



CENTENNIAL BEACH & BLUFF IMPROVEMENTS

Village of Winnetka Plan Commission
Jan. 22, 2025

AGENDA

NATURAL SYSTEMS

HISTORY OF THE MASTER PLAN

LAKEFRONT IMPLEMENTATION PLAN

CENTENNIAL EVOLUTION

WHY WE ARE HERE

PROPOSED DESIGN

Natural Systems

Lake Michigan Conditions

CENTENNIAL
BEACH & BLUFF IMPROVEMENTS



ESTABLISHING THE FACTS

Coastal Processes at Play

- Lake Level
- Waves
- Ice Climatology
- Sediment Transport

Risks to WPD Beaches and Bluffs

- Fluctuating Water Levels
- Extreme Storms and High Wave Action
- Loss of Ice Coverage in a Warming Climate
- LST/Littoral Drift
- Lakebed Dncutting
- Flooding, Erosion, and Sedimentation
- Human Influence (Littoral Barriers)
- Climate Change



Natural Systems

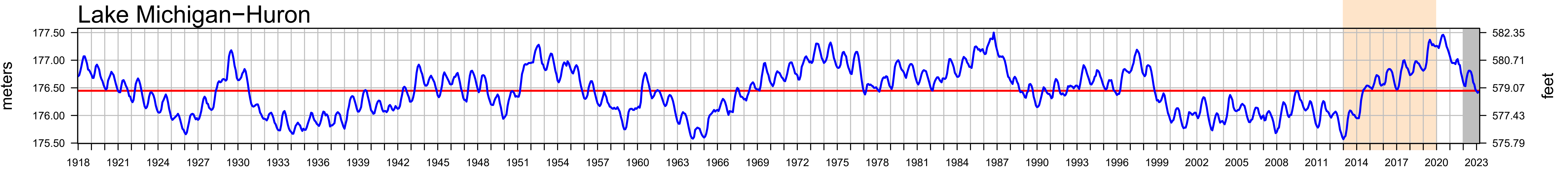


Lake Michigan Conditions



Great Lakes Water Levels (1918–2023)

Monthly Mean Level Long Term Average Annual



DATA PROVIDED BY: US ARMY CORPS OF ENGINEERS

SEE THE IMPACT AT THE
BEACHES BELOW

CENTENNIAL BEACH, HIGH WATER 2020



LLOYD BEACH, WINTER 2013



LLOYD BEACH, 2020



In January **2013**, Lake Michigan water dropped to its **lowest level** in more than 100 years, declining to **576.02** (IGLD 1985)

Subsequent years were marked by rapidly rising lake levels.

By **2020**, the Lake Michigan water level rebounded and neared the **100-year record high water** levels from January through August, reaching a peak of **582.22** in July of 2020.

The increase in water level of more than **6 feet** in just **seven years** was unprecedented.

Winnetka Park District determined that the future of the bluffs and beaches is not secure and sought to plan for the future.

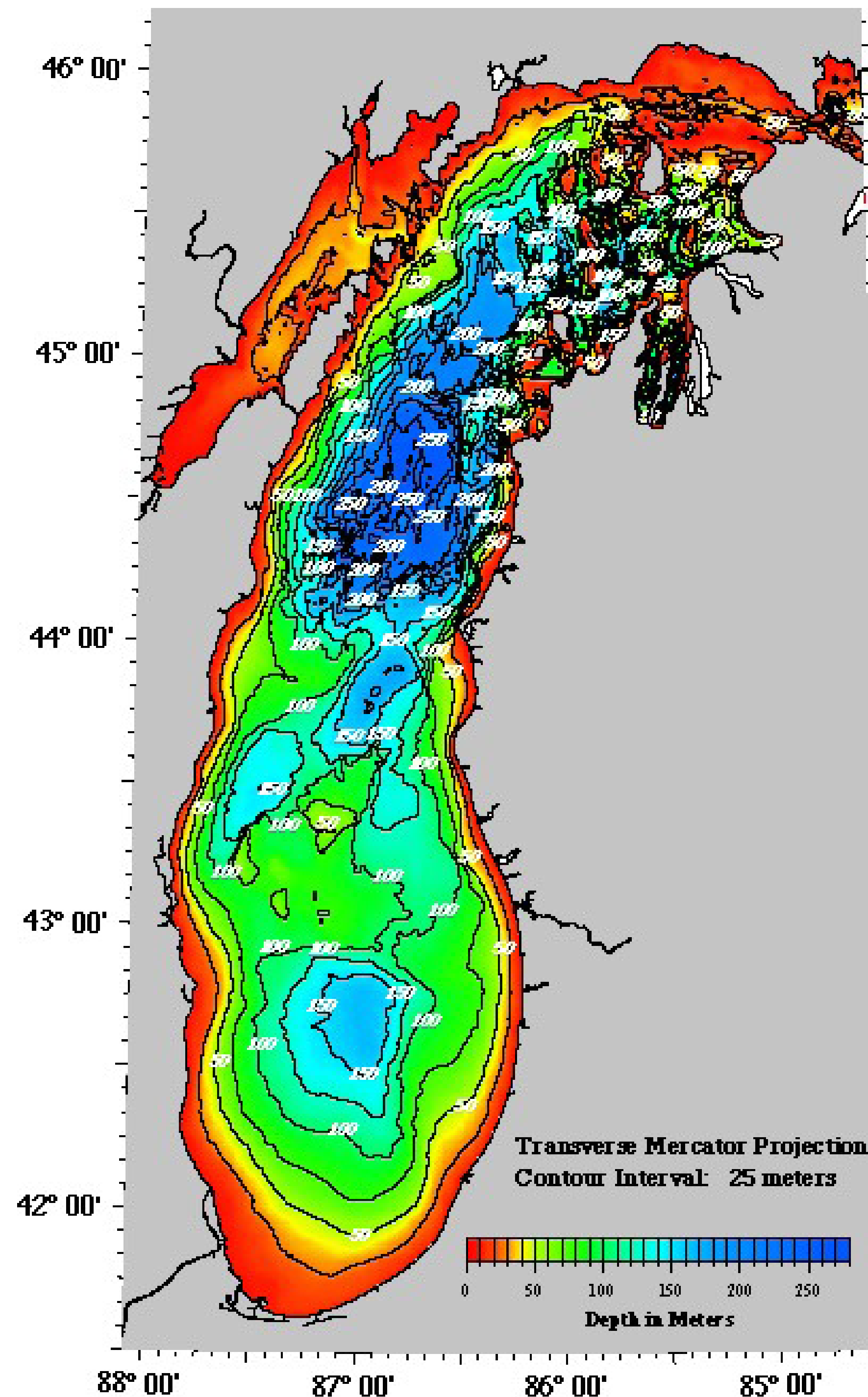
Further planning studies revealed erosion control measures and beach improvements need to be designed to protect against erosion and afford usable public access at varying lake levels.

Natural Systems

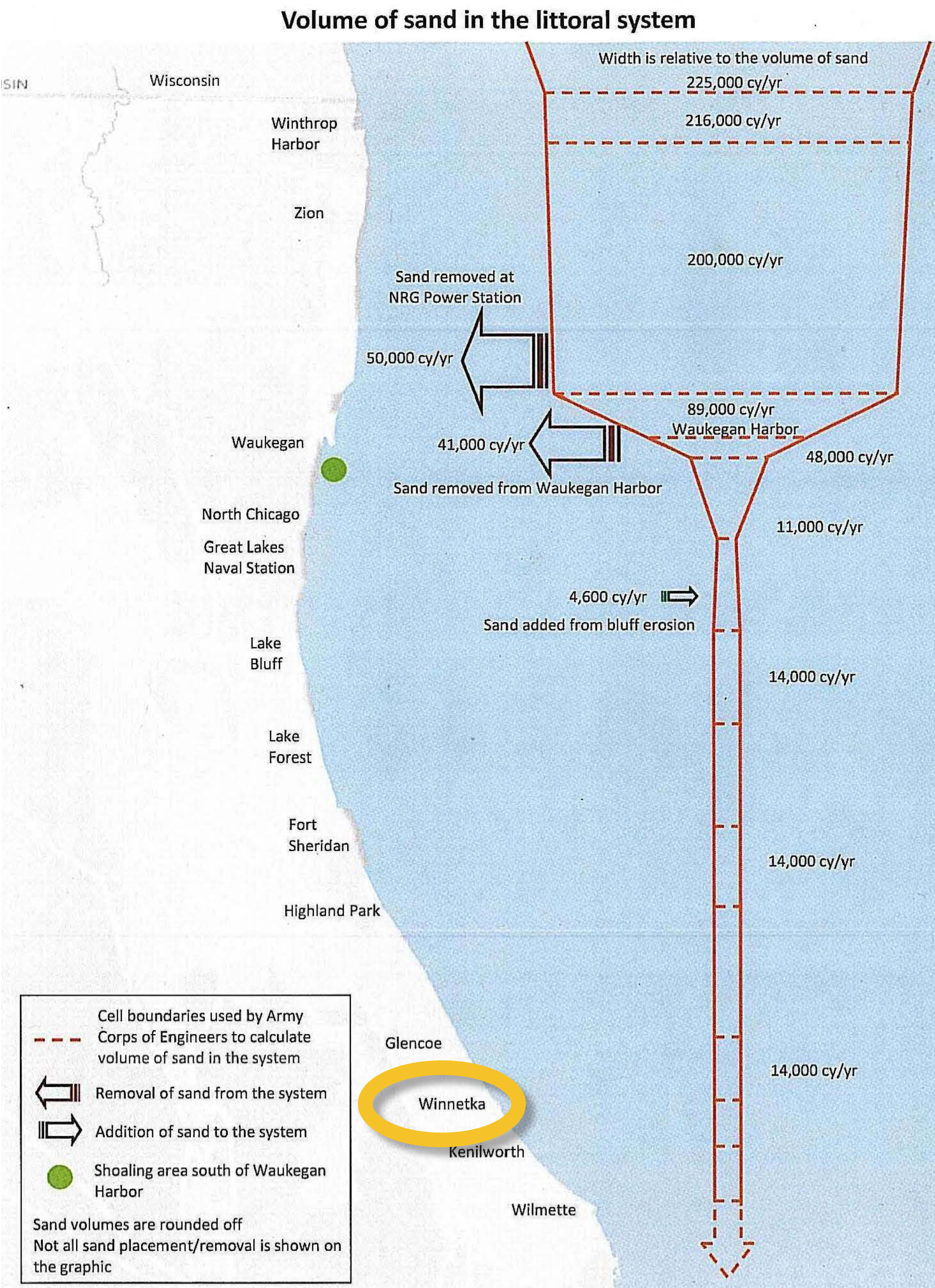
Lake Michigan Conditions

Littoral Drift

The movement of sand controlled by wave climate, bathymetry, shoreline orientation, and natural or artificial headlands that deflect waves and currents.



SOURCES: SHABICA ASSOCIATES PRESENTATION - LAKE MICHIGAN SHORELINE, 3/24/2023

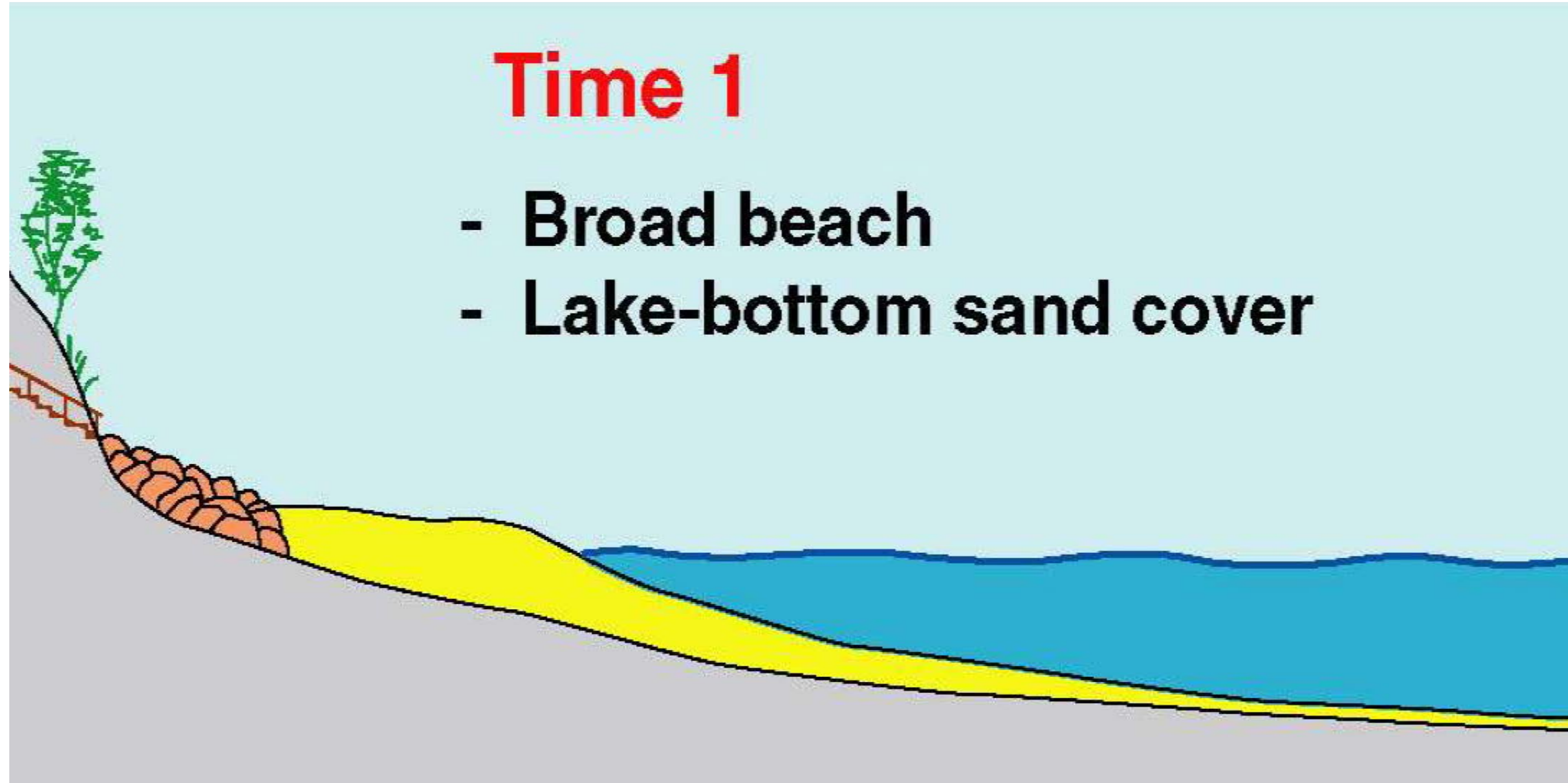


Natural Systems

Lake Michigan Conditions

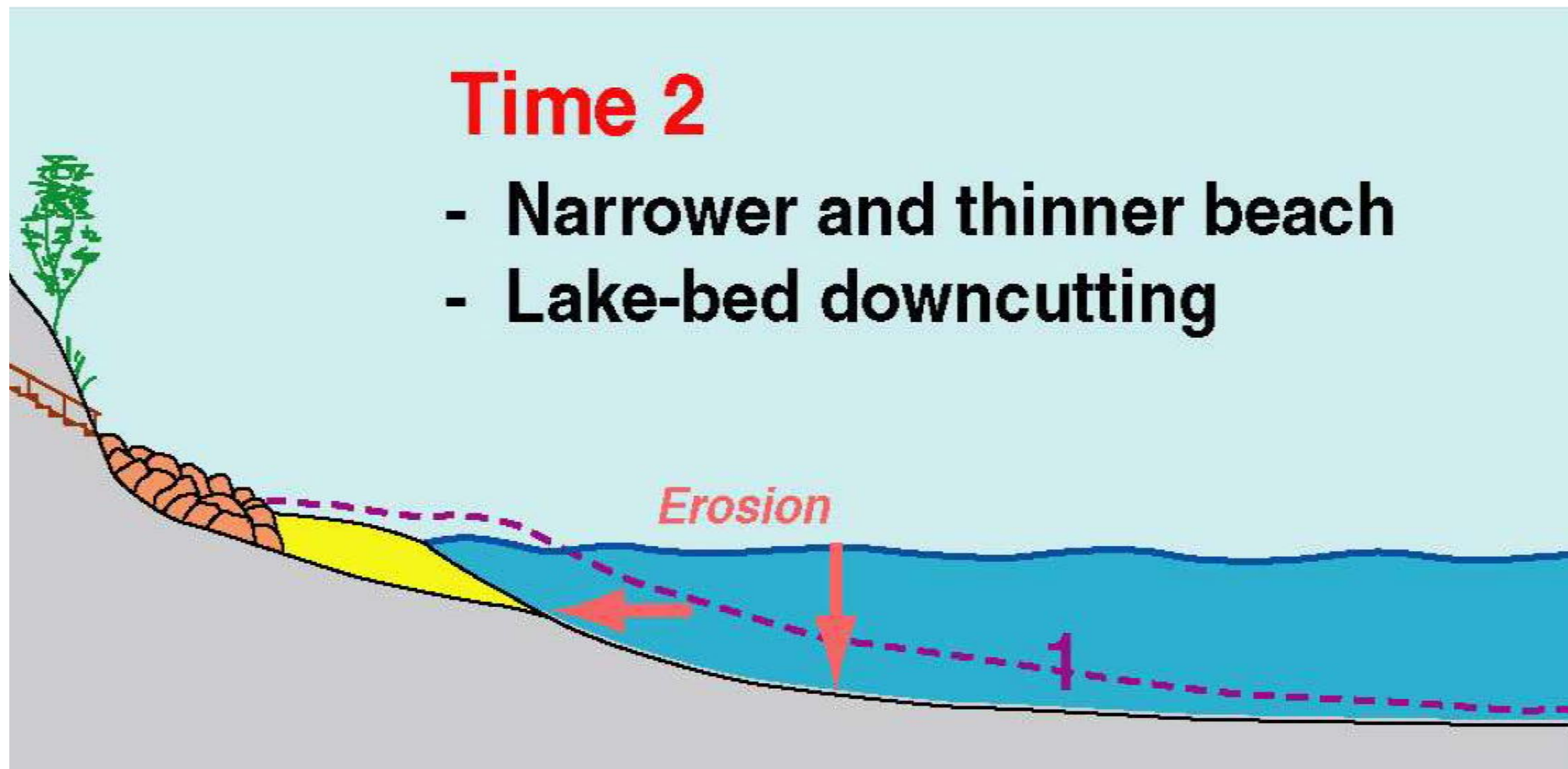
Time 1

- Broad beach
- Lake-bottom sand cover



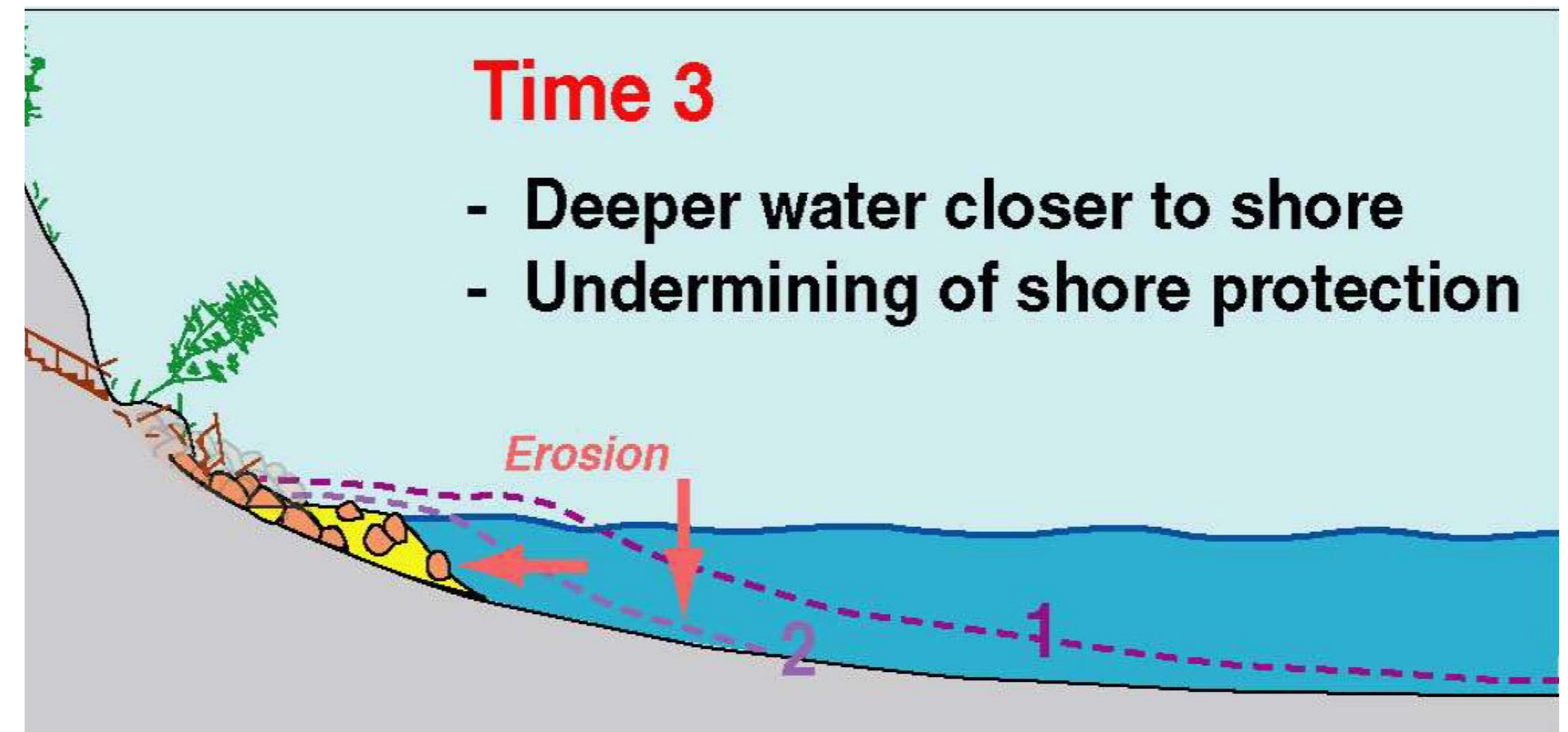
Time 2

- Narrower and thinner beach
- Lake-bed downcutting



Time 3

- Deeper water closer to shore
- Undermining of shore protection



Lake-bed Downcutting

Lake-bed Downcutting is the process of waves crashing into shore, which over time, causes erosion that deepens a lake by removing lake-bed clay. This process creates dangerous beach environments creating deeper near shore waters allowing for accelerated erosion.

Natural Systems

Lake Michigan Conditions



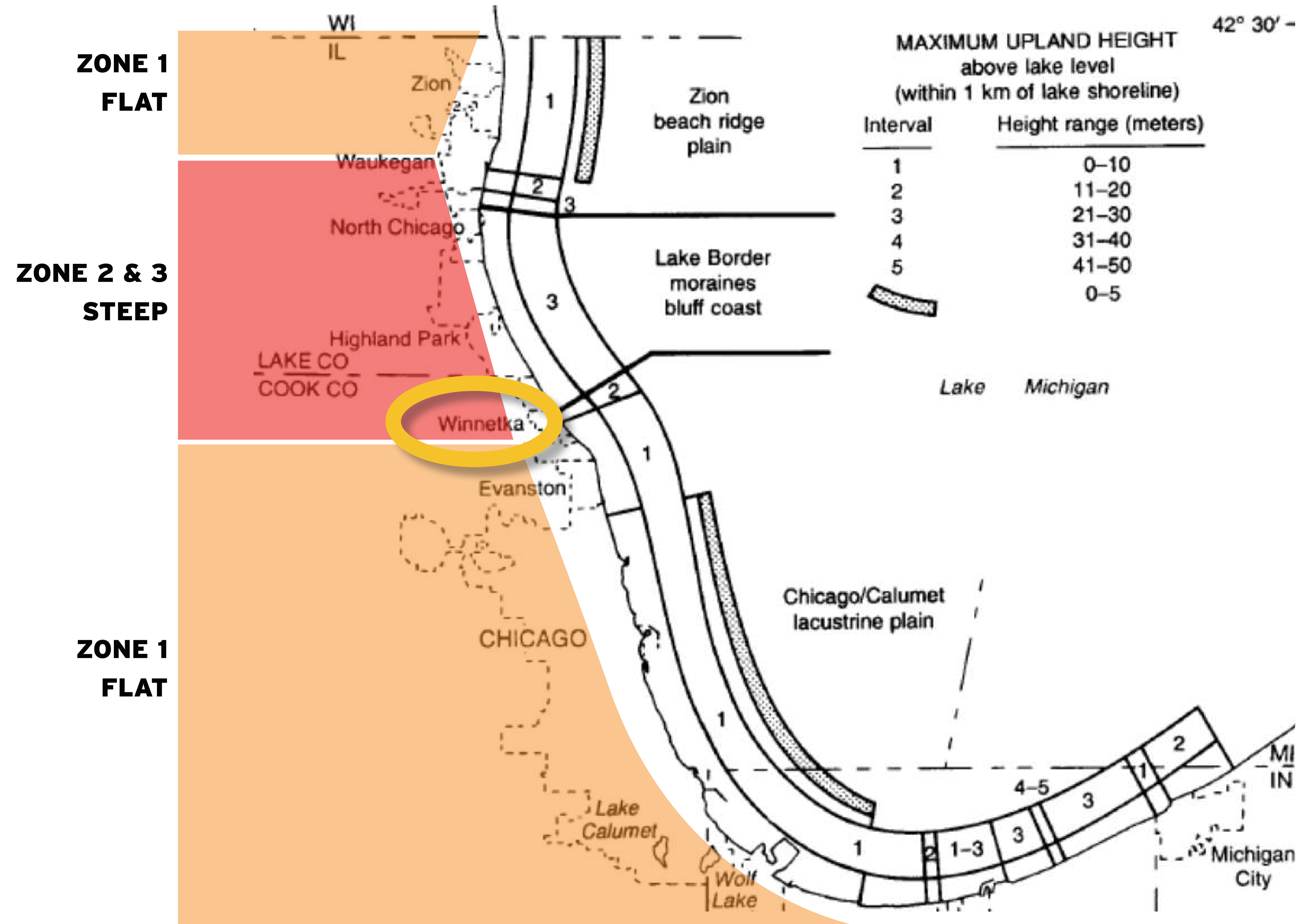
SOURCES: SHABICA ASSOCIATES PRESENTATION - LAKE MICHIGAN SHORELINE, 3/24/2023
BAIRD MEMORANDUM - TECHNICAL GUIDANCE ON COASTAL BLUFF ECOSYSTEM, 9/7/2023

Bluff Characterization

- Winnetka's bluff are within **Zone 2 - Marine bluff coast & Zone 3 - Lacustrine (lake) plain**, predominantly characterized by steep bluffs
- The natural landscape and native plant communities have been significantly altered by human impact (population growth, urban development/sprawl, fire-suppression, water management, invasive species, and littoral barriers)

Littoral Barriers

- Obstacles to littoral drift (migration of material along the shore)
- Littoral barriers may be natural rocky headlands or man-made coastal structures such as jetties, breakwaters or dredged channels. These hinder the normal drift of material along the shore



Natural Systems

Lake Michigan Conditions

SOURCES: SHABICA ASSOCIATES PRESENTATION - LAKE MICHIGAN SHORELINE, 3/24/2023
JOURNAL OF GREAT LAKES RESEARCH - DELINEATING SPATIAL DISTRIBUTION AND THICKNESS OF UNCONSOLIDATED SAND ALONG THE SOUTHWEST LAKE MICHIGAN SHORELINE USING TEM AND ERT GEOPHYSICAL METHODS, 2020

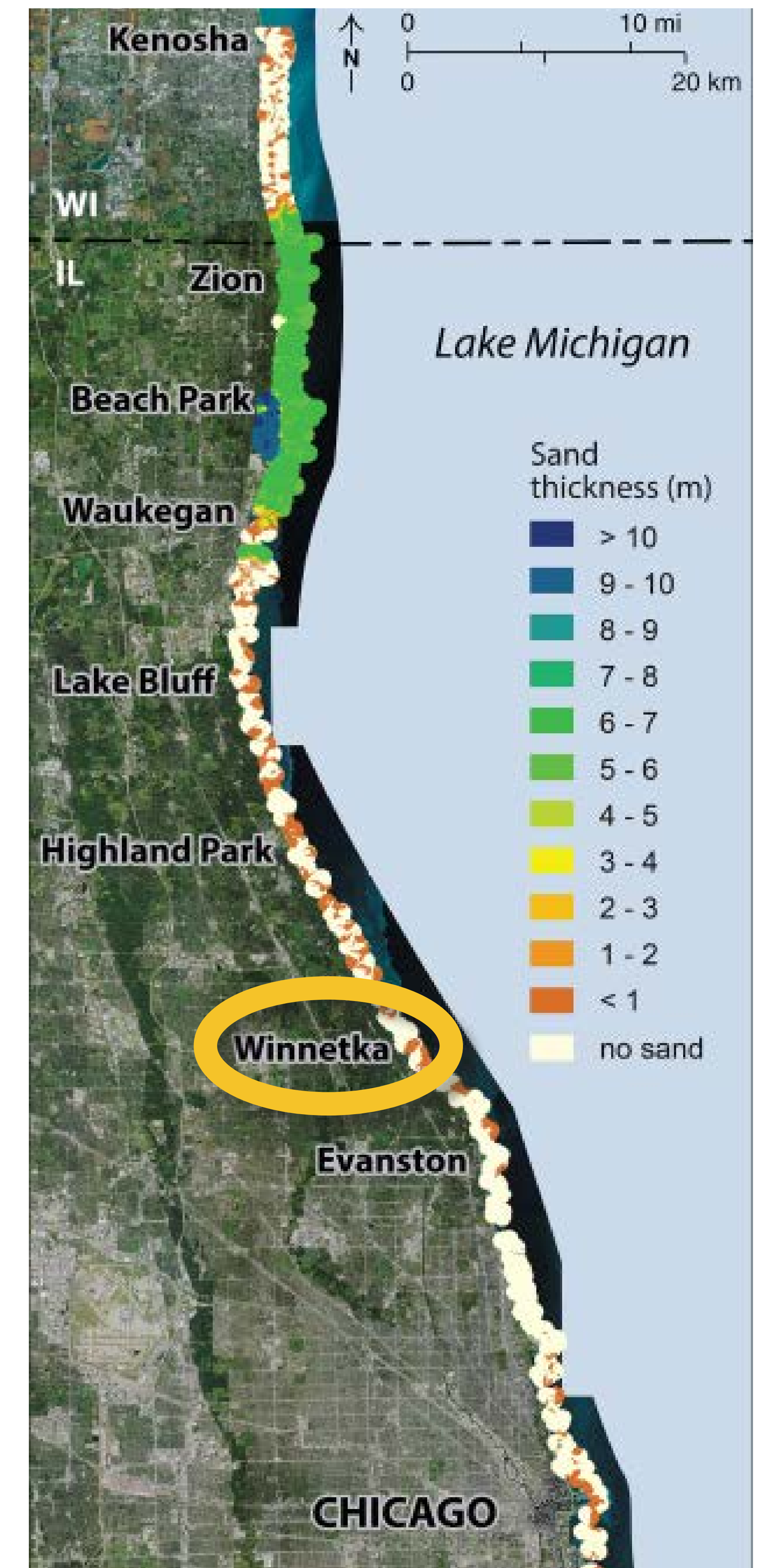
What This Means for Us

- Much of the North Shore shoreline, south of Waukegan, is sediment starved putting it at greater risk of lakebed downcutting - increasing nearshore depths (safety issue) - and coastal damage including erosion, flooding, and destabilized coastal structures and loss of beaches.

WAUKEGAN HARBOR (1939)



WAUKEGAN HARBOR (2022)





Lake Michigan Conditions

What We Learned from the Village Council Study Sessions

January 10, 2023

Speakers:

- *Soren Hall, Regulatory Branch (USACE)*
- *Steve Altman, Division Manager (IDNR)*
- *Peter Friedman, Village Attorney*
- *David Schoon, Director of Community Development (VOW)*
- *James Bernahl, Director of Engineering (VOW)*

*A tremendous amount of information regarding **protection measures of the Lake Michigan Shoreline**, and how **revetments, groins, and breakwaters all protect the shoreline and bluffs**. The **permitting process for shoreline improvements** was also reviewed from all levels of government, and review of lake front zoning, regulations and provisions around the development of the shoreline and bluffs.*

September 12, 2023

Speakers:

- *David Schoon, VOW*
- *James Bernahl, VOW*
- *Caleb Barth, Baird Associates*

*Information regarding the **Bluff Steep Slope Regulations**, other community zoning and development regulations, and **technical guidance on coastal bluff ecosystems**.*

History of the Master Plan



Background Info

What drove the need for Master Plan study?

- Effects of fluctuating Lake Michigan water levels and damage from extreme lake events
- New policy at a regional level provided clear, holistic, actionable approach and grant opportunities for lakefront communities
- IDNR Coastal Management Program as funded by NOAA

Master Planning Efforts

- Lakefront 2030 Master Plan (WPD, 2016)
- Bluff Restoration Plan (WPD, 2019)
- Strategic Comprehensive Plan (VOW, 2023)

Winnetka Park District and the Village of Winnetka have an aligned mission to improve resident access to open spaces and natural areas including the lakefront beaches.

“Our mission is to provide a balance of quality recreation and leisure opportunities while protecting assets, natural resources, and open space to benefit present and future generations.”



History of the Master Plan

Lakefront 2030 Master Plan

PURPOSE AND MISSION

As the stewards of the Winnetka natural areas, resources, and open space recreation areas, the Park District initiated a comprehensive waterfront plan in 2014, to:

- Assess the recreational beach system
 - Address the continuing beach erosion
 - Expand recreational uses
 - Enhance ADA accessibility
- The purpose of the plan was "to create a strategic and unified community vision for the future of Winnetka's shoreline."
 - The Plan's Mission Statement was to "provide a long-term, sustainable strategy for the preservation, protection, restoration, and enhancement of Winnetka's lakefront for both Winnetka residents and a broad range of Lake Michigan user groups."



History of the Master Plan

Lakefront 2030 Master Plan



PROJECT GUIDING PILLARS

To support the mission, the planning team established **seven plan goals**:

1. Enhance recreation and open space facilities and programming for Winnetka residents.
2. Develop facilities with intergenerational appeal.
3. Facilitate safe and convenient access.
4. Support and enhance Lake Michigan ecosystems.
5. Adopt a sustainable operations model.
6. Expose and inform Winnetka residents to the value of the public lakefront.
7. Encourage and seek partnerships (public and private).

LAKEFRONT MASTER PLAN PROJECT TEAM



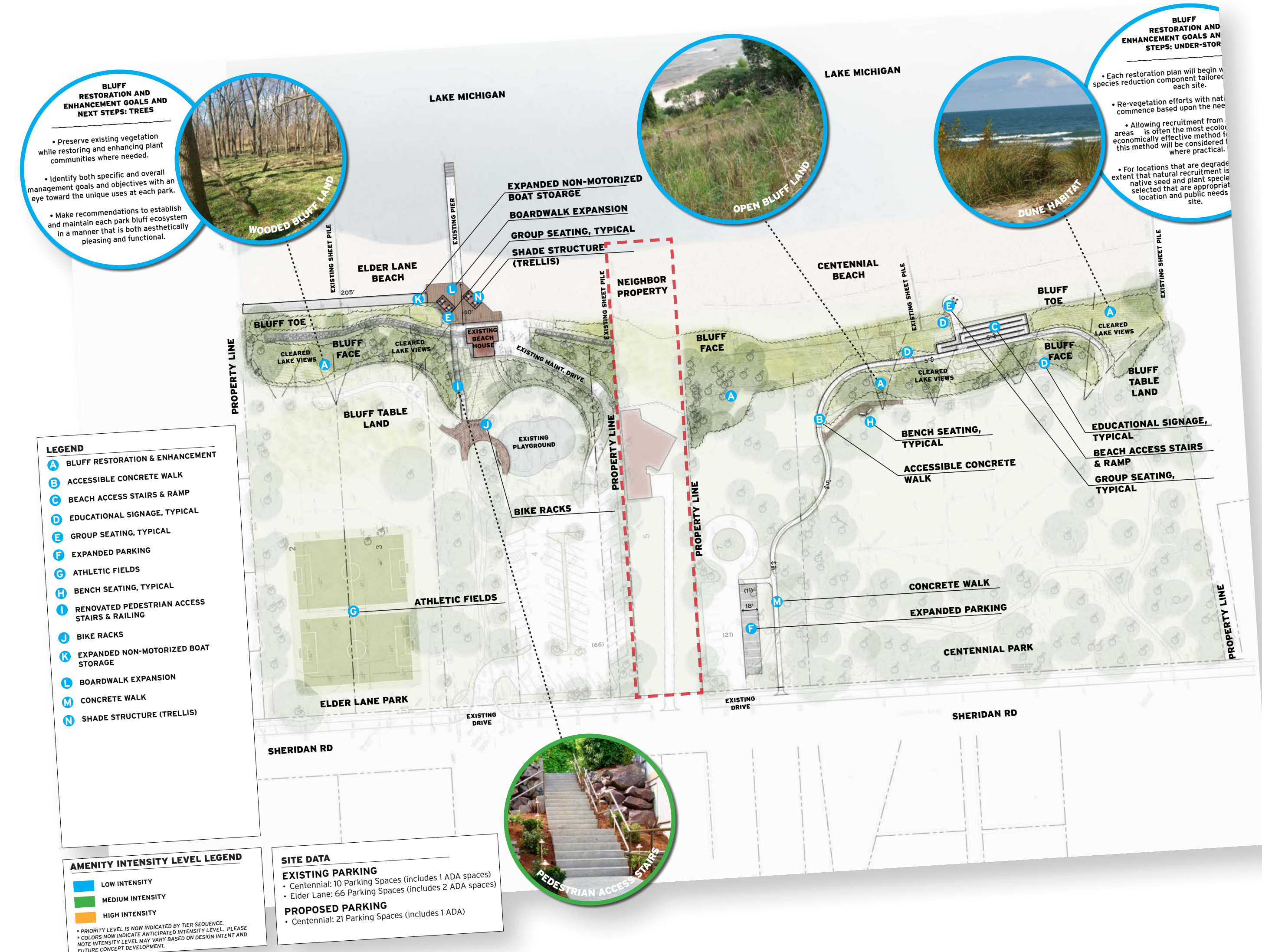
History of the Master Plan

Bluff Restoration Master Plan

PURPOSE AND MISSION

In 2018, the Park District initiated a comprehensive study of bluff lands at all five lakefront parks to:

- Establish bluff vegetation and habitat creation goals
 - Address slope instability and erosion
 - Further define park recreational uses
 - Improve views to the lake and provide bluff and beach access
 - Establish phasing and timeline for implementation
- The purpose of the plan was to "clearly articulate the desired character and goals for each park and establish the right balance of natural habitat, open space, viewshed opportunities, and active and passive recreational pursuits."
- The Plans were shared with the community through public meetings and virtual surveys with feedback from over 160 participants



FAVORITE AMENITIES FROM THE ELDER & CENTENNIAL PARK MASTER PLAN

Indicated below...



History of the Master Plan

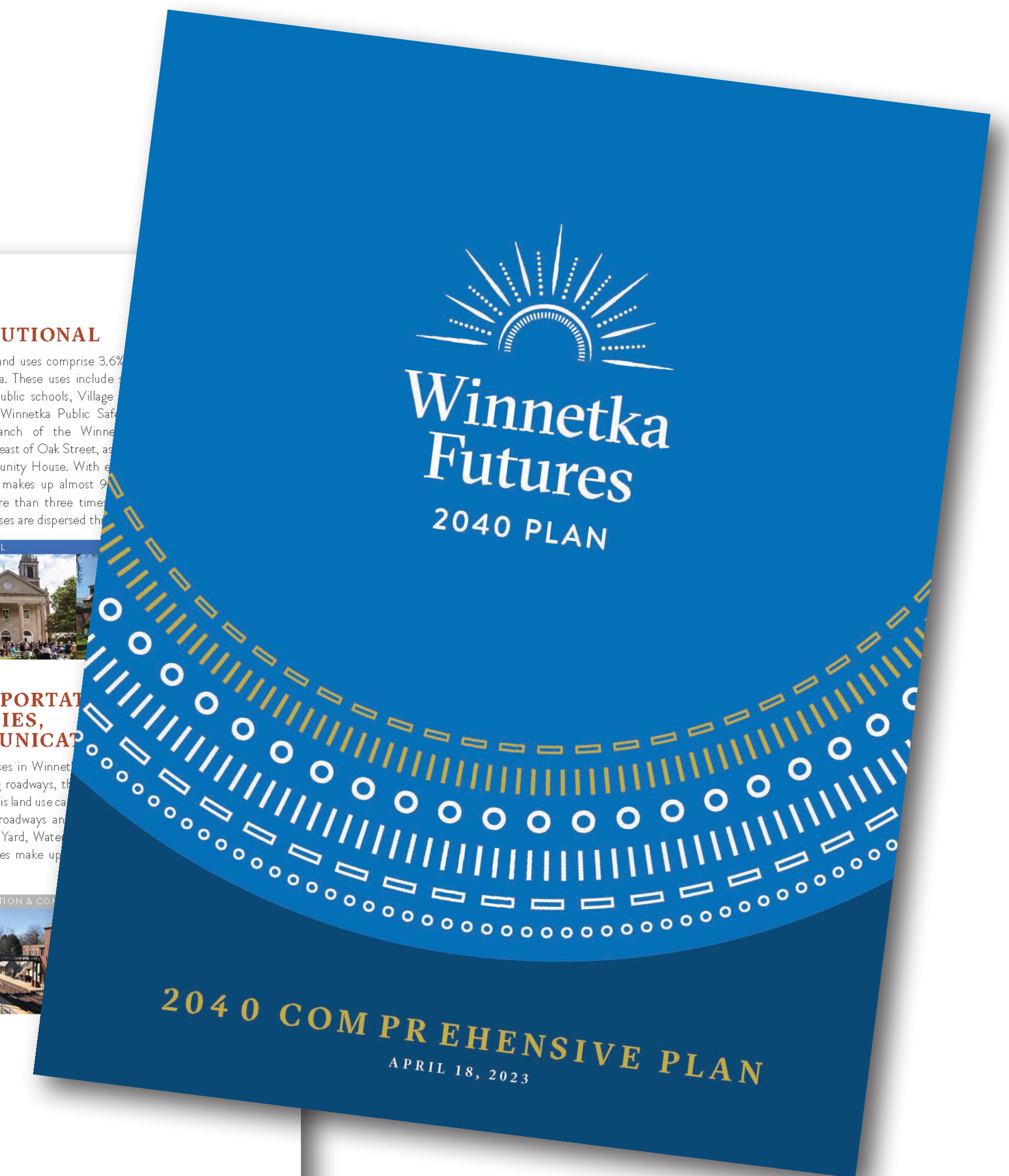
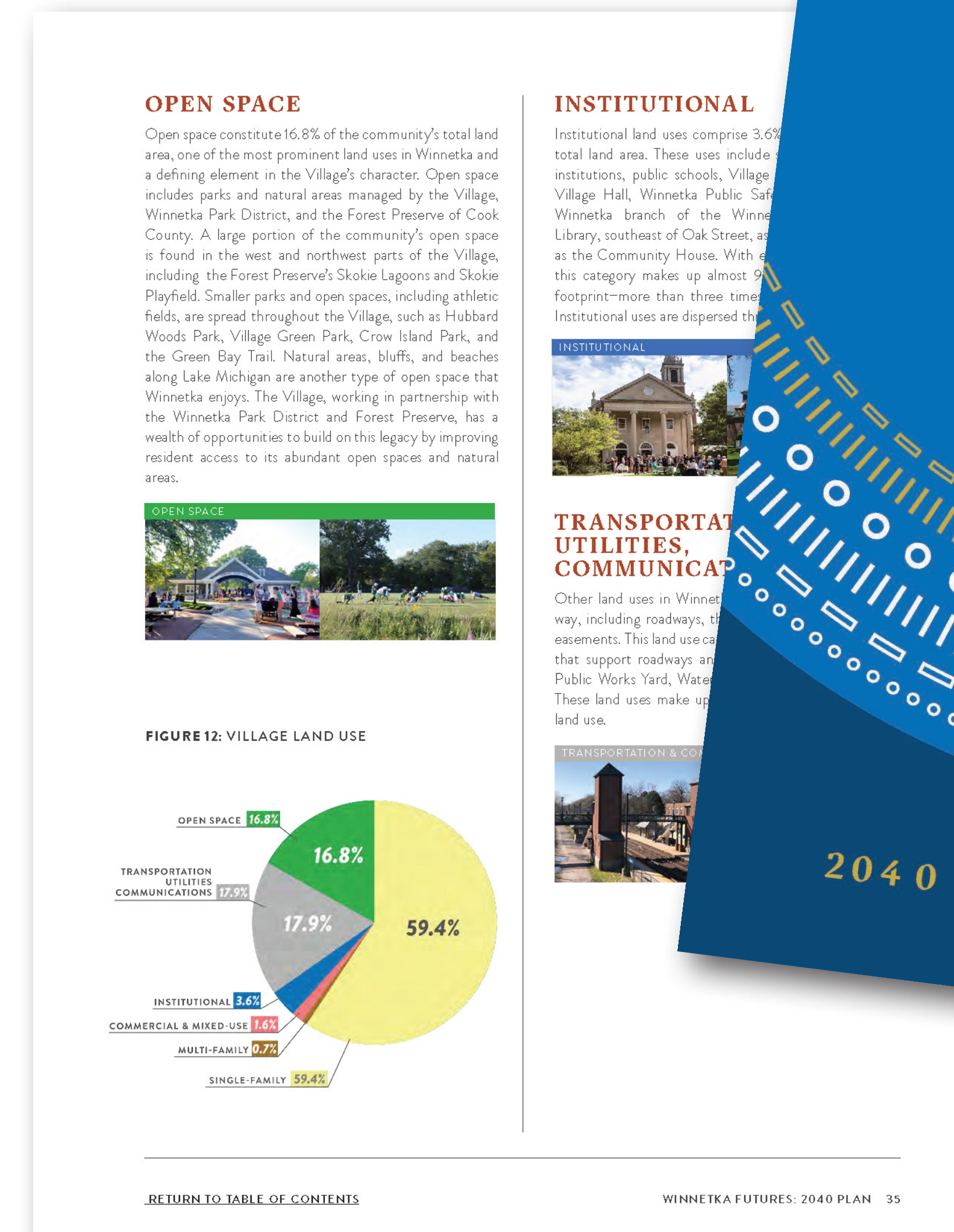


Village of Winnetka 2040 Comprehensive Plan

OVERVIEW AND IMPORTANCE OF PARTNERSHIPS BETWEEN INTERGOVERNMENTAL AGENCIES

- On April 18, 2023 the Village of Winnetka adopted the **Winnetka Futures 2040 Plan** (Comprehensive Plan for the Village of Winnetka).
- The Village Comprehensive Plan recognized the **important role that the Park District plays** in creating a sense of place that is different from surrounding communities.
- The Village acknowledged the "**wealth of opportunities it has working in partnership with the Park District to improve resident access to its abundant open spaces and natural areas.**"

see page 35 of the Comprehensive Plan



History of the Master Plan



Village of Winnetka 2040 Comprehensive Plan

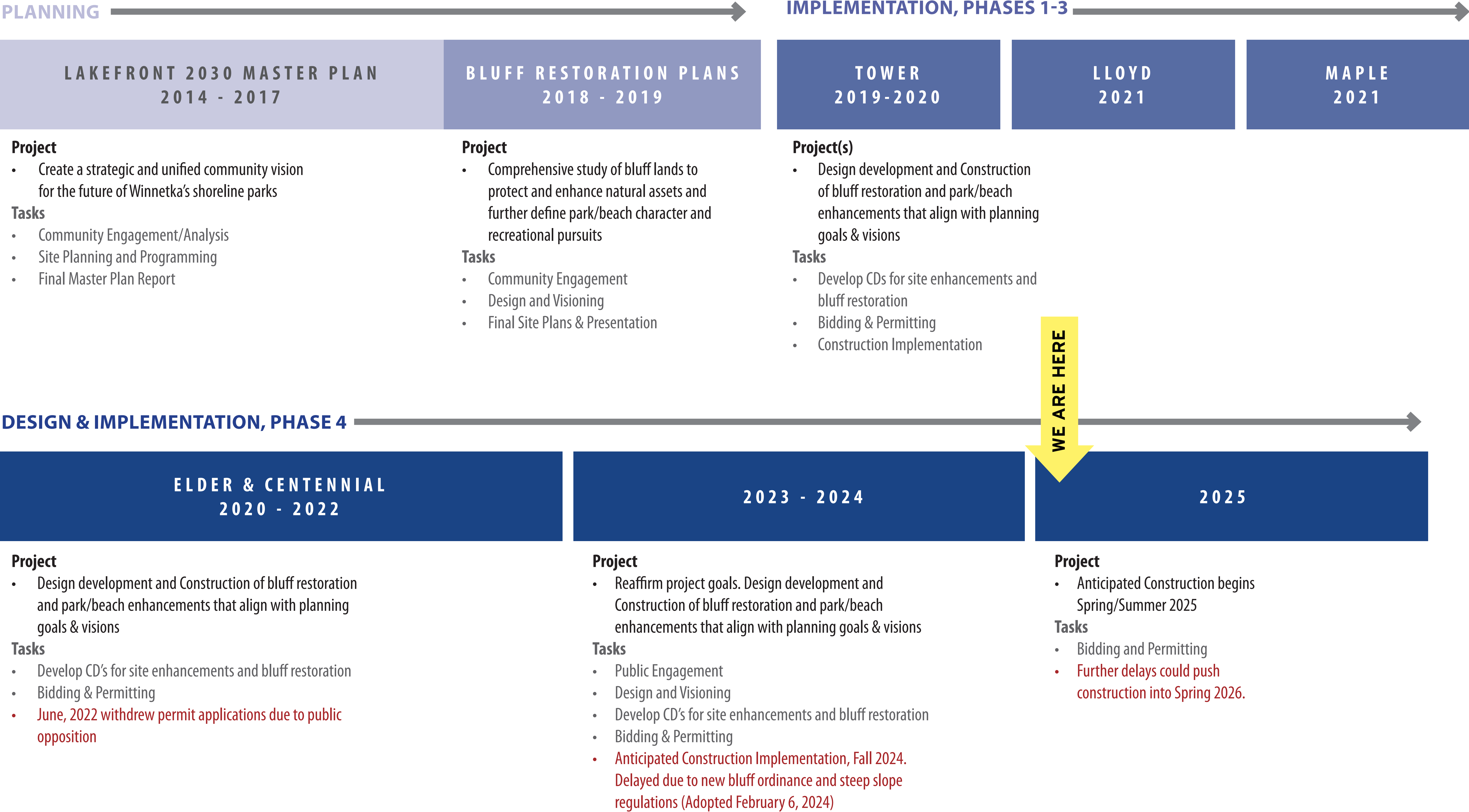
SHARED PURPOSE AND MISSION

- The Village Comprehensive Plan supports the Lakefront Master Plan's shoreline and bluff stabilization goals and visions
see page 157 of the Comprehensive Plan
- Acknowledges that shorelines along Lake Michigan are experiencing erosion and significant destruction and that Winnetka's lakefront, both publicly and privately owned, has been negatively impacted by shoreline erosion
see page 157 of the Comprehensive Plan
- Acknowledges the Park District's recent efforts to monitor and restore its parkland
see page 158 of the Comprehensive Plan

“Our mission is to provide a balance of quality recreation and leisure opportunities while protecting assets, natural resources, and open space to benefit present and future generations.”



Lakefront Parks Implementation Plan



Lakefront Parks Implementation Plan

Investments Realized - Securing Our Shoreline's Future



Long-Term Investment

- Costs allocated for beach and bluff implementation projects represent critical, long-term investments in the **sustainability** of Lake Michigan's shoreline and Winnetka's environmental and recreational assets.

Shared Responsibility

- While the State designates these assets as the **responsibility** of individual property owners, they are **interconnected parts** of a larger natural system.

Community Stewardship

- The WPD has a duty to **protect and invest** in these public infrastructure assets to **preserve their use and value for the community**.

Extended Lifespan

- With proper care and maintenance, these improvements are designed to endure for the next 70+ years, **ensuring their benefits are realized across generations**.

Lakefront Parks Implementation Plan

CENTENNIAL
BEACH & BLUFF IMPROVEMENTS



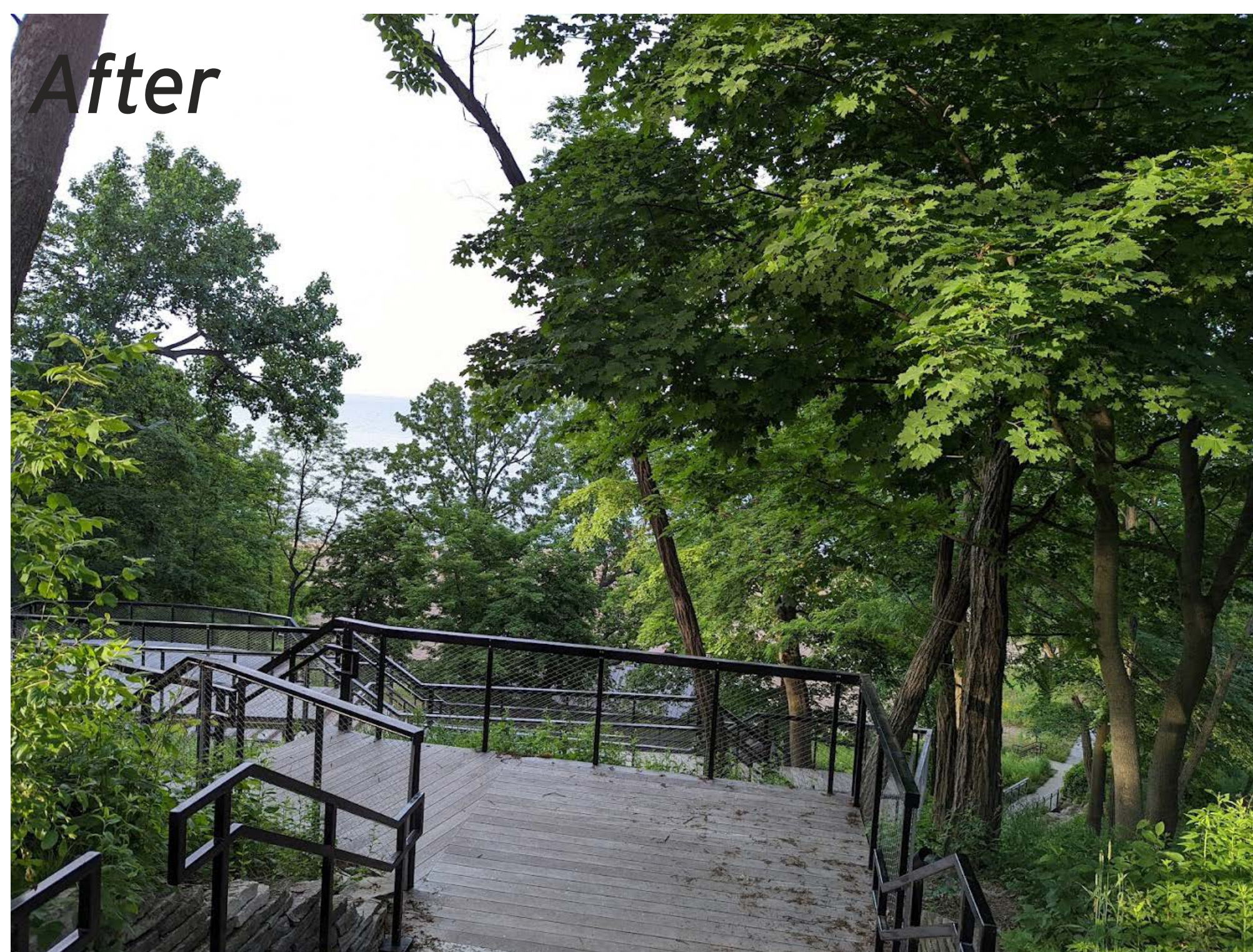
Project completion and ongoing progress

Tower Bluff, 2019 - 2020



Tower

- New staircase from parkland to beach
- New ADA lookout at top of bluff
- New overlook platform along staircase
- Bluff "restoration" & ongoing maintenance
- Parking lot entry plaza and sidewalk renovations



Lloyd Bluff & Beach, 2021



Lloyd

- Shoreline protection and beach creation
- Retaining wall for bluff erosion protection
- Pedestrian access ramp
- Bluff "restoration" & ongoing maintenance
- Hardwood boardwalk

Lakefront Parks Implementation Plan

CENTENNIAL
BEACH & BLUFF IMPROVEMENTS



Project completion and ongoing progress

Maple Bluff & Beach, 2021

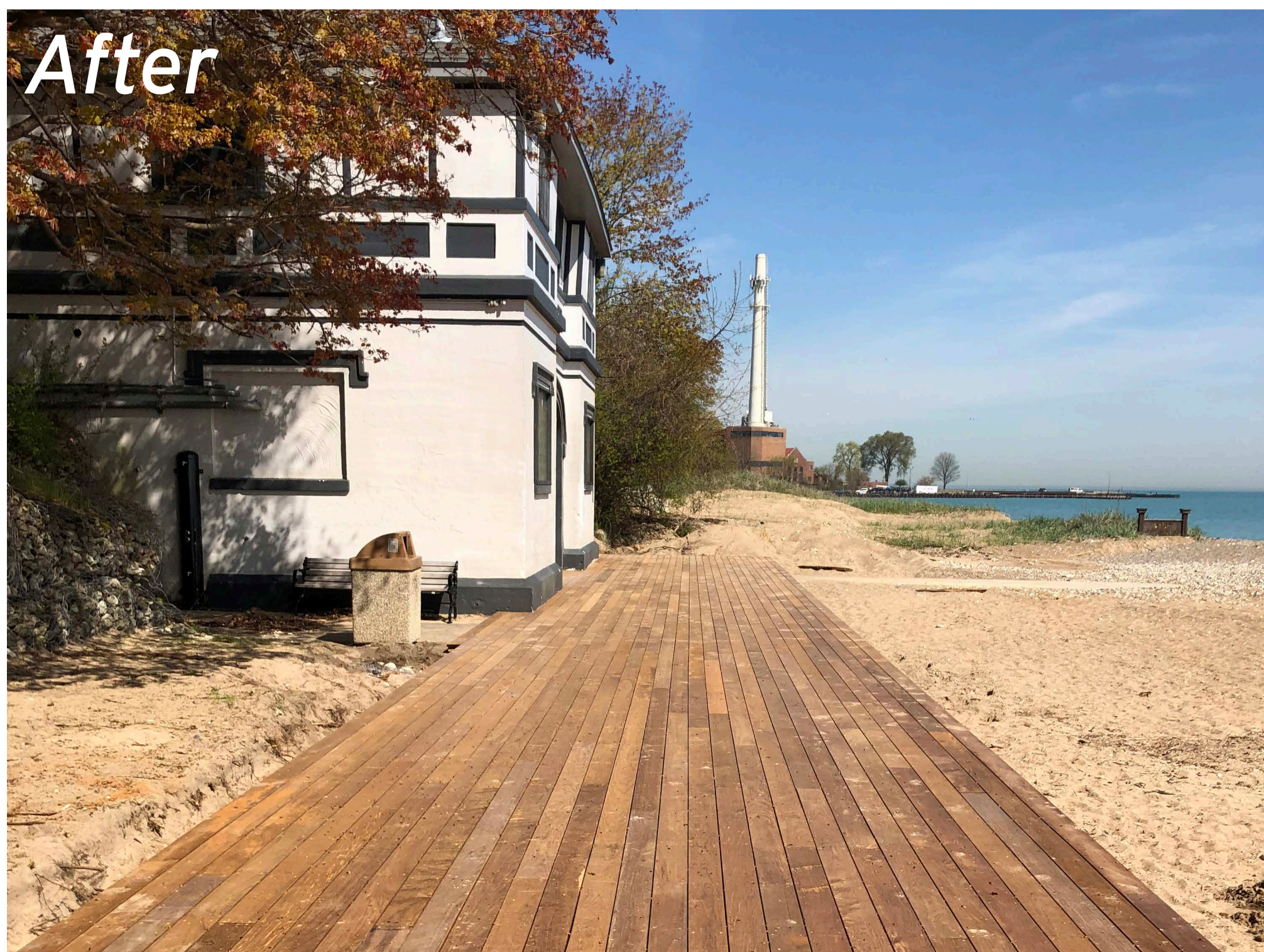
Before



Maple

- New boardwalk
- Bluff “restoration” & ongoing maintenance
- Repair gabion retaining wall for bluff erosion protection

After



Centennial

- Shoreline protection and beach creation
- Dog vs. swimming beach delineation
- Breakwater and pier structure
- Pedestrian ADA access ramp / staircases
- Bluff “restoration” & ongoing maintenance
- Hardwood boardwalk

Centennial Bluff & Beach, 2020 - Now

Before



Vision



...Elder To Come

Centennial Evolution



A Comprehensive Systemic Approach

- *Winnetka's beaches are part of a larger environmental system as well as a **district managed asset**.*
- *The planning team considered **ALL five beach parks together as a combined system with shared goals, finances, and operational/maintenance resources**.*
- *An achievable, phased implementation plan was developed with individual park master plan design schemes that **work together and build upon each other** to ensure both environmental and human-centric community needs are being met.*
- *Design solutions include a variety of gray to green measures such as **beach nourishment, stone groins/revetments, offshore breakwaters, native planting and invasive species management**, known to provide measurable benefits to shoreline & bluff stabilization and beach sand retention*



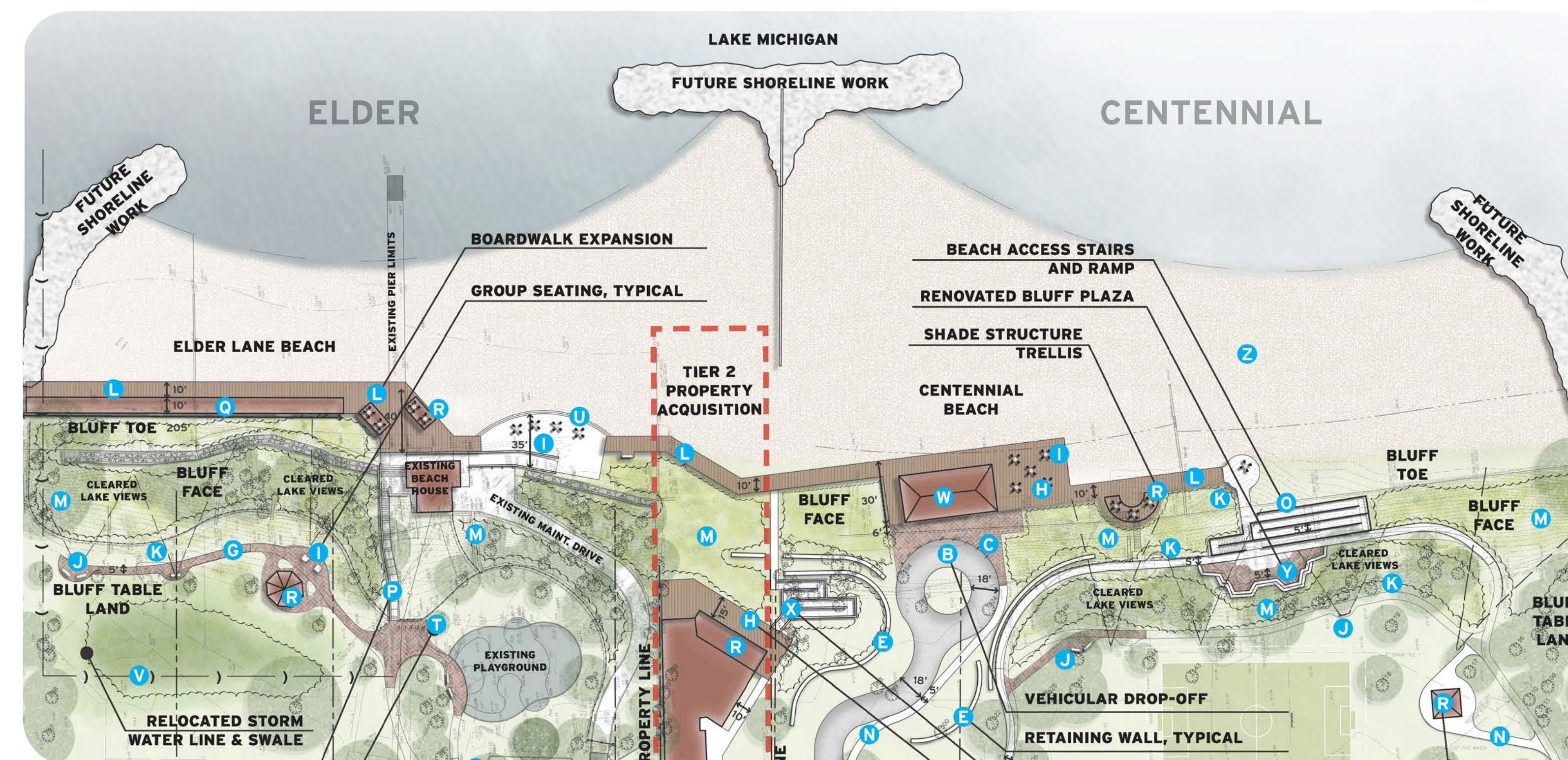
Centennial Evolution



An Iterative Process - Site Plan Development Timeline

2016 LAKEFRONT MASTER PLAN

This plan prioritized a three-element headland beach system to protect and resolve chronic beach erosion and support a variety of recreational amenities



2019 BLUFF RESTORATION PLAN

This plan further defined the beach and site program and explored appropriate bluff restoration and invasive species management practices to meet project environmental goals

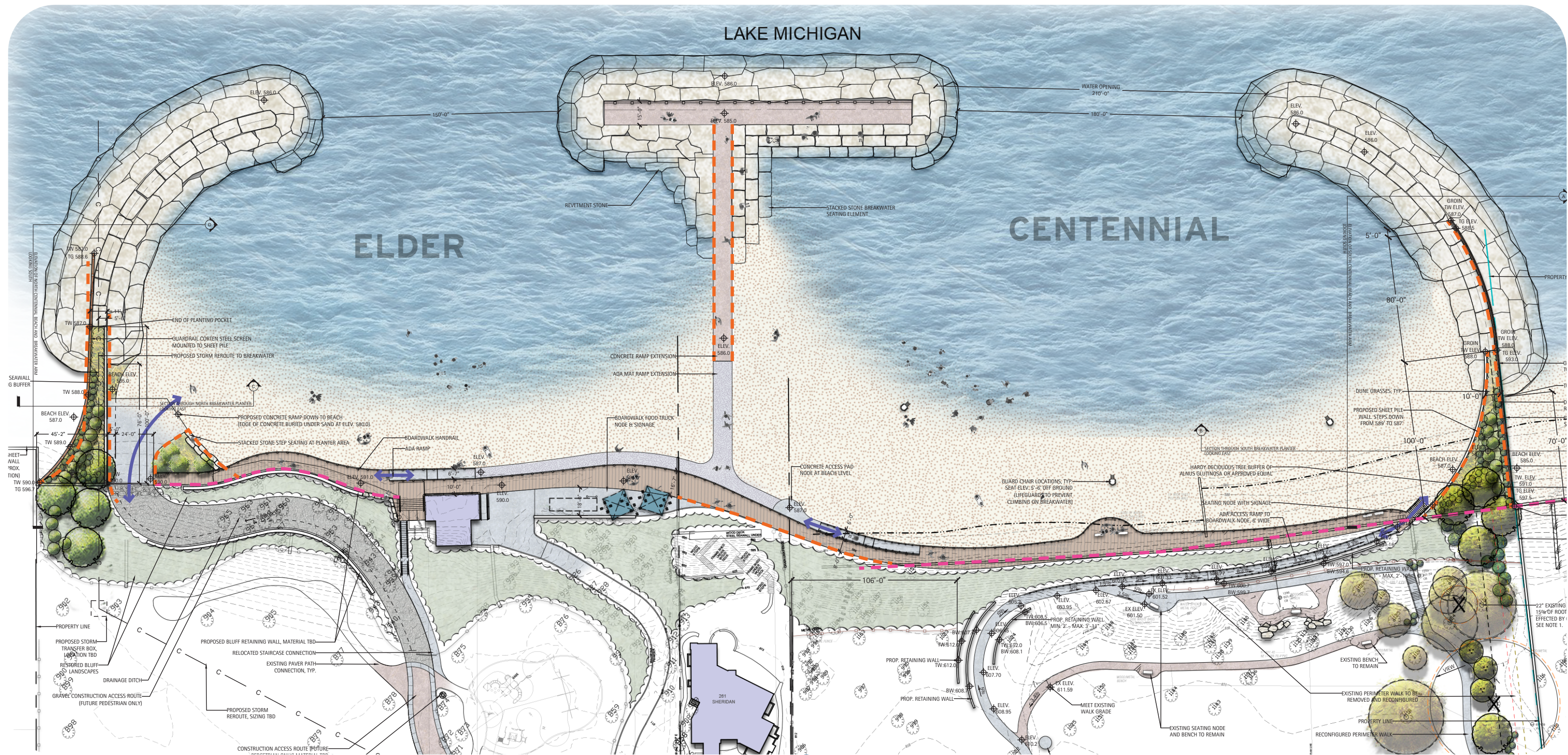
Centennial Evolution



An Iterative Process - Site Plan Development Timeline

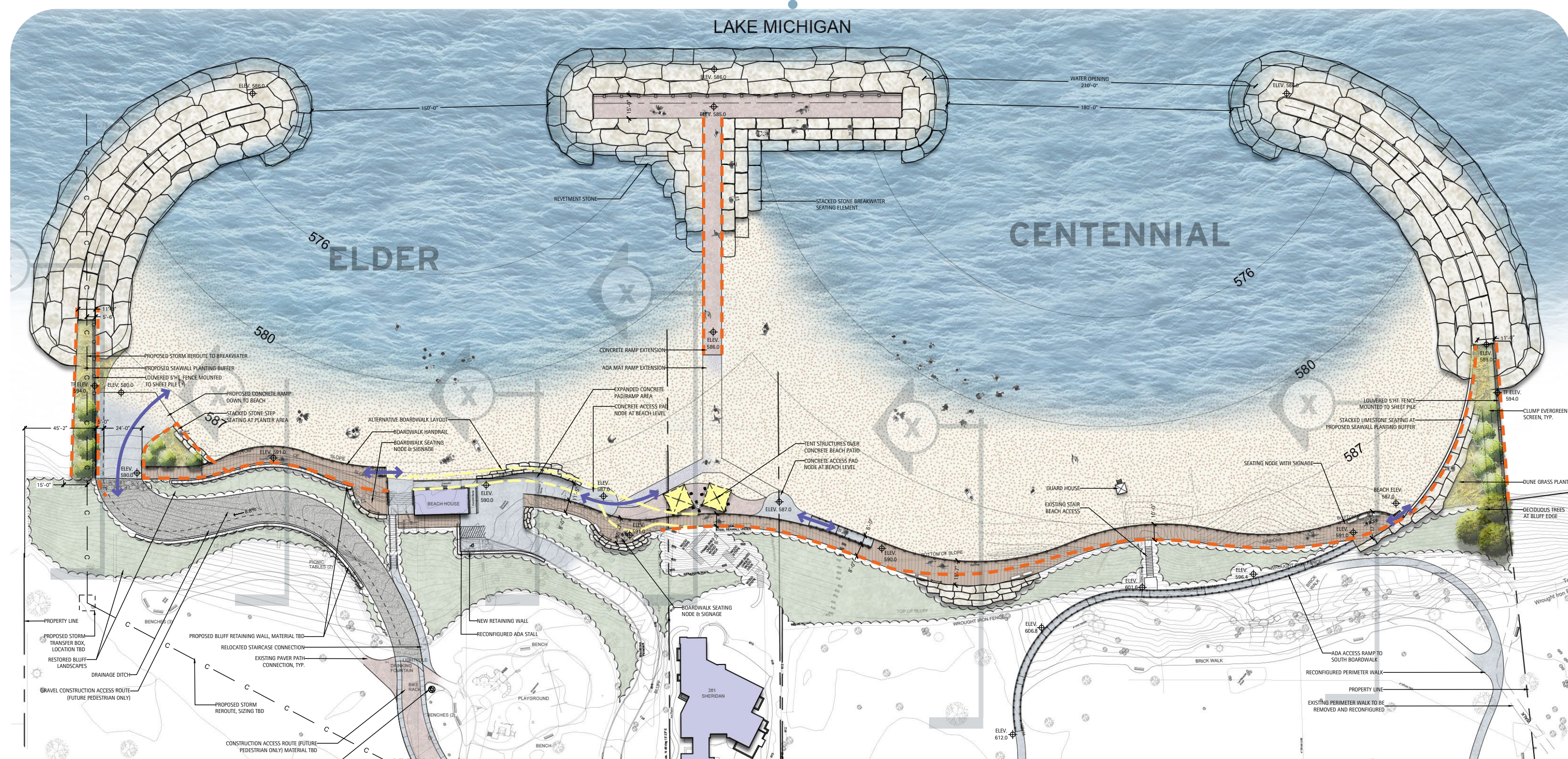
2021 DESIGN DEVELOPMENT

Design development and preliminary engineering for a site layout and breakwater system consistent with the original Master Plan approach for Elder and Centennial



MARCH

FEBRUARY



2022 DESIGN DEVELOPMENT

A permit was submitted to USACE and IDNR in February, 2022 for this breakwater design, but due to public opposition, the Park District voted to withdraw the application in June, 2022

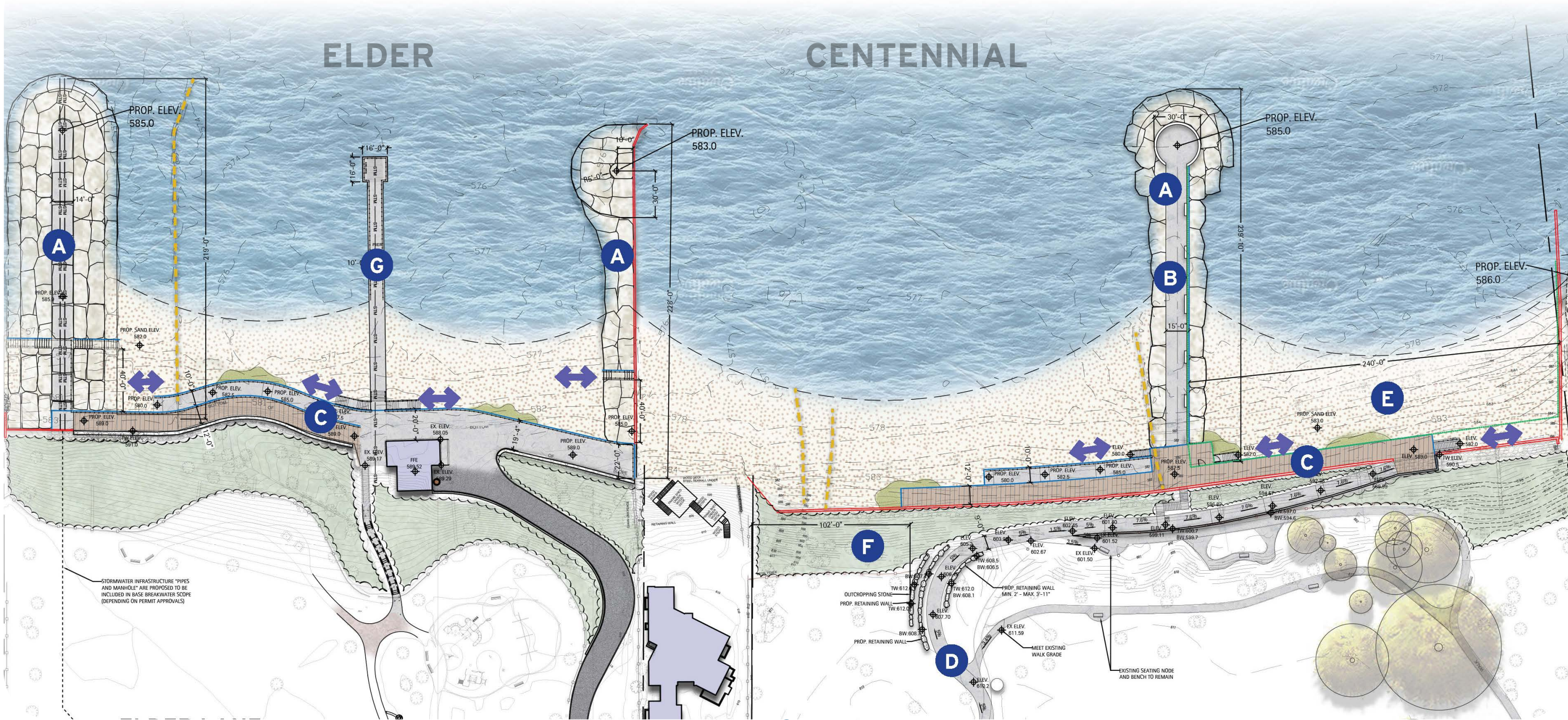
Centennial Evolution



An Iterative Process - Site Plan Development Timeline

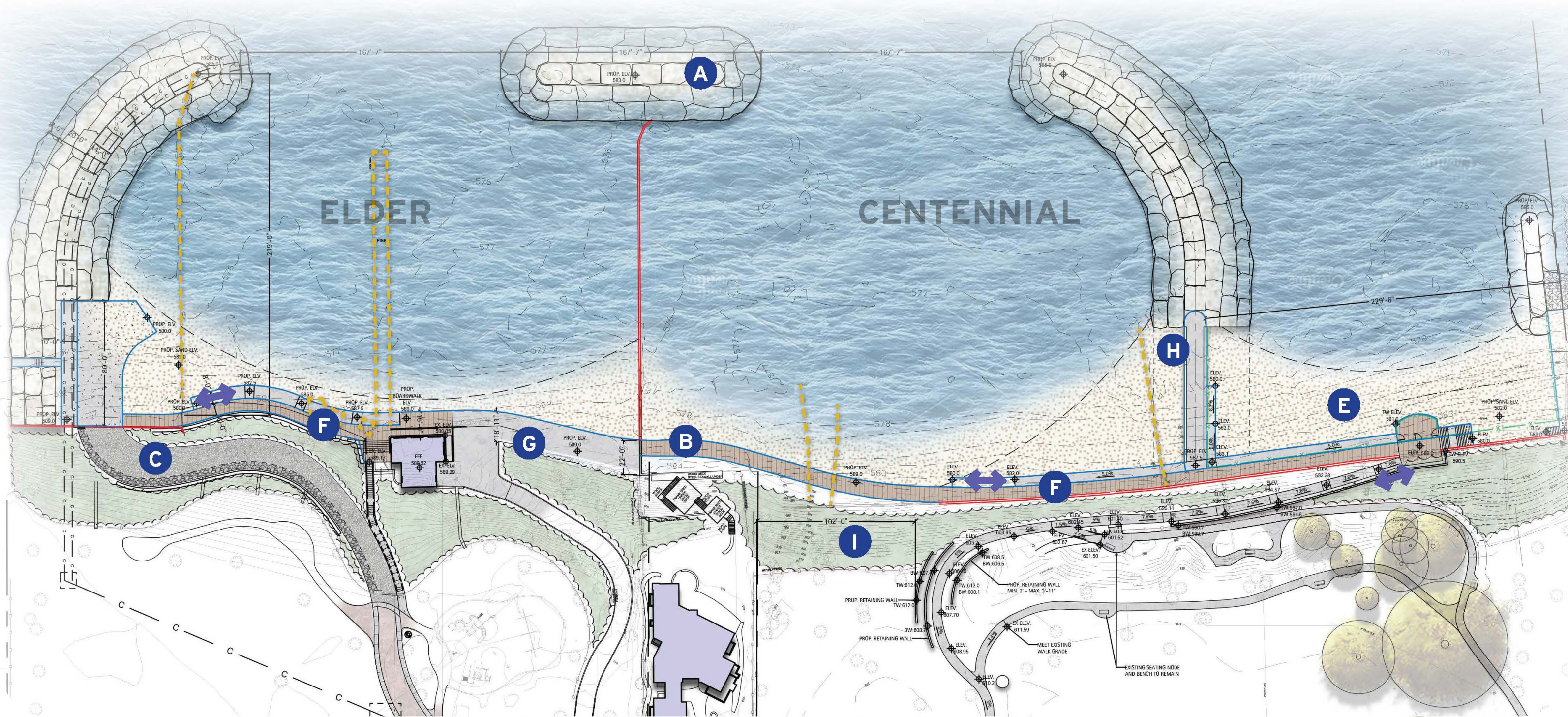
2023 DESIGN DEVELOPMENT

After significant public engagement and re-engagement framework the Park District resumed designs for Elder and Centennial that would prioritize accessibility, views to the lake, and include a dog beach at Centennial



MARCH

OCTOBER



2023 DESIGN DEVELOPMENT

The final approved plan incorporates ADA access at Centennial from parking lot to boardwalk, allows pedestrians to access across the beachfront beyond Park District property, and limits heights of shoreline structures to maintain key views and vistas

Centennial Evolution

CENTENNIAL
BEACH & BLUFF IMPROVEMENTS



Our Current Focus

1. Long-term reinvestment in public open space
2. Increased stewardship and natural resource management
3. Improve operational efficiencies
4. Responding to public input
 - Preserve views to Lake Michigan
 - Maintain existing Dog Beach use
 - Caucus survey and four public open house meetings indicated strong community desire for reinvestment in Elder & Centennial Beaches.

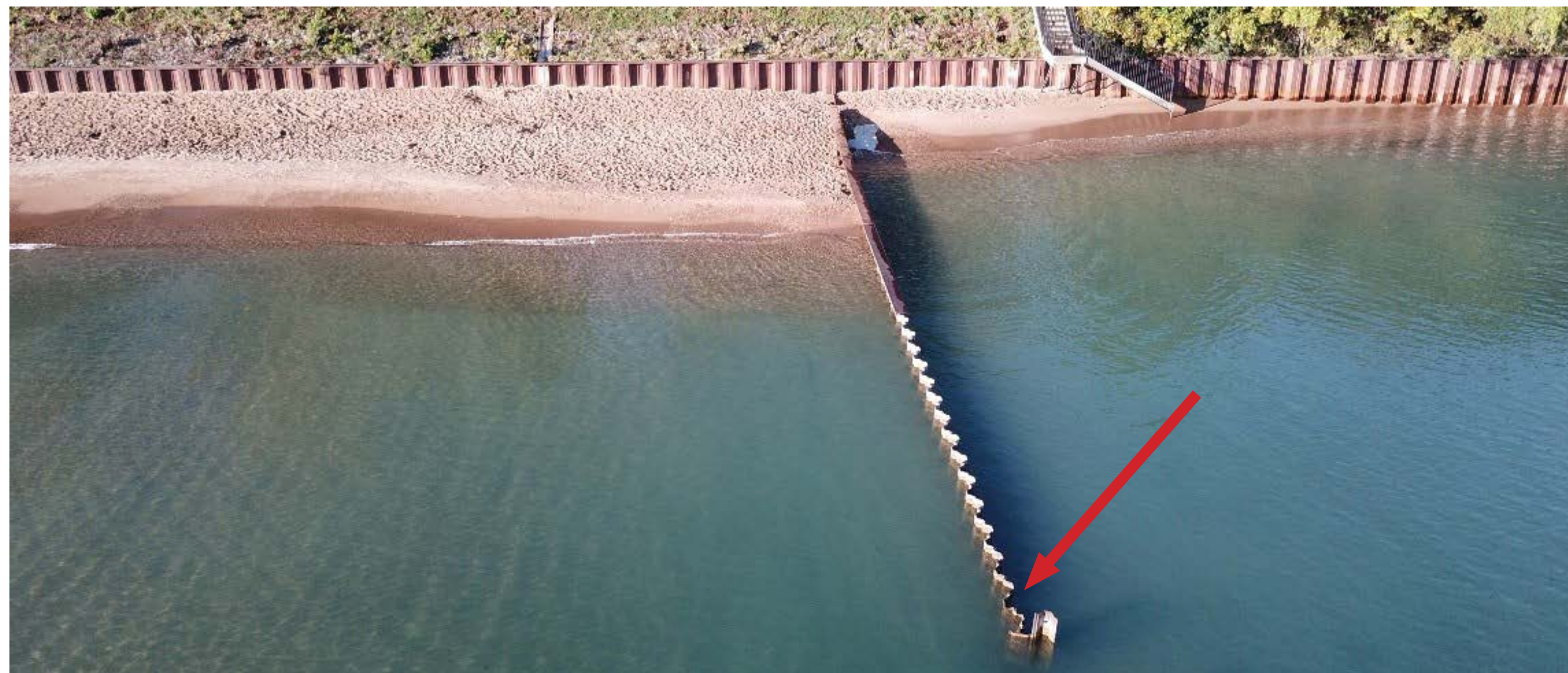


Centennial Evolution

Centennial Beach Conditions



- More recent high-water conditions **have impacted lakefront infrastructure** including:
 - Dog beach fence damage
 - Primary shore protection repairs
 - Fluctuating beach sand levels (causing erosion)



- The existing steel groins installed **circa August 1953** to arrest littoral drift and sustain the beaches are **damaged**

- Centennial Beach includes **remnants of wooden piles** at or below the surface

- Attempts at installing a **chain link fence** at Centennial Beach to establish the off-leash dog beach were **destroyed by waves**



Why We Are Here



Value of Regulatory Review & Control

PLANNING & ZONING

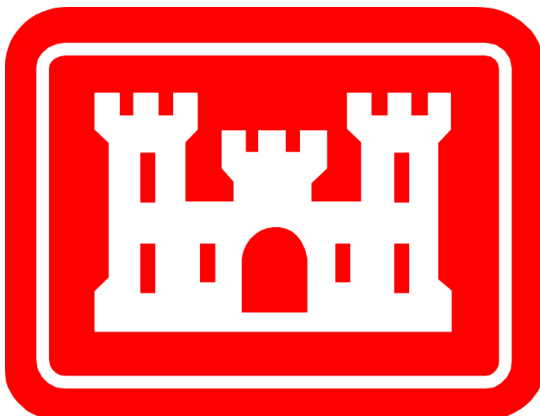
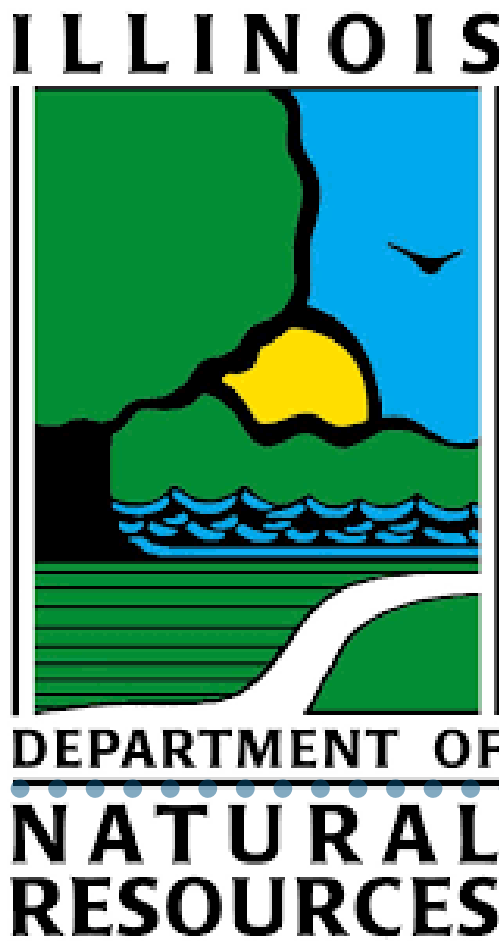


VILLAGE OF WINNETKA

Our plan is seeking special use exceptions and variance approval for Zoning and Steep Slope regulations.

- ✓ Zoning Board of Appeals
- Plan Commission
- Design Review Board
- Village Council

ENGINEERING



US Army Corps
of Engineers®

IDNR & US ARMY CORPS OF ENGINEERS

Our plan will obtain required permits from the USACE for shoreline improvements, and adheres to core tenets of the IDNR Coastal Management Program:

1. Public access & recreation
2. Headland beach systems
3. Preserve, protect, restore, and enhance coastal resources for this and succeeding generations



VILLAGE OF WINNETKA

- Lakefront Construction Permits
- Building Permits

Why We Are Here



Seeking a favorable recommendation from **PLAN COMMISSION** for:

1. A special use permit to allow construction of proposed improvements to new and existing uses as outlined in plans | *per Zoning Ordinance*
See chart of Proposed Project Elements.
2. An exception to permit Development in the Steep Slope Zone | *Section 17.82.040*
See chart of Proposed Project Elements.

Why We Are Here



Special Uses (Chapter 17.56)

SPECIAL USE PERMIT STANDARDS

Park District requests that it's proposed findings of fact be admitted as evidence in support of this application.

1. That the establishment, maintenance, and operation of the special use will not be detrimental to or endanger the public health, safety, comfort, morals, or general welfare;
2. That the special use will not be substantially injurious to the use and enjoyment of other property in the immediate vicinity which are permitted by right in the district or districts of concern, nor substantially diminish or impair property values in the immediate vicinity;
3. That the establishment of the special use will not impede the normal and orderly development or improvement of other property in the immediate vicinity for uses permitted by right in the district or districts of concern;
4. That adequate measures have been or will be taken to provide ingress and egress in a manner which minimize pedestrian and vehicular traffic congestion in the public ways;
5. That adequate parking, utilities, access roads, drainage, and other facilities necessary to the operation of the special use exists or are to be provided; and
6. That the special use in all other respects conforms to the applicable regulations of this and other village ordinances and codes.

Proposed Design

Site Program and Mission Alignment

SHARED PURPOSE AND MISSION

- The core functions and active & passive site uses align with Winnetka Park District Lakefront Master Plan Mission & Village of Winnetka Comprehensive Plan Pillars:

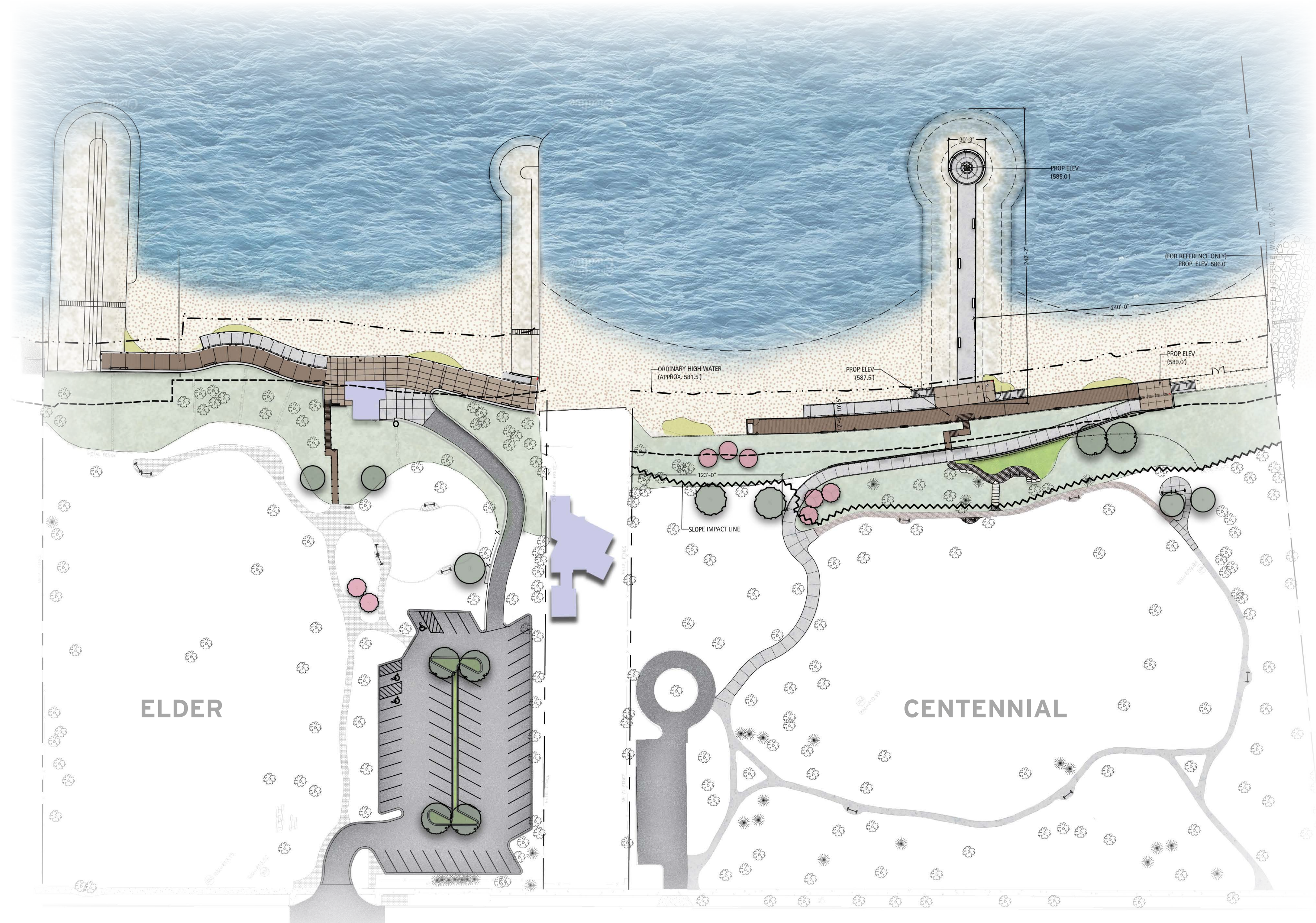
Active (Centennial):

- all access swimming beach
- off-leash dog beach
- ADA park and beach access
- all access viewing pier

Passive (Centennial):

- sand beach
- boardwalk and seating
- views to Lake Michigan
- bluff & beach vegetative habitat creation

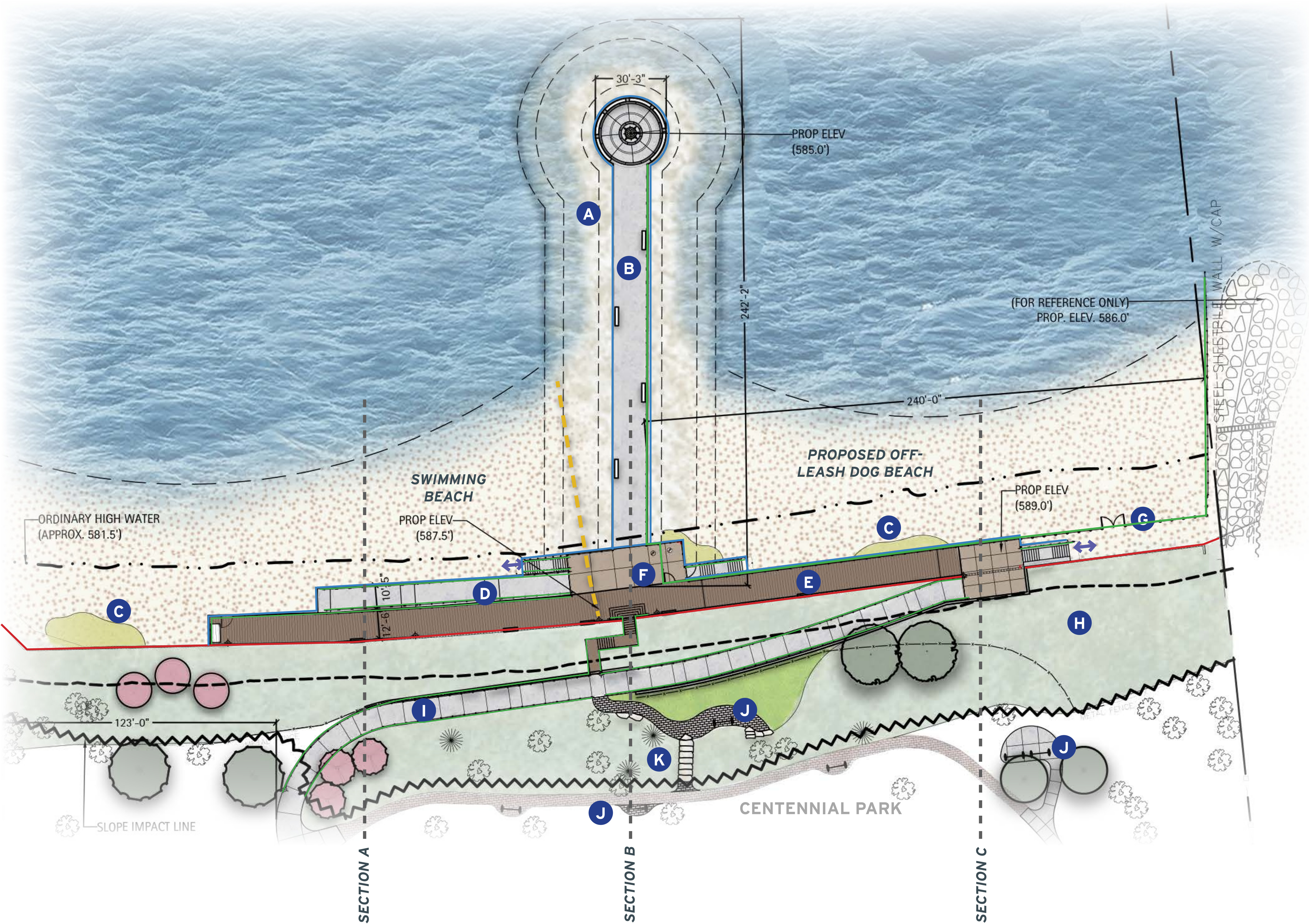
- Changing demographics demonstrate a community that values open space, health, and happiness.



“Our mission is to provide a balance of quality recreation and leisure opportunities while protecting assets, natural resources, and open space to benefit present and future generations.”

Proposed Design

Centennial Plan Render



LEGEND

- TURF RESTORATION
- DUNE GRASSES
- BLUFF RESTORATION
- ACCESS TO BEACH
- SHEET PILE (PROPOSED)
- SHEET PILE (EXISTING)
- ELEMENT TO BE REMOVED
- ORNAMENTAL FENCE/HANDRAIL
- A RUBBLE MOUND BREAKWATER SHORELINE PROTECTION
- B ACCESSIBLE VIEWING PIER WITH BENCH SEATING
- C NATIVE BEACH DUNE PLANTING
- D ADA ACCESSIBLE BEACH ACCESS RAMP
- E ADA ACCESSIBLE BOARDWALK
- F SECURE DOG BEACH ACCESS
- G DOG BEACH FENCING
- H BLUFF RESTORATION
- I ACCESSIBLE PEDESTRIAN PATH & RAMP TO BEACH
- J RECONFIGURED SEATING AREAS (MAINTAIN PASSIVE USES & VIEWS TO LAKE)
- K OUTCROPPING STONE

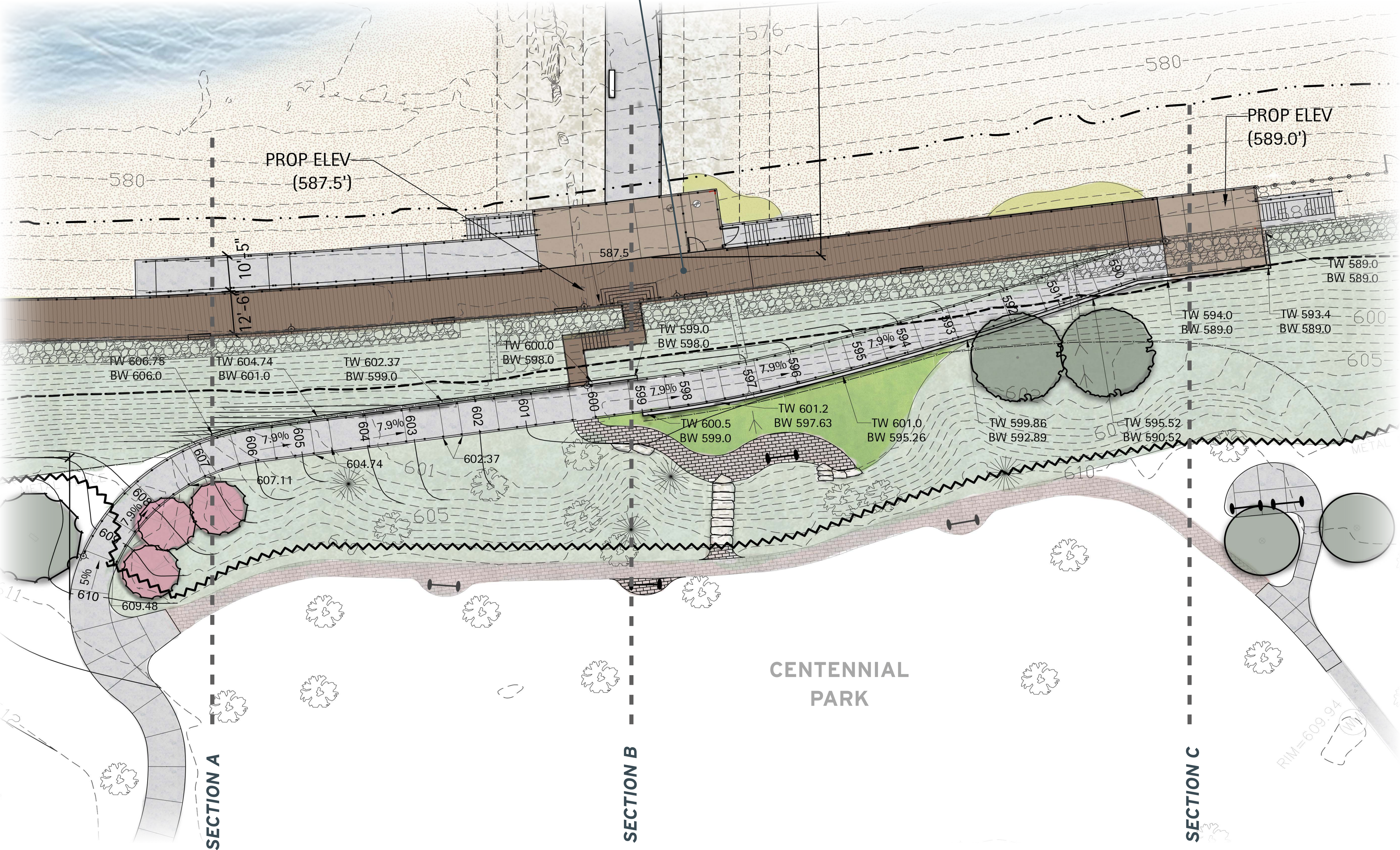
Proposed Design



Centennial Park Pedestrian Access

PARK PEDESTRIAN ADA ACCESS WALK

- ADA ACCESSIBLE
- TIE INTO EXISTING PEDESTRIAN WALKS
- MAINTAIN EXISTING MID-BLUFF STAIRCASE
- CONNECTS PARK (TABLE LAND) TO THE TOE OF THE BLUFF (CENTENNIAL BEACH) WHILE PRESERVING BREATHTAKING VIEWS TO LAKE MICHIGAN.
- MAINTENANCE ACCESS



10/27/22 WPD BOARD MOTION

- MOTION #5 INCORPORATE PEDESTRIAN ACCESS DOWN TO CENTENNIAL BEACH



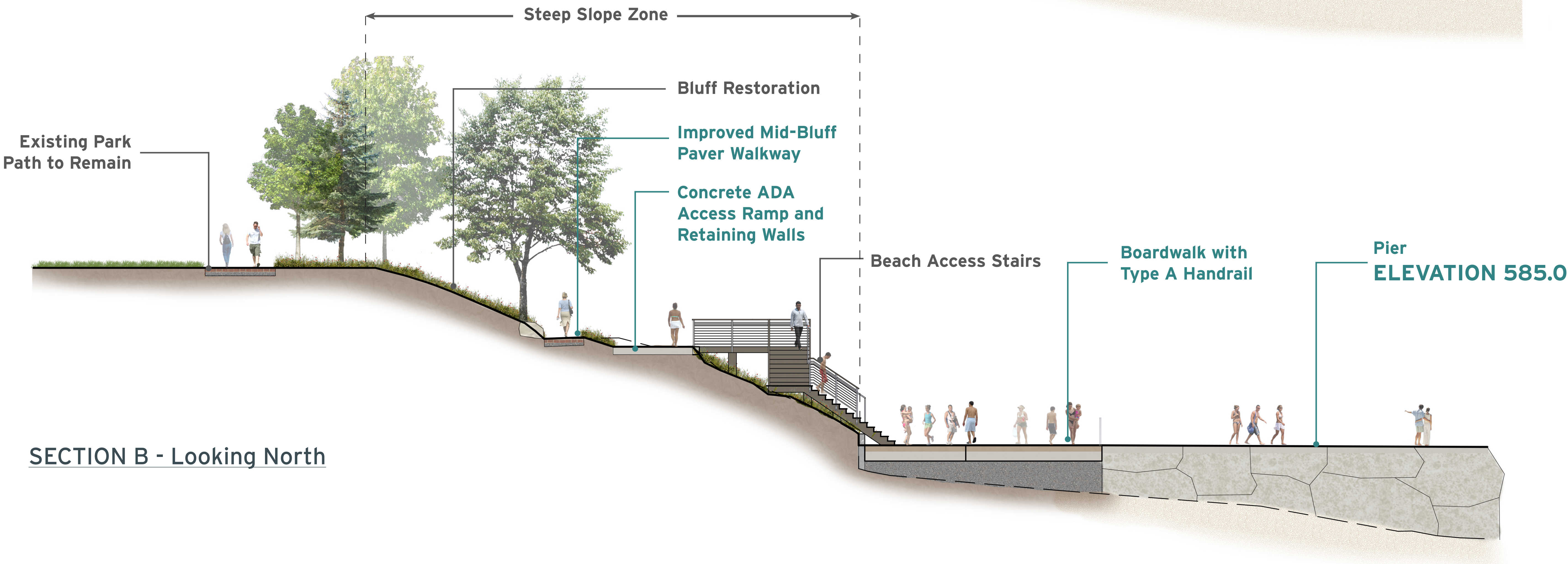
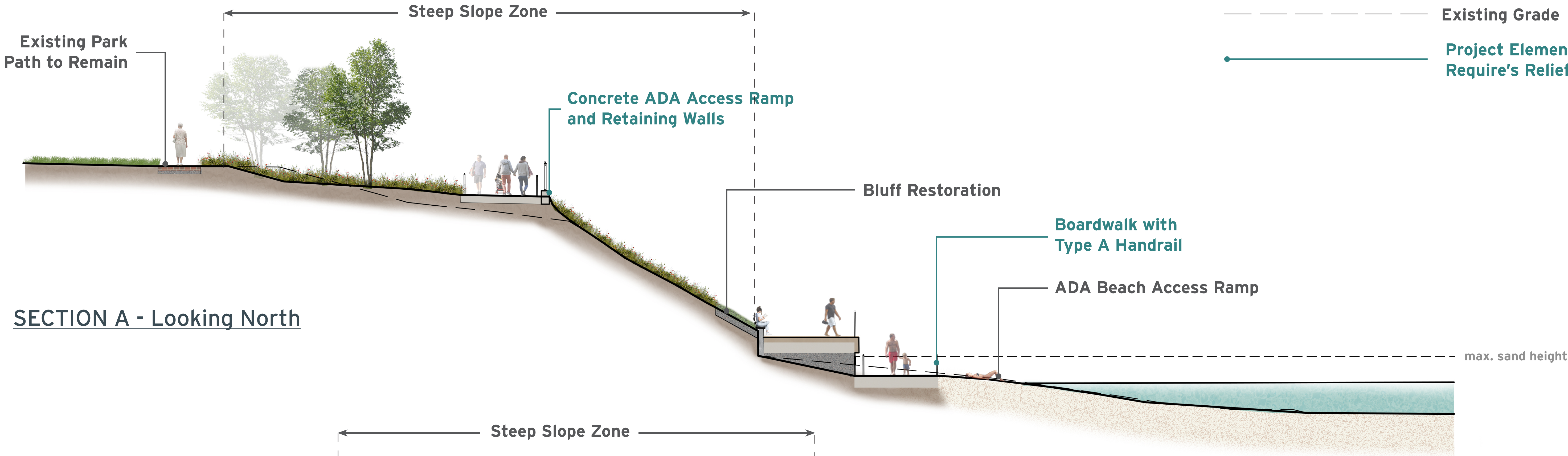
Proposed Design



Centennial Section Cuts

LEGEND

- Existing Grade
- Project Element Require's Relief



Proposed Design



Centennial Section Cuts

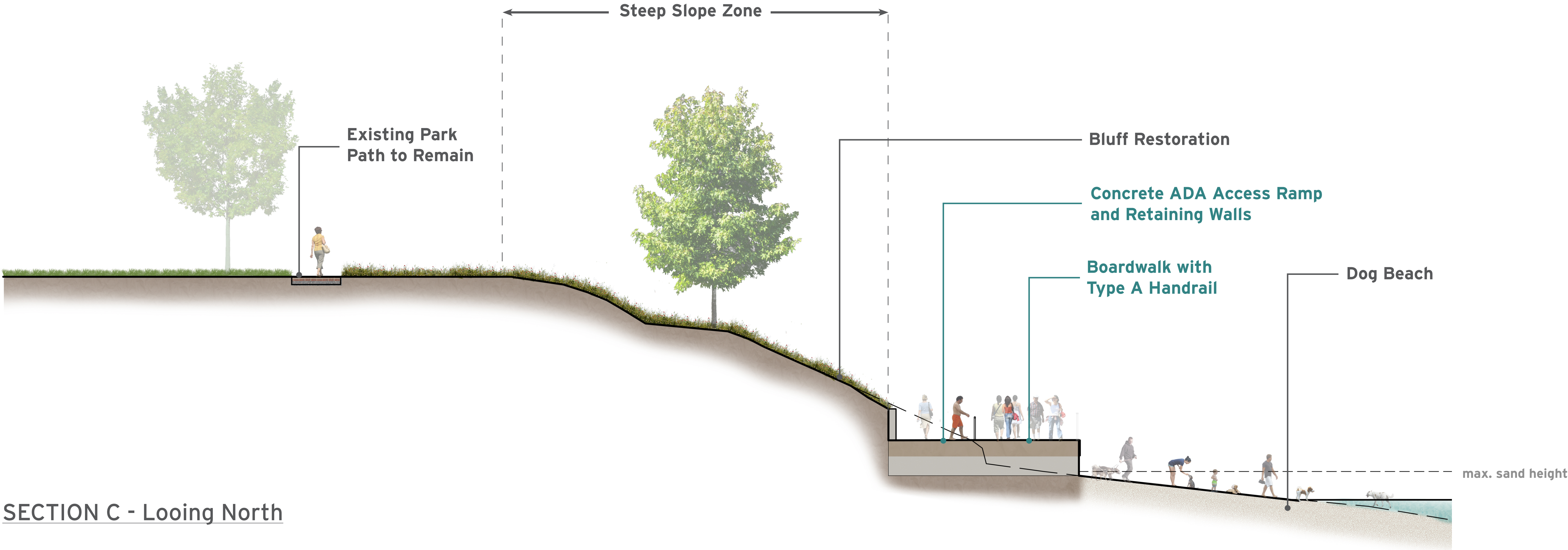
LEGEND

— — — — —

Existing Grade

● — — — — —

Project Element
Require's Relief



SECTION C - Looing North

Proposed Design



A Look at Elevation

ELDER PIER (FOR REFERENCE)



ELEVATION 584.7

Proposed Design



Centennial Beach & Park - Proposed Project Elements

CODE SECTION: Development in Steep Slope Zone Section 17.82.040

Proposed improvements must meet the requirements for Ordinance No. MC-01-2024, Steep Slope Area Along Lake Michigan and required Zoning Requirements as noted in Section 17.82.040.

The ZBA has granted approval of these exceptions provided the project is granted the special use permit.

	Project Element	Exception Required	Rationale
1	Concrete ADA Access Ramp and required retaining walls to support the ramp	The Park District is looking for exception of this improvement from the Slope Impact Area, to allow for the accessible connection to the Centennial Beach Level amenities.	ADA Universal Design and site connectivity.
2	Outcropping Stone Steps	The proposed stair width is 1' greater than the allowable limit. We are requesting an exception for this improvement to accommodate the additional 1 foot width of the outcropping stone staircase.	Recreational Asset and Site Connectivity
3	Improved Mid-Bluff paver walkway and seating area	The proposed paver walkway is being reconfigured and not following the current footprint, which makes it a new improvement. Since the new area is wider than 5' we are requesting a exception .	Recreational Asset and Site Connectivity

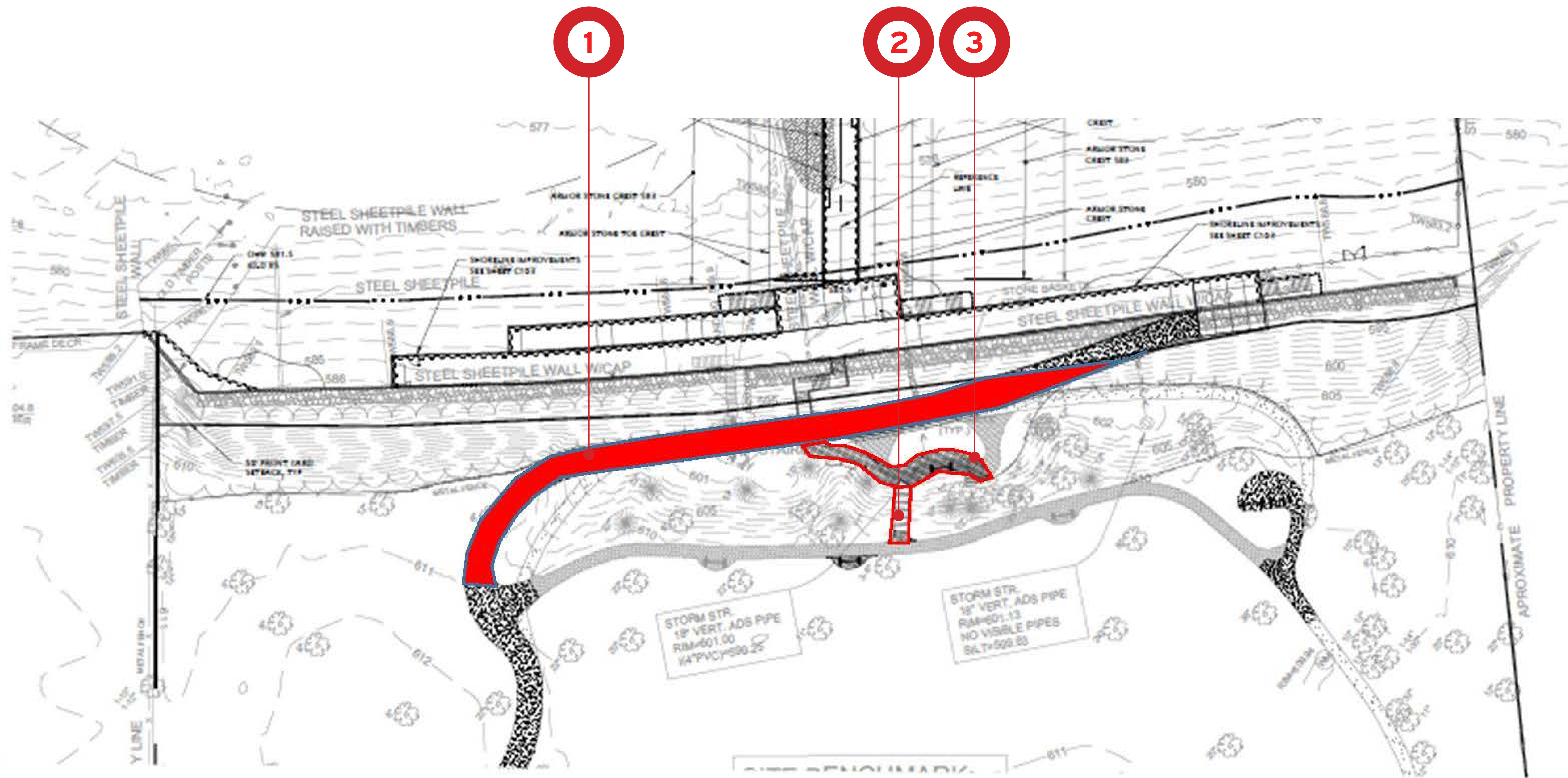
Please note that all of these elements serve two main purposes; Maintain and Preserve the Bluff and Provide ADA Access from the Public ROW.

Proposed Design

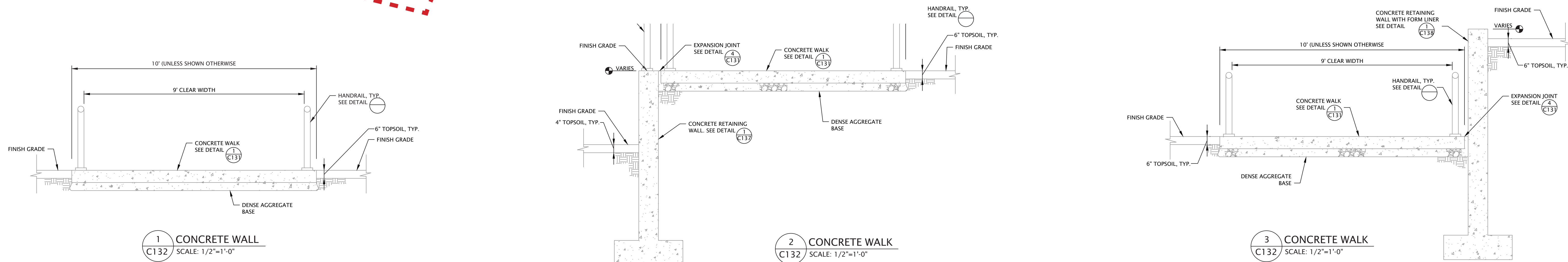


Code Section: Development in Steep Slope Zone Section 17.82.040

PROJECT ELEMENT SITE LOCATION - EXCEPTION REQUESTS



PROJECT ELEMENT EXCEPTION REQUEST - 1

[illegible]

Proposed Design

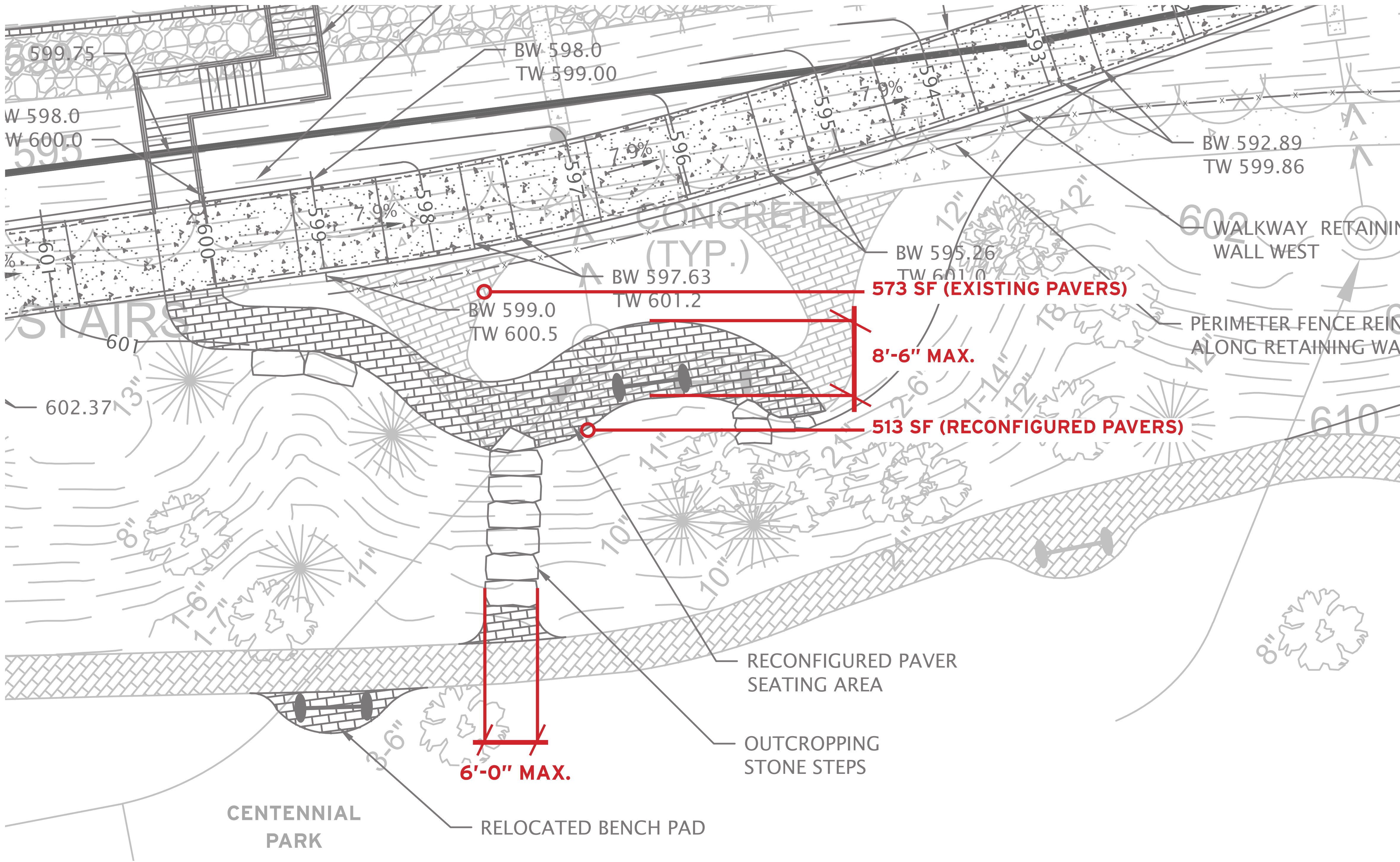


Code Section: Development in Steep Slope Zone Section 17.82.040

PROJECT ELEMENT EXCEPTION REQUEST - 2 & 3

REQUEST: ALLOW THE IMPROVED
MID-BLUFF PAVER / SEATING AREA
AS DESIGNED (OVER 5' WIDTH)

REQUEST: ALLOW THE OUTCROPPING
STONE STEPS AS DESIGNED (OVER 5'
WIDTH)

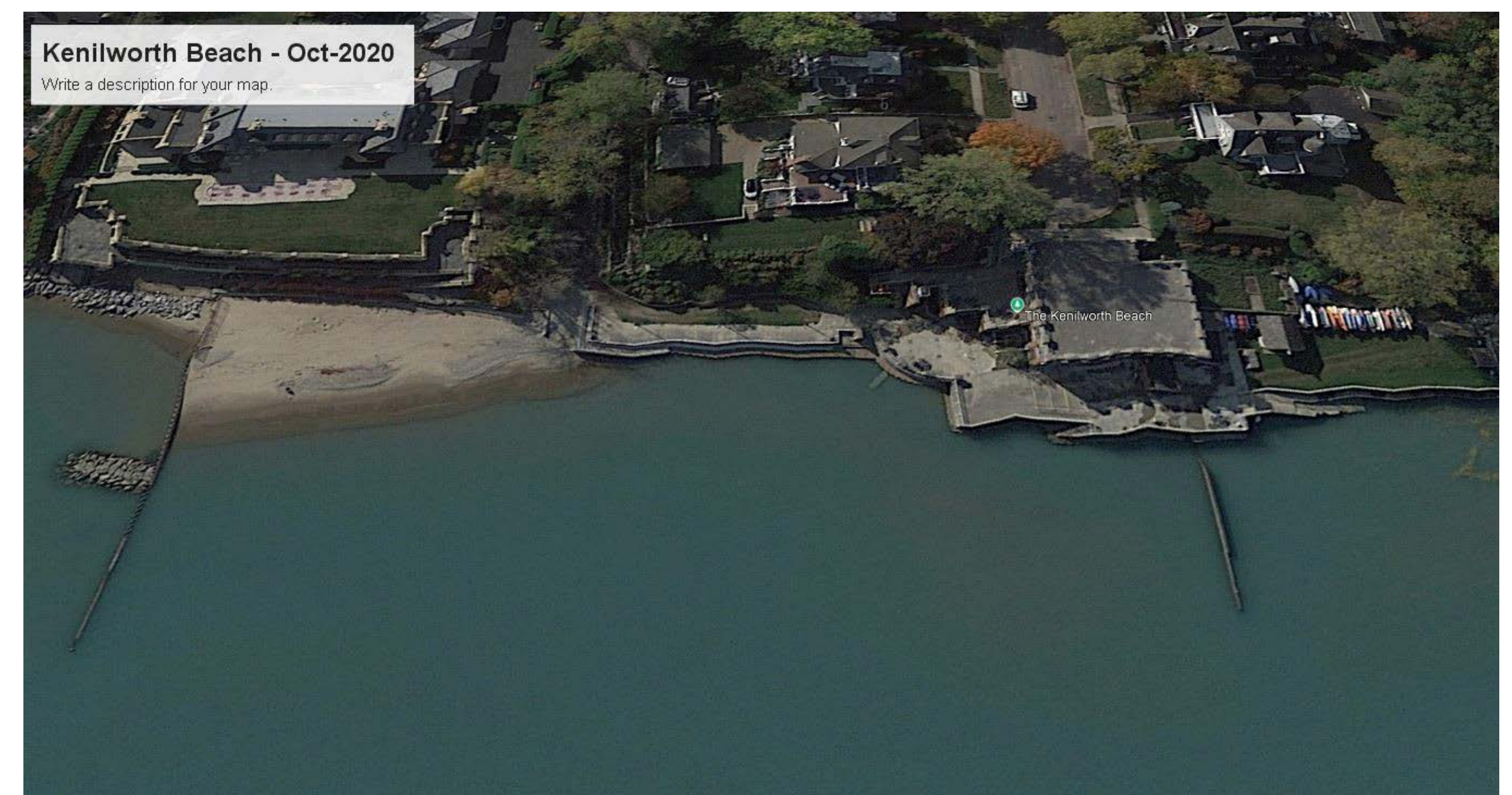
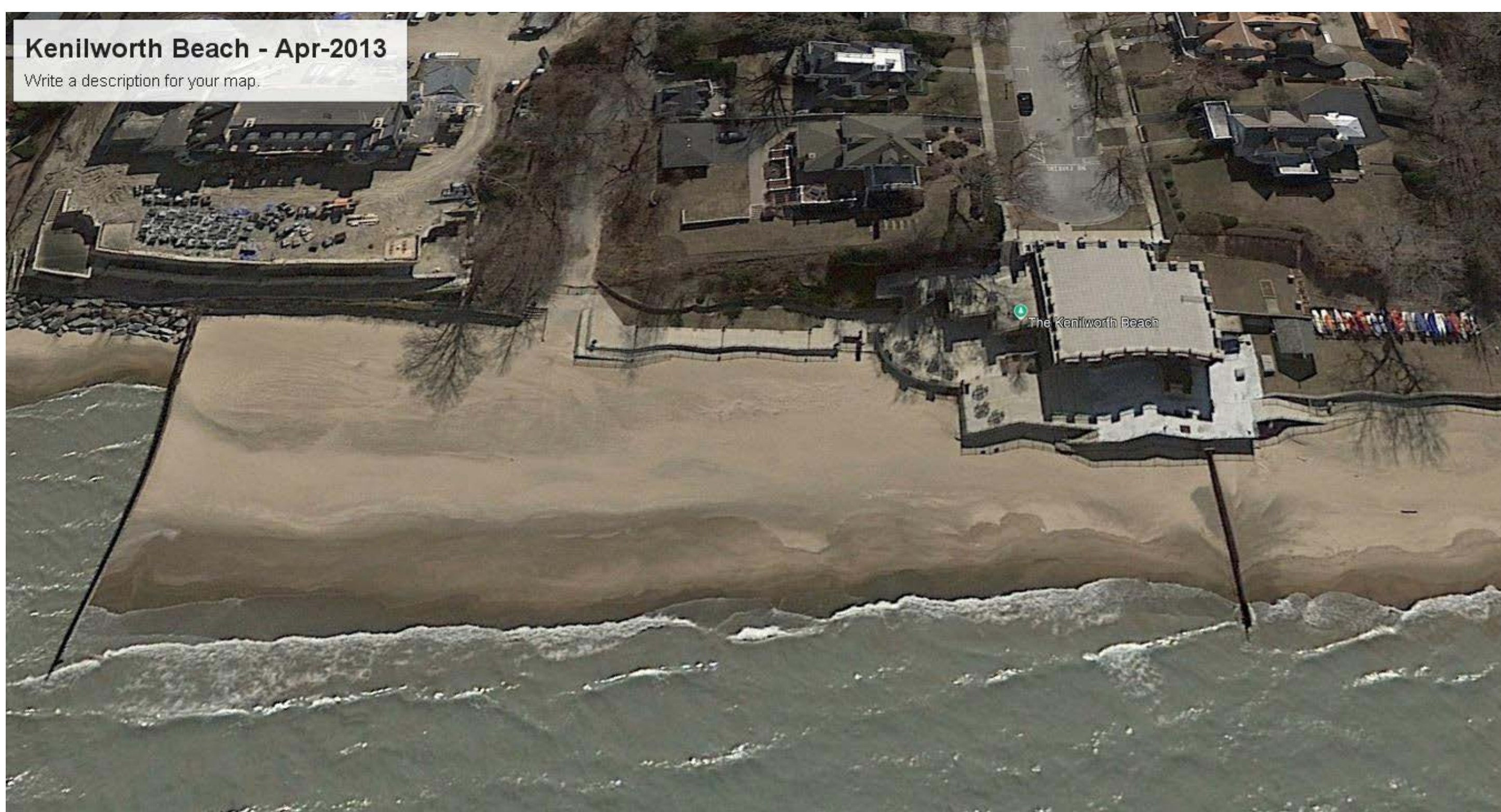
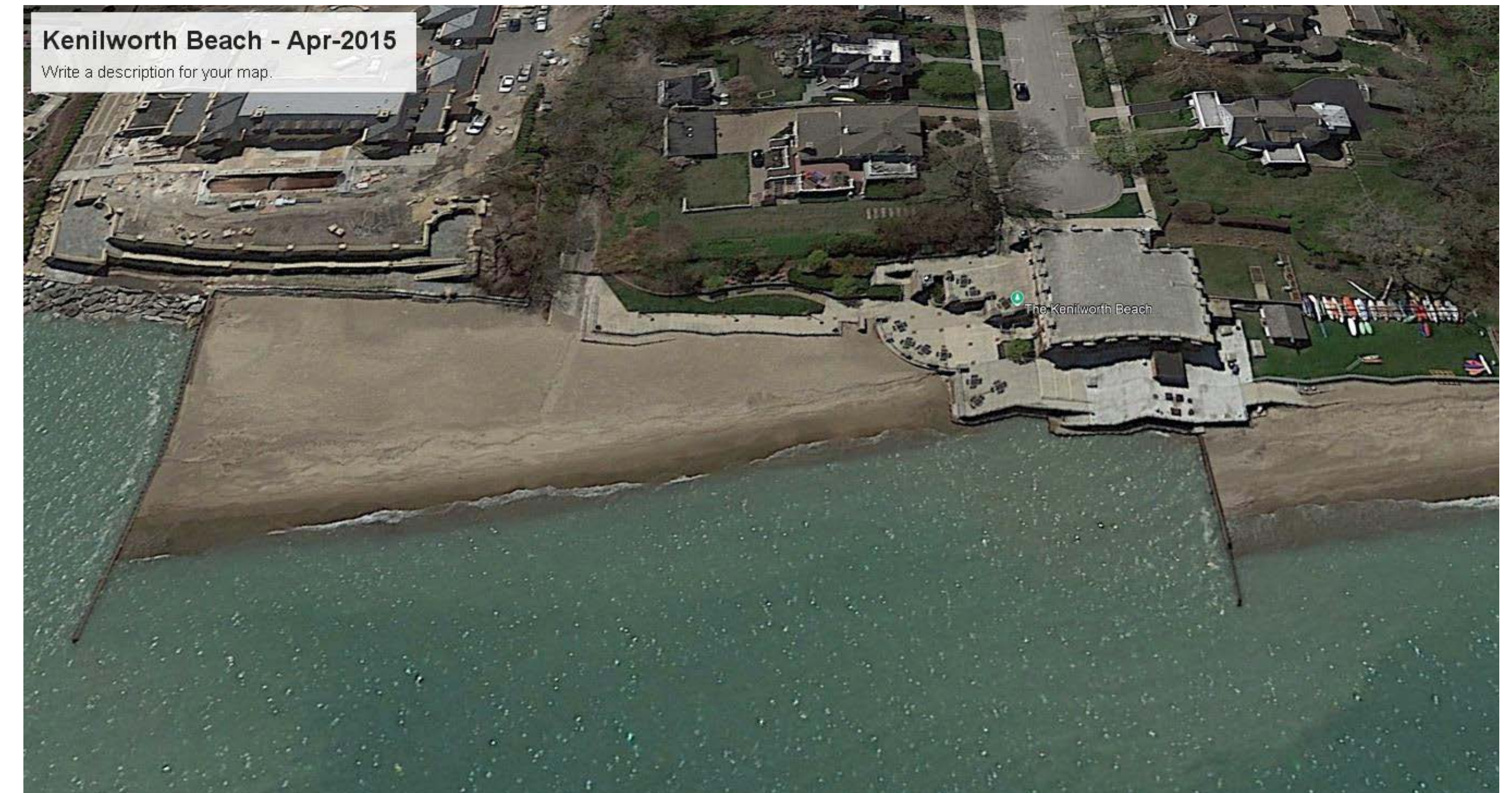


Proposed Design

Coastal Engineering

Littoral Barriers

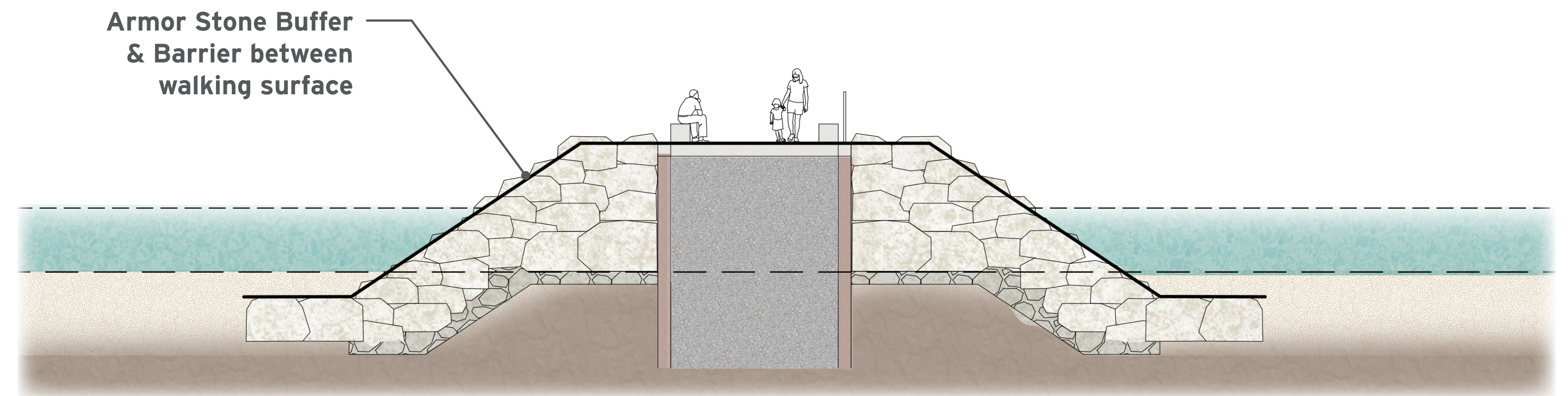
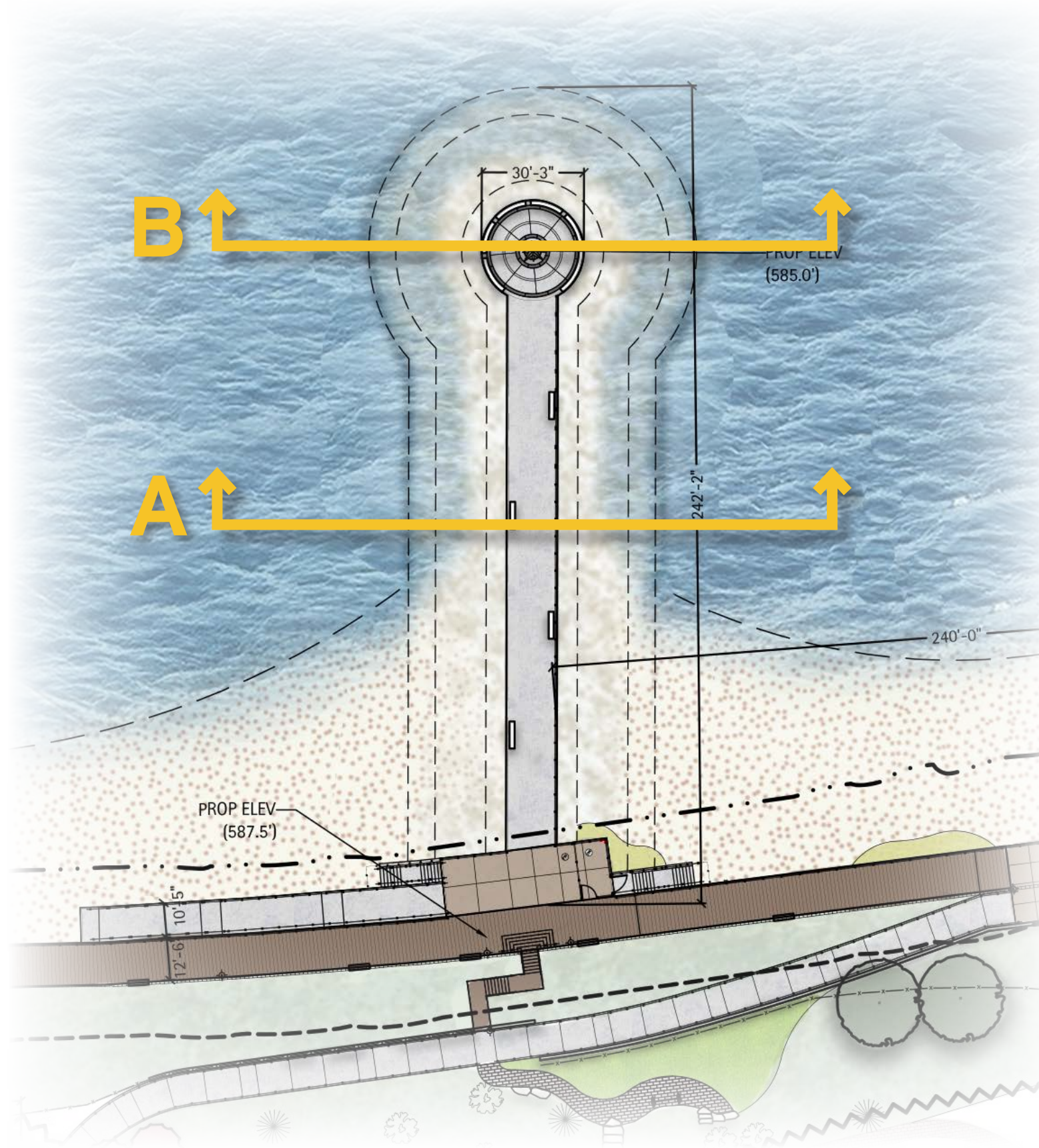
An obstacle to littoral drift or migration of material along the shore. Littoral barriers may be natural, for example, rocky headlands or man made jetties, breakwaters or dredged channels. These hinder the normal drift of material along the shore



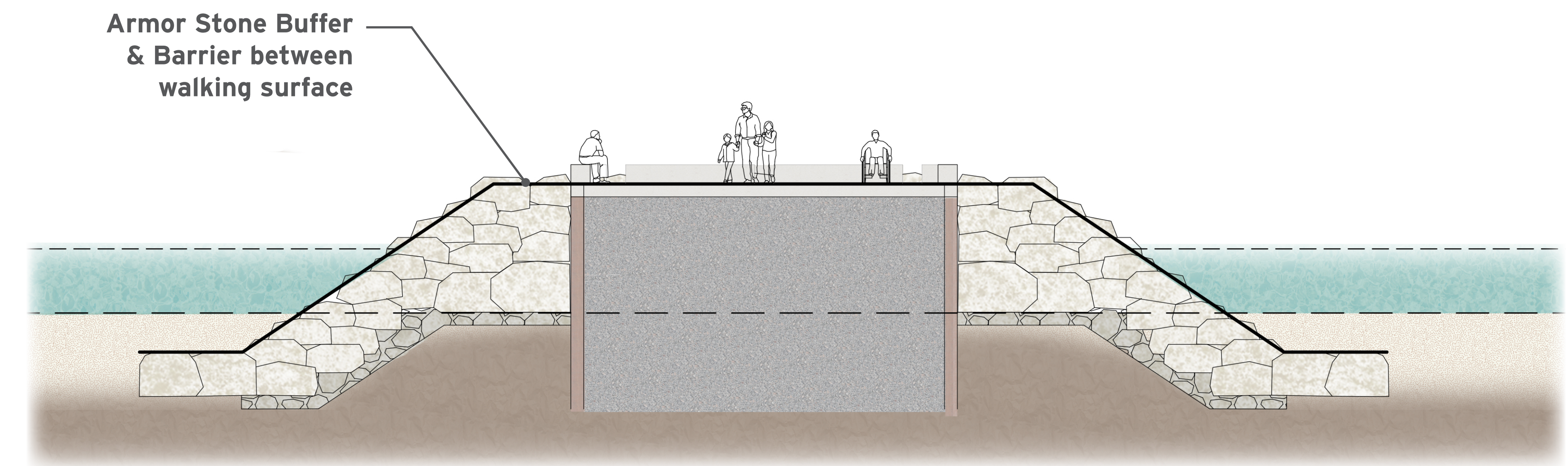
Proposed Design

Coastal Engineering

KEY MAP



SECTION A - Looking East



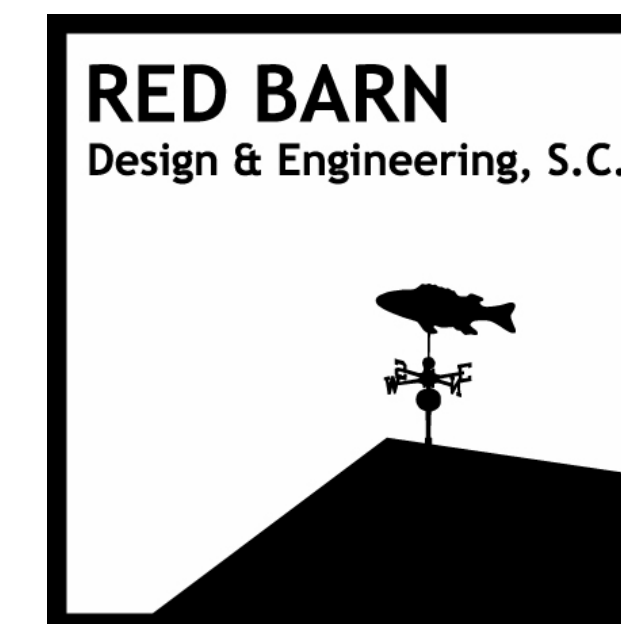
SECTION B - Looking East

Rubble Mound Breakwater with Pier Surface

- *Length: Promotes sand retention*
- *Height x Width (shape): Reduces wave energy leading to fewer rip currents*

Proposed Design

Coastal Engineering



6750 Woodland Dr.
Waunakee, WI 53597

p. 608.849.2042
c. 608.843.1870

redbarnde@tds.net

Coastal Engineering Design Criteria

- *Balances environmental sustainability and industry standard engineering, while being responsive to community feedback.*
- *[Pier] structure serves as an improvement over the existing steel groin as it relates to reduction of any existing rip currents currently experienced along the steel groin, while performing additional sand retention and seasonal accretion at the beach areas.*
- *Length and width [of the pier] were carefully selected to ensure it provides the right scale for the site while achieving vital environmental goals.*
- *Length of the pier aligns with the dimensions of other piers along the Winnetka shoreline*

6 December 2024

DESIGN STATEMENT: Site Improvements Centennial Park and Beach Project

The design elements and project components, and project documents for the Centennial Park and Beach site, have been prepared and under the direction of the Winnetka Park District (WPD). These documents were prepared in accordance with current State and Federal codes, regulations, and industry standards for site improvement projects along the Great Lakes shoreline.

The projects incorporate elements that reflect a balance of environmental sustainability, and industry standard engineering, while being responsive to community feedback. These elements, combined with input received from local stakeholders and the requirements outlined in the Village's Amended Lakefront Construction Ordinance, have shaped the project design now presented for Special Use Permitting for Centennial Park and Beach.

A key feature of the proposed design is the new pier structure, which features a steel sheet pile core bordered by a rubble mound revetment structure. This structure serves as an improvement over the existing steel groin as it relates to reduction of any existing rip currents currently experienced along the steel groin, while performing additional sand retention and seasonal accretion at the beach areas. These improvements provide enhanced public space at the park beachfront. The pier's length and width were carefully selected to ensure it provides the right scale for the site while achieving vital environmental goals.

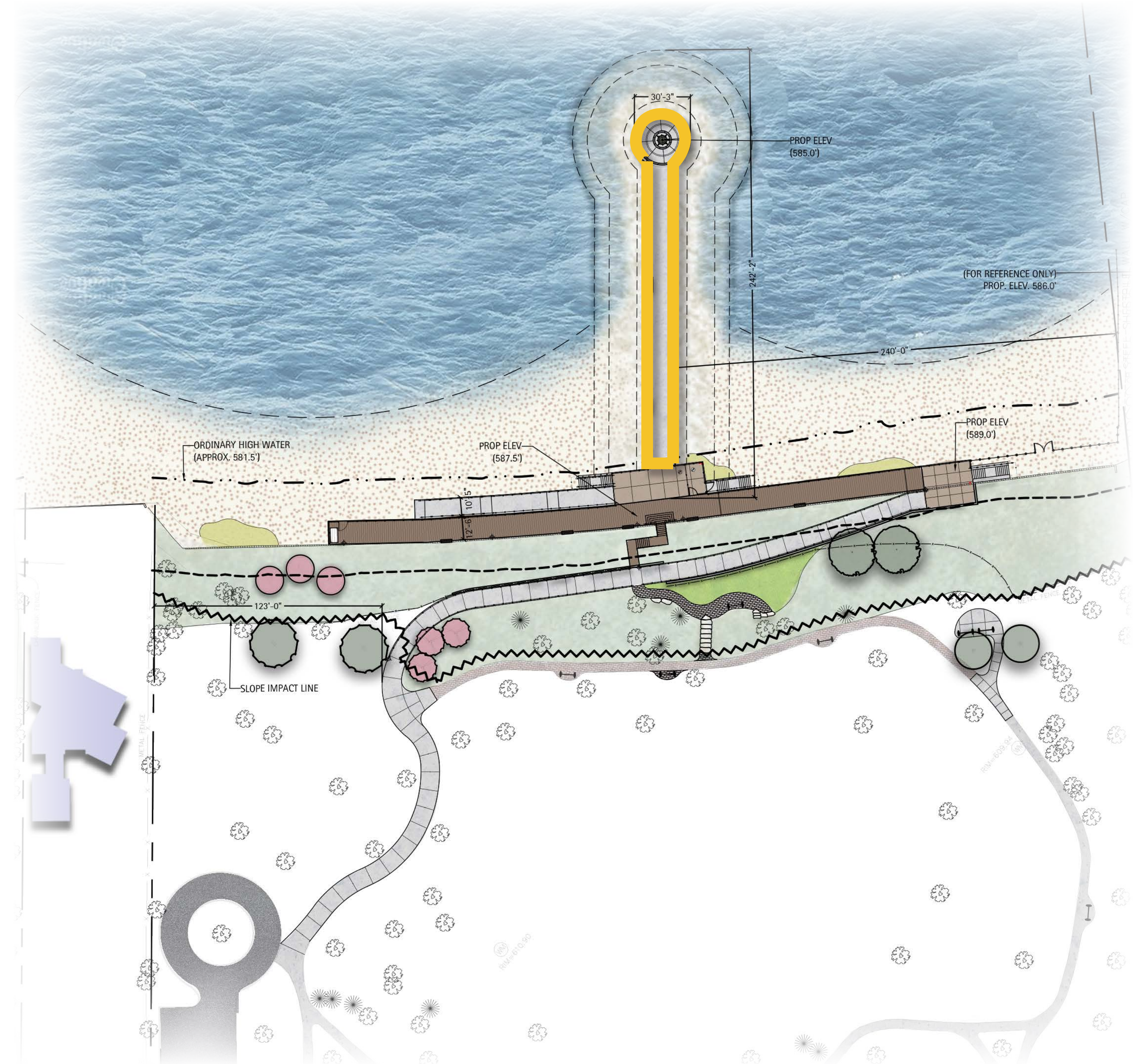
The crest elevations of both the pier core and rubble mound revetment were selected to follow the Village's Lakefront Ordinance, while adhering to the principle of minimal intervention necessary to fulfill these objectives.

The chosen length of the pier aligns with the dimensions of other piers along the Winnetka shoreline, ensuring consistency with the area's existing shoreline improvements. This thoughtful consideration allows the design to blend harmoniously with the surrounding environment while enhancing the functionality of the beach.

The project documents were prepared by a collaborative team including the WPD, RED BARN Design & Engineering, The Lakota Group, Spaceco Inc., Shabica & Associates, and Christopher Burke Engineering. Documents for State and Federal permitting, and project documents for bidding and construction have been prepared as part of this coordinated effort.

- ***Improved Public Amenity***
- ***Training & Operations***

Improved Public Amenity with safe accessible access to the proposed pier. The pier design itself promotes a safer beach environment with reduced rip currents, while the armour stone surround highlights a visual and physical barrier to prevent diving. Suggested barriers and signage will be included to close the pier and boardwalk as needed during high wind and/or lake levels.

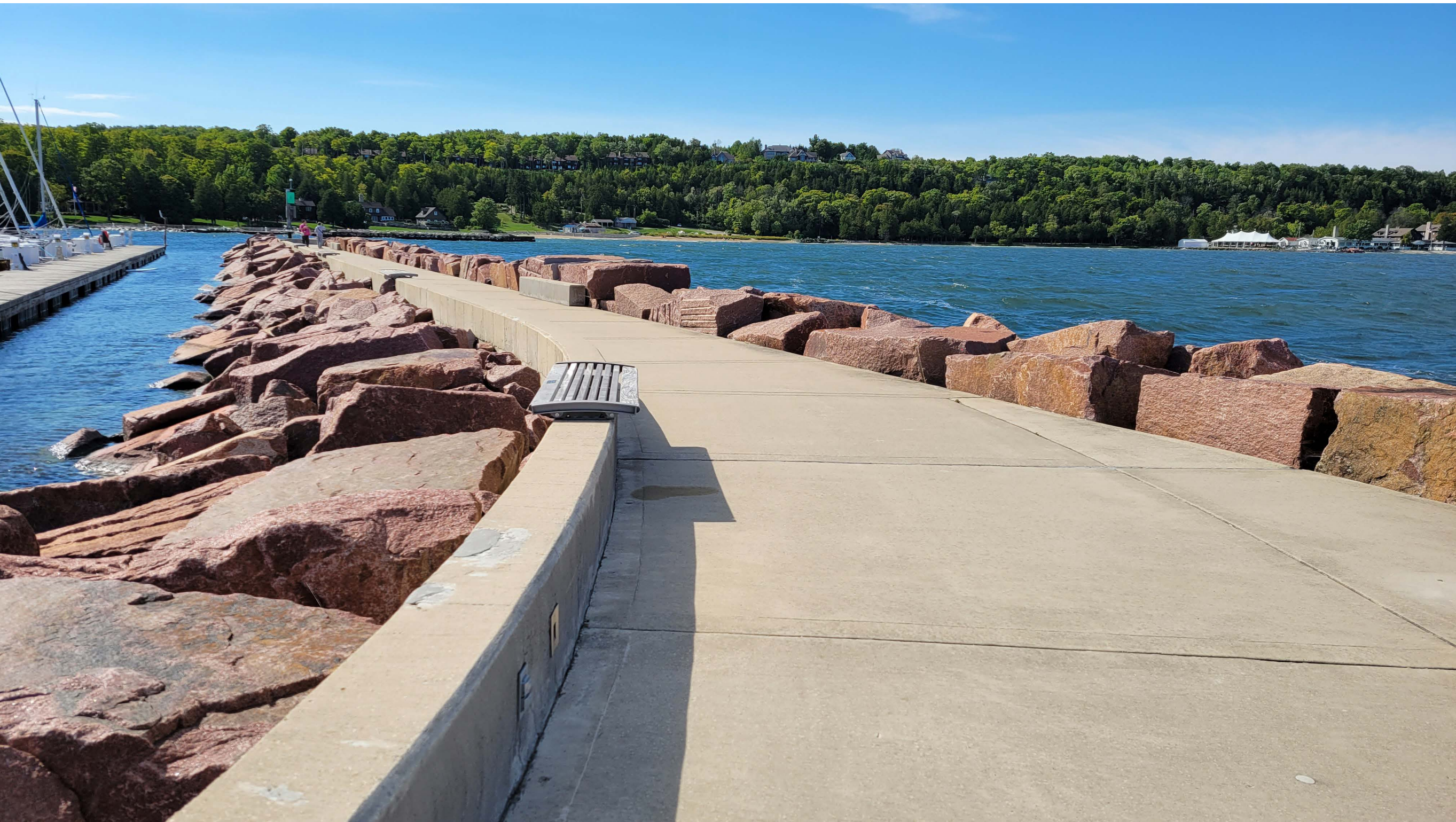


Proposed Design



Safety

EGG HARBOR MARINA - DOOR COUNTY, WI



PERE MARQUETTE - MUSKEGON, MI



PETOSKEY HARBOR - PETOSKEY, MI



FRANKFORT NORTH PIER - FRANKFORT, MI

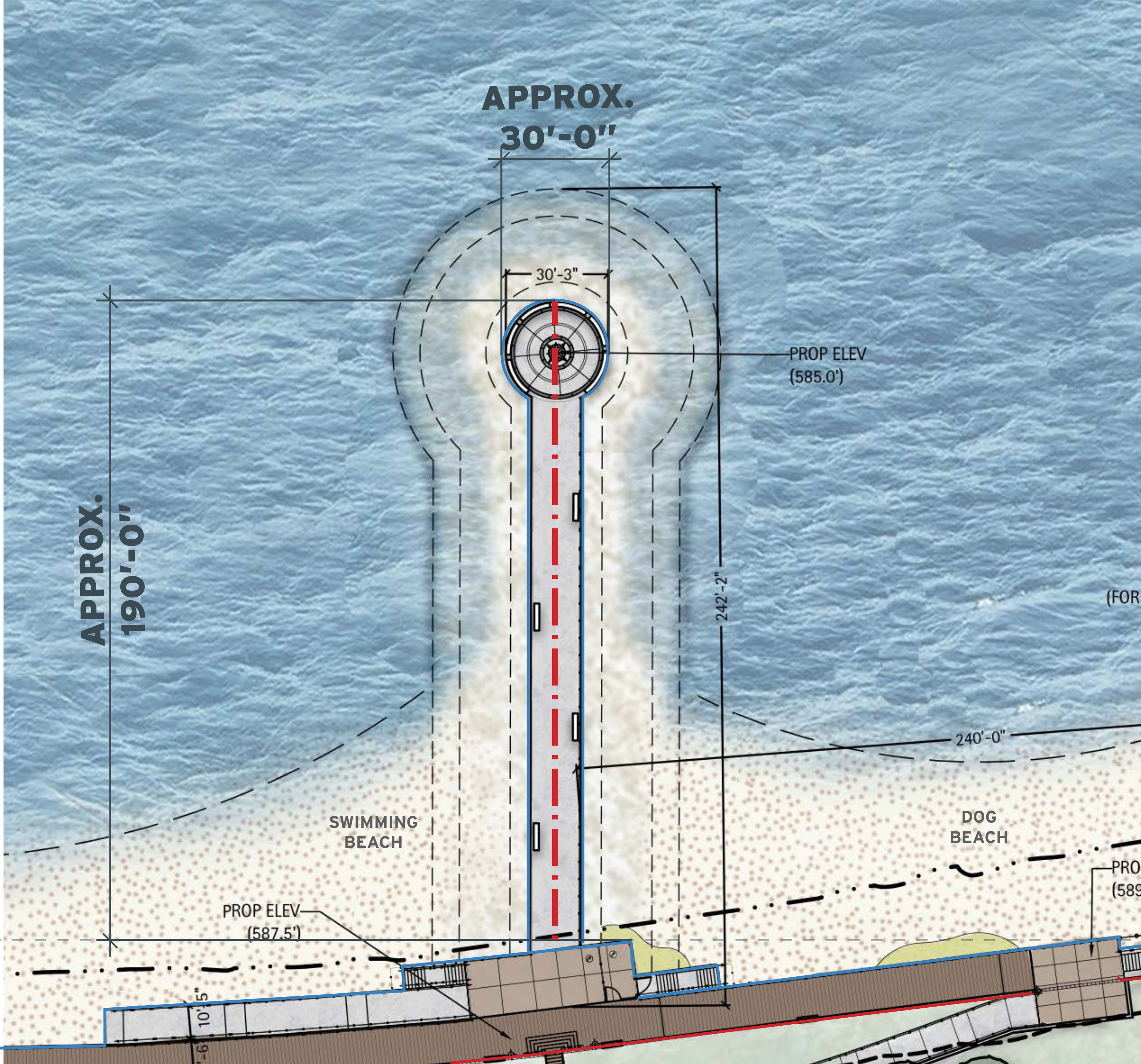


Proposed Design

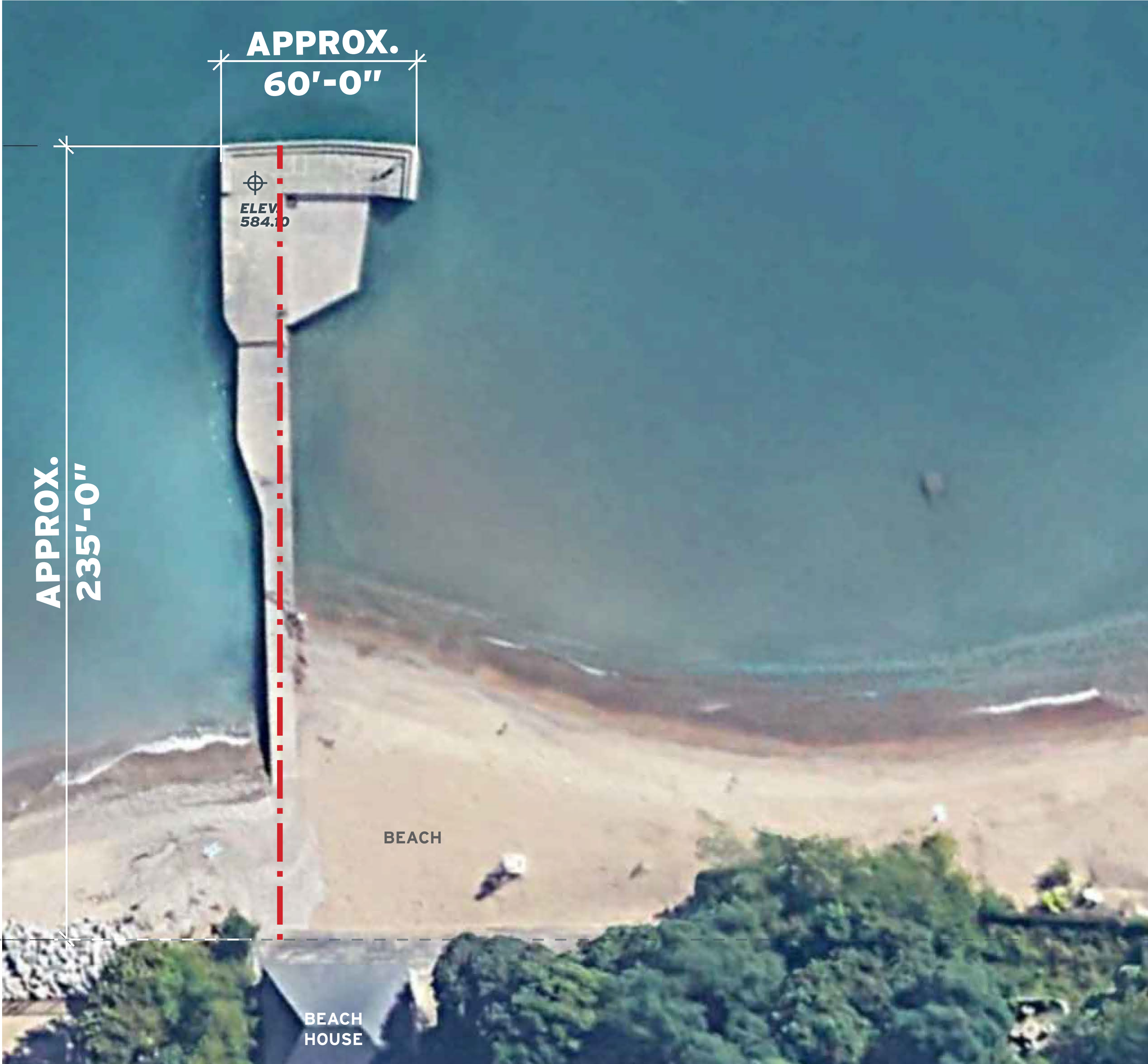
Safety



PROPOSED CENTENNIAL BEACH

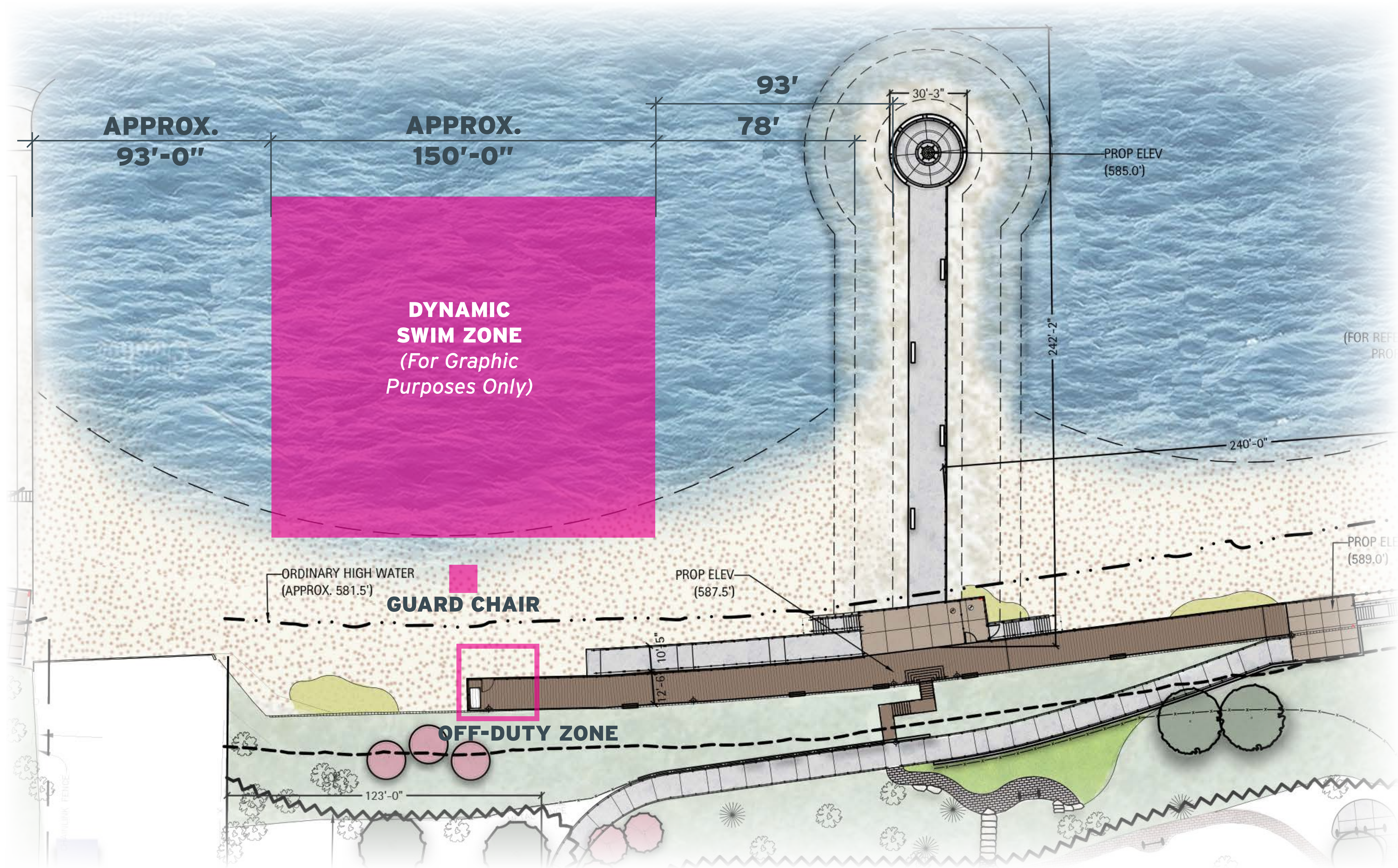


MAPLE STREET BEACH



Proposed Design

Safety



Proposed Design

Pier Safety

Becoming a Lifeguard at WPD

- **American Red Cross Lifeguard Professional Rescuers Certified:**

(7) hours of online and (20) hours of in-water training. Certification includes: Professional Rescuer CPR/AED/1st Aid lifesaving skills including multi-person active rescues and passive (unconscious) rescues

- **Waterfront Certification:**

Additional (4) hours training at the beach required for beachfront lifeguards Training includes: Beach entry and water searches

- **WPD also incorporates 2-part physical fitness test that all incoming guards must pass**



Proposed Design

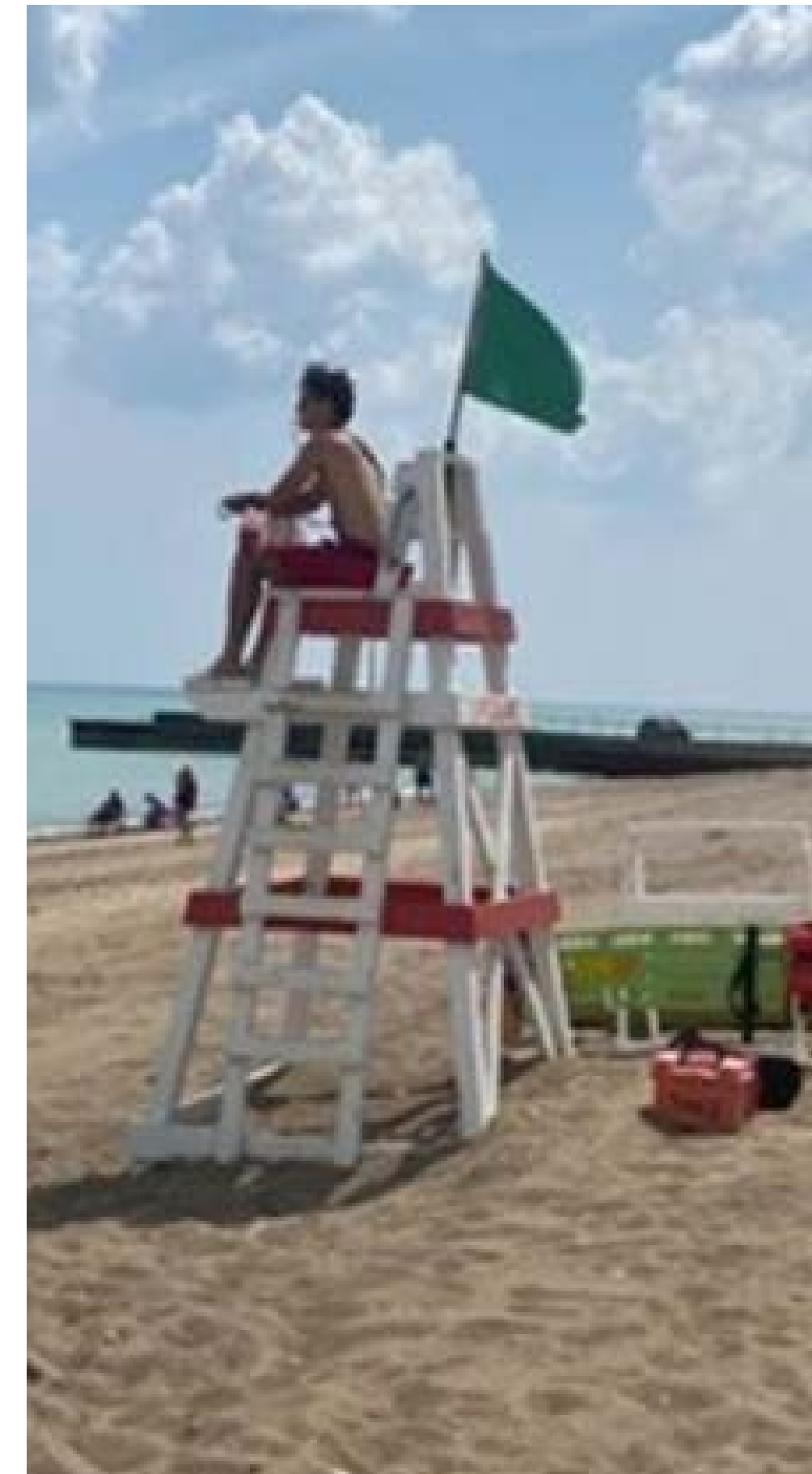
Pier Safety

Lifeguards on duty will be in a guard chair, walking the shoreline and/or on a rescue board in water.

Lifeguards rotate on/off every 20-30 minutes. Lifeguards are required time away from duty and will sit behind active guards while on break.

Training requirements throughout summer include:

- *Daily on-shift skill reviews*
- *Monthly training (2) hours mandatory in-service training hours to maintain certification*
- *PDRMA (3) unannounced audits throughout the summer assessing lifeguard observations in-chair and lifesaving skills and administrative operation review*



Proposed Design

Pier Safety

BEach SAFE Water Safety Campaign

- **Launched in May, 2024**
- **Summer Kickoff Event:** Held water safety scavenger hunt, community education event
- **Promoted campaign at every special even this summer with handouts**
- **Spoke to over 700 District 36 Students**
- **Signage posted at Beaches**
- **Beach Safety web page created on winpark.org website**



Proposed Design

Parking

Existing Parking

Centennial Park

- 11 Spaces
- Limited to Dog Beach Pass Holders and Residents

Elder Lane Park

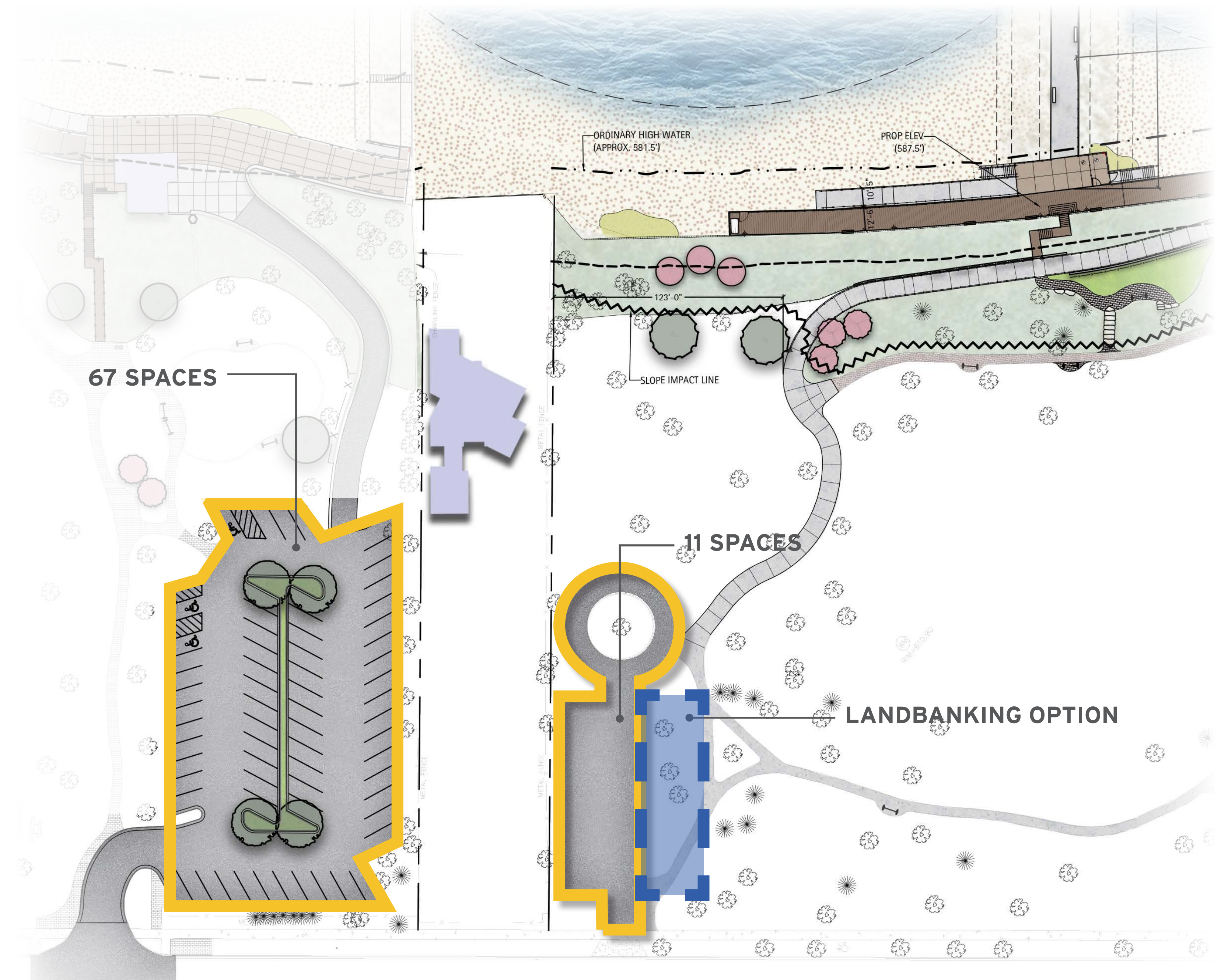
- 67 Spaces (1 Additional ADA Space at Beach House-Seasonal)
- 4 Spaces Reserved for Park Patrons
- 63 Spaces for New Trier Permits (7AM-4PM Weekdays)

Parking Review from Kimley Horn

Land Bank Parking Options

- Willingness to expand parking in lieu of existing green space and trees

Off-Site Parking Options



Parking - Transportation Review from Kimley Horn

Plan Evaluation

•Traffic Generation

- »Is typically driven by industry resources, due to the unique use of Park Space, they are not always the same, so **there is not specific standard to follow** making it difficult to reference traditional resources.
- »Data was collected from the previous three year's **beach season pass sales, daily fee visits and dog beach pass sales** helping to create the snap shot of users along the WPD beaches.
- »Assumptions consider the improvements for Centennial and Elder Lane Beaches, expecting an **initial uptick in users over the course of the first season or two**, normalizing afterward.
- »Several beach options along the Winnetka shoreline **help disburse the desire to use Centennial and Elder Lane** due to parking access and may instead visit one of the other beaches.

•Access

- »Access and Parking for these two sites is consistent with **the current conditions.**
- »Centennial Parking functions well, with the 11 current parking places **the lot itself should not have significant issues or congestion** when entering or leaving the park.
- »The additional parking available at **Elder Lane Park is within close proximity** to Centennial and has a **traffic signal which provides a controlled crossing for the neighborhood.**

•Parking

- »**The proposed plans allow for 78 combined parking places, which is more than the combined 64 spaces between Tower and Maple Parks.** As a system, the Winnetka Park District provides 142 parking spaces for the swimming beaches, Lloyd provides another 56 for the boating beach and launch with an overall total parking of 198 Park District owned spaces.



Parking - Transportation Review from Kimley Horn

Potential Parking Measures

- *Installation of signs directing visitors to other lakefront parks and beaches if full*
- *Resident parking only in parking lots*
- *Secure overflow parking at New Trier (or another site near the Beaches)*
- *Future expansion of parking in exchange for green space and trees (Land Bank)*

Table 4. Comparable Beach Characteristics

Location	Town	Parking	Access	Beachfront ¹	Park Features
Centennial Park	Winnetka	Parking Lot 11 spaces	Season Dog Beach Pass	520 feet	Park / Open Space Dog Beach Swimming Beach ²
Elder Lane Park	Winnetka	Parking Lot 67 spaces ³	Currently Closed	400 feet	Park / Open Space Swimming Beach ⁴ Playground
Maple Street Park	Winnetka	Parking Lot 14 spaces	Season Pass Daily Fee	175 feet	Park / Open Space Swimming Beach
Tower Road Park	Winnetka	Parking Lot 50 spaces	Season Pass Daily Fee	500 feet	Park / Open Space Swimming Beach Playground
Glencoe Beach	Glencoe	On-Street 94 spaces	Season Pass Daily Fee (only available on weekdays after 12 PM)	550 feet	Park / Open Space Swimming Beach Sailing Tennis Courts Playground
Rosewood Beach	Highland Park	2 Parking Lots (resident only with decal) 87 spaces	Residents: Free Pass Non-Residents: Season Pass or Daily Fee	1,000 feet	Park / Open Space Swimming Beach Playground
Forest Beach Park	Lake Forest	3 Parking Lots (resident only) 208 spaces Metra Station (non-residents) ¾-mile walk	Residents: Free Pass Non-Residents: Daily Fee	1,770 feet	Park / Open Space Swimming Beach Boat Launch Sailing Playground
Sunrise Beach	Lake Bluff	On-Street in Neighborhood	Residents: Free Pass Non-Residents: Daily Fee	950 feet + 250 feet dog beach	Swimming Beach Playground

¹ Approximate length
² Proposed for southern ½
³ Proposed parking capacity
⁴ Beach has been closed since 2020

Proposed Design



Parking - Transportation Review from Kimley Horn

Summary

Based on review of current conditions, the proposed plans for Centennial and Elder Lane Parks, and data relating to beach passes and daily fee visits, the transportation and parking elements of the proposed plan are expected to continue to adequately serve the two park sites.

Special Use Standard #4

That adequate measures have been or will be taken to provide ingress and egress in a manner which minimize pedestrian and vehicular traffic congestion in the public ways;

- *Access to both Centennial Park and Elder Lane Park are proposed to remain as existing. Given the traffic volume along Sheridan Road, and the size of the parking lots, and the configurations and traffic control at the two intersections, vehicle traffic should not have issues or cause meaningful congestion when entering or exiting the parks.*
- *The traffic signal at Sheridan Road/Elder Lane provides a controlled crossing for pedestrians walking between the lakefront and the neighborhood west of Sheridan Road. Elder Lane Park is immediately east of this signal and Centennial Park is located just over 200 feet south of this traffic signal, so this crossing supports pedestrians walking to/from either park.*
- *Pedestrian sidewalk currently exists along the park frontages on Sheridan Road exiting vehicles maintain good visibility of pedestrians as they approach the respective access drives. The proposed plans do not negatively impact these sight lines.*
- *Upon further validation of the findings in this evaluation, supplemental data collection and review planned in Summer 2025 will inform whether additional measures may be warranted. This data collection and review will be coordinated with the Village Engineer.*

Special Use Standard #5

That adequate parking, utilities, access roads, drainage, and other facilities necessary to the operation of the special use exists or are to be provided;

- *The parking at Elder Lane Park is available to supplement Centennial Park needs and is easily accessible via a short walk (approximately 200 feet between access points) along Sheridan Road's public sidewalk.*
- *The 78 spaces at Elder Lane and Centennial Parks offer more parking more than Tower Road and Maple Street Parks combined. As a system, the lakefront parks with swimming beaches would provide 142 off-street parking spaces. This capacity is expected to adequately serve the collective vehicle parking demand as patrons can distribute among the beaches if one is too crowded.*
- *The combined 78 spaces at Elder Lane and Centennial Parks is generally in line with parking provided at other comparable lakefront parks/beaches along the North Shore.*
- *Additional parking measures are possible to provide overflow parking and/or limit use of off-street lots to residents only, if needed.*
- *Upon further validation of the findings in this evaluation, supplemental data collection and review planned in Summer 2025 will inform whether additional parking measures may be warranted. This data collection and review will be coordinated with the Village Engineer.*

Proposed Design



Off-Site Parking Options



Proposed Design



Perspective - Centennial Breakwater Looking West

EYE-LEVEL APPROX. 65.5" HT (ASSUMES APPROX. 5'-10" HT. INDIVIDUAL)

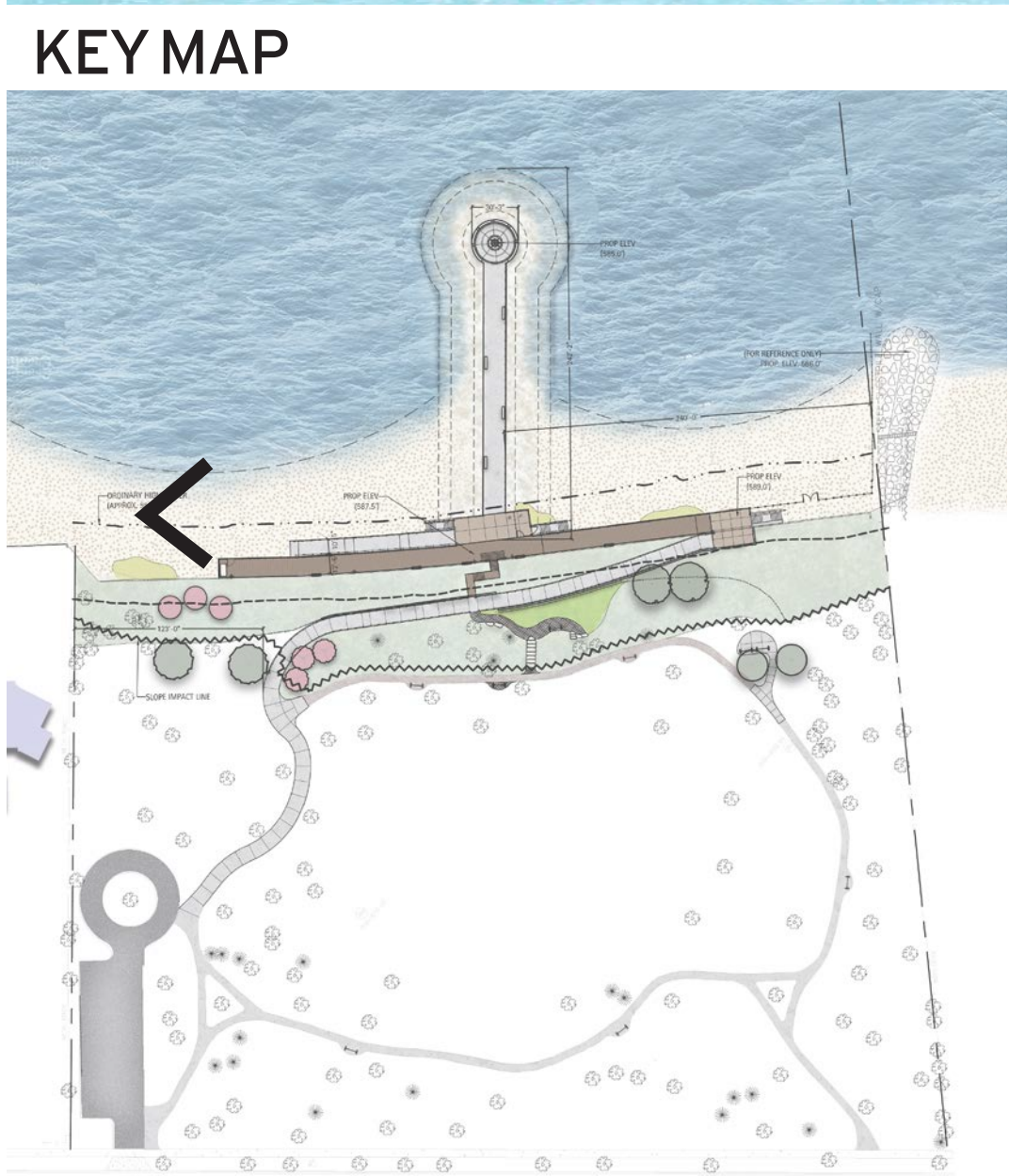


Proposed Design



Perspective - Centennial Swimming Beach Looking South

EYE-LEVEL APPROX. 65.5" HT (ASSUMES APPROX. 5'-10" HT. INDIVIDUAL)

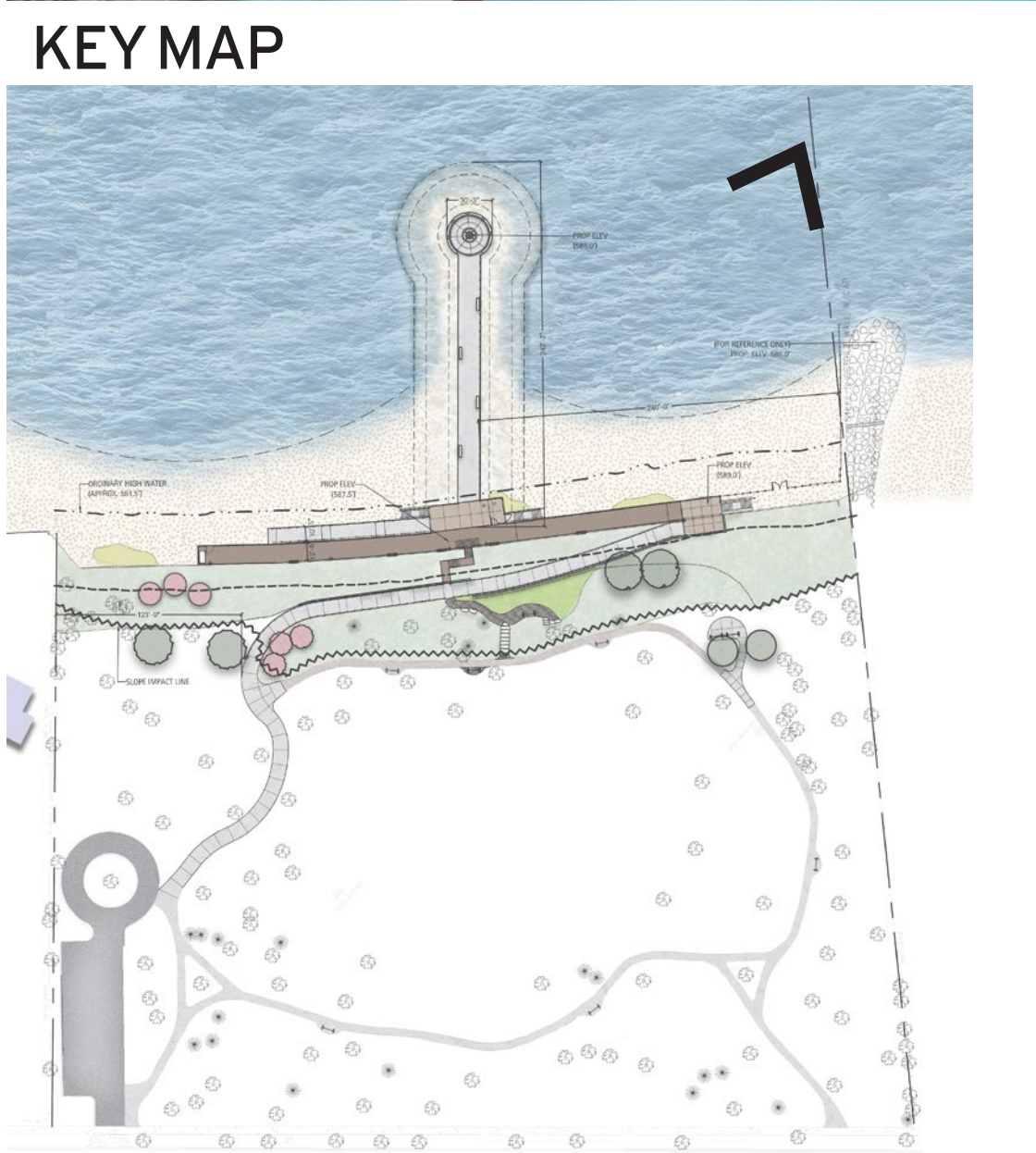


Proposed Design



Perspective - Bird's Eye View at South Centennial Looking W/NW

BIRDSEYE-LEVEL



Proposed Design



Perspective - Centennial Access Path Looking E/SE

EYE-LEVEL APPROX. 65.5" HT (ASSUMES APPROX. 5'-10" HT. INDIVIDUAL)

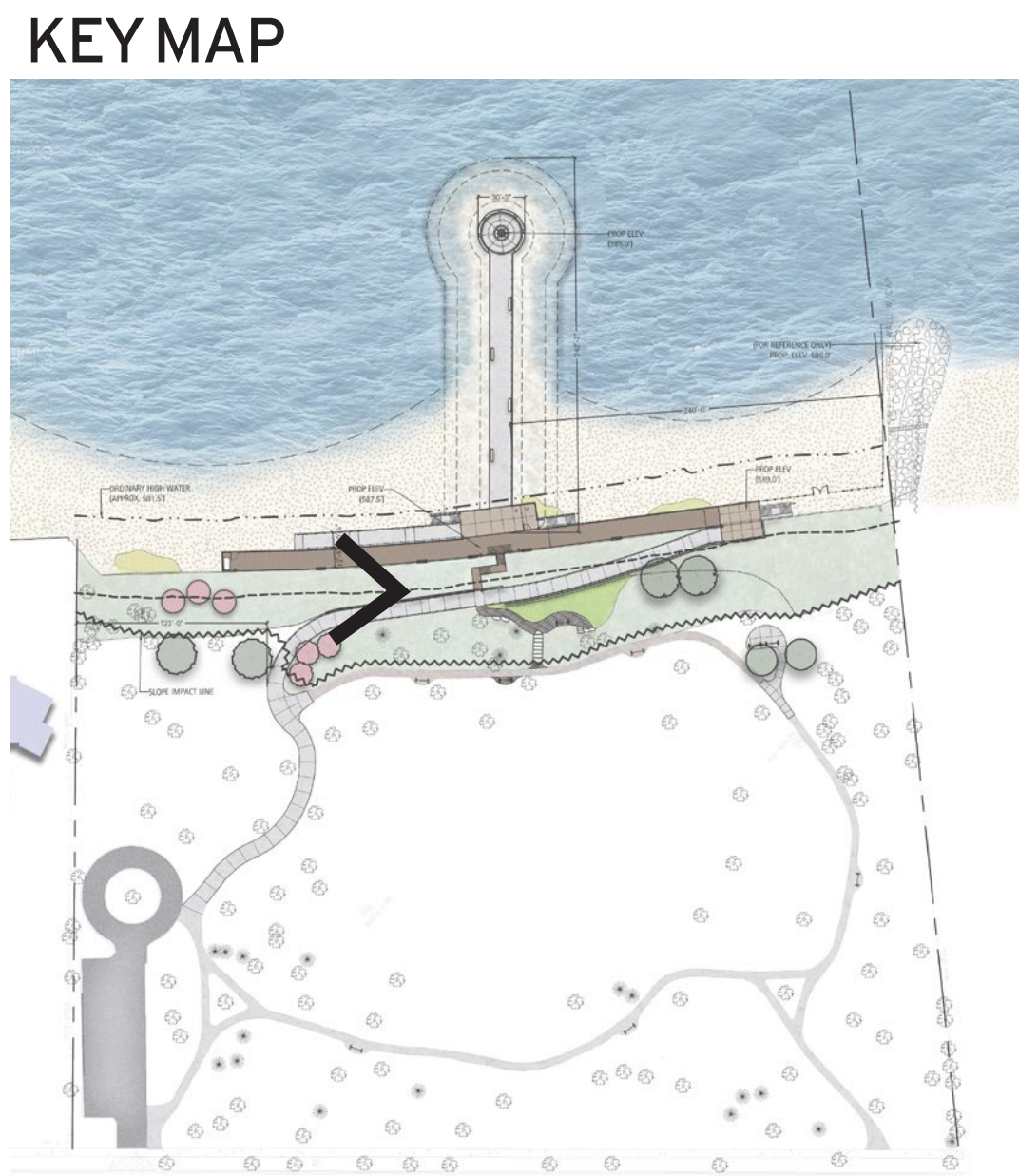


Proposed Design



Perspective - Centennial Access Path Looking N/NE

EYE-LEVEL APPROX. 65.5" HT (ASSUMES APPROX. 5'-10" HT. INDIVIDUAL)



ACCESS PATH LOOKING N/NE

THE
LAKOTA
GROUP.

Proposed Design



Perspective - Centennial Dog Beach Looking South

EYE-LEVEL APPROX. 65.5" HT (ASSUMES APPROX. 5'-10" HT. INDIVIDUAL)



Proposed Design



Seeking a favorable recommendation from **PLAN COMMISSION** for:

1. A special use permit to allow construction of proposed improvements to new and existing uses as outlined in plans | *per Zoning Ordinance*
See chart of Proposed Project Elements.
2. An exception to permit Development in the Steep Slope Zone | *Section 17.82.040*
See chart of Proposed Project Elements.

THANK YOU

Questions?

