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|--|------------------|--------------------------|-----------------|--|---------------------|-----------------|-------------|
| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |                  |                          |                 | <br><br>Athena Technologies, Inc.<br>1293 Graham Farm Road<br>McClellanville, SC 29458<br>ph (843) 887-3800<br>fax (843) 887-3801 |                     |                 |             |
| Project Name: Sarasota County Public Works                                     |                  |                          |                 |  |                     |                 |             |
| Sample Name: SK-Area1-V10 #A1-V10-1  |                  |                          |                 |  |                     |                 |             |
| Analysis Date: 02-06-14  |                  |                          |                 |  |                     |                 |             |
| Analyzed By: CRM Sr  |                  |                          |                 |  |                     |                 |             |
| Easting (ft):  |                  | Northing (ft):           |                 | Coordinate System:   |                     | Elevation (ft): |             |
| 442,579  |                  | 1,026,003                |                 | Florida State Plane West   |                     | -42.1 NAVD 88   |             |
| USCS:  |                  | Munsell:                 |                 | Comments:  |                     |                 |             |
| SP   |                  |                          |                 |  |                     |                 |             |
| Dry Weight (g):  | Wash Weight (g): | Pan Retained (g):        | Sieve Loss (%): | Fines (%):   | Organics (%):       | Carbonates (%): | Shells (%): |
| 116.13   | 114.70           |                          |                 | #200 - 1.41<br>#230 - 1.22   |                     |                 | 35.00       |
| Sieve Number   | Sieve Size (Phi) | Sieve Size (Millimeters) | Grams Retained  | % Weight Retained  | Cum. Grams Retained | % Passing Sieve |             |
| 3/4"   | -4.25            | 19.03                    |                 | 0.00   | 0.00                | 100.00          |             |
| 5/8"   | -4.00            | 16.00                    |                 | 0.00   | 0.00                | 100.00          |             |
| #3.5   | -2.50            | 5.66                     |                 | 0.07   | 0.08                | 99.93           |             |
| #4   | -2.25            | 4.76                     |                 | 0.09   | 0.19                | 99.84           |             |
| #5   | -2.00            | 4.00                     |                 | 0.19   | 0.41                | 99.65           |             |
| #7   | -1.50            | 2.83                     |                 | 0.32   | 0.78                | 99.33           |             |
| #10  | -1.00            | 2.00                     |                 | 0.83   | 1.74                | 98.50           |             |
| #14  | -0.50            | 1.41                     |                 | 1.52   | 3.50                | 96.98           |             |
| #18  | 0.00             | 1.00                     |                 | 4.83   | 9.11                | 92.15           |             |
| #25  | 0.50             | 0.71                     |                 | 13.53  | 24.82               | 78.62           |             |
| #35  | 1.00             | 0.50                     |                 | 16.46  | 43.94               | 62.16           |             |
| #45  | 1.50             | 0.35                     |                 | 16.26  | 62.82               | 45.90           |             |
| #60  | 2.00             | 0.25                     |                 | 19.09  | 84.99               | 26.81           |             |
| #80  | 2.50             | 0.18                     |                 | 12.73  | 99.77               | 14.08           |             |
| #120   | 3.00             | 0.13                     |                 | 9.56   | 110.87              | 4.52            |             |
| #170   | 3.50             | 0.09                     |                 | 2.76   | 114.07              | 1.76            |             |
| #200   | 3.75             | 0.07                     |                 | 0.35   | 114.48              | 1.41            |             |
| #230   | 4.00             | 0.06                     |                 | 0.19   | 114.70              | 1.22            |             |
|  |                  |                          |                 |  |                     |                 |             |
| Phi 5  | Phi 16           | Phi 25                   | Phi 50          | Phi 75   | Phi 84              | Phi 95          |             |
| 2.97   | 2.42             | 2.07                     | 1.37            | 0.61   | 0.30                | -0.30           |             |
| Moment   | Mean Phi         | Mean mm                  | Sorting         | Skewness   | Kurtosis            |                 |             |
| Statistics   | 1.32             | 0.40                     | 1.01            | -0.27  | 3.17                |                 |             |

|  |                  |                          |                 |  |                     |                 |             |
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| <b>Granularmetric Report</b><br>Depths and elevations based on measured values |                  |                          |                 | <br><br>Athena Technologies, Inc.<br>1293 Graham Farm Road<br>McClellanville, SC 29458<br>ph (843) 887-3800<br>fax (843) 887-3801 |                     |                 |             |
| Project Name: Sarasota County Public Works                                     |                  |                          |                 |  |                     |                 |             |
| Sample Name: SK-Area1-V10 #A1-V10-2  |                  |                          |                 |  |                     |                 |             |
| Analysis Date: 02-06-14  |                  |                          |                 |  |                     |                 |             |
| Analyzed By: CRM Sr  |                  |                          |                 |  |                     |                 |             |
| Easting (ft):  |                  | Northing (ft):           |                 | Coordinate System:   |                     | Elevation (ft): |             |
| 442,579  |                  | 1,026,003                |                 | Florida State Plane West   |                     | -45.7 NAVD 88   |             |
| USCS:  |                  | Munsell:                 |                 | Comments:  |                     |                 |             |
| SP-SM  |                  |                          |                 |  |                     |                 |             |
| Dry Weight (g):  | Wash Weight (g): | Pan Retained (g):        | Sieve Loss (%): | Fines (%):   | Organics (%):       | Carbonates (%): | Shells (%): |
| 106.64   | 101.66           |                          |                 | #200 - 7.38<br>#230 - 4.68   |                     |                 | 12.00       |
| Sieve Number   | Sieve Size (Phi) | Sieve Size (Millimeters) | Grams Retained  | % Weight Retained  | Cum. Grams Retained | % Passing Sieve |             |
| 3/4"   | -4.25            | 19.03                    |                 | 0.00   | 0.00                | 100.00          |             |
| 5/8"   | -4.00            | 16.00                    |                 | 0.00   | 0.00                | 100.00          |             |
| #3.5   | -2.50            | 5.66                     |                 | 0.00   | 0.00                | 100.00          |             |
| #4   | -2.25            | 4.76                     |                 | 0.24   | 0.26                | 99.76           |             |
| #5   | -2.00            | 4.00                     |                 | 0.01   | 0.27                | 99.75           |             |
| #7   | -1.50            | 2.83                     |                 | 0.13   | 0.41                | 99.62           |             |
| #10  | -1.00            | 2.00                     |                 | 0.17   | 0.59                | 99.45           |             |
| #14  | -0.50            | 1.41                     |                 | 0.44   | 1.06                | 99.01           |             |
| #18  | 0.00             | 1.00                     |                 | 1.49   | 2.65                | 97.52           |             |
| #25  | 0.50             | 0.71                     |                 | 4.02   | 6.94                | 93.50           |             |
| #35  | 1.00             | 0.50                     |                 | 5.22   | 12.51               | 88.28           |             |
| #45  | 1.50             | 0.35                     |                 | 4.97   | 17.81               | 83.31           |             |
| #60  | 2.00             | 0.25                     |                 | 8.31   | 26.67               | 75.00           |             |
| #80  | 2.50             | 0.18                     |                 | 10.45  | 37.81               | 64.55           |             |
| #120   | 3.00             | 0.13                     |                 | 31.15  | 71.03               | 33.40           |             |
| #170   | 3.50             | 0.09                     |                 | 21.65  | 94.12               | 11.75           |             |
| #200   | 3.75             | 0.07                     |                 | 4.37   | 98.78               | 7.38            |             |
| #230   | 4.00             | 0.06                     |                 | 2.70   | 101.66              | 4.68            |             |
|  |                  |                          |                 |  |                     |                 |             |
| Phi 5  | Phi 16           | Phi 25                   | Phi 50          | Phi 75   | Phi 84              | Phi 95          |             |
| 3.97   | 3.40             | 3.19                     | 2.73            | 2.00   | 1.43                | 0.31            |             |
| Moment   | Mean Phi         | Mean mm                  | Sorting         | Skewness   | Kurtosis            |                 |             |
| Statistics   | 2.41             | 0.19                     | 1.02            | -1.28  | 4.67                |                 |             |

|  |                  |                          |                 |  |                     |                 |             |
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| Project Name: Sarasota County Public Works                                     |                  |                          |                 |  |                     |                 |             |
| Sample Name: SK-Area1-V10 #A1-V10-3  |                  |                          |                 |  |                     |                 |             |
| Analysis Date: 02-06-14  |                  |                          |                 |  |                     |                 |             |
| Analyzed By: CRM Sr  |                  |                          |                 |  |                     |                 |             |
| Easting (ft):  |                  | Northing (ft):           |                 | Coordinate System:   |                     | Elevation (ft): |             |
| 442,579  |                  | 1,026,003                |                 | Florida State Plane West   |                     | -47.5 NAVD 88   |             |
| USCS:  |                  | Munsell:                 |                 | Comments:  |                     |                 |             |
| SM   |                  |                          |                 |  |                     |                 |             |
| Dry Weight (g):  | Wash Weight (g): | Pan Retained (g):        | Sieve Loss (%): | Fines (%):   | Organics (%):       | Carbonates (%): | Shells (%): |
| 112.48   | 93.09            |                          |                 | #200 - 26.31<br>#230 - 17.24   |                     |                 | 13.00       |
| Sieve Number   | Sieve Size (Phi) | Sieve Size (Millimeters) | Grams Retained  | % Weight Retained  | Cum. Grams Retained | % Passing Sieve |             |
| 3/4"   | -4.25            | 19.03                    |                 | 0.00   | 0.00                | 100.00          |             |
| 5/8"   | -4.00            | 16.00                    |                 | 0.00   | 0.00                | 100.00          |             |
| #3.5   | -2.50            | 5.66                     |                 | 0.34   | 0.38                | 99.66           |             |
| #4   | -2.25            | 4.76                     |                 | 0.00   | 0.38                | 99.66           |             |
| #5   | -2.00            | 4.00                     |                 | 0.20   | 0.61                | 99.46           |             |
| #7   | -1.50            | 2.83                     |                 | 0.25   | 0.89                | 99.21           |             |
| #10  | -1.00            | 2.00                     |                 | 0.45   | 1.40                | 98.76           |             |
| #14  | -0.50            | 1.41                     |                 | 0.73   | 2.22                | 98.03           |             |
| #18  | 0.00             | 1.00                     |                 | 1.00   | 3.34                | 97.03           |             |
| #25  | 0.50             | 0.71                     |                 | 1.32   | 4.83                | 95.71           |             |
| #35  | 1.00             | 0.50                     |                 | 1.80   | 6.85                | 93.91           |             |
| #45  | 1.50             | 0.35                     |                 | 2.13   | 9.25                | 91.78           |             |
| #60  | 2.00             | 0.25                     |                 | 3.89   | 13.62               | 87.89           |             |
| #80  | 2.50             | 0.18                     |                 | 6.19   | 20.58               | 81.70           |             |
| #120   | 3.00             | 0.13                     |                 | 16.67  | 39.33               | 65.03           |             |
| #170   | 3.50             | 0.09                     |                 | 25.14  | 67.61               | 39.89           |             |
| #200   | 3.75             | 0.07                     |                 | 13.58  | 82.89               | 26.31           |             |
| #230   | 4.00             | 0.06                     |                 | 9.07   | 93.09               | 17.24           |             |
|  |                  |                          |                 |  |                     |                 |             |
| Phi 5  | Phi 16           | Phi 25                   | Phi 50          | Phi 75   | Phi 84              | Phi 95          |             |
|  |                  | 3.79                     | 3.30            | 2.70   | 2.31                | 0.70            |             |
| Moment   | Mean Phi         | Mean mm                  | Sorting         | Skewness   | Kurtosis            |                 |             |
| Statistics   | 2.82             | 0.14                     | 1.1             | -2.26  | 9.41                |                 |             |