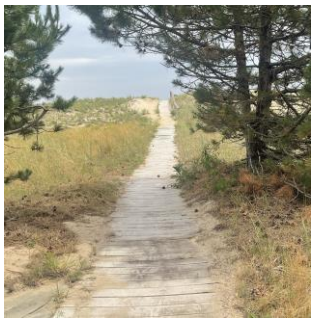
Andover Street: Dune Walkway Profile

Site Assessments: March 5, 2024 and July 25, 2024

Structure Conditions and Observations	
Road to Beach	537 ft
Boardwalk Length	467 ft
End of boardwalk to beach	70 ft
Walkway Width	4.0 ft
Boardwalk Material	• Asphalt apron • Pressure treated wood connected by galvanized cable
Attached pathways*	3
Benches	5
Additional Features	Railing on southern side of walkway along the landward side of dune crest incline.
**Human-made pathways connected to the municipal walkway*	

Ecological Conditions and Observations			
Community Types Present	**Rare Species**	**Other Native Species of interest**	**Species of Concern**
• Beachgrass grassland • Hudsonia maritime shrubland	• Wooly beach heather (*Hudsonia tomentosa*)[S2] • Gray's sedge (*Cyperus grayi*)[S1] • Tall wormwood (*Artermesia campestrus*)[S1]	• Beachgrass (*Ammophila breviligulata*) • Seaside goldenrod (*Solidago sempervirens*) • Beach pea (*Lathyrus japonicus*) • Beach plum (*Prunus maritima*)	• Asiatic bittersweet (*Celastrus orbiculatus*)[P] • Shrub honeysuckle (Lonicera species)[P] • Autumn olive (*Elaeagnus umbellata)*[P] • Climbing nightshade (*Solanum dulcamara*)[W]
S1 = endangered in NH, S2 = threatened in NH, P = prohibited species in NH, W = NH invasive watch list)			

Walkway Entrance



Landward Side

Seaward Side

Walkway Observations

Landward Side of Dune

- The initial portion of the walkway was reconstructed in 2024 (see Additional Information section below).
- Multiple nonnative and/or invasive species are present at the entrance to the walkway near the road and along the fence
- Pine trees near the restoration area may be Austrian pine (*Pinus nigra*) or Japanese black pine (*Pinus thunbergia*) (Figure 1).
- The section beyond the newly replaced part before the incline to dune crest has many bowed planks posing tripping hazards *(Figure 2)*.
- An unvegetated area exists on the north side of the boardwalk where it is steep, slippery, and boards are missing (Figure 3).
- Areas of dense and intact *Hudsonia* maritime shrubland are intersected by walking paths through the dunes directly to homes resulting in areas of bare sand and sparse vegetation.
- There one bench along the side of the walkway about halfway between the entrance and dune crest oriented parallel to it.
- It appears a walkway from a home through the dunes has been abandoned and is revegetating with native dune species. By connecting to the municipal walkway (approximately 60 foot long path) rather than running directly from the house to the dune (approximately 390 foot long path), the new path avoids 330 feet of dune impact

Figure 1. Pine trees

Figure 2. Uneven boards

Dune Crest

- At the dune crest there are two benches on the south side of the walkway. Each are positioned at an approximate 45-degree angle to walkway.
- Areas of suspected dune die-off exist along the dune crest and landward side of the dune (Figure 4).

Figure 3. Unvegetated areas on northside of boardwalk

Seaward Side of Dune

- The seaward side of the boardwalk is steeper and partially covered in windblown sand (See Figure 2).
- On the seaward side, two benches are located along the walkway—one on the north side near the dune crest, angled about 45 degrees toward the path, and the other on the south side, about halfway to the beach, set back into the dune and positioned perpendicular to the walkway.
- The lower portion of the boardwalk is buried in sand near the beach access point.

Figure 4. Suspected dune die-off

- A well-established beachgrass grassland exists at the seaward end of the walkway. The walkway is narrow and the area is well vegetated. (Figure 5).

Figure 5. Beach opening

Potential Action Items

- Remove invasive species near the restoration area and replant with native species.
- Seek positive confirmation of pine tree species.
- Relocated or reposition benches at 45° angle along the walkway when practicable and revegetate with native dune species the areas around them, other than directly in front.
- Move bench at the seaward end of the walkway, on the south side, closer to the walkway to limit dune impacts.
- Delineate paths from homes to walkway to minimize dune impact.
- Revegetate bare areas with native sand dune plants.
- In areas of suspected dune die-off, consider planting a diversity of sand dune species and/or treating the area with a lime and fertilizer.
- Conduct regular maintenance to prevent future sand buildup, especially after storms.
- Install a Mobi Mat or similar ADA-compliant beach access mat at the end of the walkway to improve accessibility.
- Install non-slip surfacing along the seaward portion of the walkway, particularly on the steeper section, to improve traction and reduce the risk of slipping.
- Remove excess sand from the lower portion of the walkway to restore accessibility and reduce the risk of structural strain.
- Allow the beachgrass on the seaward side of the dune to continue to grow.

Additional Information

A sand dune restoration project occurred at the landward end of this walkway in 2024. A collaboration of the Town of Seabrook, Seabrook Beach Civic Association, Millenium Engineering, Wetland Scientist Sergio Bonilla, Seabrook residents, NH Sea Grant Extension, the University of New Hampshire Coastal Restoration Team, and volunteers with the Coastal Research Volunteer program worked together to restore the habitat along the landward end of the Andover St walkway. The project involved the removal of invasive species and planting with native beachgrass and the replacement of the boardwalk at the landward end of the walkway. In August 2024, three months after planting, an estimated 85-90% success rate of beachgrass planting was observed. Ragweed (*Ambrosia*) was observed growing throughout the area.

Figure 6. May 2024 Planting event

Figure 7. Restored area in Aug 2024

Resources

- GoBotany – Native Plant Trust: https://gobotany.nativeplanttrust.org/
- MA Office of Coastal Zone Management Tips: Basics of Building Beach Access Structures that Protect Dunes and Banks
- NH Guide to Upland Invasive Species: https://www.agriculture.nh.gov/publications-forms/documents/upland-invasive-species.pdf
- Planting guide for tidal shoreline erosion management in NH: https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/tidal-erosion-planting-guide.pdf
- NH Comprehensive Invasive Plant list: https://www.agriculture.nh.gov/publications-forms/documents/nh-invasive-plant-list.pdf
- UNH Extension resources on invasive species: https://extension.unh.edu/natural-resources/forests-trees/invasive-species