



# Lake Anna Shoreline

## Packet for Lake Structures

*Updated March 23, 2018*

### **This packet is used for:**

- The construction of or addition to lake structures on the Lake Anna shoreline
- Lake structure projects without land disturbance or
- Lake structure projects with land disturbances under 10,000 square feet

### **The Packet for Lake Structures has the following items:**

- *Lake Anna Shoreline Checklist for Lake Structures*
- *Requirements for Site Plan Approval*
- An example of a successful site plan
- *Owners Consent to Enter Property*
- Copy of *Lake Anna Shoreline Use and Design Standards*, directly from ordinance

### **The applicant must submit the following items for a lake structure to be approved:**

- Completed *Development Permit: Zoning and Building*
- Signed and completed *Lake Anna Shoreline Checklist for Lake Structures*
- *Construction and Use Agreement from Dominion Power* that shows approval
- Site plan, **a separate copy** from the one submitted to Dominion Power, that follows **all** the requirements listed in this packet
- Construction plans that shows all dimensions of the proposed structure

### **After submission:**

- Planning staff will review the site plan, checklist and forms for zoning approval
- Building Code staff will review the construction plan and forms for building approval
- Once both divisions approve the proposed lake structure, the applicant will be issued a building permit to begin work
- Inspection and Code Enforcement staff will confirm code compliance once work begins on the lake structure
- Once the lake structure is completed, the Community Development Department will issue a final inspection at which time the applicant/owner **must have the signed and approved site plan on site**



**Lake Anna Shoreline Checklist:**  
**For Lake Structures Updated 04/11/2017**

**I. General Information**

Type of Project: \_\_\_\_\_

Property Address: \_\_\_\_\_

Current Zoning: \_\_\_\_\_ Tax Map Number: \_\_\_\_\_

Name and Address of Owner: \_\_\_\_\_

Name and Address of Contractor (if different): \_\_\_\_\_

Date Submitted: \_\_\_\_\_ Subdivision (if applicable): \_\_\_\_\_

*This checklist must be completed, signed and submitted with the application. The information contained in this checklist reflects the contents of the Shoreline Ordinance as of April 11, 2017. The applicant is responsible for insuring that no revisions to the Ordinance have occurred since preparation of this document.*

**II. Approvals Obtained**

- Step 1:** \_\_\_ Virginia Dominion Power
- Step 2:** \_\_\_ Louisa County Zoning Administrator
- Step 3:** \_\_\_ Louisa County Building Official

**III. Checklist**

( ✓ = Present & adequate, N/A = Not applicable)

**Reflectors:**

- \_\_\_ All structures shall have (2) two-inch minimum diameter reflectors affixed along the sides of the structure at (10) ten foot intervals:
- \_\_\_ Reflectors shall be within (1) one foot of both sides of lakeside corners
- \_\_\_ Reflectors shall be placed within (2) two feet of the normal pool level (250 feet above mean sea level for the lake and 251 feet above mean sea level for the WHTF)

**Lighting:**

- If lake structures have light fixtures, then the following are recommended:
- \_\_\_ Lights should have initial output less than 2000 lumens, or should be fitted with opaque shields to prevent direct visibility of the lamp to persons more than (50) fifty feet away.
  - \_\_\_ Lights should meet dark-sky standards
  - \_\_\_ Solar lighting is encouraged

**Lake Structures:**

- \_\_\_ For side loading structures, the minimum travel-way between groups of dock slips shall be two (2) times the length of the adjacent slip; if two slips are different sizes, the larger length shall be used
- \_\_\_ The maximum height of structures within the Dominion easement in *all* zoning districts shall be twenty (20) feet for flat roofs and twenty-eight (28) feet for pitched roofs as measured from normal lake level (250 feet above mean sea level for the lake, 251 feet above mean sea level for the WHTF).
- \_\_\_ Waterfront construction may have a second story but it shall not be enclosed, *except for screened areas*

The following is the maximum square footage (SF) permitted, excluding the area from land to the structure: \* -Check all that apply-

Agricultural and Residential District Uses

- \_\_\_ 0—54 linear feet of waterfront = no slip or piers\*\*
- \_\_\_ 55 – 99 Linear feet of waterfront = 10 SF per linear foot of waterfront
- \_\_\_ 100 – 300 Linear feet of waterfront = 2,000 SF
- \_\_\_ Over 300 Linear feet of waterfront = 3,000 SF

\* Walkways shall not exceed 5 feet in width  
 \*\* Parcels in existence prior to April 2, 2007 shall be limited to no more than 550 SF.

**Safe Navigation:**

- \_\_\_ Water access entrances and travel-ways into coves shall be at least (30) thirty feet in width at navigable depth, until the cove reaches a width of 90 feet or less
- \_\_\_ For agricultural and residential district uses, structures shall not protrude more than one third of the distance across the water, to a maximum of 150 feet
- \_\_\_ For commercial district and common area uses, structures shall not protrude more than one third of the distance across the water, to a maximum of 150 feet
- \_\_\_ For resort development and planned district uses, the length of lake structures shall be included as part of the master plan submitted during the rezoning process

*The standards established by Dominion shall govern dredging, excavation, and filling along with other applicable federal, state and local codes, unless otherwise noted.*

**IV. Read and Sign**

In representing the above referenced property owner(s), submitting this shoreline development plan for approval, I hereby state that, to the best of my knowledge, the attached plan contains all information required by this checklist.

\_\_\_\_\_  
**Signature of person completing checklist**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Printed Name**

\_\_\_\_\_  
**Daytime Phone number**

## Requirements for Site Plan Approval

### For Lake Structures

*The construction of or addition to a lake structure requires a site plan. The plan must meet all the requirements listed below.*

- \_\_\_ The applicant must submit a plan legibly drawn on a **\*single sheet\***:
- \_\_\_ The plan should be a separate copy than the one approved by Dominion Power

*The plan must have the following information to be approved:*

### **Format**

- \_\_\_ Scale with all lake structures and features depicted proportionately

### **Land**

- \_\_\_ Tax map number
- \_\_\_ Lot lines and extension lines from the lot to the water. (Extension lines are typically found on a subdivision plat)
- \_\_\_ Zoning
- \_\_\_ If the property is within a subdivision
- \_\_\_ Dominion Power shoreline (shown and labeled)
- \_\_\_ Shoreline distances and lake frontage (shown and labeled)

### **Structures**

- \_\_\_ Location of all proposed structures
- \_\_\_ Horizontal and vertical dimensions (shown and labeled) of all proposed structures
- \_\_\_ Height of proposed lake structures above normal lake level
- \_\_\_ For additions, dimensions of existing and proposed structures (shown and labeled)
- \_\_\_ Dimensions of adjacent lake structures (shown and labeled)
- \_\_\_ Distances (shown and labeled) between proposed structure and lake structures on adjacent properties
- \_\_\_ Indicate if adjacent structures are side or front loading
- \_\_\_ Include roof overhangs, slips & other usable floor area in dimensions of all structures
- \_\_\_ Clear indications of what is proposed and existing
- \_\_\_ Distances across the water and dimensions of structures across the water
- \_\_\_ Where lot fronts open water, give general distances across water
- \_\_\_ A note indicating if there will be land disturbance and the extent in square feet

### **Other comments**

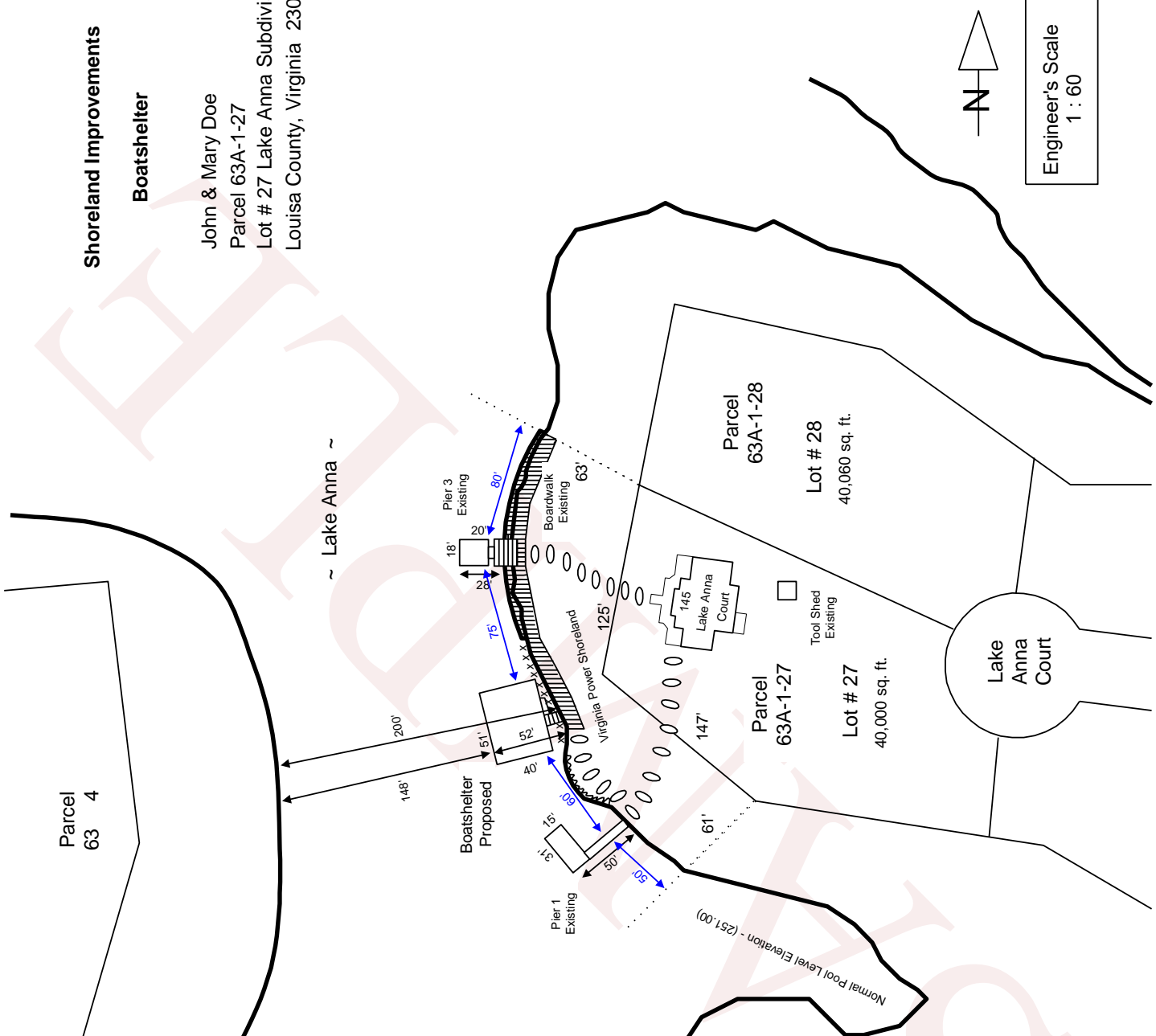
- If the site plan lacks the above information, a letter of revision will be mailed to the applicant and staff will require an updated plan that meets the above standards
- Free hand drawings are **\*HIGHLY DISCOURAGED\***
- The use of straightedges and rulers is **strongly encouraged**
- The use of computer drawing programs is optimal but **not required**

Mapping information may be found on the County's website  
<http://www.louisacounty.com/> under the GIS link

**Shoreland Improvements**

**Boatshelter**

John & Mary Doe  
 Parcel 63A-1-27  
 Lot # 27 Lake Anna Subdivision  
 Louisa County, Virginia 23024



Critical Distances	Actual
Distance Across Cove	200 feet
Length of Proposed Boatshelter	52 feet
Width of Fairway	148 feet

Size of Structures	Actual
Proposed Boatshelter (40' x 51')	2040 sq. ft.
Existing Dock # 1 (31' x 15')	465 sq. ft.
Existing Dock # 3 (18' x 20')	360 sq. ft.
Total all Structures	2865 sq. ft.
Structure Size Allowed based on 325' Linear Footage of Waterfront	3500 sq. ft.

Boatshelter Details
Height of Boatshelter
- Less than 20' for upper deck
- Less than 28' for pitched roof
Upper Deck will be open (not enclosed)
Two Inch White Reflectors Around Boatshelter:
- Within 1 foot of each corner
- Every 6 feet around the dock
- Within 2 feet of 251' above MSL

Engineer's Scale  
 1 : 60



## COUNTY OF LOUISA

### OWNERS CONSENT TO ENTER PROPERTY

I HEREBY GRANT THE COUNTY OF LOUISA THE RIGHT TO ENTER UPON THE  
SUBJECT PROPERTY PERIODICALLY TO ENSURE COMPLIANCE.

*THE CURRENT PROPERTY OWNER MUST SIGN THIS APPLICATION.*

**Owner Name (Print):** \_\_\_\_\_

**Property Location:**

**Tax Map Reference:** \_\_\_\_\_ **Lot** \_\_\_\_\_ **Subdivision** \_\_\_\_\_

**Street Address:** \_\_\_\_\_

**Signature of Landowner:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

**Amended Shoreline Ordinance – BOS Approved 06/15/2015**

DIVISION 5. - LAKE ANNA SHORELINE USE AND DESIGN STANDARDS

Sec. 86-455. - Statement of intent; policy guidance.

The intent of this division is to encourage the public's health, safety, and welfare with equitable and enforceable conditions for development along the Lake Anna shoreline, including the w-Waste Heat Treatment facility (WHTF). These use and design standards are intended to protect the shoreland, enhance public safety, and advance the public's general welfare and quality of life. The Lake Anna shoreline use and design standards are adopted under the general provisions of the zoning ordinance.

Unless specifically stated otherwise, the provisions set forth in this division do not apply to structures built, or otherwise approved by the County or Dominion, prior to the adoption of these standards. Non-conforming structures shall be exempt from these standards unless the structure is expanded or if the structure is replaced more than two years after being removed. A structure for the purposes of this division includes, but is not limited to, fixed or floating docks, piers, boardwalks, slips, accessory buildings, or other types of development on, or attached to, Dominion's property.

The standards set forth in this division are mandatory unless a waiver is granted. Applications that meet all of the ordinance standards will be reviewed administratively by staff. Applications should include site plans that meet the criteria included in the "Lake Anna Shoreline Site Plan Requirements Checklist", to include an approval statement by Dominion for proposed development on Dominion's shoreland or shoreline. Where criteria are not clearly illustrated on a site plan, a survey shall be required to demonstrate compliance with the ordinance, or in order to process special exception requests. If a waiver is requested, then the application will be reviewed by staff (per section 86-22 of this ordinance). If a waiver is denied, applicants may resubmit a revised waiver at any time or appeal staff's decision to the board of supervisors.

*(Res. of 12-5-05(05.162); Res. of 4-2-07(07.058); Res. of 6-7-10(10.134); Res. of 8-6-12(2012-138))*  
*(Res. of 12-5-05(05.162); Res. of 4-2-07(07.058))*

Sec. 86-455.1. - Use and design standards.

- (a) *Shoreland Protection / Erosion and Sediment Control.* This section is intended to mitigate the impacts to the shoreland of residential and commercial development (including common areas) along the Lake Anna shoreland due to construction activities.

These standards address two main types of erosion, upland erosion and shoreline erosion. These measures are intended to mitigate the impacts of land disturbance above and beyond the scope of the Louisa County Erosion and Sediment Control Ordinance (Code of Louisa County, VA, chapter 38, article II). The measures also recommend approved methods of shoreline stabilization.

For the purposes of this ordinance, land disturbance is defined consistent with the definition provided in the Erosion and Sediment Control Ordinance: any land change which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands in the commonwealth, including, but not limited to, clearing, grading, excavating, transporting and filling of land.

- (1) *Upland erosion.* Land disturbances over 10,000 square feet (SF) along the Lake Anna waterfront shall require a Lake Anna shoreline agreement in lieu of an erosion and sediment control plan or an erosion and sediment control plan that implements one of the recommended methods, or equivalent measures, as approved by the Thomas Jefferson Soil and Water Conservation District (TJSWCD). The agreement in lieu requires the implementation of one of several recommended methods of shoreland protection measures depending on the individual site or owner preference (where it would be more environmentally beneficial).

Any shoreland that is disturbed shall be permanently stabilized. Permanently stabilized vegetation is ground cover that is uniform, mature enough to survive, and will inhibit erosion. Sand beaches shall be permitted if they are properly retained.

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Shoreland protection measures may include a 100-foot wide natural, forested buffer along the shoreline. A natural, forested buffer for the purposes of this section is an indigenous, undisturbed, riparian forest with ground cover, shrub, and tree canopy layers.

Alternative protection measures may also be used. The following slopes shall be calculated within the Dominion property boundary as an average slope between a property's boundary lines. The specifications outlined below are a summary of those outlined in the Lake Anna shoreline agreement in lieu.

3—15 percent = a vegetated diversion (18 inches minimum in height) with compacted soil and a minimum base width of 4.5 feet. This diversion shall consist of a berm and a swale and be contoured with the property. The swale shall be designed to carry flows at a minimal slope to a rock outlet located at a defined low point. Vegetation on the diversion should include native grasses or shrubs, with other non-invasive ornamental plantings as desired;

>15 percent = the above specified diversion with a 25-foot wide undisturbed, vegetated area along the shoreline, measured horizontally from the water's edge (not to include pathway to lake structures).

Alternate control methods not listed above may be used pending review and approval by the Thomas Jefferson Soil and Water Conservation District.

Applications of fertilizers and herbicides are prohibited within the berm, swale, and buffer areas, and within 25 feet of the shoreline. Insecticides are strongly discouraged.

All of the above recommended control methods shall be maintained and repaired as necessary to remain permanently stabilized and in compliance with state and local erosion and sediment control regulations.

- (2) *Shoreline stabilization.* Shoreline erosion is exacerbated by wave action from boats on Lake Anna. Another cause of shoreline erosion, from the sheet flow of water across the land, is adequately addressed in the above section. Shoreline erosion not directly caused by land disturbance is not required to be stabilized, but is encouraged. Shoreline that is disturbed shall be permanently stabilized by one of the below recommended methods.

The use of non-structural, vegetated stabilization methods is strongly encouraged per the Lake Anna shoreline agreement in lieu. Structural methods are limited to rip-rap and bulkhead materials with geotextile fabrics unless otherwise approved by the Thomas Jefferson Soil and Water Conservation District.

Technical guidance for complying with the Lake Anna Shoreline Use and Design Standards is available through the Thomas Jefferson Soil and Water Conservation District.

A violation of this section shall be subject to the penalties set forth in the Code of Louisa County, VA, section 38-37, including, but not limited to, a \$1,000.00 fine per violation (each day of violation).

(b) *Safe navigation.*

- (1) Water access entrances and travel-ways into coves shall be at least 30 feet in width at navigable depth until the cove reaches a width of 90 feet or less. The one-third rule shall be the determining factor in any cove less than 90 feet in width. This standard applies to all choke points leading to, and within, the cove. A choke point is a narrowing of the cove that boats navigate through. Staff may grant a waiver (per section 86-22 of this ordinance) to this standard in extenuating circumstances due to water depth, topography, irregular shoreline, narrowness of cove, existing structures, and other existing conditions.
- (2) The navigable channel shall be clearly identified during site plan review.



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- (3) Structures shall not protrude into the water from the shoreline further than the following maximum lengths unless otherwise approved by a waiver or special exception.
- a. *Agricultural/residential district uses.* Structures shall not protrude more than one-third of the distance across the water from the shoreline, to a maximum of 150 feet. Structures proposed to exceed this limit require approval of a waiver or special exception. The travel-way must be a minimum of 30 feet consistent with the standards of subsection 86-455.2(b)(1) above.
  - b. *Commercial district and common area uses.* Structures shall not protrude more than one third of the distance across the water from the shoreline, to a maximum of 150 feet. Structures proposed to exceed this limit require approval of a waiver or special exception. The travel-way must be a minimum of 50 feet whenever serving common area launch facilities or commercial properties.
  - c. *Resort development and planned unit development uses.* The length of lake structures shall be included as part of the master plan submitted during the rezoning process. The standards set forth in this section should be used in the development of the master plan requirements regulating lake structures.

For the purposes of this section, the term shoreline shall refer to the boundary line, at normal pool, between land and the water.

- (4) In order to identify the protruding outline of all lake structures, existing and new, two-inch minimum diameter reflectors shall be affixed along the sides of the structure at intervals of ten feet. Reflectors shall be within one foot of both sides of each lakeside corner. Reflectors shall be placed no more than two feet above normal pool level (250 feet above mean sea level for the lake, 251 feet above mean sea level for the WHTF).

All lake structures shall be in full compliance with this safety standard by November 1, 2007.

- (5) If lake structures utilize light fixtures the following standards are recommended:
- a. Lights should have initial output less than 2,000 lumens (equivalent to 120 watt incandescent bulbs), or should be fitted with opaque shields to prevent direct visibility of the lamp to persons more than 50 feet beyond the structure.
  - b. Light specifications should meet International Dark-Sky Association (IDA) standards for either landscape or wall-mount style fixtures, or equivalent. Landscape fixtures should be under 2,000 lumens and partially shielded. Wall-mount fixtures should be fully shielded.
  - c. Solar lighting is encouraged.
- (6) The minimum travel-way between groups of dock slips shall be two times the length of the adjacent slip; if two slips are different sizes, the larger length shall be used. A fairway is an unobstructed access channel for entry to or exit from a moorage area.
- (7) Common areas.
- a. Common area ramps shall be constructed of reinforced concrete with a minimum thickness of six inches, and shall be a minimum distance of 75 feet from designated swimming areas.
  - b. Common areas are required to have a dry hydrant in a location to be determined on the site plan.
  - c. Common area boat ramps shall be placed or positioned to minimize wave interference from boats passing nearby through high concentration navigation choke points as determined by the county during site plan review (i.e., cove entrances, narrow channels, sharp bends, bridges, etc.).

(c) *Neighbor policies.*

- (1) A sign shall be posted at common area and commercial pier entrances summarizing alcohol and boating regulations in the state.

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(2) All site plans for new development must show shoreline building zones and extension lines to 150 feet into the water or one third of the cove, whichever is less.

(3) Structures.

a. District uses.

1. *Agricultural/residential*. The following is the maximum square footage (SF) permitted, excluding the area from land to the structure:\*

(i) 0—54 linear feet of waterfront = no slip or piers\*\*

(ii) 55—99 linear feet of waterfront = 10 SF per linear foot of waterfront

(iii) 100—300 linear feet of waterfront = 2,000 SF

(iv) Over 300 linear feet of waterfront = 3,000 SF

\* Walkways shall not exceed 5 feet in width

\*\* Parcels in existence prior to April 2, 2007 shall be limited to no more than 550 SF.

2. *Commercial and common areas*. The following is the maximum square footage (SF) permitted over water:

(i) 0—99 linear feet of waterfront = 90 SF per linear foot of shoreline

(ii) 100—500 linear feet of waterfront = 75 SF per linear foot of shoreline

(iii) > 500 linear feet of waterfront = 55 SF per linear foot of shoreline

3. *Resort development and planned*. If lake structures are included as part of the proffered conditions during the rezoning process, the maximum square footage shall be included. The standards set forth in this section should be used in the development of the proffered conditions regulating lake structures.

b. The maximum height of structures on land within the Dominion easement in all zoning districts shall be 20 feet for flat roofs and 28 feet for pitched roofs as measured from the lowest finished grade. Weathervanes and telecommunication antennas do not count against the structure's height.

The maximum height of structures *over the water* within the Dominion easement in all zoning districts shall be 20 feet for flat roofs and 28 feet for pitched roofs as measured from normal lake level (250 feet above mean sea level for the lake, 251 feet above mean sea level for the WHTF). Weathervanes and telecommunication antennas do not count against the structure's height.

c. Waterfront construction may have a second story but it may not be enclosed. Screened areas are not considered to be enclosed. Maximum height limits shall apply.

Structures that will exceed these standards shall require a waiver from staff. (per section 86-22 of this ordinance).

(4) Common areas.

a. Restroom facilities are required in areas with structures for persons or watercraft for common areas with 25 or more lots. Restrooms are not allowed within the Dominion easement without their approval.

b. All structures in a common area shall maintain a 100-foot side setback from residential and agricultural zoning districts (not part of the subdivision), and a 50-foot side setback from resort development, commercial, and industrial zoning districts.

c. A 25-foot vegetative buffer between the common area and adjoining property owners (not part of the subdivision) shall be required. Buffers shall consist of evergreen vegetation, but may also

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include deciduous species. County staff may grant a special exception to this requirement on a case-by-case basis.

- (5) Commercial areas.
  - a. A pump out station shall be required for commercial waterside operations if they introduce traffic to the lake.
  - b. Commercial slips are allowed one enclosed storage structure per slip that is a maximum of 50 square feet.
  - c. Any business engaged in fuel sales shall use United States Coast Guard (USCG) approved spill recovery systems.
- (d) *Dredging, excavation, and filling.* The standards established by Dominion shall govern these activities along with other applicable federal, state, and local codes, unless otherwise noted in this section.

*(Res. of 12-5-05(05.162); Res. of 4-2-07(07.058); Res. of 3-7-11(2011-69); Res. of 8-6-12(2012-138))*