Proposal

Lake Michigan Property Owners'

Sea Wall Proposal

Background In 1986, high Lake Michigan levels and heavy wave erosion caused severe damage to the dunes to the west of the cottages belonging to the Rauth, Gosnell, Burrows, and Smolik families. A "cliff" of about 8-10 feet was created, and dune erosion was severe. (Note that what is now the Edmonds property was part of the Nethercutt/Hayes family at the time). These cottage owners requested permission to build a protective wall, and the CSA approved (nearly unanimously). We then engaged Gilbert Excavation to construct a wooden sea wall along Lake Michigan beach at the toe of the dune.

This sea wall provided protection for some time, but the rise in lake levels, along with very strong wave action, has created a much more dangerous situation than in 1986. The "cliff" is several times higher, access stairs to the Lake have been destroyed, and the property lines of the above owners are now truly threatened. The major portion of the wooden wall has been virtually destroyed; in some areas some remnants remain, in others not. Parts of the existing wall, especially on the south end, are so damaged as to be irreparable. See Figure One of the enclosed PowerPoint presentation for visual evidence.

After much consideration, the owners of the Smolik, Burrows, and Gosnell properties ("the Owners") have mutually decided that the best solution for protecting their properties is the construction of a steel sea wall, of essentially the same design as that recently constructed by the owners of the Wildewood properties. Note that the owners of the Rauth and Edmonds properties have decided, for reasons of their own, to remediate their wooden sea wall from 1986. They have attached wood pieces to the existing foundation, and have built up about 3' above the sand level. They have acknowledged that this approach will require ongoing, frequent repairs.

The decision of the Owners was driven by the desire to have a more permanent solution to the ongoing problem of dune erosion. Sea walls of this construction, commonly called "sheet piling", are a very common, cost effective and long term solution. Properties to the north and south of the Owners have elected to do the same projects to protect themselves.

Proposal The Owners propose to have constructed on the common property beach of the Congregational Summer Assembly (CSA) a continuous sea wall of sheet pile design. Figures Two and Three of the presentation describe the layout of this wall. It will generally follow the path of the remains of the wooden sea wall, but be a few feet to the landward side (typically 5'). At the north and south ends of the wall, the wall will turn landward on a 45-degree angle (to mitigate "scouring" wave action from the side). On the north end of the wall, the wall will tie into the Rauth's repaired wooden wall, providing a solid front. In total, the wall will be approximately 300' long. The work would all be performed by Gilbert Excavation of Arcadia, MI,

the same firm who recently constructed the Wildewood sea wall, as well as the original 1986 wooden sea wall.

Construction Figure Four depicts the sheet pile pieces before construction. They are 15' high, 5 ga steel. Figure Five shows the Wildewood wall installed. During construction, the pieces are vibrated into the sand, embedding them about 11' into the sand, with 4' of wall remaining exposed. Every 10' or so where possible the wall is tied back to the landward side to maximize structural stability. See Figure Six of the presentation for a depiction.

During placement of the sea wall, rocks, tree branches, roots and the like will likely be uncovered. These will be deposited on the landward side of wall, as seen in Figures five and Six. All man-made garbage will be cleaned up and removed. In addition, any damage caused by the construction equipment to the CSA beach property will be fully remediated by the Owners and their contractor.

Legal and Insurance Considerations The Owners will be responsible for any necessary repairs to the wall to maintain safety and functionality. Note that the CSA's insurance carrier has determined that the presence of this wall will not increase the insurance of the CSA, so we see no liability issues for the CSA going forward. If the CSA should desire a written agreement with the Owners, we are willing to work with you to do so, once approval of the project is granted. The Owners will reimburse the CSA for legal fees incurred on this matter.

Project Timing The Owners are obviously eager to complete this project as soon as possible. Each of the owners has individually applied to the Corps of Engineers, the State of Michigan, and Benzie County for regulatory approval of this project. Based on the experiences of Gilbert Excavating, we anticipate approvals from these agencies by March-early April 2021.

Assuming that the approval of the project by the CSA and the regulators is forthcoming in a reasonable time, we anticipate the start of construction in late March or early April, depending on weather conditions. Based upon the performance of the Wildewood project, we expect to complete the work on the wall within a month or so of construction start, and in any event well before Memorial Day 2021. This should not have any effect on 2021 summer season activities.

Construction Access As part of the project, because of their extended frontage, the Smolik family has offered to allow beach access through their property, specifically Lot 174. See Figures Seven through Nine of the presentation for a visual depiction of the access location. The Owners have agreed to jointly fund a full remediation of this access point once construction has completed, in accordance with the requirements of our permits. In addition, although we do not anticipate this, should any damage occur to CSA inland property during the project, the Owners will have this remediated as well.

Sea Wall Project
2020 - 2021

Smolik, Burrows, Gosnell Cottages

Presented to the Congregational Summer Assembly

Figure One

Remnants of Existing Wooden Wall
From North End of Gosnell Property
(looking south)

Figure Two

Survey of Cottage Lots, Existing and Proposed Sea Walls

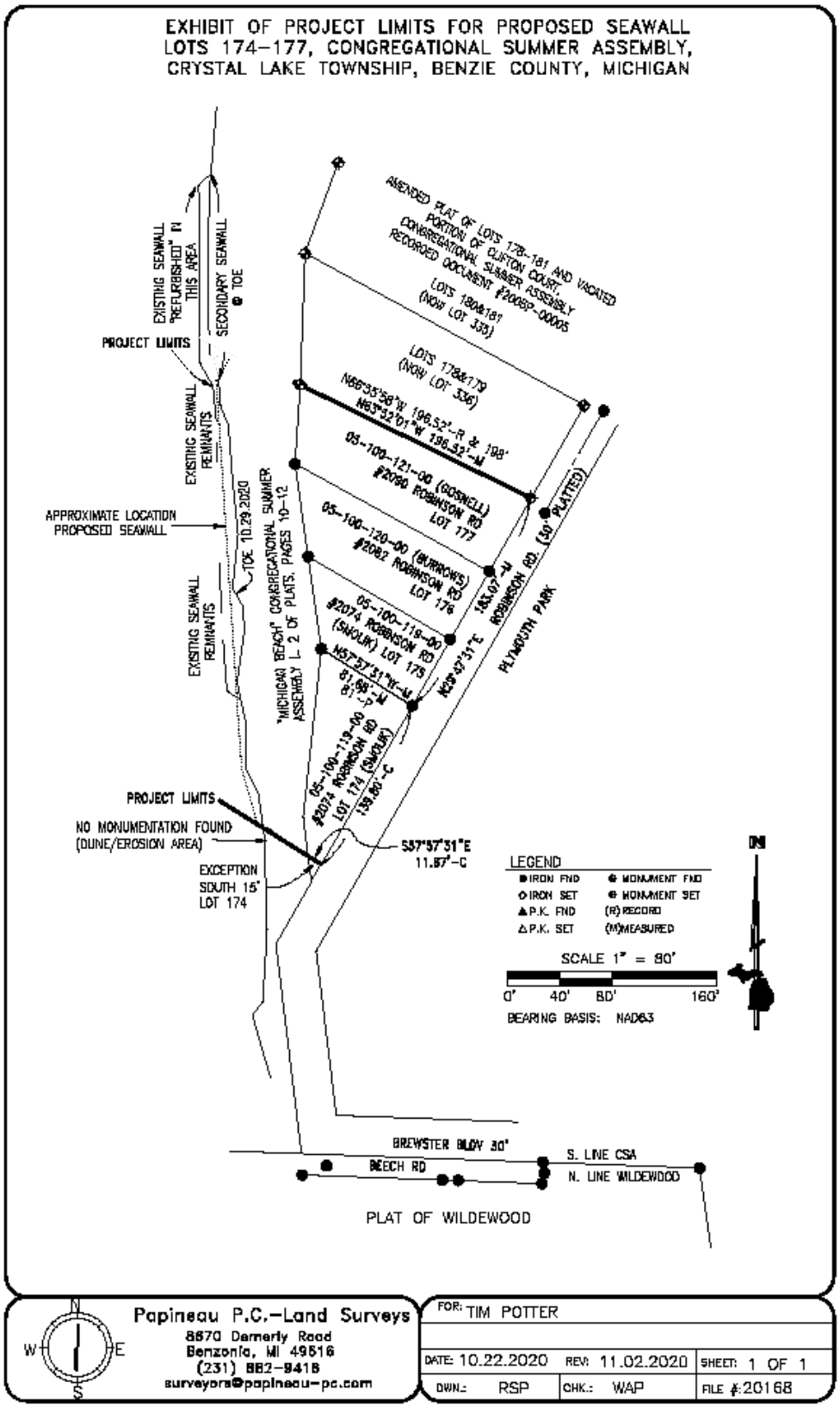

Figure Three

Survey With
New Sea Wall Highlighted

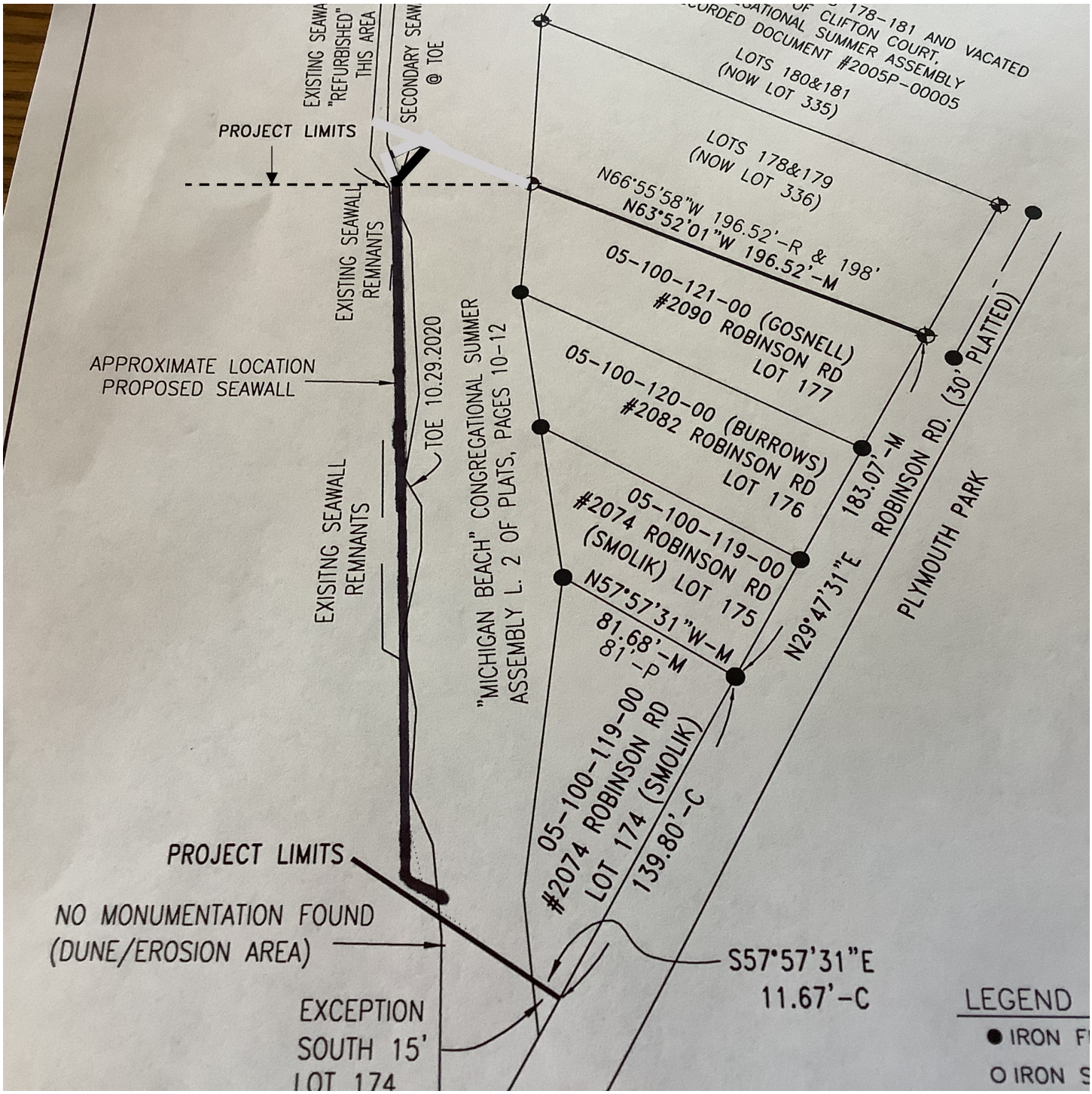

Figure Four

Sheet Pile Steel Pieces

Prior to Installation

Figure 5

Wildewood Sheet Pile
Sea Wall
(looking south)

4’0”High +/-

Figure Six

Wildewood Sea Wall
Showing Tie-Backs
(looking south)

Tie -Backs

Figure Seven

Access Ramp

Looking West

Figure Eight

Access Point

Overhead View

Figure Nine

Access Ramp

Aerial View

Showing Lot Lines