## SUMMARY OF LABORATORY TESTING

# ABC 123 IMPOUNDMENT

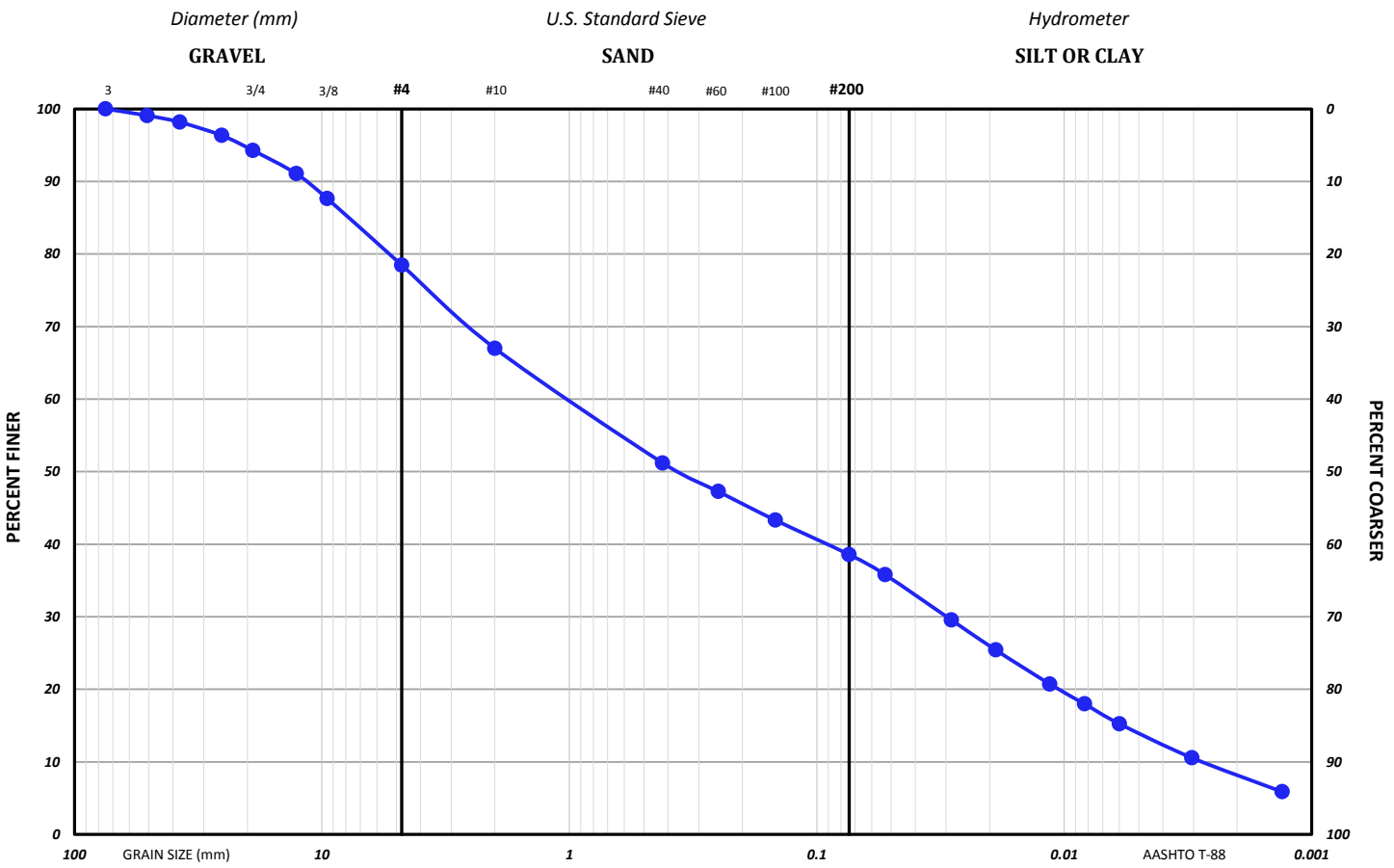
| | | | | |
|---|---|---|---|---|
| **PROJECT #:** | 1234567.89 | **SAMPLED:** | - | **JAY KAY TESTING** |
| **SAMPLES:** | 14 | **LOCATION:** | *Baltimore, MD* | 5233 Lehman Road, Suite 110 |
| **REPORT:** | 05/22/14 | **REMARKS:** | - | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

| BORING | SAMPLE | DEPTH | MC % | OM % | LL | PL | PI | % FINES | USCS |
|---|---|---|---|---|---|---|---|---|---|
| B-1 | Bulk | 0-5.0 | 15.4 | - | 35 | 20 | 15 | 38.6 | SC |
| B-1 | S-1 | 1.5-3.0 | 12.8 | - | 27 | 24 | 3 | 20.6 | SM |
| B-1 | S-2 | 3.0-4.5 | 13.4 | - | 32 | 27 | 5 | 96.3 | ML |
| B-1 | S-3 | 4.5-6.0 | 13.1 | - | 40 | 25 | 15 | 99.1 | CL |
| B-1 | S-4 | 6.0-7.5 | 12.4 | - | 46 | 22 | 24 | 94.1 | CL |
| B-2 | S-1 | 0-2.0 | 11.8 | - | 30 | 25 | 5 | 32.8 | GM |
| B-2 | S-2 | 2.0-4.0 | 13.9 | - | 28 | 20 | 8 | 54.1 | CL |
| B-2 | S-3 | 4.0-6.0 | 12.8 | - | 27 | 17 | 10 | 46.8 | SC |
| B-2 | S-4 | 8.0-10.0 | 15.1 | - | 31 | 22 | 9 | 32.1 | GC |
| B-3 | S-1 | 18.0-20.0 | 12.8 | - | 30 | 22 | 8 | 60.9 | CL |
| B-3 | S-2 | 23.5-25.0 | 13.1 | - | 36 | 22 | 14 | 44.9 | SC |
| B-3 | S-3 | 28.5-30.0 | 13.8 | - | 34 | 21 | 13 | 40.2 | SC |
| B-3 | S-4 | 33.5-35.0 | 12.4 | - | 42 | 25 | 17 | 85.1 | CL |
| B-4 | Tube | 23.5-25.0 | 13.8 | - | 24 | 17 | 7 | 57.0 | CL-ML |

Jay Kay Testing (AASHTO-Accredited)

## ABC 123 IMPOUNDMENT

| | | | | | |
|---|---|---|---|---|---|
| **BORING:** | B-1 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** | |
| **SAMPLE:** | Bulk | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 | |
| **DEPTH:** | 0-5.0 | **LOCATION:** | *Baltimore, MD* | Spring Grove, PA 17362 | |
| | | | | Phone: (410) 259-5101 | |




### GRAIN SIZE ANALYSIS

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Diameter* | 75.0 | 50.8 | 37.5 | 25.4 | 19.0 | 12.7 | 9.51 | 4.76 | 2.0 | 0.42 | 0.25 | 0.147 | 0.074 |
| *Sieve Size* | 3" | 2" | 1.5" | 1" | 3/4" | 1/2" | 3/8" | #4 | #10 | #40 | #60 | #100 | **# 200** |
| *% Passing* | 100.0 | 99.1 | 98.2 | 96.3 | 94.3 | 91.1 | 87.6 | 78.5 | 67.0 | 51.2 | 47.3 | 43.3 | **38.6** |

| % GRAVEL | % SAND | Coarse Gravel | Fine Gravel | Coarse Sand | Medium Sand | Fine Sand | CC | CU |
|---|---|---|---|---|---|---|---|---|
| **21.5** | **39.9** | 5.7 | 15.8 | 11.5 | 15.8 | 12.6 | - | - |

| | | | |
|---|---|---|---|
| Moisture Content | 15.4 | Organic Content | - |
| pH | - | Other | - |

### ATTERBERG LIMITS

| | |
|---|---|
| Liquid Limit | 35 |
| Plastic Limit | 20 |
| Plasticity Index | 15 |

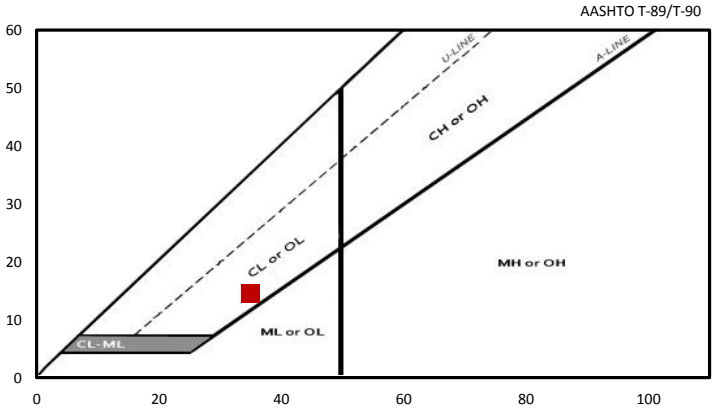
### CLASSIFICATION

| | |
|---|---|
| AASHTO | A-6 |
| USCS | SC |

### SOIL DESCRIPTION

Brown clayey SAND with gravel

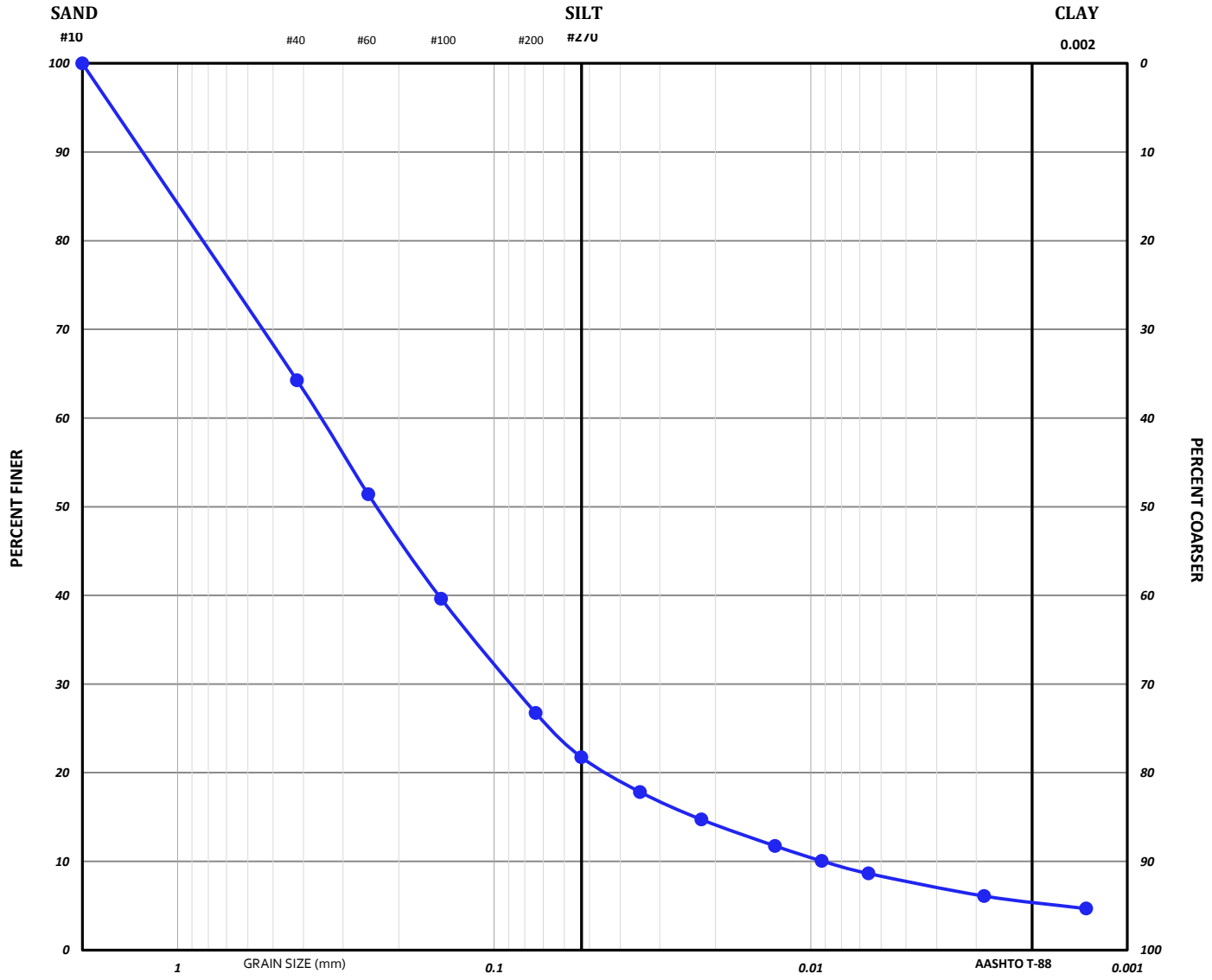
AASHTO T-89/T-90



## ABC 123 IMPOUNDMENT

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-1 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | S-1 | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 1.5-3.0' | **LOCATION:** | *Baltimore, MD* | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

# USDA RESULTS




| PERCENT SAND | PERCENT SILT | PERCENT CLAY | USDA CLASSIFICATION |
|---|---|---|---|
| 78.3 | 16.4 | 5.3 | LOAMY SAND |

| MC | LL | PL | PI | USCS | AASHTO |
|---|---|---|---|---|---|
| 12.8 | 27 | 24 | 3 | SM | A-2-4 |

## ABC 123 IMPOUNDMENT

**BORING:** B-1
**SAMPLE:** Bulk
**DEPTH:** 0-5.0'

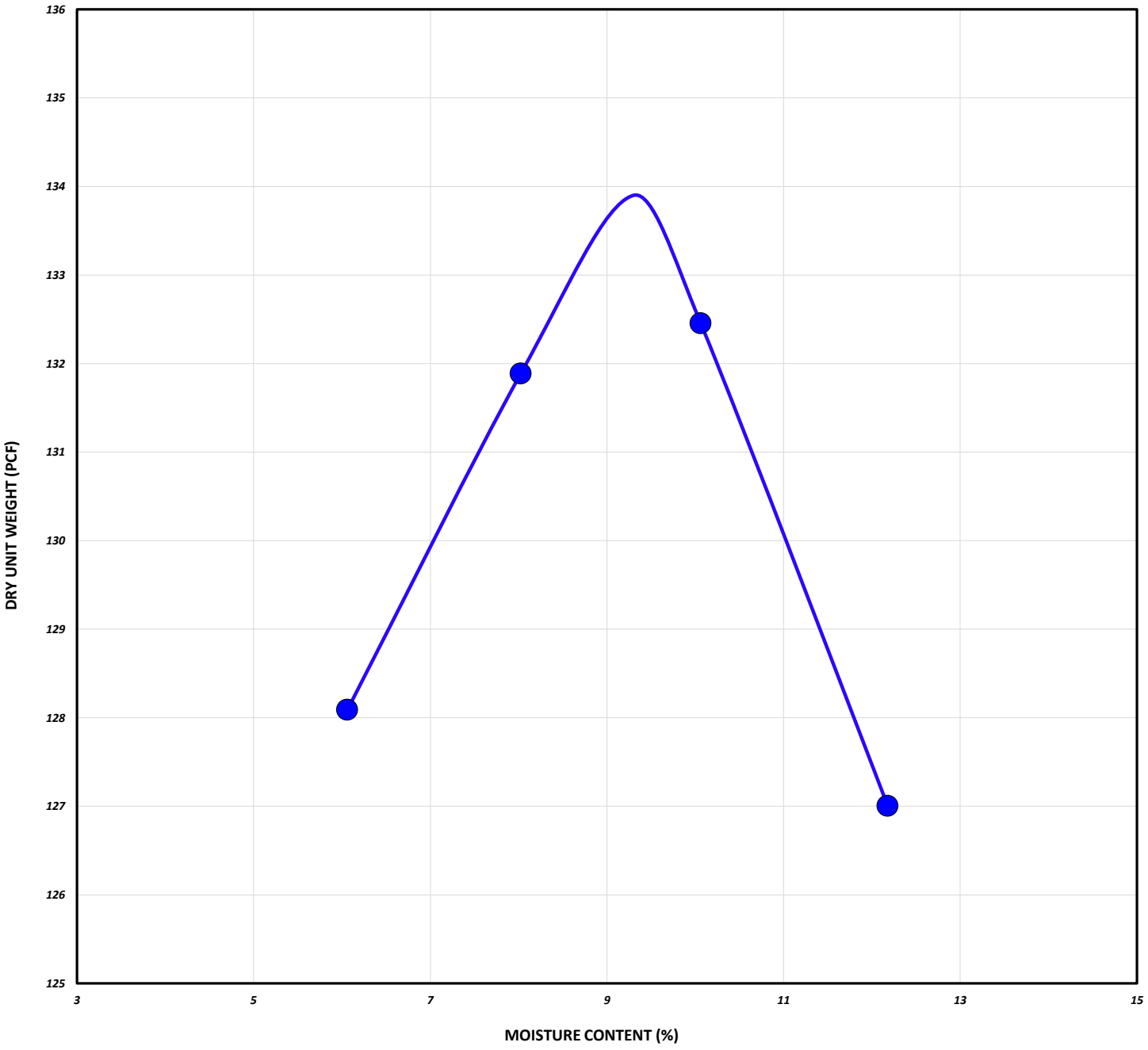
**PROJECT #:** 1234567.89
**SAMPLED:** -
**LOCATION:** *Baltimore, MD*

**JAY KAY TESTING**
5233 Lehman Road, Suite 110
Spring Grove, PA 17362
Phone: (410) 259-5101

# MODIFIED PROCTOR TEST RESULTS

**TEST METHOD: AASHTO T-180 (C)**

| *Maximum Dry Unit Weight* | *Optimum Moisture Content* |
|---|---|
| **133.9** | **9.3** |
| PCF | % |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 15.4 | 35 | 20 | 15 | SC | A-6 | 38.6 | Brown clayey SAND with gravel |

## ABC 123 IMPOUNDMENT

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-1 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | Bulk | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 0-5.0' | **LOCATION:** | *Baltimore, MD* | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

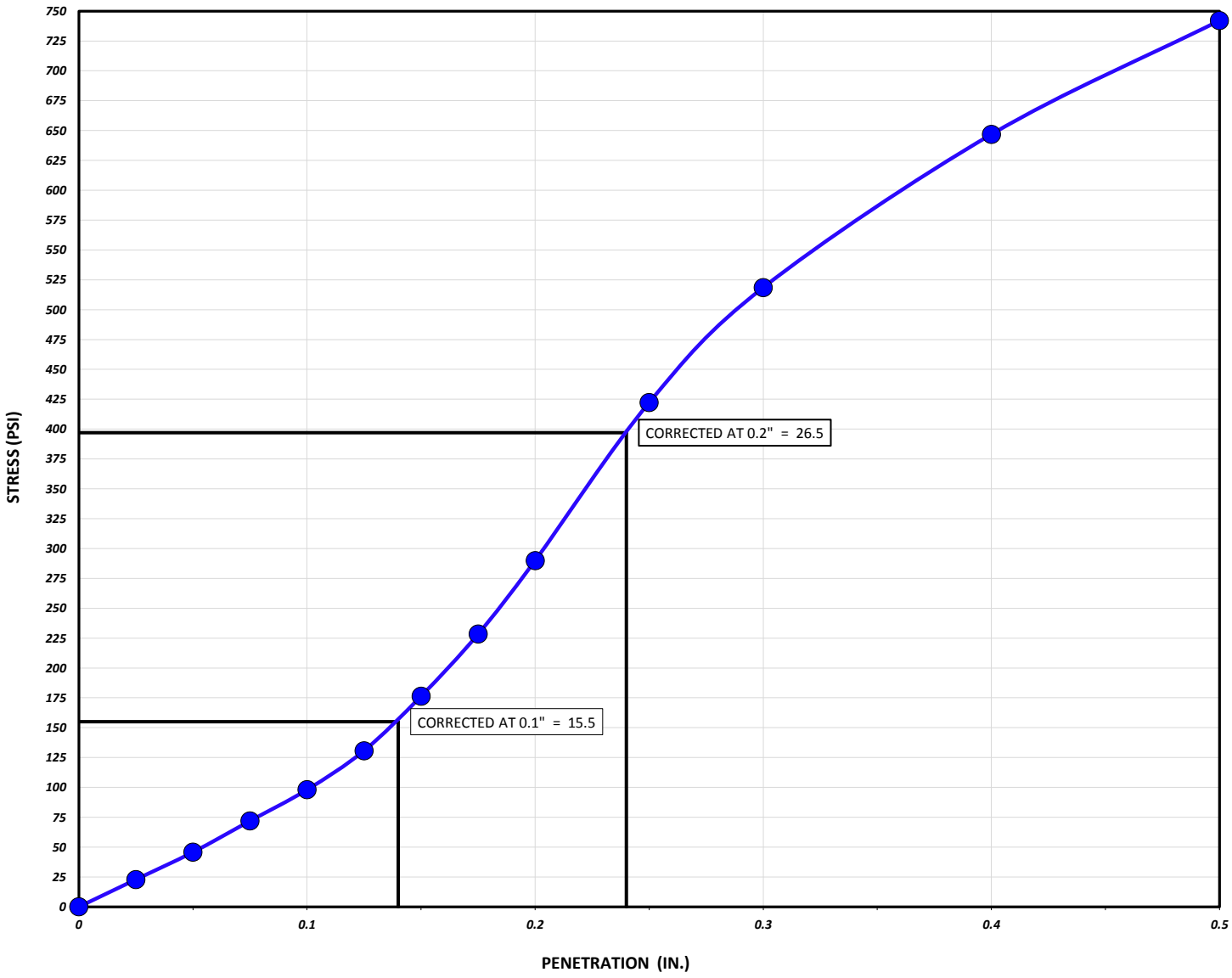
## CALIFORNIA BEARING RATIO TEST RESULTS

METHOD: AASHTO T-193, COMPACTION: AASHTO T-180 (C)

SURCHARGE: 75 PSF

| CORRECTED CBR AT 0.1" | CORRECTED CBR AT 0.2" |
|---|---|
| **15.5** | **26.5** |

| | DRY UNIT WEIGHT (PCF) | MOISTURE CONTENT (%) | COMPACTION (%) | SWELL (%) |
|---|---|---|---|---|
| *As Molded* | 118.9 | 9.4 | 88.8 | - |
| *After Soak* | 115.8 | 13.6 | 86.5 | 1.18 |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 15.4 | 35 | 20 | 15 | SC | A-6 | 38.6 | Brown clayey SAND with gravel |

## ABC 123 IMPOUNDMENT

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-1 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | Bulk | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 0-5.0' | **LOCATION:** | *Baltimore, MD* | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

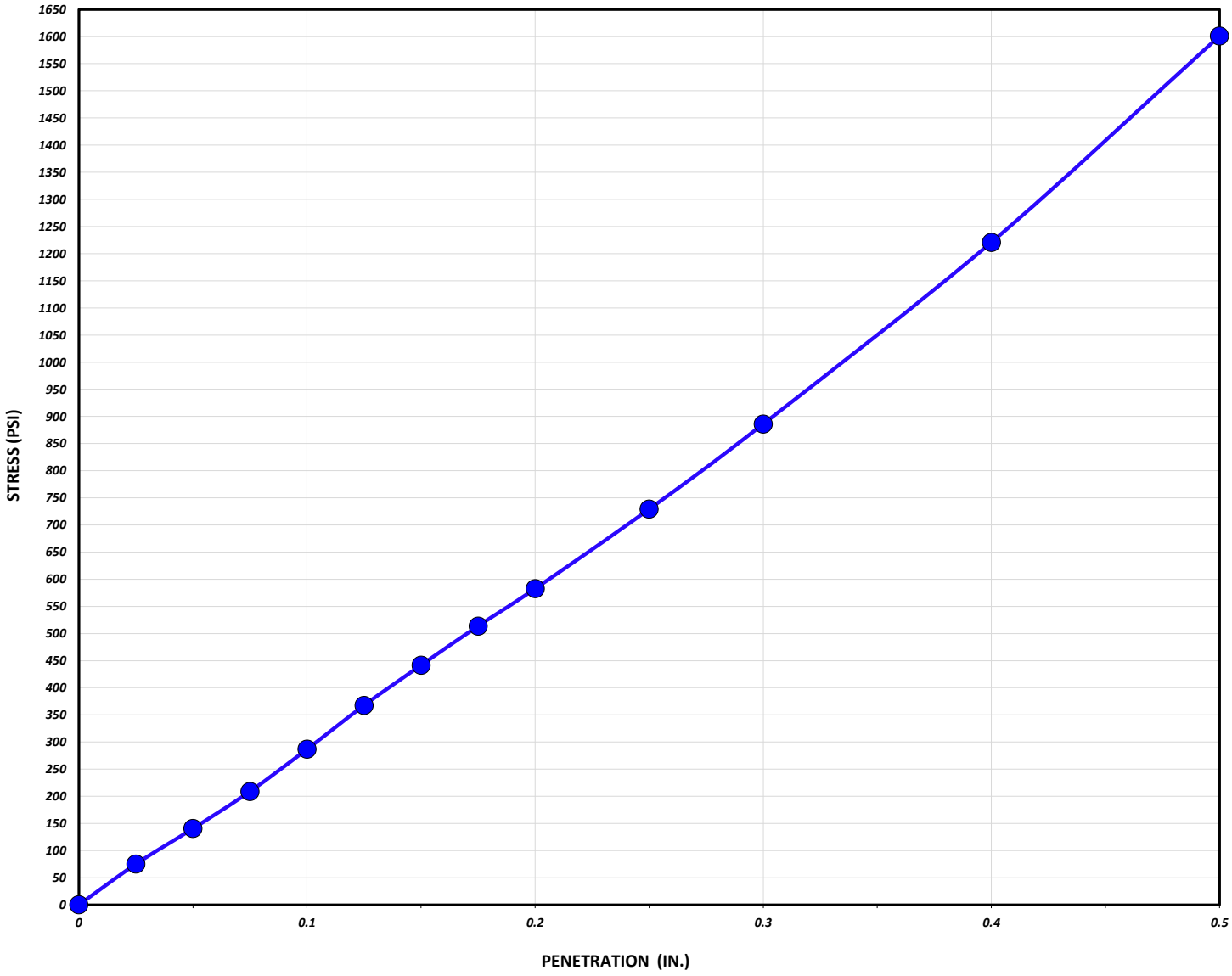
## CALIFORNIA BEARING RATIO TEST RESULTS

METHOD: AASHTO T-193, COMPACTION: AASHTO T-180 (C)

SURCHARGE: 75 PSF

| CBR AT 0.1" | CBR AT 0.2" |
|---|---|
| **28.7** | **38.8** |

| | DRY UNIT WEIGHT (PCF) | MOISTURE CONTENT (%) | COMPACTION (%) | SWELL (%) |
|---|---|---|---|---|
| *As Molded* | 122.6 | 9.6 | 91.6 | - |
| *After Soak* | 122.3 | 11.6 | 91.4 | 0.74 |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 15.4 | 35 | 20 | 15 | SC | A-6 | 38.6 | Brown clayey SAND with gravel |

## ABC 123 IMPOUNDMENT

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-1 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | Bulk | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 0-5.0' | **LOCATION:** | *Baltimore, MD* | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

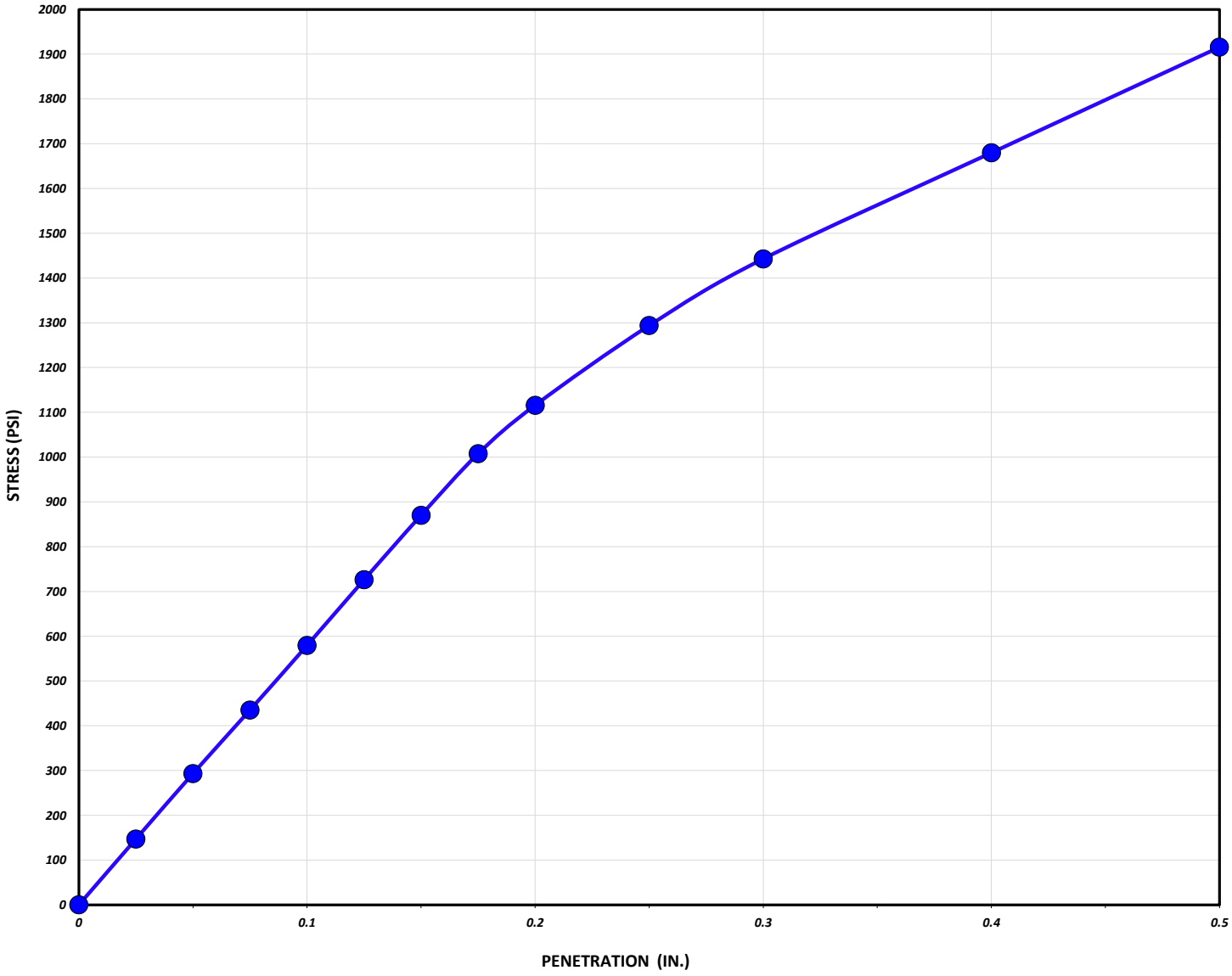
## CALIFORNIA BEARING RATIO TEST RESULTS

METHOD: AASHTO T-193, COMPACTION: AASHTO T-180 (C)

SURCHARGE: 75 PSF

| CBR AT 0.1" | CBR AT 0.2" |
|---|---|
| **57.9** | **74.4** |

| | DRY UNIT WEIGHT (PCF) | MOISTURE CONTENT (%) | COMPACTION (%) | SWELL (%) |
|---|---|---|---|---|
| *As Molded* | 127.1 | 9.3 | 94.9 | - |
| *After Soak* | 128.8 | 9.9 | 96.2 | 0.31 |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 15.4 | 35 | 20 | 15 | SC | A-6 | 38.6 | Brown clayey SAND with gravel |

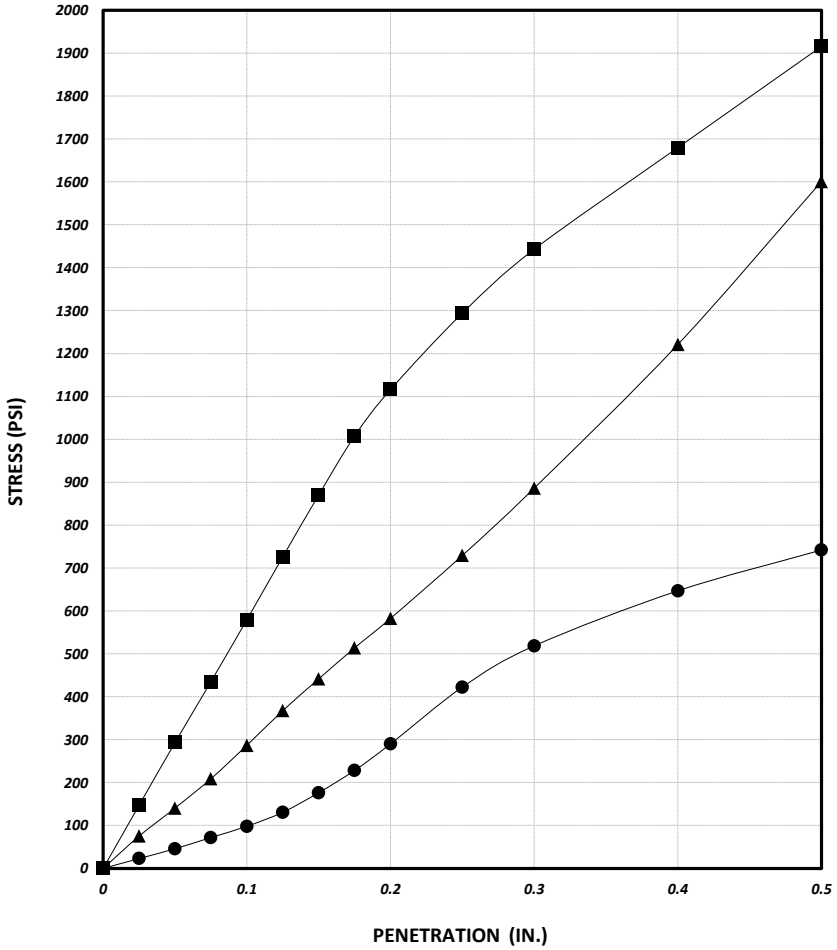
## ABC 123 IMPOUNDMENT

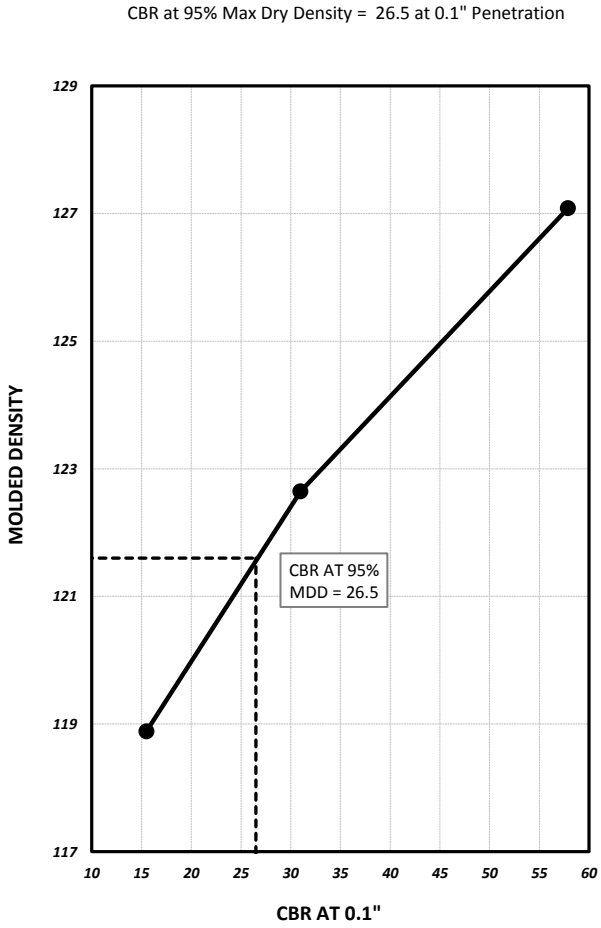
| | | | | |
|---|---|---|---|---|
| **BORING:** | B-1 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | Bulk | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 0-5.0' | **LOCATION:** | *Baltimore, MD* | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

# CALIFORNIA BEARING RATIO TEST RESULTS

MAXIMUM DRY DENSITY: 128.0 PCF OPTIMUM MOISTURE CONTENT: 9.3 % METHOD: AASHTO T-193, COMPACTION: AASHTO T-180 (C)

| | AS MOLDED | | | AFTER SOAK | | | | | | SURCHARGE: 75 PSF |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Compaction* | *Density* | *Moisture* | *Compaction* | *Density* | *Moisture* | *CBR at 0.1"* | *CBR at 0.2"* | *Blows* | *Swell* |
| ● | 88.8 | 118.9 | 9.4 | 86.5 | 115.8 | 13.6 | 15.5* | 26.5* | 15 | 1.18 |
| ▲ | 91.6 | 122.6 | 9.6 | 91.4 | 122.3 | 11.6 | 31.0 | 38.8 | 30 | 0.74 |
| ■ | 94.9 | 127.1 | 9.3 | 96.2 | 128.8 | 9.9 | 57.9 | 74.4 | 60 | 0.31 |
| | **%** | **PCF** | **%** | **%** | **PCF** | **%** | *DENOTES CORRECTED VALUE | | | **%** |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 15.4 | 35 | 20 | 15 | SC | A-6 | 38.6 | Brown clayey SAND with gravel |

## ABC 123 IMPOUNDMENT

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-4 | **PROJECT #:** | 1234567.89 | |
| **SAMPLE:** | Tube | **SAMPLED:** | - | |
| **DEPTH:** | 23.5-25.0' | **LOCATION:** | *Baltimore, MD* | |

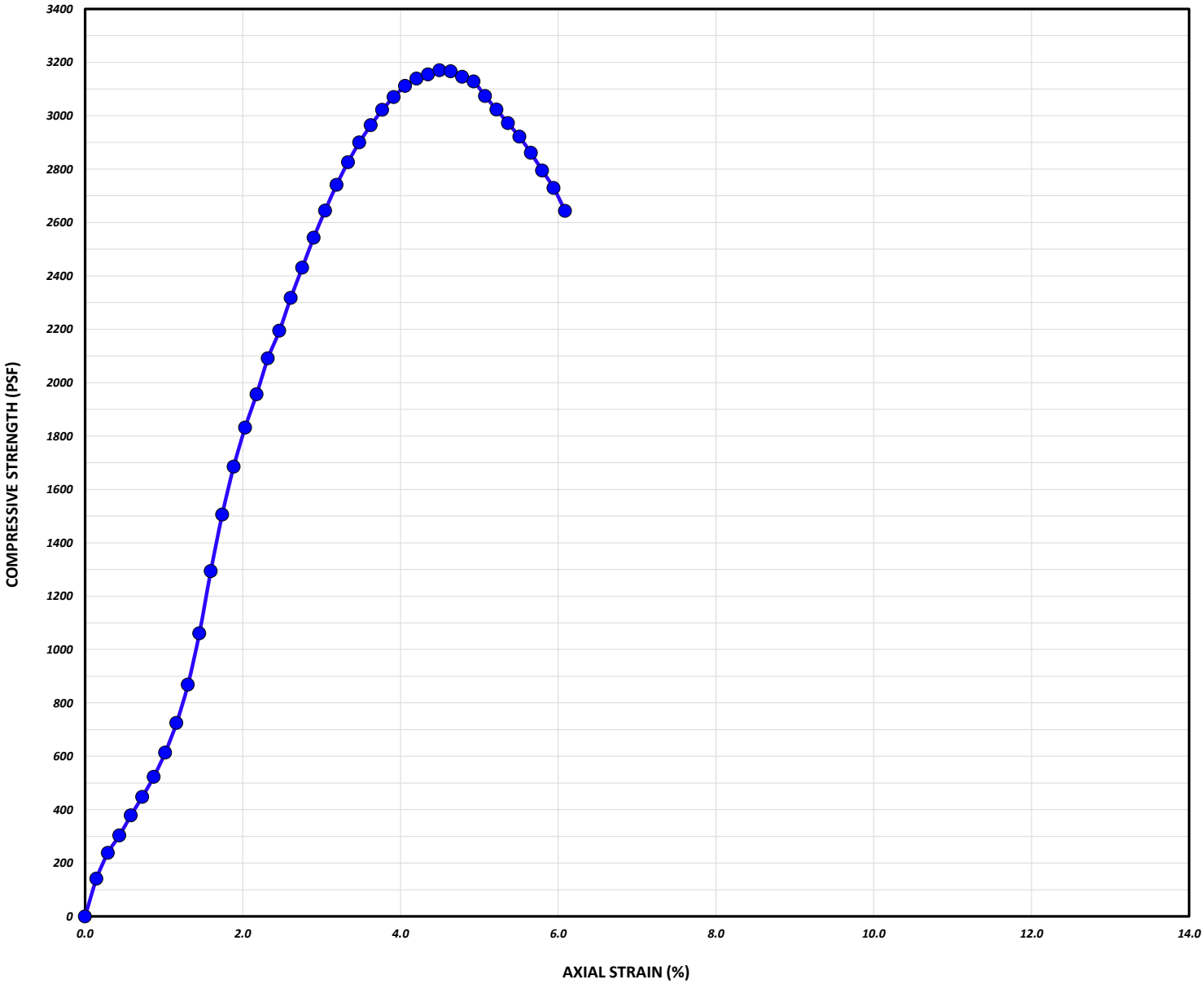
**JAY KAY TESTING**
5233 Lehman Road, Suite 110
Spring Grove, PA 17362
Phone: (410) 259-5101

## UNCONFINED COMPRESSIVE STRENGTH TEST

UNCONFINED COMPRESSIVE STRENGTH: 3170.6 PSF
Undrained Shear Strength: 1585.3 PSF

TEST METHOD: AASHTO T-208

| | HEIGHT | DIAMETER | AREA | VOLUME | WET UNIT WEIGHT | DRY UNIT WEIGHT |
|---|---|---|---|---|---|---|
| *Initial Specimen Data* | 6.90 | 2.85 | 6.37940 | 0.02547 | 131.2 | 109.8 |
| | in. | in. | sq. in. | cu. ft. | cu. ft. | cu. ft. |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 13.8 | 24 | 17 | 7 | CL-ML | A-4 | 57.0 | Brown sandy SILTY CLAY |

## ABC 123 IMPOUNDMENT

**BORING:** B-3
**SAMPLE:** S-1
**DEPTH:** 18.0-20.0'

**PROJECT #:** 1234567.89
**SAMPLED:** -
**LOCATION:** *Baltimore, MD*

**JAY KAY TESTING**
5233 Lehman Road, Suite 110
Spring Grove, PA 17362
Phone: (410) 259-5101

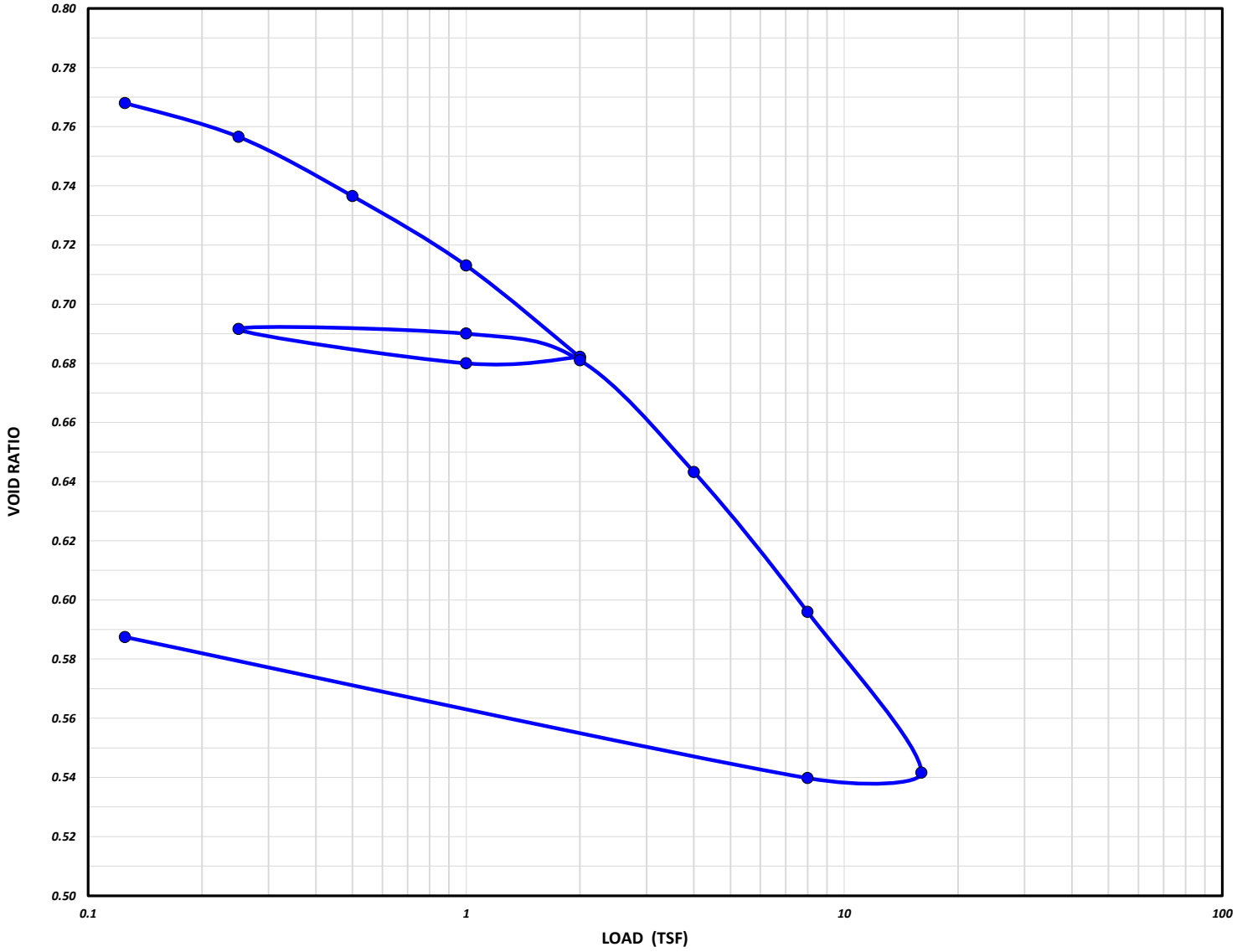
## CONSOLIDATION TEST

TEST METHOD: AASHTO T-216

Undisturbed 3" Shelby Tube
Inundated at 0.125 TSF

| SAMPLE DIAMETER | SAMPLE HEIGHT | SPECIFIC GRAVITY |
|---|---|---|
| 2.497 in. | 0.755 in. | 2.70 (est.) |

| | VOID RATIO | MOISTURE CONTENT | WET UNIT WEIGHT | DRY UNIT WEIGHT |
|---|---|---|---|---|
| *Initial* | 0.801 | 29.4 | 121.1 | 93.6 |
| *Final* | 0.587 | 22.4 | 128.5 | 105.0 |
| | | % | PCF | PCF |




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 12.8 | 30 | 22 | 8 | CL | A-4 | 60.9 | Brown sandy lean CLAY |

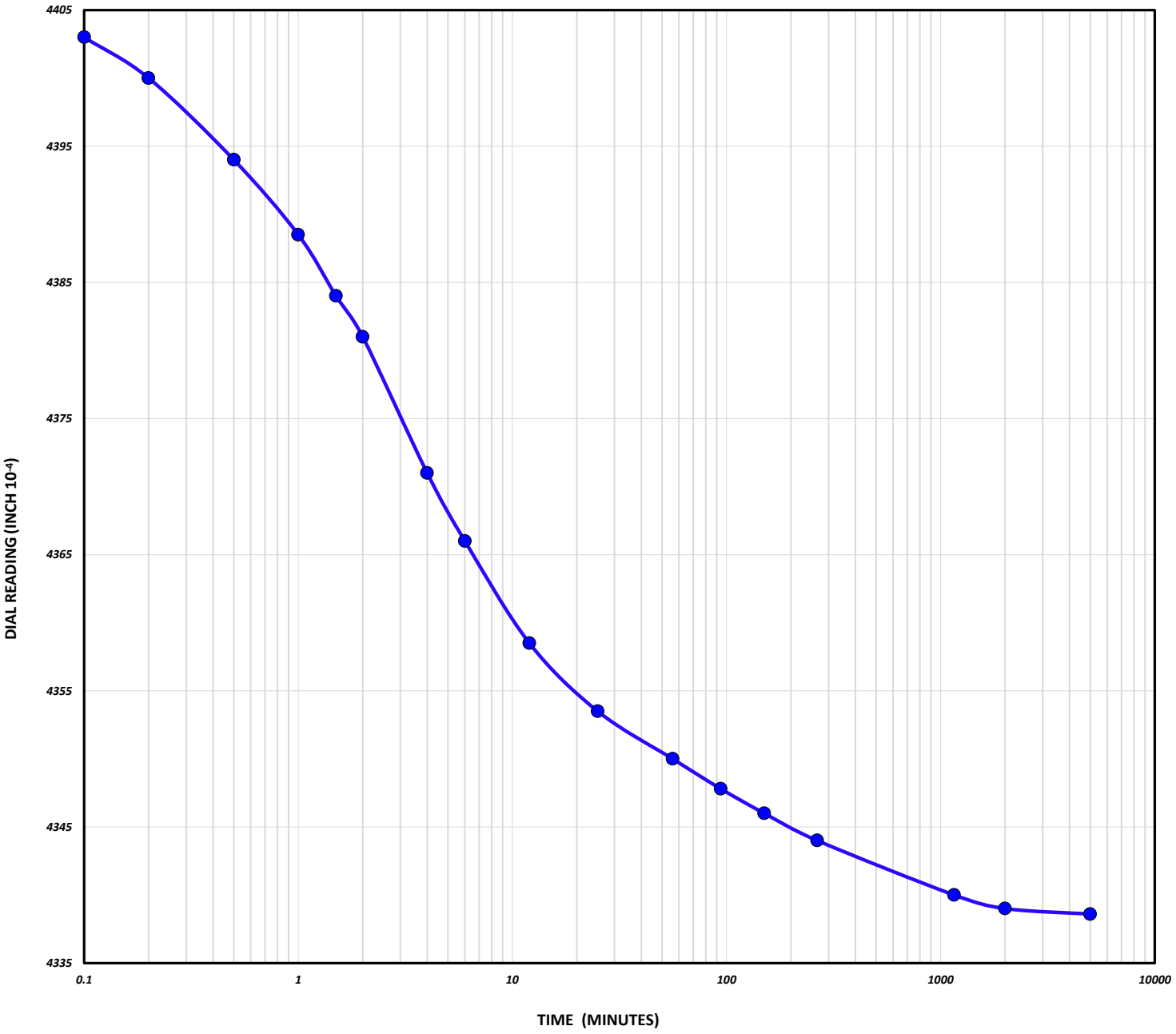
**ABC 123 IMPOUNDMENT**

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-3 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | S-1 | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 18.0-20.0' | **LOCATION:** | Baltimore, MD | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

## CONSOLIDATION TIME READINGS

**APPLIED LOAD (TSF)**

2.0




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 12.8 | 30 | 22 | 8 | CL | A-4 | 60.9 | Brown sandy lean CLAY |

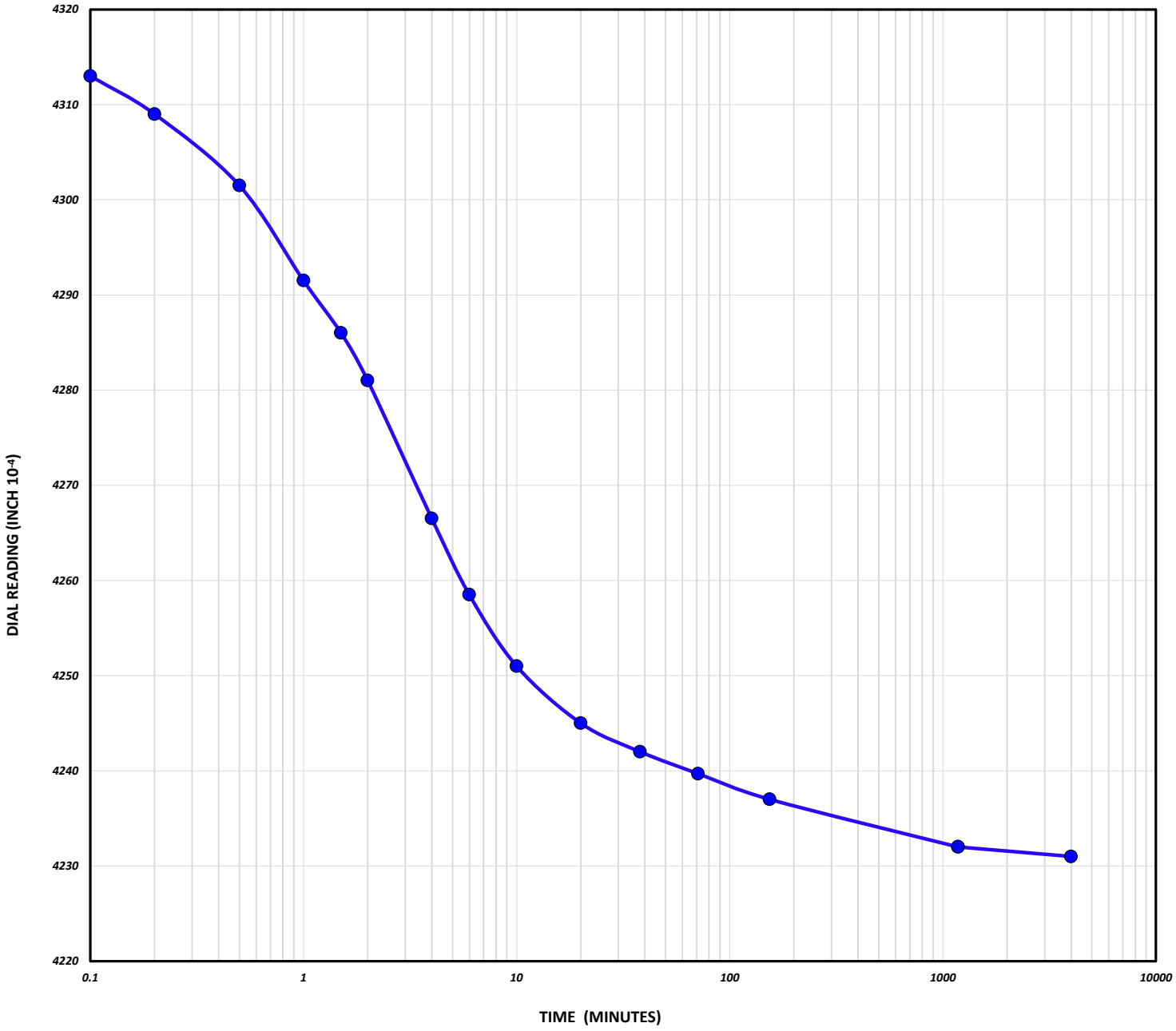
**ABC 123 IMPOUNDMENT**

| | | | | |
|---|---|---|---|---|
| **BORING:** | B-3 | **PROJECT #:** | 1234567.89 | **JAY KAY TESTING** |
| **SAMPLE:** | S-1 | **SAMPLED:** | - | 5233 Lehman Road, Suite 110 |
| **DEPTH:** | 18.0-20.0' | **LOCATION:** | Baltimore, MD | Spring Grove, PA 17362 |
| | | | | Phone: (410) 259-5101 |

## CONSOLIDATION TIME READINGS

**APPLIED LOAD (TSF)**

4.0




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 12.8 | 30 | 22 | 8 | CL | A-4 | 60.9 | Brown sandy lean CLAY |

**ABC 123 IMPOUNDMENT**

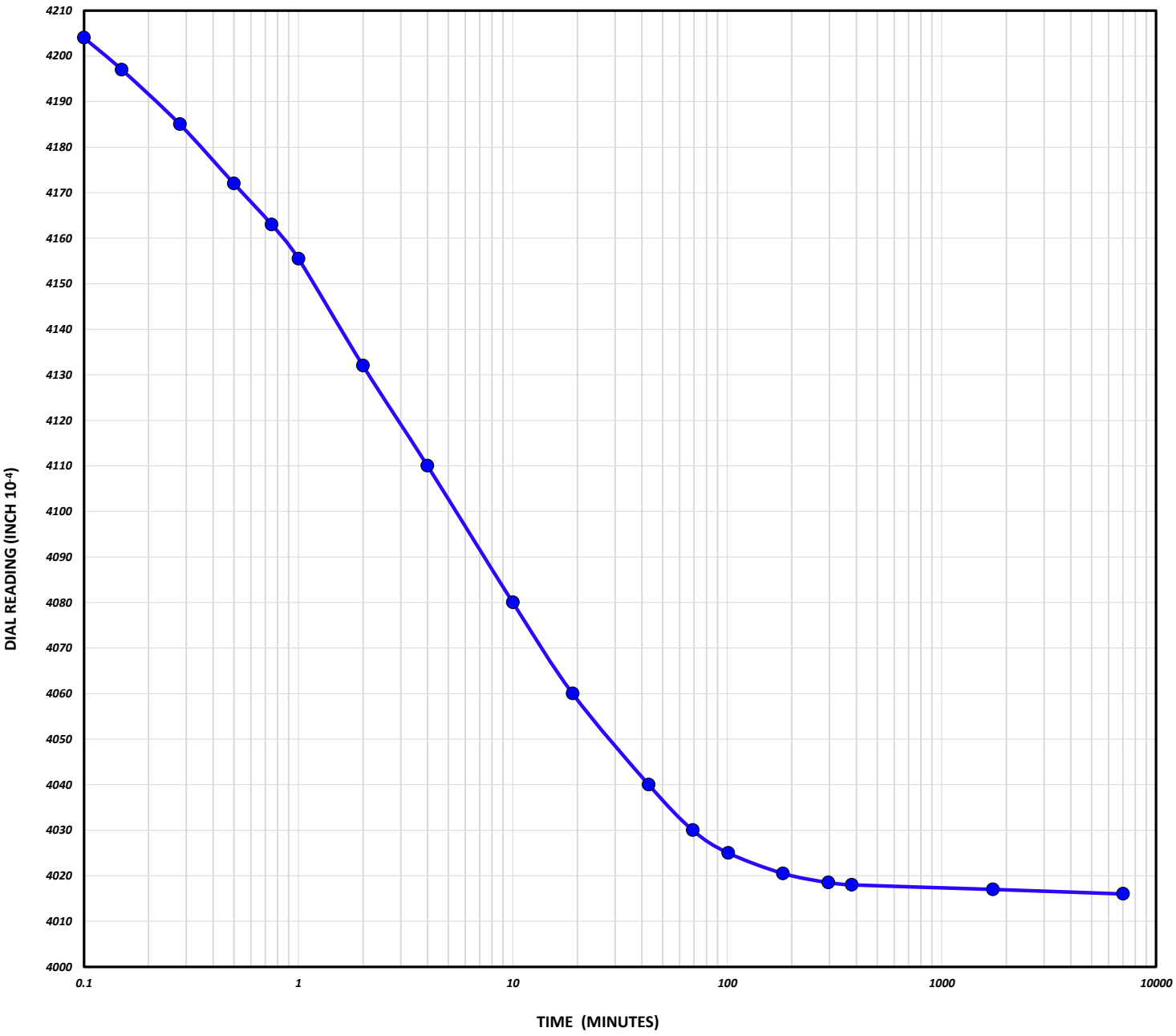
| | | | |
|---|---|---|---|
| **BORING:** | B-3 | **PROJECT #:** | 1234567.89 |
| **SAMPLE:** | S-1 | **SAMPLED:** | - |
| **DEPTH:** | 18.0-20.0' | **LOCATION:** | Baltimore, MD |

**JAY KAY TESTING**
5233 Lehman Road, Suite 110
Spring Grove, PA 17362
Phone: (410) 259-5101

## CONSOLIDATION TIME READINGS

**APPLIED LOAD (TSF)**

8.0




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 12.8 | 30 | 22 | 8 | CL | A-4 | 60.9 | Brown sandy lean CLAY |

**ABC 123 IMPOUNDMENT**

| | | | |
|---|---|---|---|
| **BORING:** | B-3 | **PROJECT #:** | 1234567.89 |
| **SAMPLE:** | S-1 | **SAMPLED:** | - |
| **DEPTH:** | 18.0-20.0' | **LOCATION:** | Baltimore, MD |

**JAY KAY TESTING**
5233 Lehman Road, Suite 110
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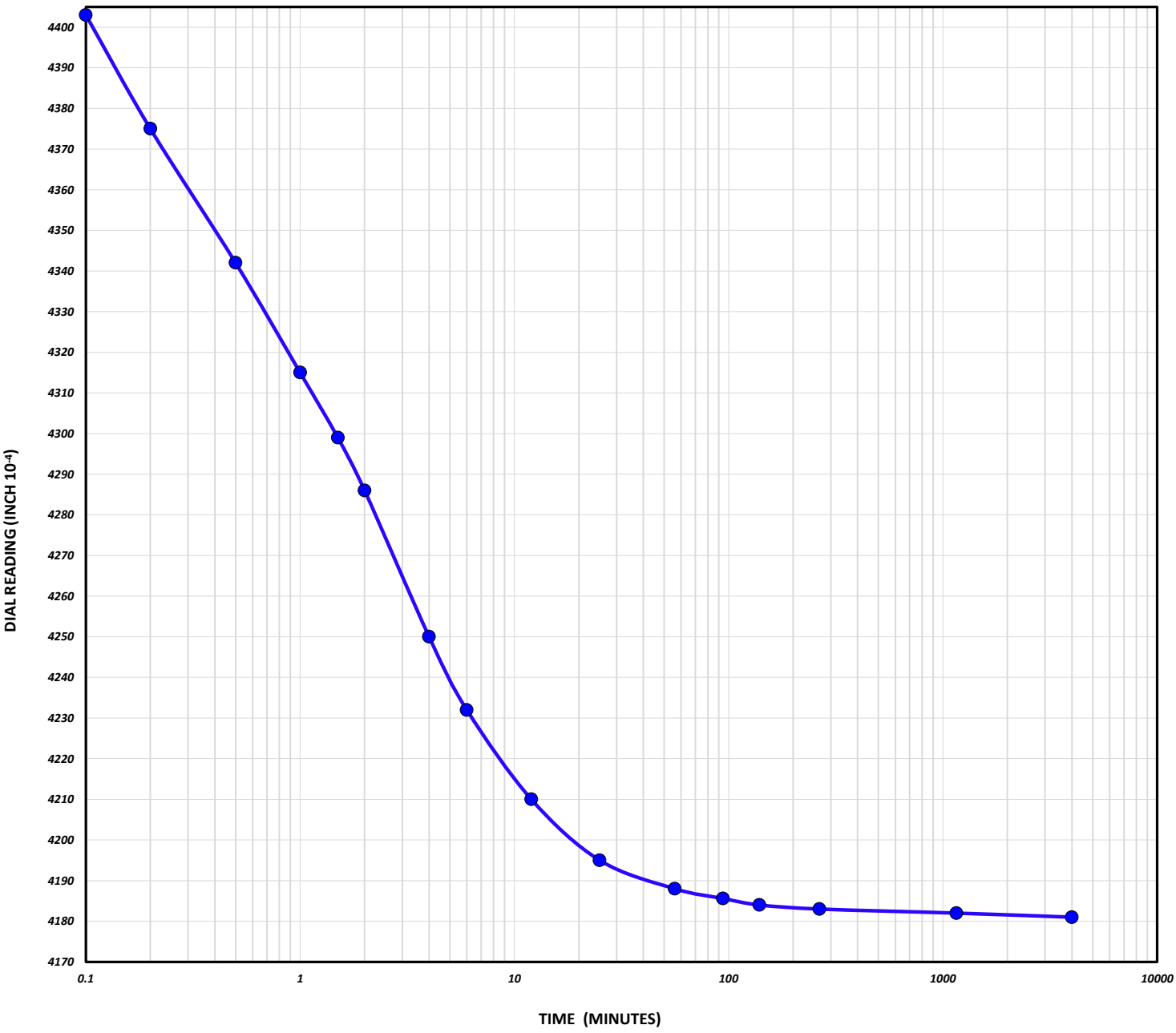
Phone: (410) 259-5101

## CONSOLIDATION TIME READINGS

**APPLIED LOAD (TSF)**

16.0




| MC | LL | PL | PI | USCS | AASHTO | FINES | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|
| 12.8 | 30 | 22 | 8 | CL | A-4 | 60.9 | Brown sandy lean CLAY |