



**NORTHEAST ENGINEERS
& CONSULTANTS, INC.**

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March 2, 2022

Ronald M. Wolanski, AICP
Director of Planning & Economic Development
350 East Main Road
Middletown, RI 02842

RE: Response to Engineering Memorandum
Application of Juan Campos - Campos Residential Subdivision
Plat 120, Lots 68A & 68B

Dear Mr. Wolanski:

The attached revised plans and calculations are in response to the memorandum issued by the town engineer dated, February 4 2022 regarding the above referenced application for a five (5) lot residential subdivision. The following changes have been made to the design to address the continued concerns regarding groundwater recharge.

- The stormwater system configuration has been revised to include a stormwater infiltration basin in addition to the sand filter and the detention basin. This infiltration area receives only low flow water from the sand filter underdrain. This infiltration basin provides the volume of groundwater recharge required by the RI Stormwater Manual.
- The bottom of this basin has been set approximately three (3) feet above the seasonal high groundwater table. This infiltration area is shallow, with a maximum ponding depth of six (6) inches. The fill material specified to obtain the groundwater separation is ASTM C-33 sand.
- The placement of this device required a revision to the configuration of the sand filter and detention basin. One of the wet swales is no longer required, as much of the lot that it served now flows directly into the sand filter. This revision also eliminates the drain crossing within the sewer easement.
- The detention basin is now lined with a 30-mil poly-liner and provides no infiltration.
- In order to preemptively stave off concerns regarding potential groundwater mounding in large storm events, the infiltration provided by the infiltration basin is effectively uncredited within the HydroCAD analysis for all storms greater than the 1.2-inch water quality storm.

Best regards,
NORTHEAST ENGINEERS & CONSULTANTS, INC.

Jeremy Rosa, PE
Senior Civil Engineer