



TOWN OF  
**NORTH KINGSTOWN, RHODE ISLAND**

DEPARTMENT OF PUBLIC WORKS  
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**May 4, 2016**  
**ADDENDUM #2**

**INVITATION FOR BIDS**  
**BOAT RAMP, ALLEN HARBOR**

1. Geotechnical Boring: The means and methods of the installation of the precast concrete boat ramp is the contractor's responsibility. The work can be performed in a wet condition or in a dry condition. If the work is to be performed in the dry condition, the contractor will be required to submit a cofferdam design prepared by a licensed engineer and a dewatering plan for approval by the town.

A soil boring was performed at the location of the existing ramp for the benefit of the bidders and has been included in this addendum for review along with a geotechnical executive summary. It is intended as a representation of the soil strata in the boring's location. Bidders may coordinate additional borings with the Town at their own expense upon request.

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# Geotechnical Investigation Executive Summary

Allen Harbor Marina

24 Bruce Boyer St

North Kingstown, RI, USA

May, 2016

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*Prepared by:*



**HARBOR ENGINEERING, LLC**  
*Waterfront Planning, Permitting & Design*

## 1.0 Introduction

*Harbor Engineering, LLC (HARBOR)* was contracted by *the Town of North Kingstown (OWNER)* to perform a geotechnical investigation to provide soil characteristics to contractors bidding the Allen Harbor Boat Ramp Project located at *26 Bruce Boyer St, North Kingstown, RI (SITE)*. The bid involves replacement of the concrete boat ramp at the **SITE**. The bidders may choose to perform the work in the wet, or install a cofferdam and dewatering system to perform the work in the dry. If the work is performed in the dry condition, a cofferdam design and dewatering plan will need to be submitted to the **OWNER** for approval. The information gathered by this effort may be useful to the contractor in determining the cost of the design, installation and maintenance of the cofferdam and dewatering system.



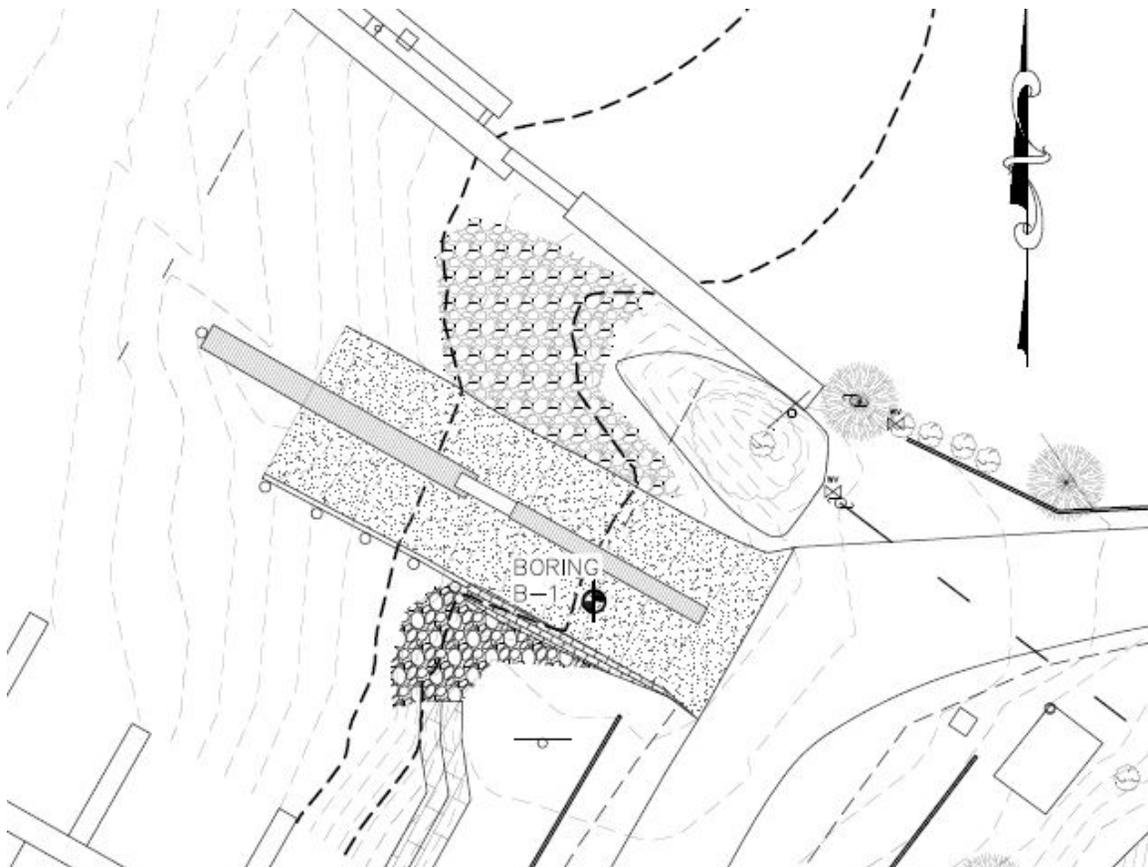
**PHOTO 1: Aerial Photograph of the SITE**

## 2.0 Field Investigation Methodology

The location of the single proposed boring was chosen to be accessible by a truck mounted drill rig and within the footprint of the proposed ramp. *ALLSTATE DRILLING CO (ALSTATE)* utilized a truck-mounted drill rig to identify subsurface strata and retrieve samples for soil identification. The exact location of the boring was moved to a spot in the ramp that did not have any concrete on the surface for ease of drilling. The concrete

surrounding the bare spot was 6” thick. No other locations were measured for concrete thickness.

At the boring location, an auger was drilled in 5 ft increments into the subsurface material by the drill rig. Once the auger was drilled to a depth of 5 ft, a 2” diameter split spoon sampler was then driven using the *Standard Penetration Test (SPT)* beginning at the bottom of the auger and driven a total of 2 ft (or to refusal) and used to retrieve material samples. The driller recorded the ‘blow counts’ (the number of hammer drops onto the top of the sampler **SPT<sub>n</sub>**) in four (4) six-inch increments. The density/resistance of the soil and other properties can be estimated by the contractor and his engineer using the **SPT<sub>n</sub>** and the driller’s description of the soil. This information is necessary to properly design a cofferdam and dewatering plan.



**FIGURE 1: Boring location**

### **3.0 Soil Conditions**

One single boring was performed at one location and the information gathered can only be considered representative of this boring location. The contractor may coordinate with the town to perform additional borings upon request at his own expense.

The depth of concrete in Boring B-1 was 6" (refer to the attached driller log) with a fine to medium dark gray sand with some silt below the slab. The investigation was performed to a depth of 27 feet. The subsurface material varies slightly in its recorded description by depth with blow counts ranging from 40 to 89 BPF as seen in the driller's log.



**PHOTO 1: ALLSTATE auguring at Boring B-1 location**

#### **4.3 Limitations**

Geotechnical engineering is not an exact science and its accuracy is limited to the number of borings completed. The location and number of borings chosen by **HARBOR** was based on its experience and budget allocated by the **OWNER**. The nature and extent of variations in soil strata and their characteristics between boring locations is uncertain and will not become evident until construction. If variations appear during construction, it will be necessary for the **OWNER** and/or its selected contractor to provide such information to **HARBOR** so it may have the opportunity to reevaluate its recommendations and subsequent design efforts.

ALLSTATE DRILLING COMPANY  
 227 WAMPANOAG TRAIL  
 RIVERSIDE, RHODE ISLAND 02915  
 (401) 434 7458

# LETTER OF TRANSMITTAL

TO TOWN OF NORTH KINGSTOWN  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DATE	05/03/16	JOB NO.	Y-405
ATTENTION	PHIL BERGERON		
RE:	ALLENS HARBOR BOAT RAMP		
	24 BRUCE BOYER STREET		
	NORTH KINGSTOWN, RI		

> WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:

- Shop drawings       Prints       Plans       Samples       Specifications  
 Copy of letter       Change order       \_\_\_\_\_

COPIES	DATE	NO.	DESCRIPTION
1	05/02/16		BORINGS: B-1

THESE ARE TRANSMITTED as checked below:

- For approval       Approved as submitted       Resubmit \_\_\_\_\_ copies for approval  
 For your use       Approved as noted       Submit \_\_\_\_\_ copies for distribution  
 As requested       Returned for corrections       Return \_\_\_\_\_ corrected prints  
 For review and comment       \_\_\_\_\_  
 FOR BIDS DUE \_\_\_\_\_ 20 \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS \_\_\_\_\_  
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COPY TO \_\_\_\_\_

SIGNED: GEORGE J. GEISSER, III

