

## Percolation Testing

Job Name: Beach Cities Health District - Senior Living Project

Job No.: 15-31-312-02

Location: 514 North Prospect Avenue, , Redondo Beach, CA 90277

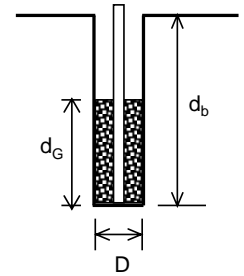
Test Date: April 14, 2022

Test Boring No PT-3

Depth of Boring ( $d_b$ ): 10.0 feet

Diameter of Boring (D): 0.67 feet

Test Performer: Syfur Rahman



| Time of Testing         |            |               | Water Level Measurement |                      | Water Level Calculations       |                              |                        |                                | Percolation Rate Calculations |                  |                           |
|-------------------------|------------|---------------|-------------------------|----------------------|--------------------------------|------------------------------|------------------------|--------------------------------|-------------------------------|------------------|---------------------------|
| Initial Time            | Final Time | Time Interval | Initial depth to water  | Final depth to water | Initial Height of water column | Final Height of water column | Drop in Height         | Average height of water column | Pre-adjusted Percolation Rate | Reduction Factor | Adjusted Percolation Rate |
| $T_i$                   | $T_f$      | $\Delta T$    | $d_i$                   | $d_f$                | $d_i$                          | $d_f$                        | $\Delta d = d_i - d_f$ | $L_{ave}$                      | $k_i = \Delta d / \Delta T$   | $R_f$            | $k = k_i / R_f$           |
|                         |            | (hr)          | (feet)                  | (feet)               | (feet)                         | (feet)                       | (feet)                 | (feet)                         | (inch/hr)                     |                  | (inch/hr)                 |
| <b>Percolation Test</b> |            |               |                         |                      |                                |                              |                        |                                |                               |                  |                           |
| 0                       | 10         | 0.17          | 1.70                    | 9.65                 | 8.30                           | 0.35                         | 7.95                   | 4.33                           | 572.40                        | 13.9             | 41.15                     |
| 10                      | 20         | 0.17          | 1.70                    | 9.20                 | 8.30                           | 0.80                         | 7.50                   | 4.55                           | 540.00                        | 14.6             | 37.03                     |
| 20                      | 30         | 0.17          | 1.70                    | 9.00                 | 8.30                           | 1.00                         | 7.30                   | 4.65                           | 525.60                        | 14.9             | 35.32                     |
| 30                      | 40         | 0.17          | 1.40                    | 8.70                 | 8.60                           | 1.30                         | 7.30                   | 4.95                           | 525.60                        | 15.8             | 33.32                     |
| 40                      | 50         | 0.17          | 1.40                    | 8.70                 | 8.60                           | 1.30                         | 7.30                   | 4.95                           | 525.60                        | 15.8             | 33.32                     |
| 50                      | 60         | 0.17          | 1.40                    | 8.70                 | 8.60                           | 1.30                         | 7.30                   | 4.95                           | 525.60                        | 15.8             | 33.32                     |

Note: Reduction Factor,  $R_f = (2 \cdot d_i - \Delta d) / D + 1$

Lowest Percolation Rate = **33.32** inch/hr

Average Percolation Rate = **35.58** inch/hr

Design Percolation Rate = **36.03** inch/hr

Note: Design Percolation Rate = Average of last three readings

Reference: Los Angeles County (2014). Administrative Manual - Low Impact Development Best Management Practice Guideline for Design, Investigation, and Reporting, 12/31/14.

CFv and CFs factors are not applied, Civil engineer can apply these factors