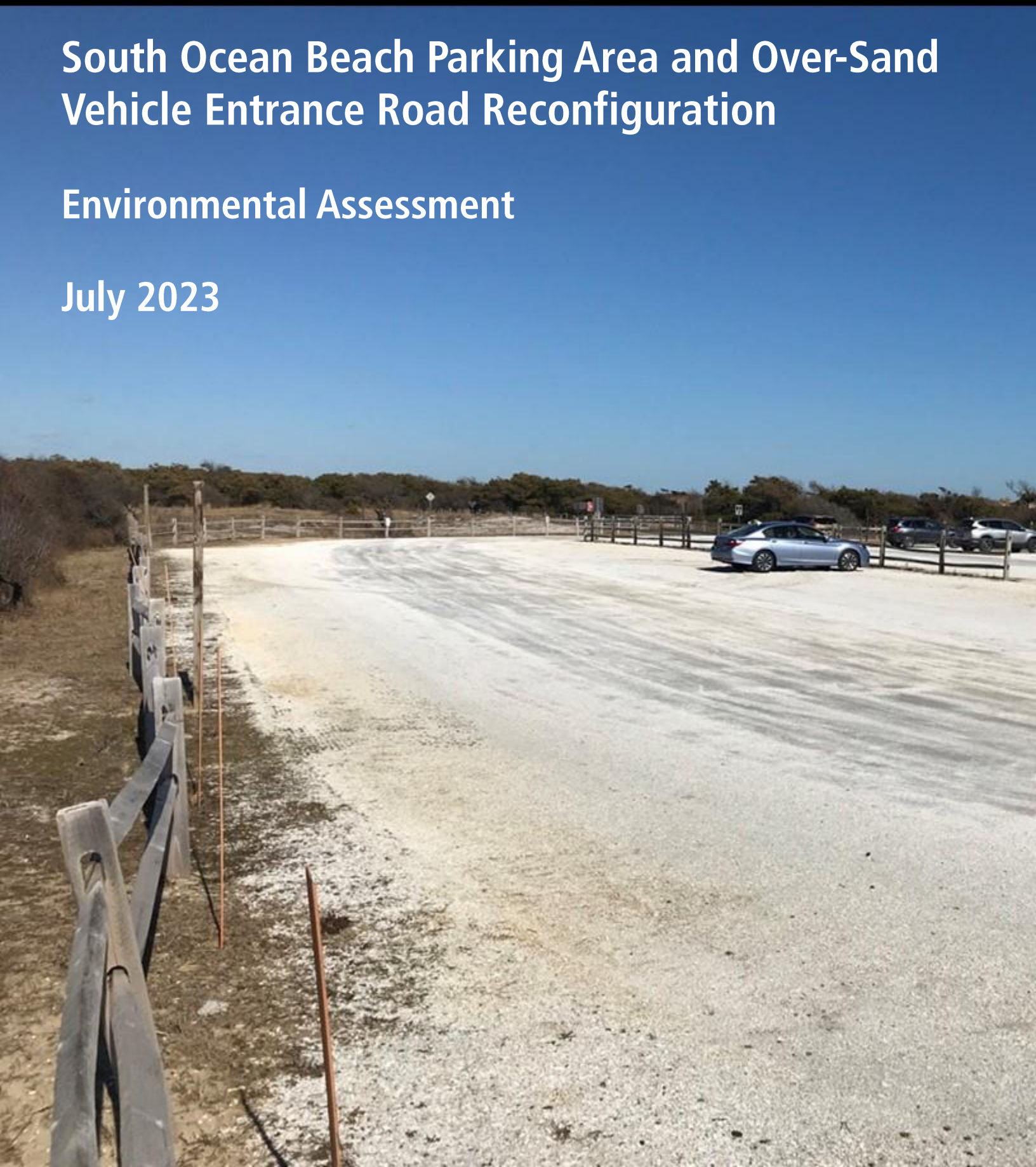
National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration

Environmental Assessment

July 2023



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Note to Reviewers:

Comments on this South Ocean Beach Parking Area and OSV Entrance Road Reconfiguration EA may be submitted electronically at http://parkplanning.nps.gov/SouthOceanBeach by 11:59 pm Eastern Standard Time (EST) on July 30, 2023.

You may also mail written comments postmarked by 11:59 pm EST on July 30, 2023, to the following address:

Superintendent
Attn: South Ocean Beach Reconfiguration EA Comments
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, Maryland 21811

Before including personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

On the Cover:

Photograph taken from the southwest corner of the existing South Ocean Beach parking area.

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ACRONYMS AND ABBREVIATIONS

Assateague Island NS	Assateague Island National Seashore
BMPs	Best Management Practices
CBA	Choosing by Advantages
CZMA	Coastal Zone Management Act
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
E2SS	Estuarine, Intertidal, Scrub-Shrub
EA	Environmental Assessment
ESC	Erosion and Sediment Control
FEMA	Federal Emergency Management Agency
IPaC	Information for Planning and Consultation
LOD	Limits of Disturbance
MDE	Maryland Department of Environment
MDDNR	Maryland Department of Natural Resources
MDSPGP	Maryland State Programmatic General Permit
MHT	Maryland Historical Trust
NEPA	National Environmental Policy Act of 1969
NPS	National Park Service
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OSV	Over-Sand Vehicle
PEM	Palustrine Emergent
PEPC	Planning, Environment and Public Comment
PFO	Palustrine Forested
PSS	Palustrine Scrub-Shrub
RV	Recreational Vehicle
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WB	Wheelbase

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PURPOSE AND NEED

PROPOSED ACTION

The National Park Service (NPS) is proposing to reconfigure the South Ocean Beach parking area and over-sand vehicle (OSV) zone entrance road at Assateague Island National Seashore (Assateague Island NS) in Worcester County, Maryland. South Ocean Beach is approximately 1.25 miles south of Assateague Island NS's entrance station. Figure 1 provides the location of South Ocean Beach. The NPS is proposing to undertake this project recognizing the vulnerability of portions of South Ocean Beach over the next 20 years. The proposed action would reduce the storm-related risks to facilities that serve South Ocean Beach by relocating them to a more sustainable location. The proposed action would also reconfigure the facilities to manage current visitor use more effectively and upgrade infrastructure and amenities that are in poor condition and /or inadequate for current visitation.

The NPS has prepared this Environmental Assessment (EA) to assess the potential environmental impacts of implementing the South Ocean Beach parking area and OSV zone entrance road reconfiguration in accordance with the National Environmental Policy Act of 1969 (NEPA); the Council on Environmental Quality's regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508); US Department of the Interior NEPA regulations (43 CFR 46); NPS *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-Making* (NPS 2011b); and the NPS NEPA Handbook (NPS 2015).

PROJECT BACKGROUND

South Ocean Beach consisted of two parking areas, one east of the OSV zone entrance road near the beach and one smaller parking area for the Life of the Dunes Trail at the location of the current parking lot, when the remnants of Hurricane Sandy impacted Assateague Island NS in 2012. The storm covered much of the easternmost parking lot with sand (Photo 1), and damaged pavement, curbs, and parking islands.

The NPS responded after the storm by removing the damaged lot and expanding the capacity of the Life of the Dunes Trail parking area, which is further inland and less vulnerable to storm activity. Figure 2 provides a map of the current configuration of the existing facilities that serve South Ocean Beach.

South Ocean Beach provides visitors with access to beach activities, the OSV zone, the Life of the Dunes Trail, and duck and deer hunting areas. The area also provides opportunities for nature study, birding, picnicking, and other leisure, educational, and recreational activities. There is also a multi-use path that enters the recreation area from Oceanside Drive and ends at the Life of the Dunes Trail.

OSV use is a unique and popular attraction at Assateague Island NS that is accessible only from the South Ocean Beach recreation area. The NPS sells approximately 14,000 permits annually to access the OSV zone, and nearly 91,000 vehicles entered the OSV zone in 2021.

Photo 1. March 2013 aerial image of damage to former South Ocean Beach Parking Area caused by the remnants of Hurricane Sandy (Source: Google Earth 2023)

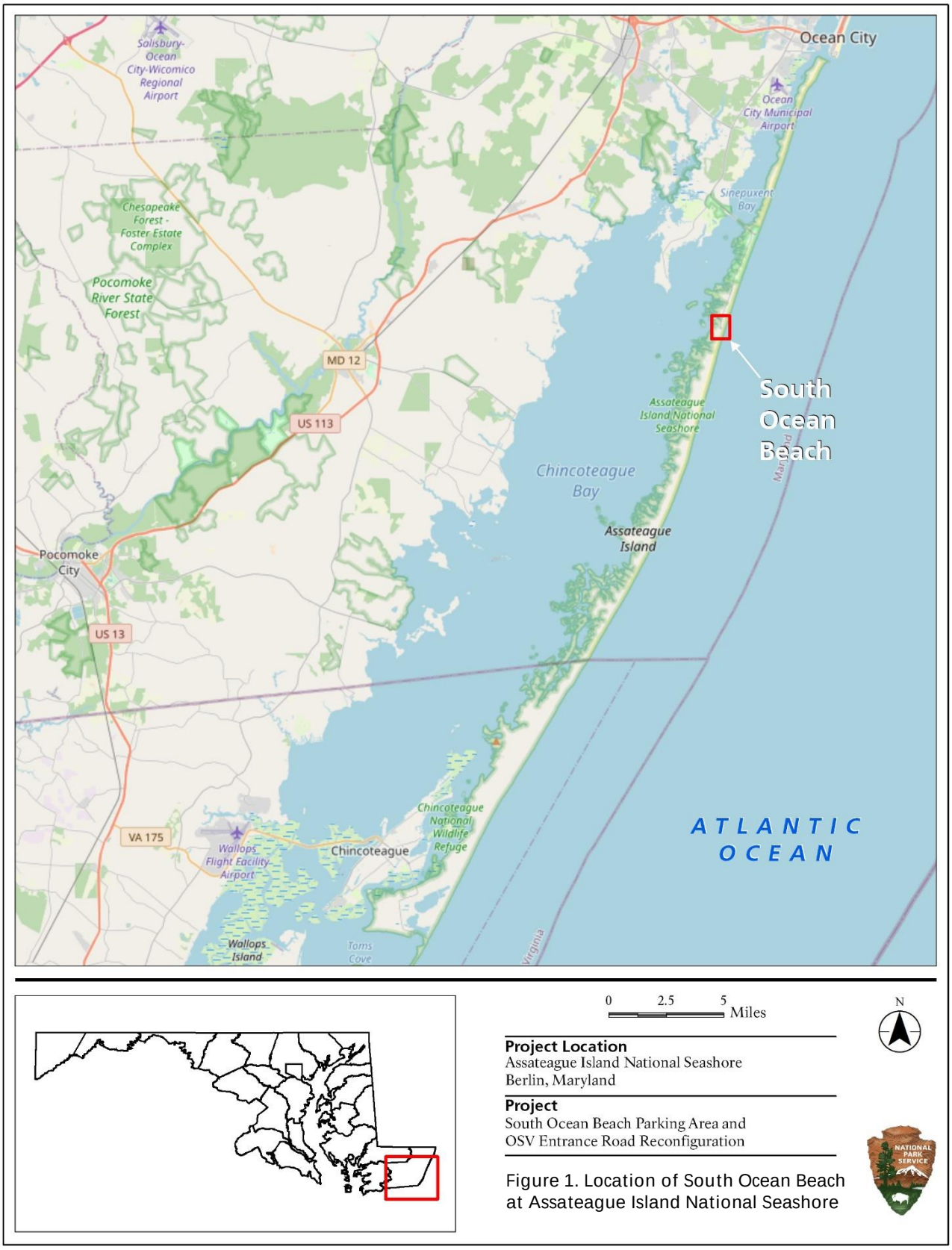

Figure 1. Location of South Ocean Beach at Assateague Island National Seashore

Figure 2. Existing Facilities at South Ocean Beach

PROJECT AREA DESCRIPTION

South Ocean Beach is accessible from Bayberry Drive, a park road with one northbound and one southbound lane, and Oceanside Drive, a park road with one lane southbound. Both roadways merge into a traffic circle that circulates vehicles through South Ocean Beach and provides access to the parking area and OSV zone entrance road (Photo 2).

The parking area (Photo 3) is southwest of the traffic circle and west of the OSV zone entrance road. The parking area consists of a clay and clamshell surface of approximately 38,200 square feet in area. The NPS designed the parking area to accommodate 80 vehicles utilizing a 90-degree parking format. There are four rows for parking and adequate space for two-way vehicle circulation around the parking area. Split-rail fencing helps to delineate parking aisles, spaces, and vehicle circulation within the parking area. A pedestrian walkway provides access to the beach from the parking area that consists primarily of boardwalk except where it crosses the OSV zone entrance road. Plastic mats establish two accessible parking spaces adjacent to the pedestrian walkway. Other visitor amenities include showers, vault toilets, and a bench adjacent to the existing walkway to the beach.

The OSV zone entrance road consists of two 10-foot-wide asphalt lanes for approximately 775 feet to the current location of the electronic gate that manages vehicle entry. The entrance road widens prior to the gate to provide pull-off space for up to eight vehicles to deflate their tires prior to entering. The entrance road consists of a compacted clay and clamshell surface for approximately 950 feet from the gate to the beach. The NPS is in the process of relocating the OSV zone entrance gate approximately 500 feet south as a temporary measure to increase queue capacity when the OSV zone reaches its 145-vehicle limit. An air compressor station is located along the OSV zone exit lane directly north of the gate that provides eight air pumps and three dumpsters. A small building west of the entrance lane protects the compressor for the air pumps. Additionally, signs positioned along the OSV zone entrance road provide driving and permit information for visitors.

Photo 2. OSV Zone Entrance from Traffic Circle

Photo 3. South Ocean Beach Parking Area

A portion of the Life of the Dunes Trail is within the project study area, including the trailhead, which is at the southeast corner of the parking area. A 10-foot-wide asphalt multi-use path enters South Ocean Beach from Oceanside Drive and parallels the parking area to its terminus at the Life of the Dunes Trail.

The remaining portions of the project study area include undeveloped natural areas characterized as salt marsh, inland wetlands, forest and shrublands, and dunes and grasslands habitats (NPS 2011a).

PURPOSE AND NEED

The purpose of the proposed project is to reconfigure the facilities that serve South Ocean Beach to be less susceptible to damage caused by natural coastal processes and future storm events, improve safety, and protect and enhance the visitor experience and park resources through visitor use management strategies.

The project is needed in response to the westward dune movement that is encroaching on South Ocean Beach. The NPS determined from annual shoreline regression data on Assateague Island collected between 1996 and 2018 that the South Ocean Beach shoreline had migrated westward between 4.5 and 5 feet per year on average during that period. These data suggest that the dunes will continue to migrate westward, causing significant sand deposition on the existing traffic circle and OSV zone entrance road by 2040 (Figure 3), making the facilities that serve South Ocean Beach unsustainable at their current locations.

The project also is needed because South Ocean Beach does not have capacity to accommodate current visitation, which causes congestion, user conflicts, and is resulting in park resource degradation. The configuration of the existing facilities that serve South Ocean Beach create unsafe conditions for pedestrians, drivers, bicyclists, and wildlife, particularly during peak visitation. The proposed action would also resolve the following visitor-related issues that contribute to the need.

- The parking area, which NPS designed to hold 80 vehicles, does not provide sufficient capacity to manage visitor use of South Ocean Beach. The parking area sometimes exceeds 100 vehicles because visitors park in unauthorized areas around its perimeter. When the parking area becomes full, sometimes as early at 8:30 a.m. on weekends during the summer peak period, visitors park along both sides of Bayberry Drive as far as 1,350 feet north of the traffic circle. Upwards of 200 vehicles may be present at South Ocean Beach during these peak visitation periods. Resource degradation is occurring due to visitors parking in unauthorized areas.
- The existing OSV zone entrance road cannot support the line of vehicles that will form when the OSV zone reaches the 145-vehicle maximum capacity. The OSV zone entrance road provides 775 feet of queue space from the OSV zone entrance gate to the traffic circle, which accommodates approximately 30 vehicles (Photo 4). During peak visitation, the line can back up through the traffic circle and onto Bayberry Drive, which blocks access to the parking area and the ability for visitors to turn around onto northbound Bayberry Drive, creating major traffic congestion and restricting access for emergency vehicles. The NPS is currently working to relocate the OSV zone entrance gate farther south, which will increase vehicle queue space on the OSV zone entrance road from 775 feet to approximately 1,300 feet, potentially accommodating about 50 vehicles (assumes 25 feet of space for each vehicle). However, even more queue space would support current visitor use of the OSV zone.
- The current configuration of South Ocean Beach creates potential conflicts between pedestrians, drivers, bicyclists, and wildlife. Visitors must cross over the OSV zone entrance road to access the beach from the parking area, which creates safety hazards, especially during peak visitation. Also, visitors that park on Bayberry Drive when the parking area is full will walk on the road and through the traffic circle to access the beach instead of on established pedestrian pathways.
- Finally, the existing comfort station that consists of two vault toilets and showers is inadequate to support current visitation to South Ocean Beach. Peak season demand for these amenities, particularly the vault toilets, often results in long waiting times for visitors. Excessive use also requires a high frequency of custodial maintenance.

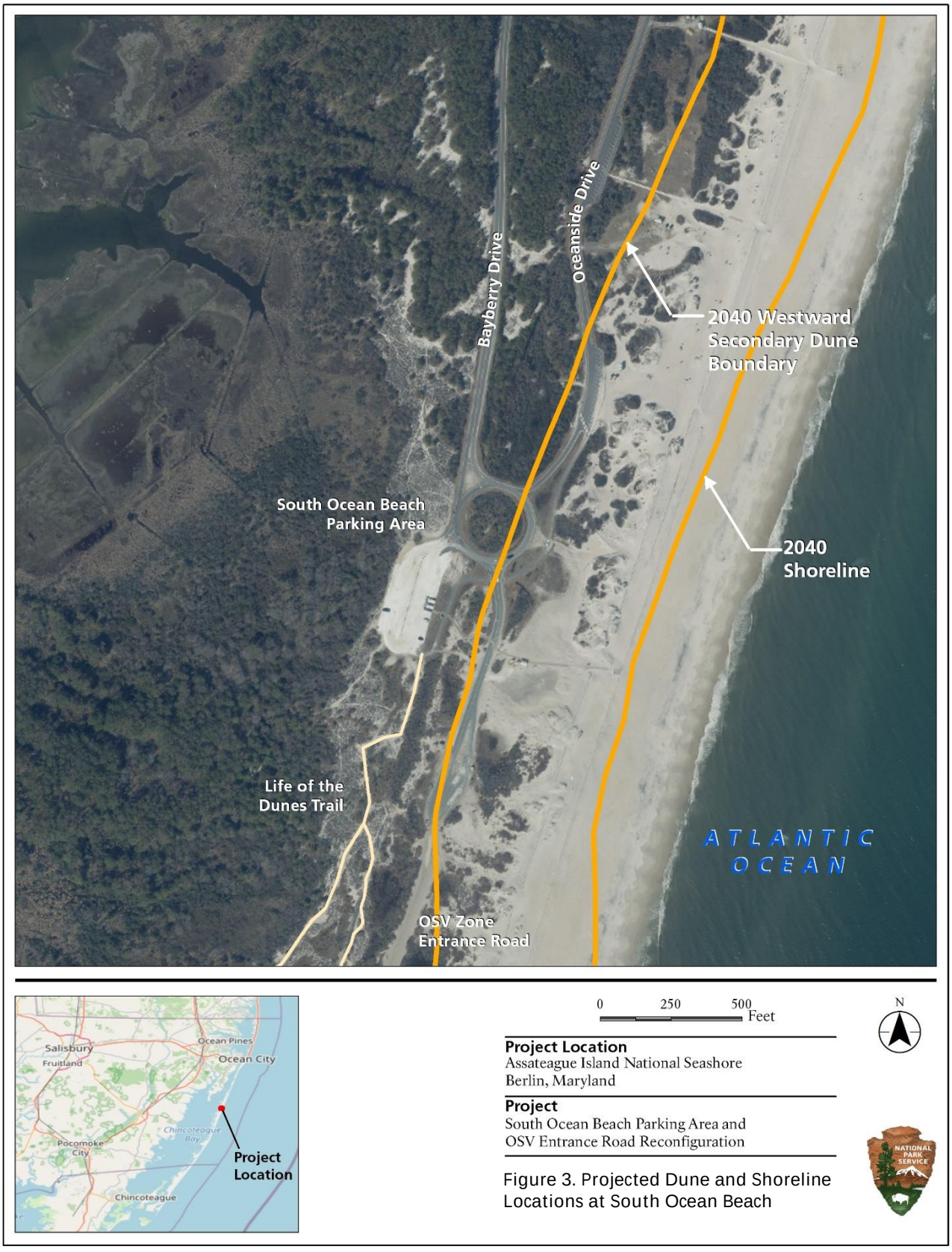

Figure 3. Projected Dune and Shoreline Locations at South Ocean Beach

ISSUES AND IMPACT TOPICS RETAINED FOR DETAILED ANALYSIS

The NPS determined that the following issues and impact topics identified during project planning warranted detailed analysis in this EA.

Wetlands

The NPS has identified wetlands within the project study area, including several inland nontidal wetlands, and a large estuarine wetland along the western boundary associated with Chincoteague Bay. The proposed project could result in a loss of wetlands or may affect the functions and values of wetlands. The NPS has analyzed these issues under the *Wetlands* impact topic in this EA.

Floodplains

Most of Assateague Island NS, including South Ocean Beach, is in the regulated 100-year floodplain according to Federal Emergency Management Agency (FEMA) floodplain mapping. The proposed project could result in disturbances within the floodplain during construction and could affect floodplain functions and values. The NPS has analyzed these issues under the *Floodplains* impact topic in this EA.

Photo 4. Vehicle Queue at OSV Entrance Gate during Peak Visitation

Visitor Use, Experience, and Safety

The proposed project has the potential to disrupt visitors during construction; however, once construction is complete, visitors may benefit from improved safety, circulation, amenities, and other site improvements. The NPS has analyzed these issues under the *Visitor Use, Experience, and Safety* impact topic in this EA.

ISSUES AND IMPACT TOPICS DISMISSED FROM DETAILED ANALYSIS

The NPS has dismissed the following issues and associated impact topics from detailed analysis because they:

- do not have environmental impacts central to the proposal or of critical importance, and/or
- do not require a detailed analysis of environmental impacts to make a reasoned choice between alternatives.

Water Quality

The South Ocean Beach reconfiguration would exceed 5,000 square feet of ground disturbance from grading and other construction activities. As such, the NPS would prepare an Erosion and Sediment Control (ESC) Plan for review and approval by the Maryland Department of the Environment (MDE) that would incorporate selected ESC principles and practices into construction in accordance with Maryland's *2011 Standards and Specifications for Soil Erosion and Sediment Control* and the 2015 publication entitled *Maryland Stormwater Management and Erosion and Sediment Control Guidelines for State and Federal Projects*. The NPS would also register for National Pollutant Discharge Elimination System (NPDES) permit coverage for stormwater discharges under the US Environmental Protection Agency's (USEPA's) Construction General Permit. ESCs may include silt fencing, stabilized construction entrances, temporary sediment traps, or other best management practices (BMPs). Properly implemented and maintained ESCs

would result in minimal impacts to water quality of receiving waterbodies, including wetlands, from the transport of sand and sediment or any other byproducts of construction.

The NPS would also incorporate stormwater management BMPs into construction to address the increase of impervious surface, the associated reduction of the groundwater infiltration capacity of the project site, and the possible risk from erosional forces caused by increased flow rates. Stormwater management BMPs would be designed in accordance with Maryland's *Stormwater Management* (Code of Maryland Regulations [COMAR] 26.17.02) regulations, the *2000 Maryland Stormwater Design Manual,* and the above-mentioned 2015 Guidelines for State and Federal Projects. Due to the high infiltration rate of the sandy soils at the site, stormwater management BMPs would likely consist of drainage swales for water quality treatment along all new roadways and along the longitudinal edges of the parking area that would allow for infiltration following storms. The swales would capture stormwater flows from the parking area and roadways to minimize the potential for erosion, promote infiltration, and prevent sediments, nutrients, and other pollutants from entering waterbodies.

Furthermore, the NPS must comply with Maryland's Chesapeake and Atlantic Coastal Bays Critical Area Protection Program established by the Maryland Assembly to protect water quality, wildlife, environmental features (e.g., streams and wetlands), and vegetation from development within 1,000 feet of the tidal influence of the Bay. The *Critical Area* (COMAR 27.01) regulations also establish that a minimum 100-foot vegetated buffer should be maintained landward from the mean high water line of tidal waters, the edge of each bank of tributary streams, and the landward edge of tidal wetlands. The proposed South Ocean Beach reconfiguration would require vegetation removal within the critical area and buffer. Therefore, to comply with Maryland's *Critical Area* regulations, the NPS would prepare a Critical Area Buffer Management Plan in accordance with COMAR 27.01.09.01 that would include measures to protect and maintain the buffer and to conduct on- and off-site vegetation restoration and plantings to compensate for vegetation removal at a 3:1 ratio within the buffer and 1:1 ratio outside the buffer.

Due to the implementation of ESCs and stormwater management BMPs, and implementation of a Critical Area Buffer Management Plan and associated vegetation restoration and plantings, the NPS anticipates the proposed South Ocean Beach reconfiguration would have minimal impacts to water quality. Therefore, the NPS has dismissed *Water Quality* from further analysis.

Wildlife Habitat

The NPS characterized and described seven habitat types on Assateague Island NS based primarily on landscape position in a Natural Resource Condition Assessment. These habitats, from the Chincoteague Bay to the Atlantic Ocean, include (1) bay subtidal and mudflats, (2) salt marsh, (3) inland wetlands, (4) forest and shrublands, (5) dunes and grasslands, (6) beach and intertidal, and (7) Atlantic subtidal habitats. The NPS conducted a site visit and mapping exercise to characterize the habitat at South Ocean Beach using these habitat classifications. Table 1 shows the amount of potential habitat disturbance that would occur to construct the proposed project.

Disturbance would be similar among the alternatives and would be minimal compared to the amount of available habitat on Assateague Island. To mitigate habitat loss, the NPS would implement a Buffer Management Plan, in accordance with Maryland's *Critical Area* regulations, that would include on-site vegetation restoration primarily where the proposed project would permanently remove asphalt, as well as off-site plantings to replace trees and shrubs that the proposed project would remove. Additionally, the NPS would allow other temporarily disturbed areas to naturally revegetate using the existing seed bank. Therefore, the NPS has dismissed *Wildlife Habitat* from further analysis.

Table 1. Habitat Disturbance by Project Action Alternative

Habitat Classification	Habitat Area on Assateague Island (acres)	Alt 1 Habitat Disturbance (acres)	Alt 1 Percent Loss (%)	Alt 2 Habitat Disturbance (acres)	Alt 2 Percent Loss (%)	Alt 3 Habitat Disturbance (acres)	Alt 3 Percent Loss (%)
Bayside subtidal	15,819.30	0.0	-	0.0	-	0.0	-
Bayside mudflats	16,377.80	0.0	-	0.0	-	0.0	-
Salt marsh	531.60	0.0	-	0.0	-	0.0	-
Inland wetlands	2,377.40	0.12	0.005%	0.16	0.007%	0.18	0.008%
Forest and shrubland	2,247.20	2.42	0.108%	1.75	0.078%	2.38	0.106%
Dunes and grasslands	555.00	3.71	0.668%	3.18	0.573%	3.45	0.622%
Beach and intertidal	5,238.50	0.0	-	0.0	-	0.0	-
Atlantic subtidal	7,240.00	0.0	-	0.0	-	0.0	-
Total Habitat	50,386.80	6.25	0.0124%	5.09	0.0101%	6.01	0.0119%

Federally Listed Species

The NPS obtained an official species list from the US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database on August 1, 2022. According to IPaC, the proposed project has the potential to affect two federally listed threatened bird species, eastern black rail (*Laterallus jamaicensis jamaicensis*) and piping plover (*Charadrius melodus*), and a federally listed threatened flowering plant, seabeach amaranth (*Amaranthus pumilus*). The NPS determined that the proposed project may affect, but is not likely to adversely effect, the federally listed eastern black rail, piping plover, and seabeach amaranth. The NPS sent a letter to USFWS requesting concurrence of its effects determination on September 12, 2022. The USFWS concurred with the determination in a response letter dated October 12, 2022 (Appendix B). Therefore, the NPS has dismissed *Federally Listed Species* from further analysis.

State-Listed Species

The NPS sent a letter to the Maryland Department of Natural Resources (MDDNR) Wildlife and Heritage Service on March 7, 2022, to obtain information on state-listed species with the potential to occur in the vicinity of South Ocean Beach. In a letter dated April 8, 2022, MDDNR responded that seabeach knotweed (*Polygonum glaucum*), meadow lovegrass (*Eleocharis rostellata*), and seabeach amaranth are plant species of concern that may occur in project study area (Appendix B). The NPS anticipates there would be no impacts based on the locations of the documented occurrences; however, the NPS would conduct surveys prior to construction to determine if these plants occur in the project study area. The NPS would coordinate with MDDNR to identify appropriate measures to minimize disturbance to these species if NPS locates them within the limits of construction. Therefore, the NPS has dismissed *State-Listed Species* from further analysis.

Migratory Birds

The USFWS IPaC database identified 21 migratory birds protected under the Migratory Bird Treaty Act that have the potential to occur in the vicinity of South Ocean Beach (Table 2). Using NatureServe Explorer (2023) and the USFWS IPaC database, the NPS evaluated habitat suitability and the probability of presence within the project study area for each migratory bird species. American oystercatcher, prairie warbler, and willet have the highest likelihood of breeding on Assateague Island NS of the migratory birds listed in Table 2 based on the probability of presence data. All other species are likely to occur on Assateague Island on a transient basis ranging from a couple of weeks to several months where suitable habitat exists.

Implementation of any of the action alternatives would occur over an approximately six- to eight- month timeframe. The NPS would plan for most of the construction to occur between October and April when the

probability of presence is low to reduce the likelihood of an incidental take of any migratory birds. However, because the NPS would not be able to apply asphalt during the winter, the NPS expects that the project would not be substantially complete until May or June. Construction activities expected when the probability of presence begins to increase would include asphalt application, installing signs and pavement markings, and installing fencing and barriers, among other final activities that would not disturb migratory bird habitat.

The USFWS also protects bald eagles under the Bald and Golden Eagle Protection Act. There are currently five breeding pairs of bald eagles and four nest sites thought to be active on Assateague Island NS. The NPS anticipates that the proposed project would not disturb eagles and their nests because the nearest active nest is more than 1,000 meters from the project study area. The proposed project would also not affect their ability to hunt for prey because it is inland from the Atlantic Ocean and Chincoteague Bay, which bald eagles likely use as their primary food sources. Therefore, the NPS has dismissed *Migratory Birds* from further analysis.

Table 2. Migratory Birds with Potential to Occur at South Ocean Beach

Species Common Name	Species Scientific Name
American oystercatcher	*Haematopus palliates*
bald eagle	*Haliaeetus leucocephalus*
black skimmer	*Rynchops niger*
black-billed cuckoo	*Coccyzus erythropthalmus*
blue-winged warbler	*Vermivora cyanoptera*
bobolink	*Dolichonyx oryzivorus*
Canada warbler	*Cardellina canadensis*
cerulean warbler	*Setophaga cerulea*
eastern whip-poor-will	*Antrostomus vociferus*
gull-billed tern	*Gelochelidon nilotica*
Hudsonian godwit	*Limosa haemastica*
lesser yellowlegs	*Tringa flavipes*
prairie warbler	*Setophaga discolor*
prothonotary warbler	*Protonotaria citrea*
purple sandpiper	*Calidris maritima*
red-headed woodpecker	*Melanerpes erythrocephalus*
ruddy turnstone	*Arenaria interpres morinella*
rusty blackbird	*Euphagus carolinus*
short-billed dowitcher	*Limnodromus griseus*
willet	*Tringa semipalmata*
wood thrush	*Hylocichla mustelina*

Air Quality including Greenhouse Gas Emissions

Construction activities would generate emissions of volatile organic compounds and greenhouse gases such as nitrogen oxides from engine use associated with the operation of vehicles and equipment. Construction activities would also result in emissions of particulate matter (dust) and the construction of paved access roads, parking area, and multi-use trail, would emit fumes during the application of hot mix asphalt surfaces. To minimize greenhouse gas emissions and impacts to air quality during construction, the NPS would encourage the construction contractor to limit equipment idling times and to employ fugitive dust controls.

Once the proposed facilities are operational, ambient air quality would return to pre-construction conditions and routine maintenance activities and visitor use of South Ocean Beach would not generate greenhouse gas emissions that would have a noticeable contribution to climate change. There may be a slight reduction in vehicle and equipment-related emissions from the expected decrease in the frequency of required maintenance. Additionally, the increase in parking availability may cause less idling or circling for open spaces that may slightly reduce vehicle emissions. Alternatives 1 or 2 would also have a slight benefit to air quality over the lifetime of the project at the parking area because there would be less dust created by the paved asphalt surface compared to the clay / clamshell surface material currently used and proposed under Alternative 3. Overall, emissions generated by the proposed project would be minimal and temporary construction emissions would be the primary cause of any air quality impacts. Therefore, the NPS has dismissed *Air Quality including Greenhouse Gas Emissions* from further analysis.

Geology, Geomorphology, and Soils

Soil map units at South Ocean Beach consist primarily of sand. The shape of the landscape is constantly changing as frequent high winds and occasional storm surge move the sand. Natural coastal processes are causing the unconsolidated sediments that make up Assateague Island to migrate westward, placing the traffic circle and OSV zone entrance road in a vulnerable area more susceptible to damage from storms and more prone to frequent sand deposition. Since the proposed action is meant to address these geomorphological processes occurring at Assateague Island, the NPS would implement ESCs during construction to contain soils onsite, allow temporarily disturbed areas to revegetate naturally, and plant native trees and shrubs, if necessary, to stabilize soils. As such, the NPS has dismissed *Geology, Geomorphology, and Soils* from further analysis.

Archeological Resources

The NPS completed an archeological site reconnaissance for the proposed project in April 2022 in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* and the Maryland Historical Trust's (MHT) *Standards and Guidelines for Archeological Investigations in Maryland*. Archeologists did not identify any archeological sites during the reconnaissance. The NPS determined that the proposed reconfiguration of the facilities that serve South Ocean Beach would have no effect on archeological resources. MHT concurred with the NPS's effects determination in a letter dated July 19, 2022 (Appendix B). Therefore, the NPS has dismissed *Archeological Resources* from further analysis.

Historic Structures, Districts, and Cultural Landscapes

The NPS identified one above-ground architectural resource within the project study area, which consisted of remnants of Baltimore Boulevard. Baltimore Boulevard was a 15-mile road constructed by developers on Assateague Island during the 1950s that a storm subsequently destroyed in 1962. The NPS determined the road segment is not historically significant, and therefore not eligible for listing in the National Register of Historic Places (NRHP). The NPS determined that the proposed South Ocean Beach reconfiguration would have no effect on historic structures, districts, or cultural landscapes. MHT concurred with the NPS's NRHP-eligibility assessment and effects determination in a letter dated July 19, 2022 (Appendix B). Therefore, the NPS has dismissed *Historic Structures, Districts, and Cultural Landscapes* from further analysis.

Environmental Justice and Underserved Communities

The USEPA defines environmental justice as the "…fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies." Executive Order 12898 *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires federal agencies to incorporate environmental justice into their missions by identifying and addressing the

disproportionately high and / or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

The State of Maryland builds on the USEPA definition of environmental justice by adding that citizens should expect to be protected from public health hazards and to have access to socioeconomic resources necessary to address concerns about their livelihood and health. Maryland defines underserved communities as census tracts with at least 25% of the residents qualifying as low-income; at least 50% of the residents identifying as nonwhite; or at least 15% of the residents having limited English proficiency.

According to MDE Environmental Justice Screening Tool, none of the census tracts near Assateague Island NS meet the definition of an underserved community from a minority population or English proficiency standpoint. MDE considers Census Tract 9517, which is directly west of Assateague Island NS, as an underserved community because 26% of the census tract consists of residents qualifying as low-income. However, the NPS has dismissed concerns related to *Environmental Justice and Underserved Communities* from detailed analysis in this EA because the proposed action would not disproportionately affect any minority or low-income communities, or have a disproportionate effect on the accessibility of South Ocean Beach for these populations; equal consideration was given to all public input from persons regardless of age, race, income status, or other socioeconomic or demographic factors; and the proposed action would not result in any identifiable adverse human health effects.

ALTERNATIVES

NEPA requires that federal agencies explore a range of reasonable alternatives. The alternatives under consideration include the "no-action" alternative to serve as a comparison. Any alternative analyzed must meet the management objectives of the park, either wholly or partially, while also meeting the purpose of and need for the project.

The alternatives analyzed in this document are the result of civic engagement, agency consultation, and extensive collaboration among the project team, which included NPS personnel from Assateague Island NS, the Interior Region 1 Office, Washington, DC Area Support Office, and Water Resources Division; and the consultant design and environmental compliance teams. The project team explored and objectively evaluated a range of alternatives. After consideration of agency, stakeholder, and public comments, the NPS carried forward the no-action alternative and three action alternatives for detailed analysis in this EA. The NPS also considered and dismissed several alternative elements from further study for the reasons described later in this chapter.

NO-ACTION ALTERNATIVE

The NPS would manage South Ocean Beach using an approach consistent with the overall management strategy described in Assateague Island NS's 2016 *General Management Plan* under the no-action alternative. The NPS would maintain the infrastructure and amenities at South Ocean Beach until natural coastal processes render them unusable. The NPS would maintain access to the OSV zone while it remains safe for visitors. Maintenance costs would increase as the dunes encroach on the facilities that serve South Ocean Beach. Additionally, the current configuration and capacity of the facilities that serve South Ocean Beach would continue to cause congestion, user conflicts, resource degradation, and facility management concerns.

ACTION ALTERNATIVES

This section describes the three action alternatives for the proposed South Ocean Beach parking area and OSV entrance road reconfiguration. The action alternatives are similar, having the same vehicle circulation paths, general location of the traffic circle, alignment for the OSV zone entrance road, and beach access and amenities. The differences among the action alternatives are primarily related to the configuration and surface material of the parking area that result in minor associated differences in 1) how they address the visitor use, experience, and safety portion of the purpose and need, and 2) the total amount of wetlands and floodplain area impacted during the construction phase.

The NPS designed each action alternative to a schematic level and are therefore subject to further refinement based on additional site data collected and coordination with third parties, including other state and federal agencies during the permit and regulatory approval process. Figures in this chapter represent the general scope and layout of proposed facilities at South Ocean Beach.

Assateague Island NS staff conducted a choosing by advantages (CBA) workshop in November 2022 to determine which of the three action alternatives presented in this EA provides the most value (i.e., benefits measured against the cost to construct, maintain, and replace the alternative based on a 25-year useful lifespan). The NPS chose Alternative 2 as the preferred alternative through this process. Although Alternative 2 had similar advantages to the other alternatives regarding improvements to visitor use and experience and resiliency, Alternative 2 accommodates the targeted number of parking spaces within the least amount of impervious surface area and has the lowest initial cost and life-cycle cost of the three alternatives.

Finally, note that the NPS had designed each alternative to allow for alternative transportation opportunities, such as a transit bus stop, should the NPS pursue this in the future. All three alternatives

would be able to accommodate a transit bus stop for drop-off and pick-up with low-cost modifications to the parking area.

Elements Common to All Action Alternatives

The following sections provide descriptions of elements that NPS would include with the implementation of any of the three action alternatives for the proposed parking area and OSV zone entrance road reconfiguration at South Ocean Beach.

Circulation

The NPS would relocate the traffic circle approximately 650 feet northwest of its existing location centered on the existing Bayberry Drive under the action alternatives. The traffic circle would be similar in size to the existing circle, allowing for safe circulation by providing adequate sight distance and separation between entrance and exit points. Bayberry Drive would intersect with the traffic circle on the north side while Oceanside Drive would intersect with the traffic circle from the northeast. The OSV entrance road intersects with the traffic circle on the west side and the parking area access road intersects with the traffic circle to the south. Roads would have 11-foot-wide lanes and the traffic circle lane width would be 15 feet. The traffic circle would accommodate the WB (wheelbase)-50 design vehicle type (defined as a large semi-trailer truck with an overall length of 55 feet) and recreational vehicles (RV) without traversing over the center circle.

OSV Zone Entrance Road

The NPS would relocate the OSV zone entrance road to a more sustainable location under the action alternatives, looping to the west around the new parking area. The NPS would make the temporary location of the existing electronic OSV zone entrance gate permanent, allowing for queuing capacity for up to approximately 90 vehicles. The NPS would use asphalt pavement for the road to approximately 15 feet east of the multi-use path crossing on the OSV zone entrance road where the road surface would then change to a clay and clamshell surface. The OSV zone entrance road would have 5-foot-wide shoulders and clear space on both sides of the roadway to allow vehicles to turn around and leave the queue if desired. The NPS would install a standard timber gate or automated gate system on the OSV zone entrance road just off the traffic circle to restrict access to the OSV zone if needed.

Beach Access and Amenities

The action alternatives would establish two pedestrian paths to provide access to the beach from the parking area. The NPS would design the paths to align with pedestrian routes in the parking area and would distance the paths from each other as much as feasible to spread visitors out on the beach. The paths would be on existing pavement or constructed as at-grade wooden boardwalks until they reach the beach where they would transition to accessible matting placed on the sand.

The action alternatives would also establish two comfort stations including one prefabricated concrete vault toilet building (each with two toilets), pedestal showers, water fountains, changing cabanas, and benches adjacent to each boardwalk path near the parking area. The NPS would widen the paths in front of these facilities to provide sufficient space for pedestrian circulation within and through the comfort stations. The comfort stations would be moveable so the NPS could relocate the facilities in response to storms and / or changes to the landscape. Service vehicles would be able to access the vault toilets for maintenance and cleaning from the parking area across from the multi-use path. The NPS would install a standard timber gate to prevent unauthorized parking at the vault toilet access locations. A utility contractor would extend a water line from its current location on Oceanside Drive to the pedestal showers and drinking fountains.

Multi-Use Path

The NPS would construct a 10-foot-wide asphalt multi-use path around the parking area and OSV zone entrance road, creating a loop trail that connects back to the existing path on Oceanside Drive, under the action alternatives. The path's alignment would direct visitors to the Life of the Dunes Trail at the south end of South Ocean Beach. A new trailhead established at the entrance to the Life of the Dunes Trail would

include a bicycle rack, bench, and trailhead signage. The NPS would sign and mark the path that crosses the OSV zone entrance road for pedestrian safety.

Stormwater Management

The action alternatives would incorporate small-scale, nonstructural stormwater management techniques to mitigate the project's effects on water quality and floodplain functions in accordance with Maryland's *Stormwater Management* regulations, the 2000 *Maryland Stormwater Design Manual*, and the 2015 publication *Maryland Stormwater Management and Erosion and Sediment Control Guidelines for State and Federal Projects*. According to the *Maryland Stormwater Design Manual*, the proposed project would qualify as a new development since the existing percent impervious within the project limits is less than 40 percent. The manual therefore requires water quality treatment of 100 percent of the new impervious area and 100 percent of the full depth reconstructed impervious area within the project limits stormwater management facilities. The action alternatives incorporate grass swales for stormwater quality treatment along all new roadways and along the longitudinal edges of the parking area to incorporate stormwater management into the proposed project. The manual would not require stormwater quantity management because existing drainage within the project study area outfalls directly to tidally influenced waters.

Signing and Striping

The NPS would install signing to direct visitors to the parking area, OSV zone entrance road, beach area, and Life of the Dunes Trail; mark unauthorized parking areas; and establish traffic laws and other restrictions. Striping would delineate parking spaces, pedestrian crossings, paths, and roadways. All signing and striping would match NPS standards.

Fencing and Barriers

The action alternatives include placing split rail fencing, primarily to deter visitors from parking beyond designated spaces and on road shoulders, taking care to maintain safe routes for horses through South Ocean Beach. The NPS would install steel backed timber guardrail to match the existing infrastructure within Assateague Island NS between the multi-use path and the roads as a safety measure and fencing between the multi-use path and parking area to delineate the roadway pavement and path pavement.

Construction Phasing and Staging

Construction phasing would provide continuous access to the OSV gate for those permitted to drive on the beach. The NPS may need to temporarily relocate the OSV gate and / or entrance road to maintain access. The current clamshell parking area and beach access would not be accessible to visitors during construction, as the parking area would serve as the primary materials and equipment staging area.

South Ocean Beach Reconfiguration Alternative 1

The NPS proposes the following improvements under Alternative 1 in addition to the common elements described in the previous section. Figure 4 provides a schematic-level design of Alternative 1.

Parking Area

Under Alternative 1, the NPS would expand the existing parking area by about 40,530 square feet to approximately 78,730 square feet in area. The parking area would include an asphalt surface material with pavement markings to accommodate 152 standard 9-foot-wide parking spaces and six accessible parking spaces. Forty-five-degree angled parking spaces, and a one-way, 14 feet wide drive aisle would facilitate efficient entering and exiting parking spaces and provide safer pedestrian crossings within the parking area. The parking area configuration would allow RVs to circulate but would not provide RV parking spaces. The entrance and exit road to the parking area would split to match the one-way traffic flow in the parking area and to minimize wetland impacts.

OSV Zone Air Compressor Station

The NPS would construct an air compressor station under Alternative 1 that would be located approximately 100 feet south of the entrance to the traffic circle. The air compressor station would provide eight air pumps, a vault toilet, and downward facing lighting adjacent to the OSV zone exit lane of similar shape and size to the existing station. A new, prefabricated structure would house the air compressor and any electrical panels. A utility contractor would extend an electrical conduit from its current location to the air compressor building to operate the compressor and lights at the air pumps. Alternative 1 would also include pavement widening at the air compressor station to accommodate short-term parking for one to two vehicles to access the vault toilet.

South Ocean Beach Reconfiguration Alternative 2 (NPS Preferred Alternative)

The NPS proposes the following improvements under Alternative 2 in addition to the common elements described in the previous section. Figure 5 provides a schematic-level design of Alternative 2.

Parking Area

The NPS would expand the parking area under Alternative 2 by about 20,670 square feet to approximately 58,870 square feet in area. The parking area would include an asphalt surface material with pavement markings to accommodate 150, 90-degree angled parking spaces, six accessible parking spaces, and two-way drive aisles that would be 24 feet combined width. A parking area marked with 90-degree angled parking spaces requires less surface area to accommodate the same number of spaces compared to the 45-degree angled spacing in Alternative 1. The parking area for Alternative 2 would therefore be smaller than the parking area for Alternative 1. Also, the entrance and exit lanes to the parking area would run adjacent to each other to connect to the traffic circle in Alternative 2.

OSV Zone Air Compressor Station

The OSV zone entrance road is similar for Alternative 2 as Alternative 1, except that the air compressor station would be located near the southwest corner of the parking area, adjacent to the exit lane on the OSV zone entrance road, approximately 60 feet from the clay and clamshell OSV zone entrance road surface, and approximately 1,000 feet south of the entrance to the traffic circle. The NPS would provide a vault toilet, like Alternative 1, and a utility contractor would extend electrical conduit to operate the air compressor and lights at the air pumps.

South Ocean Beach Reconfiguration Alternative 3

The NPS proposes the following improvements under Alternative 3 in addition to the common elements described in the previous section. Figure 6 provides a schematic-level design of Alternative 3.

Parking Area

The NPS would expand the parking area under Alternative 3 by about 31,510 square feet to approximately 69,710 square feet in area. The parking area would accommodate 150, 90-degree angled parking spaces, six accessible parking spaces, and two-way drive aisles that would be 24 feet wide. Alternative 3 involves constructing the parking area using a clay and clamshell surface material like the existing parking area. Pavement markings delineating each parking space are not feasible on this surface material; however, the NPS would install split rail fencing around the parking area, and within its interior, to delineate parking aisles and vehicle circulation. Alternative 3 assumes 10.5-foot-wide parking spaces (Alternatives 1 and 2 assume parking spaces are each nine feet wide) to compensate for the inefficiencies that are inherent to this type of alternative parking surface. The six accessible parking spaces would require an accessible surface, such as asphalt, to facilitate pedestrian access between the parking spaces and the paths and boardwalks. The entrance and exit lanes to the parking area would be on the same alignment as Alternative 2, running adjacent to each other to connect to the traffic circle.

OSV Zone Air Compressor Station

The OSV zone entrance road and air compressor station location under Alternative 3 would be like Alternative 1. However, the road would follow a slightly different alignment south of the parking area due to the smaller size of the parking area as compared to Alternative 1.

SUMMARY COMPARISON OF THE ALTERNATIVES

Table 3 provides a summary comparison of the primary design differences between the action alternatives. The table also includes the no-action alternative for further comparison against the existing condition.

Table 3. Summary Comparison of the Alternatives

Design Element	No-Action	Alternative 1	Alternative 2	Alternative 3
Parking Area Surface	clay / clamshell	asphalt pavement	asphalt pavement	clay / clamshell
Park Area Size	38,200 square feet	78,730 square feet	58,870 square feet	69,710 square feet
Parking Area Spaces	80[1]	152	150	150[1]
Parking Area Circulation	two-way	one-way	two-way	two-way
Parking Space Angle	90-degree	45-degree	90-degree	90-degree
Pavement Markings	No	Yes	Yes	No
OSV Queue Length	775 feet[2] 1,275 feet[3]	1,685 feet[2] 2,210 feet[3]	1,615 feet[2] 2,140 feet[3]	1,635 feet[2] 2,160 feet[3]

[1] Dependent upon the space each vehicle occupies in the parking area.
[2] Approximate lengths from traffic circle to current electronic gate location.
[3] Approximate lengths from traffic circle to future relocated electronic gate location.

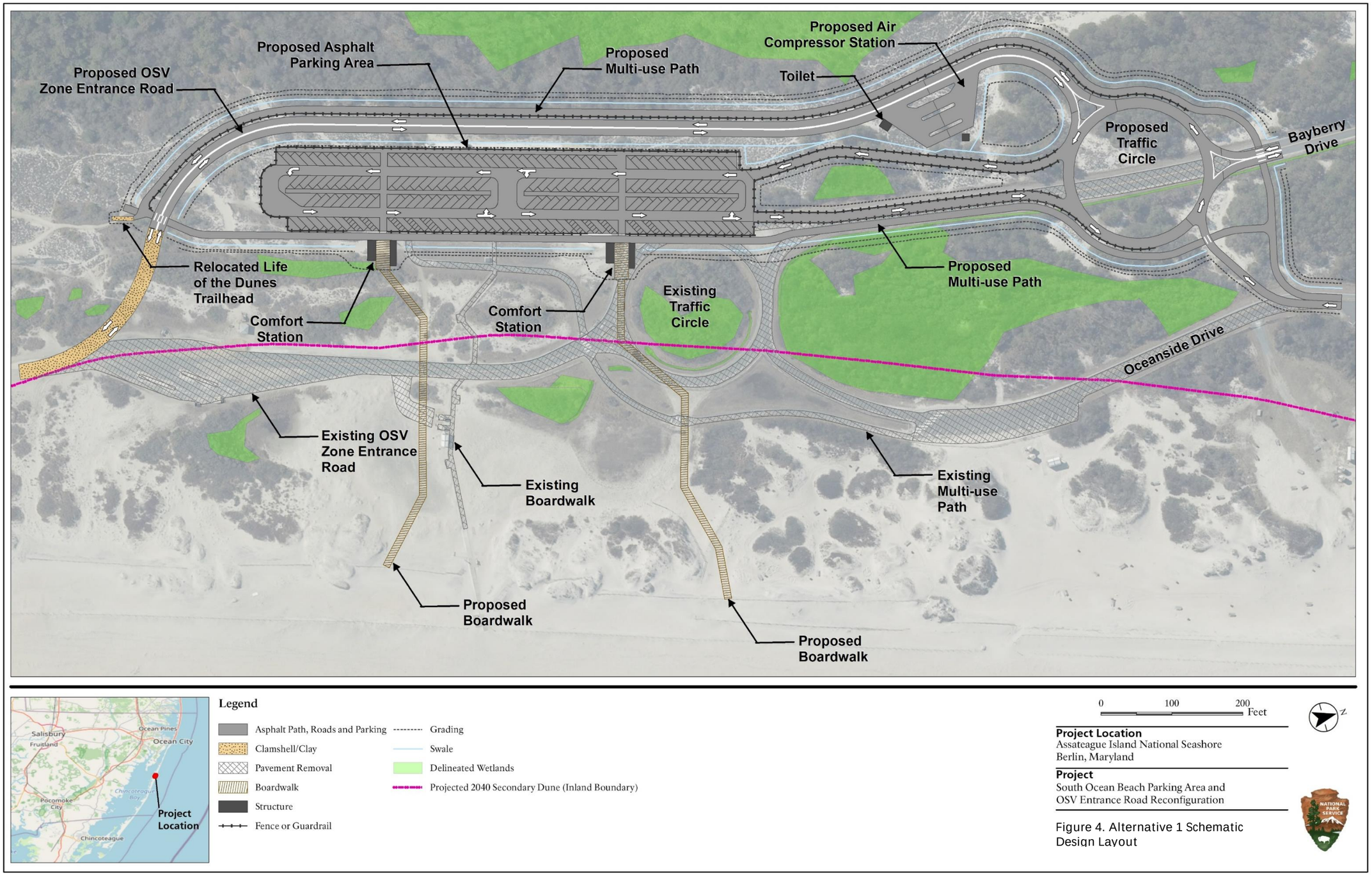

Figure 4. Alternative 1 Schematic Design Layout

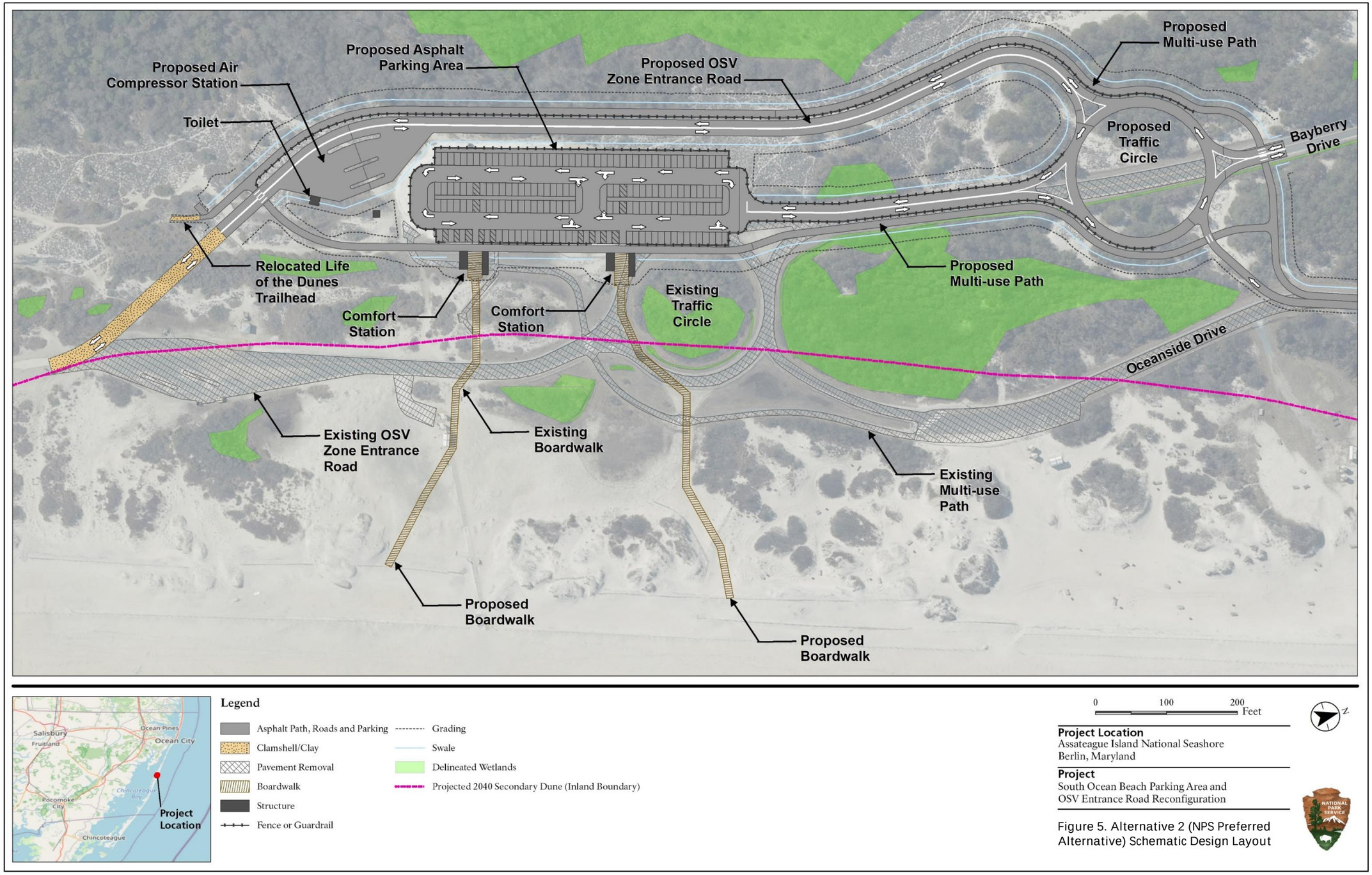

Figure 5. Alternative 2 (NPS Preferred Alternative) Schematic Design Layout

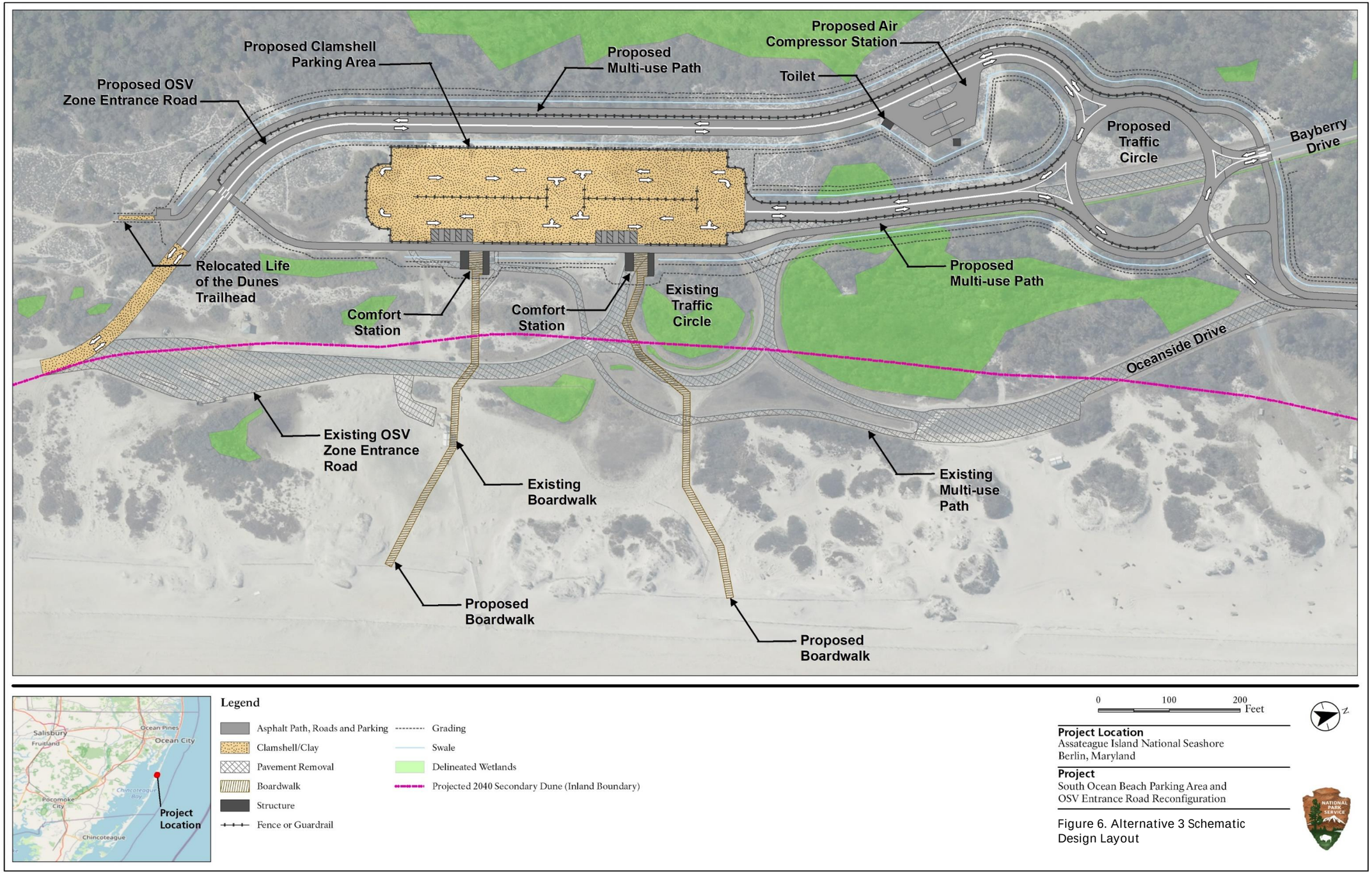

Figure 6. Alternative 3 Schematic Design Layout

MITIGATION MEASURES

The Organic Act and its associated Management Policies 2006 task NPS with preventing impairment of park resources. This mandate gives the NPS authority to adopt mitigation measures. The NPS would implement mitigation measures for resource protection and to minimize disruption to park visitors. The exact mitigation measures would depend upon the final design and plan approvals by relevant agencies. The NPS proposes the following mitigation measures to reduce project impacts.

Wetlands

- Continue to evaluate opportunities to further reduce wetland impacts as the design progresses.
- Obtain required authorizations and certifications for unavoidable wetland impacts in accordance with Sections 404 and 401 of the Clean Water Act and Maryland's *Nontidal Wetlands* (COMAR 26.23.01) regulations.
- Develop an ESC Plan that includes BMPs to contain sediment in the construction area.
- Design and construct an on-site compensatory wetland mitigation project to replace the loss of wetlands and associated functions in accordance with NPS Director's Order 77-1: *Wetland Protection*, Clean Water Act requirements, and Maryland's *Nontidal Wetlands* regulations.
- Allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

Floodplains

- Implement the proposed action to allow natural coastal processes to continue while maintaining visitor use and minimizing resource damage within the floodplain.
- Relocate the South Ocean Beach facilities to locations less susceptible to damage from shoreline regression, dune migration, and coastal storm events, and by using moveable facilities as much as possible to minimize flood risk.
- Design and construct the proposed facilities to be consistent with the 44 CFR Part 60 standards under the National Flood Insurance Program.
- Obtain authorization for proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations.
- Develop an ESC Plan that includes BMPs to minimize floodplain disturbance.
- Incorporate stormwater management BMPs to compensate for the increase in impervious surface area and loss of floodplain functions.
- Remove existing pavement and restore wetland and upland habitats in these areas to mitigate for flood storage, groundwater infiltration, and habitat loss.
- Prepare a Critical Area Buffer Management Plan that demonstrates compensation for vegetation removal in accordance with Maryland's *Critical Area* regulations.
- Allow other temporarily disturbed areas to naturally revegetate after construction is complete.
- Clean construction vehicles and equipment offsite to prevent the transport of invasive plant seeds, propagules, and other weed seeds, onto Assateague Island NS.

Visitor Use, Experience, and Safety

- Construct the project primarily during off-peak visitation between October and April.
- Use fencing or other similar temporary barriers to establish a perimeter around active construction areas for the safety of park visitors and wildlife.
- Construct the project during the daytime to avoid night sky impacts and nighttime noise disruption.
- Phase construction to maintain traffic circulation between Oceanside Drive and Bayberry Drive and to maintain access to the OSV zone.
- Establish temporary alternative access routes to the Life of the Dunes Trail and duck blinds nearest to South Ocean Beach.

ALTERNATIVE ELEMENTS DISMISSED FROM FURTHER CONSIDERATION

During the planning process, the NPS considered a range of design options that could be elements of the action alternatives. The NPS reviewed these alternative elements during the planning process for their ability to maximize benefits to visitors while minimizing impacts to park resources and maintenance costs. From this evaluation, the NPS refined the alternatives to the three described in this EA. This section provides brief descriptions of alternative elements that NPS dismissed from further consideration during project planning because they duplicated other less environmentally damaging or expensive options.

Traffic Circle

The NPS evaluated options for the placement of the proposed traffic circle, as well as replacing the circle with stop condition intersections. The current location of the traffic circle is not sustainable because of anticipated sand deposition from natural coastal processes by 2040. The NPS considered relocating the circle further north or west on Bayberry Drive, but unacceptable wetland impacts and design engineering constraints eliminated these options. The NPS also eliminated the option of establishing a stop condition intersection in lieu of a traffic circle because large vehicles would have difficulty making U-turns, and because a stop condition intersection may create additional congestion and more serious conflict points compared to a traffic circle.

Parking Area

The NPS evaluated four other potential parking area surface materials. The evaluation resulted in the preferred surface of either asphalt pavement or clay and clamshell material. Asphalt is less costly to install, and although it requires more frequent maintenance than concrete, it is easier to maintain. The clay and clamshell surface material requires frequent maintenance but is native to the local environment. This means that the NPS would not have to recover the clay and clamshell material if a storm washes it away. Table 4 describes other surface materials considered but eliminated from further study.

Table 4. Alternative Surface Materials Considered but Dismissed from Further Consideration

Surface Material	Rationale for Dismissal
Concrete	Concrete is easy to clear of sand and snow, can be striped to delineate parking, and requires less maintenance over its lifespan compared to asphalt. However, concrete may crack under extreme weather conditions and is more difficult and costly to repair than asphalt or the clay and clamshell surface material currently used. The NPS prefers to use a softer, less costly alternative to concrete due to the dynamic landscape at South Ocean Beach.
Stone / Gravel	Stone / gravel was the least costly option considered. However, it is difficult to clear of sand and snow, requires frequent maintenance and replenishment, and cannot be striped to delineate parking. Even though it is a natural material, stone / gravel is non-native to the coastal island environment and so the NPS would need to recover the material if a storm washes it away.
Pervious Pavers	Pervious pavers would be advantageous because the NPS could stripe the pavers to delineate parking. Pervious pavers also allow for the infiltration of stormwater. However, sand and snow removal operations can damage pavers. Pavers require frequent maintenance to maintain perviousness, and the NPS would need to remove the pavers if the base layer under the pavers needs repairs. Pervious pavers were the costliest option evaluated.
Geogrid	Geogrid is a ground stabilization material that can reinforce a parking surface, minimize erosion, and allow for stormwater infiltration. However, like pervious pavers, sand or snow removal operations can easily damage geogrid. Geogrid requires frequent maintenance, and it can be difficult to repair the base layer without having to remove and then reinstall the geogrid. Geogrid would be a higher cost option to construct and maintain compared to the other materials evaluated.

The NPS also evaluated options for increased parking area capacity. The NPS considered more than doubling the parking spaces at South Ocean Beach to accommodate 200 vehicles or more. However, the NPS eliminated any option expanding parking capacity over 152 spaces to balance between visitor accommodations, resource management, and maintaining the unique experience that South Ocean Beach provides.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

This chapter describes current environmental conditions in and around South Ocean Beach at Assateague Island NS. The discussion serves as a baseline for understanding the condition of the resources that could be impacted. This chapter also describes the environmental impacts of the no-action alternative and the three action alternatives for the proposed South Ocean Beach reconfiguration.

The Affected Environment description is followed by the Environmental Impacts for each resource topic. The resource topics presented in this chapter correspond to the planning issues and concerns described in the Purpose and Need chapter of this EA.

In accordance with Council on Environmental Quality regulations, the environmental impact analysis includes direct, indirect, and cumulative impacts (40 CFR 1502.16). The intensity of impacts is assessed in the context of the park's purpose and significance, and any resource-specific context that may be applicable (40 CFR 1508.27). Where appropriate, mitigating measures for adverse impacts are described and their effect on the severity of the impact is noted. The methods used to assess impacts vary depending on the resource but are generally based on a review of pertinent literature and park studies, information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

WETLANDS

Affected Environment

The NPS investigated the project study area to determine the presence, extent, and classification of waters of the United States and waters of the State (Stantec Consulting Services Inc. 2022). The NPS delineated one estuarine, intertidal, scrub-shrub (E2SS) wetland and several palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetland systems within the project study area (Figure 7).

Pursuant to Section 404 of the Clean Water Act, the US Army Corps of Engineers (USACE) regulates activities that result in the discharge of dredged or fill material into waters of the United States, including wetlands. In Maryland, MDE is responsible for issuing water quality certifications in accordance with Section 401 of the Clean Water Act. In addition, MDE regulates activities in nontidal wetlands under Maryland's *Nontidal Wetlands* regulations. The USACE and MDE have established a joint permitting process for regulated activities in waters of the United States, and waters of the State, which the agencies have documented in the Maryland State Programmatic General Permit (MDSPGP)-6.

Additionally, federal agencies are responsible for wetland protection practices under Executive Order 11990 *Wetland Protection*. The NPS meets this requirement through implementation of Director's Order 77-1: *Wetland Protection* and adherence to Procedural Manual 77-1: *Wetland Protection*, which require mitigation to compensate for conversion, degradation, or loss of wetland area and / or function greater than 0.1 acre (NPS 2016). Compensatory mitigation is calculated based on the functional quality of the impacted wetlands and the functional quality of the compensatory wetlands to meet NPS compliance requirements.

The USACE and / or MDE may also stipulate mitigation through the Clean Water Act Section 404 and / or Section 401 permitting processes, typically requiring mitigation when impacts to nontidal wetlands are greater than 5,000 square feet. In Maryland, compensatory mitigation is determined using replacement ratios for each wetland type, including a 1:1 ratio to compensate for PEM wetland loss, and a 2:1 ratio to compensate for PSS and PFO wetland loss.

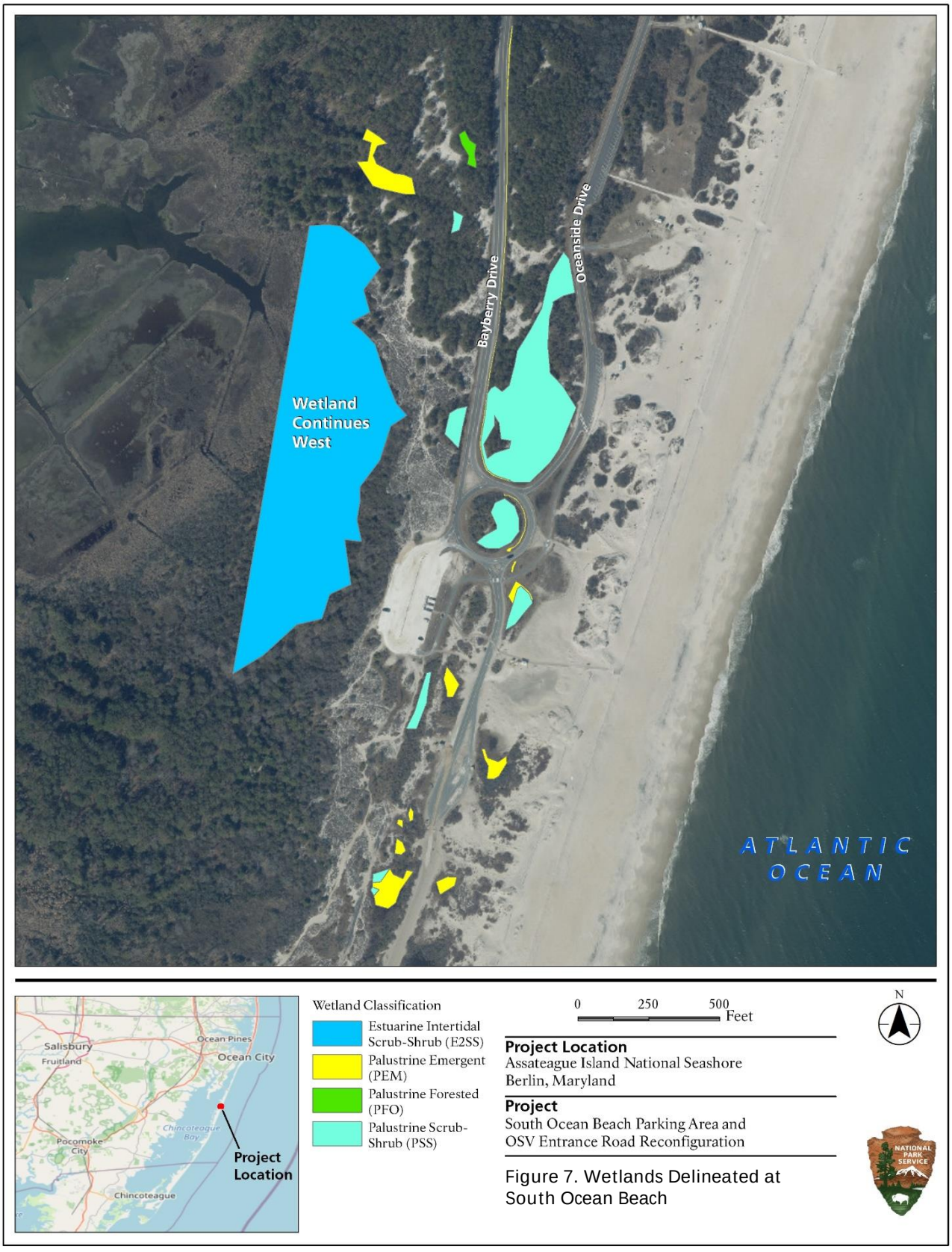

Figure 7. Wetlands Delineated at South Ocean Beach

The NPS evaluated the functions and values of each wetland using the USACE New England District's "Descriptive Approach" (USACE 1999). Inland wetlands potentially affected by the project are generally in interdunal depressions or swales, or in ditches or depressions adjacent to park infrastructure, and serve relatively similar functions, including groundwater recharge / discharge, floodflow alteration, sediment / toxicant retention, nutrient removal, production export, and wildlife habitat, as well as provide educational / scientific, recreational, visual quality / aesthetic, and heritage values. Additionally, interdunal wetlands are unique coastal features that vary greatly in plant species composition due to fluctuations in water levels and salinity. These wetland habitats are also now known to support populations of Bethany Beach firefly (*Photuris bethaniensis*) on Assateague Island NS, which is a species currently under review by the USFWS for listing under the Endangered Species Act.

Shoreline regression is threatening inland wetlands at South Ocean Beach and throughout Assateague Island. Interdunal wetlands have the potential to become filled with sand caused by westward dune migration and from future storm surges and coastal flooding that NPS anticipates will occur with more frequency and intensity due to climate change. Inland wetlands are also susceptible to other climate change effects, particularly to increased salinity resulting from sea level rise (NPS 2011a). The ongoing Dune Maintenance Program implemented at Assateague Island NS may prolong the lifespan of inland wetlands; however, interdunal wetlands are most susceptible to the ever-changing barrier island landscape.

Impact Analysis Methodology

The NPS quantified wetland impacts based on the limits of disturbance (LOD) of each schematic design alternative and evaluated qualitatively each alternative's impacts to wetland functions and values. Table 5 towards the end of this section provides a summary comparison of the construction-related wetland impacts for each alternative. The NPS has designed each alternative to minimize wetland impacts while providing sufficient infrastructure to manage current visitation at South Ocean Beach more effectively.

Impacts of No Action

No construction would occur at South Ocean Beach that would result in a loss of wetlands under the no-action alternative. The NPS would continue to maintain and operate the facilities that serve South Ocean Beach as long as it is safe to do so. However, shoreline regression and westward dune migration caused by natural coastal processes, as well as future storm surges, coastal flooding, and other effects of climate change, have the potential to threaten inland wetlands at South Ocean Beach and throughout Assateague Island beginning within the next 10 to 15 years.

Impacts Common to All Action Alternatives

Implementation of any of the action alternatives would result in an unavoidable loss of onsite wetlands from construction activities, including grading and other site preparations, for the proposed infrastructure improvements at South Ocean Beach. Additionally, a small amount of temporary wetland disturbance may occur under the action alternatives from installing ESCs and minor site grading at pavement removal and wetland creation areas to establish desired site contours. There would be no offsite wetland impacts because of the proposed project.

The NPS designed each action alternative to avoid direct impacts to estuarine wetlands at the project study area, and to avoid and / or minimize other direct wetland impacts resulting from ground disturbance to the extent feasible. The NPS would continue to evaluate opportunities to further reduce wetland impacts as the design progresses regardless of which alternative NPS selects for implementation. This includes developing a plan with the utility contractors that avoids wetland impacts caused by the extension of electrical conduit or water lines.

The NPS would schedule a meeting with MDE and the USACE during the final design phase prior to submitting a joint permit application. The purpose of the meeting would be to conduct an on-site review of impacted wetlands and discuss potential permit special conditions and mitigation requirements. The NPS

would obtain the required authorizations and certifications for unavoidable wetland impacts in accordance with Sections 404 and 401 of the Clean Water Act and Maryland's *Nontidal Wetlands* regulations, prior to commencing the proposed project. Additionally, the NPS would develop an ESC Plan for the project for MDE approval prior to construction. The ESC Plan would include a variety of BMPs, such as stabilized construction entrances, silt fence, and other common practices, to prevent sediment transport offsite and potentially into wetlands.

To mitigate for the loss of wetlands and associated functions, as well as temporary disturbances, under any of the action alternatives, the NPS would design and construct an on-site compensatory wetland mitigation project, as required, in accordance with NPS Director's Order 77-1: *Wetland Protection*, Clean Water Act requirements, and Maryland's *Nontidal Wetlands* regulations. The project would involve wetland creation within proposed pavement removal areas to compensate for the loss of wetland area and functions. The NPS would create the wetlands by establishing groundwater connectivity as the primary source of hydrology, allowing wetland conditions to develop over time, similar to the interdunal wetlands that currently exist at South Ocean Beach. The NPS would establish vegetation within the created wetlands to replace the PEM and PSS wetland types that the project would permanently remove. These created wetlands would compensate for the loss of wetland area and functions by providing flood storage, groundwater infiltration, sediment / toxicant retention, nutrient removal, and wildlife habitat.

The NPS would coordinate with MDE and the USACE, as needed, to ensure that the NPS develops an adequate compensatory mitigation plan that also satisfies Clean Water Act requirements and Maryland's *Nontidal Wetlands* regulations. This coordination would include developing a mitigation monitoring strategy aimed at ensuring wetland conditions are established and to address any concerns that might hinder the successful creation of wetlands per the approved mitigation plan. This monitoring typically occurs annually over a five to 10-year period post-construction.

Impacts of South Ocean Beach Reconfiguration Alternative 1

The NPS anticipates Alternative 1 would permanently or temporarily impact 10,303 square feet (0.24 acres) of wetland. This includes 5,301 square feet (0.12 acres) of permanent nontidal wetland impacts based on schematic-level designs, including 2,284 square feet (0.05 acres) to PEM wetlands, and 3,017 square feet (0.07 acres) to PSS wetlands. This loss of wetlands is small compared to the total area of inland wetlands (2,377.40 acres) that occur on Assateague Island. Alternative 1 would result in 23 percent less permanent wetland impacts than Alternative 2, and 32 percent less impacts than Alternative 3. Alternative 1 would also result in a total of approximately 5,002 square feet (0.12 acres) of temporary nontidal wetland impacts, including 1,153 square feet (0.03 acres) to PEM wetlands, and 3,849 square feet (0.09 acres) to PSS wetlands from installing ESCs and minor grading activities at pavement removal and wetland creation areas to establish desired contours. The NPS would allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

The NPS compliance requirement is at least a minimum of 10,303 square feet (0.24 acres) of wetland creation (a 1:1 ratio of area of impact equal to the area of compensation) under Alternative 1 to satisfy NPS Director's Order 77-1: *Wetland Protection*. As part of the proposed project, the NPS would remove approximately 81,326 square feet (1.87 acres) of existing pavement at South Ocean Beach and would restore both wetland and upland habitats in these areas. The NPS has identified more than 64,000 square feet (1.47 acres) of potential wetland creation opportunities within these pavement removal areas to satisfy all compensatory mitigation requirements. As such, the proposed project would have beneficial impacts over the lifetime of the project because the wetland creation would more than compensate for the anticipated loss of wetland area, types, and functions.

Impacts of South Ocean Beach Reconfiguration Alternative 2

The NPS anticipates Alternative 2 would permanently or temporarily impact 11,695 square feet (0.27 acres) of wetland. This includes 6,588 square feet (0.15 acres) of permanent nontidal wetland impacts based on

schematic-level designs developed for Alternative 2, including 2,147 square feet (0.05 acres) to PEM wetlands, and 4,441 square feet (0.1 acres) to PSS wetlands. This loss of wetlands is minimal compared to the total area of inland wetlands (2,377.40 acres) that occurs on Assateague Island. Permanent wetland impacts under Alternative 2 are 23 percent greater than Alternative 1, but nine percent less than Alternative 3. Alternative 2 would also result in a total of approximately 5,107 square feet (0.12 acres) of temporary nontidal wetland impacts, including 1,163 square feet (0.03 acres) to PEM wetlands, and 3,944 square feet (0.09 acres) to PSS wetlands from installing ESCs and minor grading activities at pavement removal and wetland creation areas to establish desired contours. The NPS would allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

The NPS compliance requirement is at least a minimum of 11,695 square feet (0.27 acres) of wetland creation (a 1:1 ratio of area of impact equal to the area of compensation) under Alternative 2 to satisfy NPS Director's Order 77-1: *Wetland Protection*. As part of the proposed project, the NPS would remove approximately 80,503 square feet (1.85 acres) of existing pavement at South Ocean Beach and would restore both wetland and upland habitats in these areas. The NPS has identified more than 64,000 square feet (1.47 acres) of potential wetland creation opportunities within these pavement removal areas to satisfy all compensatory mitigation requirements. As such, the proposed project would have beneficial impacts over the lifetime of the project because the wetland creation would more than compensate for the anticipated loss of wetland area, types, and functions.

The NPS has prepared a Wetland Statement of Findings for Alternative 2 that is in Appendix A. The Statement of Findings documents compliance with NPS Director's Order 77-1: *Wetland Protection* and accompanying Procedural Manual.

Impacts of South Ocean Beach Reconfiguration Alternative 3

The NPS anticipates Alternative 3 would permanently or temporarily impact 9,625 square feet (0.29 acres) of wetland. This includes 7,341 square feet (0.16 acres) of permanent nontidal wetland impacts based on schematic-level designs developed for Alternative 3, including 2,358 square feet (0.05 acres) to PEM wetlands, and 4,983 square feet (0.11 acres) to PSS wetlands. This loss of wetlands is minimal compared to the total area of inland wetlands (2,377.40 acres) that occurs on Assateague Island. Permanent wetland impacts under Alternative 3 are 32 percent greater than Alternative 1, and 9 percent greater than Alternative 2. Alternative 3 would also result in a total of approximately 5,831 square feet (0.13 acres) of temporary nontidal wetland impacts, including 1,094 square feet (0.03 acres) to PEM wetlands, and 4,737 square feet (0.1 acres) to PSS wetlands from installing ESCs and minor grading activities at pavement removal and wetland creation areas to establish desired contours. The NPS would allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

The NPS compliance requirement is at least a minimum of 9,625 square feet (0.29 acres) of wetland creation (a 1:1 ratio of area of impact equal to the area of compensation) under Alternative 3 to satisfy NPS Director's Order 77-1: *Wetland Protection*. As part of the proposed project, the NPS would remove approximately 77,646 square feet (1.78 acres) square feet of existing pavement at South Ocean Beach and would restore both wetland and upland habitats in these areas. The NPS has identified more than 64,000 square feet (1.47 acres) of potential wetland creation opportunities within these pavement removal areas to satisfy all compensatory mitigation requirements. As such, the proposed project would have beneficial impacts over the lifetime of the project because the wetland creation would more than compensate for the anticipated loss of wetland area, types, and functions.

Cumulative Impacts

Past projects, including the Bayside Picnic Parking Area and South Ocean Beach Parking Area Relocation projects, have avoided estuarine and inland palustrine wetland impacts on Assateague Island NS. The NPS anticipates that reasonably foreseeable planned actions, such as the Bayside and Oceanside Campgrounds Rehabilitation and Reconfiguration project, Maryland District Entrance Station Rehabilitation and

Reconfiguration project, and the ongoing Dune Maintenance Program implemented at Assateague Island NS, will also avoid permanent wetlands impacts. As such, there would be no cumulative impacts to wetlands under the no-action alternative or any of the action alternatives.

Table 5. Summary of Construction-Related Wetland Impacts for each Alternative

	No-Action	Alternative 1	Alternative 2	Alternative 3
Estuarine Intertidal Scrub-Shrub (E2SS)	0	0	0	0
Palustrine Emergent (PEM)	0	Permanent 2,284 square feet (0.05 acres) Temporary 1,153 square feet (0.03 acres)	Permanent 2,147 square feet (0.05 acres) Temporary 1,163 square feet (0.03 acres)	Permanent 2,358 square feet (0.05 acres) Temporary 1,094 square feet (0.03 acres)
Palustrine Scrub-Shrub (PSS)	0	Permanent 3,017 square feet (0.07 acres) Temporary 3,849 square feet (0.09 acres)	Permanent 4,441 square feet (0.09 acres) Temporary 3,944 square feet (0.09 acres)	Permanent 4,983 square feet (0.11 acres) Temporary 4,737 square feet (0.1 acres)
Palustrine Forested (PFO)	0	0	0	0
Total Impact	0	Permanent 5,301 square feet (0.12 acres) Temporary 5,002 square feet (0.12 acres)	Permanent 6,588 square feet (0.15 acres) Temporary 5,107 square feet (0.12 acres)	Permanent 7,341 square feet (0.16 acres) Temporary 2,284 square feet (0.13 acres)

FLOODPLAINS

Affected Environment

The majority of Assateague Island NS is in the regulated 100-year floodplain based on FEMA Flood Insurance Rate Maps for Worcester County, Maryland (FEMA 2015a). The 100-year floodplain represents areas of high flood risk according to FEMA. As shown on Flood Insurance Rate Map 24047C0285H, effective July 16, 2015, South Ocean Beach is entirely within Zone AE, an area that presents a one percent annual chance of flooding. On Assateague Island, Zone AE occurs behind the dunes and is not subject to wave action. Base flood elevations are five to six feet in the project study area. Figure 8 provides floodplain mapping for South Ocean Beach and surrounding area.

Floods on Assateague Island can typically range from minor overwash events during high tides to major flooding from hurricanes and other coastal storms. Excessive precipitation can also cause flooding in low elevation areas across the island. Major storms can drive ocean storm surges completely across the island, dramatically changing the entire landscape. High waves and water have periodically swept entirely over Assateague Island and flowed into Chincoteague Bay and Sinepuxent Bay adjacent to the project study area. As demonstrated by Tropical Storm Isabel in 2003 and Hurricane Sandy in 2012, NPS facilities on Assateague Island are extremely vulnerable to coastal flood events. However, because large coastal storm events are typically predictable, with warning times ranging from many hours to several days, evacuation can be fairly easy to coordinate. Assateague Island NS prepares an annual Hurricane and Coastal Storm Plan for the protection of park staff, visitors, and resources that outlines the operating procedures for storm preparations, including evacuation, and the responsibilities of park staff before, during, and after a storm.

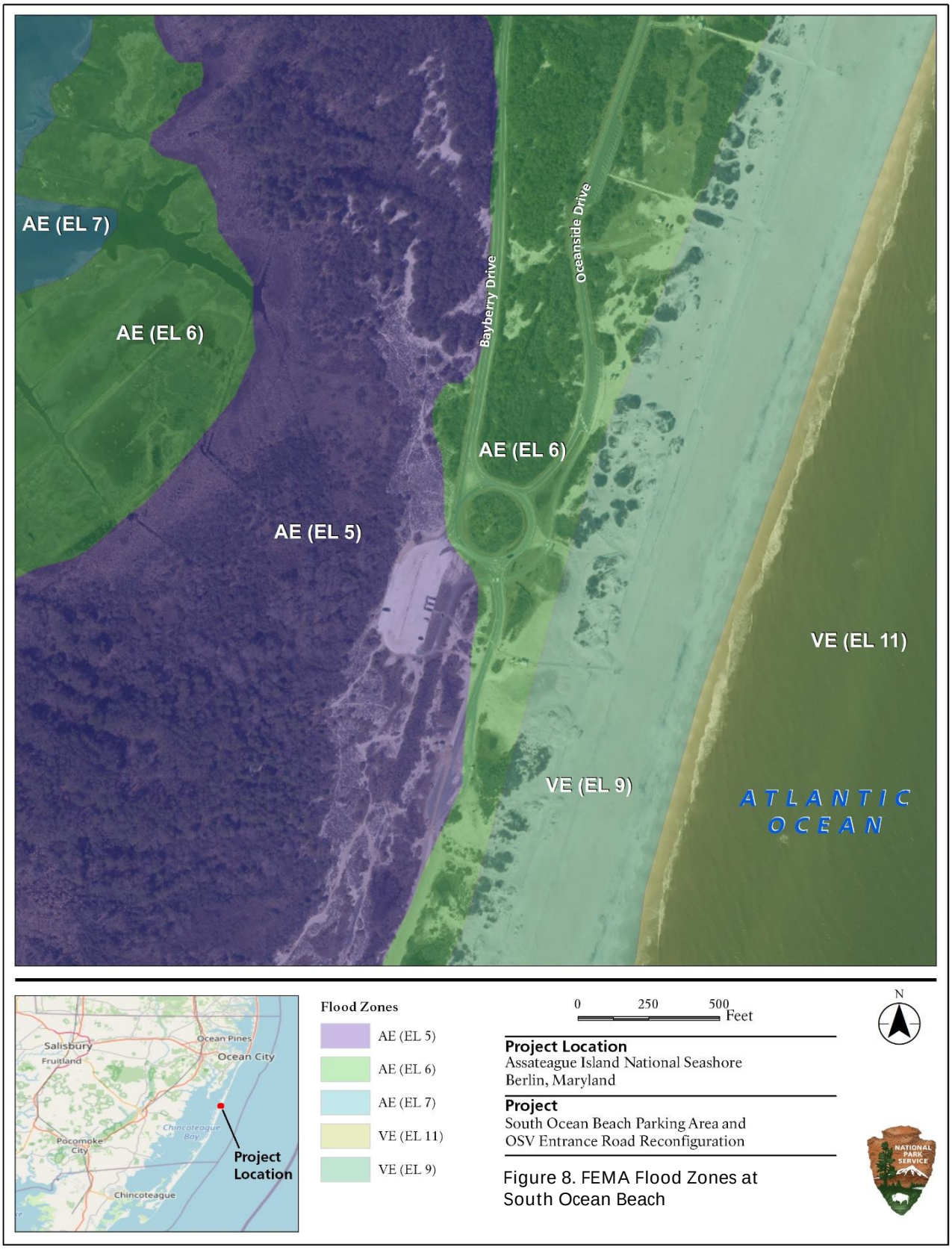

Figure 8. FEMA Flood Zones at South Ocean Beach

Floodplains provide a wide range of benefits to natural environments and human society. According to FEMA, floodplains can provide a variety of water resource, biological, and societal functions (FEMA 2015b). Water resource functions of floodplains include natural flood storage, erosion control, groundwater recharge, and surface water quality treatment. Biological functions of floodplains include production export and provision of fish and wildlife habitats. Societal resources are the floodplain functions that benefit human society with harvestable products, recreational opportunities, and educational values.

Natural resource conditions at South Ocean Beach provide beneficial functions that help to mitigate impacts of flooding. Estuarine wetlands west of South Ocean Beach provide flood storage, erosion control, and sediment retention functions. Dunes along the seashore impede storm surge. Interdunal wetlands and other inland depressions also function to store flood waters. The floodplain on Assateague Island also supports infiltration and groundwater recharge due to the unconsolidated nature of the soil and fluctuating groundwater table. Floodplain vegetation can provide water quality treatment, support a wide variety of wildlife, and provide recreational opportunities.

Executive Order 11988 *Floodplain Management*, and Executive Order 13690 *Establishing a Federal Flood Risk Management Standard*, which amended 11988 on January 30, 2015, directs federal agencies to avoid to the extent possible the short- and long-term adverse impacts associated with the occupancy and modification of floodplains, to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, and to consider current or potential flood risk. To comply with these executive orders, the NPS has adopted Director's Order 77-2: *Floodplain Management* to preserve floodplain functions and values and minimize potentially hazardous conditions associated with flooding. In addition, MDE regulates activities in waters of the State, which include nontidal 100-year floodplains, under Maryland's *Construction on Nontidal Waters and Floodplains* regulations (COMAR 26.17.04).

Sea level rise and coastal flooding can be used as an indicator of climate change. At Lewes, Delaware, just over 33 miles north of Assateague Island, sea level increased nearly nine inches between 1960 and 2021 according to collected data. Data from Lewes also provides evidence that the average number of coastal flood events per year has increased. Between 1950 and 1989, the average number of coastal flood events was less than 2 per year. The average number increased to just over four from 1990 to 2009, and to an average of almost eight between 2010 and 2020 (EPA 2022). Additionally, along the Atlantic coast, sea level rise is converting land to open water. The EPA estimates that approximately four square miles of land was lost along the Atlantic coast between 1996 and 2011 (EPA 2022). As a barrier island, Assateague Island is especially vulnerable to coastal flooding, rising sea level, land loss, and other climate change effects.

Impact Analysis Methodology

The NPS quantified floodplain impacts based on the LOD of each schematic design alternative and evaluated qualitatively each alternative's impacts to floodplain functions and values. Table 6 towards the end of this section provides a summary comparison of the construction-related floodplain impacts for each alternative. Additionally, the NPS considered future challenges facing Assateague Island NS at South Ocean Beach given the anticipated effects of natural coastal processes and sea level rise.

Impacts of No Action

No construction would occur at South Ocean Beach that would affect floodplain functions and values under the no-action alternative. No new impervious surface would be added that would reduce the infiltration and groundwater recharge capabilities of the floodplain, and the capacity for inland wetlands and depressions to provide flood storage would not change. The floodplain's ability to provide water quality treatment, support wildlife, and provide recreational opportunities would also not be affected. Existing roadside swales and ditches would manage stormwater during typical precipitation events or stormwater would infiltrate into adjacent sandy soils.

By 2040, the NPS anticipates that continued shoreline regression would threaten the NPS's ability to safely operate South Ocean Beach at its current location. Additionally, the NPS expects sea level rise influenced by

climate change to intensify coastal storms and surges, which is likely to result in more frequent inundation and damage to park infrastructure at South Ocean Beach. The demand for maintenance to keep the facilities that serve South Ocean Beach operational through 2040 would drastically increase, and the NPS may need to relocate park infrastructure, such as the OSV zone entrance road, if it is no longer safe to use at its current location.

Impacts Common to All Action Alternatives

The NPS would implement the proposed action in part as a mitigation measure to allow natural coastal processes to continue while maintaining visitor use and minimizing resource damage within the floodplain. Relocating the South Ocean Beach facilities west of areas projected to be covered by dunes by 2040 would increase the useable lifespan of the facilities and minimize flood risk by placing the new facilities at locations less susceptible to damage from shoreline regression, dune migration, and coastal storm events, and by using moveable facilities as much as possible to further minimize risk. Assateague Island NS's Hurricane and Coastal Storm Plan also reduces flood risk by outlining procedures for managing storms, handling emergencies, and recovering assets.

Each action alternative would result in an increase in impervious surface area within the 100-year floodplain and result in floodplain disturbance from construction activities, including site grading and vegetation clearing. The increase in impervious surface area would reduce the infiltration capacity of the floodplain and the potential for groundwater recharge. Additionally, disturbance to natural areas adjacent to existing park infrastructure to construct the proposed project, such as grading and vegetation clearing, would result in a reduction in wildlife habitat within the floodplain. The electrical conduit and water lines needed for the proposed facilities would be installed at locations that are planned for construction. The NPS does not anticipate additional floodplain disturbance due to the utility extensions required for the proposed project.

The NPS would design and construct the proposed facilities to be consistent with the 44 CFR Part 60 standards under the National Flood Insurance Program. The NPS would obtain authorization from MDE for the proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations, prior to commencing the proposed project. The NPS would also develop an ESC Plan for the project for MDE approval that would include BMPs to minimize temporary floodplain disturbances outside the limits of construction primarily from erosion and sedimentation. The NPS would also coordinate internally to ensure that the project and proposed mitigation for floodplain impacts are in compliance with Director's Order 77-2: *Floodplain Management*.

The NPS would include appropriate stormwater management BMPs in the design of the proposed project to compensate for the increase in impervious surface area and loss of floodplain functions provided at South Ocean Beach. Due to the sandy substrate at the site, stormwater management BMPs are likely to consist primarily of ditches and swales adjacent to impervious areas to capture and infiltrate stormwater runoff and to provide for groundwater recharge. These swales would also serve to temporarily store floodwaters until infiltration is possible following more intense storms. Also, the NPS would remove some existing pavement at South Ocean Beach and restore both wetland and upland habitats in these areas. The NPS would prepare a Critical Area Buffer Management Plan that would include on-site vegetation restoration and off-site plantings, as necessary, to compensate for vegetation removal in accordance with Maryland's *Critical Area* regulations. The NPS would also require the construction contractor clean vehicles and equipment offsite to prevent the transport of invasive plant seeds, propagules, and other weed seeds, onto Assateague Island NS.

Impacts of South Ocean Beach Reconfiguration Alternative 1

Implementation of Alternative 1 would result in an increase of 58,684 square feet (1.35 acres) of impervious surface area within the 100-year floodplain and 378,592 square feet (8.69 acres) of floodplain disturbance. Alternative 1 would result in a larger extent of floodplain disturbance, having nine percent more than Alternative 2, and four percent more than Alternative 3. The NPS would use stormwater management BMPs to mitigate for the reduced infiltration capacity at the site caused by the increase in impervious surface area.

Additionally, the NPS estimates that Alternative 1 would require 104,892 square feet (2.41 acres) of vegetation clearing and associated habitat loss within the floodplain. However, the NPS would mitigate much of the habitat loss by removing approximately 81,326 square feet (1.87 acres) of existing pavement and restoring wetland and upland habitats in these areas, and by conducting off-site plantings, as necessary, per an approved Critical Area Buffer Management Plan. The on-site restoration areas would also serve flood storage and groundwater infiltration functions in addition to reducing habitat loss. Overall, the NPS anticipates that adverse impacts to the floodplain under Alternative 1 would not be noticeable due to the small scale of the proposed project when compared to the overall floodplain area, and due to the measures proposed to mitigate impacts to floodplain functions and values.

Impacts of South Ocean Beach Reconfiguration Alternative 2

Implementation of Alternative 2 would result in an increase of 42,357 square feet (0.97 acres) of impervious surface area within the 100-year floodplain and 344,990 square feet (7.92 acres) of disturbance. Alternative 2 would result in the least extent of floodplain disturbance, having nine percent less than Alternative 1, and six percent less than Alternative 3. The NPS would use stormwater management BMPs to mitigate for the reduced infiltration capacity at the site caused by the increase in impervious surface area. Additionally, the NPS estimates that Alternative 2 would require 103,149 square feet (2.37 acres) of vegetation clearing and associated habitat loss within the floodplain. However, the NPS would mitigate much of the habitat loss by removing approximately 80,503 square feet (1.85 acres) of existing pavement and restoring wetland and upland habitats in these areas, and by conducting off-site plantings, as necessary, per an approved Critical Area Buffer Management Plan. The on-site restoration areas would also serve flood storage and groundwater infiltration functions in addition to reducing habitat loss. Overall, the NPS anticipates that adverse impacts to the floodplain under Alternative 2 would not be noticeable due to the small scale of the proposed project when compared to the overall floodplain area, and due to the measures proposed to mitigate impacts to floodplain functions and values.

The NPS has prepared a Floodplain Statement of Findings for Alternative 2 that is in Appendix A. The Statement of Findings document compliance with NPS Director's Order 77-2: *Floodplain Management*.

Impacts of South Ocean Beach Reconfiguration Alternative 3

Implementation of Alternative 3 would result in an increase of 47,358 square feet (1.09 acres) of impervious surface area within the 100-year floodplain and 364,654 square feet (8.37 acres) of disturbance. Alternative 3 would result in a six percent larger extent of floodplain disturbance compared to Alternative 2, but four percent less when compared to Alternative 1. The NPS would use stormwater management BMPs to mitigate for the reduced infiltration capacity at the site caused by the increase in impervious surface area. Additionally, the NPS estimates that Alternative 3 would require 96,655 square feet (2.22 acres) of vegetation clearing and associated habitat loss within the floodplain. However, the NPS would mitigate much of the habitat loss by removing approximately 77,646 square feet (1.78 acres) of existing pavement and restoring wetland and upland habitats in these areas, and by conducting off-site plantings, as necessary, per an approved Critical Area Buffer Management Plan. The on-site restoration areas would also serve flood storage and groundwater infiltration functions in addition to reducing habitat loss. Overall, the NPS anticipates that adverse impacts to the floodplain under Alternative 3 would not be noticeable due to the small scale of the proposed project when compared to the overall floodplain area, and due to the measures proposed to mitigate impacts to floodplain functions and values.

Cumulative Impacts

Past projects, including the Bayside Picnic Parking Area and South Ocean Beach Parking Area Relocation projects, have resulted in floodplain disturbance on Assateague Island NS. The NPS anticipates that reasonably foreseeable planned actions, such as the Bayside and Oceanside Campgrounds Rehabilitation and Reconfiguration project, Maryland District Entrance Station Rehabilitation and Reconfiguration project, and the ongoing Dune Maintenance Program, will also result floodplain disturbance. However, the

NPS anticipates a minor cumulative impact because each project, including any of the action alternatives, would only result in localized floodplain disturbances within Assateague Island NS's developed area that would be small compared to the overall floodplain area. There would be no cumulative impacts under the no-action alternative because the proposed South Ocean Beach reconfiguration would not occur and would therefore not result in floodplain disturbance from human activities.

Table 6. Summary of Construction-Related Floodplain Impacts for each Alternative

	No-Action	Alternative 1	Alternative 2	Alternative 3
Floodplain Disturbance	0	378,592 square feet (8.69 acres)	344,990 square feet (7.92 acres)	364,654 square feet (8.37 acres)
Vegetation Removal	0	104,892 square feet (2.41 acres)	103,149 square feet (2.37 acres)	96,655 square feet (2.22 acres)
Current Impervious Area	128,506 square feet (2.95 acres)	128,506 square feet (2.95 acres)	128,506 square feet (2.95 acres)	128,506 square feet (2.95 acres)
Proposed Impervious Area Increase	0	58,684 square feet (1.35 acres)	42,357 square feet (0.97 acres)	47,358 square feet (1.09 acres)
Total Proposed Impervious Area	128,506 square feet (2.95 acres)	187,190 square feet (4.3 acres)	170,863 square feet (3.92 acres)	175,864 square feet (4.04 acres)

VISITOR USE, EXPERIENCE, AND SAFETY

Affected Environment

Assateague Island NS is open year-round and receives over two million visitors annually. In March 2022, Assateague Island NS announced a record 2.66 million visitors in 2021. Assateague Island NS is one of the few publicly accessible points along the east coast of the United States where visitors can enjoy seashore values such as clean ocean water and beaches, undeveloped bay and marshlands, natural sounds free of manmade disturbances, seashore viewsheds, night skies, and wildlife viewing.

The Seashore's proximity to Washington DC, Baltimore, and Philadelphia metropolitan areas draws many visitors, while residents of the surrounding communities also contribute noticeably to visitation. Although visitation is highest during the summer months (June – August), Assateague Island NS has been experiencing increases in visitation during the spring (April – May) and fall (September – October) seasons. Assateague Island NS visitation consists largely of family groups arriving by private vehicles, while motor coaches bring senior citizens to the area, and students arrive by school bus for scheduled educational programs. Visitors to the Seashore can enjoy a variety of activities including camping, canoeing, kayaking, biking, birding, hiking, shell collecting, shellfishing (e.g., clams and crabs), surf fishing, swimming, sunbathing, and surfing.

South Ocean Beach provides access to a variety of these activities from the onsite parking area (Photo 5). Visitors access the beach from the parking area to enjoy a variety of outdoor recreational activities. The NPS currently provides two portable shower units, two vault toilets (Photo 6), and a bench along an accessible pedestrian boardwalk that leads to the beach from the parking area. Peak season demand for these amenities, particularly the vault toilets, often results in long waiting times for visitors. Excessive use also requires a high frequency of custodial maintenance.


Photo 5. Existing Parking Area


Photo 6. Existing Portable Showers and Vault Toilets

South Ocean Beach provides visitors with a unique experience compared to North Ocean Beach. South Ocean Beach tends to be less crowded since there is less parking capacity and because it is farther from the entrance gate station. Lifeguards do not patrol South Ocean Beach and the NPS allows pets on the beach year-round, unlike at North Ocean Beach, where the NPS prohibits pets in the guarded beach area from Memorial Day weekend through September 30. South Ocean Beach also provides access to other outdoor recreational activities and experiences, most notably, to the OSV zone (Photo 7). OSV use is a unique and popular attraction at Assateague Island NS that is accessible only from South Ocean Beach. The NPS sells approximately 14,000 permits annually to access the OSV zone, and nearly 91,000 vehicles entered the OSV zone in 2021. These permits provide 24 / 7 access to the OSV zone for camping, fishing, stargazing, picnicking, and other outdoor recreational activities. Visitors with appropriate permits can also access most of the designated hunting areas along Assateague Island NS directly from the OSV zone.

South Ocean Beach provides visitors with access to the Life of the Dunes Trail (Photo 8) from the south end of the parking area. A multi-use path (Photo 9) that extends the entire length of the developed area within Assateague Island NS enters South Ocean Beach from Oceanside Drive and ends at the entrance to the Life of the Dunes Trail. South Ocean Beach also provides opportunities for nature study, birding, picnicking, and other outdoor leisure and educational activities. Visitors can also observe Assateague's wild horses occasionally walking through the area.

Photo 7. OZV Zone Entrance Gate


Photo 8. Life of the Dunes Trail

South Ocean Beach cannot support existing visitation, which creates congestion, potential user conflicts, and safety concerns. The parking area reaches capacity sometimes as early as 8:30 a.m. on weekends during the summer peak period, resulting in unauthorized parking around the perimeter of the parking area and along Bayberry Drive. Visitors who park on Bayberry Drive when the parking area is full walk on the road and through the traffic circle to access the beach instead of using established pedestrian pathways. Upwards of 200 vehicles may be present at South Ocean Beach during these peak visitation periods, but the existing parking area can accommodate only 80 vehicles.

Photo 9. Existing Multi-use Path

Major traffic congestion can occur when the OSV zone reaches the 145-vehicle maximum capacity. The vehicle queue space is inadequate, causing the line of vehicles to back up through the traffic circle and onto Bayberry Drive (Photo 10), which blocks access to the parking area and restricts emergency vehicle access. Also, the current location of the parking area requires visitors to cross over the OSV zone entrance road (Photo 11) to access the beach, which creates safety hazards, especially during peak visitation.

Photo 10. OSV Queue from Traffic Circle during Peak Visitation

Photo 11. Existing Pedestrian Crossing on OSV Zone Entrance Road

Impact Analysis Methodology

This analysis focuses on how each alternative would potentially affect park visitors at South Ocean Beach. The NPS performed an analysis of potential impacts using professional judgment, information provided by park staff, public comments, and experience with similar past projects.

Impacts of No Action

Visitor use, experience, and safety would remain the same as current conditions under the no-action alternative for the next 10 to 15 years. The NPS would continue to operate and maintain the facilities that serve South Ocean Beach, including removing sand deposited by storms and high winds, supplementing the parking area with additional clay and clamshell surface material, repairing the pedestrian boardwalk, and other activities, as needed. All the current uses and visitor experiences provided at South Ocean Beach would remain accessible.

However, the South Ocean Beach parking area would continue to reach capacity early in the morning on weekends during peak visitation, causing visitors to park along Bayberry Drive. The OSV zone entrance road

would continue to back up into the traffic circle and onto Bayberry Drive, causing congestion and blocking emergency vehicle access. Although the NPS plans to move the existing OSV gate south and closer to the beach to provide additional queue capacity, backups into the traffic circle would still occur during peak visitation. Safety hazards would also continue to be a concern for pedestrians crossing the OSV zone entrance road, and for visitors walking on Bayberry Drive and through the traffic circle to access the beach.

By 2040, continued shoreline regression would threaten the NPS's ability to safely operate the facilities that serve South Ocean Beach at their current locations. The NPS anticipates that sea level rise influenced by climate change will intensify coastal storms and surges, which is likely to result in more frequent inundation and damage to park infrastructure at South Ocean Beach. The demand for maintenance to keep the facilities that serve South Ocean Beach operational through 2040 would drastically increase, and the NPS may need to relocate park infrastructure, such as the OSV zone entrance road, if it is no longer safe to use at its current location.

Impacts Common to All Action Alternatives

Construction Phase

Implementation of any of the action alternatives would occur over an approximately six- to eight- month timeframe. The NPS would plan for the majority of construction to occur between October and April when visitation to South Ocean Beach would be low compared to peak season periods. However, because the NPS may not be able to obtain asphalt during the winter, the NPS expects that the project would not be substantially complete until May or June.

The NPS would close some South Ocean Beach facilities to visitors, such as the parking area, multi-use trail, and beach access and amenities, while construction is taking place. The NPS would use fencing or other similar temporary barriers to establish a perimeter around active construction areas for the safety of park visitors and wildlife. Construction would only occur during the daytime to avoid night sky impacts and nighttime noise disruption at nearby campsites or for visitors on the OSV zone. The NPS would implement a phased construction approach to maintain traffic circulation between Oceanside Drive and Bayberry Drive and to maintain access to the OSV zone. The NPS would also maintain access to hunting areas from the OSV zone and would establish temporary alternative access routes to the duck blinds nearest to South Ocean Beach. Similarly, although the NPS would close the existing entrance to the Life of the Dunes Trail during construction, the NPS would establish a temporary alternative route to the trail to maintain access.

Facility Relocation

Once construction is complete, relocating the OSV zone entrance road and traffic circle to more sustainable locations would benefit visitors by prolonging the useable lifespan of the facilities that serve South Ocean Beach. The reconfiguration of South Ocean Beach would also indirectly benefit park visitors because it would be easier for NPS to operate and maintain the facilities.

Visitors would also benefit from the proposed relocation of the OSV zone entrance road because it would improve safety be eliminating user conflicts. The current condition requires pedestrians to cross the OSV zone entrance road to access the beach from the parking area. However, the proposed condition eliminates this pedestrian crossing, thus reducing potential user conflicts and safety concerns. The NPS would establish a formal pedestrian crossing on the OSV zone entrance road to access the Life of the Dunes Trail. This crossing would be less of a safety concern to NPS because visitors tend to access the beach in much greater numbers than the Life of the Dunes Trail.

Additionally, the proposed OSV zone entrance road relocation west of the parking area, along with the relocated traffic circle to the northwest, would also benefit visitors to South Ocean Beach by allowing NPS to increase the vehicle queue capacity on the OSV zone entrance road from 30 vehicles to approximately 90 vehicles. This increase in queue capacity would better support current visitation and would reduce the frequency of vehicles in the queue blocking access to the parking area, or through the traffic circle, thus

improving circulation through South Ocean Beach. The NPS also proposes to install a single vault toilet at the air pump station along the OSV zone exit lane for the benefit of OSV users and hunters.

Upgraded Amenities

The NPS proposes a variety of other upgrades and amenities that would benefit visitors and improve the experience at South Ocean Beach. Currently, there are two accessible parking spaces at the existing parking area, as well as two portable shower units and two vault toilets adjacent to the boardwalk that provides the only pedestrian path to the beach. The NPS would establish two separated paths using similar boardwalk material to spread visitors out on the beach, and for ease of access from the parking area. The proposed project would establish three accessible parking spaces within the parking area at each pedestrian path, which would increase the number of available accessible parking spaces from two to six. Furthermore, the proposed project includes comfort stations consisting of two accessible showers, water fountains, and vault toilets adjacent to the paths, effectively doubling these amenities to better support current visitation to South Ocean Beach. The NPS would also improve the multi-use path by establishing a loop that would reconnect to the existing path on Oceanside Drive. The NPS would establish formal trail crossings on Bayberry Drive and Oceanside Drive for safety and would also establish a formalized trailhead along the multi-use path at the entrance to the Life of the Dunes Trail for the benefit of visitors that would include a bike rack, bench, and interpretive signage.

Impacts of South Ocean Beach Reconfiguration Alternative 1

Parking Area

The proposed improvements to the South Ocean Beach parking area under Alternative 1 would benefit visitors and support NPS resource management objectives. Expanding the parking area from the current 80 vehicle capacity to 152 vehicles would more adequately support current visitation to South Ocean Beach. The additional parking availability and the use of deterrents like guardrail or fencing would prevent visitors from parking along Bayberry Drive or in other unauthorized areas near South Ocean Beach, thus improving safety and minimizing resource degradation. Additionally, the proposed asphalt surface under Alternative 1 would improve efficiency and safety within the parking area by allowing NPS to stripe parking spaces and delineate pedestrian routes. However, the use of asphalt for the parking area at South Ocean Beach under Alternative 1 may detract slightly from the experience for visitors who prefer the existing clamshell surface material. The 45-degree parking spaces proposed under Alternative 1 would be easier to enter and exit, and the one-way traffic flow through the parking area would provide the safest experience for visitors among the alternatives by reducing user conflicts, since pedestrians would only have to be concerned with vehicles coming from one direction when crossing the drive aisles.

Project Lifespan

Over the lifespan of the project, which NPS anticipates being at least 25 years, Alternative 1 would benefit visitor use, experience, and safety by relocating facilities most susceptible to damage caused by natural coastal processes and storm events to more sustainable locations, by improving safety, and by expanding capacity and upgrading amenities to better support current visitation to South Ocean Beach. The 45-degree angled parking spaces and one-way traffic flow would be the safest for visitors circulating through the parking area as compared to the other action alternatives.

Impacts of South Ocean Beach Reconfiguration Alternative 2

Parking Area

The proposed improvements to the South Ocean Beach parking area under Alternative 2 would benefit visitors and support NPS resource management objectives. Expanding the parking area from the current 80 vehicle capacity to 150 vehicles would more adequately support current visitation to South Ocean Beach. The additional parking availability and the use of deterrents like guardrail or fencing would prevent visitors from parking along Bayberry Drive or in other unauthorized areas near South Ocean Beach, thus improving

safety and minimizing resource degradation. Additionally, the proposed asphalt surface under Alternative 2 would improve efficiency and safety within the parking area by allowing NPS to stripe parking spaces and delineate pedestrian routes. However, the use of asphalt for the parking area at South Ocean Beach under Alternative 2 may detract slightly from the experience for visitors who prefer the existing clamshell surface material. The 90-degree parking spaces and two-way traffic flow through the parking area proposed under Alternative 2 would mean that pedestrians would have to be concerned with vehicles coming from both directions when crossing the drive aisles. But the 90-degree parking format is more efficient than the 45-degree angled spacing proposed under Alternative 1, requiring less area to provide the same number of parking spaces.

Project Lifespan

Over the lifespan of the project, which NPS anticipates being at least 25 years, Alternative 2 would benefit visitor use, experience, and safety by relocating facilities most susceptible to damage caused by natural coastal processes and storm events to more sustainable locations, by improving safety, and by expanding capacity and upgrading amenities to better support current visitation to South Ocean Beach. The two-way drive aisles in the parking area would add a potential user conflict for pedestrians circulating through the parking area when compared to Alternative 1, but the 90-degree parking format allows the NPS to construct the proposed project under Alternative 2 within a smaller footprint to reduce resource impacts while accommodating the same number of parking spaces.

Impacts of South Ocean Beach Reconfiguration Alternative 3

Parking Area

The proposed improvements to the South Ocean Beach parking area under Alternative 3 would benefit visitors and support NPS resource management objectives. Expanding the parking area from the current 80 vehicle capacity to 150 vehicles would more adequately support current visitation to South Ocean Beach. The additional parking availability and the use of deterrents like guardrail or fencing would prevent visitors from parking along Bayberry Drive or in other unauthorized areas near South Ocean Beach, thus improving safety and minimizing resource degradation. Additionally, the proposed clay and clamshell parking surface under Alternative 3 would not allow the NPS to stripe parking spaces or pedestrian routes. However, the NPS would use other means such as signage, fencing, and bollards to delineate parking aisles and establish pedestrian routes through the parking area. The 90-degree parking spaces and two-way traffic flow through the parking area under Alternative 3 would mean that pedestrians would have to be concerned with vehicles coming from both directions when crossing the drive aisles. But the 90-degree parking format is more efficient than the 45-degree angled spacing proposed under Alternative 1, requiring less area to provide the same number of parking spaces. The NPS designed the parking area under Alternative 3 to be larger than Alternative 2 since there is an inherent inefficiency in parking on a surface without delineated parking spaces.

Project Lifespan

Over the lifespan of the project, which NPS anticipates being at least 25 years, Alternative 3 would benefit visitor use, experience, and safety by relocating facilities most susceptible to damage caused by natural coastal processes and storm events to more sustainable locations, by improving safety, and by expanding capacity and upgrading amenities to better support current visitation to South Ocean Beach. The two-way drive aisles in the parking area would add a potential user conflict for pedestrians circulating through the parking area when compared to Alternative 1, but the 90-degree parking format allows the NPS to construct the proposed project under Alternative 3 within a smaller footprint to reduce resource impacts while accommodating the same number of parking spaces. However, the inefficiencies of not having delineated parking spaces and the inability to mark pedestrian routes on the parking surface would result in similar inefficiencies as the existing parking area.

Cumulative Impacts

Past, present, and reasonably foreseeable planned actions on Assateague Island NS are primarily aimed at preserving park resources and improving park infrastructure for the benefit of visitors in consideration of current and future effects of climate change. Assateague Island NS is a highly dynamic natural landscape that is expected to become less stable under most climate change projections. Sea level rise, and more intense and possibly more frequent storms, are expected to increase the likelihood for erosion, overwash, inlet breaching, shoreline retreat, dune migration, and island narrowing. Past projects, including the Bayside Picnic Parking Area and South Ocean Beach Parking Area Relocation projects, have benefited visitors, as the NPS moved these facilities to more sustainable locations allowing for visitor use to continue with less risk to public safety and less susceptibility to the effects of climate change.

The NPS anticipates that reasonably foreseeable planned actions, such as the Bayside and Oceanside Campgrounds Rehabilitation and Reconfiguration project, Maryland District Entrance Station Rehabilitation and Reconfiguration project, and the ongoing Dune Maintenance Program implemented at Assateague Island NS will benefit visitors by managing resources and implementing planning to protect park infrastructure from impacts caused by sea level rise and coastal storms, improving access to Assateague Island NS, and relocating facilities to continue to make them available for visitors to enjoy at more sustainable locations. Beneficial cumulative impacts would result when the benefits to visitor use, experience, and safety under any of the action alternatives are combined with the benefits of other planning actions on Assateague Island NS. There would be no cumulative impacts under the no-action alternative because the NPS would continue to maintain the existing South Ocean Beach facilities in their current condition, resulting in no new impacts to visitor use, experience, and safety, over what is currently occurring. However, the long-term effects of climate change are likely to result in an increase in the demand for maintenance and the need to relocate facilities being threatened by dune migration and other coastal processes exacerbated by climate change.

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CONSULTATION AND COORDINATION

The NPS provided an opportunity for the public to comment on the proposed action during the planning process. The NPS also conducted consultation and coordination activities with federal, state, and local agencies and elected officials; American Indian tribes; and other interested parties to identify issues related to natural and cultural resources and concerns of park visitors. This chapter provides a summary of the public involvement and agency consultation and coordination that occurred during project planning to inform the project and the EA.

PUBLIC INVOLVEMENT

The NPS involved the public in project planning by holding a 30-day civic engagement period from June 6, 2022 through July 5, 2022, including a public open house on June 28, 2022 at the Assateague Island NS Headquarters / Environmental Education Center. The NPS announced the civic engagement period and public open house on May 31, 2022 by sending an email blast with a newsletter to the mailing list established for the project that included agencies, stakeholders, and other potentially interested individuals. The NPS also posted the civic engagement newsletter on the NPS Planning, Environment and Public Comment (PEPC) project webpage at http://parkplanning.nps.gov/SouthOceanBeach, and posted a notice on the Assateague Island NS's official Facebook page.

The NPS received a total of 35 separate correspondences from members of the public during the civic engagement period. Many of the comments expressed general support for, or disapproval of, the project, expressed preferences for certain concepts and / or parking area surface material (i.e., asphalt or clamshell), or suggested modifications to improve the concept designs.

AGENCY CONSULTATION AND COORDINATION

Section 106 of the National Historic Preservation Act

Pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800), NPS initiated consultation with MHT, service as the State Historic Preservation Office, in a letter dated March 7, 2022. On July 19, 2022, the NPS sent an effects determination letter to MHT requesting concurrence that the proposed project would have no effect on archeological resources, historic structures and districts, and cultural landscapes, as none were identified in the project's area of potential effect. MHT concurred with the NPS's effects determination in a letter dated August 3, 2022. Correspondence between NPS and MHT is in Appendix B.

Tribal Consultation

The NPS sent tribal consultation initiation letters to the Delaware Nation and Delaware Tribe of Indians on March 7, 2022. The NPS also sent a consultation letter to the Pamunkey Indian Tribe on February 4, 2023. The NPS resent consultation initiation letters to the Delaware Nation and Delaware Tribe of Indians on February 15, 2023 in a second attempt to engage the tribes. The Delaware Nation responded on March 13, 2023 requesting that an archeological survey be performed. The NPS sent the Phase I archeological survey report completed in May 2022 the following day and answered questions from the Tribal Historic Preservation Officer in emails dated April 3 and 4, 2023. On April 5, 2023, the Delaware Nation responded that there are no concerns with the project moving forward assuming that there would be no deep excavations.

Tribal consultation correspondence is in Appendix B. The NPS has not received a response from the Delaware Tribe of Indians or Pamunkey Indian Tribe as of May 11, 2023.

Section 7 of the Endangered Species Act

The NPS obtained an official species list using the USFWS IPaC System on August 1, 2022 that identified the federally listed threatened eastern black rail, piping plover, seabeach amaranth, and the monarch butterfly, a candidate species, as potentially affected by the proposed project. The USFWS also identified the Bethany Beach firefly as a species of concern in a letter received by NPS on July 5, 2022. The NPS sent a letter to USFWS on September 12, 2022 requesting concurrence that the project may affect, but is not likely to adversely affect, federally listed species. The USFWS concurred with the determination in a response letter dated October 12, 2022. Correspondence between NPS and USFWS, as well as the IPaC species list, are in Appendix B.

Maryland Department of Natural Resources, Wildlife and Heritage Service

The NPS sent a letter to the MDDNR Wildlife and Heritage Service on March 7, 2022 requesting information on state-listed species with the potential to occur in the vicinity of the project study area. MDDNR responded in a letter dated April 8, 2022 identifying three plant species of concern that have been recorded in the vicinity of the project study area, including seabeach knotweed, meadow lovegrass, and seabeach amaranth. Based on the locations of the documented occurrences of these species, the NPS anticipates there would be no impacts to these species. However, the NPS would conduct presence / absence surveys prior to construction to determine if any of these species of concern occur in the project study area, and would coordinate with MDDNR, if needed, to identify appropriate measures to minimize disturbance to these species if the NPS identifies them within the project study area. Correspondence between NPS and MDDNR is in Appendix B.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972 (16 United States Code [USC] 1451 et seq., as amended) provides for the protections, restoration, and responsible development of the nation's coastal resources. The CZMA established the National Coastal Zone Management Program as a partnership between the federal government and coastal states. Section 307 of the CZMA requires that federal actions within or outside the coastal zone that affect any land or water use or natural or cultural resource of the coastal zone, carry out those activities consistent, to the maximum extent practicable, with the state's coastal management program (16 USC 1456). The Maryland Coastal Zone Management Program consists of enforceable coastal policies, including general policies, coastal resource policies, and coastal use policies. MDDNR enforces Maryland's Coastal Zone Management Program in partnership with other local, regional, and state agencies that support the program's efforts to ensure that proposed federal activities are consistent with Maryland's coastal resource objectives and policies.

Assateague Island is within Maryland's coastal zone, which extends from three miles offshore in the Atlantic Ocean to the inland boundaries of 16 counties (including Worcester County) and the City of Baltimore that border the Atlantic Ocean, Chesapeake Bay, or the Potomac River. As such, the NPS evaluated the proposed project's consistency with Maryland's enforceable coastal policies. Through this evaluation the NPS has determined that the proposed action would be consistent, to the maximum extent practicable, with the coastal policies set forth by Maryland's Coastal Zone Management Program. The NPS submitted a federal consistency determination to Maryland's Federal Consistency Coordinator on January 5, 2023 requesting concurrence with the NPS's determination.

The NPS received a response letter from MD DNR's Coastal Consistency Coordinator on April 25, 2023. The letter stated that the project is consistent with the enforceable coastal policies of the Maryland Coastal Zone Management Program under the conditions that NPS schedules a meeting with MDE and the USACE prior to submitting a joint permit application for Section 404 / 401 authorization, the NPS develops a Critical Area Buffer Management Plan, and that NPS resubmits the project for a new consistency determination if the design or disturbance numbers change. The federal consistency determination and MD DNR's response are in Appendix B.

List of Agencies and Stakeholders

Table 7 lists the agencies, elected officials, American Indian tribes, and other stakeholders that NPS contacted during planning to request input on the proposed project. The NPS consulted individuals without affiliation, but the NPS has excluded their names for privacy.

Table 7. Agencies, Elected Officials, Tribes, and Other Stakeholders

Contact Group		
Federal Government Agencies and American Indian Tribes	National Oceanic and Atmospheric Administration, Fisheries Service USACE, Baltimore District USEPA, Region 3 USFWS, Chincoteague National Wildlife Refuge USFWS, Chesapeake Bay Field Office Delaware Nation Delaware Tribe of Indians Pamunkey Indian Tribe	
Federal and State Elected Officials	Ben Cardin, US Senate Chris Van Hollen, US Senate Andrew P. Harris, US House of Representatives Charles J. Otto, Worcester County State Delegate Mary Beth Carozza, Worcester County State Delegate	
Maryland Government Agencies	Assateague State Park Maryland Critical Area Commission MDE, Federal Consistency Coordinator MDDNR, Coastal Fisheries Program MDDNR, Coastal Zone Management Program MDDNR, Maryland Park Service MDDNR, Wildlife and Heritage Service MHT	
Local Elected Officials	Berlin, Maryland Ocean City, Maryland Pocomoke City, Maryland Snow Hill, Maryland Wicomico County Council Wicomico County, County Executive Worcester County Commission	
Local Government Agencies	Worcester County, Department of Development Review and Permitting Worcester County, Department of Emergency Services Worcester County, Department of Tourism and Economic Development	
Stakeholders	ARWhite Photography Assateague Campers Assateague Coastal Trust Assateague Island Alliance Assateague Mobile Sportfishermen's Association Assateague OSV Count Assateague Outfitters At The Beach rentals Audubon Society Maryland-DC Berlin Fire Company Burnham Guides Coastal Kayak Conservation Community Consulting Dana Marie Photography Delmarva Discovery Center Discovery Bicycle Tours	Dona Jung Photography Dusk to Dawn Bowfishing Escape The District Julie Wagner Photography LLC Lower Shore Land Trust Magic Bowfishing Maryland Coastal Bays Program National Wild Turkey Federation OC Liquid Limo Sarah Murray Photography Talbot Street Watersports The Nature Conservancy The Nature Conservancy MD/DC Chapter Thrive Engineering, LLC Wild Horse Cabanas

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2022 Climate Change Indicators: Oceans. Online at https://www.epa.gov/climate-indicators/oceans. Accessed April 4, 2023.

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National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration

Environmental Assessment

Appendix A
Wetland and Floodplain Statement of Findings

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WETLAND AND FLOODPLAIN STATEMENT OF FINDINGS

South Ocean Beach Parking Area and
Over-Sand Vehicle Entrance Road Reconfiguration

Assateague Island National Seashore

Maryland

Recommended: _____ _____

Superintendent — Date

Assateague Island National Seashore

Certification of
Technical Adequacy and
Servicewide Consistency: _____ _____

Water Resources Division — Date

Approved: _____ _____

Regional Director — Date

INTRODUCTION

Pursuant to the National Environmental Policy Act of 1969 (NEPA), the National Park Service (NPS) is preparing an Environmental Assessment (EA) for the proposed reconfiguration of the South Ocean Beach parking area and over-sand vehicle (OSV) entrance road at Assateague Island National Seashore (Assateague Island NS) in Worcester County, Maryland.

Executive Order 11990 *Protection of Wetlands*, Executive Order 11988 *Floodplain Management*, and Executive Order 13690 *Establishing a Federal Flood Risk Management Standard*, which amended 11988 on January 30, 2015, require the NPS and other federal agencies to evaluate the likely impacts of actions in wetlands and floodplains. Director's Order 77-1: *Wetland Protection* (effective October 2002) and Procedural Manual 77-1: *Wetland Protection* (reissued June 2016) provide NPS procedures for complying with Executive Order 11990, while Director's Order 77-2: *Floodplain Management* and Procedural Manual 77-2 provide NPS procedures for complying with Executive Order 11988. Guidance for the Federal Flood Risk Management Standard is described in Executive Order 13690 and the associated implementation guidelines.

This Statement of Findings was prepared per Director's Order 77-1: *Wetland Protection* and Director's Order 77-2: *Floodplain Management* for the proposed South Ocean Beach parking area and OSV entrance road reconfiguration and documents compliance with the NPS wetland protection and floodplain management procedures. The NPS has completed a Statement of Findings because the proposed project would occur within the 100-year floodplain and would result in a loss of wetlands on Assateague Island NS.

PROPOSED ACTION

Under Alternative 2 (the Preferred Alternative), the NPS proposes the following improvements to make the facilities that serve South Ocean Beach less susceptible to damage caused by natural coastal processes and to manage visitors more effectively. The proposed action would reduce the storm-related risks to facilities that serve South Ocean Beach by relocating them to a more sustainable location. The proposed action would also reconfigure the facilities to manage current visitor use more effectively and upgrade infrastructure and amenities that are in poor condition and /or inadequate for current visitation.

Circulation

The Preferred Alternative would relocate the traffic circle approximately 650 feet northwest of its existing location centered on the existing Bayberry Drive. The traffic circle would be similar in size to the existing circle, allowing for safe circulation by providing adequate sight distance and separation between entrance and exit points. Bayberry Drive would intersect with the traffic circle on the north side while Oceanside Drive would intersect with the traffic circle from the northeast. The OSV entrance road intersects with the traffic circle on the west side and the parking area access road intersects with the traffic circle on the south side. Roads would have 11-foot-wide lanes and the traffic circle lane width would be 15 feet. The traffic circle would accommodate the WB (wheelbase)-50 design vehicle type (defined as a large semi-trailer truck with an overall length of 55 feet) and recreational vehicles (RV) without traversing over the center circle.

Parking Area

The Preferred Alternative would expand the parking area by about 20,670 square feet to approximately 58,870 square feet in area. The parking area would include an asphalt surface material with pavement markings to accommodate 150 standard 9-foot-wide parking spaces, six accessible parking spaces, and two-way drive aisles that would be 24 feet combined width. Also, the entrance and exit lanes to the parking area would run adjacent to each other to connect to the traffic circle.

OSV Zone Entrance Road

The Preferred Alternative would relocate the OSV zone entrance road to a more sustainable location, looping to the west around the new parking area. The NPS would make the temporary location of the existing electronic OSV zone entrance gate permanent, allowing for queuing capacity for up to approximately 90 vehicles. The NPS would use asphalt pavement for the road to approximately 15 feet east of the multi-use path crossing on the OSV zone entrance road where the road surface would then change to a clay and clamshell surface. The OSV zone entrance road would have 5-foot-wide shoulders and clear space on both sides of the roadway to allow vehicles to turn around and leave the queue if desired.

OSV Zone Air Compressor Station

Additionally, the NPS would construct an air compressor station near the southwest corner of the parking area, adjacent to the exit lane on the OSV zone entrance road, approximately 60 feet from the clay and clamshell OSV zone entrance road surface, and approximately 1,000 feet south of the entrance to the traffic circle. The air compressor station would provide eight air pumps, a vault toilet, and downward facing lighting adjacent to the OSV zone exit lane of similar shape and size to the existing station. A new, prefabricated structure would house the air compressor and any electrical panels. A utility contractor would extend an electrical conduit from its current location to the air compressor building to operate the compressor and lights at the air pumps. The NPS would install a standard timber gate or automated gate system on the OSV zone entrance road just off the traffic circle to restrict access to the OSV zone if needed. The Preferred Alternative would also include pavement widening to accommodate short-term parking for one to two vehicles to access the vault toilet.

Beach Access and Amenities

The Preferred Alternative would establish two pedestrian paths to provide access to the beach from the parking area. The NPS would design the paths to align with pedestrian routes in the parking area and would distance the paths from each other as much as feasible to spread visitors out on the beach. The paths would be on existing pavement or constructed as at-grade wooden boardwalks until they reach the beach where they would transition to accessible matting placed on the sand.

The Preferred Alternative would also establish two comfort stations including one prefabricated concrete vault toilet building (each with two toilets), pedestal showers, water fountains, changing cabanas, and benches adjacent to each boardwalk path near the parking area. The NPS would widen the paths in front of these facilities to provide sufficient space for pedestrian circulation within and through the comfort stations. The comfort stations would be moveable so the NPS could relocate the facilities in response to storms and / or changes to the landscape. Service vehicles would be able to access the vault toilets for maintenance and cleaning from the parking area across from the multi-use path. The NPS would install a standard timber gate to prevent unauthorized parking at the vault toilet access locations. A utility contractor would extend a water line from its current location on Oceanside Drive to the pedestal showers and drinking fountains.

Multi-Use Path

The NPS would construct a 10-foot-wide asphalt multi-use path around the parking area and OSV zone entrance road under the Preferred Alternative, creating a loop trail that connects back to the existing path on Oceanside Drive. The path's alignment would direct visitors to the Life of the Dunes Trail at the south end of South Ocean Beach. A new trailhead established at the entrance to the Life of the Dunes Trail would include a bicycle rack, bench, and trailhead signage. The NPS would sign and mark the path that crosses the OSV zone entrance road for pedestrian safety.

Stormwater Management

The Preferred Alternative would incorporate small-scale, nonstructural stormwater management techniques to mitigate the project's effects on water quality and floodplain functions in accordance with Maryland's *Stormwater Management* regulations, the 2000 *Maryland Stormwater Design Manual*, and the 2015 publication *Maryland Stormwater Management and Erosion and Sediment Control Guidelines for State and Federal Projects*. According to the *Maryland Stormwater Design Manual*, the proposed project would qualify as a new development since the existing percent impervious within the project limits is less than 40 percent. The manual therefore requires water quality treatment of 100 percent of the new impervious area and 100 percent of the full depth reconstructed impervious area within the project limits stormwater management facilities. The action alternatives incorporate grass swales for stormwater quality treatment along all new roadways and along the longitudinal edges of the parking area to incorporate stormwater management into the proposed project. The manual would not require stormwater quantity management because existing drainage within the project study area outfalls directly to tidally influenced waters.

Signing and Striping

The NPS would install signing to direct visitors to the parking area, OSV zone entrance road, beach area, and Life of the Dunes Trail; mark unauthorized parking areas; and establish traffic laws and other restrictions. Striping would delineate parking spaces, pedestrian crossings, paths, and roadways. All signing and striping would match NPS standards.

Fencing and Barriers

The Preferred Alternative includes placing split rail fencing, primarily to deter visitors from parking beyond designated spaces and on road shoulders, taking care to maintain safe routes for horses through South Ocean Beach. The NPS would install steel backed timber guardrail to match the existing infrastructure within Assateague Island NS between the multi-use path and the roads as a safety measure and fencing between the multi-use path and parking area to delineate the roadway pavement and path pavement.

Construction Phasing and Staging

Construction phasing would provide continuous access to the OSV gate for those permitted to drive on the beach. The NPS may need to temporarily relocate the OSV gate and / or entrance road to maintain access. The current clamshell parking area and beach access would not be accessible to visitors during construction, as the parking area would serve as the primary materials and equipment staging area.

OTHER ALTERNATIVES CONSIDERED

The NPS evaluated two additional alternatives (Alternatives 1 and 3) in the EA that the NPS did not select as the Preferred Alternative. Both alternatives are similar to the Preferred Alternative except for differences to the parking area and OSV zone air compressor station.

Alternative 1

Under Alternative 1, the NPS would expand the existing parking area by about 40,530 square feet to approximately 78,730 square feet in area. The parking area would include an asphalt surface material with pavement markings to accommodate 152 standard 9-foot-wide parking spaces and six accessible parking spaces. However, unlike the Preferred Alternative, Alternative 1 includes 45-degree angled parking spaces, and a one-way, 14 feet wide drive aisle to facilitate efficient entering and exiting parking spaces and provide safer pedestrian crossings within the parking area. The entrance and exit road to the parking area would split to match the one-way traffic flow in the parking area and to minimize wetland impacts, which is also different from the Preferred Alternative.

Additionally, the NPS would construct the air compressor station under Alternative 1 at a different location along the OSV zone entrance road compared to the Preferred Alternative. Under Alternative 1, the air compressor station would be located approximately 100 feet south of the entrance to the traffic circle. All the facilities provided at the air compressor station under Alternative 1 would be similar to the Preferred Alternative.

Alternative 3

Under Alternative 3, the NPS would expand the parking area by about 31,510 square feet to approximately 69,710 square feet in area. The parking area would accommodate 150, 90-degree angled parking spaces, six accessible parking spaces, and two-way drive aisles that would be 24 feet wide. However, unlike the Preferred Alternative, Alternative 3 involves constructing the parking area using a clay and clamshell surface material like the existing parking area. Pavement markings delineating each parking space are not feasible on this surface material; however, the NPS would install split rail fencing around the parking area, and within its interior, to delineate parking aisles and vehicle circulation. Alternative 3 assumes 10.5-foot-wide parking spaces (Alternative 1 and the Preferred Alternative assume parking spaces are each nine feet wide) to compensate for the inefficiencies that are inherent to this type of alternative parking surface. The six accessible parking spaces would require an accessible surface, such as asphalt, to facilitate pedestrian access between the parking spaces and the paths and boardwalks. The entrance and exit lanes to the parking area would be on the same alignment as the Preferred Alternative, running adjacent to each other to connect to the traffic circle.

The OSV zone air compressor station location under Alternative 3 would be like Alternative 1. All the facilities provided at the air compressor station under Alternative 3 would be similar to the Preferred Alternative.

SITE DESCRIPTION

Wetlands

The NPS conducted a wetland investigation during project planning to determine the presence, extent, and classification of waters of the United States, including wetlands and waters of the State, within the project study area. The NPS delineated one estuarine, intertidal, scrub-shrub (E2SS) wetland and several palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetland systems. Detailed descriptions of the wetlands that would be permanently and/or temporarily impacted during construction of the Preferred Alternative are below. Figure 1 attached to this Statement of Findings displays the locations of these impacted wetlands.

Wetland 5A (WET5A) is within an interdunal depression between the OSV access road and the Life of the Dunes Trail near the southeast corner of the South Ocean Beach parking area. During the investigation, primary indicators of hydrology included a high water table and saturated soils within the wetland. Hydrophytic vegetation dominated WET5A, including wax myrtle (*Morella cerifera*), switchgrass (*Panicum virgatum*), and needlepod rush (*Juncus scirpoides*). Soils met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plan. WET5A encompasses 2,133 square feet (0.05 acres) within the study area and was classified as a PEM wetland with persistent vegetation and a seasonally flooded/saturated and/or intermittently flooded water regime.

Wetland 7 (WET7) is within the existing traffic circle. During the investigation, primary indicators of hydrology included a high water table and saturated soils within the wetland. Hydrophytic vegetation dominated the wetland, including wax myrtle, loblolly pine (*Pinus taeda*), woolly panic grass (*Dichanthelium acuminatum*), small carpetgrass (*Arthraxon hispidus*), common reed (*Phragmites australis*), and roundleaf greenbrier (*Smilax rotundifolia*). Soils met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plain. WET7 encompasses 9,265

square feet (0.21 acres) within the study area and was classified as a PSS wetland with broad-leaved evergreen and needle-leaved evergreen vegetation and a seasonally flooded/saturated water regime.

Wetland 10 (WET10) is adjacent to Bayberry Drive northwest of the traffic circle. During the investigation, primary indicators of hydrology included a high water table and saturated soils. Hydrophytic vegetation dominated WET10, including wax myrtle, loblolly pine, common reed, and roundleaf greenbrier. Soils within the wetland met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plain. WET10 encompasses 4,033 square feet (0.09 acres) within the study area and was classified as a PSS wetland with broad- and needle-leaved evergreen vegetation and a seasonally flooded/saturated water regime.

Wetland 11 (WET11) is primarily located directly north of the traffic circle between Bayberry Drive and Oceanside Drive. The wetland was dominated by hydrophytic vegetation that included narrowleaf cattail (*Typha angustifolia*). Primary indicators of hydrology included a high water table, saturated soils, water marks, and inundation visible on aerial imagery within the wetland. Soils within the wetland met the criteria of stripped matrix, a hydric soil indicator of the Atlantic Coastal Plain. A portion of WET11 consists of a roadside ditch along Bayberry Drive and around the east side of the traffic circle. This portion of WET11 encompasses 4,791 square feet (0.11 acres) within the study area and was classified as a PEM wetland with non-persistent vegetation and a seasonally flooded/saturated and/or intermittently flooded water regime. The remaining portion of WET11 encompasses 74,921 square feet (1.72 acres) within the study area and was classified as a PSS wetland with broad- and needle-leaved evergreen vegetation and a seasonally flooded/saturated water regime. The ditch and adjacent PSS wetlands have a direct surface connection to traditional navigable waters via a culvert that conveys flow within the ditch to a tidal marsh associated with Chincoteague Bay outside of the project study area to the north.

Functions and Values Assessment

The NPS evaluated the functions and values of each wetland using the USACE New England District's "Descriptive Approach" (USACE 1999). The inland wetlands identified during the investigation are generally in interdunal depressions or swales, or in ditches or depressions adjacent to park infrastructure, and serve relatively similar functions, although larger wetlands would have a higher potential to effectively provide these functions compared to smaller wetlands. The following describes the primary wetland functions and values observed for the wetlands:

Groundwater recharge/discharge is a primary function of all the delineated wetlands due to the sandy composition of the soils and because a fragipan or bedrock do not occur that would restrict groundwater/surface water interaction.

Floodflow alteration is a primary function of WET5A and WET11 because they are generally located in depressional features with the capability to store and infiltrate floodwaters.

Sediment/toxicant retention is a function of WET5A and WET11 because they are generally located in depressional features with the potential to retain sediments as water recedes following coastal storm events. Also, sediment and debris from park roadways can be retained in adjacent ditches and wetlands.

Nutrient removal is a function of WET5A and WET11 because they are generally located in depressional features with the potential to sequester nutrients and prevent their transport to other waterbodies.

Production export is a function of all the delineated wetlands because they are likely to provide food sources for wildlife on the Island to varying degrees.

Wildlife habitat is a primary function of all the delineated wetlands. Wetlands in smaller depressional areas can provide habitat for amphibians (seasonally) and for birds and other small

mammals. Larger wetlands bordered by expansive forested uplands and edge habitat are more likely to also provide suitable habitat for white-tailed deer, sika deer, and Assateague's wild horses.

Wetlands at the South Ocean Beach parking area also provide educational/scientific value to the park due to their locations with a dynamic coastal landscape, as well as recreational, visual quality/aesthetic, and heritage value because of the opportunities for visitors to be able to view and appreciate the wetlands for bird watching, or while walking to the beach, hiking the Life of the Dunes Trail, or walking, biking, or driving on park roadways and trails.

Interdunal wetlands are unique coastal features that vary greatly in plant species composition due to fluctuations in water levels and salinity. These wetland habitats are also now known to support populations of Bethany Beach firefly (*Photuris bethaniensis*) on Assateague Island NS, which is a species currently under review by the USFWS for listing under the Endangered Species Act.

Functional Quality Rating

WET5A supports all the functions described in the previous section. Its location within an interdunal depression is unique to the coastal maritime dune and grassland system, and its position on the dynamic landscape makes WET5A sensitive to coastal events and natural processes. Even though WET5A is small it was given a "high" quality rating because of its uniqueness, landscape position, lack of invasives, and the variety of functions it supports, including providing potential habitat for Bethany Beach firefly. An estimated 392 square feet (0.01 acres) of temporary impacts are anticipated to WET5A from minor grading activities to establish desired contours to connect WET5A with a potential wetland creation area aimed at mitigating project wetland impacts.

WET7 supports some of the functions described previously within this section, primarily providing suitable habitat for birds and other wildlife. However, because WET7 is located within the traffic circle, it is believed that the wetland has established due to alterations to the pre-development natural hydrologic conditions of the site. Due to this, WET7's limited functional value, and because the invasive common reed has established within the wetland, WET7 has been given a "low" quality rating. An estimated 685 square feet (0.02 acres) of temporary impacts are anticipated to WET7 from minor grading activities to establish desired contours to connect WET7 with a potential wetland creation area aimed at mitigating project wetland impacts.

WET10 supports some of the functions described previously within this section, primarily providing suitable habitat for birds and other wildlife. WET10 has been given a "low" quality rating because of its limited functional value, location adjacent to Bayberry Drive, and because common reed has established within the wetland. An estimated 1,628 square feet (0.04 acres) of permanent impacts are anticipated to WET10 from grading and establishing desired contours for the entrance road to the parking area. Additionally, an estimated 479 square feet (0.01 acres) of temporary impacts are anticipated from installing ESCs.

The PSS portion of WET11 supports all the functions described previously in this section. Due to its size, WET11 has the highest functional value of the impacted wetlands, although there remains the possibility that the wetland was established due to alterations to the pre-development natural hydrologic conditions of the site when Oceanside Drive and Bayberry Drive were constructed. As such, the PSS portion of WET11 was given a "moderate" quality rating. An estimated 2,813 square feet (0.06 acres) of permanent impacts are anticipated to the PSS portion of WET11 from grading and establishing desired contours for the multi-use trail. Additionally, an estimated 2,780 square feet (0.06 acres) of temporary impacts are anticipated to the PSS portion of WET11 from installing ESCs and from minor grading activities to establish desired contours.

The PEM portion of WET11 is within a ditch at the existing traffic circle and along Bayberry Drive. The ditch provides a direct surface water connection to tidal waters and has been observed to have standing water and is sparsely vegetated with cattails and other wetland plants. The PEM portion of

WET11 provides all the functions described previously in this section but was given a "low" quality rating since the wetland is in a manmade ditch adjacent to park infrastructure. An estimated 2,147 square feet (0.05 acres) of permanent impacts are anticipated to the PEM portion of WET11 from relocating the ditch to accommodate the new parking area entrance road and multi-use path. A new ditch would be established adjacent to these features to replace the hydrologic functions of the existing ditch. Additionally, an estimated 771 square feet (0.02 acres) of temporary impacts are anticipated to the PEM portion of WET11 from installing ESCs and from minor grading activities to establish desired contours.

Floodplains

As shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map 24047C0285H, effective July 16, 2015, South Ocean Beach is entirely within Zone AE, an area that presents a 1% annual chance of flooding, also known as the 100-year floodplain (FEMA 2015a). The 100-year floodplain represents areas of high flood risk according to FEMA. On Assateague Island, Zone AE occurs behind the dunes and is not subject to wave action. Base flood elevations are five to six feet in the project study area. Figure 2 attached to this Statement of Findings displays the location of the Preferred Alternative within the 100-year floodplain. The proposed action is considered a Class I Action per NPS Procedural Manual 77-2: *Floodplain Management*.

Floods on Assateague Island can typically range from minor overwash events during high tides to major flooding from hurricanes and other coastal storms. Excessive precipitation can also cause flooding in low elevation areas across the barrier island. Major storms can drive ocean storm surges completely across the island, dramatically changing habitats and the entire landscape. High waves and water have periodically swept entirely over Assateague Island and flowed into Chincoteague Bay and Sinepuxent Bay adjacent to the project study area. As demonstrated by Tropical Storm Isabel in 2003 and Hurricane Sandy in 2012, NPS facilities on Assateague Island are extremely vulnerable to coastal flood events. However, because large coastal storm events are typically predictable, with warning times ranging from many hours to several days, evacuation can be fairly easy to coordinate. Assateague Island NS prepares an annual Hurricane and Coastal Storm Plan for the protection of park staff, visitors, and resources that outlines the operating procedures for storm preparations, including evacuation, and the responsibilities of park staff before, during, and after a storm.

Floodplains provide a wide range of benefits to natural environments and human society. According to FEMA, floodplains can provide a variety of water resource, biological, and societal functions (FEMA 2015b). Water resource functions of floodplains include natural flood storage, erosion control, groundwater recharge, and surface water quality treatment. Biological functions of floodplains include production export and provision of fish and wildlife habitats. Societal resources are the floodplain functions that benefit human society with harvestable products, recreational opportunities, and educational values.

Natural resource conditions at South Ocean Beach provide beneficial functions that help to mitigate impacts of flooding. Estuarine wetlands west of South Ocean Beach provide flood storage, erosion control, and sediment retention functions. Dunes along the seashore impede storm surge. Interdunal wetlands and other inland depressions also function to store flood waters. The floodplain on Assateague Island also supports infiltration and groundwater recharge due to the unconsolidated nature of the soil and fluctuating groundwater table. Floodplain vegetation can provide water quality treatment, support a wide variety of wildlife, and provide recreational opportunities.

Sea level rise and coastal flooding can be used as an indicator of climate change. At Lewes, Delaware, just over 33 miles north of Assateague Island, sea level increased nearly nine inches between 1960 and 2021 according to collected data. Data from Lewes also provides evidence that the average number of coastal flood events per year has increased. Between 1950 and 1989, the average number of coastal flood events was less than 2 per year. The average number increased to just over four from

1990 to 2009, and to an average of almost eight between 2010 and 2020 (EPA 2022). Additionally, along the Atlantic coast, sea level rise is converting land to open water. The EPA estimates that approximately four square miles of land was lost along the Atlantic coast between 1996 and 2011 (EPA 2022). As a barrier island, Assateague Island is especially vulnerable to coastal flooding, rising sea level, land loss, and other climate change effects.

JUSTIFICATION FOR USE OF WETLANDS AND THE FLOODPLAIN

Wetlands Justification

Data collected by NPS suggests that shoreline regression and westward dune migration will cause significant sand deposition on the existing traffic circle and OSV zone entrance road by 2040, making the facilities that serve South Ocean Beach unsustainable at their current locations. To meet the project's purpose and need to make the facilities less susceptible to damage from these natural coastal processes, the NPS proposes to relocate these facilities to the west away from projected 2040 dune areas where wetland impacts are unavoidable. Additionally, to meet the project's purpose and need to manage visitor use more effectively, the NPS must expand the facilities into wetlands to meet current visitation demand. Therefore, the loss of wetlands is unavoidable under each of the action alternatives, including the Preferred Alternative.

Assateague Island NS staff conducted a choosing by advantages (CBA) workshop in November 2022 to determine which of the three action alternatives presented in this EA provides the most value (i.e., benefits measured against the cost to construct, maintain, and replace the alternative based on a 25-year useful lifespan). The NPS chose Alternative 2 as the Preferred Alternative through this process, which has more wetland impacts than Alternative 1, but less impacts than Alternative 3. Although the Preferred Alternative has 23 percent more wetland impacts than Alternative 1 (6,683 square feet compared to 5,301 square feet, respectively), the Preferred Alternative accommodates the targeted number of parking spaces within 16,327 square feet less impervious surface area and 33,602 square feet less overall floodplain disturbance compared to Alternative 1, while also having the lowest initial cost and life-cycle cost of the three action alternatives.

Floodplain Justification

According to FEMA floodplain mapping, the majority of Assateague Island NS, including South Ocean Beach, is within the 100- or 500-year floodplain of Chincoteague Bay, Sinepuxent Bay, and/or the Atlantic Ocean. A portion of the North Ocean Beach parking area and secondary dune directly to the east is the only part of the developed area of Assateague Island NS not within the floodplain. As such, floodplain disturbance necessary to reconfigure the South Ocean Beach parking area and OSV zone entrance road is unavoidable. Implementation of the Preferred Alternative would result in 344,990 square feet (7.92 acres) of disturbance and an increase of 42,357 square feet (0.97 acres) of impervious surface area within the 100-year floodplain.

MITIGATION

Wetland Mitigation

The NPS would implement the following measures to minimize wetland disturbance and compensate for the loss of wetlands associated with the Preferred Alternative:

1) The NPS would continue to evaluate opportunities to further reduce wetland impacts as the design progresses.
2) The NPS would obtain required authorizations and certifications for unavoidable wetland impacts in accordance with Sections 404 and 401 of the Clean Water Act and Maryland's *Nontidal Wetlands* (Code of Maryland Regulations [COMAR] 26.23.01) regulations.

3) The NPS would develop an Erosion and Sediment Control (ESC) Plan to contain sediment in the construction area. The ESC Plan would include a variety of BMPs, such as stabilized construction entrances, silt fence, and other common practices, to prevent sediment transport offsite and potentially into wetlands.

4) Implementation of the Preferred Alternative would result in an unavoidable loss of wetlands from construction activities, including grading and other site preparations, for the proposed infrastructure improvements at South Ocean Beach. The NPS anticipates a total of 6,588 square feet (0.15 acres) of permanent nontidal wetland impacts based on schematic-level designs developed for the Preferred Alternative, including 2,147 square feet (0.05 acres) to PEM wetlands, and 4,441 square feet (0.1 acres) to PSS wetlands. Alternative 2 would also result in a total of approximately 5,107 square feet (0.12 acres) of temporary nontidal wetland impacts, including 1,163 square feet (0.03 acres) to PEM wetlands, and 3,944 square feet (0.09 acres) to PSS wetlands from installing ESCs and grading activities. Figure 1 attached to this Statement of Findings presents the site-specific wetland impacts that the NPS anticipates would occur. Table 1 provides a summary of the anticipated wetland impacts and the quality rating that has been used to determine mitigation to satisfy NPS requirements.

Table 1. Summary of Construction-Related Wetland Impacts for the Preferred Alternative

Wetland	Wetland Type	Permanent Impact	Temporary Impact	Quality Rating
WET5A	PSS	none	392 square feet (0.01 acres)	High
WET7	PSS	none	685 square feet (0.02 acres)	Moderate
WET10	PSS	1,628 square feet (0.04 acres)	479 square feet (0.01 acres)	Moderate
WET11	PSS	2,813 square feet (0.06 acres)	2,780 square feet (0.06 acres)	High
WET11	PEM	2,147 square feet (0.05 acres)	771 square feet (0.02 acres)	Moderate
Total Impact		6,588 square feet (0.15 acres)	5,107 square feet (0.12 acres)	

The Preferred Alternative would permanently or temporarily impact 11,695 square feet (0.27 acres) of wetland. To mitigate for the loss of wetlands and associated functions, as well as for temporary wetland disturbances, the NPS would design and construct an on-site compensatory wetland mitigation project under the Preferred Alternative. The project would involve wetland creation to compensate for the loss of wetland area and functions based on the anticipated impacts and functional quality rating given for each impacted wetland. Given the quality of the wetlands being impacted, and the quality of the compensatory wetlands, the NPS compliance requirement is at least a minimum of 11,695 square feet (0.27 acres) of wetland creation (a 1:1 mitigation ratio of area of impact equal to the area of compensation) under the Preferred Alternative.

As part of the proposed project, the NPS would remove approximately 80,503 square feet (1.85 acres) of existing pavement at South Ocean Beach and would restore both wetland and upland habitats in these areas. The NPS has identified more than 64,000 square feet (1.47 acres) of potential wetland creation opportunities within these pavement removal areas to satisfy all compensatory mitigation requirements. Figure 1 includes the locations of potential wetland creation areas at South Ocean Beach.

The NPS would therefore create 64,000 square feet (1.47 acres) of wetlands by establishing groundwater connectivity as the primary source of hydrology, allowing wetland conditions to develop over time, similar to the interdunal wetlands that currently exist at South Ocean Beach. The NPS would establish vegetation within the created wetlands to replace the PEM and PSS wetland types that the project would permanently remove. These created wetlands

would compensate for the loss of wetland area and functions by providing flood storage, groundwater infiltration, sediment/toxicant retention, nutrient removal, and potential habitat once vegetation establishes. The NPS anticipates created wetlands would receive moderate to high quality ratings once wetland conditions become established.

The NPS would coordinate with the Maryland Department of the Environment (MDE) and the US Army Corps of Engineers (USACE), as needed, to ensure that the NPS develops an adequate compensatory mitigation plan that also satisfies Clean Water Act requirements and Maryland's *Nontidal Wetlands* regulations. This coordination would include developing a mitigation monitoring strategy aimed at ensuring wetland conditions are establishing and to address any concerns that might hinder the successful creation of wetlands per the approved mitigation plan. This monitoring typically occurs annually over a five to 10-year period post-construction.

5) The NPS would allow temporarily disturbed wetland areas to naturally revegetate after construction is complete.

Floodplain Mitigation

The NPS would implement measures to minimize floodplain disturbance including, but not limited to, the following:

1) The proposed facilities would be consistent with the 44 CFR Part 60 standards under the National Flood Insurance Program.
2) The NPS would obtain authorization for proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations.
3) The NPS would implement the proposed action in part as a mitigation measure to allow natural coastal processes to continue while maintaining visitor use and minimizing resource damage within the floodplain. Relocating the South Ocean Beach facilities west of areas projected to be covered by dunes by 2040 would increase the useable lifespan of the facilities and minimize flood risk by placing the new facilities at locations less susceptible to damage from shoreline regression, dune migration, and coastal storm events. The NPS would also use moveable facilities as much as possible to further minimize flood risk.
4) Assateague Island NS's Hurricane and Coastal Storm Plan would reduce flood risk by outlining procedures for managing storms, handling emergencies, and recovering assets.
5) The NPS would obtain authorization from MDE for the proposed floodplain disturbance in accordance with Maryland's *Construction on Nontidal Waters and Floodplains* regulations, prior to commencing the proposed project. The NPS would also develop an ESC Plan for the project for MDE approval that would include BMPs to minimize temporary floodplain disturbances outside the limits of construction primarily from erosion and sedimentation. The NPS would also coordinate internally to ensure that the project and proposed mitigation for floodplain impacts are in compliance with Director's Order 77-2: *Floodplain Management*.
6) The NPS would include appropriate stormwater management BMPs in the design of the proposed project to compensate for the increase in impervious surface area and loss of floodplain functions provided at South Ocean Beach. Due to the sandy substrate at the site, stormwater management BMPs are likely to consist primarily of ditches and swales adjacent to impervious areas to capture and infiltrate stormwater runoff and to provide for groundwater recharge. These swales would also serve to temporarily store floodwaters until infiltration is possible following more intense storms.

7) Additionally, the NPS estimates that Alternative 2 would require 103,149 square feet (2.37 acres) of vegetation clearing and associated habitat loss within the floodplain. To mitigate habitat loss, the NPS would remove approximately 80,503 square feet (1.85 acres) of existing pavement and restore wetland and upland habitats in these areas. The NPS would prepare a Critical Area Buffer Management Plan that would include on-site vegetation restoration and off-site plantings, as necessary, to compensate for vegetation removal in accordance with Maryland's *Critical Area* regulations. The on-site restoration areas would also serve flood storage and groundwater infiltration functions in addition to reducing habitat loss.
8) The NPS would allow other temporarily disturbed floodplain areas to naturally revegetate after construction is complete.
9) The NPS would also require the construction contractor clean vehicles and equipment offsite to prevent the transport of invasive plant seeds, propagules, and other weed seeds, onto Assateague Island NS.

CONCLUSION

The Preferred Alternative would permanently or temporarily impact 11,695 square feet (0.27 acres) of wetland. This includes 6,588 square feet (0.15 acres) of permanent nontidal wetland impacts and 5,107 square feet (0.12 acres) of temporary nontidal wetland impacts based on schematic-level designs developed for the Preferred Alternative.

Implementation of the Preferred Alternative would require compensatory mitigation to comply with NPS Director's Order 77-1: *Wetland Protection*. Mitigation would involve creating 64,000 square feet (1.47 acres) of PEM and PSS wetlands to compensate for the loss of wetland area and functions. The NPS anticipates that the proposed project would have beneficial impacts because the wetland creation would more than compensate for the anticipated loss of wetland area, types, and functions.

Additionally, although the Preferred Alternative would result in unavoidable floodplain disturbance, the impact would not be noticeable due to the relatively small-scale of the proposed project when compared to the overall floodplain area. The proposed project would increase the useable lifespan of the South Ocean Beach facilities, minimize flood risk, and mitigate impacts to floodplain functions and values under the Preferred Alternative.

The NPS finds that this proposed action is consistent with the policies and procedures of Director's Order 77-1: *Wetland Protection* and Director's Order 77-2: *Floodplain Management*, and Executive Order 13690.

REFERENCES

Federal Emergency Management Agency

2015a *Flood Insurance Rate Map 24047C0285H*, effective July 16, 2015, Worcester County, Maryland. FEMA Map Service Center. Online at https://msc.fema.gov/portal/home. Accessed February 6, 2023.

2015b *Chapter 8: Floodplain Natural Resources and Functions*. Emergency Management Institute. Online at http://www.training.fema.gov/hiedu/docs/fmc/chapter%208%20-%20floodplain%20natural%20resources%20and%20functions.pdf. Accessed February 6, 2023.

National Park Service

2016 *Procedural Manual 77-1: Wetland Protection*. Online at https://www.nps.gov/policy/DOrders/Procedural_Manual_77-1_6-21-2016.pdf. Accessed February 6, 2023.

US Army Corps of Engineers

1999 *Wetland Functions and Values, A Descriptive Approach*. The Highway Methodology Workbook Supplement. Online at https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf. Accessed February 6, 2023.

US Environmental Protection Agency

2022 Climate Change Indicators: Oceans. Online at https://www.epa.gov/climate-indicators/oceans. Accessed April 4, 2023.

ATTACHMENTS

Figure 1. Preferred Alternative Wetland Impact Map

Figure 2. Preferred Alternative FEMA Flood Zone Map

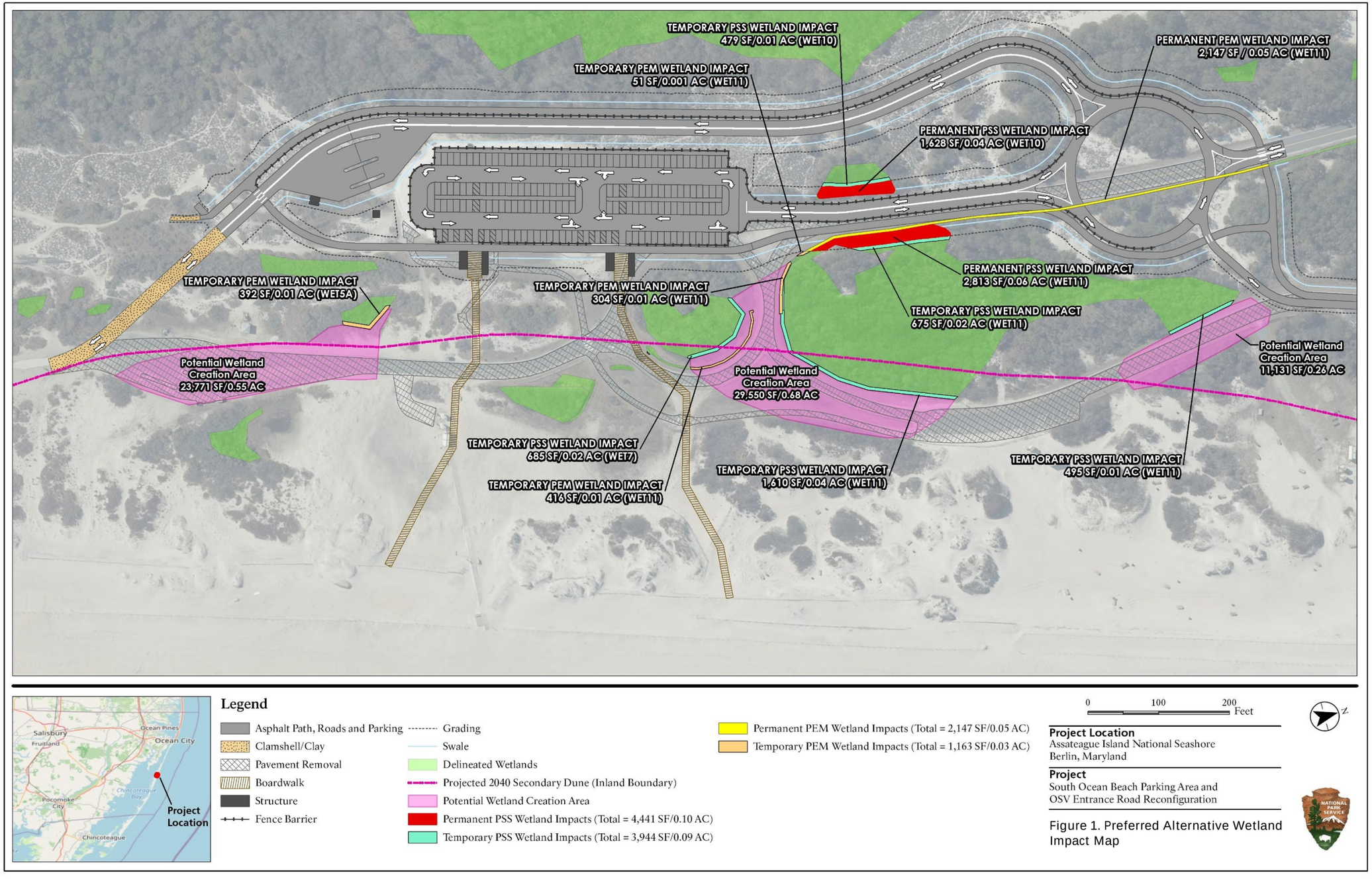

Figure 1. Preferred Alternative Wetland Impact Map

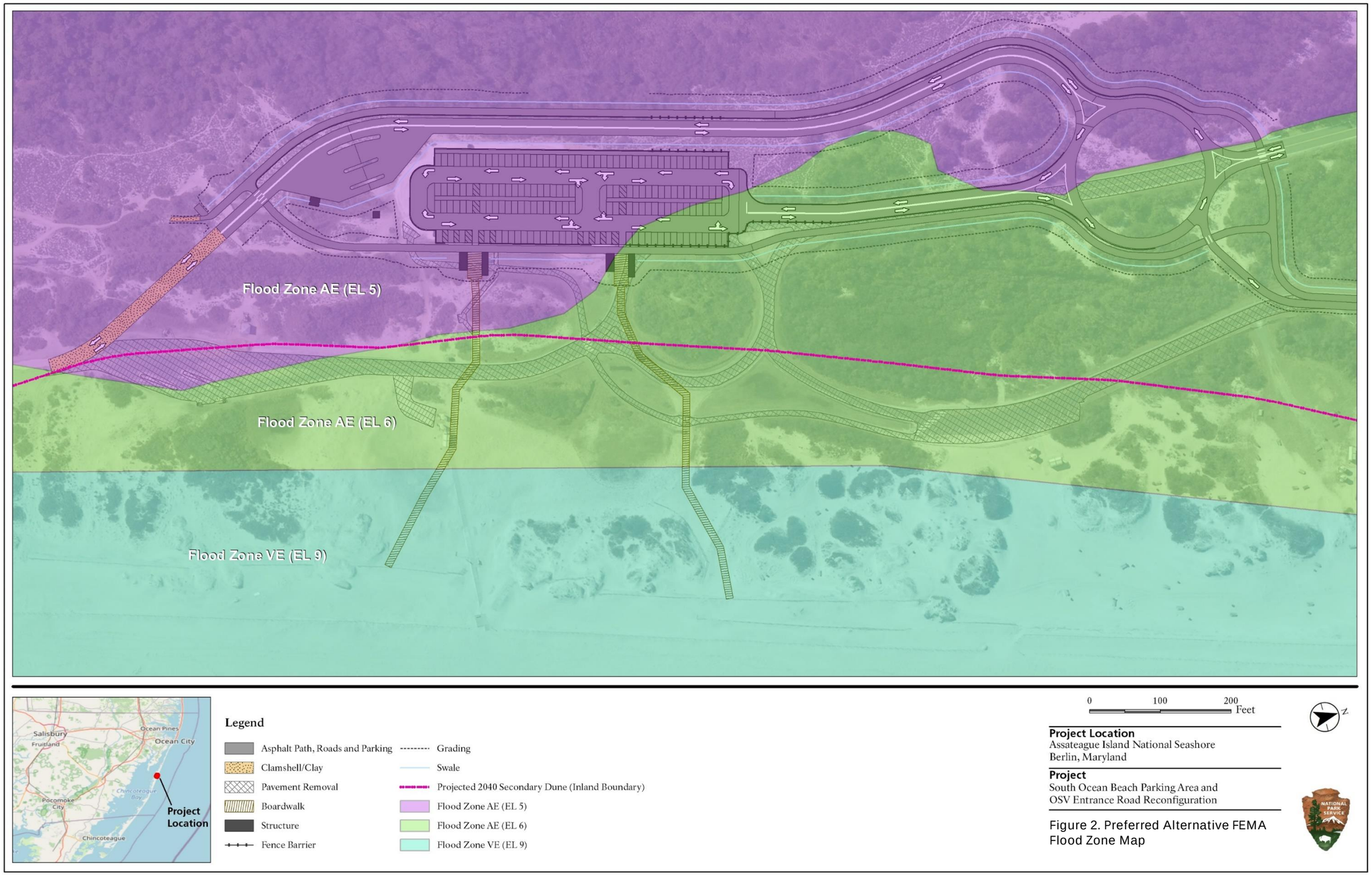

Figure 2. Preferred Alternative FEMA Flood Zone Map

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National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration

Environmental Assessment

Appendix B
Agency Correspondence

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United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

IN REPLY REFER TO

March 7, 2022

Beth Cole, Administrator
Review and Compliance
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023

Sent by email to: beth.cole@maryland.gov

Re: Initiation of Section 106 Consultation, South Ocean Beach Parking and Over Sand Vehicle Entrance Reconfiguration Project, Assateague Island National Seashore

Dear Ms. Cole:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance at Assateague Island National Seashore. The NPS wishes to formally initiate consultation with the Maryland Historical Trust (MHT), serving as the Maryland State Historic Preservation Office (SHPO), in compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations (36 CFR § 800).

Purpose of and Need for Action

The proposed project is to reconfigure the South Ocean Beach Recreation Area infrastructure and amenities by designing a logical site plan that is less susceptible to damage from future storm events, increases capacity, and improves safety and the visitor experience. The proposed project includes:

- relocating / reconfiguring the parking area and providing expanded capacity;
- relocating / reconfiguring the OSV entrance to eliminate crossing beach access pathways;
- increasing queuing capacity on the OSV access road to reduce the frequency that access to the parking area becomes blocked during peak visitation periods;
- upgrading amenities such as showers, changing rooms, and restroom facilities;
- maintaining access to the Life of the Dunes Trail by establishing a new trailhead;
- using flexible design strategies that will allow facilities to be relocated or quickly rebuilt as conditions on the Island change or in response to damaging storm events; and
- minimizing impacts to sensitive resources.

The proposed project is needed to address the increased frequency and intensity of storm events due to climate change and the westward dune movement that is encroaching on the South Ocean Beach Recreation Area. The NPS determined from annual shoreline regression data on Assateague Island collected between 1996 and 2018 that the South Ocean Beach Recreation Area shoreline had migrated westward between 1.4 and 1.55 meters per year on average during that period. This data suggests that a portion of the existing traffic circle and most of the OSV access road and entrance will be under secondary dune sand by 2040, making the area unsustainable at its current location.

The project is also needed because of the congestion and safety concerns caused by high visitation to the South Ocean Beach area. The NPS expressed the following concerns related to visitor use and experience:

- The current site layout is unsafe particularly for pedestrians, but also for drivers, bicyclists, and wildlife. The original parking area was relocated as a reactive measure following Hurricane Sandy and was not logically designed at that time.
- The OSV entrance queue area provides insufficient capacity to support the line of vehicles that regularly form when the OSV zone reaches the 145-vehicle maximum. The line can back up through the traffic circle, which blocks access to the parking area and the ability for visitors to turn around onto northbound Bayberry Drive, creating major traffic congestion and restricting access for emergency vehicles.
- The South Ocean Beach parking area does not provide sufficient capacity for the recreation area and its location requires visitors to cross over the OSV entrance to access the beach, which creates safety hazards, especially during peak visitation. The parking area reaches capacity by 8:30 a.m. on weekends during the summer peak period. Once the parking area is full, visitors park along Bayberry Drive, which is causing resource degradation.

Section 106 and Historic Properties

To prepare for the Section 106 consultation process, NPS has developed a graphic illustration of the draft Area of Potential Effect (APE) that is subject to modification through the consultation process. The draft APE for direct (i.e., physical disturbance) effects encompasses the area within which the NPS is currently developing a range of alternatives for the proposed reconfigured site plan. The draft APE for indirect (i.e., visual) effects includes the areas from which the project site is reasonably visible based on a preliminary field inspection. The APE for direct and indirect effects are displayed on the attached figure as red and purple polygons, respectively.

The NPS has consulted with MHT on two past projects in the vicinity of the proposed action. These projects include the Bayside Picnic and South Ocean Beach Parking Relocation Project in 2013, and the proposed Oceanside Campground Relocation Project in 2018. The APE for both projects overlap the APE for the proposed action as shown on the attached figure. Both projects resulted in concurrence from MHT that there would be no effects to historic properties, which includes historic structures/districts and archeological resources. The NPS assumes the findings from these past consultations remain applicable within the portions overlapping the draft APE for the proposed South Ocean Beach Parking and OSV Entrance Reconfiguration Project.

The draft APE for the proposed South Ocean Beach Parking and OSV Entrance Reconfiguration Project does however consist of areas that have not been assessed for archeological potential as part of past projects. The NPS proposes to conduct archeological assessment and survey within these areas of the APE for direct effects. The boundaries of the APE for the proposed action do not encompass any structures that are listed, or that are potentially eligible for listing, in the National Register of Historic Places.

Section 106 and NEPA Coordination

The NPS will prepare an Environmental Assessment (EA) to document the analysis of potential impacts of the proposed site plan reconfiguration project in accordance with NEPA. The NPS plans to coordinate the Section 106 and NEPA processes per the implementing regulations (36 CFR § 800.8) of the NHPA. The NPS will also develop an Assessment of Effect for this project as a separate, but parallel, process to the EA.

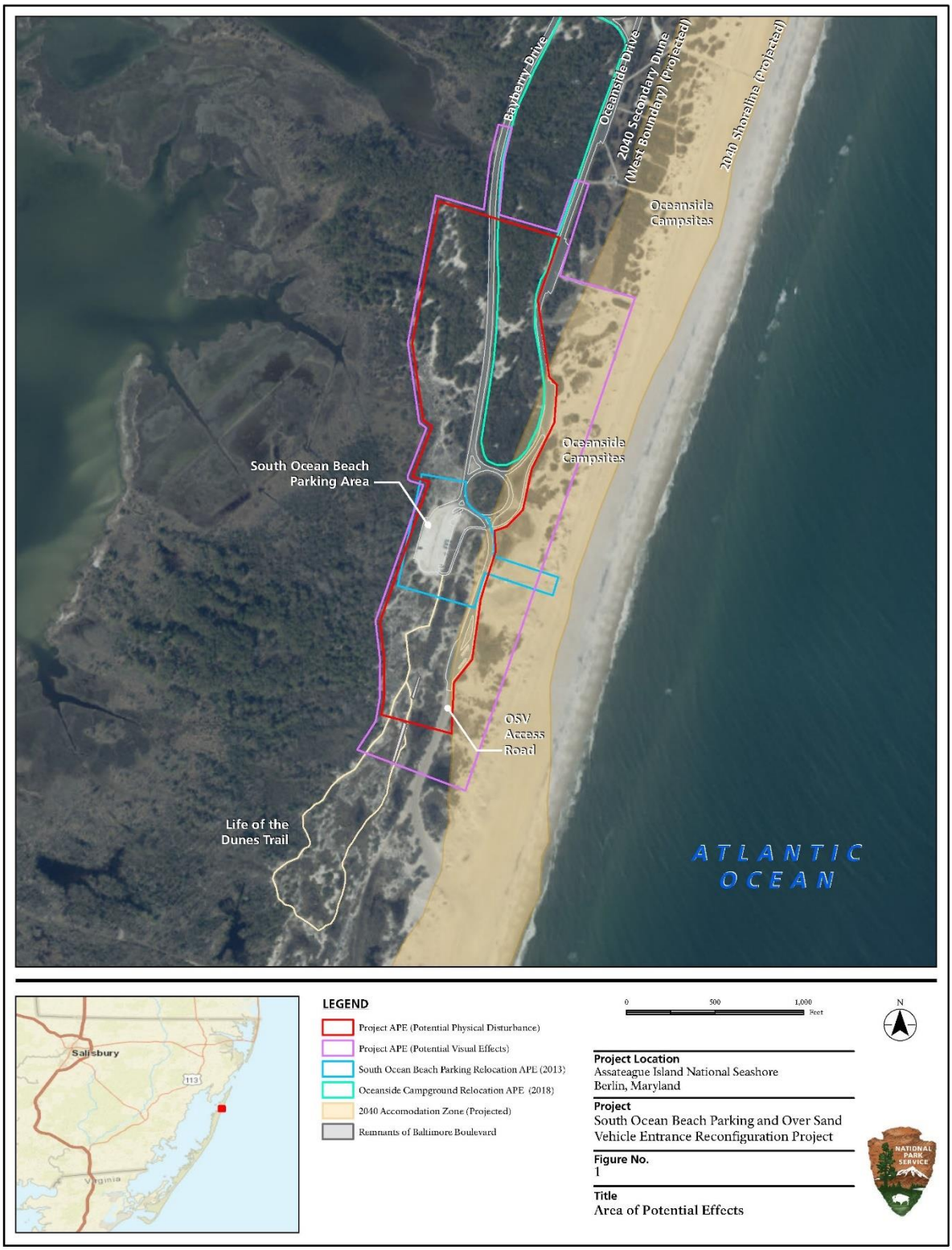
We look forward to beginning the Section 106 consultation process for this project. If you have any questions or preliminary feedback related to the project, draft APE, historic properties, or upcoming investigations please contact Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

Sincerely,

Hugh Hawthorne
Superintendent

Enclosures: South Ocean Beach Parking and OSV Entrance Reconfiguration Project APE Map

cc:


Bayberry Drive
Oceanside Drive
2040 Secondary Dune (West Boundary) (Projected)
2040 Shoreline (Projected)
Oceanside Campsites
Oceanside Campsites
South Ocean Beach Parking Area
OSV Access Road
Life of the Dunes Trail
ATLANTIC OCEAN
Salisbury
113
Virginia
LEGEND
Project APE (Potential Physical Disturbance)
Project APE (Potential Visual Effects)
South Ocean Beach Parking Relocation APE (2013)
Oceanside Campground Relocation APE (2018)
2040 Accomodation Zone (Projected)
Remnants of Baltimore Boulevard
0
500
1,000
Feet
N
Project Location
Assateague Island National Seashore
Berlin, Maryland
Project
South Ocean Beach Parking and Over Sand Vehicle Entrance Reconfiguration Project
Figure No.
1
Title
Area of Potential Effects
NATIONAL PARK SERVICE

[EXTERNAL] Re: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project (MHT Log #202201067)

Beth Cole - MHT <beth.cole@maryland.gov>
Fri 3/18/2022 3:29 PM
To: Hulslander, Bill <Bill_Hulslander@nps.gov>

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Bill,

Thank you for your recent letter, dated March 7, 2022 and received by the Maryland Historical Trust (Trust) on March 8, 2022, initiating consultation with the Trust pursuant to Section 106 of the National Historic Preservation Act for the above-referenced undertaking.

We understand that NPS proposes to reconfigure the South Ocean Beach Recreation Area infrastructure and amenities to increase capacity, improve safety and visitor experience, and to be less susceptible to damage from future storm events. Your letter provided a preliminary APE for the undertaking. We understand that NPS will be completing an archeological assessment and survey within the APE for direct effects to identify any archeological resources that may be impacted by the project. We await receiving the results of the archeological investigations for review and comment, when available.

We appreciate NPS's early coordination on this undertaking to ensure the appropriate consideration of the park's cultural resources during project planning and implementation. We look forward to further coordination with NPS and other consulting parties to complete the Section 106 review of this undertaking and await NPS's findings of effect on historic properties for review and concurrence. If you have questions or need further assistance, please contact me at beth.cole@maryland.gov. Thank you for providing us this opportunity to comment. Have a good weekend!

Beth

To check on the status of a submittal, please use our online search:
https://mht.maryland.gov/compliancelog/ComplianceLogSearch.aspx.

Beth Cole
Administrator, Project Review and Compliance
Maryland Historical Trust
Maryland Department of Planning
100 Community Place
Crownsville, MD 21032

20220205

F
NPS
EJR

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

IN REPLY REFER TO:

RECEIVED
JUL 19 2022
By

July 19, 2022

Beth Cole, Administrator
Review and Compliance
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023

Sent by email to beth.cole@maryland.gov.

Re: Determination of No Effect to Historic Properties
South Ocean Beach Parking Area and Over-Sand Vehicle (OSV) Entrance Road Reconfiguration
Assateague Island National Seashore

WO Co.

Dear Ms. Cole:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking Area and Over-Sand Vehicle (OSV) Entrance Road at Assateague Island National Seashore. The project would make the South Ocean Beach recreation area more resilient to natural coastal processes and future storm events, improve safety, and protect and enhance the visitor experience and park resources through visitor use management strategies. Conceptual drawings developed by NPS of possible options for the South Ocean Beach reconfiguration are attached.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations (36 CFR § 800), NPS initiated consultation with the Maryland Historical Trust (MHT), serving as the Maryland State Historic Preservation Office (SHPO), in a letter dated March 8, 2022. The letter briefly described the project, defined an Area of Potential Effects (APE), discussed two past planning efforts with APEs that overlap the APE for the present undertaking, and described the NPS' plan to conduct a Phase I archeological assessment and survey within areas of the APE that have not been previously surveyed. Consultation initiation letters were sent concurrently to the Delaware Nation and Delaware Tribe of Indians. Responses have not been received from the tribes.

The NPS has assessed the potential effects the proposed undertaking might have on historic properties and our findings are summarized in the remaining sections of this letter.

Historic Structures, Districts, and Cultural Landscapes
The boundaries of the APE for the proposed undertaking do not encompass any structures or districts that are listed, or that are potentially eligible for listing, in the National Register of Historic Places (NRHP).

Archeo: IA SC 8/3/2022

The only above-ground architectural resource identified was an approximately 1160.2-square-foot (107.8-square-meter) segment of the remnant of Baltimore Boulevard at the southern end of the APE. Stantec recommends that the road segment is not eligible for listing in the NRHP. The segment of roadway that exists within the APE possesses little integrity related to the resource's potential period of significance. The black tarmac is highly fragmented and eroded and shifting sands may have displaced the road segment from its original geometric design. As the APE is also not within a significant landscape, the NPS has determined that the proposed reconfiguration of the South Ocean Beach recreation area would have **No Effect** on historic structures, districts, or cultural landscapes.

Archeological Resources

Under contract to NPS, Stantec Consulting Services Inc. (Stantec) conducted an archeological investigation for the South Ocean Beach Parking Area and OSV Entrance Road Reconfiguration Project in April 2022. The investigation was conducted in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* and the MHT's *Standards and Guidelines for Archeological Investigations in Maryland* and consisted of a pedestrian walkover survey of the entire 24.5-acre (9.9-ha) APE. Stantec identified three metal objects south of the South Ocean Beach parking area. All were photographed and left in situ. One object appeared to be a heavily rusted machine part with a central hole and curved edges, while the other two objects resembled mid-century water heaters. Stantec did not identify any archeological sites within the APE and no additional archeological investigations are recommended. The NPS has determined that reconfiguration of the South Ocean Beach recreation area would have **No Effect** on archaeological resources, as none were identified in the APE. The Phase I archeological assessment report prepared by Stantec is attached to this letter.

We look forward to your concurrence with these determinations, or any comments or questions you have regarding the Project or the attached Phase I Archeological Report. Please send any correspondence to Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

Sincerely,

The Maryland Historical Trust has determined that there are no historic properties affected by this undertaking.
Beth Cole 8/3/2022
Date

Hugh Hawthorne
Superintendent

Enclosures:
- South Ocean Beach Reconfiguration Concept Drawings
- Phase I Archeological Assessment for the South Ocean Beach Parking Area and OSV Entrance Road Reconfiguration Project

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

IN REPLY REFER TO

March 7, 2022

Ms. Erin Paden
Historic Preservation Director
Delaware Nation
P.O. Box 825
Anadarko, OK 73005

Sent by email to: epaden@delawarenation-nsn.gov

Re: Initiation of Tribal Consultation, South Ocean Beach Parking and Over Sand Vehicle Entrance Reconfiguration Project, Assateague Island National Seashore

Dear Ms. Paden:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance at Assateague Island National Seashore. The NPS wishes to formally initiate consultation with the Delaware Nation in compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations (36 CFR § 800).

Purpose of and Need for Action
The proposed project is to reconfigure the South Ocean Beach Recreation Area infrastructure and amenities by designing a logical site plan that is less susceptible to damage from future storm events, increases capacity, and improves safety and the visitor experience. The proposed project includes:

- relocating / reconfiguring the parking area and providing expanded capacity;
- relocating / reconfiguring the OSV entrance to eliminate crossing beach access pathways;
- increasing queuing capacity on the OSV access road to reduce the frequency that access to the parking area becomes blocked during peak visitation periods;
- upgrading amenities such as showers, changing rooms, and restroom facilities;
- maintaining access to the Life of the Dunes Trail by establishing a new trailhead;
- using flexible design strategies that will allow facilities to be relocated or quickly rebuilt as conditions on the Island change or in response to damaging storm events; and
- minimizing impacts to sensitive resources.

The proposed project is needed to address the increased frequency and intensity of storm events due to climate change and the westward dune movement that is encroaching on the South Ocean Beach

Recreation Area. The NPS determined from annual shoreline regression data on Assateague Island collected between 1996 and 2018 that the South Ocean Beach Recreation Area shoreline had migrated westward between 1.4 and 1.55 meters per year on average during that period. This data suggests that a portion of the existing traffic circle and most of the OSV access road and entrance will be under secondary dune sand by 2040, making the area unsustainable at its current location.

The project is also needed because of the congestion and safety concerns caused by high visitation to the South Ocean Beach area. The NPS expressed the following concerns related to visitor use and experience:

- The current site layout is unsafe particularly for pedestrians, but also for drivers, bicyclists, and wildlife. The original parking area was relocated as a reactive measure following Hurricane Sandy and was not logically designed at that time.
- The OSV entrance queue area provides insufficient capacity to support the line of vehicles that regularly form when the OSV zone reaches the 145-vehicle maximum. The line can back up through the traffic circle, which blocks access to the parking area and the ability for visitors to turn around onto northbound Bayberry Drive, creating major traffic congestion and restricting access for emergency vehicles.
- The South Ocean Beach parking area does not provide sufficient capacity for the recreation area and its location requires visitors to cross over the OSV entrance to access the beach, which creates safety hazards, especially during peak visitation. The parking area reaches capacity by 8:30 a.m. on weekends during the summer peak period. Once the parking area is full, visitors park along Bayberry Drive, which is causing resource degradation.

Section 106 and Historic Properties

To prepare for the Section 106 consultation process, NPS has developed a graphic illustration of the draft Area of Potential Effect (APE) that is subject to modification through the consultation process. The draft APE for direct (i.e., physical disturbance) effects encompasses the area within which the NPS is currently developing a range of alternatives for the proposed reconfigured site plan. The draft APE for indirect (i.e., visual) effects includes the areas from which the project site is reasonably visible based on a preliminary field inspection. The APE for direct and indirect effects are displayed on the attached figure as red and purple polygons, respectively.

The NPS has consulted with the Maryland Historical Trust (MHT), which serves as the Maryland State Historic Preservation Office (SHPO), on two past projects in the vicinity of the proposed action. These projects include the Bayside Picnic and South Ocean Beach Parking Relocation Project in 2013, and the proposed Oceanside Campground Relocation Project in 2018. The Delaware Nation was also consulted during planning for the 2018 campground relocation project. The APE for both projects overlap the APE for the proposed action as shown on the attached figure. Both projects resulted in concurrence from MHT that there would be no effects to historic properties, which includes historic structures/districts and archeological resources. The NPS assumes the findings from these past consultations remain applicable within the portions overlapping the draft APE for the proposed South Ocean Beach Parking and OSV Entrance Reconfiguration Project.

The draft APE for the proposed South Ocean Beach Parking and OSV Entrance Reconfiguration Project does however consist of areas that have not been assessed for archeological potential as part of past projects. The NPS proposes to conduct archeological assessment and survey within these areas of the APE for direct effects. The boundaries of the APE for the proposed action do not encompass any structures that are listed, or that are potentially eligible for listing, in the National Register of Historic Places.

Section 106 and NEPA Coordination

The NPS will prepare an Environmental Assessment (EA) to document the analysis of potential impacts of the proposed site plan reconfiguration project in accordance with NEPA. The NPS plans to coordinate the Section 106 and NEPA processes per the implementing regulations (36 CFR § 800.8) of the NHPA. The NPS will also develop an Assessment of Effect for this project as a separate, but parallel, process to the EA.

We look forward to beginning the Section 106 consultation process for this project. If you have any questions or preliminary feedback related to the project, draft APE, historic properties, or upcoming investigations please contact Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

Sincerely,

Hugh Hawthorne
Superintendent

Enclosures: South Ocean Beach Parking and OSV Entrance Reconfiguration Project APE Map

cc:

RE: [EXTERNAL] RE: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project Scoping

Katelyn Lucas <klucas@delawarenation-nsn.gov>
Wed 4/5/2023 11:29 PM

To: Hulslander, Bill <Bill_Hulslander@nps.gov>

Cc: Hawthorne, Hugh J <Hugh_Hawthorne@nps.gov>

Thanks for the additional information. As long as the anticipated depth of ground disturbance is no more than 1-2 feet, and if cut/fill actions will be minimized and redevelopment occurring at or above existing grades as much as possible, we won't have concerns with the project moving forward. But please do notify us if any Native American artifacts are inadvertently uncovered.

Sincerely,

Katelyn Lucas
Delaware Nation Tribal Historic Preservation Officer
PhD Candidate
405-544-8115
klucas@delawarenation-nsn.gov

From: Hulslander, Bill <Bill_Hulslander@nps.gov>
Sent: Tuesday, April 4, 2023 8:43 AM
To: Delaware Nation
Cc: Katelyn Lucas; Hawthorne, Hugh J
Subject: Re: [EXTERNAL] RE: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project Scoping

Good morning,

I'm sorry to hear you've had trouble with email. Here is a brief summary of the planning history and status of the South Ocean Beach project.

Pre-NEPA planning and civic engagement were initiated back in March 2022. As part of this effort, initial tribal consultation letters were sent to the Delaware Nation on March 7, 2022.
No response was received, but project planning continued.

The Phase 1 archeological survey was completed in April 2022 to inform schematic design.
NPS conducted a 30-day civic engagement period from June 6 – July 5, 2022, and held an in-person open house meeting on June 28, 2022.
A newsletter announcing these dates was emailed to all potentially interested parties, and posted on the NPS Planning, Environment and Public Comment (PEPC) website (http://parkplanning.nps.gov/SouthOceanBeach)
NPS continued efforts to engage by re-sending tribal consultation letters in February 2023.

After receiving your March 13, 2023 message, I emailed you the archeological survey report for review on March 14, 2023.
NPS is planning to release an Environmental Assessment for a 30-day public review/comment period at the end of May 2023.

Based on findings from prior surveys (Barile and Gonzalez, 2013 Seiter, 2017) within and adjacent to the APE, coupled with the extremely dynamic nature of Assateague Island, the project team concluded that a pedestrian survey would be suitable for this geographic location. Significant quantities of sand get deposited during regular weather/wind events across much of the APE. I've attached a copy of the newsletter that was distributed during the civic engagement period to provide you with some additional background about the site and the project. Although there are no specific construction drawings available at this time, the anticipated depth of ground disturbance would be approximately 1-2 feet. Our intent is to minimize cut/fill actions and focus redevelopment at or above existing grades as much as possible. This approach is consistent with the Seashore's General Management Plan and is intended to make this recreation area and associated facilities more resilient to impacts from natural coastal processes and future storm events.

I'd be happy to discuss any of this with you and/or set up a call to answer any additional questions you may have.

Thank you.
****
Bill Hulslander
Chief of Resource Management
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811
410-629-6061

From: Delaware Nation <delawarenationsection106@gmail.com>
Sent: Monday, April 3, 2023 11:20 AM
To: Hulslander, Bill <Bill_Hulslander@nps.gov>
Subject: RE: [EXTERNAL] RE: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project Scoping

Hello,

I've had multiple of my emails to you receive a failure to deliver notice, so I'm trying to reach you from our office's general gmail account.

I apologize for my confusion, but I'm seeking some clarity on what the current status of this project is. I see that previous emails mentioned that correspondence had begun with my predecessor, Erin Paden, back in March of 2022. But the next email correspondence was dated February 2023...could you clarify if any correspondence was received during that time, and what occurred with the project during that time? Also, I see that I responded on March 13 2023 that we would like to be a consulting party and were requesting an archaeological survey be performed, and that we would like to review the work plan before implementation. I'm assuming we were unable to do that because the work had already been performed?

I just reviewed the Phase 1 Assessment that was emailed to me, however this seems to have only been a surface level walking investigation, which really tells us little to nothing about the potential for undisturbed archaeological resources in the ground. When we request Phase 1 surveys, we usually expect some degree of shovel testing for areas of the APE expecting significant ground disturbance. Could you please remind me of what the anticipated depth of ground disturbance is for this project?

Any clarity you could provide me with on the current state of this project would be helpful, thank you.

Sincerely,

Katelyn Lucas
Delaware Nation Tribal Historic Preservation Officer
PhD Candidate
405-544-8115
klucas@delawarenation-nsn.gov

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Delaware Nation Historic Preservation
31064 SH 281
P.O. Box 825
Anadarko, OK 73005
Office: 405-247-2448 ex. 1403

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Re: [EXTERNAL] RE: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project Scoping

Hulslander, Bill <Bill_Hulslander@nps.gov>
Tue 3/14/2023 4:40 PM
To: klucas <klucas@delawarenation-nsn.gov>
Cc: Hawthorne, Hugh J <Hugh_Hawthorne@nps.gov>

1 attachments (13 MB)
ASIS_south_ocean_beach_phase_I_archeological_assessment_report_final_20220510.pdf;

Dear Ms. Lucas,

Thank you for your interest in the South Ocean Beach Reconfiguration Project at Assateague Island National Seashore. A Phase 1 Archeological Assessment was completed on April 4-6, 2022. The final report from that undertaking is attached for your information.

If need anything else to assist in making a determination, please let me know.

Sincerely,

****
Bill Hulslander
Chief of Resource Management
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811
410-629-6061

From: Katelyn Lucas <klucas@delawarenation-nsn.gov>
Sent: Monday, March 13, 2023 3:32 PM
To: Hulslander, Bill <Bill_Hulslander@nps.gov>
Cc: Hawthorne, Hugh J <Hugh_Hawthorne@nps.gov>
Subject: [EXTERNAL] RE: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project Scoping

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hello,

Yes, Delaware Nation would like to be a consulting party on this project, and we concur with the need for archeological assessment and survey within the areas of the APE expecting direct ground

disturbance effects. We would like to review proposed archaeological work plans and eventual reports prior to making a determination on the project. Thank you.

Sincerely,

Katelyn Lucas
Delaware Nation Tribal Historic Preservation Officer
PhD Candidate
405-544-8115
klucas@delawarenation-nsn.gov

From: Hulslander, Bill <Bill_Hulslander@nps.gov>
Sent: Wednesday, February 15, 2023 5:15 PM
To: Katelyn Lucas
Cc: Hawthorne, Hugh J
Subject: Fw: Assateague Island National Seashore - South Ocean Beach Reconfiguration Project Scoping

Dear Ms. Lucas,

As a follow up to my original message sent to Ms. Erin Paden on March 7, 2022, the National Park Service is reaching out again to determine if the Delaware Nation has interest in a current planning effort at Assateague Island National Seashore, located along the Atlantic coast in Worcester County, Maryland.

If you have any questions or feedback related to the project, please let me know. An email response indicating your level of interest in this project would be appreciated.

Thank you very much.

****
****

Bill Hulslander
Chief of Resource Management
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

IN REPLY REFER TO

March 7, 2022

Mr. Larry Heady
Delaware Tribal Historic Preservation Officer
125 Dorry Lane
Grants Pass, OR 97527

Sent by email to: lheady@delawaretribe.org

Re: Initiation of Tribal Consultation, South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance Reconfiguration Project, Assateague Island National Seashore

Dear Mr. Heady:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance at Assateague Island National Seashore. The NPS wishes to formally initiate consultation with the Delaware Tribe of Indians in compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations (36 CFR § 800).

Purpose of and Need for Action

The proposed project is to reconfigure the South Ocean Beach Recreation Area infrastructure and amenities by designing a logical site plan that is less susceptible to damage from future storm events, increases capacity, and improves safety and the visitor experience. The proposed project includes:

- relocating / reconfiguring the parking area and providing expanded capacity;
- relocating / reconfiguring the OSV entrance to eliminate crossing beach access pathways;
- increasing queuing capacity on the OSV access road to reduce the frequency that access to the parking area becomes blocked during peak visitation periods;
- upgrading amenities such as showers, changing rooms, and restroom facilities;
- maintaining access to the Life of the Dunes Trail by establishing a new trailhead;
- using flexible design strategies that will allow facilities to be relocated or quickly rebuilt as conditions on the Island change or in response to damaging storm events; and
- minimizing impacts to sensitive resources.

The proposed project is needed to address the increased frequency and intensity of storm events due to climate change and the westward dune movement that is encroaching on the South Ocean Beach Recreation Area. The NPS determined from annual shoreline regression data on Assateague Island

collected between 1996 and 2018 that the South Ocean Beach Recreation Area shoreline had migrated westward between 1.4 and 1.55 meters per year on average during that period. This data suggests that a portion of the existing traffic circle and most of the OSV access road and entrance will be under secondary dune sand by 2040, making the area unsustainable at its current location.

The project is also needed because of the congestion and safety concerns caused by high visitation to the South Ocean Beach area. The NPS expressed the following concerns related to visitor use and experience:

- The current site layout is unsafe particularly for pedestrians, but also for drivers, bicyclists, and wildlife. The original parking area was relocated as a reactive measure following Hurricane Sandy and was not logically designed at that time.
- The OSV entrance queue area provides insufficient capacity to support the line of vehicles that regularly form when the OSV zone reaches the 145-vehicle maximum. The line can back up through the traffic circle, which blocks access to the parking area and the ability for visitors to turn around onto northbound Bayberry Drive, creating major traffic congestion and restricting access for emergency vehicles.
- The South Ocean Beach parking area does not provide sufficient capacity for the recreation area and its location requires visitors to cross over the OSV entrance to access the beach, which creates safety hazards, especially during peak visitation. The parking area reaches capacity by 8:30 a.m. on weekends during the summer peak period. Once the parking area is full, visitors park along Bayberry Drive, which is causing resource degradation.

Section 106 and Historic Properties

To prepare for the Section 106 consultation process, NPS has developed a graphic illustration of the draft Area of Potential Effect (APE) that is subject to modification through the consultation process. The draft APE for direct (i.e., physical disturbance) effects encompasses the area within which the NPS is currently developing a range of alternatives for the proposed reconfigured site plan. The draft APE for indirect (i.e., visual) effects includes the areas from which the project site is reasonably visible based on a preliminary field inspection. The APE for direct and indirect effects are displayed on the attached figure as red and purple polygons, respectively.

The NPS has consulted with the Maryland Historical Trust (MHT), which serves as the Maryland State Historic Preservation Office (SHPO), on two past projects in the vicinity of the proposed action. These projects include the Bayside Picnic and South Ocean Beach Parking Relocation Project in 2013, and the proposed Oceanside Campground Relocation Project in 2018. The Delaware Tribe was also consulted during planning for the 2018 campground relocation project. The APE for both projects overlap the APE for the proposed action as shown on the attached figure. Both projects resulted in concurrence from MHT that there would be no effects to historic properties, which includes historic structures/districts and archeological resources. The NPS assumes the findings from these past consultations remain applicable within the portions overlapping the draft APE for the proposed South Ocean Beach Parking and OSV Entrance Reconfiguration Project.

The draft APE for the proposed South Ocean Beach Parking and OSV Entrance Reconfiguration Project does however consist of areas that have not been assessed for archeological potential as part of past projects. The NPS proposes to conduct archeological assessment and survey within these areas of the APE for direct effects. The boundaries of the APE for the proposed action do not encompass any structures that are listed, or that are potentially eligible for listing, in the National Register of Historic Places.

Section 106 and NEPA Coordination

The NPS will prepare an Environmental Assessment (EA) to document the analysis of potential impacts of the proposed site plan reconfiguration project in accordance with NEPA. The NPS plans to coordinate the Section 106 and NEPA processes per the implementing regulations (36 CFR § 800.8) of the NHPA. The NPS will also develop an Assessment of Effect for this project as a separate, but parallel, process to the EA.

We look forward to beginning the Section 106 consultation process for this project. If you have any questions or preliminary feedback related to the project, draft APE, historic properties, or upcoming investigations please contact Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

Sincerely,

Hugh Hawthorne
Superintendent

Enclosures: South Ocean Beach Parking and OSV Entrance Reconfiguration Project APE Map

cc:

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

IN REPLY REFER TO:

February 4, 2023

Shaleigh R. Howells
Cultural Resource and Museum Director
Pamunkey Indian Tribe
1054 Pocahontas Trail
King William, VA 23086

Sent by email to: Saleigh.Howells@pamunkey.org

Re: Initiation of Tribal Consultation, South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance Reconfiguration Project, Assateague Island National Seashore, Worcester County, Maryland

Dear Ms. Howells:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance at Assateague Island National Seashore. The NPS wishes to formally initiate consultation with the Pamunkey Tribe in compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and its implementing regulations (36 CFR § 800).

Purpose of and Need for Action

The proposed project is to reconfigure the South Ocean Beach Recreation Area infrastructure and amenities by designing a logical site plan that is less susceptible to damage from future storm events, increases capacity, and improves safety and the visitor experience. The proposed project includes:

- relocating / reconfiguring the parking area and providing expanded capacity;
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The proposed project is needed to address the increased frequency and intensity of storm events due to climate change and the westward dune movement that is encroaching on the South Ocean Beach Recreation Area. The NPS determined from annual shoreline regression data on Assateague Island collected between 1996 and 2018 that the South Ocean Beach Recreation Area shoreline had migrated westward between 1.4 and 1.55 meters per year on average during that period. This data suggests that a portion of the existing traffic circle and most of the OSV access road and entrance will be under secondary dune sand by 2040, making the area unsustainable at its current location.

The project is also needed because of the congestion and safety concerns caused by high visitation to the South Ocean Beach area. The NPS expressed the following concerns related to visitor use and experience:

- The current site layout is unsafe particularly for pedestrians, but also for drivers, bicyclists, and wildlife. The original parking area was relocated as a reactive measure following Hurricane Sandy and was not logically designed at that time.
- The OSV entrance queue area provides insufficient capacity to support the line of vehicles that regularly form when the OSV zone reaches the 145-vehicle maximum. The line can back up through the traffic circle, which blocks access to the parking area and the ability for visitors to turn around onto northbound Bayberry Drive, creating major traffic congestion and restricting access for emergency vehicles.
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Section 106 and Historic Properties

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structures that are listed, or that are potentially eligible for listing, in the National Register of Historic Places.

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We look forward to continuing the Section 106 consultation process for this project. If you have any questions or preliminary feedback related to the project, draft APE, historic properties, or upcoming investigations please contact Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

Sincerely,

Hugh Hawthorne
Superintendent

Enclosures: South Ocean Beach Parking and OSV Entrance Reconfiguration Project APE Map

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

September 12, 2022

U.S. FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401

Sent by email to cbfoprojectreview@fws.gov.

Re: Project Code: 2022-0023486
Determination of Effects to Federally Listed Species
South Ocean Beach Parking Area and Over-Sand Vehicle (OSV) Entrance Road Reconfiguration
Assateague Island National Seashore, Maryland

To whom it may concern:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking Area and Over-Sand Vehicle (OSV) Entrance Road at Assateague Island National Seashore, Maryland. The project would make the South Ocean Beach recreation area more resilient to natural coastal processes and future storm events, improve safety, and protect and enhance the visitor experience and park resources through visitor use management strategies.

The project would address the westward dune movement that is encroaching on the facilities at the South Ocean Beach recreation area. Data collected by NPS suggest that a portion of the traffic circle and most of the OSV entrance road will be impacted by natural coastal processes by 2040, making the facilities that provide access to this popular recreation area unsustainable at their current location.

The project would also address the increasing visitor use at the South Ocean Beach recreation area that is causing congestion and safety concerns and is resulting in resource degradation because:

- The South Ocean Beach parking area does not provide sufficient capacity to accommodate visitor use at the recreation area.
- The existing OSV entrance road cannot support the line of vehicles that will form when the OSV zone reaches the 145-vehicle maximum capacity.
- The current configuration of the recreation area presents potential safety issues, especially when crowded, between pedestrians, drivers, bicyclists, and wildlife.

A project action area map and conceptual drawings of three potential site layouts are included with this letter for your reference.

PROJECT SITE DESCRIPTION

The project site is a 24.5-acre area within an established Development Zone of Assateague Island National Seashore where traditional recreational uses and activities are focused (NPS 2011). The project site consists of the existing parking area and OSV entrance road, as well as other traffic circulation features, including Bayberry Drive, Oceanside Drive, and a traffic circle that provides access to the South Ocean Beach parking area and OSV entrance and allows for a continuous flow of traffic through the recreation area. A portion of the Life of the Dunes Trail is within the project site, as is the trailhead, which is at the southeast corner of the parking area. Other visitor amenities include an asphalt bike path that parallels the parking area and terminates at the trailhead, a pedestrian walkway that provides access to the beach from the parking area, and showers and vault toilets.

Habitats on Assateague Island National Seashore were previously characterized and described in a Natural Resource Condition Assessment (NPS 2011). Seven habitats were characterized within the park based primarily on landscape position. These habitats, from the Chincoteague Bay to the Atlantic Ocean, include (1) bay subtidal and mudflats, (2) salt marsh, (3) inland wetlands, (4) forest and shrublands, (5) dunes and grasslands, (6) beach and intertidal, and (7) Atlantic subtidal habitats (NPS 2011).

These habitat classifications were used to characterize habitat within the project site. In addition to park infrastructure, the project site consists of salt marsh, inland wetlands, forest and shrublands, and dunes and grasslands habitats. A habitat map is attached to this letter and each habitat found within the project site is generally described below.

SALT MARSH

High salt marsh exists along the western boundary of the project site associated with Chincoteague Bay. A small portion of the salt marsh extends into the project site, totaling approximately 0.02 acres. Vegetation along the boundary of the marsh consists of dense thickets of salt and sand tolerant species, including northern bayberry (*Myrica cerifera*), wax myrtle (*Morella cerifera*), loblolly pine (*Pinus taeda*), common reed (*Phragmites australis*), and roundleaf greenbrier (*Smilax rotundifolia*). It is assumed that the area along the boundary is irregularly flooded during very high tidal cycles or during severe coastal storm events based on the facultative wetland indicator status of these species (common reed is the exception).

INLAND WETLANDS

Inland palustrine forested (PFO), scrub-shrub (PSS), and emergent (PEM) wetlands occur throughout the project site in interdunal depressions and swales and adjacent to park infrastructure in depressions and ditches. Inland wetlands total approximately 2.6 acres of the project site. These freshwater wetlands tend to develop due to a shallow groundwater table, although water is lost quickly due to evaporation or drainage through the sandy soil as groundwater levels fluctuate (NPS 2016). Loblolly pine dominates the only PFO wetland in the project site, while wax myrtle and loblolly pine dominate PSS wetlands in the scrub-shrub layer. Dominant herbaceous vegetation in inland wetlands include common reed, switchgrass (*Panicum virgatum*), broomsedge (*Andropogon virginicus*), woolly panic grass (*Dichanthelium acuminatum*), needlepod rush (*Juncus scirpoides*), and marsh seedbox (*Ludwigia palustris*).

FOREST AND SHRUBLANDS

Approximately 9.7 acres of the project site consists of maritime upland forest and shrubland dominated by wax myrtle and loblolly pine, with American holly (*Ilex opaca*), red cedar (*Juniperus virginiana*), and other species occasionally observed. The dunes shield this community from strong wind and salt spray allowing the growth of shrubs and vines (NPS 2016).

DUNES AND GRASSLANDS

Dunes and grasslands occupy approximately 8.7 acres of the project site. Beach heather (*Hudsonia tomentosa*), prickly pear (*Opuntia humifusa*), scattered loblolly pine, and beachgrass (*Panicum amarum*), occur on the sparsely vegetated secondary dunes within the project site. Grasslands of American beach grass (*Ammophila breviligulata*) and other species able to tolerate wind, salt spray, and occasional tidal storm surges occur behind the primary dune, which is adjacent to, but outside of, the eastern boundary of the project site.

EFFECTS DETERMINATION

The NPS obtained an official species list from the US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) website on August 1, 2022. The species list is attached to this letter. According to IPaC, two federally listed threatened bird species, eastern black rail (*Laterallus jamaicensis jamaicensis*) and piping plover (*Charadrius melodus*), and a federally listed threatened flowering plant, seabeach amaranth (*Amaranthus pumilus*), are potentially affected by the project. The list also identified a candidate insect species, the monarch butterfly (*Danaus plexippus*), as potentially affected. Additionally, concerns were expressed by the USFWS regarding impacts to the Bethany Beach firefly (*Photuris bethaniensis*) in a letter received on July 5, 2022, during a public engagement period conducted as part of project planning.

Potential effects were analyzed for each species and effects determinations are provided below.

EASTERN BLACK RAIL

The eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*) is a wetland/marsh-dependent bird that was listed by the USFWS as a federally threatened species on November 9, 2020. In the northeastern United States, the eastern black rail is typically found in salt and brackish marshes along the Atlantic Coast. The eastern black rail requires dense emergent cover and extremely shallow water depths (typically ≤3 cm) over a portion of the wetland-upland interface to support its resource needs. The eastern black rail also uses the transition zone (ecotone) between emergent wetlands and upland grasslands. These transitional areas are critical to eastern black rails, as they provide refugia during high-water events caused by precipitation or tidal flooding (USFWS 2019). Based on the description of suitable habitat, there is potential that eastern black rail could occur within the mud flats and salt marsh habitats, and along the wetland/upland transition at the western boundary of the project site.

Black rail surveys were conducted by researchers in 1990, 2007 and 2014 throughout many sites within the Chesapeake Bay Region, including Assateague Island National Seashore (Watts et al 2021). Although black rails were detected on Assateague Island, they have not been detected within or near the project site. In addition, there have been no documented sightings of eastern black rail on Assateague Island National Seashore on eBird.org.

A small amount of salt marsh occurs along the western boundary of the project site; however, the NPS anticipates that disturbance from mechanical activities would result in minimal impacts to potentially suitable habitat for the eastern black rail. Erosion and sediment controls (ESC) would be implemented to minimize potential indirect effects to potentially suitable habitat outside the limits of disturbance, and the project would be constructed outside the eastern black rail breeding period, generally mid-March through September, to the extent possible to minimize construction-related disturbances (e.g., noise, vibration, etc.). Therefore, the proposed project may affect, but is not likely to adversely affect, the eastern black rail.

PIPING PLOVER

The piping plover (*Charadrius melodus*) is a shorebird that was listed by the USFWS as a federally threatened species in the Northeast Region on December 11, 1985. Piping plovers have very specific habitat requirements. Nesting habitat includes dry sandy areas of beach berms, overwash fans, gently sloping dunes, sparsely vegetated back dunes and, in some cases, dredge material placed for beach nourishment. Foraging habitat is primarily within active overwash areas on the beach and within the intertidal zone (NPS 2011).

The NPS has implemented a comprehensive Piping Plover Management program to conserve breeding populations by creating favorable conditions needed to enhance site selection, nesting, and productivity levels for the species on Assateague Island National Seashore. The NPS conducts annual pre-season vegetation surveys to document high probability plover use areas and then monitors for breeding pairs from mid-April to mid- to late-summer to locate and protect nests and foraging areas (NPS 2016). No breeding pairs or nests have been observed in the project vicinity during these annual surveys for piping plover within the park. However, there have been nine separate documented sightings of piping plover in the immediate vicinity of the project site since 2000 on eBird.org.

No ground disturbance would occur in potential foraging habitat east of the project site. To minimize potential indirect construction-related disturbance (e.g., noise, vibration, etc.) the project would be constructed outside the plover breeding period, generally mid-April through early-September, to the extent possible. Annual surveys would continue so that if nests or breeding pairs happen to be identified in the vicinity of the project area, they can be protected. Therefore, the proposed project may affect, but is not likely to adversely affect, piping plovers.

SEABEACH AMARANTH

Seabeach amaranth (*Amaranthus pumilus*) is a flowering plant that was listed by the USFWS as threatened on April 7, 1993. It is a dune annual that is largely restricted to between the high tide line and the over-wash habitats at the base of the primary dune (NPS 2011). Like piping plover, the NPS conducts annual surveys for seabeach amaranth at Assateague Island National Seashore. No seabeach amaranth populations have been observed in the project site during these annual surveys. Annual surveys would continue so that if seabeach amaranth happens to be identified in the vicinity of the project area it can be protected. Therefore, the project may affect, but is not likely to adversely affect, seabeach amaranth.

MONARCH BUTTERFLY

The eastern United States population of monarch butterflies (*Danaus plexippus*) overwinters in Mexico, generally migrating between October and late-March (USFWS 2022). Limiting construction to occur during the migration period would minimize impacts to individual monarch butterflies that may potentially be on Assateague Island National Seashore. According to iNaturalist.org, one recent observation of common milkweed (*Asclepias syriaca*), a host plant for the monarch butterfly, was documented at the project site in June 2022. The NPS would consider conducting surveys for milkweed to determine the extent of any individual plants that would be lost for possible replacement if the monarch butterfly becomes listed under the Endangered Species Act before the project is implemented.

BETHANY BEACH FIREFLY

The Bethany Beach firefly is an insect species currently under review by the USFWS for listing under the Endangered Species Act. The Bethany Beach firefly is a species that inhabits interdunal freshwater swales that are often characterized by plant communities of *Myrica-Baccaris* or *Juncus scirpoides-Scirpus pungens*. Surveys for the firefly are being conducted through a partnership between NPS, USFWS, and

Maryland DNR which have documented multiple suspected and one confirmed occurrence of the firefly within swales on Assateague Island National Seashore, including near the project site.

Alternatives currently under development for the proposed project would have minimal impact to interdunal swale habitat as all but one swale within the project site would be avoided. The project does not include installation of any artificial lighting that would create light pollution that could affect the firefly. Also, pedestrian walkways would be installed to direct visitor use and circulation away from swale habitat.

Please accept this letter as a request for concurrence with the NPS' determinations that the proposed project may affect, but is not likely to adversely affect, the eastern black rail, piping plover, and seabeach amaranth.

We look forward to your concurrence with these determinations, or any comments or questions you have regarding the project. Please send any correspondence to Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

Sincerely,

Hugh Hawthorne
Superintendent

Enclosures:
- Project Action Area Map
- South Ocean Beach Reconfiguration Concept Drawings
- Official Species List
- Habitat Map

References:

National Park Service (NPS)

2011 Natural Resource Condition Assessment (NPS/ASIS/NRR-2011/405). Online at http://npshistory.com/publications/asis/nrr-2011-405.pdf. Accessed March 2022.

2016 Assateague Island National Seashore Draft General Management Plan and Environmental Impact Statement

US Fish and Wildlife Service

2019 Species Status Report for the Eastern Black Rail (*Laterallus jamaicensis jamaicensis*) Version 1.3. Online at https://ecos.fws.gov/ServCat/DownloadFile/186791. Accessed March 2022.

2022 Species profile for monarch butterfly. Environmental Conservation Online System (ECOS). Online at https://ecos.fws.gov/ecp/species/9743. Accessed March 2022.

Watts, B., Brinker, D., Wilson, M., Smith, F. & C. Hines. 2021. Decline of Eastern Black Rails (*Laterallus jamaicensis jamaicensis*) within the Chesapeake Bay Region, USA. Waterbirds 44 (2): 257-268. Accessed August 2022: https://doi.org/10.1675/063.044.0212

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To:
Project Code: 2022-0023486
Project Name: South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration

August 01, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Chesapeake Bay Ecological Services Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401-7307
(410) 573-4599

Project Summary

Project Code: 2022-0023486

Project Name: South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration

Project Type: Recreation - Maintenance / Modification

Project Description: The National Park Service (NPS) is proposing to reconfigure the South Ocean Beach parking area and Over-Sand Vehicle (OSV) Entrance Road at Assateague Island National Seashore. The project would make the South Ocean Beach recreation area more resilient to natural coastal processes and future storm events, improve safety, and protect and enhance the visitor experience and park resources through visitor use management strategies.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.19163525,-75.1587627191345,14z

Counties: Worcester County, Maryland

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: https://www.fws.gov/savethemonarch/FAQ-Section7.html). Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Seabeach Amaranth *Amaranthus pumilus*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/8549

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Coastal Barriers

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

Otherwise Protected Area (OPA)

OPAs are denoted with a "P" at the end of the unit number. The only prohibition within OPAs is on federal flood insurance. ***CBRA consultation is not required for projects within OPAs.*** *However, agencies providing disaster assistance that is contingent upon a requirement to purchase flood insurance after the fact are advised to disclose the OPA designation and information on the restrictions on Federal flood insurance to the recipient prior to the commitments of funds.*

UNIT	NAME	TYPE	SYSTEM UNIT ESTABLISHMENT DATE	FLOOD INSURANCE PROHIBITION DATE
MD-01P	Assateague Island	OPA	N/A	11/16/1991

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, Maryland 21401
http://www.fws.gov/chesapeakebay

October 12, 2022

Hugh Hawthorne
Superintendent, Assateague Island National Seashore
National Park Service

RE: "Not Likely to Adversely Affect" determination for South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration at Assateague Island National Seashore in Worcester County, Maryland

Dear Mr. Hawthorne:

The U.S. Fish and Wildlife Service (Service) has reviewed your project information from the Service's Information for Planning and Consultation (IPaC) online system and your email sent September 12, 2022. The comments provided below are in accordance with Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

The purpose of this proposed project is to redesign the South Ocean Beach recreation area to make it more resilient to natural processes and future storm events, improve safety, and enhance the visitor experience. This project would reconfigure the existing facilities in this area, including the parking area, the Over-Sand Vehicle entrance, trail access points, and other amenities. The federally threatened Eastern black rail (*Laterallus jamaicensis jamaicensis)*, piping plover (*Charadrius melodus)*, and seabeach amaranth (*Amaranthus pumilus)* may be present within the project area.

Although Eastern black rail has been detected on Assateague Island in the past, they have not been detected within or near the proposed project site. There is a small amount of potentially suitable black rail habitat within the project area, however any impacts from project activities are expected to be minimal due to the use of erosion and sediment control measures and implementation of a time of year restriction to avoid Eastern black rail breeding season.

Piping plovers nest at Assateague, however, no breeding pairs or nests have been found within the project area. Additionally, no ground disturbance activities will occur within potential piping plover foraging habitat located east of the project area. Any indirect disturbances will be minimized through a time of year restriction during the piping plover breeding period and the continuation of annual surveys to detect if the species is found within the project area.

Seabeach amaranth is found on Assateague Island, however, plants have not been found within the project area. Annual surveys occur for this species, allowing biologists to identify and protect the species if found in the project area. Based on the species locations and mitigation measures provided, we concur that this project as proposed is "not likely to adversely affect" Eastern black rail, piping plover, or seabeach amaranth.

Except for occasional transient individuals, no other federally proposed or listed threatened or endangered species are known to exist within the project area. Should project plans change or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

We appreciate the opportunity to provide information relative to fish and wildlife issues. Thank you for your interest in these resources. If you have any questions or need further assistance, please contact Kathleen Cullen of my staff at 410/573-4579 or kathleen_cullen@fws.gov.

Sincerely,

GENEVIEVE PULLIS

Digitally signed by GENEVIEVE PULLIS
Date: 2022.10.12 14:55:06 -04'00'

Genevieve LaRouche
Field Supervisor

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

IN REPLY REFER TO

March 7, 2022

Ms. Lori Byrne, Environmental Review Specialist
MD DNR - Wildlife and Heritage Service
Tawes State Office Building, E-1
580 Taylor Avenue
Annapolis, MD 21401

Sent by email to: lori.byrne@maryland.gov

Re: South Ocean Beach Parking and Over Sand Vehicle Entrance Reconfiguration Project
Assateague Island National Seashore, Berlin, Maryland

Dear Ms. Byrne:

The National Park Service (NPS) is conducting planning activities, including alternatives development and data collection, prior to initiating the National Environmental Policy Act (NEPA) compliance process for the proposed reconfiguration of the South Ocean Beach Parking and Over Sand Vehicle (OSV) Entrance at Assateague Island National Seashore. The proposed project is to reconfigure the South Ocean Beach Recreation Area infrastructure and amenities by designing a logical site plan that is less susceptible to damage from future storm events, increases capacity, and improves safety and the visitor experience. A location map and a topographic map displaying the project study area have been included for your reference.

Please accept this letter as a request for any information concerning state-listed rare, threatened, or endangered plants or animals and/or any unique habitat that may occur in the study area. You can send your response to Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov.

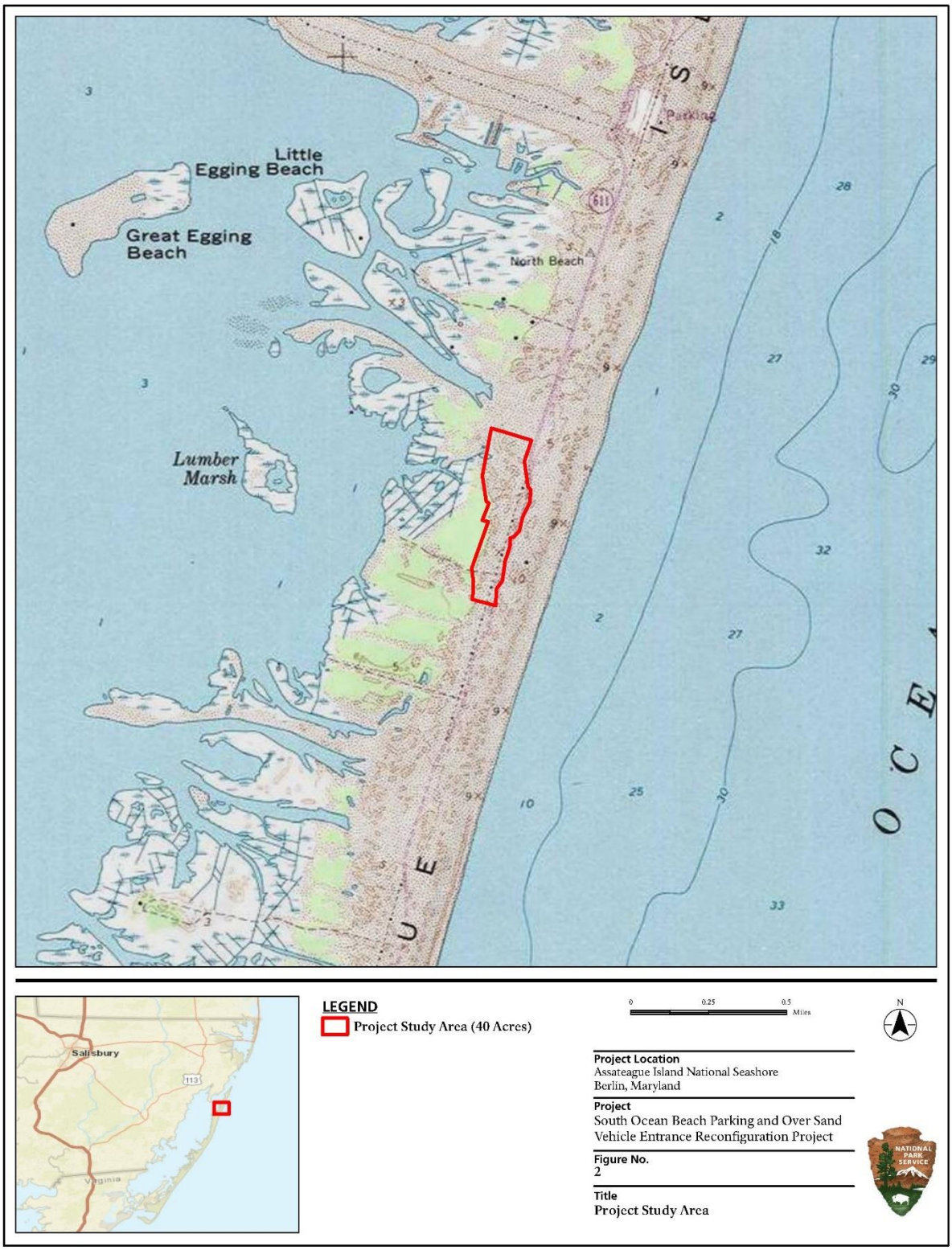
If you have any questions or need additional information regarding this request, please do not hesitate to contact Bill at the email address listed above.

Sincerely,

Hugh Hawthorne
Superintendent

Enclosures: South Ocean Beach Parking and OSV Entrance Reconfiguration Project Location Maps

INTERIOR REGION 1 • NORTH ATLANTIC-APPALACHIAN
CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, VERMONT, VIRGINIA, WEST VIRGINIA


Little
Egging Beach
Great Egging
Beach
North Beach
Lumber
Marsh
Parking
611
Salisbury
113
Virginia
LEGEND
Project Study Area (40 Acres)
0
0.25
0.5
Miles
N
Project Location
Assateague Island National Seashore
Berlin, Maryland
Project
South Ocean Beach Parking and Over Sand
Vehicle Entrance Reconfiguration Project
Figure No.
2
Title
Project Study Area


Oceanside Campsites
Oceanside Drive
Bayberry Drive
Oceanside Campsites
Oceanside Campsites
South Ocean Beach Parking Area
OSV Access Road
ATLANTIC OCEAN
Life of the Dunes Trail
Salisbury
113
Virginia
LEGEND
Project Study Area (40 Acres)
Life of the Dunes Trail
0
250
500
Feet
N
Project Location
Assateague Island National Seashore
Berlin, Maryland
Project
South Ocean Beach Parking and Over Sand Vehicle Entrance Reconfiguration Project
Figure No.
1
Title
Project Study Area
NATIONAL PARK SERVICE

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary
Allan Fisher, Deputy Secretary

April 8, 2022

Mr. Bill Hulslander
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811

RE: Environmental Review for South Ocean Beach Parking and Over Sand Vehicle Entrance Reconfiguration Project, Assateague Island National Seashore, Berlin, Worcester County, Maryland.

Dear Mr. Hulslander:

The Wildlife and Heritage Service has the following records of rare, threatened or endangered species in the study area, which should be considered in the planning of this project:

- There is a record of the state-listed endangered Seabeach Knotweed (*Polygonum glaucum*) documented in 1984. The record describes it as being found between the parking lot and dunes, in disturbed sand habitat.
- There is a record of the Meadow Lovegrass (*Eragrostis refracta*) – now a watchlist species in Maryland – documented along the path to lumber marsh duck blind.
- There is a record for a population of state-listed endangered and federally-listed threatened Seabeach Amaranth (*Amaranthus pumilus*) documented within close proximity to the study area. It is documented to occur along the overwash area of the beach, in open sandy areas, and could potentially occur within the project's limits-of-disturbance as well.

The forested part of the study area is potential Forest Interior Dwelling Birds (FIDS) habitat. The key to maintaining suitable breeding habitat for FIDS, and halting or reversing their declines, is the protection of extensive, unbroken forested areas throughout the region.

It is also important to note that all of the natural communities on Assateague Island are of global significance due to a limited distribution (NY to SC) and threats from coastal development and erosion. Immediately south of the parking area and OSV entrance are prime examples of the Maritime Dune and Grassland system. Habitats there exhibit zonation and are dominated by grasses and dwarf shrubs well adapted to extreme gradients of soil moisture and salt spray. Scrub vegetation tends to occupy more protected zones or inland edges of the dune system. Sand movement is a critical factor in shaping dune communities. Small, seasonally flooded grasslands are known from low swales between secondary dunes are commonly referred to as "interdunal swales". Interdunal swales are characterized by perched water tables and shallow seasonal flooding by rainfall. Although they are predominantly freshwater wetlands, periodic saltwater intrusion may occur in some swales during storm surges. Fluctuations in water levels and salinity vary between swales and greatly influence species composition. As water levels drawdown late in the growing season, interdunal swales support a variety of grasses, sedges, rushes, and forbs many of which are restricted to these unique wetlands.

Tawes State Office Building – 580 Taylor Avenue – Annapolis, Maryland 21401
410-260-8DNR or toll free in Maryland 877-620-8DNR – *dnr.maryland.gov* – TTY Users Call via the Maryland Relay

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Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at lori.byrne@maryland.gov or at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service

ER# 2022.0376.wo
Cc: D. Limpert, DNR

United States Department of the Interior

Assateague Island National Seashore
NATIONAL PARK SERVICE
Interior Region 1- North Atlantic-Appalachian
7206 National Seashore Ln
Berlin, MD 21811

January 5, 2023

Ms. Danielle Spendiff, Federal Consistency Coordinator
Wetlands and Waterways Program
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Re: Federal Consistency Determination (15 CFR Part 930, Subpart C) for the Proposed South Ocean Beach Parking Area and Over-Sand Vehicle (OSV) Entrance Road Reconfiguration Project, Assateague Island National Seashore, Berlin, Maryland

Dear Ms. Spendiff:

The National Park Service (NPS), in accordance with the Coastal Zone Management Act (CZMA) of 1972, as amended, requests concurrence that the proposed South Ocean Beach Parking Area and OSV Entrance Road Reconfiguration Project is consistent, to the maximum extent practicable, with the enforceable policies of the Maryland Coastal Zone Management Program.

The attached document provides the State of Maryland with the Federal Government's Consistency Determination in accordance with CZMA section 307(c)(1) [or (2)] and 15 CFR Part 930, subpart C, for the proposed implementation of the South Ocean Beach Parking Area and OSV Entrance Road Reconfiguration Project on Assateague Island National Seashore. The information in this Consistency Determination is provided pursuant to 15 CFR §930.39. The attached document provides a description and location of the proposed federal activity, as well as the basis for this determination in relation to the applicable policies of the Maryland Coastal Zone Management Program (CZMP). Completed Maryland CZMP Policy Checklists are also attached.

Pursuant to 15 CFR Section 930.41, the Maryland CZMP has 60 days from the receipt of this letter in which to concur or object to this Consistency Determination, or to request an extension under 15 CFR Section 930.41 (b). Therefore, please respond to this request on or before March 6, 2023.

Please direct all correspondence to Mr. Bill Hulslander, Chief of Resource Management, at bill_hulslander@nps.gov or 410-629-6061.

Sincerely,

/s/Hugh Hawthorne
Superintendent

COASTAL ZONE MANAGEMENT ACT

FEDERAL CONSISTENCY DETERMINATION FOR THE

PROPOSED SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE (OSV) ENTRANCE ROAD RECONFIGURATION

ASSATEAGUE ISLAND NATIONAL SEASHORE

DATE: January 5, 2023

CONSISTENCY REVIEW: This Federal Consistency Determination (FCD) is being submitted by the National Park Service (NPS) for coordination and concurrence from the Maryland Department of the Environment (MDE).

PROJECT DESCRIPTION: The National Park Service (NPS) proposes the reconfiguration of the South Ocean Beach Parking Area and Over-Sand Vehicle (OSV) Entrance at Assateague Island National Seashore in Worcester County, Maryland. The purpose of the proposed project is to make the South Ocean Beach recreation area more resilient to natural coastal processes and future storm events, improve safety, and protect and enhance the visitor experience and park resources through visitor use management strategies.

The project is needed to respond to the westward dune movement that is encroaching on the South Ocean Beach recreation area. The NPS determined from annual shoreline regression data on Assateague Island collected between 1996 and 2018 that the South Ocean Beach shoreline had migrated westward between 4½ and 5 feet per year on average during that period. As the shoreline retreats, the dunes adjoining the shoreline also move inland. This data suggests that the dunes will continue to shift to the west, burying a portion of the existing traffic circle and most of the OSV zone entrance / exit road under sand by 2040, making the recreation area unsustainable at its current location. The project is also needed because the South Ocean Beach recreation area does not have capacity to support current visitation, which causes congestion and is resulting in park resource degradation. Unsafe conditions for pedestrians, but also for drivers, bicyclists, and wildlife, particularly during peak visitation, are created because of the configuration of the existing infrastructure at the recreation area.

South Ocean Beach is approximately 1¼ miles south of the Seashore's entrance. A map of the facilities that serve the South Ocean Beach recreation area, as well as the limits of the project area, are provided as **Attachment 1**. Prior to Hurricane Sandy in 2012, the South Ocean Beach recreation area consisted of two parking areas, one east of the OSV zone entrance road near the beach, and one smaller parking area for the Life of the Dunes Trail at the location of the current parking lot. However, after Hurricane Sandy damaged the easternmost parking lot, the NPS responded by removing the damaged lot and expanding the capacity of the Life of the Dunes Trail parking area, which is further inland and less vulnerable to storm activity and less susceptible to damage. Recognizing the vulnerability of the current location of portions of the recreation area, the NPS is proposing this project as a proactive approach to reduce the threat of natural coastal processes over the next 20 years by relocating facilities that serve the recreation area to a more sustainable location, and reconfiguring the facilities to manage current visitor use more effectively and to upgrade infrastructure and amenities in poor condition.

Three options are being developed to a schematic level of design for the proposed reconfiguration of the South Ocean Beach recreation area infrastructure and amenities. Generally speaking, each option includes relocating park infrastructure away from the projected 2040 secondary dune areas; improving traffic, pedestrian, and bicycle circulation; reconfiguring the parking area to be more efficient and to better

support current visitor use of the recreation area; relocating the OSV entrance road to better support current visitor use and reduce pedestrian crossings; upgrading amenities; and developing infrastructure that can be easily modified to accommodate future alternative transportation options.

The three options are largely similar in the overall strategy for improving the South Ocean Beach recreation area, except for some differences in configuration and materials. The schematic design plan set for the three options is included as **Attachment 2**, and **Table 1** summarizes the primary differences between the options.

Table 1. Summary Comparison of the Schematic Design Options

Design Element	Option 1	Option 2	Option 3
Parking Lot Surface	Asphalt Pavement	Asphalt Pavement	Clay/Clamshell
Parking Lot Spaces	152	150	150*
Parking Lot Aisles	One-Way: 14' wide	Two-Way: 24' wide	Two-Way: 24' wide
Parking Space Angle	45°	90°	90°
Pavement Markings	Yes	Yes	No
Parking Lot Area	78,730 square feet	58,870 square feet	69,710 square feet
Location of Air Compressor Station	northwest of proposed parking area location	southwest of proposed parking area location	northwest of proposed parking area location
*Dependent upon the space each vehicle occupies in the parking area.			

PROPERTY CLASSIFICATION: The South Ocean Beach recreation area is within a Development Zone established by the existing General Management Plan (GMP) for Assateague Island National Seashore where traditional recreational uses and activities are focused. A map of the facilities that serve the South Ocean Beach recreation area is provided as **Attachment 1**. **Attachment 1** also includes the project study area, which is an approximately 24.5-acre area identified early in project planning in which project alternatives may be located and natural and cultural resource surveys and investigations have been conducted.

South Ocean Beach is accessible from Bayberry Drive, a park road with one northbound and one southbound lane, and Oceanside Drive, a park road with one lane southbound. Both roadways merge into a traffic circle that circulates vehicles through the recreation area and provides ingress / egress for the parking area and OSV zone entrance / exit road. From the traffic circle, the OSV zone entrance / exit road consists of two 10-foot-wide asphalt lanes for approximately 770 feet to the electronic gate that is used to manage vehicle entry to the OSV zone. The entrance road widens prior to the gate to provide adequate pull-off space for up to eight vehicles to deflate their tires prior to entering the OSV zone. From the gate, the access road consists of a compacted clay / clamshell surface for approximately 950 feet to the beach. Eight air stations and dumpsters are provided along the OSV zone exit lane directly north of the gate. The compressor for the air stations is protected in a small building west of the entrance lane. Also, several signs have been installed along the OSV zone entrance road to inform visitors of driving and permit information.

The South Ocean Beach parking area is southwest of the traffic circle and west of the OSV zone entrance / exit road. The parking area consists of a clay / clamshell surface of approximately 38,200 square feet in area. The parking area was designed to hold 80 vehicles utilizing a 90-degree parking format. There are four rows for parking and adequate space for two-way vehicle circulation around the parking area. Split-rail fencing surrounds the parking area and a line of fencing at the interior of the parking area helps to delineate parking spaces within the lot. A pedestrian walkway provides access to the beach from the

parking area that consists primarily of boardwalk except where it crosses the OSV zone entrance / exit road. Other visitor amenities include showers, vault toilets, and a bench that are available adjacent to the existing walkway to the beach. Also, the NPS has used plastic mats to establish two accessible parking spaces adjacent to the pedestrian walkway to the beach.

A portion of the Life of the Dunes Trail is within the project study area, as is the trailhead, which is at the southeast corner of the parking area. A 10-foot-wide asphalt multi-use path enters the recreation area from Oceanside Drive and parallels the parking area to its terminus at the Life of the Dunes Trail. The remaining portions of the project study area include undeveloped natural areas characterized as salt marsh, inland wetlands, forest and shrublands, and dunes and grasslands habitats.

IMPACTS TO RESOURCES/USES OF THE COASTAL ZONE: See summaries below and Maryland CZMP Consistency Checklists included as **Attachment 4**.

DETERMINATION: Based upon evaluation of impacts and in accordance with Section 307 of the Coastal Zone Management Act (CZMA) and the CZMA Federal Consistency Regulation – 15 CFR Part 930, the NPS has determined that the proposed project would be undertaken in a manner consistent, to the maximum extent practicable, with the enforceable policies of Maryland's CZMP.

ENFORCEABLE POLICIES

A. Core Policies

1. Quality of Life

Policy 1 – Air Quality
Construction of the South Ocean Beach reconfiguration may result in air quality impacts from heavy equipment emissions and fugitive dust. During the construction period, fugitive dust and particulate emissions would be mitigated via water and other dust suppressants, as necessary. The project would be consistent with Policy 1, to the maximum extent practicable, because any affects to air quality would be temporary.

Policy 2 – Noise
The proposed project would result in temporary noise above ambient levels. NPS would implement best management practices (BMPs) to address noise impacts during construction related activities, such as prohibiting nighttime work to preserve the natural quality of the soundscape for park visitors at nearby campgrounds and avoiding construction during peak visitation periods. Therefore, the South Ocean Beach reconfiguration is consistent, to the maximum extent practicable, with Quality of Life Policy 2.

Policy 3 – Protection of State Wild Lands
The proposed project would not occur on State wild lands; therefore, this policy is not applicable.

Policy 4 – Protection of State Lands & Cultural Resources
The proposed project would not affect the ability to preserve the safety, order, and natural beauty of State parks and forests, State reserves, scenic preserves, parkways, or historical monuments; therefore, this policy is not applicable.

Policy 5 – Natural Character & Scenic Value of Rivers and Waterways
The proposed project would not occur in an area impacting a river or waterway; therefore, this policy is not applicable

Policy 6 – Natural Flow of Scenic & Wild Rivers
The proposed project would not occur on a scenic and wild river; therefore, this policy is not applicable.

Policy 7 – Atlantic Coast Development
According to the Code of Maryland Regulations (COMAR) Sec. 08.09.02.01., the beach erosion control district is, "the area of land bordered on the north by the Ocean City inlet, bordered on the east by the Atlantic Ocean, bordered on the south by the boundary line between Maryland and Virginia, and bordered on the west by a line which coincides, more or less, with the west crest of the existing natural dune on Assateague Island." No construction or permanent structures should occur within the Beach Erosion Control District; therefore, this policy is not applicable.

Policy 8 – Integrity & Natural Character of Assateague Island
The NPS would plan, design, and construct the South Ocean Beach reconfiguration, which is within the Development Zone of Assateague Island National Seashore, to ensure the integrity and natural character of Assateague Island is not diminished; therefore, the project would be consistent with Policy 8 to the maximum extent practicable.

Policy 9 – Public Outreach
The proposed project does not involve dredging, filling, constructing bulkheads, or changing the shoreline. Additionally, the proposed project does not involve dam construction or creation of a waterway. Therefore, this policy is not applicable.

Policy 10 – Erosion & Sediment Control
NPS would prepare an Erosion and Sediment Control (ESC) Plan prior to construction for approval by Maryland Department of Environment (MDE) as ground disturbance is anticipated to exceed 5,000 square feet. The ESC Plan would include best management practices (BMP) for erosion and sediment transport, such as silt fencing, stabilized construction entrances, coir logs, erosion matting, sediment basins, and others as deemed appropriate for the site. BMPs would minimize impacts and ensure the project is consistent with Policy 10.

Policy 11 – Safeguards for Outer Continental Shelf Development
The project would not occur on the outer continental shelf; therefore, this policy is not applicable.

2. Waste & Debris Management

The policies of this program are administered by MDE and Maryland Department of Transportation (MDOT) and establish requirements for hazardous waste management in Maryland's coastal zone and in Port of Baltimore. The proposed project does not involve the handling of hazardous waste nor is it located at the Port of Baltimore; therefore, these policies do not apply.

3. Water Resources Protection & Management

Policy 1 – Pollution Discharge Permit
The NPS would obtain a National Pollutant Discharge Elimination System (NPDES) Permit because construction disturbance would exceed one acre. The project would be consistent with Policy 1 for Water Resources Protection & Management once the permit is obtained and adhered to, as necessary.

Policy 2 – Protection of Designated Uses
State waters on and surrounding Assateague Island are designated as Class II: Support of Estuarine and Marine Aquatic Life and Shellfish Harvesting (MDE 2022). The NPS would coordinate with MDE and

the Maryland Department of Natural Resources (MD DNR) to determine any potential time of year restrictions or other protections that would be required to be consistent, to the maximum extent practicable, with Water Resources Protection & Management Policy 2.

Policy 3 – Prohibition of Harmful Toxic Impacts
The project would not intentionally release harmful toxic materials or waste into the environment to ensure consistency with Policy 3.

Policy 4 – Pre-Development Discharge Permit
The proposed project does not involve installation, modification, extension, or alteration of an outlet or establishment that could cause or increase the discharge of pollutants into the waters of the State and require a discharge permit. As such, Policy 4 is not applicable.

Policy 5 – Use of Best Available Technology or Treat to Meet Standards
The proposed project does not involve a permitted discharge into State waters; therefore, this policy is not applicable.

Policy 6 – Control of Thermal Discharges
This policy is not applicable as the proposed project does not involve thermal discharges.

Policy 7 – Pesticide Storage
The proposed project does not include the storage of pesticides; therefore, Policy 7 is not applicable to the project.

Policy 8 – Stormwater Management
Stormwater Management and ESC plans would be prepared and submitted to MDE for review and approval prior to construction. The NPS would ensure that appropriate stormwater management BMPs would be included in the design of the proposed project. Due to the sandy substrate at the site, BMPs are likely to consist primarily of ditches and swales adjacent to impervious areas to capture and infiltrate stormwater runoff. The proposed project would therefore be consistent with this policy.

Policy 9 – Unpermitted Dumping of Used Oil
Unpermitted dumping of oil would not intentionally occur; therefore, this policy is not applicable.

Policy 10 – Toxicity Monitoring
Toxic substances would not intentionally be dumped into waters of the State; therefore, this policy is not applicable.

Policy 11 – Public Outreach
The proposed project would be consistent with Policy 11, as the NPS is conducting public engagement as part of project planning and National Environmental Policy Act (NEPA) compliance activities. In addition, NPS would support MDE to conduct a public hearing, if necessary, during the joint permit application review process when obtaining authorization from MDE under Section 404/401 of the Clean Water Act (CWA) and/or Maryland's Wetland and Waterway Regulations for impacts to wetlands, wetland buffers, and regulated floodplains.

Policy 12 – No Adverse Impact from Water Appropriation
The proposed project does not involve water appropriation; therefore, this policy is not applicable.

4. Flood Hazards & Community Resilience

Policy 1 – No Adverse Impact
The proposed project is not anticipated to create additional flooding in the vicinity because there would be no new structures constructed that would obstruct flood flows. In addition, any increases in impervious surface would not have a noticeable effect on infiltration capacity. The NPS would design the project to minimize additional flooding and impacts to water quality and other resources consistent with Policy 1 to the maximum extent practicable.

Policy 2 – Non-Tidal Waters and Non-Tidal Floodplains
The project is not within non-tidal waters or non-tidal floodplains. Also, no structures are proposed that would need to be elevated above the 100-year flood event; therefore, this policy is not applicable.

Policy 3 – Development-Related Runoff Restrictions for the Gwynne Falls and Jones Falls Watersheds
The project is not within the Gwynne Falls or Jones Falls watersheds; therefore, this policy is not applicable.

B. Coastal Resources

1. The Chesapeake and Atlantic Coastal Bays Critical Area

Policy 1 – Scope of the Buffer
The proposed project would be consistent with Policy 1 to the maximum extent practicable based on the response to Critical Area Policy 10.

Policy 2 – Buffer Disturbance
The proposed project would be consistent with Policy 2 to the maximum extent practicable based on the response to Critical Area Policy 10.

Policy 3 – Protection of Bird Nesting Areas
The proposed project would not disturb colonial water bird nesting sites; therefore, this policy is not applicable.

Policy 4 – Protection of Waterfowl
The project does not propose any new facilities within the critical area that would interfere with historic waterfowl concentration and staging areas. As such, this policy is not applicable.

Policy 5 – Restrictions on Stream Alterations
No stream alterations are proposed; therefore, this policy is not applicable.

Policy 6 – Prohibition of Riprap and Artificial Surfaces
No riprap or artificial surfaces would be installed or introduced to the bottom of natural streams; therefore, Policy 6 is not applicable to the project.

Policy 7 – Prohibition of Dams and Structures
Policy 7 is not applicable because no dams or other structures are proposed that may prevent the movement of spawning fish or larval forms in streams.

Policy 8 – Restrictions on Stream Crossings and Impacts
No streams would be crossed or impacted; therefore, the proposed project is consistent with Policy 8.

Policy 9 – Time of Year Restrictions for Construction in Streams
This policy is not applicable as no construction is proposed within streams.

Policy 10 – Avoid & Minimize Construction Impacts in Habitat Areas
The proposed project would be constructed primarily in an already developed area on Assateague Island National Seashore. However, proposed facilities would be expanded into currently undeveloped natural areas adjacent to existing park infrastructure, including within the 100-foot buffer. Maps displaying the extent of development within the Critical Area Buffer for each alternative are included as **Attachment 5**.

The NPS would make all efforts to balance the needs of the park and its visitors with the protection of park resources. Site designs would provide only what is needed to support current visitation and minimize resource degradation within the park. The project is being planned to have the least amount of impact to water quality and habitat within the buffer as possible and would be sited to be less susceptible to damage from natural coastal processes and storm events to extend the usable lifespan of the facilities. Stormwater Management and ESC Plans would be prepared prior to construction for approval by MDE, as the proposed ground disturbance would exceed 5,000 square feet, to minimize water quality impacts. Also, areas of asphalt removal and other temporary disturbances would be allowed to naturally revegetate to reduce habitat impacts. The NPS would develop a landscape plan and install plantings to mitigate for vegetation impacts within the buffer, if necessary.

Overall, impacts to dune and forest and shrubland habitat would be minimal compared to the amount of similar habitats on Assateague Island. Therefore, the proposed project would be consistent with Policy 10 to the maximum extent practicable.

Policy 11 – Intensely Developed Areas
The South Ocean Beach recreation area is not within an intensely developed area; as such, Policy 11 is not applicable.

Policy 12 – Limited Development Areas & Resource Conservation Areas
The proposed project would be consistent with Policy 12 to the maximum extent practicable based on the response to Critical Area Policy 10.

Policy 13 – Public Facilities Allowed with Restrictions in Buffer
The proposed project would be consistent with Policy 13 to the maximum extent practicable based on the response to Critical Area Policy 10.

Policy 14 – Water-Dependent Research Facilities
Research facilities are not proposed; therefore, this policy is not applicable.

Policy 15 – Siting Industrial & Port-Related Facilities
Industrial and port-related facilities are not proposed under the proposed project; therefore, this policy is not applicable.

Policy 16 – Restrictions on Waste Facilities
Policy 16 is not applicable because the proposed project does not involve waste collection/disposal facilities or sanitary landfills.

Policy 17 – Buffer Management Plan
The proposed project would be consistent with Policy 17 to the maximum extent practicable based on the response to Critical Area Policy 10.

Policy 18 – Protection of Critical Area from Surface Mining Pollution
The proposed project does not involve surface mining; therefore, this policy is not applicable.

Policy 19 – Reclamation Requirements for Mining
The proposed project does not involve mining. As such, Policy 19 is not applicable.

Policy 20 – Restrictions on Sand & Gravel Operations
The proposed project does not involve sand and gravel operations; therefore, this policy is not applicable.

Policy 21 – Prohibition of Wash Plants in Buffer
The proposed project does not involve wash plants; therefore, this policy is not applicable.

Policy 22 – Requirements for Agriculture in the Buffer
Agricultural activities are not part of the proposed project; therefore, this policy is not applicable.

Policy 23 – Geographical Limits for Feeding or Watering Livestock
The project does not include the feeding or watering of livestock; therefore, Policy 23 is not applicable.

Policy 24 – Creating New Agricultural Lands
The proposed project does not involve the creation of new agricultural lands; therefore, this policy would not apply.

Policy 25 – Best Management Practices for Agriculture
Agricultural activities are not included in the project; therefore, this policy is not applicable.

Policy 26 – Cutting or Clearing Trees in the Buffer
Tree clearing within the buffer would be minimal because most the NPS anticipates that most of the vegetation that would be impacted consists of dune and shrubland areas; therefore, the proposed project would be consistent with Policy 26 to the maximum extent practicable.

Policy 27 – Requirements for Commercial Tree Harvesting in the Buffer
The proposed project does not involve commercial tree harvesting; therefore, this policy is not applicable.

Policy 28 – General Restrictions to Intense Development
Intense development is not proposed under the proposed project; therefore, Policy 28 does not apply.

Policy 29 – Development Restrictions in Critical Area
No non-maritime heavy industry, transportation or utility transmission facilities, or sludge handling, storage, or disposal facilities, are proposed other than the transportation-related infrastructure needed to support visitation to the South Ocean Beach recreation area. Therefore, the proposed project would be consistent with Policy 29 to the maximum extent practicable.

2. Tidal Wetlands

Policy 1 – Projects That Alter Natural Character Shall Avoid Dredging & Filling, Be Water-Dependent and Provide Appropriate Mitigation
The jurisdictional boundaries of tidal wetlands were delineated within the project area in March 2022. The NPS would make all reasonable efforts to avoid and minimize direct and indirect impacts to these wetlands during planning, design development, and construction. If impacts to tidal wetlands are deemed unavoidable during design development, the NPS would submit a *Joint Federal/State Application for the*

Alteration of any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland to MDE to obtain a permit or license for tidal wetland impacts. The NPS would also coordinate with MDE to determine appropriate mitigation, if required, to compensate for permanent impacts to tidal wetlands. In addition, the NPS would prepare Stormwater Management and ESC Plans prior to construction for approval by MDE, as the proposed ground disturbance would exceed 5,000 square feet, to minimize indirect impacts to tidal wetlands. Therefore, since all required authorizations for unavoidable tidal wetland impacts would be obtained, mitigation would be provided, if necessary, and indirect impacts would be minimized through stormwater management and ESCs, the proposed project would be consistent with the Tidal Wetlands policy to the extent practicable.

3. Non-Tidal Wetlands

Policy 1 – Removal or Alteration is Generally Prohibited Unless There Is No Practicable Alternative, in Which Case, Impacts are First Minimized & Then Mitigated to Replace Ecological Values Lost
The jurisdictional boundaries of non-tidal wetlands were delineated within the project area in March 2022. The NPS would make all reasonable efforts to avoid and minimize direct and indirect impacts to these wetlands during planning, design development, and construction. If impacts to non-tidal wetlands are deemed unavoidable during design development, the NPS would submit a *Joint Federal/State Application for the Alteration of any Floodplain, Waterway, Tidal or Nontidal Wetland in Maryland* to MDE to obtain a permit for non-tidal wetland impacts. The NPS would also coordinate with MDE to determine appropriate mitigation, if required, to compensate for permanent impacts to non-tidal wetlands. In addition, the NPS would prepare Stormwater Management and ESC Plans prior to construction for approval by MDE, as the proposed ground disturbance would exceed 5,000 square feet, to minimize indirect impacts to non-tidal wetlands. Therefore, since all required authorizations for unavoidable non-tidal wetland impacts would be obtained, mitigation would be provided, if necessary, and indirect impacts would be minimized through stormwater management and ESCs, the proposed project would be consistent with the Non-Tidal Wetlands policy to the extent practicable.

4. Forests

Policy 1 – Projects Impacting More Than 40,000 Square Feet Must Generally Identify & Protect Habitat & Mitigate for Impacts
The proposed project is in the Critical Area and is exempt from the requirements of the Forest Conservation Act; therefore, Policy 1 is not applicable.

Policy 2 – Maintain Resource Sustainability & Prevent or Limit Clear-Cutting to Protect Watersheds
Although the proposed project would require removal of some trees from the project site, the project does not involve clear cutting forests; therefore, Policy 2 is not applicable.

Policy 3 – Commercial Timber Cuts of Five Acres or More with Pines Comprising 25% of Live Trees Shall Ensure Pine Resource Sustainability
The proposed project does not involve commercial timber cuts; therefore, this policy is not applicable.

Policy 4 – Minimize Forest Removal for Highway Construction Projects & Mitigate with Equivalent Reforestation if over 1 Acre Is Lost
The proposed project does not propose highway construction; therefore, this policy does not apply.

Policy 5 – Protection of Roadside Trees Unless Removal or Trimming Is Justified
The proposed project does not involve removal or trimming of roadside trees within the right-of-way of the State or County; therefore, this policy is not applicable.

Policy 6 – Sediment & Erosion Control in Non-Tidal Wetlands
The proposed project does not involve forestry activities in non-tidal wetlands; therefore, this policy is not applicable.

5. Historical and Archaeological Sites

Policy 1 – Protection of Submerged Historic Resources
The proposed project does not involved construction within areas where submerged archaeological resources could be present; therefore, this policy is not applicable.

Policy 2 – Protection of Caves & Archaeological Sites
A Phase I archeological investigation was completed for the Project in April 2022 in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* and the Maryland Historical Trust's (MHT) *Standards and Guidelines for Archeological Investigations in Maryland*. The investigation consisted of a pedestrian walkover survey of the 24.5-acre project study area where construction could potentially occur. Archeologists identified three metal objects that were photographed and left in situ. One object appeared to be a heavily rusted machine part, while the other two objects resembled mid-century water heaters. No archeological sites were identified within the project study area. The NPS determined that that the proposed reconfiguration of the South Ocean Beach recreation area would have no effect on archaeological resources. MHT concurred with the NPS's effects determination in a letter dated July 19, 2022 (see **Attachment 3)**. Therefore, this policy is not applicable.

Policy 3 – Protection of Burial Sites & Cemeteries
The proposed project would not impact known burial sites or cemeteries; therefore, Policy 3 is not applicable.

6. Living Aquatic Resources

Policy 1 – Protection of Rare, Threatened or Endangered Fish or Wildlife
A review of the US Fish and Wildlife Services (USFWS) Information for Planning and Consultation (IPaC) website determined that the federally threatened eastern black rail (*Laterallus jamaicensis*), piping plover (*Charadrius melodus*), and the seabeach amaranth (*Amaranthus pumilus*) may potentially be affected by the proposed project. The list also identified a candidate insect species, the monarch butterfly (*Danaus plexippus*), as potentially affected. Additionally, concerns were expressed by the USFWS regarding impacts to the Bethany Beach firefly (*Photuris bethaniensis*) in a letter received on July 5, 2022, during a public engagement period conducted as part of project planning. The NPS determined that, although black rails have been detected during past surveys on Assateague Island, they have not been detected within or near the project site. Additionally, piping plover nests and seabeach amaranth have not been observed within the project area during annual surveys conducted on Assateague Island according to NPS resource managers at the park. Constructing the project during the migration period, generally between October and March, would minimize impacts to individual monarch butterflies. The NPS may consider conducting surveys for milkweed, the monarch's host plant, prior to construction to determine the extent of any individual plants that would be lost for possible replacement. The project would also have minimal impact to dune and swale habitat where Bethany Beach fireflies may be present.

The NPS's evaluation of effects on these species was sent to USFWS in a letter requesting concurrence of its effects determination on September 12, 2022. The USFWS concurred with the determination in a response letter dated October 12, 2022 (see **Attachment 3**).

In addition, a letter was sent to the MD DNR Wildlife and Heritage Service on March 7, 2022, requesting information on state-listed species with the potential to occur in the vicinity of the project study area. MD DNR responded in a letter dated April 8, 2022, identifying three plant species of concern that have been recorded in the vicinity of the project study area, including seabeach knotweed (*Polygonum glaucum*), meadow lovegrass (*Eleocharis rostellata*), and seabeach amaranth. Based on the locations of the documented occurrences of these species, the NPS anticipates there would be no impacts to these species. However, the NPS would conduct presence/absence surveys prior to construction to determine if any of these species of concern occur in the project study area, and would coordinate with MD DNR, as necessary, to identify appropriate measures to minimize disturbance to these species if they are found to occur within the site.

Correspondence with USFWS and MD DNR is included in **Attachment 3**. The proposed project would be consistent with Policy 1 to the maximum extent practicable.

Policy 2 – Sustainable Harvesting of Fisheries
The proposed project does not involve harvesting of fisheries; therefore, this policy is not applicable.

Policy 3 – Protection of State Fishery Sanctuaries & Management Resources
The proposed project does not involve State land or water resources acquired to protect, propagate, or manage fish. Therefore, this policy is not applicable.

Policy 4 – Fish Passage
Policy 4 is not applicable as the project would not impede or prevent fish passage.

Policy 5 – Time-of-Year Restrictions for Construction in Non-Tidal Waters
The proposed project would not involve in-stream construction; therefore, this policy is not applicable.

Policy 6 – Protection of Forest Buffers Along Trout Streams
There are no trout streams within the project area; therefore, this policy is not applicable.

Policy 7 – Non-Tidal Habitat Protection & Mitigation
The proposed project would be constructed primarily in an already developed area on Assateague Island National Seashore. However, proposed facilities would be expanded into currently undeveloped natural areas adjacent to existing park infrastructure. The NPS would make all efforts to balance the needs of the park and its visitors with the protection of park resources, including habitat. Site designs would provide only what is needed to support current visitation and minimize resource degradation within the park. The project is being planned to have the least amount of impact to water quality and habitat and would be sited to be less susceptible to damage from natural coastal processes and storm events to extend the usable lifespan of the facilities. Stormwater Management and ESC Plans would be prepared prior to construction for approval by MDE, as the proposed ground disturbance would exceed 5,000 square feet, to minimize water quality impacts. Also, areas of asphalt removal and other temporary disturbances would be allowed to naturally revegetate to reduce habitat impacts. Overall, impacts to dune and forest and shrubland habitat would be minimal compared to the amount of similar habitats on Assateague Island. Therefore, the proposed project would be consistent with Policy 7 to the maximum extent practicable.

Policy 8 – Protection & Management of Submerged Aquatic Vegetation (SAV)
This policy is not applicable because the proposed project would not impact SAV.

Policy 9 – Protection of Natural Oyster Bars
This policy is not applicable because the proposed project would not occur in, destroy, damage, or injure natural oyster bars in the Chesapeake Bay.

Policy 10 – Protection of Oyster Aquaculture Leases
This policy is not applicable because the proposed project would not occur on any aquaculture or submerged land lease areas.

Policy 11 – Genetically Modified Organisms (GMOs) Are Prohibited in State Waters
The proposed project would not introduce GMOs into State waters; therefore, this policy is not applicable.

Policy 12 – Control of Nonnative Aquatic Organisms
The proposed project would not introduce nonnative aquatic organisms; therefore, this policy is not applicable.

Policy 13 – Control of Snakehead Fish
The proposed project would not introduce snakehead fish or viable eggs into the State; therefore, this policy is not applicable.

Policy 14 – Nonnative Oysters Prohibited in State Waters
The project would not introduce nonnative oysters. Therefore, this policy is not applicable.

C. Coastal Use

1. Mineral Extraction
The proposed project would not include the extraction of mineral resources; therefore, the policies of this program do not apply.

2. Electrical Generation and Transmission
No power plants, transmission lines, or their associated facilities are proposed as part of the project, nor would any be affected. The enforceable polices of this program are not applicable.

3. Tidal Shore Erosion Control
The policies of this program are not applicable because the proposed project does not involve tidal shore erosion control.

4. Oil and Natural Gas Facilities
The proposed project does not involve oil and natural gas facilities and, as such, the enforceable policies of this program are not applicable.

5. Dredging and Disposal of Dredged Material
The proposed project does not involve dredging; therefore, the enforceable policies of this program are not applicable.

6. Navigation
The policies of this program are not applicable because the proposed project does not involve navigation.

7. Transportation

Policy 1 – Sustainability Analysis of Transportation Projects
The potential effects of the proposed project will be analyzed as part of the NEPA process, which includes consideration of a reasonable range of alternatives, an analysis of effects on the environment, and public involvement in the decision-making process. As such, the project is consistent with Transportation Policy 1.

Policy 2 – Public Engagement in Transportation Project Planning
Public involvement is being conducted as part of project planning and the NEPA process; therefore, the project is consistent with this policy.

Policy 3 – Projects Must Support Multi-Modal Transportation
The proposed project includes improved pedestrian and bicycle facilities and is being designed to accommodate future alternative transportation options through simple modifications to the site design; therefore, the project is consistent with Policy 3.

Policy 4 – An Integrated Private-Public Regional Transportation System
The proposed project does not involve private transit facilities; therefore, this policy is not applicable.

Policy 5 – Transportation Project Must Consider the Needs of Bicyclists & Pedestrians
The proposed project includes improved pedestrian and bicycle facilities that are being sited and designed to address current congestion and safety at the South Ocean Beach recreation area for all visitors; therefore, the project would be consistent with Transportation Policy 5.

8. Agriculture
The proposed project does not involve agricultural projects or operations; therefore, the policies of this program are not applicable.

9. Development

Policy 1 – Sediment & Erosion Control
The NPS would prepare an ESC Plan prior to construction for MDE approval that would include BMPs for erosion and sediment transport, such as silt fencing, stabilized construction entrances, coir logs, erosion matting, sediment traps, sediment basins, and others as deemed appropriate for the site. Therefore, the proposed project would be consistent with Policy 1.

Policy 2 – Erosion and Sediment Control Plan
An ESC Plan would be prepared and submitted to MDE for review and approval prior to construction; therefore, the proposed project would be consistent with this policy.

Policy 3 – Stormwater Management
The NPS would ensure that appropriate stormwater management BMPs would be included in the design of the proposed project. Due to the sandy substrate at the site, BMPs are likely to consist primarily of ditches and swales adjacent to impervious areas to capture and infiltrate stormwater runoff. The proposed project would therefore be consistent with this policy.

Policy 4 – First Avoid then Minimize Wetland Impacts, Minimize Water Quality, Habitat & Forest Damage & Preserve Cultural Resources
The NPS will make all reasonable efforts to avoid and minimize impacts to natural resources during project planning, site design, and construction to be consistent with Policy 4 to the maximum extent practicable. Through site investigations and consultation with MHT, the NPS has determined that there are no cultural resources at the site.

Policy 5 – Proposed Development Projects Must Be Sited Where Adequate Water Supply, Sewerage and Solid Waste Services & Infrastructure Are Available
The proposed project would occur at a site this is already developed. An adequate water supply exists to the site for showers and drinking fountains. Vault toilets and dumpsters provided at the site would be frequently emptied by private contractors. Therefore, the proposed project would be consistent with this policy.

Policy 6 – Proposed Construction Must Have Water and Wastewater Allocation or Provide Onsite Capacity
On-site water usage would be limited to up to four showers and two drinking fountains for park visitors. Existing water service is anticipated to be adequate to support these facilities. Vault toilets would be installed that do not require waste disposal systems, as they would be frequently pumped empty by a private contractor. As existing water service to the site is adequate, and no water or sewage treatment and disposal systems are proposed, the proposed project would be consistent with this policy.

Policy 7 – Structures Served by On-Site Water and Sewage Waste Disposal Systems Must Demonstrate Capacity Prior to Construction or Alteration
On-site water usage would be limited to up to four showers and drinking fountains for park visitors. Existing water service is anticipated to be adequate to support these facilities. Vault toilets would be installed that do not require waste disposal systems, as they would be frequently pumped clean by a private contractor. As no water or sewage treatment and disposal systems are proposed, this policy is not applicable.

Policy 8 – Grading or Building in the Severn River Watershed Requires Approved Development Plan
The proposed project is not located within the Severn River Watershed; therefore, this policy is not applicable.

Policy 9 – Siting Requirements for Industrial Facilities
The proposed project does not involve industrial facilities; therefore, this policy is not applicable.

Policy 10 – Citizen Engagement in Planning & Development
Public involvement and outreach is being conducted as part of project planning and the NEPA process; therefore, the proposed project will be consistent with this policy.

Policy 11 – Protect Existing Community Character & Concentrate Growth
This policy is not applicable as the proposed project does not involve community development.

Policy 12 – Site Development Near Available or Planned Transit
The proposed project would occur on Assateague Island National Seashore where access to transit options are limited; therefore, this policy is not applicable.

Policy 13 – Design for Walkable, Mixed Use Communities
This policy is not applicable as the proposed project does not involve community development.

Policy 14 – Communities Must Identify Adequate Water Supply, Stormwater & Wastewater Services & Infrastructure to Meet Existing & Future Development
This policy is not applicable as the proposed project does not involve community development.

10. Sewage Treatment
The proposed project does not involve sewage treatment; therefore, this program is not applicable.

DETERMINATION: Based upon the information, data, and analysis presented above, the NPS finds that the proposed South Ocean Beach Parking Area and OSV Entrance Road Reconfiguration project is consistent, to the maximum extent practicable, with the enforceable policies of the Maryland CZMP.

Attachments:
Attachment 1: Site Location Map
Attachment 2: Schematic Design Options Plan Set
Attachment 3: Agency Coordination
Attachment 4: Maryland CZMP Consistency Checklists
Attachment 5: Critical Area Buffer Maps

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Wes Moore, Governor
Aruna Miller, Lt. Governor
Josh Kurtz, Secretary
David Goshorn, Deputy Secretary

April 25, 2023

Mr. Bill Huslander
Chief or Resource Management
Assateague Island National Seashore
7206 National Seashore Lane
Berlin, MD 21811

Mr. Huslander,

Thank you for your submission for the OSV Entrance Road Reconstruction Project. On behalf of Danielle Spendiff (MD Federal Consistency Coordinator), I am responding to your request for CZMA coastal consistency concurrence.

The purpose of the proposed project is to improve the entrance to the South Ocean Beach recreation area and make it more resilient to natural coastal processes, future storm events, and improve safety. The project is needed to respond to the westward dune movement that is encroaching on the South Ocean Beach recreation area.

Based on our review of the information provided, the above project is consistent with the enforceable coastal policies of the Maryland Coastal Zone Management Program with the following conditions:

- A Joint Permit Application meeting will need to be completed for potential non-tidal wetland impacts depending on the final design. That process can be initiated here: https://mde.maryland.gov/programs/Water/WetlandsandWaterways/PermitsandApplications/Pages/index.aspx.
- The project meets the Critical Area Coastal Zone policies to the maximum extent practicable based on information listed in the table below provided:
  - Any proposed changes to the design or disturbance numbers require a new consistency determination;
  - A Critical Area Buffer Management Plan will be provided by NPS to demonstrate mitigation for buffer impacts is being accomplished.

LT	Total Buffer Impact	Vegetation Clearing in Buffer	Vegetation Clearing Outside Buffer	Total Impervious Area	Total Parking Area	Pavement Removal/Area Restored
Existing	NA	NA	NA	128,506 SF/2.95 AC	38,200 SF/0.88 AC	NA

Tawes State Office Building – 580 Taylor Avenue – Annapolis, Maryland 21401
410-260-8DNR or toll free in Maryland 877-620-8DNR – *dnr.maryland.gov* – TTY Users Call via the Maryland Relay

1	49,936 SF/1.15 AC	12,508 SF/0.29 AC	92,384 SF/2.12 AC	187,190 SF/4.3 AC	78,730 SF/1.8 AC	81,326 SF/1.87 AC
2	49,923 SF/1.15 AC	11,687 SF/0.27 AC	91,462 SF/2.10 AC	170,863 SF/3.92 AC	58,870 SF/1.35 AC	80,503 SF/1.85 AC
3	49,945 SF/1.15 AC	11,692 SF/0.27 AC	84,963 SF/1.95 AC	175,864 SF/4.04 AC	69,710 SF/1.6 AC	77,646 SF/1.78 AC

Please note that this determination does not obviate the applicant's responsibility to obtain any other State or local approvals that may be necessary for the project.

Thank you,

Kristen Fleming
Coastal Consistency Coordinator
Maryland Department of Natural Resources

cc: Danielle Spendiff, MDE

National Park Service
U.S. Department of the Interior

Assateague Island National Seashore
Maryland

South Ocean Beach Parking Area and Over-Sand Vehicle Entrance Road Reconfiguration

Environmental Assessment

Appendix C
Schematic Design Plans

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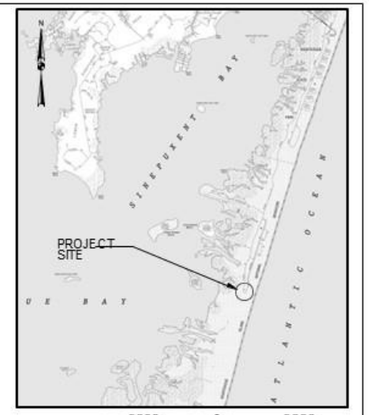

SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION

ASSATEAGUE ISLAND NATIONAL SEASHORE

SCALE:
1" = 100'
100 50 0 100 200 300

SHEET INDEX

SHEET NO.	SHEET SUB NO.	SHEET TITLE
1	C1	TITLE SHEET
2	C2	EXISTING CONDITIONS PLAN
3	C3	EXISTING CONDITIONS PLAN
4	C4	EXISTING CONDITIONS PLAN
5	C5	TYPICAL SECTIONS
6	C6	BUILDING AND PAVEMENT DETAILS
7	C7	VAULT TOILET AND RINSE SHOWER DETAILS
8	C8	CHANGE STATION DETAILS
9	C9	FENCE DETAILS
10	C10	BICYCLE RACK DETAILS
10A	C10A	BOARDWALK DETAILS
10B	C10B	GUARDRAIL DETAILS
10C	C10C	GATE DETAILS
11	C11	PAVING PLAN OPTION I
12	C12	PAVING PLAN OPTION I
13	C13	PAVING PLAN OPTION I
14	C14	PAVING PLAN OPTION II
15	C15	PAVING PLAN OPTION II
16	C16	PAVING PLAN OPTION II
17	C17	PAVING PLAN OPTION III
18	C18	PAVING PLAN OPTION III
19	C19	PAVING PLAN OPTION III

PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C1	TITLE OF SHEET: TITLE SHEET	DRAWING NO.: 622 182833	
CADD: CC		SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	PMIS/PKG NO.: XXXXXX	
TECH. REVIEW: KW			SHEET: 1 OF 19	
DATE: 10.12.2022				

LEGEND

- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE

APPROXIMATE LOCATION LIFE OF THE DUNES TRAIL

EXISTING PARKING AREA

MATCH LINE, SEE SHEET C3

EXISTING MULTI-USE PATH

COMPRESSOR BUILDING

EDGE OF ROAD

OSV ENTRANCE GATE

OSV ZONE ENTRANCE ROAD

EXISTING AIR COMPRESSOR STATION

ACCESS TO MAINTAIN VAULTS

2040 DUNE LINE

PRELIMINARY – NOT FOR CONSTRUCTION

SCALE: 1" = 30'
30 15 0 30 60 90

NOTE:
TOPOGRAPHY WAS DEVELOPED BY GIS, SURVEY REQUIRED.

DESIGNED: DHM	SUB SHEET NO. C2	TITLE OF SHEET: EXIST. CONDITIONS PLAN	DRAWING NO. 622 / 182833
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TECH. REVIEW: KW			SHEET 2 OF 19
DATE: 10.12.2022			

SCALE: 1" = 30'
30 15 0 30 60 90

NOTE:
TOPOGRAPHY WAS DEVELOPED BY GIS, SURVEY REQUIRED.

PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C3	TITLE OF SHEET: EXIST. CONDITIONS PLAN	DRAWING NO. 622 / 182833
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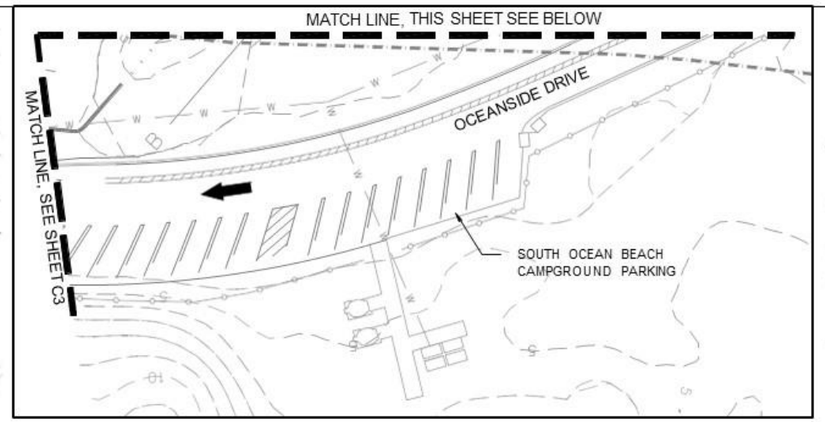
TECH. REVIEW: KW			SHEET 3 OF 19
DATE: 10.12.2022			



BAYBERRY DRIVE

MATCH LINE, SEE SHEET C3

EXISTING MULTI-USE PATH

OCEANSIDE DRIVE

2040 DUNE LINE

MATCH LINE, THIS SHEET SEE ABOVE

LEGEND

- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE

SCALE: 1" = 30'

30 15 0 30 60 90

NOTE:
TOPOGRAPHY WAS DEVELOPED BY GIS, SURVEY REQUIRED.

PRELIMINARY – NOT FOR CONSTRUCTION

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TECH. REVIEW: KW			SHEET 4 OF 19
DATE: 10.12.2022			

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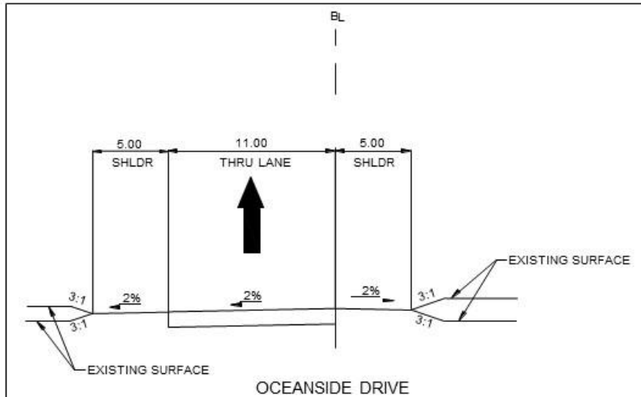
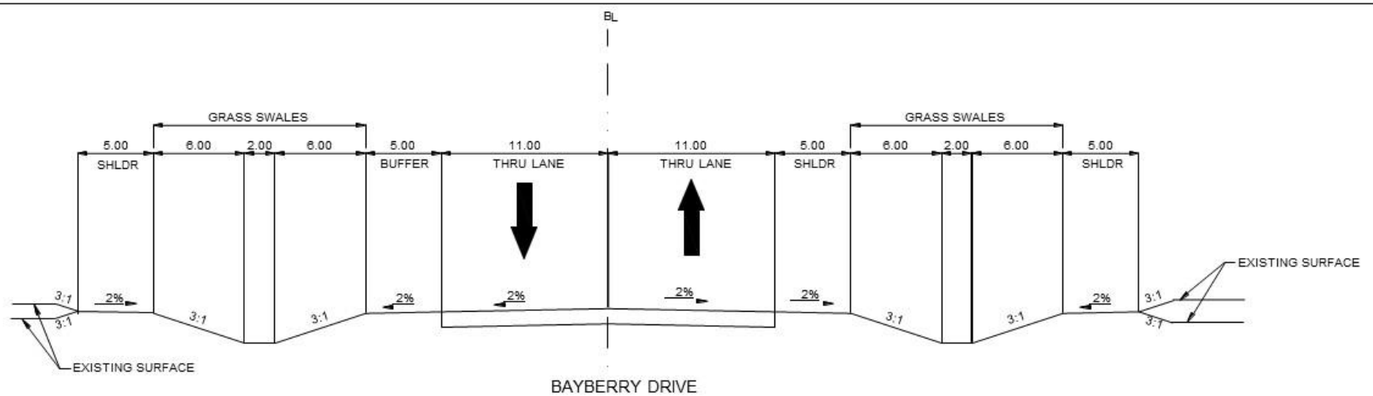


OCEANSIDE DRIVE



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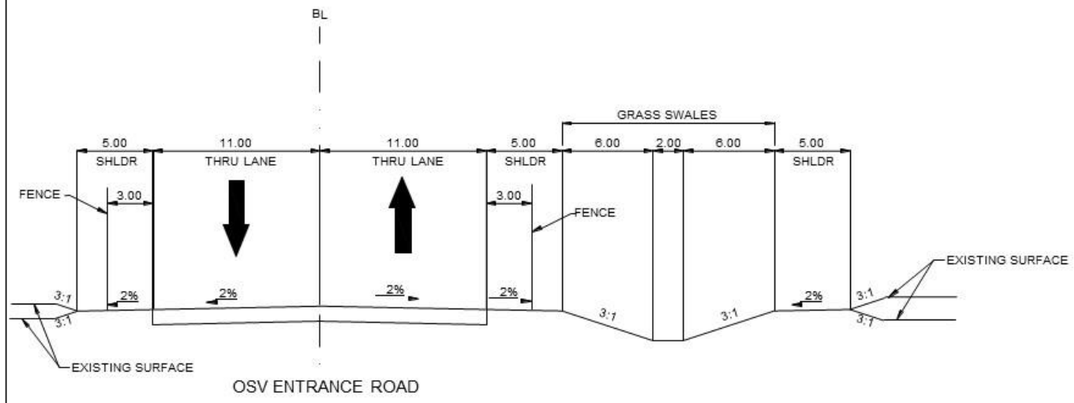
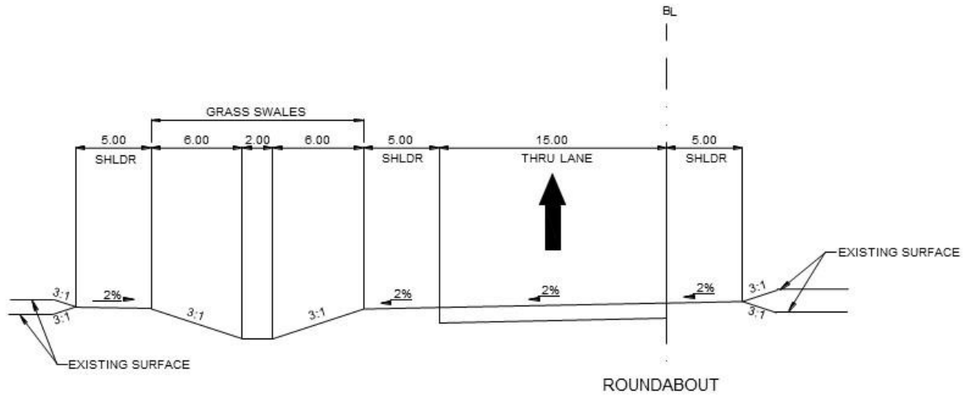
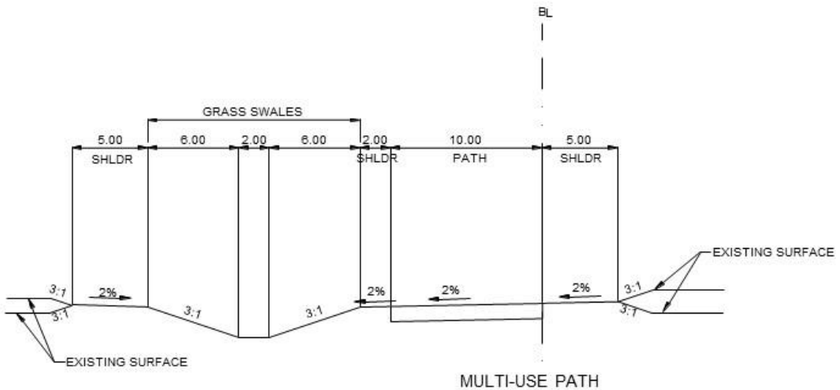


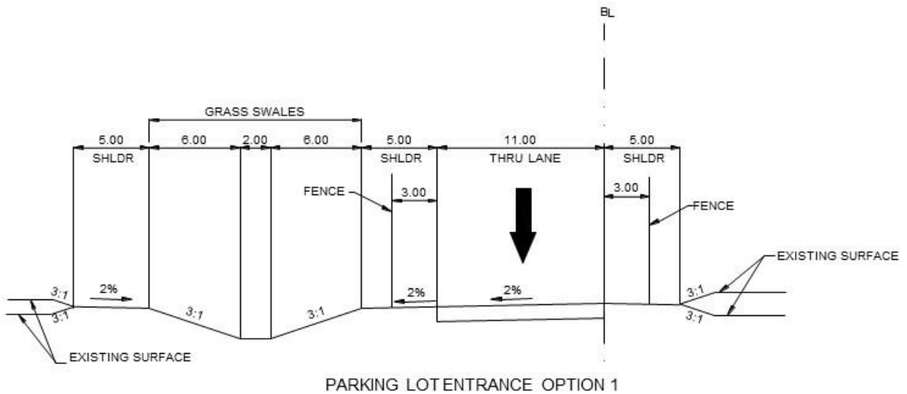
OSV ENTRANCE ROAD



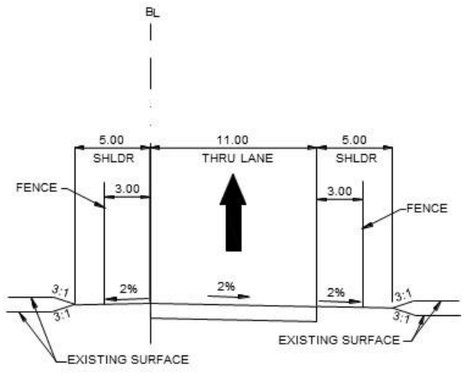
ROUNDABOUT



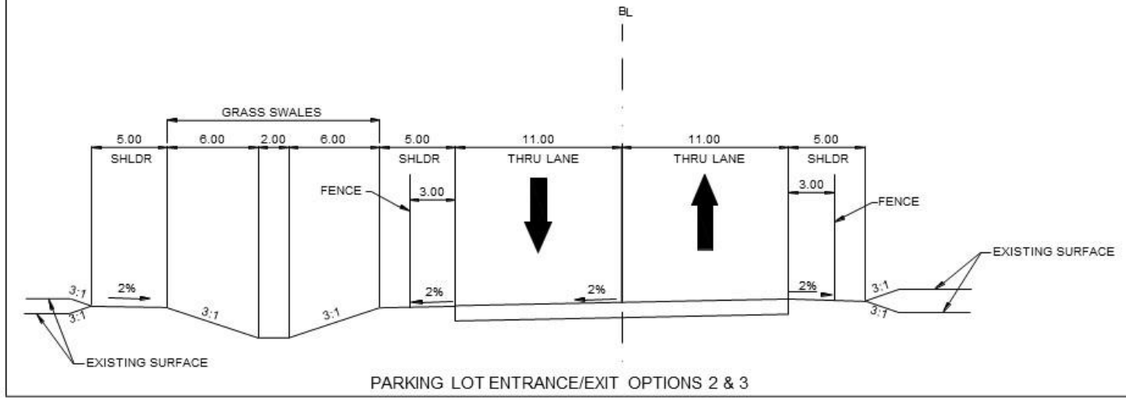
MULTI-USE PATH



PARKING LOT ENTRANCE OPTION 1



PARKING LOT EXIT OPTION 1



PARKING LOT ENTRANCE/EXIT OPTIONS 2 & 3

PRELIMINARY – NOT FOR CONSTRUCTION

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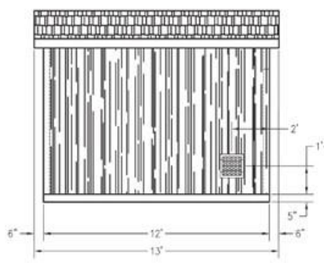
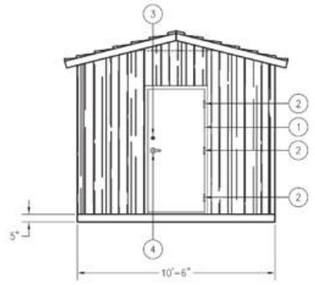
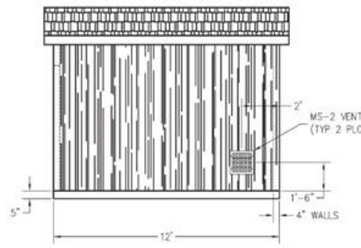


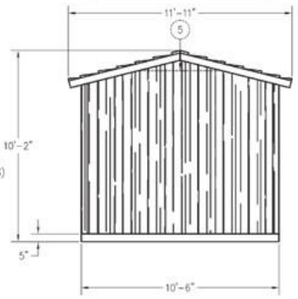
LH SIDE ELEVATION



FRONT ELEVATION



RH SIDE ELEVATION



REAR ELEVATION

DESIGN CRITERIA:

GENERAL NOTES APPLY TO ALL PANELS
UNLESS SPECIFICALLY NOTED OTHERWISE

1997 UBC

LOADS:
WIND: 120 MPH EXP D
SEISMIC: ZONE 4
SNOW: 250 PSF ROOF LOAD
FLOOR LIVE LOAD: 400 PSF

MATERIALS:
CONCRETE: F'ci = 2500 PSI
F'C = 5000 PSI

STEEL:
REBAR=ASTM A615 GRADE 60
WELDING NOT ALLOWED
MIN LAP SPLICE IS 40 DIAMETERS
ALL MESH IS 4x4xW8xW8
MIN. MESH LAP IS TWO SQUARES
MESH IS TO BE CENTERED IN PANEL
PLATES & BARS=ASTM A36 Fy=36 KSI

PANEL THICKNESS:
FLOOR = 5"
WALLS = 4"
ROOF = 4 1/2"

COLOR: SEE MI

TEXTURE: WALLS – BARNWOOD
ROOF – CEDAR SHAKE

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
1	1	3068 DOOR ASSEMBLY
		PREP FOR DEAD BOLT
		OPENS OUT
		AUTOMATIC DOOR BTM
		3" THRESHOLD
2	3	SPRING HINGE 4.5 x 4.5
3	1	SCHLAGE DEAD BOLT LOCK
4	1	GLASS ROOM LEVER
5	3	FLAT BAR 1/2" x 5HR x 4'-2"

APPROXIMATE WEIGHT

CASTING TOLERANCES:
OVERALL LENGTH OR WIDTH
10 FT OR UNDER = ± 1/8"
10 TO 20 FT = ±1.25"/FT, -3/4"
25 TO 40 FT = ±1/4"
TOTAL THICKNESS = -1/8, +1/4
VARIATION FROM SQUARE = ±1/8 PER 4 FT OF DIAGONAL
LOCAL SMOOTHNESS = 1/4" IN 10 FT
SWEEP = ±1/4"
POSITION OF TENDONS = ±1/4"
POSITION OF BLOCKOUTS = ±1/4"
SIZE OF BLOCKOUTS = ±1/4"
POSITION OF EMBEDS = ±1/4"
TIPPING AND FLUSHNESS OF PLATES = +0, -1/4
BOWING = LENGTH/360
END SQUARENESS = ±1/8"

CXT®
Precast Products

PROJECT TITLE
10.5' x 12' SCHWEITZER
CXT STANDARD BUILDING

NOTICE

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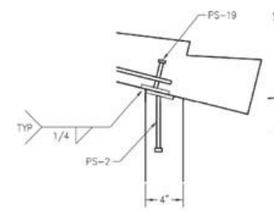
CXT Incorporated

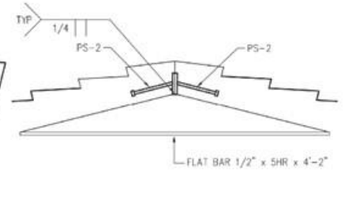
REV	DESCRIPTION	APPROVAL	DATE
SCALE	1/4"=1'-0"	DATE	03-28-05
DRAWN		FILE NO.	PP-SW03139
CHECKED		PLOT	48

BUILDING ELEVATIONS

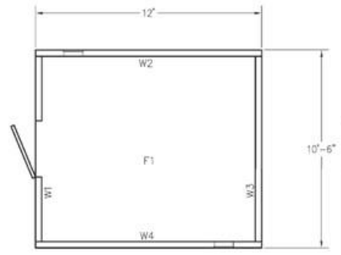
DWG NO. 10.512-01 | SHEET | REV.



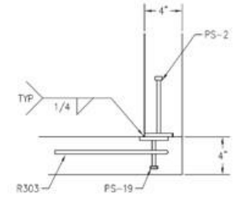
WALL TO ROOF CONNECTION



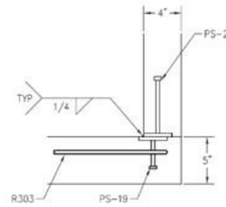
RIDGE CONNECTION



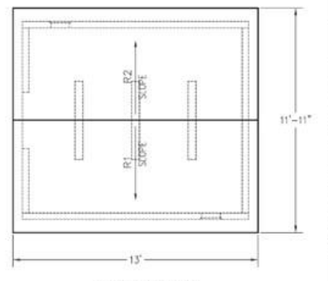
FLOOR PLAN



WALL TO WALL CONNECTION



WALL TO FLOOR CONNECTION



ROOF PLAN

CXT®
Precast Products

PROJECT TITLE
10.5' x 12' SCHWEITZER
CXT STANDARD BUILDING

NOTICE

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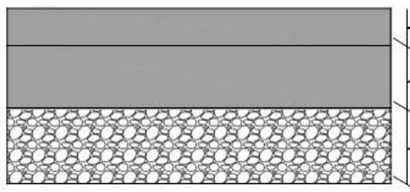
CXT Incorporated

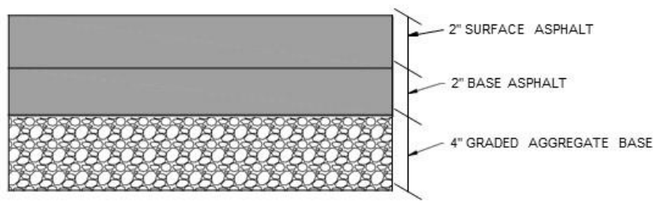
REV	DESCRIPTION	APPROVAL	DATE
SCALE	1/4"=1'-0"	DATE	03-28-05
DRAWN		FILE NO.	PP-SW03139
CHECKED		PLOT	48

PLAN VIEW

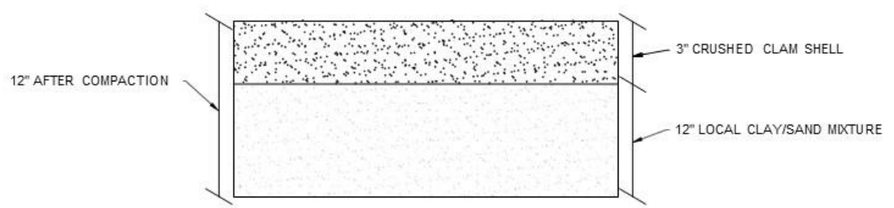
DWG NO. 10.512-02 | SHEET | REV.



ASPHALT ROADWAY PAVING DETAIL
NOT TO SCALE



ASPHALT MULTI-USE PATH AND PARKING LOT DETAIL
NOT TO SCALE



CRUSHED CLAM SHELL PAVING
NOT TO SCALE

PRELIMINARY – NOT FOR CONSTRUCTION

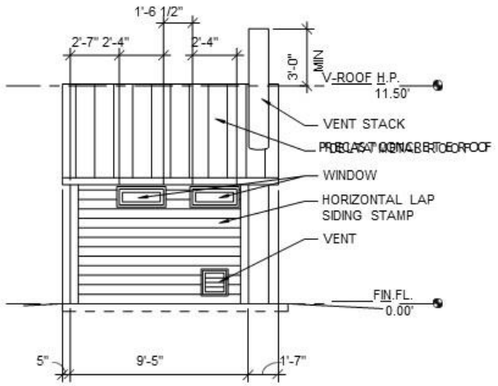
NATIONAL PARK SERVICE

DESIGNED:	DHM
CADD:	JC
TECH. REVIEW:	KW
DATE:	10.12.2022

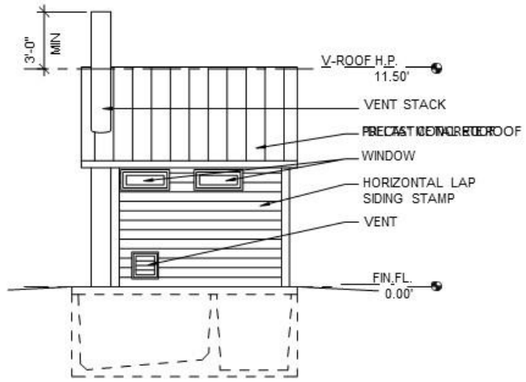
SUB SHEET NO. C6

TITLE OF SHEET
BUILDING AND PAVEMENT DETAILS
SCHEMATIC DESIGN
SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION
ASSATEAGUE ISLAND NATIONAL SEASHORE

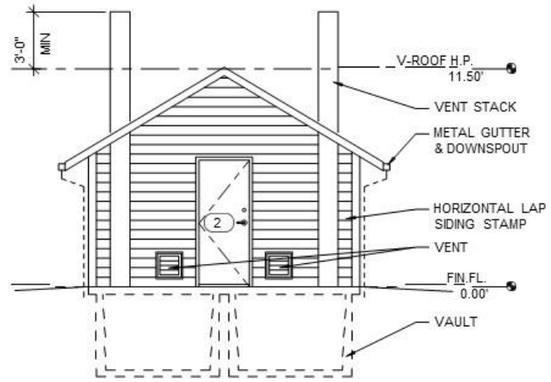
DRAWING NO. 622 / 182833
PMIS/PKG NO. XXXXXX
SHEET 6 OF 19



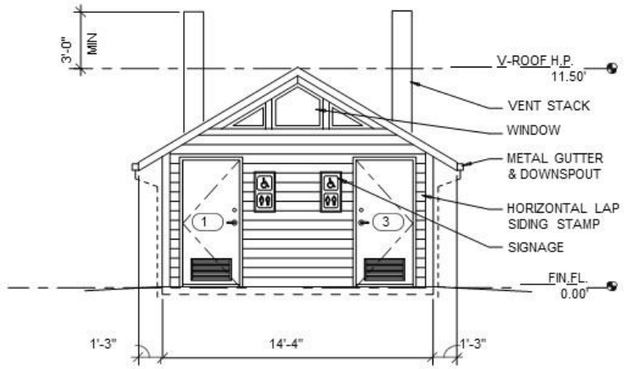
A1 1 VAULT - SIDE ELEVATION (B)
SCALE A



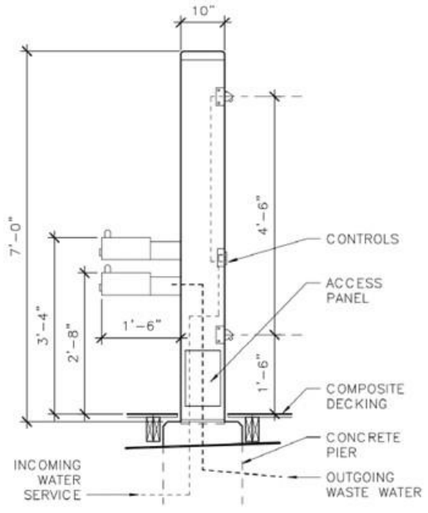
A1 2 VAULT - SIDE ELEVATION (A)
SCALE A

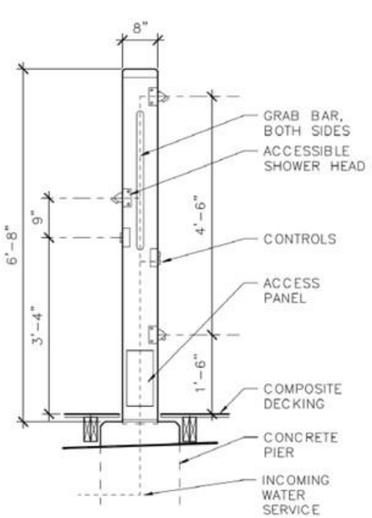


A1 3 VAULT - REAR ELEVATION
SCALE A

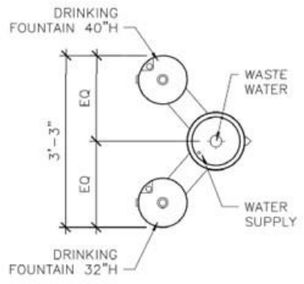


A1 4 VAULT - FRONT ELEVATION
SCALE A

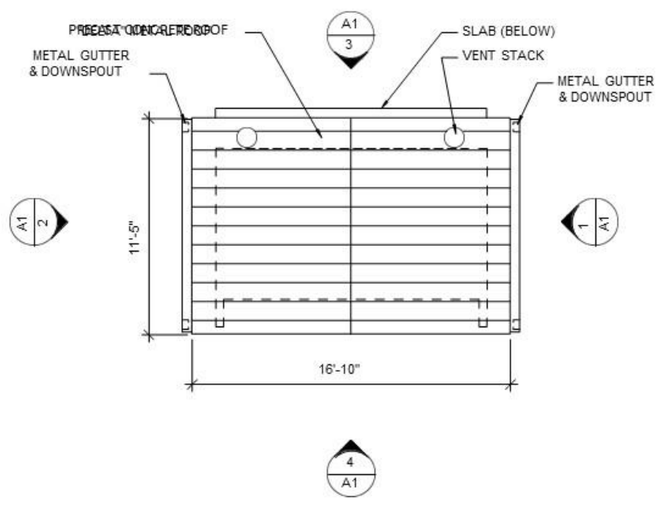




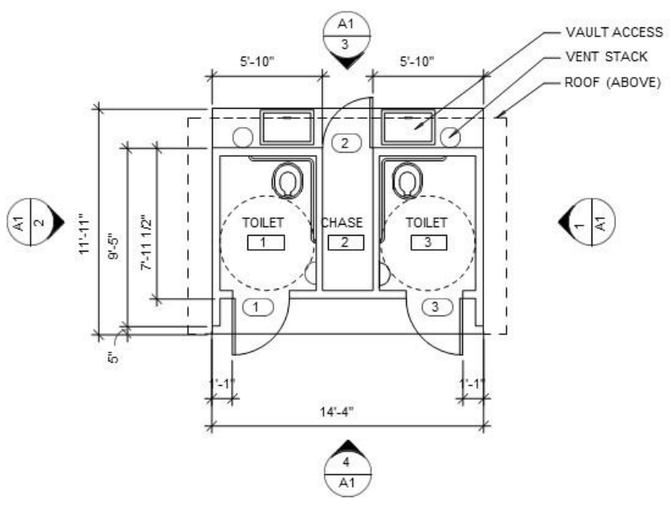
A1 RINSE SHOWERS
SCALE B



A1 RINSE SHOWERS—PLAN
SCALE B



A1 6 VAULT - ROOF PLAN
SCALE A



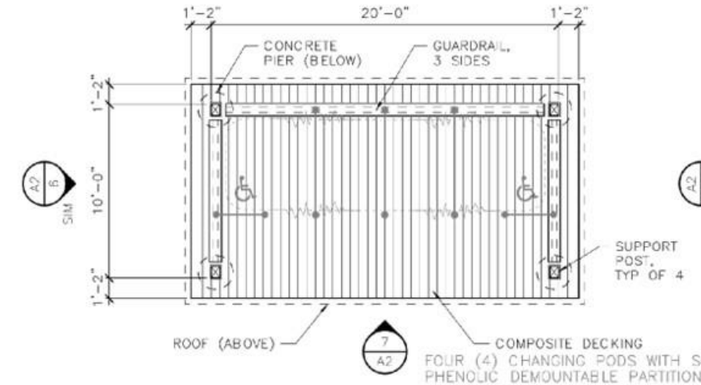
A1 7 VAULT - FLOOR PLAN
SCALE A

SCALE A 4 2 0 4 8 12
1" = 4'

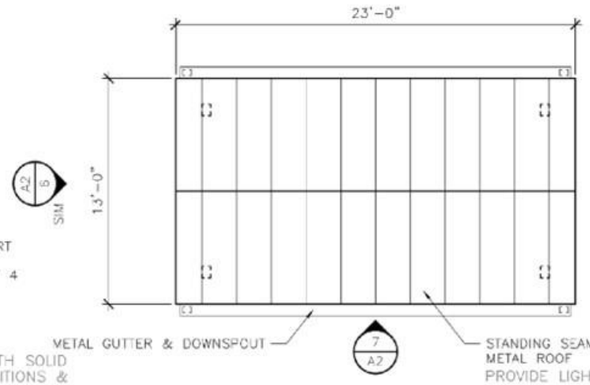
PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C7	TITLE OF SHEET: VAULT TOILET AND RINSE SHOWER DETAILS	DRAWING NO.: 622 182833
CADD: JC		SCHEMATIC DESIGN	PMIS/PKG NO.: XXXXXX
TECH. REVIEW: KW		SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION	SHEET 7 OF 19
DATE: 10.12.2022		ASSATEAGUE ISLAND NATIONAL SEASHORE	

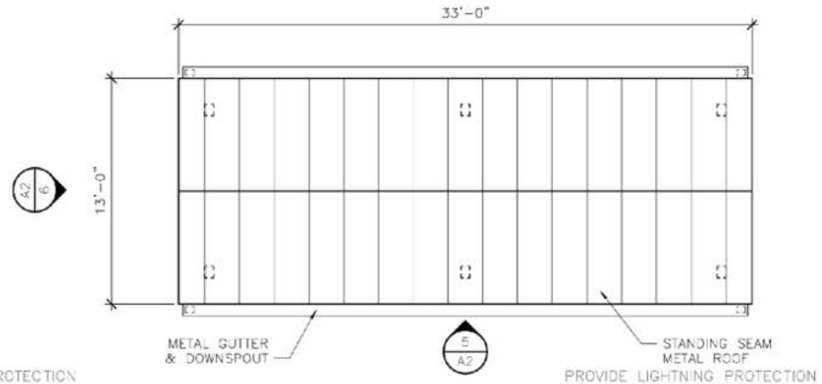
11/15/2022 09:42 SRHART R17 \\us0525-pprss01\shared_projects\202811311\03_design\700 CADD\700 Sheet\C07_DETAILS_NEW.dwg



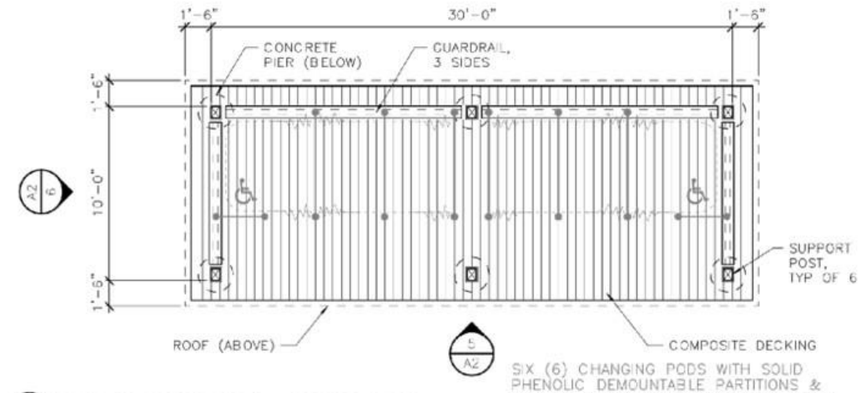
1 CHANGE STATION (A) – FLOOR PLAN
SCALE A



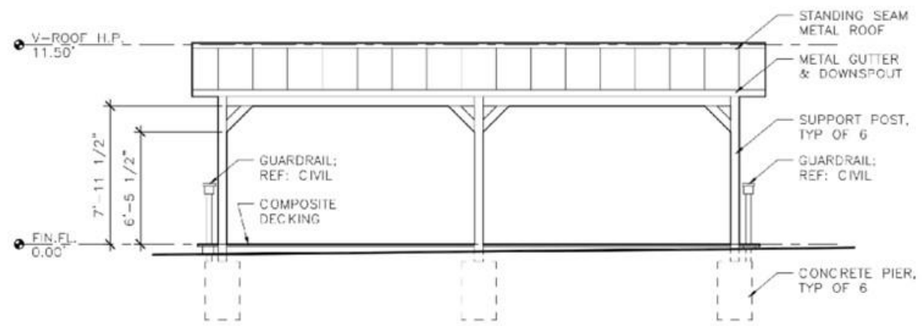
2 CHANGE STATION (A) – ROOF PLAN
SCALE A



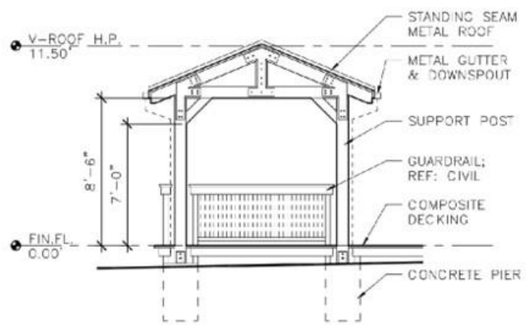
3 CHANGE STATION (B) – ROOF PLAN
SCALE A



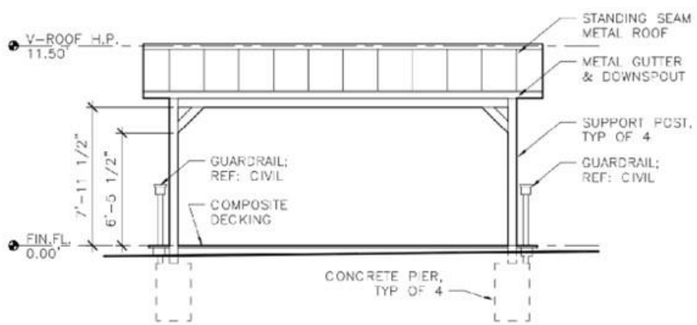
4 CHANGE STATION (B) – FLOOR PLAN
SCALE A



5 CHANGE STATION (B) – SIDE ELEVATION
SCALE A



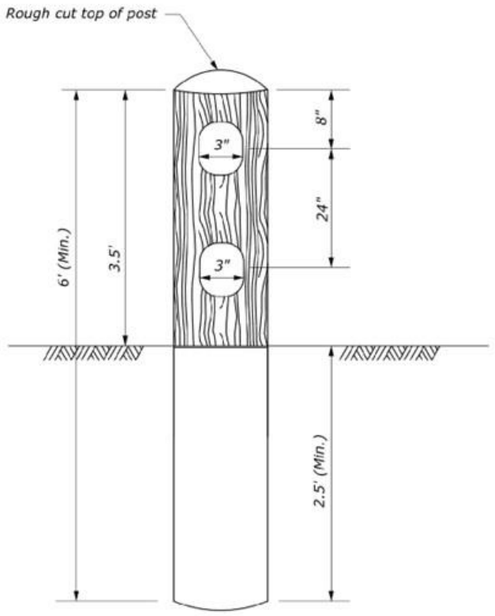
5 CHANGE STATION (A) – FRONT ELEVATION
SCALE A



7 CHANGE STATION (A) – SIDE ELEVATION
SCALE A

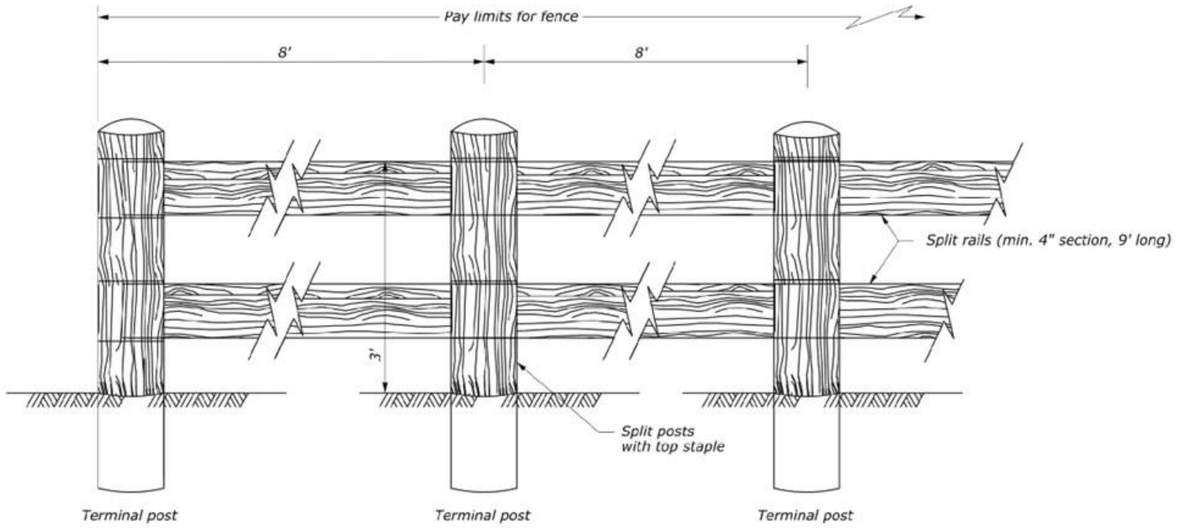
PRELIMINARY – NOT FOR CONSTRUCTION

NATIONAL PARK SERVICE	DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO. C8	TITLE OF SHEET: CHANGE STATION DETAILS SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO.: 622 / 182833 PMIS/PKG NO.: XXXXXX SHEET: 8 OF 19

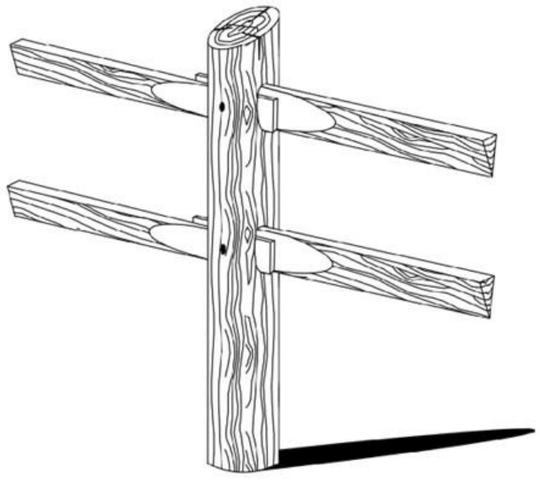


FENCE POST

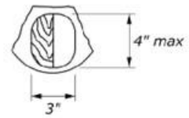
(6" min. Girth)



ELEVATION



PERSPECTIVE VIEW



RAIL
END VIEW

(4"-6" Girth)

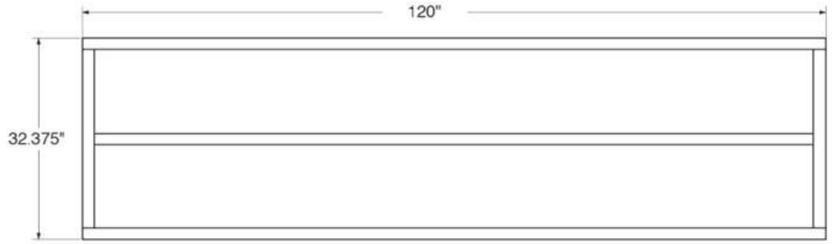
NOTE:

Pressure treat timber posts and rails in accordance with the latest American Wood Protection Association (AWPA) Standard U1.

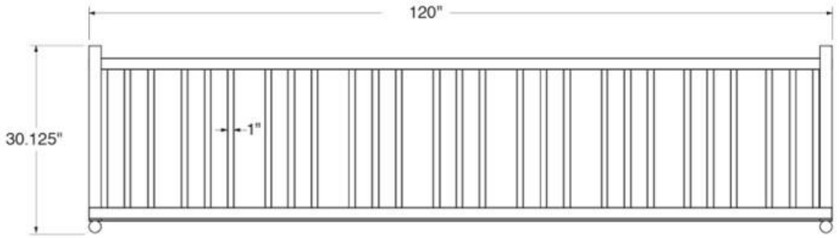
PRELIMINARY – NOT FOR CONSTRUCTION

NATIONAL PARK SERVICE	DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO.: C9	TITLE OF SHEET: FENCE DETAILS SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO.: 622 / 182833 PMIS/PKG NO.: XXXXXX SHEET: 9 OF 19

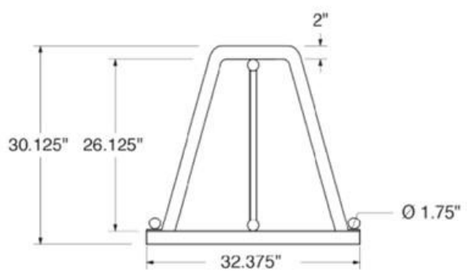
ISOMETRIC VIEW



PLAN VIEW



ELEVATION VIEW



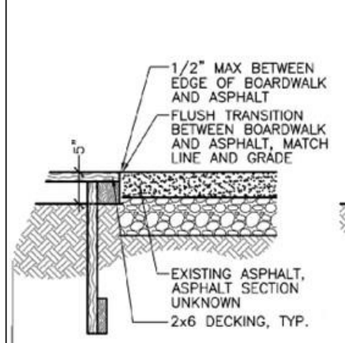
SIDE VIEW

NOTES:

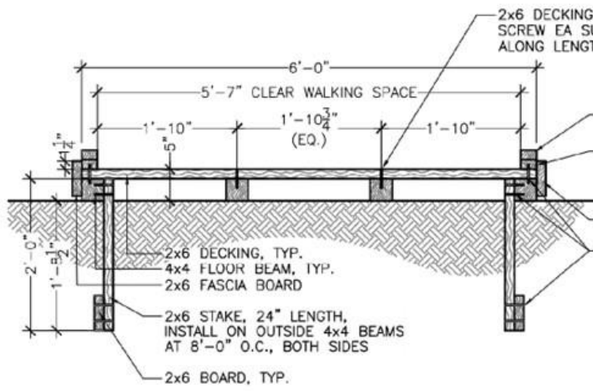
1. *Use galvanized steel for all tubing and hardware.*
2. *Provide all galvanized hardware according to ASTM A153.*
3. *Provide connectors to join multiple racks together.*
4. *Submit detail drawing, specifications of the bicycle rack, and obtain approval from the CO.*

PRELIMINARY – NOT FOR CONSTRUCTION

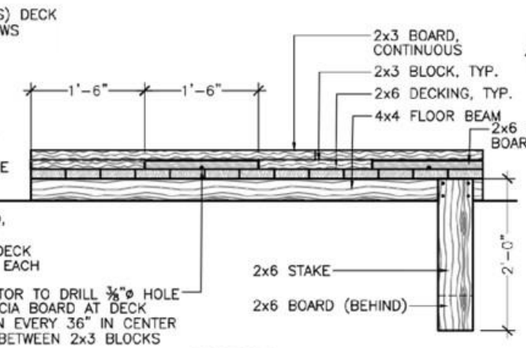
NATIONAL PARK SERVICE	DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO.: C10	TITLE OF SHEET: BICYCLE RACK DETAILS SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO.: 622 / 182833 PMIS/PKG NO.: XXXXXX SHEET: 10 OF 19



SECTION A
AT-GRADE BOARDWALK AND ASPHALT TRANSITION

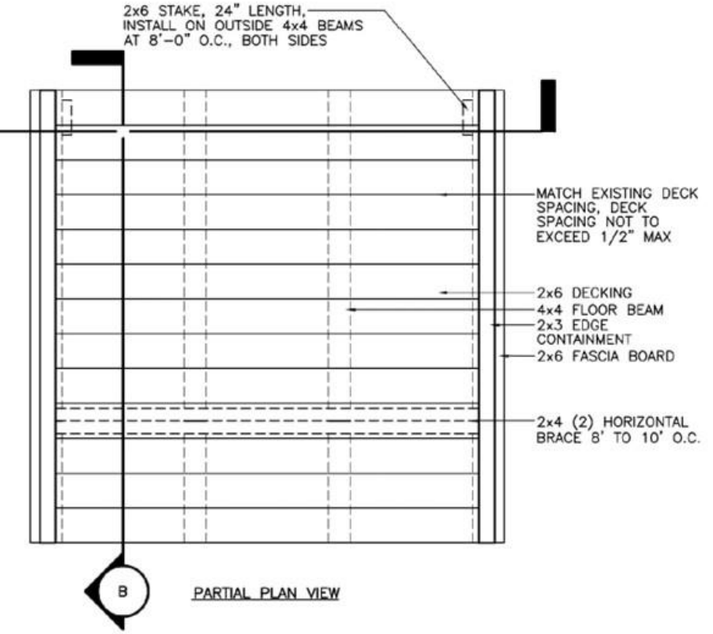


SECTION A



SECTION B

NOTE: AT TRANSITION FROM "AT GRADE" TO SLIGHTLY ELEVATED BOARDWALK, PROVIDE TRANSVERSE 4X10 X 6' BURIED SUPPORT FOR 4X4 FLOOR BEAMS. SPACE 4X10 @ 5' CENTERS MAXIMUM WITH TYPICAL 2X6 STAKES BOTH ENDS OF 4X10. LOCATE END STAKES INSIDE EDGE 4X4 FOR CONCEALMENT. PROVIDE SIMPSON H2.5A SS CLIPS EACH 4X4 TO BURIED 4X10



PARTIAL PLAN VIEW

1 L4.0 PROPOSED AT-GRADE BOARDWALK

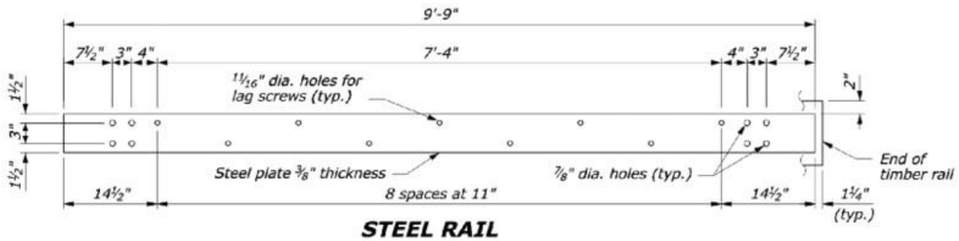
SCALE 1"=1'-0"

IMAGE OF EXISTING AT-GRADE BOARDWALK.
INSTALL CONTAINMENT EDGE PER DETAIL.

PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C10A	TITLE OF SHEET: BOARDWALK DETAILS	DRAWING NO.: 622 / 182833
CADD: JC		SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	PMIS/PKG NO.: XXXXXX
TECH. REVIEW: KW			SHEET: 10A OF 19
DATE: 10.12.2022			

STATE	PROJECT	SHEET NUMBER



STEEL RAIL

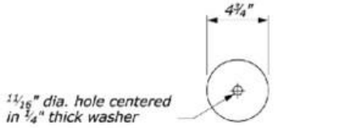
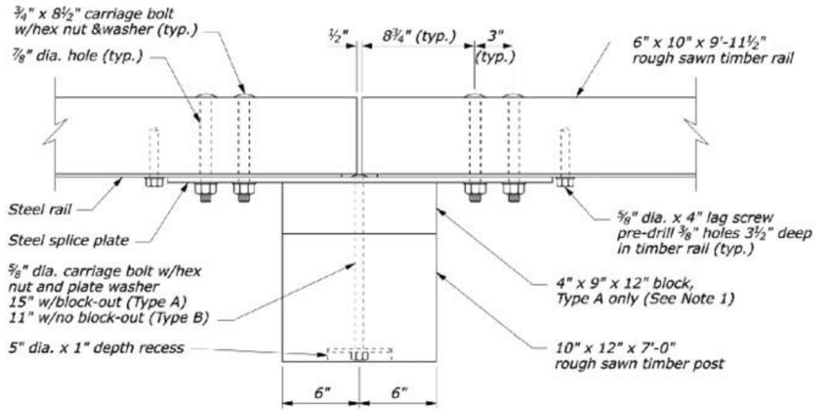


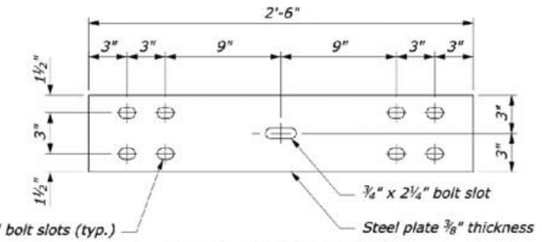
PLATE WASHER

NOTE:

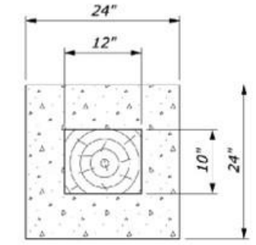
1. *Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified in the plans.*
2. *Use weathering steel for all structural steel and fastener hardware as specified.*
3. *Place a terminal section (See Standards 617-61 and 617-62) on both approach and trailing ends of barrier installations.*

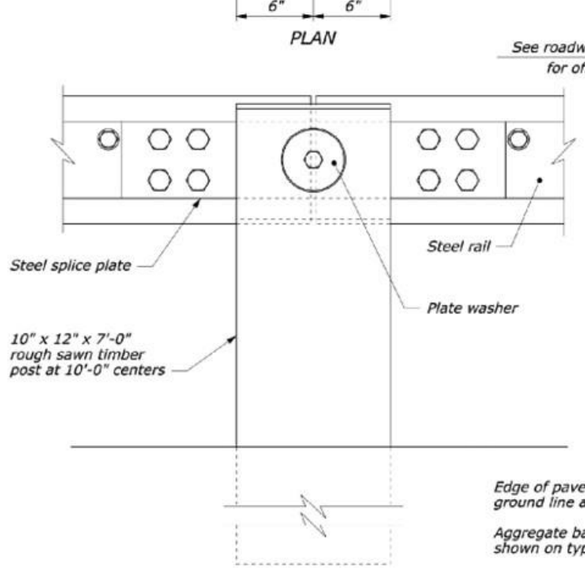


PLAN



STEEL SPLICE PLATE



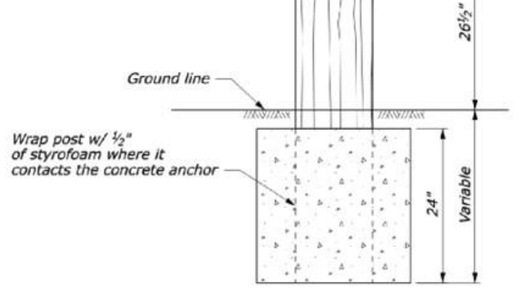


ELEVATION

POST CONNECTION

TYPICAL GUARDRAIL CROSS SECTION

NO SCALE



24" dia. round anchor is an acceptable alternative. Reduced size acceptable in solid rock.

CONCRETE ANCHOR FOR SHORT GUARDRAIL POST

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

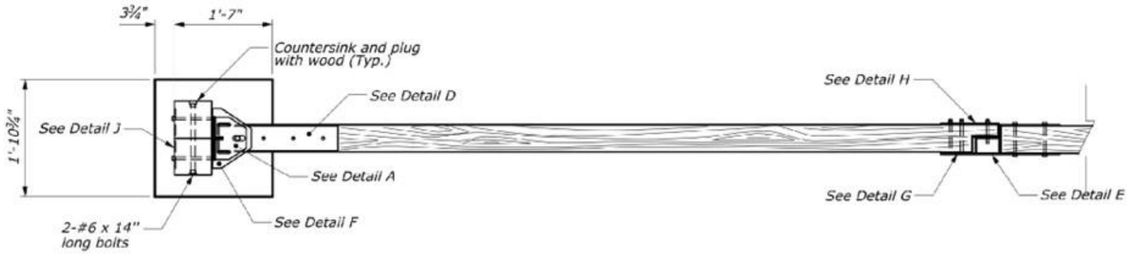
STEEL-BACKED TIMBER GUARDRAIL TYPE A & TYPE B

STANDARD APPROVED FOR USE 3/1990	STANDARD
REVISED: 4/1994 6/2005	617-60

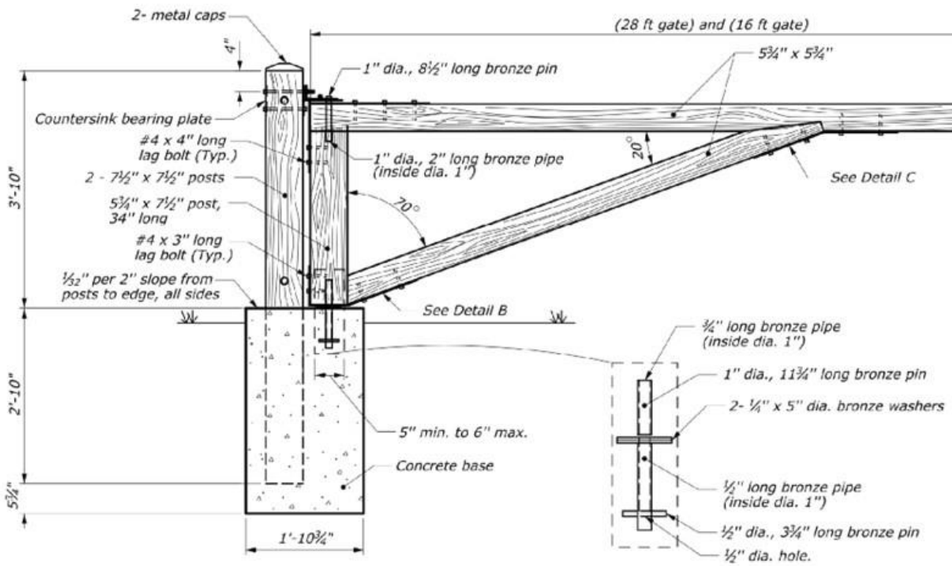
PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C10B	TITLE OF SHEET: GUARDRAIL DETAILS	DRAWING NO. 622 182833
CADD: JC		SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	PMIS/PKG NO. XXXXXX
TECH. REVIEW: KW			SHEET 10B OF 19
DATE: 10.12.2022			

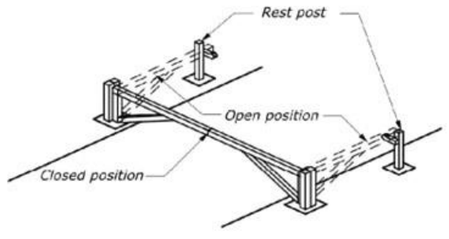
STATE	PROJECT	SHEET NUMBER
VA	FW-CHIN 10(2)	S23



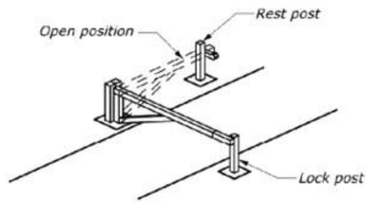
PLAN



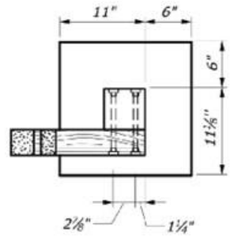
ELEVATION



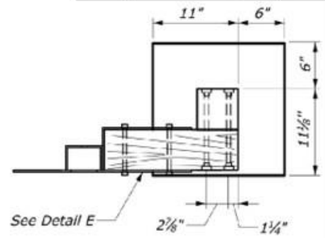
ISOMETRIC VIEW OF 28-FOOT GATE



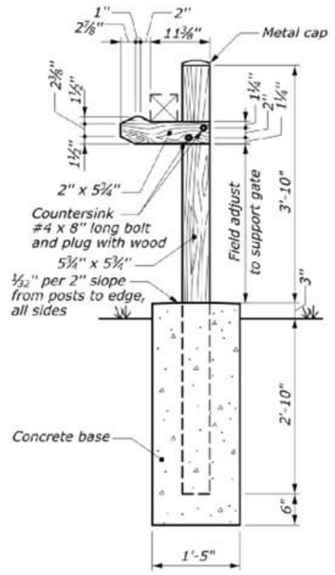
ISOMETRIC VIEW OF 16-FOOT GATE



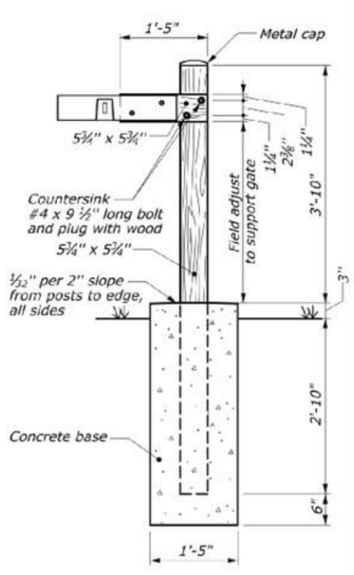
REST POST PLAN



LOCK POST PLAN



REST POST ELEVATION



LOCK POST ELEVATION

NOTES:

1. All Bolts #4 unless otherwise noted.
2. Use 1 inch dia. washers under all bolt heads and nuts unless otherwise noted.
3. All hardware, except parts made of bronze , are galvanized (double hot dipped after fabrication).
4. Timbers are select douglas fir or southern yellow pine (545). Pressure treat posts embeded in concrete to 0.60 to 0.80 CCA. All other timbers are 0.40 CCA pressure treated. Apply three brush coats of CCA to all saw cut areas and drilled holes.
5. Make all necessary field adjustments (with approval from the CO) to produce a plumb gate.
6. Conform to Section 601.

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

16 FT AND 28 FT GATES

Sheet 1 of 2

DETAIL APPROVED FOR USE	DETAIL
APPROVED : MAY 2011 REVISED: SEPTEMBER 2014	E619-04

PRELIMINARY – NOT FOR CONSTRUCTION

NATIONAL PARK SERVICE	DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO.: C10C	TITLE OF SHEET: GATE DETAILS SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO.: 622 / 182833 PMIS/PKG NO.: XXXXXX SHEET: 10C OF 19

LEGEND

- ASPHALT PARKING LOT
- ASPHALT PATH AND ROADS
- CLAMSHELL/CLAY
- PAVEMENT REMOVAL
- BOARDWALK
- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- PROPOSED FENCE OR TRAFFIC BARRIER
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE
- * HANDICAP PARKING ASPHALT PAVED
- SHOWER AND CHANGE STATION
- RESTROOM
- DRAINAGE SIDE DITCH/GRASS SWALE

PROPOSED OSV ENTRANCE GATE

LIFE OF THE DUNES TRAIL

PROPOSED BICYCLE RACK

MULTI-USE PATH

OSV ZONE ENTRANCE ROAD

TRAFFIC BARRIER

CUT/ FILL LIMIT

MULTI-USE PATH

MATCH LINE, SEE SHEET C12

OPTIONAL GATE LOCATION

CUT/ FILL LIMIT

COMPRESSOR BUILDING

OSV ENTRANCE GATE

EXIST. COMPRESSOR STATION

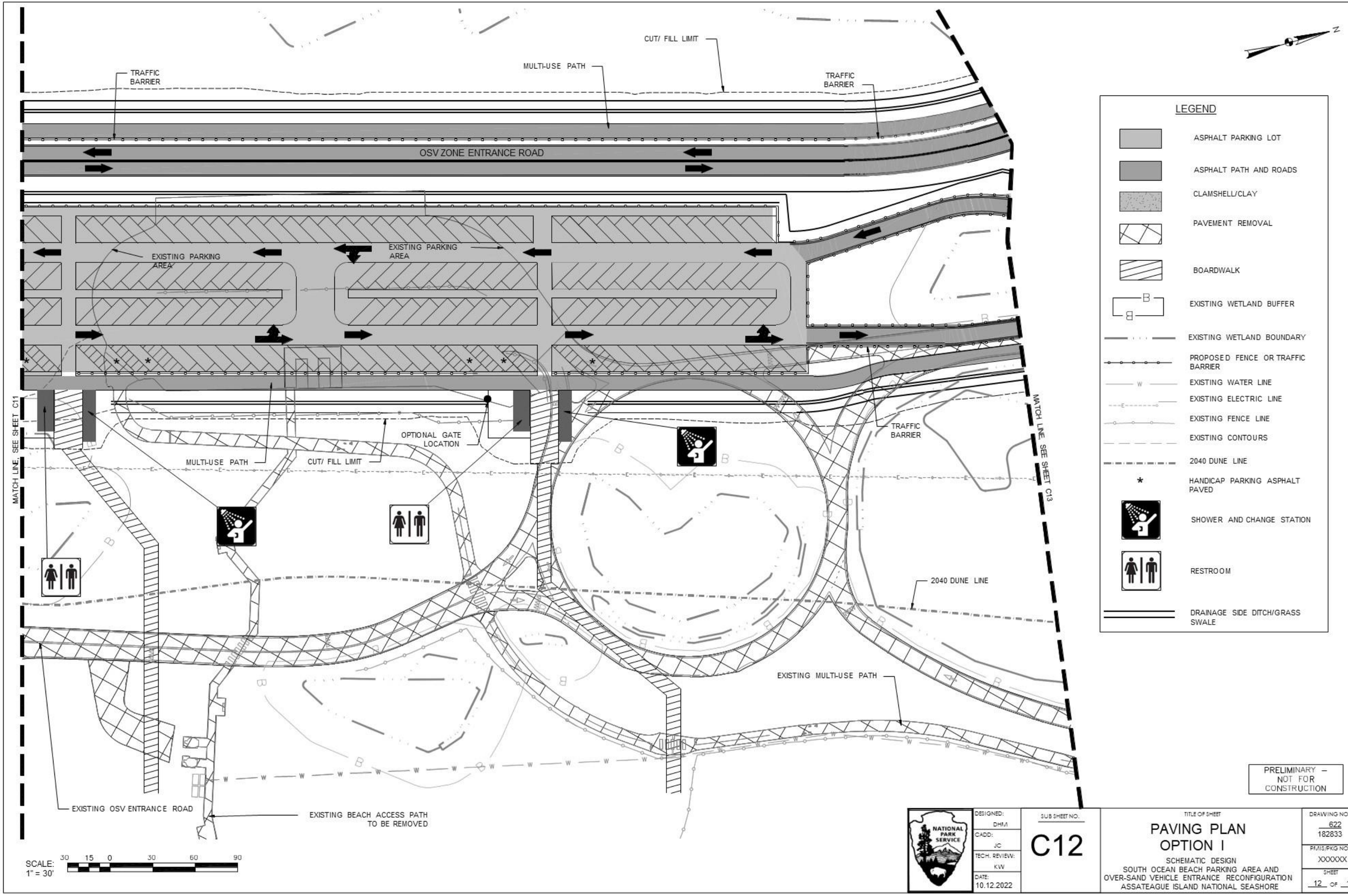
2040 DUNE LINE

SCALE: 1" = 30'

30 15 0 30 60 90

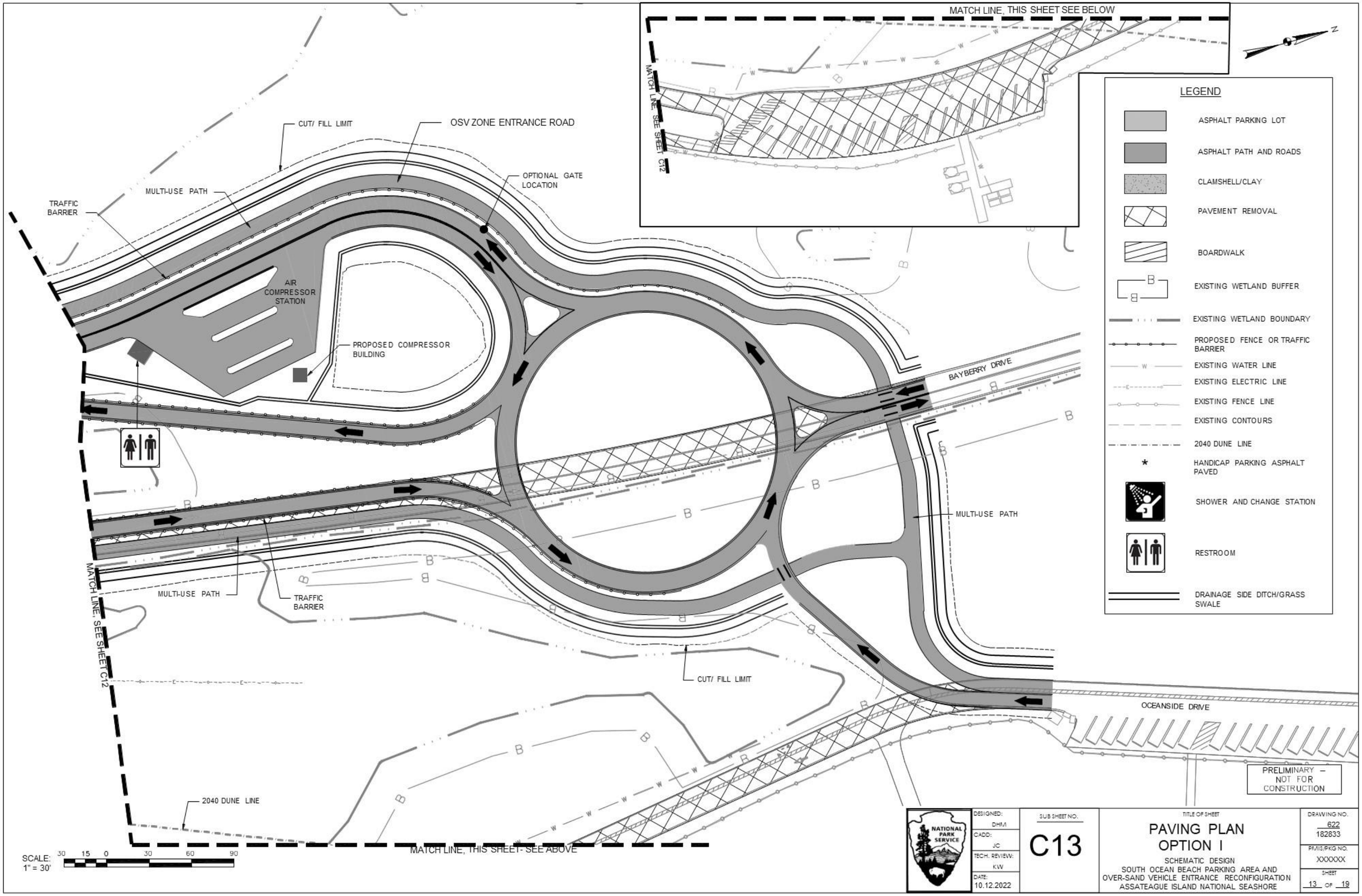
PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C11	TITLE OF SHEET: PAVING PLAN OPTION I	DRAWING NO. 622 182833
CADD: CC		SCHEMATIC DESIGN	PMIS/PKG NO. XXXXXX
TECH. REVIEW: KW		SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION	SHEET 11 OF 19
DATE: 10.12.2022		ASSATEAGUE ISLAND NATIONAL SEASHORE	



PRELIMINARY – NOT FOR CONSTRUCTION

NATIONAL PARK SERVICE	DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO. C12	TITLE OF SHEET: PAVING PLAN OPTION I SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO. 622 / 182833 PMIS/PKG NO. XXXXXX SHEET 12 OF 19



PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C13	TITLE OF SHEET: PAVING PLAN OPTION I SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO. 622 / 182833
CADD: JC			PMIS/PKG NO. XXXXXX
TECH. REVIEW: KW			SHEET 13 OF 19
DATE: 10.12.2022			

LEGEND

- ASPHALT PARKING LOT
- ASPHALT PATH AND ROADS
- CLAMSHELL/CLAY
- PAVEMENT REMOVAL
- BOARDWALK
- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- PROPOSED FENCE OR TRAFFIC BARRIER
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE
- * HANDICAP PARKING ASPHALT PAVED
- SHOWER AND CHANGE STATION
- RESTROOM
- DRAINAGE SIDE DITCH/GRASS SWALE

LIFE OF THE DUNES TRAIL

AIR COMPRESSOR STATION

MULTI-USE PATH

TRAFFIC BARRIER

CUT/ FILL LIMIT

PROPOSED BICYCLE RACK

PROPOSED COMPRESSOR BUILDING

MATCH LINE, SEE SHEET C15

CUT/ FILL LIMIT

MULTI-USE PATH

PROPOSED OSV ENTRANCE GATE

OSV ENTRANCE GATE

EXIST. COMPRESSOR STATION

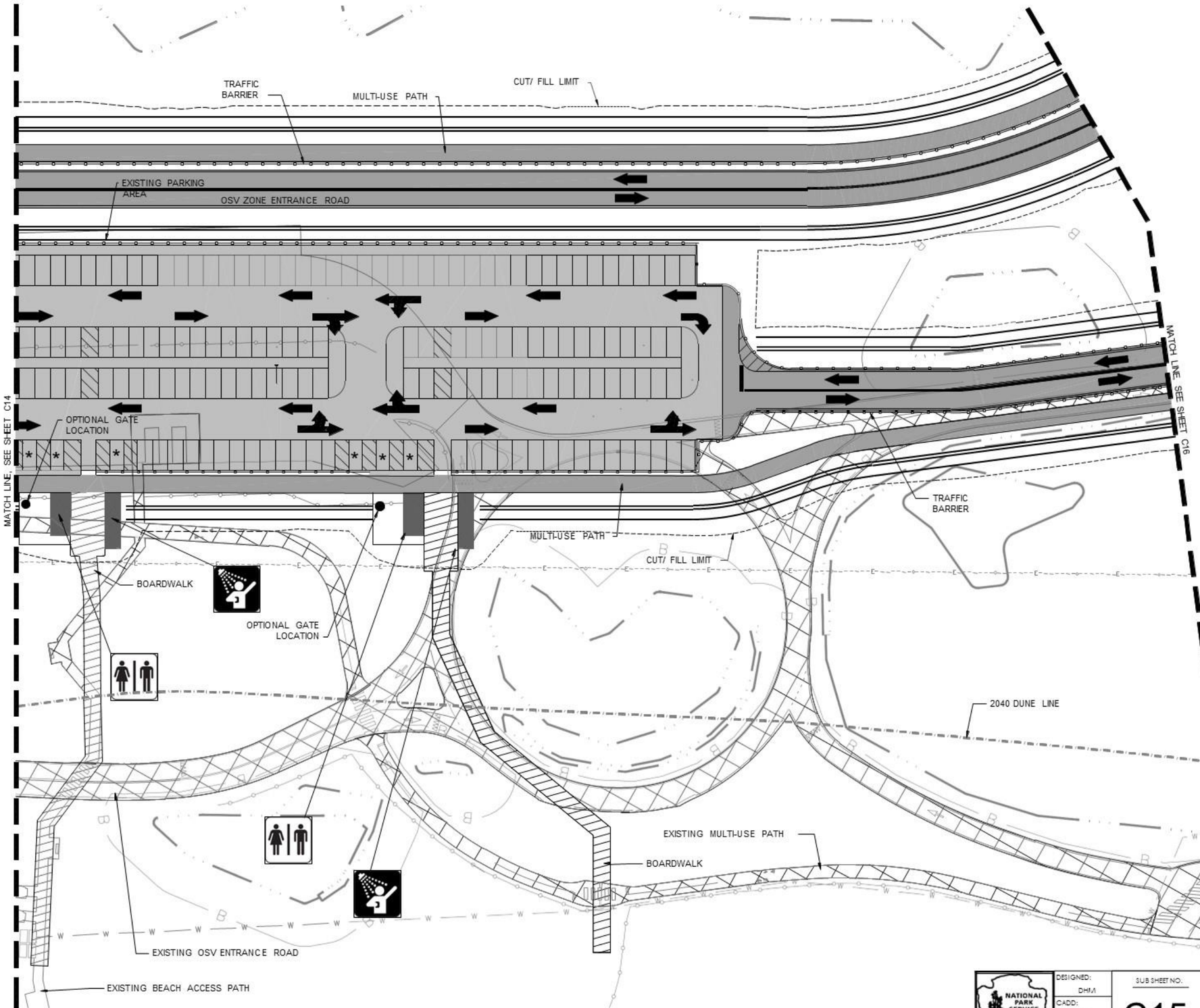
2040 DUNE LINE

SCALE: 1" = 30'

30 15 0 30 60 90

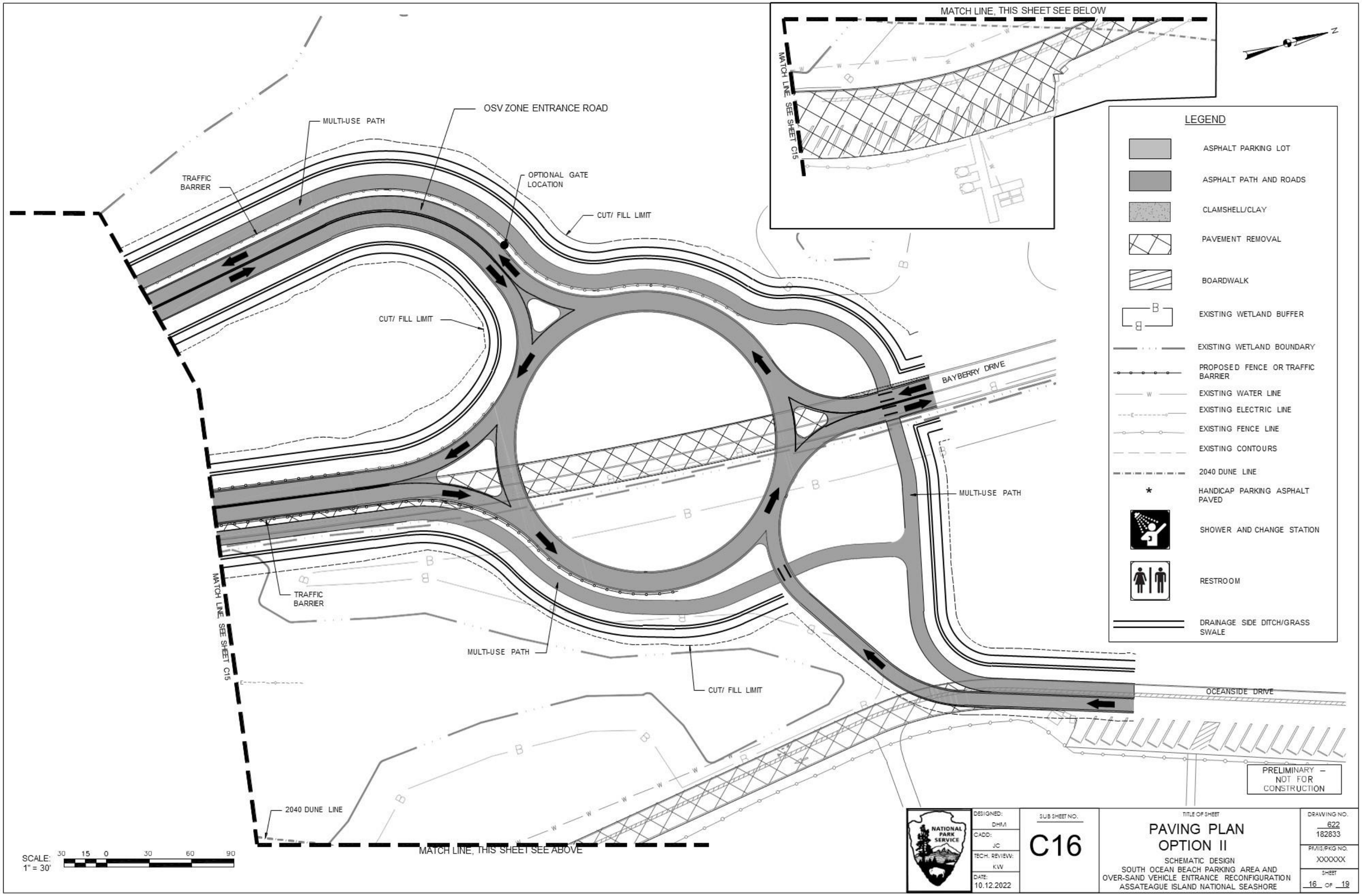
PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C14	TITLE OF SHEET: PAVING PLAN OPTION II	DRAWING NO. 622 / 182833
CADD: CC		SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	PMIS/PKG NO. XXXXXX
TECH. REVIEW: KW			SHEET 14 OF 19
DATE: 10.12.2022			



PRELIMINARY – NOT FOR CONSTRUCTION

NATIONAL PARK SERVICE	DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO. C15	TITLE OF SHEET: PAVING PLAN OPTION II SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO. 622 / 182833 PMIS/PKG NO. XXXXXX SHEET 15 OF 19



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DESIGNED: DHM CADD: JC TECH. REVIEW: KW DATE: 10.12.2022	SUB SHEET NO. C16	TITLE OF SHEET PAVING PLAN OPTION II SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO. 622 / 182833 PMIS/PKG NO. XXXXXX SHEET 16 OF 19

LEGEND

- ASPHALT PARKING LOT
- ASPHALT PATH AND ROADS
- CLAMSHELL/CLAY
- PAVEMENT REMOVAL
- BOARDWALK
- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- PROPOSED FENCE OR TRAFFIC BARRIER
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE
- * HANDICAP PARKING ASPHALT PAVED
- SHOWER AND CHANGE STATION
- RESTROOM
- DRAINAGE SIDE DITCH/GRASS SWALE

N

MULTI-USE PATH

CUT/ FILL LIMIT

TRAFFIC BARRIER

PROPOSED BICYCLE RACK

LIFE OF THE DUNES TRAIL

MATCH LINE, SEE SHEET C18

CUT/ FILL LIMIT

MULTI-USE PATH

PROPOSED OSV ENTRANCE GATE

OSV ENTRANCE GATE

EXIST. COMPRESSOR STATION

2040 DUNE LINE

SCALE: 1" = 30'

30 15 0 30 60 90

PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C17	TITLE OF SHEET: PAVING PLAN OPTION III	DRAWING NO. 622 182833
CADD: CC		SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	PMIS/PKG NO. XXXXXX
TECH. REVIEW: KW			SHEET 17 OF 19
DATE: 10.12.2022			

CUT/ FILL LIMIT

TRAFFIC BARRIER

MULTI-USE PATH

OSV ZONE ENTRANCE ROAD

EXISTING PARKING

MATCH LINE, SEE SHEET C17

ASPHALT PAVED ADA PARKING

ASPHALT PAVED ADA PARKING

MATCH LINE, SEE SHEET C19

TRAFFIC BARRIER

OPTIONAL GATE LOCATION

OPTIONAL GATE LOCATION

MULTI-USE PATH

CUT/ FILL LIMIT

BOARDWALK

2040 DUNE LINE

EXISTING MULTI-USE PATH

EXISTING OSV ENTRANCE ROAD

EXISTING BEACH ACCESS PATH

N

LEGEND

- ASPHALT PARKING LOT
- ASPHALT PATH AND ROADS
- CLAMSHELL/CLAY
- PAVEMENT REMOVAL
- BOARDWALK
- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- PROPOSED FENCE OR TRAFFIC BARRIER
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE
- * HANDICAP PARKING ASPHALT PAVED
- SHOWER AND CHANGE STATION
- RESTROOM
- DRAINAGE SIDE DITCH/GRASS SWALE

SCALE: 1" = 30'

30 15 0 30 60 90

PRELIMINARY – NOT FOR CONSTRUCTION

NATIONAL PARK SERVICE

DESIGNED:	DHM
CADD:	JC
TECH. REVIEW:	KW
DATE:	10.12.2022

SUB SHEET NO.

C18

TITLE OF SHEET

PAVING PLAN
OPTION III

SCHEMATIC DESIGN
SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION
ASSATEAGUE ISLAND NATIONAL SEASHORE

DRAWING NO. 622 / 182833

PMIS/PKG NO. XXXXXX

SHEET 18 OF 19

MATCH LINE, THIS SHEET SEE BELOW

MATCH LINE, SEE SHEET C16

CUT/ FILL LIMIT

OSV ZONE ENTRANCE ROAD

TRAFFIC BARRIER

MULTI-USE PATH

OPTIONAL GATE LOCATION

AIR COMPRESSOR STATION

PROPOSED COMPRESSOR BUILDING

BAYBERRY DRIVE

MULTI-USE PATH

MATCH LINE, SEE SHEET C16

TRAFFIC BARRIER

MULTI-USE PATH

CUT/ FILL LIMIT

OCEANSIDE DRIVE

2040 DUNE LINE

MATCH LINE, THIS SHEET SEE ABOVE

SCALE: 1" = 30'

30 15 0 30 60 90

LEGEND

- ASPHALT PARKING LOT
- ASPHALT PATH AND ROADS
- CLAMSHELL/CLAY
- PAVEMENT REMOVAL
- BOARDWALK
- EXISTING WETLAND BUFFER
- EXISTING WETLAND BOUNDARY
- PROPOSED FENCE OR TRAFFIC BARRIER
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING FENCE LINE
- EXISTING CONTOURS
- 2040 DUNE LINE
- * HANDICAP PARKING ASPHALT PAVED
- SHOWER AND CHANGE STATION
- RESTROOM
- DRAINAGE SIDE DITCH/GRASS SWALE

PRELIMINARY – NOT FOR CONSTRUCTION

DESIGNED: DHM	SUB SHEET NO. C19	TITLE OF SHEET: PAVING PLAN OPTION III SCHEMATIC DESIGN SOUTH OCEAN BEACH PARKING AREA AND OVER-SAND VEHICLE ENTRANCE RECONFIGURATION ASSATEAGUE ISLAND NATIONAL SEASHORE	DRAWING NO. 622 / 182833
CADD: JC			PMIS/PKG NO. XXXXXX
TECH. REVIEW: KW			SHEET 19 OF 19
DATE: 10.12.2022			