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May 12, 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  
Private Access Way/Resource Protection Permit Review

Dear Maureen:

We have received and reviewed an April 29, 2010 submission package for the subject project. The package included an April 29, 2010 letter addressed to you from Jon Whitten, Jr. of Terradyn Consultants, L.L.C. with supporting documentation and a two plan set of drawings dated March 2, 2010. 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 access way 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.

We understand that the Board will be conducting a completeness level review of the project at the upcoming Board meeting. We have reviewed the submission requirements and, in our opinion, it appears that the current submission package may have some minor elements that would need to be considered before completeness can be fully determined. Our comments presented below may relate to design details beyond the completeness level of review. These comments are included herewith to facilitate future submittals and reviews of the project. It should be noted that additional comments may be forthcoming as more detailed information becomes available and our review of the project continues.

2. The plan should be labeled "Plan of a Private Accessway" and the approval block for signatures should state "Private Accessway, Approved by the Town of Cape Elizabeth Planning Board."
3. A north arrow should be added to the plans.
4. It is our understanding that the private access way will be paved for a width of 14-feet for the entire length. The designer should provide the pavement thickness to the Private Accessway Section detail on Sheet #1 and to the Typical Pavement Joint detail on Sheet #2.
5. The designer should consult Chapter 16-3-2 of the Ordinance for specific turnaround design components and dimensions as the current layout and size does not appear to be within the

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minimum dimensions for turnarounds. The dimensions of the turnaround should be added to the plans as well. The turnaround redesign should also be reviewed and approved by the Fire Chief.

6. It appears that the proposed contours will cause surface water to sheet across the entrance of the private access way toward Shore Road and the north side of the lot. The designer should either add a culvert to at the entrance of the private access way to prevent this gutter drainage along the face of the intersection or divert this surface water to the inlet of the proposed 15-inch culvert to be located 60-feet off the edge of Shore Road. The designer may also wish to review the invert elevations of the 15-inch culvert to provide a minimum of 2-feet of cover over the top of this pipe.
7. The applicant has hired T.Y. Lin International to analyze the sight distance requirements for the proposed project. It is our understanding that there is currently a ledge outcrop that restricts sight distance that will need to be removed. The anticipated ledge removal that will provide adequate sight distance should be shown on the plans. Per our discussions with the Public Works Director, the plans should also have a note requiring verification from a professional engineer that sight distance is adequate once the ledge outcrop is removed.
8. It is our understanding that wastewater will be treated onsite by an individual septic system and leach bed system. Test pits were provided on the plans, however, the applicant should also provide a layout of where the septic system and leach bed system is to be constructed on the plans and submit a completed HHE-200 for the Code Enforcement Officer's review.
9. The submitted plan does not show the location and size of the existing water main on Shore Road. There is a hydrant shown but no water line. The designer should add this information to the plan.
10. It is our understanding that the lot will be serviced by a well; however, there is no indication on the plans where the well will be located. The applicant should consider tapping into the water main located on Shore Road and installing a water service to service the lot instead of using a well.
11. Per the 19-8-3 Resource Protection Performance Standards, wetland areas should be mapped at no greater than one (1) foot contours. The plan shows the wetlands mapped at two (2) foot contours. We would promote a waiver request due to the narrow channel and footprint of wetland impact.
12. The designer should add flow direction of all existing and proposed watercourses, ponds, or standing water present for two or more months each year to the plans as required by the Private Accessway standards.
13. Plan Sheet #2 includes a detail for riprap protection. The designer should add an inlet protection detail to the plans and show the inlet/outlet protection graphically on Plan Sheet #1.
14. We agree with the wetland assessment performed by the applicant's consultant, Mark Cenci, There is mention of a stream system in his Site Location and Description and depending on its location, there may be a need for a Department of Environmental Protection (DEP) Natural

Resource Protection Act (NRPA) Permit by Rule (PBR) application. The applicant should determine with their consultant if a PBR will be required.

15. We agree in concept that the existing 24-inch will be able to accommodate the proposed project, however the incremental decrease in post development flows to the culvert is difficult to understand as more impervious area is being added to the watershed. 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 Oxford County and not of Cumberland County.
  - b. Watershed 6S appears to be mislabeled as 3S on the Post-Development Watershed Map.
  - c. The HydroCAD calculations suggest an impervious area growth from the pre-development to the post-development for subcatchment 2S. However, it appears that there would be no additional impervious area added to 2S as 6S is reflecting the proposed development.
  - d. The HydroCAD modeling of the stage storage for the "Pond 3P" appears to have the same surface area for both pre- and post-development at the 26-foot contour. The post-development's 26-foot contour surface area should actually decrease as a portion of the 26-foot contour is being reduced for the roadway construction.
16. The Road Maintenance Declaration should be revised as the project is located within Cumberland County and not York County as specified. The Declaration should also state that the Town and emergency vehicles have the right to use the private access way.
17. A note should be added to the plans, in accordance with Section 19-7-9D.5.a. of the ordinance, that states that a registered professional engineer shall inspect and certify to the Code Enforcement Officer that the private access way has been constructed in accordance with Section 19-7-9 of the ordinance prior to the issuance of any building permits.

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



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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