

North Perry Village/Madison Township



Existing Site Conditions

This project site is located near the boundary between North Perry Village and Madison Township. Townline Park in North Perry Village forms the west edge of the project. Stanton Park in Madison Township forms the east boundary. The area in between the two parks is made up of private residences. The project area encompasses approximately one mile of coastline.

Conditions along the one-mile of shoreline vary between naturally stable beaches and slopes to unprotected eroding slopes. Townline Park is a semipublic village park with an unsafe boat launch. A narrow sand beach is situated at the bottom of relatively stable vegetated slopes east of the boat launch area. Stanton Park is a public township park with a need for some bluff stabilization and possibly an improved access route to the water. A narrow beach at the base of relatively stable, vegetated bluffs is located along the western portion of the park. The private shoreline between the two parks contains a combination of treated and

untreated shoreline and slopes that appear to be relatively stable with the exception of one small stretch of eroding bluff. The beach at the base of the bluff ranges between narrow to nonexistent. A variety of different concrete protection structures have been placed along this reach of shoreline in an effort to break wave energy and maintain the beaches.

Development Program

The initial intent for the Townline and Stanton Parks was to locate a harbor of refuge basin between Geneva State Park and Fairport Harbor. This included the repair and replacement of the existing boat launch at Townline Park, and stabilization of the failing slope at Stanton Park. More recent strategies included the idea of placing offshore barrier structures to protect the shoreline and create substantial recreational boating and swimming beaches in the area between the two parks as part of an integrated safe harbor and passive recreation waterfront design.

Specific Design Parameters and Technical Issues

The NOAA bathymetric data used for this study indicates a very flat offshore profile resulting in relatively shallow water several hundred feet out from the shoreline. This may have significant implications in terms of recreational boating draft requirements, initial project dredging, and maintenance dredging. A more detailed site specific bathymetric survey and coastal wind/wave analysis will be required and may result in adjustments to the final design scheme as shown in this document.

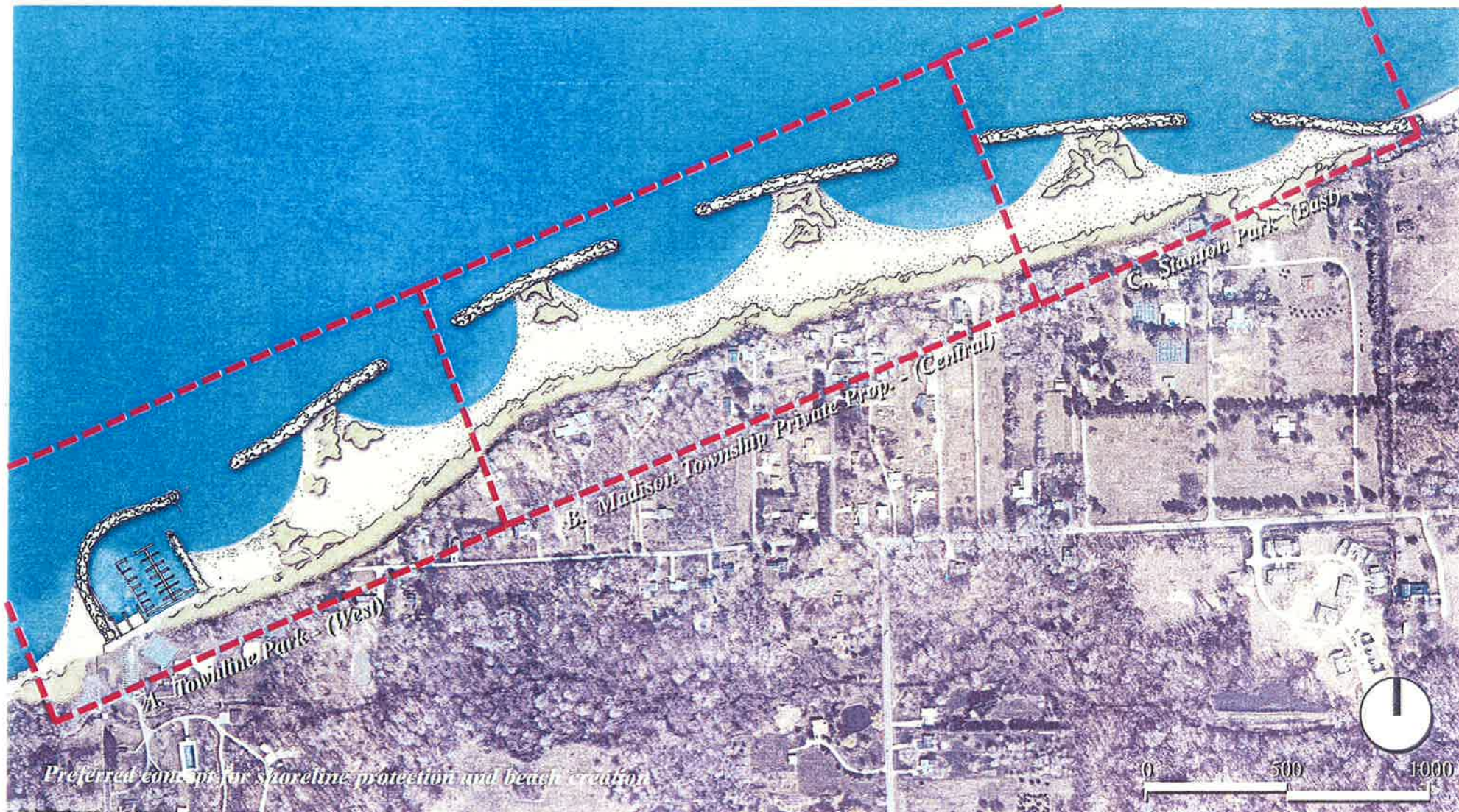
Specific design parameters and technical issues that will have to be addressed for the development of this waterfront area include:

- water depths at the harbor of refuge/marina;
- littoral drift and potential sand deposition in the harbor entrance area;
- regulatory agency permitting for placement of protective offshore structures and for filling of the lakebed;
- and land use agreements between the Lake County/Madison Township and private landowners.

Conceptual Design

The concept shown in this report includes a series of offshore breakwaters and beaches, and a small harbor area that will:

- provide safe harbor for recreational boaters, anglers, and small commercial vessels;
- restore, enhance, and protect the shoreline and bluffs from erosive wave action;



- provide waterfront access and recreational beaches for swimmers and sunbathers; and
- create potential coastal wetland zones for enhanced fish and wildlife habitat.

The beach forms shown are a result of the location of the breakwater and the type and nature of the beach material used to “fill” the beach cells. The beach shape will change slightly in response to storm events. Highlights and elements of this concept that are part of the Opinion of Probable Construction Costs include:

- a protected harbor for recreational water craft;
- small marina with dockage for approximately 40 boats;
- new boat launch within the protected harbor;
- supporting marina infrastructure including driveways and parking, water and electrical utilities, deicing system;
- waterfront access and sand beaches for recreation and fishing;
- slope stabilization at Stanton Park;
- scenic overlook structures at both Townline and Stanton Park.

Summary of Opinion of Probable Construction Costs

A. Townline Park - (West)

1	Demolition and Site Preparation	\$ 150,000
2	Land-Based Site Improvements	\$ 767,000
3	Water-Based Site Improvements	\$ 5,227,000
Total		\$ 6,144,000

B. Madison Township Private Prop. - (Central)

1	Demolition and Site Preparation	\$ 95,000
2	Land-Based Site Improvements	\$ -
3	Water-Based Site Improvements	\$ 4,500,000
Total		\$ 4,595,000

C. Stanton Park - (East)

1	Demolition and Site Preparation	\$ 95,000
2	Land-Based Site Improvements	\$ 323,000
3	Water-Based Site Improvements	\$ 1,750,000
Total		\$ 2,868,000

Notes/Assumptions:

1. All costs in 2004 dollars.
2. The site is a clean, non-contaminated site, ready for construction.
3. Does not include improvements to existing breakwaters or seawalls, or dock edges.
4. For planning and costing purposes, dockage assumes 10' head piers, 5' wide finger piers, and 40' long slips.
5. Marina basin dredged to 6' or greater navigable water to support boat dockage.
6. Bluffs above beaches will remain stable after placement of breakwaters and beaches.

7. Pedestrian access assumes 5% ADA down 40' bluff.
8. Final breakwater/revetment/sheetpile design and engineering will require appropriate geotechnical and hydraulic analysis.
9. Opinion of Probable Construction Cost does not include the 25% conceptual design contingency or 10% design and engineering fees.

