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February 25, 2021



Conservation Commission
City of New Bedford
c/o Bruce Hebbel, Acting Conservation Agent
133 William Street
New Bedford, MA 02740

155041.006.002

Subject: Response to Comments Letter, February 1, 2021
Notice of Intent
Former Aerovox Facility, RTN 4-0000601

Dear Mr. Hebbel and Commissioners,

AVX Corporation (AVX) and Brown and Caldwell (BC) have previously acknowledged receipt of the Woods Hole Group's (WHG) February 1, 2021 comment letter to the Conservation Commission regarding the Notice of Intent for remediation of the former Aerovox Facility (RTN 4-0000601) under the Massachusetts Contingency Plan (MCP). On behalf of AVX, BC is providing the following response to these comments. For ease of review, the below paragraphs repeat each of the comments, followed by AVX's response.

1. General Responses

Several of the comments contained in the WHG letter are general interest notes or questions that do not relate to the requirements of the Wetlands Protection Act or the jurisdictional areas of the site that will be impacted by the MCP project. The following general comment responses are provided for informational purposes only.

- A. All project related permit applications have been submitted with the exception of the NPDES Construction General Permit NOI which is not required until 14 days prior to the start of construction. A copy of the MEPA Certificate is attached. A copy of this NOI was sent to EPA (newbedfordharbor@epa.gov) via email per the City of New Bedford Administrative Checklist.
- B. In accordance with the MCP requirements (310 CMR 40.0018), an emergency response and contingency plan, health and safety plan, and related construction work plans will be developed prior to the start of construction. Weekly onsite construction status meetings are planned and include invited participation by the City of New Bedford, along with subsequent distribution of meeting notes.
- C. Dewatering liquid will be managed in accordance with MCP requirements for remedial wastewater, will be treated on site outside of the wetlands jurisdictional areas and discharged to the New Bedford sanitary sewer under an Industrial Pretreatment Permit.
- D. Staging areas are outside the wetlands jurisdictional area, will be different for Year 1 and Year 2 construction and are subject to operational requirements of the contractor. Approximate staging areas are shown on drawings C-501 and C-502.

2. Letter Responses

A. Field Wetland Delineation

- 1. Comment:** *We recommend that the Commission request the applicant to revise the wetland delineation to show the salt marsh resource area extending up to the currently mapped boundary of BVW (i.e., HTL); there is no BVW at the site.*

Response: EcoTec agrees that there is no BVW present; rather, the upper boundary of the salt marsh is marked by flags A1 to A67 (See Sheet C-200 and C-300).

- 2. Comment:** *Although the subtidal areas offshore from the Aerovox property were not directly assessed during the site visit, given the shellfish resources present on the adjacent [Titleist] property, unless there is direct evidence to the contrary (i.e., a shellfish survey that found no evidence of shellfish), as a conservative measure we recommend considering all areas seaward of MLW as land containing shellfish as well. Although these areas are outside the area of direct influence from the project, they are within 100 feet of the project boundary and should also be included on the existing conditions plan.*

Response: As discussed during the call between BC and Woods Hole Group, the EPA cap is located on the seaward side of the existing sheet pile wall, and BC does not have information regarding specific wetland resources prior to the installation of the cap. A note has been added to Drawing C-300 to indicate the location of the cap.

B. Cover Letter

- 1. Question/Comment:** *The NOI application cover letter from Brown and Caldwell, dated December 2, 2020, lists a number of permits and reviews that are required for the proposed remediation project. Have all of the permits listed here been obtained and reviews completed? If so, we recommend that the MEPA Certificate be included as part of this filing.*

Response: See general response 1.A. above.

C. Narrative

Narrative – Section 2 – Site Information

- 1. Question/Comment:** *What are the elevations of these tidal datums at this location? What data source was used to determine those elevations? The wetland delineation memo provided in Appendix B references the Clarks Point tide gauge, but this location is outside the hurricane barrier. Given the various constriction points at the hurricane barrier and highway crossings, it's likely that there is some attenuation in the tidal range between Clarks Point and the project site. Is a more localized set of tidal data available?*

Response:

The Mean High Water (MHW) line depicted on the wetland resource area figure is based on data available from the National Oceanic and Atmospheric Administration (NOAA) and is consistent with EPA restoration plans for the New Bedford Harbor. The EPA subtidal/intertidal restoration plans (by Jacobs) are on the EPA website for New Bedford Harbor. The Jacobs August 2019 work plan for West Zone 2-3 includes the

Titleist property (Parcel 112-133) can be found here:
<https://semspub.epa.gov/work/01/100014733.pdf>. These plans reference elevation 1.99 ft as MHHW and -1.97 ft as MLLW (both in NAVD88 datum).

EcoTec's November 18, 2020 wetland resource report includes elevations for (NOAA) Station 8447712, Clarks Point, New Bedford, MA, available on the NOAA website. The datums provided for the Clarks Point Station were presented relative to MLLW, with the MHW line as 3.71 ft relative to the MLLW line. For this location the NAVD88 datum was not available. [Using NOAA's Vertcon VGVD to NAVD Converter](#), the 3.71ft MHW line in MLLW datum converts to 1.75 ft in the NAVD88 datum. This conversion is consistent with the table of tidal, NAVD88, and NGVD29 datums available from the Buzzards Bay National Estuary Program below, as well as elevations used in EPA's August 2019 work plan referenced above:

Clarks Point New Bedford Tidal Datums vs. NAVD 88 and NGVD29				
Tidal State	Tidal Datum (meters)	Tidal Datum (feet)	NAVD88 ft	NGVD 29 ft
MEAN HIGHER HIGH WATER (MHHW)	1.21	3.96	1.99	2.82
MEAN HIGH WATER (MHW)	1.13	3.71	1.74	2.57
1988 North American Vertical Datum NAVD88	1.97	1.357	0.00	0.83
MEAN TIDE LEVEL (MTL)	0.59	1.93	-0.40	0.79
MEAN SEA LEVEL (MSL)	0.51	1.67	-0.30	0.53
1929 National Geodetic Vertical Datum (NGVD29)	1.14	0.83	-0.860	0.000
MEAN LOW WATER (MLW)	0.04	0.14	-1.83	-1.00
MEAN LOWER LOW WATER (MLLW)	0.00	0.00	-1.97	-1.14

To conclude, the EPA plans provide the MHHW elevation of 1.99 ft and MLLW elevation of -1.97 ft, as well as the site elevations of MHW elevation of 1.74 ft and the MLW elevation of -1.83 ft. Therefore, the EPA elevations, the Brown and Caldwell elevations, and the Clarks Point NOAA tidal NAVD88 datums are all consistent, and no adjustments to MHW or MLW are warranted. Furthermore, this consistency in application of the NAVD88 datum elevations shown above, and incorporated into EPA Plans, the Aerovox design drawings and the NOI, is essential to define and maintain site boundaries and coordinate between the two remediation projects.

2. **Comment:** *The Wetland Protection Act defines "Land Subject to Tidal Action" as "Land subject to the periodic rise and fall of a coastal waterbody, including spring tides." Spring tide elevations are higher than MHW. Therefore, if the applicant is defining Land Subject to Tidal Action as only extending to MHW, the area that is actually Land Subject to Tidal Action is likely larger than what is currently depicted on the plan in Figure 4.*

Response:

On the Titleist property (Drawing C-200), the high tide line is depicted as higher than the MHW line. EcoTec flagged the upper boundary of the salt marsh resource area, which, by definition, extends landward up to the highest high tide line. The high tide-line is the landward edge of the salt marsh resource area.

As noted by Woods Hole Group in Comment 31, the date of delineation (September 17, 2020) corresponded to a new moon, and a spring high tide would have

occurred. EcoTec flagged high tide on the Aerovox property (Flags A1 – A23 on Drawing C-300), which falls above the MHW line.

3. **Question/Comment:** *Was the 100-foot buffer zone measured from the toe or top of the coastal bank? Woods Hole Group recommends that the Commission confirm that this buffer zone was measured from the top of the coastal bank.*

Response: The 100-foot buffer zone was originally measured from the toe of slope. This line has been adjusted such that it is measured from the top of coastal bank. (See Sheet C-200 and C-300).

Narrative – Section 3 – Remedial Action

4. **Question:** *Are there any contingency plans in place to remove, relocate and or secure equipment and site material in the event of a severe storm?*

Response: See general response 1.B. above

5. **Question:** *How will dewatering liquid be stored, handled, treated?*

Response: See general response 1.C. above.

6. **Comment/Question:** *Staging areas do not appear to be included in Plan C-102 as described. “Clean Materials Staging Area” is, however, shown on Plan C-301 and Plan C-304, but they appear to indicate slightly different areas. Woods Hole Group recommends that the Commission have the applicant confirm where the boundaries of the staging area will be.*

Response: See general response 1.D. above.

7. **Comment/Question:** *Woods Hole Group recommends that the Commission ask the following questions of the applicant: 1) How will the silt curtain and coffer dam be installed and anchored (e.g., will heavy equipment need to cross/enter the resource areas?, will dredging be necessary to create suitable flat topography to install the coffer dam correctly?); 2) How long and during what time of year will these barriers be in place?; 3) Does the applicant have any emergency provisions for storm damage (i.e., if these barriers are damaged during a storm event)?*

Response: 1) In general, Portadam® installation consists of a steel supporting structure with a continuous reinforced liner/membrane to effectively provide a means of water diversion, retention or impoundment. The support structure is designed to transfer hydraulic loading to a near vertical load, thereby creating a free-standing structure with no back brace. The liner system is very flexible, providing a good seal over most irregular contours. A document that further describes the Portadam structure and installation is attached.

2) The use of the Portadam is intended for Year 2 of construction only (2022) for a duration of approximately three (3) months during the spring/summer.

3) See general response 1.B. above.

8. **Comment:** *Section 3.2.5 describes how the proposed project will meet the Coastal Beach performance standards under 310 CMR 10.27, and notes that the tidal flat is not significant to marine fisheries. No mention is made of the potential significance of this area as wildlife habitat; tidal flats are typically important to shorebirds as a foraging area. The January 26, 2021 site visit conducted by the Woods Hole Group PWS found no evidence to indicate that this area would not be significant to the protection of marine fisheries and wildlife habitat.*

Response: The MHW line (as shown on Sheet C-200), falls within the salt marsh area. The coastal beach (tidal flat) area falls landward of the MLW and outside of the proposed work area. As such, no impacts are anticipated in the tidal flat area. Overall, it is our intent to place the temporary Portadam as close to the limit of work as feasible (marked by the MHW line) to minimize temporary impacts to water circulation and species within the intertidal zone. The footprint of the Portadam within the salt marsh is also quite small compared to the availability of similar habitat nearby, which allows fish and birds access to food sources nearby.

9. **Question:** *Section 3.2.5 describes how the proposed project will meet the Coastal Beach performance standards under 310 CMR 10.27, and notes that the tidal flat is not significant to marine fisheries. How was it determined that this area was not significant to the protection of marine fisheries? Is this area significant to the protection of wildlife habitat? If it is significant to either, does the proposed project meet the performance standard under 10.27(6):*

“a project on a tidal flat shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, on marine fisheries and wildlife habitat caused by (a) alterations in water circulation, (b) alterations in the distribution of sediment grain size; and, (c) changes in water quality, including, but not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.”

Response: See response to Comment 8 above.

10. **Question:** *Does the proposed project meet the coastal bank performance standards (6) through (8)?*

Response: 310 CMR 10.30(6): Excavation of contaminated soils will take place along and within 100 feet of the coastal bank on the Site based on the bank's location within an area of contaminated soil where remediation is required by the Massachusetts Contingency Plan and therefore cannot be avoided. However, temporary construction impacts will be mitigated by restoring the coastal bank to pre-construction elevation, and installation and stabilization of vegetation. 310 CMR 10.30 refers to disturbances to coastal banks that can reduce its natural resistance to wind and rain erosion, resulting in gullies that increase risk of its collapse and potential for impacting the value of the bank as a buffer. During proposed excavation activities, the existing and temporary sheet piling is not only intended to stabilize the work area but will prevent destabilization and erosion on the seaward side of the work area due to wave action, precipitation, and wind. When each phase of excavation is complete, clean fill soils will be backfilled in compacted lifts to pre-construction grades, including along the bank, and organic rich soils will be placed to enable restoration of vegetation. Drawing C-320 illustrates how stabilization matting will also

be utilized. BC understands that a more detailed restoration monitoring and maintenance plan will be required in the Order of Conditions and will provide the plan to Commission for review.

310 CMR 10.30(7): No bulkheads, revetments, seawalls, groin or other coastal engineering structures are proposed as part of this project.

310 CMR 10.30(8): Based on MassGIS natural heritage data, the site is not identified as located on a rare vertebrate or invertebrate species habitat.

11. Comment: *Section 10.32 of the WPA refers to salt marsh resource areas. 310 CMR 10.32(4) does not apply to the proposed project, as this is not a "small project" "such as an elevated walkway". However, 310 CMR 10.32(5), which is not addressed here, may apply.*

Response: The reference to 310 CMR 10.32(4) appears to be a typographical error. Further discussion of performance standards in salt marsh resource areas included in response to Comment 12 below.

12. Comment: *310 CMR 10.32(3), which states that a proposed project "shall not destroy any portion of the salt marsh and shall not have an adverse effect on the productivity of the salt marsh," was not addressed and does apply. This performance standard does not permit any destruction of salt marsh (temporary or otherwise). Without an Ecological Restoration permit, which page 2 of the NOI application form states this project is not eligible for, or a variance, the project cannot have an adverse impact on existing salt marsh resource areas and still meet the standards of the Wetlands Protection Act.*

Response:

Remedial activities mandated by the MCP and in accordance with agreements between the City of New Bedford and the USEPA must be completed. As noted in the NOI, public hearing, and during the site walk with WHG, the work proposed in the NOI (above the MHW line) is not discretionary and is the responsibility of the AVX Corporation. Remedial work below the MHW line is the responsibility of the USEPA, and the USEPA will likely be performing remediation of the intertidal zone along the former Aerovox and Titleist properties within the next few years. Salt marsh and other coastal resources are present on the Aerovox and Titleist properties within and adjacent to areas where remedial activities must be performed in accordance with the Remedial Implementation Plan (RIP). The proposed work aligns with the allowable limited projects in 310 CMR 10.24, which allows Commissions to issue an Order for the assessment, monitoring, containment, mitigation, and remediation of oil and/or hazardous material in accordance with the MCP. Page 2 of the NOI form was in error and has been revised to indicate that the proposed project qualifies at this type of limited project. The Revised NOI form Page 2 is attached.

As noted above, there is no alternative to the response action being proposed under the MCP. Remedial action alternatives have been evaluated, and the selected remedy has been identified in the RIP submitted to MassDEP in July 2020. Temporary, but unavoidable impacts to wetland resource areas will occur; however, the proposed work will be implemented and restoration areas maintained to meet the standards outlined in 310 CMR 10.24(c)(6)(b) to the maximum extent practicable.

13. Comment: *The installation of a coffer dam will impact water circulation. Woods Hole Group recommends that the Commission ask the applicant to specify how long this barrier will be in place, specifically what areas of intertidal area will be impacted (all existing sessile biota in this area will likely die), and how long it is expected to take for biota to re-establish after the conclusion of the project.*

Response: As noted in our response to Comment 8, the Portadam (coffer dam) will be in place for approximately three (3) months during construction Year 2 within the salt marsh resource area. BC expects the re-establishment of biota as soon as the next spawning season occurs after the Portadam is removed based on the relatively small footprint of temporary impacts from the Portadam compared to surrounding available habitat, the project area's close proximity to other areas with the same biota, and the dispersal capabilities of the biota. Given no permanent changes to sediments, slopes, and vegetation are proposed, restoration of the salt marsh area will provide habitat for biota during re-establishment.

14. Comment: *The January 26, 2021 site visit conducted by the Woods Hole Group PWS found significant mussel beds within the salt marsh, forming a reef at the seaward edge of the salt marsh and in the tidal flat seaward of the salt marsh (Figure 2). These shellfish resources will be significantly impacted through the installation of a coffer dam and the removal of the water from this area. Per 10.34(5) a temporary impact to shellfish is allowed under the Wetland Protection Act if that area can and will be returned to its former productivity less than one year from the commencement of work. Woods Hole Group recommends that the Commission ask the applicant to confirm how the proposed project will comply with this performance standard.*

Response: Our intent is to install the temporary Portadam as close to the work area (marked by the MHW line) within the salt marsh area for as short a duration as feasible. The purpose of the Portadam is to prevent the encroachment of tidal waters into the work area during excavation, and removal of significant volumes of water from within the Portadam area is not proposed. We do not anticipate that the Portadam will be placed beyond the seaward edge of the salt marsh where the reef was observed. Within the landward edge of the salt marsh, mussels are typically found at lower densities than what was shown in the Woods Hole Group photograph. As noted in the response to comment 13, BC expects re-establishment of biota as soon as the next spawning season. Given the proposed restoration activities, along with the anticipated requirement for a detailed monitoring and maintenance plan, there are no long-term impacts that are expected to prevent successful establishment and growth of mussels where present within the footprint of the Portadam.

Narrative – Section 4 – Restoration Activities

15. Comment: *The restoration work planned for the Coastal Bank is not described anywhere in Section 4.*

Response: The coastal bank on the Titleist property is located within the upland riparian habitat area. Site elevations on the Titleist property will be restored, including the location of the pre-construction coastal bank. As noted on revised site plans C-204 and C-205, the bank and slopes will be stabilized and re-vegetated. A

detailed monitoring and maintenance plan will be prepared prior to the start of construction and provided to the Commission.

Note that the coastal bank on the Aerovox property is marked by the existing sheet pile wall, which will remain in place throughout and after remediation activities.

16. Question: Can the use of fertilizer be eliminated or minimized within close proximity to the river?

Response: Fertilizer use specific to salt marsh plantings will be applied in accordance with recommendations from the Virginia Institute of Marine Sciences to help plantings succeed, especially within the crucial first year of growth. Fertilizer is proposed to be applied to each plug to maximize uptake of nutrients by plantings and minimize waste. In lawn areas, fertilizer will be applied once in accordance with manufacturer instructions to promote growth within the first growing season.

17. Comment/Question: Even if planting is done during the preferred seasons (i.e., fall or winter), watering may still be necessary through at least the first growing season (especially if drought conditions occur) to ensure the plants establish successfully. Does the site have water hookups? Who will be responsible for watering? How will this be implemented (i.e., who will be watching, and for what, to know that the need for watering has been triggered)? Woods Hole Group recommends that the Commission require a detailed monitoring and maintenance plan be submitted for all planted/restored areas of the project.

Response: It is our understanding that a more detailed monitoring and maintenance plan will be required as part of the Order of Conditions and will include topics such as those mentioned in this comment. The plan will be prepared in accordance with the Order.

18. Comment: As noted above in Section B – Wetland Delineation Review, it is our opinion that the areas mapped as BVW are actually salt marsh. The New England Wetmix mentioned in the narrative is recommended for freshwater sites. Given that this area is occasionally inundated with salt water (i.e., it is below the HTL), the New England Coastal Salt Tolerant Grass Mix from New England Wetland Plants, Inc. would be a more appropriate seed mix for this location.

Response: The seed mix list on Drawing C-319 includes switchgrass and big bluestem, both of which are included in the salt tolerant grass mix referenced in the comment above. The other species listed on Drawing C-319 are also salt tolerant and offer more diversity for pollinators than the suggested salt tolerant grass mix. As such, the New England Wetmix will not be used, and the intent is to use the seed mix specified in Drawing C-319.

19. Comment: The final paragraph of Section 4.1 describes the salt marsh restoration work planned for the Titleist Property (OU-1). The description of the work describes planting both high and low marsh species, and briefly mentions the addition of sand fill. The narrative directs the reader to construction drawings C-318 through C-320 for additional plans and details regarding this work. Construction drawings C-318 through C-320 show the restoration work for the Aerovox Property (OU-3), not the Titleist Property. The restoration work for the Titleist Property is shown on

construction drawings C-204 and C-205. These plans, however, do not show any proposed salt marsh restoration work and do not indicate that any fill will be placed in the salt marsh.

Response: On the Titleist property, a small area of salt marsh that is located above the MHW line will be excavated to remove contaminated soil. Following contaminated soil removal, clean fill soil will be backfilled into the area above the MHW line to a minimum of 4 inches below final grades in areas of steeper slopes. The remaining 4 inches will consist of a sandy loam topsoil containing organic matter. In areas with slopes of 8H:1V or less, clean fill soil will be backfilled to a minimum of 12 inches below final grades and 12 inches of sand fill will be installed, similar to the marsh creation on the Aerovox Property. In these flatter areas where slope stability is of less concern, sand fill is a preferred media since it allows better drainage of the soils during tidal cycles, helping plant survival and quicker root growth for plant establishment. The sand is also not as easily carried away from the site, helping to hold established finished grades better. The small amount of fertilizer placed with each marsh plant plug helps provide the needed nutrients as recommend in the Virginia Institute of Marine Sciences living shoreline guidance documents. Using organic materials or topsoil materials with lower drainage characteristics in these flatter areas can result in poorer growth of the marsh plants. Over time, organics are deposited in the flatter tidal areas and provide the natural nutrients used by the plants. Detail drawing B, provided on Drawing C-320 shows a cross section of soil to be removed and placement of clean fill based on slope condition. Drawings C-204 and C-205 have been revised to show the salt marsh restoration in plan view.

20. Question: *In reference to comment #19, is salt marsh restoration actually proposed for this area? If so, this portion of the restoration approach should also be shown and detailed on the plans. Given the proposed coffer dam, it is likely that the salt marsh fronting the Titleist property will require restoration at the conclusion of the project. With regards to the sand fill described in the narrative, would a more organic rich salt marsh/wetlands soil mix be more appropriate? The existing sediment at the site is not sand.*

Response: As noted in the response to Comment 19, Drawings C-204 and C-205 have been revised to show restoration of the salt marsh area. Also as noted above, when establishing marsh areas, using a coarse-grained sand provides quicker establishment of the marsh plants by allowing quicker root growth and better drainage of the material during tidal cycles in flatter areas. Over time, the soil medium will become more organic to sustain the marsh plants. See attached photos of similar representative plantings.

The placement of the coffer dam on the low marsh areas will be as landward as possible and will lay over the existing vegetation. In shoreline restoration projects that require access over marsh grasses, often wood mats are placed on the vegetation to minimize impact for machine access. When removed, the low marsh grasses typically re-establish and minimal impact to the plants occur.

21. Question: *Section 4.3 describes the restoration proposed on the Aerovox Property (OU-3), including a wetland constructed inland of a sill. With the top of the sill proposed to be higher than MHW, and only a few inlet/outlet portals, how will pooling be eliminated if the material behind the sill settles differently over time? How will*

the project design ensure fish and other marine organisms are not trapped behind the sill at low tide?

Response: The gradation of the sand is designed to minimize movement during tide cycles and from becoming suspended in the water column, while providing optimal conditions for quick root growth of the high and low marsh plants for quick establishment. The design specifications require that the sand be placed in 12-inch lifts through a minimum of two tide cycles as well as providing a minimum of three weeks for the sand to settle before planting of the marsh. Grades are also required to be checked for compliance with final grades before planting. This is a standard process used on many shoreline projects and helps to minimize settling after planting. If areas do settle some, they provide micro-pools and natural habitat areas for fisheries and other marine organisms, mimicking natural shoreline marshes. Eliminating pooling in these areas would decrease the diversity of habitat in the proposed marsh and discourage the potential for a species-rich environment. Each of the inlet/outlet pipes are located at the low points along the existing steel sheet pile, reducing the opportunity for those species that move with the tide changes from being trapped.

22. Question: Will any of the year 2 activities impact the restoration portions completed in year 1? What measures will be put into place to ensure previously restored areas will not be adversely impacted by year 2 activities?

Response: No. Year 1 activities will occur entirely on City (Aerovox) property while Year 2 activities will primarily take place on Titleist property. It is likely that Year 1 shoreline work areas will be stabilized for the winter, and planting will be performed in the spring of Year 2. Staging areas and work areas are positioned such that restoration areas can be avoided during other phases of work.

23. Question: When monitoring the newly planted areas, what quantitative monitoring thresholds would trigger additional planting? Should monitoring also include inspection after significant storm events in addition to the regular semi-annual inspections? What methods will be employed for monitoring the marsh vegetation (e.g., mapping the outer extent of surviving vegetation? quantifying percent ground cover within marsh area? will quadrats or transects be utilized for monitoring? Woods Hole Group recommends that the Commission require a detailed monitoring and maintenance plan be submitted for all planted/restored areas of the project.

Response: BC anticipates that a more detailed maintenance and monitoring plan associated with restoration activities will be a requirement of the Order of Conditions, and a plan will be provided to the Commission that addresses these specific items.

24. Comment: The narrative notes that inspections after the first two years will occur in early spring. Late summer/early fall is more appropriate for determining percent survival and health of the plants. Salt marsh plants are often just sprouting by early spring.

Response: BC anticipates that a more detailed maintenance and monitoring plan associated with restoration activities will be a requirement of the Order of

Conditions. The plan will include a semi-annual monitoring schedule for inspection in both spring and the late summer/ early fall.

Narrative – Section 5 – Measures to Protect Natural Receptors and Resources

25. Question: *Is there a need to decontaminate equipment between different segments of the project?*

Response: No. See general responses 1.B. above

26. Question: *How will visual turbidity monitoring be conducted? Will monitoring take place at more than one location along the shoreline? What is the threshold for “obvious problem”?*

Response:

Turbidity is a measure of relative clarity in the water. BC construction oversight staff will make visual observations to the extent practicable along the Titleist and Aerovox shoreline in the areas within and outside the Portadam and/or silt curtain to identify if turbid water originating from the work area has bypassed the silt curtain. “Obvious problems” are site conditions in which a plume of turbid water can be readily observed originating from within the work area and migrating outside the silt curtains.

Narrative – Section 6 – Stormwater Report

27. Comment/Question: *The applicant’s response only addresses how the proposed project will utilize erosion and sediment control (ESC) measures but does not address how the project plans to control other potential pollutant sources. Will the proposed ESC measures be sufficient to ensure pollutants and contaminants are contained? Has a pollution prevention plan for stormwater been supplied to the Commission?*

Response: Section 5.1 of the narrative states that a Construction Stormwater Pollution Prevention Plan (CSWPPP) will be prepared in accordance with the EPA’s Construction General Permit (CGP) for stormwater associated with construction activities. The CSWPPP will be prepared prior to the start of mobilization as required, and a Notice of Intent (NOI) will be submitted to the EPA. The CSWPPP will describe how control measures will be inspected and maintained during construction. The CGP requires that construction be phased to the extent possible to minimize areas of disturbance. Work planned in Years 1 and 2 will be performed in phases to minimize land disturbance. The CGP also requires that potential pollutant sources and controls be identified in the CSWPPP. The CSWPPP will be prepared utilizing the EPA’s CSWPPP template to address these topics. Erosion control measures will be installed at the start of each year’s construction season and inspected by the Conservation Agent prior to the start of the work. A copy of the CSWPPP will be kept on site at all times during construction activities.

Figures

28. Comment: *Figure 2 presents a FEMA Flood Zone Map. The boundaries of the FEMA flood zones are depicted on the map, and the legend indicates whether particular*

areas or AE or X (0.2% Annual Chance of Flooding), for example, but the map does not show the base flood elevations (BFEs).

Response: Figure 2 has been revised to add the base flood elevations and is attached.

29. Comment: *Figure 4 shows the Wetland Resources Areas Plan. This figure does not depict the extent and boundaries of all wetland resource areas present at the site. Labels and areas of the amount of each type of wetland resource area that will be impacted are shown on the plan, but the arrows don't always appear to be pointing to a defined area. Changing the scale of this plan and/or providing a zoomed-in detail of the shoreline may aid in the readability of this map. Some additional specific concerns with this figure include:*

- 1) Wetland flag numbers are not shown (although they are referred to in the Wetland Delineation Report) so it is not possible to compare the descriptions from the Wetland Delineation Report with what's shown on this plan;*
- 2) Elevations labels are not provided on the topographic lines;*
- 3) The mean low water (MLW) line, as well as the lines for the coffer dam and silt curtain, appear to pass through the middle of the area symbolized as salt marsh. Ecologically, the seaward edge of the salt marsh should be well above MLW; the tidal datums and the placement of these lines should be double checked and confirmed by the applicant. Woods Hole Group recommends that the Commission ask the applicant to confirm the location of the coffer dam (i.e., will it be placed within the salt marsh or in the fronting tidal flats?); and*
- 4) The boundaries of the FEMA flood zones are depicted on this figure, but the BFE labels are not provided.*

Response: See the attached Drawings C-200 and C-300, and revised Figure 2.

Wetland Delineation Report

30. Question: *On page 2 of the report, the table describes blue ground flags as delineating the upper boundary of the High Tide Line (HTL) along the Acushnet River. How was this location determined? Were field conditions at the site used to determine the HTL? Or were these locations surveyed in based on calculations of tidal datums conducted prior to the delineation?*

Response:

The blue wetland flagging for the upper boundary of High Tide Line was delineated based upon the presence of a wrack line and elevation of flooding and saturation caused of the high tide observed during a new moon high tide during EcoTec's site visit on September 17, 2020. As Woods Hole Group noted, based upon the new moon tide of September 17, 2020 this is a reasonable proxy for the high tide line.

31. Comment: *The Wetlands Protection Act defines "high tide line" as the "highest spring tide of the year". November 15-16 and December 13-15, 2020, which both corresponded with new moons, produced the highest high tides of 2020.*

September 17, 2020, when the delineation was conducted, also corresponded to a new moon, and a spring high tide would have occurred that day; although this would be slightly lower than the true HTL, it is possible that the high water line (i.e., the highest water level of that day) of September 17 could serve as a reasonable proxy for the HTL. It would, however, be helpful to understand what field evidence was used to determine this location.

Response: See response to comment 30 above.

32. Comment: *The same table on page 2 of the report describes three discrete sets of wetland flags: A1 to A23 were blue ground flags delineating the HTL, A23 to A67 were blue flags delineating the upper boundary of the BVW, and B1 to B13 were red flags delineating the BVW boundary southeast of the site. These flag locations are not labeled on the wetlands figure.*

Response:

The locus for EcoTec's inspection extended further south than the NOI site plans to make sure that the extent of coverage was obtained. The Bordering Vegetated Wetland (BVW) delineation is located further south than the current project locus. As such, the delineated BVW and associated (upland & wetland) test plot flags are located southerly and beyond the work area of the NOI and therefore will not be depicted on the site plans. Flag numbers associated with the work area have been added to Drawings C-200 and C-300.

33. Question: *What location on the site plans does this [BVW] form correspond to? Without flag numbers on the plans, it's not possible to tell where this information was collected.*

Response: Flag numbers have been added to Drawings C-200 and C-300. As discussed in the response to 32, BVW is located south of the work area.

34. Question: *The Narrative notes that "work proposed within 0 feet of a Salt Marsh would require a waiver of the bylaw regulations." To what bylaw regulations is the applicant referring to? Woods Hole Group's review found that New Bedford has a Wetlands Ordinance, but no Wetlands bylaw. The Wetland Ordinance does not contain a stipulation requiring a waiver for work proposed within 50 feet of a salt marsh. If there is a relevant bylaw that includes this language, was a waiver request filed?*

Response: EcoTec Inc. confirmed that their statement regarding a waiver for work proposed within 50 feet of a salt marsh was inadvertently included in the report. EcoTec is issuing a revised wetland delineation report, attached.

35. Comment: *The definition of salt marsh in 310 CMR 10.32(2) is "a coastal wetland that extends landward up to the highest high tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in, saline soils." Based on the definition, Woods Hole Group recommends extending the salt marsh delineation landward to the HTL.*

Response: The upper boundary of the salt marsh has been extended landward to the HTL as shown on Drawing C-200.

36. Question: *Were cross-sections and slope calculations provided to support the bank delineation?*

Response:

EcoTec Inc provided cross sections of coastal banks for reference from Mass Policy 92.1 and provided guidance that at the Titleist property, the coastal bank is represented by the change in slope. On the Aerovox property, the coastal bank is represented by the existing sheet pile wall. The coastal bank is shown on Drawings C-200 and C-300.

37. Comment: *One of the attachments to the Wetland Delineation Report, page 96 of the application packet PDF and the page between the map of the Natural Heritage Atlas Online Data Viewer Output and the Datums for Clarks Point, is not legible. This page should be resubmitted to the Commission.*

Response: The sheet contained in the report is the FEMA FIRMette Map# 2500056C03916 dated 7/16/2014. A clean copy is included in the revised wetland delineation report.

38. Comment: *With the exception of Plan C-318, where MHHW and MLLW are shown on the cross-sections, this is the only location in the application where tidal datum elevations are presented. The NOAA tidal datums in this attachment are, however presented relative to MLLW, rather than to NAVD88 like the rest of the plan set. In subsequent communication with the applicant, additional detail was provided on the tidal datums at the site, including elevations referenced to NAVD88. We recommend that these NAVD88 referenced elevations be clearly noted on the plans.*

Response: MLW and MHW elevations in NAVD88 datum are noted on attached Drawings C-200 and C-300.

Site Plans to Accompany Notice of Intent

39. General comment: *Existing wetland resource areas are not depicted on any of the site plans. Woods Hole Group strongly recommends that the Commission request a revised plan set that a) includes a clear depiction of the boundaries of all wetland resource areas present on the site, and b) clearly shows the proposed actions overlap with the wetland resource areas so specific impacts are clear.*

Response: An existing site conditions plan set (Drawings C-200 and C-300) has been added and is attached.

40. Question: *Plan C-205, the Titleist Restoration Planting Plan, notes that “bank stabilization matting” will be installed on all upland riparian buffer areas. What kind of matting will be used (i.e., what material will it be made from)?*

Response: Bank stabilization matting is RoLanka BioD-Mat™ 70, or comparable 100% biodegradable bristle coir woven blanket.

41. Comment: *There is a significant area of existing salt marsh fronting that property [Titleist] that could be adversely affected by the proposed work, specifically due to the*

coffer dam and silt curtain placement (either because these components are placed with the salt marsh and will do direct damage or because they are placed seaward of the salt marsh and will indirectly adversely affect the marsh by cutting off its natural hydrology – the application narrative and site plans do not clearly articulate which will occur). Woods Hole Group strongly recommends that the Commission request a salt marsh restoration plan for this area.

Response: Salt marsh restoration activities are depicted on revised Drawings C-204 and C-205. BC anticipates that a more detailed maintenance and monitoring plan associated with restoration activities will be a requirement of the Order of Conditions.

42. Comment: *MLLW should be accurately labeled on the plans.*

Response: The MLLW line typo has been corrected on revised Drawing C-318.

43. Question: *Based on the cross-sections on C-318 and the plan view of the proposed restoration on C-319, the entire high marsh area appears to be proposed above MHHW. Is this interpretation of the plans correct? If so, will the high marsh survive if above MHHW?*

Response: Interpretation of the plans is correct. Based on living shoreline design guidelines and plant adaptability of *Spartina patens*, the upper high marsh limits are set at 1.5 times the mean tide range from the MLW mark – roughly elevation +3.5'. High salt marsh to be created at the Site will fall within the appropriate range of elevations for survival, and the plantings are consistent with EPA's intertidal restoration plans for the remainder of the New Bedford shoreline.

44. Comment: *As previously mentioned in the comments above related to Section 4 – Restoration Activities, The New England Wetmix mentioned in the narrative (and provided in tabular form on Plan C-319) is recommended for freshwater sites. Given that this area is occasionally inundated with salt water (i.e., it is below the HTL), the New England Coastal Salt Tolerant Grass Mix from New England Wetland Plants, Inc. would be a more appropriate seed mix for this location.*

Response: The seed mix list on Drawing C-319 includes switchgrass and big bluestem, both of which are included in the salt tolerant grass mix referenced in the comment above. However, the other species listed on Drawing C-319 are also salt tolerant and offer more diversity for pollinators than the referenced salt tolerant grass mix. As such, the New England Coastal Salt Tolerant Grass Mix will not be used, and the intent is to use the seed mix specified in Drawing C-319.

45. Question: *How long will wildfowl exclusion fencing be maintained? How often will it be monitored, checked, and/or repaired? Is there a contingency plan in place to adjust or change the overall waterfowl deterrent approach if the currently proposed plan proves ineffective?*

Response: Waterfowl fence will be required to stay in place and maintained through the first growing year. The fence will be monitored at the same time as other site monitoring events and repairs will be made as needed. This type of fencing has shown to be successful on all other shoreline restoration projects. If needed,

adjustments will be made during monitoring to address specific breaches. BC anticipates that a more detailed maintenance and monitoring plan associated with restoration activities will be a requirement of the Order of Conditions, and a plan will be provided to the Commission that addresses these specific items.

Additional General Comments

46. General comments: Are weekly progress reports to the Commission proposed? (i.e., this is what we did this week; these are the problems we came across; how they were handled?).

Response: See general response 1.B above

47. Question: Was a copy of the NOI sent to the EPA?

Response: See general response 1.A above

Very truly yours,

Brown and Caldwell

Marilyn M. Wade, P.E., LSP
Managing Engineer

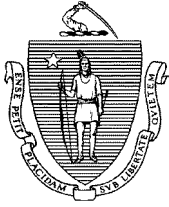
cc: M. Paul, City of New Bedford
B. Bossle, AVX Corporation
E. Wilson, BC
J. LeClair, BC

List of Attachments:

1. MEPA Certificate
2. Portadam® Installation Description
3. Revised Drawings C-204, C-205, C-318, and C-320
4. Representative Planting Photos
5. Revised Figure 2
6. Revised Page 2 of NOI form
7. Revised Wetland Delineation Report (including FEMA FIRMette Map# 2500056C03916 dated 7/16/2014, clean copy)
8. Existing Conditions Drawings C-200 and C-300 and Wetland Resource Area Profiles (C-104)

Attachment 1

MEPA Certificate



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

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GOVERNOR

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LIEUTENANT GOVERNOR

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January 22, 2021

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Former Aerovox Facility
PROJECT MUNICIPALITY : New Bedford
PROJECT WATERSHED : Buzzards Bay
EEA NUMBER : 16303
PROJECT PROPONENT : AVX Corporation
DATE NOTICED IN MONITOR : December 23, 2020

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of the remediation of residual contamination areas centered around the former Aerovox facility (the Facility) located at 740 Belleville Avenue in New Bedford. This includes the adjacent property to the north, referred to as the Titleist property (located at 700 Belleville Avenue), and the property to the south, referred to as the Precix property (located at 74 Howard Avenue). The former manufacturing site has been assigned Release Tracking Number (RTN) 4-0601 by the Massachusetts Department of Environmental Protection (MassDEP). The purpose of the project is to remediate the project site in compliance with the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). The project is intended to remove sediment impacted by hazardous materials in order to meet the MCP criteria of a condition of No Significant Risk and to achieve a Permanent Solution with No Conditions. Specifically, the project proposes to remove highly-contaminated soils and backfill with non-hazardous soil present on-site as well as clean soil, conduct soil gas monitoring, construct an engineered barrier (to contain

backfill/consolidated soils within the site), install a hydraulic barrier (to prevent migration of groundwater and contaminants from site), perform in-situ chemical oxidation (ISCO) groundwater treatment, and replacement/repair of storm sewers on-site. According to the ENF, the project is mandated by MassDEP pursuant to an Administrative Consent Order (ACO) and by an Administrative Order on Consent (AOC) between the U.S. Environmental Protection Agency (EPA) and AVX Corporation (the Proponent).

Soil removal will be conducted landward of mean high-water (MHW). A temporary coffer dam will be installed below MHW for the purpose of shoreline protection on the Titleist portion of the property during contaminated soil removal. To facilitate soil removal, temporary sheet piling will be installed along MHW on the Titleist portion of the property (landward of the cofferdam) as well as immediately landward of existing, aged sheet piling on the Aerovox parcel. Dewatering will occur landward of the sheet piling while excavation occurs. Wastewater generated from dewatering activities will be treated and discharged to the municipal stormwater system in accordance with an Industrial Pretreatment Permit to be issued by the City of New Bedford (the City). All solid waste generated during remediation activities will be properly handled and disposed of off-site.

The remediation activities proposed are specific to areas above the MHW line of the Acushnet River. Historic and future remediation activities conducted below the MHW line of the Acushnet River in the project area are associated with the New Bedford Harbor Superfund Site¹ and will be performed by the Environmental Protection Agency (EPA). The separate and distinct designation is confirmed in writing in the federal administrative order and state consent order that govern the Aerovox Project. According to the Proponent, the MCP/21E remediation must move ahead independently and regardless of future federal actions to be taken east of the existing sheet pile wall and below MHW (i.e. the Aerovox Site Boundary).

Project Site

The 11-acre project site is comprised of the former Aerovox property (owned by the City), the entirety of Hadley Street and the eastern portion of the Titleist property to the south, and the eastern portion of Graham Street to the north. The project is bounded by Belleville Ave to the west. According to comments from MassDEP, releases of polychlorinated biphenyls (PCBs) and chlorinated volatile organic compounds (CVOCs) have been found to impact the soil and groundwater on the project site and sediment in the adjacent Acushnet River. The former Aerovox property is industrially zoned and formerly contained a multi-story manufacturing building with several ancillary structures. The Facility began manufacturing electrical components in 1938 and used PCBs from the 1940s until 1978 when PCBs were prohibited under the Toxic Substances Control Act (TSCA, 15 U.S.C. §2601). The Facility also used solvents, including trichloroethene (TCE), until it closed in 2001. In 2011, following the 2010 ACO/AOC agreements, all infrastructure on the site was demolished and removed. Following demolition an asphalt cap was installed across the site, which has been vacant since.

The project site contains several wetland and coastal resources associated with the Acushnet River, including: Riverfront Area (RFA), Salt Marsh, Bordering Vegetated Wetland (BVW), Land Under the Ocean (LUO), Coastal Beach, Coastal Bank, Land Subject to Coastal Storm Flowage

¹ More information on the New Bedford Harbor Superfund Site and associated remediation work can be found here: <https://www.epa.gov/new-bedford-harbor/general-information-about-new-bedford-harbor-cleanup>

(LSCSF), and Land Containing Shellfish. Portions of the project site are located within a designated AE Zone (area subject to inundation by a one-percent-annual-chance flood event) floodplain area as depicted on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) for Bristol County (Map Panel No. 25005C0391G; effective July 16, 2014). The project site is not located in Priority and/or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP) or an Area of Critical Environmental Concern (ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

Environmental Impacts and Mitigation

As described in the ENF and supplemental information provided on January 8, 2021, the project will impact the following overlapping resource areas: RFA (26,794 square feet (sf) (0.62 acres)), Salt Marsh (6,797 sf (0.16 acres)), BVW (4,232 sf (0.10 acres)), LUO (1,191 sf (0.03 acres)), Coastal Beach (15,603 sf (0.36 acres)), Coastal Bank (925 linear feet (lf)), LSCSF (226,708 sf (5.20 acres)), and Land Containing Shellfish (2,048 sf (0.05 acres)). The project will alter 11 acres of land and generate 150,000 gallons per day (gpd) of wastewater during dewatering/excavation activities.

The project is proposed to remediate historic environmental impacts. Measures to avoid, minimize and mitigate environmental impacts will include use of temporary erosion and sedimentation controls, construction of catch basin inlet protection, use of a decontamination area and temporary waste containment area, dust and odor control measures, secondary containment and release mitigation measures, turbidity monitoring, and collection and treatment of dewatered liquids, in addition to monitoring. Wetland resource areas disturbed by the proposed project will be restored to pre-existing conditions.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires submittal of an ENF pursuant to Sections 11.03(3)(b)(1)(a), 11.03(3)(b)(1)(c), 11.03(3)(b)(1)(d), 11.03(3)(b)(1)(f), 11.03(3)(b)(6), and 11.03(5)(b)(4)(a) of the MEPA regulations because it requires a State Agency Action and includes alteration of a Coastal Bank, alteration of 1,000 or more sf of salt marsh, alteration of 5,000 or more sf of BVW, alteration of greater than one half acre of any other wetlands (LUO, LSCSF, and RFA), construction of an existing solid fill structure of 1,000 or more sf base area in flowed tidelands, and new discharge or to a sewer system of 100,000 or more gpd of industrial wastewater, respectively.² The project will require a Chapter 91 (c. 91) Waterways Permit from MassDEP.

The project will require an Order of Conditions from the New Bedford Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP). The project will also require an Industrial User Pretreatment Wastewater Discharge Permit from the City of New Bedford. The project requires authorization from the U.S. Army Corps of Engineers (ACOE) under the General Permits for Massachusetts in accordance with Section 404 of the Federal Clean Water Act as well as a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the United States Environmental Protection Agency (EPA). Comments from the

² The ENF did not identify that the project exceeds the MEPA threshold 301 CMR 11.03(3)(b)(1)(f).

Massachusetts Office of Coastal Zone Management (CZM) state the project may also be subject to CZM Federal Consistency Review.

The project is not receiving Financial Assistance from the Commonwealth. Therefore, MEPA jurisdiction for any future review would be limited to those aspects of the project that are within the subject matter of any required or potentially required Agency Actions and that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provided a description of existing and proposed conditions, preliminary project plans, dewatering calculations, air emissions calculations, previous licenses, and identified measures to avoid, minimize and mitigate environmental impacts. To assist in MEPA review, the Proponent provided an updated wetland impacts analysis³. Following the remote MEPA consultation session (held on January 6, 2021), the Proponent distributed a tidal study, climate change vulnerability report, and quantified temporary impacts associated with the proposed cofferdam⁴.

Comments from State Agencies and the Bedford Conservation Commission reflect support for the project and identify concerns with the resiliency of the project from the effects of climate change. Comments from State Agencies also identify concerns regarding the potential impact of future remediation activities proposed to be conducted by the EPA adjacent to the site in the Acushnet River on wetland restoration work proposed as part of this project. State Agencies do not request additional analysis in the form of an EIR but identify additional information that should be provided during the permitting process. This information is detailed below.

Alternatives Analysis

The alternative selected for the project was developed based on consultation with MassDEP during the MCP evaluation process as described in the Phase III Remedial Action Plan (RAP).⁵ According to the ENF, the alternatives were evaluated based on the effectiveness, reliability, difficulty of implementation, cost, risks, benefits, timeliness, green remediation, and non-pecuniary interests (aesthetics and community acceptance). The Phase III RAP evaluated several alternatives for four distinct areas within the project site: Area 1: contaminated soils located above the peat layer on the eastern side of the Titleist property; Area 2: the potential vapor intrusion pathway for the Precix property; Area 3: the Aerovox property soils, storm sewers, and overburdened soil and groundwater; and Area 4: bedrock groundwater within the project site. The alternatives for each OU described in the Phase III RAP are as follows:

Area 1 Alternatives (Titleist property):

³ The updated wetlands impact analysis was provided in an email from Elizabeth Wilson (Brown and Caldwell) to Eva Murray (MEPA Office) sent on January 4, 2021.

⁴ The tidal study and climate change vulnerability report were distributed on January 7, 2021. Quantified impacts from the proposed cofferdam were distributed on January 8, 2021.

⁵ The Phase III RAP, including detailed descriptions of each alternative and alternatives analysis, can be accessed here: <https://eeaaonline.eea.state.ma.us/EEA/fileviewer/Default.aspx?formdataid=0&documentid=405830>

- Excavation of Two Feet of Surface Soil and All Soils with PCB Concentrations Greater than the PCB UCL of 100 mg/kg and Off-Site Disposal
- Excavation of All Soils with PCB Concentrations Greater than...
 - ...4 mg/kg and Off-Site Disposal
 - ...1 mg/kg and Off-Site Disposal
 - ...1 mg/kg and On-Site Consolidation (*Preferred Alternative*)
- Placement of an Engineered Barrier or Asphalt Cap over All Soils with PCB Concentrations Greater Than 100 mg/kg and 1 mg/kg, respectively

Area 2 Alternatives (Precix property):

- Monitored Sub slab Soil Gas Attenuation and an AUL (*Preferred Alternative*)
- Monitored Natural Attenuation of Subslab Soil Gas, an AUL and Installation of a Vapor Barrier Over the Floor Slab
- Monitored Natural Attenuation of Subslab Soil Gas, Installation of an Active Subslab Depressurization System (SSDS) and an AUL

Area 3 Alternatives (Aerovox property):

- Removal and off-site disposal of soils above UCLs, cap areas with PCB concentrations >2 mg/kg, and -
 - : overburden groundwater containment via vertical barrier wall with hydraulic containment, and in situ treatment of plume hot spot
 - : overburden groundwater containment via vertical barrier wall with hydraulic containment
- Removal and off-site disposal of soils within 25 feet of shoreline above peat, within the northeast corner down to bedrock, and above UCLs, cap areas with PCB concentrations >2 mg/kg, partial containment and treatment of groundwater with PRB, in situ treatment of plume hot spot
- Removal and off-site disposal of soils within 25 feet of shoreline above peat and down to bedrock within the northeast corner, engineered barrier over areas with PCBs >100 mg/kg and asphalt cap over areas with PCBs >2 mg/kg, and -
 - overburden groundwater containment via vertical barrier wall with hydraulic containment, in situ treatment of plume hot spot
 - overburden groundwater containment via vertical barrier wall with hydraulic containment
 - partial containment and treatment of groundwater with PRB, in situ treatment of plume hot spot
- Removal and on-site consolidation of soils within 25 feet of shoreline above peat and down to bedrock within the northeast corner, engineered barrier over areas with PCBs >100 mg/kg and asphalt cap over areas with PCBs >2 mg/kg, and -
 - overburden groundwater containment via vertical barrier wall with hydraulic containment, in situ treatment of plume hot spot
 - overburden groundwater containment via vertical barrier wall with hydraulic containment
 - partial containment and treatment of groundwater with PRB, in situ treatment of plume hot spot (*Preferred Alternative*)
- Asphalt cap over soils with PCB concentrations >2 mg/kg and engineered barrier over soils with concentrations above UCLs, and -
 - overburden groundwater containment via vertical barrier wall with hydraulic containment, and in situ treatment of plume hot spot

- overburden groundwater containment via vertical barrier wall with hydraulic containment.

Area 4 Alternatives (bedrock groundwater):

- In situ Chemical Oxidation of Hot Spots and Monitored Natural Attenuation (*Preferred Alternative*)
- In situ Thermal Treatment of Deep Bedrock Hot Spots, in situ Chemical Oxidation of Shallow Bedrock Hot Spots, and Monitored Natural Attenuation.

Based on the RAP and MCP evaluation criteria for remedial action alternatives (detailed at 310 CMR 40.0858), the above alternatives within each area of the project site were selected to comprise the Preferred Alternative, as according to the ENF, they best met project goals based on the criteria described above. Comments from MassDEP state that the MassDEP Bureau of Waste Site Cleanup (BWSC) has conditionally approved the Phase III RAP and the conceptual plan/selected alternatives described within to achieve a Permanent Solution under the MCP for the Site.

Wetlands

As described in the ENF, all impacts to wetland resources (RFA, Salt Marsh, BVW, LUO, Coastal Beach, Coastal Bank, LSCSF, and Land Containing Shellfish) are temporary in nature. The ENF states that any temporarily impacted resources will be restored to pre-existing conditions. The New Bedford Conservation Commission will review the project for its consistency with the Wetlands Protections Act (WPA), the Wetland Regulations (310 CMR 10.00), and associated performance standards. The project proposes to reinforce the existing sheet piling on the Aerovox portion of the project site prior to conducting excavation, dewatering (as necessary), and restoration activities landward of this piling. On the Titleist portion of the property, where there is no existing sheet piling, the project proposes to install a temporary cofferdam below the MHW line and within existing Salt Marsh. Further landward of this cofferdam, temporary sheet piling will be installed, behind which excavation and dewatering (as necessary) will occur. During the remote consultation session for the project, the Proponent's consultant indicated the cofferdam would be in place for approximately three (3) months.

The area between the cofferdam and this sheet piling is not proposed to be dewatered; however, the cofferdam will restrict tidal action to the area between the two structures. The ENF states that the Salt Marsh in this area will be restored to pre-existing conditions, including the utilization of Salt Marsh plantings and post-restoration monitoring. As stated in comments from Massachusetts Department of Marine Fisheries (DMF), the ENF did not describe how impacts from restricting tidal flows to Salt Marsh in this area would be documented. Comments from MassDEP state that any wetlands replication and/or restoration monitoring plan should include provisions for the assessment and remediation of any invasive plant species. Further details regarding the delineation of wetland resources, restoration, and monitoring in this area should be provided during the permitting process.

In addition to restoring any temporarily impacted wetland resources, the project proposes creating new riparian and salt marsh areas on the Aerovox shoreline portion of the project site. According to the ENF, the creation of this living shoreline will enhance coastal resilience and flood control, particularly as it relates to sea level rise. Comments from CZM and DMF indicate concern

regarding the long-term viability of the created salt marsh. Specifically, CZM states concern regarding the impact of future restoration activities by the EPA proposed within the Acushnet River, abutting the proposed salt marsh area. As stated by CZM, these two wetland resource replication areas must function seamlessly to be effective and successful, and ideally should be constructed at the same time. According to the Proponent, the EPA does not plan to remove the existing cap and perform associated restoration activities in the area adjacent to Aerovox portion of the property for some time after the project is completed. Additionally, the Proponent indicated there is no current timeline for the EPA-led intertidal cleanup in front of the Titleist portion of the property. As described above, the Proponent has stated the MCP/21E remediation described in the ENF must move ahead independently and regardless of future federal actions to be taken below MHW (i.e. the Aerovox Site Boundary) in accordance with the federal AOC and state ACO. I refer the Proponent to comments from CZM describing additional analysis that should be conducted should it not be possible to construct the living shoreline in conjunction or in coordination with the planned EPA restoration work. Comments from CZM additionally state the project may be subject to CZM Federal Consistency Review.

As stated in the ENF, installation of the temporary sheet piling along the MHW line and installation of the temporary coffer dam below the MHW line will require a new c. 91 Waterways Permit from MassDEP in accordance with 310 CMR 9.05. As stated in the ENF, there are several existing c.91 Licenses for the project site, including License No. 3130 (issued in 1906), No. 3485 (1910), and No. 4064 (1916). Comments from MassDEP describe additional existing c.91 Licenses for the site, No. 3424 (issued 1909), No. 4065 (1916), and No. 2636 (1943). The ENF states the proposed excavation and replacement of contaminated fill/soils below the historic high tide line will take place within the existing footprint of previously authorized fill. Comments from MassDEP state that, while a new License application is not required for the activity in these areas, the Proponent is required to submit Minor Modification Requests for said License(s) for MassDEP approval.

Hazardous Wastes

MassDEP has provided direct review and oversight for remedial activities associated with this site, which was assigned RTN 4-0601. The ENF states the proposed work is consistent with the 2010 TSCA Determination that provides for remediation of the project site consistent with the MCP. Comments from MassDEP note that while the ENF states the Proponent submitted a Phase IV Remedy Implementation Plan (RIP) for this project to MassDEP in July 2019, MassDEP-BWSC record indicated that the Phase IV RIP was submitted in July 2020. The Phase IV RIP presented the remedial approach as described in the ENF. Comments from MassDEP state that no approval, conditional approval, or denial letter has been issued for the Phase IV RIP, however MassDEP does not foresee that any future approvals or conditional approvals of the Phase IV RIP will affect the proposed work described within the ENF filing itself.

Climate Change Adaptation and Resiliency

Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and direct Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits

established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change. I note that the MEPA statute directs all State Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions. M.G.L. c. 30, § 61.

The City is a participant in the Commonwealth's Municipal Vulnerability Preparedness (MVP) program. The MVP program is a community-driven process to define natural and climate-related hazards, identify existing and future vulnerabilities and strengths of infrastructure, environmental resources, and vulnerable populations, and develop, prioritize and implement specific actions the City can take to reduce risk and build resilience. Through the MVP program, the City received funding to conduct a planning process for climate change resiliency and implementing priority projects. The results of the initial community-driven process were presented in the "Community Resilience Building Workshop - Summary of Findings Report" (the Report), dated June, 2018.⁶ The Report identified intense storms, heat waves and changes in air quality, flooding, and sea level rise as top climate hazards in New Bedford. Notably, the project site is located approximately 3.5 miles upriver from the New Bedford Hurricane Barrier, located at the mouth of the Acushnet River.

The project site is bounded to the east by the tidally-influenced Acushnet River, making it vulnerable to flooding exasperated by climate-induced sea level rise. As stated previously, the Proponent provided a Climate Change Vulnerability memo (the Climate Memo) as supplemental information during MEPA review. According to the Climate Memo, flooding has been observed on the eastern end of the Aerovox property and Hadley street during periods of high-tide and intense rainfall. This memorandum references the Massachusetts Coastal Flood Risk Model (MC-FRM) data and maps provided to the City as part of their resiliency planning. The maps and data show the predicted landward extent of high tides in the future as well as the probability of coastal flood depths occurring in 2030, 2050 and 2070 during storm events. According to the Climate Memo, these models assume the hurricane barrier would be closed during these events to limit storm surge-based flooding and that the barrier does not fail during a storm event. As stated in comments from CZM, this modeling indicates that the hurricane barrier will be overtopped by some storms by 2050, increasing in frequency by 2070. The MC-FRM predicts that the site will have increasing inundation at high tide, with daily high tides inundating about half of the project site by 2070, and the effects of coastal storms will extend upstream to the project area, with up to four feet of flood water and waves extending onto the property in coastal storm events. The Climate Memo identified the possibility of physical damage to the engineered barrier and concrete cap in the future due to these changing conditions.

To reduce the possibility of water damage from flooding, the Climate Memos states high-density asphalt will be used to cap the site to reduce permeability and minimize infiltration. The memo also states that the site will be regraded to promote proper draining and mitigate existing low-lying areas that allow water to pool within the site. While the Climate Memo indicates that modifications to surface elevations may be evaluated in the future, these resiliency strategies are not being pursued at this time, although this work isn't precluded by the current design. Comments from CZM state concern that the proposed project does not include more pro-active measures to avoid the regular inundation and storm impacts that could affect the integrity of the consolidation cell in the next 30 to 50 years. Comments from the New Bedford Conservation Commission also reflect concerns regarding the long-term

⁶ The Report can be accessed here: <https://www.mass.gov/doc/2017-2018-mvp-planning-grant-report-new-bedford/download>

resilience of the remedy details, particularly relative to sea level rise, while recognizing the necessity to begin remediation work in a timely fashion to prevent recontamination. I refer the Proponent to comments from CZM that state pro-active measures to reduce onsite flooding and storm damage, such as filling the area above the predicted high-water levels, should be considered; and that measures to protect the consolidation cell from coastal storm damage should be evaluated and presented. The Climate Memo states future modifications of the site may be evaluated periodically through the Adaptive Site Management Plan once the New Bedford Harbor Superfund Site remediation is complete. I note that, according to the Climate Memo, the project site was classified as highly vulnerable in a 2019 evaluation of MCP site vulnerability, ranking 304 out of 6,001 sites evaluated. As such, I expect the Proponent to further incorporate resiliency measures into the project design as it proceeds through permitting.

Construction Period

As described in the ENF, construction and implementation of this project is anticipated to occur over a two-year period, with minimal work conducted during winter months. Year 1 is anticipated to include: site prep, Aerovox shoreline excavation and dewatering with off-site transportation and disposal and on-site consolidation, backfilling and compaction of the excavations, installation of the hydraulic barriers and the permeable reactive barrier, temporary capping of disturbed portions of the consolidation cell, stormwater system lining and replacement, and installation of the in situ chemical oxidation (ISCO) injection (utilized for groundwater treatment), ISCO extraction, and monitoring well network followed by demobilization for the winter months. Year 2 will include reopening activities, groundwater treatment, bedrock and deep bedrock treatment, drilling of bedrock monitoring wells, final grading and capping, and restoration activities. According to the ENF, all Year 1 activities are expected to occur within the Aerovox property soils, storm sewers, and overburdened soil and groundwater. The ENF states Year 2 is anticipated to include installation of the Precix permanent soil vapor monitoring points, excavation of contaminated soils located above the peat layer on the eastern side of the Titleist property and the Aerovox property, backfill of the Titleist property, overburden and bedrock ISCO injections, final site grading and capping (including Engineered Barrier and direct contact barrier caps), and recording institutional controls for the Site limiting future use.

All construction activities should be managed in accordance with applicable MassDEP's regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The project should include measures to reduce construction period impacts (e.g., noise, dust, odor, solid waste management) and emissions of air pollutants from equipment, including anti-idling measures in accordance with the Air Quality regulations (310 CMR 7.11). I encourage the Proponent to require that its contractors use construction equipment with engines manufactured to Tier 4 federal emission standards, or select project contractors that have installed retrofit emissions control devices or vehicles that use alternative fuels to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). As noted in comments from MassDEP, should the Proponent identify oil and/or hazardous material during project implementation that is separate, distinct, or presents different conditions than those already known to be present on the project site, notification should be provided to MassDEP pursuant to the MCP (310 CMR 40.0000). All construction activities should be undertaken in compliance with the conditions of all State and local permits.

Conclusion

The ENF has adequately described and analyzed the project and its alternatives, and assessed its potential environmental impacts and mitigation measures. Based on review of the ENF and comments received on it, and in consultation with State Agencies, I have determined that an EIR is not required.

January 22, 2020

Date

Kathleen A. Theoharides

Comments received:

01/11/2021	Massachusetts Office of Coastal Zone Management (CZM)
01/12/2021	City of New Bedford Conservation Commission
01/12/2021	Massachusetts Division of Marine Fisheries (DMF)
01/13/2021	Massachusetts Department of Environmental Protection (MassDEP) – Southeast Regional Office (SERO)

KAT/ELM/elm



THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
251 Causeway Street, Suite 800, Boston, MA 02114-2136
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MEMORANDUM

TO: Kathleen A. Theoharides, Secretary, EEA
ATTN: Eva Murray, MEPA Office
FROM: Lisa Berry Engler, Director, CZM
DATE: January 11, 2021
RE: EEA-16303, Former Aerovox Facility Cleanup Environmental Notification Form;
New Bedford

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the *Environmental Monitor* dated December 23, 2020, participated in the virtual MEPA consultation on January 6, 2021, and reviewed the supplemental information (Climate Change and Resiliency Design Considerations Technical Memorandum, dated July 10, 2020) provided on January 7, 2021 in response to issues raised during the MEPA consultation. CZM has the following comments on the proposed project.

Project Description

The project, located at 700 and 740 Belleville Avenue, and 74 Howard Avenue in New Bedford, includes "...implementation of the approved comprehensive remedial response actions selected in accordance with the Massachusetts Contingency Plan (MCP)(310CMR 40.00) as outlined in the Phase IV Remedy Implementation Plan (RIP), submitted to MassDEP in July 2019." Details of the RIP include: excavation and removal of impacted soils, backfilling with clean soil, soil gas monitoring, construction of an engineered barrier, installation of a hydraulic barrier, in-situ chemical oxidation, groundwater treatment, and repair/replacement of onsite storm sewers. The proposed remedial action will cause temporary alteration of coastal wetland resource areas, and require restoration of these areas, and creation of additional riparian and salt marsh areas on the Aerovox shoreline portion of the site.

Comments

While CZM is supportive of the elements contained in the RIP approved by MassDEP, we have two concerns. The first concern is that the climate change resilience of the RIP was not discussed initially in the ENF. It was supplied following the MEPA consultation session in Appendix I: Climate Change and Resiliency to the RIP. This document was submitted approximately one year following the submittal of the RIP to MassDEP. It is not apparent from the information provided that climate change resilience was included as a guiding parameter and given consideration early in the process of developing the RIP. Detailed comments regarding coastal resiliency are provided below.

Our second concern involves the proposed restoration and creation of riparian and salt marsh areas behind the steel sheet piling at the Aerovox property. Designing and constructing these coastal wetland resource areas is premature. For these wetland resources to be effective and successful, they have to function seamlessly with the future restoration activities that will be completed by the U.S. Environmental Protection Agency (EPA) following their removal of the extensive rock cap and contaminated sediments seaward of the sheet pile. The area that the EPA will need to restore seaward of the steel sheet pile appears to be significantly larger than the area proposed for restoration and



creation behind the sheet pile. These two pieces should be designed and constructed simultaneously to maximize efficiency and for viability of the living shoreline. We also believe that this combined restoration design should include elements of climate change resilience from the start to ensure its long-term effectiveness and success. In the interim, the RIP for the area landward of the sheet pile should be completed, including the placement of clean soils suitable for eventual restoration, followed by seeding of a temporary vegetative cover until the final restoration/creation of wetland resource areas.

If it is infeasible to construct the living shoreline in coordination with planned EPA restoration work, more in depth analysis of tidal range and elevation in the restoration area at planned grades should be conducted to ensure the appropriateness of species selected for plantings. A hydraulic and hydrologic analysis including inputs from the nine 24" pipes and stormwater sheet flow should be conducted to ensure the restoration design will provide sufficient tidal flow and drainage. Protection against scour and erosion for the recreated salt marsh may be required depending on flow velocities from the pipes in addition to sheet flow. A description for how existing plantings will be protected when the sheet pile wall is removed for future restoration by EPA should be provided. Non-structural toe protection should be considered instead of the rock still, which may cause additional scour on adjacent areas and this analysis should be provided. Marsh restoration projects have been successfully completed in Massachusetts with coir rolls as toe protection.

For the Titleist property, more detail is required to confirm that resource areas identified below the high tide line are accurate. Design plans should include sufficient detail to clearly delineate resource areas and any work above and below mean high water. Details on potential impacts to tidal flow volumes to resource areas as a result of installation of a new (temporary) sheet pile wall at the mean high-water line should be provided. For restoration areas, a rationale for the planting plan should be provided including tidal range and elevation to ensure the adequacy of species selected. Seeding with a wetland seed mix such as New England Wetmix would not be appropriate for areas subject to tidal inundation and saline conditions. For all restoration areas, a plan which describes the steps that will be taken if the plantings and restoration are not successful should be provided along with a detailed monitoring plan.

Coastal Resiliency

CZM reviewed the Climate Change and Resiliency Design Considerations Technical Memorandum prepared by Brown and Caldwell, dated July 10, 2020 for the project. This memorandum references the Massachusetts Coastal Flood Risk Model (MC-FRM) data and maps provided to the City of New Bedford as part of their resiliency planning. The maps and data show the predicted landward extent of high tides in the future as well as the probability of coastal flood depths occurring in 2030, 2050 and 2070 during storm events. Although the project site is located upstream of the New Bedford Hurricane Barrier, the modeling indicates that the barrier will be overtopped by some storms by 2050, increasing in frequency by 2070. The MC-FRM predicts that the site will have increasing inundation at high tide, with daily high tides inundating about half of the project site by 2070, and the effects of coastal storms will extend upstream to the project area, with up to four feet of flood water and waves extending onto the property in coastal storm events. Although the Technical Memorandum does identify the possibility of physical damage to the consolidation cell, engineered barrier and concrete cap, CZM is concerned that the current plan for remediation and capping doesn't include more pro-active measures to avoid the regular inundation and storm impacts that could affect the integrity of the consolidation cell in the next thirty to fifty years. The memorandum identifies several possible options to reduce the potential damages but indicates that they are not being pursued

at this time and will be re-evaluated in the future. Modifications to the shoreline elevations and surfaces may be evaluated as part of Adaptive Site Management once the New Bedford Harbor Superfund Site remediation is complete. Further consideration of pro-active measures to reduce onsite flooding and storm damage, such as filling the area above the predicted high-water levels, and measures to protect the consolidation cell from coastal storm damage should be evaluated and presented.

Federal Consistency Review

This project may be subject to CZM federal consistency review, which requires that the project be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Bob Boeri, Project Review Coordinator, at robert.boeri@mass.gov or visit the CZM web site at <https://www.mass.gov/federal-consistency-review-program>.

LBE/dsj/rlb/rh/ap/ts

cc: David Dickerson, USEPA
Natalie McClaine, USEPA
Christine Jacek, USACE
Gerard Martin, MassDEP
Carlos Fragata, MassDEP
Michele Paul, City of New Bedford



MAYOR
JON MITCHELL

City of New Bedford Conservation Commission •

Department of Environmental Stewardship

133 William Street • Room 304 • New Bedford, Massachusetts 02740

Telephone: (508) 991.6188

Conservation • Environmental Stewardship • Resilience

January 12, 2021

Eva Murray, Environmental Analyst
Massachusetts Environmental Policy Act (MEPA) Office
100 Cambridge Street, 9th Floor, Boston, MA 02114

Re: EEA-16303, Former Aerovox Facility Cleanup Environmental Notification Form; New Bedford

Dear Ms. Murray:

The City of New Bedford appreciates the opportunity to comment on the Environmental Notification Form for the Former Aerovox Facility Cleanup at 740 Belleville Avenue in New Bedford. As owner of the subject property, the City submitted substantial comments to MassDEP's Bureau of Waste Site Cleanup regarding the Phase IV Remedy Implementation Plan in October 2020. While the conceptual Phase III Remedial Alternatives Evaluation was conditionally approved in July 2019, the specific details provided in the Phase IV Remedy Implementation Plan are pending approval by MassDEP BWSC with input from the City as well as EPA.

While the City still has concerns focused on the long-term resilience of the remedy details, particularly relative to sea level rise, we also recognize the necessity to begin work toward a solution in a timely fashion. EPA's subtidal and intertidal dredging efforts in New Bedford Harbor have reduced PCB concentrations to below target levels. Specifically, EPA is in the process of intertidal cleanup around the City-owned former Aerovox facility and judicious shoreline cleanup by AVX is imperative to prevent recontamination.

We appreciate this opportunity to comment at this key decision point on a site that will continue to have an impact on the City's economy, habitat, recreational opportunities, and landscape in perpetuity.

Sincerely,

Michele Paul, LSP
Director, Resilience and Environmental Stewardship, City of New Bedford

Cc: Christina Connelly, COO, City of New Bedford
Jane Medeiros Friedman, Esq., City of New Bedford
Marilyn Wade, P.E., LSP, Brown & Caldwell





The Commonwealth of Massachusetts

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KARYN E. POLITO
Lt. Governor

KATHLEEN A. THEOHARIDES
Secretary

RONALD S. AMIDON
Commissioner

DANIEL J. MCKIERNAN
Director

January 8, 2021

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Eva Murray, EEA No. 16303
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Theoharides:

The Division of Marine Fisheries (MA DMF) has reviewed the Environmental Notification Form (ENF) by the AVX Corporation for the Former Aerovox Facility Project located at 740 Belleville Avenue on the Acushnet River in the City of New Bedford. Proposed work would also occur on adjacent properties at 700 Belleville Avenue (Titleist Property) and 74 Howard Avenue (Precix Property). The project consists of the full-scale implementation of the approved comprehensive remedial response actions selected in accordance with the Massachusetts Contingency Plan as outlined in the Phase IV Remedy Implementation Plan (RIP). The Phase IV RIP consists of the excavation and removal of impacted soils, backfilling of clean soil, soil gas monitoring, construction of an engineered barrier, installation of a hydraulic barrier, in situ chemical oxidation groundwater treatment, and the replacement and repair of the on-site storm sewer system. Remediation activities are designed to remove polychlorinated biphenyls (PCBs) and chlorinated volatile organic compounds (CVOCs). Proposed work would result in temporary impacts to 4,676 square feet of salt marsh habitat due to installation of cofferdam and sheet piling containment structures and removal of some existing riprap within this habitat. Part of the proposed work includes salt marsh restoration in the form of salt marsh plantings in the area of anticipated impact (Titleist Property). Salt marsh plantings are also proposed as part of the restoration of the shoreline fronting the Former Aerovox Facility, which is currently unvegetated. Existing marine fisheries resources and habitat and potential project impacts to those resources are outlined in the following paragraphs.

The Acushnet River provides habitat for a variety of finfish and invertebrates. Winter flounder (*Pseudopleuronectes americanus*) and diadromous fish species including alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), rainbow smelt (*Osmerus mordax*), and American eel (*Anguilla rostrata*) use all or part of the harbor and river for passage, spawning, nursery, and/or foraging habitat. The Acushnet River and New Bedford Harbor also provides foraging habitat for predatory fish species including striped bass (*Morone saxatilis*).

The shoreline fronting the Titleist Property component of the project contains salt marsh vegetation. Salt marsh provides a variety of ecosystem services, including habitat and energy sources for many fish and invertebrate species (Boesch & Turner 1984, Deegan & Garritt 1997, Deegan et al. 2000).

MA DMF offers the following comments for your consideration:

- MA DMF is supportive of the proposal to replace existing hardened shoreline fronting the former Aerovox facility with salt marsh plantings and to install plantings in any areas impacted by temporary coffer dam disturbance in existing salt marsh habitat fronting the Titleist property. Further details on both marsh plantings would be beneficial to include as the project proceeds through the permitting process. Section 5.3 of the ENF describes some details of the post-planting monitoring, but does not describe how any impacts in the Titleist property site would be documented. To ensure that the Titleist property marsh habitat remains undisturbed, it would be helpful to describe how that marsh habitat will be monitored pre-and post-construction (prior to any restorative planting). It would also be helpful to clearly delineate the total area of proposed marsh creation fronting the former Aerovox site.

Questions regarding this review may be directed to John Logan in our New Bedford office at john.logan@mass.gov.

Sincerely,



Daniel J. McKiernan

Director

cc: New Bedford Conservation Commission
Marilyn Wade, Brown and Caldwell
Kaitlyn Shaw, NMFS
Robert Boeri, CZM
Ed Reiner, EPA
Bev Vucson, DFG
Eileen Feeney, Kathryn Ford, Ryan Nuttall, Tom Shields, Holly Williams, DMF

References

Boesch DF, Turner RE (1984) Dependence of fishery species on salt marshes: the role of food and refuge. *Estuaries* 7:460–468.
Deegan LA, Garritt RH (1997) Evidence for spatial variability in estuarine food webs. *Mar Ecol Prog Ser* 147:31–47.

Deegan LA, Hughes JE, Rountree RA (2000) Salt marsh ecosystem support of marine transient species. In: *Concepts and Controversies in Tidal Marsh Ecology*. Weinstein MP, Kreeger DA (eds) Kluwer Academic Publisher, The Netherlands, p 333–365

DM/JL/sd



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

January 12, 2021

Kathleen A. Theoharides
Secretary of Environment and Energy
Executive Office of Energy and
Environmental Affairs
100 Cambridge Street, Suite 900
ATTN: MEPA Office
Boston, MA 02114

RE: ENF Review. EOEEA 16303 NEW
BEDFORD. Former Aerovox Facility, New
Bedford located at 700 and 740 Belleville
Avenue, 74 Howard Avenue

Dear Secretary Theoharides,

The Southeast Regional Office of the Department of Environmental Protection (MassDEP) has reviewed the Environmental Notification Form (ENF) for the Former Aerovox Facility, New Bedford located at 700 and 740 Belleville Avenue, 74 Howard Avenue, New Bedford (EOEEA # 16303). The Project Proponent provides the following information for the Project:

The Project site includes four parcels. The former Aerovox property (two parcels) currently consists of a vacant, unused asphalt lot. The Acushnet Company parcel is currently a manufacturing facility. The fourth parcel (Acushnet Rubber Co., inc.) is currently operating as Precix and is also a manufacturing facility. See attached Narrative (Section 2) for existing conditions and land uses of the Project site.

The proposed Project will be a full-scale implementation of the approved comprehensive remedial response actions selected in accordance with the Massachusetts Contingency Plan (MCP)(310 CMR 40.000) as outlined in the Phase IV Remedy Implementation Plan (RIP), submitted to MassDEP in July 2019. The Phase IV RIP consists of excavation and removal of impacted soils, backfilling of clean soil, soil gas monitoring, construction of an engineered barrier, installation of a hydraulic barrier, in situ chemical oxidation (ISCO) groundwater treatment, and replacement/repair of the storm sewers on-site. See attached Narrative (Section 5) for a more detailed description of each phase if work.

Bureau of Water Resources Comments

Wetlands. The proposed Project involves the removal of contaminated soil and remediation of contaminants found at the old Aerovox Facility in New Bedford, Massachusetts. Impacts described by the ENF filing to wetland resource areas would be temporary and involve work in salt marsh [310 CMR 10.32], coastal bank [310 CMR 10.30], coastal beach [310 CMR 10.27], riverfront [310 CMR 10.58], bordering vegetated wetland [310 CMR 10.58], land under the ocean [310 CMR 10.25], land containing shellfish [310 CMR 10.34] and land subject to coastal storm flowage. In

accordance with the ENF, “The proposed Project will be a full-scale implementation of an approved Comprehensive Remedial Response Actions selected in accordance with the Massachusetts Contingency Plan (MCP)(310 CMR 40.000] as outlined by Phase IV Remedy Implementation Plan (RIP), submitted to DEP in July 2019.” For the proposed work in wetland resource areas as identified by the ENF, a Notice of Intent Application, therefore, must be submitted with the New Bedford Conservation Commission, and a final Order of Conditions obtained prior to the commencement of work at this site.

In accordance with 310 CMR 10.53 (3)(q) of the Wetland Regulations, Projects may be allowed as a limited Project for the purpose of “Assessment, monitoring, containment, mitigation, and remediation of, or other response to, a release or threat of release of oil and/or hazardous material in accordance with the provisions of 310 CMR 40.0000:...” The regulation at 310 CMR 10.53 (3)(q)(2) further states that such Projects “shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and shall meet the following standards to the maximum extent practicable:”.

As a limited Project, the applicant must provide wetland mitigation to the best extent practicable, including the restoration and/or replication of bordering vegetated wetland, salt marsh and riverfront area in previously disturbed areas. Monitoring of these wetland resource areas should be provided in order to achieve full wetland restoration/replication in accordance with the Wetland Replication Guidelines as set forth by the Department. In addition, provisions should be included with any wetland replication/restoration monitoring plan that identifies and provides for the assessment and remediation for any invasive plant species.

Waterways. After performing a review of its data-base, the Department has found prior authorizations, and additional Licenses have also been identified by the Proponent, for properties at this site, including but not limited to License No. 3130 (issued in 1906), 3424 (1909), 3485 (1910), 4064 (1916), 4065 (1916), and 2636 (1943).

Installation of the temporary sheet piling along the Mean High Water (MHW) line and installation of the temporary coffer dam below the MHW line for the purpose of shoreline protection, in the area of contaminated soil excavation, will as stated in the ENF require a Waterways Permit in accordance with 310 CMR 9.05.

A Chapter 91 Waterways Permit Application for these temporary structures has been submitted and is being placed on hold until this MEPA process is completed (Refer to Transmittal No. X287005).

The ENF states that the proposed excavation of historic fill materials and contaminated soils below the historic high tide line and replacement with clean fill will take place within the existing footprint of previously authorized fill. In accordance with 310 CMR 9.22(3) and referencing back to 9.05(3) a license application is not required for this activity subject to the Department receiving a Minor Modification Request for said License(s) and approving such. In support of this need, the Department will work with the Proponent to craft the request and plan format.

This Project use has been determined to be Water-Dependent. Any additional concerns will be addressed during the permitting process.

Stormwater Management/National Pollutants Discharge Elimination System (NPDES) Permit. The Project construction activities are scheduled to disturb more than an acre of land and therefore may require a NPDES Stormwater Permit for Construction Activities. The Proponent can access

information regarding the NPDES Stormwater requirements and an application for the Construction General Permit at the EPA website: https://www.epa.gov/sites/production/files/2017-07/documents/cgp_flow_chart_do_i_need_a_permit2.pdf

The Proponent is advised to consult with David Gray at gray.david@epa.gov, 617-918-1577 for any of its questions regarding EPA's NPDES stormwater permitting requirements.

Additional information regarding these permits may also be found at:

<http://www.epa.gov/region1/npdes/stormwater/assets/pdfs/CGP-DGP-RGP-Flow-Chart.pdf>

Bureau of Waste Site Cleanup Comments

The former Aerovox property is a known Disposal Site (as defined in M.G.L. Chapter 21E and the Massachusetts Contingency Plan (MCP – 310 CMR 40.0000)) where releases of polychlorinated biphenyls (PCBs) and chlorinated volatile organic compounds (CVOCs) have been found to impact the soil and groundwater and the sediments in the Acushnet River. The property is currently vacant.

The Potentially Responsible Party, AVX Corporation (AVX), is performing the response actions at the Site under a June 2010 Administrative Consent Order (ACO) in conjunction with the MassDEP Bureau of Waste Site Cleanup (BWSC) that requires that each MCP submittal be reviewed and approved by MassDEP prior to initiating the next step in the cleanup process.

At this time, MassDEP BWSC has conditionally approved the Phase III Remedial Action Plan (Phase III RAP), a conceptual plan that outlines how a Permanent Solution under the MCP is achieved for the Site.

AVX has submitted a Phase IV Remedy Implementation Plan (Phase IV RIP) that details how the Phase III RAP will be implemented and the specifics of how the cleanup will be conducted. As of this correspondence, the plan is currently under review by MassDEP BWSC. No approval, conditional approval, or denial letter has been issued. This property is also regulated under EPA's Toxic Substances Control Act (TSCA).

The Project Description on page 3 of the ENF erroneously states that the Phase IV RIP was submitted to MassDEP-BWSC in July 2019 - in conflict with our records that show July 2020 as the submittal date. The previous Phase III RAP was conditionally approved by MassDEP and incorporates soil excavation, off-Site soil disposal, on-Site consolidation of contaminated soils, in situ chemical oxidation, and a permeable reactive barrier. Although MassDEP BWSC has not issued an approval letter for this work, as stated above, the conceptual approach presented in the Phase III RAP has been approved.

The ACO does not require that MassDEP BWSC approve non-MCP submittals, such as the filing of the ENF.

Based on MassDEP-BWSC's review of the ENF, the information provided for construction purposes is consistent with the Phase IV RIP. MassDEP BWSC does not foresee that any future approvals or conditional approvals of the Phase IV RIP will affect the proposed work described within the ENF filing itself. The proposed activities described in the ENF are necessary to initiate and complete the remediation of the former Aerovox site and cannot be initiated until an approval or conditional approval is issued by MassDEP.

The Project Proponent is advised that if oil and/or hazardous material that is separate, distinct or presents different conditions than those already known to be present are identified during the implementation of this Project, notification to MassDEP may be required pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000). The BWSC may be contacted for guidance if questions arise regarding cleanup.

Bureau of Air and Waste (BAW) Comments

Air Quality. Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor, or noise. To determine the appropriate requirements please refer to:

310 CMR 7.09 Dust, Odor, Construction, and Demolition

310 CMR 7.10 Noise

Construction-Related Measures

MassDEP requests that all non-road diesel equipment rated 50 horsepower or greater meet EPA's Tier 4 emission limits, which are the most stringent emission standards currently available for off-road engines. If a piece of equipment is not available in the Tier 4 configuration, then the Proponent should use construction equipment that has been retrofitted with appropriate emissions reduction equipment. Emission reduction equipment includes EPA-verified, CARB-verified, or MassDEP-approved diesel oxidation catalysts (DOCs) or Diesel Particulate Filters (DPFs). The Proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece of equipment on file for Departmental review.

Massachusetts Idling Regulation

The ENF reports that the Project Proponent proposes that the "anti-idling rules will be followed during all remediation activities." MassDEP reminds the Proponent that unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operations phase of the Project (Section 7.11 of 310 CMR 7.00). Regarding remediation period activity, typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage. In addition, to ensure compliance with this regulation once the Project is occupied, MassDEP requests that the Proponent install permanent signs limiting idling to five minutes or less on-site.

Spills Prevention. A spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential on-site activity releases.

Solid Waste Management.

Waste Ban Regulations: MassDEP enforces solid waste regulations that restrict certain recyclable materials from disposal. Known as "waste bans", these regulations (310 CMR 19.017) prohibit the disposal of recyclable materials as solid waste. Waste materials that are determined to be solid waste (e.g., construction and demolition waste) and/or recyclable material (e.g., metal, asphalt, brick, and concrete) shall be disposed, recycled, and/or otherwise handled in accordance with the Solid Waste Regulations including 310 CMR 19.017: Waste Bans.

Asphalt, brick, and concrete (ABC) rubble, such as the rubble generated by the demolition of buildings or other structures must be handled in accordance with the Solid Waste regulations. These regulations allow, and MassDEP encourages, the recycling/reuse of ABC rubble. The Proponent should refer to MassDEP's Information Sheet, entitled "*Using or Processing Asphalt Pavement, Brick and Concrete Rubble, Updated February 27, 2017*", that

answers commonly asked questions about ABC rubble and identifies the provisions of the solid waste regulations that pertain to recycling/reusing ABC rubble. This policy can be found on-line at the MassDEP website: <https://www.mass.gov/files/documents/2018/03/19/abc-rubble.pdf>

For more information on how to prevent banned materials from entering the waste stream the Proponent should contact the RecyclingWorks in Massachusetts program at (888) 254-5525 or via email at info@recyclingworksma.com. RecyclingWorks in Massachusetts also provides a website that includes a searchable database of recycling service providers, available at <https://recyclingworksma.com/>.

If you have any questions regarding the Solid Waste Management Program comments above, please contact Mark Dakers at (508) 946-2847

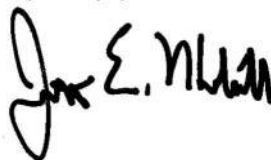
Proposed s.61 Findings

The “Certificate of the Secretary of Energy and Environmental Affairs on the Environmental Notification Form” may indicate that this Project requires further MEPA review and the preparation of an Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the Project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Other Comments/Guidance

The MassDEP Southeast Regional Office appreciates the opportunity to comment on this ENF. If you have any questions regarding these comments, please contact George Zoto at (508) 946-2820.

Very truly yours,



Jonathan E. Hobill,
Regional Engineer,
Bureau of Water Resources

JH/GZ

Cc: DEP/SERO

ATTN: Millie Garcia-Serrano, Regional Director
David Johnston, Deputy Regional Director, BWR
Gerard Martin, Deputy Regional Director, BWSC
Seth Pickering, Deputy Regional Director, BAW
Jennifer Viveiros, Deputy Regional Director, ADMIN
John Handrahan, Chief, C&E, Brownfields, BWSC
Angela Gallagher, C&E, Brownfields, BWSC
Daniel Gilmore, Chief, Wetlands and Waterways, BWR

Gary Makuch, Wetlands and Waterways, BWR
Carlos Fragata, Wetlands and Waterways, BWR
Mark Dakers, Chief, Solid Waste, BAW
Alison Cochrane, Solid Waste, BAW
Elza Bystrom Solid Waste, BAW
Allen Hemberger, Site Management, BWSC

Attachment 2

Portadam® Installation Description

Portadam System Basic Installation Procedure

Steel Framework:

1. Individual steel frame Components are prepared on-shore by attaching two pinned connectors at the bottom horizontal brace of two separate frames in order to construct a frame "pair", consisting of two frames and two bar connectors.
2. Frame sets are then placed directly into position by hand, off wooden floats or by crane along the desired configuration perimeter line with progressive connections made using adjustable clamp (one bolt) arrangement. Final elevation and/or direction adjustments are made at this point. Obstruction removal may be required at this point.
3. Along the predetermined installation line, the frame pairs are lowered into vertical position, adjusted and then spread at the top to form a "V". A steel spacer link is installed in the "V" to maintain distance. The frame pair is then attached to the previous frame pair using a steel, two-part, bolted clamp designed to clamp anywhere on the frame member. This adjustment permits frame pairs to be installed at different elevations as encountered over irregular contours as well as up and down slopes. Standard frame spacing is 15" or 30" per pair. Spacing can be increased for shallower water or decreased for deeper water.
4. To create a turn along the installation line, single frame members are placed vertically plumb with inside toes tight together and outside toes separated to produce a fan shape. Only the adjustable top clamp is used in corners, the upper and lower connectors are not needed:
5. To complete the assembly, heavy steel poles can be added through steel loops at the back of each frame member, both vertically and horizontally, to increase stability in soft foundation areas.

Fabric sealing membrane ("Liner"):

1. Fabric sealing sheets are provided in 25' and 50' horizontal section and special outside corners (fan shaped) which can be joined by waterproof, pinned end seams. Preparation is done onshore by laying out individual liner sections and joining into the desired configuration. There are no special tools required for this operation. The assembled liner is then folded, rolled and tied into a long "sausage" shape for ease of installation on the framework structure.
2. The entire assembled liner section is then placed around the perimeter of the framework and secured to the top at each frame pair location. Once secured at the top of the frame structure, the liner is then unrolled down the diagonal face of the framework and extended out onto the existing bed at the toe of the frames. An extension of the liner is pulled horizontally out away from the toe of the framework to form a "sealing apron". The outside perimeter of the sealing apron contains a heavy chain which assists with sinking the liner. That perimeter can be buried in soft material to form a cutoff and is normally sandbagged into place to assist with sealing.

3. Preparations at the shoreline ends and at the turns are then completed to insure a proper seal.
4. Pumping equipment is positioned in the enclosed area in sump holes, if possible. Once the pumps are started, the water head differential sucks the liner membrane tightly onto the framework and the surrounding bed area. Final liner adjustments are then made. Minor leaks under the sealing apron are located and sealed with sandbags.

Removal:

1. Upon completion of all internal construction or repair work and clean up, the enclosed area is then flooded, thereby equalizing pressure on the structure and releasing suction on the liner. All fabric membrane sections are removed first, then all steel framework is lifted out by the same method used for installation. All components are checked for damage and inventoried. All components are reusable and are then packaged for shipping.
2. Divers may be used to check all disturbed bottom areas for objects left. All components must be accounted for.



Portadam 'A' frame is installed in the river ready to receive fabric.

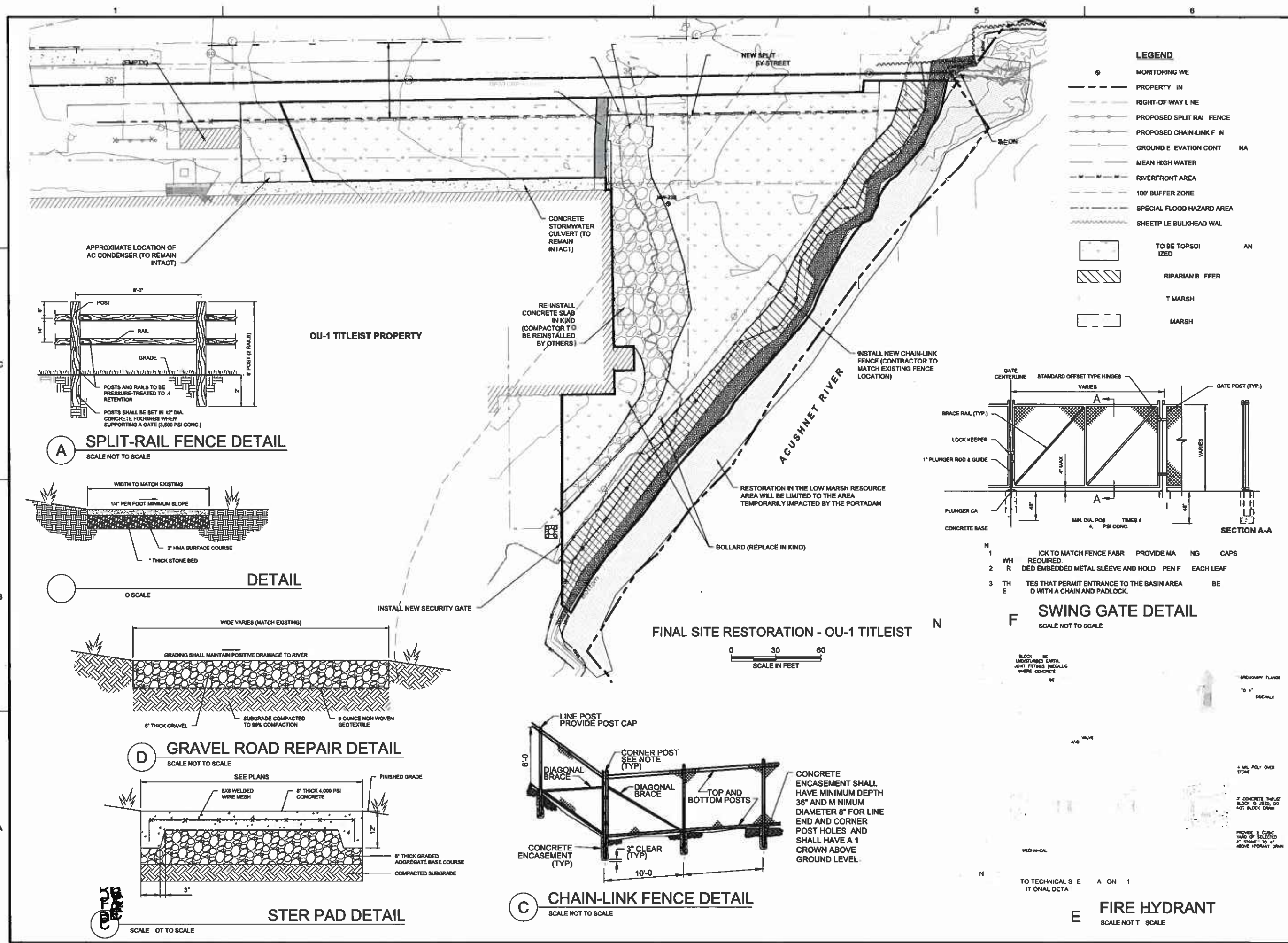


Crews are securing fabric to the Portadam 'A' frame.

Attachment 3

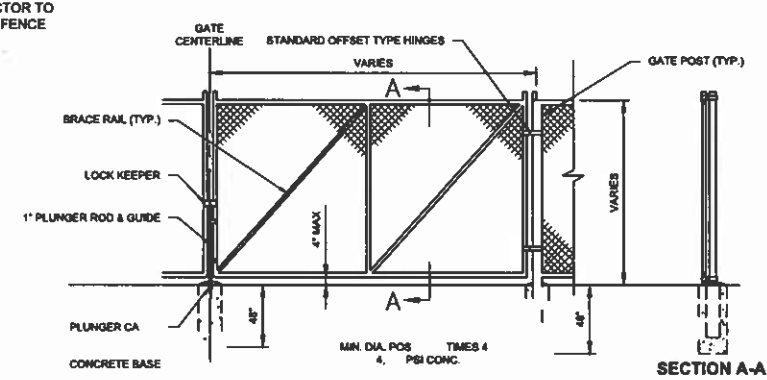
Revised Drawings C-204, C-205, C-318 and C-320

C:\Users\SANTIA\OneDrive\Documents\Projects\OU-1 Titleist Property\OU-1 Titleist Property.dwg
PLOT DATE: 2/24/2021 4:16 PM
FILENAME: C-204.DWG
PLOT USER: ALAN SANTIAGO



- LEGEND**
- MONITORING WE
 - PROPERTY IN
 - RIGHT-OF-WAY LINE
 - PROPOSED SPLIT RAIL FENCE
 - PROPOSED CHAIN-LINK FENCE
 - GROUND ELEVATION CONTROL
 - MEAN HIGH WATER
 - RIVERFRONT AREA
 - 100' BUFFER ZONE
 - SPECIAL FLOOD HAZARD AREA
 - SHEETPILE BULKHEAD WALL

- TO BE TOPSOILED
- RIPARIAN BUFFER
- T MARSH
- MARSH

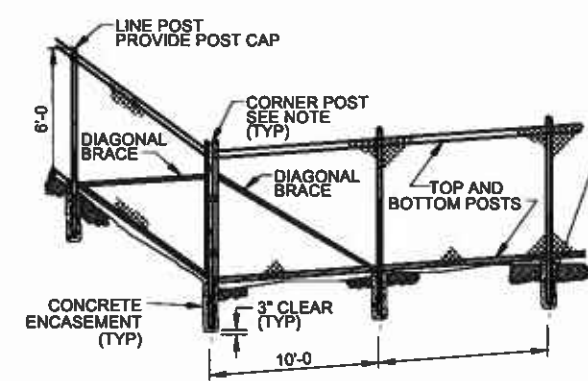


- 1. CHECK TO MATCH FENCE FABRIC. PROVIDE MANUFACTURER'S CAPS.
- 2. REQUIRED. EMBEDDED METAL SLEEVE AND HOLD DOWN EACH LEAF.
- 3. TESTS THAT PERMIT ENTRANCE TO THE BASIN AREA. PROVIDE WITH A CHAIN AND PADLOCK.

SWING GATE DETAIL
SCALE NOT TO SCALE

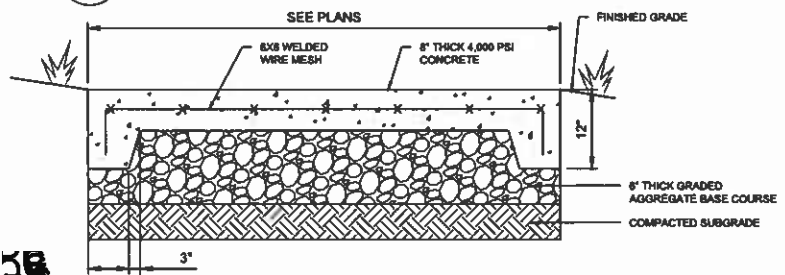


FIRE HYDRANT
SCALE NOT TO SCALE



CHAIN-LINK FENCE DETAIL
SCALE NOT TO SCALE

GRAVEL ROAD REPAIR DETAIL
SCALE NOT TO SCALE



GRAVEL ROAD REPAIR DETAIL
SCALE NOT TO SCALE

STER PAD DETAIL
SCALE NOT TO SCALE

FORMER AEROVOX FACILITY
740 BELLEVILLE AVENUE
NEW BEDFORD, MA

REVISIONS		
REV	DATE	DESCRIPTION
1	7/10/20	ISSUE
2	2/25/21	ISSUED FOR PRELIMINARY PROCESS

LINE IS 2 INCHES AT FULL SIZE

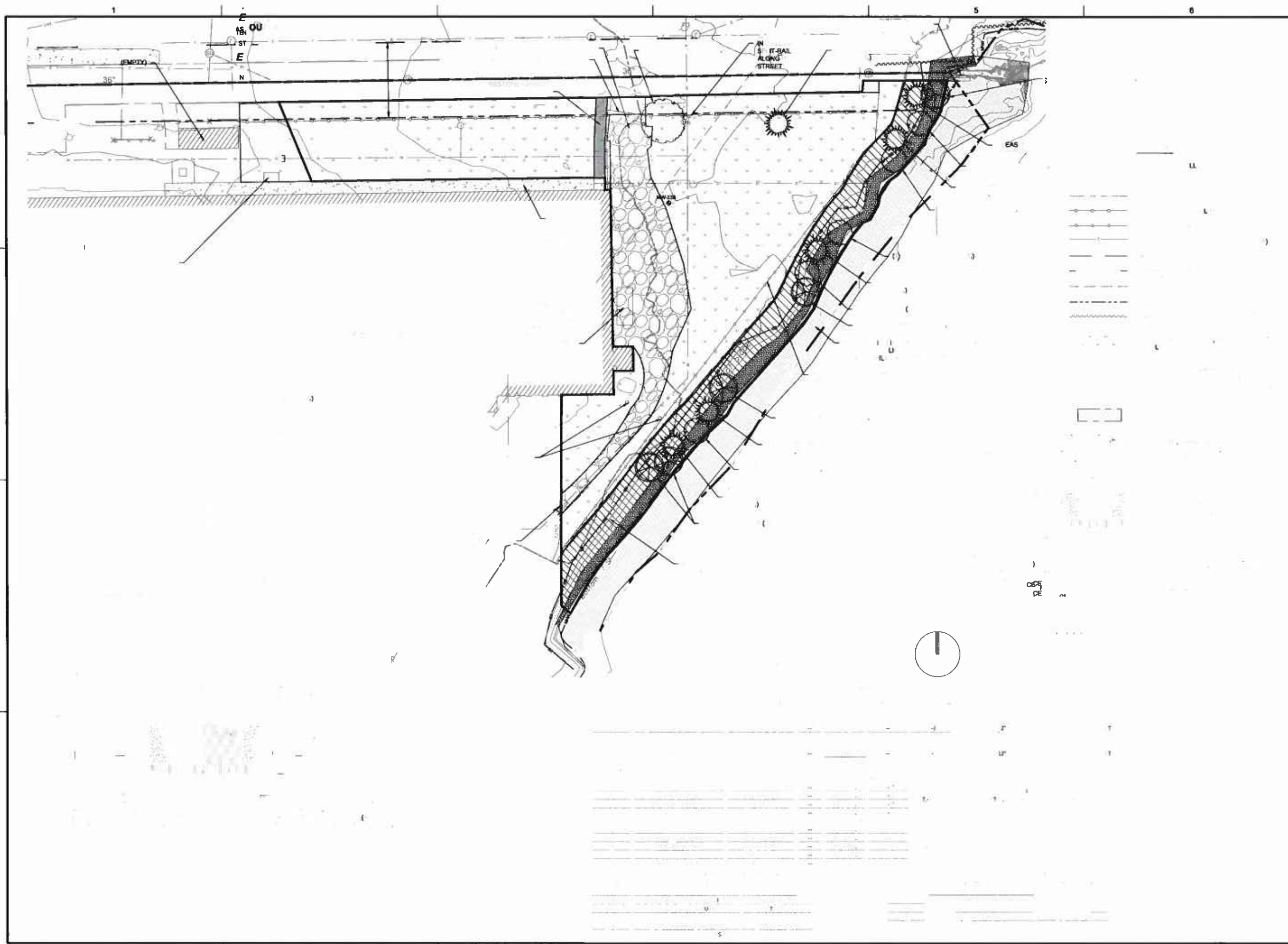
DESIGNED: J. SPADT
DRAWN: A. SANTIAGO
CHECKED: K. DYSON
CHECKED:
APPROVED: M. WADE

FILENAME: C-204.DWG
PROJECT NUMBER: 155041
CLIENT PROJECT NUMBER:

CIVIL

TITLEIST FINAL SITE RESTORATION PLAN AND DETAILS

DRAWING NUMBER
C-204
SHEET NUMBER
11 OF 42



PERMITTING PROCESS	
1	PRELIMINARY PERMIT
2	PERMIT TO CONSTRUCT
3	CONSTRUCTION PERMIT
4	FINAL PERMIT

DATE: 10/10/2010

TIME: 10:00 AM

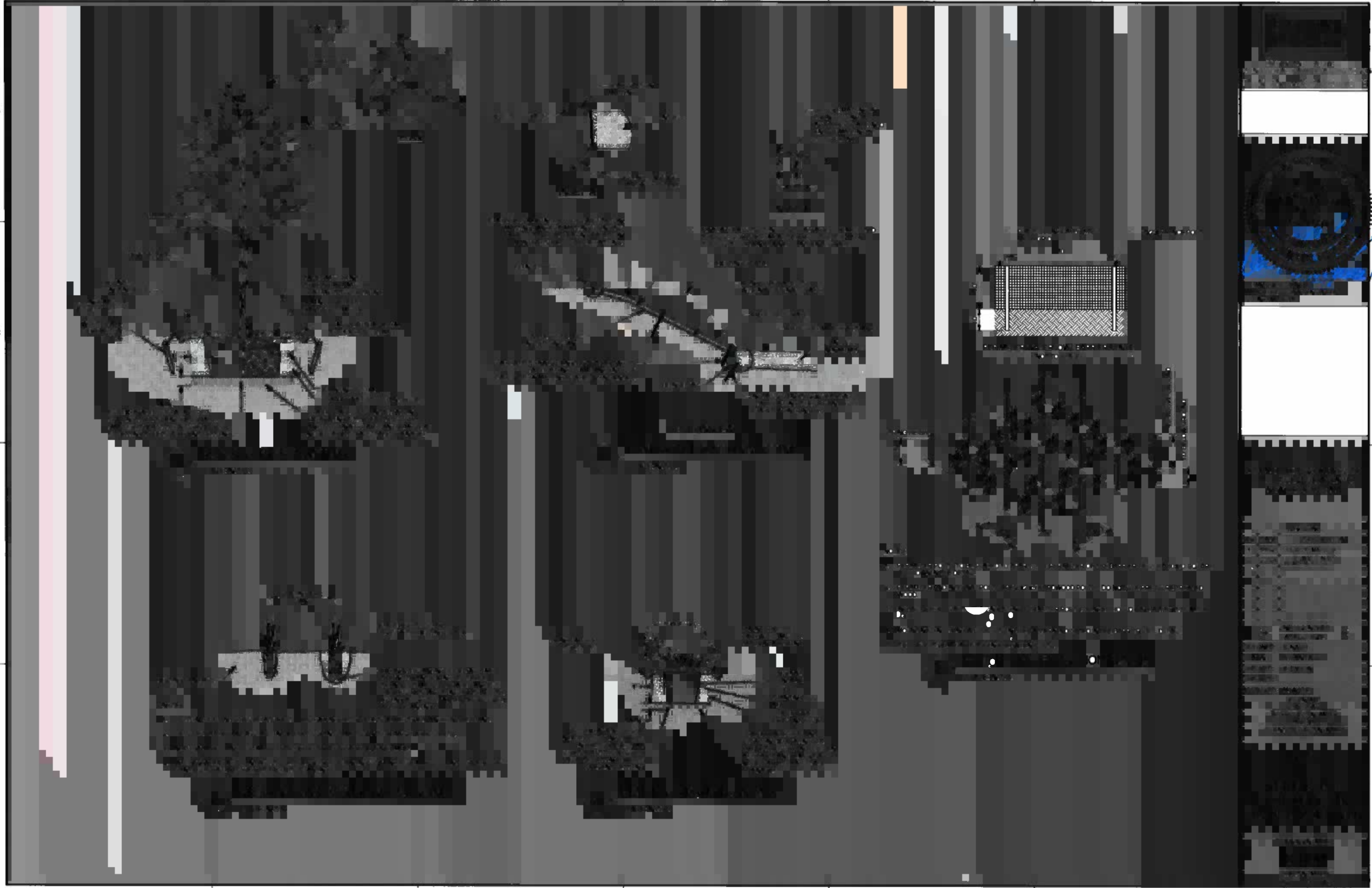
ATTACHED: 10/10/2010

10/10/2010

10/10/2010

DRAWN

10/10/2010



Attachment 4

Representative Planting Photos

Project Name: Former Aerovox Facility	Example Spartina Growth Photos	Project No. 155041
---	---------------------------------------	------------------------------

Photo No.
1

New Plantings



Photo No.
2

3 Months Post-Planting





PHOTOGRAPHIC LOG

Project Name:

Former Aerovox Facility

Example Spartina Growth Photos

Project No.

155041

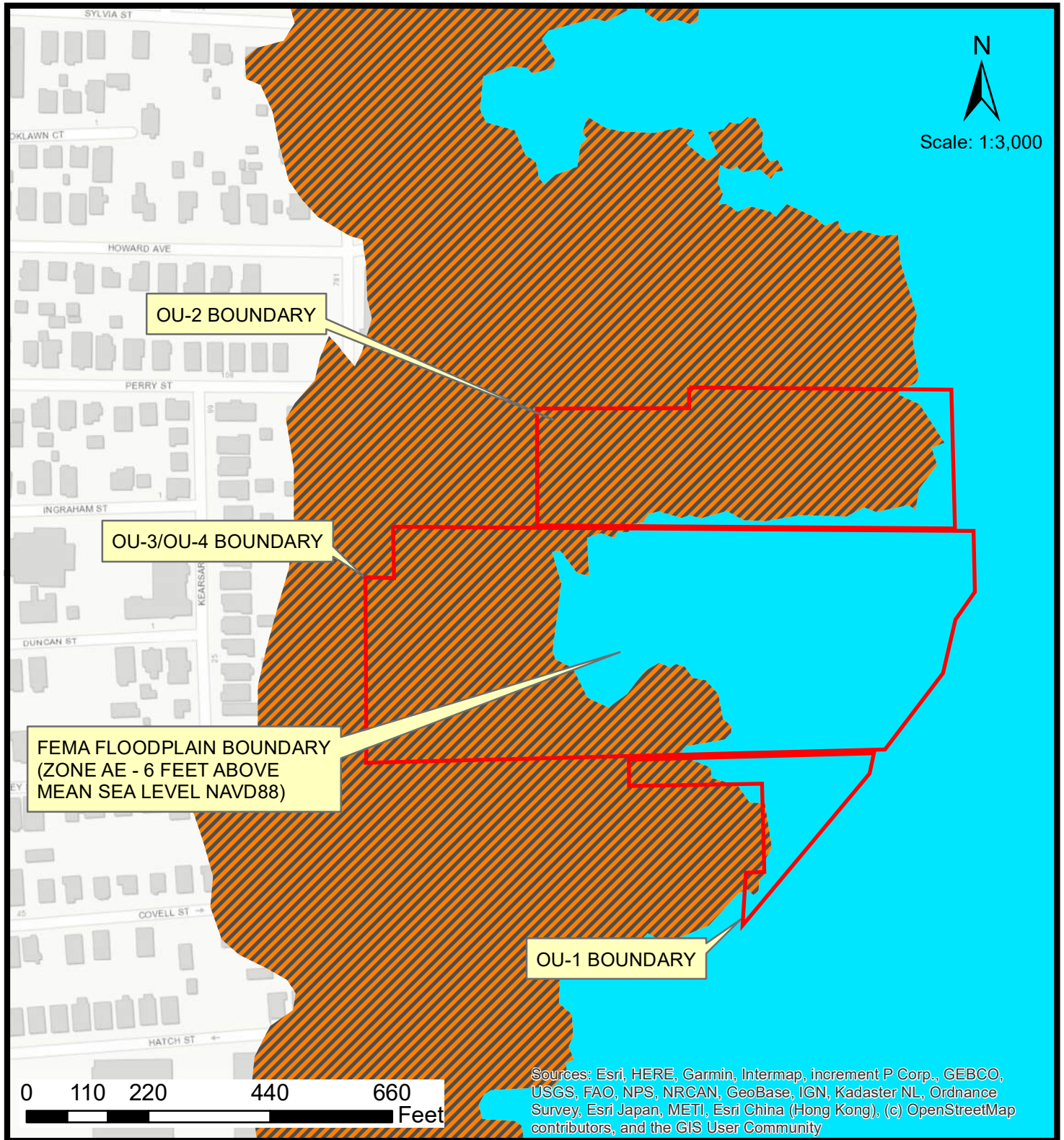
Photo No.
3

1 Year Post-Planting



Attachment 5

Revised Figure 2



Legend

- A: 1% Annual Chance of Flooding, no BFE
- AE: 1% Annual Chance of Flooding, with BFE
- AE: Regulatory Floodway
- AH: 1% Annual Chance of 1-3ft Ponding, with BFE
- AO: 1% Annual Chance of 1-3ft Sheet Flow Flooding, with Depth
- VE: High Risk Coastal Area
- D: Possible But Undetermined Hazard
- X: 0.2% Annual Chance of Flooding
- X: 1% Drainage Area < 1 Sq. Mi.
- X: Reduced Flood Risk due to Levee
- Area Not Included
- Area with no DFIRM - Paper FIRMs in Effect

FIGURE 2

FEMA FLOOD ZONE MAP

AVX CORPORATION

740 BELLEVILLE AVENUE
NEW BEDFORD, MASSACHUSETTS

DATE
2/19/2021

PROJECT NUMBER
155041



Attachment 6

Revised Page 2 of NOI Form



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

City/Town

A. General Information (continued)

6. General Project Description:

Complete all remediation activities for the four OUs associated with the Disposal Site (OU1, OU2 and OU3/OU4) as discussed in the Phase IV Remedial Implementation Plan, dated July 2020.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input checked="" type="checkbox"/> Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☒ Yes ☐ No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)
310 CMR 10.24(7)(c)(6) - Assessment, monitoring, containment, mitigation, and remediation of OHM.
2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Bristol

a. County

09206

c. Book

b. Certificate # (if registered land)

104

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☒ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Attachment 7

Revised Wetland Delineation Report

EcoTec, Inc.
ENVIRONMENTAL CONSULTING SERVICES
102 Grove Street
Worcester, MA 01605-2629
508-752-9666 – Fax: 508-752-9494

September 30, 2020 (revised 2/19/2021)

Elizabeth Wilson
Brown and Caldwell
One Tech Drive
North Andover, MA 01810

RE: Wetland Resource Evaluation, 740 Belleville Avenue, New Bedford, Massachusetts

Dear Ms. Wilson:

On September 17, 2020, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by: (1) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the “Act”) and its implementing regulations (310 CMR 10.00 *et seq.*; the “Regulations”); (2) the City of New Bedford Wetlands Protection Ordinance; and (3) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands). Scott M. Morrison, PWS conducted the inspection.

The subject site consists of a 5±-acre parcel located to the east of Belleville Drive, and west of the Acushnet River in New Bedford. The upland portions of the site consist of an existing parking lot, commercial building, lawn, landscaping and undeveloped forest. Plant species observed include staghorn sumac (*Rhus typhina*) trees and/or saplings; oriental bitter-sweet (*Celastrus orbiculata*) climbing woody vines; bramble (*Rubus sp.*), eastern red cedar (*Juniperus virginiana*), autumn elaeagnus (*Elaeagnus umbellata*), honeysuckle (*Lonicera sp.*), and multiflora rose (*Rosa multiflora*) shrubs; and grasses (Gramineae sp.), northern dewberry (*Rubus flagellaris*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*), common dandelion (*Taraxacum officinale*), Queen Anne’s lace (*Daucus carota*), and annual ragweed (*Ambrosia artemisiifolia*) ground cover. The wetland resources observed on the site are described below.

Methodology

The site was inspected, and areas suspected to qualify as wetland resources were identified. The boundary of Bordering Vegetated Wetlands was delineated in the field in accordance with the definition set forth in the regulations at 310 CMR 10.55(2)(c). Section 10.55(2)(c) states that “The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.” The methodology used to delineate Bordering Vegetated Wetlands is further described in: (1) the BVW Policy “BVW: Bordering Vegetated Wetlands Delineation Criteria and

Methodology,” issued March 1, 1995; and (2) “*Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook*,” produced by the Massachusetts Department of Environmental Protection, dated March 1995. The upper boundary of Salt Marsh was delineated with red ground flags based upon the uppermost extent of salt marsh plant species. The remaining coastal resources are identified and determined based in large part upon elevation or slope. The plant taxonomy used in this report is based on the *National List of Plant Species that Occur in Wetlands: Massachusetts* (Fish and Wildlife Service, U.S. Department of the Interior, 1988). Federal wetlands were presumed to have boundaries conterminous with the delineated Bordering Vegetated Wetlands. One set of DEP Bordering Vegetated Wetland Delineation Field Data Forms completed for observation plots located in the wetlands and uplands near flag B-9 is attached. The table below provides the Flag Numbers, Flag Type, and Wetland Types and Locations for the delineated wetland resources.

Flag Numbers	Flag Type	Wetland Types and Locations
Start A1 to A23 Stop	Blue Ground Flags	Upper boundary of High Tide Line of the Acushnet River in the northeastern portion of the site (federal resource area limit). Based upon the wrack line immediately following high tide during a new moon.
Start A23 to A67 Stop	Blue Flags	Upper boundary of Salt Marsh near the northern site boundary to be confirmed by survey elevations of highest high tide line (jurisdictional boundary). The lower boundary should also be located and consists of the lower extent of coverage by the <i>Spartina alterniflora</i> (i.e., the taller salt marsh grass).
Start B1 to B13 Stop (B1 connect to A61 & B13 connect to A62)	Red Flags	Boundary of Bordering Vegetated Wetlands/ Bank located in the southeastern portion of the site that is associated with an intermittent stream.

Findings

Inland wetland resource areas consist of Wetland B (i.e., flags B1 to B13) consists of a forested swamp and stream located in the southeastern portion of the site that is associated with an intermittent stream. Plant species observed include red maple (*Acer rubrum*) and gray birch (*Betula populifolia*) trees and/or saplings; poison ivy (*Toxicodendron radicans*) and common greenbrier (*Smilax rotundifolia*) climbing woody vines; and arrow-wood (*Viburnum dentatum*), shrubs. Evidence of wetland hydrology, including hydric soils, high groundwater, saturated soils, pore linings, and drainage patterns, was observed within the delineated wetland. This vegetated wetland borders an intermittent stream; accordingly, the vegetated wetlands would be regulated as Bordering Vegetated Wetlands and the intermittent stream would be regulated as Bank under the Act. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands and Bank under the Act and Ordinance.

The following coastal wetland resource areas occur on or adjacent to the site:

- **Land Under the Ocean** is defined at 310 CMR 10.25(2) as “...land extending from the mean low water line seaward to the boundary of the municipality’s jurisdiction and includes land under estuaries.” “Nearshore Areas of land under the ocean means that land extending from the mean low water line to the seaward limit of a municipality’s jurisdiction, but in no case beyond the point where the land is 80 feet below the level of the ocean at mean low water....” The **Mean Low Water Line** is defined at 310 CMR 10.23 as “...the line where the arithmetic mean of the low water heights observed over a specific 19-year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.”
- **Coastal Beach** is defined at 310 CMR 10.27(2) as “...unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing man-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.” **Tidal Flat** is also defined at 310 CMR 10.27(2) as “...any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.” A 100-foot Buffer Zone extends horizontally outward from the boundary of Coastal Beach or Tidal Flat. At the site, tidal flat occurs (e.g., in the intertidal zone downgradient of the riprap slope and salt marsh, where salt marsh occurs)
- **Salt Marsh** is defined at 310 CMR 10.32(2) as “...a coastal wetland that extends landward up to the highest high tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in, saline soils. Dominant plants within salt marshes are salt meadow cord grass (*Spartina patens*) and/or salt marsh cord grass (*Spartina alterniflora*). A salt marsh may contain tidal creeks, ditches and pools.” A 100-foot Buffer Zone extends horizontally outward from the boundary of Salt Marsh.

Near the site, the upper boundary of the Salt Marsh was delineated based upon the extent of salt marsh vegetation and delineated by wetland flags A23 to A67. The lower boundary should be surveyed based upon the lower extent of the salt marsh cord grass. The majority of the salt marsh at the site has a poor to almost non-existent peat mat.

- **Coastal Bank** is defined at 310 CMR 10.30 as “...the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.” A 100-foot Buffer Zone extends horizontally outward from the boundary of Coastal Bank. The limits of Coastal Bank are further defined by MassDEP Policy 92.1, which establishes procedures for identifying the extent of Coastal Bank based upon the profile geometry of surface contour cross sections perpendicular to the shoreline. The surveyor should develop sufficient site topography and cross sections to allow for a determination of the limits of Coastal Bank in accordance with the Policy.

- **Land Subject to Coastal Storm Flowage** is defined at 310 CMR 10.04 as “...land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.”

Based upon a review of the Flood Insurance Rate, Map Numbers 25005C391G, Effective Date July 16, 2014, there is a mapped Zone AE (i.e., 100-year floodplain) with a 100-year flood elevation of 6 feet (NAVD 1988) associated with the embayment of the Acushnet River (see comment regarding Bordering Land Subject to Flooding below). It is EcoTec’s interpretation that Land Subject to Coastal Storm Flowage would extend to the 6-foot (NAVD) contour based upon the FEMA map.

- **Land Subject to Tidal Action** is defined at 310 CMR 10.04 as which is simply defined as land subject to the periodic rise and fall of a coastal water body, including spring tides. **Spring Tides** are defined at 310 CMR 10.04 as “...those tides which occur with new and full moons, and which are perceptibly higher and lower than other tides.” The surveyor should determine the height of spring tides at the site and plot the extent of inundation based upon site topography.
- **Land Containing Shellfish** is defined at 310 CMR 10.34(2) as “...means land under the ocean, tidal flats, rocky intertidal shores, salt marsh and land under salt ponds when any such lands contain shellfish.” The Tidal Flat and Land Under the Ocean areas of the site likely contain shellfish and therefore would also be regulated as Land Containing Shellfish.

The following coastal wetland resource areas do not appear to be located on or near the site:

- Designated Port Areas;
- Coastal Dunes;
- Barrier Beaches;
- Rocky Intertidal Shores (limited to naturally occurring rocky areas);
- Land Under Salt Ponds; and
- Banks of or Land Under the Ocean or River that Underlie an Anadromous/Catadromous Fish Run (based upon GIS mapping).

In addition to the coastal wetland resource area listed above, the site is proximate to a tidally influenced embayment of the Acushnet River, a perennially mapped stream. As such, a 25-foot Riverfront Area under the Act/Regulations would extend horizontally outward from the Mean Annual High-water Line associated with the river.

Riverfront Area is defined at 310 CMR 10.58(2)(a) as “...the area of land between a river’s mean annual high water line and a parallel line measured horizontally. The riverfront area may

include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.” For tidal rivers, such as the pertinent reach of the Acushnet River, the *Mean Annual High-water Line* is coincident with the *Mean High Water Line* determined under 310 CMR 10.23 (see 310 CMR 10.58(2)(a)2.c.). The **Mean High Water Line** is defined at 310 CMR 10.23 as “...the line where the arithmetic mean of the high water heights observed over a specific 19-year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.” his appears to be elevation 3.71 MLLW datum (see attached information).

The Regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the *Massachusetts Natural Heritage Atlas*, 14th edition, Priority Habitats and Estimated Habitats from the NHESP Interactive Viewer, valid from August 1, 2017, and Certified Vernal Pools from MassGIS, there are no Estimated Habitats [for use with the Act and Regulations (310 CMR 10.00 *et seq.*)], Priority Habitats [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; “MESA”) and MESA Regulations (321 CMR 10.00 *et seq.*)], or Certified Vernal Pools on or in the immediate vicinity of the site. A copy of this map is attached.

The reader should be aware that the regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. A brief description of my experience and qualifications is attached. If you have any questions, please feel free to contact me at any time.

Cordially,
ECOTEC, INC.



Scott M. Morrison, PWS
Senior Environmental Scientist

Attachments (7, 9 pages)

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 – Fax: 508-752-9494

Scott M. Morrison, PWS, RPSS, SE **Senior Environmental Scientist**

Scott Morrison is a Senior Environmental Scientist with EcoTec, Inc. Since joining EcoTec in 2000, Mr. Morrison's project experience include wetland resource evaluation, delineation, and permitting at the local, state, and federal levels; wildlife habitat evaluation; pond and stream evaluation; vernal pool evaluation, monitoring, and certification; wetland replacement, replication, and restoration area design, construction, and monitoring; soil evaluations to determine infiltration rates and seasonal high groundwater elevations for detention basin construction; environmental sampling and analysis tasks, including soil and groundwater sample collection and handling; and expert testimony preparation. He has conducted rare species habitat assessments for the eastern box turtle, wood turtle, Blanding's turtle, spotted turtle, and marbled salamander. He has participated in rare species studies for rare species including the marbled salamander, piping plover, eastern box turtle, and northern diamondback terrapin and developed mitigation strategies for the marbled salamander, spotted turtle, eastern box turtle and wood turtle. He has participated in visual preconstruction sweeps for the wood turtle and both preconstruction and research projects for the eastern box turtle. He has served as a consultant to municipalities, conservation commissions, engineering and survey firms. He has completed numerous wetland related projects including environmental impact assessments for proposed development, erosion control and environmental monitoring for subdivisions, commercial developments, golf courses and landfills. He has prepared Massachusetts Environmental Policy Act (MEPA) documentation, including Environmental Notification Forms (ENFs), Notice of Project Changes (NPCs), and Draft and Final Environmental Impact Reports (EIRs) including Green House Gas Assessments for various projects including subdivisions, commercial buildings, and dredging projects. Prior to joining EcoTec, Inc. Mr. Morrison worked for the Massachusetts Department of Environmental Management (currently the Department of Conservation and Recreation) where he was involved with the monitoring and protection of endangered species and rare old growth forest. He was an active member of the Spencer Conservation Commission from 1998 to 2000 where he provided oversight of proposed wetland replication projects and review of projects submitted for wetland permitting. His educational background includes courses in forestry, ecology, chemistry, soils, and natural resource policy. His prior research experience includes research on forest succession and field research on nesting piping plovers, an endangered coastal shore bird.

Education:

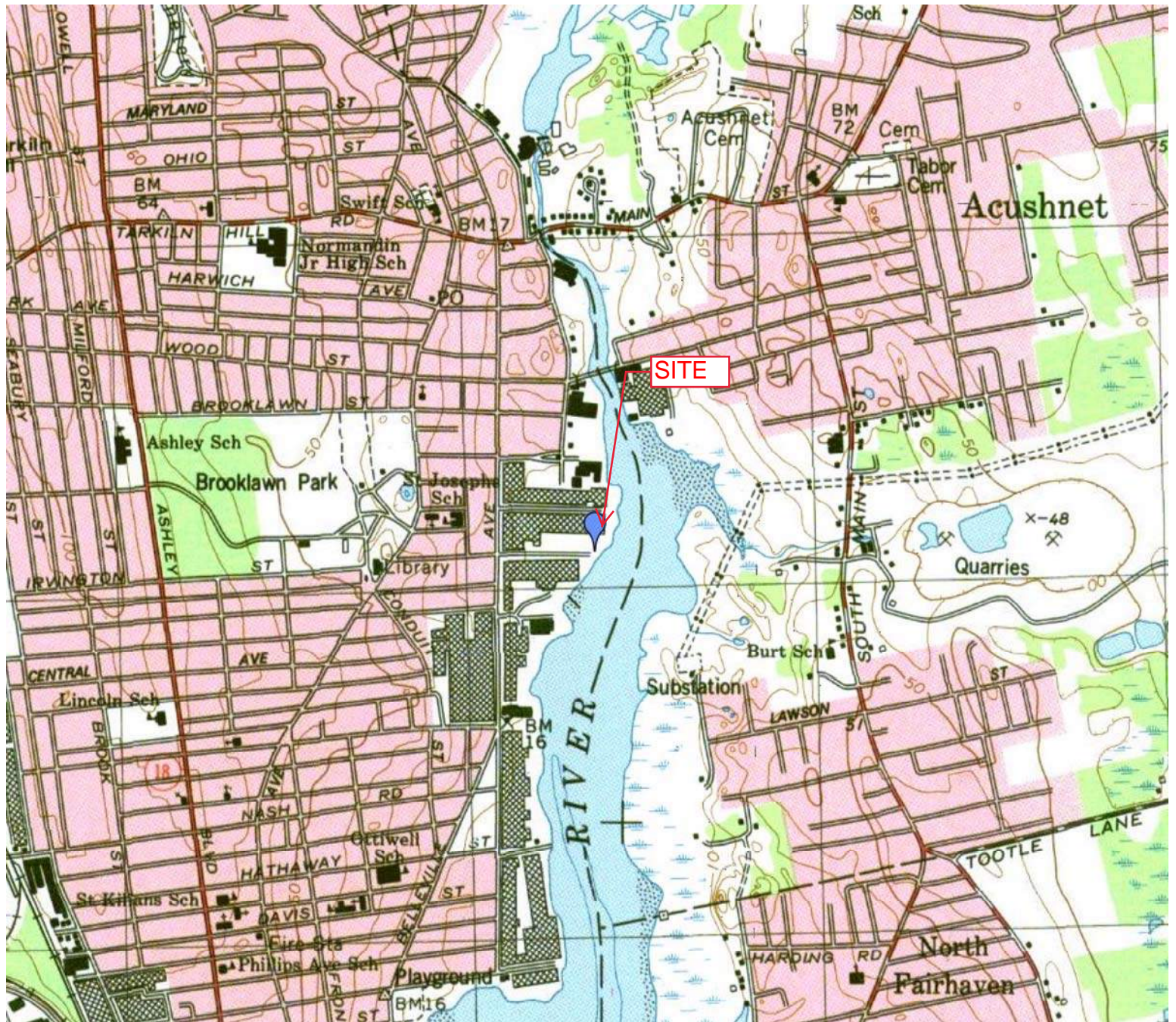
Graduate Soil Science Certificate Program
University of Massachusetts at Amherst, 2006
Bachelor of Science: Natural Resource Studies
University of Massachusetts at Amherst, 1998
Associate of Science: Business Administration
Quinsigamond Community College, 1996

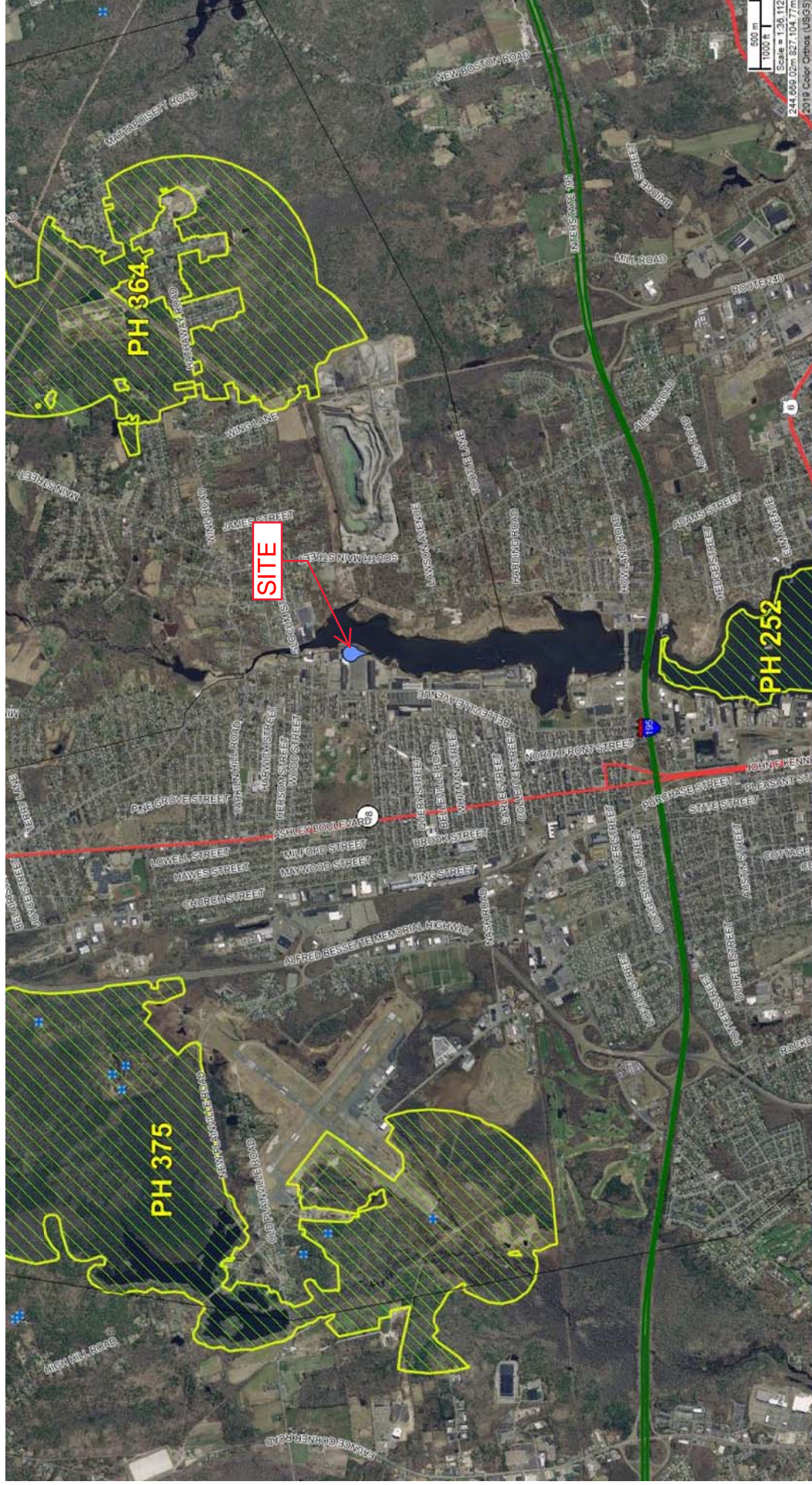
Professional Affiliations: Registered Professional Soil Scientist, Society of Soil Scientists of Southern New England (SSSSNE)

Massachusetts Association of Conservation Commissioners
Association of Massachusetts Wetland Scientists
Society of Wetland Scientists

Certifications:

Society of Wetlands Scientists Professional Wetland Scientist,
Certification Number 2583
Massachusetts Department of Environmental Protection Soil Evaluator,
Certification Number SE 13766
OSHA Health and Safety Training, 40-Hour, 29 CFR 1910.120
University of Massachusetts Extension, Invasive Species Management

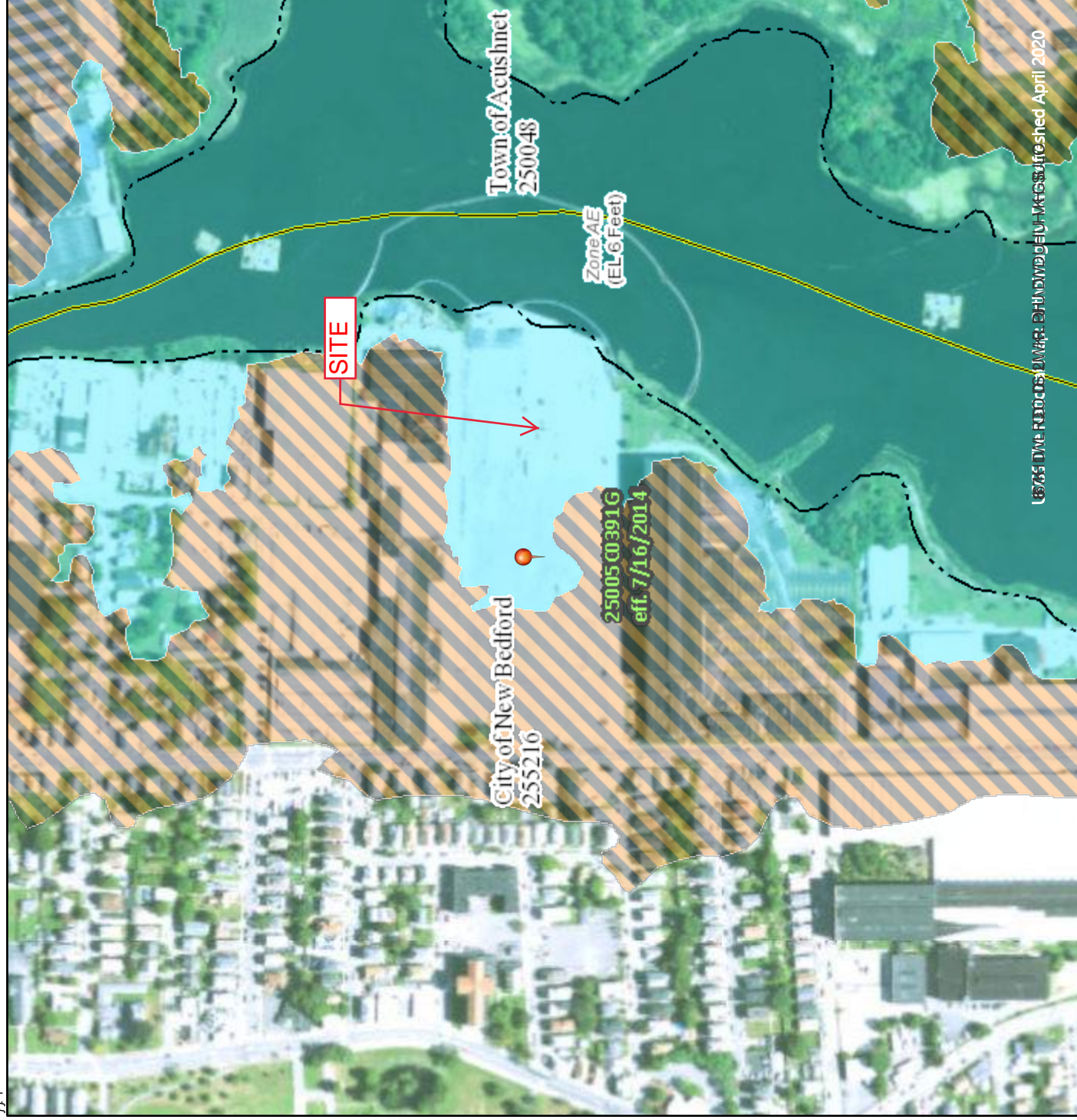




Natural Heritage Atlas Online Data Viewer Output-September 2020

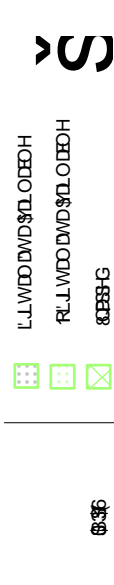
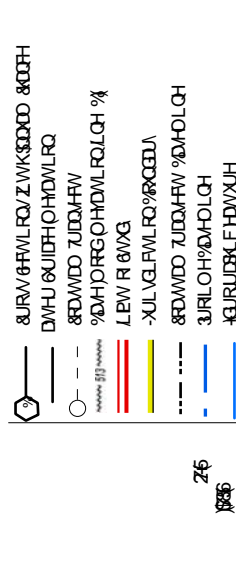
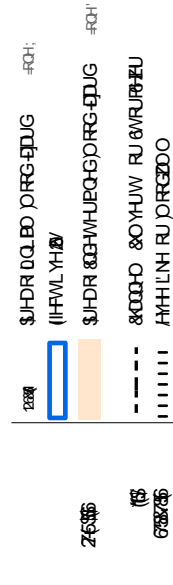
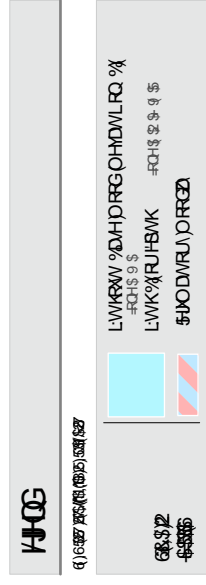
740 Belleville Avenue, New Bedford

ff1



WH

ff 1



74HS.QG.VSO.DHGRQWKHBSLV.DQ.DSURL.BWH
SR.QW.VO.HV.HVGE.WKH.X.HJ.DQG.GR.V.QRW.UHS
DQ.DXWKRL.WDML.YHS.JRSH.UW.O.RDML.RQ

7KLVB\$F\$BOLH/ZWK\$VW\$W\$W\$W\$W\$G/IRUWKHXHR
GLTWIDIORGB\$LI\$WLVQWYRLGD/GHFULB\$G\$H\$F\$Z
7KHED\$B\$W\$K\$Q\$F\$BOLH/ZWK\$V\$V\$E\$H\$B\$B\$
N\$X\$IR\$W\$W\$W\$W\$G/

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 ZV/HRUJRWQ DW ③ DOGGRH/GRW
 UHOJFWROCH/RUJRGGRQVWVXHTKQWWRWMLVGMVHDOG
 WLF 7K4VHOGHIFWLHYLORJWMLRBJROGHRU
 HERRVXVHVGGECHGZGZDRHUWLPL

7K.V/BSLH.VL.GLI.WKIFQIRU.RUHR.WKIFQIRZ.QIBS
H-HHW.GRW.DSDU.EDH.FSLBWA.IORGQIOH.OV
O-HQG.VTD.HEDU.FSDUHL.FQSDWH.FRQ.WLGOW.LLHV
(.SBDQO.QBU.DG)H.HWL.HGDMH.BSLB/IRU
XBSB.GDS.XRG.UQ.HSDUJ.FQDWR.HXHGIRU
UHQDQWU.SURWV

Datums for 8447712, NEW BEDFORD, CLARKS POINT MA

NOTICE: All data values are relative to the MLLW.

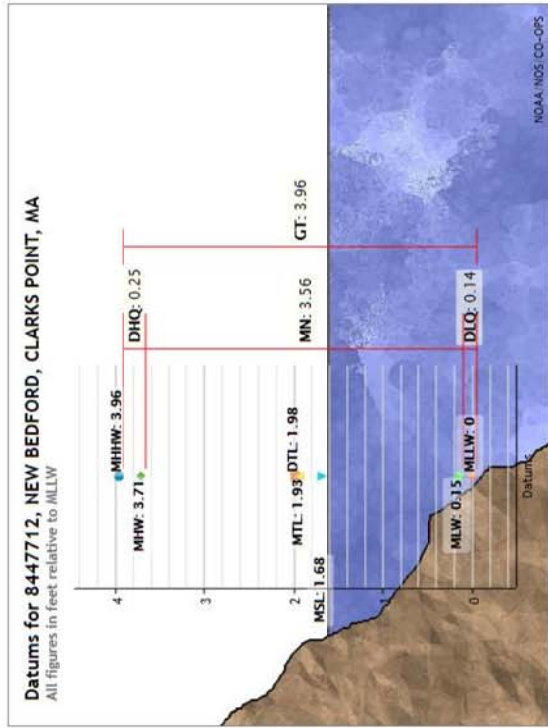
Elevations on Mean Lower Low Water

Station: 8447712, NEW BEDFORD, CLARKS POINT, MA		T.M.: 75	
Status: Accepted (May 3 2004)		Epoch: 1983-2001	
Units: Feet		Datum: MLLW	
Control Station: 8452660 Newport, RI			
Datum	Value	Description	
MHHW	3.96	Mean Higher-High Water	
MHW	3.71	Mean High Water	
MTL	1.93	Mean Tide Level	
MSL	1.68	Mean Sea Level	
DTL	1.98	Mean Diurnal Tide Level	
MLW	0.15	Mean Low Water	
MLLW	0.00	Mean Lower-Low Water	
NAVD88			

Datums for 8447712, NEW BEDFORD, CLARKS POINT, MA

All figures in feet relative to MLLW

STND	-2.49	Station Datum
GT	3.96	Great Diurnal Range
MN	3.56	Mean Range of Tide
DHQ	0.25	Mean Diurnal High Water Inequality
DLQ	0.14	Mean Diurnal Low Water Inequality
HWI	0.50	Greenwich High Water Interval (in hours)
LWI	6.30	Greenwich Low Water Interval (in hours)
Max Tide		Highest Observed Tide
Max Tide Date & Time		Highest Observed Tide Date & Time
Min Tide		Lowest Observed Tide
Min Tide Date & Time		Lowest Observed Tide Date & Time



Showing datums for

8447712 NEW BEDFORD, C...

Datum

MLLW

Data Units

Feet

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant

Prepared by: EcoTec, Inc

Project Location: 740 Belleville, N. Bedford

DEP File #

Section I. Vegetation

Number: Upland

Transect # B-9

Date of Delin: 9/30/2020

A. Sample layer and plant species (Enter largest to smallest % cover by layer)				Wetland		
			Percent Cover (or basal area)	Percent Dominance	Dominant Plant?	Indicator Category
Tree	red maple	Acer rubrum	40		50.0 YES	FAC *
	Atlantic white cedar	Chaemaecyparis thyoides	40		50.0 YES	OBL *
Sapling	red oak	Quercus rubra	20		50.0 YES	FACU-
	Atlantic white cedar	Chaemaecyparis thyoides	20		50.0 YES	OBL *
Shrub	Japanese barberry	Berberis thunbergii	20		100.0 YES	FACU
Ground	Japanese barberry	Berberis thunbergii	30		85.7 YES	FACU
	poison ivy	Toxicodendron radicans	5		14.3 NO	FAC *
Vine						

Vegetation Conclusions		
Number of dominant wetland indicator plants	3	Number of dominant non-wetland indicator plants
Is the number of dominant wetland plants equal or greater than the number of dominant non-wetland plants?		3

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant	Prepared by: EcoTec, Inc	Project Location: 740 Belleville, N. Bedford	DEP File #
Section II. Indicators of Hydrology		Transect # B-9	Date of Delin: 9/30/2020

1. Soil Survey

Is there a published soil survey for this site?

title/date
map number
soil type mapped
hydric soil inclusions

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
A	0-8	10YR 3/2	
Bw	8-12+	10YR 4/4	

Remarks sand

3. Other

Conclusion: Is the soil hydric?

No

Other Indicators of hydrology (check all that apply):

- ☐ Site Inundated
- ☐ Depth to free water in observation hole
- ☐ Depth to soil saturation in observation hole
- ☐ Water marks
- ☐ Drift lines
- ☐ Sediment Deposits
- ☐ Drainage patterns in BVWs
- ☐ Oxidized rhizospheres
- ☐ Water stained leaves
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
Hydric soil present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other indicators of hydrology present	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample Location is in a BVW	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant: [redacted] Prepared by: EcoTec, Inc Project Location: 740 Belleville, N. Bedford DEP File #

Section I. Vegetation Number: Wetland Transect # B-9 Date of Delin: 9--17-2020

A. Sample layer and plant species (Enter largest to smallest % cover by layer)			Wetland Indicator Category		
Tree		Acer rubrum	Percent Cover (or basal area)	Percent Dominance	Dominant Plant?
			40		100.0 YES
					FAC
Sapling		Acer rubrum	20		100.0 YES
					FAC
Shrub		Chaemaecyparis thyoides	10		100.0 YES
					OBL
Ground		Toxicodendron radicans	30		50.0 YES
		Smilax rotundifolia	30		50.0 YES
					FAC
Vine					

Vegetation Conclusions		
Number of dominant wetland indicator plants	5	Number of dominant non-wetland indicator plants
Is the number of dominant wetland plants equal or greater than the number of dominant non-wetland plants?		0

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant	Prepared by: EcoTec, Inc	Project Location: 740 Belleville, N. Bedford	DEP File #
Section II. Indicators of Hydrology		Transect # B-9	Date of Delin: 9--17-2020

1. Soil Survey

Is there a published soil survey for this site?

title/date	
map number	
soil type mapped	
hydric soil inclusions	

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
O	0-6		
A	6-10	10YR 2/1	
Bg	10-12+	10YR 4/2	20% 10YR 4/1

Remarks

sand

3. Other

Conclusion: Is the soil hydric?

Yes

Other Indicators of hydrology (check all that apply):

<input type="checkbox"/> Site Inundated	
<input type="checkbox"/> Depth to free water in observation hole	
<input checked="" type="checkbox"/> Depth to soil saturation in observation hole	surface
<input type="checkbox"/> Water marks	
<input type="checkbox"/> Drift lines	
<input type="checkbox"/> Sediment Deposits	
<input type="checkbox"/> Drainage patterns in BVWs	
<input type="checkbox"/> Oxidized rhizospheres	
<input type="checkbox"/> Water stained leaves	
<input type="checkbox"/> Recorded data (stream, lake, or tidal gauge; aerial photo; other):	
<input type="checkbox"/> Other:	

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants ≥ number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample Location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 740 Belleville Drive City/County: New Bedford Sampling Date: 9-17-2020
Applicant/Owner: _____ State: _____ Sampling Point: Upland
Investigator(s): Scott Morrison, EcoTec Section, Township, Range: Bristol County
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Urban Soils NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
If yes, optional Wetland Site ID: _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes _____ No _____
Surface Water Present? Yes _____ No _____ Depth (inches): _____	Water Table Present? Yes _____ No _____ Depth (inches): _____	
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: Upland

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)														
2. <u>Chaemaecyparis thyoides</u>	<u>40</u>	<u>yes</u>	<u>OBL</u>															
3. <u>Quercus rubra</u>	<u>20</u>	<u>yes</u>	<u>FACU-</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>100</u> = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>1</u></td> <td>x 1 = <u>1</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>1</u></td> <td>x 3 = <u>3</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>4</u> (A)</td> <td><u>12</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3</u>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>1</u>	x 3 = <u>3</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>4</u> (A)	<u>12</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>1</u>	x 1 = <u>1</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>1</u>	x 3 = <u>3</u>																	
FACU species <u>2</u>	x 4 = <u>8</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>4</u> (A)	<u>12</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Berberis thunbergii</u>	<u>20</u>	<u>yes</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Berberis thunbergii</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Toxicodendron radicans</u>	<u>5</u>	<u>no</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>35</u> = Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: _____

[illegible]

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: 740 Belleville Drive City/County: New Bedford Sampling Date: 9-17-2020
 Applicant/Owner: _____ State: _____ Sampling Point: Wetland
 Investigator(s): Scott Morrison, EcoTec Section, Township, Range: Bristol County
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none
 Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Urban Soils NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

Sampling Point: _____

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>60</u>	<u>yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>60</u>	= Total Cover															
Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Chaemaecyparis thoyoides</u>	<u>10</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>1</u></td> <td>x 1 = <u>1</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>4</u> (A)</td> <td><u>10</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.5</u>	Total % Cover of:	Multiply by:	OBL species <u>1</u>	x 1 = <u>1</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>4</u> (A)	<u>10</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>1</u>	x 1 = <u>1</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>3</u>	x 3 = <u>9</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>4</u> (A)	<u>10</u> (B)																	
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>10</u>	= Total Cover															
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Toxicodendron radicans</u>	<u>30</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Smilax rotundifolia</u>	<u>30</u>	<u>yes</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>60</u>	= Total Cover															
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		_____	= Total Cover															

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input checked="" type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	

Indicators for Problematic Hydric Soils³:

☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
☐ Dark Surface (S7) (**LRR K, L**)
☐ Polyvalue Below Surface (S8) (**LRR K, L**)
☐ Thin Dark Surface (S9) (**LRR K, L**)
☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

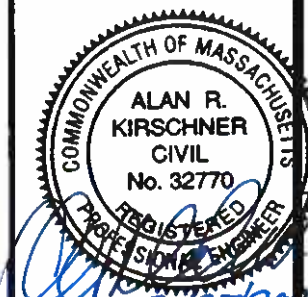
Depth (inches): _____

Hydric Soil Present? Yes X No

Remarks:

Attachment 8

Existing Conditions Drawings C-200 and C-300, and Wetland Resource Areas Profiles



ALAN R. KIRSCHNER
MA PROFESSIONAL ENGINEER
LIC NO. MA 32770

**FORMER AEROVOX FACILITY
740 BELLEVILLE AVENUE
NEW BEDFORD, MA**

[illegible]

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: E. WILSON

DRAWN: A. SANTIAGO

CHECKED: J. LEONARD

CHECKED: J. LECLAIR

CHECKED: _____

APPROVED: M. WADE

FILENAME
C:\200.DWG

BC PROJECT NUMBER

155041

CLIENT PROJECT NAME	
---------------------	--

CIVIL

CIVIL

REFERENCES

WETLAND

RESOURCE

RESOURCE

PLAN FOR THE

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

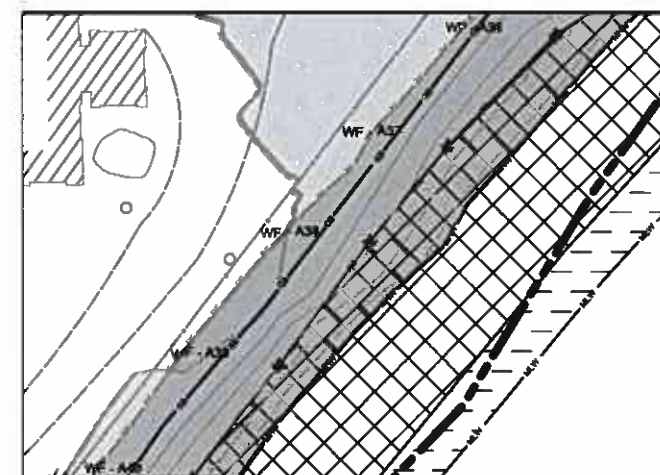
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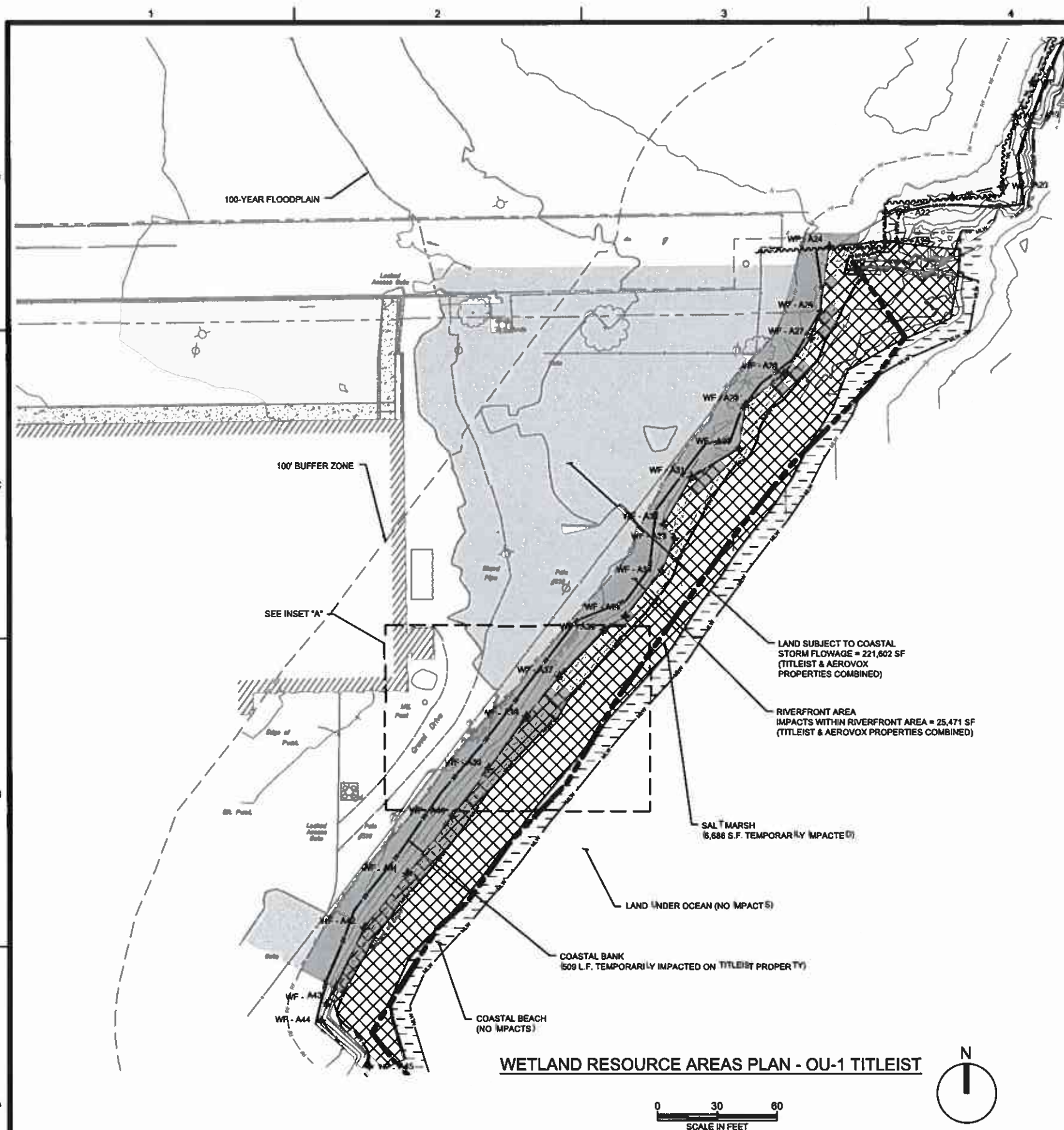
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SHEET NUMBER

12 OF



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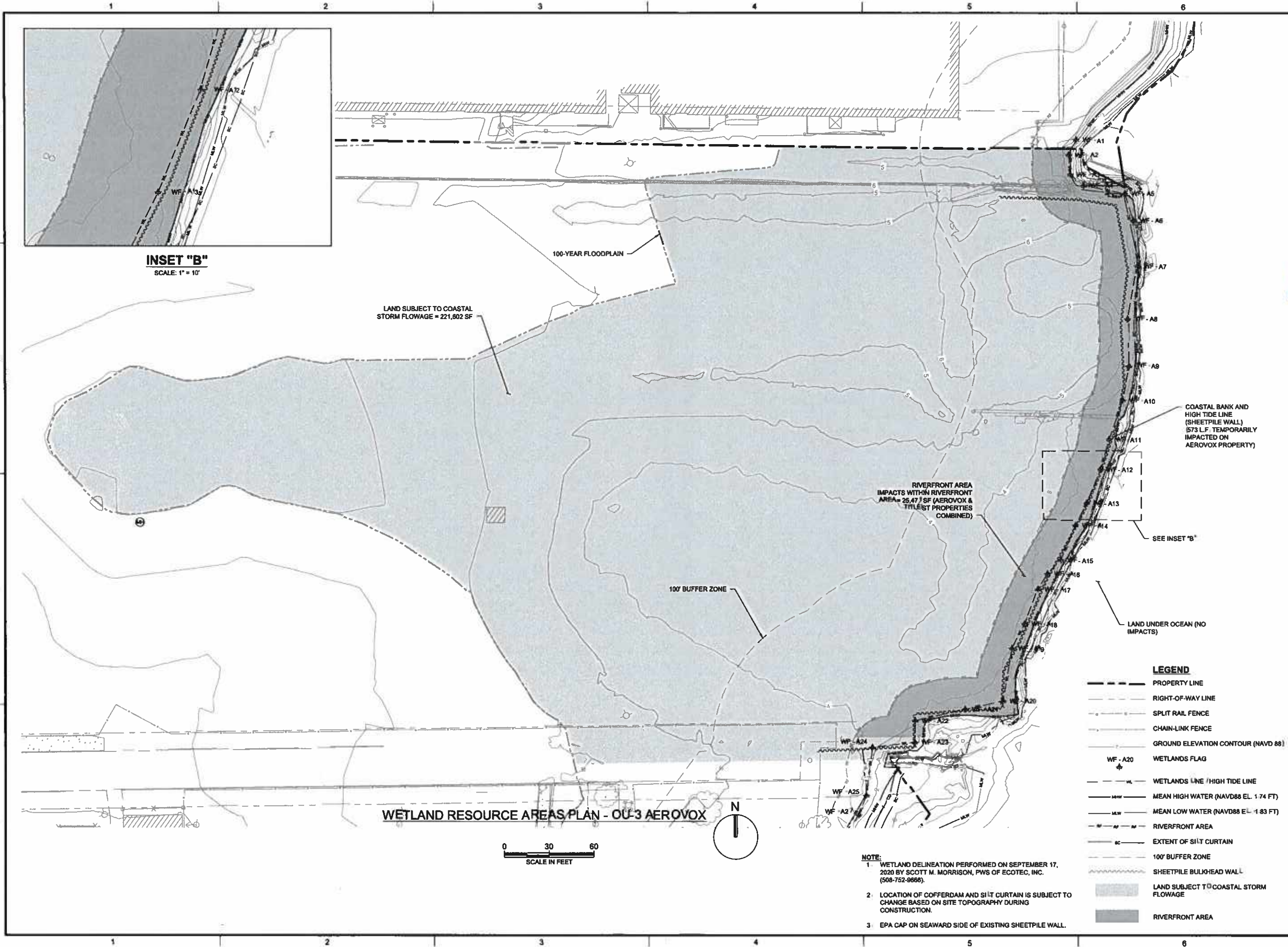


NOTE:

1. WETLAND DELINEATION PERFORMED ON SEPTEMBER 17, 2020 BY SCOTT M MORRISON, PWS OF ECOTEC, INC. (508-752-9666).
2. LOCATION OF COFFERDAM AND SILT CURTAIN IS SUBJECT TO CHANGE BASED ON SITE TOPOGRAPHY DURING CONSTRUCTION

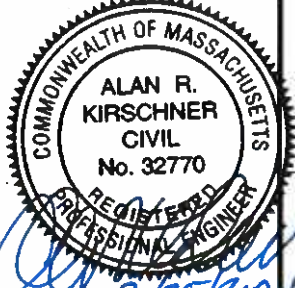
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Brown and Caldwell

101 INDUSTRIAL PARK ROAD, SUITE 205



ALAN R. KIRSCHNER
MA PROFESSIONAL ENGINEER
LIC NO. MA 32770

FORMER AEROVOX FACILITY
740 BELLEVILLE AVENUE
NEW BEDFORD, MA

REVISIONS		
REV	DATE	DESCRIPTION
1	2/25/21	ISSUED IN RESPONSE TO PERMITTING PROCESS

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: E. WILSON

DRAWN: A. SANTIAGO

CHECKED: J. LECLAIR

CHECKED:

APPROVED: M. WADE

FILENAME
C-300.DWG

BC PROJECT NUMBER
155041

CLIENT PROJECT NUMBER

CIVIL

**WETLAND
RESOURCE AREAS
PLAN FOR
AEROVOX**

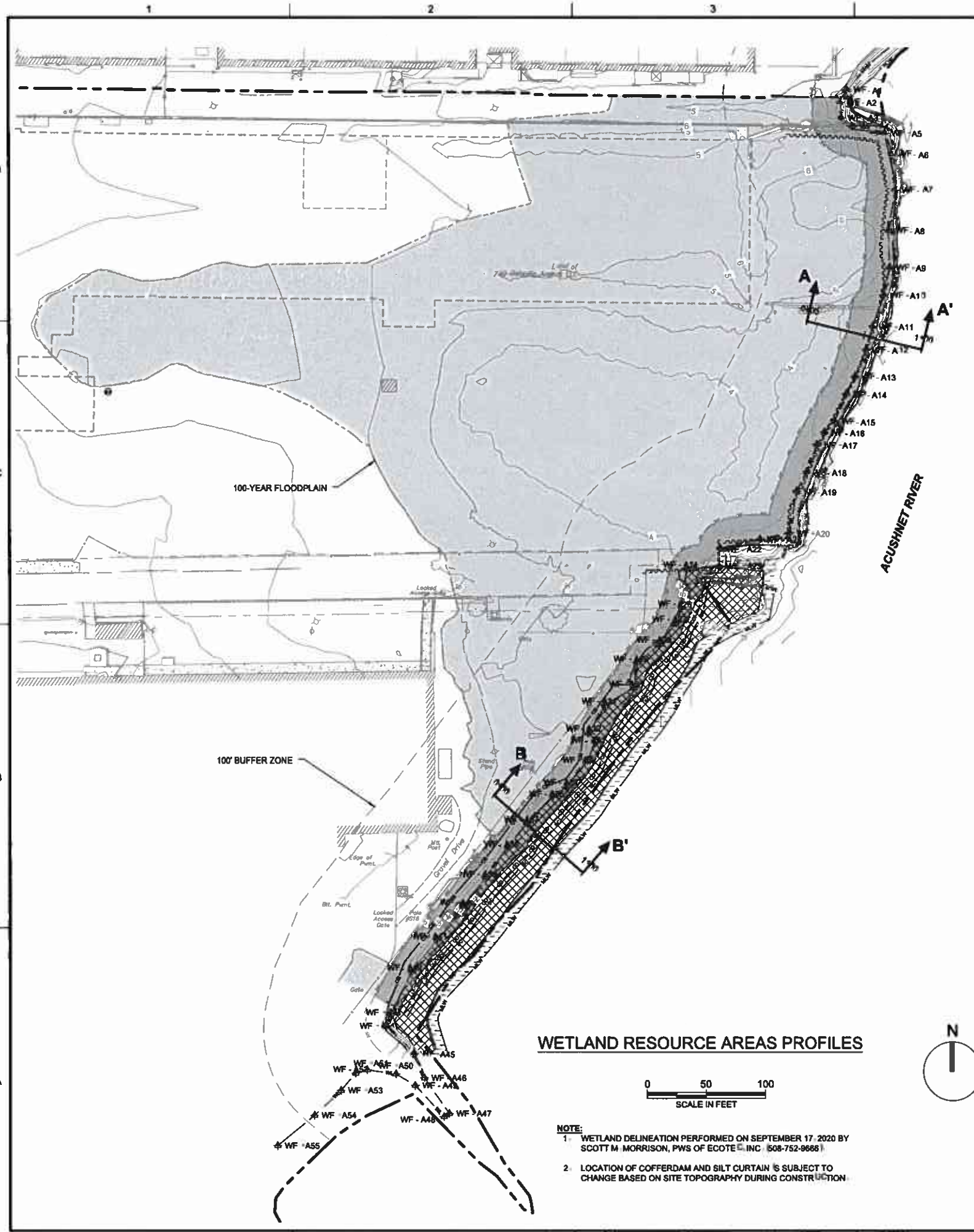
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C-300

SHEET NUMBER

12 OF 42

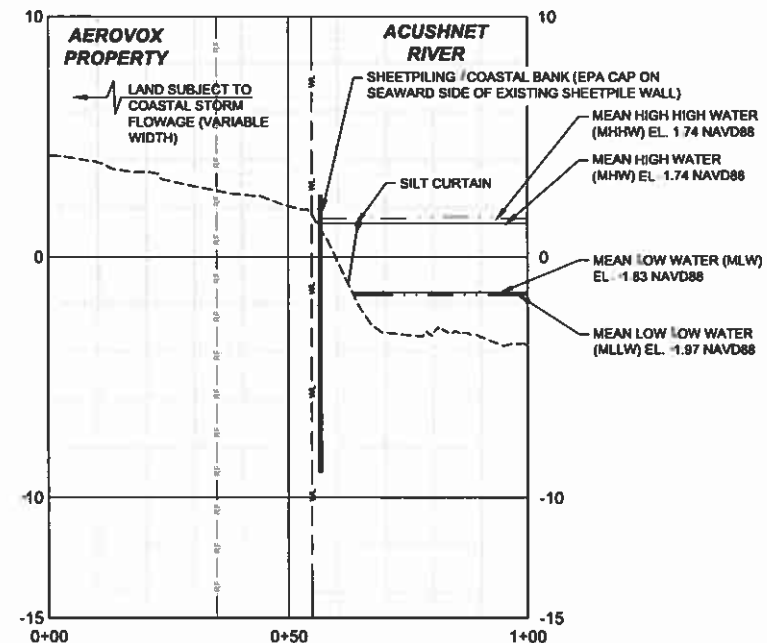
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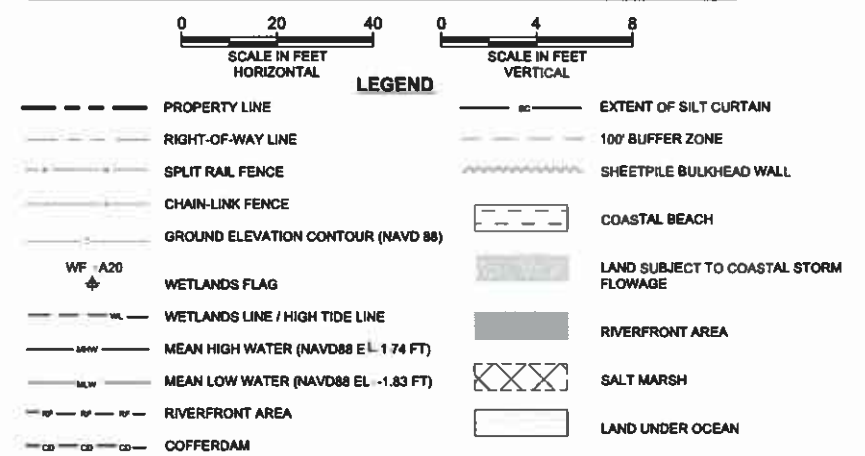
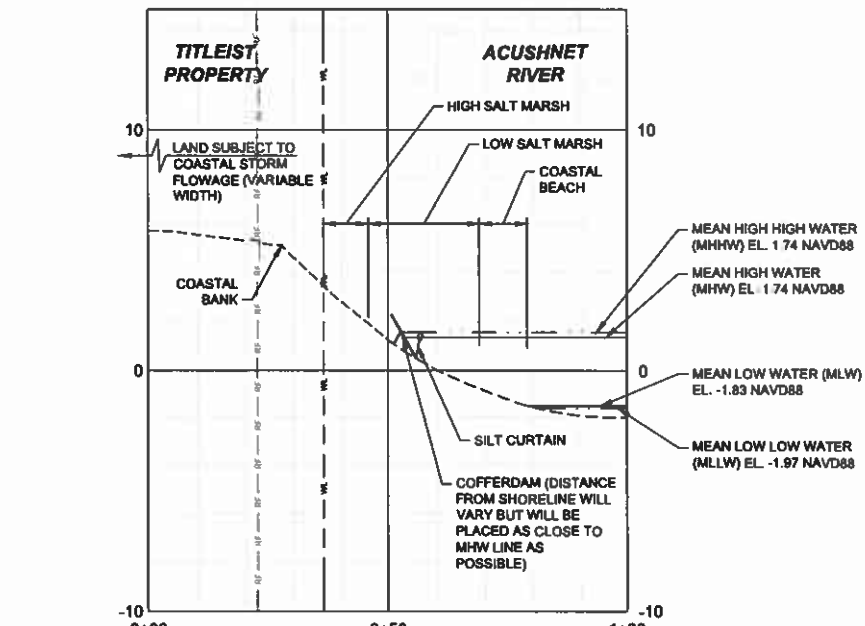
WETLAND RESOURCE AREAS PROFILES

- NOTE:**
1. WETLAND DELINEATION PERFORMED ON SEPTEMBER 17, 2020 BY SCOTT M. MORRISON, PWS OF ECOTE INC. (508-752-9866)
 2. LOCATION OF COFFERDAM AND SILT CURTAIN IS SUBJECT TO CHANGE BASED ON SITE TOPOGRAPHY DURING CONSTRUCTION

WETLAND RESOURCE AREAS PROFILE A-A' (AEROVOX)

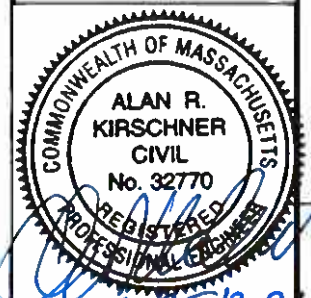


WETLAND RESOURCE AREAS PROFILE B-B' (TITLEIST)



Brown and Caldwell

101 INDUSTRIAL PARK ROAD, SUITE 205



ALAN R. KIRSCHNER
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LIC NO. MA 32770

FORMER AEROVOX FACILITY
740 BELLEVILLE AVENUE
NEW BEDFORD, MA

REVISIONS		
REV	DATE	DESCRIPTION
1	2/25/21	ISSUED IN RESPONSE TO PERMITTING PROCESS

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: E. WILSON
DRAWN: A. SANTIAGO
CHECKED: J. LECLAIR
CHECKED:

APPROVED: M. WADE

FILENAME
C-104.DWG
BC PROJECT NUMBER
155041
CLIENT PROJECT NUMBER

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WETLAND
RESOURCE AREAS
PROFILES

DRAWING NUMBER
C-104
SHEET NUMBER
12 OF 42