360.91.01

June 10, 2010

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

SUBJECT: MC Associates – 1055 Shore Road
Private Access Way/Resource Protection Permit Review

Dear Maureen:

We have received and reviewed a May 28, 2010 submission package for the subject project. The package included a May 28, 2010 letter addressed to you from Jon Whitten, Jr. of Terradyn Consultants, L.L.C. with supporting documentation and a revised two plan set of drawings dated May 28, 2010. We also met on June 3, 2010 with you, Cape Elizabeth Public Works Director Bob Malley, and Jon Whitten, Jr., the design engineer from Terradyn Consultants, L.L.C. Subsequent to our June 3rd meeting, we have received and reviewed another submission package dated June 7, 2010 with a June 7th cover letter addressed to you, a revised June 7, 2010 Stormwater Management Report with supporting calculations and revised June 7, 2010 drawings.

This information has been revised and re-submitted to address comments from our May 12, 2010 review letter and the discussion of our June 3rd technical review meeting. Based on our review of submitted material and the project's conformance to the technical requirements of Section 19-7-9, Private Access Provisions and Section 19-8-3, Resource Protection Permit Completeness, of the Zoning Ordinance, we offer the following comments.

1. The applicant, MC Associates, is proposing the development of a private accessway located at 1055 Shore Road to provide the required road frontage in the Residence A (RA) District for the lot to be saleable for the development of a single family residential structure. It is our understanding that the development will result in the filling of approximately 270 square feet of an RP-2 wetland.

2. The designer has revised the accessway layout and turnaround from the original design dated March 2, 2010. The turnaround configuration does not meet the standard turnaround dimensions in the Ordinance, however, the designer has verbally stated that the design can accommodate the B-40 turning template which most approximates the turning movements of the ladder truck which is the largest emergency vehicle used by the Cape Elizabeth Fire Department. The designer also indicated that a representative turning template detailing the B-40's ability to negotiate a turnaround maneuver would be provided to illustrate the B-40's movement through the site. To date, this information has not yet been provided. Once we have this information, we can review the information and provide a recommendation to the Fire Chief for his review and approval.

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3. The designer has incorporated a swale on west side of Shore Road that will collect surface water and send it to the culvert crossing underneath the private accessway. This swale should minimize surface water sheeting across the entrance of the private access way toward Shore Road and the north side of the lot. The applicant has also provided a draft drainage easement granting the Town permission to convey and maintain stormwater through the subject property. This easement will allow the Town to maintain proper drainage of Shore Road if, and when, the Shore Road Pathway project is constructed.

4. It is our understanding that wastewater will be treated on-site by an individual septic system and leach bed system. The applicant has submitted a completed HHE-200 Form completed by Mark Cenci for the proposed subsurface wastewater disposal area. This information should be reviewed and approved by the Code Enforcement Officer

5. The submitted plan shows the location but not the size of the existing water main on Shore Road. The designer should add this information to the plan.

6. It is our understanding that the applicant is now proposing to tap into the water main located on Shore Road and to install a two-inch water service to service the lot instead of using a well, as proposed in their March 2nd plans. An additional water trench patch detail should be included on the detail sheet for the trench work to be done in Shore Road. This detail should indicate the matching of the trench pavement thickness to that of existing pavement thickness in Shore Road and the milling of the surface area alongside paved edges of the trench.

7. Per the 19-8-3 Resource Protection Performance Standards, wetland areas are now mapped at one (1) foot contours while the remaining site is mapped at two (2) foot contours.

8. A note should be added to the plans stating that a Street Opening Permit will be required by the Town prior to construction.

9. We agree in concept with the designer's assertion that the construction of this single family house lot would have a minimal effect on the localized drainage characteristics relating to the estimated peak flow of runoff from the surrounding area to the receiving culvert under Shore Road. Despite our conceptual agreement, the designer should revise their analysis based on the following comments.

    a. The storm frequency rainfall amounts used by the designer in their Modeling Assumptions of the Stormwater Management Plan are from Cumberland County, but the report still references Oxford County.
    b. The paved accessway is now proposed to be constructed with porous pavement. The addition of porous pavement in the design will act to attenuate the modest increase in surface water runoff volume from the project area. In addition, the porous pavement will act to treat surface water runoff quality from the accessway and should lessen environmental impacts given the fact that less sand and salt applications would be required for winter maintenance.
    c. The designer should add additional information to the porous pavement detail including a definition of what the choker course is and specify the gravels related to MDOT specifications.

d. The designer should reevaluate the 15-inch culvert outlet elevation as it appears to be graphically shown near elevation 25.5 feet, but it shown to have an invert out elevation of 24.6 feet. The designer may consider decreasing the slope to raise the outlet invert elevation to minimize additional impacts to the adjacent wetlands that may occur with the installation of an invert at 24.6 feet.
e. The porous pavement area quantity appears to be underestimated for Subcatchment 2S and/or missing from Subcatchment 3S, which is labeled "New Development". The designer should revise their model to include the additional porous pavement quantity that appears to be missing. The designer should also consider adding the drainage subcatchment divide on the plans for ease of future reviews as the currently submitted Post-Development Watershed Map is not at a detailed scale and does not lend itself to readily provide this information.

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,
AMEC Earth & Environmental, Inc

Andrew P. Masella

for Stephen D. Harding, P.E.
Town Engineer

SDH:lap
cc: Bob Malley, Public Works Director
Andrew Masella, AMEC Earth & Environmental, Inc
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