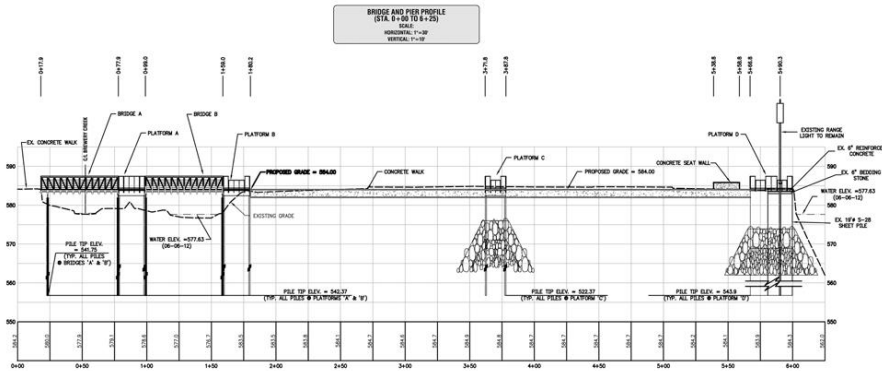
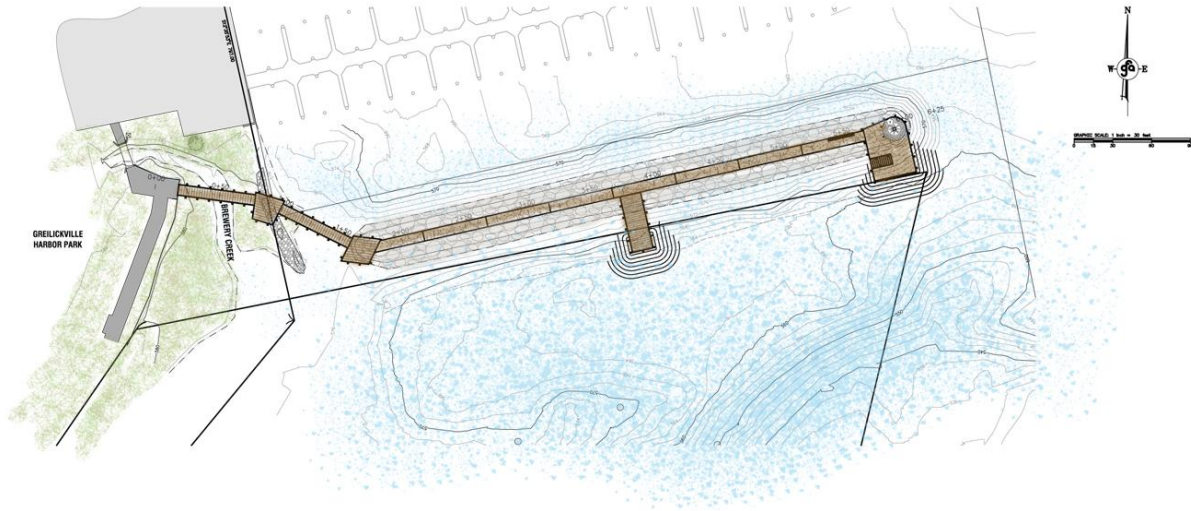




Charter Township of Elmwood Proposed Public Fishing Pier



gfa **Goodie-Fraser**
Civil/Environmental Engineers

DATE: 08/14/2013
PROJECT: 12036
DRAWING: 12036-01
SCALE: AS SHOWN
SHEET: 3.2

**CHARTER TOWNSHIP OF ELMWOOD
PUBLIC FISHING PIER
PLAN AND PROFILE SHEET**

SECTION 13, TOWNSHIP 28 NORTH, RANGE 11 WEST,
ELMWOOD TOWNSHIP, LEGUISSA CANTON, WISCONSIN

These documents are prepared in accordance with the contractual terms and conditions for this project.



Final Narrative Report



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Appendix

A-1. Public Education & Survey Materials
A-2. Financial Documentation



Charter Township of Elmwood Public Fishing Pier

Final Narrative Report – Section One

November 30, 2012

Project title Fishing Pier Construction, Greilickville Marina/Park



Grantee Organization

Charter Township of Elmwood
10090 E. Lincoln Road
Traverse City, MI 49684
Phone: 231.946.0921 Fax: 231.946.9320

Project Team

- Charter Township of Elmwood: Jack Kelly, Supervisor
- Elmwood Township Marina Committee
- Gourdie-Fraser, Inc.:
 - Project Engineer – Jamie Wade, PE
 - Public Education/Meeting Materials: Heather Harris-Brady
 - QA/QC: Joe Elliott, CEO/President
 - CAD - Tim Russell
 - Surveying: Jon Wilson, Gary Wilson
 - Structural Engineering: Terry Boyd, PE
- Smith Group JJR: Pat Doher, Chad Brintnall, Bob Doyle

Project Contacts

Jack Kelly, Supervisor, Charter Township of Elmwood
Jamie Wade, Project Engineer, Gourdie-Fraser, Inc.

supervisor@elmwoodtownship.net
jwade@gourdiefraser.com

Grant Amount

\$45,000.00

Time Frame – Major Milestones

- 1) Grant period: January 2012 – August 2012
- 2) May 2012: Public Input Session #1
- 3) June 2012: Public Surveys Conducted (2)
- 4) July 19, 2012: Public Input Session #2
- 5) August 17, 2012: Public Meeting #3, Marina Committee Approval of Design Features
- 6) August 20, 2012: Township Board Approval of Preliminary Design
- 7) December 5, 2012: Final Design Plans and Specs Complete



Focus area: Access for fishing at varying depths of water from shore



I-A. Brief Project Summary

For over a decade the public has desired a fishing pier in the Greilickville Harbor area, to the extent that it became one of 10 key overall township wish list items. Until 2011, when a new marina master plan took all these wish list items into account, no formal action had been taken to define that desire into a focused project plan.

As a way to kickstart the marina master plan the Township marina committee and subsequently, the board, voted to apply for a Great Lakes Fishery Trust grant to fund the design of a fishing pier along the breakwall immediately adjacent to the marina area. GLFT awarded the Township's grant application, stipulating that the public input portion of the project should take place during active fishing season. As the design hinged on this input, the process was planned but not implemented until late April, 2012, after the opening of trout season.

The final goal of this GLFT funded project phase was to have a biddable/buildable project ready to construct. First, we fine tuned what the public desired through open public input sessions. Second, we produced several preliminary plans for the public to choose key features from. Once the primary features were selected, the final project plans and specifications were developed to be ready for bidding.

I-B. Project in Context

I-B.1 - Project Need

There is currently limited Grand Traverse Bay/Lake Michigan access in Traverse City at the Open Space Park and the Maritime Academy area. However, this new pier will allow fishermen to cast into a drop-off area nearby and access fish that have previously been only available by boat. This new fishing pier will be universally accessible and in close proximity to the newly renovated and highly popular Greilickville Harbor Park. At this point only the Traverse City Open Space Park fishing area is barrier-free. In the past year the Township also purchased a defunct partial development directly opposite this area. The new purchase offers expanded options for additional parking and linkage to the busy TART non-motorized trail that runs along the west side of the development.



View to the pier connection point from the marina

I-B.2 - Relationship to other programs

The fishing pier will be located adjacent to the Elmwood Township marina and public boat launch facility, as well as Greilickville Harbor Park. Pier access will be tied directly to the existing walkways within the park and marina.



Existing connection bridge from the park, south of the proposed pier location

I-B.3 - Intended Population

This fishing pier will be located in one of northern Michigan's most densely populated areas – Traverse City. Not only are there many local residents, but this area is extremely popular with tourists as well. According to the Traverse City Convention and Visitor's Bureau, fishing is the fourth most popular reason visitors are drawn to the area (behind swimming, golf and hiking/biking). Even in the down economy Traverse City tourism has remained a bright spot.

The marina boat launch is one of the area's busiest. Data available from the Grand Traverse Area Sportfishing Association states that of the 280 seasonal launch pass holders, an estimated 200 of them are anglers using the site. Over 3800 daily launch passes were sold in 2010; approximately 1800-2000 passes were to anglers. As you can see, this area is already popular with fishermen. The pier and platforms may also be used by the non-fishing public for unmatched panoramic views of the bay and the Traverse City skyline with its festival fireworks and air shows.

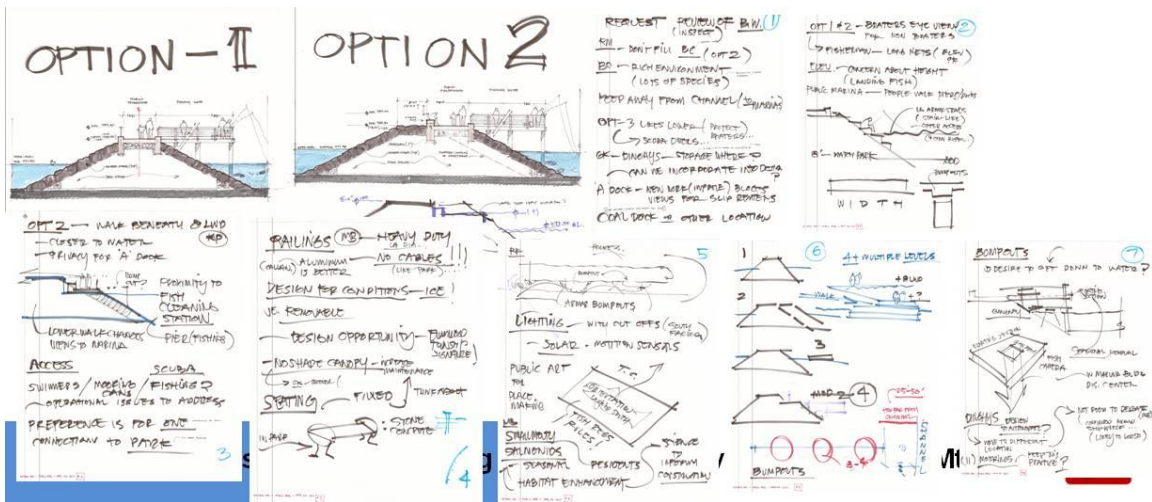
I-C. Goals of the Effort

The key goals of this phase of the fishing pier project were as follows:

1. To organize the wishes and desired features of the public into a preliminary plan.
2. To put a real dollar figure on the project.
3. To produce a buildable project plan.

I-C.1 - Results of the Effort

Options were developed from conceptual design feedback, Public Meeting #1 (5/23/12)



After an initial public meeting the Township opted to do more extensive surveying amongst the fishing public. In cooperation with the Grand Traverse Area Sportfishing Association, we surveyed participants during Kids Fishing Day at the Hagerty Center in Traverse City June 9. We followed this up with surveys at Veronica Valley Park during Leelanau County Kids Fishing Day Sunday June 24. A survey was also conducted online and accessible through the Township's website. These results and preferences were factored in to the later design decisions.

The result of the public input sessions was that they gave a singular focused voice to the multiple groups and individuals with interest by the project. Once the project began to take shape during preliminary planning more detail was added to meet the public's desires. The final outcome was a project that is ready bid that will provide direct access to varying depths of water for fishing, for learning, for watching and even for scuba diving.

I-C.2 - Product and Resources

At various times this project has been publicized in the local media (including the Leelanau Enterprise and the Traverse City Record-Eagle). In addition, meeting documents were posted on the township website and the Elmwood marina website:

<http://www.leelanau.cc/elmwoodtwp.asp>

There is also a prezi online:

<http://prezi.com/mj7tps9iji5v/elmwood-fishing-pier-public-input-meeting-2/>

Sightline Analysis



Elmwood Township Public Fishing Pier Preliminary Design, Public Mtg #2



Copies of the survey materials and promotional posters are included in the Appendix. A cd will be provided that will include pdfs of the meeting presentations.

Final Narrative Report

Final Narrative Report – Section Two



II-A. Background/Overview

The project was 'a process' that was completed as originally intended. Many diverse needs, wants and priorities were weighted and condensed into a buildable project. The public input process took place over the busy summer season. Since this pier will be such a prominent feature of the Elmwood waterfront, and a key destination, the overall consensus of the group was to invest in an attractive, yet functional, design that can speak to many different user groups while still playing its key role of providing a new fishing access point.

The Elmwood Marina is extremely popular with both slip owners and day users of the boat launch. During the design process we took great care to minimize impact on the marina. We also conducted a fairly extensive hydrographic investigation so the design could be based upon current, accurate survey data.

In terms of universal accessibility, we are fortunate in that the park is at a nearly identical elevation to the top of the breakwall. Therefore, you will notice in the plan set that we have taken advantage of this situation. In addition to the accessible walkways, there are railing insets for improved fishing accessibility.

It is worth noting that site conditions dictated a completely customized approach to this project. As this process culminated in a plan set, but not a constructed project, some of the following elements have limited applicability.

II-B. Outcomes - Summary

2-B.1 - Outcome 1, Fishing Pier Design Alternatives & Associated Activities

As noted previously, a total of three public input sessions were held along with two field surveys at scheduled family fishing events to gather desired features from the public. From that information, several possible pier designs were drafted for consideration by the Marina Committee and the Township Board.

Survey! New Elmwood Township Fishing Pier

Since 2010 the Township's marina/park wish list has included a new public fishing pier at a location between the two facilities. Happily, in 2011 Elmwood received a Great Lakes Fishery Trust grant for the design of a fishing pier that is universally accessible.

1) When are you likely to use the pier? (Circle all that apply.)
Morning Afternoon Evening Weekdays Weekends Shoulder Seasons

2) Who will fish with you? (Circle all that apply.)
I'll fish alone or with one other adult. Sm. Family (1-2 children) Lrg. Family (3+ children)

3) If you are planning to fish with children at the pier, what are their ages? (Circle all that apply.)
Under 5 5-10 years 11-14 years 15 years +

4) What fish species are you targeting? (Circle all that apply.)
No preference Panfish Smaller sporfish Larger sporfish

You're almost done! Please see the back~

Survey! New Elmwood Township Fishing Pier

6) How will you handle your catch?
Catch and release Clean a few at home Clean all keepers

7) How far will you be driving to reach the fishing pier?
Less than 10 miles 10-25 miles 25-50 miles 50 miles+

8) Other comments? _____

Thank you for your time!

If you'd like to register to win a Ware's gift certificate, please put your name and cell number here:

NEW TOWNSHIP FISHING PIER

Please fill out our survey card, you could win Ware's ice cream!

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So now we would like you to help us guide the design! Thank you for helping make Elmwood Township's waterfront corridor one of the brightest jewels along the bay!

www.elmwoodtownshipmarina.com

II-B.2 - Outcome 2, Preliminary Engineering for Preferred Alternative and Associated Activities

Preliminary design and engineering was completed for several specific design features in order to produce an estimated cost for the project in order for the township and the marina committee to finalize its selection of the preferred design alternative.

The input sessions and survey cards were intended to reach out to the general public, with a desired target of the non-boating public as they may benefit the most from the construction of the fishing pier. Attendance at the input sessions was initially mainly marina patrons as some were concerned with increased pedestrian traffic near their boats with a decrease in privacy. A study of what could be seen of the marina from the fishing pier reduced their concerns when it was found that the distance from the boats to the new access was far enough to maintain the sense of privacy ([depicted in the sightline analysis prezi](#)). This seemed to reduce the separation of boaters and non-boaters.

Existing Materials - Park



Elmwood Township Public Fishing Pier

Preliminary Design, Public Mtg #2



Option 1: Offset Pier with Rock Buildout

Option 2: Promenade with Floating Bumpout & Large Outer Platform



Bumpout

Shaded Area = New Stone

Mid-Pier

Cross-Section View

Approximate build-out view

Could add planter boxes on top to further minimize affect on view

Option 3: Offset Promenade with Multiple Bumpouts

Mid-Pier

Outer Platform

Cross-Section View

Could add planter boxes along top to further minimize affect on view

Option 4: Promenade with Curved Bumpouts

II-B.3 - Outcome 3, Permitting and Habitat Improvement and Associated Activities

Initially it was thought that the area along the rubble wall may not be suitable habitat for target species that may be sought by shore fisherman and that additional structures may be needed. However, during a public input session it was stated by divers that frequent this area, as well as members of the sportfishing association, that there are already sport fish that stay along the wall using the rocks as habitat. This was supported by a local resident employed by SeaGrant. The armor stone and pilings that were incorporated into the design will provide additional structure for fish habitat. Copies of the final plans are being submitted along with the Joint Permit Application to the MDEQ and USACE.

Members of the project team attended the Sustain Our Great Lakes seminar recently, including a session on fish shelters developed and used by the Three Lakes Association. In their experience the most effective structure at this time is a timberframe cage filled with brush.

After construction we would evaluate the local fish population around the new pier support system and determine if additional shelter structures are needed after the pier is in place.



Jim Gilleylen inspecting a fish shelter before its deployment 6-5-12

A primary goal of the Fish Shelters Project is to improve the fishing in five lakes in the Elk River Chain of Lakes, Elk, Torch, Clam, Bellaire, and Intermediate Lakes. We also believe installing fish shelter may improve the fish habitat, which is expected to increase the population of fish-food organisms and provide sanctuary for small fish. The plan is to install a set of three structures at the drop off in front of properties where the water depth is about 15 to 20 feet deep and where the property owners have provided written permission. The types of structures were based on discussions with a DNR fish biologist.

The photo shows one of the project volunteers, Jim Gilleylen, inspecting each of the three fish shelter structures that were approved by the DNR. This photo was taken on June 5, 2012 on a barge on Clam Lake a couple hours before these shelters were deployed. The location that received these shelters was the first of about 20 locations on these five lakes to receive a similar set of three shelters in 2012. Ultimately the goal is to install a set of three fish shelters at each of 80 locations on these five lakes over the next five years. An article about this fish shelters project is available in TLA's April Newsletter, which can be accessed from TLA's Website..

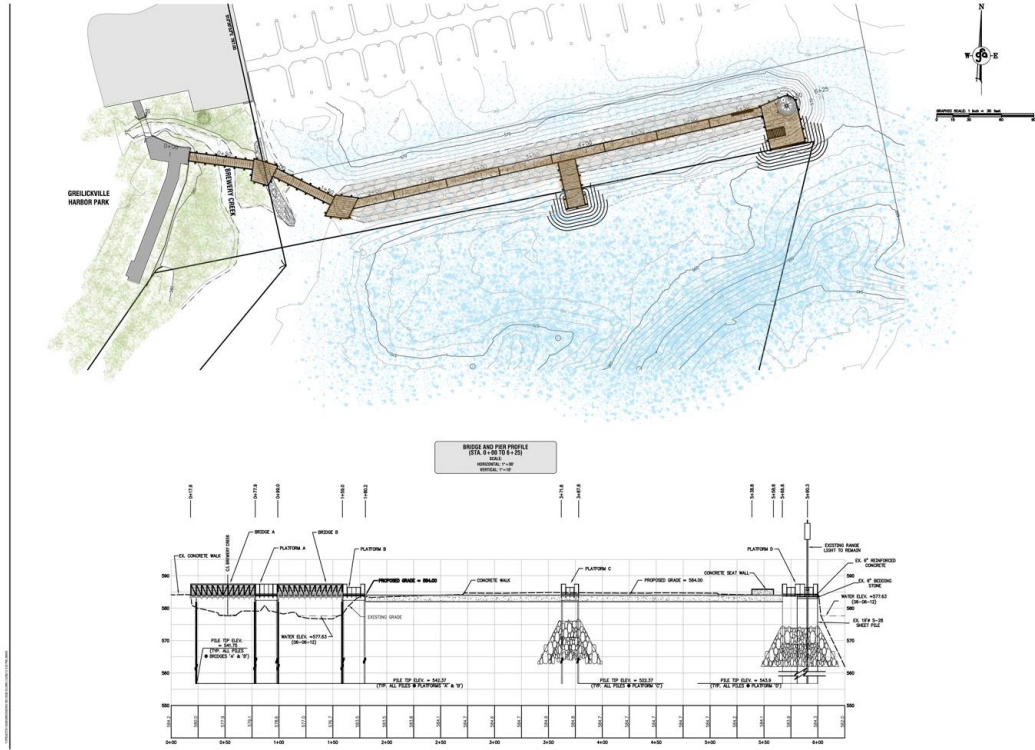
DEQ permit applications to install these fish shelters, one application for each of the five lakes, were submitted to DEQ on March 8th and the permits were received on June 1, 2012. A team of about 20 volunteers were involved in obtaining the written permission checks from property

II-B.4 - Outcome 4, Final Design, Preferred Alternative and Associated Activities

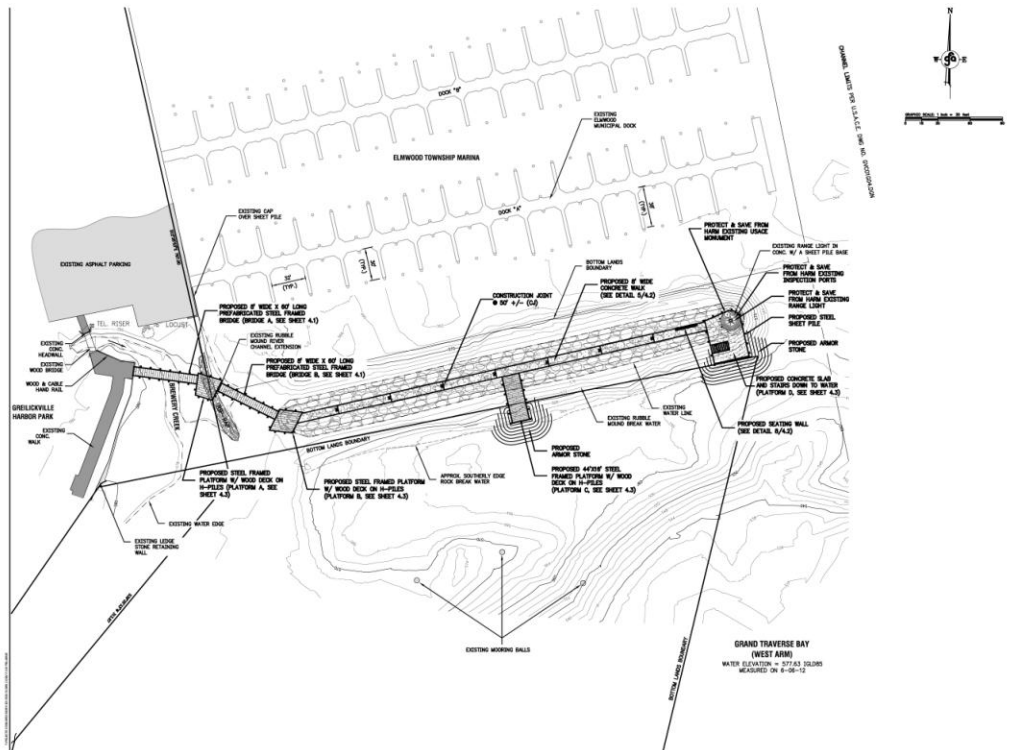
Please see figure on the following page.

Upon confirmation of the preferred alternative design by the township board in August, final plans and specifications were prepared.

Perhaps the most important outcome of this process is that the township now has a project plan with an estimated price tag. Now they can seek additional funding for construction for a project that will provide safe access to expand public access to the Grand Traverse Bay fishery.

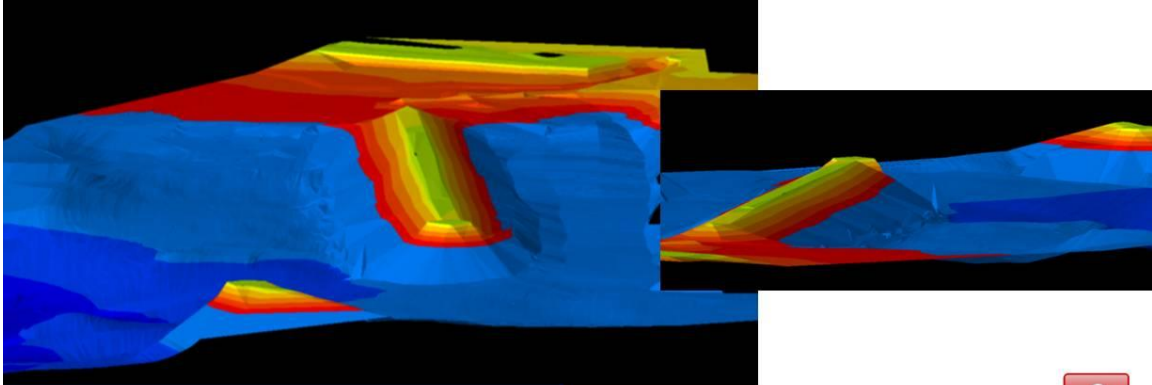


Final Design, Proposed Elmwood Township Public Fishing Pier



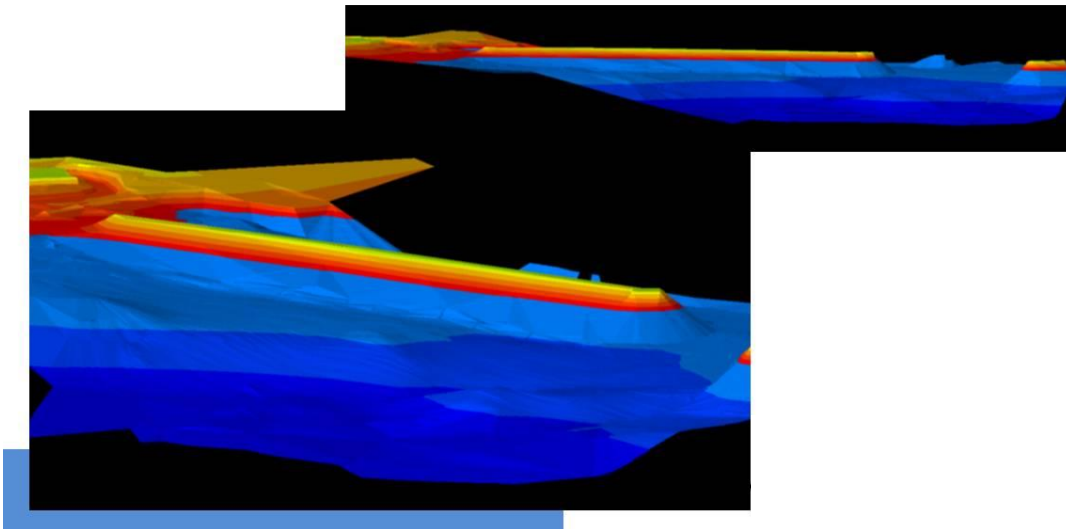
II-C. Site Specific Information

Bathymetric Survey



Elmwood Township Public Fishing Pier

Preliminary Design, Public Mtg #2

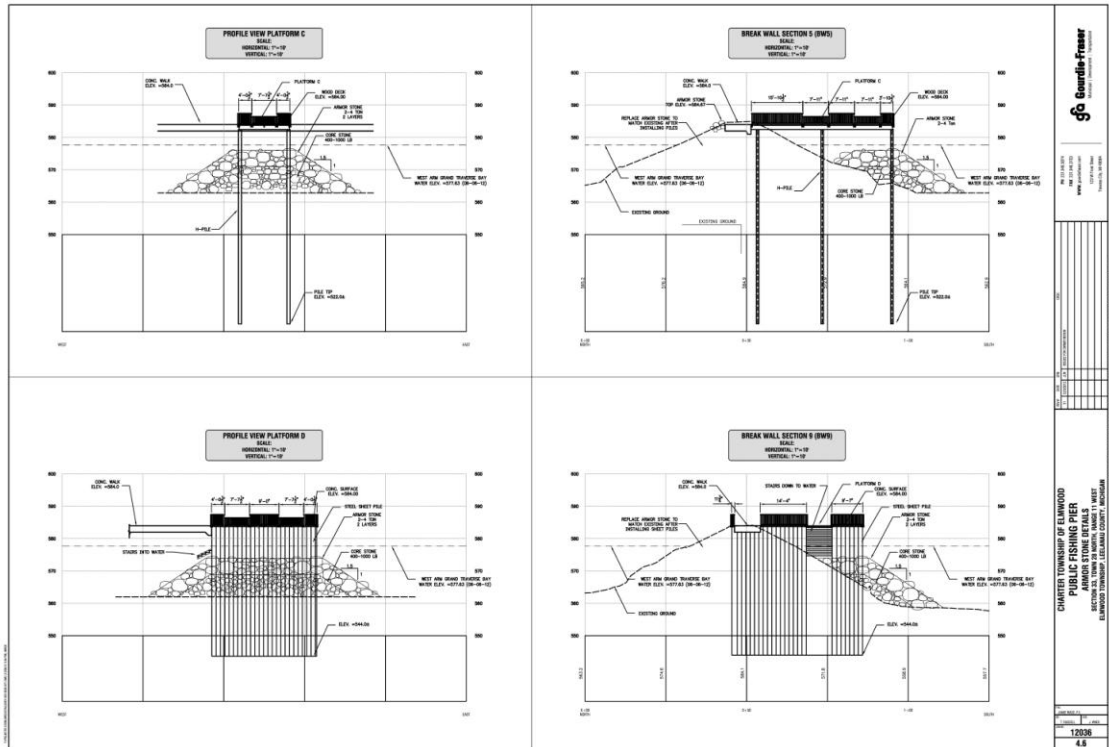


Prior to developing the plan set, our surveying team conducted a detailed bathymetric survey of the underwater elements. This gave us a clear picture of the breakwall and the bottom. This information was used to form the base map under the plan set.

The fishing pier access is from the Greilickville Harbor Park walkway system which is located immediately adjacent to and south of the Elmwood Township Marina and Boat Launch. The pier access begins with crossing Brewery Creek with a 60-ft long self supporting bridge to an observation/fishing platform; then crossing a small channel with another 60-ft long bridge to another observation/fishing platform at the west end of the south harbor wall. From there an 8-ft wide concrete walkway continues nearly 400 ft to the east



along the top of the existing rubble mound breakwater; ending at a concrete surface fishing/access platform roughly 32x36 feet in size. Approximately half way along the wall is another fishing platform that is roughly 16x46 feet in size. The depth of water at the fishing platforms ranges from only a few feet to over 17 feet at the current lake level of 577.6. Each of the platforms is designed with a hand rail and portions of that rail have been designed at a lower height to provide access to fisherman from a seated position.



Parking is available at the Greilickville Harbor Park and is within 400 feet of the fishing pier. Additional parking is available on the west side of M-22 at the recently acquired Brewery Creek Center property and is within a five minute walk.

Please see map on the following page.

This site will offer access for fishing whenever open water is present. Although our surveys demonstrated that a specific species is not expected, indeed most people seem happy just to the experience whatever the catch, one should expect to be able to catch panfish, bass, pike and salmon from the pier.

The MDNR has stocked Brown Trout in Brewery Creek, which flows under the access bridge connected to this pier as recently as the spring of 2011. We also know that salmon regularly migrate through this area.



II-D. Pictures – Site Photos

We have included a full plan set on a fileshare (please see the cover letter for the link), as well as additional project area photos. Unfortunately, since the project has not yet been constructed, we do not have final photos.



View of the future bridge area from the shore to the breakwall



View of the bottom from out on the breakwall



On the breakwall, looking out into the bay

II-E. Related Efforts

The fishing pier is part of a list of projects and improvements in Elmwood Township that focuses on redefining the area as a destination place. The township is currently in the planning process of redeveloping the marina to better suit everyone's needs. Current township projects are at various stages of development, including:

- A new township master plan update
- A township rec plan update

- A M-22 corridor sub-area plan
- A marina master plan (completed) and an associated phased renovation plan
- The defunct Norris School building, to the north of the marina area, may be renovated as an area arts center

Appendix

A-1. Public Education & Survey Materials

A-2. Financial Documentation



NEW TOWNSHIP FISHING PIER

**Please fill out
our survey card,
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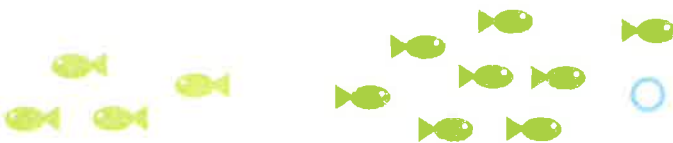
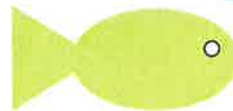
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Please

help

us!



SMITHGROUP JJR

www.elmwoodtownshipmarina.com

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Morning Afternoon Evening Weekdays Weekends Spring Summer Fall

2) Who will fish with you? (Circle all that apply.)

I'll fish alone or with one other adult. Sm. Family (1-2 children) Lrg. Family (3+ children)

3) If you are planning to fish with children at the pier, what are their ages? (Circle all that apply.)

Under 5 5-10 years 11-14 years 15 years +

4) What fish species are you targeting? (Circle all that apply.)

No preference Panfish Smaller sportfish Larger sportfish

You're almost done! Please see the back~



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Survey! New Elmwood Township Fishing Pier

6) How will you handle your catch?

Catch and release Clean a few at home Clean all keepers

7) How far will you be driving to reach the fishing pier?

Less than 10 miles 10-25 miles 25-50 miles 50 miles+

8) Other comments? _____

Thank you for your time!

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Elmwood Fishing Pier Public Input Meeting 2

Sightline Analysis

by Heather Brady on 13 July 2012 • 20  Like  Tweet

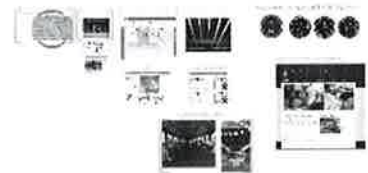
Comments (0)

Add comment

0 characters used (of 300 allowed). [Comment](#)

Your recent prezis

Harrison Kitchen Incubator Project



Elmwood Township M-22 Corridor, 2012



This prezi will give you an overview of current and future Township planning projects for the M-22 corridor.

[See all of your prezis](#)

Elmwood Township

VOTER INFORMATION

FISHING PIER DESIGN SURVEY

Planning Commission Meeting Agendas

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BUDGET

Special Assessment Districts

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[Townships and Villages](#)>[Elmwood](#)>FISHING PIER DESIGN SURVEY

Fishing Pier Survey

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<http://www.surveymonkey.com/s/95QYG9M>

This survey will be open for comment until Friday July 31. Please visit this site after July 12 for more detailed design information.

This page last updated on 6/29/2012.

This site is supported by the Leelanau County Board of Commissioners, participating agencies, and the community.

***The Leelanau County Government Center is located at:
8527 E. Government Center Dr., Suttons Bay MI 49682
Toll Free Phone # 1-866-256-9711***