



# City of Sanibel

Planning Commission

## PLANNING DEPARTMENT Staff Report

**Planning Commission Meeting:** October 22, 2024  
**Planning Commission Agenda Item:** 7a.

**SUBJECT:** Determination of Impermeable Coverage (Chapter 86, Article II)

### ISSUES

- Discussion regarding an “administrative stay” implemented in 2014 regarding vegetation conditions adopted by Ordinance 14-007 to allow consideration of permeable pavers to be considered 100% permeable.

### ATTACHMENTS

|   |  |
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| A | Land Development Code Chapter 86, Article II, Section 86-42. Determination of impermeable coverage |
| B | Ordinance 14-007   |
| C | Email from Judie Zimomra (then-City Manager) dated August 6, 2014                                  |
| D | Email from Judie Zimomra (then-City Manager) dated August 14, 2014                                 |
| E | Staff Report dated May 27, 2014  |
| F | Email from Oisin Dolley (City Engineer) dated October 15, 2024                                     |
| G | Email from Holly Milbrandt (Natural Resources Director) dated October 18, 2024                     |

### BACKGROUND

At the August 13, 2024, Land Development Code Review Subcommittee meeting, staff presented its memo regarding Section 82-42. – Determination of impermeable coverage, which was divided into two parts. The first addressed determination of impermeable coverage for elevated beach dune walkovers, while the second examined existing text regarding permeable pavers in the context of an “administrative stay” placed by then-City Manager Zimomra following the adoption of Ordinance 14-007.

The subcommittee moved to direct the elevated dune beach walkover recommendations to Planning Commission and requested more background information on the administrative stay to conditions adopted by Ordinance 14-007 for further discussion.

## **ANAYLSIS**

Ordinance 14-007 was adopted on June 17, 2014, to allow for permeable pavers to replace shell or gravel driveways at single-family, duplex and triplex residential developments and not to consider such change to be an increase in impermeable coverage. A copy of Ordinance 14-007 is included with this report as **Attachment B**.

On August 6, 2024, then-City Manager Zimomra responded to Holly Milbrandt, who described implementation challenges expressed by homeowners interested in completing permeable paver installation projects and offered recommendations for revision with an understanding that such recommendations would ultimately be considered by Planning Commission and City Council to be adopted. A copy of the email is provided as **Attachment C**.

In response, on August 14, 2014, then-City Manager Judie Zimomra sent an email to Directors of the Planning, Building, Public Works, and Natural Resources Departments, informing them of her immediate implementation of an “administrative stay” to conditions described under Section 1. (4)(c), citing inconsistency with City Council’s “legislative intent” despite Council’s unanimous approval of the ordinance. A copy of the email is provided as **Attachment D**.

A review of the minutes from the seven (7) subsequent City Council meetings in 2014 shows that City Council was not provided an update on the administrative stay of vegetative buffer conditions, nor did the then-City Manager seek direction to formally amend Ordinance 14-007.

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As it relates to the nexus of these specific conditions, staff reviewed a staff report presented to Planning Commission on May 27, 2014, which included a draft ordinance, as well as a report from LaRue Planning & Management Services, Inc. Neither the staff report, nor the LaRue report, explained the basis for additional vegetation conditions. A copy of the staff report with the LaRue report is provided as **Attachment E**.

...

Staff re-examined the conditions placed under an administrative stay in the context of present-day and makes the following conclusions:

- Staff does not find the vegetative buffer requirement improves the performance of permeable pavers for stormwater infiltration and storage.
- Any action to repeal the administrative stay and implement those standards would require significant discourse and education with property owners and paver contractors. Such action would also effectively create hundreds of lawful nonconformances.

- Since 2014, staff has processed 636 development permit applications for driveway improvements – the overwhelming majority of which authorized installation of a permeable paver driveway in place of an existing shell driveway. This number does not include driveways completed in association with new construction.
- Staff finds Section 86-42. – Determination of impermeable coverage, sans vegetation conditions, remains consistent with provision 3 of Section 3.2.5. under the Plan for Scenic Preservation.
  - 3. Encourage the use of shell surfacing, or alternatively, other suitable pervious surfacing for parking areas in order to maintain a casual retreat atmosphere. Concrete and asphalt paving of parking areas should be minimized.

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The information provided above was presented to the Land Development Code Review Subcommittee on September 24, 2024. The subcommittee requested additional input from the City Engineer and Natural Resources Department, respectively, regarding the value of a prohibition on blocking or curbing and the value of a vegetative buffer in association with a permeable paver driveway.

A copy of an email from City Engineer Oisin Dolley is provided as **Attachment F** and an email from Natural Resources Director Holly Milbrandt is provided as **Attachment G**.

### **RECOMMENDATION**

Staff recommends adoption of Resolution 24-20.

### Sec. 86-42. - Determination of impermeable coverage.

In residential developments, it is deemed to be desirable to encourage sand and shell driveways and parking areas, because the more natural appearance of such substance is more in harmony with the character of the city as a whole and its emphasis on environmental and aesthetic priorities. The same factors apply to the use of sand and shell within higher density, larger, multifamily residential, mixed-use and commercial development as well. However, the use of such substances in high traffic projects also entails some inconvenience and maintenance problems in wet weather conditions.

It is similarly deemed desirable to encourage the use of permeable pavers within low density, small scale residential developments such as single-family, duplex and triplex because permeable pavers offer an attractive alternative to sand and shell driveways in that permeable pavers can, under appropriate conditions, contribute to the improved handling and treatment of on-site stormwater runoff. In light of the considerations in this section, the following rules shall apply in the determination and limitation of the area of a lot or parcel which may be covered with impermeable surfaces:

- (1) For residential developments, sand or shell driveways and parking areas shall be deemed to be 100 percent permeable, provided that the slope of such surfaces does not exceed one to 12, vertical to horizontal; that is, such areas shall not be counted in the determination of coverage by impermeable surfaces.
- (2) For nonresidential developments, and for developments containing both commercial and residential uses on the same lot or parcel, sand or shell driveways, parking areas, loading areas, and turnaround areas shall be deemed to be 50 percent permeable, provided that the slope of such surfaces does not exceed one to 12, vertical to horizontal; that is, only one-half of such surface areas shall be counted in the determination of coverage by impermeable surfaces.
- (3) For the purposes of this section, the term "driveway and parking area" shall mean that area necessary to provide for safe and convenient access and off-street parking accommodation for the number of vehicles required for the specific use.
- (4) For all new and existing single-family, duplex and triplex residential developments in conformance with the maximum allowed developed area requirements of this Land Development Code, the use of permeable pavers for driveways and parking areas, and the replacement of existing sand, shell, asphalt, brick or concrete driveways and parking areas with permeable pavers, shall be deemed to be 100 percent permeable, and such areas shall not be counted in the determination of coverage by impermeable surfaces provided that:
  - a. The pavers are installed to the manufacturer's specifications and are not less than 50 percent permeable;
  - b. The slope of such surfaces does not exceed one to 12, vertical to horizontal;

- c. A vegetated landscaped buffer at least ten feet in depth is provided on each side of the driveway, unless the driveway is existing, and is located closer than ten feet to a side property line, and cannot be relocated in order to comply with this requirement, then the buffer on the one side of the driveway can be less than ten feet in depth;
  - d. The required vegetated landscaped buffer areas shall not consist of primarily sod. All installed landscape buffers shall be subject to the maintenance standards of Land Development Code section 122-75 and the traffic visibility at driveway intersections requirements of Land Development Code section 126-935;
  - e. Native plant species shall comprise no less than 75 percent of the required vegetated landscape buffer and shall otherwise comply with the required types, numbers, varieties and installation standards of Land Development Code sections 122-73 and 122-74;
  - f. The driveway shall not be curbed or blocked along its sides in order to ensure that stormwater is allowed to drain into the adjacent vegetated landscape buffer;
  - g. Where there is a shared use path, the paver driveway must stop at and abut the interior edge of the path in order to allow for a continuous pathway without any changes in either height or texture;
  - h. Where there is no shared use path, the paver driveway must stop at and abut the paved edge of the roadway, matching the elevation of the roadway at their juncture. The property owner shall be responsible for normal maintenance and repair of the paver driveway; but the city shall either pick-up or replace any disturbed pavers to match the roadway surface whenever the city repaves or resurfaces the roadway; and
  - i. The city reserves the right to address the use of pavers on driveways and parking areas for residential duplex and triplex structures, on a case by case basis, in order to accommodate the variety of parking layouts that exists or may be employed by such structures and to ensure that the intent of this section is achieved.
- (5) All other nonnatural surfaces shall be deemed to be 100 percent impermeable unless a developer demonstrates by engineering report or other competent evidence that the surface is less than 100 percent impermeable.
- (6) Nothing in this section shall relieve the property owner from the need to meet all other provisions and requirements of this Land Development Code. Furthermore, the use of permeable pavers shall neither create nor further any nonconformity.
- (7) For all buildings, up to a four-foot roof overhang shall not count toward impermeable surface coverage, except for impermeable surfaces located under such overhang.

(Ord. No. 85-26, § 1(I.E.36), 11-27-1985; Ord. No. 14-007, § 1, 6-17-2014)

CITY OF SANIBEL  
ORDINANCE NO. 14-007

AN ORDINANCE AMENDING THE SANIBEL CODE OF ORDINANCES, SUBPART B, LAND DEVELOPMENT CODE, CHAPTER 86 DEVELOPMENT STANDARDS, ARTICLE II SITE PREPARATION, SECTION 86-42 DETERMINATION OF IMPERMEABLE COVERAGE; BY AMENDING SAID SECTION TO ALLOW, UNDER CERTAIN CONDITIONS, THE USE OF PERMEABLE PAVERS WITHIN THE DRIVEWAYS AND PARKING AREAS OF SINGLE-FAMILY, DUPLEX AND TRIPLEX RESIDENTIAL DEVELOPMENT TO BE CONSIDERED ONE HUNDRED PERCENT (100%) PERMEABLE; PROVIDING FOR CONFLICT AND SEVERANCE; PROVIDING FOR CODIFICATION AND PROVIDING AN EFFECTIVE DATE.

**WHEREAS**, the City has adopted a Land Development Code to implement the goals, objectives, and limitations of the *Sanibel Plan*; and

**WHEREAS**, a procedure has been established to revise and amend regulations contained in the Land Development Code in a manner consistent with the *Sanibel Plan*; and

**WHEREAS**, City Council deems it necessary to make such revisions, as contained in this ordinance; and

**WHEREAS**, all required public notices and public hearings for such revisions have been properly given and held; and

**WHEREAS**, such revisions have been referred to the Planning Commission for a recommendation and the Planning Commission has found such revisions and this Ordinance to be consistent with the *Sanibel Plan*;

**NOW, THEREFORE**, be it ordained by the Council of the City of Sanibel, Florida that:

**SECTION 1.** The Code of Ordinances of the City of Sanibel, Chapter 86 Development Standards, Article II Site Preparation, Section 86-42 Determination of Impermeable Coverage, is hereby amended to read as follows with underlining indicating additions and strikethroughs indicating deletions:

In residential developments, it is deemed to be desirable to encourage sand and shell driveways and parking areas, because the more natural appearance of such substance is more in harmony with the character of the city as a whole and its emphasis on environmental and aesthetic priorities. The same factors apply to the use of sand and shell within higher density, larger, multi-family residential, mixed-use and commercial development as well. However, the use of such substances in high traffic

projects also entails some inconvenience and maintenance problems in wet weather conditions.

It is similarly deemed desirable to encourage the use of permeable pavers within low density, small scale residential developments such as single family, duplex and triplex because permeable pavers offer an attractive alternative to sand and shell driveways in that permeable pavers can, under appropriate conditions, contribute to the improved handling and treatment of onsite stormwater runoff. In light of the considerations in this section, the following rules shall apply in the determination and limitation of the area of a lot or parcel which may be covered with impermeable surfaces:

- (1) For residential developments, sand or shell driveways and parking areas shall be deemed to be 100 percent permeable, provided that the slope of such surfaces does not exceed one to 12, vertical to horizontal; that is, such areas shall not be counted in the determination of coverage by impermeable surfaces.
- (2) For nonresidential developments, and for developments containing both commercial and residential uses on the same lot or parcel, sand or shell driveways, parking areas, loading areas, and turnaround areas shall be deemed to be 50 percent permeable, provided that the slope of such surfaces does not exceed one to 12, vertical to horizontal; that is, only one-half of such surface areas shall be counted in the determination of coverage by impermeable surfaces.
- (3) For the purposes of this section, the term "driveway and parking area" shall mean that area necessary to provide for safe and convenient access and off-street parking accommodation for the number of vehicles required for the specific use.
- (4) For all new and existing single-family, duplex and triplex residential developments in conformance with the maximum allowed developed area requirements of this Land Development Code, the use of permeable pavers for driveways and parking areas, and the replacement of existing sand, shell, asphalt, brick or concrete driveways and parking areas with permeable pavers, shall be deemed

to be 100 percent permeable, and such areas shall not be counted in the determination of coverage by impermeable surfaces provided that:

a. the pavers are installed to the manufacturer's specifications and are not less than 50% permeable;

b. the slope of such surfaces does not exceed one to 12, vertical to horizontal;

c. a vegetated landscaped buffer at least 10 feet in depth is provided on each side of the driveway, unless the driveway is existing, and is located closer than 10 feet to a side property line, and cannot be relocated in order to comply with this requirement, then the buffer on the one side of the driveway can be less than 10 feet in depth;

d. the required vegetated landscaped buffer areas shall not consist of primarily sod. All installed landscape buffers shall be subject to the maintenance standards of Land Development Code Section 122-75 and the Traffic visibility at driveway intersections requirements of Land Development Code Sec. 126-935.

e. native plant species shall comprise no less than seventy-five percent (75%) of the required vegetated landscape buffer and shall otherwise comply with the required types, numbers, varieties and installation standards of Land Development Code Sections 122-73 and 74.

f. the driveway shall not be curbed or blocked along its sides in order to ensure that stormwater is allowed to drain into the adjacent vegetated landscape buffer;

g. where there is a shared use path, the paver driveway must stop at and abut the interior edge of the path in order to allow for a continuous pathway without any changes in either height or texture;



h. where there is no shared use path, the paver driveway must stop at and abut the paved edge of the roadway, matching the elevation of the roadway at their juncture. The property owner shall be responsible for normal maintenance and repair of the paver driveway; but the City shall either pick-up or replace any disturbed pavers to match the roadway surface whenever the City repaves or resurfaces the roadway; and

i. The City reserves the right to address the use of pavers on driveways and parking areas for residential duplex and triplex structures, on a case by case basis, in order to accommodate the variety of parking layouts that exists or may be employed by such structures and to ensure that the intent of this section is achieved.

(53) All other nonnatural surfaces shall be deemed to be 100 percent impermeable unless a developer demonstrates by engineering report or other competent evidence that the surface is less than 100 percent impermeable.

(6) Nothing in this section shall relieve the property owner from the need to meet all other provisions and requirements of this Land Development Code. Furthermore, the use of permeable pavers shall neither create nor further any nonconformity.

(74) For all buildings, up to a four-foot roof overhang shall not count toward impermeable surface coverage, except for impermeable surfaces located under such overhang.

**SECTION 2.** Codification.

This ordinance shall be an amendment to the Code of Ordinances of the City of Sanibel. In Chapter 86 of Subpart B of Part II of the Sanibel Code of Ordinances, Section 86-42 of Article II is hereby amended.

**SECTION 3.** Conflict.

All ordinances and parts of ordinances in conflict herewith shall be and the same are hereby repealed. If any part of this ordinance conflicts with any other part, it shall be severed and the remainder shall have full force and effect and be liberally construed.

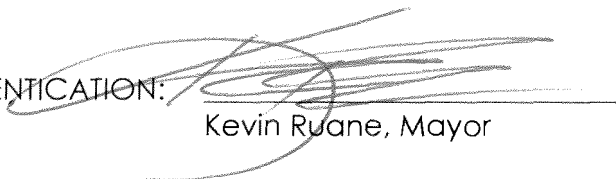
**SECTION 4.** Severance.

If any section, subsection, sentence, clause, phrase or portion of this ordinance or application hereof, is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion or application shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portion or application hereof.

**SECTION 5.** Effective date.

This ordinance shall take effect immediately upon adoption.

**DULY PASSED AND ENACTED** by the Council of the City of Sanibel, Florida, this 17th day of June, 2014

AUTHENTICATION:   
Kevin Ruane, Mayor

AUTHENTICATION:   
Pamela Smith, City Clerk

APPROVED AS TO FORM:  6/17/14  
Kenneth B. Cuyler, City Attorney Date

Publication and Hearing Dates:  
First Reading June 3, 2014  
Publication Date June 6, 2014  
Second Reading June 17, 2014

Vote of Council Members:

|          |            |
|----------|------------|
| Ruane    | <u>yea</u> |
| Congress | <u>yea</u> |
| Denham   | <u>yea</u> |
| Harrity  | <u>yea</u> |
| Jennings | <u>yea</u> |

Date filed with the City Clerk: June 17, 2014

**From:** [Holly Milbrandt](#)  
**To:** [Craig J. Chandler](#)  
**Cc:** [Paula N. McMichael](#); [Dana L. Dettmar](#); [Joel P. Caouette](#)  
**Subject:** Fw: Ord 14-007 Pervious Pavers  
**Date:** Tuesday, August 13, 2024 12:32:19 PM

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Another for the history books

*Holly Milbrandt*

Natural Resources Director  
City of Sanibel  
(239) 472-3700  
[www.mysanibel.com](http://www.mysanibel.com)



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**From:** Judie A. Zimomra <Judie.Zimomra@mysanibel.com>  
**Sent:** Wednesday, August 6, 2014 4:56 PM  
**To:** Holly Milbrandt <Holly.Milbrandt@mysanibel.com>; Sara J. Tabor <Sara.Tabor@mysanibel.com>  
**Subject:** Re: Ord 14-007 Pervious Pavers

I have a meeting e the mayor at 2 tomorrow to discuss a list of items which this is one - please book prior time on my calendar to discuss - thank you

On Aug 6, 2014, at 3:56 PM, "Holly Milbrandt" <[Holly.Milbrandt@mysanibel.com](mailto:Holly.Milbrandt@mysanibel.com)> wrote:

Judie—

I know this issue is on your radar—and understanding that any changes to the adopted ordinance would need Planning Commission/Council approval, we would like to meet at your earliest opportunity to discuss. A detailed description of challenges and proposed recommendations is below.

Thank you,

Holly

In reviewing a number of permit applications for pervious paver driveways as a result of adoption of Ordinance 14-007, it has been evident based on the applications received that applicants are unclear as to what is required to meet the vegetation buffer requirements and that there was a need at the staff level (Planning and Natural Resources) to further define how we would interpret/implement the required vegetation buffer standards. I have attached a DRAFT document for internal use that details the consensus achieved by Planning and Natural Resources regarding these standards, specifically Items 4.c, 4.d, 4.e.

No change is recommended to Items 4.c and 4.d; although some interpretation guidance has been included. However, in reviewing applications it is evident that in Item 4.e, referencing and requiring compliance with the complete residential buffer standards in 122-73 and 122-74, we have created some potential unintended consequences that were not previously realized.

**The proposed language changes to Item 4.e and new insertion Item 4.f. would eliminate the requirement to plant large or medium trees as part of the driveway buffer and would serve to clarify the standards by specifically listing the buffer requirements within Ordinance 14-007.** This recommendation is related to the often uneven distribution of landscape plants in Sanibel landscapes, with property owners generally planting most specimen exotic trees in the front of the

property. The City's 75% native standard applies to the landscape as a whole and does not require that natives be evenly distributed across the front, sides, and rear of the property. Requiring property owners to meet the existing residential buffer standards for large and medium trees may pose an undue burden to the homeowner, potentially making it necessary for an owner to either remove large and medium trees or plant native large or medium trees at a ratio of 3:1 for each exotic tree within the designated buffer area. The intent of the buffer planting requirements under this section was primarily to offset increased impervious coverage and to improve wildlife habitat, as well as to help reduce stormwater runoff. For a paver driveway, this intent can be achieved by shrub and ground cover-type plantings. Trees, which are extremely important to shield a residential structure along an arterial road, are less suited for the environmental objectives associated with a pervious paver driveway.

Here's a real world example:

To meet the standards for large/medium trees at the **Krukar residence at 757 Birdie View**, 6 trees are required on each side of the driveway. The residential vegetation buffer standards referenced in the paver ordinance (14-007) also require 6 different species in this category (large/medium trees). On the south side of the driveway, seven (7) native trees already exist within the buffer, but only represent 2 different species. Thus even though the buffer already exceeds the quantity of native trees required, it does not meet the diversity of species required. Consequently, a minimum of 4 additional native medium/large trees (8-12 feet in height, 10-gallon or larger) each of a different species are still needed to meet the standard. This is likely to add \$800-1000 or more in cost.

If the seven (7) trees already existing within the buffer were exotic species rather than natives, the buffer would again already exceed the quantity of trees required. However, unless the property owner wanted to remove some or all of the exotic trees, the property owner would have to plant a minimum of 21 native medium/large trees (8-12 feet in height, 10-gallon or larger) to meet the 75% native standard in the medium/large tree category. Adding the required plants could cost in excess of \$4000.

(This is actually a reasonable scenario inasmuch as the City's 75% native standard applies to the landscape as a whole and does not require that natives be evenly distributed across the front, sides, and rear of the property. It is quite common for people to have a higher percentage of large tropical specimen palms and trees and other showy exotics in the front yard. There is still the potential that an applicant might need to add or remove additional native shrubs or groundcovers to account for exotic shrubs and groundcovers already existing on the property, but the cost for shrubs and groundcovers is significantly less and are these plants are generally not the focal point of the landscape).

*Holly Milbrandt*

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<86-42 Update--Pervious Pavers Vegetation Buffers\_080414.docx>

**From:** [Holly Milbrandt](#)  
**To:** [Craig J. Chandler](#)  
**Cc:** [Paula N. McMichael](#); [Dana L. Dettmar](#); [Joel P. Caouette](#)  
**Subject:** Fw: Ordinance 14-007 (Residential Pavers) & Administrative on Section 1 (4)(c) Vegetation Buffer  
**Date:** Tuesday, August 13, 2024 12:21:01 PM

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FYI—For the history books

*Holly Milbrandt*

Natural Resources Director

City of Sanibel

(239) 472-3700

[www.mysanibel.com](http://www.mysanibel.com)



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**From:** Judie A. Zimomra <Judie.Zimomra@mysanibel.com>  
**Sent:** Thursday, August 14, 2014 11:34 PM  
**To:** Jimmy Jordan <Jimmy.Jordan@mysanibel.com>; James Evans <James.Evans@mysanibel.com>; Holly Milbrandt <Holly.Milbrandt@mysanibel.com>; Keith L. Williams <Keith.Williams@mysanibel.com>  
**Cc:** sancouncil <sancouncil@mysanibel.com>; Ken Cuyler <Ken.Cuyler@mysanibel.com>; Pamela Smith <pamela.smith@mysanibel.com>; 'Jim LaRue' <jim@larueplanning.com>; Harold Law <Harold.Law@mysanibel.com>  
**Subject:** Ordinance 14-007 (Residential Pavers) & Administrative on Section 1 (4)(c) Vegetation Buffer

Since the adoption of 14-007 (Residential Pavers) there has been significant interest by Sanibel homeowners wishing to pursue installation of pavers at their homes. Recently the Staff has brought to my attention that to date those homeowners who wish to install the pavers cannot due to one section of the Ordinance as adopted, Section 1. (4) (c) Vegetative Buffer. This section is not consistent with City Council's legislative intent. I have reviewed plans for a new home to be constructed, an older existing ground level home and a more recently constructed home currently in compliance for coverage & vegetation. All three homeowners wish to install pavers & all three can do so totally complaint with all sections other than the additional vegetative buffer requirements. I have also visited the properties in question. Via this email I am implementing an Administrative Stay on this section of the Ordinance. Furthermore I am requesting the City Attorney asset us draft corrective legislation. This is a very rare action however I am very aware that it was the clear legislative intent of City Council to permit the installation of residential pavers consistent with all remaining provisions of Ordinance 14-007 . This action will permit these homeowners proceed with

their projects consistent with Council's intent.

This stay is effective immediately. Please do not hesitate to contact me if you have *any* questions.

Judie Zimomra  
Sanibel City Manager



# City of Sanibel

## Planning Commission

### STAFF REPORT

Planning Commission Meeting:  
 Agenda Item:  
 Applicant:  
 Application No.

May 27, 2014  
 No. 6b  
 City of Sanibel  
 14-7983

**RE: AN ORDINANCE AMENDING THE SANIBEL CODE OF ORDINANCES, SUBPART B, LAND DEVELOPMENT CODE, CHAPTER 86 DEVELOPMENT STANDARDS, ARTICLE II SITE PREPARATION, SECTION 86-42 DETERMINATION OF IMPERMEABLE COVERAGE; BY AMENDING SAID SECTION TO ALLOW, UNDER CERTAIN CONDITIONS, THE USE OF PERMEABLE PAVERS WITHIN THE DRIVEWAYS AND PARKING AREAS OF SINGLE-FAMILY, DUPLEX AND TRIPLEX RESIDENTIAL DEVELOPMENT TO BE CONSIDERED ONE HUNDRED PERCENT (100%) PERMEABLE; PROVIDING FOR CONFLICT AND SEVERANCE; PROVIDING FOR CODIFICATION AND PROVIDING AN EFFECTIVE DATE. APPLICATION NO. 14-7983 LDC**

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#### BACKGROUND AND SUMMARY

A draft Ordinance has been prepared in response to residential property owners wanting to install permeable pavers within shell, stone and sand driveways and off-street parking areas. At City Council's direction Staff and the Planning Consultant firm of LaRue Planning and Management Services, Inc., have prepared a report that summarized the City's current regulations and those found within other Florida communities pertaining to the use of permeable/pervious brick pavers. A copy of the draft Ordinance and the LaRue Report are provided with this Staff Report respectively as **Attachment A** and **Attachment B**.

It is apparent from this study that the use of materials such as sand, shell and gravel as driveways and parking area can become more compacted and less pervious over a period of many years. It is similarly apparent that pervious pavers, when they are properly installed and maintain, can enhance the treatment and filtration of stormwater runoff carrying contaminants and siltation from shell and sand driveways and vehicular parking areas.

#### PROCEDURE

LDC Section 82-241, Amendments to Land Development Code or zoning district boundaries, provides the following standards for the Planning Commission to recommend such amendments to City Council for their consideration:

- (1) The Planning Commission shall make reference to the Sanibel Plan to determine if the proposed amendment to the land development regulations is consistent with the intent and purpose of the Sanibel Plan.



- (2) The Planning Commission shall determine whether the proposed amendment:
- a. Will encourage the most appropriate use of land and city resources, consistent with the public interest;
  - b. Will prevent the overcrowding of land and avoid the undue concentration of population;
  - c. Will adversely affect the development of adequate and efficient provisions for transportation, water, sewage, schools, parks, recreation facilities, and the environmental, social and economic resources of the city;
  - d. Will adversely affect the character and stability of the present and future land use and development of the community;
  - e. Will adversely affect orderly growth and development;
  - f. Will preserve, promote, protect and improve the public health, safety and general welfare of the community; and
  - g. Is consistent with the City Charter.
- (3) If the Planning Commission determines that a proposed amendment is inconsistent with the Sanibel Plan or its intent and purpose, the Planning Commission may, nevertheless, recommend approval of the proposed amendment, along with a corresponding amendment to the Sanibel Plan, if the Planning Commission determines that the proposed amendment should be approved based upon a consideration of all of the factors specified in subsection (2) of this section.

## **RECOMMENDATION**

Upon finding that the proposed ordinance is consistent with the requirements of Sanibel Code Section 82-241 for amendments to the Land Development Code and with the intent and purpose of the Sanibel Plan, the Planning Commission should recommend City Council adopts the subject ordinance.

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**Attachment A:** Draft Ordinance No. 14-007

**Attachment B:** LaRue Report

**ATTACHMENT A**

Draft Ordinance 14-007  
Appl. No. 14-7983LDC – Permeable Pavers  
05-27-14 Planning Commission Hearing  
Agenda Item 6b.

No. 14-7983 LDC  
Draft no. 4 05-23-2014

**CITY OF SANIBEL  
ORDINANCE NO. 14 -007**

**AN ORDINANCE AMENDING THE SANIBEL CODE OF ORDINANCES, SUBPART B, LAND DEVELOPMENT CODE, CHAPTER 86 DEVELOPMENT STANDARDS, ARTICLE II SITE PREPARATION, SECTION 86-42 DETERMINATION OF IMPERMEABLE COVERAGE; BY AMENDING SAID SECTION TO ALLOW, UNDER CERTAIN CONDITIONS, THE USE OF PERMEABLE PAVERS WITHIN THE DRIVEWAYS AND PARKING AREAS OF SINGLE-FAMILY, DUPLEX AND TRIPLEX RESIDENTIAL DEVELOPMENT TO BE CONSIDERED ONE HUNDRED PERCENT (100%) PERMEABLE; PROVIDING FOR CONFLICT AND SEVERANCE; PROVIDING FOR CODIFICATION AND PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, the City has adopted a Land Development Code to implement the goals, objectives, and limitations of the *Sanibel Plan*; and

**WHEREAS**, a procedure has been established to revise and amend regulations contained in the Land Development Code in a manner consistent with the *Sanibel Plan*; and

**WHEREAS**, City Council deems it necessary to make such revisions, as contained in this ordinance; and

**WHEREAS**, all required public notices and public hearings for such revisions have been properly given and held; and

**WHEREAS**, such revisions have been referred to the Planning Commission for a recommendation and the Planning Commission has found such revisions and this Ordinance to be consistent with the *Sanibel Plan*;

**NOW, THEREFORE**, be it ordained by the Council of the City of Sanibel, Florida that:

**SECTION 1.** The Code of Ordinances of the City of Sanibel, Chapter 86 Development Standards, Article II Site Preparation, Section 86-42 Determination of Impermeable Coverage, is hereby amended to read as follows with underlining indicating additions and strikethroughs indicating deletions:

In residential developments, it is deemed to be desirable to encourage sand and shell driveways and parking areas, because the more natural appearance of such substance is more in harmony with the character of the city as a whole and its emphasis on environmental and aesthetic priorities. The same factors apply to the use of sand and shell within higher density, larger, multi-family residential, mixed-use and commercial development as well. However, the use of such substances in high traffic projects also entails some inconvenience and maintenance problems in wet weather conditions.

It is similarly deemed desirable to encourage the use of permeable pavers within low density, small scale residential developments such as single family, duplex and triplex because permeable pavers offer an attractive alternative to sand and shell driveways in that permeable pavers can, under appropriate conditions, contribute to the improved handling and treatment of onsite stormwater runoff. In light of the considerations in this section, the following rules shall apply in the determination and limitation of the area of a lot or parcel which may be covered with impermeable surfaces:

- (1) For residential developments, sand or shell driveways and parking areas shall be deemed to be 100 percent permeable, provided that the slope of such surfaces does not exceed one to 12, vertical to horizontal; that is, such areas shall not be counted in the determination of coverage by impermeable surfaces.
- (2) For nonresidential developments, and for developments containing both commercial and residential uses on the same lot or parcel, sand or shell driveways, parking areas, loading areas, and turnaround areas shall be deemed to be 50 percent permeable, provided that the slope of such surfaces does not exceed one to 12, vertical to horizontal; that is, only one-half of such surface areas shall be counted in the determination of coverage by impermeable surfaces.
- (3) For the purposes of this section, the term "driveway and parking area" shall mean that area necessary to provide for safe and convenient access and off-street parking accommodation for the number of vehicles required for the specific use.
- (4) For all new and existing single-family, duplex and triplex residential developments in conformance with the maximum allowed developed area requirements of this Land Development Code, the use of permeable pavers for driveways and parking areas, and the replacement of existing sand, shell, asphalt, brick or concrete driveways and parking areas with permeable pavers, shall be deemed

to be 100 percent permeable, and such areas shall not be counted in the determination of coverage by impermeable surfaces provided that:

a. the pavers are installed to the manufacturer's specifications and are not less than 50% permeable;

b. the slope of such surfaces does not exceed one to 12, vertical to horizontal;

c. a vegetated landscaped buffer at least 10 feet in depth is provided on each side of the driveway, unless the driveway is existing, and is located closer than 10 feet to a side property line, and cannot be relocated in order to comply with this requirement, then the buffer on the one side of the driveway can be less than 10 feet in depth;

d. the required vegetated landscaped buffer areas shall not consist of primarily sod. All installed landscape buffers shall be subject to the maintenance standards of Land Development Code Section 122-75 and the Traffic visibility at driveway intersections requirements of Land Development Code Sec. 126-935.

e. native plant species shall comprise no less than seventy-five percent (75%) of the required vegetated landscape buffer and shall otherwise comply with the required types, numbers, varieties and installation standards of Land Development Code Sections 122-73 and 74.

f. the driveway shall not be curbed or blocked along its sides in order to ensure that stormwater is allowed to drain into the adjacent vegetated landscape buffer;

g. where there is a shared use path, the paver driveway must stop at and abut the interior edge of the path in order to allow for a continuous pathway without any changes in either height or texture;

h. where there is no shared use path, the paver driveway must stop at and abut the paved edge of the roadway, matching the elevation of the roadway at their juncture. The property owner shall be responsible for normal maintenance and repair of the paver driveway; but the City shall either pick-up or replace any disturbed pavers to match the roadway surface whenever the City repaves or resurfaces the roadway; and

i. The City reserves the right to address the use of pavers on driveways and parking areas for residential duplex and triplex structures, on a case by case basis, in order to accommodate the variety of parking layouts that exists or may be employed by such structures and to ensure that the intent of this section is achieved.

(53) All other nonnatural surfaces shall be deemed to be 100 percent impermeable unless a developer demonstrates by engineering report or other competent evidence that the surface is less than 100 percent impermeable.

(6) Nothing in this section shall relieve the property owner from the need to meet all other provisions and requirements of this Land Development Code. Furthermore, the use of permeable pavers shall neither create nor further any nonconformity.

(74) For all buildings, up to a four-foot roof overhang shall not count toward impermeable surface coverage, except for impermeable surfaces located under such overhang.

**SECTION 2.** Codification.

This ordinance shall be an amendment to the Code of Ordinances of the City of Sanibel. In Chapter 86 of Subpart B of Part II of the Sanibel Code of Ordinances, Section 86-42 of Article II is hereby amended.

**SECTION 3.** Conflict.

All ordinances and parts of ordinances in conflict herewith shall be and the same are hereby repealed. If any part of this ordinance conflicts with any other part, it shall

be severed and the remainder shall have full force and effect and be liberally construed.

**SECTION 4.** Severance.

If any section, subsection, sentence, clause, phrase or portion of this ordinance or application hereof, is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such portion or application shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portion or application hereof.

**SECTION 6.** Effective date.

This ordinance shall take effect immediately upon adoption.

**DULY PASSED AND ENACTED** by the Council of the City of Sanibel, Lee County, Florida, this \_\_\_\_\_ day of \_\_\_\_\_, 2014

AUTHENTICATION: \_\_\_\_\_  
Mayor City Clerk

APPROVED AS TO FORM: \_\_\_\_\_  
City Attorney Date

Publication and Hearing Dates:

Section 163, F.S. Publication Date: \_\_\_\_\_, 2013

Date of First Public Hearing: \_\_\_\_\_, 2013

Section 163, F.S. Publication Date: \_\_\_\_\_, 2013

Ordinance Publication Date: \_\_\_\_\_, 2013

Date of Second Public Hearing: \_\_\_\_\_, 2013

Vote of Council Members:

- Ruane \_\_\_\_\_
- Denham \_\_\_\_\_
- Harrity \_\_\_\_\_
- Jennings \_\_\_\_\_
- Congress \_\_\_\_\_

Date filed with the City Clerk: \_\_\_\_\_

**ATTACHMENT B**

LaRue Report  
Appl. No. 14-7983LDC - Permeable Pavers  
05-27-14 Planning Commission Hearing  
Agenda Item 6b.

# City of Sanibel

## Permeable Pavers for Residential Uses

Draft: Rev. April 29, 2014



**LaRue** Planning  
& Management Services, Inc.

1375 Jackson Street, Suite 206  
Fort Myers, Florida  
239-334-3366

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## I. EXISTING REGULATIONS AND HISTORICAL BACKGROUND

Since at least 1985, the City of Sanibel has favored sand and shell driveways in residential areas over more formal forms of paving. The following excerpt from Sec. 86-42, which governs impermeable coverage determinations, clearly states the basis for the City's historical position on this matter.

"In residential developments, it is deemed to be desirable to encourage sand and shell driveways and parking areas, because the more natural appearance of such substance is more in harmony with the character of the city as a whole and its emphasis on environmental and aesthetic priorities. The same factors apply to commercial development as well. However, the use of such substances in high traffic projects also entails some inconvenience and maintenance problems in wet weather conditions. ..."

In consideration of this policy, the City's Code provides an incentive to encourage residential properties to use sand and shell for driveway and parking areas. The incentive is in the form of a declaration that such surface improvements are considered 100% permeable provided the surface is not greater than one foot vertical to 12 feet horizontal. Consequently, sand and shell driveways and parking areas are not counted as impermeable surface coverage.

On the other hand, in nonresidential or mixed-use developments, such minimally sloped sand or shell surfaces are considered only 50% permeable. Other nonnatural surfaces are considered to be 100% impermeable unless it is demonstrated in an engineering report that they are less than 100% impermeable.

In 1995, the following memo was issued with regard to the permeability of concrete pavers.





DATE: May 30, 1995

TO: Sandy Larsen - Planning Department

FROM: Gates Castle - Public Works Department

Subject: Determination of Impermeable Coverage

The design considerations for the Uni Eco-Stone Concrete Paver by Rollins PH.D, P.E. indicates that infiltration tests on said concrete pavers for a rainfall of 2.8 inches in/hr. has a slope of 0.0% and a run-off of 0.0%.

Said report also indicates that drainage structures and filters tend to clog with time reducing the potential for water flow through the UNI Eco-Stone pavement surface. Fine debris and detritus may accumulate between surface particles in the drainage openings, thereby, reducing the materials flow capacity.

Based on the above information, we recommend that for the material to be highly permeable it need the drainage opening and gravel to be clean at all times and that not being the case then said concrete paver shall be considered fifty (50%) permeable.

The City has recently decided to investigate the appropriateness of reducing the disincentive for use of pavers instead of sand and shell in both residential and nonresidential areas because sand and shell have proven to have noticeable problems of their own. Specifically, sand and shell compact over time, reducing the degree of permeability which results in "ponding" as well as runoff from driveways and parking areas during the rainy season. Dust is also recognized as a problem associated with these materials in the dry season.



## II. REVIEW OF RESOURCE MATERIALS ON PERMEABLE/PERVIOUS PAVERS

Searches for information on the permeability, effectiveness, installation and maintenance of permeable pavement systems (also known as pervious pavement systems) provided a wealth of information, much of it very technical.

It has become clear to us that the effectiveness of permeable pavers varies with the installation, maintenance and the geographic area due to weather, soil, and sub-surface conditions. We have gathered reference information from a variety of sources including out-of-state sources, Florida sources such as the University of Florida and University of Central Florida, other Florida communities, and the permeable paver industry. Information from In and out-of-state sources was used to the extent that it was applicable to the performance of pavers in general, or was determined likely to be applicable to Sanibel. Following is a summary of our findings and/or excerpts from particularly germane text relating to permeable pavers.

### Permeable paving systems

“Permeable paving practices capture and temporarily store the water volume before allowing it to infiltrate into the soil. The two major types include porous asphalt or concrete and paver systems.

1. Porous asphalt and concrete resemble traditional asphalt or concrete pavement but they have a 10%--25% void space and are constructed over an open-graded stone base course that doubles as the stormwater reservoir before it infiltrates into the subsoil.
2. Pavers include permeable blocks, solid blocks with open-cell joints, as well as open-cell grids filled with either gravel or with sandy soil and then planted with turf, set on a prepared open-graded stone base course that also serves as a reservoir for the stormwater before it infiltrates into the subsoil.”<sup>(1)</sup>

For the purposes of this investigation, we have concentrated on permeable pavers which would include permeable interlocking concrete pavers (PICP) and "turf block". Turf block or grass block is the use of interlocking concrete cells filled with soil and planted with turf grass or a low-maintenance groundcover.

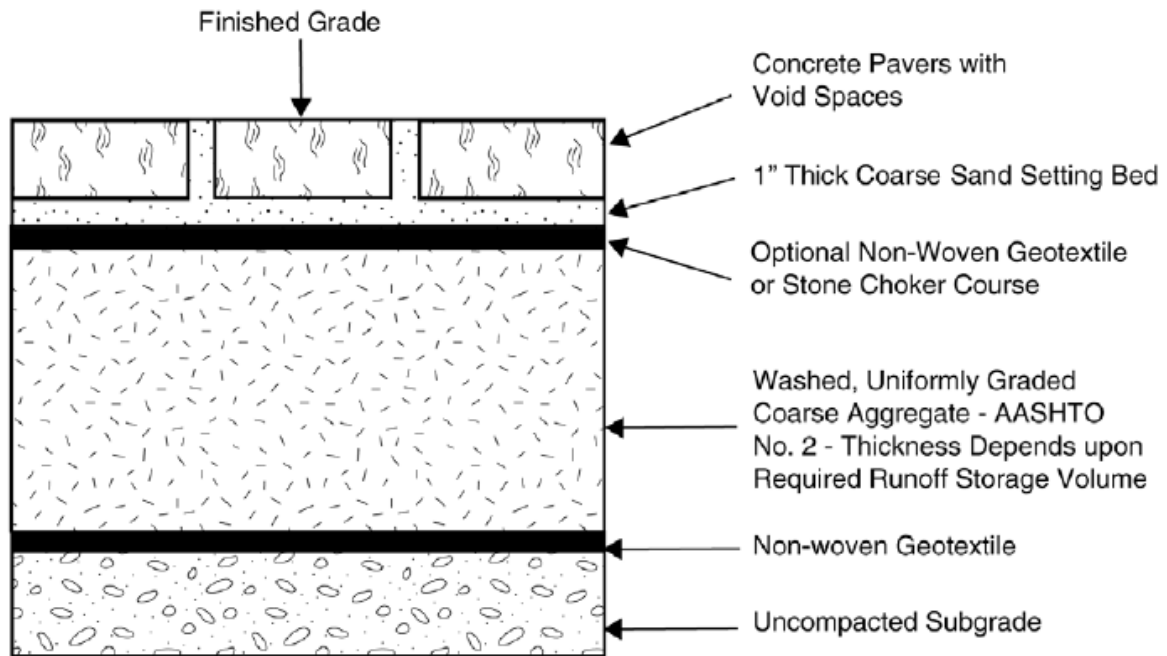
There are two types of installations of permeable pavers, with and without a storage bed (see the illustrations following). When a storage bed is provided, the pavers are placed on a thin layer of sand, beneath which is the storage bed which is comprised of a layer of broken stone. The storage bed is used to temporarily store the runoff that moves vertically through the void spaces in the pavers or spaces between the pavers. This runoff then infiltrates into the uncompacted subgrade, also helping to remove some contaminants.

Permeable pavers without a storage bed are placed only on a thin layer of sand and crushed stone that provides only structural support for the paver surface and has no significant runoff storage volume. We suspect, with the likely high water table in Sanibel, that permeable paver systems are most likely built without storage beds. Even without storage beds a portion of the runoff from the pavers can still collect in the surface voids and infiltrate through the sand and crushed stone bed into the soil below.

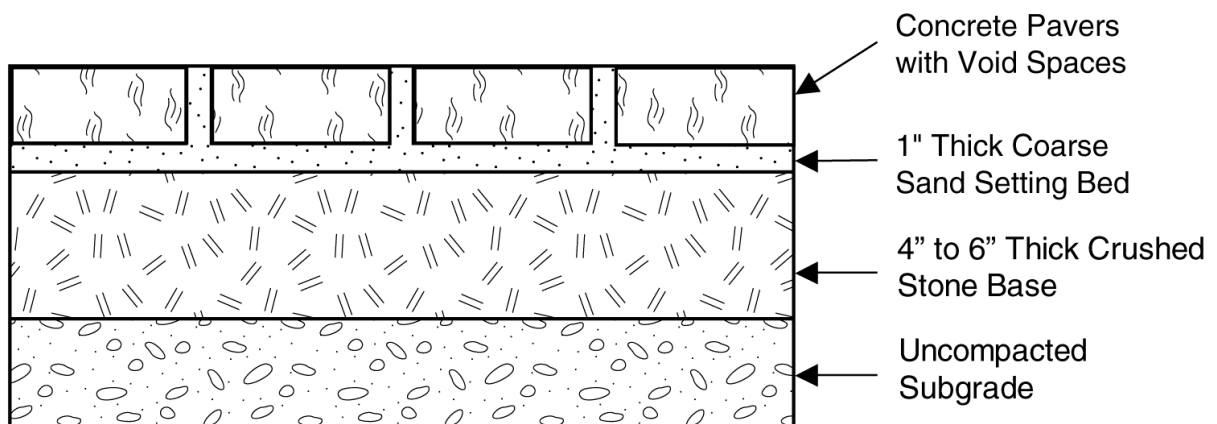
<sup>(1)</sup> State of Rhode Island Stormwater Management Guidance for Individual Single-Family Residential Lot Development



## Permeable Pavers with Storage Base



## Permeable Pavers without Storage Base



Source: New Jersey Stormwater Best Management Practices Manual

## Considerations Associated with Permeable Paver Systems

### Applicability:

Permeable pavers are appropriate for low traffic applications, such as parking areas, private driveways, courtyards, sidewalks, etc.

### Installation

Permeable paving systems should be designed and installed in accordance with the manufacturer's specifications.

In order to optimize water infiltration through the permeable paving system, other communities typically set maximum surface slope at between 2% and 5%

### Maintenance

The overall maintenance goal for a permeable paving system is to prevent clogging of the void spaces within the surface material. Proper maintenance of permeable pavers includes periodic vacuuming to remove sediment to ensure the void spaces do not clog and permeability is maintained.

### Permeability

The degree of permeability of any particular form of pervious paver is dependent upon the specific type of paver, the design of the specific application, the subsoil characteristics of the site and the manner of installation. Consequently, there is no table or matrix of permeability that an individual or municipality can rely upon to assess the extent to which a specific paver or even type of paver can be considered impermeable. Each case should be individually certified by a qualified engineer as to its degree of permeability.



### III. OTHER COMMUNITIES' REGULATIONS FOR PERMEABLE PAVERS

We identified seven Florida communities with regulations pertaining to permeable paving. Summaries of these regulations follow. Copies of the individual regulations are provided in the Appendix.

#### **Bradenton Beach**

All uses except single-family and two-family dwellings, all uses are required to surface parking and vehicular use areas with permeable material such as turf block, washed shell, stone or gravel, or asphaltic or cement pavement or equivalent so as to provide a durable and dustless surface. Such areas count as permeable surfaces only to the extent they are permeable.

#### **Dunedin**

All primary driveways must be paved, but permeable surfaces are encouraged. Front yard parking areas adjacent to driveways shall be permeable surface. Hard surfaces can be permeable including permeable asphalt, concrete or brick pavers. Loose surfaces such as gravel, mulch or crushed shell must use a method of containment to prevent float of loose material.

#### **Naples**

Parking facilities for fewer than 10 cars, supplemental parking areas and other selected low frequency uses may be surfaced with crushed shell, crushed stone, grass or other permeable surfacing upon approval by the City Manager. Other uses may use permeable parking approved through the site plan review process if:

- (1) the unpaved area is contained by an approved barrier curb to prohibit erosion;
- (2) the owner agrees to maintain the areas in a neat, graded, dust-free condition useable for parking.

The City retains the right to require paving if the area is not properly maintained or no longer functions adequately in its unpaved condition.

#### **Oldsmar**

All required parking spaces must be of an impermeable surface. An exception is made for parking and recreation parking facilities and residential areas where permeable surfaces such as porous pavement, concrete pavers, turf block and other acceptable permeable paving technologies are encouraged. Loose gravel, sand, recycled materials or native soils are not permitted as a permeable surface.

In commercial and industrial uses permeable surfaces may be used for up to 20% of the required parking under certain circumstances. Design, installation and maintenance of alternative paving surfaces must be in accordance with manufacturer's recommendations.



## **Ponce Inlet**

Except for single-family development, all off-street parking and loading facilities must be surfaced with pavement, brick, paver block, asphalt or concrete. Permeable surfaces may be used if a plan for maintaining the permeable surface and that demonstrates the continued function of the materials is included in the development application. Permeable surfaces are included in the calculation of stormwater runoff calculations.

Driveways for single-family development may be surfaced with shell or marl or any other of the materials required for other development.

## **Sarasota County**

Sarasota County has developed a detailed permeable pavers section within its LID Manual. This section does not include single-family homes. Discussion with a representative of the County revealed that no reduction in the computation of impermeable surfaces is applied to permeable paver areas installed on single-family lots. This is because such systems require maintenance to maintain their permeability, and it is difficult to enforce such requirements on single-family properties. In contrast, it is more practical to enforce codes upon commercial establishments and condominium developments with condo associations that can be made to comply with their maintenance responsibilities.

Some of the criteria imposed by Sarasota County include:

- (1) the use of a certified installer
- (2) flat or minimum slope area
- (3) provision of a perimeter edge barrier
- (4) an infiltration rate of at least 1.5 inches per hour
- (5) Require twice yearly testing of infiltration rates
- (6) use of on-site infiltration measurements
- (7) usually include use of underlying storage beds
- (8) requiring vacuum maintenance when infiltration measurement fall below standard and
- (9) designation of a legally responsible authority for maintenance, and the list goes on.

## **Stuart**

In its design standards section for off-street parking, the City of Stuart allows permeable parking surfaces if:

- (1) materials and techniques used will assure the parking will remain functional in heavy rains and drought
- (2) permeable parking materials are installed to manufacturer's specifications
- (3) subsoil testing and inspections by registered professional engineer for consistency with approved plans and manufacturer's specifications
- (4) Percolation to be at a rate sufficient to accommodate a five-year, 24-hour storm event
- (5) Maintenance procedures per manufacturer's specifications
- (6) Paving to normal standards required if permeable areas cease to function properly; credits for permeable areas will be revoked and equivalent permeable areas must be installed.



**EXISTING AND PROPOSED PERMEABLE AND IMPERMEABLE STANDARDS**

| <b>CURRENT REGULATIONS</b>  | <b>Single-family</b>  | <b>Multi-family and Mixed Use</b>             | <b>Commercial</b>                            |
|---|---|---|--|
| <b>Sand/shell</b>   | 100% permeable if slope not greater than 1:12   | 100% permeable if slope not greater than 1:12 | 50% permeable if slope not greater than 1:12 |
| <b>Other permeable non-natural surfaces per manufacturer's specifications</b>                       | 50% permeable   | 50% permeable                                 | 50% permeable                                |
| <b>All other nonnatural surfaces</b>  | 100% impermeable  | 100% impermeable                              | 100% impermeable                             |
| <b>SUGGESTED REGULATIONS</b>  | <b>Single-family, Duplex and Triplex</b>  | <b>Multi-Family and Mixed-Use</b>             | <b>Commercial</b>                            |
| <b>Sand/shell</b>   | 100% permeable if slope not greater than 1:12   | 100% permeable if slope not greater than 1:12 | 50% permeable if slope not greater than 1:12 |
| <b>Permeable pavers and other permeable pavements if installed to manufacturer's specifications</b> | 100% permeable if slope is not greater than 1:12 and total development area remains within maximum allowed. | 50% permeable                                 | 50% permeable                                |
| <b>All other nonnatural surfaces</b>  | 100% impermeable  | 100% impermeable                              | 100% impermeable                             |



**From:** [Oisin F. Dolley](#)  
**To:** [Craig J. Chandler](#); [Holly Milbrandt](#)  
**Subject:** Re: Determination of Impermeable Coverage (Planning Commission)  
**Date:** Tuesday, October 15, 2024 4:15:57 PM

---

Driveways being curbed or blocked stops runoff from going into the swales. I don't have a major issue with it but it's going to cause standing water until the water table allows the pavers to absorb the water. It's just like when people make the grass along driveways higher than the driveway. They wonder why the water doesn't drain into the swale but it can't cause it's blocked by the dirt the grass is growing on. That is the point of that prohibition. Remember that for driveways in the public ROW all elevations of the swale, driveway and driveway culverts are set by the City. A curb similar to the grass being too high would not be in conformance with the elevations as required by the City. It leads to drainage issues so that's the value of the prohibition.

With parking lots I believe they are required to be curbed to establish the retention volume. In most cases there isn't enough depth to water table for the pavers to provide adequate retention. I know Sandalfoot specially has a requirement for a 6" wall/curb around their parking lot. That is because they don't have any other retention.

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**From:** Craig J. Chandler <Craig.Chandler@mysanibel.com>  
**Sent:** Tuesday, October 15, 2024 3:49:33 PM  
**To:** Holly Milbrandt <Holly.Milbrandt@mysanibel.com>; Oisin F. Dolley <Oisin.Dolley@mysanibel.com>  
**Subject:** Determination of Impermeable Coverage (Planning Commission)

Hey Holly & Oisin:

At the last LDC Subcommittee meeting, on the topic of removing conditions (4)(c) through (f) under Section 86-42. – Determination of Impermeable Coverage, there were two questions from Commissioner Welch:

1. What is DNR input on the value of a vegetative buffer connected to permeable paver driveway?
2. What is the City Engineer's input on the value of a prohibition of blocking or curbing of a permeable paver driveway?

If you have any suggestions on amendments rather than striking these conditions, please let me know.



**From:** [Holly Milbrandt](#)  
**To:** [Craig J. Chandler](#); [Oisin F. Dolley](#)  
**Cc:** [Jacklyn A. L."Archevesque](#)  
**Subject:** Re: Determination of Impermeable Coverage (Planning Commission)  
**Date:** Friday, October 18, 2024 5:30:39 PM  
**Attachments:** [86-42 Update--Pervious Pavers Vegetation Buffers\\_080414.docx](#)

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Craig,

Prior to the implementation of the administrative stay and referenced in the email included as Attachment C, Natural Resources recommended some revised language and interpretation guidance (attached) to Ordinance 14-007 (Section 86-42) to clarify requirements related to buffer width and location and sod allowance and to eliminate requirements for large and medium trees. While I cannot recall how these were received, the administrative stay was ultimately enacted citing that the vegetation buffer requirements were inconsistent with Council's legislative intent.

Certainly, there is great value in vegetation buffers adjacent to impervious surfaces to mitigate for stormwater runoff. But for pervious/permeable surfaces that can absorb stormwater runoff, the need for a vegetation buffer is much reduced in this regard. Given that Natural Resources did in 2014 and continues to support the use of pervious pavers as an alternative to permeable gravel/shell surfaces recognizing that they can, under appropriate conditions, contribute to the improved handling and treatment of onsite stormwater runoff, and that the intent of 86-42 was to facilitate the use pervious pavers for this purpose, Natural Resources does not object to the elimination of the vegetation buffer requirements.

Let me know if you would like to discuss further,

Holly

*Holly Milbrandt*

Natural Resources Director

City of Sanibel

(239) 472-3700

[www.mysanibel.com](http://www.mysanibel.com)

Sec. 86-42. Determination of impermeable coverage.

- (4) For all new and existing single-family, duplex and triplex residential developments in conformance with the maximum allowed developed area requirements of this Land Development Code, the use of permeable pavers for driveways and parking areas, and the replacement of existing sand, shell, asphalt, brick or concrete driveways and parking areas with permeable pavers, shall be deemed to be 100 percent permeable, and such areas shall not be counted in the determination of coverage by impermeable surfaces provided that:

\*\*\*\*\*

- c. A vegetated landscaped buffer at least ten feet in depth is provided on each side of the driveway, unless the driveway is existing, and is located closer than ten feet to a side property line, and cannot be relocated in order to comply with this requirement, then the buffer on the one side of the driveway can be less than ten feet in depth;

**Interpretation:**

- ***The vegetation buffer does not have to be immediately adjacent to the driveway;***
- ***Required plant counts shall be calculated based on a 10-foot wide buffer (see 4.e below), but the required plants do not have to be planted in a 10-foot strip and may instead be spread throughout the designated buffer area, provided that there is complete coverage along the entire length of the buffer;***
- ***When the driveway edge is located more than 10-feet from the property line, the vegetation buffer can at a minimum extend from the driveway edge out 10-feet, or at a maximum from the driveway edge to the property line, at the determination of the applicant. However, all plants, native & exotic, existing & installed, between the driveway edge and outer boundary of the designated buffer will be included in the total plant count and the 75% native calculation;***
- ***If a reduced-size buffer is necessary, it should be proportional in size to the available space.***

- d. The required vegetated landscaped buffer areas shall not consist of primarily sod. All installed landscape buffers shall be subject to the maintenance standards of Land Development Code section 122-75 and the traffic visibility at driveway intersections requirements of Land Development Code section 126-935

**Interpretation:**

- ***Primarily sod = > 50 % of the buffer area***

~~e. Native plant species shall comprise no less than 75 percent of the required vegetated landscape buffer and shall otherwise comply with the required types, numbers, varieties and installation standards of Land Development Code sections 122-73 and 122-74;~~

e. Each vegetation buffer shall be installed with plants meeting the following plant requirements:

~~(1) Each required vegetation buffer shall include at least one large or medium tree for each 75 square feet of the required buffer area, with a minimum of six different species of native plants included.~~

(1) Each required vegetation buffer shall include at least one small tree or shrub for each 30 square feet of the required buffer area, ~~(at least 25 percent of which must be small trees)~~ with a minimum of six different species of native plants included.

(2) Each required vegetation buffer shall include at least one ~~low growing (small) shrub or groundcover~~ plant for each 25 square feet of the required buffer area, with a minimum of three different species of native plants included. ~~No grasses or vines shall be used to satisfy this requirement.~~

(3) A minimum of 75 percent, by count, of the in-ground ~~trees and shrubs~~ **vegetation** required by each of the subsections (1) ~~through~~ **and** (2) of this section shall be native species. The remainder may be either native or noncompeting exotic species. The category for native species as ~~large or medium trees, small trees or shrubs, or low growing (small) shrubs or groundcover plants~~, is specified on the city's horticulturally available native plants list. The applicable category for non-competing exotic species of plants shall be as determined by the city manager, or the manager's designee, considering ~~trees generally over 25 feet in height at time of maturity as large or medium trees and~~ considering the similarity of non-competing exotic species of ~~small trees, low growing (small) shrubs and groundcover plants~~ to the categories established for native plants. Existing, preserved plants shall be counted towards ~~meeting~~ the requirements of this division.

~~Sec. 122-74. Installation standards.~~

- f. All vegetation installed to meet the requirements of this division shall be planted in conformance with the following standards:
- (1) The placement of plants comprising the vegetation buffer need not be uniform, but the required plants shall be thoroughly distributed throughout the buffer area.
  - (2) The quality of plants used in the vegetation buffers shall conform to the standards of Florida No. 1 or better, as provided in Grades and Standards for Nursery Plants, 2nd edition, February 1998 PI #97T-05, published by the Division of Plant Industry, State Department of Agriculture and Consumer Services, of the State Department of Agriculture, as it may be revised from time to time.
  - (3) ~~Large and medium trees installed in a vegetation buffer, and existing, preserved large and medium trees used to meet the requirements of this division, must be a minimum of eight feet in height for medium trees and 12 feet in height for large trees. Nursery stock large and medium trees shall be in ten-gallon or larger containers at the time of installation. Small trees must be a minimum height of six feet and~~ Shrubs **must be** a minimum height of 18 inches. Nursery stock small trees and shrubs shall be in seven-gallon or larger containers ~~for small trees and in three-gallon or larger containers for shrubs~~ at the time of installation. Nursery stock ~~low-growing (small) shrubs and groundcover plants shall be in one gallon or larger containers at the time of installation.~~
  - ~~(4) Any part of a required vegetation buffer which lies directly between (line of sight) any commercial building or parking or loading area and any dwelling unit shall be sufficiently dense, between two feet and six feet above ground level, as to screen light and sound passage to the extent reasonably practical. As a minimum, all required small trees and shrubs in such portions of a buffer must be at least six feet in height at the time a completion certificate or certificate of occupancy is issued.~~
  - (4) All vegetation buffers shall be installed in a sound and workmanlike manner according to good planting procedures and in accordance with any applicable requirement of this land development code or other ordinance of the city.
  - ~~(5) All required vegetation buffers shall be protected from vehicular encroachment from adjacent streets, driveways, parking areas, and loading areas.~~

- (5) A completion certificate or certificate of occupancy shall not be issued unless required vegetation buffers meet all the requirements of this division.

**Recommended Code Change: This would eliminate the requirement to plant large or medium trees as part of the driveway buffer and would eliminate confusion by specifically listing the buffer requirements in the Ordinance .** The recommended Code change is related the general uneven distribution of landscape plants in Sanibel landscapes, with most specimen exotic trees being located along the road in the front of the property. Having buffer standards in this section apply to large and medium trees would pose an undue burden to the homeowner, requiring them to either remove large and medium trees or plant native large or medium trees at a ratio of 3:1 for each exotic tree within the designated buffer area. It is important to note that the buffer planting requirements under this section are designed primarily to offset increased impervious coverage and to improve wildlife habitat, as well as to help reduce stormwater runoff. This would be achieved by shrub and ground cover-type plantings.

**Interpretation:**

- **To calculate the total number of plants required in each category, multiply the length of the driveway (ROW not included) by 10 feet (or smaller if deemed necessary by (4.c) and apply 122-73(2) and 122-73(3);**
- **As noted in 122-73(4), “existing, preserved plants shall be counted toward meeting the requirements of this division”— includes both natives and exotics, existing and newly installed; if a property has a significant number of exotic plants concentrated in the front yard, this may require planting more natives than required or removal of existing exotics to meet the 75% native requirement;**
- **To demonstrate compliance with 75% native, the applicant must provide the total number of plants required in each category, and a breakdown of the count of existing and installed plants, with each identified as native or exotic, and the percent native calculation;**
- **Unless further modified, this would still require at least (6) species of native small trees and shrubs; and (3) species of low growing shrubs and groundcovers.**

(Ord. No. 85-26, § 1(I.E.36), 11-27-1985; Ord. No. 14-007, § 1, 6-17-2014)