



PLANNING COMMISSION MEETING

Kiawah Island Municipal Center

July 3, 2024; 2:00PM

AGENDA

- I. **Call to Order:**
- II. **Roll Call:**
- III. **Approval of Minutes:**
 - A. Planning Commission Meeting Minutes of April 3, 2024 [Tab 1]
 - B. Planning Commission Meeting Minutes of May 8, 2024
 - C. Planning Commission Meeting Minutes of June 5, 2024
- IV. **Public Comments**
(Agenda Items Only)
- V. **Old Business:**
 - A. **KiawahNext Update** [Tab 2]
- VI. **New Business:**
 - A. **Zoning Text Amendment** [Tab 3]
 - 1) **AZO24-000008** | Request to amend Section 12-128. Access, Parking and Loading Regulations, Sec. 12-63. Description of Zoning Districts and Regulations, and Sec. 12-374. Definitions to modify driveway and parking standards for pervious paving requirements.
 - B. **Discussion Item:** [Tab 4]
 - 1) **Continued Stormwater Management Strategies and Proposed Regulatory Changes** | Introduction Enhanced Stormwater Management Standards and Proposed Text Amendment Sec. 12-169. Stormwater Management Plan Review.
- VII. **Correspondence/Staff Comments:**
 - A. Development Project Updates
 - B. Comprehensive Marsh Management Plan Workgroup
 - C. Landscape and Tree Preservation Workgroup
- VIII. **Public Comments:**
- IX. **Commissioner Comments:**
- X. **Adjournment:**

FOIA: Notice of this meeting has been published and posted in accordance with the Freedom of Information Act and the requirements of the Town of Kiawah Island. Meeting materials available for public view online at:

<https://www.kiawahisland.org/meetings-minutes/planning-commission/>

PLANNING COMMISSION MEETING

Municipal Center Council Chambers

April 3, 2024, 2:00 pm

Minutes

I. **Call to Order:** *Mr. Dowdy called the meeting to order at 2:00 pm.*

II. **Roll Call:**

Present:
Bill Dowdy, *Chairman*
Larry Iwan, *Vice Chairman*
Eugene Babinec
Andy Capelli
Ronald Curran
Luke Farrell
Joanne Hennessy

Also Present:
John Taylor, Jr., *Planning Manager*
Boone Aiken, *Town Attorney*
Ross Appel, *Consulting Attorney*

III. **Approval of Minutes:**

A. Planning Commission Meeting Minutes of January 10, 2024

Mr. Capelli made a motion to approve the Planning Commission meeting minutes of January 10, 2024. Dr. Curren seconded the motion.

Mr. Farrell expressed the need to improve the response time for receiving minutes after meetings. Ms. Hennessy suggested providing backup to help with the workload. Mr. Taylor indicated that the Council had acknowledged the issue and mentioned that steps were being taken to address it.

Mr. Capelli pointed out an error at the bottom of page seven and his proposed change.

Following the discussion, the motion to approve the minutes as amended was approved by a 6 to 1 vote, with Mr. Farrell voting "No."

B. Planning Commission Meeting Minutes of February 7, 2024

C. Planning Commission Meeting Minutes of March 7, 2024

The minutes of the February 7, 2024, and March 7, 2024, Planning Commission Meetings were deferred to the next meeting.

IV. **Public Comments**

(Agenda Items Only)

None

Mr. Mark Premar – representing Kiawah Partners

Mr. Premar stated that his comments concerned items B and C under Old Business. His first question was if people in attendance would be able to participate in the Commissioner's discussion during that period or if they would be limited to only Commissioners and the staff. Chairman Dowdy stated

that he saw no issue with allowing the public to make comments during the discussion.

Mr. Permar provided advanced comments on the topics concerning Captain Sam's Parcels 12 A and 12 B. The Planning Commission began looking at a broad range of parcels, including Captain Sam's, in September. The comprehensive approach included more meetings, public response adjustments, and extensive revisions until recommendations were made and approved by the Town Council in December. Since that time, the physical conditions of those two parcels have remained the same, with no pending development permits in the works or having been submitted for review, so he questioned what had changed to warrant revisiting the parcels.

Mr. Dowdy stated that the Town Attorney, who would provide legal advice on the next few items, had been delayed, so the Zoning Text Amendment, Item D., will be considered first.

(Please note Items D. Zoning Text Amendments: Case #AZO24-000003 and Case #AZO24-00006 were considered by the Commission. Details of the discussion follow the order of the published agenda.)

Mr. Capelli made a motion to move into the Executive Session to receive legal advice regarding the 2013 Amended and Restated Development Agreement and the rezoning of parcel #TMS 207-05-00-0011 (Captain Sam's Spit). Ms. Hennessy seconded the motion, and it was unanimously approved.

V. Executive Session:

- A.** Executive Session pursuant to South Carolina Code Section 30-4-70(a)(2) to receive legal advice regarding the 2013 Amended and Restated Development Agreement and the rezoning of parcel #TMS 207-05-00-0011 (Captain Sam's Spit).

Ms. Hennessy made a motion to return to the Regular Session. Mr. Babinec seconded the motion, and it was unanimously approved.

Mr. Dowdy stated that there was no action or votes taken during the Executive Session.

VI. Old Business:

A. KiawahNext Update

Mr. Taylor thanked the Commissioners for their feedback on the objectives and goals based on the previous work session and said they have been forwarded to the consultant team. He noted that because there were differences in some of the languages, the consultants are working on consolidating the language that best represents all of the previous discussions. He anticipated having the consolidated feedback ready within the week and planned to schedule the next workshop in two weeks.

B. Comprehensive Plan Amendment Request

- 1) **#ACP24-000001** | Request to Amend the Comprehensive Plan - Comprehensive Plan Map IX.2, Future Land Use to change the future land use designation for the subject property TMS# 207-05-00-0011 from Low-Density Residential to Active Recreation and Open Space. (Captain Sam's Spit); and for the subject property TMS# 207-05-00-001 from Medium Density Residential to Conservation, Active Recreation, and Open Space.

Mr. Taylor stated that a Comprehensive Plan amendment request and a rezoning request for the parcel known as Captain Sam's Spit were under consideration. The Comprehensive Plan amendment request is to change the Future Land Use designation for the subject property located at Beachwalker Drive (TMS# 207-05-00-001 & TMS# 207-05-00-0011) from Low-Density Residential and Medium-Density Residential to Conservation, Active Recreation, and Open Space had been tabled at the previous meeting.

Discussion included that the application was tabled due to outstanding information and unresolved issues and that the only substantive change since the discussion was the current agenda item regarding the subdivision plat related to the conveyance of portions of the subject property based on the ARDA (2013 Amended and Restated Development Agreement) requirements.

C. Zoning Map Amendment Request

- 1) #REZ24-000001 | Request to amend Chapter 12- Land Use Planning and Zoning Ordinance Article II. – Zoning, Division 2. – Zoning Map/Districts, Section 12.62. Zoning Map to rezone the subject property TMS# 207-05-00-0011 and TMS# 207-05-00-00-001 from R-1, Residential, and R-2, Residential to proposed KC-O, Kiawah Conservation Overlay.

After some discussion, the Commission decided not to recommend any changes to the current zoning or the comprehensive plan map, preferring to keep them as they are.

Mr. Iwan made a motion to recommend to the Town Council that the Zoning and Comprehensive Map remain the same. Ms. Hennessy seconded the motion.

Following the discussion, the motion was unanimously approved.

D. Zoning Text Amendments

- 1) #AZO24-000003 | Request to amend Sec. 12-31. – Impact Fees to further define impact fee assessment studies for potential levied impact fees.

Mr. Taylor stated that several amendments initiated by members of the Town Council were brought forth for consideration at the March 6th Planning Commission meeting, including amendments to Section 12-31 - Impact Fees. A red-line version of the amendments proposed was presented, which included discussion points on the studies that would be required if the Town were to pursue collecting development impact fees. During the last discussion, Mr. Farrell referenced being able to include stormwater as one of the assessments, so in the presented materials, language was added specifically to include stormwater impact assessments required in addition to traffic and environmental impact assessments. Also included was a summary of points taken from state statutes regarding the requirements of a municipal jurisdiction prior to assessing impact fees for a development project.

Commissioners questioned whether a fee schedule or criteria had been established for assessing impact fees. Mr. Taylor clarified that a number of factors needed to be considered. The state statute outlined that a number of studies should be done prior to setting a fee or setting a value and what standards would be required to initiate them.

There was an in-depth discussion of why impact fees had not been imposed in the past, that impact fees could be applied to properties under the Town's jurisdiction, that the amendments were intended to set the foundation for the Town to consider developing impact fees, not to approve the collection of impact fees, and that additional language adjustments could be made.

Ms. Hennessy made a motion to approve the amendments to Sec. 12-31. – Impact Fees to further define impact fee assessment studies for potential levied impact fees. Mr. Farrell seconded the motion.

Mr. Farrell reviewed additional language amendments.

Mr. Farrell made a motion to amend the assembly restructure and replace the language from “mitigate” with “compensate or repair” and “concerns” with “impacts.” Ms. Hennessy seconded the motion, and it was unanimously approved.

Mr. Capelli made a motion to remove the redundant last sentence of (c)(3). The motion was seconded and unanimously approved.

Following further discussion, Ms. Hennessy withdrew her motion to approve the amendments to Sec. 12-31. – Impact Fees and Mr. Farrell withdrew his second.

Mr. Iwan made a motion to table the approval of the amendments to Sec. 12-31. – Impact Fees until further revision can be made. Mr. Farrell seconded the motion.

Following further discussion, it was unanimously approved.

- 2) #AZO24-000006 | Request to amend Sec. 12-162. – Site Plan Review and Sec. 12-164. – Administrative Permits to modify the approval process for site plan review.

Mr. Taylor stated that the amendment of Sec. 12-162. was brought forth for consideration at the March 6th Planning Commission meeting, indicating that the discussion centered around two points. He detailed the first point by providing examples of the square footage of current development projects, indicating that substantial commercial development projects based on that 25,000 ft square size seemed appropriate to come before the Planning Commission.

The second point was on the site plan review process. Mr. Taylor provided a presentation highlighting efforts to improve transparency and the review process itself, including the use of an online portal for submissions and a detailed description of the proposed site plan review process involving various departments and external agencies.

The Planning Commission's role in the review process was discussed, with suggestions for notifying the Commission about new submissions and making this information transparent to the public. The meeting concluded with a decision to table the discussion for further review and rewriting, with an emphasis on improving the format and clarity of the amendments.

Commissioners discussed the narrative describing modifications to the Planning Commission's purview and responsibilities, particularly in relation to site plan reviews, focusing on clarifying the meaning of "purview." The criteria for projects requiring Planning Commission review were also debated, specifically discussing the threshold for commercial and non-single-family residential projects in terms of square footage and the number of dwelling units.

Mr. Capelli made a motion to approve the amendment of Sec. 12-162. – Site Plan Review. Ms. Hennessy seconded the motion.

After much discussion, the suggestion was made to amend the language of a draft to specify that site plans for development projects exceeding certain criteria must be submitted to the Planning Commission for review and approval before the Planning Director can approve them.

Mr. Farrell made a motion to amend the language of (3)(b) to read “site plans for development projects containing commercial uses or non-single family residential uses where the structures are greater than 20,000 square feet in size or contain eight residential units, dwelling units or more must be submitted to the Planning Commission for review and approval prior to approval by the Planning Director.” Ms. Hennessy seconded the motion.

Following discussion, the motion was approved by a 6 to 1 vote, with Mr. Capelli voting “No.”

Dr. Curran made a motion to approve the red-lined document of Sec 12-162 as amended. M. Hennessy seconded the motion, and it was approved by a 6 to 1 vote, with Mr. Capelli voting “No.”

VII. New Business:

A. Subdivision Application

- 1) **SBD24-000002** | A Subdivision Plat and Waiver Request KDP II LLC
Subdivision Plat Creating Parcel 12A
TMS# 207-05-00-0011 and TMS#2007-05-00-001

- 2) **SBD24-000003** | A Subdivision Plat and Waiver Request KDP II LLC
Subdivision Plat of Parcel 12B
Residual & Marsh Area (Captain Sam’s Spit)
TMS# 207-05-00-0011

Mr. Taylor stated that two subdivision applications related to Captain Sam’s Spit were presented by KDP II, LLC, and pertain to TMS# 207-05-00-0011 and TMS#207-05-00-001 as the subject property. These applications involved subdividing the subject property into two parts, Parcels 12 A and 12 B, creating a delineation between the two, requiring a waiver for ingress and egress to the proposed parcels from the Planning Commission pursuant to Section 12-254. Waivers. The waiver needed a two-thirds vote of the commissioners present and had to meet three criteria: special conditions affecting the property, undue hardship that will result, and no detriment to adjacent properties, property owners, or the public interest.

Mr. Permar stated that the requests were a follow-up to the previously approved plat in the dune field zone of Parcel 12 B and a continuation of conveyance responsibilities as outlined in the Development Agreement. He clarified that there are no development plans for these areas, only follow through on the ARDA commitments to KICA. The conversation also touched on the conservation easement, the status of discussions regarding the highland area, and the specific boundaries between Parcels 12 A and 12 B. Mr. Permar confirmed that Parcel 12 B is specifically mentioned in the Development Agreement for conveyance, but he could not provide details on the status of broader discussions in the context of potential conveyances.

Commissioners, along with Mr. Permar, engaged in an in-depth discussion of the extraordinary hardship created, using the previously approved subdivision plat of the subject property. The parcel, due to its shape, lacks direct access to any existing public right of way, creating a hardship similar to a previously discussed parcel. The question of whether the possibility of granting a right of way through adjacent properties was considered and not previously contemplated was raised. The conversation also touched on the challenges of providing access through a dune field, the potential for non-road access to the marsh property, and access in perpetuity for the marshland.

Concerns were raised about the potential impacts of granting a waiver for a property, with questions about how it might affect surrounding parcels, as well as unresolved conveyance and deed issues. Despite efforts to meet the requirements, the commission decided to deny the waiver requests due to unanswered questions and the potential for detrimental impacts on adjacent properties.

Mr. Farrell made a motion to deny the subdivision plat and waiver request for parcels 12A and 12B based on the criteria set forth in Section 12-254. Dr. Curran seconded the motion.

Following further comments on the need for more information before a waiver could be approved, the motion was unanimously approved.

VIII. Correspondence/Staff Comments:

Mr. Taylor provides updates on the second reading of the tree ordinance exempting single-family residential, the formation of the Tree Preservation Board, with the number of members reduced to five, with that makeup being three residents, and two professionals. An open house is planned to inform the community and design professionals about the new ordinance and its implications. The second reading of the ordinance setting term limits for the members of the Planning Commission and Board of Zoning Appeals was also approved. He also noted the two amendments recommended at the March Planning Commission meeting and the changes that were approved for the first reading.

IX. Council Liaison Comments:

None

X. Public Comments:

None

XI. Commissioner Comments:

Mr. Taylor addressed Mr. Capelli's questions on the members of the KICA Board that attended the Town Council meeting and whether they spoke in reference to the tree ordinance, and clarification that the community drop-in open house would be to provide for design professionals and community representatives information on the development and permitting process along with review procedures. Additionally, a new hire was mentioned who will be responsible for the landscape and tree preservation portion of the ordinance.

Mr. Farrell suggested making edit changes that were discussed regarding the zoning text amendments and circulating them to the Commissioners to avoid future language discussions.

Mr. Iwan reflected on the slow but progressive nature of government work, specifically mentioning the tree ordinance project that took over a year to complete.

XII. Adjournment:

Mr. Iwan made a motion to adjourn the meeting at 4:55 pm. Mr. Farrell seconded the motion, and it was unanimously approved.

Submitted by,

Petra S. Reynolds, Town Clerk

Date

DRAFT

PLANNING COMMISSION MEETING

Municipal Center Council Chambers

May 8, 2024, 2:00 pm

Minutes

I. **Call to Order:** *Mr. Dowdy called the meeting to order at 2:00 pm.*

II. **Roll Call:**

Present: Bill Dowdy, *Chairman*
Larry Iwan, *Vice Chairman*
Eugene Babinec
Andy Capelli
Ronald Curran

Absent: Joanne Hennessy

Also Present: John Taylor, Jr., *Planning Director*
Mac McQuillan, *Town Attorney*

III. **Approval of Minutes:**

A. Planning Commission Meeting Minutes of February 7, 2024

Mr. Babinec made a motion to approve the Planning Commission meeting minutes of February 7, 2024. Dr. Curren seconded the motion.

Following the typographical errors pointed out by Mr. Capelli, the minutes were unanimously approved.

B. Planning Commission Meeting Minutes of March 7, 2024

Mr. Capelli made a motion to approve the Planning Commission meeting minutes of March 7, 2024. Dr. Curren seconded the motion.

Following the typographical errors pointed out by Mr. Capelli and Mr. Babinec, the minutes were unanimously approved.

IV. **Public Comments**

(Agenda Items Only)

None

V. **Old Business:**

A. **KiawahNext Update**

B. **Zoning Text Amendments**

1) #AZO24-000003 | Request to amend Sec. 12-31. – Impact Fees to further define impact fee assessment studies for potential levied impact fees.

Mr. Taylor stated that the request to amend Section 12-31 – Impact Fees was tabled at the last meeting. The initial draft of the amendments was brought forth for consideration at the March 6th Planning Commission meeting and was tabled and then tabled again at the April 8th meeting.

Working with Mr. Farrell, now on the Town Council, the language was modified based on his suggestions at the previous meeting. He reviewed the substantive structural modification change, including a detailed description of traffic impact, stormwater, and environmental impact assessments, as well as two bullets under each section. He noted that the purpose and intent of the ordinance remained the same, not constituting that the Town will move down a path of collecting impact fees today, but sets the process in motion for things that would be considered as critical needs regarding impacts that the Town wants to pay attention to.

Mr. Capelli questioned whether the town government passed the resolution directing the Planning Commission to conduct the necessary studies and to recommend the Impact Fee Ordinance, pointing out that the Development Impact Fee Act of South Carolina contains procedural safeguards that have to be done similar to the procedures used to develop the Comprehensive Plan. Mr. Taylor clarified that the process to impose impact fees, being referenced and outlined in previous meetings, had not begun. The language has not been drafted, so the Town does not have a mechanism, a structure, and a platform to assess property owners with an impact fee for development, and there is no fee associated with it.

Mr. Capelli indicated that, at this point, the Town has not fulfilled the law's requirements regarding impact fees, and the Planning Commission cannot make a recommendation unless it does its work in accordance with the law.

Following a request to go into an Executive Session to discuss the legality of the amendment being considered and the fact that the agenda could not be amended, Mr. McQuillan asserted that the ordinance sets the foundation and the items that will be studied and assessed to decide whether impact fees are viable and which studies would be a priority for the Town.

Further discussion included the language in the current ordinance, which already outlines the steps that need to occur before considering impact fees. It states, "impact fee shall be levied in accordance with this article at such time as an impact assessment study has been completed." The ordinance amendment just defines the types of studies that need to be completed, not initiating any study. If the Town were to consider imposing impact fees, as a municipality, it would need to prove the burden of impacts on existing infrastructure.

Mr. McQuillan indicated that he and Mr. Taylor had consulted with Mr. Appel, who is well-versed in violations of the impact fee statute, and he was fine with the language.

Mr. Babinec made a motion to approve the amendments to Sec. 12-31. – Impact Fees to further define impact fee assessment studies for potential levied impact fees. Mr. Iwan seconded the motion.

Following the discussion of Mr. Capelli's concerns, the motion was passed by a 4 to 1 vote, with Mr. Capelli voting "No."

VI. New Business:

None

VII. Correspondence/Staff Comments:

A. Development Project Updates

Mr. Taylor provided the requested updates on development projects as follows:

- The Beachwalker projects are still outstanding, and approval has been granted.
- Meetings continue with the Medical University of South Carolina regarding their

freestanding emergency department to work through a few more additional hurdles that are anticipated to be nearly completed.

- Working with the Architectural Review Board on their landscape plan
- Working with the Town of Seabrook Island and their encroachment permit.
- Working with the Kiawah Island Golf Resort regarding the Night Heron Park project to provide all of the particulars needed to start with the activities building.

Mr. Taylor noted that there were no new updates regarding the Andell West project at this time.

Mr. Taylor stated that also highlighted at the Town Council meeting was

- Next week, on the 14th, there will be a meeting regarding Main Road Corridor Segment C. At that time, the county will share its revised alternatives for Bohicket Road toward Main Road.
- Updates regarding the Marsh Management Plan: In addition to the sub-committee working on the Kiawah River Bridge Project, another sub-committee is working on pervious and impervious surfaces, looking at as a community, to increase more pervious surfaces across the island.
 - Exploration of both incentives and regulatory changes
 - Potential recommendations that will filter the Planning Commission to the Town Council
 - The impact of majority of property owners on Kiawah considered it an impervious material for the driveway as opposed to an impervious material.
 - reducing the amount of runoff is one of the key strategies and ties into overall stormwater management

B. Stormwater Management & Low Impact Development BMPs Introduction

Mr. Taylor discussed, in detail, the draft of a program to be deployed that would allow an initiative for property owners to participate in the conversion of their existing driveway from impervious surface to pervious surfaces, which was modeled as a very successful community-led initiative in Oceanwoods Neighborhood. He discussed the importance of pervious materials and how that can benefit a community and that the sub-committee may also consider looking at more regulatory changes, noting many communities are already making those regulatory changes, having requirements as part of their codes where a certain percentage of parking is automatically required to be pervious.

Mr. Taylor answered questions posed by Commissioners on whether the use of impervious materials could provide relief on lot coverage, what properties this would apply to, and suggested recommendations when moving forward.

Mr. Taylor reported that the Town Council had approved the appointment of three members to the Landscape and Tree Preservation Board. The three appointments included two residents of Kiawah Island, Ms. Elisabeth St. John and Mr. Robert Ryan, who is a design professional, and Ms. Denise Graybill-Donohoe, another design professional who does not reside on the island. The Board still needs two additional members, and those openings will be advertised.

VIII. Public Comments:

None

IX. Commissioner Comments:

Mr. Iwan expressed his respect for his colleague's research and his concern that the Commission might be overstating or overlooking things. Still, he was confident that when this goes to the

Town Council, legal counsel will ensure that the Commission is on the right track.

X. Adjournment:

Mr. Iwan made a motion to adjourn the meeting at 2:55 pm. Mr. Capelli seconded the motion, and it was unanimously approved.

Submitted by,

Petra S. Reynolds, Town Clerk

Date

DRAFT

PLANNING COMMISSION MEETING

Kiawah Island Municipal Center

June 8, 2024, 2:00 pm

Minutes

I. **Call to Order:** Mr. Dowdy called the meeting to order at 2:00 pm.

II. **Roll Call:**

Present: Bill Dowdy, *Chairman*
Larry Iwan, *Vice Chairman*
Gene Babinec
Andy Capelli
John Connolly
Dr. Ronald Curran
Joanne Hennessy

Also Present: John Taylor, Jr., *Planning Manager*
Patera St John, *Planner I*

III. **Approval of Minutes:**

A. Planning Commission Meeting Minutes of April 3, 2024

B. Planning Commission Meeting Minutes of May 8, 2024

The minutes of the April 3, 2024, and May 8, 2024, meetings were deferred to the next Planning Commission meeting.

IV. **Public Comments**
(Agenda Items Only)

V. **Old Business**

A. **KiawahNext Update**

Mr. Taylor discussed what he called the "small reset button" on the KiawahNext project. Staff and the Commission Chair have met with the consultant team internally to reassess and outline future steps to move the important project forward to completion more rapidly. From a time and efficiency standpoint, the structure has been modified to work with a smaller group, including Dr. Curran, Ms. Hennessy, and Mr. Iwan. They will begin reviewing the existing documents, primarily focusing on the elements that the Commission has not already reviewed, along with a full review of the entire document prior to presentation to the full Commission and in preparation for community feedback.

VI. **New Business:**

A. **Introduction of Stormwater Management Strategies and Proposed Regulatory Amendments**

Mr. Taylor began the discussion of stormwater management by highlighting the need for improved regulations and practices on Kiawah, providing an overview of stormwater and the envisioned phased approach for the process. Despite having a text amendment listed on the agenda, the staff's intent was not to necessarily have the Commission make a recommendation but rather to set a foundation for understanding how stormwater impacts other areas and that there are best

management practices from a low-impact development standpoint as well as from what one property owner can do on their actual property that helps collectively.

Ms. St. John provided background on stormwater regulation, stating that the passage of the Clean Water Act in 1972 authorized the EPA, which in turn authorized DHEC to manage stormwater for clean water purposes. She described stormwater as water that originates from rain, snowmelt, or runoff that does not soak into the ground and becomes an issue to water quality.

The presentation included how stormwater is managed, stormwater management plan components, and the current DHEC requirement for stormwater review. It was pointed out that most local coastal communities that own their stormwater infrastructure partner with Charleston County to help regulate and review the stormwater. They have adopted additional requirements above those of DHEC and the Charleston County Stormwater program.

The discussion covered the importance of managing both the quantity and quality of stormwater runoff, with examples of current practices and potential improvements. Recommendations included:

- adopting language for enforcing current DHEC standards for all construction sites,
- developing a stormwater management plan application,
- hiring a consulting engineer to review stormwater management for larger projects,
- require applicants to submit inspection reports as recommended,
- provide advanced training for Town Staff to review and inspect single-family projects.

Commissioner discussion included two focuses: improving the quality of stormwater runoff and expanding review to individual house-level construction practices. Also noted was that in addition to enforcing current DHEC standards, stormwater management at a higher level than current DHEC standards was needed. The conversation also touched on whether the Community Association is enforcing any quality controls regarding stormwater and on the legal and jurisdictional aspects of proposing or implementing new stormwater regulations, considering the unique infrastructure ownership on the island.

Mr. Taylor noted that the recommendation to investigate stormwater regulation follows the 2018 Flood Mitigation and Sea Level Rise Report, the Comprehensive Marsh Management Plan, and the 2019 amendments to the Comprehensive Plan.

Commissioners engaged in an in-depth discussion of whether to approve the amendment to create a baseline with DHEC standards as a starting point based on the information provided or whether more time is needed. Following the discussion, Mr. Capelli indicated he saw no reason to conclude there was a quality protection or quality issue with respect to the runoff and, therefore, saw no need for another ordinance. Also discussed was the importance of collaborating with the Community Association, Conservancy, and engineers to understand capacity concerns and establish enforceable standards for stormwater management.

B. Zoning Text Amendment

- 1) **AZO24-000007** | Request to create Section 12-169. – Stormwater Management Plan to enhance stormwater best management practices for purposes of reducing flooding, protecting water quality, controlling erosion, fill, and managing runoff.

Mr. Taylor stated that the proposed ordinance would create a new section in the zoning code that would establish a stormwater permit process. The proposed text outlines the purpose of providing for the review and use of best management practices for stormwater management and construction practices to reduce flooding, protect local water quality, manage storage and

treatment of stormwater runoff, reduce pollution to the marsh, reduce erosion, and manage fill as a result of construction activities.

The proposal would apply to all new construction and significant exterior remodeling that changes the footprint, including parking areas and surfaces exceeding 500 square feet. It would also include anything that's adding fill or recontour of 20% or more of the existing lot area.

The process involves submitting an application for review through the online portal. The submittal requirements included that the property owner, professional engineer, and landscape architect provide a site plan survey illustrating the existing and proposed topographical features of the lot, the existing and proposed drainage flow patterns, and a site narrative describing the means and methods of preventing adverse impacts to adjacent and/or downstream properties along with anything considered reasonable or pertinent to the particular application.

Concerns were raised about the proposed language, "considered reasonable or pertinent," as it pertains to additional information submitted by the applicant and staff's review, the potential costs to homeowners, and the need for flexibility in applying the ordinance to different properties across the island. The discussion also touched on existing practices and covenants that allow neighbors to address stormwater runoff issues without the need for a new ordinance.

The discussion also covered the appropriateness of using percentages, rather than an absolute amount, to regulate changes to lot areas, the qualifications of landscape architects in assessing stormwater runoff, and the possibility of mandating consultations with engineers for certain projects. The intent to comply with and possibly exceed DHEC standards was discussed, with suggestions for stricter local standards to address current environmental issues.

Mr. Iwan made a motion to accept the language of Section 12-169 as presented by Staff. Ms. Hennessy seconded the motion.

Ms. Hennessy expressed her concern with the percentage in the language "adding fill or recontour of 20% or more of the existing lot area" and asked that it be reviewed and that the Town of Kiawah standards would have to be defined at some point.

Ms. Hennessy made a motion to amend the language so that the percentage used when adding fill or recontouring the existing lot area is discretionary. Mr. Babinec seconded the motion, and it was approved by a 6 to 1 vote, with Mr. Capelli voting "No."

The motion to accept the language of Section 12-169 as amended was approved by a 6 to 1 vote, with Mr. Capelli voting "No."

C. Discussion Item

1) Pervious Driveway and Parking Requirements

Mr. Taylor stated that regarding the discussion of pervious/impervious requirements, staff would like to hear the Planning Commission's thoughts and feedback on a few concepts that have been discussed as of the Marsh Management Plan. The established Marsh Management Plan subcommittee's investigation of pervious and impervious requirements and a potential dual-pronged approach of incentives and regulatory changes were presented at the Town Council Retreat. The framework was provided by the incentive program in the Oceanwoods Neighborhood, where a contractor provided a cost reduction based on the entire neighborhood, converting their asphalt driveways to permeable pavers.

Mr. Taylor presented an outline of incentives, permeable requirements for driveways and

parking elements, and stormwater regulations, noting that the Commission’s feedback would be shared with the sub-committee at their next meeting.

The Comprehensive Marsh Management Plan outlined the recommendation to “*strictly limit impermeable surfaces, formalize stormwater BMPs for private properties*” and its justification. He discussed that the subcommittee has assessed what other communities are doing and found that many already have regulations regarding pervious requirements. He also discussed the work being done on measuring how much impervious cover is across this island to provide a benchmark to set a percentage goal in reducing impervious surfaces and to measure success.

Mr. Taylor reviewed the components of the recommendations for Pervious Driveway Requirements, which would require that driveways become permeable surfaces as new development or redevelopment occurs. He also reviewed the components of the Pervious Parking Requirement, which would require parking surfaces to be implemented with pervious materials.

Commissioner discussion included a question on the maintenance required with pervious surfaces, challenges with the metric to measure success, and to consider maybe how it could be done with regulation to either encourage or require, in certain instances, the need for a considerable amount of education on the products, and a concern the substantial study that is required be completed before going forward.

VII. Correspondence/Staff Comments:

A. Development Project Updates

B. Comprehensive Marsh Management Plan Workgroup

C. Landscape and Tree Preservation Workgroup

Mr. Taylor started at yesterday’s Town Council meeting;

- Two ordinances received final approval;
 - The *Temporary Uses Ordinance* was modified to grant more discretion to the Planning Director regarding tree removal for construction staging areas, with the condition that removed trees are replaced.
 - The *Site Plan Review Ordinance* requires the Planning Commission to review non-residential developments exceeding 20,000 square feet or multi-family with more than seven units. The Commission's approval authority was removed, so an application meeting those requirements would only be brought to the Commission for review and comment.
- The proposed *Impact Fees Ordinance's* first reading was highly discussed but ultimately disapproved by the Town Council.
- The Main Road Corridor project was discussed. Segment C is still open for public comment until the 14th, and community input is encouraged.
- Staff issued a “refreshed” set of comments for the projects on Beachwalker, which includes the West End, Ocean Pines, and the Cape Point Extension.
- MUSC's site plan review is nearing site-plan approval, with the remaining steps including an encroachment permit from Seabrook Island and approval of the landscape plan by the Architectural Review Board.
- The Landscape and Tree Preservation Board now has a full complement of members and will be installing officers and establishing rules of procedure later in the month.

- Phase two of the landscape standards is underway, led by Ms. St. John with a team of stakeholders to help with that process.

VIII. Public Comments:

Sheri Galliger – 119 Spartina Court

Ms. Gallagher identified herself as a KICA Board member but did not speak on its behalf. She discussed the reformation of a council for the regimes of the villages and cottages at which the regimes' presidents meet to share information and address issues. She noted that Mr. Taylor approached the group with his pervious surface idea, and the group was very receptive to it because of the success of Oceanwoods, urging the continuation of this initiative. Ms. Gallagher indicated that she was a liaison with the Regime Council and offered to share beneficial ideas.

IX. Commissioner Comments:

Mr. Dowdy formally welcomed Mr. Connolly to the Planning Commission, noting that he has lived on the island for 15 years. He has been a member of KICA, served on various committees, and has a wealth of knowledge and information about this island. A panel that included Council Member Farrell selected him from five good candidates. Mr. Dowdy expressed confidence in Mr. Connolly's abilities and looked forward to his contributions.

Mr. Connolly responded by expressing his honor at joining the Commission and looking forward to contributing value despite initially feeling overwhelmed by the volume of information.

Mr. Babinec informed the committee members that he would be absent for the next three meetings due to his children's weddings in Colorado. He mentioned that his contact information is available online for anyone who needs to reach him during his absence.

Mr. Capelli expressed the need to understand the current actions of the Council with respect to their role versus the Planning Commission versus the need to do things on the island. He questioned the need for everything to be an ordinance and the Council's intent, especially in areas regarding individual properties and individual property rights.

Mr. Capelli also sought clarification on the differences between what the Council believes its role is and what the KICA role is understood to be. He emphasized the importance of clarifying these roles before writing rules and ordinances that challenge each other and ensuring that recommendations are not only accepted but also effectively implemented to avoid conflicts and expenses.

X. Adjournment:

Dr. Curran made a motion to adjourn the meeting at 3:46 pm. Mr. Babinec seconded the motion, and it was unanimously approved.

Submitted by,

Petra S. Reynolds, Town Clerk

Date

Town of Kiawah Island Zoning Ordinance Amendment Request
Case AZO24-000008

Planning Commission Meeting: July 3, 2024
Public Hearing and First Reading:
Second Reading:

CASE INFORMATION

Applicant: Town of Kiawah Island

Application: The Town of Kiawah is requesting to amend the *Town of Kiawah Island Land Use Planning and Zoning Ordinance* to modify Section 12-128. Access, Parking and Loading Regulations, Sec. 12-63 Description of Zoning Districts and Regulations, and Sec.12-374. Definitions to modify driveway and parking standards for pervious paving requirements.

Key Factors of the Proposed Ordinance:

The proposed amendments to Sec. 12-128 Access, Parking and Loading Regulations and Sec 12-63 Description of Zoning Districts and Regulations will require pervious paving for new and replacement driveways and parking lots and eliminates the allowable increase of maximum lot coverage for utilizing pervious material. Introduces revised definition of pervious surface.

RECOMMENDATION BY THE PLANNING COMMISSION

Pursuant to §12-158(3) of the *Land Use Planning and Zoning Ordinance* "The Planning Commission shall review the proposed text amendment and/or zoning map amendment and take action, recommending that the Town Council approve or deny the proposed amendment. The Planning Commission may hold a public hearing in accordance with the procedures in section 12-156. The Planning Commission's recommendation shall be based on the approval criteria of subsection (6) of this section. The Planning Commission shall submit its recommendation to the Town Council within 30 working days of the Planning Commission meeting at which the amendment was introduced. A simple majority vote of Planning Commission members present, and voting shall be required to approve the amendment."

DECISION ON AMENDMENT BY THE TOWN COUNCIL

Pursuant to §12-158(5) of the *Land Use Planning and Zoning Ordinance* "After receiving the recommendation of the Planning Commission, the Town Council shall hold one or more public hearings, and any time after the close of the public hearing, take action to approve, approve with modifications, or deny the proposed amendment based on the approval criteria of subsection (6) of this section. A simple majority vote of Town Council members present, and voting shall be required to approve the amendment. Zoning map amendments shall not be approved with conditions. Prior to action on a proposed code text amendment, the Town Council may, in the exercise of its legislative discretion, invoke the "pending ordinance doctrine" by ordinance so that no building permits shall be issued for structures which would be affected by the proposed amendment until the Town Council has rendered its decision on the proposed amendment.

APPROVAL CRITERIA

Pursuant to §12-158(6) of the *Land Use Planning and Zoning Ordinance*, (6) Approval criteria. Text and zoning map amendments to the ordinance may be approved if the following approval criteria have been met:

- a. The proposed amendment is consistent with the purposes and intent of the adopted Town of Kiawah Island Comprehensive Plan;
- b. The proposed amendment is consistent with the purposes and intent of this article;

- c. The purpose of the proposed amendment is to further the general health, safety and welfare of the Town of Kiawah Island;
- d. The proposed amendment corrects an error or inconsistency or meets the challenge of a changed condition.

Planning staff finds the proposed amendment satisfies the approval criteria pursuant to §12-158(6) and recommends approval.

PLANNING STAFF REVIEW JULY 3, 2024

The proposed amendments are to require all new and replacement driveways and parking lots be pervious paving material and to eliminate the incentive that allowed increase to the maximum lot coverage for residential districts for utilizing pervious material for driveways. Reduced incentives remain for use of pervious walks, patios and raised courtyards and planters created by walls three feet or less above adjacent grade.

The minimization of total impervious area directly relates to a reduction in stormwater runoff volume and the associated pollutants from a development site. It is for this reason that; this proposed amendment is recommended by the Comprehensive Marsh Management Plan Pervious Impervious Subcommittee and is responsive to specific recommendations of both the Comprehensive Marsh Management Plan (2023) and the Flood Mitigation and Sea Level Rise Adaption Report for Kiawah Island (2018) to reduce the amount of impervious surfaces on the island.

In addition to the reduction in runoff and associated pollutants this could also count towards the Town's Community Rating System (CRS) credits to improve the community's FEMA score which could help lower flood insurance rates. *"The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP)."*

The Pervious/Impervious Subcommittee of the Comprehensive Marsh Management Plan has been studying for the past six months various strategies to reduce the amount of impervious surface on Kiawah, per the plan's recommendation. This has included looking at possible incentive programs and how other coastal communities are addressing this issue as well as studying regulatory approaches.

City of Folly Beach – All driveways and parking area outside the structure footprint are required to be pervious.

City New Orleans – All new and renovated surface parking lots are required to use pervious pavement.

Tybee Island – All new residential driveways and replacements of more than 50% of existing driveways be permeable materials designed to allow retention of at least the first one inch of stormwater.

Staff introduced an approach of providing incentives along with regulatory changes to achieve the recommended reduction of pervious paving on the island at the Town Council Retreat May 9-10, 2024. Based on the discussion it was understood that the Town of Kiawah has minimum incentives that can be offered at this time, as permitting costs are low and other resources are not available. It was recommended that the regulatory approach would be needed to achieve the desired reduction in impervious surface.

This also provides an opportunity to educate and inform the community on the pervious paving options that are available with a range of durability and associated costs.

The review process for this recommendation began with an introduction for discussion purposes to the Planning Commission at the June 8, 2024 meeting. The recommendation is also scheduled to be presented to the Environmental Committee for comments.

PLANNING COMMISSION MEETING

Notifications: Notice of this meeting has been published and posted in accordance with the Freedom of Information Act and the requirements of the Town of Kiawah Island.

TOWN COUNCIL MEETING PUBLIC HEARING TBD

Town of Kiawah Island

Town of Kiawah Island Municipal Center
4475 Betsy Kerrison Parkway
Kiawah Island, SC 29455

July 3, 2024



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Impervious /Pervious Paving

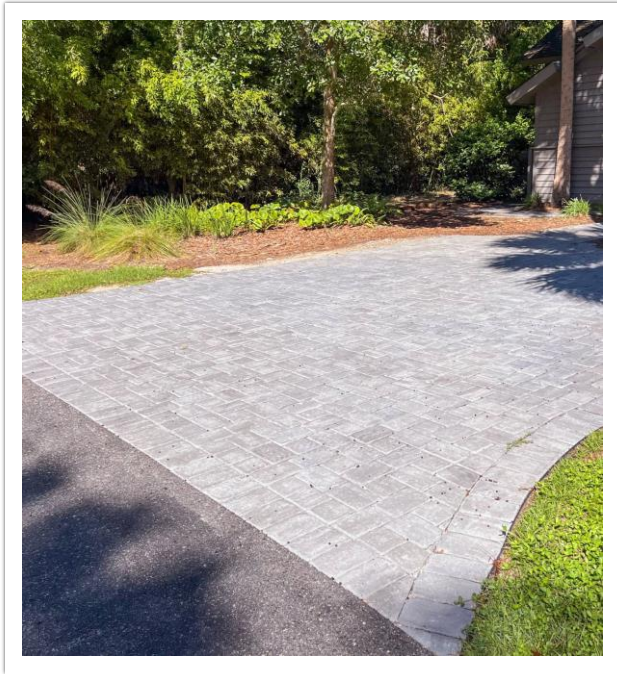
- **The minimization of total impervious area directly relates to a reduction in stormwater runoff volume and the associated pollutants from a development site. The reduction of the amount of impervious surface has been a direct recommendation of the;**
 - Comprehensive Marsh Management Plan – 2023
 - Flood Mitigation and Sea Level Rise Adaption for Kiawah Island – 2018
 - Nature Based Solutions Manual for Kiawah Island – Green Infrastructure
 - Low Impact Development in Coastal South Carolina: A planning and Design Guide

This effort could also count towards CRS credits to improve the community’s FEMA’s score which could help lower flood insurance rates.



2

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Pervious Paving Materials

Pervious Concrete Pavers

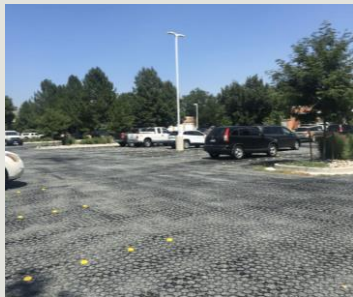
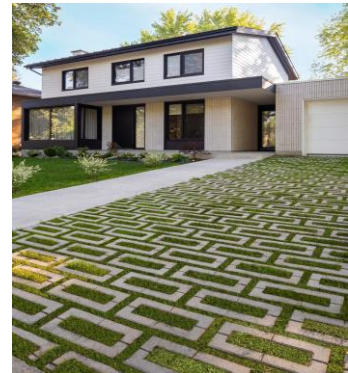
- Oceanwoods Neighborhood Driveways & Sandcastle Parking Lot
- Very durable, easy to maintain once installed properly – depends on site conditions
- Costs \$20 – \$30 SF – same as standard concrete pavers.
- Recommend working with Geotech to verify soil type is appropriate for application.

3

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◦ Pervious Paving Systems

- Includes numerous commercial products that have either concrete or plastic cells that are then fillable with pervious material including pea gravel, grass etc. Many systems also allow for on site retention beneath the surface that can tie to a larger stormwater system. This also includes porous precast concrete pavers.
- Flexible applications, works for all soils, min. runoff coefficient
- May require some maintenance depending on materials used for infill.
- Varied costs.

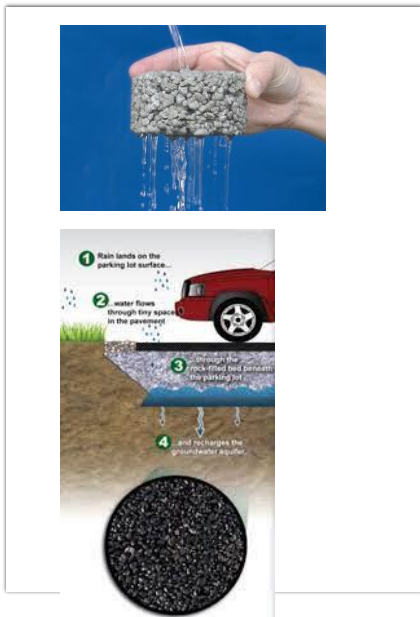


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Pervious Concrete Drive and Walkway



5



6

Pervious Asphalt and Concrete

- Both are familiar materials, made with the same material as conventional paving but with fines being removed and reduced, creating void space, approximately 16% as opposed to 2% for conventional paving. The subsurface detail can be modified to adapt to soil conditions.
- Approximate Costs
 - Conventional Asphalt - \$ 13-14/SF
 - Pervious Asphalt - \$ 15-16/SF
 - Conventional Concrete \$7 – 11/ SF
 - Pervious Concrete \$ 11.50/SF

Soft Materials with Edging

- Pea Gravel, Oyster Shell, Plantation Mix are all options which are used locally. Edging is needed to assist in keeping material in place.
- Kiawah River Farmstand Parking Lot – may require paved handicap access if not ADA accessible.
- Costs vary –
- Plantation Mix \$4.25/SF
 - with steel edging \$16/LF
- Pea Gravel \$6.75/SF
 - with steel edging \$16/ LF



7

PROPOSED ZONING TEXT AMENDMENTS

8

8

Proposed Text Amendments

#AZO24-000008 Pervious Paving for Driveways and Parking Lots

- Sec 12-63. Description of Zoning District and Regulations
- Sec. 12-128. Access, Parking and Loading Regulations
- Sec.12-374. Definitions

The proposed text amendments to Sec. 12-128 Access, Parking and Loading Regulations, Sec 12-63 Description of Zoning Districts and Regulations, and Sec. 12-374 Definitions:

- 1) Require pervious paving for new and replacement driveways and parking lots
- 2) Eliminates the allowable increase of maximum lot coverage for utilizing pervious material for driveways.
- 3) Introduces revised definition of pervious surface and a new bioretention term.

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Zoning Ordinance Text & Map Amendment Applications: Recommendation by the Planning Commission

Section 12-158(3) of the Zoning Ordinance states “The Planning Commission shall review the proposed text amendment and/or zoning map amendment and **take action, recommending that the Town Council approve or deny the proposed amendment.** The Planning Commission may hold a public hearing in accordance with the procedures in section 12-156. **The Planning Commission’s recommendation shall be based on the approval criteria of subsection (6) of this section.** The Planning Commission shall submit its recommendation to the Town Council within 30 working days of the Planning Commission meeting at which the amendment was introduced. **A simple majority vote of the Planning Commission members present and voting shall be required to approve the amendment.”**

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Zoning Ordinance Text & Map Amendment Applications: Approval Criteria

(6) Approval criteria. Text and zoning map amendments to the ordinance may be approved if the following approval criteria have been met:

- a. The proposed amendment is consistent with the purposes and intent of the adopted Town of Kiawah Island Comprehensive Plan;
- b. The proposed amendment is consistent with the purposes and intent of this article;
- c. The purpose of the proposed amendment is to further the general health, safety and welfare of the Town of Kiawah Island;
- d. The proposed amendment corrects an error or inconsistency or meets the challenge of a changed condition.

Staff finds the proposed text amendment consistent with each of the outlined criteria.

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Town of Kiawah Island Zoning Text Amendment Application(s)

Case# AZO24-000008

**Planning Commission Meeting: July 3, 2024
Town Council Public Hearing and First Reading: TBD
Second Reading: TBD**

12

12

Sec. 12-63. Description of zoning districts and regulations.

The purpose and intent of this section is to specify zoning categories and standards for all classes of use, e.g., residential, resort, commercial, etc. Standards include permitted density, lot size and coverage, and supplemental regulations.

- (1) Any property previously zoned special development shall fall under the PD zoning.
- (2) In determining the maximum number of dwelling units or hotel rooms per acre, all water bodies and all land below mean high-water level on the original or "grassroots" site are to be excluded. This requirement serves to reduce overcrowding and over-development of residential, resort, commercial and other sites. Maximum density/intensity is a limit on development rights, and not a grant of vested rights.
- (3) Lot coverage is defined in article IV, definitions, of this ordinance. Maximum percentage lot coverage is specified for each zoning district: however, the following items shall be excluded from lot coverage as determined by the Planning Director:
 - a. At grade boardwalks and landscape retaining walls below three feet in height; or
 - b. The access drive located on the "pole" of a flag lot as defined by this ordinance.

Allowable increase for residential districts. The maximum lot coverage for the R1, R2, and R3 districts may be increased for specific pervious elements as follows:

Maximum Lot Coverage as Shown in the Residential District	Allowable increase as percentage of the Maximum Lot Coverage
50 percent	10-2.5 percent
40 percent	15-5 percent
33 percent	20-10 percent

The only items that qualify for allowable increase in maximum lot coverage as determined by the Planning Director are:

- ~~a. Driveways not defined by this ordinance that utilize pervious materials.~~
- b. Pervious walks and patios.
- c. Raised courtyards and planters created by walls three feet or less above the adjacent grade.

Where an OCRM critical line is located on the property, the setback and buffer requirements of the waterfront development standards, section 12-76, shall apply.

- (4) The following apply to the residential zoning districts:
 - a. For lots on cul-de-sacs or similar circumstances, the minimum width shall apply at the front yard setback line. Cul-de-sac lots shall have a minimum width of 25 feet at the street line. The minimum width of any flag lot may be reduced to 20 feet, provided that the minimum width specified in the table is provided at the front building setback line.
 - b. The minimum yard requirements shall be increased to 30 feet from any lot or parcel boundary which abuts a golf course, lagoon, marsh, and/or open area.
 - c. Height of single-family detached homes is measured from the Federal Emergency Management Agency's base flood elevation determined for the individual home site.
- (5) The following apply to the nonresidential zoning districts:

-
- a. For lots on cul-de-sacs or similar circumstances, the minimum width shall apply at the front yard setback line. Cul-de-sac lots shall have a minimum width of 25 feet at the street line.
 - b. Nonresidential structures may have the height in stories shown in the corresponding zoning district lot standards table, provided that the highest roof ridge of the building does not exceed the height shown from the Federal Emergency Management Agency's base flood elevation determined for that individual structure.
 - c. Canopies connected to the main building shall be set back a minimum of 20 feet from any property line.

(Code 1993, § 12A-203; Ord. No. 2005-08, § 12A-203, 10-12-2005; Ord. No. 2015-04 , § 2, 4-14-2015)

Sec. 12-128. Access, parking and loading regulations.

The following regulations are intended to aid in the design and location of proper access, parking, and loading areas in order to maintain safe and efficient traffic flow.

- (1) *Access/driveways.* The following regulations shall apply to all development to prevent the proliferation of poorly spaced driveways that can result in reduced safety and carrying capacity of community streets, except that the distances may be varied in accordance with section 12-163 to permit the construction of a single, safe access where no other access to a lot is possible.
 - a. Generally, any lot having access to more than one type of street shall provide access on the street designed for the lowest traffic volume.
 - b. Nonresidential properties having access to a minor and collector street may construct a single driveway on the collector street, provided that the driveway complies with the standards herein.
 - c. There shall be only one curb cut for an individual lot or parcel. Town approval shall be required for more than one curb cut to an individual lot or parcel from any street, where there is a compelling reason.
 - d. No lot or development parcel shall directly access Kiawah Island Parkway and the arterial portions of Governor's Drive and Flyway Drive.
 - e. Private residential driveways shall be a minimum of ten feet in width and provide a vertical clearance of a minimum of 13.5 feet. Nonresidential driveways shall be a minimum of 18 feet in width and provide a vertical clearance of a minimum of 13.5 feet.
 - e-f. All new driveways and driveway replacements permitted after XX, XX, 2024 shall be constructed of pervious materials.
- (2) *Spacing between driveways and intersections.* The centerline of driveways shall be separated from the centerline of other driveways and intersections in accordance with the following table 4D, excepting lots platted prior to adoption of the ordinance from which this article is derived and where relief is needed to protect essential natural features, such as specimen trees and dunes:

Table 4D. Driveway Separation Regulations	
Road Type	Minimum driveway separation
Arterial	Driveways prohibited
Collector	75 feet
Minor	No spacing limitation

- a. No driveway shall be permitted providing access to an arterial street if the property has access to a collector or minor street.
 - b. On minor streets, no driveway should be permitted within 60 feet of an intersection, except when relief is needed due to an existing tree, unusual lot configuration, wetlands or other topographical or geographic feature of the lot.
 - c. When channelized right turn lanes are used, the Planning Director shall determine the minimum spacing between the driveways and intersections based on AASHTO standards as modified by site-specific conditions.
- (3) *Parking and loading.* This section specifies the minimum parking and loading standards for the Town. Where strict interpretation of these standards creates a unique hardship, an individual may seek a variance pursuant to section 12-163.

- a. *Minimum parking requirements.* Each use shall provide the number of parking spaces specified in table 4F in subsection (3)c of this section and comply with the following:
1. The Planning Director shall determine the number of parking spaces required for uses not referenced in table 4F in subsection (3)c of this section by first applying the standard for the most similar use or uses as listed in the table. If there is no similar use, the Planning Director may make a determination or may request that the applicant undertake a parking study.
 2. Any fraction of a parking space required under this article shall be counted as a full parking space.
 3. Handicapped spaces shall be provided as required by the Americans with Disabilities Act (ADA) standards shown below in table 4E in subsection (3)b of this section, or as requirements are amended by Federal Law.
 4. Parking requirements shall be based on gross leasable area.
 5. Off-street parking facilities shall be provided for any new building constructed and for any new use established, for any addition or enlargement of an existing building or use, or for any change of occupancy or manner of operation that would result in additional parking spaces being required; provided, however, if insufficient parking exists on a lot or parcel, then the number of spaces required to meet the needs of both the existing and new buildings or uses shall be provided.
 6. Facilities being used for off-street parking on the effective date of this article shall not be reduced in capacity to less than the number of spaces prescribed, nor shall they be altered in design or function to less than the minimum standards prescribed herein.
 7. For sites with more than one use, or for adjacent sites served by a common parking facility, the parking requirement shall be the total number of spaces required for each site or use.
- b. *Accessible parking for physically disabled persons.* Handicapped spaces shall be provided as required by the Americans with Disabilities Act (ADA) standards shown in the following table 4E:

Table 4E. Minimum Number of Accessible Spaces for Physically Disabled Persons			
Total Parking Spaces Provided	Minimum Number of Spaces		
	Accessible	Van Accessible	Car Accessible
1—25	1	1	0
26—50	2	1	1
51—75	3	1	2
76—100	4	1	3
101—150	5	1	4
151—200	6	1	5
201—300	7	1	6
301—400	8	1	7
401—500	9	2	7
501—1,000	2 percent of total spaces	1 out of every 8 accessible spaces	7 out of every 8 accessible spaces
Over 1,000	20 + 1 per each 100 spaces over 1,000		

- c. *Minimum dimensions.* All parking spaces reserved for persons with disabilities shall comply with the parking space dimension standards of this section, provided that access aisles shall be provided immediately abutting such spaces, as follows:
1. *Car accessible spaces.* Car accessible spaces shall have at least a five-foot-wide access aisle located abutting the designated parking space.
 2. *Van accessible spaces.* Van accessible spaces shall have at least an eight-foot-wide access aisle located abutting the designated parking space.
 3. *Proximity to main entrance.* All accessible spaces shall be in close proximity to the main entrance of the facility being served.

Table 4F. Off-Street Parking Requirements	
Type of Development	Required No. of Parking Spaces ⁽¹⁾
Residential	
Single-family detached	2 spaces per dwelling unit (DU) ⁽²⁾
Duplex	2 spaces per dwelling unit
Patio homes	2 spaces per 2 bedroom per dwelling unit
Townhouses	2.5 spaces per 3 or more bedroom per dwelling unit
Multiple-family	1.5 spaces per efficiency or 1 bedroom per dwelling unit
Hotels	
Guestrooms	1 space per 4 persons allowed under maximum occupancy
Conference area (part of hotel structure)	1 space per 75 square feet of indoor seating area, plus 1 per 200 square feet of outdoor seating area
	50 percent of parking required for other uses
Other uses⁽²⁾	
General office	1 space per 300 square feet of GLA
Real estate sales/leasing	1 space per 100 square feet of GLA
Doctor/dentist office	1 space per 100 square feet of GLA
Retail/service	1 space per 250 square feet of GLA
Restaurant	1 space per 75 square feet of indoor seating area, plus 1 per 200 square feet of outdoor seating area
Religious activities and public assembly	1 space per 50 square feet of assembly area
Convention center (not accessory to hotel)	1 space per 4 persons allowed under maximum posted occupancy, plus 1 per employee in shift
Community services	1 space per 2 employees plus 1 per company car parked on the premises
Recreational	
Driving range	1.5 spaces per tee
Golf courses	4 spaces per hole, plus 50 percent of the other uses, plus 1 space per employee on the largest shift ⁽³⁾
Tennis courts	2 spaces per court, plus 50 percent of the other uses, plus 1 space per employee on the largest shift ⁽³⁾
Marinas	3 spaces per 4 slips, plus 50 percent of the other uses ⁽³⁾
Swimming pool	1 space per 300 square feet pool and deck area

	Food and beverage	1 space per 75 square feet of indoor seating area, plus 1 space per 200 square feet of food service area
	Other recreational facilities, indoor	1 space per 300 sq. ft
	Parks (note: in addition to any other uses in this table)	1 space per 2 acres with minimum of 3 spaces
	Mixed use parking	Calculated per individual use as set forth in this table
⁽¹⁾ The Planning Director may determine that parking in addition to any of the parking set forth in this table is necessary in the form of overflow parking on pervious surfaces.		
⁽²⁾ Single-family residences shall have adequate turnaround space along driveways so that vehicles do not need to back into or out of driveways.		
⁽³⁾ Other uses may include accessory meeting rooms/convention facilities and accessory restaurants.		

d. *Parking design standards.* The following are minimum design standards, the Planning Director may require modifications to parking lot design to ensure the safety of pedestrians, bicyclists and motorists:

1. All off-street parking shall be located outside of required landscape buffer areas and behind front building lines.
2. Parking facilities constructed, or reconstructed greater than 50 percent of their original size, subsequent to the effective date of the ordinance from which this article is derived shall conform to these design standards.
3. All required parking facilities shall be maintained for the duration of the use requiring such facilities. Parking facilities shall be used exclusively for the temporary parking of passenger automobiles, motor vehicles or light trucks not exceeding one ton in capacity, and shall not be used for the sale, display or storage of merchandise, or for the storage or repair of vehicles or equipment.
4. All required parking facilities shall be located on the same site as the use for which such facilities are required.
5. On street head-in parking is prohibited.
6. Angled parking is prohibited.
7. Required parking for residential uses shall be provided within an enclosed garage.
8. Each standard parking space shall consist of an independently accessible rectangular or trapezoidal area.
9. Each parking space shall have a vertical clearance of at least 7.5 feet.
10. Each parking and loading area shall have adequate drives, aisles, and turning and maneuvering areas for access and usability, and shall at all times have access to a street or alley.
11. The minimum parking facility design standards are listed in table 4G in this subsection.

12. All required surface parking facilities shall be constructed of a pervious surface.

12-13. Where applicable, the Planning Director may require overflow parking spaces in addition to those required in table 4F in subsection (3)c of this section. All overflow parking spaces shall be of a pervious surface.

13-14. Required parking spaces shall not have direct access to a street or highway. Access to required parking spaces shall be provided by on-site driveways. Off-street parking spaces shall be accessible without backing into or otherwise reentering a public right-of-way.

Parking Pattern (degrees)	Maneuvering Lane Width (feet)		Parking Space Dimensions (feet)		Total Width of Two Tiers of Spaces and Maneuvering Lane (feet)	
	One-Way	Two-Way	Width	Length	One-Way	Two-Way
0 (parallel)	11	18	8.5	25	28	35
30—50	12	20	9	18	48	56
54—75	13	22	9	18	49	58
76—90	N/A	24	9	18	N/A	60

- e. *Markings.* In paved parking areas, each off-street parking space shall be identified by surface markings at least four inches in width. Marking shall be visible at all times. Such markings shall be arranged to provide for orderly and safe loading, unloading, parking and storage of vehicles.
- f. *Off-street loading requirements.*
 1. *Spaces required.* For every nonresidential use there shall be provided sufficient space to accommodate the maximum number of trucks that will be loading, unloading, or standing at any one time.
 2. *Size of space.* Each off-street loading space shall be of a size commensurate with the buildings to be accommodated. In no case shall required off street loading space encroach upon off street parking space required by this article.
 3. *Location.* All required off street loading spaces shall be located on the same lot as the building which they are intended to serve.
 4. *Entrances and exits.* Off-street loading entrance and exit drives shall be located at least 25 feet from any street intersection.
 5. *Loading spaces adjacent to sidewalks.* Where a loading space is adjacent to a public sidewalk or other public pedestrian way, it shall be so located, arranged, and improved with curbs or other barriers, as to provide adequate protection for pedestrians.
 6. *Maneuvering areas.* All off street loading spaces shall be provided with adequate off street maneuvering areas.

Gross Floor Area (square feet)	Loading and Unloading Spaces Required
0—1,999	None
2,000—4,999	1 space at the discretion of the Planning Director
5,000—19,000	1 space
20,000—99,000	1 space, plus one space for each 20,000 square feet or portion thereof in excess of 20,000 square feet

100,000 or more	5 spaces, plus one space for each 40,000 square feet or portion thereof in excess of 100,000 square feet
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g. *Parking, loading and vehicular use area landscaping.*

1. *Parking, loading and vehicular area perimeters.* Unless otherwise expressly stated, perimeter landscaping shall be required around the outer perimeter of all off street, surface parking, loading and vehicular use areas. Parking areas for the exclusive use of single-family dwellings shall be exempt from these requirements. Any off-street parking, loading or vehicular use area that will be entirely screened from view by an intervening building or structure or by a buffer provided to satisfy requirements contained elsewhere in this article shall also be exempt from these (parking, loading and vehicular use area) perimeter landscaping requirements.
2. *Perimeter landscape requirements.*
 - (i) A curbed perimeter landscape area at least ten feet in depth shall be provided at the perimeter of all off-street parking, loading and vehicular use areas, except where permitted driveway openings are to be provided. Where drainage or other utility easements exist along property lines, the perimeter landscape area shall be located adjacent to the easement.
 - (ii) Required perimeter landscape areas shall be planted in accordance with the following minimum standards:
 - A. One canopy tree shall be provided for each 50 linear feet of parking, loading or vehicular use area perimeter. These trees may be used to satisfy the interior parking lot landscaping requirements;
 - B. A hedge or other landscape material of at least three feet in height (at maturity) shall be planted within the perimeter landscape area to provide a continuous landscape element, or a combination of trees, hedge, other durable landscape material or approved wall, fence or earth berm may be used to form the continuous landscape element;
 - C. All portions of the perimeter landscape area not planted with shrubs or trees or covered by a wall or fence barrier shall be planted in grass or ground cover; and
 - D. Parked vehicles may overhang a landscaped area if curbing is installed to prevent any damage to plants within the required perimeter landscape area. Landscaping, walls, fences and earth berms will be located to prevent their damage and/or destruction by overhanging vehicles.
3. *Interior areas landscape requirements.* The following interior parking lot landscaping requirements shall apply to all parking lots except those exclusively serving single-family residential uses.
 - (i) A minimum of one landscape island shall be provided for each ten parking spaces within an off-street parking area. Required landscape islands shall have a minimum of 325 square feet, variably dependent upon the species of the canopy tree proposed by the designer. Each parking lot bay must terminate with a tree island.
 - (ii) Each required landscaping island shall contain at least one canopy tree and there shall be at least one canopy tree per ten parking spaces within the off-

street parking area. Double-loaded interior parking landscape islands are to be no less than ten feet wide and canopy trees planted in these islands are to be planted in line with parking stripes (between vehicles).

- (iii) Curbs, wheel stops or other approved protective barriers shall be installed around all required landscape islands, as approved by the Planning Director.
- (iv) Landscaping provided to meet the right-of-way buffer standards of this article may not be used to satisfy interior parking lot landscaping requirements. Canopy trees provided to meet perimeter landscaping requirements may be counted to satisfy interior parking lot landscaping requirements.

h. *Paving and drainage.*

1. For all uses ~~except single family dwellings,~~ parking and loading facilities shall be surfaced and maintained with ~~asphaltic concrete or other permanent hard surfacing~~ material sufficient to prevent mud, dust, loose material and other nuisances. ~~Pervious materials may be allowed as approved by the Planning Director.~~ Parking areas underneath the footprint of existing and proposed structures shall be exempt from this requirement. (Pervious surfaces permit infiltration or percolation of stormwater into the ground a rate greater than 0.1 inch/hour.)
2. All parking and loading facilities shall be designed, graded and provided with permanent storm drainage facilities that prevent standing water on any parking area, and do not increase the flow of water onto adjacent properties, streets or alleys. These facilities may include Low Impact Development solutions such as Bioretention Areas.

(Code 1993, § 12A-405; Ord. No. 94-12, § 2(12A-404), 9-26-1994; Ord. No. 2005-08, § 12A-405, 10-12-2005)

Sec. 12-374. Definitions.

- (a) The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

Relevant Definitions

Driveway means a minimum ten-foot wide vehicular travel way of any surface treatment (pervious or impervious) from the property line to the garage. This includes guest parking and required back-up and turn-around areas required for safe vehicular movement as determined by the Planning Director.

Impervious surface means any material which prevents, impedes or slows infiltration or absorption of stormwater directly into the ground at the rate of absorption of vegetation bearing soils, including buildings, asphalt, concrete, gravel and other surfaces as determined by the Planning Director.

Lot coverage means the total percentage of lot area that is impervious to stormwater, including buildings, decks, walls, driveways, ~~front~~-walkways, and other impervious surfaces as defined by this ordinance and determined by the Planning Director.

Parking lot means an open area providing off-street parking for the motor vehicles of residents, tourists, customers, or employees on a temporary, daily, or overnight basis.

Bioretention areas (rain gardens) means shallow depressed areas that are filled with a sandy soil and/or gravel media and are planted with vegetation used to reduce stormwater runoff rates, volumes and pollutant loads.

Pervious surface means an unimproved portion of land maintained in its natural condition or an improved portion of land covered by a material that permits infiltration or percolation of stormwater into the ground ~~as determined by the Planning Director~~ at a rate greater than 0.1 inch/hour.

Town of Kiawah Island Supplemental Stormwater Design Standards

Recommendation to look at stormwater management comprehensively for Kiawah Island.

Initial Phase:

- Outline and adopt framework for submittal process and Best Management Practices for intermediate intervention of stormwater management which provides the Town ability to implement supplementary standards to existing DHEC standards;
- Education campaign for the public on stormwater management, flooding and resiliency for greater understanding of issues and benefit of proposed regulatory changes;
- Coordination with established Comprehensive Marsh Management Plan Subcommittee priorities and Environmental Committee for alignment of Town goals.
- Benchmark the islands total impervious coverage through collaboration with Kiawah Conservancy

Subsequent Phases:

- Continued education campaign to the public on stormwater management, flooding and resiliency;
- Coordination with professional engineers for consistent standards and application as KICA, Charleston County and others;
- Develop and adopt more restrictive stormwater standards that address stormwater runoff quantity and stormwater runoff quality;
- Consider “end of pipe” regulatory changes strategies pertaining to stormwater management in collaboration with KICA and KIGR in review of master drainage system and plan. Noting without better understanding of existing infrastructure, capacity and patterns, wholesale changes to infrastructure requirements as drainage pipe sizing, culverts, catch basins and outfall etc are not recommended at this time;
- Advance training for staff and retention of professional engineers for review and assessment of submitted stormwater management plans;
- Restructure zoning code to consolidate stormwater management regulatory changes;
- Advance implementation of other recommendations within the Comprehensive Marsh Management Plan and Flood Mitigation and Sea Level Rise Adaptation Report.

Initial Recommendations

- A. Recommendation for Tree Preservation and Landscape Standards** | The preservation of trees and vegetation helps with the integrity and hydrologic cycle of the island which impacts stormwater runoff. The landscape standards workgroup under Phase II of Landscape and Tree Preservation Standards will consider touchpoint of landscape requirements as buffer standards, native plants etc. *(Status: Draft language is being developed for recommendation under established workgroup)*

***For Discussion Purposes**

Town of Kiawah Island Supplemental Stormwater Design Standards

- B. Recommendation for Pervious Paving Requirements** | The minimization of total impervious area directly relates to a reduction in stormwater runoff volume and the associated pollutants from a development site. It should be noted that no amount of pervious surface can solve the issue of tidal inundation. Included are the consideration for bioretention for parking areas. *(Status: Under Consideration for Planning Commission Recommendation)*
- C. Recommendation for Best Management Practices and Low Impact Development Strategies** | It is critical to note in improving flooding conditions, addressing stormwater at its closest source for water quality and water quantity is beneficial. The proposed regulatory changes would be applied to each individual development aiding in direct reduction of stormwater runoff. Please note that proposed recommendations are not in lieu of any state requirements or existing Town stormwater management requirements for construction activities which warrant a NPDES General Permit for discharge. Additionally permits require certain developments to develop and implement a Stormwater Pollution Prevention Plan. *(Status: Initial framework under consideration for Town Council, Planning Commission to discuss more restrictive standards.)*

Overview of Proposed Town of Kiawah Island Supplemental Stormwater Design Standards.

Charleston City, Charleston County, Town of James Island, Town of Sullivans Island are all used examples to develop framework for supplementary standards. Staff continues to engage with representatives from Kiawah Island Community Association, Charleston County Public Works, Weston & Sampson. Critical to the Kiawah supplemental standards are the consideration of natural solutions / low impact development strategies.

Addressing Water Quality

Water quality impacts should be considered when designing developments and redevelopments. Stormwater pollutants most commonly derive from nonpoint sources and are an indirect impact of land development. As stormwater runoff washes over streets and parking lots, garbage, vehicle-related chemicals, pesticides, and other debris are picked up and discharged into ponds, ditches and receiving waterbodies.

***For Discussion Purposes**

Town of Kiawah Island Supplemental Stormwater Design Standards

Addressing Water Quantity

The addition of impervious surfaces and removal of vegetation are direct impacts to the disruption of the hydrologic cycle which can lead to increased stormwater runoff peak flows and total runoff volumes. The additional factors of the coast, low depth of the groundwater table and the region's terrain being generally flat can heighten the impact of flooding. The changes in water quantity can be readily visible to property owners when flood frequency, severity, and duration increase .

- As referenced in Charleston City Stormwater Design Standards Manual

Applicability | The Town of Kiawah Island Supplemental Stormwater Design Standards provide design requirements in addition to the SCDHEC criteria that directly affect stormwater quantity and quality control. The standards are to be implemented for all developments including single family residential, multifamily residential and commercial sites.

Rainfall and Design Storm Frequency | The 24-hour precipitation depths/intensities corresponding to various probabilities for exceedance in any given year (*Annual Exceedance Probability - AEP*) are shown in the table below and are to be used for projects within the Town. The AEP is determined using historical rainfall data within a region. These values contain a 10 percent safety factor to account for uncertainties in the design process and the increasing intensity of future storms.

Recommendations are for Kiawah to align with the Town of James Island. Both James Island and Charleston County use a higher exceedance rate for probabilities of rainfall and design storms than DHEC.

24-Hour Design Storm Precipitation Frequency (Proposed Town of Kiawah Island)							
	100%	50%	20%	10%	4%	2%	1%
Return Frequency (Year)	1-year	2-year	5-year	10-year	25-year	50-year	100-year
Precipitation (inches)	3.80	4.60	6.10	7.20	8.70	9.90	11.30
Other Communities Benchmarked							
SCDHEC	3.80	4.30	5.50	6.60	8.00	9.20	10.40
Charleston County	3.80	4.60	5.90	7.00	8.00	8.90	10.20
James Island	3.80	4.60	6.10	7.20	8.70	9.90	11.30

[For example, a storm with a 5-year return period represents an event that is expected to be exceeded once every five years (on average). The frequency is 1/5, which means that there is a 20% probability

***For Discussion Purposes**

Town of Kiawah Island Supplemental Stormwater Design Standards

of a storm exceeding that magnitude occurring in any given year. Note that the return period does not mean that two storm events exceeding a given magnitude will not occur in the same year, nor does it guarantee that a storm event exceeding this magnitude will occur within any given five-year span. It just means that these storms will occur at an average rate of once every five years. The higher the return period, the more infrequent the storm event, and the higher the intensity of the rainfall.” - Bentley Drainage and Utilities CONNECT Edition]

Baseline Stormwater Management Design Standards

The Town’s typical impervious coverage is 33%. If a proposed development’s impervious area exceeds 33%, the runoff volume from a 25-year, 24- hour storm event shall be retained on site for the impervious area above 33%. *[For example, if the impervious area for a new home site is 36.8% of the total property, the site must retain the 25-year, 24-hour storm runoff volume for 3.8% of the total property area on site.]*

Additional considerations:

- 1) Consideration for delineation between single family residential and non-single family residential or commercial developments. Regarding applicability to all developments on island, single family residential remains the highest development impact.
- 2) Considerations for redevelopment standards (existing developments compared to undeveloped properties) Kiawah is approximately under 10 years regarding buildout. (Avg. 55 SFR new homes per year since 2020; 543 vacant SFR lots)

Stormwater Management Best Practices and Low Impact Development | *The Charleston County Stormwater Technical Manual 2nd edition for Best Management Practices* provides a range of options for designers to address stormwater runoff from a water quality and quantity standpoint. To improve stormwater management on Kiawah, the recommendation is for sites to implement at least one or combination of the following performance standards:

Impervious Coverage Reduction

Reduce the impervious coverage so that the impervious coverage is less than 33% ensuring the impervious cover does not exceed resulting in additional measures to retain runoff from a 25-year, 24-hour storm on site.

Runoff Reduction Requirements

All sites of less than a half-acre (21,780 square feet) with an increase of 500 square feet or more impervious area, shall offset the increase in runoff through implementation of runoff reduction

***For Discussion Purposes**

Town of Kiawah Island Supplemental Stormwater Design Standards

practices. Runoff reduction practices include disconnected downspouts, rain garden, infiltration trench, rain barrels etc. Please note reduction practices below which encourage the use of Natural Solutions.

Consideration for distinguishing new development and redevelopment standards

Reduction Practice	Requirement
Disconnect Downspouts from Impervious areas or Piped systems	500 sf of impervious area allowed per 500 sf pf roof area disconnected.
Install Rain Barrel	500 sf of impervious area per 50-gallon rain barrel installed at downspout. Rain Barrel shall be adequately screened from view.
Install Rain Garden	500 sf of impervious area allowed per 50sf of rain garden installed.
Install Infiltration Trench	1' deep x 2' wide trench filled with clean coarse sand along each side of surface features such as driveways or patios with no more than 15 feet of linear unit area flowing to the feature.

Reduction of Peak Discharge Rates:

Developments shall achieve a 20% reduction of the existing peak discharge rates at the time of submittal of a stormwater management plan application for the 10% and 4% AEP storm events (10- and 25-year storms) based on a comparison of existing ground cover at the time of submittal of a stormwater management plan application to post-development site conditions. Confirm the post development volume does not exceed the predevelopment volume for the 10% and 4% AEP storm events.

Site Grading Requirements

Site fill is to be limited to the greatest extent possible to prevent disruption of existing stormwater flow patterns. If fill is required to elevate the site above existing grade the following buffer requirements shall be met:

- a. 3:1 slopes 1 foot in height of more above adjoining property shall maintain a min. 5-foot-wide vegetated buffer area for every additional 1 foot of height (e.g. a four embankment would equate to a minimum 15-foot buffer.

***For Discussion Purposes**

Town of Kiawah Island Supplemental Stormwater Design Standards

- b. 4:1 slopes 1 foot in height or more above adjoining property shall maintain a 3-foot-wide vegetated buffer area for every additional 1 foot of height. (e.g. a 4-foot embankment would equate to a minimum 9-foot buffer.)

- c. 5:1 slopes 1 foot in height or more above adjoining property shall maintain a 1 foot wide vegetated buffer area for every additional 1 foot of height.

The buffer may overlay other vegetated buffer requirements and may contain stormwater features designed to manage stormwater generated by the fill slope. For grades between listed slopes, the necessary buffer shall be interpolated. Grading shall prevent runoff onto the adjacent property.

Compaction of non-structural fill shall be minimized during construction. Soils in landscaping areas should be protected and amended as needed. Disturbed soils in areas of fill or heavy equipment operation that will be vegetated in the final site stabilization shall be scarified or treated as directed by the designer to improve infiltration and water retention prior to final establishment of vegetation.

Soil Infiltration

Any non-structural fill brought on-site shall be compatible and have adequate permeability to allow water to infiltrate. Soils must have an infiltration rate of a minimum of 0.3 inches per hour as determined by a soil scientist or geotechnical engineer. The permeability test results must be submitted and approved prior to scheduling a certificate of occupancy or certification of construction completion inspection. Soil infiltration best management practices (BMPs) must be consistent with the most current version of the Low Impact Development in Coastal South Carolina: Planning and Design Guide.

Additional Considerations

Compensatory Storage or Floodplain Storage

“The NFIP floodway standard in 44CFR 60.3 (d) restricts new development from obstructing the flow of water and increasing flood heights. However, this provision does not address the need to maintain flood storage. Especially in flat areas, the floodplain provides a valuable function by storing floodwaters. When fill or buildings are placed in the flood fringe, the flood storage areas are lost and flood heights will go up because there is less room for the floodwaters. This is particularly important in smaller watersheds which respond sooner to changes in the topography. One approach that may be used to address this issue is to require compensatory storage to offset any loss of flood storage capacity. Some communities adopt more restrictive standards that regulate the amount of fill or buildings that can displace floodwater in the flood fringe. Community Rating System credits are available for communities that adopt compensatory storage requirements.” - FEMA

Town of Kiawah Island Supplemental Stormwater Design Standards

Floodplain Storage Requirements

Construction activities that reduce storage within the floodplain, commonly known as “fill and build” shall be prevented. The floodplain will be the 1% AEP floodplain as established by Federal Management Agency (FEMA) plus 2.5 feet elevation. The 100 year floodplain is defined by Special Hazard Area Zones A, AE, AH, AO, A99, V and VE. The 2.5 ft will be added to the elevation of the 100 year flood plain. In cases where floodplain storage impacts are proposed, impacts shall be mitigated with a minimum 1:25:1 replacement based on total storage volume to prevent deterioration of basin stormwater storage capacity over time. Mitigation shall be within the same basin effecting the same water surface elevation and hydraulics as the proposed impact.

Best Management Practices provide for Flexible Design Solutions to address both water quality and quantity. The following are generally accepted permanent quantity BMPs by various jurisdictions. (City of Charleston Design Standards Manual)

Bioretention Areas – Rain Gardens, Stormwater Planters, Tree Boxes – Bioretention areas are shallow stormwater basins or landscaped areas that use engineered soils and vegetation to capture and treat stormwater runoff. Runoff may be returned to the conveyance system through an underdrain or exfiltrated into the soil.

Permeable Pavement Systems – Permeable pavement systems are pavement surfaces that promote infiltration of stormwater through gaps in the pavement to an underlying course of gravel and then to an underdrain or underlying soils resulting in a reduced volume of runoff.

Stormwater Infiltration - Infiltration Trenches and Basins – Infiltration practices are shallow excavations that are filled with stone or engineered soil that allow stormwater runoff to enter and exfiltrate through the adjoining soils or through an underdrain.

Green Roofs – Green roofs are roofs where engineered soil media and vegetation is installed on all or a portion of the surface area. Green roofs reduce the impervious area and the volume of stormwater runoff.

Rainwater Harvesting – Rainwater harvesting is the practice of collecting and beneficially reusing rainwater. Typically, this is limited to rainwater runoff from roofs.

Impervious Surface Disconnection – Runoff from a rooftop, driveway, or other small impervious surface is directed to a pervious surface or practice to provide infiltration, filtering, or reuse. Disconnection practices are intended to reduce the volume of runoff created by impervious surfaces.

Open Channel Systems – Grass Channel and Dry Swale – Vegetated open channels with amended soils or suitable soils for infiltration that are explicitly designed and constructed to capture, route, and infiltrate stormwater runoff.

***For Discussion Purposes**

Town of Kiawah Island Supplemental Stormwater Design Standards

Site Reforestation – Site reforestation is planting trees on a site. The trees capture rainfall in their leaves and uptake infiltrated water through their roots to reduce stormwater runoff volumes.

Open Channel Systems – Wet Swale and Two Stage Ditches – Stormwater conveyance systems that provide water quality benefits through filtration and pollutant uptake.

Stormwater Filtering Systems: Perimeter Sand Filter – Perimeter sand filters are multi-chamber structures designed to treat stormwater runoff through filtration using a sand bed as its primary filter media. Filtered runoff may be returned to the conveyance system.

Dry Detention Ponds – Dry detention ponds are constructed stormwater basins that are dry between rain events. Runoff from each rain event is detained and treated in the basin, and released at a designed rate.

Wet Detention Ponds – Wet detention ponds are constructed stormwater basins that have a permanent pool, shallow marsh, or micropool of water. Runoff from each rain event is detained and treated in the pool, and released at a designated rate.

Stormwater Wetlands – Stormwater wetlands are natural or constructed systems used for stormwater management. Stormwater wetlands consist of a combination of shallow marsh areas, open water and semi-wet areas above the permanent water surface.

Vegetated Filter Strip – A vegetated buffer, or filter strip, is a uniformly graded and densely vegetated area that treats sheet flow stormwater runoff. The vegetation in the buffer works to slow down the stormwater runoff, settling and filtering some pollutants and uptaking others.

Underground Detention – Underground detention is used as an alternative to surface dry-detention basins. They are used in areas that are space-limited where there is not adequate land to provide the required detention volume. The underground storage uses tanks, vaults, and buried pipes to supply the required storage volume.

Manufactured Treatment Devices: Vortex Separator Baffles Cartridges Skimmers Gravity Oil-Grit Separator Filter Material Inlet Inserts – Pre-fabricated controls use the movement of stormwater runoff through a specially designed practice to remove target pollutants. They are typically used on smaller commercial sites and urban hotspots. There are numerous commercial vendors of these practices, but there is limited data on their performance. Until further research is done and substantial removal efficiencies are published, these structures may require monitoring.

Town of Kiawah Island

Town of Kiawah Island Municipal Center
4475 Betsy Kerrison Parkway
Kiawah Island, SC 29455

July 3, 2024



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Impervious / Pervious Paving

The minimization of total impervious area directly relates to a reduction in stormwater runoff volume and the associated pollutants from a development site. The reduction of the amount of impervious surface has been a direct recommendation of the:

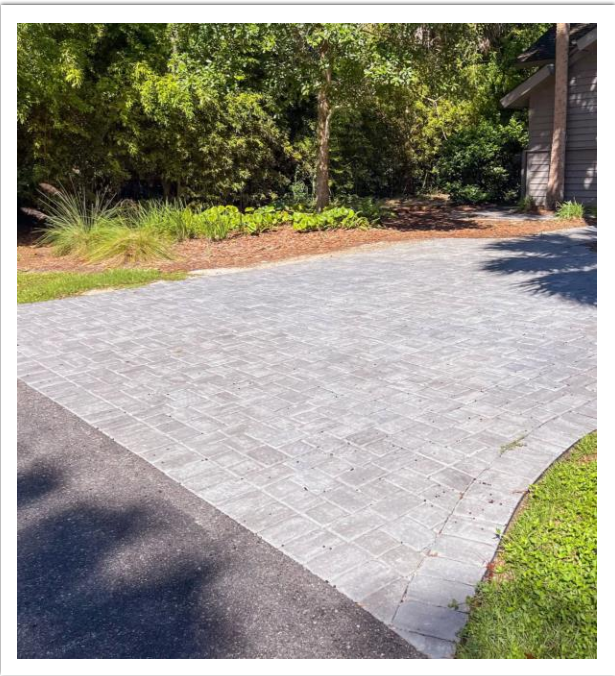
- Comprehensive Marsh Management Plan – 2022
- Flood Mitigation and Sea Level Rise Adaption for Kiawah Island – 2018
- Nature Based Solutions Manual for Kiawah Island – Green Infrastructure
- Low Impact Development in Coastal South Carolina: A Planning and Design Guide

This effort could also count towards Kiawah’s Community Rating System (CRS) credits to improve FEMA’s score which could lower flood insurance rates.



2

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Pervious Paving Materials

Pervious Concrete Pavers

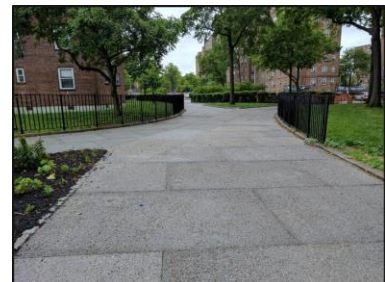
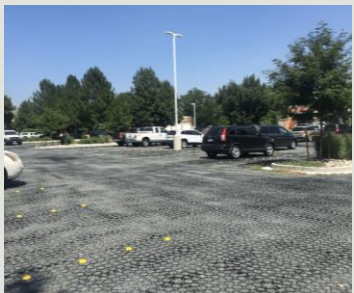
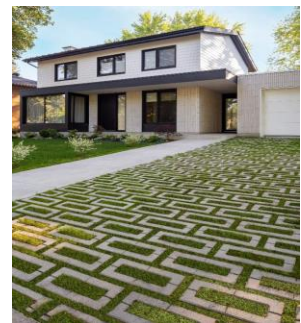
- Oceanwoods Driveways & Sandcastle Parking Lot
- Very durable, easy to maintain once installed properly – depends on site conditions
- Costs \$14 – \$28 SF – same as standard concrete pavers.
- Recommend working with Geotech to verify soil type is appropriate for application.

3

3

Pervious Paving Systems

- Includes numerous commercial products that have either concrete or plastic cells that are then fillable with pervious material including pea gravel, grass etc. Many systems also allow for on site retention beneath the surface that can tie to a larger stormwater system. This also includes porous precast concrete pavers.
- Flexible applications, works for all soils, min. runoff coefficient
- May require some maintenance depending on materials used for infill.
- Varied costs.



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Pervious Concrete Drives and Walkway



5



Pervious Asphalt and Concrete

- Both are familiar materials, made with the same material as the conventional paving but with fines being removed and reduced creating void space, approximately 16% as opposed to 2% for conventional paving.
- The subsurface detail can be modified to adapt to soil conditions.
- Approximate Costs
 - Conventional Asphalt - \$ 13-14/SF
 - Pervious Asphalt - \$ 15-16/SF
 - Conventional Concrete \$7 – 11/SF
 - Pervious Concrete \$ 11.50/SF

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Soft Materials with Edging

- Pea Gravel, Oyster Shell, Plantation Mix are all options which are used locally.
- Edging is needed to assist in keeping material in place.
- Kiawah River Farmstand Parking Lot – may require paved handicap access if not ADA accessible.
- Costs Vary / Approximate Costs
- Plantation Mix \$4.25/SF with steel edging \$16/LF
- Pea Gravel \$6.75/SF with steel edging \$16/ LF



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PROPOSED ZONING TEXT AMENDMENTS

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Proposed Text Amendments

#AZO24-000008 Pervious Paving for Driveways and Parking Lots

- Sec. 12-128. Access, Parking and Loading Regulations.
- Sec 12-63. Description of Zoning District and Regulations.
- Sec. 12-374. Definitions.

#AZO24-000009 Stormwater Management Plan Supplemental Stormwater Design Standards

- Sec. 12-169 – Stormwater Management Plan Review (*FOR DISCUSSION PURPOSES*)

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Zoning Ordinance Text & Map Amendment Applications: Recommendation by the Planning Commission

Section 12-158(3) of the Zoning Ordinance states “The Planning Commission shall review the proposed text amendment and/or zoning map amendment and **take action, recommending that the Town Council approve or deny the proposed amendment**. The Planning Commission may hold a public hearing in accordance with the procedures in section 12-156. **The Planning Commission’s recommendation shall be based on the approval criteria of subsection (6) of this section**. The Planning Commission shall submit its recommendation to the Town Council within 30 working days of the Planning Commission meeting at which the amendment was introduced. **A simple majority vote of the Planning Commission members present and voting shall be required to approve the amendment.**”

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Zoning Ordinance Text & Map Amendment Applications: Approval Criteria

(6) Approval criteria. Text and zoning map amendments to the ordinance may be approved if the following approval criteria have been met:

- a. The proposed amendment is consistent with the purposes and intent of the adopted Town of Kiawah Island Comprehensive Plan;
- b. The proposed amendment is consistent with the purposes and intent of this article;
- c. The purpose of the proposed amendment is to further the general health, safety and welfare of the Town of Kiawah Island;
- d. The proposed amendment corrects an error or inconsistency or meets the challenge of a changed condition.

Staff finds the proposed text amendment consistent with each of the outlined criteria.

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Zoning Ordinance Text and Map Amendment Applications: Decision on Amendment by the Town Council

Section 12-158(5) states "After receiving the recommendation of the Planning Commission, the Town Council shall hold one or more public hearings, **and any time after the close of the public hearing, take action to approve, approve with modifications or deny the proposed amendment based on the approval criteria of subsection (6) of this section. A simple majority vote of Town Council members present and voting shall be required to approve the amendment. Zoning map amendments shall not be approved with conditions. Prior to action on a proposed code text amendment, the Town Council may, in the exercise of its legislative discretion, invoke the "pending ordinance doctrine" by ordinance so that no building permits shall be issued for structures which would be affected by the proposed amendment until the Town Council has rendered its decision on the proposed amendment.**"

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SUPPLEMENTAL STORMWATER MANAGEMENT STANDARDS

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Supplemental Stormwater Design Standards Overview

- Comprehensive and phased approach to stormwater management
- Initial recommendations and proposed regulatory changes underway
- Introduction of regulatory changes within stormwater management Best Management Practices
- Education and Awareness Updates
- Planning Commission Discussion

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Supplemental Stormwater Design Standards

- Provide design standards directly affecting stormwater quantity control.
- Applicable to both single family and non-single family sites.
- New construction and redevelopment projects.



Rainfall & Design Storm Standards

The 24-hour precipitation depths/intensities corresponding to various probabilities for exceedance in any given year.

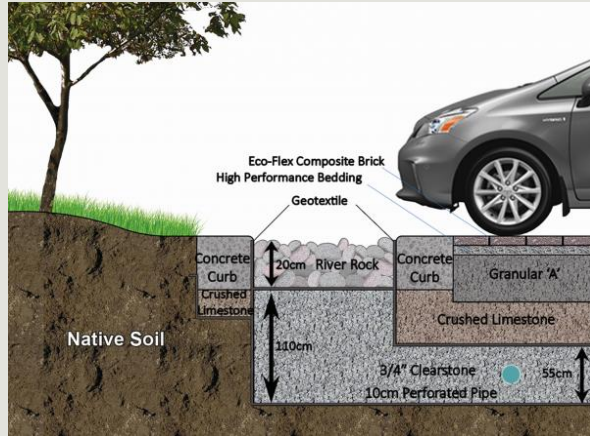
Frequency	1 year	2 year	5 year	10 year	25 year	50 year	100 year
SCDHEC (inches)	3.80	4.30	5.50	6.60	8.00	9.20	10.40
Charleston County (inches)	3.80	4.60	5.90	7.00	8.00	8.90	10.20
James Island (inches)*	3.80	4.60	6.10	7.20	8.70	9.90	11.30

* Based on 2019 Fifth National Climate Assessment.

Slow The Flow

To improve stormwater management on sites submitted for review, implement at least one of the following performance standards.

- Reduce Impervious Cover
- Reduce Runoff Volume
- Reduce Peak Discharge Rates
- Combination of Measures



Infiltration Trench

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Runoff Reduction Strategies

- Disconnect downspouts from impervious areas or piped systems
- Install Rain Barrel
- Install Rain Garden
- Install Infiltration Trench
- Remove and replace impervious surfaces with pervious surfaces.



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Site Grading Requirements

Limit site fill to the greatest extent possible to prevent disruption of existing overland stormwater flow patterns.

If fill is required to elevate the site above existing grade require vegetated buffers adjusted to allow transition to adjacent property grade and vegetation.

The buffers may overlay other vegetated buffers and may contain stormwater features designed to manage stormwater generated by the fill slope.

Soil Infiltration

Any non-structural fill brought on sites shall have adequate permeability to allow water to infiltrate

Soils must have an infiltration rate of a minimum of 0.3 inches per hour as determined by a soil scientist or geotechnical engineer.

Stormwater Management Plan Review

STORMWATER MANAGEMENT PLAN CERTIFICATION

A Stormwater Management Plan with Narrative/Plan Notes must be submitted with all Building Permit applications for residential and nonresidential construction projects meeting the following criteria:

- All new construction, exterior remodeling involving a change in the building footprint, parking areas or other impervious surfaces, change of use that results in a more intense use, or additions to any site which cumulatively exceeds 500 square feet in area.
- Adding fill or recontouring of twenty (20) percent or more of the existing lot area for lots which are 12,000 square feet or greater in size.
- Adding fill or recontouring a lot less than 12,000 square feet in size that would impact the stormwater management as determined by the Planning Director.

This plan shall be a separate sheet(s) included with the Building Permit Application submittal and must be prepared by an engineer and/or landscape architect licensed in South Carolina. The plan must comply with SCDHEC and the Town of Kiawah Island Standards.

Owners Name _____ Building Permit # _____

Project Address _____ TMS # _____

Contractor's Name _____

PE/RLA Name _____

Stormwater Plan & Survey

- Signed Stormwater Management Plan Certification form
- A scale site plan corresponding with a current survey, illustrating contour/topography lines, property boundaries, scale and property ownership information (address, TMS# etc.)
- Lot elevation at property corners, building pad and lot elevations 10' within adjacent properties (this must be determined when adding fill to the property line)
- Spot elevations of low areas
- DHEC-OCRM Critical Line and/or Baseline and Setback line
- Easements (include recording numbers if applicable).
- Existing and proposed structures including setbacks
- Location of all trees, including those to be removed and tree protection.
- Location of existing and proposed drainage facilities such as roof downspouts, pipes, catch basins, grates, splash blocks, dispersion trenches, infiltration trenches, etc.
- Existing and proposed structures (including bulkheads, retaining walls etc.)
- Proposed drainage flow patterns for surface runoff
- Construction details for proposed stormwater drainage facilities and BMP's
- Location of adjacent public stormwater drainage facilities such as ditches, catch basins.
- Location of water and sanitary sewer service.
- Proposed temporary erosion and sediment control measures such as silt fencing, construction entrances, interceptor swales etc.

Stormwater Management Narrative/Report

- Summary of existing and new impervious areas
- Summary of drainage design for surface runoff where no area drains and pipe collection systems are proposed.
- Summary of proposed Best Management Practices (BMP's) and confirmation of regular inspection and maintenance schedule of onsite BMP's.

*** An as built survey may be required for any new construction and substantial improvement.

Note the following statement on the Stormwater Plan:

"I, _____ (print name here) am a professional engineer or registered landscape architect in the State of South Carolina. The attached plans for _____ (street address) are in accordance with Zoning Ordinance 12-169 Stormwater Management Plan and I certify the means and methods proposed in this plan will prevent any adverse impacts to adjacent or downstream properties as a result of the permitted development.

Under my credentials as a licensed professional engineer or registered landscape architect in South Carolina, I hereby certify that the stormwater control measures, BMP's and the final grading for this project, will be completed and maintained in accordance with the plans and specifications detailed. I further certify that a post-development as-built survey may be required to confirm compliance with the approved stormwater management plan prior to receiving a Certificate of Completion or prior to the issuance of a Certificate of Occupancy.

Property Owner's Signature _____ Date: _____

Professional Engineer/RLA Signature: _____ Date: _____

Professional Engineer/ RLA Signature (required after construction): _____

Completion Date: _____ Staff Signature: _____

Town of Kiawah Island Zoning Ordinance Amendment Request
Case AZO24-000007

Planning Commission Meeting: June 5, 2024
Public Hearing and First Reading: July 2, 2024
Second Reading:

CASE INFORMATION

Applicant: Town of Kiawah Island

Application: The Town of Kiawah is requesting to amend the *Town of Kiawah Island Land Use Planning and Zoning Ordinance Article II. Zoning, Division 5. General Procedural Requirements*, establishing Sec. 12-169. Stormwater Management Plan Review.

Key Factors of the Proposed Ordinance:

The purpose of the proposed zoning amendment is to enhance stormwater management best management practices for purposes of reducing flooding, protecting water quality, controlling erosion, fill and managing runoff. This proposed ordinance provides the Town with greater ability to review and administer stormwater standards and best management practices for low impact development and green infrastructure.

The proposed ordinance would be applicable to all development types including single family residential, non-single family residential and commercial development projects and would require a stormwater management plan for review and approval.

No lot shall be built upon, graded, or filled without the Planning Director or Building Official's prior approval of a stormwater management plan. The stormwater management plan and construction specifications must be stamped and signed by a registered engineer or landscape architect actively licensed in the state of South Carolina. All stormwater plans must include a scaled site plan and survey illustrating all existing and proposed topographical features of the lot, existing and proposed drainage flow patterns, with a site narrative describing the means and methods of preventing adverse impacts to adjacent and or downstream properties. The following site changes shall require the submittal of a stormwater management plan:

- a. Any new building construction, new impervious source or replacement of impervious surfaces, which cumulatively exceed 500 square feet in area.
- b. Adding fill or recontouring of twenty (20) percent or more of the existing lot area.

RECOMMENDATION BY THE PLANNING COMMISSION

Pursuant to §12-158(3) of the *Land Use Planning and Zoning Ordinance* "The Planning Commission shall review the proposed text amendment and/or zoning map amendment and take action, recommending that the Town Council approve or deny the proposed amendment. The Planning Commission may hold a public hearing in accordance with the procedures in section 12-156. The Planning Commission's recommendation shall be based on the approval criteria of subsection (6) of this section. The Planning Commission shall submit its recommendation to the Town Council within 30 working days of the Planning Commission meeting at which the amendment was introduced. A simple majority vote of Planning Commission members present, and voting shall be required to approve the amendment."

DECISION ON AMENDMENT BY THE TOWN COUNCIL

Pursuant to §12-158(5) of the *Land Use Planning and Zoning Ordinance* "After receiving the recommendation of the Planning Commission, the Town Council shall hold one or more public hearings,

and any time after the close of the public hearing, take action to approve, approve with modifications, or deny the proposed amendment based on the approval criteria of subsection (6) of this section. A simple majority vote of Town Council members present, and voting shall be required to approve the amendment. Zoning map amendments shall not be approved with conditions. Prior to action on a proposed code text amendment, the Town Council may, in the exercise of its legislative discretion, invoke the "pending ordinance doctrine" by ordinance so that no building permits shall be issued for structures which would be affected by the proposed amendment until the Town Council has rendered its decision on the proposed amendment.

APPROVAL CRITERIA

Pursuant to §12-158(6) of the *Land Use Planning and Zoning Ordinance*, (6) Approval criteria. Text and zoning map amendments to the ordinance may be approved if the following approval criteria have been met:

- a. The proposed amendment is consistent with the purposes and intent of the adopted Town of Kiawah Island Comprehensive Plan;
- b. The proposed amendment is consistent with the purposes and intent of this article;
- c. The purpose of the proposed amendment is to further the general health, safety and welfare of the Town of Kiawah Island;
- d. The proposed amendment corrects an error or inconsistency or meets the challenge of a changed condition.

PLANNING COMMISSION MEETING – JUNE 5, 2024

Notifications: Notice of this meeting has been published and posted in accordance with the Freedom of Information Act and the requirements of the Town of Kiawah Island.

On June 5, 2024, the Planning Commission Recommended approval of the proposed ordinance amendment by a vote of 6 to 1.

The Planning Commission highlighted the need to incorporate a qualifying factor for smaller lots. Planning staff incorporated a distinction between lots greater than 12,000 square feet and those less than 12,000 sqft in size, granting administrative discretion for lots less than 12,000 square feet in size.

PLANNING STAFF REVIEW & COMMENTS

Planning staff finds the proposed amendment satisfies the approval criteria pursuant to §12-158(6) and recommends approval.

The proposed text amendment is consistent with the Town's Comprehensive Plan as this amendment derives as a recommendation from the Comprehensive Marsh Management Plan, and the Flood Mitigation and Sea Level Rise Adaptation Report.

Recommendation: Strictly limit impermeable surfaces, formalize stormwater BMPs for private properties. Justification: Current stormwater regulations simply direct designers to convey water to the critical line or other outfall point, without consideration of its potential effects on the marsh. Low Impact Development (LID) is an integrated, comprehensive approach to land development or redevelopment that works with nature to manage stormwater as close to its source as possible. LID practices can protect local water quality and reduce urban flooding through best practices in stormwater management. Widespread implementation will also reduce pollution of the marsh by filtering and nutrient retention.” – 2023 CMMP

The proposed text amendment adopts language to allow enforcement of current DHEC standards and

greater Town of Kiawah Island standards for all developments as it pertains to stormwater and best management practices. As a subsequent step administratively, a Stormwater Management Plan Application is developed as part of the permitting process which outlines more detailed requirements for the applicant to submit for review. These may include but not limited to:

- A scaled site plan corresponding with a current survey, illustrating contour/topography lines, property boundaries, scale, and property ownership information (address, TMS#, etc.)
- Narrative describing means and methods of preventing adverse impacts to adjacent, downstream, and/or surrounding properties.
- Lot elevation at property corners, building pad, and lot elevations 10' within adjacent properties (this must be determined when adding fill to the property line)
- Spot elevations of low points
- DHEC-OCRM Critical Line and/or Baseline and Setback line
- Easements (include recording numbers if applicable)
- Existing and proposed structures including setbacks
- Location of trees to be removed and saved
- Location of existing and proposed stormwater drainage facilities such as roof downspouts, pipes, catch basins, grates, splash blocks, dispersion trenches, dispersion buffers, vegetated flow paths, infiltration trenches, etc.
- Existing and proposed structures (including bulkheads, retaining walls, etc.)
- Existing and proposed impervious surfaces such as driveways, patios, buildings, parking areas, sport courts etc.
- Proposed drainage flow patterns for surface runoff
- Construction details for proposed stormwater drainage facilities
- Location of adjacent public stormwater drainage facilities such as ditches and catch basins
- Location of water and sanitary sewer service
- Proposed temporary erosion and sediment control measures such as silt fencing, construction entrances, interceptor swales, concrete washouts etc. (Shown on plan)

In administering the standards for substantial developments, staff recommends a consulting engineer be hired to review stormwater management plans for larger projects and require applicants to submit inspection reports as recommended. Additionally provide advance training for TOKI staff to review and inspect single family projects. A water quality fee (stormwater) may be used to assist recommended offset of review costs.

Planning staff has outlined a comprehensive approach to regulatory changes for stormwater management for the Town of Kiawah Island which are being phased with the Planning Commission with inputs from the CMMP workgroup and the Environmental Committee. The proposed text amendment is one step of a phased approach to comprehensive regulatory changes. These include:

- Implementation of low impact development and green infrastructure best management practices.
- Adoption of greater stormwater management standards for Kiawah (engineered metrics)
- Modified onsite retention requirements and modified buffer standards for marsh and ponds
- Permeable requirements for driveways, parking and non-primary trails.
- Comprehensive review of lot coverage standards.

Continued efforts to educate and inform the community on best management practices will continue through collaboration with the CMMP and the Town's Communications Department.

TOWN COUNCIL MEETING PUBLIC HEARING – JULY 2, 2024

Notifications: Notice of this meeting has been published and posted in accordance with the Freedom of Information Act and the requirements of the Town of Kiawah Island.

Town of Kiawah Island

Town of Kiawah Island Municipal Center
4475 Betsy Kerrison Parkway
Kiawah Island, SC 29455

July 2, 2024



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COMPREHENSIVE STORMWATER MANAGEMENT STRATEGIES AND PROPOSED REGULATORY CHANGES

2

2

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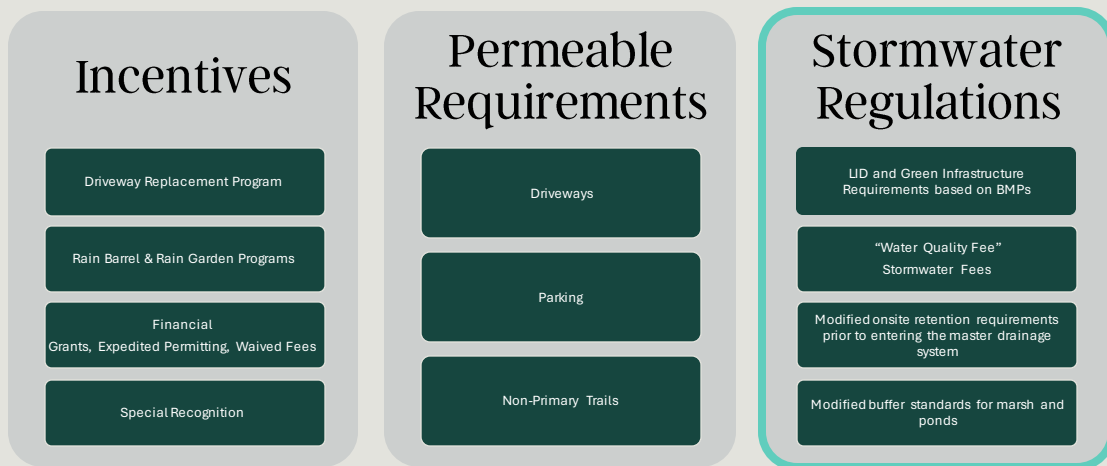
Comprehensive Marsh Management Plan

- **Recommendation: Strictly limit impermeable surfaces, formalize stormwater BMPs for private properties.**
 - **Justification:** Current stormwater regulations simply direct designers to convey water to the critical line or other outfall point, without consideration of its potential effects on the marsh. Low Impact Development (LID) is an integrated, comprehensive approach to land development or redevelopment that works with nature to manage stormwater as close to its source as possible. LID practices can protect local water quality and reduce urban flooding through best practices in stormwater management. Widespread implementation will also reduce pollution of the marsh by filtering and nutrient retention.

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Opportunities and Pathways



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A Comprehensive Approach to Kiawah's Stormwater Regulatory Changes

- **Implementation of Low Impact Development and Green Infrastructure BMPs**
- **Greater Stormwater Management Standards for Kiawah**
 - Requirements of onsite management before entering master drainage system
- **Coordination and Input from Professional Engineers**
 - **Staff has coordinated with various entities to receive general input and or recommendations from professional engineers for the proposed regulatory changes for Kiawah Island.**
 - Kiawah Island Community Association
 - Charleston County Public Works Department (Stormwater)
 - Weston & Sampson Town of James Island
 - Town of Sullivans Island



Stormwater

What is it and what do we do to control it?

What is stormwater?



Stormwater is water that originates from precipitation events, snowmelt, or runoff

Stormwater is urban and agricultural – rain falls everywhere!

7

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How is stormwater managed?

- **Control flooding** by installing, cleaning, and maintaining stormwater infrastructure such as curbs and gutters, street inlets, pipes, ditches, culverts, detention ponds, etc.
- **Regulate development** by setting design standards, providing technical guidance, reviewing plans for development and redevelopment, inspecting construction sites, and enforcing regulations.
- **Prevent pollution** by educating the public, implementing clean water programs, inspecting and monitoring runoff, complying with federal and state regulations, and enforcing water quality standards set by the Clean Water Act.

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Stormwater Management Plan Components

- Water Quantity Controls
- Water Quality Controls
- Erosion and Sedimentation Controls
- Stormwater Conveyance Controls
- Maintenance Scheduled for Construction and Post Construction.

Controlling Runoff = Controlling Stormwater

The three types of runoff that contribute to controlling stormwater quality are:

- Rural Runoff.
- Urban Runoff
- Suburban Runoff



Currently only approx. 2.5% of construction projects on Kiawah Island are regulated for stormwater management.

South Carolina Department of Health and Environmental Control (SCDHEC) requires projects larger than 1 acre to get a NPDES (National Pollutant Discharge Elimination System) Construction General Permit.

Most of our local coastal communities have created their own utility and become a MS4 (Municipal Separate Storm Sewer System) that own the stormwater infrastructure. Several partner with Charleston County for administrative and regulatory support. The Town of Kiawah would not qualify for that partnership as KICA, a private entity, owns and operates the master drainage system for the island. The State of South Carolina has over 70 regulated small MS4s.

Many of the coastal MS4s have adopted additional requirements above the DHEC and Charleston County Stormwater Program.

Mt. Pleasant – specific ordinance for Single Family Stormwater Management
Town of James Island – supplemental Stormwater Design Standards for both single family residences and non single family sites.

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Best Management Practices require concrete washouts, a simple detail that allows leftover concrete to be removed from a construction site.



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Recommendations

- 1. Adopt language to allow enforcement of current DHEC standards for all construction sites on the island. (Town of Sullivans Island)
- 2. Develop a Stormwater Management Plan Application
- 3. Hire a consulting engineer to review stormwater management plans for larger projects and require applicants to submit inspection reports as recommended.
- 4. Provide for advance training for TOKI staff to review and inspect single family projects.

**PROPOSED
ZONING TEXT
AMENDMENT**

AZO24-000007
Stormwater
Management
Plan

Proposed Text Amendment

#AZO24-000007 Stormwater Management Plan

Objective: To require a stormwater management plan for development projects

Division 5. General Procedural Requirements; Section 12-169 Stormwater Management Plan

No lot shall be built upon, graded or filled without the Planning Director or Building Official's prior approval of a stormwater management plan. The stormwater management plan and construction specifications must be stamped and signed by a registered engineer or landscape architect actively licensed in the state of South Carolina. All stormwater plans must include a scaled site plan and survey illustrating all existing and proposed topographical features of the lot, existing and proposed drainage flow patterns, with a site narrative describing the means and methods of preventing adverse impacts to adjacent and or downstream properties. The following site changes shall require the submittal of a stormwater management plan:

- a. Any new building construction, new impervious source or replacement of impervious surfaces, which cumulatively exceed 500 square feet in area.
- b. Adding fill or recontouring of twenty (20) percent or more of the existing lot area (qualified by lot size)

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Zoning Ordinance Text & Map Amendment Applications: Recommendation by the Planning Commission

Section 12-158(3) of the Zoning Ordinance states "The Planning Commission shall review the proposed text amendment and/or zoning map amendment and **take action, recommending that the Town Council approve or deny the proposed amendment.** The Planning Commission may hold a public hearing in accordance with the procedures in section 12-156. **The Planning Commission's recommendation shall be based on the approval criteria of subsection (6) of this section.** The Planning Commission shall submit its recommendation to the Town Council within 30 working days of the Planning Commission meeting at which the amendment was introduced. **A simple majority vote of the Planning Commission members present and voting shall be required to approve the amendment.**"

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Zoning Ordinance Text & Map Amendment Applications: Approval Criteria

(6) Approval criteria. Text and zoning map amendments to the ordinance may be approved if the following approval criteria have been met:

- a. *The proposed amendment is consistent with the purposes and intent of the adopted Town of Kiawah Island Comprehensive Plan;*
- b. *The proposed amendment is consistent with the purposes and intent of this article;*
- c. *The purpose of the proposed amendment is to further the general health, safety and welfare of the Town of Kiawah Island;*
- d. *The proposed amendment corrects an error or inconsistency or meets the challenge of a changed condition.*

Staff finds the proposed text amendment consistent with each of the outlined criteria.

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Town of Kiawah Island Zoning Text Amendment Application(s)

Case# AZO24-000007

Planning Commission Meeting: June 5, 2024

Planning Commission Recommended Approval by a vote of 6-1

Town Council Public Hearing and First Reading: July 2, 2024

Second Reading: TBD

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Zoning Ordinance Text and Map Amendment Applications: Decision on Amendment by the Town Council

Section 12-158(5) states "After receiving the recommendation of the Planning Commission, the Town Council shall hold one or more public hearings, **and any time after the close of the public hearing, take action to approve, approve with modifications or deny the proposed amendment based on the approval criteria of subsection (6) of this section. A simple majority vote of Town Council members present and voting shall be required to approve the amendment. Zoning map amendments shall not be approved with conditions. Prior to action on a proposed code text amendment, the Town Council may, in the exercise of its legislative discretion, invoke the "pending ordinance doctrine" by ordinance so that no building permits shall be issued for structures which would be affected by the proposed amendment until the Town Council has rendered its decision on the proposed amendment."**

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TOWN OF KIAWAH ISLAND

ORDINANCE 2024-20

An Ordinance to Amend Chapter 12 – Land Use Planning and Zoning Ordinance Article II. Zoning, Division 5. General Procedural Requirements, establishing Sec. 12-169. Stormwater Management Plan Review to enhance stormwater management best management practices for purposes of reducing flooding, protecting water quality, controlling erosion, fill and managing runoff.

WHEREAS, the Town of Kiawah Island Municipal Code currently contains *Chapter 12 - Land Use Planning and Zoning*; and

WHEREAS, the Town of Kiawah Island now finds that, upon further review, it is in the public interest to amend the *Town of Kiawah Island Land Use Planning and Zoning Ordinance* to implement standards relative to stormwater management; and

WHEREAS, the text amendment would be consistent with the purposes and intent of the adopted Comprehensive Plan and would not be detrimental to the public health, safety, and welfare of the Town of Kiawah Island; and

WHEREAS, the text amendment would be consistent with the recommendations of the *Town of Kiawah Island's Comprehensive Marsh Management Plan* and the *Town of Kiawah Island's Flood Mitigation and Sea Level Rise Adaptation Report* for purposes of addressing stormwater runoff concerns for both water quantity and water quality; and

WHEREAS, the Planning Commission held a meeting on June 5, 2024 at which time a presentation was made by staff, and an opportunity was given for the public to comment on the text amendment request; and

WHEREAS, the Planning Commission, after consideration of the staff report, subsequently voted to recommend to Town Council that the proposed amendment be approved; and

WHEREAS, Town Council held a Public Hearing on July 2, 2024 providing the public an opportunity to comment on the proposed amendment.

NOW, THEREFORE, BE IT ORDERED AND ORDAINED BY THE COUNCIL OF THE TOWN OF KIAWAH ISLAND, SOUTH CAROLINA, AND IT IS ORDAINED BY THE AUTHORITY OF SAID COUNCIL.

Section 1 Purpose

The purpose of this Ordinance is to amend Chapter 12 - Land Use Planning and Zoning Ordinance to provide for review and use of best management practices for stormwater management and construction practices for the purposes of reducing flooding, protecting local water quality, managing storage and treatment of stormwater runoff, reducing pollution of the marsh, reducing erosion, and managing fill as a result of construction activities.

PC Recommendation June 2024
Considered for Town Council Approval

Section 2 **Ordinance**

(1) The Town hereby establishes Section 12-169. Stormwater Management Plan Review as shown in the attached “**Exhibit A,**” which is hereby incorporated herein by reference.

Section 3 **Severability**

If any part of this Ordinance is held to be unconstitutional, it shall be construed to have been the legislative intent to pass said Ordinance without such unconstitutional provision, and the remainder of said Ordinance shall be deemed to be valid as if such portion had not been included. If said Ordinance, or any provisions thereof, is held to be inapplicable to any person, group of persons, property, kind property, circumstances or set of circumstances, such holding shall not affect the circumstances or set of circumstances, such holding shall not affect the applicability thereof to any other persons, property, or circumstances.

Section 4 **Effective Date and Duration**

This Ordinance shall be effective upon its enactment by Town Council for the Town of Kiawah Island.

PASSED, APPROVED, AND ADOPTED BY THE COUNCIL FOR THE TOWN OF KIAWAH ISLAND ON THIS ____ DAY OF ____, 2024.

Bradley D. Belt, Mayor

ATTEST:

By: _____
Petra Reynolds, Town Clerk

1st Reading: July 2, 2024

2nd Reading:

DRAFT
(Proposed New Ordinance Section)

Sec. 12-169. Stormwater Management Plan Review.

The purpose of this section is to provide for review and use of best management practices for stormwater management and construction practices for the purposes of reducing flooding, protecting local water quality, managing storage and treatment of stormwater runoff, reducing pollution of the marsh, reducing erosion, and managing fill as a result of construction activities.

1. *Applicability.*
 - a. *Generally.* A stormwater management plan is required to be submitted to the Town for review in accordance with the provisions contained within this section for the following site changes:
 - i. All new construction, exterior remodeling involving a change in the building footprint, parking areas or other impervious surfaces, change of use that results in a more intense use, or additions to any site which cumulatively exceeds 500 square feet in area.
 - ii. Adding fill or recontouring of twenty (20) percent or more of the existing lot area for lots which are 12,000 square feet or greater in size.
 - iii. Adding fill or recontouring a lot less than 12,000 square feet in size that would impact the stormwater management as determined by the Planning Director.
2. *Application.* No zoning or building permit shall be issued for a development project until a stormwater management plan has been reviewed and approved in accordance with the provisions contained within this section.
3. *Procedures for issuance of stormwater management plan approval.*
 - a. Stormwater management plans shall be reviewed and are subject to the approval of the Planning Director or Building Official. For development projects requiring site plan review approval, pursuant to Sec. 12-162 Site Plan Review, the Planning Director may consult with an external engineer to provide review of submitted stormwater management plans.
 - b. A stormwater management plan may be approved, approved with conditions, or denied.
4. *Submittal Requirements.* The property owner or designated representative shall initiate stormwater management review by filing an application with the Planning Director. The contents of the application shall be included on a form developed by the Town, as may be amended from time to time.
 - a. The stormwater management plan and construction specifications must be stamped and signed by a registered engineer or landscape architect actively licensed in the State of South Carolina.
 - b. All stormwater plans must include:
 - i. A scaled site plan and survey illustrating all existing and proposed topographical features of all respective lot or lots;
 - ii. Existing and proposed drainage flow patterns;
 - iii. A site narrative describing the means and methods of preventing adverse impacts to adjacent, downstream, and/or surrounding properties; and
 - iv. Such other reasonable and pertinent information, materials, design specifications and maintenance schedules with regard to the stormwater, the subject property, or neighboring lots as the Planning Director may find necessary to carry out the purposes and intent of this section and to ensure compliance with South Carolina Department of Health and Environmental Control (DHEC) and the Town of Kiawah Island standards.

DRAFT

(Proposed New Ordinance Section)

- c. Inspection reports shall be submitted for review for development projects greater than 20,000 square feet in size or as recommended by the Planning Director or its designee.

DRAFT

STORMWATER MANAGEMENT PLAN CERTIFICATION

A Stormwater Management Plan with Narrative/Plan Notes must be submitted with all Building Permit applications for residential and nonresidential construction projects meeting the following criteria:

- All new construction, exterior remodeling involving a change in the building footprint, parking areas or other impervious surfaces, change of use that results in a more intense use, or additions to any site which cumulatively exceeds 500 square feet in area.
- Adding fill or recontouring of twenty (20) percent or more of the existing lot area for lots which are 12,000 square feet or greater in size.
- Adding fill or recontouring a lot less than 12,000 square feet in size that would impact the stormwater management as determined by the Planning Director.

This plan shall be a separate sheet(s) included with the Building Permit Application submittal and must be prepared by an engineer and/or landscape architect licensed in South Carolina. The plan must comply with SCDHEC and the Town of Kiawah Island Standards.

Owners Name _____ **Building Permit #** _____

Project Address _____ **TMS #** _____

Contractor's Name _____

PE/RLA Name _____

Stormwater Plan & Survey

- Signed Stormwater Management Plan Certification form
- A scale site plan corresponding with a current survey, illustrating contour/topography lines, property boundaries, scale and property ownership information (address (TMS# etc.)
- Lot elevation at property corners, building pad and lot elevations 10' within adjacent properties (this must be determined when adding fill to the property line)
- Spot elevations of low areas.
- DHEC-OCRM Critical Line and/or Baseline and Setback line
- Easements (include recording numbers if applicable).
- Existing and proposed structures including setbacks
- Location of all trees, including those to be removed and tree protection.
- Location of existing and proposed drainage facilities such as roof downspouts, pipes, catch basins, grates, splash blocks, dispersion trenches, infiltration trenches, etc.
- Existing and proposed structures (including bulkheads, retaining walls etc.)
- Proposed drainage flow patterns for surface runoff
- Construction details for proposed stormwater drainage facilities and BMP's
- Location of adjacent public stormwater drainage facilities such as ditches, catch basins.
- Location of water and sanitary sewer service.
- Proposed temporary erosion and sediment control measures such as silt fencing, construction entrances, interceptor swales etc.

Stormwater Management Narrative/Report

EXAMPLE STORMWATER APPLICATION

- Summary of existing and new impervious areas
- Summary of drainage design for surface runoff where no area drains and pipe collection systems are proposed.
- Summary of proposed Best Management Practices (BMP's) and confirmation of regular inspection and maintenance schedule of onsite BMP's.

*** An as built survey may be required for any new construction and substantial improvement.

Note the following statement on the Stormwater Plan:

"I, _____ (print name here) am a professional engineer or registered landscape architect in the State of South Carolina. The attached plans for _____ (street address) are in accordance with Zoning Ordinance 12-169 Stormwater Management Plan and I certify the means and methods proposed in this plan will prevent any adverse impacts to adjacent or downstream properties as a result of the permitted development.

Under my credentials as a licensed professional engineer or registered landscape architect in South Carolina, I hereby certify that the stormwater control measures, BMP's and the final grading for this project, will be completed and maintained in accordance with the plans and specifications detailed. I further certify that a post-development as-built survey may be required to confirm compliance with the approved stormwater management plan prior to receiving a **Certificate of Completion** or prior to the issuance of a **Certificate of Occupancy**.

Property Owner's Signature _____ Date: _____

Professional Engineer/RLA Signature : _____ Date: _____

Professional Engineer/ RLA Signature (required after construction): _____

Completion Date: _____ Staff Signature: _____