

Island Planning Commission via e-mail: islandplanninglist@glynncounty-ga.gov

Attention: Commissioners 1725 Reynolds Street, Suite 200 Brunswick, Georgia 31520

Re: Saint Simons Christian School Rezone, ZM-24-15 and 1060 Coquina Circle Site Plan, SP-24-17

Dear Commissioners:

EnSafe Inc. has been retained on behalf of Ms. Jane Fraser to conduct an independent analysis of the proposed rezoning of multiple parcels (i.e., 04-14401, 04-05079, 04-13492, 04-05078, 04-15091, 04-15092, 04-15093, 04-15094, 04-15095, 04-15096, 04-15097, 04-15098, 04-15099, and 04-05100) located at 1060 Coquina Circle and along Pine Street on Saint Simons Island, Georgia. The Pine Street parcels are currently zoned for residential use and are part of the Glynn Haven Estates subdivision.

To our understanding, the area surrounding Coquina Circle already suffers from flooding and drainage problems. Recently, nearly 3 acres of formerly wooded area inside of Coquina Circle have been converted to an area consisting of an employee housing building along with impervious road surfaces and compacted landscaped areas. The rezoning would allow an additional approximately 2.2 acres of wooded area to be replaced with an enlarged building, a large gymnasium, and parking lot, adding even more impervious area, and further exacerbating the strain on the area's drainage infrastructure. Our review also included the 1060 Coquina Circle Site Plan (the Site Plan), which appears to have been developed with the assumption that the Island Planning Commission (IPC) has already fully approved the Saint Simons Christian School Rezone; however, the rezoning of these parcels has not yet been approved.

Our review of documents associated with the proposed amendment to the Old Stables Planned Development District (Old Stables PDD) and the proposed Site Plan for 1060 Coquina Circle indicates that the proposed amendment would violate Glynn County's storm water ordinance, floodplain ordinance, and the provision (i.e., Section VII.(3) — Storm Water Management) in the Old Stables PDD which requires that "All storm water improvements required by the development of the Old Stables Tract shall be implemented at the developer's expense" (emphasis added).

Briefly, our analysis shows that the proposed rezoning and Site Plan will:

- Result in additional development without clear demonstration regarding compliance with county storm water ordinances;
- Increase the percent of impervious surfaces allowed which will increase storm water flows from privately owned property without the necessary onsite storm water detention; and

 Allow for a site plan without consideration of the permit requirements pursuant to Glynn County's (the County) flood damage prevention ordinance for placing a building inside of the AE flood zone.

In the sections below, we provide an additional discussion of these concerns and explain how they violate County requirements and are not in keeping with the character of the Old Stables PDD. On behalf of Ms. Fraser, please accept this letter summarizing pertinent findings, conclusions, and environmental professional opinions on matters pending before the IPC.

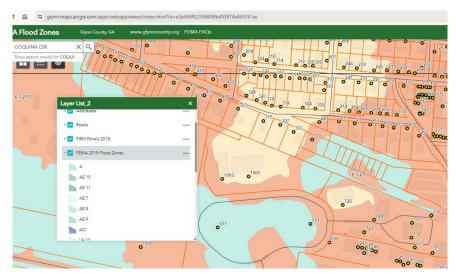
BACKGROUND

A Georgia Open Records Act (GORA) request for records related to the rezoning request was made, and EnSafe reviewed of the documents provided along with the documents provided by the County in its agenda for the IPC Meeting scheduled for June 18, 2024. Below are findings identified from review of the GORA and County documents.

FINDINGS

Based on the files supplied to EnSafe, below are relevant findings identified:

The rezoning amends Tract C of the Old Stables PDD to add school facilities, a gymnasium, and recreational fields and infrastructure to the mixed commercial uses zoning. These uses include facilities and parking lot area(s) within the Flood Zone AE-8 (as shown in the excerpt from the Glynn County's Federal Emergency Management Agency Flood Zones map below) with no indication of how the facilities would comply with the County Flood Protection Ordinance Section 2-5-139 Standards for Areas of Special Flood Hazard (Zones AE) with Established Base Flood Elevations and without Designated Floodways. Section 2-5-139 states "no encroachments, including fill material, new structures or substantial improvements shall be located within areas of special flood hazard, unless certification by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles."





- According to County Ordinance Section 2-5-137(d), areas of special flood hazard must be free from encroachment in order to allow for the discharge of the base flood without increasing the flood heights. In order to meet this requirement, there must be a hydrologic and hydraulic analysis of the encroachment in the floodway. Since the Site Plan proposes the removal of existing vegetation and construction of approximately 24,572 square feet of new buildings and additions and there will be fill placed without a flood analysis, the County cannot be assured site development will not exacerbate the existing flood issues known by County staff. This analysis must be completed before preliminary plan approval of the Site Plan.
- The documents attached to IPC's Agenda Item No. 2.3 regarding the rezoning necessary to add the improvements to the Saint Simons Christian School do not contain the evaluation noted above. This is a critical assessment given that not only will the rezoning add significant improvements, but it plans to change the maximum impervious surface allowable from 60% the maximum requirement of the County Zoning Ordinance Section 503 Density and Site Coverage to 80%, which will further increase storm water runoff in the area, as available site coverage of Tract C may be assigned to users in Tract B.
- The new site coverage language states that total Tract B and Tract C coverage cannot
 exceed the overall site coverage "allowed". Since the Ordinance Section 503 density
 requirement is deleted from the amended text, it is unclear what coverage is allowed, and
 Tract B may in fact be brought under a greater site coverage requirement, even as high
 as 80% in the amended Old Stables PDD.
- The Site Plan includes an approval by Mr. Timothy Ransom of the Brunswick Glynn County Water and Sewer Commission, but no County approvals. The Site Plan documents also indicate at least one level of staff review of the Site Plan by Roberts Engineering for Saint Simon's Christian School. According to Note 7 from the Saint Simons Christian School Site Plan dated March 5, 2024, "Recent drainage work completed along Coquina Circle was designed to handle the increase from SSCS future development, thus no detention is required." This statement circumvents the County Zoning and Subdivision Ordnance that sets out the procedure for obtaining a site plan approval from the IPC. The application must be "complete" at the time of submittal¹. Elements of a complete application include a "Description or drawing of the proposed storm water drainage system²." This element is missing from the application for the Site Plan. To our understanding, the County has not yet provided a substantive response to these concerns:
 - Note 7 from the Site Plan implies that even though the Old Stables PDD Text requires developers to pay their own costs for storm water; however, the County funded the design and installation of twin 42-inch culverts under Coquina Circle.

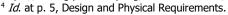
¹ Zoning and Subdivision Ordinance, Glynn County Georgia, Codified through Ordinance No. O-2022-12, enacted November 17, 2022, Section 619.2 Application Procedure.





- A letter dated May 3, 2024, from Ms. Fraser highlighted numerous concerns with the calculations used for the approval of the Sea Island Team Member Housing and response to the County regarding the drainage report provided by the developer for this project, attached hereto as Exhibit A. Because the Site Plan appears to rely on the same drainage system, the unaddressed problems would also impact the storm water associated with the proposed development that will occur should this rezoning and proposed site plan move forward. Briefly these concerns are:
 - The design uses storm type and slope factor not allowed under the Local Design Manual and an incorrect SCS curve number.
 - Storm water modeling shows that the 10- and 25-year storms and the water quality swale peak flow will impermissibly exceed the predeveloped conditions for the overall drainage area.
 - The report requests a waiver of storm water quality management 0 requirements, but so far, the County has not provided an approval.
 - The County's Storm Water Management Local Design Manual ³ prohibits 0 use of "the pipe or ditch section required to carry the design storm" in the calculation of pond storage volume. This means that the pipe section required to carry the design storm water does not count as storage for the storm water generated from the proposed additions in the 1060 Coguina Site Plan. In violation of this requirement, the plans appear to rely on the twin culverts installed inside Coquina Circle for the storm water detention that the applicant must provide. This is not permissible. In order to meet the requirements of the Local Design Manual, the applicant must provide for separate detention of this storm water prior to discharge to the public storm water system⁴.
- Given that there are unanswered "concerns" with the storm water calculations associated with the "recent drainage work", it begs the question regarding what additional calculations were relied upon to determine that the recent drainage work completed by the County inside Coguina Circle can handle yet even more storm water from the Site Plan.
- Research into recent sewage overflows from the Dunbar Creek Water Pollution Control Plant indicated that the existing sewer system is already dealing with storm water inflow and infiltration issues and needs upgrades; this proposed development could further exacerbate those sewage overflows in the area.

³ Glynn County Stormwater Design Manual, Updated: November 4, 2021, available online at https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId=





Given the concerns surrounding the sewer and storm water systems capacity, it would seem prudent to conduct an overall assessment of the County's storm water and wastewater systems in this area to determine the impacts that this and future developments will have on the surrounding area.

In conclusion, we appreciate the efforts of the Commission in considering these comments. Quite simply, the incomplete application for Saint Simons Christian School Rezone and the Site Plan, which relies on the rezoning, must be disapproved at tomorrow's meeting because neither proposal complies with Glynn County's Zoning and Subdivision Ordinance and Floodplain Ordinance. Beyond this, the proposed development which replaces natural areas with more impervious surfaces to the already challenged storm water conveyance in the area warrant further engineering studies and must be fully remedied before such a development could safely and sustainably move forward.

Sincerely,

EnSafe Inc.

By: Brian R. Derry

Vice President

Exhibits:

Exhibit A — Letter dated May 3, 2024, from Ms. Fraser

cc: Glynn County Board of Commissioners via email: commissioners@glynncounty-ga.gov



Exhibit A
Letter dated May 3, 2024, from Ms. Fraser

Glynn County Public Information Officer Submitted online via Glynn County, GA requests and via email

May 3, 2024

Re: GORA Request Regarding Unaddressed Deficiencies in the Revised Drainage Report for Sea Island Team Member Housing by Robert's Civil Engineering, dated December 4, 2023

Dear Glynn County Public Information Officer:

I am writing pursuant to the Georgia Open Records Act ("GORA") to request records documenting the County's review or approval of the Revised Drainage Report for Sea Island Team Member Housing by Roberts Civil Engineering, dated December 4, 2023 (the "December Drainage Report").

As you may be aware on March 5, 2024, I emailed Mr. John T. Gentry, along with members of the Glynn County Board of Commissioners and others regarding the many problems with the Revised Drainage Report for Sea Island Team Member Housing by Roberts Civil Engineering, dated November 3, 2023 (the "November Drainage Report"). The email dated March 5, 2024, outlined eight (8) significant concerns and requested a response to each concern. Each of these concerns, especially occurring collectively, could exacerbate flooding and endanger neighboring property owners including the adjacent school. Several of the concerns appear to be gross violations of the Local Design Manual¹ and the County's Water Resources Protection Ordinance.

On April 22, 2024, Mr. Gentry responded to my March 5, 2024 email, stating that the November Drainage Report had been revised to the December Drainage Report. Mr. Gentry went on to say that "I am attaching the report that corrected and/or clarified any questions(s) our engineers had at the time." *See* Exhibit A hereto for a copy of the referenced March 5, 2024 and April 2, 2024 email correspondence with Glynn County.

Upon receipt of Mr. Gentry's April 22, 2024 email and with the assistance of a qualified stormwater engineer, I reviewed the December Drainage Report and confirmed that the December Drainage Report did not include substantive changes to address any of the eight (8) concerns. Therefore, I again request that the County respond immediately to each of these concerns. If the County is unable to correct or otherwise remedy each concern, I request that the County immediately stop construction work at the site until the concerns can be properly addressed.

For clarity the eight (8) concerns as to the November Drainage Report are restated below with updates based on the contents of the December Drainage report as compared to the November Drainage Report. Please note that the December Drainage Report is missing two appendices that

¹ Glynn County Stormwater Management Local Design Manual, Updated: November 4, 2021, available online at <a href="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-County-Local-Design-Manual?bidId="https://www.glynncounty.org/DocumentCenter/View/109/Glynn-Center

were included in the prior November Drainage Report: Appendix E – Water Quality Calculations, and Appendix F – Hydrograph of the Water Quality Swale.

- 1. The December Drainage Report used Type II storms and a shape factor of 484 to determine the hydrographs for the development site. The Local Design Manual requires Type III storms and shape factor of 300 or 323. These numbers affect the hydrograph shape, peak flow and volume of runoff projected for the land use change.
- 2. Section 6.0 of the December Drainage Report acknowledges that the post developed condition will increase (over predeveloped conditions). The 10 and 25 year storms will exceed the predeveloped conditions for the overall drainage area. As well, the employee housing site drainage basin 1, which is considered part of the overall development area, will exceed the predeveloped 1, 25 and 50 year storms. The 50 year storm will cause gutter flooding in the roadways.
- 3. The December Drainage Report requests a waiver of the stormwater quantity management requirements by assuming that the downstream system can accommodate the increased runoff. The County has not provided a copy of the waiver referenced in the December Drainage Report. Please provide documentation of the County's approval of a waiver for this site.
- 4. Appendix E Water Quality Calculations in the November Drainage Report incorrectly determined the SCS Curve Number Post (CNPost) as 52. It should be 59. The engineers carried over an error from their curve number table. This leads to an underestimate of runoff from the development area, but they compensate for it with another error that overestimates the required water quality volume. This concern still needs to be addressed because there is no Appendix E in the December Drainage Report.
- 5. The December Drainage Report underestimated the storm runoff reduction volume using only 1 inch rather than 1.2 inch for P as required by the Local Design Manual.²
- 6. The water quality swale peak flow exceeds the pre-developed conditions for the 50 year storm. Although the Local Design Manual allows this, has the County evaluated the effects of allowing this in an area of construction in a flood zone and adjacent to residential areas and a school?
- 7. The Appendix F of the November Drainage Report specifies swale geometry, filter media depth, width and length, and weir length, height and freeboard. These details should be on the approved plan set as well as the approved version of the drainage report for the site. The construction plans previously provided by the by the County for this site do not include the swale or its placement. How will the County know that the swale has been built to the design specifications if it is not included in the approved versions of documents?

² Local Design Manual, Performance Standards, I. Stormwater Runoff Reduction.

8. An important question remains about use of the public system and wetlands for the private stormwater management for peak flooding. To elaborate on this concern, the design proposed in the December Drainage Report utilizes the volume of two (2) 42" culverts as the only storage capacity for stormwater from the proposed employee housing building. Thus, there is actually no storage capacity for the stormwater that will be generated from the proposed building and adjacent developed areas.

The Local Design Manual prohibits use of "the pipe or ditch section required to carry the design storm" in the calculation of pond storage volume. This means that the pipe section required to carry the design storm does not count as storage for the storm water generated from the proposed building. In violation of this requirement, the December Drainage Report and all prior versions utilize the twin culverts that are now installed in Coquina Circle for the stormwater detention that the applicant must provide. This is not permissible. In order to meet the requirements of the Local Design Manual, the applicant must provide for separate detention of this stormwater prior to discharge to the public stormwater system. ³ The report instead uses the public drainage system to detain its stormwater.

The County records produced by a prior GORA requests (reference nos. 24-705 and 24-945) did not include documentation of the County's review of the November or December Drainage Reports or provide evidence that the County's engineers asked questions or sought clarifications regarding either report. After a review of the previously provided records, I found no records that the County approved either the November or December Drainage Reports or required Roberts Civil Engineering to revise prior versions of the drainage reports to respond to community concerns.

Finally, from my review of the December Drainage Report, I also question how the County will maintain the Coquina Circle County storm lines, or even access their drainage easement. The plans show a landscape barrier that in practice is a roughly eight foot concrete wall along the Coquina Circle roadway with a five foot opening at each end between the wall and the new buildings. This is hardly the space required for heavy equipment necessary for large diameter storm sewer access, cleaning or maintenance.

By the above GORA request I am requesting that the County provide a full response to each of the above concerns and provide a copy of all records associated with the County's review or approval of the December and November Drainage Reports. We trust that the County will either immediately address and require remediation of these concerns or stop work on construction at the site.

Sincerely,

/s/ Jane Fraser
Jane Fraser
West 16th Street
Sea Island, GA 31561

³ Local Design Manual at p. 5, Design and Physical Requirements.

Glynn County Public Information Officer, May 3, 2024 Page 4

cc: Glynn County Board of Commissioners Island Planning Commissioners Mr. John T. Gentry, Assistant County Manager

Exhibit A

Copy of the March 5, 2024 and April 2, 2024 email correspondence with Glynn County

From: John T. Gentry < jgentry@glynncounty-ga.gov>

Sent: Monday, April 22, 2024 12:50 PM

To: Jane Fraser < <u>ifraser@stutteringhelp.org</u>>

Cc: William Fallon <wfallon@glynncounty-ga.gov>; Board of Commissioners List

<BoardofCommissionersList@glynncounty-ga.gov>

Subject: Re: External Sender - Caution! Major problems in the 11/03/2023 Revised Drainage

Report for Sea Island Team Member Housing

Ms. Fraser:

In review of your concerns, it appears that you were not referencing the most current drainage report published by the Engineer of Record. I am attaching that report that corrected and/or clarified any question(s) our engineers had at the time. For any future requests, please use the open records request process.

V/r,

John T. Gentry, Jr.
Assistant County Manager
Glynn County Board of Commissioners
W. Harold Pate Courthouse Annex
1725 Reynolds Street, Suite 302
Brunswick, GA 31520
912-554-7413

Email: jgentry@glynncounty-ga.gov Website: www.glynncounty.org



From: Jane Fraser < jfraser@stutteringhelp.org>

Sent: Tuesday, April 16, 2024 4:17 PM

To: John T. Gentry < <u>igentry@glynncounty-ga.gov</u>>

Cc: William Fallon < wfallon@glynncounty-ga.gov >; Board of Commissioners List

<BoardofCommissionersList@glynncounty-ga.gov>

Subject: External Sender - Caution! Major problems in the 11/03/2023 Revised Drainage Report for Sea

Island Team Member Housing

Dear Mr. Gentry, Mr. Fallon, and Commissioners:

On March 6th, 2024, you acknowledged receipt of the serious concerns outlined below; and you say "your team will review," but **we have yet to see the results of your review a full month and a half later.**

Allowing activities to continue under these faulty calculations and in violation of the County Stormwater Ordinance could endanger neighboring property owners as well as to the Christian School.

Jane Fraser

From: Jane Fraser < fraser@stutteringhelp.org>

Sent: Tuesday, March 5, 2024 4:25:43 PM

To: John T. Gentry < <u>igentry@glynncounty-ga.gov</u>>; William Fallon < <u>wfallon@glynncounty-ga.gov</u>> **Cc:** Board of Commissioners List < <u>BoardofCommissionersList@glynncounty-ga.gov</u>>; Island Planning List < <u>islandplanninglist@glynncounty-ga.gov</u>>; Rick Townsend < <u>Rick.Townsend@house.ga.gov</u>>; Hodges, Mike < <u>Mike.Hodges@senate.ga.gov</u>>

Subject: External Sender - Caution! Major problems in the 11/03/2023 Revised Drainage Report for Sea Island Team Member Housing

Dear Mr. Gentry and Mr. Fallon and Commissioners:

We expect an updated drainage report to address the many problems reported below before any further activities take place at the Coquina Circle site. Allowing activities to continue under these faulty calculations and in violation of the County Stormwater Ordinance could be dangerous to neighboring property owners as well as to the Christian School.

Regarding the 11/03/2023 Revised Drainage report for Team Member Housing Development:

- 1. The Drainage report used Type II storms and a shape factor of 484 to determine the hydrographs for the development site. The County Local Design Manual requires Type III storms and shape factor of 300 or 323. These numbers affect the hydrograph shape, peak flow and volume of runoff projected for the land use change.
- 2. Section 6.0 acknowledges that the post developed condition will increase (over predeveloped conditions). The 10 and 25 year storms will exceed the predeveloped conditions for the overall drainage area. As well, the Housing site drainage basin 1, which is considered <u>part</u> of the overall development area, will exceed the predeveloped 1, 25 and 50 year storms. The 50 year storm will cause gutter flooding in the roadways.
- 3. The Drainage report requests a waiver of the stormwater <u>quantity</u> management requirements by assuming that the downstream system can accommodate the increased runoff

- 4. The Appendix E Water Quality Calculations incorrectly determined the SCS Curve Number Post (CNPost) as 52. It should be 59. The engineers carried over an error from their curve number table. This leads to an underestimate of runoff from the development area, but they compensate for it with another error that overestimates the required water quality volume.
- 5. The engineers underestimated the runoff reduction volume using only 1 inch rather than 1.2 inch for P as required by the County stormwater permit.
- 6. The water quality swale peak flow exceeds the pre-developed conditions for the 50 year storm, but the Local Design Manual allows this.
- 7. The Drainage report specifies swale geometry, filter media depth, width and length, and weir length, height and freeboard. These details should be on the approved plan set. The construction plans don't include the swale or its placement on the site. How will the County know that the swale has been built to the design specifications?
- 8. An important question remains about use of the public system and wetlands for the private stormwater management for peak flooding.

We look forward to receiving your timely response. Jane Fraser, concerned citizen 227 West 16th, Sea Island, GA 31561

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