

PLANNING COMMISSION
March 13, 2019

AGENDA

The Isle of Palms Planning Commission will hold its regular meeting on Wednesday, March 13, 2019 at 4:30 p.m. in the City Hall Conference Room, second floor, 1207 Palm Boulevard.

- A. Call to order and acknowledgment that the press and the public were duly notified in accordance with state law
- B. Public comments
- C. Approval of minutes: February 13, 2019
- D. New business: Subdivision request: 105, 107, 109 Forest Trail

Discuss further protection of palm trees
- E. Old business: Discuss ways to reduce impervious surfacing:
 - 1 Reduce coverage and FAR for houses served by septic tanks
 - 2 Require fee for additional coverage and establish fund
 - 3 Require retention for additional coverage
 - 4 Amend Drainage Plan specifications and develop engineered standards for runoff
 - 5 Others
Discuss drainage projects that could be quickly implemented

Update on outfall RFP and sewer expansion MOU
- F. Miscellaneous business
- G. Adjourn

MINUTES OF THE ISLE OF PALMS
PLANNING COMMISSION MEETING
February 13, 2019

The Isle of Palms Planning Commission met in the City Hall conference room, 1207 Palm Boulevard on February 13, 2019 at 4:30 p.m. Members attending included Richard Ferencz, Vince DiGangi, Lewis Gregory, Phillip Pounds, Ron Denton, Bill Mills, and Lisa Safford; the Director of Planning Douglas Kerr was present as well. was absent. Mr. Ferencz acknowledged that the press had been notified of the meeting and the agenda for the meeting was posted in City Hall and the Building Department to comply with the Freedom of Information Act.

PUBLIC COMMENTS

Jim Raih, 3904 Cameron Boulevard, explained that he was concerned that the subdivision request on the agenda might set a precedent for other lots on the island, as there were more properties in the Forest Trail subdivision that could do a similar subdivision. He said he believes there are probably about six other instances where lots could be subdivided and yield more lots than what currently exists. He explained that the island has sewer and drainage problems and this request may meet all of the requirements, but it should open the eyes to the City that this could be the beginning of a trend.

Jamie Zazella, 104 Forest Trail, explained that she lives across from the development being planned. She explained that she was very familiar with the drainage and flooding issues in this area her property often receives the debris and bulk trash that floats over from all of the properties on the cul-de-sac.

She explained that she understood that a project is underway to hopefully address the issue but asked how the City can approve a new subdivision and increase the square footage of impervious materials in a known flood area. She stated that in her opinion the flooding must be studied, addressed, and the fix proven effective first so the neighbors are assured that five new houses can exist on these lots while keeping the properties and cul-de-sac dry.

She stated that she understood that the lots were large enough to comply with these standards, but she stated that Sections 5-5-7a, b1, d1, c3, and d3 all relate to drainage. She suggested that the City enact a moratorium, impact fees, re-examine the zoning code, increase the lot size requirement, require a bond, notify neighbors of subdivisions, require flood studies, and revisit the tree ordinance.

Henry Hagerty, 106 Forest Trail, explained that he understands that the request may comply with all the standards, but the City does not need to be in a hurry to grant approval. He asked that the Planning Commission slow down and consider the drainage impact that the project will have on the area. He stated that this request has

generated a lot of community concern and incendiary comments on social media that he thought was unnecessary and that it would be a good idea for the Commission to take a deep breath and ensure that all the community concerns are addressed.

Dave Blaszczyk, 130 Sparrow, explained that he was directly behind this proposed development and across the drainage canal. He explained that during storm events, the water overwhelms the system and deposits debris all the way up to Sparrow Drive. He stated that he is concerned that adding more houses to the area is going to make the problem worse. He explained that he would encourage an independent flood study to be done on the problem.

Scott Kagel, #2- 19th Avenue, explained that he understood that people disagreed on many of the finer points of many issues, but he knew that everyone agreed that the community is going to have more flooding in the future and this project is not going to help this situation. He stated that every time it rains people in the community are asking that the government fix their problem. He explained that he was not asking that the City fix the problem, because he did not think they could, but he did think the Commission could keep from making the problem worse by adding new houses.

Laura Judson, 3304 Cameron Boulevard, explained that she was not directly impacted by this particular request, but she would ask that the City identify natural watershed areas and make these natural drainage areas. She suggested that the City consider using some greenspace funding to acquire these lower areas to not only act as drainage retention, but also provide some greenspace for the island. She said that with a price tag of \$23M to address the problem, there was no reason to make it worse.

Dave Melsopp, 105 Forest Trail, explained that he was one of the owners of the properties in question that would be selling the property, if the developer agrees to buy it. He explained that currently his yard is the current retention pond for the entire community, and if this keeps him from being able to sell his property, he would be in a bad situation. He asked that if this request does not pass, will the community look at improving the situation for the residents in the area.

Ellen Bonner, the agent representing the sellers of these properties, wanted to clarify that her Facebook post did not call anybody ignorant, as was previously stated, and that in her post she explained that the new houses would be anywhere from 2,800 and 3,400 square feet. She explained that she would love to be able to move to the island, but she cannot currently afford to live on the island. She stated that the engineers and the purchaser of the lots wants this to be a great addition to the neighborhood and not a problem. She asked that the community work together for smart building and allowing the experts share ways this development could improve the existing problem for

the neighborhood. She explained that the roadway is a bowl and the drainage ditch has never been maintained or addressed in anyway. So maybe everyone could work together and allow long-term residents to sell their homes and fix the problem at the same time.

Elliott Summey, Isle of Palms property owner and Chairman of Charleston County Council, explained that several years ago the City chose not to increase the stormwater fee that is collected by the County to address these types of issues, but they may be considering it now. He stated that if requested, he felt that the County would probably be willing to do a drainage study in this area and assist where possible.

Michael Bailey, 248 Forest Trail, explained that he was about four houses away and he agreed with the comments about drainage, but he was concerned about the precedent this request would set for Forest Trail. He explained that the Council has just changed the 50% rule to try to stem the tide of old houses being torn down and this request would fly against the spirit of that change. He explained that this is an established subdivision and the neighbors are not looking for changes to the neighborhood.

Tom Widlowski, 107 Forest Trail, explained that he was one of the owners of the lots being subdivided and between the three owners they have been there for a collective 100 years and given of themselves to the community. He explained that the neighbors are making them feel like criminals, which is disheartening. He explained that he understands and agrees that the area has flooding issues, but as longtime residents and property owners working within the legal framework and ordinances established by the City, they have made this request and they believe that this request is fully compliant with all development regulations. He explained that they did not have a problem with the large canal in the back coming into their yards, but they have an issue with the small ditch between 105 and 107 backing up with stormwater and filling up the cul-de-sac with salt water, because it is down in a bowl. He explained that he has made multiple attempts to get this problem fixed, but it has never happened. He explained that there are three old houses and the proposal would provide new five new house, compliant to all flood regulations and elevated on pilings to be more storm resistant.

He stated that he did not think it would make a difference to the tidal flooding if there were zero houses or five houses, as this flooding is caused by high tide and the Atlantic Ocean infiltrating the neighborhood. He stated that there was no reason to study this for six months as the issue is very obvious, if you stop and look at it.

Ms. Bonner explained that the developer and his engineer have been actively studying the drainage problem and she would encourage the neighbors to stay and listen to the

proposal and what is being considered. She explained that the current coverage of the houses is considerable and she is not sure that the new houses would not cover less than what is currently covered.

APPROVAL OF MINUTES

With no more public comments offered, Mr. Ferencz explained that the next item on the agenda was the approval of the January 9, 2019 minutes and Mr. DiGangi made a motion to approve the minutes as submitted and Mr. Pounds seconded the motion. The vote was unanimous in favor of the motion.

SUBDIVISION REQUEST AT 105, 107, 109 FOREST TRAIL

Mr. Kerr explained that the attached request is for preliminary approval of a subdivision at 105, 107 and 109 Forest Trail. Preliminary approval is an optional step in the subdivision process that will give the owner(s) assurance that if outstanding issues are satisfied, the property will be able to be subdivided. Preliminary approval would not give the owner the right to individually sell the properties or begin construction on the properties.

He explained that the property is currently configured as three lots totaling 2.08 acres and the applicant is proposing to subdivide the property into five lots, with the lots measuring 17,522 square feet, 19,454 square feet, 18,650 square feet, 17,508 square feet and 17,643 square feet.

He stated that the property is located in the SR1 zoning district, which requires lots be at least 17,500 square feet in area, be at least 70 feet wide at the building line, be at least 110 feet deep, and have at least 60 feet of frontage on the street or 30 feet on a cul-de-sac. He explained that he had distributed a copy of the zoning ordinance requirements for lots in the SR1 zoning district and the information required for review of the preliminary plat.

Mr. Kerr explained that prior to being granted final approval, the owner will have to provide: proof of a legal means of handling wastewater, which is proposed to be through the public sewer system; final approval on water line extensions to each lot; stormwater plan approval through the City's NPDES program, which is administered through Charleston County Public Works; and the removal of the existing homes to comply with the setback requirements.

He stated that the property has multiple Historic Trees, which would have to be preserved in accordance with the City's tree preservation ordinance. He explained that

the City's staff has reviewed the plat and believes that request complies with the requirements of the ordinances and therefore recommends the plat be approved with the condition that all points listed above are satisfied and a note be placed on the plat indicating that all trees will be preserved in accordance with the City's tree preservation ordinance.

He stated that considering the stormwater concerns that have been raised by the neighbors, the Planning Commission may want to request that the applicant initiate the stormwater plan process and provide the information required for this submittal with Charleston County prior to granting preliminary approval. He explained that this would be required prior to final approval anyway, be that he thought it would be beneficial to the applicant to have this information on the front end, instead of midway through the process when houses could have been demolished, in case an issue arises.

He added that if the Planning Commission wanted to delay action, they would need to remain cognizant of the 60-day clock in the ordinance required for review. He stated that the clock began on January 23rd.

Mr. Denton explained that the stormwater management plan is going to show the water shedding from these lots and into a system that is underperforming. He explained that he had heartburn with prohibiting development of lots because of drainage problems, as this is not going to be unique to this lot and the Commission would be restricting the development of all areas of the island that had drainage issues, which are numerous. He said that the appropriate fix to an issue would generally be an amendment to the zoning code. He said that he believes that the Commission needs more information about how this development will impact the stormwater system, but he thinks the solution to this drainage issue is probably bigger than this development.

Ms. Safford asked if the Commission had the authority to require a developer to improve the system outside of their property.

Mr. Ferencz explained that he thought that the Commission did not have all the information that they needed, because the drainage plan that was submitted just showed arrows towards ditches but gave no assurance that the lots would actually drain and not make the problem worse.

The applicant, Mr. Rick Banning of Seacoast Builders, addressed the Commission and explained that he saw his request as an effort to improve a situation where there are dilapidated houses. He stated that he had done considerable investigation to ensure that the request was compliant with all the standards enacted by the community. He explained that the homes that would be built would be targeting full time residents and

he felt that the request would add considerable value to the community. He believes that the development would yield an additional \$25,000 annually to the community via tax revenue over what is currently generated. He stated that the drainage problem is completely unrelated to the runoff of the homes and it is completely attributable to the high tides coming back through the pipes. He stated that the current coverage is over 13,200 square feet. He stated that the footprints being proposed would total about 11,250 square feet, which is less than what is currently there. Additionally, he stated that each building permit application will include a stormwater plan and assurance from a designer that the coverage will not adversely impact neighboring properties. He stated that he intended to improve the cul-de-sac when the time comes to build the homes.

Mr. Ferencz stated that he believes Mr. Banning and he agrees with him, but he needs an actual plan developed and submitted that shows proof of this. Mr. Banning explained that he understood this, but he submitted what was requested of him.

Mickey Seabrook explained that he was the engineer for the request and they have worked very hard to comply with the standards adopted by the City. He explained that the proposed houses would be elevated and there would be opportunities to capture the runoff from the buildings, but he stated that the condition of the drainage system downstream of these properties is a problem that is bigger than these owners or this developer can be reasonably be asked to address.

Mr. Ferencz asked if he could provide a drainage plan showing the proposed houses and lot elevations.

Mr. Kerr stated that the applicant would have to go through an NPDES permitting process prior to final approval anyway and he asked if there would be an issue with handling this hurdle prior to preliminary approval instead of final approval. Mr. Seabrook answered that this process would take much longer than the 60-day timeframe. Mr. Kerr explained that the Commission will deal with the 60-day window.

Ms. Safford said that she did not feel that they need to be fully permitted, but they just needed the design done and reviewed.

Mr. Kerr stated that he thought it would be beneficial to move the ditch that is in the middle of the lot. Mr. Banning answered that they preferred to leave it in the middle of the lot, as it is the lowest point. Mr. Kerr asked if the developer would consider elevating the road, knowing that the road is at an elevation of four feet and the code limits the fill that can be brought in to being one foot above the road. Mr. Banning answered no, this was not something he was prepared to fund.

Mr. Ferencz asked that the applicant provide the Planning Commission the same package that would be submitted for NPDES permitting showing where the water is going to go. Mr. Seabrook answered yes.

Mr. Kerr added that he believed the Commission needed engineered assurance that the changes being proposed would not exacerbate an already bad situation. The applicant indicated that he understood.

The Planning Commission discussed the need to stay within the 60-day window and agreed that they could review the request again at their March window and be inside of the window, or they could consider having a special meeting, if the requested information is available sooner.

Mr. Mills made a motion to defer action until the requested information is provided. Mr. DiGangi seconded the motion and the vote was unanimous in favor of the motion.

DISCUSS REQUIRING PAVING TO BE PERVIOUS

Mr. Ferencz explained that he understood that the Commission had discussed this issue several times, but he still gets calls and requests for the Commission to consider requiring that all paving be pervious.

Mr. Denton explained that if builders are required to install pervious paving, without changing the allowable coverage, then owners will opt to build houses with larger footprints or larger pools to cover the same amount of area. He stated that he has been working with clients in this area for many years and he knows the thought process that goes into the design and this change would not have an impact, unless the amount of lot coverage allowed is reduced.

Mr. Ferencz stated that maybe the Commission should recommend a reduction in lot coverage.

Mr. Kerr explained that as part of the Planning Commission's recommendations to address septic issues, they recommended reducing the lot coverage and house size allowed when a house is tied to a septic system. He stated that the Commission could consider breathing life back into these recommendations.

The Commission discussed other methods to incentivize pervious surfacing on new projects. Mr. Denton explained that there is an additional cost of about \$3 to install pervious pavers above the cost to install impervious concrete. Ms. Safford explained

that you had to be careful with what you require, because you could end up with a lot of gravel, which can be unsightly but cheaper.

Mr. Mills stated that he is not convinced that pervious materials does not become clogged over time and perform exactly like concrete.

The Commission requested that Mr. Kerr forward the previous recommendation for consideration at their next meeting.

DISCUSS CHANGING SCOPE OF OUTFALL PROJECT TO INCLUDE ADDITIONAL OUTFALLS

Mr. Kerr explained that at the last meeting he was tasked with identifying the problematic outfalls between 31st Avenue and 19th Avenue and determine a rough cost per outfall to add more outfalls to the Thomas and Hutton study. He explained that he spoke with Thomas and Hutton and they felt the Commission would be safe to divide the total cost by the number of outfalls to come up with a rough cost per outfall of \$100,000. He said that this would be conservative approach and in reality, the cost should be less, depending on which outfalls were identified.

Mr. Kerr pointed to maps he had created with the Public Works Department that identified all of the known issues with the outfalls between 31st and 19th Avenue.

In summary, the Public Works Department did not see any of the outfalls that elevated themselves to being as problematic as the three outfalls that are currently being studied.

The Commission generally agreed that there was not a need to expand Thomas and Huttons' scope at this point.

UPDATE ON DRAINAGE RFP

Mr. Kerr explained that Thomas and Hutton was actively surveying the outfalls, so work has started and boots are on the ground.

UPDATE ON MOU WITH WATER AND SEWER COMMISSION

Mr. Kerr explained that he had attended a meeting with the Isle of Palms Water and Sewer Commission staff and Thomas and Hutton had presented the final draft of their masterplan. He indicated that the next step would be a workshop between the City and the Water and Sewer Commission to review the plan. He explained that this meeting would be scheduled soon.

Planning Commission minutes
February 13, 2019
Page 9

ADJOURNMENT

With there being no further business, the meeting was adjourned at 6:50 P.M.
Respectfully submitted, Richard Ferencz, Chairman

From: [Lewis Seabrook](#)
To: ["Douglas Kerr"](#)
Cc: [E. M. Seabrook III](#)
Subject: Banning
Date: Friday, March 8, 2019 1:02:29 PM
Attachments: [nkhfaldeeogphclh.png](#)
[18260-BANNING EXISTING CONDITIONS.pdf](#)
[18260-BUILDING AND SETBACK EXHIBIT WITH PROPOSED IMPERVIOUS CALCULATION.pdf](#)

Douglas,

Here are the two drawings about which we spoke a few minutes ago. The existing conditions impervious surfaces total 15,951 square feet on the three lots. Based on the information Rick Banning has provided us, I have calculated the proposed impervious surfaces to total 14,150 square feet. This total is based on the five building envelopes shown on the attached exhibit and an estimation of the driveway areas serving the new structures (five at 800 square feet each based on the sizes of the three existing driveways).

The breakdown of existing impervious surfaces are as follows:

lot 17 - house 2363 sq. ft., driveway, walks and slab 1200 sq. ft. = 3563 sq. ft. total

lot 18 - house and shed 3443 sq. ft., driveway, walks, slab 820 sq. ft. = 4263 sq. ft. total

lot 19 - house and other buildings 4327 sq. ft., driveway, walks, slabs and pool 3798 sq. ft. = 8125 sq. ft. total

We have not prepared a drainage plan since we do not yet know what the proposed new structures will look like, only that they will have to fit within the envelopes shown on the exhibit. In any case there will be very little opportunity to perform much grading on these lots given the amount of trees located on the lots. Any significant amount of fill used to improve the drainage flow off site would likely damage the trees.

Since the area of the proposed impervious surfaces is less than the existing conditions impervious surface area, it is reasonable to conclude that stormwater runoff from the proposed re-development of these lots will be less than the existing stormwater runoff.

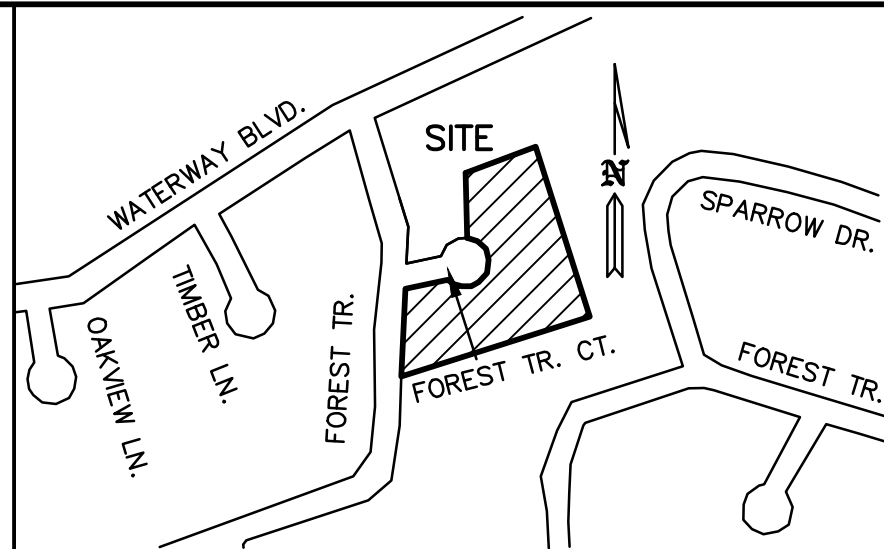
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Lewis E. Seabrook
Vice President



E. M. Seabrook Jr., Inc.

FOR APPROVAL STAMPS



LOCATION MAP
NOT TO SCALE

LEGEND

CP COMPUTED POINT
IPF IRON PIPE FOUND
IRF IRON REBAR FOUND
IRS IRON REBAR SET
EB ELECTRIC BOX
LP LIGHT POLE
MB MAILBOX
PP POWER POLE
SSMH SANITARY SEWER MANHOLE
WM WATER METER
VM VALVE
X9.1 EXISTING ELEVATION
X EXISTING CONTOUR
— FENCE
— WATER LINE

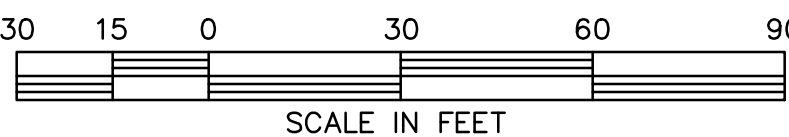
TREE LEGEND

BI BIRCH
CE CEDAR
CL CLUSTER
HO HOLLY
MAG MAGNOLIA
O OAK
PA PALMETTO
POP POPLAR
SB SUGARBERRY

TOTAL EXISTING IMPERVIOUS SURFACES
OF THESE LOTS = 15,951 SQ. FT.

CITY OF ISLE PALMS
CHARLESTON COUNTY, S. C.

PLAT OF LOT 17 BLOCK FT-FOUR SECTION BC-2D CONTAINING 0.64 ACRE,
LOT 18 BLOCK FT-FOUR SECTION BC-2D CONTAINING 0.79 ACRE,
AND LOT 19 BLOCK FT-FOUR SECTION BC-2D CONTAINING 0.65 ACRE



SCALE: 1" = 30'

JANUARY 18, 2019



E.M. SEABROOK

Engineers | Surveyors

1037 Chuck Dawley Blvd.
Building F - Suite 200
Post Office Box 96
Mount Pleasant, SC 29465
Phone (843) 884-4496
www.emseabrook.com

NGVD 29

REFERENCES:

1. PLAT BY E. M. SEABROOK, JR., INC. DATED SEPT. 10, 1968, RECORDED IN CHARLESTON COUNTY ROD OFFICE IN PLAT BOOK X PAGE 139
2. PLAT BY E. M. SEABROOK, JR., INC. DATED JULY 25, 1974, RECORDED IN CHARLESTON COUNTY ROD OFFICE IN PLAT BOOK AD PAGE 107

NOTES:

1. AREA DETERMINED BY COORDINATES
2. BASED ON INTERPRETATION OF FEMA FLOOD INSURANCE RATE MAP NUMBER 45019C 0542 J DATED NOVEMBER 17, 2004, THE PROPERTY SHOWN HEREON LIES IN FLOOD ZONE AE (ELEV. 13).
3. THE ABSENCE OR PRESENCE OF U. S. ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS HAS NOT BEEN DETERMINED BY THIS SURVEY.
4. THERE IS NO OBSERVABLE EVIDENCE OF THE LOCATION OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY. SUBSURFACE CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING ANY SUBSURFACE OBJECTS THAT MAY AFFECT THE USE OR FURTHER DEVELOPMENT OF THIS PROPERTY.
5. THIS PLAT IS BASED ON OLD DEEDS, OLD PLATS, LINES OF OCCUPATION OF LONG DURATION AND EXISTING MONUMENTATION. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH.

ZONING:

Minimum lot requirements in the SR-1 single-family residential district are as follows:
Lot area: seventeen thousand five hundred (17,500) square feet of contiguous highland.
Lot width: seventy feet (70') measured at building line.
Lot depth: one hundred ten feet (110').
Lot frontage: sixty feet (60') on a public or private street; thirty (30) feet on a public or private cul-de-sac.
Vehicle access to the lot from a public or private street shall be provided within the required lot frontage.

Minimum yard requirements in the SR-1 single-family residential district are as follows:
Front yard: thirty feet (30').
Side yard: ten feet (10').
Rear yard: thirty feet (30').
Exception: legal nonconforming lot minimum yard requirements.
Front yard: twenty-four feet (24').
Side yard: ten feet (10').
Rear yard: twenty-four feet (24').

Maximum height in the SR-1 single-family residential district shall be forty feet (40').

I HEREBY STATE THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARDS OF PRACTICE MANUAL FOR SURVEYING IN SOUTH CAROLINA AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

LEWIS E. SEABROOK
CIVIL ENGINEER & LAND SURVEYOR
S. C. REG. NO. 09860
P. O. BOX 96
MOUNT PLEASANT, S. C. 29465
(843) 884-4496

LOT 17
THE SYCH PASTEL TRUST
TMS 571-07-00-017
27,817 SQ. FT.
0.64 ACRE

LOT 19
LORI MELSOPP
DAVID J. MELSOPP
TMS 571-07-00-019
28,493 SQ. FT.
0.65 ACRE

LOT 20
CHAD E. JOHNSON
CHRISTIE A. JOHNSON
TMS 571-07-00-020

H. THOMAS SANDERS
TMS 571-07-00-022

DAVID B. BLASZCZAK
JESSICA L. BLASZCZAK
TMS 571-07-00-072

F. MICHAEL SOTTILE
JOHNSON LORAIN
TMS 571-07-00-073

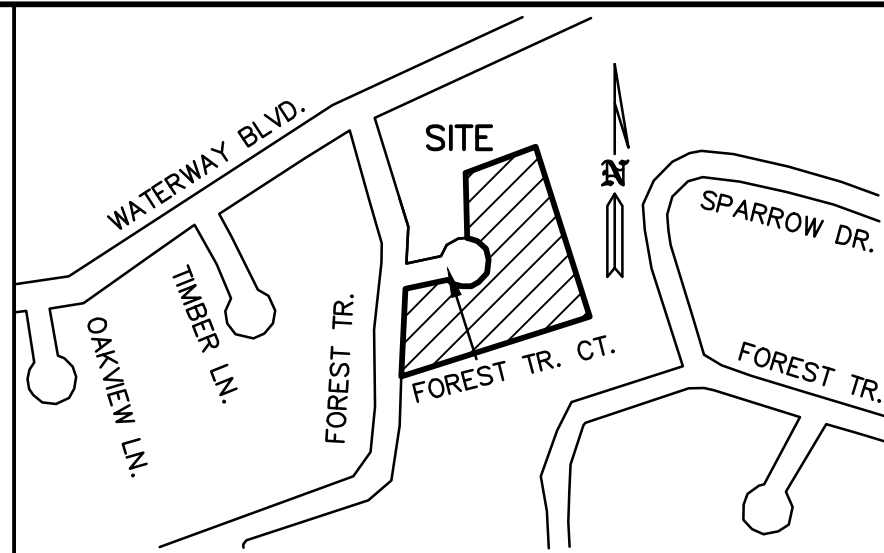
JAMES D. KOREN
IRENA SZCZYPKOWSKA
TMS 571-07-00-074

LOT 18
THOMAS F. WIDLOWSKI
JUDY A. WIDLOWSKI
TMS 571-07-00-018
34,468 SQ. FT.
0.79 ACRE

SAMUEL RIVERS PEARCE
LEIGH ANN PEARCE
TMS 571-07-00-016

ANDREW ROBERT ADAMS
JESSICA MARIE ADAMS
TMS 571-07-00-015

EUGENE STEWART GARRETT
TMS 571-07-00-012



LEGEND

- CP COMPUTED POINT
IPF IRON PIPE FOUND
IRF IRON REBAR FOUND
IRS IRON REBAR SET
EB ELECTRIC BOX
LP LIGHT POLE
MB MAILBOX
PP POWER POLE
SSMH SANITARY SEWER MANHOLE
WM WATER METER
VM VALVE
X9.1 EXISTING ELEVATION
X EXISTING CONTOUR
FENCE
W WATER LINE

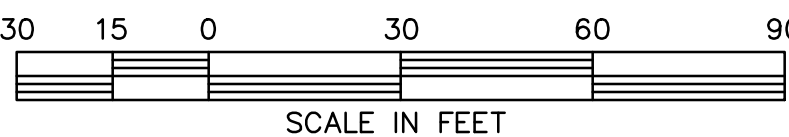
TREE LEGEND

- BI BIRCH
CE CEDAR
CL CLUSTER
HO HOLLY
MAG MAGNOLIA
O OAK
PA PALMETTO
POP POPLAR
SB SUGARBERRY

PROPOSED IMPERVIOUS SURFACES
FIVE BUILDING FOOTPRINTS = 10,150 SQ. FT.
FIVE DRIVEWAYS, ESTIMATED 800 SQ. FT. EACH = 4000 SQ. FT.
TOTAL = 14,150 SQ. FT.

BUILDING FOOTPRINTS EXHIBIT CITY OF ISLE PALMS

CHARLESTON COUNTY, S. C.
PLAT OF THE RESUBDIVISION OF LOTS 17, 18 AND 19 BLOCK FT-FOUR
SECTION BC-2D CONTAINING 2.08 ACRES TOTAL INTO
NEW LOT 17 CONTAINING 0.41 ACRE,
NEW LOT 18 CONTAINING 0.40 ACRE,
NEW LOT 19 CONTAINING 0.43 ACRE,
LOT 20 CONTAINING 0.45 ACRE AND
LOT 21 CONTAINING 0.40 ACRE
ALL ABOUT TO BE CONVEYED TO FOREST TRAIL VENTURE, LLC



SCALE: 1" = 30'

JANUARY 22, 2019



E.M. SEABROOK

Engineers | Surveyors

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Building F - Suite 200
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5. THIS PLAT IS BASED ON OLD DEEDS, OLD PLATS, LINES OF OCCUPATION OF LONG DURATION AND EXISTING MONUMENTATION. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH.
6. WATER AND SEWER SERVICE TO BE PROVIDED BY ISLE OF PALMS WATER & SEWER COMMISSION.
7. EXISTING AND PROPOSED LAND USE IS SINGLE FAMILY RESIDENTIAL.
8. SUBDIVIDER:
FOREST TRAIL VENTURE, LLC
3432 HENRIETTA HARTFORD
MOUNT PLEASANT, SC 29466
(843) 580-4179 (RICK BANNING)

ZONING:

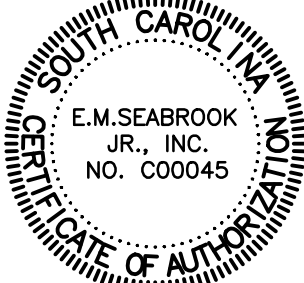
Minimum lot requirements in the SR-1 single-family residential district are as follows:
Lot area: seventeen thousand five hundred (17,500) square feet of contiguous highland.
Lot width: seventy feet (70') measured at building line.
Lot depth: one hundred ten feet (110').
Lot frontage: sixty feet (60') on a public or private street; thirty (30) feet on a public or private cul-de-sac.
Vehicle access to the lot from a public or private street shall be provided within the required lot frontage.

Minimum yard requirements in the SR-1 single-family residential district are as follows:
Front yard: thirty feet (30').
Side yard: ten feet (10').
Rear yard: thirty feet (30').
Exception: legal nonconforming lot minimum yard requirements.
Front yard: twenty-four feet (24').
Side yard: ten feet (10').
Rear yard: twenty-four feet (24').

Maximum height in the SR-1 single-family residential district shall be forty feet (40').

I HEREBY STATE THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARDS OF PRACTICE MANUAL FOR SURVEYING IN SOUTH CAROLINA AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

LEWIS E. SEABROOK
CIVIL ENGINEER & LAND SURVEYOR
S. C. REG. NO. 09860
P. O. BOX 96
MOUNT PLEASANT, S. C. 29465
(843) 884-4496



From: "Douglas Kerr"
To: [Bill Mills](#); [Lewis Gregory](#); [Lewis Gregory](#); [Lisa Safford](#); [Lisa Safford](#); [Phillip Pounds](#); [Phillip Pounds \(ppounds@iop.net\)](#); [Richard Ferencz \(Rick.ferencz@gmail.com\)](#); [Rick Ferencz](#); [Ron Denton](#); [Ron Denton](#); [Vince DiGangi](#)
Cc: [""Desirée Fragoso" \(desireef@iop.net\)"](#)
Subject: palm tree ordinance
Date: Friday, March 8, 2019 2:48:00 PM
Attachments: [minutes 3-20-13.doc](#)

Rick has asked that we put a discussion on the agenda for palm tree removal. I wanted to give some background on this issue prior to the meeting.

The City's Code allows palm trees to be removed as long as they are mitigated through one of the options included in the Code. See Section 5-4-2-(33A)(d) here:

https://library.municode.com/sc/isle_of_palms/codes/code_of_ordinances?nodeId=COOR_TIT5PLDE_CH4ZO_ART1GEPR_S5-4-2DE

Prior to 2013, palm trees were given the same protection as other trees. It is my recollection that City Council relaxed this protection in reaction to owners complaining that palms are not technically trees and they are overly abundant on the island. Attached are minutes where the Planning Commission discussed this point with the arborists from Clemson.

Below is the picture of the lot that I believe started the concern. This owner opted to pay into the City's tree fund to mitigate 13 trees. We will discuss more on Wednesday.

Thanks, Douglas

Douglas Kerr
Director of Building, Planning and Licensing
City of Isle of Palms
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MINUTES OF THE ISLE OF PALMS
PLANNING COMMISSION MEETING
March 20, 2013

The Isle of Palms Planning Commission met in the City Hall Conference Room, 1207 Palm Boulevard on March 20, 2013 at 4:30 p.m. Members attending included Bev Ballow, Richard Ferencz, Ron Denton, Patrick Harrington, Penny Lewis, Noel Scott and Don Smith; the Director of Planning Douglas Kerr was present as well. The press had been notified of the meeting and the agenda for the meeting was posted in City Hall and the Building Department to comply with the Freedom of Information Act.

Chairman Noel Scott called the meeting to order.

APPROVAL OF MINUTES

Mr. Scott explained that the first item on the agenda was the approval of the February 13, 2013 minutes. Mr. Denton made a motion to approve the minutes as submitted and Mr. Ferencz seconded the motion. The motion was unanimously approved.

DISCUSSION OF TREE ORDINANCE

Mr. Kerr explained that a redlined draft of amendments had been distributed in the packets and experts from Clemson were available to discuss the changes being considered. He explained that the changes in the amendment included: exempting palm trees that are transplanted or replaced from permitting, exempting invasive pest species of trees from permitting, and allowing the removal of trees that are causing structural damage to the enclosed, habitable area of a building when the damage cannot be remedied without removing the tree.

Mr. Scott asked the representatives from Clemson, Harry Crissy and Mark Arena, to join the group and answer questions. Mr. Kerr asked if they believed it was proper to exempt invasive species and if the "Invasive Plant Pest Species of South Carolina," published by Clemson, was the proper reference. Mr. Arena answered yes to both questions. He stated that it was his belief that not all invasive species were harmful, but that the "pest" species were all harmful and the City should not require an owner to keep them.

Ms. Ballow explained that the City's code gave no protection to pine trees and asked for their opinion on this exemption. Mr. Arena answered that he believed that large pine trees do offer ecological benefits and they should be given some level of protection. The group generally discussed the fact that there are relatively few pine trees over 24 inches in diameter left on the island. It was discussed that after Hugo many pine trees snapped and caused damage, but that there was extensive damage from all other species as well.

Mr. Kerr asked Mr. Arena what suggestions he would make regarding trees causing structural damage to people's homes. Mr. Arena stated that he believed that communities should allow owners to remove trees that are causing hardships to owners, but that there is always a challenge of determining what level of hardship should qualify for the removal of a tree. He explained that in situations where an owner is required to annually prune roots from a tree that is causing damage, the tree will ultimately die and in the end the result is the same as if the tree was allowed to be removed initially.

The group thanked Mr. Arena and Mr. Crissy for joining and agreed to go through the draft amendment. The first point of discussion was the amendment to exempt palm trees that are transplanted or otherwise replaced from permitting. The group agreed that they supported this amendment. Mr. Ferencz explained that he felt that the ordinance should clarify that the City recognizes the fact that a palm tree is not technically a tree, but that the ordinance still regulates their removal. He explained that this fact is acknowledged in discussions, but that the code is silent on the issue and it would be clearer if the code acknowledged the distinction. The group agreed that this clarification should be made.

The next point of discussion was the exemption of invasive pest species of trees from permitting. The group agreed that they supported this amendment and that they supported the code referencing the list published by Clemson as the guiding document.

The next point of discussion was granting permission for trees causing damage to property. Mr. Kerr explained that the draft included several triggers for permitting that he would like to discuss individually. He explained that as the ordinance is drafted there would have to be some level of physical damage to a structure and not just the "potential" for damage for a permit to be issued. He made an example of a large oak tree being only 24 inches from the foundation of a house, but no perceivable damage occurring and asked if the group supported the notion of requiring the owner to keep this tree until some perceivable damage occurred. The group discussed the difficulty of accurately predicting when a tree could cause damage and the opportunity for abuse if the trigger is based on a prediction. The group agreed that the trigger for removal should be some level of damage and not the potential for damage.

The next point of discussion was which structures would have to sustain damage before a tree removal permit could be issued. He explained that as currently drafted, the amendment would only cover the enclosed, habitable area of buildings. Under this language, damage to a porch, deck, parking slab, shed or pool would not qualify for tree removal.

Mr. Smith explained that he felt that language should be broadened to include any enclosed space of the principle building, including porches. The group agreed.

Mr. Harrington explained that he had believed that pools and possibly other accessory structures should also be included. Ms. Ballow explained that she felt that items like pools were luxury items and that burden should be on an owner to manage the conflict between a pool and a tree without the removal of the tree. The group generally discussed whether it would be appropriate to allow the removal of trees damaging pools, but not allow the removal of trees damaging other accessory structures.

After a lengthy discussion, Mr. Kerr proposed keeping the amendment as drafted and resuming the discussion of accessory structures at the next meeting to give time for consideration. The group agreed.

Mr. Ferencz explained that he would like to revisit the issue of pine trees being exempted regardless of size and asked that the group consider the recommendation of Mr. Arena of protecting large pine trees. Mr. Denton explained that he doubted that the island had too many pine trees as large as 24 inches in diameter, which is the size Mr. Arena referenced. Ms. Ballow explained that she supported the idea of protecting larger pine trees, as they provide habitat and enhance the ecology of the island. The group generally agreed that wanted to extend protection to include pine trees over 24 inches in diameter.

Mr. Kerr explained that he would have the amendment put into ordinance form and have it on the next agenda for consideration.

REVIEW OF THE COMPREHENSIVE PLAN

Mr. Kerr explained that the first section of the Comprehensive Plan to be reviewed was the population element and he distributed a draft of changes to the section that included changes based on the 2010 Census. He explained that the 2010 Census data did not show any alarming changes, but that there were some notable trends that the plan should note. He explained that the year round population is shown to have fallen a bit from 2000 to 2010 even though the number of housing units had increased. He also explained that the numbers appeared to show a large increase in the number of long term rentals, but the difference was so large it appeared to be due more to a change in the method of collecting or reporting data than a real change.

Mr. Denton stated that he found it interesting that for the first time, the City has more dwelling units than people.

Options to Reduce Impervious Surfacing
For Planning Commission discussion March 13, 2019

1. Reduce the lot coverage and FAR limits for properties using septic systems

This was a recommendation of the Planning Commission to Council to not only reduce coverage and provide properties tied to septic systems more area for a septic system to function, but also incentivize tying into public sewer. The draft ordinance is attached.

2. Require a fee for additional coverage

This could be a fee per square foot that would be paid to the City once a property's coverage toggles over a "normal" amount of coverage.

The fund could then be used for drainage projects to deal with the additional run-off created by the coverage.

The fee could be set at an amount that eliminates any savings an owner may have seen by using concrete or other impervious surfaces (i.e. if concrete is \$5 per square foot and pervious pavers are \$7 per square foot, the charge may be \$2 or \$3 per square foot).

Philadelphia uses an incentive-based program for large industrial tracts of land, which is not comparable, but a report on that program is attached.

3. Require retention for additional coverage

One method for requiring retention for new construction sites could be to require an engineer to analyze each site and prepare a site-specific plan, which is the next discussion point below. An alternative would be to attempt to develop a set percentage of a lot that would need to be used for retention.

Portland has a very detailed/complex stormwater program, but the program includes a "Simplified Approach" that is intended to allow homeowners to complete projects without having an engineer develop a site-specific plan. The approach appears to require a retention facility that is roughly 10% of the area of the impervious coverage on the lot. The key parts of the Simplified Approach can be found on pages 85-86 and 319-323 of the pdf.

4. Require projects to meet an engineering standard for runoff

While this is an uncommon requirement for single-family resident construction, the City could require that an engineering analysis be done to show proof that the flow rates from the proposed development do not exceed pre-development levels.

I have been unable to identify another community that goes to this level for single-family homes, but the Town of Mount Pleasant has recently implemented a program that provides good strategies and goals, but I do not see a clear engineering standard included. Their ordinance is attached.

TITLE 5 – PLANNING AND DEVELOPMENT
CHAPTER 5. - LAND DEVELOPMENT REGULATION

Sec. 5-5-1. - Subdivision approval required.

Approval of any subdivision of property within the City shall be required as set forth hereinbelow. These requirements shall be referred to as the "Land Development Regulations" of the City.

- (a) *Scope.* Regarding real property in the City, no subdivision shall be made, platted, or recorded for any purpose, nor shall parcels resulting from such subdivisions be sold or offered for sale, unless such subdivision meets all requirements of these regulations.

- (b) *Subdivision defined.* Definitions. The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

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The term "subdivision" means any division of a lot, tract or parcel of land into two (2) or more lots, building sites or other divisions for the purpose, whether immediate or future, of sale, lease, or building development, and includes all division of land involving a new street or change in existing streets and includes resubdivision which would involve the further division or relocation of lot lines of any lot or lots within a subdivision previously made and approved or recorded according to law; or the alteration of any streets or the establishment of any new streets within any subdivision previously made and approved or recorded according to law, and includes combinations of lots or record. However, the following exceptions are included within this definition only for the purpose of requiring that the Planning Commission be informed and have a record of the subdivisions:

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- (1) The combination or recombination of portions of previously platted lots where the total number of lots is not increased and the resultant lots are equal to the standards of this chapter;
- (2) The division of land into parcels of five (5) acres or more where no new street is involved and plats of these exceptions must be received as information by the Planning Commission, which shall indicate such fact on the plat; and
- (3) The combination or recombination of entire lots of record where no new street or change in existing streets is involved.

Public sewer means the gravity sewer system operated and maintained by the Isle of Palms Water and Sewer Commission for the disposal of wastewater. This definition does not include on-site wastewater disposal systems or grinder pump systems as defined in section 5-4-2.

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- (c) *Compliance with zoning requirements.* All applications for subdivision must also meet all of the applicable requirements of title 5, chapter 4, pertaining to zoning.
- (d) *Plats required to be stamped.* All plats for the subdivision of property within the City shall bear the stamp of the City Planning Commission and an authorized signature as a condition precedent to recording at the County RMC Office, or its successor office.

Sec. 5-5-2. - Subdivision approval process.

The procedure for obtaining subdivision approved by the City is as follows:

- (a) Conceptual plan: Submission and review are optional.
- (b) Preliminary plat: Submission, review and approval are required.
- (c) Conditional plat: Submission, review and approval are optional.

(d) Final plat: Submission, review, approval and recording are required.

Subsection (a) of this section is optional, at the discretion of the owner. Subsection (b) of this section shall be completed prior to land clearing, grading or making any street or other improvements, including utilities. Either subsection (c) or (d) of this section shall be completed prior to commencement of building construction and/or sale of any lots within the proposed subdivision. Subsection (d) of this section shall be completed prior to the occupancy of any structure.

Sec. 5-5-3. - Conceptual plan.

- (a) *Purpose.* Conceptual plans are encouraged but are not required. The purpose of conceptual plan review is to assist the owner in demonstrating compliance with this chapter prior to extensive site planning and expenditures.
- (b) *No rights granted by conceptual plan review.* Conceptual plan review is solely advisory in nature. Conceptual plan review does not involve any interpretation or approval and it creates no vested right or right of reliance on the part of the owner.
- (c) *Information required for review.* Conceptual plans shall contain at least the date, be legibly drawn to scale, but not necessarily showing exact dimensions, and include the following:
 - (1) North arrow, written and graphic scales, and a location map showing the relationship between the proposed subdivision and the surrounding area.
 - (2) Tract boundaries and total acreage.
 - (3) Significant topographical and physical features including the location of all critical areas, wetlands, watercourses within and abutting the tract, flood hazard areas and designation of flood hazard zone.
 - (4) The location, names and rights-of-way widths of existing streets.
 - (5) Tentative street and lot arrangement showing acreage, proposed minimum lot size and the number of lots.
 - (6) Existing and proposed land uses throughout the subdivision.
 - (7) Zoning classification and TMS numbers.
 - (8) Existing and proposed drainage and utility easements.
 - (9) Statement for Existing and proposed methods of sanitary sewerage wastewater disposal.
 - (10) The location of the critical area as defined by OCRM, and delineation of the marsh setback required by section 5-4-18. All wetland areas under the jurisdiction of the OCRM or the U.S. Army Corps of Engineers shall be shown.
 - (11) Flood hazard zone, the OCRM critical line, baseline and construction setback line and the City's zoning beach front jurisdictional setback line shall be shown; if applicable.
 - (12) The tree survey required in section 5-4-61.
 - (13) Owner's name, address and telephone number.
- (d) *Review process.* The applicant may submit a proposed conceptual Plan to the Zoning Administrator, who shall forward the plan to the City Building Official and the Planning Commission for advisory review. The Planning Commission shall provide the applicant with the advisory and nonbinding results of its review within forty-five (45) days following submission of the plan. City Council hereby delegates to the Planning Commission the review of any conceptual plan pursuant to any PDD zoning district requirement.

Sec. 5-5-4. - Preliminary plat.

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- (a) *Required.* Submission and approval of a preliminary plat is the first formal stage of a subdivision application review. Preliminary plat approval is required before site improvements may commence.
- (b) *Rights afforded by approval.* Issuance of a preliminary plat authorizes the owner to proceed with the installation of site improvements and with the preparation of final plats. Preliminary plat approval does not authorize the sale or transfer of lots, or the commencement of construction of improvements.
- (c) *Information required for review.*

1. Preliminary plats shall be drawn to scale no smaller than 1" = 200'. Where large areas are being platted, they may be drawn on one (1) or more sheets not to exceed twenty-two inches (22") by thirty-four inches (34") in size. For small areas being platted, a scale of 1" = 100' shall be used, provided the drawing does not exceed twenty-two inches (22") by thirty-four inches (34") in size.
2. In addition to the information required for conceptual plans in section 5-5-3(c), the following information shall be required:
 - (1) The courses and distances of the perimeter of the subject property shall be shown.
 - (2) References to a known point such as street intersections and railroad crossings.
 - (3) Zoning classifications, total acreage and total number of lots.
 - (4) The County Tax Map System (TMS) identification numbers of adjacent properties, and street names where known or available, and all intersecting boundaries or property lines shall be shown.
 - (5) Proposed divisions to be created shall be shown, including the right-of-way widths, roadway widths, easement widths, and names of streets; the location of proposed utility installations, lot lines; and sites reserved or deeded for public uses.
 - (6) The title, scale (including graphic scale), north arrow (magnetic, grid or true), date, name of the subdivider and the name of the licensed professional who prepared the plat, together with his South Carolina Registration Number and seal shall be shown on each sheet.
 - (7) Drainage features shall be shown.
 - (8) When required by the City Building Official or other requirements, a drainage plan showing profiles, plans and drainage specifications for existing and/or proposed on-site stormwater drainage facilities and off-site facilities to be used to carry stormwater from the site.
 - (9) Accompanying data as listed in subsection (9)(a) of this section:

(a) The preliminary plat shall be accompanied by:

1. either a statement from the Isle of Palms Water and Sewer City Water and Sewer Commission stating that a sewer line is located on a right-of-way or easement abutting the proposed lots and that public sewer capacity is available to serve the proposed lots; and

2. or where a sewer line does not abut the property or public sewer capacity is not available, proof that the proposed lots meet the current SCDHEC minimum standards for an on-site wastewater treatment system a statement from the owner agreeing to provide public sewer service to the proposed lots.

The preliminary plat shall be accompanied by either a statement from the City Water and Sewer Commission stating that public sewer capacity is available to serve the proposed lots.

- (d) *Criteria for review.* The application for preliminary plat approval must contain all required information. Incomplete applications will be rejected and returned to the applicant without review. All rejected applications shall be accompanied by a letter from the Planning Commission stating the reason for rejection.

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(e) *Review process.*

- (1) The owner shall submit a proposed preliminary plat to the Zoning Administrator, who shall forward the application to the Planning Commission, the City Building Official and all other applicable City departments and consultants for review. Complete applications submitted more than fourteen (14) days prior to the next regularly scheduled meeting of the Planning Commission will be placed on the Commission's agenda for review; complete applications submitted within fourteen (14) days of a regularly scheduled Commission meeting shall be placed on the agenda of the following regularly scheduled meeting. Twelve (12) copies of the plat and two (2) copies of the required supplemental material shall be submitted.
 - (2) Fees set by City Council pursuant to section 5-5-12 must be paid by the applicant at the time of submission of a proposed preliminary plat.
 - (3) The Planning Commission shall take action to approve, disapprove, or approve with specified conditions the preliminary plat within the sixty (60) days after receipt of a complete application and all required information. Failure to act within the sixty (60) day period, unless extended by agreement, shall be deemed to constitute approval and a certificate to that effect shall be issued by the Planning Commission on demand. The owner shall be notified in writing of the actions taken.
 - (4) A record of all actions on all plats with the grounds for approval or disapproval and any conditions attached to the action must be maintained by the Planning Commission as a public record.
- (f) *Duration.* Approval of a preliminary plat is valid for one (1) year from the date of approval. Where a subdivision is being developed in sections, the one (1) year shall be measured from the date of the most recent final approval granted to a portion of the subdivision. Prior to the expiration of a preliminary plat, the developer may apply for a one (1) year extension of time by the Planning Commission. There is no right to receive an extension, and the Planning Commission has the discretion to require the subdivider to apply for a new preliminary plat; the Planning Commission shall consider the applicant's progress or lack thereof in proceeding with the development and any change circumstances and restrictions in deciding whether to grant an extension.

Sec. 5-5-5. - Conditional plat.

- (a) *Submittal.* Submission and approval of the conditional plat is an optional second formal stage of the subdivision regulation process. Approval authorizes the sale of lots and the construction of structures before site improvements are made, provided that adequate financial guarantees are provided to the City to ensure that all required improvements will be completed.
- (b) *Rights afforded by approval.* Issuance of a conditional plat authorizes the subdivider to proceed with the sale or transfer of lots and with the preparation of final plats. Further, structures may be approved and constructed, pursuant to the requirements of this title, on lots covered by a conditional plat. However, no certificate of occupancy shall be issued for any structures until approval and recording of a final plat is obtained by the owner.
- (c) *Information required for review.* In addition to the information required for review of a preliminary plat submission, the following information is required:
 - (1) The applicant shall submit a bond or other financial guarantee meeting the criteria set forth in section 5-5-9.
 - (2) The following conditions shall be conspicuously noted on the plat:
 - a. "This is a conditional plat. No final approval from the City has been obtained. Final plat approval is contingent upon completion and approval of all required improvements. No property shown on the preliminary plat may be occupied in any manner until a final plat is approved by the City. No building permits will be issued until the road base and water system are installed."

- b. "It shall be the duty of any attorney, real estate agent or broker involved in the subdivision process to give notice of these conditions of approval to all prospective purchasers of any parcels shown thereon."
- (d) *Criteria for review.* The application for conditional plat approval must contain all required elements. Incomplete applications shall be returned to the applicant without review. All rejected applications shall be accompanied by a letter from the Planning Commission stating the reason for the rejection.
- (e) *Review process.* The application for conditional plat shall follow the same process set forth for the approval of a preliminary plat pursuant to section 5-5-4.
- (f) *Duration.* In the event required improvements are not completed within one (1) year from the date of approval of a conditional plat, the City shall have the right to invoke the applicable financial guarantees and complete construction of the required improvements. The developer may apply for an extension of time of up to one (1) year by the Planning Commission to complete the required improvements, provided that adequate financial guarantees are so extended; however, no more than two (2) such extensions may be granted, and the Planning Commission has the right to invoke the applicable financial guarantees rather than grant an extension.

Sec. 5-5-6. - Final plat.

- (a) *Required.* Submission and approval of the final plat is the final stage of the subdivision approval process. Such approval is required before a certificate of occupancy will be issued.
- (b) *Rights afforded by approval.* Approval of a final plat authorizes the owner to sell or transfer lots, and to commence construction of structures provided all necessary permits have been obtained therefor, and further authorizes issuance of a certificate of occupancy upon compliance with all requirements of section 5-4-101.
- (c) *Information required for review.*
 - 1. The final plat must be recordable at the County RMC Office, drawn on sheets not exceeding twenty-two inches (22") by thirty-four inches (34"), with a scale of 1" = 100' or larger, and not less than eight and one-half inches (8½") by eleven inches (11"). Where necessary the plat may be on several sheets accompanied by an index sheet or key map insert showing the entire subdivision.
 - 2. In addition to the information required for review of the preliminary plat in section 5-5-4, the following information shall be required:
 - (1) All information required on the preliminary plat, with the exception of topographic data.
 - (2) All property lines with distances, accurate bearings or deflection angles. If a control traverse is run between any two (2) points on any property lines, then it shall be noted. For property lines which are curves or are in part curves, the arc length and radius shall be shown.
 - (3) Curve data for all curves shall consist of the following: The Delta angle, the degree of the curve, the tangent distance, the length of curve by arc method, and the radius. This information should be calculated along the centerline or other defined traverse line for the entire curve, beginning to end as one (1) set of data.
 - (4) The location of all points of curvature and tangency.
 - (5) The location of points of intersection where circular curves are not used.
 - (6) Lot and block numbers suitably arranged by an easily understood system.
 - (7) Certificate of accuracy. A certificate of accuracy shall be lettered or printed on the face of the final plat. The signature, seal and certification of a State-registered professional land surveyor to the effect that the final plat accurately reflects a Class A survey, that all monuments shown thereon actually exist and their position is accurately showing, and that all dimensional details are correct.

(8) In subdivisions where existing ~~public water and~~ public sewer systems have been extended and/or a new system installed, the applicant shall submit: (i) a letter of operation and maintenance agreement for the system from the Isle of Palms Water and Sewer Commission and (ii) certifications of inspection from the State Department of Health and Environmental Control (SCDHEC).

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(9) A statement as follows: "This plat is subject to all applicable easements, reservations and restrictive covenants of record."

(10) Accurate location, material and description of monuments and markers. Monuments to be placed after final street improvements shall be designated as "future."

(11) Certificates, as follows:

a. A surveyor's certificate as to accuracy of survey and plat.

"I, [name of surveyor], a registered surveyor of the State of South Carolina, do hereby certify that I have surveyed the property shown hereon, that this plat shows the true dimensions of the property and that all necessary markers have been installed and the precision is 1: _____ [state actual precision]."

The unadjusted field measurement of lots and blocks shall be accurate within the standards set forth in the minimum Standards Manual of the State Board of Engineering Examiners.

b. A statement of dedication by the property owner of any streets, rights-of-way, easements, or other sites for public use. If any change in ownership is made subsequent to the submission of the plat and prior to the granting of final approval, the statement or dedication shall be amended accordingly.

c. The signature and seal of the registered land surveyor in accordance with the current Minimum Standard Manual for the Practice of Land Surveying in South Carolina.

d. The date of the field survey upon which final plat is based.

(d) *Criteria for review.* The application for final plat approval must contain all required elements. Incomplete applications shall be rejected and returned to the applicant without review. All rejected applications shall be accompanied by a letter from the Planning Commission stating the reason for rejection.

(e) *Review process.*

(1) The applicant shall submit a proposed final plat to the Zoning Administrator, who shall forward the application to the Planning Commission, the City Building Official and all other applicable City departments and consultants for review. Complete applications submitted more than fourteen (14) days prior to the next regularly scheduled meeting of the Planning Commission will be placed on the Commission's agenda for review; complete applications submitted within fourteen (14) days of a regularly scheduled Commission meeting shall be placed on the agenda of the following regularly scheduled meeting. Twelve (12) copies of the plat and two (2) copies of the required supplemental material shall be submitted.

(2) The Planning Commission may request additional information or documentation to make an application complete and eligible for review.

(3) The Planning Commission shall take action to approve, disapprove, or approve with specified conditions the final plat within sixty (60) days after receipt of a complete application and all required information. Failure to act within sixty (60) days, unless extended by agreement, shall be deemed to constitute approval and a certificate to that effect shall be issued by the Planning Commission on demand.

(4) A record of all actions on all plats with the grounds for approval or disapproval and any conditions attached to the action must be maintained by the Planning Commission as a public record. In addition, the owner must be notified in writing of the actions taken.

- (5) When the Planning Commission approves a final plat after all requirements of these regulations are met, it shall cause its action, including any conditions, to be noted on the face of the original final plat.
- (6) The City reserves the right to require that the following statement be placed upon the plat:

"The approval of this plat does not obligate the City of Isle of Palms in any way to accept the maintenance any of the streets, roads, accesses or easements shown hereon."
- (7) No property may be sold or transferred prior to the approval and recording of the final plat, except pursuant to a conditional plat issued under section 5-5-5.
- (8) No certificate or occupancy pursuant to section 5-4-101 shall be issued prior to the approval and recording of a final plat.
- (9) Fees as set forth in section 5-5-12 will be levied to defray expenditures associated with processing of applications. These fees are due upon submission of an application.

Sec. 5-5-7. - Development standards.

- (a) *Location.* Critical area, land subject to flooding by normal tides, freshwater wetlands and other areas subject to periodic inundation shall not be subdivided for residential use, unless provisions are made for satisfactory drainage in accordance with the requirements of OCRM, U.S. Army Corps of Engineers and other applicable State and Federal regulatory agencies. All drainage system shall be designed and constructed in accordance with the requirements of the OCRM and the latest edition of the County Road Code.
- (b) *Easements and dedications.*
 - (1) Easements for drainage, water or sewer, may be required along rear and side property lines where necessary. Redesign of the lot may be required to address drainage conditions.
 - (2) Drainage easements shall be provided and dedicated in accordance with the requirements of the OCRM and the latest edition of the County Road Code.
 - (3) Easements shall center along or be adjacent to a common property line where practical.
 - (4) No subdivision shall block or obstruct the natural drainage of the adjacent area.
 - (5) Existing natural drainage shall be retained or adequately relocated.
 - (6) Dedication of streets, schools sites, or recreational areas may be required.
- (c) *Lots.* Lot requirements are contained in sections 5-4-32 through 5-4-40, with special requirements and exceptions contained in additional sections of this title.
- (d) *Flood prevention.*
 - (1) All subdivision proposals shall be consistent with the need to minimize flood damage.
 - (2) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
 - (3) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.
 - (4) Base flood elevation data shall be provided for subdivision proposals and other proposed development which is greater than fifty (50) lots or five (5) acres.
- (e) *Other requirements.*
 - (1) All land subdivisions in the City shall be in accordance with (Class A) Urban Land Surveys as promulgated by S.C. Code 1976, title 40, ch. 22, as amended, and as described in the Minimum Standards Manual For the Practice of Land Surveying in South Carolina.
 - (2) Beachfront property. All plats for beachfront property shall contain the following note:

"The City of Isle of Palms, at the time of the approval of this plat, prohibits the issuance of any permits for any kind of hard beach erosion control structures or devices (i.e., sea walls, revetments, rip-rap, bulkheads, groins, large sandbags, etc.) within the area landward of the OCRM critical area and within a 250-foot radius of the mean high water mark of the Atlantic Ocean, Breach Inlet, or Dewees Inlet, and strongly opposes the issuance of any permits for hard beach erosion control structures elsewhere in the City.

- (3) The Planning Commission shall approve and authorize the name of a street or road laid out within property over which it has jurisdiction. Also, it may, after fifteen (15) days' notice published in a newspaper having general circulation in the City, change the name of a street or road within the City pursuant to S.C. Code 1976, § 6-29-1200, as amended.
- (4) No land development plan, including subdivision plats, shall be approved unless all land intended for use as building sites can be used safely for building purposes without danger from flood or other inundation or from other menaces to health, safety or public welfare.
- (5) Stormwater management. No land development plans, including subdivision plats, shall be approved unless the property meets all requirements contained in title 3, chapter 3, pertaining to stormwater regulations.

Sec. 5-5-8. - Required improvements.

(a) *Markers.*

(1) Markers shall be placed as specified below:

- a. A marker shall be set on the right-of-way line at the ends of the block for every block length of street. When blocks occur that have a curve in them, markers shall be set on both sides of the street at the ends of tangents. Markers shall also be set on rights-of-way (on each side of the centerline) at angle points when curves are not used. All interior lot corners shall be marked.
- b. Markers shall be one of the following:
 1. A reinforced concrete marker with a brass or copper pin in the top. Concrete markers shall be a minimum of three feet (3') long and have a minimum cross sectional area of nine (9) square inches. They shall protrude above the ground not less than two inches (2") and not more than six inches (6").
 2. An iron pipe having a minimum diameter of three-fourths (¾) inch hollow or one-half (½) inch solid steel. Such iron pins will be a minimum of two feet (2') in length and shall extend above the ground at least one inch (1").

(2) Markers shall be installed prior to the submission of and approval of the final plat.

(3) The location and type of all markers used shall be indicated on the final plat.

(b) *Utility, drainage and street improvements.*

(1) Utility, drainage and street improvements shall be as required by and in conformance with the standards and specifications of the latest edition of the County Road Code.

~~(2) The owner shall install public water lines where public water service is available within five hundred feet (500') of the property.~~

~~(32) The owner shall install public sewer lines and connect to the public sewer system operated and maintained by the Isle of Palms Water and Sewer Commission where public sanitary sewer service is available within five hundred feet (500') of the property.~~

(43) Street name signs in accordance with the requirements of the current edition of the County Road Code shall be installed. Should another type be desired, exceeding these standards, plans shall accompany the preliminary plat for approval.

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(54) All required drainage facilities shall be properly constructed in accordance with the standards and specifications of the latest edition of the County Road Code.

(65) All lots not exceeding two hundred (200') feet in depth shall be provided with means for positive drainage and shall have a slope of not less than 0.70 percent to an approved swale, ditch, gutter or other type of approved drainage facility. Larger tracts of land shall either meet this standard or provide for adequate drainage by using one or more of the techniques contained in OCRM stormwater guidelines and approved by the Building Official and Public Works Department as consistent with the drainage patterns for surrounding properties.

Sec. 5-5-9. - Financial guarantees.

- (a) In lieu of completing the required improvements listed hereinabove, a no-contest, irrevocable bank letter of credit, or performance and payment bond underwritten by an acceptable State-licensed corporate surety, or a bank cashier's check, all in favor of the City, to ensure that in the event of default by the developer funds will be available to install the required improvement at the expense of the owner, may be accepted by the Planning Commission; provided that the City Attorney has in each instance reviewed each letter of credit or bonding agreement and has given an opinion in favor of the City that the interests of the City are fully protected. Where a cashier's check for the full cost of the improvements is utilized, opinion of counsel may be waived. The amount of the bond shall be set by the Planning Commission, and shall be not less than one hundred twenty-five percent (125%) of the projected cost of the improvements, with a minimum of \$2,000.00, if completed two (2) years after the date of the bond.
- (b) Upon completion of the improvements as required by this section, written notice thereof shall be given by the subdivider to the bond holder, who shall cause an inspection of the improvements to be made. The bond holder will within thirty (30) days of the date of notice, authorize in writing the release of the security given, provided improvements have been completed in accordance with the required specifications. Should the improvements not be completed in accordance with the required specifications by the date originally stipulated in writing by the bond holder, the funds derived from said bond or cashier's check will be used by the bond holder to complete the improvements according to required specifications, at the earliest reasonable time. Where it appears that the bond was insufficient to finance the required improvements after the subdivider has defaulted, City Council will assess the individual subdivider the cost of the improvements over and above the surety amount.
- (c) In no instance will the bond holder be authorized to extend for the subdivider the completion date originally stipulated.
- (d) Pro-rata refunds based on a percentage of overall completion shall not be authorized, with the exception of an irrevocable bank letter of credit. The Planning Commission, may at its discretion, refund no more than ninety percent (90%) of the original estimated completion cost of that portion of the project requested by the developer.
- (e) The Planning Commission shall review, approve, or reject each acceptance of surety in lieu of completion of improvements. In making its determination it shall give due consideration to the commitments made by the subdivider to individual purchases.

Sec. 5-5-10. - ~~Exception to preliminary plat review process.~~

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For a proposed subdivision, or modification of an existing lot or subdivision, which does not involve the construction or improvement of any street or drainage system, an owner may submit the following information to the Zoning Administrator ~~in lieu of the preliminary plat requirements:~~

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- (1) The information required for review of a conceptual plan, as set forth in section 5-5-3.

~~(2) County Health Department approval for lots that will utilize on-site sanitary sewerage disposal systems.~~

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(32) A letter confirming the availability of water and/or public sewer service from the applicable utility, the Isle of Palms Water and Sewer Commission and a statement from the owner agreeing to provide public sewer service to the proposed lots.

(3) In subdivisions where existing public sewer systems have been extended and/or a new system installed, the applicant shall submit: (i) a letter of operation and maintenance agreement for the system from the Isle of Palms Water and Sewer Commission and (ii) certifications of inspection from the State Department of Health and Environmental Control (SCDHEC).

Review shall follow the procedures set forth for final plats in section 5-5-6; provided, however, that if the Building Official determines that street or drainage system modifications are required, the application shall be construed as one for issuance of a preliminary plat pursuant to section 5-5-4.

Sec. 5-5-11. - Variances.

- (a) Where extraordinary hardship may result from strict interpretation of these regulations, the applicant may apply to the Planning Commission for a variance. Such variance may be granted to alleviate such hardship, provided that such variation does not have the effect of nullifying the intent and purpose of these regulations.
- (b) The application for a variance shall clearly and definitely state the reason why a variance is needed. Consideration must be given to the following factors:
 - (1) Special conditions affecting the property.
 - (2) Undue hardships that will result from adherence to the requirements.
 - (3) Grants of variance shall not be detrimental to adjacent property or to the public interest. Conditions may be imposed on any such variance.

Sec. 5-5-12. - Fees.

- (a) Fees charged to defray the costs of plat review shall be set forth in a Schedule of Fees, to be developed by the Building Official and approved by resolution of City Council.
- (b) Such Schedule of Fees may be amended from time to time by resolution of City Council.

Sec. 5-5-13. - Vested rights.

- (a) Definitions. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:
 - 1. *City* means the incorporated area of the City.
 - 2. *Approved* means a final review and approval by the Planning Commission of a site specific development plan in accordance with the provisions of this chapter. Phased development plans remain subject to review by the Planning Commission of all phases prior to being vested.
 - 3. *Landowner* means an owner of a legal or equitable interest in real property, including heirs, devisees, successors, assigns and personal representatives of the owner. Landowner also includes a person holding a valid contract to purchase real property whom the owner has given written authorization to act as his agent or representative for the purpose of submitting a proposed development plan.
 - 4. *Phased development plan* means a development plan submitted to the Planning Commission by a landowner that shows the types and density or intensity of uses for a specific property or properties to be developed in stages but which do not satisfy the requirements of a Site Specific Development Plan.
 - 5. *Site specific development plan* means a plan submitted by a landowner which describes with reasonable certainty the types and density or intensity of uses for specific property and must

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include, at a minimum, a preliminary plat in conformity with section 5-5-4(c) and a site plan which includes the sizes, shapes, dimensions and locations of all proposed structures.

6. *Vested right* means the right to undertake and complete the development of property under the terms and conditions of a Site Specific Development Plan in conjunction with this section and in conformity with City land development ordinances and upon final approval by the Planning Commission.
- (b) Submission and approval of a site specific development plan confers upon the owner a vested right to undertake and complete the development of the subject property in conformity with the information provided by the owner to the Planning Commission.
- (c) A vested right is established for two (2) years from the date of final approval of a site specific development plan. Such vested right shall receive no more than five (5) one-year extensions upon written application by the landowner for each year that an extension is desired and shall be received no later than thirty (30) days prior to the expiration of the current term. No extension shall be approved if an amendment to this chapter has been adopted that prohibits such approval.
- (d) A vested right in a site specific development plan shall not attach until all plans have been received, approved and all fees paid in accordance with the procedure outlined in subsection (e) of this section. All administrative appeals must be resolved in favor of the applicant before a vested right attaches.
- (e) The procedure for the review process of a site specific development plan is the same as that required to submit a preliminary plat as set forth in section 5-5-4(e).
- (f) The Board of Zoning Appeals has no authority to grant a vested right and no such right shall accrue as a result of its actions.
- (g) Variances or special exceptions do not create vested rights.
- (h) A phased development plan is not eligible for vesting.

Sec. 5-5-14. - Penalties.

Any violation of the provisions of this chapter shall be a misdemeanor, punishable pursuant to section 1-3-66; and in addition, any City official is hereby authorized and empowered to enforce these regulations pursuant to the remedies set forth in section 5-4-7.

Planning Commission Action Items:

Require owners building within 150 feet of a gravity sewer line to tie into the sewer system

Reduce floor to area ratio (FAR) from 40% to 30% for new houses tying into a septic system

Reduce lot coverage from 40% to 30% for new houses tying into a septic system

TITLE 5 – PLANNING AND DEVELOPMENT

CHAPTER 4. - ZONING

Sec. 5-4-2. - Definitions.

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

- (1) *Accessory building or use* means a use or building customarily incidental, subordinate to, and detached from the principal use or building and located on the same lot with such principal use or building.
- (2) *Adjoining property* means any piece, parcel or lot of real property abutting any other real property, including real property located directly across streets, watercourses, drainage easements or other rights-of-way from other real property.
- (3) *Adult uses* means sexually oriented businesses which are characterized by the exposure, depiction, or description of specified anatomical areas, or specified sexual activities by any method, manner, or device, including but not limited to the following:
 - (a) Regularly featuring persons who are nude, whether live, in films, motion pictures, videos, slides, or other photographic reproductions;
 - (b) Distribution of any one (1) or more of the following: books, magazines, periodicals, printed matter, photographs, films, motion pictures, videocassettes, video reproductions, slides, or other visual representations; or instruments, devices, or paraphernalia which are designed for use in connection with specified sexual activities, as defined herein; or
 - (c) Escort services, baths, saunas, steam baths, hydrotherapy, physical cultures, nude model studios, sexual activities or other similar services.

Specified anatomical areas means the male genitals in a state of sexual arousal and/or the vulva or more intimate parts of the female genitals.

Specified sexual activities means and includes the fondling or other erotic touching of human genitals, pubic area, buttocks, anus, or breasts; sexual acts, normal or perverted, actual or simulated, including intercourse, oral copulation, sodomy, masturbation, actual or simulated; or excretory functions as part of or in connection with any of the foregoing acts.

~~(4)~~ (4) *Antenna* means a device, dish or array utilized by commercial, governmental, or other public or quasi-public users to transmit or receive telecommunications signals.

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~~(5)~~ (5) *Building line or setback* means a line which represents the minimum distance, when measured at right angles, which a building or structure must be placed from a lot line or a street right-of-way pursuant to this chapter.

~~(6)~~ (6) *Charter boat* means watercraft for hire where captain or crew is provided.

~~(7)~~ (7) *Communication tower* means a structure of any type which supports communication equipment for signal transmission or reception, and is utilized by commercial, governmental, or other public or quasi-public users, but excluding communication towers used exclusively by amateur radio operators who are duly licensed by the Federal Communications Commission and which are exempt from municipal zoning regulations.

~~(8)~~ (8) *Conditional use* means a use permitted in a zoning district only by complying with additional conditions, restrictions or limitations as set forth in the description of such use.

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(99) *Diameter at breast height (DBH)* means the diameter of a tree trunk, measured in inches, at four and one-half feet (4½') above the existing grade of the property. If a tree has a multi-trunk split above grade, the DBH is deemed to be the sum of all trunks of the tree measured in inches, at four and one-half feet (4½') above the existing grade of the property.

(4010) *Drinking place* means a business primarily engaged in the sale of alcoholic beverages, beer or wine, for on-premises consumption.

(4411) *Dwelling* means a building or portion of a building used, arranged or designed to provide private human residential occupancy, excluding mobile homes and manufactured homes.

- a. *Dwelling, single-family*, means a detached dwelling designed for or occupied exclusively by one (1) family unit, and containing only one (1) kitchen.
- b. *Dwelling, two-family*, means a detached or semi-detached building designed for or occupied exclusively by two (2) family units living independently of each other.
- c. *Dwelling, group*, means a building or portion of a building occupied or intended for occupancy by several family units, but in which separate cooking facilities are not provided. The term "group dwelling" includes roominghouses, fraternity houses and sorority houses, but excludes hotels, motels or tourist homes.
- d. *Dwelling, multifamily, apartment house or residential condominium*, means a dwelling other than a single-family dwelling, two-family dwelling, or group dwelling.

(4212) *Eating place, fast food*, means a business primarily engaged in the sale of ready-to-consume food or beverages for on or off-premises consumption. An eating place or restaurant shall be deemed a fast food eating place if:

- (1) It has a seating capacity of less than twenty (20) persons for service of meals;
- (2) Most food items are already prepared or packaged before the customer places an order; and
- (3) Food and beverages are served primarily with disposable containers and tableware.

The term "fast food eating place" excludes retail grocery stores, convenience stores, delicatessens, or other businesses selling food or beverages as an accessory use or for off-premises preparation and consumption.

(4313) *Eating place, restaurant*, means a business primarily engaged in the preparation and sale of food to customers for on-premises consumption and having seating capacity for at least twenty (20) persons, including, but not limited to, cafes, lunch counters, cafeterias, eating and drinking establishments, or similar businesses, but excludes a fast food eating place or a drinking place. Any carryout service must be clearly subordinate to the principal business of serving prepared foods for on-premises consumption.

(14) *Engineered on-site wastewater disposal system* means a specialized on-site wastewater disposal system. See definition for, *Specialized on-site wastewater disposal system*.

(4415) *Family unit* means one (1) person, or two (2) or more persons related by blood or marriage living together; or a group of not more than four persons, not related by blood or marriage but living together.

(4516) *Fence* means any manmade barrier that impedes or blocks free passage of humans or animals. It may or may not block line-of-sight vision or free flow of wind or water.

(4617) *Floor area ratio (FAR)* means a percentage calculated by dividing the total livable floor area of a structure on a lot by the total area of contiguous high land of such lot.

(4718) *Front yard* means an open area between the front of the building and the front lot line.

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(1819A) *Frontage* means all of the property fronting on one (1) side of the street between intersecting or intercepting streets, or between a street and a right-of-way, waterway, end of a dead-end street, or political subdivision boundary, measured along the street line.

(20) *Grinder pump system* means a wastewater pump station with pump(s), storage capacity and appurtenant piping, valves and other mechanical and electrical equipment which grinds or reduces the particle size of wastewater solids to yield a sewage slurry and which conveys the wastewater from its source to connect with the public gravity sewer system.

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(18B21) *Hazardous tree* means any tree that is causing structural damage or poses a clear and imminent threat of structural damage, as determined in writing by a certified arborist, to an enclosed area of a primary building, including porches, or any other permanent accessory structure that would require a building permit, or a septic tank system. The term does not include trees causing structural damage or threatening structural damage to accessory structures that would not require a building permit or to any unenclosed areas of primary buildings.

(1922) *Height of a structure* means the vertical distance from either the highest elevation of the road centerline immediately adjacent to the lot on which the structure is located, or the lowest area within the building footprint, proposed or existing, of an unaltered/unfilled lot, whichever is higher, to the highest point on the structure. Except for height limitations of communication towers and antennae contained in this chapter, the zoning district height limitations contained in this chapter shall not apply to church spires, chimneys, antennas, communication towers or aials.

(2023) *Historic tree* means any live oak tree (*Quercus virginiana*) having a diameter at breast height (DBH) of sixteen (16) inches or greater or any tree of any other species having a diameter at breast height (DBH) of twenty-four (24) inches or greater.

(2124) *Home occupation* means a use customarily conducted in a dwelling and which is conducted entirely inside the primary residence of the principal owner of the business, and does not constitute a nuisance or otherwise adversely affect the use and development of other property in the neighborhood.

(2225) *Hotel* means a building, or portions thereof, which contains multiple units intended to provide sleeping accommodations for transient guests. The term "hotel" also includes motel, tourist home, motor lodge, inn, bed and breakfast, tourist court and auto court. The following criteria shall be used to distinguish between a hotel and a multifamily dwelling:

- a. If any units have individual kitchen facilities, the building is deemed to be a multifamily dwelling.
- b. Temporary habitation by transient guests normally involves durations of less than ninety (90) days. If a majority of the facility's occupants reside for more than ninety (90) consecutive days, the facility is deemed to be a multifamily dwelling.

(2326) *Impervious material* means any material through which water cannot penetrate. Such material includes, but is not limited to, principal or accessory structures, porches and decks, either covered or of tongue and groove construction, concrete, asphalt, or similar substances, but excludes gravel, shell or crushed stone.

(27) *Isle of Palms Water and Sewer Commission* means the Commissioners of Public Works of the City of Isle of Palms. *Isle of Palms Water and Sewer Commission* is the trade name used by the Commissioners of Public Works of the City of Isle of Palms organized pursuant to Section 5-31-210 of the Code of Laws of the State of South Carolina.

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(2428) *Junkyards* or *salvage yards* means the use of any property for the storage, keeping, abandonment, sale or resale of junk, salvage, waste or scrap materials; or the dismantling, demolition or abandonment of vehicles, machinery, equipment or any parts thereof.

(2529) *Lot* means a parcel of land described by metes and bounds at the County RMC Office, and having a County Tax Map System (TMS) number assigned to it.

(2630) *Lot coverage* means the percentage of contiguous high land on a lot that can be covered with impervious material.

(2731) *Lot, double frontage*, means a lot having a frontage on two (2) streets, other than at their intersection, as distinguished from a corner lot.

(2832) *Mobile home* means a manufactured home as defined by State law.

(2933) *Natural grade* means the elevation of the undisturbed natural surface of the property.

(3034) *Nonconforming lot, structure, or use* means a lot, structure or use which does not comply with the regulations of the zoning district in which it is located.

(3135) *OCRM* means the State Office of Ocean and Coastal Resource Management, or its successor.

(36) *On-site wastewater disposal system* means a traditional septic tank system or other on-site wastewater disposal system. This definition also includes engineered or specialized on-site wastewater disposal systems.

(3237) *Public sewer line* means a gravity operated sewer line operated and maintained by the Isle of Palms Water and Sewer Commission.

(38) *Public sewer system* means the gravity sewer system operated and maintained by the Isle of Palms Water and Sewer Commission for the disposal of wastewater. This definition does not include on-site wastewater disposal systems or grinder pump systems.

(39) *Rear yard* means an open area, excluding accessory buildings, between the rear line of the building and the rear lot line.

(33A40) *Removal of a tree* means any intentional or negligent act which:

- a. Cuts down or otherwise destroys or removes a tree;
- b. Causes a tree to decline and die, including, but not limited to:
 1. Damage inflicted upon the root system of a tree by the application of toxic substances, the operation of machinery, the change of natural grade by excavation or filling above the root system or around the tree trunk;
 2. Damage from injury or fire which results in pest infestation;
 3. Damage resulting from the attachment or use of ropes, wires or other similar devices; or
 4. Damage resulting from improper pruning or trimming; or
- c. Subdivides property in such a manner that a tree is at or near the center of a lot or in a location on the lot that requires the removal of the tree for construction of a dwelling unit or other structure.
- d. The term does not include removing palm trees when the palm trees are transplanted or replaced in compliance with section 5-4-66.

(33B)(41) *Septic tank system* means an on-site wastewater treatment system consisting of an underground tank, distribution box and drain field.

(42) *Significant tree* means any live oak tree (*Quercus virginiana*) having a diameter at breast height (DBH) of eight (8) inches to sixteen (16) inches or any tree of any other species having a diameter at breast height (DBH) of eight (8) inches to twenty-four (24) inches.

(3443) *Side yard* means an open area between the building and the side lot line. Any lot line which is not a rear lot line or a front lot line shall be deemed to be a side lot line.

(44) *Specialized on-site wastewater disposal system* (also known as *Engineered on-site wastewater disposal system*) means an on-site wastewater disposal system that has been designed by a

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Registered Professional Engineer licensed in the State of South Carolina. Such systems may be utilized in lieu of traditional septic tank systems when the required engineering design and certification have been approved by the South Carolina Department of Health and Environmental Control (SCDHEC).

(3545) *Street line* means a line separating the street or other right-of-way from a lot.

(3646) *Structure* means anything constructed or erected which requires a fixed location on the ground, or which is attached to something having a fixed location on the ground, including but not limited to buildings, dwellings, mobile homes, fixtures, towers, signs, billboards, backstops for athletic activities, swimming pools, walls and fences. The term "structure" shall be construed to include any part thereof.

(3747) *Trailer* means any vehicle or structure capable of moving, or being moved, over streets and highways on its own wheels or on flatbeds or other carriers, which is designed or utilized to:

- (i) Provide temporary or permanent quarters for the conduct of a business, profession, trade or occupation;
- (ii) Serve as a carrier of new or used goods, products or equipment; or
- (iii) Be used as a selling, advertising or display device.

(3848) *Travel trailer* means a portable vehicular structure designed and primarily intended by its manufacturer as a temporary dwelling for recreational and vacation uses.

(3949) *Tree* means any woody plant which has a diameter breast height (DBH) of at least eight inches (8"), including palm trees, but excluding pine trees and any tree identified as an invasive pest species in "Invasive Plant Pest Species of South Carolina," published by Clemson Extension.

(4050) *Tree protection zone* means a circular area surrounding the base of a tree having a diameter equal to one foot (1') for each inch of DBH.

(51) *Wastewater* means sewage or a combination of water-carried wastes from residences and business buildings together with such ground, surface and stormwaters as may be present.

Sec. 5-4-12. - Additional regulations.

The following additional regulations shall apply to all zoning districts:

- (a) No land or building shall hereafter be used or occupied and no building or part thereof shall be constructed, erected, altered, or moved unless done in compliance with all applicable provisions of this chapter. Any use of land or buildings which is not allowed as a permitted use, conditional use, or special exception in the applicable zoning district is strictly prohibited.
- (b) The height of a building or structure shall not exceed forty feet (40'), unless otherwise provided in this chapter.
- (c) No lot shall be reduced to a size which does not meet the minimum lot area, lot width, yard areas, or other requirements of the applicable zoning district.
- (d) Except as provided in sections 5-4-45 and 5-4-46, no buildings shall be erected, altered or moved to create smaller front yards, side yards, rear yards or other open spaces than are required by the applicable zoning district.

(e) All new construction or substantial improvements, as those terms are defined in section 5-4-155, shall be connected to a the public sewer system, if a public sewer line abuts a property or could abut a property with an extension of the sewer line of comes within one hundred fifty (150') feet or less of a property, as determined by the Isle of Palms Water and Sewer Commission. Where a gravity operated gravity operated public sewer line is not accessible from a right-of-way or easement abutting the lot does not abut a property or would require an extension of the sewer line of more than come within one hundred fifty (150') feet to reach of a property, all new construction or substantial improvements must have the an on-site wastewater treatmentwastewater disposal

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system or grinder pump system constructed or brought into compliance with current South Carolina Department of Health and Environmental Control (SCDHEC) standards. ~~Provided, provided, however, that if that this subsection shall not apply where a building is located on a lot which does not have a gravity operated sewer line accessible from a right-of-way or easement abutting the lot and which the lot property cannot meet current SCDHEC on-site wastewater treatment wastewater disposal system or grinder pump system standards, so long as the building on such lot property is shall not be increased in size and the improvements de shall not increase the number of bedrooms or bathrooms.~~

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~~where a gravity operated sewer line is accessible from a right-of-way or easement abutting the lot; or w~~

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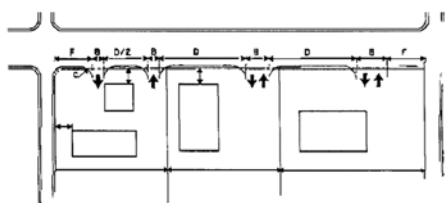
- (f) Sills, belt course, window air conditioning units, chimneys and cornices may project into a required yard by not more than two feet (2'). Steps may project into a required front yard or rear yard by not more than five feet (5').
- (g) The zoning district front yard setback requirements for dwellings shall not apply to any lot where the average setback of existing buildings located within one hundred feet (100') of each side of the dwelling within the same block and fronting on the same street is less than the required front yard setback. In such case the average setback on such lot shall not be less than the average setback of the existing buildings.
- (h) Where a lot abuts on two (2) streets (either a corner lot or a double frontage lot), the lot's front yard setback requirements must be met on both street sides and the lot's side yard setback requirements must be met on all other sides of the lot.
- (i) Where a lot abuts on two (2) streets or rights-of-way (either a corner lot or a double frontage lot), no accessory building shall be located closer to a street than the lot's front yard setback requirements.
- (j) No fence, wall, shrubbery, or other structure shall obstruct road traffic vision.
- (k) Every building hereinafter erected or moved shall be on a lot abutting a public street, or having legal access to an approved private street. All structures shall be located to allow for safe and convenient access for servicing, fire protection, and off-street parking.
- (l) All lots shall be located on a street having a minimum right-of-way of fifty feet (50'). The required fifty feet (50') shall not include any critical area as defined in section 5-4-15(A).
- (m) Except as allowed in section 5-4-113(g), no access drive shall be permitted which would require a reduction in existing on-street public parking or loading areas.
- (n) Except in residential and GC-2 zoning districts, access drives shall conform to the requirements set forth in the following table and figure 5-4-12-A:

Street Speed Limit (mph)	Maximum One-Way/Two-Way Drive Width (in feet)	Minimum Radius (in feet)	Minimum Spacing Between All Access Drives* (in feet)	Minimum Spacing Between All Drives and Intersections (in feet)
≤20	12/24	15	30	50
25	15/30	15	40	50
30	15/30	20	50	50

35	18/36	20	50	50
40	20/40	25	50	50

*The distance between abutting one-way access drives, with the inbound drive located upstream of the traffic flow from the outbound drive, can be one-half of the distance listed above.

Figure 5-4-12-A



B = Access Drive Width

C = Curb Radius

D = Access Drive Separation

E = Fifty (50) Foot Minimum Spacing From Right-of-Way

- (o) Access drives in the GC-2 zoning district authorized pursuant to section 5-4-113(g) must comply with the following requirements:
 - 1. There shall be only one (1) access drive per lot.
 - 2. An access drive shall not exceed twenty-four feet (24') in width.
 - 3. Prior to constructing an access drive from a State right-of-way, the owner of the property first must obtain an encroachment permit from the South Carolina Department of Transportation (SCDOT). All fees, costs and expenses for obtaining the permit and for construction of the access drive, arrangement for the sight distance requirement, and any other requirements of SCDOT shall be borne by the owner of the property.
 - 4. Prior to constructing an access drive from a City or County right-of-way, the owner of the property first must obtain an encroachment permit as set forth in title 3, chapter 1, article E. All fees, costs and expenses for construction of the access drive, compliance with the sight distance requirement, and any other requirements shall be borne by the owner of the property.
- (p) No lot shall be graded or filled to an elevation that results in a change to the existing stormwater runoff for such lot without the Zoning Administrator's prior approval of a stormwater management plan. The stormwater management plan shall include the stamp and signature of a duly licensed and qualified professional, all existing and proposed topographical features of the lot, and a

statement by the professional certifying that the filling or grading of the lot will not adversely impact the drainage of any adjacent properties, drainage systems or rights-of-way.

Sec. 5-4-13. - Maximum lot coverage; floor area ratio* requirements; additional setback requirements.

1. The following regulations shall apply to the SR-1, SR-2 and SR-3 zoning districts:

(a) Not more than forty percent (40%) of the area of a lot shall be covered by impervious material, provided that this requirement shall not limit lot coverage to less than three thousand two hundred (3,200) square feet nor allow lot coverage to exceed seven thousand (7,000) square feet. For lots with on-site wastewater disposal systems, this lot coverage requirement shall be reduced from forty (40%) percent to not more than thirty (30%) percent, provided that this requirement shall not limit lot coverage to less than two thousand four hundred (2,400) square feet nor allow lot coverage to exceed five thousand two hundred fifty (5,250) square feet.

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(b) The floor area ratio of a lot shall not be greater than forty percent (40%) of the area of a lot, provided that this requirement shall not limit the enclosed living space of a principal structure to less than three thousand two hundred (3,200) square feet nor allow such enclosed space to exceed seven thousand (7,000) square feet. For lots with on-site wastewater disposal systems, this floor area ratio shall be reduced from forty (40%) percent to not greater than thirty (30%) percent, provided that this requirement shall not limit the enclosed living space of a principal structure to less than two thousand four hundred (2,400) square feet nor allow the enclosed living space of a principal structure to exceed five thousand two hundred fifty (5,250) square feet.

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- (c) For lots larger than eight thousand (8,000) square feet, with a lot width at the front building line of seventy (70) feet or greater, the combined minimum side yard setback requirement for any portion of the enclosed building at or above twenty-five (25) feet in height as measured pursuant to section 5-4-2(18) shall be thirty (30) feet, with no side yard less than ten (10) feet.
- (d) For lots larger than eight thousand (8,000) square feet, with a lot width at the front building line of at least sixty (60) feet but less than seventy (70) feet, the combined minimum side yard setback requirement for any portion of the enclosed building at or above twenty-five (25) feet in height as measured pursuant to section 5-4-2(18) shall be twenty-five (25) feet, with no one side yard less than ten (10) feet.
2. This section does not prohibit a structure on any City-owned lot which is used for municipal purposes from exceeding seven thousand (7,000) square feet so long as the other requirements of this section which are not inconsistent with this subsection are met.

Action Item from Planning Commission:

Require properties that sell where gravity sewer available to tie into the sewer system

TITLE 6 – HEALTH AND SANITATION

CHAPTER 1 – GENERAL PROVISIONS

ARTICLE D. - REGULATION OF ~~NON-PUBLIC ON-SITE~~ **ON-SITE SEWAGE DISPOSAL WASTEWATER** DISPOSAL SYSTEMS

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Sec. 6-1-40. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Engineered on-site wastewater disposal system means a specialized on-site wastewater disposal system. See definition for Specialized on-site wastewater disposal system.

Grinder pump system means a wastewater pump station with pump(s), storage capacity and appurtenant piping, valves and other mechanical and electrical equipment which grinds or reduces the particle size of wastewater solids to yield a sewage slurry and which conveys the wastewater from its source to connect with the public gravity sewer system.

Immediate family member means a person's spouse, great-grandparents, grandparents, parents, legal guardian, brothers, sisters, children, grandchildren, great-grandchildren, mothers-in-law, fathers-in-law, sisters-in-law, brothers-in-law, daughters-in-law and sons-in-law.

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Isle of Palms Water and Sewer Commission means the Commissioners of Public Works of the City of Isle of Palms. Isle of Palms Water and Sewer Commission is the trade name used by the Commissioners of Public Works of the City of Isle of Palms organized pursuant to Section 5-31-210 of the Code of Laws of the State of South Carolina.

On-site wastewater disposal system means a traditional septic tank system or other on-site wastewater disposal system. This definition also includes engineered or specialized on-site wastewater disposal systems. ~~OSDS means any septic tank system or other on-site sewage disposal system.~~

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Public sewer line means a gravity operated sewer line operated and maintained by the Isle of Palms Water and Sewer Commission.

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Public sewer system means the gravity sewer system operated and maintained by the Isle of Palms Water and Sewer Commission for the disposal of wastewater. This definition does not include on-site wastewater disposal systems or grinder pump systems.

Septic tank system means an on-site wastewater treatment system consisting of an underground tank, distribution box and drain field.

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Specialized on-site wastewater disposal system (also known as Engineered on-site wastewater disposal system) means an on-site wastewater disposal system that has been designed by a Registered Professional Engineer licensed in the State of South Carolina. Such systems may be utilized in lieu of traditional septic tank systems when the required engineering design and certification have been approved by the South Carolina Department of Health and Environmental Control (SCDHEC).

Wastewater means sewage or a combination of water-carried wastes from residences and business buildings together with such ground, surface and stormwaters as may be present.

Sec. 6-1-41. - New installations.

Any new or replacement **OSDS on-site wastewater disposal system** installed within the City shall be required to include an access manhole built into the lid over each compartment of the tank, and over the

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Action Item from Planning Commission:

Require properties that sell where gravity sewer available to tie into the sewer system

outlet end of the septic tank. An appropriate mechanism shall be provided to make the access manholes vandal-, tamper-, and child-resistant.

Sec. 6-1-42. - Mandatory connection to public sewer system upon sale or transfer of property.

At such time as a public sewer line becomes available to a property serviced by an existing on-site wastewater disposal system or grinder pump system, such property shall be connected to the City's public sewer system when the property is sold or otherwise transferred to a new owner; provided, however, that this provision shall not apply to the transfer of property to an immediate family member or by inheritance. Any existing on-site wastewater disposal system or grinder pump system shall be emptied, disposed of, and filled with suitable material in accordance with all applicable local and state regulations. All expenses associated with the mandatory public sewer connection shall be paid by the buyer or transferee of the property. A public sewer line shall be considered available to a property when it is located in a right-of-way or easement abutting any lot line of the property.

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~~Sec. 6-1-42. - Reserved.~~

Sec. 6-1-43. - Reserved.

Sec. 6-1-44. - Violations; penalties.

A violation of this article is a misdemeanor punishable pursuant to section 1-3-66. Each day that a violation continues shall constitute a separate offense.

STATE OF SOUTH CAROLINA	)	AN ORDINANCE TO AMEND CHAPTER 150,
	)	BUILDING REGULATIONS, BY ADDING A
	)	NEW SECTION ESTABLISHING NEW
	)	PROCEDURES AND GUIDELINES ENSURING
	)	THE PROTECTION OF PROPERTY FROM
	)	UNMANAGED STORMWATER AND
	)	CONSTRUCTION SITE SEDIMENT WHILE
	)	MINIMIZING IMPACTS TO EXISTING TREES
COUNTY OF CHARLESTON	)	AND BUFFERS. NEW GUIDELINES SHALL
	)	APPLY TO ALL PROPERTIES IN THE TOWN
	)	OF MOUNT PLEASANT ON WHICH A SINGLE
	)	FAMILY DETACHED RESIDENCE IS A
	)	PERMITTED USE. ALSO PROPOSED IS
	)	AN AMENDMENT TO CHAPTER 153,
	)	STORMWATER MANAGEMENT AND WATER
	)	QUALITY, BY INCREASING THE SINGLE
	)	FAMILY RESIDENTIAL NATIONAL
TOWN OF MOUNT PLEASANT	)	POLLUTANT DISCHARGE ELIMINATION
	)	SYSTEM (NPDES) FEE FROM \$25 TO \$225

WHEREAS, Mount Pleasant Ordinances for code sections referenced herein were adopted June 24, 1974 and August 14, 2007 (Ord. 07045), and the same have been amended on more than one occasion; and

WHEREAS, Mount Pleasant Town Council now desires to amend Chapter 150, Building Regulations, and Chapter 153, Stormwater Management and Water Quality, of the Mount Pleasant Code of Ordinances by creating a new section in Chapter 150 establishing new procedures and guidelines ensuring the protection of property from unmanaged stormwater and construction site sediment while minimizing impacts to existing trees and buffers. These new guidelines shall apply to all properties in the Town of Mount Pleasant on which a single family detached residence is a permitted use. Also proposed is an amendment to Chapter 153 to increase the single family residential National Pollutant Discharge Elimination System (NPDES) Fee from \$25 to \$225; and

WHEREAS, the Mount Pleasant Planning Commission held a public hearing on November 14, 2018, to consider the amendment herein to the Mount Pleasant Code of Ordinances; and

WHEREAS, Mount Pleasant Town Council is empowered with the authority to make amendments to the Mount Pleasant Code of Ordinances, and now believes that it is in the best interest of the Town to so act with respect to the matter described herein.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Councilmembers of the Municipality of Mount Pleasant, in Council assembled, that Chapter 150, Building Regulations, and Chapter 153, Stormwater Management and Water Quality, *shall be and is hereby amended*, by adding a new section in Chapter 150 establishing new procedures and guidelines ensuring the protection of property from unmanaged stormwater and construction site sediment while minimizing impacts to existing trees and buffers. These new guidelines shall apply to all properties in the Town of Mount Pleasant on which a single family detached residence is a permitted use. Also proposed is an amendment to Chapter 153, increasing the single family residential National Pollutant Discharge Elimination System (NPDES) Fee from \$25 to \$225, as specifically detailed in Exhibit A attached hereto.

THIS ORDINANCE SHALL BE EFFECTIVE MARCH 1, 2019, UPON FINAL READING.

SIGNED, SEALED AND DELIVERED THIS 9 DAY OF January, 2019.



J.W. Haynie, Mayor
Town of Mount Pleasant

Attest:

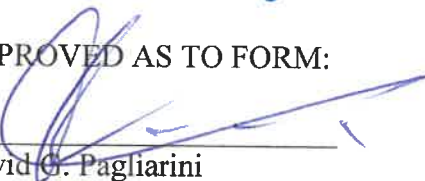


Christine Barrett
Clerk of Council

January 9, 2018
Mount Pleasant, SC

Introduced: December 11, 2018
Final Reading: January 8, 2019

APPROVED AS TO FORM:


David G. Pagliarini
Corporation Counsel

Single Family
Stormwater Management
And
Tree Preservation Program



November 14, 2018

Planning Director Initials



Single Family Stormwater Management and Tree Preservation Program

Introduction:

The Single Family Residential Stormwater Management and Tree Preservation Program will set forth standards by which the Town, citizens and homebuilders may use as a means to administer, regulate and manage construction of single family lots, while preserving existing trees and buffers. Tree preservation is accepted and recognized as a natural resource to sustaining property values, by maintaining the historical character, and protecting the significant benefits to the environment through wildlife habitats, energy preservation, air quality, and the promotion of higher infiltration rates through tree/groundwater transpiration.

This program will utilize a new a strategic plan of action that will not only give contractors guidelines to more accurately navigate the building process but instruct in ways to build more responsibly. The scope of this permit has two purposes: (1) To establish procedures that residents can use to proceed with their site improvements that resolves stormwater runoff and tree impacts concurrently; and (2) To unify land altering site improvements while minimizing tree and buffer impacts. The goal is to enhance contractors and homeowners knowledge and give priority to the preservation of trees and buffers during the construction process.

Ordinance:

Chapter 150.020: Building Regulations

150.020: Single Family Stormwater Management and Tree Preservation Ordinance

Contractors and residents who plan to proceed with clearing and grading activities that disturb or alter land on a single family parcel must have a stormwater management and tree preservation permit prior to the release of any building permit. Such permit will be issued only after a suitable plan is approved and installed in accordance with such plan.

150.021: Purpose and Intent

The intent of this permit is to minimize tree and stormwater impacts due to construction on single family lots. These requirements insure the protection of neighboring properties from unmanaged stormwater and construction site sediment while minimizing impacts to existing trees and buffers.

It shall be the responsibility of each property owner to undertake land development activity in a way that does not diffuse or cast concentrated runoff in a direction that will cause adverse impacts onto lower elevated property and to alter land in such a way that will not displace, deflect, obstruct or impede stormwater from higher elevated property.



Single Family Stormwater Management and Tree Preservation Program

The owner or representative shall use good construction methods by implementing all means necessary to remain in compliance. The Town review procedure is not to be used for design purposes, but to ensure the applicant is fully aware of their responsibility to make use of proper stormwater management techniques and the latest best management practices prior to undertaking land development activity. However, additional improvements may be required throughout the implementation process if deemed necessary following field inspection.

150.022: Administration

The Building Inspection Division shall administer this ordinance through plan reviews and enforcement of standards that are practical and reasonable for achieving the objectives of the Town. It shall not be administered in such a way to hinder or infringe on the development property rights of citizens, but to insure site improvements proceed in a manner that protects surrounding property from flood damage and prevents the unnecessary removal of buffers and trees. Therefore, this ordinance allows each property owner the ability to responsibly remove trees, alter land, and expand development on their property while effectively managing all stormwater runoff discharging from the project boundaries. The applicant shall demonstrate compliance by submission of a stormwater management plan and tree survey depicting existing and proposed site improvements. It shall conform to the natural water course of the surrounding area or with the proposed final grades of the larger common plan for the subdivision, if applicable. Issuance of a Site Improvement Permit does not constitute a Building Permit, nor does it authorize vertical construction. It shall only authorize stormwater related site improvements. The permit may be administered independently or concurrently with a building permit submittal.

150.023: Standards

A. It shall be unlawful to undertake activity resulting in discharge flowrates that exceed the capacity of the receiving drainage system, or to impede the natural flow traversing the land to where the action causes water levels to increase on property.

B. A Site Improvement Permit is required before land clearing or land disturbance on any residential property. Authorization of this permit shall confirm the applicant's plan is in compliance with the minimum standards and is authorized to commence proposed site improvements.

C. All work shall comply with the applicable ordinance regulation in Chapter 155 and 156 as it relates to the following:

1. Tree Protection Zones and buffers shall be protected from grading or clearing activity, other than hand-clearing.
2. Site improvements plans shall be legible and clearly demonstrate the applicant has used good judgment and is proposing adequate provisions to implement safeguards to avoid negatively impacting surrounding property.



Single Family Stormwater Management and Tree Preservation Program

3. Erosion control devices and existing storm drainage infrastructure shall be routinely inspected by the applicant to ensure it remains in proper working order.
 4. As-built surveys may be required when deemed necessary by the Town Plans Examiner. In such cases, final grade elevations are to be provided for swales, embankments, dry ponds, pipes, surface improvements such as driveways, and fill.
- D. Buffers encroachments shall be pre-approved by Zoning Administrator or his designee.
- E. Building Permits shall not be released until an acceptable site inspection has been completed by the Land Development Code Inspector.
- F. Site Improvement Permits shall remain valid for 24 months from the date of approval. Approval date is the date the final field inspection is completed and approved.
- G. Any work-related activity undertaken by a licensed contractor must be permitted under this ordinance.
- H. The Permit Application found online at the official Town website must be properly completed and submitted.
- I. A copy of the Site Improvement Permit is to be placed on-site and easily retrieved by an inspector at all times.

150.024: Submittal Requirements

- A. The application provided on the official Town website will be submitted to the Town along with a scaled plan depicting details of existing and proposed activity.
- B. The following will be required. Further information may be requested at the discretion of the Town Plans Examiner.
1. Stormwater Management/Tree Preservation Application
 2. Certificate of Compliance
 3. NPDES Fee Chapter 153.100
 4. One Site Plan to include the following at an appropriate scale:
 - a. Existing grade single-point elevations, and single-point proposed elevations; topographic contours at one-foot intervals shall be acceptable.
 - b. Building Footprint
 - c. Drainage arrows demonstrating intended flow direction, indicate swale low points and high points
 - d. Indicate points of concentrated stormwater discharge, such as roof gutter downspouts. These points of discharge shall not be closer than 10 feet from any common property line.
 - e. Significant Tree Survey with Protection Zones. Trees greater than or equal to 16 inches DBH. (As defined in Chapter 156.227)



Single Family Stormwater Management and Tree Preservation Program

- f. Special Buffers, where applicable, as defined in Chapter 156.201
- g. Building Setbacks. Refer to Chapter 156.106
- h. Impervious Surface Setback and OCRM DHEC Critical Line Buffer, where applicable
- i. Existing Structures including pools, patios, driveways, sidewalks, significant landscape features
- j. All Easements, and utility structures

150.025: Procedures

1. Contractor shall submit the application by uploading the Single Family Site Improvement Permit application with a plan to the Town Building Inspections Division. See submittal requirements under section 150.024.
2. Town staff shall conduct an internal review and site investigation. Following approval of the plan, the permit will be released. Following, the installation of protective provisions such as tree barricades, silt fence, and other applicable best management practices are to be installed.
3. Contractor is authorized to commence site improvements once protective measures are in place and a pre-Building Permit inspection is scheduled.
4. Town staff shall conduct an onsite Site Improvement Inspection. Applicant shall be notified and have the opportunity to be present.
5. Once Site Improvement Inspection is approved, contractor shall be eligible for release of building permit.

150.999: Penalty (no change)

Whoever violates any provision of this chapter for which no penalty is otherwise provided, shall be fined not more than \$500 or imprisoned for not more than 30 days. However, no penalty shall exceed the penalty provided by state law for similar offenses. A separate offense shall be deemed committed on each day that a violation occurs or continues.

('81 Code, § 150.99)

§ 153.100 CHARGES AND FEES.

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(A) *Stormwater quality fee.* In addition to all other charges, fees, and penalties, the town shall have the right to develop and impose a stormwater quality fee to fund implementation of these stormwater management and water quality regulations, and associated programs and plans. This fee is established by Town Council as \$100 per disturbed acre, with a maximum of \$2,000.

(B) *Drainage inspection fee.* The inspection fee for drainage systems is based upon per linear foot of roadway as determined by Town Council.

(C) *NPDES inspection fee.* The inspection fee for town NPDES site inspections shall be as follows:

(1) *For single-family residences or sites of less than one acre.*

(a) The fee will be payable prior to the issuance of the building permit, with the submittal of a signed certificate of compliance, as provided in [Chapter 155, Appendix B](#), § 13.

(b) The Town Council establishes a fee of ~~\$25~~\$225 for sites of less than one acre.

(2) *For large residential and commercial developments that disturb one acre or greater.*

(a) The fee will be payable prior to the issuance of a clearing and grading permit.

(b) This fee is established by Town Council, based upon the area of disturbed land as:

1. 1-5 acres \$100;
2. 5-10 acres \$200;
3. 10+ acres \$400.

(D) *Reinspection fee.* A reinspection fee of \$100 shall be charged for any additional inspection required after the initial inspection of site work.

(E) *Stop work fee.*

(1) An administrative fee of \$200 shall be charged for the inspections and management associated with any stop work order issued.

(2) The fee will be payable to the Public Services Department prior to recommencement of work.

(Ord. 07045, passed 8-14-07; Am. Ord. 13027, passed 6-11-13)

Builder's Guide for Stormwater Management in the Old Village Area



November 2017

15th

11/15



Contents

Introduction:.....	1
Purpose and Intent:.....	1
Submittal Requirements:.....	2
Definitions:	2
Basic Rules of Stormwater Management:.....	2
Description of Existing Conditions:.....	3
Categories and Standards for Proposed Conditions:.....	3
Existing Lot Drainage Scenarios:	5
Executive Summary:.....	10

Appendices:

Appendix A - Typical Lot Improvement Plans

Appendix B - Design Tailwater Explanation and Tidal Information

Introduction:

The Old Village area of Mount Pleasant was developed during an era when stormwater was considered a nuisance to be cast away from the home and many local residents accepted periodic flooding as natural occurrences due to the low-lying area. Development and redevelopment continued to follow the same standard approach of ridding the lot of runoff to the closest or most available outlet. It was not until the late 1990s that the Town of Mount Pleasant undertook a major stormwater drainage project to relieve some of the flood-prone areas through the use of a permanent pump station located at Edwards Park. Up until this time, flooding was managed with minor upgrades to the existing drainage network, mobilizing pumps, and through natural infiltration. Throughout the history of the Old Village area, the storm drainage system evolved incrementally in a piecemeal fashion with no overall stormwater management plan to direct new development and redevelopment and manage the additional runoff it produced.

Most of the platted lots in this portion of the Town were created in the 1770s, predating the formation of the Town as we know it now. The lots were recorded prior to local and state agencies formalizing many of the stormwater management regulations that are now in place. As a result, the neighborhood design did not take into account the natural topographic, geographic, and drainage conditions affecting each lot.

The overall cumulative effect of trends in residential development in the Old Village area has vastly exceeded the capacity of the existing infrastructure and infiltration rates of the soil. Flooding has been at the forefront of problems in the community impacting the quality of life for citizens residing in the area. The recently released Old Village Drainage Study identified inadequacies and deficiencies in the existing infrastructure and determined that, in most cases, the system cannot accept additional increases in peak flow rates and additional volume. In response, the Town produced a stormwater management guide for home builders to assist in the proper and orderly management of stormwater runoff.

Purpose and Intent:

The purpose of this Builder's Guide is to provide homeowners, engineers, builders, contractors and the Town staff guidance in designing, building and permitting site improvements on residential lots specifically in the Old Village area. This guide applies to any single-family home project that will increase impervious surfaces or undergoes grade altering activities. This would include, but not be limited to, demolition and reconstruction of a larger home, addition of accessory dwelling units (ADUs), new swimming pool decks, driveways, paved patios, and detached garages. It shall be utilized by Town staff in the review of any building permits to be issued. These guidelines may not address every unique development or re-development as it relates to land development, but it is intended to be used as a tool to maintain a level of consistency and fairness to those that wish to develop their property. Every citizen has a right to develop and make improvements to their property. However, such development/improvements should be conducted in a manner to protect property rights of others and to maintain the highest quality of life possible for each citizen in the Town.

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Submittal Requirements:

Every application in the Old Village which includes new impervious surfaces related to home site development, re-development or the addition of impervious area that require conditional use permits, site development permits, design reviews, or building permits will need to utilize this Builder's Guide in addressing stormwater runoff for the site.

Definitions:

Berm: A raised bank or mound designed to direct or contain stormwater runoff on the property and not onto adjacent or downstream properties.

French Drain/Infiltration System: A trench filled with gravel or rock or containing a perforated pipe that redirects surface water and groundwater away from an area. Downspouts from roofs or other impervious areas can discharge into French drains for percolation and infiltration instead of direct runoff.

Impervious Surface: A monolithic surface made of non-porous material that prevents water from infiltrating through. Examples are a concrete or asphalt slab, driveway, sidewalk, patio, pool, rooftop, street, curbing and including elevated decks constructed not to allow water to pass through to the underlying soil. Any material is considered impervious when the Soil Conservation Service (SCS) Curve Number is equal to or greater than 90.

Pervious Surface: Surface or material that will allow water to pass through to the ground below. These include grassed/vegetated areas, pervious pavement/pavers, porous concrete, etc. A wood deck is considered a pervious surface.

Swales: Shallow, mildly sloped grass or pervious ditches designed to route concentrated runoff from impervious surfaces or steep slopes into grassed areas for sheet flow/infiltration or into a downstream drainage system.

Basic Rules of Stormwater Management:

When impervious surfaces are constructed in areas that were previously pervious it affects both the volume and rate of stormwater runoff in the vicinity. Best management practices (BMPs) are utilized in order to minimize the potential impact of increased stormwater runoff. There are multiple BMPs that can be incorporated to reduce the potential impact of development or re-development of single family home lots. These include the following:

- Reduction of impervious surfaces.
- Install detention areas to temporarily store runoff.
- Direct roof runoff into vegetated areas, pervious pavement or infiltration systems (i.e. Modified French drains).
- Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas/filter strips.
- Direct runoff from driveways and/or uncovered parking areas onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with pervious surfaces.
- Construct driveways, and/or uncovered parking areas with pervious surfaces.
- Utilize conservation landscaping with native plants.
- Construct swales/berms to store and contain runoff on site.
- Fit design layout to follow the natural contours of the site.

11/15

Two basic fundamental rules of stormwater management are to be followed when moving forward with your development/re-development plan. Property owners shall not impede the natural flow of runoff from their neighbors; and they shall not dispel their runoff in a manner that will impact their neighbors. The current standards set forth in our state law are for owners to be responsible for managing water naturally traversing their property and to take reasonable action to prevent their runoff from inundating or causing appreciable damage to downstream property when creating a drainage plan. Emphasis is to be placed on the current flow patterns and natural topography when there are questions of legal standing. Each situation is to be evaluated on its own uniqueness based upon reason, common sense, and good judgement.

The most effective method of reducing potential runoff impacts from site development/re-development is to preserve as much of the natural landscape/trees as possible, minimization of impervious surfaces and utilization of best management practices.

Description of Existing Conditions:

Prior to any development or re-development of home sites in the Old Village, existing site conditions and drainage patterns need to be established. Those existing conditions include:

1. The Finished Floor Elevation (FFE) of all habitable structures on the site.
2. Identification of all impervious surfaces (i.e. roof, pool decks, driveways, paved patios, detached garages, sheds, etc.)
3. Existing topography represented by survey spot elevations or contours, along with flow arrows representing the general flow-pattern of surrounding properties. All elevations are to be NAVD '88.
4. All drainage features, easements, low areas, pipes, inlets, ditches and swales.
5. All trees to be saved, identify size, species and protection zone (1 ft Diameter:1 inch DBH).
6. Sanitary sewer and water service locations.
7. All submitted drawings are to be to an engineering scale.

Categories and Standards for Proposed Conditions:

In order to minimize the burden and potential costs to homeowners in the Old Village, this Guide is structured to only require professional designer involvement on the projects with the most potential for stormwater runoff impacts. The Guide breaks down the necessary standards for the level of design to be performed into three (3) categories based on the existing conditions and the intensity of the development relating directly to stormwater runoff. The three (3) categories for proposed development or re-development on a single-family home parcel are as follows:

Category 1:

- a. Construction of a new home on an existing vacant lot.
- b. Complete house removal and redevelopment.

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Category 2:

- a. Construction of a secondary structure (i.e. an accessory dwelling unit).
- b. Major site impervious additions to include detached garages, paved patios, pool decks or significant increases in parking areas.

Category 3:

Minor additions such as driveways or improvements in the road right of way (i.e. side street parking).

For Category 1 projects, existing drainage patterns of either casting water or receiving water from the surrounding area(s) will need to be determined. In cases where the subject property is diffusing surface water, or it is topographically higher than the surrounding property, it may be unreasonable to increase additional water downstream where the basin is deemed to be closed (no outlet) and the additional water is contributing to an existing flooding problem. In an opposing scenario, a topographically lower elevation compared to surrounding elevations where surface water is being received without an outlet to manage flood water elevations, a detailed detention analysis shall be performed to ensure current conditions are not negatively changed.

For Category 1 projects, the drainage plan shall be stamped and signed by a registered professional engineer licensed in SC and who contains a corporate seal as proof of insurance. The engineer can use whatever methodology (i.e. rational method, SCS TR-55, etc.) that is deemed appropriate for the site considerations, but utilization of the selected methodology will need to be consistent for all calculations. Any hydraulic/hydrologic analysis will need to include the effects of the following:

1. Overall changes of impervious area(s).
2. Filling in of existing natural low or detention areas.
3. Change of pervious areas (i.e. wooded versus grass).

For Category 1 projects, the engineer should provide the following:

1. Show that concentrated stormwater discharge from a downspout, cistern, or any collection device shall be located a distance of no less than 10 feet from any common property line.
2. Proposed topography represented by, at a minimum, one (1) foot contours.
3. Flow direction arrows for roof drainage, high points, low points, inlet elevations, pipe invert elevations, road side swales, ditches and all proposed drainage features are to be clearly labeled as proposed with cross sections for swales, ditches and berms.
4. Existing and proposed spot elevations at all grade changes of proposed fill including toe and top of bank of proposed cut and fill.
5. The Finished Floor Elevation (FFE) of all habitable structures on the site.
6. Designation of all impervious surfaces (i.e. roof, pool decks, driveways, paved patios, detached garages, sheds, etc.).

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7. When additional runoff is to be received by an existing pipe network, hydraulic engineering calculations are required to demonstrate the inlet is not surcharged during a 10-year event and there is no adverse impact within the system. The system is to be analyzed to the ultimate outfall. A tailwater elevation at the critical area is to be a constant 5.5 feet NAVD 88. Appendix B explains the rationale for utilization of the tailwater elevation. All calculations are to be provided as a separate submittal. Supplemental information to be included: the pipe network, basin boundaries, runoff coefficient, and time of concentration. Results are to be in a pre-versus post format with high water warnings for inlets to demonstrate the system capacity has not been exceeded and detention is not necessary.
8. Whenever permanent detention is required on a site, then a deed restriction covenant will need to be recorded to ensure long-term maintenance.
9. Describe how it was determined that the drainage plan for the proposed site improvements will not adversely impact adjoining properties or create stormwater runoff impacts.
10. Any downstream analysis should begin at an existing inlet or junction box where the contributing drainage basin is five (5) acres or greater, or the lot size is 10% of the overall contributing basin.
11. The base flood elevation, if known, shall be stated on the plot plan, and shall be the elevation determined by FEMA or approved Town engineering studies. The Town Floodplain Manager will determine if such an elevation is currently available.
12. If the professional engineer determines that soil conditions may not be appropriate for infiltration practices or other BMPs on the site, then a geotechnical analysis may be necessary.
13. Proposed erosion and sediment control measures during construction, and proposed maintenance schedule for silt fences and other erosion control measures during construction.
14. In special cases, when fill is added to a site, an interim grading plan may be necessary during construction until the permanent proposed system is in place.

For categories 2 and 3 projects, the drainage plan will need only to show the areas of new impervious surfaces on the existing plat and a drainage plan showing how the runoff from the new impervious areas are to be routed/treated so as not to have any offsite impacts. This plan can be provided by the homeowner, builder or contractor. For Category 2 projects, when deemed necessary by the Town, if impacts to adjacent properties is a concern, a basin map comparison and supporting calculations shall be required to ensure the area draining to the adjacent property is not increasing as a result of the site improvement. In these cases, the drainage plan shall be stamped and signed by a registered professional engineer licensed in SC and who contains a corporate seal as proof of insurance.

LAND DEVELOPMENT PLAN #1

Category 1, Stormwater Scenario 1 – Major development (i.e. new house on vacant lot or complete tear down/rebuild), high lot, closed basin, inadequate outfall.

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The following will need to be included on a plan sheet for projects falling into the Land Development Plan #1 category:

1. Contributing basins are to be identified using an aerial image or topographic map. One can be provided by the Town.
2. Natural or existing flow patterns from the subject lot to the ultimate outfall.
3. The subject lot plan shall contain elevation spot grades or contours where applicable.

In addition, the Stormwater Management Plans will need to include the following:

- Existing topo and proposed new grades represented by either point survey readings or contours. Proposed elevations are to emulate the proposed site improvements.
- Grade shots on surrounding areas such as roadway edge of pavement, roadside swales, and along adjoining property lines.
- Identify points of discharge where surface water is leaving the property.
- Identify high points on the property where surface water flow direction changes.
- Perform 2 and 10-year discharge rates of flow for comparison.
- Identify existing side lot swales, permanent landscaping features, and trees to remain.
- If post flow rates exceed existing flow rates, either detention to reduce the rates to an existing flow prior to discharging from the property or a downstream analysis is required to demonstrate no adverse impact will result from the increased flow rate. Provide supporting calculations.

Supporting Calculations

1. Above or below ground detention is to be sized by routing the pre- and post-development hydrographs through a storage volume and a control structure to limit the peak discharge rates. 10-year, 24-hour rain events are to be used. Utilize a time of concentration of six (6) minutes.
2. Perform a hydraulic analysis for the 10-year, 24-hour rain event on the downstream system to demonstrate no surcharge is experienced at any inlet or junction box. Analysis is to be performed for the system downstream until the contributing basin becomes insignificant to the flows in the downstream system. Any downstream analysis should begin at an existing inlet or junction box where the contributing drainage basin is five (5) acres or greater, or the lot size is 10% of the overall contributing basin.
3. A system schematic including pipe inverts, pipe sizes, type of material, and basin maps shall be submitted for review. The hydraulic grade line for the 10-year, 24-hour storm event is to be shown on the pipe profile and on a table for comparison. Tailwater elevation is to be 5.5 feet NAVD 88.

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LAND DEVELOPMENT PLAN #2

Category 1, Stormwater Scenario 2 – Major development (i.e. new house on vacant lot or complete tear down/rebuild), low lot, closed basin, inadequate outfall.

The following will need to be included on a plan sheet for projects falling into the Land Development Plan #2 category:

1. Contributing basins are to be identified using an aerial image or topographic map. One can be provided by the Town.
2. Natural or existing flow patterns from the subject lot to the ultimate outfall.
3. The subject lot shall contain elevation spot grades or contours where applicable.

In addition, the Stormwater Management Plans will need to include the following:

Existing Conditions Plan

- Determine onsite detention volume – individual lot topography or grade elevations to identify the depth and area where surface water collects.
- Perform 2 and 10-year storm event stage elevation calculations.
- Perform 2 and 10-year discharge rate of flow for comparison.
- Existing trees, swales, and significant landscaping features.

Proposed Conditions Plan

- Lot tree and grading plan with existing and proposed contours. Identify high points and flow pattern for adjacent property.
- Provide detention area to equal existing condition if downstream system analysis is not performed.
- Perform 2 and 10-year storm event stage elevations for detention.
- Perform 2 and 10-year storm event discharge rates for flow comparison.
- An interim grading plan may be necessary if fill is proposed on the property.
- If detention is not included, provide supporting calculations as to why it is not necessary.

Supporting Calculations

1. Above or below ground detention is to be sized by routing the pre- and post-development hydrographs through a storage volume and a control structure to limit the peak discharge rates. 10-year, 24-hour rain events are to be used. Utilize a time of concentration of six (6) minutes.
2. Perform a hydraulic analysis for the 10-year, 24-hour rain event on the downstream system to demonstrate no surcharge is experienced at any inlet or junction box. Analysis is to be performed for the system downstream until the contributing basin becomes insignificant to the flows in the downstream system.

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Any downstream analysis should begin at an existing inlet or junction box where the contributing drainage basin is five (5) acres or greater, or the lot size is 10% of the overall contributing basin.

3. A system schematic including pipe inverts, pipe sizes, type of material, and basin maps shall be submitted for review. The hydraulic grade line for the 10-year, 24-hour storm event is to be shown on the pipe profile and on a table for comparison. Tailwater elevation is to be 5.5 feet NAVD 88.

LAND DEVELOPMENT PLAN #3

Category 2, Stormwater Scenario 1 – Additions, pools, decks and accessory structures, high lot, closed basin, inadequate outfall.

The following will need to be included on a plan sheet for projects falling into the Land Development Plan #3 category:

1. Contributing basins are to be identified using an aerial image or topographic map. One can be provided by the Town.
2. Natural or existing flow patterns from the subject lot to the point of discharge at the property line.
3. The subject lot shall contain elevation spot grades or contours where applicable.

In addition, the Stormwater Management Plans will need to include the following:

- Existing topo and proposed new grades represented by either point survey readings or contours. Proposed elevations are to emulate the proposed site improvements.
- Grade shots on surrounding areas such as roadway edge of pavement, roadside swales, and along adjoining property lines.
- Identify points of discharge where surface water is leaving the property.
- Identify high points on the property where surface water flow direction changes.
- Identify existing side lot swales, permanent landscaping features, and trees to remain.

If the Town deems it necessary, due to concerns that the proposed improvements could cause impacts to adjacent properties, then the following additional information will need to be provided:

- A basin map comparison to ensure the area draining to the adjacent property is not increasing as a result of the site improvement.
- Perform 2 and 10-year discharge rates of flow for comparison.
- If post flow rates exceed existing flow rates for the 10-year, 24-hour storm event, either detention to reduce the rates to an existing flow prior to discharging from the property or a downstream analysis is required to demonstrate no adverse impact is realized as a result of the increased flow rate and there is adequate downstream system capacity.

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LAND DEVELOPMENT PLAN #4

Category 2, Stormwater Scenario 2 – Additions, pools, decks and accessory structures, low lot, closed basin, inadequate outfall.

1. Contributing basins are to be identified using an aerial image or topographic map. One can be provided by the Town.
2. Natural or existing flow patterns from the subject lot to the point of discharge at the property line or closest drainage inlet.
3. The subject lot shall contain elevation spot grades or contours where applicable.

Existing Conditions

- Determine onsite detention volume – individual lot topography or grade elevations to identify the depth and area where surface water collects.
- Existing structures, impervious surfaces, trees, swales, and significant landscaping features.

Proposed Conditions

- Lot tree and grading plan with existing and proposed contours. Structures and impervious surfaces are to be shown. Proposed site improvement is to be highlighted. Identify high points on the site and flow patterns for adjacent properties.
- When filling, spot survey grade readings are to be provided on the adjacent properties. Surface flows from adjacent lots and roadways are to be represented and accounted for in the design. Provide detention area to equal existing condition if downstream system analysis is not performed. If equal detention is not provided, include supporting calculations to demonstrate why it is not necessary.

If the Town deems it necessary, due to concerns that the proposed improvements could cause impacts to adjacent properties, then the following additional information will need to be provided:

- A basin map comparison to ensure the area draining to the adjacent property is not increasing as a result of the site improvement.
- Perform 2 and 10-year discharge rates of flow for comparison.
- If post flow rates exceed existing flow rates for the 10-year, 24-hour storm event, either detention to reduce the rates to an existing flow prior to discharging from the property or a downstream analysis is required to demonstrate no adverse impact is realized as a result of the increased flow rate and there is adequate downstream system capacity.

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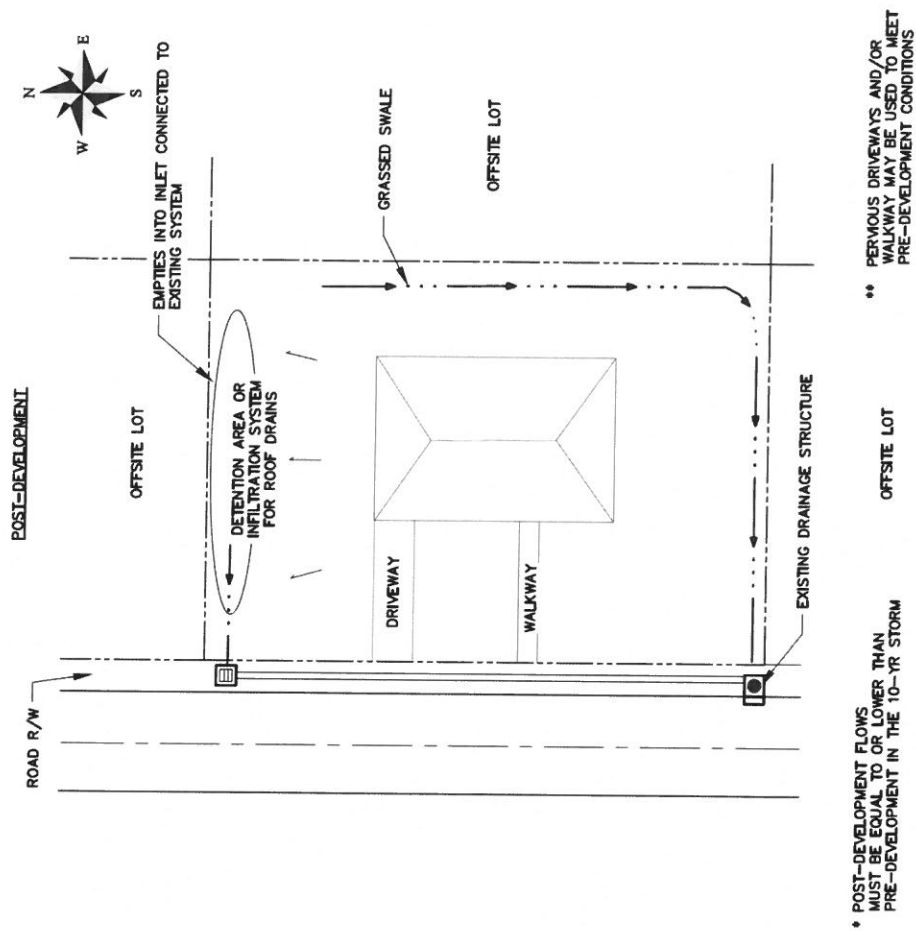


Summary:

This Guide is to be utilized when there is an increase in impervious surfaces on a residential lot in the Old Village. While many typical scenarios have been identified, it is understood that there will always be unique situations that will require consultation with the Town engineer during the site planning process. Each project will require determination of the existing and proposed topography, drainage patterns and necessary best management practices necessary to prevent stormwater runoff impacts to adjacent properties or downstream drainage systems. Appendix A contains typical site plans for different scenarios and Appendix B includes an explanation and information related to the utilization of 5.5 feet NAVD88 for design tailwater conditions.

APPENDIX A

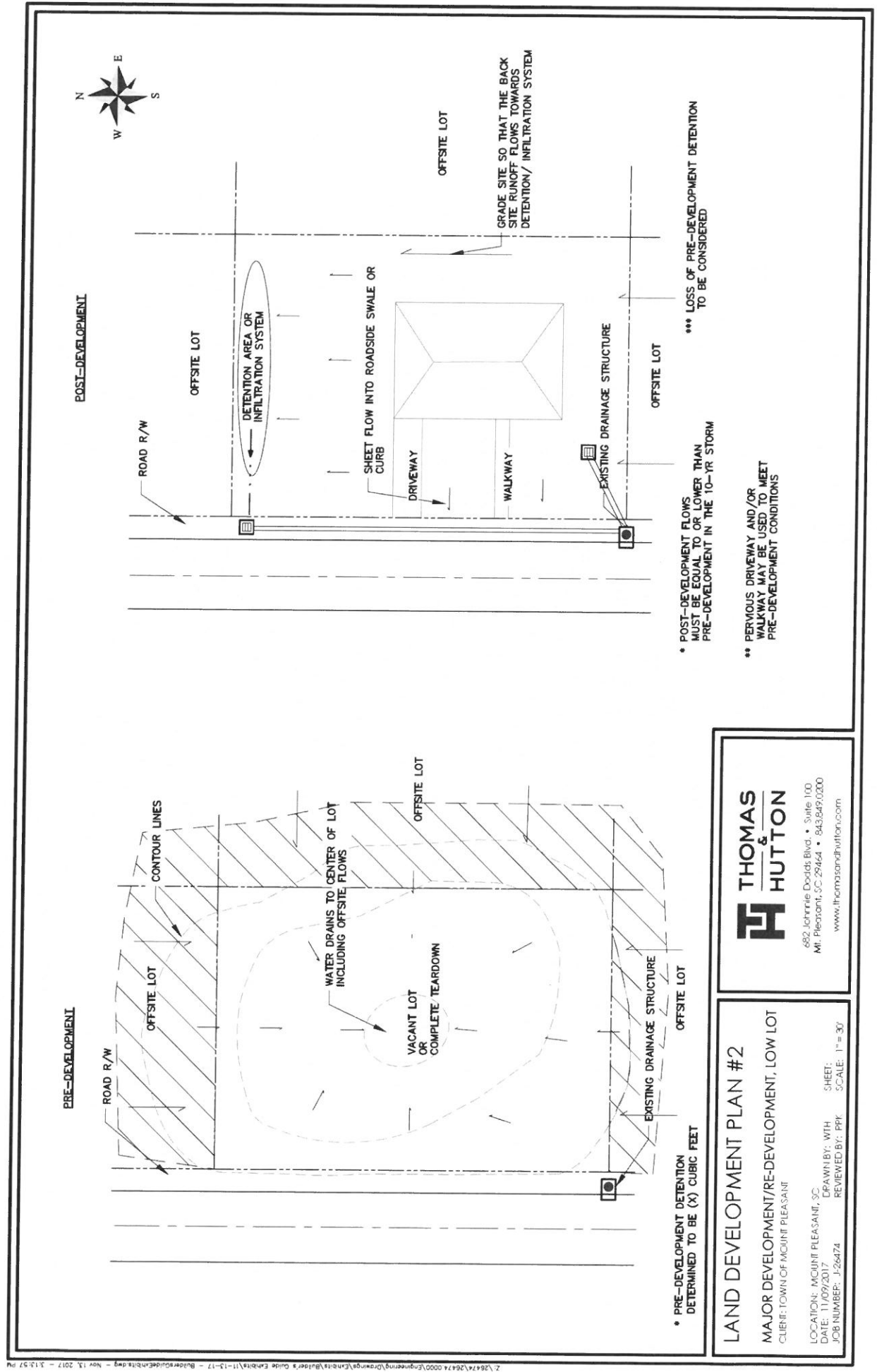
Typical Lot Improvement Plans



682 Johnnie Dodds Blvd. • Suite 100
Mt. Pleasant, SC 29464 • 843.849.0200
www.thomasandhutton.com

X SS - SURVEYED GROUND ELEVATION TO
SHOW FLOW DIRECTION (ASSUMED DATUM IS ACCEPTABLE)

11/15



THOMAS & HUTTON

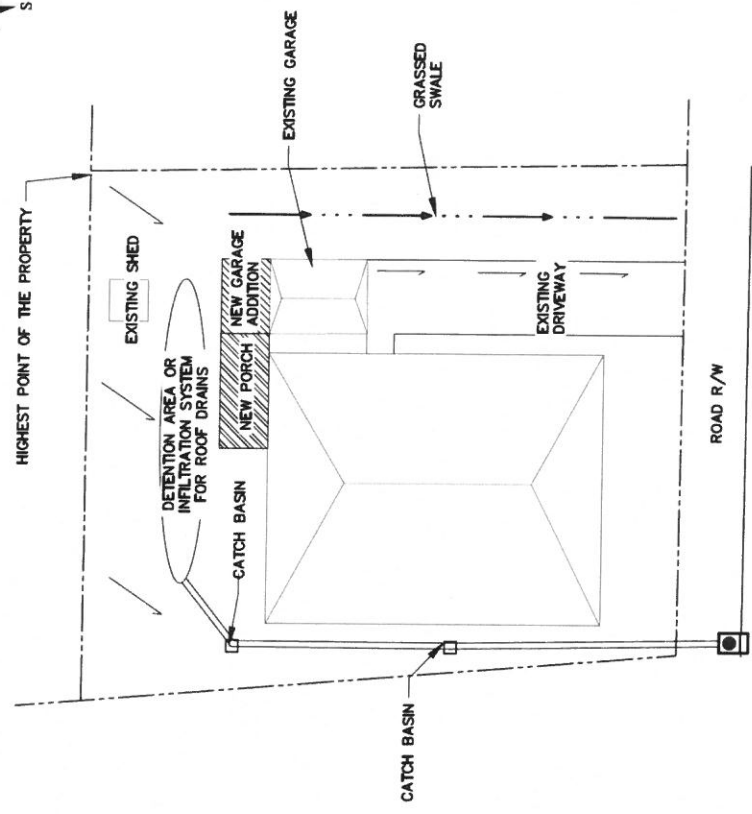
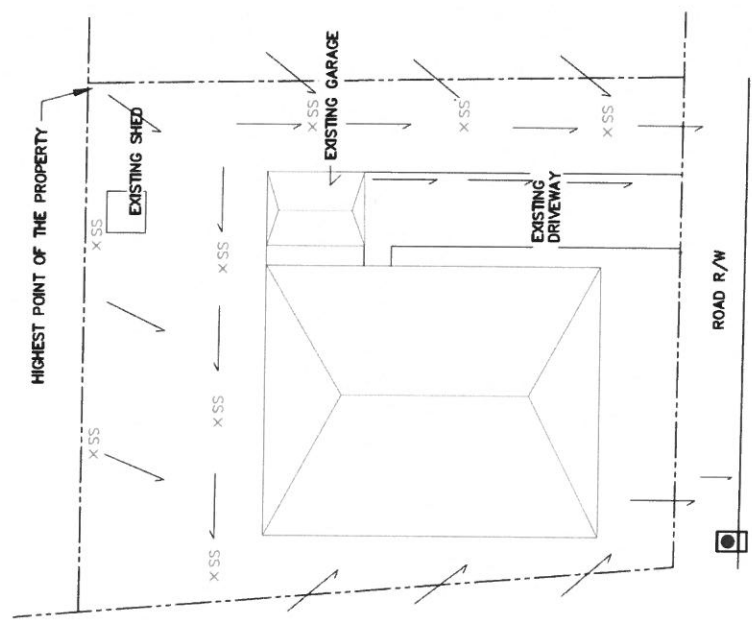
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Mt. Pleasant, SC 29464 • 843.849.0000
www.thomasonhutton.com

LAND DEVELOPMENT PLAN #2

MAJOR DEVELOPMENT/RE-DEVELOPMENT, LOW LOT
CLIENT: TOWN OF MOUNT PLEASANT

LOCATION: MOUNT PLEASANT, SC
DATE: 11/09/2017
JOB NUMBER: J-26474
DRAWN BY: WTH
REVIEWED BY: PRY
SHEET: 1
SCALE: 1" = 30'

- PRE-DEVELOPMENT DETENTION DETERMINED TO BE (X) CUBIC FEET
- POST-DEVELOPMENT FLOWS MUST BE EQUAL TO OR LOWER THAN PRE-DEVELOPMENT IN THE 10-YR STORM
- PERVIOUS DRIVEWAY AND/OR WALKWAY MAY BE USED TO MEET PRE-DEVELOPMENT CONDITIONS
- *** LOSS OF PRE-DEVELOPMENT DETENTION TO BE CONSIDERED



- * POST-DEVELOPMENT FLOWS MUST BE EQUAL TO OR LOWER THAN PRE-DEVELOPMENT IN THE 10-YR STORM
- ** PERVIOUS DRIVEWAY AND/OR WALKWAY MAY BE USED TO MEET PRE-DEVELOPMENT CONDITIONS

- POST-DEVELOPMENT FLOWS MUST BE EQUAL TO OR LOWER THAN PRE-DEVELOPMENT IN THE 10-YR STORM
- PERVIOUS [WALKWAY IN PRE-DEVELOPMENT]

X SS - SURVEYED GROUND ELEVATION TO
SHOW FLOW DIRECTION (ASSUMED DATUM IS ACCEPTABLE)

LAND DEVELOPMENT PLAN #4

IMPERVIOUS ADDITIONS, LOW LOT

CLIENT: TOWN OF MOUNT PLEASANT

LOCATION: MOUNT PLEASANT, SC
DATE: 11/09/2017
DRAWN BY: WITH
REVIEWED BY: PRK

SHEET:
SCALE: 1" = 30'

APPENDIX B

Design Tailwater Explanation and Tidal Information

11/15

Appendix B Design Tailwater Explanation and Tidal Information

For the determination of hydraulic gradients for sizing of storm drain conduits, other design hydraulic considerations, the specification of the tailwater elevation coincident with the design storm event is critical. In addition, assessing the vulnerability of a project from tidal flooding requires careful consideration of local tidal conditions. A tailwater or tide that can be reasonably expected to occur during the life cycle of the infrastructure should be determined and used in the design of projects.

It has previously been the Town's policy to require hydraulic calculation and other tidal considerations to be made using a tidal tailwater condition of 4.5 ft. mean sea level (MSL). The Town's ordinances equate MSL to the National Geodetic Vertical Datum of 1929 (NGVD29). Current survey and engineering practices utilize the North American Vertical Datum of 1988 (NAVD88). For the Mount Pleasant area, the conversion from the NGVD29 datum to the NAVD88 datum is -0.988. For simplicity, a conversion of -1.0 is used here. Thus, the Town's previously required tidal tailwater condition would be equivalent to 3.5 ft. in the NAVD88 datum.

The design of coastal projects (including new construction, reconstruction, and drainage systems) should consider sea level rise (SLR) in the long-term functionality of the project and protection from flooding over the design life of the facility. SLR science is evolving and future higher tidal elevations vary widely. Unaddressed, SLR poses a threat to current planning, existing development, and ecological systems. Additional concerns include greater storm surges, loss of infrastructure, destruction of wetlands, and increased risks for public health and safety.

The City of Charleston recently released a Sea Level Rise Strategy document (<https://www.charleston-sc.gov/DocumentCenter/View/10089>) that summarizes recent SLR science and various SLR predictions. A "moderate" prediction of SLR is a 2.0 foot rise within 50 years. This is recommended as a reasonable accounting of SLR in the design of future infrastructure in the Town. Therefore, the required tidal tailwater condition should be specified as 5.5 ft. in the NAVD88 datum.

To assess the validity of the recommended tidal tailwater condition, an assessment of recent tidal conditions was conducted. Approximately 3.75 years of recently measured hourly tidal data was collected from NOAA for the Cooper River Entrance, Charleston, SC (Station 8665530). Refer to Figure 1 for a chart of the hourly tidal data from January 1, 2014 through September 30, 2017. Common tidal constants such as mean tide level (MTL), mean high water (MHW), etc. are included. Also, king tides are illustrated. Refer to Figure 2 for a "close up" chart of the hourly tidal data for a 2-month period (August 1, 2017 to September 30, 2017).

The hourly tidal data was assessed for various elevations for percentage of exceedance – or the percentage of time a given elevation would be exceeded by the tide. This can be used as a relative measure as to the potential that an assumed tailwater elevation could be exceeded during a storm event (and thus making the design including the assumed tailwater elevation less effective).

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Refer to Table 1 for a summary of this analysis. The analysis shows that under current conditions, the previous design tidal tailwater of 3.5 ft. NAVD88 provides a conservative assumption, as tides only exceed this value 2% of the time. However, under the potential future condition (accounting for a typical 50-year design life and thus accounting for a 2.0 feet SLR) the current design tidal tailwater of 3.5 ft. NAVD88 would be exceeded 33% of the time. This would greatly increase the potential that a system based on this elevation could fail in the future due to higher tailwater conditions. Based on 2.0 feet SLR and assuming that other tidal conditions (range, amplitude and period) remain constant, the recommended tidal tailwater condition of 5.5 ft. NAVD88 would provide the same protection 50-years in the future as the current standard does today.

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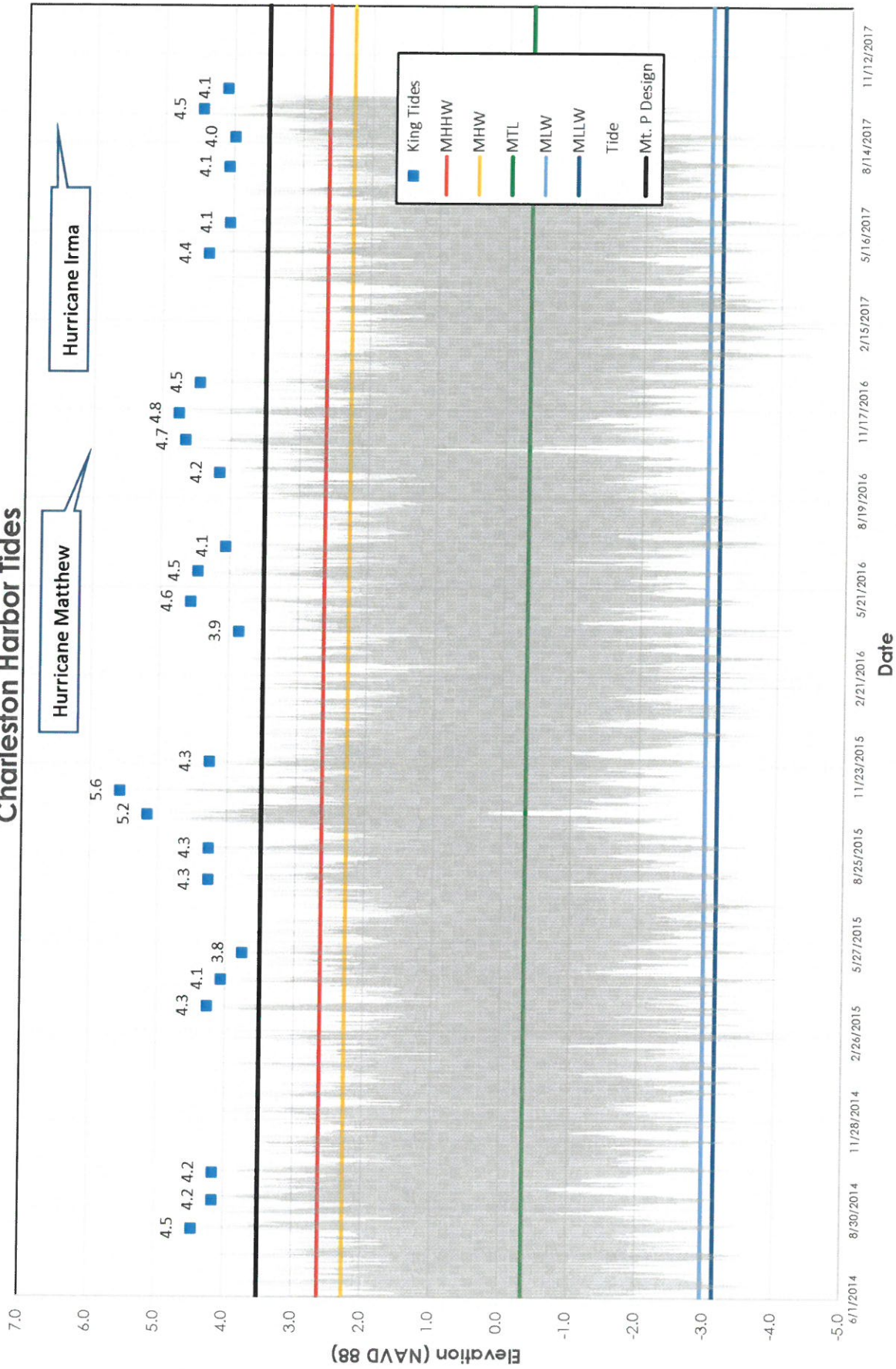
TABLE 1
Tidal Tailwater Condition
Exceedance Assessment

Condition	Elev. (ft. NAVD 88)	Elev. Exceeded ⁽¹⁾	
		Hrs.	%
Current Conditions			
MHHW	2.62	3,894	12%
MHW	2.26	6,060	18%
MTL	-0.35	19,233	59%
MSL	-0.22	18,706	57%
Previous Design Standard	3.50	803	2%
Potential Future Conditions (Approx. 2065)			
Previous Design Standard	3.50 ⁽²⁾	10,891	33%
Recommneded Design Standard	5.50 ⁽³⁾	803	2%

Notes:

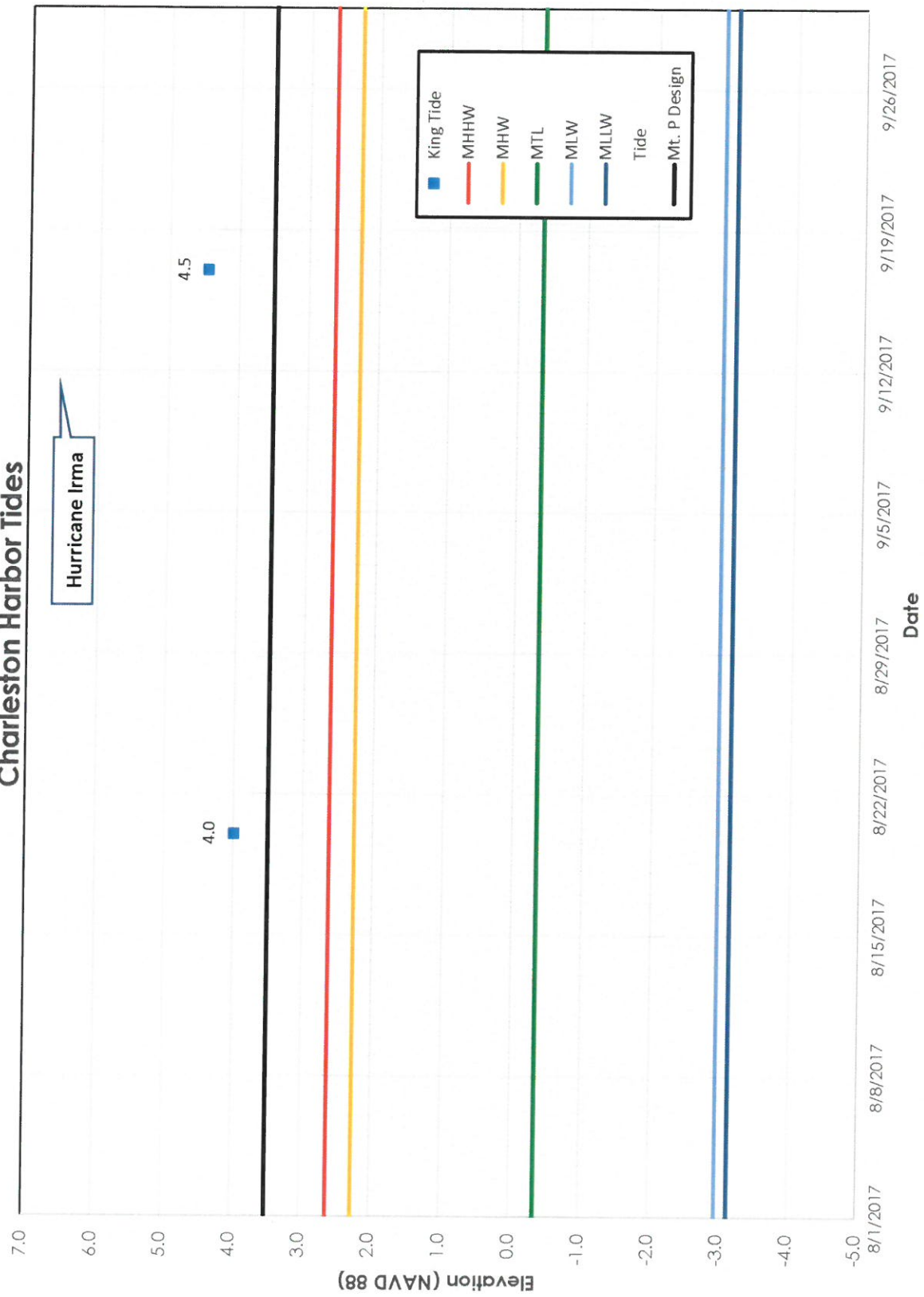
- ⁽¹⁾ Assessed hourly tide data from 1/1/2014 to 9/30/2017
(32,856 hrs. or approximately 3.75 yrs.)
- ⁽²⁾ Estimated as current (2017) elev. of 1.5 ft. NAVD88
- ⁽³⁾ Estimated as current (2017) elev. of 3.5 ft. NAVD88

FIGURE 1
Charleston Harbor Tides



11/15

FIGURE 2
Charleston Harbor Tides



11/15



682 JOHNNIE DODDS BOULEVARD, SUITE 100 | POST OFFICE BOX 1522
MT. PLEASANT, SC 29464 | 843.849.0200
WWW.THOMASANDHUTTON.COM

March 1, 2019

Mr. Douglas Kerr
City of Isle of Palms
P.O. Drawer 508
Isle of Palms, SC 29451

Re: Phase 3 Internal Drainage Improvements
City of Isle of Palms, South Carolina
T&H J-27670.0000
Letter Agreement for Services

Dear Mr. Kerr:

Pursuant to our meeting on February 25, 2019, you requested Thomas & Hutton perform the following scope changes, which were not included in our original Contract: An expansion of the Study, Alternatives Analysis, and Recommended Outfall Improvements Task from the Phase 3 Drainage Outfall Design and Permitting Contract.

The additional services to be provided will use the H&H modeling and analysis under the original scope to perform a more detailed analysis resulting in the identification, prioritization, and recommendation of drainage improvements to address existing flooding problems and inadequate drainage internal to the three Phase 3 basins. The total construction cost of the recommended improvements will amount to roughly the \$500,000 the City has budgeted for these projects. The Scope of Services includes:

1. A detailed study area analysis,
2. Identification of internal drainage improvement projects,
3. Prioritization of the identified improvement projects,
4. Opinions of probable cost (based on conceptual plans),
5. Recommendations based on the City's available funds, and
6. Miscellaneous consulting.

In order to provide the additional scope of work specified, we request a modification of our Contract. Our fee to perform the described scope change is \$23,300.

If acceptable, please indicate your authorization to proceed with this additional work by signing and initialing where designated below and returning a copy to us for our files. This proposal will be open for acceptance until April 1, 2019, unless changed by us in writing. Please note that no work will be performed without prior written authorization to proceed. This extra work is subject to the terms and conditions of the Contract executed for this Project dated January 16, 2019.

____ Owner's Initials

____ Consultant's Initials

Mr. Douglas Kerr
City of Isle of Palms
Letter Agreement for Services
March 1, 2019
Page 2

This proposal between The City of Isle of Palms (Owner), and Thomas & Hutton Engineering Co. ("Consultant"), consisting of the Consulting Services on a Time & Expense Basis Rate Sheet and Exhibit "A," represent the entire understanding between you and us with respect to the scope change. This agreement may only be modified in writing if signed by both of us.

We appreciate this opportunity to be of service to you on this Project. Should you have any questions or need further information, please do not hesitate to call on us.

Very truly yours,

THOMAS & HUTTON ENGINEERING CO.

By


Richard Karkowski, PE, PH, CPSWQ, D.WRE
Water Resources Department Manager

RPK/ala

Enclosures: Exhibit "A"

CITY OF ISLE OF PALMS

ACCEPTED: _____, 2019

By _____

TITLE

Owner's Initials

_____
Consultant's Initials


EXHIBIT "A"

ADDITIONAL SERVICES OF CONSULTANT

If authorized by Owner in writing, Consultant shall furnish or obtain from others Additional Services of the following types that are not considered normal or customary Basic Services.

1. Revising previously fully approved and accepted studies (by regulatory agencies), reports, design documents or Contract Documents when such revisions are due to causes beyond Consultant's control.
2. Furnish the services of special consultant for other than the civil or structural engineering defined in the scope of services. Special services such as mechanical or electrical engineering, geotechnical exploration, underwater investigation, laboratory testing and inspections of samples, materials, and equipment.
3. Preparing to serve or serving as a consultant or witness for Owner in any litigation, public hearing or other legal or administrative proceeding involving the project.
4. Services after completion of the Construction Phase, such as inspections during any equipment, material, or construction guarantee period and reporting observed discrepancies under guarantees called for in any contract for the project.
5. If requested by Owner and agreed to in writing, a Resident Project Representative will be furnished and will act as directed by Consultant in order to assist in observing performance of the work of Contractor(s). Through more extensive on-site observations of the work in progress by the Resident Project Representative, Consultant shall endeavor to provide further protection for the Owner against defects and deficiencies in the work of Contractor(s). However, the furnishing of such representation will not make Consultant responsible for construction means, methods, techniques, sequences, procedures or for safety precautions or programs, or for Contractor(s) failing to perform their work in accordance with the Contract Documents.

Owner's Initials

 Consultant's Initials