

1.0 Project Narrative

The site locus is a 29,249 SF parcel improved by two existing residential dwellings and out buildings such as sheds and a detached garage being used as a shop. Each dwelling can be accessed via its own paved driveway accessed from Old Country Way. Both dwellings can be accessed by a secondary point of access from Jenkins Place consisting of a concrete pathway having a width of approximately eight feet.

The site locus is more commonly known as 14-16 Old Country Way located in a Village Overlay District within the limits of a Business Zoned area. The site also resides in the Scituate water Resource Protection District (WRPD) and the Zone A sub district to the WRPD (150' no touch buffer).

The project proposes to raze the existing onsite dwellings and out buildings and construct two new commercial buildings on the combined two lots (#14 and #16). The new commercial buildings will consist of a total of eight (8) small shops, four shops in each of the two proposed buildings, to promote small business in accord with the intent of the zoning district. The project proposes to preserve the remaining yard areas as open space. The project proposes a permeable pavement parking lot and five (5) Subsurface Recharge Systems (SRS) to promote recharge of the clean roof top runoff, to provide a maximized water quality for recharge, and to minimize the overall proposed impervious area.

1.2 Description OF Stormwater Management System

The proposed stormwater management system consists two BMP practices. The first and primary BMP structure employed in the stormwater management system is the use of permeable pavement. Permeable pavement lends itself very well in achieving the performance standards of the overlay districts identified above in that the system is de-centralize and dispersed throughout the site in accord with LID practice and intent. It also provides a high level of treatment without requiring frequent and exhaustive measures. The permeable pavement will only recharge stormwater that falls on the paved area. The permeable pavement will not intercept stormwater from overland sources subjecting it to sediment and debris getting depositing on its surface. In the 100 year storm, only a 0.02' depth of runoff will result in the 4 inch deep layer of the choker course of the permeable pavement. Three roof top areas are proposed to be tied directly into the respective Sub-surface Recharge Systems (SRS) via the gutter down spouts. This will increase the amount of clean water being recharged into the critical area. Since the roof top runoff is 100% clean by DEP definition and standard, tying the roof top areas directly into the SRS will provide additional treatment to the water quality in that it will dilute the TSS concentrations to well above the credited 80% removal rate credit.

The second BMP practice the proposed stormwater incorporates is a sub-surface recharge system (SRS) consisting of twenty SC-740 infiltration chambers. No pretreatment is proposed or required prior to discharging into the SRS as 100% of the discharge consists of clean roof top runoff. The roofing materials to be used in the construction of the proposed buildings shall not be metal but asphalt shingle or rubber membrane composites.

1.3 BMP Treatment Train Diagram

The following diagram illustrates the treatment train for the proposed stormwater management system and the associated total suspended solids (TSS) removal credit for each BMP structure.



The proposed treatment train and its associated structures were based upon the performance standards of BMP Standard 6. The BMP treatment train is discussed in more detail in sections 5.4 and 5.6 in this report.

1.4 Performance Standards

The proposed project qualifies as redevelopment project as confirmed by the Scituate Zoning Board's Decision dated April 9, 2018. The project only needs to meet the performance standards of the DEP's Stormwater Handbook only to the maximum extent practicable. We maintain the project as designed and submitted meets the performance standards fully. These claims have been substantiated in the documents referenced below.

1.5 Plan References

"SITE PLAN for 14-16 Old Country Way in Scituate Massachusetts" dated June 15, 2018. This is a standalone document containing ten sheets. Note: This plan set contains the Erosion Control Plan and associated detail sheet.

Watershed Plans for the Pre and Post Development Conditions at 14-16 Old Country Way in Scituate, Massachusetts, dated June 15, 2018. These plans are contained in Appendix C of this report and contains 2 sheets.

1.0 Resource Area Report

The on-site resource area consists of an intermittent stream in the form of a 24" RCP. The 24" RCP begins approximately 40' off the northeast property line (rear property line) and passes through the site approximately 2.5' below grade, and daylights approximately 30' off the northwest property line (front property line) on the other side of Old Country Way. A man-made ditch flows into the 24" RCP. The 24" RCP then discharges into a man-made ditch on the other side of Old Country Way. The ditch was dug long before the Wetlands Protection Act was established for the purposes of draining a wet area located at the end of Jenkins Place. The ditch cuts through a level upland area resulting in a uniform and defining channel having an average width of 2 feet. The 24" RCP was installed at a later date, but predates the Wetland Protection Act, to make better use of the land.

Although the 24" RCP is a regulated intermittent stream, it has no inland bank associated with it and hence does not have an associated buffer zone. The project is not disturbing the 24" RCP or tying into it in any way. The man-made ditches flowing into and out of the 24" RCP do have distinct banks where the cut into the ground surface constitutes the top of the inland bank. Grass and small brush line the ditch, but mostly grass. No wetland vegetation was observed within the ditches.

The buffer zones shown on the plan are the buffers to the inland banks associated with the man-made drainage ditches that terminate at the entrance and exit of the 24" RCP.

