**NOTE: This fake soils report does not meet all requirements of a soils report for use with the 2021 City of Tacoma Stormwater Management Manual – it has been created to contain certain minimum information and to be used for training purposes only in the context of the 2021 SWMM SSP training. A Soils Report with this level of detail would not be approved for use in permitting of new or redevelopment sites.**

**Soils report for the Coldest Ice Convenience Store**

**Tacoma, WA**

**January 2, 2021**

We have conducted a geotechnical evaluation to determine the feasibility of on-site management of stormwater at the proposed location of the Coldest Ice Convenience Store.

This evaluation is based on the requirements of the 2021 City of Tacoma Stormwater Management Manual and meets the requirements of Vol 4 Appendix B.

**Site Information**

The existing site use is a vacant lot. Stormwater follows contours and generally flows from west to east where it enters the City of Tacoma stormwater system. There are no groundwater wells, septic systems, superfund areas, or flood hazard areas within 100 feet of the site. There are no sensitive or critical areas within 500 feet of the site.

The proposed site is a convenience store with associated parking lot and drive aisles. Offsite improvements including sidewalk installation and roadway replacement are required. Stormwater runoff patterns remain the same between existing and proposed conditions.

**Geotechnical Analysis**

Three test pits were excavated throughout the site. Soil types from the test pits were logged. The field investigation was completed Dec 2, 2020. It had been unusually dry for winter in Tacoma, WA.

Two PIT infiltration tests were conducted at Pits # 2 and #3. PIT tests were conducted per City of Tacoma SWMM Volume 4 Appendix A – Determining the Design Infiltration Rate.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Pit Information** | | | | |
| Test pit # | Depth of test pit  (feet below ground surface) | Depth to groundwater (feet below ground surface) | Measured infiltration rates (in/hr) | Notes |
| 1 | 2 | 2 | NA - See notes | Pit abandoned due to large amounts of gw at approximately 2 feet below ground surface – pit test could not be conducted |
| 2 | 5 | 3 | 0.43 inches / hour | GW seepage at 3 feet |
| 3 | 10 | 3 | 0.75 inches / hour | GW seepage at 3 feet |

**Conclusions**

For Lawn and Landscaped Areas – BMP L613: Post Construction Soil Quality and Depth – Option 3 – Amend in Place will be used on all areas that will be lawn/landscaped in the final scenario. FEASIBLE

High Groundwater has made the following BMPs Infeasible:

BMP L602: Downspout Full Infiltration was deemed infeasible.

BMP L630: Bioretention was deemed infeasible.

BMP L604: Perforated Stub-Outs was deemed infeasible.

BMP L633: Permeable Pavements was deemed infeasible.

BMP L630: Bioretention was deemed infeasible.