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August 28, 2018

Mr. Edward S. Toole, Chairman  
Zoning Board of Appeals  
2 Fairgrounds Road  
Nantucket, MA 02554

**Re: Surfside Crossing  
Response to Chessia Consulting Services LLC Peer Review dated August 20, 2018**

Dear Mr. Toole:

This office has reviewed the above referenced document. Our responses to engineering and surveying comments are as follows:

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**Site Design**

- Issues relative to roadway width will be addressed in the next plan submission;
- Identifying specific affordable unit lots will be addressed in the next plan submission;
- Identifying specific units on certain lots will be addressed in the next plan submission;
- Public safety officials and the Town's transportation Consultant comments to date and any future comments will be addressed.

**Habitat Impacts**

- To be addressed by LEC Environmental Consultants, Inc. and ZBA peer review consultant.

**Water Supply**

- To be addressed by Haley & Ward, Inc. and ZBA peer review consultant.

**Sanitary Sewer System**

- To be addressed by Weston & Sampson Engineers, Inc. and ZBA peer review consultant.

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**Stormwater Management**

- In our opinion, the treatment complies with Stormwater Management Standards and has been an accepted method of treatment on Nantucket. A revised plan and calculations will be submitted that will address comments in this review;

**Utilities**

- Pole relocations may not need to be required in the next plan submission and underground utilities may not be required in the buffer area. If they are required, the buffer areas can be enhanced to mitigate the clearing required for the cleared path for the utilities. A final utility design will need to be approved by the appropriate utility companies.



## Ownership and Maintenance

- These items will be addressed in final Homeowner and Condominium Association documents to be discussed with the Board.

## **Part I- Town of Nantucket Zoning Board of Appeals Comprehensive Permit Rules and Regulations**

### **(a) Preliminary Site development Plans**

#### **Condominium Site**

- Regulations require “*Preliminary*” Site Development plans. The plans submitted are in more detail than a typical Preliminary Plan;
- Building dimensions are shown on the architectural plans and are not shown on the site plans. This is typical for site plans submitted in Nantucket and would be consistent with Sachem’s Path plans;
- The parking lot configuration with no back out space is also typical on Nantucket due to site constraints. Larger vehicles in the last space may need to make an extra maneuver to exit;
- Items regarding details and additional cross-section will be addressed on next plan submission;

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### **Subdivision**

- Issues relative to roadway and driveway width will be addressed in the next plan submission;
- We will add building setback lines to the next plan submission, however, we don’t feel that building dimensions plans should be shown on the site plans because they are shown on the architectural plans;
- We do not feel that we need to add grading, building types, etc. to the Landscape plan which are shown on other plan sheets. This would seem to be redundant;
- Landscaping comments including walkways and driveways we assume will be addressed by the Landscape Consultant;
- Drainage calculations were conservatively done based on an average impervious area of 65% of the lots draining toward the road which is typical for lots this size. Roof areas were included in the drainage areas but will actually be treated separately with infiltration systems.

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### **(b) Report on Existing Site Conditions**

- Habitat, traffic and historical issues to be addressed by other Consultants;
- MEPA review is required for NHESP and total impervious area. ENF shall be submitted at the appropriate time following discussions with Natural Heritage;
- Soil testing done on site was for representative purposes and to confirm mapped soil types. Additional test pits will be performed in the areas of the infiltration systems prior to construction;
- Additional survey information will be added to the next plan submission to address the paved turn around on the property.

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**(c) Preliminary Architectural Drawings**

- Location of specific unit types on certain lots to be discussed with the Board;
- Plans indicate the number of bedrooms for each unit type and a total tally has been provided.

**(d) Tabulation of Proposed Buildings**

- The drainage calculations were based on an estimated percent of impervious area on the lots which is standard practice for a typical subdivision. This impervious area will not match exactly to the impervious area of tables submitted. More detail will be added to the next plan submission which will include information for individual subsurface systems for roof areas;
- The number of bedrooms and size comparisons of market rate and affordable units to be discussed with the Board.

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**(e) Subdivision Plan**

- The roads are intended to remain private. Utility companies shall be provided easements as necessary;
- Waiver requests shall be modified in the next submission;
- Minor plan changes requested will be addressed in the next submission;
- Inspection requirements, Covenant and Bond comments to be addressed with the Board;
- Street survey bounds are indicated at enough roadway points to be able to reproduce lot corners. A waiver to bound all lot corners has been requested;
- We disagree that the plans do not sufficiently show proposed grading. In addition, overall grading is shown on the drainage area plan for the entire site;
- We disagree that the Map and Parcel numbers need to be added to the vicinity map. This information is shown on the existing conditions plan;
- Utility congestion will be addressed in the next plan submission;
- As mentioned previously, utilities may be required in the buffer areas and additional planting will be incorporated to screen any above ground elements;
- Additional information will be added to the plan and profiles. The scale used is larger which allows greater detail to be shown in this case. This is common practice and 1" = 40' is typically considered the smallest scale allowed;
- Additional profile data will be included in the next plan submission;
- Erosion and airborne dust control measures will be incorporated in the next plan submission;
- The plans shall be revised to eliminate the waiver request for roadway width. All roadway layouts will be at least 40' wide to address concerns regarding pavement width, utilities, snow removal, etc.;
- Demonstration of sight lines will be added on next plan submission;

- Centerline Radii will be labeled on next plan submission;
- Catch basins will be adjusted as needed on the next plan submission;
- The requirement for one leaching catch basin to be annexed to each pair of catch basins is outdated and the leaching pit details differ to accommodate the proposed design. These requirements have not been implemented by the Planning Board in recent memory.
- Calculations will be added to demonstrate adequate pipe sizes exist under back-water flow conditions if required with the next plan submission;
- We disagree that gas and oil separators are required if Proprietary units are utilized. These units take the place of the separators and meet Stormwater Standards. These units have been used throughout the island in recharge areas in place of the separators;
- The reference in the regulations for Artificial Recharge are also outdated. Projects in Nantucket have been designed using the Mass DEP Stormwater Standards;
- The swale system designed is likely to be removed in the next plan submission. If any swales are going to be proposed, these comments will be addressed;
- Sewer design calculations will be based on current sewer regulations; therefore, it is likely we will not literally comply with this regulation;
- National Grid will not start the design of the electrical system until the town has approved the plans. The electrical system we have shown is based on a preliminary design by an electrical consultant and is subject to final design and modifications by National Grid. This has been the process for subdivisions on Nantucket;
- The Landscaping plans will be revised and reviewed by another Consultant to the Board;
- Compliance with Massachusetts Architectural Access Board will be demonstrated on final plans;
- Infiltration rates used in the calculations are adequate for the soils found on the site. Soil testing shall be performed at the location of each drainage system prior to finalizing construction plans. Adjustments to the design will be made if required.

**(f) Utilities Plan**

- Water and sewer will be addressed by other ZBA Consultants;
- There will be a common duct bank for electric/telephone/cable. This will be shown on next plan submission.

**Drainage and Stormwater Standards**

**Standard 1 - Untreated Stormwater**

- In our opinion, the design includes adequate Best Management Practices and will comply with these standards. Modifications to the design will be incorporated as stated in the sections below.

**Standard 2 – Post Development Peak Discharge rates.**

- The submittal did not include an analysis of existing conditions because all proposed impervious areas will be recharged on site. Plans will be updated to include more details on the individual roof infiltration systems;

- Analysis for peak discharge rates offsite typically are used to evaluate flooding impacts or impacts to wetlands, however, we will incorporate these calculations in the next submission to demonstrate no detrimental increase in runoff toward abutting properties;
- Impervious discrepancies were previously addressed. Drainage calculations will be revised and provide more detail on impervious areas;
- We disagree with the suggestion that only the bottom area of the infiltration system can be used for the calculations. The referenced email from DEP is not attached; however, it is acceptable and common practice across the industry to use the vertical and horizontal infiltration surfaces and this has always been the practice on Nantucket;
- As indicated in the drainage report, groundwater was estimated based on the Horsley & Whitten Groundwater Map that indicates groundwater depths are approximately 20' deep. Final groundwater elevations will be determined in the location of each drainage system and final plans will be adjusted accordingly if needed.

### **Standard 3 - Recharge to Groundwater**

- The next plan submission will show all infiltration systems at least 10' from property lines;
- In areas where roof infiltration systems are close to foundations, the foundations will be properly waterproofed. This is common practice in Nantucket;
- Calculations in the next submission will include the percent impervious area recharged to demonstrate that over 95% of the impervious area will be recharged;
- Infiltration systems will empty within the mandatory 72 hours based on the stage storage data and exfiltration ability. We do not feel the actual calculation is required;

### **Standard 4 - 80% TSS Removal**

- Street sweeping credit used is only 5% and is reasonable in this development. The credit for street sweeping is at the discretion of the approving authority;
- Catch basins have been limited to no more than .25 acres of impervious area when factoring in the removal the roof areas in the calculations. As stated previously, we feel the calculations are conservative;
- For the design of the proprietary units we utilized the design program from the manufacturer which has been acceptable. We will review the DEP report referenced to determine if the 30% removal rate is applicable to this project;
- Volume to flow rate calculations will be done for the next submission to confirm system sizes.

### **Standard 6 - Protection of Critical Areas**

- The project does not exceed the allowable coverage in the Zone II under the local Bylaw. Impervious coverage is limited to 15% of the lot or 2500 square feet, whichever is greater unless artificial recharge of 95% of the annual precipitation is proposed. This project will recharge at least this amount, therefore will comply with the Bylaw;
- The Stormceptor is an approved and commonly used system. Product information will be provided in the next submission;



- Our TSS removal sheets did not include credit for the infiltration system because these calculations met the requirement for 80% removal prior to the infiltration system. These TSS removal sheets will be revised to include this credit;
- TSS worksheets will also be revised if removal efficiencies are modified for the proprietary units.

#### **Standard 8 - Erosion/Sediment Control**

- In our opinion, NPDES permit will not be required since there is no discharge point and runoff is contained on site;
- Erosion control measures will be detailed on the next plan submission.

#### **Standard 9 - Operation and Maintenance Plan**

- An operation and maintenance plan will be provided for review with the next submission.

#### **(g) Project Eligibility Letter**

- As responded to previously, many of these issues including NHESP, traffic, water, landscaping and sewer are being addressed by others;
- Review comments on drainage as discussed above will be addressed in the next plan submission;
- Lighting plans were submitted to the Board; however, they will be updated in the next plan submission;
- Cross-walk information and signage will be included in the next plan submission;
- Dumpster locations will be shown in the next plan submission;
- Ownership and management will be addressed with the Board.

#### **(h) Listing of Requested Waivers**

- Impervious areas will be clarified as previously mentioned;
- There will be a revised waiver request to the Zoning Bylaws based on the next plan submission to include removing the request for driveway widths and screening of parking;
- Other waivers noted to be discussed with the Board;
- There will be a revised waiver request to the Subdivision Regulations based on the next plan submission.

We would be happy to meet with Mr. Chessia in advance of the next meeting to review the plans in more detail. I am confident we can address the issues raised.

If you have any questions regarding our response, please do not hesitate to contact me at 508-325-0044 or [don@brackeneng.com](mailto:don@brackeneng.com).

Sincerely,

**Bracken Engineering, Inc.**

A handwritten signature in black ink, appearing to read 'Donald F. Bracken, Jr.', written in a cursive style.

Donald F. Bracken, Jr., P.E.  
President

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August 28, 2018

Mr. Edward S. Toole, Chairman  
Zoning Board of Appeals  
2 Fairgrounds Road  
Nantucket, MA 02554

**Re: Surfside Crossing  
Wastewater and Sewer Peer Review dated August 20, 2018**

Dear Mr. Toole:

This office has reviewed the above referenced document. As mentioned in the review, I met with Daniel Sheahan of Weston & Sampson Engineers, Inc. and David Gray the Nantucket Sewer Director to review this project.

We agree that Options 3 & 4 stated in the letter are the viable options for this project at this time. The current design is based on Option 3. As discussed at our meeting, we will modify the current design to relocate the proposed pump station toward South Shore Road to facilitate a future connection to a potential gravity sewer main (Option 4). We have performed additional survey work from the project site to the treatment plant to complete the force main design for this project and to evaluate Option 4.

The pump station on site will be designed in accordance with the Town's latest standards to be provided by the Consultant and incorporated in the final design set of plans.

If you have any questions regarding our response, please do not hesitate to contact me at 508-325-0044 or [don@brackeneng.com](mailto:don@brackeneng.com).

Sincerely,

**Bracken Engineering, Inc.**

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August 28, 2018

Mr. Edward S. Toole, Chairman  
Zoning Board of Appeals  
2 Fairgrounds Road  
Nantucket, MA 02554

**Re: Surfside Crossing  
Water Supply Peer Review dated August 20, 2018**

Dear Mr. Toole:

This office has reviewed the above referenced document. Comments 1 thru 3 thoroughly explain the existing water infrastructure capacity and concerns about future build-out impacts on the system. As indicated in Comment 2, it appears that the current system has the capacity to serve this development. As stated in the review, the Wannacomet Water Company is taking steps to address future capacity concerns.

Comments 4 thru 8 which relate to fire protection capacity, hydrant flow tests, detail specifications for system components and placement of hydrants shall be addressed in the next plan submission.

If you have any questions regarding our response, please do not hesitate to contact me at 508-325-0044 or [don@brackeneng.com](mailto:don@brackeneng.com).

Sincerely,

**Bracken Engineering, Inc.**

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