



Clark Reservoir Improvement Project

Prepared by Union County and C.M.E. Associates

Introduction



Union County

Edward Oatman – County Manager

Victoria Durbin-Drake – Director of Parks and Recreation

Bruce Bergen – County Counsel

CME Associates

Michael J. McClelland, PE

Executive Vice President

Gary Oliva, PE

Director

Peter Bednarsky, PE

Program Manager



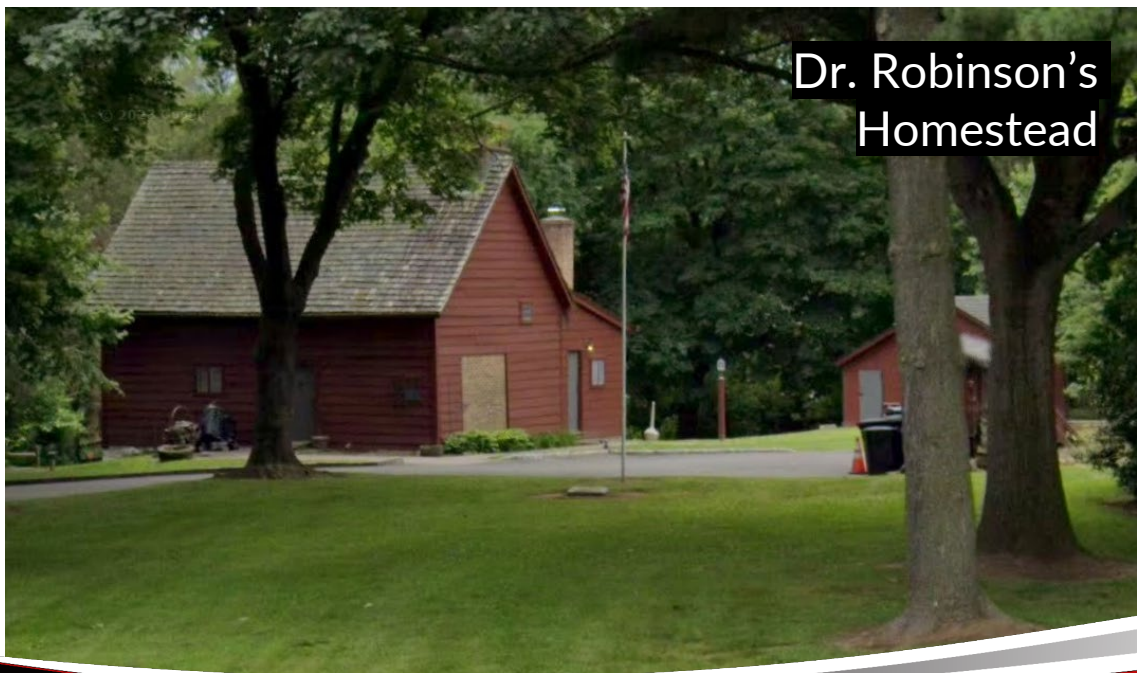
Map from 1906



History

- The area of land that became Clark Township was originally occupied by the Lenape Indian Tribe and was used as hunting grounds.
- In 1686 Dr. William Robinson emigrated from Scotland and settled in the area.
- In 1690, Dr. Robinson constructed his homestead off Madison Hill Road, proximate to a tributary branch of the Rahway River.
 - Later named Robinson's Branch of the Rahway River

Dr. Robinson's Homestead



History

- Clark Township was officially incorporated in 1864 when the Township broke away from the City of Rahway
- The Reservoir was established circa 1907 when “Consumers Aqueduct Company” constructed a dam on the Robinsons Branch of the Rahway River
 - The created water bodies were used for drinking water until the 1970s
- The Reservoir used to be one continuous water body until the 1920s when the Raritan Road overpass was constructed and the 1950s when the Garden State Parkway was constructed through Clark Township



History



- In 1997 Clark Township purchased the land from Middlesex Water Company.
- In 2007 Union County began the process of accepting ownership of Clark Reservoir to help adequately meet the maintenance and development demands that were required for the Property.
- In 2008 Union County purchased Clark Reservoir and additional properties surrounding the reservoir, including a portion of the St. Agnes Church property.





Background

Clark Reservoir consists of 4 lakes located along the Robinson Branch of the Rahway River:

- The Reservoir Headwaters located to the west of Featherbed Lane
- West Lake located between Featherbed Lane and Raritan Road
- Central Lake located between Raritan Road and the Garden State Parkway
- East Lake located between the Garden State Parkway and the spillway near Madison Hill Road

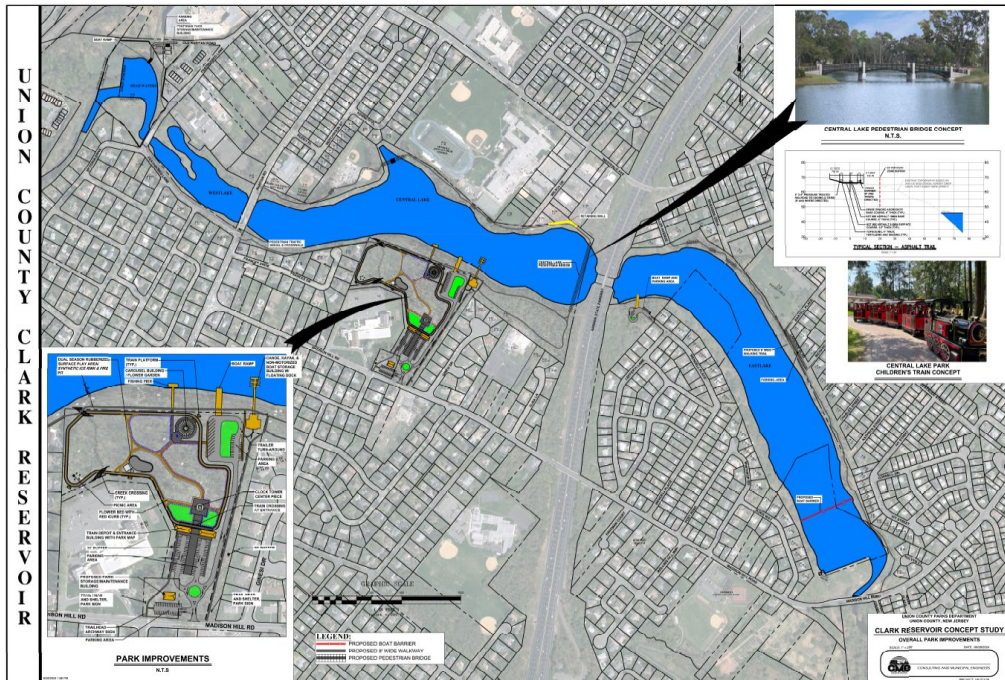




Proposed Improvements

Improvement plan consists of:

- Dredging Improvements
- Perimeter Path Improvements
- Park Improvements
- Environmental Improvements:
 - Dredging of the Reservoir Head Waters, West Lake and Central Lake to limit further sedimentation and reduce overgrowth
 - Stabilizing drainage ditches to reduce soil erosion and improve sediment control proximate to the reservoir
 - Construction of a Push Wall near Clark Department of Public Works property to address and control debris from entering the water



Central Lake Overgrowth





Project Funding

- Project funded through a series of state grants, including the American Rescue Plan Act (ARPA) of 2021, totaling \$43 million to be used for reservoir improvements

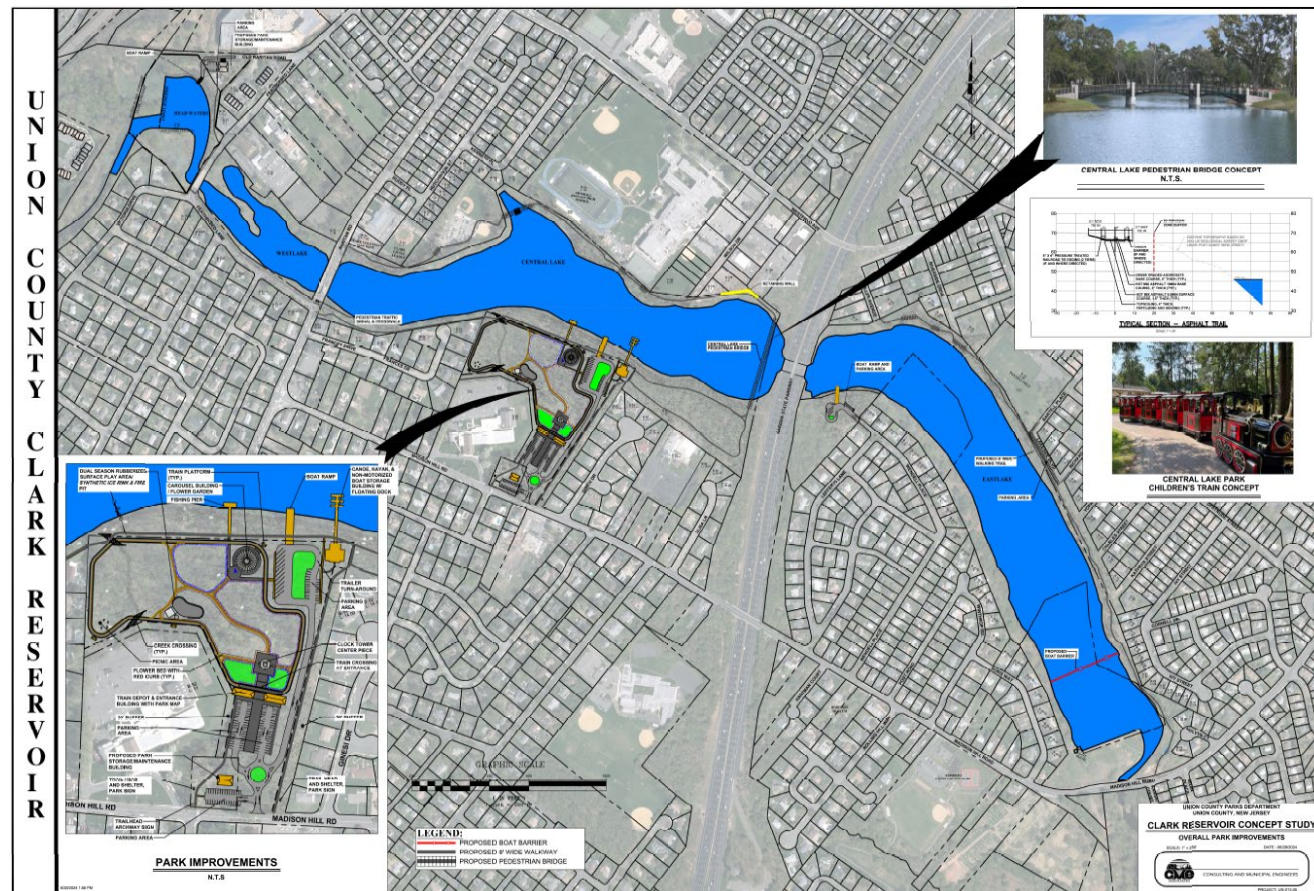
Existing Encroachments

- As part of this project, Union County will continue efforts to mitigate existing encroachments on reservoir property as required by NJDEP and NJCF



Proposed Improvement Area

- Total Project Area: **162 Acres±**
- Total Reservoir Area: **82 Acres±**
- Total Land Area: **80 Acres±**
- Proposed Improvement Area: **8.25 Acres±**
 - Includes all buildings, parking lots, trails, and bridges
 - Percentage of Project Area: **5%±**
- Proposed Area to be Protected: **153.75 Acres±**
 - Percentage of Project Area: **95%±**

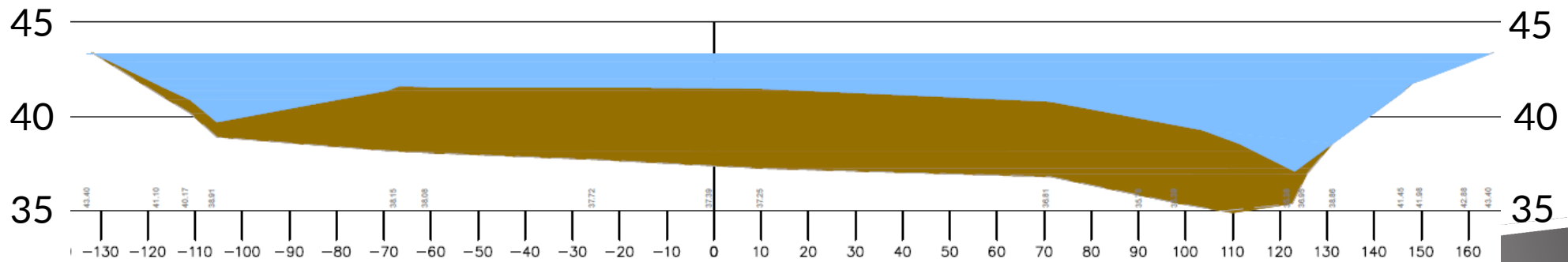




Dredging Improvements

- Consists of the dewatering, removal and disposal of sedimentation in the Headwaters, West Lake, and Central Lake.
- Approximate volumes of sediment to be removed:

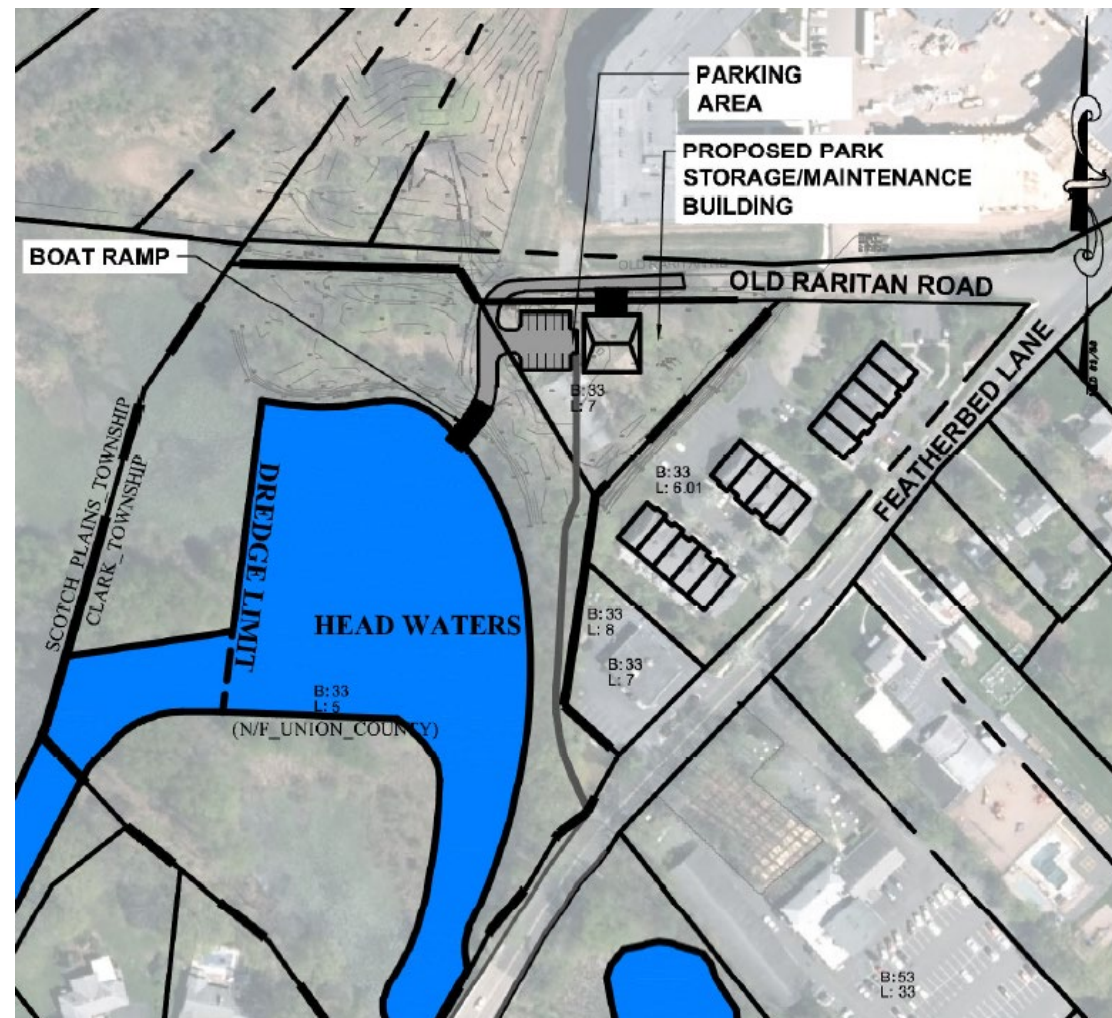
Reservoir	Volume [CY]
Head Waters	5,250
West Lake	13,500
Central Lake	135,250
TOTAL:	154,000





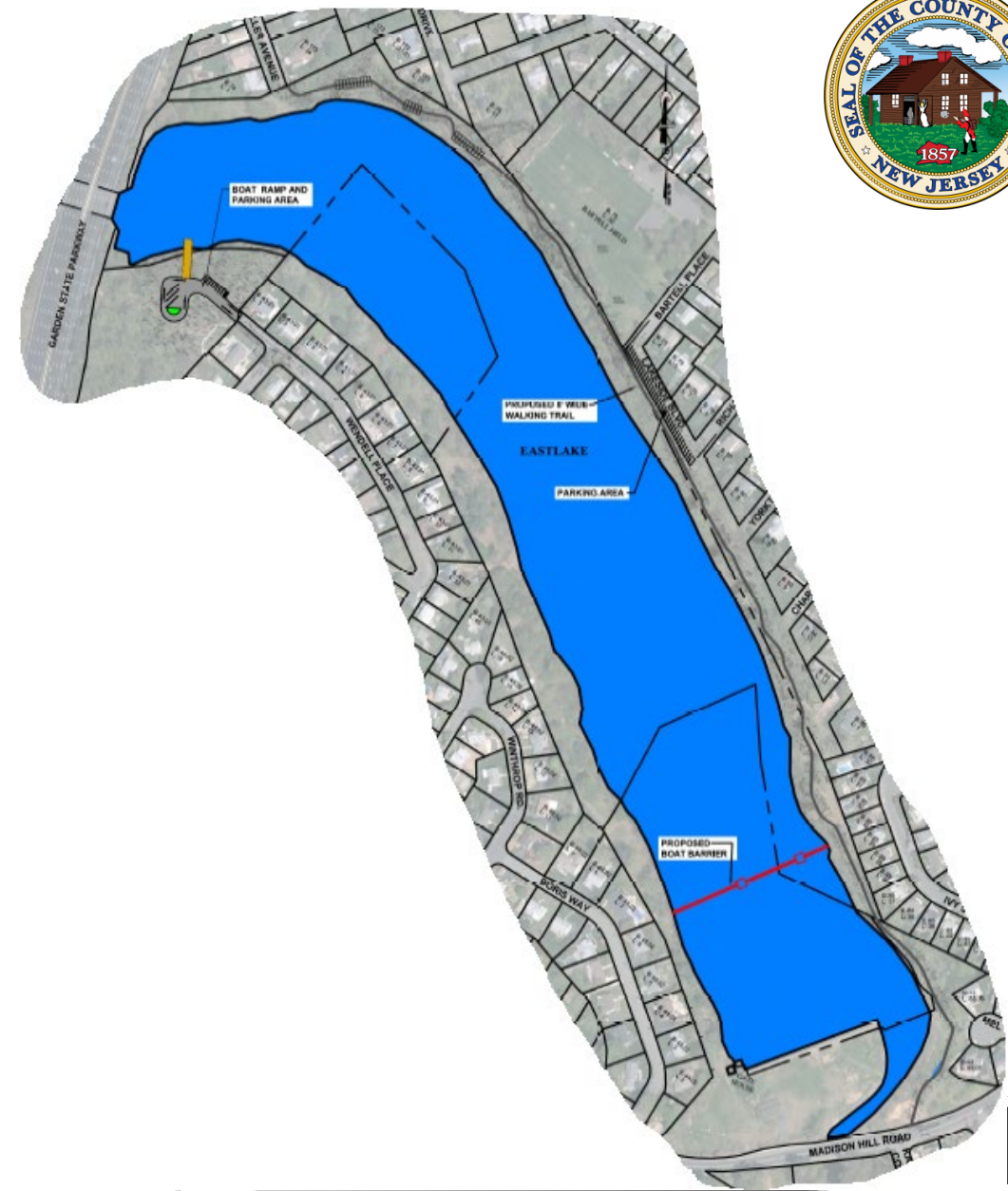
Head Water Improvements

- Proposed improvements consist of:
 - 8' wide asphalt trail along northwest side of Head Waters from Featherbed Lane to proposed building
 - Park Storage/Maintenance Building
 - Boat Ramp
 - Parking Area



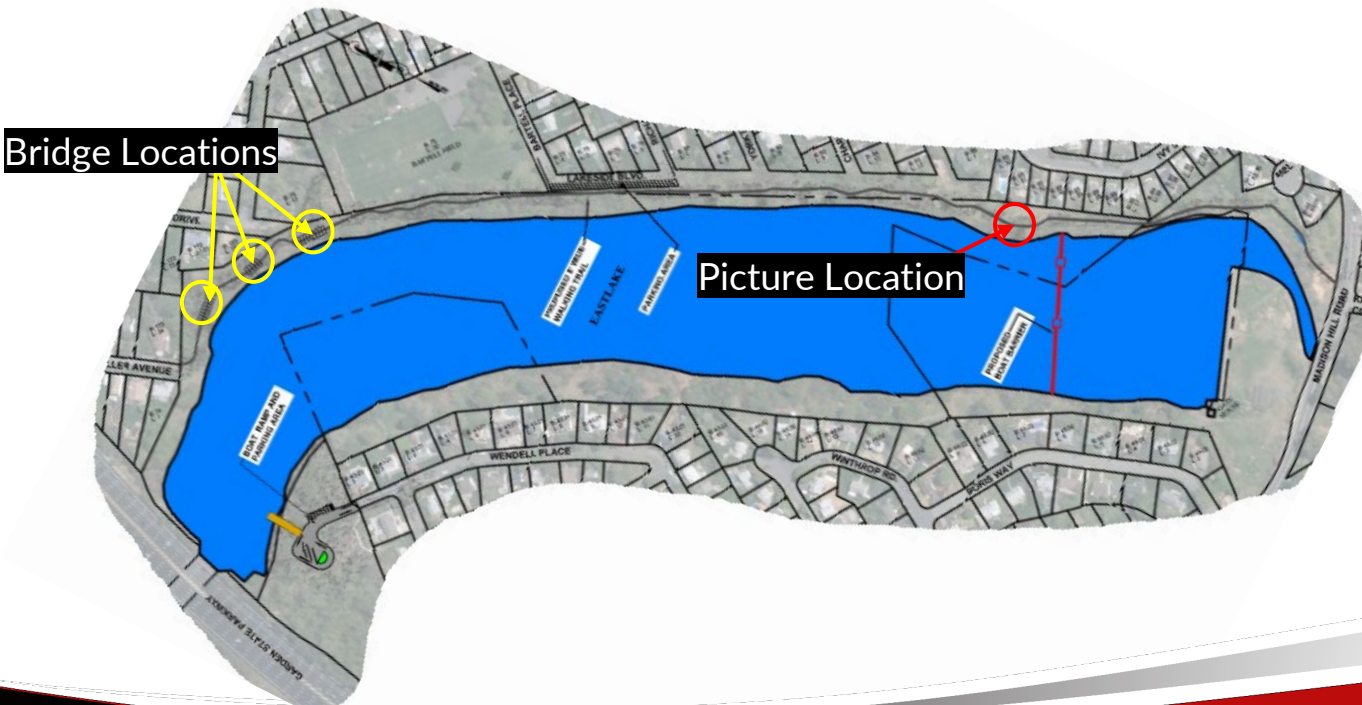
East Lake Improvements

- Proposed improvements consist of:
 - 8' wide asphalt trail along northeast side of lake with 3 pedestrian bridges
 - Boat Barrier near spillway
 - Boat Ramp and parking area on Wendell Place

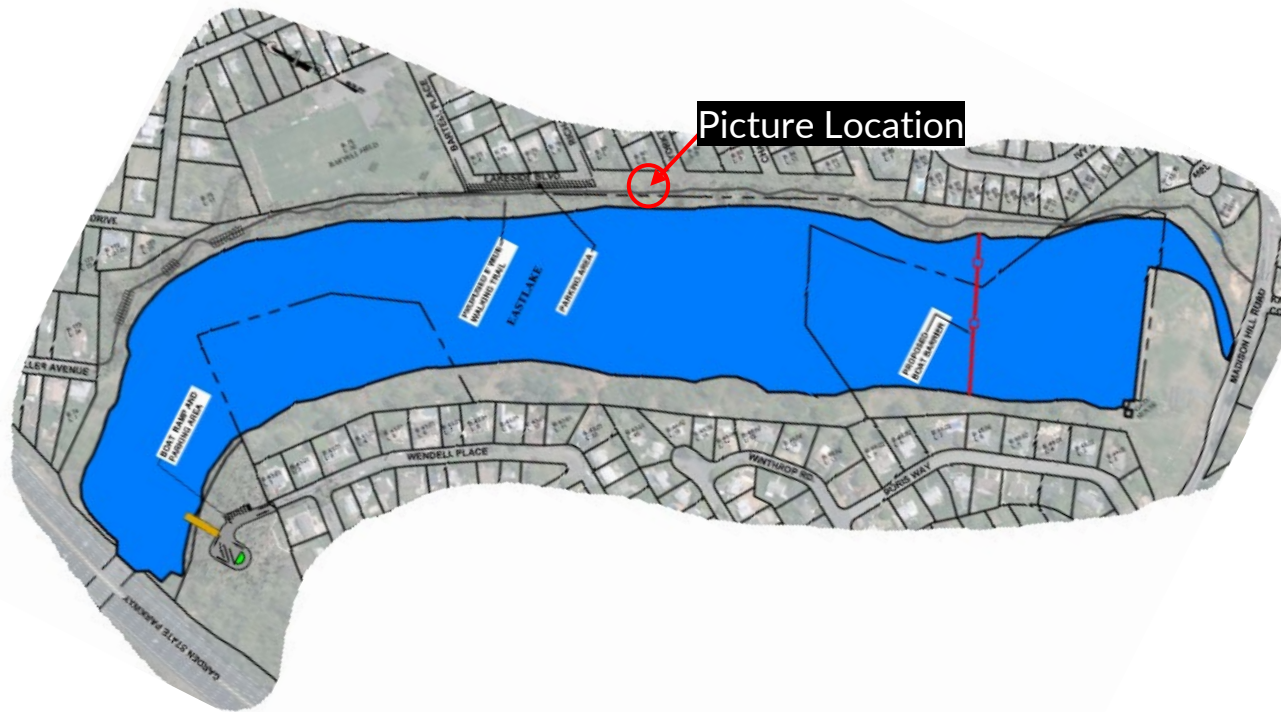


East Lake Trail

- Proposed Trail Length: 3809 LF (0.72 mi)
- Includes:
 - 3 pedestrian bridges
 - Parking area along Lakeside Boulevard
 - Anticipated security features including surveillance cameras



East Lake Trail



Existing Trail



Proposed Trail



East Lake Boat Ramp



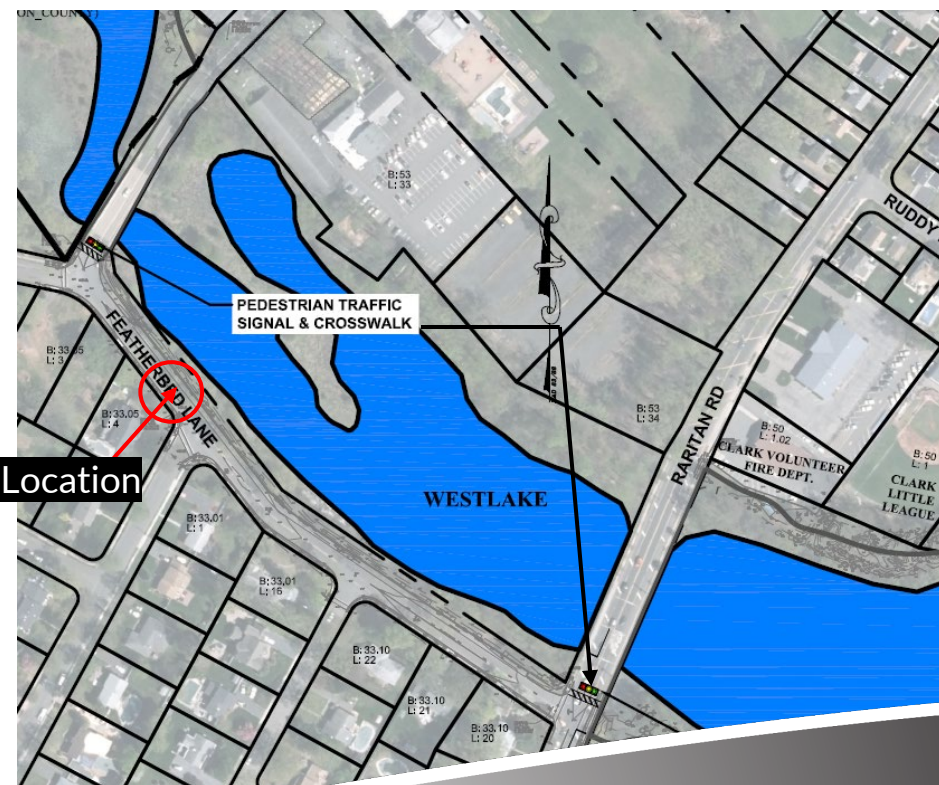
Proposed Amenities:

- Parking area
- Trailer parking area
- Lighting improvements are not anticipated.
- During conceptual design phase parking area size and overall footprint was reduced by 13%±



West Lake Improvements

- Proposed improvements consist of:
 - 8' wide asphalt trail along Featherbed Lane
 - Anticipated pedestrian traffic signals and cross walks at Featherbed Lane and Raritan Road Intersections



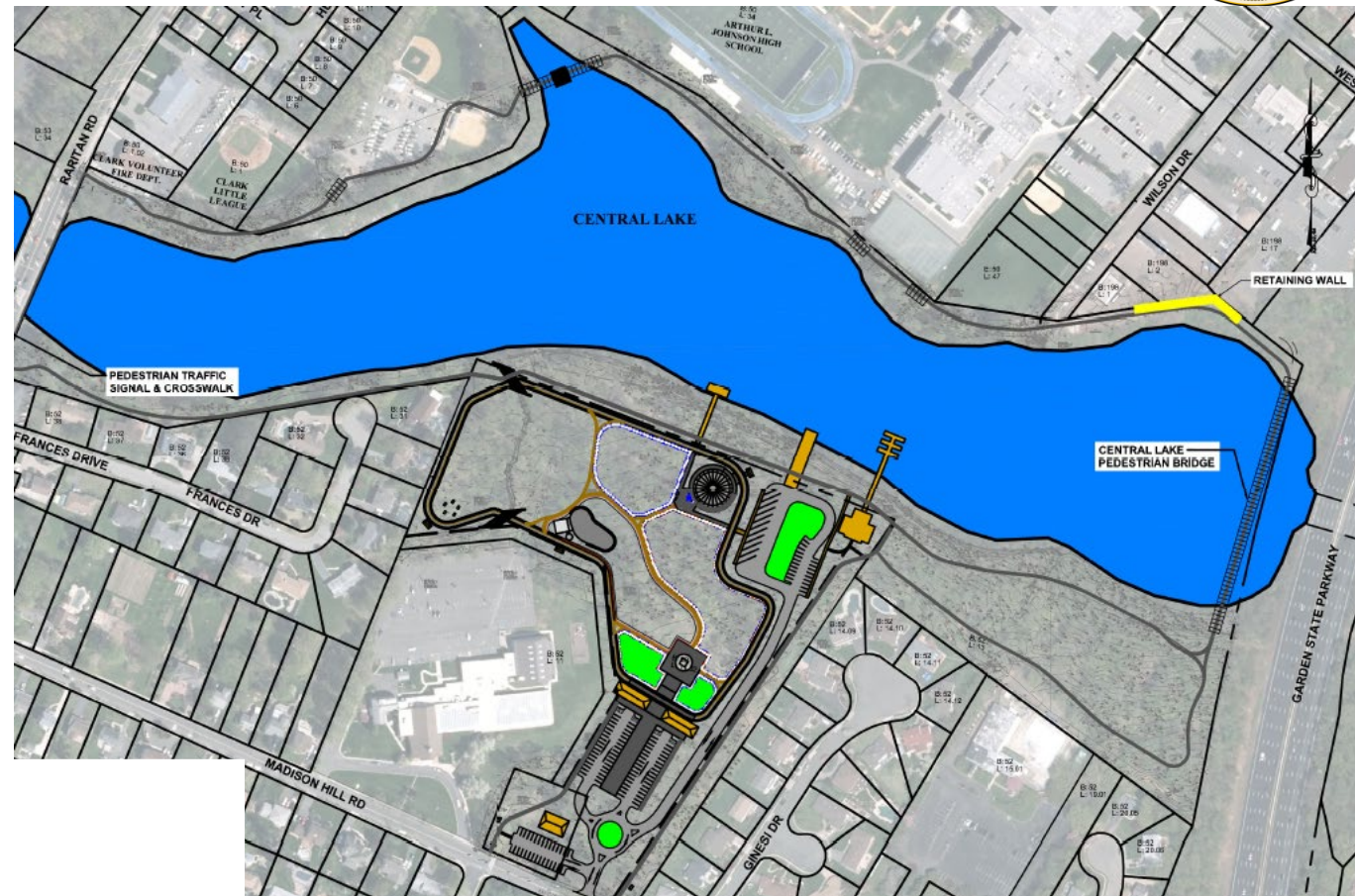
Picture Location



Central Lake Improvements



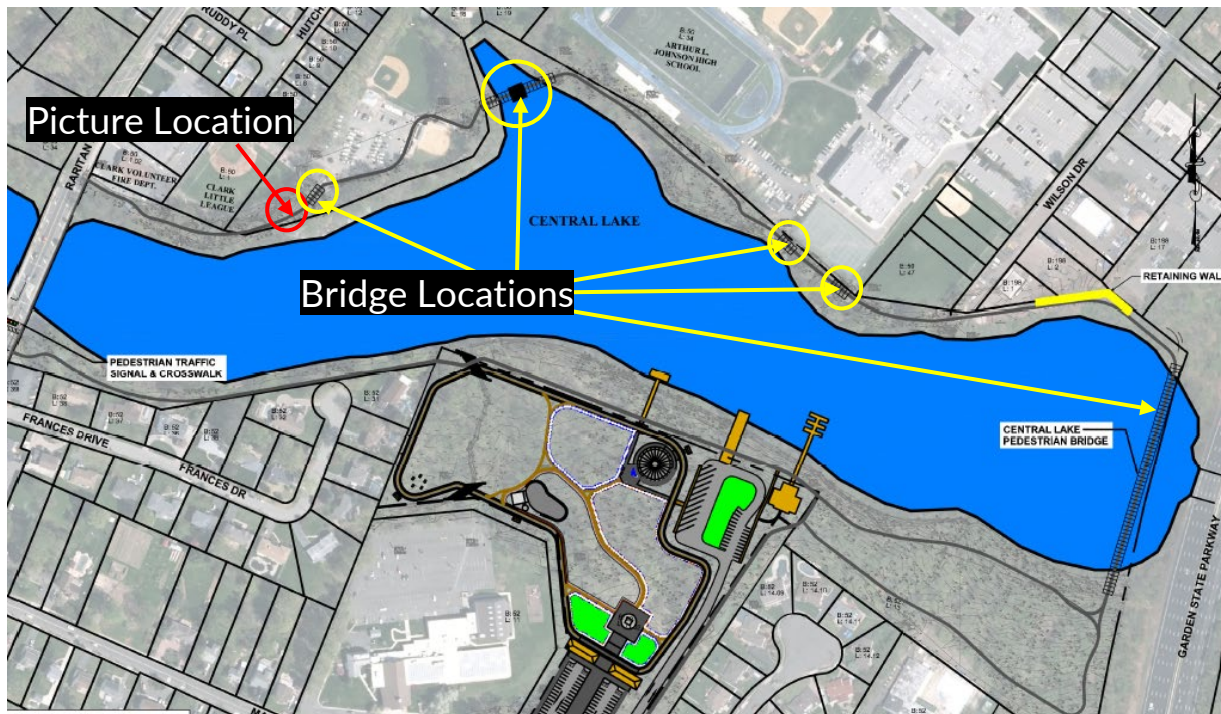
- Proposed improvements consist of:
 - 8' wide asphalt trail surrounding lake body along with multiple pedestrian bridges
 - Various park improvements including:
 - Boat ramp and trailer parking
 - Canoe, Kayak, and Non-Motorized Boat Storage Building
 - Interior Paths
 - Park Storage/Restroom Building
 - Carousel
 - Plaza Area
 - Electric Children's Train



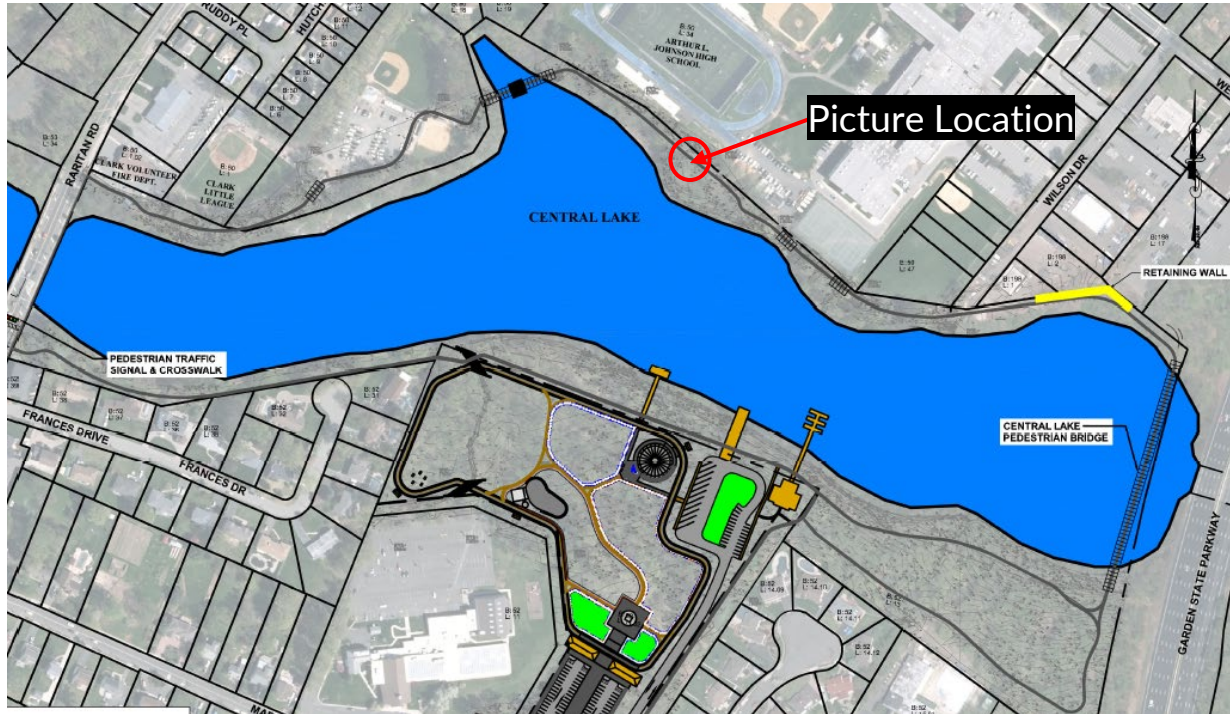
Central Lake Trail



- Proposed Trail Length: 8065 LF (1.53 mi)
 - Includes 5 pedestrian bridges, including a 180' span and a 625' span bridge
 - Anticipated security features including surveillance cameras



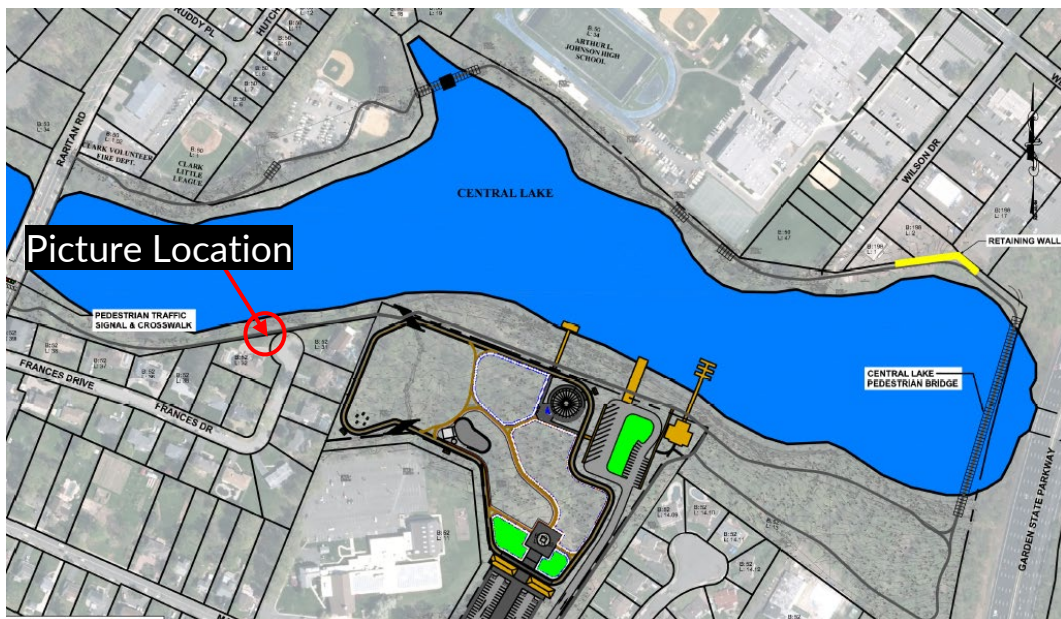
Central Lake Trail





Central Lake Trail – Frances Drive

- Proposed improvements consist of:
 - 8' wide asphalt trail
 - Landscaping improvements to provide privacy between trail and properties



Existing Conditions



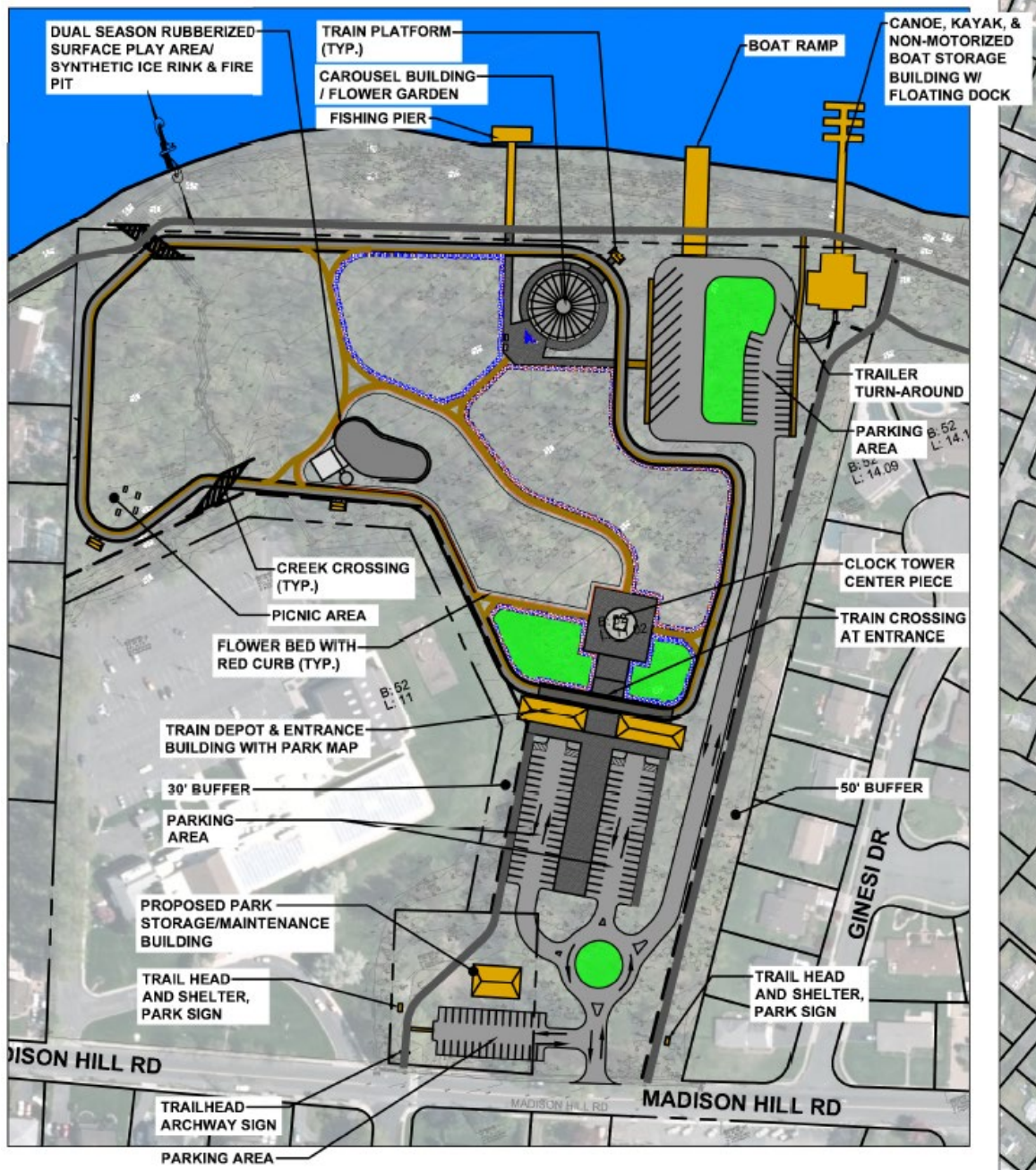
Proposed Trail



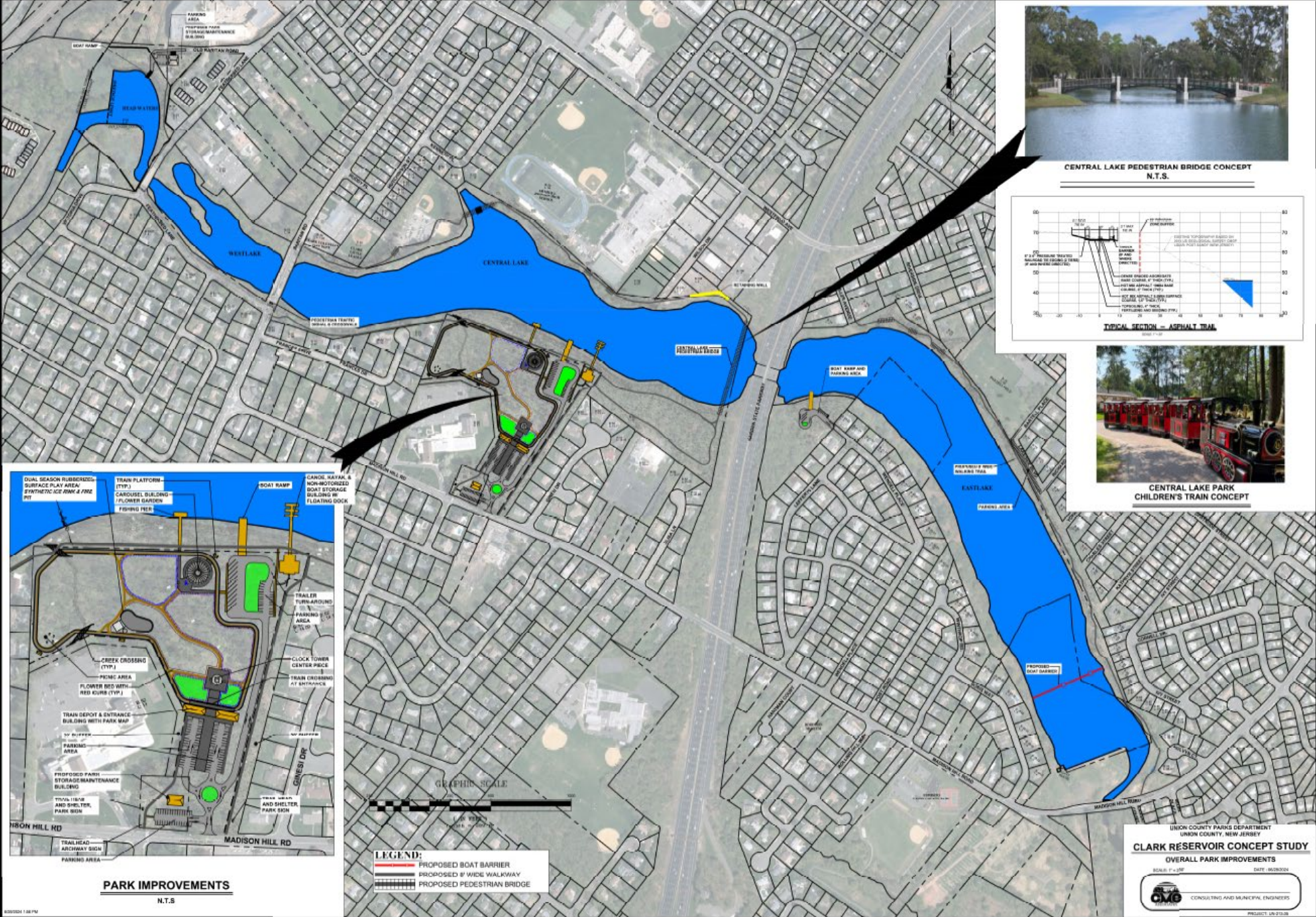
Central Lake Park Improvements

Proposed Park includes:

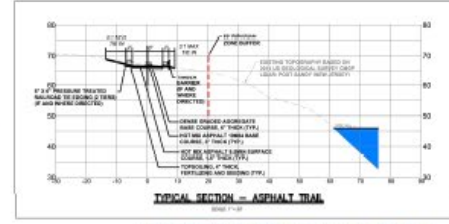
- Approximately 1-mile of recreational use paths
- Parking Areas
- Boat Storage Building with floating dock, concessions, and canoe rentals
- Boat Ramp with 10 trailer parking stalls
- Dual Season Rubberized Surface Play Area/Synthetic Ice Rink
- Electric Children's Train will be operational seasonally and will run on limited hours to be determined by the County



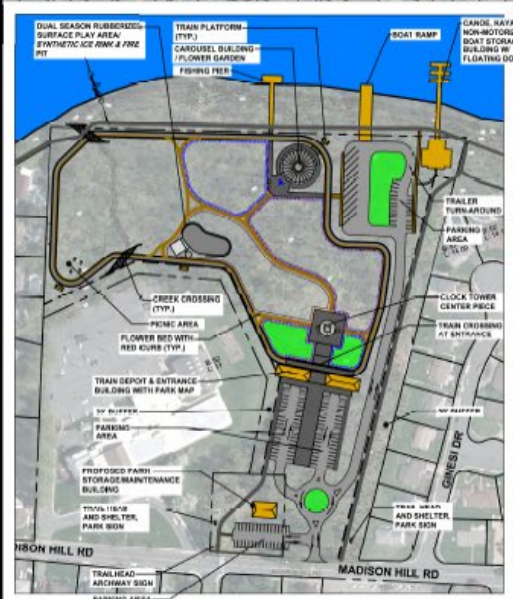
UNION COUNTY CLARK RESERVOIR



CENTRAL LAKE PEDESTRIAN BRIDGE CONCEPT
N.T.S.



CENTRAL LAKE PARK CHILDREN'S TRAIN CONCEPT



- LEGEND:**
- PROPOSED BOAT BARRIER
 - PROPOSED 8' WIDE WALKWAY
 - PROPOSED PEDESTRIAN BRIDGE

UNION COUNTY PARKS DEPARTMENT
UNION COUNTY, NEW JERSEY
CLARK RESERVOIR CONCEPT STUDY
OVERALL PARK IMPROVEMENTS
SCALE: 1" = 20' DATE: 06/20/24
 CONSULTING AND MUNICIPAL ENGINEERS
PROJECT: UN-2024

