



Professional Service Industries, Inc.  
 16550 Scheer Blvd, Suite 1  
 Hudson, FL 34667  
 Eng Certificate Of Authorization 3684  
 Phone: (727) 868-9526  
 Fax: (727) 868-0094

# Material Test Report

**Report No: MAT:0390975-10-S1**

**Issue No: 2**

**Client:** LANG DEVELOPMENT  
 C/O PASCO EXCAVATING LLC,  
 18744 COUNTYLINE RD  
 SPRING HILL, FL 34610

**CC:** MARA HUNT  
 THERESA MCLAUGHLIN  
 THOMAS LANG

**Project:** PASCO MINE  
 SPRING HILL, FL

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Approved Signatory: James Kenney (Branch Manager)  
 Date of Issue: 10/4/2016

## Sample Details

**Sample ID:** 0390975-10-S1 **Lift:**

**Client Sample ID:**

**Date Sampled:** 08/23/16

**Sampled By:** William Morrison

**Specification:** AGSO Sec. 548 - Retaining Wall

**Supplier:**

**Source:** STOCKPILE

**Material:** Yellowish Brown Fine Sand

**Sampling Method:**

**Soil Description:** Yellowish Brown Fine Sand

**General Location:** STOCKPILE ONSITE MATERIAL

**Location:** SOUTH PILE AT ENTRANCE

## Particle Size Distribution

**Method:** AASHTO T 27, AASHTO T 11

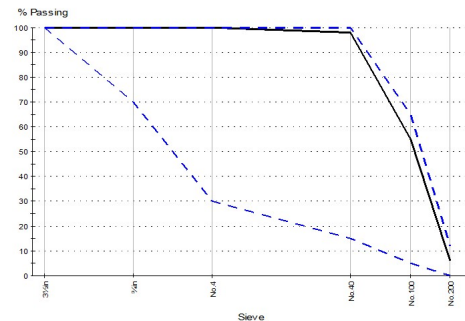
**Date Tested:**  
**Tested By:**

Sieve Size	% Passing	Limits
3/4in (90.0mm)	100	100
1/2in (19.0mm)	100	70 to 100
No.4 (4.75mm)	100	30 to 100
No.40 (425µm)	98	15 to 100
No.100 (150µm)	55	5 to 65
No.200 (75µm)	6.0	≤12

## Other Test Results

Description	Method	Result	Limits
Organic Content (%)	AASHTO T 267	0.20	
Liquid Limit (%)	AASHTO T 89-13	N/A	≤15
Plastic Limit (%)	AASHTO T 90-00	NP	
Plasticity Index	AASHTO T 90-00	NP	≤6
Tested By	William McGinn		
Date Tested	8/31/2016		
Maximum Dry Unit Weight (lb/ft³)	ASTM D 1557	108.8	
Corrected Maximum Dry Unit Weight (lb/ft³)		108.8	
Optimum Water Content (%)		11.5	
Corrected Optimum Water Content (%)		11.5	
Method		A	
Preparation Method		Dry	
Tested By	William McGinn		
Date Tested	8/30/2016		
pH	FM 5-550	6.90	5 to 9
Reading 1	FM 5-551		
Multiplier 1			
Resistivity 1 (ohm-cm)			
Reading 2			
Multiplier 2			
Resistivity 2 (ohm-cm)			
Reading 3			
Multiplier 3			
Resistivity 3 (ohm-cm)			
Min Resistivity (ohm-cm)			>3000
Drops	FM 5-552	1	
Chloride Ion (ppm)		60	<100
Meter	FM 5-553	48.4	<200
Sulfate Ion (ppm)		120.3	

## Chart



## Comments

NP = Non Plastic  
 Soil Classification: A-3