

EXHIBIT E



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August 30, 2019

VIA E-MAIL AND HAND DELIVERY

City of Lewes Planning Commission
P.O. Box 227
114 E. Third Street
Lewes, DE 19958

**Re: Fishers Cove Land Use Application
Burke & Rutecki, LLC**

Dear Chairman McKay:

We are writing in our capacity as civil/site engineer for Burke & Rutecki, LLC in relation to its Land Use application for the Fishers Cove subdivision (the "Application"). Below, we address several of the twenty-two factors set forth for preliminary consent consideration of a major subdivision application in the City of Lewes Code of Ordinances § 170-19(E). It is our opinion, to a reasonable degree of engineering certainty, that the Application complies with each of the below factors:

Factor Two: Integration of the proposed major subdivision into existing terrain and surrounding landscape.

The development is well integrated into the existing terrain and landscape. All lots are outside of wetland areas, on upland (9.6 acres), and will have landscaped buffers. By proposing larger lots than those found on Rodney Street, along with 3.46 acres of open space (31.2% of the total property), the subdivision is harmonious with the surrounding landscape as it transitions well with the University property to the North. The Application shall comply with all SCD, DNREC and FEMA requirements relating to stormwater and floodplain.

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It should be noted that the 3.46 acres (or 31.2%) of Open Space set aside within the 11.08 acre site is significantly more (3.1 times) than that required by Code (10% minimum set in § 170-26).

Factor Four: Preservation of natural and historical features.

The proposed development preserves the natural and historical features of the area. The development, again, provides 3.46 acres of open space (31.2% of the total property, in excess of the 10% required by Code). In addition, fifteen (15) foot landscaped buffers are provided in the rear of the lots and at least two (2) street-side tree plantings will be required. All wetlands on the property will be preserved. All existing trees within the non-tidal wetlands area and all existing trees within and south of the Open Space Parcel A are to be preserved. Further, all trees on lots 8 through 18 that exist will be preserved to the greatest extent practicable, subject to detailed grading to be refined during the design phase of the project, and concurrence of GMB and Sussex Conservation District. The applicant shall submit a final landscape plan to the Parks and Recreation Committee review, and will be planting indigenous species as recommended.

An Arborist has completed an initial report and indicates that there are no specimen trees in the location of the future clearing for the new community and that most are scrub trees that have grown up naturally and exhibit less than (20) years of growth.

The applicant intends to maintain the Fisher House on its own lot (one of Lewes' oldest homes, though not historical) as part of the minor subdivision process which has been submitted separate from this application.

Factor Five: Preservation of open space and scenic views.

The larger lots will help preserve scenic views, as will the elongated island in the cul-de-sac and protect all existing wetlands. Lots on uplands and landscaped buffers likewise will preserve scenic views. The Fisher House will be preserved as one of Lewes' oldest historical homes and should be considered a valuable scenic asset. An easement for walking is planned across the edge of the Fisher House property with a natural surface, which will enable the Fishers Cove community to access Pilottown Road, as well as to the Rehoboth Canal across from Pilottown Road.

The City of Lewes Code requires a minimum lot area of 10,000 square feet. It should be noted that the average lot area is 13,513 square feet, significantly more (35.1%) more than the minimum required. The smallest lot proposed is 11,180 square feet, also much larger than the minimum requirement. The larger lots provide for a more scenic viewshed and views for the community to the open space and the Great Marsh.

The entire property boundary along the Great Marsh will be preserved in its natural condition and has an open view from the proposed lots and public roads, thus providing and preserving the scenic views.

Factor Six: Minimization of tree and soil removal and grade changes, except to ease flood concerns.

The City has mandated that the public roads be located at or above the FEMA 100-year flood elevation. To minimize fill in the flood plain, to the extent practicable, the roadway fill will be supported by a retaining wall, that meets GMB and Sussex Conservation concurrence. Additionally, to ease flood concerns the City and FEMA require that the lowest floor of the homes be 1.5 feet above the FEMA 100-year flood elevation. Further, to ease flood concerns the home foundations/crawl spaces will be equipped with flood vents as required by City Code and FEMA, which will allow for the passage of flood waters in the event of major flood events. For all the above, soil removal and grading will be subject to and comply with GMB, SCD, DNREC and FEMA requirements.

Minimal tree removal will be implemented, and tree planting will be required to augment the buffers proposed to the neighboring community.

An Arborist has completed an initial report and indicates that there are no specimen trees in the location of the future clearing for the new community and that most are scrub trees that have grown up naturally and exhibit less than (20) years of growth.

Commissioner Moser has submitted a comment on the Application which states that the deforestation shown is not "realistic," and that the proposed grading will impact wetland vegetation because it reaches to the absolute edge of the wetlands area.¹ The comment further states that "the proposed grading for the long narrow stormwater facility appears to extend up to the rear yards of the adjacent, existing homes, potentially impacting

¹ Commissioner Moser's comment is attached hereto as Exhibit A.

existing trees and other improvements.” However, as indicated earlier, all existing trees within the non-tidal wetlands area and all existing trees within and south of the Open Space Parcel A are to be preserved. Further, all trees on lots 8 through 18 that exist will be preserved to the greatest extent practicable, subject to detailed grading to be refined during the design phase of the project, and concurrence of GMB and Sussex Conservation District. The applicant shall submit a final landscape plan to the Parks and Recreation Committee review, and will be planting indigenous species as recommended.

Commissioner Moser’s comments dated February 7, 2019 were made relative to the Karins and Associates’ Concept Plan for Fishers Cove (Plan) dated August 29, 2018, with a revision dated November 28, 2018, and referenced the narrow stormwater facility at the rear yards of adjacent existing homes, which was eliminated in the Plan that is currently in front of the Planning Commission, which is Plan dated August 29, 2018, and last revised March 15, 2019. The City Engineer has since commented on the Plan in their review comments dated May 10, 2019 and endorsed the lot layout as shown.

Factor Seven: Screening of objectionable features from neighboring properties and roadways.

Fifteen (15) foot landscaped buffers shall be maintained between adjacent properties; however, no objectionable features are and shall be present. As noted previously, all trees on lots 8 through 18 that exist will be preserved to the greatest extent practicable, subject to detailed grading to be refined during the design phase of the project, and concurrence of GMB and Sussex Conservation District. Any portion of the proposed screened buffer that does not have existing trees or where the existing trees will be thinned/removed due to grading will be augmented with combination of trees and shrubs to provide the required screening to the neighboring properties. The applicant shall submit a final landscape plan to the Parks and Recreation Committee review, and will be planting indigenous species as recommended.

Commissioner Moser’s comment further notes, also related to the Plan dated August 29, 2018 with revision date of November 28, 2019, that Burke Road should be screened off from existing homes on Rodney Avenue. We agree, for this reason the Plan for Fishers Cove currently before the Planning Commission dated August 29, 2018 and last revised March 15, 2019 provides for a buffer between Burke Road and the adjoiner Rodney Avenue Lot, which will also be landscaped with a mixture of trees and shrubs.

Factor Eight: Provision for water supply.

Public water is proposed to the community and shall be provided by the city based on the BPW and the City Engineer's plans, the point of connection and extension of water line will be coordinated and confirmed with final site plan approval. The water plan and design within the community will also meet and exceed the requirements of the State Fire Marshal's office.

Factor Nine: Provision for Sewage Disposal.

The proposed development plan adequately provides for sewage disposal by gravity to a pump station to be located within the project limits. The pump station will discharge to sewer provided by the City, based on the BPW and the City Engineer's plans, to be determined with final site plan approval and meet the requirements. The design of the sewer conveyance and pump station will also meet the requirement of DNREC, as necessary for permitting.

The Anderson Report notes that "an emergency generator and odor control measures will be required" for the proposed sanitary sewer pump station. Requirements of DPW and the City Engineer shall be met regarding the design of the pump station and specifically with regard to odor control and emergency generator.

Factor Sixteen: Compatibility with adjacent area land uses.

See the above response to Factor Two. The adjacent area land uses are residential and state government land. As a mix of residential, open space, and wetlands, the proposed development would constitute a similar use to these adjacent properties.

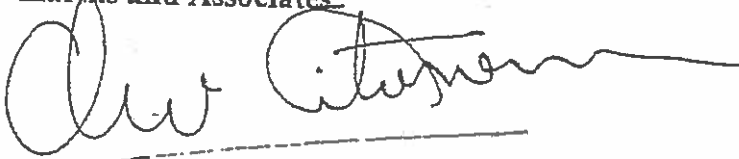
Factor Twenty: Recognition of scenic byways and walkability.

As currently proposed, the proposed development will have sidewalks on both sides of all proposed public streets. The Application further provides for an easement across the Fisher House property to Pilottown Road, increasing the walkability of the area and provide for a pedestrian connection to Pilottown Road and Rehoboth Canal across from Pilottown Road.

Based on the above, we believe, to a reasonable degree of engineering certainty, that the Application complies with Factors 2, 4-9, 16, and 20 set forth in the City of Lewes Code of Ordinances § 170-19(E). We are available at your convenience should you have any questions or concerns. Thank you for your consideration of the Application.

Sincerely,

Karins and Associates

A handwritten signature in black ink, appearing to read "Dev Sitaram", written over a horizontal line.

Dev Sitaram, P.E.

EXHIBIT F

The City of Lewes



STAFF REVIEW

June 4, 2019 (updated preliminary consent plan)

Application Title	Fishers Cove
Application Type	Preliminary Consent - Major Subdivision
Owner	Burke & Rutecki, LLC
Tax Map and Parcel	SC Tax Map# 335-4.00-15.00
Size and Location	11.08 acres and located off Rodney Avenue, southwest of Pilottown Road
Comprehensive Plan Designation	Residential
Zoning District	R-2 – Residential Low-Density
Present Use	agriculture/vacant
Proposed Use	18 additional residential dwellings
Online application material	https://lewescommissions.wordpress.com/reviews/dev_reviews/fishers-cove/

I. BACKGROUND INFORMATION:

Fishers Cove is an 18 lot single family home subdivision on 11.08 acres. The applicant is proposing 18 new single family homes, new roads to access the property, and dedicated open space. According to the proposed plan the lots would average 17,925 square feet and there would be 2.97 acres of dedicated open space. The property is bordered by existing residential properties along the south and east, the University of Delaware to the north and the Great Marsh Preserve to the west. Connection to proposed roads that would provide access to the new dwellings would be through an extension of Rodney Avenue.

II. PLAN APPLICATION

Original – September 2018

- An official application package was submitted to the City on September 18, 2018¹.
- On October 10, 2018 the Applicant's Engineer provided a revised grading plan sheet that was incorporated into the original plan packet.
- On October 29, 2018 the Applicant's Engineer requested to meet with City staff and Engineer to review the status of the plan, that meeting occurred on November 7, 2018. During the discussions the City Engineer indicated inconsistencies between information provided on the grading sheet and other plan sheets (this was attributed to the use of LIDAR data vs. field survey data). Other items of discussion included elevation (below base flood elevation) for portions of the proposed road network and some structures, geotechnical testing and the status of other agency reviews (see attachment 1 for full list of discussions). It was agreed that the applicant would make revisions to the set of plans and would include a key that listed the changes to assist with tracking prior to resubmitting the plan set for a full City review.

Revised – December 2018

- A revised set of plans was submitted to the City on December 10, 2018 incorporating the changes discussed at the November applicant/staff meeting. A full City review was initiated at that point.

Updated – March 2019

- A revised set of plans was submitted to the City on March 29, 2019 that:
 - Removed the parcels abutting Pilottown Rd. from the major subdivision application. A minor subdivision application was also submitted at the same time that would convey 0.25 acres from tax parcel 335-4.14-103.00 to tax parcel 335-4.00-15.00.
 - Adjusted the plan in response to issues raised by the City Engineer's Report and comments raised at the 2/7/2019 Planning Commission meeting.
- Since the March 2019 plan submittal contained significant changes the reports created based on the December 2018 major subdivision application were updated accordingly.

Prior to the current application the City of Lewes reviewed a proposed subdivision for the property in 1987. The earlier subdivision proposed the construction of 26 building lots on the property. That earlier application was denied by City Council in May 1987 after determining that access was available to Pilottown Road across land that was held by the current property owner, the 1.03 acre parcel that is part of the minor subdivision application.

¹ Prior to the official submission the applicants met to discuss the project with City staff on July 23, 2018. At that meeting they provided a 2016 conceptual site plan that displayed 11 new residential dwellings for discussion purposes.

As part of the submission the following information was provided with the application:

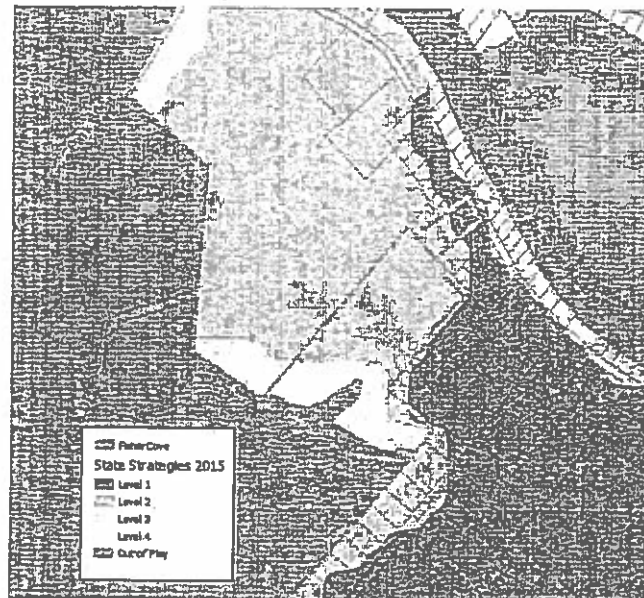
- Written documentation identifying the applicants;
- A conceptual plat plan (updated on 3/15/19);
- A letter from the Lewes Board of Public Works certifying that utilities are existing and available;
- Payment of major subdivision application fee;
- Documentation of Public Notification;
- An Applicant Engineer's Report (amended 3/26/19);
- A Delineation of Wetland Report and Wetlands Determination Forms;
- A Tree Inventory Report;
- A Boundary, Topographic and Wetland Location Survey; and
- A copy of Plats and Deeds of Record.

III. Compliance with adopted policies:

Based upon the information presented, the City of Lewes Code and the Comprehensive Plan, staff submits the following regarding the application for Subdivision Preliminary Consent approval:

A. State Designation

Portions of the project are located within Levels 1 and 2 according to the Strategies for State Policies and Spending. Levels 1 and 2 includes lands in the City that are adjacent to or intermingled with areas that are developed although environmentally sensitive features or other infrastructure issues may present issues that will need to be addressed during the review and permitting processes. Portions of the tract near the Canal and adjacent to wetland areas fall within Level 3 which are areas that are not designated for near term development according to State policies. Areas on the western perimeter of the property contain wetlands that are adjacent to the Marsh are designated Out of Play due to significant legal and/or environmental constraints suggesting those areas should be held in some form of permanent open-space protection.



B. City Comprehensive Plan

- a. Use designation - The proposed residential lots are consistent with the use designation "Residential" for this area as defined in the City of Lewes Comprehensive Plan, Future Land Use Map (see Map 10 at <http://www.ci.lewes.de.us/pdfs/Appendix B Maps2.pdf>).

- b. Several portions of the City Comprehensive Plan address concerns with development on properties containing wetlands or within the floodplain. As mentioned in the Comprehensive Plan strict attention will be placed on ensuring that any future development meets or exceeds floodplain requirements contained in the City's zoning ordinance and building code. These issues will be addressed more fully in latter sections of this review.

C. City Zoning Ordinance

- a. Permitted Uses – The proposed use, single family detached dwelling, is permitted by right and are in compliance with the R-2 Residential Low-Density zone.
- b. Lot Dimensional Regulations - The proposed lots comply with the lot area and bulk regulations, as listed below, for development in the R-2 zone.

From Section 197, Attachment 2 of the City of Lewes Zoning Code.

Lot area (square feet)	10,000
Lot width (feet)	75
Lot depth (feet)	100
Setbacks (feet)	
Front yard	30
Side yard	8
Rear yard	15

- c. Floodplain regulations – The development of buildable lots, as proposed by the application, should address the need to ensure that each lot could meet or exceed the requirements outlined in § 197-73, Floodplains of the Zoning Code. In addition prior to any construction activity applicants would need to obtain a building permit ensuring that all proposed construction activity would be in compliance with the zoning provisions and applicable Building Code requirements. As part of the subdivision review evaluations should address § 197-73 E (3) which states that no development activity that would affect the flood-carrying capacity of the flood plain be permitted. Additional information on these considerations, as well as addressing compliance with State and Federal regulations will be covered in the later section "Flooding". In addition the City Engineer's Report will address compliance issues concerning lots and facilities,

D. City Subdivision Ordinance

- a. Process Requirements - The submittal for Preliminary Consent approval has complied with all of the required provisions for Initial Application under § 170-19 A, making it a complete application.
- b. The Planning Commission preliminary consent review evaluates the proposed application to criteria listed under § 170-19 E of the City Code.
- c. Other Subdivision Ordinance considerations:

- i. Water, Sewer, Electric and Stormwater systems – Planning Commission review requires evaluation of compliance to ordinance provisions. Refer to City Engineer’s Report for details and recommendations on these requirements.

E. City Agency Reviews

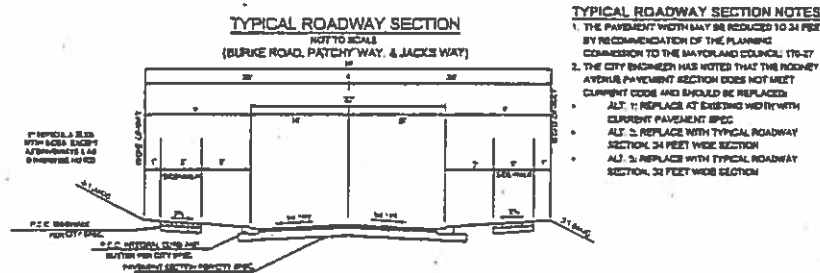
- a. Parks and Recreation Commission (PRC) review – The updated application for Preliminary Consent has been reviewed and submitted for consideration by the Planning Commission (an online copy of the report can be found at http://www.ci.lewes.de.us/pdfs/PRC_UPDATED_4.19_Fishers_Cove_Report_to_Planning_Commission.pdf). As noted in § 177-11 of the City Code applicants are responsible for the street tree plantings. The applicant is advised to coordinate the placement and type of street trees as well as the review of long-range landscape projections and plans with the Lewes Parks and Recreation Commission prior to final plan approval.
- b. City Engineer and Board of Public Works report – The updated report for Preliminary Consent has been completed and submitted for consideration by the Planning Commission. An online copy of the report can be found at [http://www.ci.lewes.de.us/pdfs/Fishers_Cove_\(Preliminary_Consent_Review\)_5-09-19_JTE.pdf](http://www.ci.lewes.de.us/pdfs/Fishers_Cove_(Preliminary_Consent_Review)_5-09-19_JTE.pdf).
- c. Reports from other agencies – Copies of reports or issued permits provided by other agencies, that are required as part of the subdivision approval, must be submitted to the City of Lewes.

IV. Considerations

In addition to review for consistency with current policies and regulations a number of considerations are evaluated as part of the review for preliminary consent. Some require evaluations conducted by City agencies, others are overseen by external agencies. Some can be addressed completely as part of the preliminary consent review whereas others require detailed assessments that are typically addressed during final plan review.

A. Site Access

According to information provided with the application vehicle access will be provided by extending Rodney Avenue to the proposed intersection with Burke Road. The applicant is proposing to build new roads (Burke Road, Patchy Way and Jacks Way) to City standards using a 50’ ROW comprised of 2 travel lanes (16’ lanes), with curbs/gutters and 5’ sidewalks on each side along with 3’ unpaved section between the sidewalks and curbs (see typical roadway section below). The updated plan has



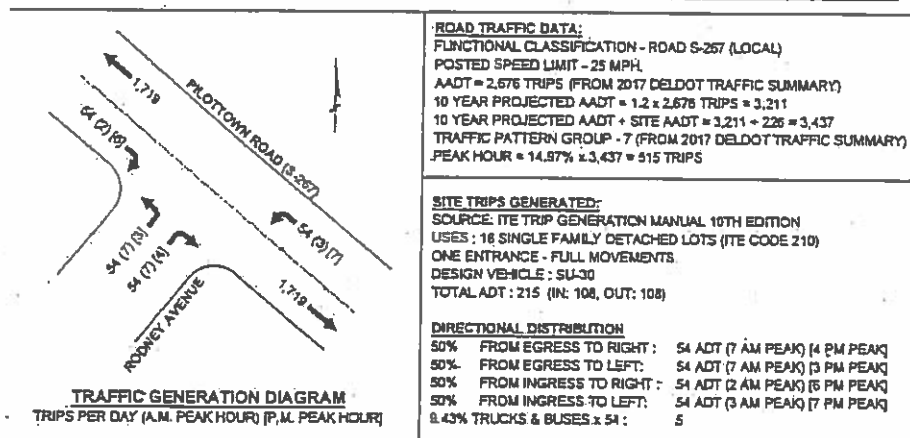
proposed replacing the previous cul-de-sac (Tylers Rd.) with what the application describes as an modified cul-de-sac called Tyler's Circle.

The applicant has also noted in the plan a possible option to allow the pavement width to be reduced to 24' by reducing cartways to 12' pending recommendation by the Planning Commission and approval by City Council (Section 170-27). Decisions regarding residential road widths typically involve balancing the need to accommodate vehicular traffic or providing opportunity for on-street parking (if needed) while avoiding concerns related to excess impervious cover or making wide roads that tend to increase vehicle speed. The Planning Commission should consider the requested road reduction and include a recommendation that will be factored into the preparation of a final plan if the application proceeds.

The proposal to use an extension of Rodney Avenue as the access to the proposed development triggers evaluations of that existing corridor. Preliminary evaluations indicate that Rodney Avenue is currently not constructed to City standards. The paved width is estimated to be less than 20' and narrower in several stretches. The City Engineer also suggests that road and base is also not built to current standards which could degrade rapidly should it be used to accommodate heavy equipment that would be expected with site development. As part of the application the applicant has proposed 3 alternatives intended to improve Rodney Avenue to enable it to accommodate the additional traffic which are listed under #2 of the notes in the Typical Road Section image above. The Planning Commission should review the alternatives and be prepared to offer recommendations to City Council for consideration during final plan review.

Included within the plan application is a panel that describes traffic generation and distribution. The information indicates that the development would result in an additional 215 average daily trips per day. As suggested in the panel distribution of the current and additional traffic (estimated to be 500 average daily trips), at the intersection of Rodney Avenue with Pilottown Road, would be evenly split (see Trip Generation image below).

TRIP GENERATION - PILOTTOWN ROAD (S-267) AND RODNEY AVENUE



The plan shows the proposed cartways and ROW lines. Additional details on cartway width, curb radii, sight distance, curbing and sidewalks (required by code on both sides of all streets) are addressed

within the updated City Engineer report. In addition to those findings the following should be considered during preliminary consent review:

1. It should be noted that wheelchair ramps would be required at all intersections as per § 167-13 of the City Code.
2. The proposed Tylers Circle has replaced the former cul-de-sac (Tylers Court). According to the application description this is proposed to be a modified or "elongated cul-de-sac" with a center island. The Applicant's Engineer Report includes a notation (p.5) requesting that the Planning Commission consider Tylers Circle as a modification to City Code standards (Section 170-27 H(1)(a) Cul-de-sac with center islands. The City Engineer's report includes suggestions on the proposed road. In its review of the proposed Tylers Circle the Planning Commission should take the following considerations into account as part of this request:
 - a. Cul-de-sacs are defined as a dead end street with a common ingress and egress with a turn-around in both City and State regulations.
 - b. The City Code indicates that a dead-end cul-de-sac should be avoided when there is a potential for a connection § 170-27 H (1), a topic yet to be considered by the Planning Commission;
 - c. The proposed modified cul-de-sac would be approximately 420 feet long from its connection with Patchy Way. Standards, including from DeIDOT² are in place to limit the length of a cul-de-sac, according to the City code (Section 170-27 H(5) the maximum length of a dead end street (cul-de-sac) is 200 feet.
 - d. The proposed elongated cul-de-sac appears more like a circle in terms of street layout and access, except the lanes are one way in and one way out. The proposed ROW is also 40' for each segment as opposed to the 50' minimum ROW for City streets.
 - e. Although the proposed modified cul-de-sac may provide greater accessibility it could make for confusing circulation patterns.
 - f. On street parking on the proposed lanes is not addressed, Since the road is designated as 22' wide it is assumed that parking could be accommodated on one-side, presumably the outer lane but this should be clarified further.
 - g. Review the recommendations for Tylers Circle as noted in the City Engineer's Report.
3. As part of the plan update and the minor subdivision plan, the applicants have also proposed connecting a 20' wide walkway, utility and emergency access easement through the adjacent property (tax parcel 335-4.14-103.00) to serve as an alternative access for emergencies (as well as during construction activity). These revisions address, in part, previous suggestions that alternative emergency access, at a minimum be considered and guidelines provided by the State that suggest infrastructure be designed to address potential coastal hazards. In its review of the site design the Planning Commission should consider if the added measures are adequate or if other potential connection opportunities are available and should be considered. Additional details should also be provided by the applicant, prior to plan approval for either application that clearly defines the access easement design and on-going

² The maximum tangent length as measured from the corner radii of the intersecting street to the cul-de-sac radius for a permanent dead end street is 200 feet. DeIDOT Development Coordination Manual, Chapter 5.

maintenance responsibilities to ensure its long-term availability. Assuming the proposed easement connection proceeds the applicant should plan to coordinate that access design with the State Fire Marshal, DelDOT and the Lewes Historic Byways Committee since Pilottown Rd. is a designated Byway corridor.

B. Sedimentation and Stormwater Management

A detailed sediment and stormwater plan will be required prior to any land disturbing activity taking place on the site. The plan review and approval as well as construction inspection will be coordinated through the Sussex Conservation District. Contact Jessica Watson at the Sussex Conservation District at (302) 856-2105 for details regarding submittal requirements and fees. According to the Applicant's Engineer letter of December 7, 2018 this application has been initiated and will be available for final plan review. The site topography, soils mapping, pre- and post-development runoff, proposed method(s) and location(s) of stormwater management and discharge into state regulated wetlands should be evaluated as part of that plan review.

Under the original plan the application proposed that stormwater would have been managed using onsite infiltration systems to recharge runoff for the design storm events. Subsequent testing (not included in the application) performed by Atlantic Resources Management on behalf of the applicants later indicated that on-site recharge was limited, presumably due to water table and soil conditions. As a result, the proposed grading was modified and stormwater collection basins replaced the recharge systems. In the latest iteration of the concept plan, grading was again modified (to address potential inundated lots noted in the City Engineer's Report) and the locations and types of stormwater collection basins have been revised. According to notes on the latest Concept Grading Plan the former infiltration management approach has been replaced – the method of stormwater quality and management will employ bio-retention system designs. These systems are described as dry basins that will collect and manage stormwater. According to Chapter 2 of the Delaware Post Construction Stormwater BMP Standards & Specifications manual bio-retention involves *“practices that capture and store stormwater runoff and pass it through a bed of engineered soil media comprised of sand, lignin and organic matter, known as biosoil”*. Based on information provided by the applicant and descriptions from the manual the proposed system would contain dry basins containing the media and vegetation used to support stormwater management. Two basins, one in the center of the proposed Tylers Circle (on Open Space Parcel D) and a second between Patchy Way and the federally protected wetlands at the western side of the property (on Open Space Parcel C) are shown on the Concept Grading Plan. The second basin contains a marine bulkhead bordering the wetlands with controlled openings (no details [size or elevation]) that discharge directly into the wetlands and separates the pond from the wetlands.

The most recent designs, as shown on the Conceptual Grading Plan, provide the basis for information required by the City Code in terms of identifying stormwater management approach, however further evaluations of the systems are required to ensure they meet minimum standards and capable of controlling runoff and minimizing the potential for flooding. Those determinations ultimately require submittal of detailed grading and system designs, and review/approval by the Sussex County Conservation District or an authorized engineer acting in that capacity, an

evaluation currently required as part on the Final Plan and Improvements Construction phase-of the review process.

Based on the identified site conditions (wetlands, floodplain, high water table, poor drainage conditions) and the repeated alterations in the proposed stormwater collection designs submitted so far it is obvious that drainage conditions at the site and approaches proposed to manage the impacts will be a significant site review consideration.

Although the State manual references the use of bio-retention systems as a viable stormwater management approach it also identifies numerous criteria that appear to be inconsistent with the application as currently proposed, such as:

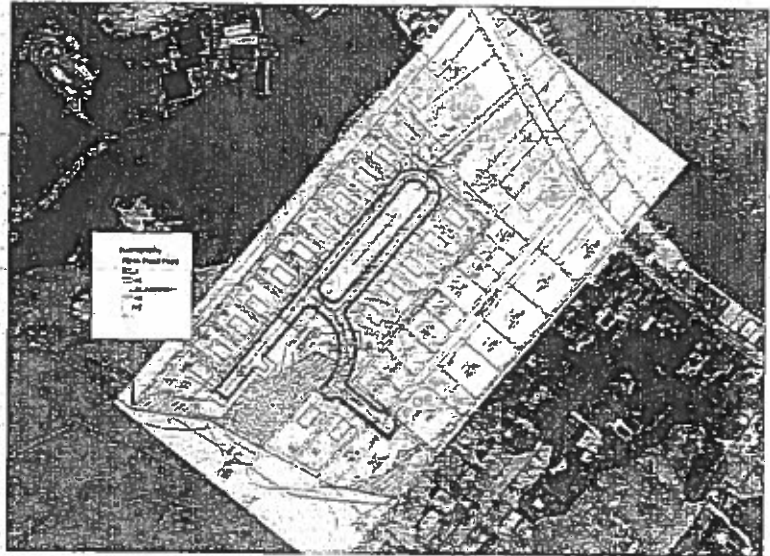
- Locational criteria which suggest bio-retention facilities should be cited outside of the 100 year floodplain and above seasonal high water table levels; and
- Facilities should contain minimum areas for maintenance (15' buffers) and use of multiple spreader outlets to reduce scouring, that do not appear to be included in the current proposal.

Another consideration that the Planning Commission will need to address is how the system will impact adjacent areas. One concern is the proposed system would employ a marine bulkhead. Although few details are available to properly assess its operation/impact; it may be that the bulkhead, in conjunction with the adjacent grading would allow outflow but cut-off a sizable portion of the tract from rising waters, altering its current ability to absorb flood waters as currently happens within the natural floodplain. While the floodplain alterations may be advantageous to the properties on the high side of the bulkhead, it could put properties on the other side at increased risk (see more in next section on flooding).

As mentioned above more detailed information will be forthcoming (grading, stormwater design details, etc.) that can clarify some of the questions as the review process continues through to final plan submittal. Given the significance of the drainage concerns and the multiple attempts to redesign an approach it would be advantageous for the applicants to submit the conceptual plans to the Sussex County Conservation District for preliminary review of the stormwater design approach, a service that agency offers to get clarification on the questions outlined above. In the previous plan review, submitted last December, the applicants noted that a submittal for subdivision review had been initiated with the Conservation District. Ideally an evaluation of the submitted application has proceeded and the applicants would soon be in a position to share the preliminary results from the Conservation District on the proposed solutions so that the Planning Commission could review that information to provide a better basis for the considerations needed for preliminary consent review as defined in Section 170-19 E.

C. Flooding

A significant portion of the planned development area lies within the mapped 1% and 0.2% annual chance flood zone as mapped by FEMA on the effective Flood Insurance Rate Maps (FIRMs). The image on the right (from the digital or DFIRM Maps) shows the areas in the current 1% (AE) or 100 year flood zone in orange. The 0.2% (X) or 500 year flood zone is shown in tan. These areas correspond to the mapped flood areas shown on the Environmental Constraints Map



submitted with the application. As noted above the Final Plan will need to demonstrate compliance with current City floodplain regulations and permits for development will need to be met for all construction of residential structures within the floodplain which includes construction of all living facilities above the identified base flood elevation plus 18 inches of freeboard. In addition to the structures the proposed roads and support facilities must be designed and constructed to avoid failure as a result of the identified flooding conditions. In addition to on-site impacts on-site construction or disturbance must minimize the impact of development on adjacent properties within and near flood-prone areas under the Zoning Code (Section 197-73). Due to the proposed grading and use of fill in the flood hazard area the applicant has been advised to apply for a FEMA Conditional Letter of Map Amendment (CLOMR). According to the Applicant's Engineer letter of December 7, 2018 this application has been initiated.

In addition to existing flooding conditions this area is subject to increased flooding as a result of sea level rise as documented by the State which has recommended that those conditions be factored into land development decisions. State maps depicting future inundation risk from sea level rise (see <http://www.dnrec.delaware.gov/Pages/SLRMaps.aspx>) indicate that much of the upland portion of this site, as well as adjacent areas, could be increasingly inundated by sea level rise. In the short-term, sea level rise in and around this tract, combined with periodic coastal flooding events, may result in repetitive flood damage to homes and significant difficulties maintaining stormwater and drainage infrastructure. In the long-term, this increased flood and inundation risk could result in costly public and private flood abatement and drainage projects and an eventual abandonment of homes. The State maps are based on current conditions, meaning changes such as onsite grading could alter the extent of this projected flooding on the property. Onsite changes could also aggravate flooding conditions on nearby properties. As part of the application the Applicant's Engineer Report indicates that the project would not cause additional downstream flooding. The City is in the process of evaluating the cumulative and localized impacts of flooding from development in conjunction with coastal storm impacts and

sea level rise. Information resulting from this analysis is expected to provide greater understanding of these conditions and be factored into development decisions.

According to the submitted application many of the proposed dwellings would be located in the 1% flood zone although the lowest floor would be elevated above the current base flood elevation plus the required freeboard. Elevating the structures will help address flooding of living spaces under current conditions however additional measures should be considered as part of the application review, as follows:

- a. The use of fill to elevate new structures should be restricted (in accordance with code requirements);
- b. Yard areas for some of the proposed dwellings (especially the lots adjacent to the marsh) will remain or would be graded to elevations below current base flood elevations making those areas susceptible to periodic flooding. If the plan is approved these areas should be subject to special precautions such as:
 - a. avoiding the placement of any structures that cannot withstand periodic flooding;
 - b. limiting vegetation to types that are flood resistant and do not require specialized nutrients or chemical treatment that could migrate into the adjacent marsh;
- c. Additional freeboard, beyond that required under current ordinances should be considered for portions of structures to address projected sea level rise as an added measure to limit property loss or ensure safety.

The proposed access road is also located within a mapped floodplain and projected future sea level rise inundation area. Based on the submitted application, the road corridor is expected to be constructed above the current base flood elevation. Overtime, based on projections established by the State, the proposed roadway would be subject to periodic flooding on a more frequent basis.

As mentioned earlier the proposed Concept Grading Plan would employ a marine bulkhead. Although few details exist at this point in the review process it could be that the wall, in conjunction with adjacent site grading will alter the capacity of the current floodplain to help absorb floodwater. While such hardscaping techniques can provide added safety to some areas, the changes to the floodplain can create added risk in both the short term and long term. Although hardscaping techniques are an acceptable solution in some situations many coastal communities are turning to alternative techniques to mitigate safety problems while ensuring the overall community is more resilient to flooding and storm events. These alternatives seek to improve the capacity of the area by employing techniques that absorb floodwater rather than diverting it by maintaining floodplain areas as much as possible, as opposed to filling in the areas or constructing walls to reduce the flood areas. Coastal planning programs do recognize that some alterations to floodplain areas are needed to ensure safety, such as elevating roadways but approaches increasingly involve maintaining the natural drainage systems as much as possible which ultimately is more sustainable (avoids huge investments in infrastructure) and makes the overall community more resilient to increasing flood risks. While the current Concept Grading Plan may ultimately comply with minimum standards, the policies adopted by the City in its various planning programs (ex. Hazard Mitigation and Climate Change Adaptation Plan and Comprehensive Plan) suggest that alternative approaches, that increase the flood carrying capacity of the area, as opposed to decreasing it, should be fully considered as part of the upcoming deliberations on the best stormwater management techniques. Ultimately

those techniques should factor in the best available data as it becomes available and build upon the adopted policies and regulations in place to ensure the solution meets the needs for the overall community.

D. Utilities

The submitted application contains information on water supply, sewage collection and stormwater collection. A report provided by the City Engineer of behalf of the Lewes Board of Public Works contains additional details regarding the systems and compliance with the City Code.

One aspect that impacts site layout is the addition of storm water management facilities. The City Engineer's report addresses the operation of these proposed systems. One issue related to the stormwater collection systems involves responsibility in terms of operation and maintenance. According to plan notes on the Concept Plan, the Fishers Cove Homeowners Association will be responsible for the maintenance of stormwater management. Those terms make sense with respect to the installation of the system components but the long term operation of an advanced stormwater management system by an HOA of limited size (18 properties) should be further clarified. As noted in the State manual, bio-retention systems rely on careful maintenance of the basins and all collection points (inlets). While the basins are on common property, many of the inlets are on private property, consideration should be made to how those inlets areas will be maintained as prescribed by the State manual.

E. Landscaping and Open Space

The City of Lewes Parks and Recreation Commission completed their review of the updated plan on April 15, 2019, their recommendations should be addressed and incorporated into the final plan, a copy of their letter is available on the project website.

The updated version of the plan shows landscape buffers to the rear of all of the proposed lots and along the sides of many. As was noted during the Parks and Recreation Commission discussion on the plan, a number of these buffer areas coincide with areas containing existing vegetation but because of proposed grading it will be likely that the existing vegetation could be replaced after the site is regraded. Existing vegetation should be maintained as much as possible, especially with respect to mature vegetation within the defined landscape buffer areas between the proposed new lots and the ones along Rodney Avenue.

The areas defined as landscape buffers are located on common areas and on private lots. There is no indication on the current plan as to how the landscape buffers will be maintained on private lots after initial sale. It is recommended that these areas be maintained through covenants in the HOA documents that address how the community landscaping (including in the landscape buffer areas) and open space will be maintained, replaced or added.

F. Other Note

Owner information, for adjacent lots is not up to date. For instance SCTM 335-4.18-6.00 contains property owner information in the table that is different than the information shown on the site plan map. This information, for all of the applicable adjacent lots should be reviewed and updated to reflect current records.

EXHIBIT G



GEORGE MILES & BUHR, LLC

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ENGINEERS

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May 10, 2019

Board of Public Works
107 Franklin Avenue
Lewes, DE 19958

Attn: Darrin Gordon
General Manager

Re: Fishers Cove Subdivision
Preliminary Consent Review – Resubmitted Plans
Lewes, Delaware
GMB File No. R180225

Dear Mr. Gordon:

We have completed our review of the Conceptual Plat Plan dated March 15, 2019, and Engineers Report (Suitability, Proposed Development, Existing Property Assessment, Post Development Assessment, Estimate of Utility Extensions, Easements, Street Names, Preliminary Geological Assessment, Traffic, Fire and Emergency Services Access, and Other Considerations), as submitted by Karins and Associates on behalf of Burke & Utecki, LLC for the proposed Fishers Cove development. The proposed development is located at the end of Rodney Avenue. 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. Per our discussion with the City, we understand these comments will be addressed during the Council Approval phase of the project.

General

1. Applicant's Engineer's Report:

- a. In the "Proposed Development" section of the Engineer's Report, it should be noted that the total area in lots should read 5.30 ac. It should also be noted that this will change the average lot area to 0.29 acres (12,827 square feet).
- b. In the "Fire and Emergency Service access" section of the Engineer's Report, it is stated that "Jacks Court is a tee turn-around, with the dead end being less than 200 feet in length." Recognizing that a cul-de-sac may cause undue hardship in land use, the proposed T-Shaped background will be acceptable contingent on State Fire Marshal approval.
- c. The existing property assessment should be updated to reflect the 2019 assessment values.

2. Through streets and connections thereof with existing or probable future streets of adjoining properties:

JAMES H. WILLEY, JR., PE
PETER A. BOZICK, JR., PE
JUDY A. SCHWARTZ, PE
CHARLES M. O'DONNELL, III, PE
W. BRICE FOXWELL, PE
A. REGGIE MARINER, JR., PE
JAMES C. HOAGESON, PE
STEPHEN L. MARSH, PE
DAVID A. VANDERBEEK, PE
ROLAND E. HOLLAND, PE
JASON M. LYTLE, PE
CHRIS B. DERBYSHIRE, PE
W. MARK GARDOCKY, PE
MORGAN H. HELFRICH, AIA
KATHERINE J. MCALLISTER, PE

JOHN E. BURNSWORTH, PE
MICHAEL G. KOBIN, PE
VINCENT A. LUCIANI, PE
ANDREW J. LYONS, JR., PE
W. NICHOLAS LLOYD
AUTUMN J. WILLIS

- a. The Tee-Shaped Background at Burke Road and Patchy Way is not necessary according to any applicable code and presents a safety issue at lot number 2. It is recommended that the Tee-Shaped Background be removed. Additionally, the "intersection" at Burke Road and Patchy Way does not constitute an intersection pursuant to the AASHTO "Green Book" Chapter 9, Section 9.3 Types and Examples of Intersections (A policy on Geometric Design of Highways and Streets 6th Edition, 2011). While it is evidenced that the joining of Burke Road and Patchy Way does not constitute an intersection and is thus an unusual condition it is suggested that the applicant request a waiver due to the topographic constraints of the site.
 - b. Tyiers Circle, the "elongated cul-de-sac with a center island" is technically acceptable contingent upon the addition of no parking areas on the east side of the proposed cul-de-sac due to emergency vehicle turning radius conflicts. The applicant will be responsible for coordinating with the Lewes Fire Department to ensure that all emergency vehicles and equipment can navigate the "elongated cul-de-sac with a center Island." The use of the "elongated cul-de-sac with a center island" is contingent on Fire Marshal approval and a modification to City Code Section §170-27. Streets. H. (1)(a) – 'Cul-de-sac with Center Islands' – such modification granted by the Lewes Planning Commission.
3. Endorsement or comment on suitability of land for proposed purpose:
- a. All building lots (1-18) are suitable for subdivision as requested. The applicant's engineer's changes to the plans have ensured that all developments, lots, and properties are provided with a drainage system that is adequate to prevent the undue retention of surface water on the site. The changes have also eliminated the previously proposed stormwater infiltration basins.
 - b. All stormwater management practices are subject to the approval of the Sussex Conservation District and may require additional geotechnical testing for the currently shown practices.
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 cost estimate for the total project, including construction, additional engineering design fees, and expected legal costs, must be submitted and reviewed during the Council Approval

stage of the project such that a proper project 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 fire hydrant proposed beside the existing University of Delaware easement must be relocated to maintain access to the easement.
 - b. Except for the above, the Plat Plans are generally in accordance with the City's Subdivision Regulations – the following items should be noted:
 - i. All given road options are acceptable from an engineering standpoint and it should be left up to the Planning Commission to decide the final road width.
 - ii. The Applicant's Engineer should ensure that the chosen landscape buffer along the backs of lots 3-7 provides adequate drainage to the proposed stormwater management practices.


Permits Required for Proposed Site Work

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

1. Sussex County Conservation District – stormwater management and erosion and sediment control permit approvals.
2. DNREC – sanitary sewer system permit.
3. Office of Drinking Water – water system approval to construct permit.
4. Any other permits/approvals necessary to develop the project.

If you have any questions, please contact me at 302.628.1421. Thank you.

Sincerely,


Josh T. Elliott, EIT
Project Engineer

JTE/jd

cc: City of Lewes
Attn: Tom West
Planning & Development Officer