

June 22, 2007
200238

Mr. Jack Hubbard, Supervisor
Burt Township
P.O. Box 430
21837 Grand Marais Avenue
Grand Marais, MI 49839

RE: Grand Marais Sea Wall

Dear Mr. Hubbard:

This letter is prepared in response to your request on March 30, 2007. It is our understanding that you are interested in constructing a sea wall to replace the existing pile dike sea wall which has collapsed. Previously, a report was prepared regarding this project dated 1 December, 2000, by Dr Guy Meadows and Dr. Lorelle Meadows with the University of Michigan Ocean Engineering Laboratory. We participated in providing engineering data and cost estimating for that report.

After meeting with you and others at Grand Marais on June 9, 2007, a fourth option was proposed for construction of the wall in addition to the three options which are contained in the earlier report. The fourth option would reconstruct the wall along the original wall alignment taking advantage of the rock which is still present. This rock could serve as a partial base for the reconstructed wall. Because so much of the bay has been filled in with drifting sand, the reconstructed wall would be turned toward the shore and terminated short of its original easterly end.

Because the bay has been filling with sand, only sketchy data is available regarding the present depth of water where the wall would be constructed under any of the four options. For that reason, we recommend that a preliminary design be prepared which would include above water and below water surveys to determine the exact location, depth and estimated cost of construction for the wall. Once the wall is constructed, some of the sand which has been filling the bay could be excavated and discharged on the lakeward side of the new wall. It will probably be necessary to excavate sand from the harbor mouth on an annual basis to keep the harbor open.

Another consideration is the location of the mouth of the Sucker River which discharges into the bay. It is our understanding that you desire to maintain the river mouth on the bay side of the sea wall. Some rock armour may be necessary to prevent the river from meandering out to Lake Superior east of the reconstructed wall.

- **Construction**

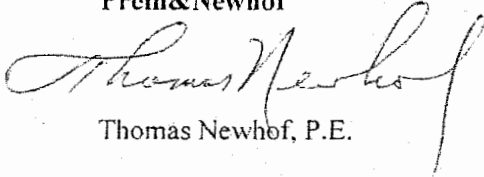
This work would be done by a qualified marine contractor after receiving bids and awarding a contract. It is estimated that the work would require at least one full construction season depending on the volume of rock to be placed. It is possible that two seasons may be necessary to complete the work. We would provide construction observation as necessary or as you desire during the construction.

We understand that time is of the essence with this project because of the rapid rate at which the West Bay is filling with sand. We expect that the work described above will require approximately 90 to 120 days. It is desirable to complete the underwater work this summer, if possible. The permit applications would be submitted near the end of the preliminary design period. It is anticipated that construction could start in 2008 if adequate funding is available.

Thank you for the opportunity to prepare this Preliminary Design Proposal for you. We are looking forward to the opportunity to work with you on this interesting project.

Sincerely,

Prein&Newhof



Thomas Newhof, P.E.

TN/mvk

cc: Dr. Guy Meadows, University of Michigan
Dr. Lorelle Meadows, University of Michigan
Mark Lee, P.E., Prein&Newhof

Date: Thu, 28 Jun 2007 17:11:28 -0400 [05:11:28 PM EDT]
From: "Newhof, Tom" <TNewhof@preinnewhof.com>
To: jhubbar2@jamadots.com
Cc: "Lee, Mark" <MLee@preinnewhof.com>
Subject: Grand Marais

COPY

Hi, Jack,

I've been out at a conference for a few days but I thought I should add a few comments to the letter which I sent to you last week.

First, regardless of whether you accept our proposal, I think it would be to your advantage to send in a FOIA request for the Corps' files. Then you will have copies of the past records and the current work that has been accomplished. If they have the information and you can get it, you would not need to replicate it. And your cost to get it would be minimal.

Secondly, our fees would only apply to the work that is authorized by you. Following is a breakdown of our estimated costs related to the work described in my proposal. If any of this work has been completed and can be used, you would not have to pay to repeat it.

1. Under water survey
\$5,000
2. Jet borings
15,000
3. FOIA request
0
4. Soil borings
25,000
5. Aerial topographic maps
15,000
6. Preliminary design
5,000
7. Application for permits
10,000
8. Cost estimates
5,000
9. Preliminary Design Report
5,000
10. Contingencies
10,000