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Civil / Municipal Engineering  
Site Plan and Subdivision Design  
Surveying  
Land Use Planning  
Water and Wastewater Design  
Environmental Consulting  
Inspection / Construction Management

**TOWNSHIP OF GALLOWAY  
ATLANTIC COUNTY, NEW JERSEY**

**GRIST MILL PUMP STATION  
CONTRACT NO. 10**

**PROJECT ADDENDUM No. 2**

To: All Planholders:

In response to the questions our office has received regarding the various aspects of the above referenced project please accept the following responses in order to clarify the issues.

Please note the following changes to the contract documents for the above referenced project. The following addendum is hereby made part of the Bid Documents for the GRIST MILL PUMP STATION, CONTRACT NO. 10, as fully and completely as if the same were set forth herein.

A. The Bid Opening date of Thursday, February 28, 2019 as noted on Addendum No. 1 shall now be extended to Thursday, March 14, 2019 at 10:00 am at the same location.

1. *Question: What size is the feeder that is being extended from the control building to the in ground electrical junction box that is shown on page PS1?*

Response: The conductor feeds from the building to the in ground junction box shall be sized for submersible pump motors, per NEC, latest revision.

2. *Question: What size is the feeder that is being extended from the control building to the meter chamber manhole that is shown on page PS1?*

Response: No conductor feeds are to be provided from the building to the meter chamber manhole. Two sets of pull lines shall be provided in the conduit for the future installation of conductors.

3. *Question: What size is the feeder that is being extended from the control building to the chemical feed system that is shown on page PS1?*

Response: The conductor feeds from the building to the chemical feed system shall be sized to power the control unit per the manufacturer's recommendations.

4. *Question: Under Item No. 13 there is a discrepancy in the Linear Foot quantity as shown on page P-4 of the Proposal section and on page TS-30 of the Technical Specifications.*

Response: The quantity of 925 Linear Feet for Item No. 13 is correct.

5. *Question: Are there any soil borings to show the elevation of ground water?*

Response: A complete soil boring log is attached and made part of this Addendum No. 2  
Please acknowledge your receipt of this clarification by signing below and faxing this form to (609) 646-2949. Acknowledgement is required.

I acknowledge receipt of ADDENDUM No. 2 to Contract No. 10 as indicated above.

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Signature

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Print Name, Company Name & Date

## FIELD SOIL & ROCK CLASSIFICATION SYSTEM

Craig Testing Laboratories, Inc. uses the following definitions, abbreviations and terminologies to classify and correlate soil and rock samples in the field.

### Soil samples are described as follows:

USCS Group Name, USCS group symbol, color, state, moisture condition, fabric (fibrous, cemented, varved, lenses, Saprolite) and odor (hydrocarbon-like, organic, etc.)

### Rock cores are described as follows:

Type, color, hardness, degree of weathering, fracture spacing, quality, and if applicable: bedding thickness, relative dip and spacing of joints.

**UNIFIED SOIL CLASSIFICATION SYSTEM (USCS – ASTM D-2488) symbols and group names are:**

### SOIL PARTICLE SIZE IDENTIFICATION

	<u>Diameter</u>	<u>Sieve Retained</u>
Boulders	Greater than 12 inch	12"
Cobbles	3 to 12 inch	3"
Gravel	Coarse - 0.75 to 3 inch	¾"
	Fine - 4.75 mm to 0.75 inch	#4
Sand	Coarse - 2.0 to 4.75 mm	#10
	Medium - 0.425 to 2.0 mm	#40
	Fine - 0.075 to 0.425 mm	#200
Silt & Clay	Smaller than 0.075 mm	Passing #200

### MODIFIERS

<u>Description</u>	<u>Percent (by weight)</u>
Trace (tr)	1 – 4
With (w/)	5 – 12 (dual symbol)
Adjective (ly)	13 – 44
Borderline (/)	45 – 55

### COARSE GRAINED SOIL

GP or GW	Poorly or well graded gravel
GM or GC	Silty or clayey gravel
GP-GM	Poorly graded gravel with silt
GP-GC	Poorly graded gravel with clay
GW-GM	Well graded gravel with silt
GW-GC	Well graded gravel with clay
SP or SW	Poorly or well graded sand
SM or SC	Silty or clayey sand
SP-SM	Poorly graded sand with silt
SP-SC	Poorly graded sand with clay
SW-SM	Well graded sand with silt
SW-SC	Well graded sand with clay

### FINE GRAINED & ORGANIC SOIL

ML	Silt of low plasticity
CL	Clay of low plasticity
ML/CL	Clayey silt of low plasticity
CL/ML	Silty clay of low plasticity
MH	Silt of high plasticity
CH	Clay of high plasticity
MH/CH	Clayey silt of high plasticity
CH/MH	Silty clay of high plasticity
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OL	Organic silt/clay of low plasticity
OH	Organic silt/clay of high plasticity
PT	Peat and highly organic soil

**STANDARD PENETRATION TEST (SPT – ASTM D-1586)** - A 2.0" O.D. (1-3/8" I.D.) split barrel sampler is driven into undisturbed soil by means of a 140 pound weight hammer falling freely a vertical distance of 30 inches in 4 successive 6-inch increments, for a total drive of 24 inches (2 feet). The number of blows required for the middle 12 inches (1 foot) of penetration is the Standard Penetration Resistance (N).

### STATE – GRANULAR SOIL (Gravel & Sand)

<u>Density</u>	<u>Approximate N Values</u>
Very Loose	4 blows/ft or less
Loose	5 – 10 blows/ft
Medium Dense	11 – 30 blows/ft
Dense	31 – 50 blows/ft
Very Dense	51 blows/ft or greater

### STATE – COHESIVE SOIL (Clay & Silt)

<u>Consistency</u>	<u>Approximate N Values</u>
Very Soft	1 blow/ft or less
Soft	2 – 4 blows/ft
Medium Stiff	5 – 8 blows/ft
Stiff	9 – 15 blows/ft
Very Stiff	16 – 30 blows/ft
Hard	31 blows/ft or greater

### ABBREVIATIONS

Bn - Brown	Wh - White	WOH - Weight of hammer
Tn - Tan	Blk - Black	WOR - Weight of rods
Or - Orange	Gy - Gray	R - Sample recovery (inches)
Yl - Yellow	Lt - Light	NR - No recovery
Rd - Red	Dk - Dark	Misc - Miscellaneous
Gn - Green	Multi - Multi-colored	

### ROCK QUALITY DESIGNATION (RQD)

<u>RQD (%)</u>	<u>Description</u>
0 – 25	Very poor
26 – 50	Poor
51 – 75	Fair
76 – 90	Good
91 – 100	Excellent
(RQD: total length of pieces > 4" per attempted run length)	



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## FIELD TEST BORING LOG

**CLIENT** Polistina & Associates, LLC

**DATE** 2/25/2019

**PROJECT** Proposed Pump Station - 650 East Moss Mill Road - Absecon, NJ

**CTL No.** 918006 / 190050

**BORING NO.** B-1

**Sheet 1 of 2**

**ELEV.** 25.5±

Ground Water Data				Method of Advancing Boring		Depth
Depth	Hour	Date	Hrs. After Completion	Continuous Split Spoon		0' to 10'
				Mud Rotary		10' to 37'
7'6"	8:55am	2/25/2019	0			to
Depth	Sample			Stratum	Soil Classification	Remarks
	No.	Depth	Blows			
0	S-1	0'-2'	3-6-6-4		Poorly graded SAND w/silt (SP-SM) / bn, medium dense, moist	1" topsoil R=8"
	S-2	2'-4'	5-5-4-3		Poorly graded SAND w/silt (SP-SM) / tn, loose, moist	R=20", trace gravel
5	S-3	4'-6'	4-3-3-3		Poorly graded SAND w/silt (SP-SM) / tn, loose, moist	R=18", mottles
	S-4	6'-8'	3-4-8-9		Poorly graded SAND (SP) / tn, medium dense, moist to wet	R=18", mottles
10	S-5	8'-10'	11-10-15-13		Poorly graded SAND w/gravel (SP) / tn, or, medium dense, wet	R=24"
	S-6	10'-12'	9-18-14-13		Poorly graded SAND w/gravel (SP) / tn, dense, wet	R=8"
15	S-7	15'-17'	6-9-12-14		Poorly graded SAND w/clay (SP-SC) / tn, medium dense, wet	R=12"
20	S-8A	20'-21'6"	8-11-17		Poorly graded SAND (SP) / lt gy, medium dense, wet	R=12"
	S-8B	21'6"-22'	16		Poorly graded SAND w/clay (SP-SC) / tn, lt gy, dense, wet	
25	S-9	25'-27'	9-12-16-14		Poorly graded SAND w/clay (SP-SC) / tn, medium dense, wet	R=12"
30	S-10	30'-32'	6-7-10-13		CLAY (CL) / tn, very stiff, wet	R=20"

### Additional Remarks:

Elevation estimated from project site plan provided (NGVD1929).

Static groundwater observation was performed at the time of the subsurface investigation; groundwater levels can be expected to fluctuate throughout the year.

☐ S - 2" O.D. Split Spoon Sample    ☒ U - Undisturbed Sample, 3" Diameter    ☒ - Core Drilling    ☐ - No Recovery

Blows - Standard Penetration Resistance per 6"  
(140# Hammer, 30" drop)

Inspector K. Herman

Driller T. Ward

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## FIELD TEST BORING LOG

BORING NO. B-1

Sheet 2 of 2

CTL No. 918006 / 190050

Depth	Sample			Stratum	Soil Classification	Remarks
	No.	Depth	Blows			
35	S-11	35'-37'	5-7-10-10		CLAY (CH) / tn, very stiff, wet	R=18"
					Test Boring Completed @ 37'	
40						
45						
50						
55						
60						
65						
70						

☐ S - 2" O.D. Split Spoon Sample   
 ☒ U - Undisturbed Sample, 3" Diameter   
 ☒ - Core Drilling   
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Blows - Standard Penetration Resistance per 6"  
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