



**UNITED STATES DEPARTMENT OF COMMERCE**  
National Institute of Standards and Technology  
Gaithersburg, Maryland 20899

IN REPLY REFER TO

UNE Marine Science Center Pier

September 9, 2024

Erin Wilson, Federal Consistency Coordinator  
Maine Department of Marine Resources  
Maine Coastal Program  
32 Blossom Lane  
21 State House Station  
Augusta, Maine 04333

RE: Coastal Zone Management Act Consistency Determination for the Proposed New Construction of a Permanent Research Pier at the University of New England Arthur P. Girard Marine Science Center  
NIST grant 60NANB23D148: Construction of a Coastal Research Deployment Facility

Dear Ms. Wilson:

This document provides the Maine Coastal Program (MCP) of the Maine Department of Marine Resources (MDMR) with the National Institute of Standards and Technology (NIST) consistency determination under Section 307(c)(1) of the Coastal Zone Management Act (16 U.S.C. § 1456, Maine Revised Statutes (MRS) Title 38, Chapter 19 and the core laws of the MCP, and Title 15 of the Code of Federal Regulations (CFR) Part 930, Subpart C. This coastal consistency determination is for the proposed new construction of a permanent research pier at the University of New England (UNE) Arthur P. Girard Marine Science Center located at 11 Hills Beach Road in Biddeford, Maine. The information in this consistency determination is provided pursuant to 15 CFR § 930.39 and is based, in large part, on information provided by UNE to NIST.

***Proposed Action and Preferred Alternative***

The Proposed Action (referred to as the Preferred Alternative) would consist of the new construction of a permanent research pier along the coast of the Saco River at the UNE Marine Science Center located on the UNE Campus in Biddeford, Maine. At a location to the west of the proposed pier location, UNE currently uses floating docks that are removed seasonally (winter and spring months). Based on information provided by UNE to NIST, construction of a permanent pier at UNE's Girard Marine Science Center is essential for dynamic, year-round, ocean-going research activities, facilitating scientific and practical exchanges with local, regional, and national marine researchers and industry partners. Additionally, the deep-water access would expand UNE's ability to serve as a collaboration hub for coastal marine and deep-water science and industry. As good stewards of the environment and its coastal neighbors, UNE is committed to ensuring the planned structure fully adheres to local, state, and federal laws and

regulations.

The Preferred Alternative proposes an approximate 500-foot (11,200 square foot) access road from the existing Marine Science Center parking lot traversing north along the east side of the Marine Science Center, then west along the north side of the Marine Science Center to the proposed pier location; blasting of bedrock will occur. The project proposes an additional 4,500-square feet of Site grading and stormwater infrastructure, including bioretention filter cells, underdrains, vegetated swales, and level spreaders. The proposed 5,100-square foot marine pier will be constructed with 26 concrete filled steel pipe pilings, cast in place concrete pile caps, and precast concrete deck planks. A timber fender pile system will be utilized (a timber fender system is a type of bumper that protects marine vessels from damage when they bump against the dock). An 80-foot aluminum gangway will traverse to a group of floating timber docks on the southwest side comprising a total of approximately 768 square feet. A 320-square foot covered outdoor classroom, 80 square foot storage shed, and a jib crane will be located on the pier. In addition to typical construction equipment/vehicles used on the landward portion of the project, the Preferred Alternative would require the use of a temporary barge as a staging area, which will be used throughout the proposed project area during construction.

An ancillary element of the need for the project is lack of a permanent docking location for a local fireboat for the City of Biddeford Fire Department. Currently the fire department must launch its fireboat at the time of an emergency, which greatly increases response time (15-minute drive plus deployment time). UNE has arranged to allow the fireboat to berth at a float on the east side of the proposed pier, so that it can be left in the water and available for a more expeditious response.

NIST finds that the activities proposed under the Preferred Alternative, when implemented with the proposed mitigation (provided in **Table 1** in the Conclusion section) and required federal and/or state permits, are consistent in all respects with the core laws of the MCP and policies of MRS Title 38, Chapter 19, in the areas of wetlands, biological resources, cultural resources, coastal resiliency, floodplain management and flood risk. The following information provides discussion of pertinent aspects of the Preferred Alternative and the potential impacts on the coastal zone.

### ***Wetlands***

The proposed pier at the UNE Marine Science Center would be located within a portion of the intertidal and shallow subtidal zone of the Saco River designated as estuarine, subtidal with unconsolidated bottom (E1UBL). The proposed pier is not located within a coastal barrier resource. The footprint of the proposed pier is nearly devoid of any vegetation except some rockweeds along the lower parts of the rock ledges in the low- and mid-intertidal zone. No typical coastal wetlands vegetation was identified within the footprint area for the proposed pier. In addition to the pier pile impacts to the E1UBL wetland, short-term impacts would include an increase in turbidity and an increase in shading during the construction period. Long-term impacts on wetlands would occur from shading due to the installation of the pier, floating docks and gangway, support pilings, and timber fenders.

A survey of the intertidal and shallow subtidal areas indicated the Preferred Alternative would have a direct impact on approximately 1,302 square feet of intertidal area and 5,797 square feet of subtidal area. In addition, there would be an indirect impact on 221 square feet of intertidal area

and 797 square feet of subtidal area. The survey identified only rockweed within the footprint of the Proposed Action. Mussels, clams, marine worms, eelgrass, lobsters, or other organisms typically found in intertidal areas were not observed. No signs of shoreline or intertidal erosion or previous human alterations were noted.

While impacts to the E1UBL wetland are anticipated, the proposed pier project has undergone an extensive alternatives analysis, and the Preferred Alternative location results in the least impact to wetlands when compared to nine other locations that were considered along the Saco River coastline within the UNE campus. Preliminary consultation with Maine Department of Environmental Protection (DEP) indicated no compensation (i.e., in lieu fee) would be required for these minor impacts due to pile driving. However, compliance with the following permits/laws/regulations and consultation with applicable state/federal agencies apply to the project and are required to comply with Executive Order 11990, as amended by Executive Order 12608:

- Maine DEP
  - Natural Resources Protection Act (NRPA) permit
  - Mandatory Shoreland Zoning Act (MSZA) permit
  - Site Location and Development Act permit
- Coastal Zone Management Act (and applicable State programs/statutes)
- U.S. Army Corps of Engineers permit
- City of Biddeford Code of Ordinances
  - Site plan and Shoreland Zoning approvals
- Saco River Corridor Commission approval

Note that public participation as required by Executive Order 11990, Section 2(b), and in accordance with Executive Order 11514, Section 2(b), will be completed in conjunction with the *Notice of Intent to File* for the Maine NRPA license/permit. Additionally, an Environmental Assessment (EA) will be completed in accordance with National Environmental Policy Act (NEPA) and will be posted for public review.

### ***Biological Resources***

The Preferred Alternative would create short-term impacts to marine wildlife and fisheries during the construction period. Wildlife in the area include benthic macroinvertebrates, fish, and birds including the Atlantic Sturgeon and Shortnosed Sturgeon. During construction, the spudding of the barge and pile and timber fender installation would alter the harbor bottom, increasing turbidity of the water. Impacts to marine resources from an increase in turbidity include clogging fish gills or the filter-feeding systems of some invertebrates. High turbidity also hinders visibility for aquatic organisms, making it difficult for predators to find prey and for prey to escape predation. However, based on the size of the project and limited number of piles, turbidity booms are not anticipated to be necessary for the project but will be considered based on regulatory agency consultation during permitting.

Noise associated with pile driving would also cause impacts on marine resources, specifically fish. High sound pressure levels associated with pile driving could potentially prevent fish from finding

food and acoustically locating mates. Noise could displace these organisms from their habitat as they try to avoid excess noise. Additionally, noise can interfere with marine organisms' ability to communicate, especially cetaceans. To reduce impacts to marine resources, the use of non-pounding techniques while driving piles into the sediment or use of pounding techniques utilizing bubble curtains or similar means of reducing underwater noise could be implemented.

According to the National Oceanic and Atmospheric Administration (NOAA) Essential Fish Habitat (EFH) Mapper, the following EFH was identified in the Saco River within the pier footprint: Acadian Redfish, American Plaice, Atlantic Cod, Atlantic Herring, Atlantic Mackerel, Atlantic Wolfish, Bluefish, Haddock, Little Skate, Longfin Inshore Squid, Monkfish, Northern Shortfin Squid, Ocean Pout, Pollock, Red Hake, Silver Hake, Smooth Skate, Thorny Skate, White Hake, Windowpane Flounder, Winter Flounder, And Winter Skate; none of these fish species are threatened or endangered. Atlantic Salmon EFH/Habitat of Particular Concern (HAPC) and juvenile Cod (neither threatened nor endangered) HAPC were also identified. While Atlantic Salmon EFH/HAPC was identified at the Proposed Action location, the Atlantic Salmon endangered designation applies to the Gulf of Maine Distinct Population Segment (DPS) only; the Preferred Alternative location is outside of the Gulf of Maine DPS. No EFH areas protected from fishing were identified. Impacts to EFH would be similar to those described above for marine wildlife and fisheries. Short-term impacts on EFH would occur from a temporary increase in turbidity and from temporary noise associated with pile driving.

According to the NOAA Drawn Action Area and Overlapping S7 Consultation Areas Mapper, the proposed pier is within consultation areas for Atlantic Sturgeon (threatened) and Shortnose Sturgeon (SNS; endangered). The Atlantic Sturgeon (adult and subadult) and SNS (adult) are known to migrate and forage within the Saco River and its estuaries. Marine construction work would be completed between November and April when it is expected the Atlantic Sturgeon would have migrated offshore to saltwater habitat to overwinter before returning to freshwater rivers in the spring and summer. However, marine construction work in winter has the potential to impact SNS foraging areas within the Saco River Estuary (SRE), as SNS tend to stay close to shore and spend little time in the ocean. Consultation with NOAA is required for these species. Further review of the Atlantic Sturgeon and SNS indicated, that while there may be temporary and permanent impacts to Atlantic Sturgeon and SNS foraging/migratory habitat, the Preferred Alternative is not anticipated to result in the intentional or unintentional take of either species.

Overall, impacts other than permanent piles and shading would be short-term and only last the duration of the construction period and would not be significant. Wildlife and fisheries populations would remain healthy and viable and critical wildlife and fisheries habitat would be protected to the maximum extent practicable. Use of less noise intrusive pile driving techniques would reduce impacts during construction.

### ***Cultural Resources***

UNE has conducted several historical and archeological surveys on the Biddeford campus in conjunction with prior development activities, including an archeological survey that comprises most of the landward portion of the Preferred Alternative. Historical and archeological surveys of the Preferred Alternative location indicated the following:

- No properties 45 or more years of age would be affected.
- No registered historic properties would be affected.

- There are no registered historic properties or districts within the viewshed of the project.
- There are no properties within a historic district that would be affected by the project.
- The area was historically utilized by Native American tribes.
- An Archeological Survey Plan for the project area indicates positive test pits (i.e., artifacts were found) were located within the Preferred Alternative footprint.

Based on the above information, there is potential to encounter subsurface historical/cultural artifacts during the construction. No other historical and/or cultural resource(s) or structure(s) were identified at, near, or within the viewshed of the project. Typical of all previous land disturbances at the UNE campus, the Preferred Alternative would be monitored and documented by an onsite professional archaeologist. Should unknown archeological resources be uncovered during construction, work would be halted, and consultation with the State Historic Preservation Office (SHPO) would occur.

### ***Coastal Resiliency***

According to the Maine Geological Survey (MGS) map, *Coastal Bluffs of the Biddeford Quadrangle, Maine*, the Preferred Alternative is located along a rocky bedrock shore (i.e., no bluff), which comprises greater than 50 percent bedrock and may include minor accumulations of sediment that occur in small coves or other sheltered areas. According to the MGS map, *Coastal Landslide Hazards of the Biddeford Quadrangle, Maine*, the Preferred Alternative is located along a non-bluff shoreline where landslides are not anticipated.

In addition, UNE has recently been awarded a two-year nearly \$140,000.00 grant from the Builder Initiative and the Broad Reach Fund, through the Maine Community Foundation, for development of a living shoreline along the Saco River on its Biddeford campus. Funding will be used to mitigate coastal erosion and restore parts of the shoreline that have been impacted by the effects of climate change (e.g., the degradation of salt marshes resultant from sea level rise [SLR] and increased flooding events).

### ***Project Resiliency/Floodplain Management***

The Preferred Alternative is located within Federal Emergency Management Agency (FEMA) Floodplain Zone V2 with a base flood elevation of 14 feet. The coastal base flood elevation accounts for the effects of wave action. Zone V2 is characterized as areas of 100-year coastal flood with velocity (wave action) where base flood elevations and flood hazards are determined. The area is within a FEMA-designated Special Flood Hazard Area (SFHA); therefore, flood insurance is required by the Flood Disaster Act. Note that public participation as required by Executive Order 11988, Section 2(b), and in accordance with Executive Order 11514 Section 2(b) would be done in conjunction with the *Notice of Intent to File* for the Maine NRPA license/permit. Additionally, an Environmental Assessment will be completed in accordance with NEPA and will be posted for public review.

### ***Flood Risk Analysis***

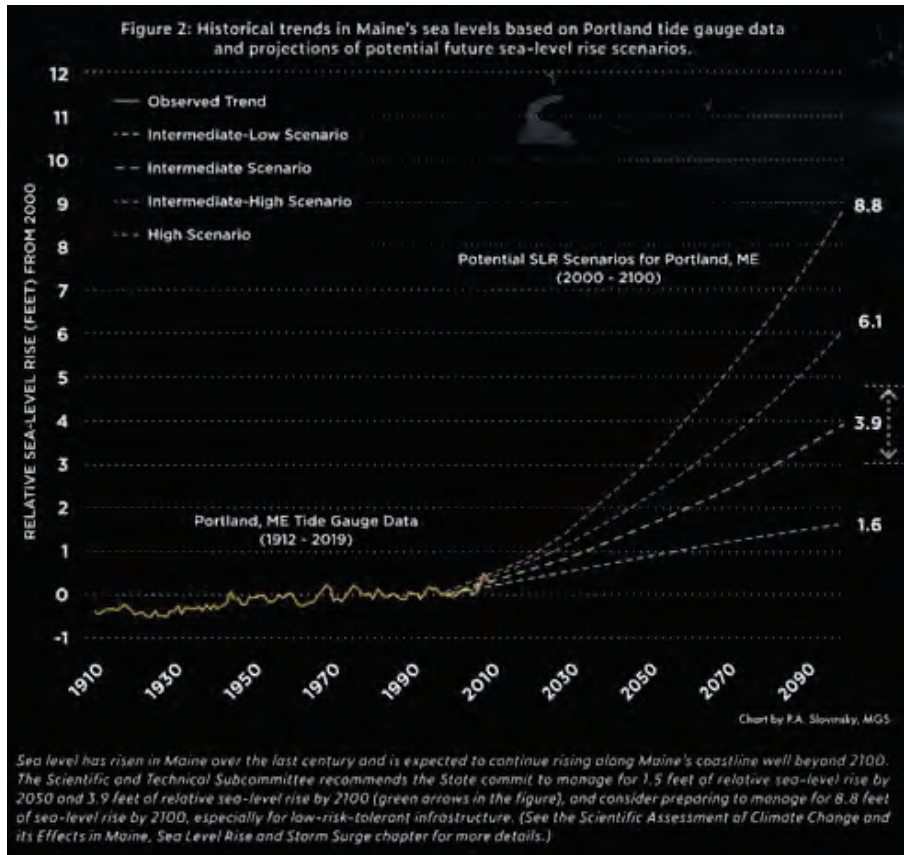
GEI Consultants, Inc. (GEI) conducted a flood risk analysis to assess the potential exposure of the pier to floodwaters in current conditions and under various scenarios of SLR that may potentially occur throughout the structure life (approximately 75 years). For the analysis, GEI utilized the scenarios put forth by the Maine Climate Council (MCC) in their 2020 report *Maine Won't Wait: A*



*Four-Year Plan for Climate Action.* The MCC recommends consideration of SLR based on two separate scenarios:

1. Commit to Manage Scenario – This reflects the “intermediate” SLR curve from the 2017 NOAA model, with a relative SLR of 3.9 feet in 2100 (relative to 2000 mean sea level)
2. Prepare to Manage – This reflects the “high” SLR curve from the 2017 NOAA model, with a relative SLR of 8.8 feet in 2100 (relative to 2000 mean sea level)

SLR curves published in the referenced MCC report are shown below for reference:



*1 Inset – Historical trends in Maine’s sea levels based on Portland tide gauge data and projection of potential future sea-level rise scenarios*

GEI used these scenarios to project future water elevations throughout the tidal range and in flood/storm events, throughout the design life of the structure, and compares those elevations to the proposed elevations of various assets to assess the level of risk from exposure to floodwaters (see Flood Risk Analysis Table below).

Top of Pier Deck EL 18.0 NAVD88 (Pier Deck Overtopped)	NAVD88	Commit to Manage				Prepare to Manage			
		2030	2050	2070	2100	2030	2050	2070	2100
BFE - Preliminary - VE Zone	14.00	14.80	15.50	16.40	17.90	15.40	17.00	19.00	22.80
0.2% SWEL	9.50	10.30	11.00	11.90	13.40	10.90	12.50	14.50	18.30
1% SWEL	8.90	9.70	10.40	11.30	12.80	10.30	11.90	13.90	17.70
2% SWEL	8.50	9.30	10.00	10.90	12.40	9.90	11.50	13.50	17.30
10% SWEL	7.90	8.70	9.40	10.30	11.80	9.30	10.90	12.90	16.70
Highest Astronomical Tide	6.69	7.49	8.19	9.09	10.59	8.09	9.69	11.69	15.49
Highest Annual Tide	6.61	7.41	8.11	9.01	10.51	8.01	9.61	11.61	15.41
MHHW	4.69	5.49	6.19	7.09	8.59	6.09	7.69	9.69	13.49
MHW	4.26	5.06	5.76	6.66	8.16	5.66	7.26	9.26	13.06
NAVD88	0.00	0.80	1.50	2.40	3.90	1.40	3.00	5.00	8.80
MSL	-0.17	-0.63	-1.33	-2.23	-3.73	-1.23	-2.83	-4.83	-8.63
NGVD29	-0.72	0.08	0.78	1.68	3.18	0.68	2.28	4.28	8.08
MLW	-4.66	-3.86	-3.16	-2.26	-0.76	-3.26	-1.66	0.34	4.14
MLLW	-4.99	-4.19	-3.49	-2.59	-1.09	-3.59	-1.99	0.01	3.81

Bottom of Pier Deck EL 16.67 NAVD88 (Pile Caps Submerged, Pier Deck Exposed to Floodwater)	NAVD88	Commit to Manage				Prepare to Manage			
		2030	2050	2070	2100	2030	2050	2070	2100
BFE - Preliminary - VE Zone	14.00	14.80	15.50	16.40	17.90	15.40	17.00	19.00	22.80
0.2% SWEL	9.50	10.30	11.00	11.90	13.40	10.90	12.50	14.50	18.30
1% SWEL	8.90	9.70	10.40	11.30	12.80	10.30	11.90	13.90	17.70
2% SWEL	8.50	9.30	10.00	10.90	12.40	9.90	11.50	13.50	17.30
10% SWEL	7.90	8.70	9.40	10.30	11.80	9.30	10.90	12.90	16.70
Highest Astronomical Tide	6.69	7.49	8.19	9.09	10.59	8.09	9.69	11.69	15.49
Highest Annual Tide	6.61	7.41	8.11	9.01	10.51	8.01	9.61	11.61	15.41
MHHW	4.69	5.49	6.19	7.09	8.59	6.09	7.69	9.69	13.49
MHW	4.26	5.06	5.76	6.66	8.16	5.66	7.26	9.26	13.06
NAVD88	0.00	0.80	1.50	2.40	3.90	1.40	3.00	5.00	8.80
MSL	-0.17	0.63	1.33	2.23	3.73	1.23	2.83	4.83	8.63
NGVD29	-0.72	0.08	0.78	1.68	3.18	0.68	2.28	4.28	8.08
MLW	-4.66	-3.86	-3.16	-2.26	-0.76	-3.26	-1.66	0.34	4.14
MLLW	-4.99	-4.19	-3.49	-2.59	-1.09	-3.59	-1.99	0.01	3.81

Bottom of Pile Caps EL 14.17 NAVD88 (Pile Caps Exposed to Floodwater)	NGVD29	Commit to Manage				Prepare to Manage			
		2030	2050	2070	2100	2030	2050	2070	2100
BFE - Preliminary - VE Zone	14.00	14.80	15.50	16.40	17.90	15.40	17.00	19.00	22.80
0.2% SWEL	9.50	10.30	11.00	11.90	13.40	10.90	12.50	14.50	18.30
1% SWEL	8.90	9.70	10.40	11.30	12.80	10.30	11.90	13.90	17.70
2% SWEL	8.50	9.30	10.00	10.90	12.40	9.90	11.50	13.50	17.30
10% SWEL	7.90	8.70	9.40	10.30	11.80	9.30	10.90	12.90	16.70
Highest Astronomical Tide	6.69	7.49	8.19	9.09	10.59	8.09	9.69	11.69	15.49
Highest Annual Tide	6.61	7.41	8.11	9.01	10.51	8.01	9.61	11.61	15.41
MHHW	4.69	5.49	6.19	7.09	8.59	6.09	7.69	9.69	13.49
MHW	4.26	5.06	5.76	6.66	8.16	5.66	7.26	9.26	13.06
NAVD88	0.00	0.80	1.50	2.40	3.90	1.40	3.00	5.00	8.80
MSL	-0.17	0.63	1.33	2.23	3.73	1.23	2.83	4.83	8.63
NGVD29	-0.72	0.08	0.78	1.68	3.18	0.68	2.28	4.28	8.08
MLW	-4.66	-3.86	-3.16	-2.26	-0.76	-3.26	-1.66	0.34	4.14
MLLW	-4.99	-4.19	-3.49	-2.59	-1.09	-3.59	-1.99	0.01	3.81

Legend	
	Asset overtopped >3.0ft, significant functional impacts and risk of damage
	Asset overtopped >1.5-ft and < 3.0-ft, greater functional impacts and risk of damage
	Asset overtopped <1.5-ft, potential impacts to function, low potential for structural damage
	Asset not overtopped

2 Inset – Flood Risk Analysis Table

GEI’s analysis evaluated the flood risk at proposed elevations of various assets (top of pier deck, bottom of pier deck, and bottom of pile cap), consistent with the Maine Climate Council’s recommendations in which the Commit to Manage and Prepare to Manage Scenarios are to be considered:

1. Top of pier deck elevation (18.0’ NAVD88).
  1. Commit to Manage Scenario (max SLR of 3.9 feet) – Inundation is not expected to occur throughout the design life.
  2. Prepare to Manage Scenario (max SLR of 8.8 feet) – By 2070, inundation may occur in the predicted 100-yr recurrence interval coastal storm event with wave action, and by 2100 the frequency and depth of inundation will increase further.

2. Bottom of pier deck elevation (16.67' NAVD88).
  1. Commit to Manage Scenario – The bottom of the pier deck may be exposed to flood waters in the predicted 100-yr recurrence interval coastal storm event with wave action in 2100.
  2. Prepare to Manage Scenario – The bottom of the pier deck may be exposed to flood waters in the predicted 100-yr recurrence interval coastal storm event with wave action by 2070 and in more frequent still water conditions by 2100 with greater exposure due to wave action.
  
3. Bottom of pile cap elevation (14.17' NAVD88).
  1. Commit to Manage Scenario – The bottom of the pile caps may be exposed to flood waters in the predicted 100-yr recurrence interval coastal storm event with wave action as early as 2030.
  2. Prepare to Manage Scenario – The bottom of the pile caps may be exposed to flood waters in the predicted 100-yr recurrence interval coastal storm event with wave action by 2030, in more frequent still water conditions by 2070, with greater exposure due to wave action, and increasing frequency in 2100.

The pier would utilize flood resistant materials, such as steel pipe piles with fusion bonded epoxy coating, and concrete superstructure elements with corrosion inhibiting admixtures. These materials can sustain exposure to the coastal environment while maintaining durability throughout their design life.

The pier design and analysis assumed the design life is approximately 75 years (end of life would be approximately 2100). GEI designed the structure for uplift and lateral loading assuming water elevations associated with the storm surge and wave action during 100-year recurrence interval coastal storm events under the Commit to Manage scenario. GEI believes this reflects an appropriate design condition that reasonably balances structure risk throughout the design life, project functionality, adjacent site impacts, and project cost. The pier is designed to accommodate conditions through the end of life under the Commit to Manage scenario (3.9 feet of SLR). If more extreme levels of SLR occur, it may be necessary to upgrade or modify use of the pier later in the design life (2070-2100). The need for possible modification would be better understood once actual sea level trends have been observed over the coming decades.

### ***Aesthetic and Visual Resources***

UNE must work with the confines of several laws and regulations that are fully protective of scenic values in fashioning its institutional Master Plan, including the following:

- State of Maine Site Location of Development Act, 38 MRSA section 484(3) and implementing regulations DEP Regulations Chapter 375(14)
- State of Maine Shoreland Protection Act, 38 MRSA section 435 "Shoreland Areas" and City of Biddeford implementing Shoreland Zoning Ordinance
- Saco River Corridor Commission law, 38 MRSA section 954, and implementing regulations
- City of Biddeford Institutional Zone



The Preferred Alternative is located in an institutional zone situated east and north of Marine Science Center, comprising an undulating landform within the confines of a wooded landscape at the top of bank of the Saco River. The immediate surrounding area is also institutional with a similar landscape. Terrestrial views to the east and west include wooded areas, to the south includes the Marine Science Center, and to the north includes the Saco River scenic area. Views from the proposed pier to the east, north, and west will provide enhanced views of the Saco River corridor and river mouth to the Atlantic Ocean, and to the south views of the Marine Science Center.

While there would be temporary impacts to aesthetics and visual resources during construction, the Preferred Alternative is anticipated to fit harmoniously into the surrounding environment when implemented in consideration of applicable laws and regulations stated above; thus, the Proposed Action is not anticipated to impact the scenic value of the Saco River scenic area. No historic structures or areas in regard to aesthetics or visuals were identified at the project location.

**Conclusion**

Based on the above provided information there are no anticipated adverse ‘coastal effects’ produced by the Preferred Alternative, and the project would be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the MDMR-MCP. As such, the Proposed Action is federally consistent with the MDMR-MCP. The MDMR-MCP will be contacted once more for consistency review of the Preferred Alternative when the appropriate permits/mitigation are obtained/implemented and evidence of such is supplied to the MDMR-MCP. The following mitigation measures are planned for the Preferred Alternative:

**Table 1. Potential Resource Impacts and Mitigation Measures**

Resource	Potential Impact	Mitigation Measures
Aesthetics and Visual Resources	Negligible minor adverse impact to aesthetics during construction. Permanent pier would be more aesthetically valuable than the seasonal pier currently used.	Compliance with Institutional Zone Master Plan.
Biological Resources	The following listed impacts are not anticipated to have an overall adverse impact on biological resources: -Short-term impacts during construction due to noise and general disturbance -Short-term water quality impacts due to disturbing sediments, surface soil erosion -Permanent impacts due to tree removal and road/pier construction	<ul style="list-style-type: none"> <li>• Best management practices (BMPs) to reduce noise and water quality impacts.</li> <li>• Cessation of work if protected species are in proximity to work zone.</li> <li>• No in water marine work from April 10 to November 7 (based on ACOE feedback)</li> <li>• No tree removal from May to September, if required by regulatory agencies.</li> <li>• Removal of non-native species during Site work and planting native species, within the limits of construction.</li> <li>• Erosion control measures</li> <li>• Maine Department of Environmental Protection BMPs for Erosion and Sedimentation Control</li> </ul>

Resource	Potential Impact	Mitigation Measures
Cultural Resources	Potential impacts to subsurface cultural artifacts, which are negligible provided all requirements laid forth in the historic preservation offices' concurrence letters are completed and/or followed during construction and operation	<ul style="list-style-type: none"> <li>• Archeological oversight during construction. One or more archaeologists would monitor the initial clearing of soil from the route of the access road and be allowed enough time to recover information from any subsoil features that are present.</li> <li>• If artifacts, human remains, cultural sites, or ground features are unexpectedly unearthed during ground disturbing activities, all construction would immediately cease, and the resources would be examined by a professional archaeologist.</li> </ul>
Noise	Temporary negligible impacts during construction from equipment, blasting, and pile driving when proper mitigation measures are implemented	<ul style="list-style-type: none"> <li>• Noise mitigation BMPs</li> <li>• Limited work hours during construction, in conformance with city and state requirements</li> <li>• Blasting will be conducted in accordance with regulatory permits.</li> </ul>
Flood Risk, Coastal Resiliency, Project Resiliency, and Floodplain Management	<p>The pier is not anticipated to produce any undue or burdensome impacts to the floodplain that would threaten or increase flood risk elsewhere along the Saco River.</p> <p>Potential adverse impacts to pier during later stages of the Commit to Manage and Prepare to Manage flood risk SLR scenarios.</p> <p>Potential minor adverse impacts from winter icing (concern is for floating dock and vessels only as the pier is designed to sustain forces from ice).</p>	<ul style="list-style-type: none"> <li>• Flood Insurance is required by the Flood Disaster Act as the project location is partially in ZONE V, a FEMA-designated SFHA</li> <li>• City flood hazard development permit</li> <li>• Continuous evaluation through pier lifespan as SLR predictions change with time</li> <li>• Installation of temporary or permanent protective measures and/or limiting the use of the pier during times when ice is anticipated.</li> </ul>
Wetlands	Minor negligible impacts during construction to estuarine, subtidal with unconsolidated bottom (E1UBL) from pile driving and general disturbance	<ul style="list-style-type: none"> <li>• BMPs implementation during construction/demolition.</li> <li>• Permits/regulations: <ul style="list-style-type: none"> <li>○ Maine DEP</li> <li>○ Natural Resources Protection Act (NRPA) permit</li> <li>○ Mandatory Shoreland Zoning Act (MSZA) permit</li> <li>○ CZMA</li> <li>○ United States Army Corps of Engineers permit</li> <li>○ City of Biddeford Code of Ordinances</li> <li>○ Site plan and Shoreland Zoning approvals</li> <li>○ Saco River Corridor Commission approval</li> </ul> </li> </ul>

Your response within 30 days from the date of receipt of this letter would be greatly appreciated. Pursuant to 15 CFR § 930.41, the MDMR-MCP has 60 days from the receipt of this letter in which to concur with or object to the consistency determination, or to request an extension. Concurrence will be presumed if the MDMR-MCP response is not received by NIST on the 60th day from the receipt of this letter. Please submit written comments to [athibeault@une.edu](mailto:athibeault@une.edu) and :

University of New England  
Attn: Alan Thibeault  
11 Hills Beach Road  
Biddeford, ME 04005

Thank you for your assistance with this project. If you have any questions, please contact me at 240.527.1927 or [robert.slocum@nist.gov](mailto:robert.slocum@nist.gov).

Sincerely,

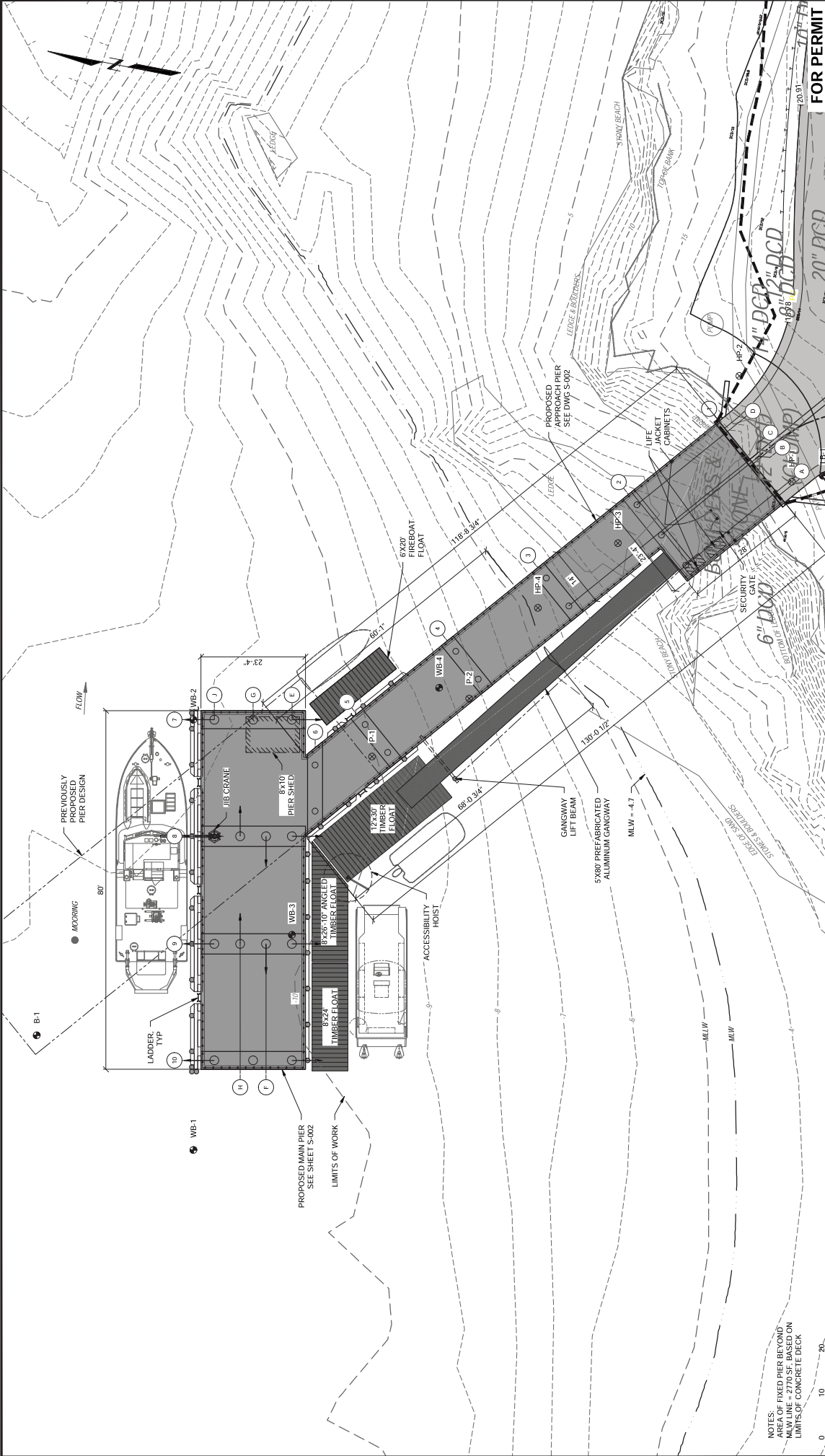
**ROBERT SLOCUM** Digitally signed by ROBERT  
SLOCUM  
Date: 2024.09.09 10:19:53 -04'00'

Robert Slocum, PE  
Construction Grants Program Manager









**FOR PERMIT**

SHEET NO. **S-001**

SHEET NAME **PIER LAYOUT PLAN**

**UNIVERSITY OF NEW ENGLAND MARINE SCIENCE CENTER PIER**  
 11 HILLS BEACH RD.  
 BIDDEFORD, YORK COUNTY, MAINE

**UNIVERSITY OF NEW ENGLAND**  
 BIDDEFORD, MAINE

**GEI CONSULTANTS**  
 GEORGE ENGINEERING INC.  
 1070 WINDY HILL RD  
 PORTLAND, ME 04107

**DRAFT**

Attention:  
 1" = 10' (horizontal)  
 1" = 4' (vertical)  
 1" = 10' (diagonal)  
 1" = 10' (original scale)

Scale: FEET  
 0 10 20

NOTES:  
 AREA OF FIXED PIER BEYOND  
 MLW LINE = 2770 SF, BASED ON  
 LIMITS OF CONCRETE DECK

NO.	DATE	ISSUE/REVISION
1	12/01/2022	15% DESIGN SUBMISSION
2	2/15/2023	30% DESIGN SUBMISSION
3	6/28/2023	75% DESIGN SUBMISSION
4	9/14/2023	DEP PERMIT SET
5	6/27/2024	REVISED PERMIT SET
6	9/17/2024	REVISED PERMIT SET

DESIGNED:	D/B
JAM	

DRAWN:	B/B
BMM	

APPROVED:	P.E. No.
13033	

GEI Project	2203703
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ELEVATION	MLW	NAVBIG
HAT	-11.6	-6.6
MHW	-9.7	-4.7
MSL	-4.8	-0.2
MLW	0.0	-5.0

\*PROJECT DATUM





Attention:  
 1" = 400'  
 If this scale bar  
 is not shown on  
 a drawing, the  
 drawing is  
 not original scale.

**DRAFT**

Designed:	DJB
Drawn:	JAM
Checked:	BJB
Approved:	BMM
P.E. No.:	13033
GEI Project:	2203703

**GEI** Consultants  
 GE CONSULTANTS, INC.  
 100 BROADWAY, SUITE 200  
 PORTLAND, ME 04101  
 (207) 761-6601

**UNE**  
 UNIVERSITY OF  
 NEW ENGLAND

**UNIVERSITY OF  
 NEW ENGLAND  
 MARINE SCIENCE CENTER  
 PIER**  
 11 HILLS BEACH ROAD,  
 BIDDEFORD, MAINE

NO.	DATE	ISSUE/REVISION	APP.
6	9/17/2024	REVISED PERMIT SET	DJB
5	6/27/2024	REVISED PERMIT SET	DJB
4	9/14/2023	DEP PERMIT SET	DJB
3	6/28/2023	75% DESIGN SUBMISSION	DJB
2	2/15/2023	30% DESIGN SUBMISSION	DJB
1	12/9/2022	15% DESIGN SUB REV	DJB
0	11/11/2022	15% DESIGN SUBMISSION	DJB

**FOR PERMIT**

SHEET NO. **G-003**

SHEET NAME **VICINITY PLAN**