that filled land remains titled to the State of Rhode Island for the public trust.

3. A long-term maintenance plan will be required, in accordance with the Narrow River Special Area Management Plan (§4.4.9(A)(3)(b)).

a. Staff recognize that this will be a working plan and will likely evolve from lessons learned during the proposed dredge event. Staff plans to stipulate that a long-term maintenance plan be submitted within twelve (12) months following the completion of the dredge event.
b. Staff plan to stipulate that yearly post winter storm/spring hydro and topographic surveys shall be conducted for a period of five (5) years following the dredge and dune construction event.

4. Staff provide the following comments regarding a long-term maintenance plan.

a. Staff recommend the required surveys, in conjunction with the water level monitoring, be used to assess project success. The Town is encouraged to utilize the data to define what triggers would warrant the planning of another dredge event and to refine the long-term maintenance plan.
b. With the proposed dredge depth being -4' MLLW + 1' overdepth, Staff recommend that if shoaling is observed shallower than -4' MLLW, the Town begin the planning process for another dredge event.
c. The Final Report from the RI House Special Commission to Make a Comprehensive Study and Provide Recommendations for Remedies to the Erosion of Rhode Island Beaches included the following recommendation:

> "*The Commission recommends impacted municipalities consider earmarking beach parking lot funds for future contribution to beach erosion mitigation solutions. The Commission recognizes the financial burden that dredging and beach nourishment represents at both the municipal and state level.*"

In concordance with the above, Staff recommend the Town consider establishing a fund within their municipal budget for long term dredging and beach maintenance.

This information must be submitted within 90 days of the above date. If the information requested is not provided within this 90 day period, the application will be canceled without prejudice. If you have any questions regarding this letter, please contact the office.

Sincerely,

Mason Sherman
Marine Infrastructure and Dredging Coordinator

Emily Hall
Coastal Geologist

/cc: Kaitlyn Cross

TOWN OF NARRAGANSETT
Town Hall • 25 Fifth Avenue • Narragansett, RI 02882
Tel. (401) 789-1044 TDD (401) 782-0610 Fax (401) 783-9637

ENGINEERING DIVISION
Fax No. (401) 782-0669

January 5, 2026

State of Rhode Island – Coast Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879-1900

ATTN: Mason Sherman, Marine Infrastructure and Dredging Coordinator

Re: CRMC Application 2025-06-017

Dear Mr. Sherman:

The Town of Narragansett acknowledges receipt of your correspondence requesting that additional information be submitted in order to continue review of the subject CRMC Application 2025-06-017 for proposed dredging at the Narrow River. This correspondence has been prepared to provide the requested information. The original inquiry request is restated below followed by the specific responses for clarity.

1. Please provide a location map showing proposed locations for at least two (2) water level monitors for pre/post monitoring events.
    a. Staff recommend applicant works with stakeholders who provided input during the public comment period (NRPA, Save the Bay, USFWS) to determine locations for these monitors and to potentially help implement the monitoring.

Response: Refer to attached Foth Infrastructure & Environment, LLC November 7, 2025 memorandum for proposed water level monitoring work plan. We worked with NRPA and Save the Bay on this plan and continue to coordinate with Save the Bay to obtain relevant information and refine the proposed plan. We anticipate that final locations of water level monitors may vary based on field fit and any additional stakeholder information received prior to implementation.

2. Please provide a brief narrative discussing the planned data collection and processing procedures from the water level monitors.
    a. Staff requires two (2) lunar cycles pre-dredge and two (2) lunar cycles post-dredge to ensure adequate data is collected.

Response: Proposed monitoring plan includes two (2) lunar cycles pre- and post-dredge monitoring. Refer to attached Foth memorandum for data collection and processing details.

3. Please provide an updated Site Plan depicting the spatial extent of dune vegetation planting. This may be achieved with polygon overlays on the Site Plan. Please include the revegetation timeline, species list, and planting timeline.
    a. Any new planting shall be native species. Recommended plantings may be found in the Maritime Dune species list in the CRMC Coastal Buffer Planting Guide.

Response: Refer to attached Foth Infrastructure & Environment, LLC December 12, 2025 memorandum for proposed dune vegetation planting plan.

The CRMC correspondence also included several items that Staff identified to clarify in advance of permit issuance and noted that language will be finalized in the formal Assent Stipulations. The Town acknowledges the items CRMC has identified and intends to comply with the formal Assent Stipulations. The Town will consider the CRMC recommendations regarding project assessment, subsequent dredging activities, and funding when developing a long-term maintenance plan.

We trust that the above and enclosed information addresses the CRMC comments and inquiries regarding the Town's application. Thank you for your assistance and cooperation on this project. Please feel free to contact me if you have any questions or need additional information.

Sincerely,

Jonathan Gerhard, P.E.
Town Engineer

enc:

cc: Emily Hall, CRMC (w/enc)
James Tierney, Town Manager (w/enc)
Kaitlyn Cross, Foth (w/enc)

JSG/jsg
705-L-001-26

Memorandum

114 Touro Street
Newport, RI 02840
(401) 236-0360
foth.com

November 7, 2025

TO: Town of Narragansett (Town)

FR: Foth Infrastructure & Environment, LLC

RE: Narrow River Dredging – Proposed Water Level Monitoring Work Plan

Overview

To support environmental review and permitting for the proposed dredging at the mouth of the Narrow River, a water level monitoring program will be implemented. The program is designed to capture tidal behavior and water level fluctuations over two full lunar cycles prior to dredging and two full lunar cycles following completion. This approach provides a comparative dataset to assess potential changes in tidal range, mean water level, and flow dynamics resulting from dredging. This work plan is intended to detail the proposed actions to document and evaluate changes in tidal hydrodynamics associated with dredging activities at the river mouth.

Where appropriate, collaboration with local and regional environmental organizations will be explored to enhance data sharing, community engagement, and ecological interpretation. Potential partners include the Narrow River Preservation Association (NRPA), Narragansett Chapter of Save The Bay, and the U.S. Fish and Wildlife Service (USFWS). These groups may provide historical data, assist with site access, or contribute to public outreach and stewardship efforts.

1. Monitoring Plan

The monitoring effort will be structured to ensure consistent data collection across both pre- and post-dredging phases. Key design elements include:

- Duration
  - Pre-dredging monitoring: ~60 days (two lunar cycles).
  - Post-dredging monitoring: ~60 days (two lunar cycles), initiated immediately after dredging completion.
- Instrumentation
  - Pressure-based water level loggers (e.g., RBRSolo Rose Gauges) will be used to record water levels at 6-minute intervals.
    - Two (2) gauges will be installed at each location to ensure logger error is mitigated.

- A barometric pressure logger will be deployed concurrently, or data will be sourced from a nearby NOAA station for atmospheric compensation.
- Loggers will be affixed to stable structures (e.g., pilings, structures, weighted frames) to minimize movement and ensure consistent vertical datum.

- Deployment Locations
  - Please see Attachment A for plan depicting proposed monitoring locations. Foth intends to place tidal monitors in the following locations:
    - Primary Site: South of the dredge footprint within the Narragansett Bay at State Pier 5 in Narragansett, RI.
    - Secondary Site: Upstream control location North of Boston Neck Road.

2. Data Collection and Processing

Data will be collected and processed using standard hydrologic monitoring protocols consistent with federal guidance from USGS, NOAA, and USFWS. These protocols ensure accuracy, consistency, and defensibility of results. The following procedures will be followed:

- Download Frequency
  - Data will be retrieved monthly to verify logger performance and prevent data loss.
  - Two (2) data loggers will be deployed to create redundancy in the event of a logger malfunction.
- Data Corrections:
  - Water level data will be corrected for atmospheric pressure using barometric readings.
  - Adjustments will be made to align with local tidal datums (e.g., MLLW, NAVD88) using NOAA benchmark data.
- Quality Assurance / Quality Control (QA/QC):
  - Raw data will be reviewed for anomalies such as spikes, dropouts, or drift.
  - Erroneous data points will be flagged and excluded from analysis.
  - Logger performance will be validated against NOAA tide gauge data from nearby coastal stations.
  - Calibration records and deployment logs will be maintained throughout the monitoring period.

These procedures are informed by the USGS National Field Manual for the Collection of Water-Quality Data, the USGS Techniques and Methods 1–D3, and NOAA's Capturing Water Levels Resource Guide and Water Level Station Specifications for Shoreline Mapping Projects. USFWS

protocols for hydrologic data collection and habitat mapping also support the QA/QC framework, particularly for wetland and estuarine environments.

3. Reporting and Deliverables

A technical memorandum will be prepared following completion of the post-dredging monitoring phase. The report will include:

- Summary of monitoring objectives, methods, and instrumentation.
- Time series plots of water level data for both pre- and post-dredging periods.
- Statistical comparison of tidal range, mean water level, and variability.
- Discussion of observed changes, if any.
- GIS-based map showing logger deployment locations.
- Appendices with raw and processed data tables

The draft report will be submitted within 30 days of completing the post-dredging monitoring. Final deliverables will be provided following review and comment resolution.

Attachments

Attachment 1 Proposed Monitoring Plan

References

NOAA Center for Operational Oceanographic Products and Services (CO-OPS). (2025). Capturing Water Levels: Resource Guide. Available at: https://tidesandcurrents.noaa.gov/education/tech-assist/training/water-level/pdf/Capturing%20Water%20Levels%20Resource%20Guide_2025.pdf

NOAA CO-OPS. (2009). Water Level Station Specifications and Deliverables for Shoreline Mapping Projects. Updated May 2009. Available at: https://tidesandcurrents.noaa.gov/publications/Water_Level_Station_Specifications_and_Deliverables_for_Shoreline_Mapping_Projects,_Updated_May_2009.pdf

U.S. Fish and Wildlife Service. (2020). Data Collection Requirements and Procedures for Mapping Wetland, Deepwater, and Related Habitats of the United States. Available at: https://www.fws.gov/sites/default/files/documents/data-collection-requirements-and-procedures-for-mapping-wetland-deepwater-and-related-habitats-of-the-united-states.pdf

U.S. Fish and Wildlife Service. (n.d.). Hydrologic Data Collection and Investigations. Project Overview. Available at: https://www.fws.gov/project/hydrologic-data-collection-and-investigations

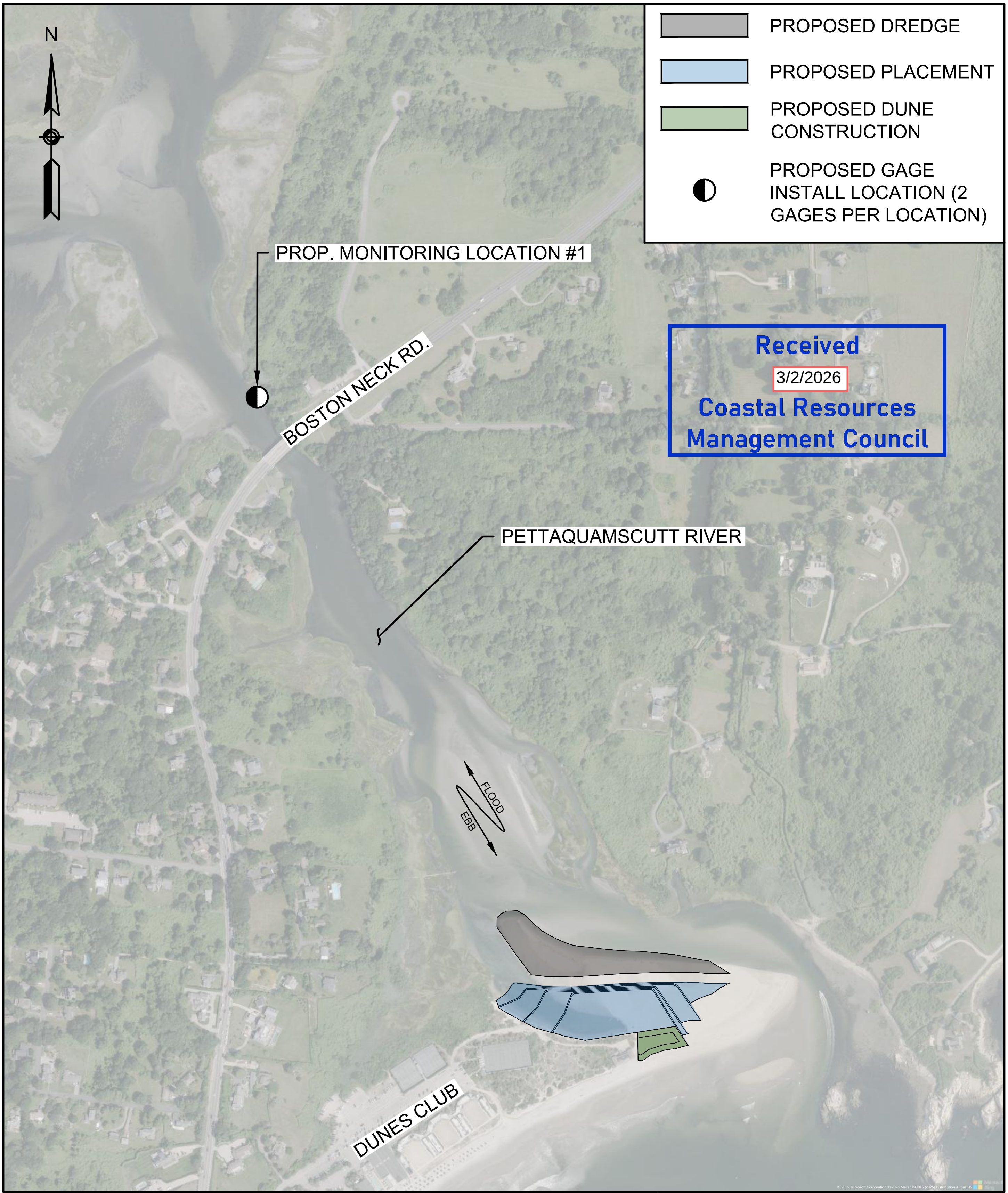
U.S. Geological Survey. (2002). Long-Term Hydrologic Monitoring Protocol for Coastal Ecosystems. Open-File Report 2002–497. Available at: https://pubs.usgs.gov/publication/ofr02497

U.S. Geological Survey. (2006). National Field Manual for the Collection of Water-Quality Data. Techniques of Water-Resources Investigations Book 9. Available at: https://www.usgs.gov/mission-areas/water-resources/science/national-field-manual-collection-water-quality-data-nfm

Wagner, R.J., Boulger, R.W., Oblinger, C.J., & Smith, B.A. (2006). Guidelines and Standard Procedures for Continuous Water-Quality Monitoring in Streams. U.S. Geological Survey Techniques and Methods 1–D3. Available at: https://pubs.usgs.gov/tm/2006/tm1D3/

Attachment 1

Proposed Monitoring Plan



Received
3/2/2026
Coastal Resources Management Council

PURPOSE: NEW DREDGING AT THE MOUTH OF THE NARROW RIVER

DATUM: MLLW = 0.00'
MLW = +1.91'
NAVD88 = +3.31'
AHTL = +4.89'

FOTH INFRASTRUCTURE & ENVIRONMENT, LLC.
114 TOURO ST. NEWPORT, RI 02840

PROPOSED WATER LEVEL MONITORING PLAN

GRAPHIC SCALE
0 300 600
SCALE IN FEET

NARROW RIVER DREDGING

AT: TOWN OF NARRAGANSETT
COUNTY OF: WASHINGTON
APPLICATION BY: FOTH INFRASTRUCTURE & ENVIRONMENT, LLC

DATE: 11/5/2025

SHEET 1 OF 2

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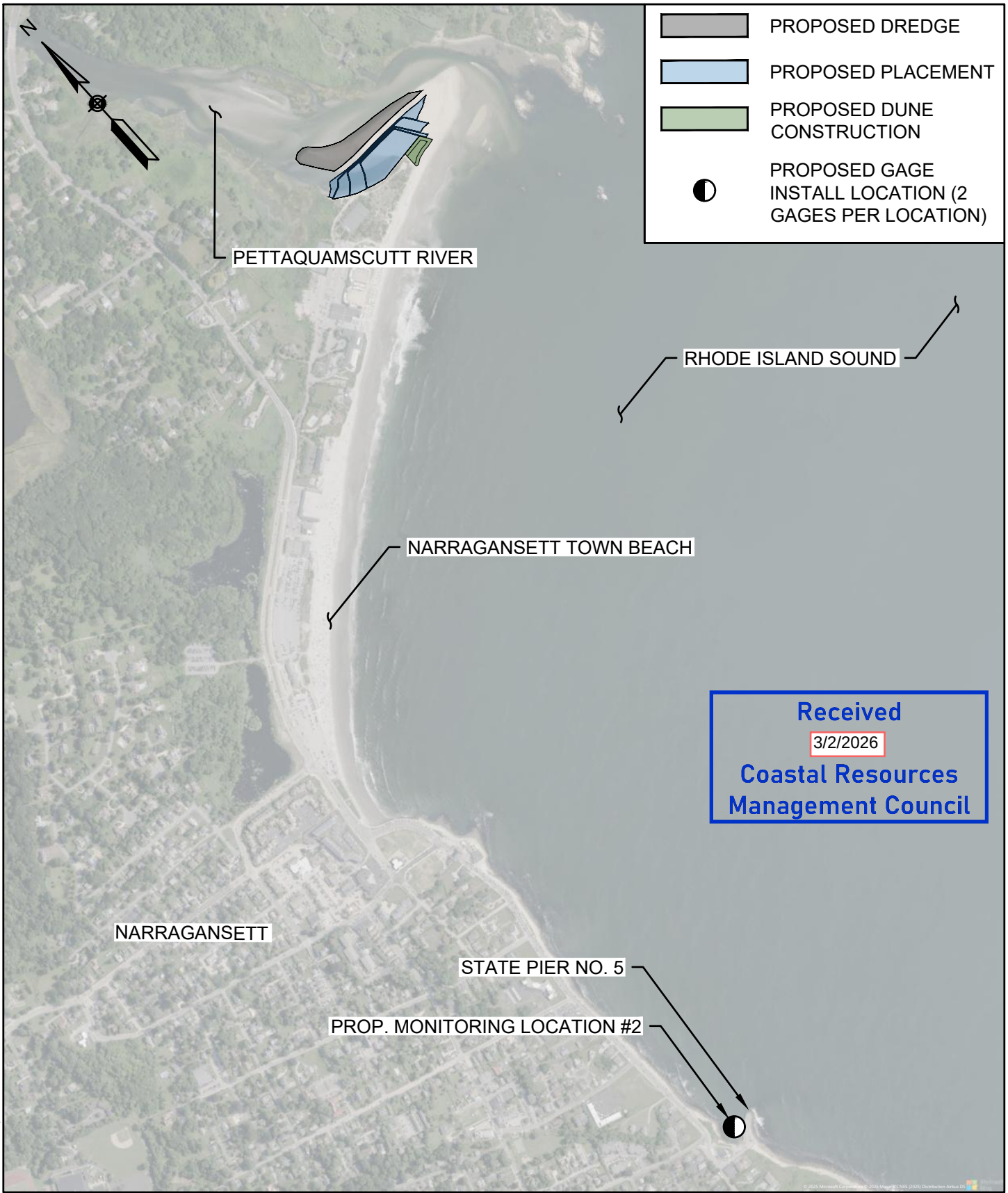

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AT: TOWN OF NARRAGANSETT
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APPLICATION BY: FOTH INFRASTRUCTURE & ENVIRONMENT, LLC

DATE: 11/5/2025

SHEET 2 OF 2

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Memorandum

114 Touro Street
Newport, RI 02840
(401) 236-0360
foth.com

December 12, 2025

TO: Town of Narragansett, Rhode Island (Town)

FR: Foth Infrastructure & Environment, LLC

RE: Dune Vegetation Planting Plan

Site Overview

- **Location**: Coastal dune system in Rhode Island
- **Soil**: Sandy, well-drained
- **Exposure**: Full sun, high wind, salt spray
- **Goal**: Stabilize dune, prevent erosion, restore native vegetation

1. Planting Plan

1.1 Species Selection

Zone	Species	Notes
Foredune	*Ammophila breviligulata* (American beachgrass)	Primary stabilizer
Dune Crest	*Morella pensylvanica* (Northern bayberry), *Prunus maritima* (Beach plum)	Shrubs for structure
Backdune	*Solidago sempervirens* (Seaside goldenrod), *Schizachyrium littorale* (Shore Coastal Little bluestem), Panicum virgatum (Switchgrass)	Pollinator support

1.2 Planting Zones

1.2.1 Foredune Zone (Primary Stabilization)

- Species:
  - *Ammophila breviligulata* (American beachgrass – perennial grass)
- Layout:
  - Plant in staggered rows.
  - Rows should follow the contour of the dune to reduce wind exposure.

- Plant in clusters of two (2) to three (3) culms (bare root stems with roots) per hole to mimic natural colonization (herein considered a plant).

- Spacing:
  - Row spacing: Staggered rows, 12" offset between rows.
  - Planting within rows: Space plants 18” apart, if wind erosion is severe reduce spacing to 12”.
- Density:
  - Approximately 1,000–1,500 culms per 1,000 sq ft
- Planting Guidelines:
  - Planting seeds is not permitted due to their low germination rates.
  - Plant culms at least 8" deep.
  - Avoid planting in straight lines, use a zigzag pattern to reduce erosion.
  - Typical planting window ranges between March 1 to April 30 depending on seasonal weather conditions. Avoid planting when the soil is frozen.
  - Do not plant during the summer.
  - Keep culms and roots moist before and during planting. Water in thoroughly after planting.
- Fertilization: Applying fertilizer is not recommended.

1.2.2 Dune Crest Zone (Structural Vegetation)

- Species:
  - *Morella pensylvanica* (Northern bayberry –perennial shrub)
  - *Prunus maritima* (Beach plum – perennial shrub)
    - Note: Beach Plum seeds (pits) contain hydrocyanic acid (cyanide) and are toxic if consumed. Recommend signage on toe of dune not to consume.
- Layout:
  - Plant shrubs in naturalistic drifts or clusters, not in rows.
  - Use shrubs to create windbreaks and anchor sand.
- Spacing:
  - Perennial shrubs should be planted 3 ft–5 ft apart (on center).
  - Include 3–7 plants of the same species within each cluster.

- Randomly arrange Northern bayberry and Beach plum clusters throughout dune crest.

- Density:
  - Approximately 100–150 shrubs per 1,000 sq ft
- Planting Guidelines:
  - Perennial shrubs should be one (1) to two (2) year old bare root or containerized plants.
  - Dig holes twice the width of root balls.
  - Mulch with salt hay to retain moisture.
  - Planting should be installed in early spring prior to the shrubs breaking dormancy.
  - Avoid planting when the soil is frozen.
  - Optional: Beach Plum should be inoculated with both an arbuscular mycorrhizal fungus and a phosphate solubilizing fungus at the time of planting to enhance salt tolerance and soil health at the root.
- Fertilization: Applying fertilizer is not recommended.

1.2.3 Backdune Zone (Pollinator and Biodiversity Support)

- Species:
  - *Solidago sempervirens* (Seaside goldenrod – perennial forb)
  - *Schizachyrium littorale (Nash or* Shore Coastal Little bluestem – perennial grass)
  - *Panicum virgatum* (Switchgrass – perennial grass)
- Layout:
  - Plant in staggered rows.
  - Rows should follow the contour of the dune to reduce wind exposure.
  - Mix grasses and forbs in alternating patches.
- Spacing:
  - Row spacing: 3 ft from previous center.
  - Planting within rows: 18"–24" apart (plug center to center)
- Density:
  - Approximately 400–600 plugs per 1,000 sq ft
- Planting Guidelines:

- Forbs and grasses should be planted as containerized stock (plugs).
- Grasses should be planted with the root ball 2” below nursery grow depth.
- If planting stock, stems should be 1 -2 ft tall.
- Direct seeding for coastal dune environments is not recommended and may result in insufficient grass establishment.
- Keep substrate attached to the roots of the seedlings while planting (i.e. keep plugs intact).
- Transplant forb stock in late winter to early spring.
- Planting forbs and grasses should be done between March to May.
- Avoid planting when the soil is frozen.
- Use erosion control fabric if slope exceeds 3:1.

- Fertilization: Applying fertilizer is not required for forbs.

1.3 Planting Timeline

Task	Timing
Site prep (dredging, grading, invasive removal)	Fall/Winter (October–January)
Install erosion controls (sand fencing, coir logs, temporary sandbags, and mulch)	Winter (February)
Site inspection (assess erosion)	Early Spring (Mar)
Planting beachgrass culms, shrub and perennial	Mid-spring (March – April)
Mulching, erosion control, and repair fencing as needed	Immediately after planting
Supplemental planting (if needed)	Fall (September–October) (pending weather)

1.4 General Layout Recommendations

- Orientation**:** Rows should run parallel to prevailing wind direction.
- Edge Planting**:** Use denser planting at dune edges to reduce wind scour.

1.5 Irrigation

- Initial Watering: Thoroughly water in all culms, shrubs, forbs, and plugs immediately after planting.
- Establishment Period: Water weekly for first 6–8 weeks if rainfall is insufficient.
- Long-Term: No irrigation needed once established; plants are drought-tolerant.

1.6 Temporary Winter Erosion Controls

- Sand Fencing (Helps trap sand on the dune surface, reduces wind-driven (aeolian) sediment transport and contributes to dune growth and stability.)
  - Install perpendicular to wind.
  - Staggered rows, 10–20 ft apart.
  - Signage should be installed on sand fencing to deter public passage.
- Coir Logs (Stabilizes dune slope)
  - Place along the toe of the dune.
  - Secure with stakes every 3–4 ft.
- Temporary Sandbags
  - Buried approximately 1 foot below seaward toe of dune.
  - Temporarily placed during winter season to protect against winter storm surge.
- Silt Fence (Controls sediment transport caused by upland runoff)
  - Install downslope of disturbed areas.
  - Bury bottom edge of fencing 6" deep.

2. Maintenance Plan

Task	Frequency	Notes
Watering	Weekly (first 2 months)	Only during dry spells
Invasive species removal	Monthly (Year 1), then quarterly	Hand-pulling preferred
Fertilizing	30 days after planting, mid-summer & late-summer (Year 1)	Foredune plantings only – Reference Section 1.2
Replanting	As needed	Fill gaps in spring or fall
Mulch replenishment	Annually	Use salt hay or straw
Monitoring	Biannual	Check for erosion, plant health, and coverage

3. Revegetation Timeline

Phase	Duration	Outcome
Establishment	0–3 months	Root development, minimal growth
(USDA Natural Resources Conservation Services, 2005)	3–12 months	Beachgrass spreads via rhizomes
Stabilization	12–24 months	Full coverage, erosion control
Maturity	2–3 years	Self-sustaining dune vegetation

4. References

RI Coastal Resources Management Council. (2008). *RI.gov*. Retrieved from Coastal Landscapes Program: https://www.crmc.ri.gov/coastallandscapes.html#:~:text=These%20include%20a%20Coastal%20Buffer%20Planting%20Guide%20%28PDF%29,for%20coastal%20property%20owners%20under%20current%20CRMC%20regulations.

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USDA Natural Resources Conservation Services. (2005). Switchgrass Panicum virgatum L. Plant Fact Sheet. Retrieved from https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs_pavi2.pdf

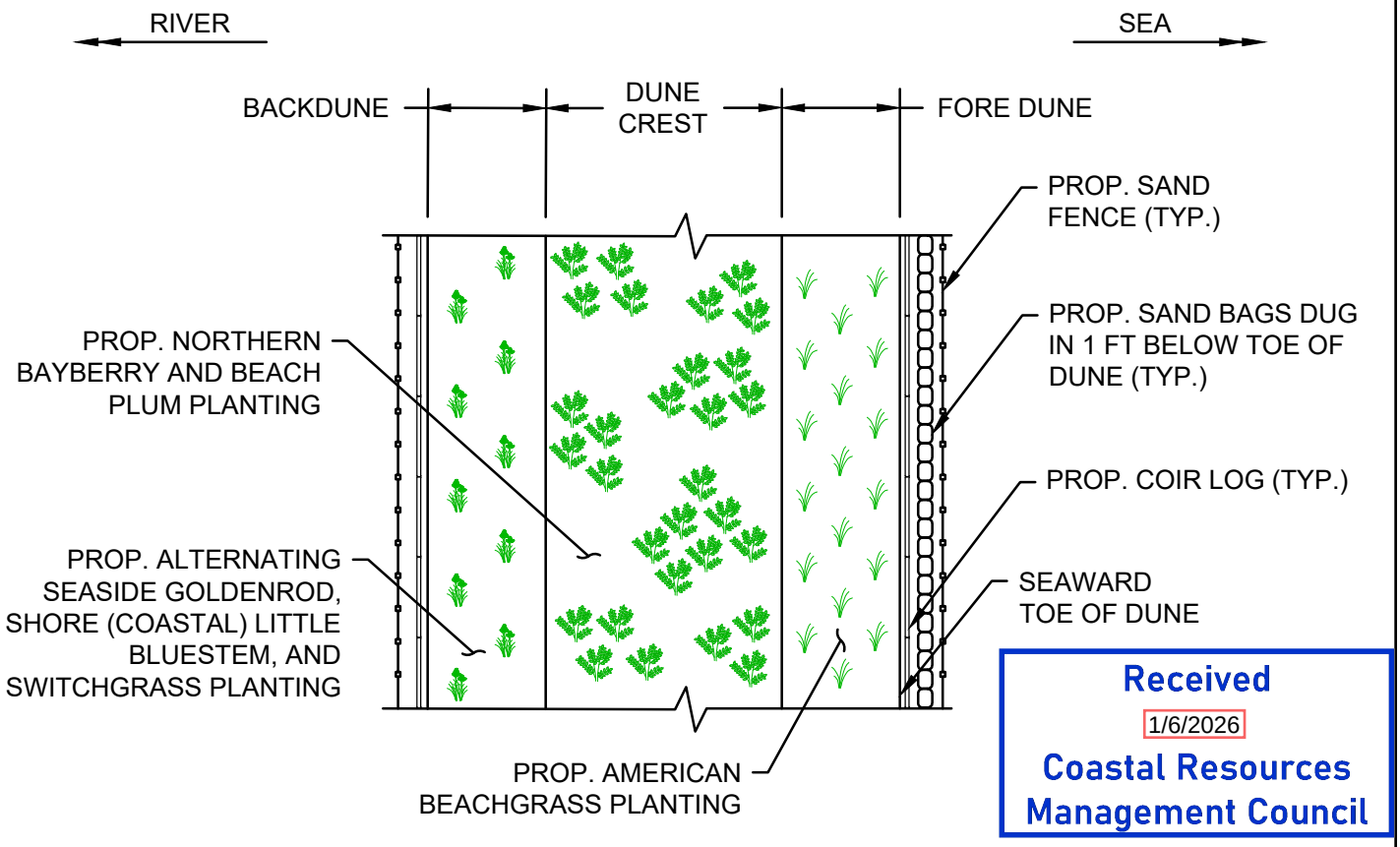
USDA Natural Resources Conservation Services. (2019). NORTHERN BAYBERRY Morella pensylvanica (Mirb.) Kartesz. Retrieved from https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg_mope6.pdf

Attachments

Attachment 1 Conceptual Dune Vegetation Plan

Attachment 1

Conceptual Dune Vegetation Plan



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1/6/2026
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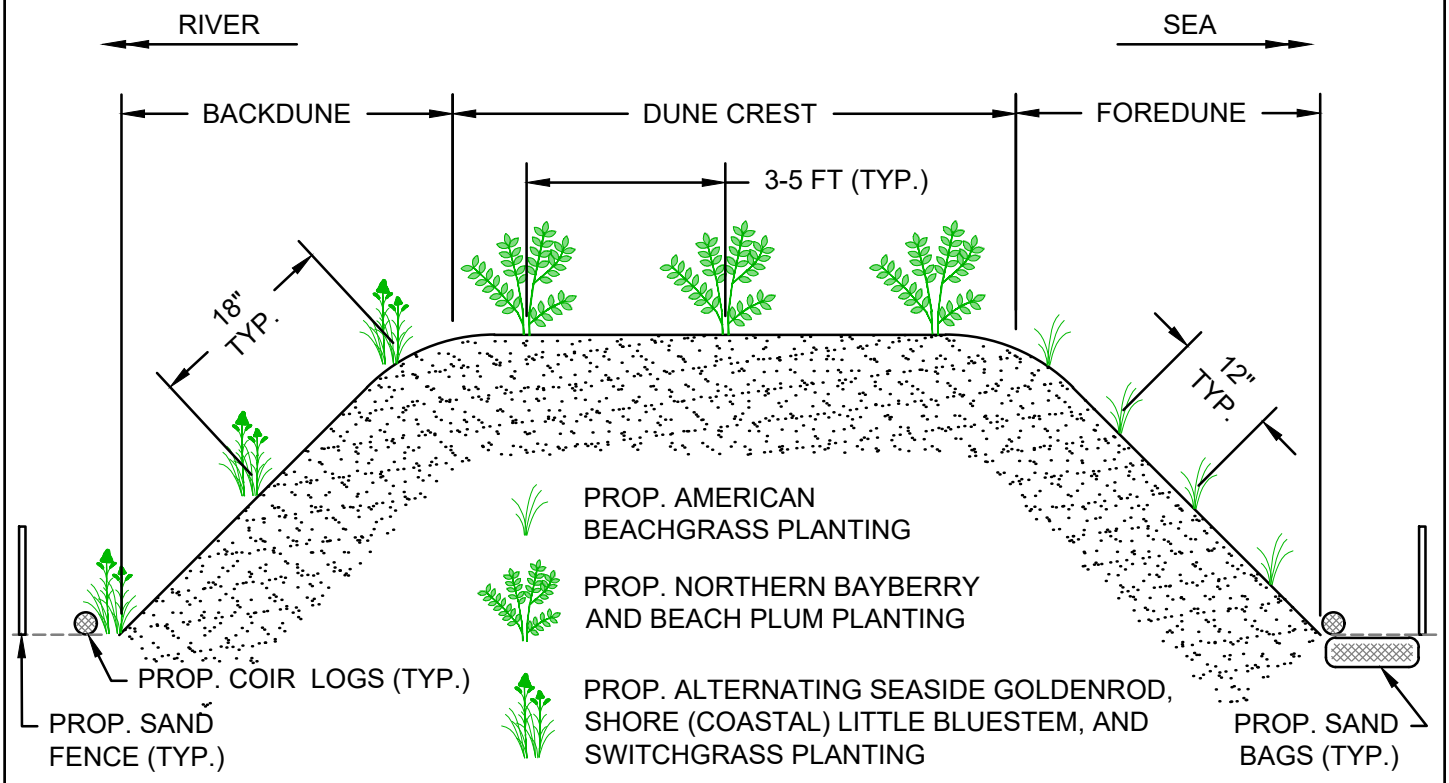

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FOTH INFRASTRUCTURE & ENVIRONMENT, LLC.
114 TOURO ST. NEWPORT, RI 02840

PROPOSED DUNE PLANTING PLAN

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SCALE IN FEET

NARROW RIVER DREDGING

AT: TOWN OF NARRAGANSETT
COUNTY OF: WASHINGTON
APPLICATION BY: FOTH INFRASTRUCTURE & ENVIRONMENT, LLC

DATE: 11/5/2025

SHEET 3 OF 3

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