



May 11, 2016  
16031

Maureen O'Meara, Town Planner  
Town of Cape Elizabeth  
320 Ocean House Road  
P.O. Box 6260  
Cape Elizabeth, Maine 04107

**Subject: Cape Chiropractic & Acupuncture Site Plan/Minor Subdivision Review**

Dear Maureen:

We have received and reviewed a revised submission package dated May 4, 2016 for the subject project. The package included a May 4, 2016 cover letter addressed to you from John Kenney of WBRC Architects & Engineers of Bangor and Portland, Maine along with a 21 sheet drawing set of the project plans with a revision date of May 4, 2016. Also included in the submission package was a standalone May 4, 2016 Subdivision Plat Plan and revised May 4, 2016 Stormwater Management narrative.

Based on our review of submitted material and the project's conformance to the technical requirements of Section 16-2-3, Minor Subdivision Completeness and Section 19-9, Site Plan Completeness for a project site within the Town Center District Zone, we offer the following comments:

**General Engineering Comments:**

1. The most recent revisions made to the drawing set have addressed many of the comments presented in our April 13, 2016 review letter.
2. A detail for the precast concrete paver sidewalk has now been included. An MDOT specification should be added to the detail for the granular base material.
3. The designer stated that tactile warning strips are not typically installed unless the crosswalk is crossing a public street. We have reviewed this situation with the Public Works Director and have determined that the Town does not typically require tactile warning strips for sidewalk connections not crossing a public street.
4. The designer states in their response letter that they are in contact with the Portland Water District (PWD) and that conversations regarding ledge removal methods are ongoing. Given that the PWD routinely works with contractors on construction matters related to their infrastructure, we are confident that this issue will be adequately addressed during construction of the improvements.

**Stormwater Design Comment:**

1. The designer has provided a revised Stormwater Management narrative to reflect the addition of the rain garden. In the post-development condition, drainage will be routed through the extensive porous pavement system and a rain garden which will act to both treat the surface water quality and reduce the estimated peak rate of runoff from the site. The inclusion of the porous pavement will significantly reduce the amount of salt products and sand that would need to be applied during winter storm conditions. This reduction of winter storm protection materials is a primary benefit of porous pavement

in cold weather climates which will dramatically improve upon the water quality of the runoff exiting the site by effectively limiting the introduction of those potentially detrimental materials on-site.

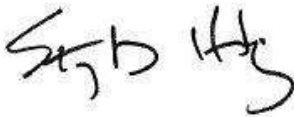
As noted in our April 13<sup>th</sup> letter, the porous pavement and rain garden design will further act to treat the collected surface water quality released from the site while effectively reducing the peak rate of runoff. The designer has submitted information from the software model indicating only slight increases in the estimated peak rate of runoff for the Town Ordinance required storm events. In doing so, the quality of the surface water will be enhanced and the projected peak rate of flow will approximate those levels estimated for the pre-development condition (0.16 cubic feet per second increase for the 2-year storm event and 0.11 cubic feet per second increase in the 25-year storm event). With the proposed stormwater management system closely approximating the peak rate of runoff from the site while dramatically improving upon the water quality of the runoff generated on-site, we support the stormwater management approach.

Again as noted in our April 13<sup>th</sup> letter, the runoff from this site predominately drains to the municipal system at the intersection of Route 77 and Hill Way. In our conversations with the Public Works Director, this system has historically handled large runoff events without nuisance flooding conditions so it is anticipated that the post-development runoff flow will continue to be readily handled by the Town's drainage infrastructure without creating adverse conditions to the drainage system or its receiving areas. Therefore we believe that although the post-development runoff model technically estimates a minimal increase in peak runoff for the Town required storm event, we support the proposed Stormwater Management system given the substantial benefits to the site's runoff water quality and the available capacity of the down gradient Town storm drainage system to handle the anticipated runoff rates.

We trust that these comments will assist the Board during their deliberations on this project. Should there be any questions or comments regarding our review, please do not hesitate to contact us.

Sincerely,

SEBAGO TECHNICS, INC.



Stephen D. Harding, P.E.  
Town Engineer

SDH:cca

cc: John Kenney, WBRC  
Bob Malley, Public Works Director  
Caitlyn Abbott, Sebago Technics