

**From:** Paul Pottle PPottle@fstinc.com  
**Subject:** Islesford Pier Extension drawings and Construction Cost Estimate  
**Date:** 14 January 2016 at 3:53 PM  
**To:** james@cranberryisles-me.gov  
**Cc:** PHarrington@fstinc.com

PP

Jim;

Attached you will find the plans and a construction cost estimate for the pier extension at Islesford. The plans show a couple of different options for a wave barrier built into the pier, with one using sheathing only and the other using a combination of piles and sheathing, much like it is today. Along with those alternatives, there are a couple that show solid fill under the pile supported pier that we should be able to have permitted. Please note that neither of these fill options will bring the fill up to the high water mark, but the laid up granite should be able to get close to mid tide (+5' MLLW) and the heavy riprap will get to the normal low water and maybe slightly above (+1' MLLW). Both will give you better protection from swells and both will not let the waves just pass under the wave fence, which can happen during the lower tides.

Along with the wave barrier and fill options, you will see a detail for a rock socket for the piles. Without any geotechnical information and limited information on how deep previous piles were driven, we have had to make an assumption on how pile installation may go. As a minimum, we need to get 5 to 6 feet into good bottom material and we are hopeful that we will get as much as 15 feet of penetration. If we cannot get the 5 to 6 feet of penetration, we will need to install pile sockets for those piles. The sketch will tell the contractor what the expectation is. In order to get a realistic price for this option, should it be needed, we may want to tell the contractor that a couple are expected to be required and are included in the base bid price for the work. We can discuss this further when you are ready to go out to bid.

As for the estimate, I have put together a base price without the wave barrier and solid fill costs included. Basically, that price is \$400,000. Prices were obtained from a local marine contractor in Rockland and could be a little better when done in a bidding environment. I am using 12 weeks for construction, but that also could be a little shorter, but much will depend on when the work is planned and how much other vessel traffic is in the area. To get a total cost of the project, you will need to add in one of the wave barrier options as well as one of the solid fill options (if you still want one) and I would plan on 2 pile sockets for funding purposes and hope that you do not need to use any.

Lastly, you will need to plan on the cost associated with permitting the project and that will partially depend on whether you want to try for the solid fill. I will have a price soon for the permitting including what it will take to cover the solid fill. Along with permitting costs, you should plan on some construction support costs from Stantec. I would hope to be on site at least for a day or two while the piles and fill are being installed and should check on the progress a couple of other times as a minimum. If DOT provides any of the funding, they will insist on some coverage by the designer and will want you to have someone local do day to day observation and documentation. It is usually safe to estimate around 5% to 6% of the construction costs for this effort (especially if doing fulltime), assuming that some of this is done with someone who is more local. If you wanted Stantec to provide someone on a fulltime basis during construction, it would cost approximately \$750 per day plus expenses for an inspector or assistant engineer. You can plan on something closer to \$1,000 per day for me plus expenses.

I trust this provides you with what you need for providing information to everyone before the annual town meeting. As we discussed, we are drafting a bid book based on the DOT requirements and will need to discuss some of your desires about which efforts and timing before we can finish that aspect of this project. Once people have had an opportunity to review the plans, let me know what there might be for questions or changes. We can make changes to the drawings before going out to bid

once running is secured.

Paul

**Paul D. Pottle**

FST, now Stantec

778 Main Street, Suite 8, South Portland, ME 04106

Cell: 207-274-0574

Phone: 207-775-1121 EXT 4105

Fax: 207-879-0896

[PPottle@fstinc.com](mailto:PPottle@fstinc.com)



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