

January 7, 2021

Board of Public Works
107 Franklin Avenue
Lewes, Delaware 19958

Attn: Mr. Darrin Gordon
General Manager

Re: Preliminary Consent Review
Review Comments – Response Letter
Lands of Virden - Major Subdivision
City of Lewes, Lewes & Rehoboth Hundred,
Sussex County, Delaware
Project No. VIR01-02

Dear Mr. Gordon:

In response to the review comments provided by GMB, dated November 24, 2020, the following represent our responses in the same order.

1. Applicant's Engineer's Report:

a. **Comment:** *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.*

Response: Acknowledged. A waiver request will be provided, under separate cover, requesting relief from the installation of streetlights along Cebb Lane.

b. **Comment:** *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 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.*

Response: Acknowledged. The ADT for the site using the ITE Code 210 – Single Family Detached Housing is 47 using the average rate and 66 using the fitted curve. Given the short length of the proposed road segment and the environmental benefits of selecting open section paving, a waiver from the requirement to install curb will be submitted under

separate cover. As you can see from the enclosed exemption that was granted by the Sussex Conservation District, no stormwater management is required or “officially” proposed. That said, the Developer and this Engineer recognize and appreciate the importance of providing for stormwater management. Therefore, shallow depressions are proposed alongside the proposed roadway to provide storage of road runoff from the 10-year storm event with an infiltration rate that is 50% of the assigned infiltration rate of 30 MPI (2” per hour). The shallow depressions would capture and store sediment and nutrients that are contained in the runoff, rather than channelizing it along a curb and directing it to inlets that would be connected to the City’s stormwater system.

- c. **Comment:** *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.*

Response: Acknowledged and addressed. Width, length, and radii for the fire truck turn around have been provided on Dwg SP1.1.

- d. **Comment:** *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.*

Response: Acknowledged and addressed. Verification of notifications, by certified mail of all neighbors within 100 feet, was included with the initial submission of the Preliminary Consent Report and Conceptual Plat Plan and confirmed by Janelle Cornwell.

- e. **Comment:** *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.*

Response: Acknowledged and addressed. The Engineer’s Report now includes the aforementioned estimate.

- f. **Comment:** *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.”*

Response: Acknowledged and addressed. A landscape buffer has been added within the open space of the subdivision per separate recommendation from the Parks & Recreation Committee. An existing fence, belonging to the Delaware River and Bay Authority, screens the subdivision from Freeman Highway and is planned to remain. Existing vegetation along this fence is also planned to remain.

- g. Comment:** *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.*
- Response:** Acknowledged and addressed. SCD has granted Cebb Lane an exemption, and will review lot and driveway construction on an individual basis utilizing the Residential Standard Plan approval process. Documentation of the granted exemption is included with this submission.
- h. Comment:** *Per the requirements of City Code Section 170-27, Paragraph G-4 thru 8, provide the pavement section in the plan set.*
- Response:** Acknowledged and addressed. The pavement section is now shown on Dwg CD1.1, Construction Details.
- i. Comment:** *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.*
- Response:** Acknowledged and addressed. The turnaround has been designed to meet City code requirements and the Delaware State Fire Prevention Regulations. Additionally, "No on street parking anytime" signs have been specified along Cebb lane and located on the site plan. Parking restrictions have also been included on the Preliminary Boundary Plan and incorporated into the HOA covenants and restrictions.
- j. Comment:** *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.*
- Response:** Acknowledged and addressed. The length of Cebb Lane from the entrance intersection of Kings Highway, along the centerline, to the end of the pavement (not including the designated turnaround, is 197 feet. The turnaround will be for driveway access for lots C, D, and E, as well as for emergency and delivery vehicles only.
- k. Comment:** *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.

Response: Acknowledged and addressed. Proposed driveway locations are now shown on the plans.

- l. Comment:** *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.*

Response: Acknowledged. A waiver request will be provided, under separate cover, requesting relief from the construction of curb and sidewalks along CeBB Lane.

- m. Comment:** *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.*

Response: Acknowledged. The proposed swales are intended to provide storage of road runoff. Infiltration will occur in these areas. Based on the initial soil reconnaissance, the soil will support it an assigned permeability for the most restricted soil layer of 30 MPI (2"/hour).

- n. Comment:** *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.*

Response: Acknowledged and addressed. The total areas of lots, street (ROW), and open space now equal the total area within the property boundary. This information has also been updated in the Engineer’s Report.

- o. Comment:** *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%.*

Response: Acknowledged. The original road design is based upon a 2.00% cross slope.

- p. Comment:** *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 6-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.

Response: Acknowledged and addressed. The connection to existing main has been relocated to the 12 inch main; the blow off has been replaced with a fire hydrant; the onsite water main has been increased to a 6 inch main; and sanitary sewer slopes have been coordinated with the proposed inverts. Profiles for both water main and sanitary sewer will be provided on the Final Plans.

- q. **Comment:** *Sheet UT3.1 shows title for water crossing profiles, but no profiles have been shown.*

Response: Acknowledged. Profiles for the water main will be provided on the Final Plans.

- r. **Comment:** *In the Introduction of the Engineer's Report, there appears to be a typographical error in the total open space area listing – please revise.*

Response: Acknowledged and addressed. The open space acreage has been corrected.

- s. **Comment:** *On Sheet T1.0, the Net Development Area has been left blank –please fill in accordingly.*

Response: Acknowledged and addressed. The net development area is now shown in the Site Data Column on Dwg T1.0.

- t. **Comment:** *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>

Response: Acknowledged and addressed. The noted details have been updated to the October 2018 revisions.

2. A statement regarding through streets and connections thereof with existing or probable future streets of adjoining properties:

- a. **Comment:** *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.*

Response: Acknowledged and addressed. The design intent is to comply with the City Code and the Delaware State Fire Prevention Regulations, and we will work within the guidelines provided by the Office of the State Fire Marshal, and the Board of Public Works to ensure the turn-around is adequate for fire trucks, emergency, and maintenance vehicles. Since Freeman Highway is a limited access highway, connection between Cebb Lane and Freeman Highway may not be possible.

3. Endorsement or comment on suitability of land for proposed purpose:

a. **Comment:** *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.*

Response: Acknowledged. It is our opinion that the plan revisions and our responses to each comment address the potential issues that have been indicated.

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. **Comment:** *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.*

Response: Acknowledged. A construction cost estimate will be provided, under separate cover.

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. **Comment:** *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 DelDOT.

Response: Acknowledged. Comments will be addressed so that the Plat Plan is in full accordance with subdivision regulations. Utility trench restoration will comply with the code of the City of Lewes, Article V, Section 167-14. Street Restoration Standards and DelDOT Utility Permit requirements.

6. Additional comments received via email:

a. **Comment:** *ADD the following Water System note between existing Notes 10 and 11: "Fire hydrants shall be a traffic model compression type with 5-1/4" main valve opening, one 4-1/2" pumper nozzle and two 2-1/2" hose nozzles and shall have a 6" side inlet mechanical joint shoe connection to accommodate the class of pipe hereinbefore specified. Depth of bury shall be suitable for a minimum trench of 3'-0". Hydrants shall conform with AWWA C 502, latest edition. Hydrant seat shall be provided with bronze threaded connection. The operating nut shall be pentagon shape measuring 1-1/2" National Standard point to flat. Non-kinking hose nozzle chains are required. Drain mechanisms shall be bronze to preclude galvanic corrosion of dissimilar metals and shall operate automatically with the opening and closing of the main valve. Hydrants shall*

receive prime and shop coats of paint at the factory. Submit coating specifications for approval. Final coating color to be Pennsbury paint (color as directed by the Board of Public Works). The Developer shall be responsible for field touch-up or repainting of hydrants as required. Hydrant barrel shall be provided with a reflective tape of a minimum of 2" in width around the barrel under the top flange. The entire hydrant assembly, including the valve seat and all moving parts, shall be removable from the top without the need to excavate and/or remove the hydrant. The design shall be that lubrication of the operating threads is possible without disassembly. A certificate of inspection and test shall be furnished including submission of a flow and friction loss curve. Provide one (1) hydrant wrench for every two (2) hydrants supplied. Fire hydrants shall be Model B-62-B as manufacturer by American Darling, and shall open by turning to the right."

Response: Acknowledged and addressed. This note has been added to Dwg T1.1 as City of Lewes Board of Public Works, B. Water System, Note 11.

- b. **Comment:** Sanitary Sewer Note No. 1 – ADD the degree symbol between "73" and "F".

Response: Acknowledged and addressed. The degree symbol has been added to Sanitary Sewer Note No. 1 where requested.

- c. **Comment:** *ADD the following Sanitary Sewer note between existing Notes 8 and 9: "Pipe restraint at bends or other special fittings shall be with retainer glands system approved by the City/BPW Engineer manufactured by Tyler, U.S. Pipe, EBAA, or UniFlange, or with concrete buttresses as shown in the City of Lewes Board of Public Works Standard Details."*

Response: Acknowledged and addressed. This note has been added to Dwg T1.1 as City of Lewes Board of Public Works, B. Sanitary Sewer System, Note 9.

- d. **Comment:** *GMB's review comment 1-p-i on page 4 of the letter dated 11/24/2020 should read "Water main shall be minimum 6-inch diameter."*

Response: Acknowledged and addressed.

- e. **Comment:** *Regarding the proposed roadside swales, if the Lewes Planning Commission and City Council approve a waiver for curb and gutter, it is likely that an infiltration test completed by a certified geotechnical engineer will be required per the current design intent to allow those swales to store and infiltration runoff.*

Response: Acknowledged.

Mr. Darrin Gordon, General Manager

January 7, 2021

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We trust our responses adequately address these comments; however, please call or email with any additional comments or questions. Following your review/approval of the foregoing, please confirm that the plans are ready for formal review by the Planning Commission, and we will mail 2 copies and an electronic copy via Dropbox to you for distribution.

Respectfully Submitted,



Robert J. Palmer, P.E.

President | Senior Engineer

Enclosures

cc: Mr. Jerry Virden w/enclosures via Dropbox

Mr. Vince Robertson w/enclosures via Dropbox

Mr. Charlie M. O'Donnell, III, P.E. w/enclosures via Dropbox

Ms. Janelle Cornwell, AICP w/enclosures via Dropbox

Ms. Cheri Hochstedler w/enclosures via Dropbox