Supplemental Information

MAPS AND/OR PHOTOS OF THE PROJECT:

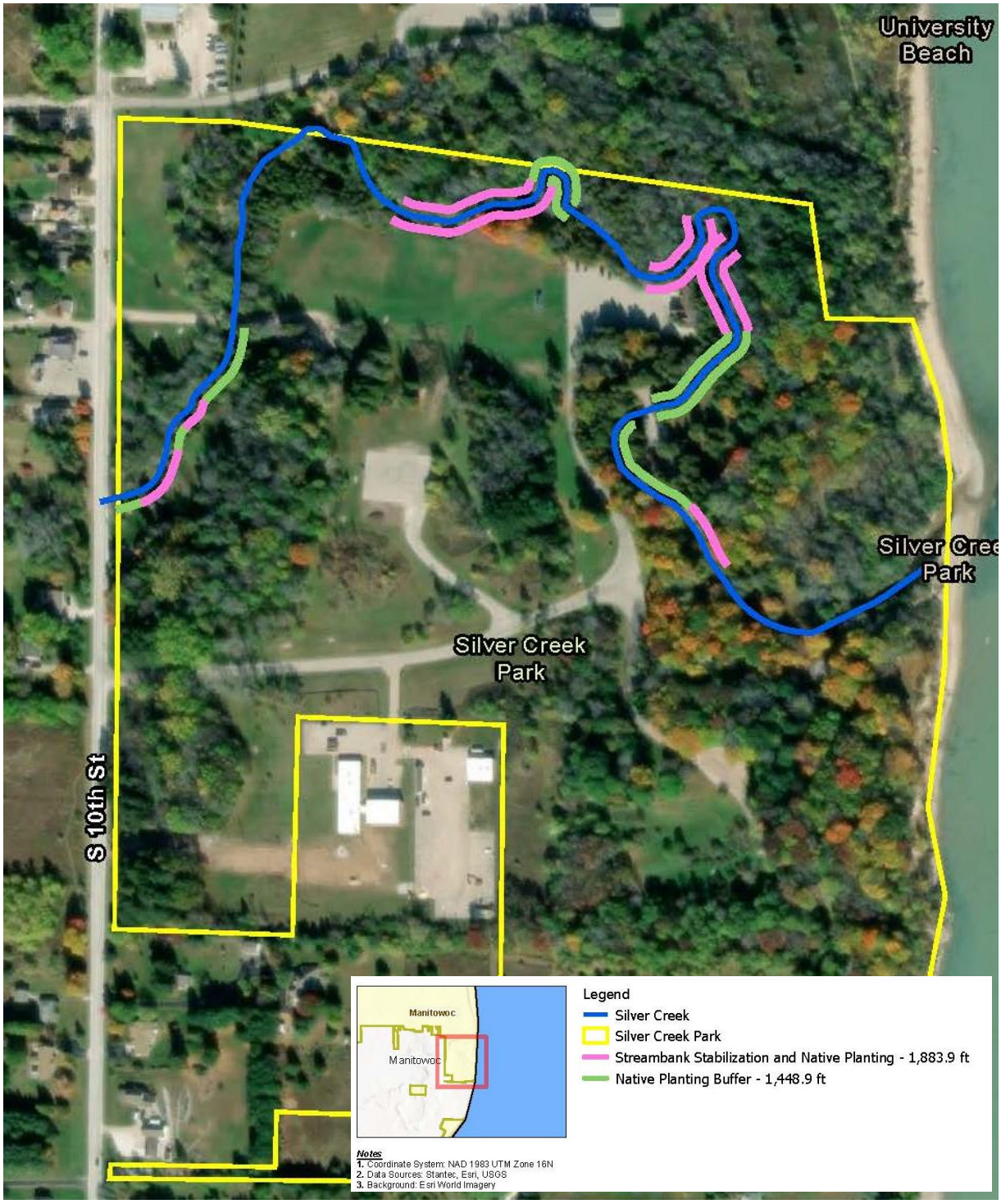


Photo 1. Showing Bank Erosion

Photo 2. Showing Bank Erosion

PROJECT GOALS – Final design is complete, and the project is ready for construction. This shovel-ready project will enhance and restore 3,333 feet of eroding stream banks and riparian buffer, by applying strategies to maximize resilience, restore a native vegetated riparian buffer, intercept/infiltrate stormwater, reduce erosion, stabilize eroding banks, reduce sedimentation, improve water quality, and improve in-stream habitat structures. Total project length is 0.48 miles, with project outcomes including 1,884 linear feet of stabilization to address significantly eroded stream banks and restore degraded in-stream habitat structure; four sections of restored riffle/pool sequence to enhance in-stream habitat; and 1,449 linear feet of restored 10-foot or wider vegetated riparian buffer with native, pollinator-friendly perennial plants to reduce erosion and provide enhanced wildlife habitat. The stream and riparian approaches will restore a combined total of 3,333 linear feet of streambank (counting left and right banks where appropriate).

This project will provide significant reductions in total suspended solids (TSS), total phosphorus (TP), and total nitrogen (TN), based on pollutant load calculations for Silver Creek conducted using EPA's Pollutant Load Estimation Tool (PLET). Restoration is anticipated to result in an estimated 98.8% reduction in sediment, 98.2% reduction in TP, and 94.1% reduction in TN from the proposed stream reach's overall pollutant load to Lake Michigan. The project design calls for a deep pool at the upstream end of the reach. This pool will capture upstream sediment and can mitigate nutrient loads from the largely agricultural watershed. The pool will provide a long-term capability to intercept and remove sediment and nutrients before reaching the estuary and Lake Michigan. The project will target actions to address root causes of water quality degradation in the lower reach, in order to achieve significant functional lift in stream habitat, and result in sustainable, effective, long-term benefits to water quality in the estuary and Lake Michigan. Based on the PLET model, this project will achieve an annual reduction of 1,348 pounds of TP, 646 pounds of nitrogen, 459 tons of sediment, and 60,000 gallons of untreated stormwater will be captured/treated annually from the 10-foot wide restore riparian buffer.

PROJECT DESIGN PLANS – sample attached Page 5 (detailed design plans would exceed page limit)

TARGET SPECIES - The Park's combination of stream, estuary, shorelines, wetlands, grasslands, and forest habitats have been identified by WDNR as one of the most significant remaining migratory stopover habitats on the Central Lake Michigan coast. Silver Creek is managed by WDNR as a Class II steelhead stream and produces juvenile white suckers and trout, supporting a popular sport fishery. Abundant fish provide important forage for diving ducks, kingfishers, and bald eagles; shorebirds congregate along the beach, and migrating songbirds feed on insects in the forest and grasslands. According to WDNR, 130 migratory bird species, including 7 species of greatest conservation need, use the park site each year, due to the diversity of high-quality natural habitats and aquatic resources. However, water quality and habitat within the creek are under threat by ongoing bank erosion within the Park, sedimentation from the upstream urban and agricultural watershed, and a broad and shallow channel in the lower reaches, which has suffered from sedimentation from bank erosion. Extensive portions of the riparian zone are mowed turfgrass or unvegetated understory, resulting in unstable banks, soil erosion and compaction, sedimentation, reduced capacity for stormwater infiltration, and diminished habitat value for wildlife and pollinators. In addition, unfiltered stormwater runoff from Park roadways and parking lots discharges directly to the creek, resulting in gully erosion that threatens to undermine sensitive natural communities, including diverse, mixed conifer-hardwood forests, on the

steep slopes adjacent to the creek, and contributing excess sediment and nutrients which degrade water quality and aquatic habitat within the stream and estuary.

The project will improve foraging and spawning habitat for fish, and rearing habitat for juveniles, in the stream, estuary, and nearshore portions of Lake Michigan via improvements to water quality and fish passage. Aquatic macroinvertebrates will benefit from improved water quality and reduced sedimentation. Brook trout will benefit from increased shading, improved bed scouring, and channel structure promoting deeper and cooler water. Migratory and resident bird species that depend on the site for migratory stopover and breeding habitats, including bald eagles, kingfishers, diving ducks, shorebirds, and neotropical migrant songbird species, will benefit from enhanced fish and aquatic macroinvertebrates in the stream and estuary. The site has been identified by WDNR as particularly important to supporting large concentrations of diving ducks, including greater scaup, common goldeneye, and bufflehead, that will benefit from increased forage fish. Sanderling and other shorebirds also congregate at the estuary and adjacent beaches to forage on the abundance of macroinvertebrates that wash ashore at Silver Creek. The project site is located within the High Potential Zone for the Federally-Endangered RPBB, which was observed by WDNR less than a mile from the project site in 2022. RPBB will directly benefit from increased nectar source availability and diversity as a result of native plantings in the restored riparian buffer.

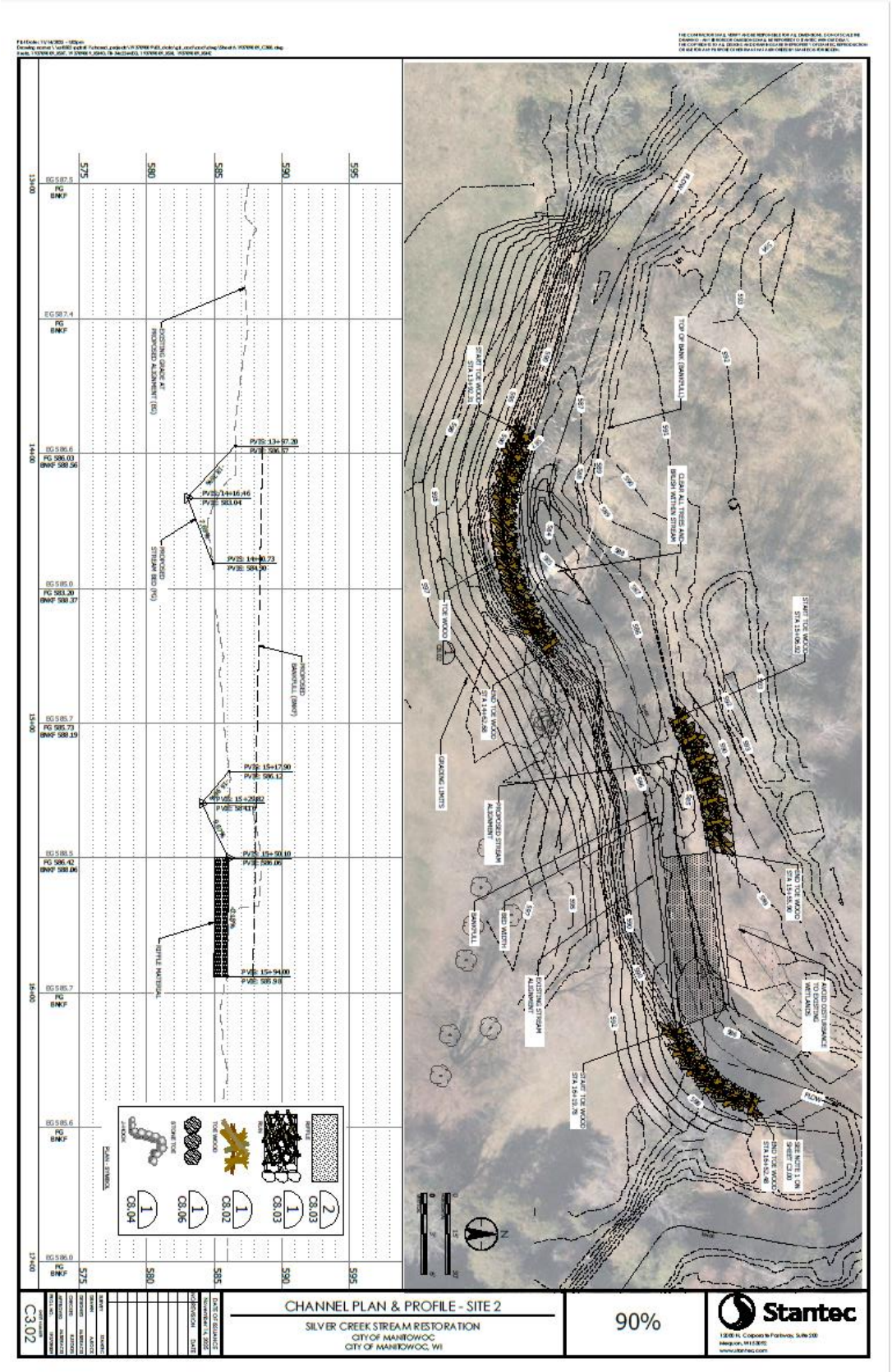
BUDGET DETAILS

CONTRACTUAL / CONSTRUCTION	**BUDGET**
Project Management	$10,000
Educational signage	$5,000
Topo Survey	$8,000
Final design	$55,000
Permitting	$8,000
ER Review	$1,500
Wetland Delineation	$7,000
Cultural Resource Review	$2,500
Bidding & Coordination	$5,000
Construction oversight and coordination	$35,000
Construction (mobilization, survey, clearing & site prep, earthwork, materials, site erosion control)	$400,000
CLOMR / LOMR	$25,000
Construction native buffer (site prep, native seeding)	$10,000
Invasive removal in expanded riparian area	$75,000
Restoration maintenance costs (2 years post construction)	$100,000
TOTAL CONTRACTUAL:	**$747,000**

The grant request to WDNR Wetland Surcharge program will fund a portion of the construction estimate shown above. The above numbers are preliminary. Additional funding will be secured as needed from Fund for Lake Michigan, pending receipt of quotes from contractors in January/February 2026.

PROOF/DESCRIPTION OF PUBLIC ACCESS

- Silver Creek Park: https://www.manitowoc.org/Facilities/Facility/Details/18
- City of Manitowoc Park Rules: https://www.manitowoc.org/2321/Park-Rules



Full document can be found here: https://app.box.com/s/fq5c15kdehqplo9ji761glefru3cavm9