

## LAND DEVELOPMENT CODE AMENDMENT

### PETITION

PL20180003486

### ORIGIN

Board of County  
Commissioners

### HEARING DATES

BCC - TBD  
CCPC - TBD  
DSAC - TBD  
DSAC-LDR- 12/18/18

### SUMMARY OF AMENDMENT

This amendment introduces a new section to address the placement and location of residential permanent emergency generators for single-family and two-family dwelling units. The amendment establishes locational criteria to property lines, another generator, ancillary fuel tanks, window openings to a dwelling, and when necessary the installation of carbon monoxide detectors.

### LDC SECTIONS TO BE AMENDED

4.02.01 Dimensional Standards for Principal Uses in Base Zoning Districts  
5.03.07 Permanent Emergency Generators (*New Section*)

## ADVISORY BOARD RECOMMENDATIONS

**DSAC-LDR**  
TBD

**DSAC**  
TBD

**CCPC**  
TBD

### BACKGROUND

After Hurricane Irma, all of the County's 270,000 customers served by Florida Power and Light had power outages. There has been a significant increase of County residents installing various residential permanent emergency generators as a means of resiliency against power outage events. Many building permit applications have been rejected due to setback requirements, missing a letter from an entity to allow placement within a maintenance easement, lacking a detailed location plan, or insufficient information. The majority of permits issued have been for 20 and 22 kilowatt generators which represent 77.2% of the total permits and 89.5% are 30 kilowatts or less. (See Exhibit A).

On June 26, 2018, the Board directed staff to proceed with an amendment to increase flexibility for the placement of emergency generators on residential parcels or lots. Staff reviewed common manufacturers' recommended minimum surrounding clearances from walls, fences and landscaping (See Exhibit B), standards in other communities (See Exhibit C), and other guidelines. Staff also worked with industry professionals to better understand common constraints and potential safety issues.

The amendment provides additional flexibility for generator placement by establishing minimum setbacks from property lines that vary depending on the required yard sizes. These setbacks are based on the majority of generators being placed within three to four feet from the exterior house's wall, provided the wall is one-hour fire rated resistant. Four out of five common manufacturer's installation guidelines would be able to meet placement within four feet of the house wall (see Exhibit B- yellow highlight).

The amendment also addresses potential health, safety and welfare associated with adding permanent generators in close proximity to homes by requiring minimum distances between generators and mechanical air intake equipment, compliance with manufacturer's specifications, concurrent review of

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applicable building permits and providing design standards consistent with the Florida's building, mechanical, electrical, plumbing, fuel and gas codes.

A scaled illustration of the proposed 10 feet separation standard between generators is shown in Exhibit D along with photos of installed generators taken from West Coast Generators's website. Additionally, the Exhibit identifies two generator permits that have been rejected, one in a side yard setback of 6.0' and the other 7.5'. To meet manufacturer's locational specifications and current LDC code requirement, these generators exceeded the current standard by 11 inches and 8 inches.

**FISCAL & OPERATIONAL IMPACTS**  
TBD

**GMP CONSISTENCY**  
To be provided by comprehensive planning staff.

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**EXHIBITS:** A) Permanent Generator Permits Issued or Rejected ; B) Manufacturer's Surrounding Clearances; C) Other Florida Communities Research

Amend the LDC as follows:

**4.02.01 - Dimensional Standards for Principal Uses in Base Zoning Districts**

\* \* \* \* \*

**D. Exemptions and exclusions from design standards.**

\* \* \* \* \*

13. Permanent emergency generators may be placed within the rear yard with a 10-foot rear yard setback. Permanent emergency generators may encroach into side yards up to 36 inches. Generators are not permitted to encroach into required front yards. For single-family and two-family dwelling units, see LDC section 5.03.07 for exceptions and requirements. Above-ground fuel tanks for the generators are subject to the same setbacks; however, underground tanks are not subject to setback requirements. In order to reduce noise during required routine exercising of the generators, this exercising is restricted to operating the generator for no more than 30 minutes weekly during the hours of 9:00 a.m. to 5:00 p.m. and shall not exceed sound level limits for Manufacturing and Industrial uses as set forth in Ordinance 90-17, the Noise Ordinance, as amended. All permanent emergency generators must be equipped with sound attenuating housing to reduce noise.

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**5.03.07 – Permanent Emergency Generators**

A. Purpose and Intent. It is the purpose of this section to protect the public health and safety of homeowners from the risks associated with combustible engines and the entry of carbon monoxide gas to a dwelling unit. It is the intent to improve the resiliency of homeowners who seek shelter at home during periods of electrical power outages.

B. Applicability. Permanent emergency generators for single family and two-family dwellings shall be permitted as an accessory use and located in accordance with LDC section 5.03.07 Table 1.

C. Standards and Requirements.

1. Permanent emergency generators shall adhere to all generator manufacturer's locational specifications and applicable federal, state, and local code requirements. The manufacturer's locational specifications shall be concurrently reviewed with the applicable electrical, structural, mechanical, gas piping, and storage tank permits.

2. Submittals. At a minimum, the applicant's site plan shall indicate the location and dimension of the proposed generator, generator exhaust direction and permanent fuel tank(s) in proximity to the dwelling unit and lot line. The site plan shall be provided with the building permit application.

3. Location and Distances. Permanent emergency generators for single- and two-family dwelling units may be located in the required front, side and rear yard

setback in accordance with the following Table 1. All distance setback and separation requirements shall be measured from the most restrictive of the generator's enclosure or exhaust outlet and adhere to the following:

- a. When located underneath the dwelling unit, the exhaust outlet shall be vented outside of the dwelling unit above the roof line.
- b. Diesel or gasoline powered generators shall be setback a minimum of 15 feet from any lot line.
- c. Generators may be allowed in the front yard, at a distance no greater than six feet from the dwelling unit in zoning districts with 35 feet front yard setback or greater.
- d. Generators elevated 30 inches above the general ground level of the graded lot, including the supporting structure, shall be calculated the same as the principal structure for the zoning district.

**TABLE 1 Distance Setback and Separation Standards**

		<u>Side Yard Setbacks (feet) Are Lots</u>			
		<u>With 5' or less</u>	<u>Greater than 5' and up to 7.5'</u>	<u>Greater than 7.5' and less than 20'</u>	<u>With 20' or greater</u>
<u>Distance to Side Yard Lot Line</u>		<u>1</u>	<u>2</u>	<u>4</u>	<u>10</u>
<u>Distance to Rear Yard Lot Line</u>	<u>Waterfront or Preserve</u>	<u>None</u>			
	<u>Non-Waterfront</u>	<u>5</u>		<u>10</u>	
<u>Setback to Road Right-Of-Way</u>		<u>2</u>			
<u>Separation Between Mechanical Air Intake Equipment or Other Generators</u>		<u>10</u>			
<u>Distance from Windows, Soffit Vent, Eaves, Other Mechanical Air Intake To the Dwelling, Shrubs and Trees</u>		<u>5</u>			
<u>Distance from Gas and Electrical Meters</u>		<u>3</u>			

4. Carbon Monoxide Detector. If any exterior wall openings are within 10 feet of the generator's exhaust outlet, at least one carbon monoxide detector shall be installed inside the structure near the exterior wall openings and on each floor level.

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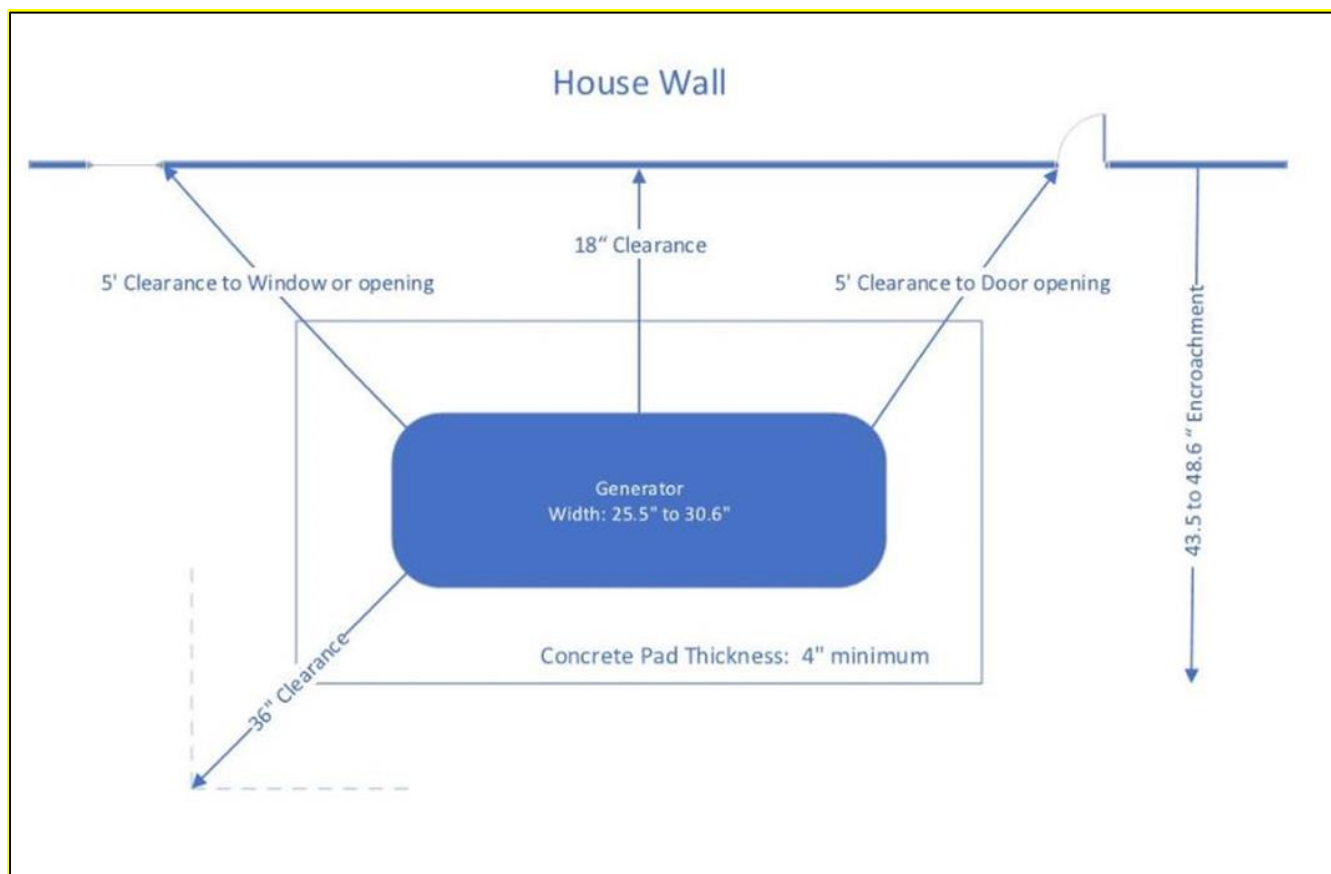
## Exhibit A – Permanent Generator Permits Issued or Rejected

Generator KW Size	2017 Yr. Ending	2018 thru July 5	Total Permits	2017 Total thru KW 30	2018 Total thru KW 30	Total Combined	% of all permits
7.5	1	0	1				
8	1	0	1				
11	1	0	1				
12	1	3	4				
14	0	1	1				
15	1	0	1				
16	3	5	8				
19.5	1	0	1				
20	62	119	181				34.6
22	88	135	223				42.6
23	0	0	0				
24	4	5	9				
25	1	4	5				
27	7	5	12				
30	8	12	20	179	289	468	89.5
32	3	5	8				
36	1	2	3				
38	5	9	14				
40	0	4	4				
45	2	0	2				
48	9	8	17				
60	2	3	5				
80	1	0	1				
100	0	1	1				
Totals	202	321	523				
Missing size information, rejected or lacking other information			78				

## Exhibit B – Manufacturers’ Surrounding Clearances

<b>Generator Manufacturer 14 to 30 KW</b>		Briggs/Stratton 17 /20 -25 Air-Liquid Cooled	Champion 14 Air Cooled	Kohler Res14/20 Air Cooled	Kohler RCL24 Liquid Cooled	Generac 16/20/22 Air Cooled	Generac 22/25/30 Liquid Cooled	Generac 22/27 Spark Ignited	Cummins RS22 Air Cooled
Dimension	Width	34"-30"	30.1"	26.2"	32.9 "	25.5"	30.6"	29"	34"
Clearances	Exhaust Outlet	5'	5'	4'	8'				5'
	Overhead	5'	5'			5'			
	Shrubs	5'		4'					
	SWRI-Rated	18"				18"			18"
	1 Hour- Fire Rated		17.7"	3'					
	Non-Rated			5'					
	Total Clearance and Width (Inches)								
Encroachment	SWRI-Rated	52-48		44.2	50.9	43.5	48.6	47	52
	Fire Rated	52-48	47.8	62.2	68.9	61.5	66.6	65	70
	Non-Rated	94-90	90.1	86.2	92.9	85.5	90.6	89	94

### Exhibit Based on Generac’s Site Selection Installation Guidelines



## Exhibit C – Other Florida Communities Research

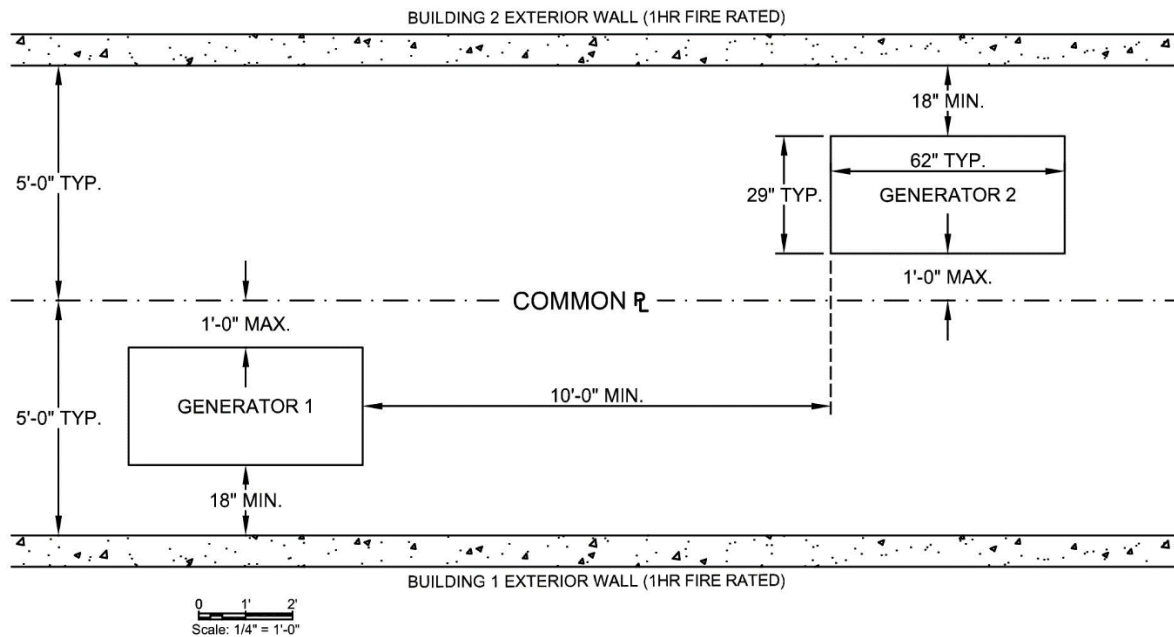
Community	Setbacks			
	Zoning Districts	Side	Rear	Distance to Property Line (PL)
County				
Brevard <sup>1</sup>	All Residential	4' into required side and rear yard.		Not Addressed (N/A)
Miami-Dade <sup>2</sup>	Residential Urban	3'	5'	
	Residential Estates	5'	5'	
Orange <sup>3</sup>	All Residential	10'	5' or rear ½ of lot or parcel	
Palm Beach <sup>4</sup>	Single-Family	3'	5'	
	Zero lot line	5'		
Sarasota	All districts except Siesta Key Overlay District (SKOD)	Exempt from setback requirements when located at above ground level or elevated due to FEMA elevation requirements.		No closer than 3'
	SKOD	Same as side yard setback.		
City				
Boca Raton	All Residential Districts	Anywhere within side or rear yard.		N/A
Boynton Beach <sup>5</sup>		3' plus 1 foot for every 1 foot above height of 6 feet but not greater than the minimum principal structure setback.		
Key Biscayne <sup>6</sup>	Single-Family and Two-Family	5'		
Lighthouse Point <sup>7</sup>	All Residential Districts	5'	Not allowed.	5'
Naples		Same as principal structure (SPS).		N/A
North Miami <sup>8</sup>		5'	5' or 15' from rear street PL.	
Ocean Ridge		SPS		5'
Marco Island		4' into required side or rear yard.		N/A
Miami Springs		Anywhere within side or rear yard.		
Town of Palm Beach		5'	5'	5'
Palmetto Bay <sup>9</sup>		5'	5'	N/A
Plantation <sup>10</sup>		2.5' from side or rear property line and 7.5' from sidewalk, bikeway, or street right-of-way lines.		
Redington Beach		Anywhere within side or rear yard.		N/A
Sanibel		Anywhere within side or rear yard.		10'
South Miami		12.5'		12.5'

### Footnotes and Additional Criteria:

- 1- Encroachment is not subject to separation distances between structures.
- 2- 10' setback from street property line.
- 3- 15' setback from side street.
- 4- Encroachment is limited to 10% of setback requirement and generators less than 4' in height.
- 5- Not allowed in front yard or corner side yard unless approved by administrative adjustment and no other on-site location is feasible or there is a finding the location and use or design of the abutting property would not have negative impact.
- 6- None in a yard facing any street. Propane gas tanks – 5 feet to side property line, limited to 500 gallons above ground and 1,000 gallons underground.
- 7- If not 5 feet from property line, then generator must be placed lengthwise and 1 foot from building.
- 8- 15' from rear street property line.
- 9- 10' from rear street.
- 10- Generators above 5.5' height must comply with same setback as principal structure.

## Exhibit D – Illustrations

### GENERAC 22 AND 27KW SEPARATION BETWEEN GENERATORS NO ZERO LOT LINE - 5 FEET SIDEYARD SETBACKS



Kohler 38 RCL



Kohler 24 RCL

Photos: Courtesy of Westcoast  
Generators Website



Kohler 20 RESA



GE 45kw



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