

## **Pemberton Lake Accessible Trail Proposal**

Updated February 21, 2023

Pemberton Township and Pinelands Preservation Alliance, with the consent of the New Jersey Division of Fish and Wildlife (NJFW), propose to improve an existing 0.65 mile trail along the perimeter of Pemberton Lake in order to make the trail accessible for people using wheelchairs and walkers, as well as others requiring a flat and stable surface. The project is justified by the dearth of accessible nature trails and lake access sites in Pemberton and the Pinelands as a whole.

The trail links two parking areas in NJFW's Pemberton Lake WMA, one on Magnolia Road and one on Coleman's Bridge Road, and runs through land owned by Pemberton Township. The improvements are intended to make the trail meet standards for accessible trails in the U.S.D.A. Accessibility Guidebook for Outdoor Recreation and Trails. The improvements include grading the trail within its existing course to make it flatter and more stable, addition of fine stone and, in the wettest stretches, wood or composite boardwalk, and an accessible parking space at the Coleman's Bridge parking area. While the township and PPA believe these improvements will have no environmental impact on the surrounding habitats, the project includes restoration of an area of the WMA that has been badly damaged by illegal vehicle use and dumping.

There is growing interest among public and nonprofit land managers in providing better options for people with disabilities in the Pinelands and coastal areas of the state through low impact and affordable improvements to suitable existing trails. The Pemberton Lake trail will serve as a pilot or demonstration project on the costs, feasibility, impacts and effectiveness of this kind of accessible trail project in Pinelands settings.

**The Need:** Being in nature is important to human physical and mental health, and providing opportunities for people to recreate in nature is one of the core purposes of the Pinelands Protection Act and CMP. Yet most people with disabilities have few options for enjoying natural places in their neighborhoods.

People with disabilities that impair their ability to enjoy the natural areas of the Pinelands make up a large portion of the local population, even before taking into account the family members, friends and caregivers of people with disabilities who are also inhibited from recreating in nature. According to the U.S. Census, the total population of the seven counties of the Pinelands is about 2.3 million, of whom just over 300,000, or 13%, identify as having a disability. Of those 65 and over, 34% have a disability. The overall portion of the population below the defined poverty level is 6% (a number we suspect is understated), and 23% of this group have a disability. Ambulatory challenges account for 53% of these disabilities, representing by far the largest portion of the issues we face in increasing use of nature sites. The percentages of those with disabilities is slightly higher for Pemberton Township. Specifically, 15.8% of the population self-identify as having a disability. Of these, 53.6% face ambulatory. And these census numbers

based on self-identification certainly understate the true extent of age-related mobility challenges in the population.

There are very few accessible trails in the Pinelands, and this is as true in Pemberton Township as other towns in our region. The U.S. Forest Service's Accessibility Guidebook for Outdoor Recreation and Trails (2012) defines accessibility to include a trail surface, among other requirements, that is "firm and stable," at least 36" wide, with no more than a 5% grade (except for short segments), and without gaps or protruding obstacles. On this measure, we have found at most three accessible forest trails in the entirety of Pemberton Township, and they are all within Brendan T. Byrne State Forest. The vast majority of forest trails in the Pinelands and Pemberton Township are rendered non-accessible because they (a) are not flat due to gaps in the soil, slopes, protruding tree roots and puddles, (b) have sand that is too soft in places for regular wheelchairs or walkers, (c) are not maintained for accessibility, so their conditions change over time, and (d) are not advertised to the public as accessible, so users are unlikely to risk trips on trails they can have no confidence are safe for them to use.

**The Existing Trail:** The existing trail connects the two parking areas at Pemberton Lake is 0.65 miles in length and provides good views of Pemberton Lake. There is a handicap parking space at the Magnolia Road parking lot. The trail is not currently accessible along its length, because in places it is tilted, has soft and wet spots, and has too steep an incline. But it is sufficiently wide, dry and flat along most of its course to be readily improved for accessibility. The trail runs along the top of what was once a dyke or sand road created when it was part of a cranberry farm. However, in one place it has a significant slope and in two places it dips sufficiently to be frequently wet for short distances. Pemberton Lake is a scenic, manmade 45-acre impoundment off Magnolia Road. There are wetlands to the north side of the trail that have been heavily altered as part of historic uses and more recent wetlands mitigation efforts connected to construction of the Pemberton Bypass.

The Pemberton Lake trail has great value as place for accessible nature recreation, for several reasons. The trail is close to many homes, so easy to reach for residents of Pemberton. It is short, so doable for a person using a wheelchair. It provides lovely views of Pemberton Lake, giving it great scenic value. And it has places for fishing or just enjoying the scenery at either end of the trail and in places along the trail. The trail and its context are shown on the maps below.

**The Proposal:** Consistent with the U.S. Forest Service Guidelines, Pemberton and PPA propose to make the trail firm, stable and flat to meet the definition of accessibility by (a) adding soil and mild grading to make the trail flat side to side and no more than 5% in grade along its length, (b) adding crushed stone and compacting the trail surface across 48" of width, (c) adding wooden boardwalks across the two areas that get wet due to their elevation, and (d) maintaining the trail in these conditions through quarterly inspections and repairs when necessary. The trail will be signed and advertised as accessible. In addition, PPA will work with NJFW to restore most of the open area that has been created by motorized vehicles at the

Coleman's Bridge Road parking area, in order to discourage illegal uses of the area and ensure the parking area also meets accessibility standards (the parking lot on Magnolia Road is already paved and accessible). We also anticipate connecting this trail with Burlington County's growing trail network, which is planned to pass along Pemberton Bypass in this area.

Experience reported by NJ state land managers and others justifies the use of crushed stone, instead of other materials, to stabilize the trail surface. For users, a paved trail would be best, but paving raises more serious environmental and precedential concerns than does adding stone to the native soil surface. Wood chips are not suitable because they do not create a uniformly firm surface; in addition, they disintegrate quickly and need to be constantly renewed, making maintenance infeasible. A wooden boardwalk along the entire length is simply too expensive, given that just the pressure-treated lumber for a wooden boardwalk is expected to cost as much as \$90/square foot; even with volunteer labor, the cost of a 2-foot stretch of 4-foot wide boardwalk will probably cost \$7,000.

The photographs below of the Red Trails at Batsto Village and Atsion Recreation Area (both in Wharton State Forest), and the Leeds Ecotrail at the Forsythe National Wildlife Refuge use exactly the same methods proposed for the Pemberton Lake trail (except that they are a little wider in most places than the 4-foot width proposed here). They each run through Pinelands forests and along the edge of lakes and wetlands. They use crushed stone to stabilize the surface of the trail and ensure it is not too soft for wheelchairs, walkers and canes. The Batsto and Atsion trails also use short wooden boardwalks to cross wetlands. They are among the very few trails in the Pinelands that are designed, constructed, and maintained to be accessible.

**Environmental Impact:** The proposed improvements to the trail will have no adverse environmental impact, as detailed in the attached report from Princeton Hydro. In summary, the improvements will not require the removal of any trees or vegetation, as the existing trail is clear and at least 48" wide along its entire length. The crushed stone to be added will be chemically non-reactive and will not alter the chemistry of the lake and wetlands on either side of the trail. The trail will not be widened, and the 48" of compacted stone trail will not generate enough runoff to have any impact on the surrounding land, the lake or adjacent wetlands. An examination of existing trails along lakes and through wetlands buffers in the Pinelands that are designed and maintained using the same methods as we propose here demonstrates that they have not harmed the surrounding Pine Barrens environments. Outstanding examples include the Red and Blue Trails at Atsion Recreation Area and the Red Trail at Batsto Village, both in Wharton State Forest, and the Leeds Ecotrail at Forsythe NWR, shown in the photographs below.

Although we believe the improved trail will have no adverse environmental impact, the project includes additional beneficial measures consistent with the CMP's requirements for Memorandums of Agreement. First, PPA will restore the area at the WMA end of the trail, just before the parking area on Coleman's bridge road, that has been damaged by illegal motorized vehicle use and dumping. The restoration measures will include cleanup of trash, installation of

wooden barriers to block motorized access from the parking area, and planting of native shrubs and trees in the denuded area. PPA will provide the materials and staff and volunteer labor for these measures. Second, Pemberton Township, with permission of the Department of Environmental Protection, install a handicap parking space in the WMA parking lot, where none currently exists.

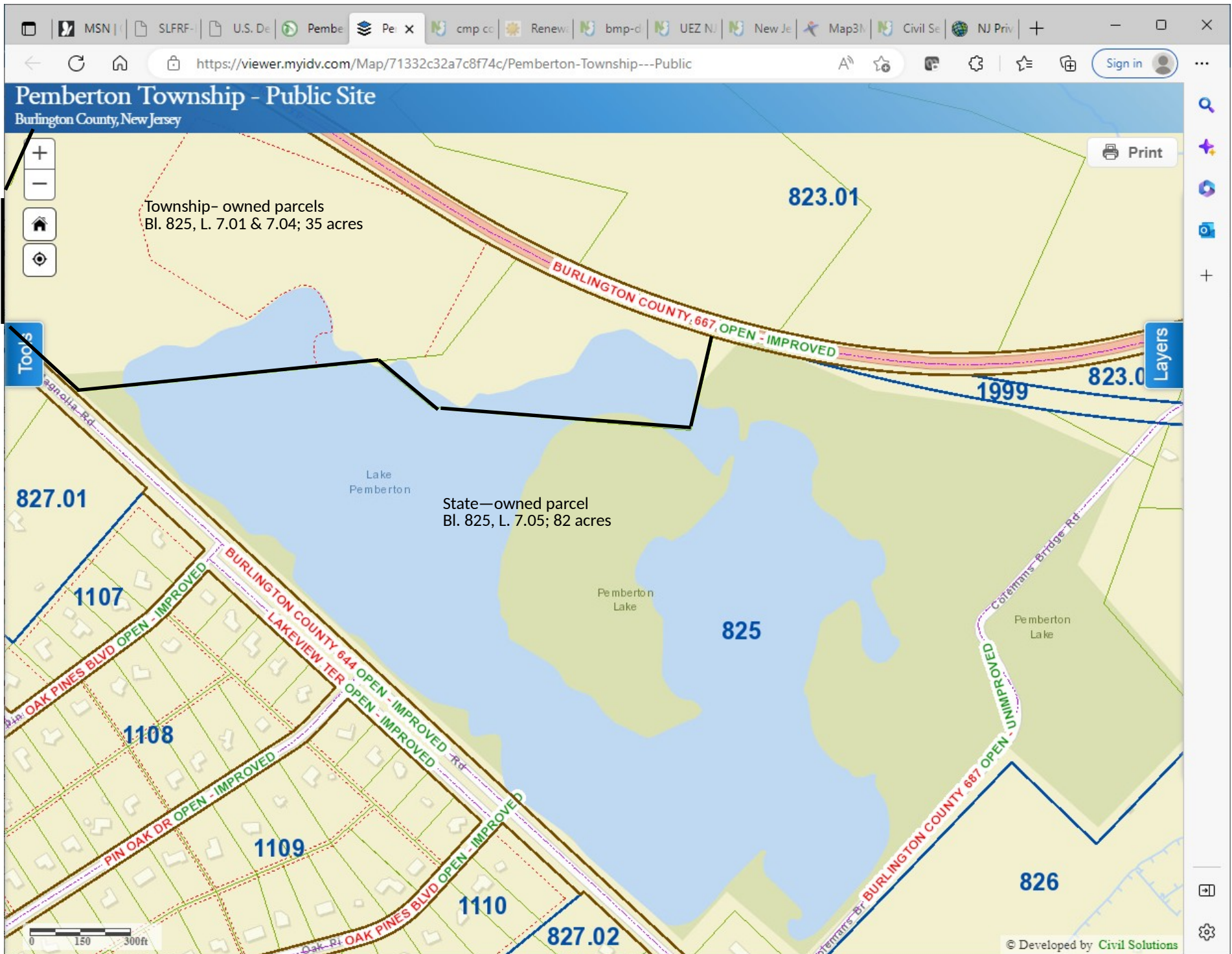
Respectfully submitted,

Daniel Hornickel, Pemberton Township

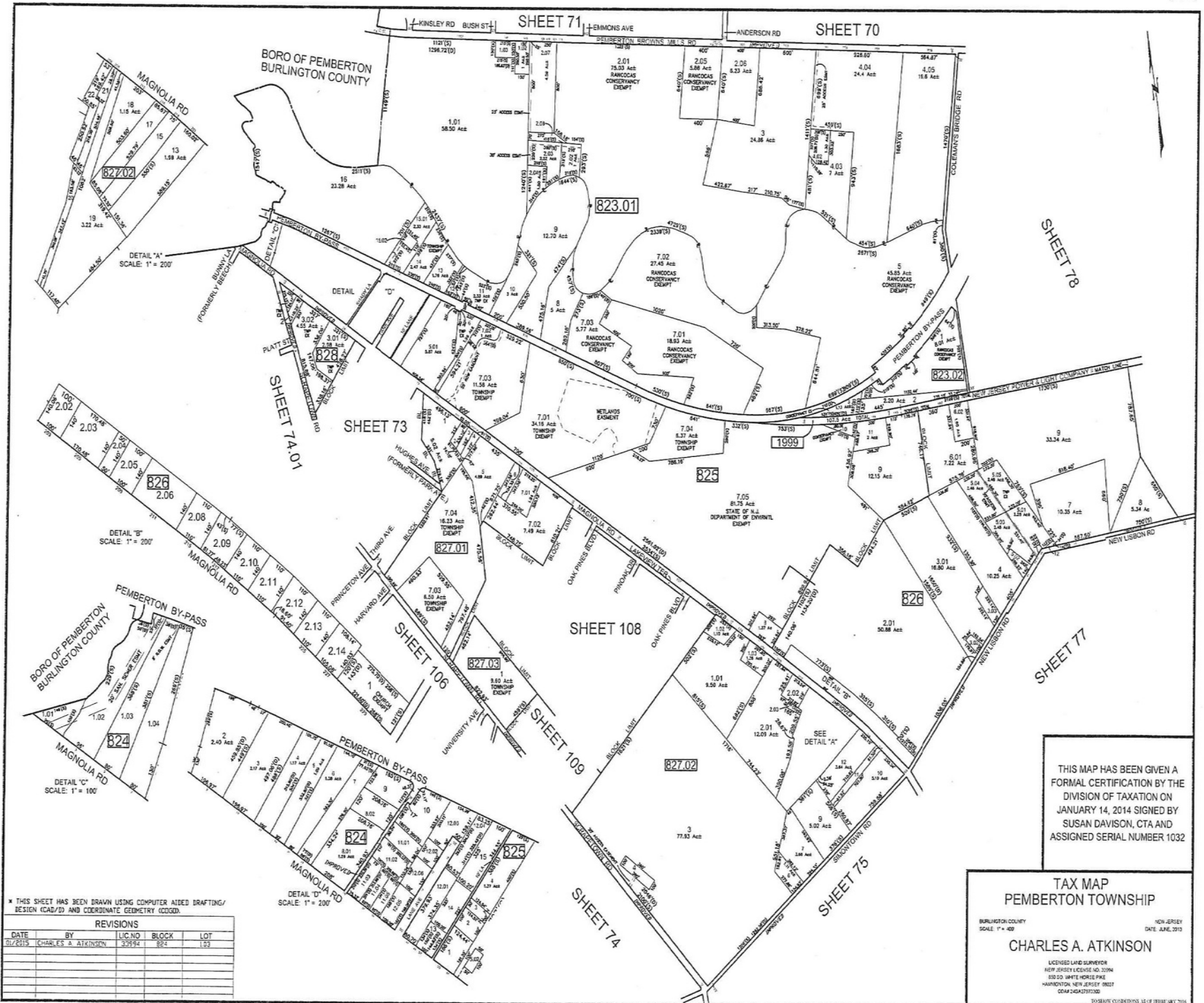
Carleton Montgomery, Pinelands Preservation Alliance

Attachment A

Maps of the Pemberton Lake Trail  
(Prepared by Pemberton Township)







\* THIS SHEET HAS BEEN DRAWN USING COMPUTER AIDED DRAFTING/ DESIGN (CAD/D) AND COORDINATE GEOMETRY (CGO/D).

REVISIONS				
DATE	BY	LIC NO	BLOCK	LOT
01/23/15	CHARLES A. ATKINSON	33954	824	123

THIS MAP HAS BEEN GIVEN A FORMAL CERTIFICATION BY THE DIVISION OF TAXATION ON JANUARY 14, 2014 SIGNED BY SUSAN DAVISON, CTA AND ASSIGNED SERIAL NUMBER 1032

**TAX MAP  
PEMBERTON TOWNSHIP**

BURLINGTON COUNTY NEW JERSEY  
SCALE: 1" = 400'

**CHARLES A. ATKINSON**

LICENSED LAND SURVEYOR  
NEW JERSEY LICENSE NO. 30394  
300 20 WHITE HORSE PIKE  
HAMMONTON NEW JERSEY 08027  
CDAP 24642737000

ISSUANCE COORDINATES IS-18 (2014) MAY 2014

## Photographs of the Existing Pemberton Lake Trail

(Provided by Pinelands Preservation Alliance)



Typical stretch of the trail with Pemberton Lake to the south (left)



Lake access point along the trail



A view of Pemberton Lake from the trail



A flat, stable stretch of the trail



A soft spot on the trail



The biggest dip in the trail



Parking lot on Magnolia Road

**Photographs of Proposed Restoration Area on Pemberton Lake WMA**  
(Provided by Pinelands Preservation Alliance)



**Photographs of Accessible Trails in Wharton State Forest and Forsythe NWR**  
(Provided by Pinelands Preservation Alliance)



Batsto Red Trail



Atsion Recreation Area Red Trail



Leeds Ecotrail at Forsythe National Wildlife Refuge