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November 24, 2020

Board of Public Works
107 Franklin Avenue
Lewes, DE 19958

Attn: Darrin Gordon
General Manager

Re: Virden Subdivision
Preliminary Consent Review
Lewes, Delaware
GMB File No. R200211

Dear Mr. Gordon:

We have completed our review of the Conceptual Plat Plan dated October 27, 2020, and Engineers Report (including Introduction, Suitability of Land for Subdivision Development, Regulatory/ Review Agency Coordination, Conceptual Plat Plan, Letter from the Lewes Board of Public Works, Floodplain Map, and Customized Websoil Survey Report), as submitted by Beacon Engineering, LLC on behalf of Jerome Virden for the proposed Virden subdivision. The proposed subdivision is located approximately 1,700 feet north of the Kings Highway and Theodore C. Freeman Memorial Highway split. The submission was reviewed in adherence to the preliminary approval procedure for a major subdivision in the City Code – specifically, Section 170-19 Paragraph D, and generally accepted engineering principles. Specific comments were made regarding individual components of the submittal and are discussed below.

Section 170-19, Paragraph D, Items 1 – 5

1. Applicant’s Engineer’s Report:

- a. The requirements of City Code Section 170-19, Paragraph A-2 note that new streets shall “afford adequate light and air” – **the Developer shall coordinate with the Board of Public Works on street light requirements on the proposed CeBB Lane, and provide the design on the Council Approval phase final plans.**
- b. The requirements of City Code Sections 170-19, Paragraph A-2 and 170-27, Paragraph E-1 note that residential streets be paved to a 32-foot minimum width and street right-of-way shall be 50-foot minimum width. In addition, curb is required by the Code Sections – **Cebb Lane shall be widened from 24-feet to 32-feet and the right-of-way width increased from 40-feet to 50-feet. Curbing shall also be added to Cebb Lane.** The Lewes Planning Commission may recommend to the Mayor and City Council, per Code Section 170-27, Paragraph E, Section 2, an exception to allow the developer-proposed 24-foot pavement

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width and 40-foot right-of-way width, if the developer can show the site average daily traffic volume (ADT) to be less than 500.

- c. The requirements of City Code Section 170-19, Paragraph A-2 note that new streets shall “facilitate access of firefighting equipment to buildings” – **no width, length, or radii dimensions have been provided for the intended fire truck turnaround area. These dimensions shall be added to the plan.**
- d. The requirements of City Code Section 170-19, Paragraph A-5 note that “the applicant shall notify, by certified mail with return receipt requested, the property owners certified by the applicant to be the property owners within 100 feet of the boundaries of the property which is the subject of the major subdivision application, that such application is being filed with the City, and the applicant shall provide proof of the notification to the City with the initial application” – **have adjacent property owners been notified? Please provide proof of notification in the Preliminary Submission package.**
- e. The requirements of City Code Section 170-19, Paragraph A-6(h)[2] & (i)[1] note that the Applicant shall submit “the Latest City assessment of property, per the City records, as well as an estimate of the assessments to be made of the following after development/subdivision: land, buildings”, and “Estimates of off-site extensions of water mains, sewers, and paved streets for the following: the portion of the same to be recorded and the final future plan” – **the building estimates and off-site extensions of water mains, sewers, and paved streets shall be included in the Engineer’s Report.**
- f. Planning Commission shall take into consideration site screening per City Code Section 170-19, Paragraph E-7: “Screening of objectionable features from neighboring properties and roadways.”
- g. Per the requirements of City Code Section 170-19, Paragraph E-10, the Planning Commission’s review shall consider “prevention of pollution of surface water and groundwater” – **No erosion and sediment control plan was submitted in the preliminary submission to determine if pollution is being prevented.** This plan will be required for Sussex Conservation District (SCD) review. Please provide a letter from SCD stating this is not required if it is not intended to be in the plan set.
- h. Per the requirements of City Code Section 170-27, Paragraph G-4 thru 8, **provide the pavement section in the plan set.**

- i. The requirements of City Code Section 170-27, Paragraph H-3 note that “where the installation of a cul-de-sac would cause undue hardship in land use, a T-shaped background may be approved. Such paved space shall extend the entire width of the street right-of-way and shall be at least 12 feet wide, with the flared portions rounded by at least a curve with a twenty-five-foot radius. Any T-shaped design must receive approval from the City Engineer” – **the proposed T-shaped design warrants several questions. Are the lot driveways intended to be located off the T-shaped design? If the T-shaped design is to be used for fire truck turnaround, it is the City Engineer’s recommendation that driveways not be located as extensions of the T-shaped design, as parked cars could impact emergency use. Please provide dimensions of the T-shaped design, including radii. Please note that a standard barricade may be required, per the State Fire Marshal Code Figure 5-4, should the T-shaped design be utilized for fire truck turnaround.**
- j. The requirements of City Code Section 170-27, Paragraph H-5 note that “the maximum length of a permanent dead-end street is 200 feet’ – **the road centerline appears to be longer than the 196-foot dimension shown. Please confirm this dead-end street is indeed 200-feet or less in length. Note that the paved surface extends roughly 15-feet beyond the proposed right-of-way line.**
- k. The requirements of City Code Section 170-27, Paragraph L, note that “the developer shall grade and pave streets, accessways and alleys, construct or install curbs, gutters, fire hydrants, water mains, sanitary sewers, storm sewers and related improvements and facilities, sidewalks, crosswalks and off-street parking paving, as shown on the approved subdivision plan” – **no proposed driveways have been shown on the plans.**
- l. The requirements of City Code Section 170-27, Paragraph N note that “Sidewalks shall be provided on both sides of all streets. Sidewalk requirements shall be at the discretion of the Planning Commission. Construction and details of sidewalks are governed by the appropriate sections of the latest edition of the Specifications of the Department of Transportation of the State of Delaware and the Americans with Disabilities Handbook. Developers shall construct sidewalks using either concrete or brick or concrete pavers” – **no sidewalks have been proposed on either side of Cebb Lane.**

- m. The requirements of City Code Section 197-76, Paragraph B-1 note that “all developments, lots, and properties shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the site” – **no storm drain pipes or stormwater outfall have been shown on the plans. Two (2) proposed swales are shown with no outfall. The City Engineer questions whether the site runoff will affect adjacent parcels. Additional grading may need to be shown to prevent stormwater runoff impacts to adjacent lots.**
- n. The addition of the lots, streets, and open space areas in the area calculations do not equal the total area within boundaries calculation provided on Sheet T1.0. It appears that the open space and street areas may be incorrectly listed. The open space area listed in the plan view on sheet CP1.1 varies from that listed on the Cover Sheet – **please revise accordingly.**
- o. It appears that Cebb Lane is crowned with 6.65% cross-slopes on both sides of the crown – **road slopes from crown shall be 2.00%.**
- p. On Sheet UT1.1, it appears the proposed water is connecting into the existing 4-inch water main on Kings Highway – **please revise to connect into the existing 12-inch main on Kings Highway. In addition, on Sheet UT1.1, note the following:**
- i. **Water main shall be minimum 4-inch diameter.**
 - ii. **The proposed blow-off shall be replaced with a fire hydrant.**
 - iii. **The proposed sanitary sewer pipe inverts and slopes do not match. Sanitary sewer main pipe shall be 8-inch with a minimum slope of 0.0028 and a minimum depth of 42-inches. Sanitary sewer service pipes to homes must be 6-inch with a minimum slope of 0.02. Please provide utility profiles upon submission of Final Plans.**
- q. **Sheet UT3.1 shows title for water crossing profiles, but no profiles have been shown.**
- r. In the Introduction of the Engineer’s Report, there appears to be a typographical error in the total open space area listing – **please revise.**
- s. On Sheet T1.0, the Net Development Area has been left blank – **please fill in accordingly.**

- t. **Please revise the Standard Board of Public Works details shown on Sheet UT3.1. The following details have been updated since May 2004: 106, 200, 201, 300, & 304. The updated Standard Utility Details can be found here:**

<https://lewesbpw.delaware.gov/files/2019/01/Lewes-BPW-Std-Utility-Specs-and-Details-for-Water-Sewer-and-Storm-Drain-2018.pdf>

2. A statement regarding through streets and connections thereof with existing or probable future streets of adjoining properties:
- a. **The one (1) proposed street – CeBB Lane – providing entry and access to the subdivision is a dead-end street. The City Engineer would not recommend connection to adjoining properties, nor would connection to the existing Freeman Highway be recommended assuming that the T-shaped turnaround and firefighting equipment concerns noted herein are adequately addressed.**
3. Endorsement or comment on suitability of land for proposed purpose:
- a. **The approximate 1.45-acre property is suitable for subdivision, however, the comments and questions contained herein indicate potential issues with the subdivision as proposed.**
4. Verification or adjustment of cost estimates of items, if any, to be borne in whole or in part by the Board of Public Works and the City during the construction process:
- a. **A construction cost estimate for all City (streets, curbs, sidewalks, ADA improvements, etc.) and Board of Public Works (water, sanitary sewer, catch basins and storm drain piping, electrical service, and street lights, etc.) infrastructure must be reviewed during the Council Approval stage of the project such that a proper construction performance bond can be put in place.**
5. Certification of the Plat Plan is complete and in full accordance with the subdivision regulations, as well as fits into a plan for orderly development of the City:
- a. **The comments listed in the above-listed notes 1 through 4 must be addressed prior to this certification. In addition, the following items must be addressed:**

i. Utility trench restoration into Kings Highway must meet the City's trench restoration standards, and those of DeIDOT.

Permits Required for Proposed Site Work

Please forward the following permits/approvals to the City of Lewes, Lewes Board of Public Works, and George, Miles & Buhr, LLC as the project progresses.

1. Sussex County Conservation District – erosion and sediment control permit and/or letter of exemption, and stormwater management approval of letter of exemption.
2. DNREC – wastewater conveyance permit.
3. State Office of Drinking Water (ODW) – water system approval to construction and approval to operate (upon construction and submission of as-built drawings to the ODW).
4. DeIDOT – entrance and record plan approval, utility construction permit (including utility connections, ADA sidewalk, traffic safety and control, etc.).
5. Office of the State Fire Marshal – site plan approval
6. Any other permits/approvals necessary to develop the project.

If there are any questions, please contact Cheri Hochstedler (chochstedler@gmbnet.com or 302.628.1421) or me (codonnell@gmbnet.com or 410.430.7056). Thank you.

Sincerely,



Charles M. O'Donnell, III, P.E.
Senior Project Director

COD/jad

cc: City of Lewes
Attn: Janelle Cornwell
Planning & Development Officer
Beacon Engineering, LLC
Attn: Robert J. Palmer, P.E.