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July 13, 2015

Mr. Pete Correia, Supervisor
& Township Board of Peninsula Township
13235 Center Road
Traverse City, Michigan 49685

RE: Planner's Report – The 81 on East Bay - Planned Unit Condominium Project, Boursaw Road, Section 21, Peninsula Township, T29N R8W, Grand Traverse County, Michigan.

Dear Mr. Correia and Township Trustees,

Project Description. The proposal is for a Planned Unit Development (i.e., a single-use residential PUD) known as “The 81 on East Bay,” and consists of 41 single-family lots ranging in size from 11,633 square feet to 43,008 square feet on 80.26 acres. The subject property possesses more than 180 feet of vertical drop (i.e., elevation change) and 2,505 lineal feet of East Grand Traverse Bay shoreline, and consists of two (2) separate parcels (tax parcel ID numbers #28-11-114-001-00 and #28-11-114-002-00). The parcels are commonly held. Parcel #001-00 (66.85 acres) is zoned Rural & Hillside Residential (R1-A) and parcel #002-00 (14.36 acres) is zoned Coastal Residential (R1-B) by the Peninsula Township zoning ordinance.¹ The project intends to utilize on-site water wells for all lots, to serve proposed Lots 1 through 5 and 25-29 with private septic systems, and to serve proposed Lots 6-24 and 30-41 with an on-site community wastewater treatment system.² Other planned infrastructure include an access road, two (2) *cul de sacs* (understood to be private, and not to be maintained by Grand Traverse County), and an approximately 185,000 square foot storm water retention/infiltration basin.

Peninsula Township Zoning Review. The project was brought for review before the Peninsula Township Board on July 11, 2015. Based on the application as provided, the project should be denied as proposed for the failure to comply with the following requirements of the Peninsula Township Zoning Ordinance.³

¹Peninsula Township Zoning Ordinance, adopted June 5, 1972 (amendments through August 31, 2009).

²It is noted that the project plans appear to be inconsistent regarding Lot #6; elsewhere Lot #6 is listed as using on-site private waste water septic system and not the community waste water treatment system. See The 81 on East Bay SUP application, pp. 26 & 33.

³Peninsula Township Zoning Ordinance, effective June 5, 1972 and as amended through August 31, 2009.

Based on the review of The 81 on East Bay site plan provided to Peninsula Township,⁴ I offer the following:

1. Sections 6.2.4 R-1A Rural and Hillside Residential District Section 6.2.4 and Section 6.3.2 Coastal Zone Residential District allow PUDs in the R-1A and R-1B Districts as Special Land Uses reviewed pursuant to Article VII. Section 8.3.2. PUD Objectives; states in part, “(t)he following objectives shall be considered in reviewing any application for a special land use permit for planned unit development.”
 - a. To encourage a more desirable living environment by preserving the natural character of open fields, stand(s) of trees, steep slopes...; hills and similar natural assets.

The 81 site plans state, “(t)he proposed grading is what is minimally required in order (to) construct the roadway, buildable lake view residential lots and septic and storm water infrastructure.”⁵ Notably, grading cut/fill volumes are not disclosed within plans reviewed for this project. However, conservative estimates suggest more than 27 acres of the project’s nearly 82 acres or nearly 33% will completely denuded and graded/re-contoured with heavy earth moving equipment for development. Site grading plans do not detail cut/fill volumes, but cross-sections provided indicate cut/fill up to 15 feet in depth in graded areas and suggest an average cut/fill depth of 10 feet in graded areas across the site. Grading (i.e., cut/fill) volumes can therefore be reasonably estimated at 1,178,733.6 square feet or 11,787,336 cubic feet (436,568 yards). This is an astonishing amount of earthwork proposed for very to extremely steep slopes, i.e., the project focuses proposed development on existing steep slopes and the majority of flat to gently sloping areas at the site are proposed for required open space. Such massive earthwork is analogous to the volume of 133 Olympic swimming pools or 1,007 large residential swimming pools – to accommodate merely 41 proposed single-family residences.⁶

- b. To encourage developers to use a more creative and imaginative approach in the development of residential areas.

The 81 on East Bay application proposes the removal of about one-half of the existing forest cover existing at the parent parcels.⁷ Importantly, such forest cover is not uniformly spread across the site, but was wisely retained by former agriculturalists on the steep to extremely steep slopes at the site to retain soils and prevent gully erosion, downslope sedimentation, and mass bank slumpage. Importantly, mass slumpage and soil erosion has been observed recently at three (3) locations on similar slopes (i.e., percent slope and soil textures) along Lake Michigan north of Harbor Springs, immediately following the removal of existing tree cover for residential development. As a general rule, the selective thinning of forest cover up to 33% for filtered views is required by communities following good planning principles - clear cutting, such as proposed, is strictly prohibited, root systems are left in place, and filtered view trimming is only undertaken after home construction primarily working within site topography to direct thinning only where needed to create desired home lake views.

⁴ The 81 on East Bay: An Open Space Preservation Community, submitted to Peninsula Township as a Planned Unit Development, a Special Use in the Rural & Hillside (R-1A) and Coastal Zone (R-1B) Zoning Districts, prepared by Mansfield Land Use Consultants, January 2015, revised April 27, 2015.

⁵ See above referenced site plan and SUP application for The 81 on East Bay development as proposed, dated April 27, 2015.

⁶ Assumes an Olympic swimming pool 50 meter long, 25 meters wide and 2 meters deep; and large residential swimming pool of 60 feet long, 30 feet wide and 3 to 10 feet sloping bottom.

⁷ See above referenced site plan and SUP application for The 81 on East Bay, p. 23.

Finally, the site plan in no way needs to plan for “walk-outs” at all for any of the units proposed at lots 30-41 at the northwest corner of the site, within the steepest pre- and post-construction lots at The 81 PUD. Rather, creativity and imagination as required by the Peninsula Township Zoning Ordinance, should inform site plans to work to fit into the landscape/topography, in order to avoid (and only then to minimize unavoidable earthwork) to accommodate a development of this scale at this location.⁸

- c. To provide for more efficient and aesthetic use of open areas by allowing the developer to reduce development costs through the by-passing of natural obstacles in the residential project.

The plan as proposed does not by-pass, but rather focuses development upon the most sensitive land areas, i.e., “extremely steep” slopes in the words of the developer’s agents, up to 45 percent.⁹ Moreover such extremely steep slopes are comprised of highly erodible Kalkaska loamy sand and Leelanau-Kalkaska loamy sands. Importantly, more than 40% of the entire site is comprised of loamy sand slopes greater than 12%, nearly 34% of loamy sand slopes greater than 18% and nearly 27% loamy sands greater than 25%. Such steep to extremely steep sandy slopes represent the most challenging development areas in our region, especially once existing vegetative cover are removed, and due to the project’s close proximity to East Grand Traverse Bay - one of our regional economic jewels.

I am very concerned about the potential for soil erosion/deposition, resulting wildlife habit loss and fragmentation, and aesthetic impacts as observed from public navigation areas of East Grand Traverse Bay from the extent of earthwork proposed for this development. Alternatively, home sites should be “worked into and with” the existing topography, public view sheds, and wildlife habitats and migration corridors should be understood and preserved within required open space, while allowing developers to achieve a reasonable rate of return through the residential development of this site. We have also observed a significant short-term release of phosphorous into near surface groundwater immediately following the removal of existing tree and ground cover on this scale in the construction of golf courses in Leelanau County. This proposed project’s proximity to East Grand Traverse Bay necessitates far more careful and ecologically-informed planning and development to comply with the tenets of the Peninsula Township Master Plan and the spirit and intent of the Peninsula Township Zoning Ordinance.

2. Open space is defined by the Peninsula Township Zoning Ordinance as an area that is open to the sky exclusive of roads, parking lots and building envelopes (Revised by Amendment 151).

The application presents open space calculations just above the required minimum 65% at 65.63%. However, site plans include the Boursaw Road right-of-way at 0.72 acres and the lake bottom above the Lake Michigan Ordinary High Water Mark and below the “survey line” at 1.42 acres as part of the parent parcel, increasing it from a reported 80.26 acres to 82.63 acres. Merely eliminating the inclusion of the Boursaw Road right-of-way, if warranted through an examination of the relevant parcel description, places the proposed open space slightly below the required 65% at 64.75%. Importantly, Township officials and agents should double-check all acreages as presented to determine open space compliance, especially given the “close shave” of such percentages as proposed in the application. Similarly, close and independent verification

⁸ See also Section 8.3.1 Planned Unit Developments (revised by Amendment 151): Authorization which states in part “(i) it is the purpose of this Section to encourage more imaginative and livable housing environments within the Planned Unit Development and Residential Districts.”

⁹ See the above referenced SUP application, p. 11.

should be completed of the purported 14.4% impervious surface, in the proposal again slightly under the required 15% limit.

Finally, significant portions of the open space proposed by The 81 on East Bay development are taken up by storm water infiltration structure and community septic drainfield and reserved drainfield systems. There is absolutely no agricultural, residential community, or wildlife habitat value in required “open space” consisting of a storm water basin or septic drainfields, and such areas should not be counted in the open space calculation.

3. Sections 8.1.3(1)(c) and 8.1.3(3)(e) require permits from all relevant regulating public agencies or written assurances of approval for essential services including water, septic, roads, fire protection storm water management, public safety, and soil erosion control.

Importantly, no soil erosion and sedimentation control plan was available for public review from documents submitted to the Township. Very importantly, no required MDEQ Part 41 permit, or any other detail, is provided for public or Township review for the proposed community sewage treatment and disposal system (i.e., handling 10,000 gallons or more of sewage per day) that is intended to serve 31 of the 41, or 75.6%, of the lots planned. Also, it is fundamental the Peninsula Township reviewers realize now that according to Part 41 requirements, project developers will very likely request that the Township certify in writing to the MDEQ their willingness to take over the operation and maintenance of the proposed community seepage system in the event of The 81 PUD development’s failure or bankruptcy (i.e., MCL 324.31099(3)).

For these reasons alone, the site plan and SUP application as provided are incomplete and preclude Township Board of Trustees consideration or ultimate Township approval, or even approval with conditions, of this plan. For example, community primary and reserve drainfield are proposed in relatively close proximity to forested wetlands and a planned storm water retention/infiltration basin, each essential service actually being claimed as part of qualifying “open space.” The Township has apparently not been provided information regarding groundwater depths or flow direction/gradient at either of these locations to evaluate compliance with Peninsula Township zoning standards to protect public health, safety and welfare and the environment.

4. The definition of open space in the Peninsula Township zoning ordinance acknowledges the community’s valuation of and attempt to protect the dark night sky. Based on the information publicly available relative The 81 PUD, no exterior lighting plan has been submitted for Township review.

Likelihood of Environmental Harm from Proposed Plan. Given the planned density of residential development within the most environmentally sensitive portions of the site (i.e., the prevalence of steep to extremely steep slopes comprised of loamy sand soils); the development’s proximity to East Grand Traverse Bay; and typical residential development patterns within shoreline developments in northwestern Michigan (i.e., the significant clearing of trees for a homes/drives/parking footprints; additional tree removal for water views; and future lawn irrigation and fertilization, etc.), I believe that significant water quality degradation and aesthetic impact from public ways are likely to be direct results from this development as proposed. Specifically, given soil types, the extensive planned clearing of mature forests on steep to extremely steep slopes, and extensive earthwork/re-contouring as planned for home development, I believe that there is a likelihood of water quality degradation within the near shore environment of East Grand Traverse Bay from this development.

Alternative development plans and the full implementation of best management practices should be considered at this location in conformance with the Peninsula Township Master Plan and zoning ordinance and the Michigan Environmental Protection Act, including low impact/conservation design and/or site conservation with the Grand Traverse Regional Land Conservancy and Peninsula Township. Given the extensive unbroken shoreline, productive farmland, intact and connected forests and wildlife habitat, and extremely steep sandy slopes vulnerable to erosion at this location, Township review of this plan requires no less than bringing to bear imaginative and innovative approaches to preserve these parcels or development that results in low impact/conservation residential development.

Thank you for the opportunity to provide these comments. Please contact me if you have any questions at 231-499-7165 or cgrobbel@grobbelenvironmental.com.

Sincerely,
Grobbel Environmental & Planning Associates

A handwritten signature in black ink, appearing to read 'C Grobbel', written in a cursive style.

Christopher P. Grobbel, Ph.D.
Sr. Project Manager/Planner

cc Scott Howard, OBH