



**Housing Trust Fund Corporation / Governor's Office of Storm Recovery
Stone Materials for the Construction of the Living Breakwaters Project
Request for Information
Issued on December 12, 2017**

1. Invitation and Terms

The Governor's Office of Storm Recovery ("GOSR") of the Housing Trust Fund Corporation ("HTFC") invites responses to this Request for Information ("RFI") from qualified firms to source, manufacture, store, and deliver specially designed stone materials for the Living Breakwaters Project ("the Project"). This RFI is intended to determine whether there is sufficient market interest and capability to proceed to a competitive bidding process. In the event there is sufficient interest and capability in this requirement, GOSR may, but is not obligated to, initiate a competitive bidding opportunity through an authorized procurement method in accordance with the Procurement and Contract Guidelines of GOSR and in compliance with [Section 2879a of the New York Public Authorities Law](#).

Information that any interested party wishes to submit as part of a response will be submitted voluntarily, and with the understanding that this RFI is for information gathering purposes only; it is not an offer. No contractual relationship will be automatically generated between the Respondent and GOSR or the State of New York by responding to this request.

GOSR will not be liable for any costs incurred by any Respondent pertaining to the preparation and submission of any written response. GOSR may use information resulting from this RFI process and/or request to meet with Respondents following the RFI submission deadline. All materials submitted in response to this RFI shall become the property of GOSR. RFI submissions are subject to disclosure under the under Public Officers Law Section 87 ("Freedom of Information Law Act").

Respondents to this RFI will not be precluded from responding to any future competitive bidding opportunity, and will not be given any additional consideration over vendors who have not submitted a response to this RFI.

Since this RFI does not constitute a procurement, the restricted period under State Finance Law Sections 139j and 139k (the Procurement Lobbying Law) is not applicable. However, any future procurement resulting from the RFI will be subject to all applicable requirements.

GOSR, in its sole discretion, reserves the right, without liability, to modify and/or to cancel this RFI at any time without explanation, and/or to modify or waive any requirements contained in the RFI, if it determines that doing so is in the best interest of the State of New York.

2. Who May be Interested

GOSR encourages a broad range of Respondents to submit responses. Potential Respondents or joint venture partnerships to this RFI may include but are not limited to: manufacturers, suppliers, providers and all other sources.

3. Background and Purpose

The Living Breakwaters is a project which has been funded by the U.S. Department of Housing Preservation and Development and is being administered by the NYS Governor’s Office of Storm Recovery. At the current design stage of preliminary 60%, the project includes a system of 9 breakwaters to be constructed off shore at the southern tip of Staten Island near Tottenville’s Conference House Park (see figure below). The ecologically enhanced breakwater system is designed to reduce wave energy at the shoreline and prevent or reverse shoreline erosion while creating hard/structured marine habitat. The 9 breakwaters range in length from approximately 300 to 450 feet and are located between 790 and 1,200 feet from shore. The breakwaters would be primarily constructed as rubble mound structures with a stone core, outer armor layers consisting of armor stone, and bio-enhancing concrete armor units with marine mattresses to prevent settling and scour. The breakwater structures would occupy approximately 495,900 square feet (approximately 11.4 acres) on the bottom of Raritan Bay and include the placement of a total of approximately 3.45 million cubic feet of stone structures (in-place volume) plus approximately 256,700 cf of narrowly graded (D50=4”) rock to be used in marine mattresses. See Section 7 for a summary of the anticipated technical requirements, quantities, and specifications of the stone materials required.



There are no piers, docks, or public boat access points immediately adjacent to the project area. GOSR expects that the Project will be constructed through waterside access only and thus, will have a minimal impact to the land properties in the project area during construction. While the means of access to the site are not limited, marine access is preferable. It is anticipated the Respondent will be able to deliver material either directly to the site via water or to a local off-site staging area to be determined prior to construction.

The purpose of this RFI is to seek information on the availability of qualified firms who have the essential capabilities to source, manufacture, store, and deliver stone materials to the project site or local off-site staging

area. The type and variety of stone materials shall conform to the sizes, weight, shape, density, and durability tests described in Section 7. The delivery of stone material is anticipated to occur in sequences to accommodate a construction schedule that will last over one year. Extended project work stoppages will be required to address seasonal environmental regulatory requirements. As such, Respondents to this RFI should demonstrate the capability to store, access, and deliver the material in sequences, over an extended timeframe.

Respondents to this RFI should review the New York State Action Plan for CDBG-DR and all amendments thereto, as well as all Federal Register notices related to the CDBG-DR funds. The Action Plan and all amendments are located on the GOSR website at <http://stormrecovery.ny.gov/funding/action-plans-amendments>.

4. RFI Submission

4.1. Submission Details

- 4.1.1. Any inquiries related to this RFI must be sent electronically, with the subject line “RFI Inquiry – Living Breakwaters Project” to GOSRprocurement@stormrecovery.ny.gov.
- 4.1.2. Response submission must be in pdf file and sent electronically, with the subject line “RFI Submission – Living Breakwaters Project” to GOSRprocurement@stormrecovery.ny.gov.
- 4.1.3. Response submission must be delivered by email no later than the Response Submission Deadline and time indicated in Section 6. GOSR reserves the right to accept late responses at its sole discretion.

5. RFI Submission Content

5.1. Responses should be provided in the following format.

- 5.1.1. Contact information, including the legal name of the Respondent, business address, phone number, email address, and point of contact.
- 5.1.2. A brief letter of introduction, including a capability statement and three (3) examples of comparable previous or current projects.
- 5.1.3. Description of capability to produce, store, access, and deliver materials over an extended construction schedule.
- 5.1.4. Documentation on the compliance of the available materials with the requirements of this Project as described herein and listed in Section 7.
- 5.1.5. Any material testing results performed within the last five (5) years as described in Section 7.
- 5.1.6. Unit price range for each material gradation per type volume and weight with an add/deduct unit cost for additional or less material, or an alternate pricing structure. If published price list exists, please include it in your submission.
- 5.1.7. Estimated schedule and means and methods for mobilization and delivery.
- 5.1.8. Recommendations and technical suggestions.

6. RFI Timeline and Schedule

Target Date	Event
December 12, 2017	Issuance of RFI
December 18, 2017	Non-Mandatory Conference Call Call in number: 1-844-633-8697 Access code: 959 449 36
January 5, 2018	Question Submission Deadline – 12:00 p.m. (Eastern)
January 12, 2018	Issuance of Answers to Questions (tentative)
January 31, 2018	Response Submission Deadline – 12:00 p.m. (Eastern)

7. Specifications

The following information summarizes the anticipated technical requirement for the breakwater stone material. Requirements may change based on additional analysis forthcoming during the final design phase. This document shall not be used for bidding purposes.

7.1. Evaluation Testing of Stone

The following technical data shall be available to verify that proposed stone materials conform to the technical requirements detailed below. The tests for which documentation shall be available include petrographic examination (ASTM C 295), bulk specific gravity (SSD), unit weight, absorption (ASTM C 127), resistance of stone to freezing and thawing (COE CRD-C144, ASTM D 5312), and if argillaceous limestone and sandstone are used, resistance to wetting and drying (COE CRD-C 169, ASTM D 5313). If such tests have not been performed to date, the Contractor shall undergo these tests for the Project. The laboratory to perform the required testing shall be validated based on relevant paragraphs of ASTM D 3740, and no work requiring testing shall be permitted until the laboratory has been inspected and validated.

1. Bulk Specific Gravity Range. All stone shall have a minimum bulk specific gravity, saturated surface dry (SSD) of 2.55 and a maximum bulk specific gravity of not more than 2.90 based upon water having a unit weight of 62.4 pounds per cubic foot. The method of test for bulk specific gravity (SSD) shall be ASTM C 127.
2. Unit Weight and Absorption. Stone shall weigh more than 155 pounds per cubic foot, have a bulk specific gravity, saturated surface dry, greater than 2.60. The stone shall have an absorption less than 2 percent unless other tests and service records show that the stone is satisfactory. The method of test for unit weight and absorption shall be ASTM C 127.
3. Petrographic Examination. Stone shall be evaluated in accordance with ASTM C 295 which shall include information required by ASTM D 4992, paragraph 10. COE CRD-C 148 shall be used to perform Ethylene glycol tests required on rocks containing smectite as specified in ASTM D 4992 and on samples identified to contain swelling clays.

4. Resistance to Freezing and Thawing. Stone shall have a maximum loss of 5 percent after the number of cycles specified in ASTM D 5312, Figure 1, when determining the durability of stone when subjected to freezing and thawing in accordance with COE CRD-C 144, ASTM D 5312, except the surface area of one side of the sample shall be between 144 and 2304 square inches.
5. Resistance of Rock to Wetting and Drying. Stone shall have a maximum loss of 1 percent when determining the durability of stone when subject to wetting and drying in accordance with COE CRD-C 169, ASTM D 5313, except the surface area of one side of the sample shall be between 144 and 2304 square inches.
6. The maximum aspect ratio (greatest dimension to least dimension) of any piece of stone for size ranges which are not graded with a screen or grizzly, shall be not greater than 3:1 when measured across mutually perpendicular axis. Not more than 25 percent (25%) of the stones within a gradation range shall have an aspect ratio greater than 2.5:1. A maximum of 5 percent flat and elongated pieces by weight will be acceptable. A flat and elongated piece of stone is defined as having a ratio of width to thickness or length to width greater than 3:1. ASTM D 4791 shall be used as a guide to perform the test.

7.2. Acceptable Stone Material

Acceptable stone materials for all breakwater stone elements shall be as follows:

- Granite
- Quartzite
- Basalt
- Diabase
- Dolomite

7.3. Summary of Anticipated Stone Gradations

1. Breakwater Armor Stone. The stones furnished for breakwater armor stone shall be free of fines, narrowly graded, and weigh between 1.6 tons and 2.5 tons each. Fifty percent (50%) of the stones shall weigh greater than 2 tons each. Equivalent diameters would be $D_{min} = 37$ in., $D_{50} = 40$ in., $D_{max} = 43$ in.
2. Breakwater Toe Armor Stone. The stones furnished for the breakwater toe armor stone shall be free of fines, narrowly graded, and weigh between 2.2 tons and 5.2 tons each. Fifty percent (50%) of the stones shall weigh greater than 3.5 tons each. Equivalent diameters would be $D_{min} = 41$ in., $D_{50} = 48$ in., $D_{max} = 55$ in.
3. Breakwater Core Stone. The stones furnished for breakwater core stone shall be free of fines, widely graded, and weigh between 60 lbs and 670 lbs each. Fifty percent (50%) of the stones shall weigh greater than 210 lbs each. Equivalent diameters would be $D_{15} = 10$ in., $D_{50} = 16$ in., $D_{95} = 22$ in.
4. Reef Ridge Armor Stone. The stones furnished for reef ridge armor stone shall be free of fines and weigh between 200 lbs and 1.5 tons each. Fifty percent (50%) of the stones shall weigh greater than 870 lbs each. Equivalent diameters would be $D_{15} = 15$ in., $D_{50} = 24$ in., $D_{100} = 36$ in.
5. Reef Ridge Toe Armor Stone. The stones furnished for the reef ridge toe armor stone shall be free of fines, narrowly graded, and weigh between 2.2 tons and 5.2 tons each. Fifty percent (50%) of the stones shall

weigh greater than 3.5 tons each. Equivalent diameters would be Dmin = 41 in., D50 = 48 in., Dmax = 55 in.

6. Reef Ridge Core Stone. The stones furnished for reef ridge core stone shall be free of fines, narrowly graded, and weigh between 870 lbs and 1.5 tons each. Fifty percent (50%) of the stones shall weigh greater than 1,700 lbs each. Equivalent diameters would be Dmin = 24 in., D50 = 30 in., Dmax = 36 in.
7. Marine Mattress Ballast. The stones furnished for the marine mattress shall be free of fines, narrowly graded, and sized according to the following: Dmin = 1.5 in., D50 = 4 in., Dmax = 7 in.

7.4. Summary of Anticipated Material Quantities

Material Type	Total Approx. Volume (ft³)	Total Approx. Weight (tons)
Breakwater Armor Stone	1,498,100	77,800
Breakwater Toe Armor Stone	157,900	8,200
Breakwater Core Stone	1,488,900	77,400
Reef Ridge Armor Stone	57,500	3,000
Reef Ridge Toe Armor Stone	99,200	5,200
Reef Ridge Core Stone	150,500	7,800
Marine Mattress Ballast	256,700	13,400