



# CITY OF COOPER CITY BUILDING DEPARTMENT

Phone 954-434-4300  
Ext. #230, #227, #279  
Fax 954 680-1439

## Generator Checklist

### PLEASE CHECK ANSWERS BELOW:

TANK LOCATION:	<input type="checkbox"/> ABOVE GROUND TANK	<input type="checkbox"/> BELOW GROUND TANK
FUEL TYPE:	<input type="checkbox"/> LP	<input type="checkbox"/> OTHER _____
GALLONS:	_____	<input type="checkbox"/> SLAB _____

### REQUIRED:

#### PLANNING AND ZONING

- TWO (2) COPIES OF SURVEY SHOWING THE LOCATION AND ELEVATION OF THE GENERATOR SLAB
- LABEL SIZE OF GENERATOR SLAB, LABEL SETBACK TO PROPERTY LINE
- MUST INCLUDE SETBACKS FROM THE HOUSE TO THE GAS TANK ( See diagram )

#### LANDSCAPING

- SHOW LANDSCAPING AROUND GENERATOR 24" TO 30 " PLANTING
- OR OTHER APPROVED MEANS OF SCREENING PER ZONING

#### STRUCTURAL

- TWO (2) COPIES OF SLAB AND ANCHOR DETAIL STATING DESIGN IS FOR 156 MPH ( 3 SEC. GUST ) EXPOSURE C
- Top of slab shall be at a minimum equal to finish floor grade.

#### PLUMBING

- PERMIT APPLICATION REQUIRED
- LP GAS CONTRACTOR WITH TWO (2) COPIES OF DRAWINGS BY SAME

#### ELECTRICAL: ELECTRICAL DIAGRAM: TWO (2) COPIES

- PROVIDE ELECTRICAL RISER DIAGRAM. THESE PLANS SHALL INDICATE THE SERVICE PANEL(S), TRANSFER SWITCH(S); MAIN DISCONNECT(S) GENERATOR INSTALLATION, OVER CURRENT PROTECTION, GROUNDING, CONDUIT SIZES AND WIRE SIZES.

#### GENERATOR

- PROVIDE INFORMATION FOR THE GENERATOR SHOWING KW RATING, AMPACITY, VOLTAGE, PHASE, FUEL SOURCE AND DIMENSIONING.
- ALL LOAD CONNECTED TO THE GENERATOR MUST BE IDENTIFIED
- PROVIDE LOAD CALCULATIONS FOR THE GENERATOR, **NEC ARTICLE 220** SHALL BE USED TO CALCULATE EXISTING LOADS. WHERE THE GENERATOR IS CONNECTED TO THE LOAD THROUGH A CORD AND PLUG (EXPOSED **METAL PARTS SHALL BE NON-CURRENT CARRYING**), THE RECEPTACLE SHALL BE SIZED FOR THE CORRESPONDING OVER CURRENT PROTECTION AT THE GENERATOR OTHER OVER CURRENT PROTECTION DEVICE IN FRONT OF THE RECEPTACLE.
- GENERATOR SHALL BE SIZED FOR THE LOAD SERVED. **NEC ARTICLE 220** SHALL BE USED TO CALCULATE THE EXISTING LOAD.
- PROVIDE DBA SOUND RATINGS IF REQUIRED PER LOCAL ORDINANCE
- TRANSFER SWITCH: REQUIRED FOR ALL GENERATORS SHALL BE RATED FOR THE CONNECTED



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#### MANUAL TRANSFER SWITCH (OPTIONS)

- SIZED FOR THE INTENDED LOAD ON THE ELECTRICAL SERVICE
- SIZED FOR THE OPTIONAL STANDBY PANEL(S) WHICH MAY BE BUILT INTO THE PANEL(S) AND TRANSFER SWITCH(S).

#### AUTOMATIC TRANSFER SWITCH (OPTIONS)

- SIZE TO TRANSFER THE ENTIRE LOAD ON THE ELECTRICAL SERVICE
- PRESELECT THE LOADS TO BE SERVED WITH AN OPTIONAL STANDBY PANEL(S) AND TRANSFER SWITCH(S).
- PROVIDE AUTOMATIC LOAD SHEDDING EQUIPMENT TO REDUCE TOTAL LOAD IMPOSED ON GENERATOR.

#### SIGN

- A **PERMANENT SIGN** SHALL BE PLACED AT THE ELECTRICAL SERVICE ENTRANCE EQUIPMENT THAT **INDICATES THE LOCATION OF ON-SITE OPTIONAL STANDBY POWER SOURCES.**
- A **PERMANENT SIGN** SHALL BE PLACED AT THE TRANSFER SWITCH LOCATION **INDICATING THE SEQUENCE OF OPERATION** TO START THE GENERATOR AND TRANSFER THE ELECTRICAL LOADS.

#### **SIGNS MUST BE LARGE ENOUGH TO READ**

#### NOTICE OF COMMENCEMENT (CERTIFIED COPY)

- NOTICE OF COMMENCEMENT REQUIRED IF TOTAL COST OF INSTALLATION EXCEEDS \$2,500.00 INCLUDING GAS TANK INSTALLATION COST. THIS MUST BE SUBMITTED WITH PERMIT APPLICATION.

#### **NOTE**

- MOST OF THESE GENERATORS ARE SUPPLIED A FIBERGLASS SLAB OR A PRE-CAST CONCRETE SLAB. WE ARE NOT REQUIRING PERMITS FOR THESE PADS UNDER PERMANENTLY MOUNTED GENERATORS; **HOWEVER, PERMITS WILL BE REQUIRED FOR ALL OTHER SLABS.**
- FOR GENERATORS ONLY, THE **ELECTRICAL CONTRACTOR** WILL BE RESPONSIBLE FOR THE SLAB AND THIS WILL BE INCLUDED ON THE ELECTRICAL PERMIT APPLICATION.



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**Generator Checklist**

**RESIDENTIAL GENERATOR REQUIREMENTS**

**NOTICE OF COMMENCEMENT (Certified Copy)** (*State of Florida effective January 1, 1991, requires a notice of commencement when the **fair market** value is \$2,500.00 or greater*)

**ELECTRIC**

- PERMIT APPLICATION BY A **LICENSED ELECTRICAL CONTRACTOR**.

**PLUMBING**

- LIQUID PROPANE AND NATURAL GAS GENERATORS REQUIRE A PERMIT APPLICATION BY A **LICENSED GAS OR PLUMBING CONTRACTOR**.

**FIRE**

- THE FIRE DEPARTMENT WILL REVIEW PLANS TO MEET ALL **NFPA** REQUIREMENTS.

**ZONING**

- EQUIPMENT INSTALLATION MUST MEET ALL REQUIREMENTS OF **CITY OF COOPER CITY CODE SEC. 23-80** (*Accessory and Mechanical Equipment*) INSTALLATION OF **LIQUID PROPANE GAS TANKS** SHALL MEET ALL REQUIREMENTS OF **SEC. 23-105** (*Propane Gas Tanks*).

**STRUCTURAL**

- BUILDING PERMIT APPLICATION COULD BE REQUIRED FOR LARGE POURED IN PLACE OR PRE-CAST EQUIPMENT SLABS. THIS WILL BE DETERMINED AT THE PLAN REVIEW PROCESS.

PROVIDE **TWO (2)** COPIES OF YOUR PROPERTY SURVEY AND EASEMENT RELEASES.

**TWO (2) COPIES OF HOMEOWNERS ASSOCIATION APPROVAL.** (*If Applicable*)

**TWO (2) COPIES OF EQUIPMENT INFORMATION AND SPECIFICATIONS.**



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**Generator Checklist**

**INSTALLATION OF GAS  
PERMIT SUMMITAL CHECKLIST**

- PERMIT APPLICATION
- TWO (2)** COPIES OF FINAL SURVEY SHOWING THE LOCATION OF THE PROPOSED GAS TANK WITH THE DISTANCE TO ALL PROPERTY LINES. ALSO INDICATE IF THE TANK IS **ABOVE OR BELOW** GROUND.
- MUST COMPLY WITH **NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 54 & 58**
- THIS PERMIT REQUIRES PLUMBING / MECHANICAL, FIRE AND ZONING REVIEW.
- TWO (2)** COPIES HOMEOWNERS ASSOCIATION APPROVAL (If *Applicable*)
- GRADE LEVEL EQUIPMENT IS **REQUIRED** TO HAVE **SCREENING** PER CITY OF COOPER CITY CODE OF ORDINANCE.

# BROWARD COUNTY UNIFORM BUILDING PERMIT APPLICATION

Select One Trade:  Building     Electrical     Plumbing     Mechanical     Other \_\_\_\_\_

Application Number: \_\_\_\_\_

Application Date: \_\_\_\_\_

1	Job Address: _____		Unit: _____		City: _____	
	Tax Folio No.: _____		Flood Zn: _____		BFE: _____	
	Building Use: _____		Construction Type: _____		Occupancy Group: _____	
	Present Use: _____		Proposed Used: _____			
	Description of Work:					
	<input type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> Repair <input type="checkbox"/> Alteration <input type="checkbox"/> Demolition <input type="checkbox"/> Revision <input type="checkbox"/> Other: _____					
	Legal Description: _____ <input type="checkbox"/> Attachment					

2	Property Owner: _____		Phone: _____		Email: _____	
	Owner's Address: _____		City: _____		State: _____ Zip: _____	

3	Contracting Co.: _____		Phone: _____		Email: _____	
	Company Address: _____		City: _____		State: _____ Zip: _____	
	Qualifier's Name: _____		Owner-Builder: <input type="checkbox"/>		License Number: _____	

4	Architect/Engineer's Name: _____		Phone: _____		Email: _____	
	Architect/Engineer's Address: _____		City: _____		State: _____ Zip: _____	
	Bonding Company: _____					
	Bonding Company Address: _____		City: _____		State: _____ Zip: _____	
	Fee Simple Titleholder's name (if other than owner): _____					
	Fee Simple Titleholder's Address (If other than owner): _____		City: _____		State: _____ Zip: _____	
	Mortgage Lender's Name: _____					
	Mortgage Lender's Address: _____		City: _____		State: _____ Zip: _____	

Application is hereby made to obtain a permit to do the work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a separate permit must be secured for ELECTRICAL WORK, PLUMBING, SIGNS, WELLS, POOLS, FURNACES, BOILERS, HEATERS, TANKS, and AIR CONDITIONERS, etc.

**OWNER'S AFFIDAVIT:** I certify that all the foregoing information is accurate and that all work will be done in compliance with all applicable laws regulating construction and zoning.

**WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.**

X \_\_\_\_\_  
Signature of Property Owner or Agent

X \_\_\_\_\_  
Signature of Qualifier

STATE OF FLORIDA  
COUNTY OF BROWARD

STATE OF FLORIDA  
COUNTY OF BROWARD

Sworn to (or affirmed) and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by \_\_\_\_\_

Sworn to (or affirmed) and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by \_\_\_\_\_

\_\_\_\_\_  
(Type / Print Property Owner or Agent Name)

\_\_\_\_\_  
(Type / Print Qualifier's Name)

\_\_\_\_\_  
NOTARY'S SIGNATURE as to Owner or Agent's Signature

\_\_\_\_\_  
NOTARY'S SIGNATURE as to Qualifier's Signature

Notary Name \_\_\_\_\_  
(Print, Type or Stamp Notary's Name)

Notary Name \_\_\_\_\_  
(Print, Type or Stamp Notary's Name)

Personally Known \_\_\_\_\_ or Produced Identification \_\_\_\_\_

Personally Known \_\_\_\_\_ or Produced Identification \_\_\_\_\_

Type of Identification Produced \_\_\_\_\_

Type of Identification Produced \_\_\_\_\_

APPROVED BY: \_\_\_\_\_ Permit Officer    Issue Date: \_\_\_\_\_ Code in Effect: \_\_\_\_\_

**A jurisdiction may use a supplemental page requesting additional information and citing other conditions, please inquire.**  
Note: If any development work as described in FS 380.04 Sec. 2 a-g is to be performed, a development permit must be obtained prior to the issuance of a building permit.

THE CITY OF



BROWARD COUNTY, FLORIDA

P.O. BOX 290910  
9090 Southwest 50<sup>th</sup> Place  
Cooper City, Florida 33329-0910  
(954) 434-4300 Ext#230 • Fax (954) 680-1439  
www.coopercityfl.org

**PERMIT NUMBER:**

**PLAN REVIEW NUMBER:**

TYPE	FEE	ADDTL FEES
PERMIT		
EDUCATION		
COUNTY		
BCPSF		
TECH FEE		
BOND		
PARKS		
PUBLIC SAFETY		
PUBLIC BLDGS		
FIRE		
ADDTL PERMIT FEES		
SUB TOTAL		
NOTARY FEE		
TOTAL		
INVOICE #		
RECEIPT #		

OFFICE USE ONLY				
DIVISION	APPROVED	DATE	REJECT	DATE
STRUCTURAL				
ELECTRICAL				
PLUMBING				
MECHANICAL				
UTILITES/ENGIN				
FIRE				
ZONING				

**NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENT ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES OR FEDERAL AGENCIES.**

**THE ISSUANCE OF A BUILDING PERMIT DOES NOT GIVE YOU PERMISSION TO VIOLATE DEED RESTRICTION AND/OR HOMEOWNER'S REGULATIONS. PLEASE CHECK DEED RESTRICTIONS BEFORE COMMENCING ANY CONSTRUCTION**

**OWNER'S AFFIDAVIT: I CERTIFY THAT ALL FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING. FURTHERMORE, I AUTHORIZE THE ABOVE NAMED CONTRACTOR TO DO THE WORK STATED.**

**NOTICE OF COMMENCEMENT, CLERK OF COURTS, BROWARD COUNTY GOVERNMENTAL CENTER  
RECORDING SECTION. ROOM 114. 115 S. ANDREWS AVENUE. FORT LAUDERDALE. FL 33302 PHONE: 954-357-7283**

URBAN PLANNING AND REDEVELOPMENT DEPARTMENT (D.P.E.P)  
WWW.BROWARD.ORG/DEVELOPMENT  
STATE OF FLORIDA DIVISION OF HOTELS AND RESTAURANT  
PHONE: 954-956-5692

CITY OF COOPER CITY, FLORIDA • DEVELOPMENT SERVICES • BUILDING DIVISION  
P.O. BOX 290910  
9090 SOUTHWEST 50<sup>th</sup> PLACE  
COOPER CITY, FLORIDA 33329-0910  
(954) 434-4300 Ext#230 • Fax (954) 680-1439  
www.coopercityfl.org

7/2/06

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*Minimum Standards*  
for  
**PERMANENT Residential Stand-By Generator Permitting Electrical Checklist**  
**2002 National Electrical Code (NEC) Article 702**  
**2005 National Electrical Code (NEC) Article 702**

Effective 11/01/06

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**Site Plan:**

Indicate generator and fuel tank locations.

Indicate location of all operable windows and operable doors near generator exhaust (Generator spacing from the building shall meet manufacturer's specifications from all openings and operable doors, including those in the neighbors house). The location of the generator shall conform to local zoning requirements and shall be mounted above the base flood level.

**Slab Drawing:**

Provide applicable structural plans. These plans shall indicate, *as a minimum*:

- A. Provide the size and depth of the slab and type of reinforcement use
- B. Provide generator anchoring details.

**Electrical Riser Diagram:**

Provide electrical riser diagram. These plans shall indicate the service, panel(s), transfer switch(s), main disconnect(s), generator installation, overcurrent protection, grounding, conduit sizes and wire sizes.

**Generator:**

A. Provide information for the generator showing KW rating, ampacity, voltage, phase, fuel source and dimensioning.

B. All loads connected to the generator shall be identified.

C. Provide load calculations for the generator. NEC Article 220 shall be used to calculate existing loads. Where the generator is connected to the load through a cord-and-plug (**Exposed metal parts shall be non-current carrying.**), the receptacle shall be sized for the corresponding overcurrent protection at the generator or other overcurrent protection device in front of the receptacle.

D. Generator shall be sized for the load served. NEC Article 220 shall be used to calculate the existing load.

E. Provide dbA sound ratings if required per local ordinance.

**Transfer Switch:** Required for all generators shall be rated for the connected load.

**Manual Transfer Switch:** (Options)

A. Sized for the intended load on the electrical service or

B. Sized for optional standby panel(s) which may be built into the panel(s) and transfer switch(s).

**Automatic Transfer Switch:** (Options)

A. Size to transfer the entire load on the electrical service or

B. Pre-select the loads to be served with an optional standby panel(s) and transfer switch(s) or

C. Provide Automatic load shedding equipment to reduce total load imposed on generator.

**Sign:**

A. A permanent sign shall be placed at the electrical service entrance equipment that indicates the location of on-site optional standby power sources.

B. A permanent sign shall be placed at the transfer switch location indicating the sequence of operation to start the generator and transfer the electrical loads.

## VENTILATION

requirements are intended to maintain a separation of exit enclosure ventilation systems from other portions of the building and other building mechanical systems, and are intended to protect the exit enclosures from the spread of smoke from other areas. The key point is that HVAC systems serving an exit enclosure must not serve any other room or space.

\*401.5 Opening location. Outdoor air exhaust and intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot. Where openings front on a street or public way, the distance shall be measured to the centerline of the street or public way.

Exception: Group R-3.

- ❖ To prevent the introduction of contaminants into the ventilation air of a building or to avoid the exhaust of contaminants onto areas that may be occupied by people or into other buildings, the code requires a minimum separation of 10 feet (3048 mm) between outside air exhaust and intake openings and any lot lines or buildings on the same lot, or to the center-lines of any streets or public ways.

The exception to this rule is for buildings constructed as one- and two-family dwellings. In a typical townhome configuration, practical difficulties exist in achieving the required 10-foot (3048 mm) separation distance because of the close proximity of lot lines or adjacent dwelling units. Also, the air exhausts discharging from a dwelling unit (clothes dryer, kitchen and bathroom) are not considered to be significantly hazardous or noxious and are of low volume. In these situations, the code official must determine an appropriate distance or location for the placement of intake and exhaust openings. In evaluating each installation, consideration should be given to the orientation of the exhaust or intake louver and its spatial relationship to any source of contaminant or adjacent intake opening, as well as to the direction of the prevailing winds at the location (see commentary, Sections 401.5.1 and 401.5.2). In addition, see Chapter 8 and the IFGC for specific regulations for the location of mechanical exhaust vent terminations for fuel-fired appliances. The specific provisions of Chapter 8 take precedence over the general provisions of this section.

401.5.1 Intake openings. Mechanical and gravity outdoor air intake openings, shall be located a minimum of 10 feet (3048 mm) from any hazardous or noxious contaminant such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code. Where a source of contaminant is located within 10 feet (3048 mm) of an intake opening, such opening shall be located a minimum of 2 feet (610 mm) below the contaminant source.

- ❖ In the context of this section, intake openings include windows, doors, gravity air intakes, soffit vents, combustion air intake openings, outside air intakes for air handlers, makeup air intakes and similar openings that naturally or mechanically draw in air from the

building exterior. This section identifies specific locations that are known to generate or emit noxious contaminants, and requires that both mechanical and gravity air intake openings be located a minimum of 10 feet (3048 mm) from those hazards to avoid introducing contaminants into the building. As an alternative, mechanical and gravity air intakes can be located within 10 feet (3048 mm) of those sources of contamination if the intakes are at an elevation at least 2 feet (610 mm) below the contaminant source. A 2-foot (610 mm) vertical separation distance will allow the noxious gases and contaminants to disperse into the atmosphere before they can be drawn into an air intake opening. Placing the source of contamination above an air intake takes advantage of the fact that normally encountered sources of contamination are lighter (less dense) than the surrounding air and, therefore, will rise above the vicinity of an air intake located below. Figure 401.5.1 shows an example of the relative locations for intake air openings for a building where lot lines and sources of contaminants are present. See Chapter 8 and the IFGC for specific regulations for the location of mechanical exhaust vent terminations for fuel-fired appliances.

401.5.2 Exhaust openings. Outdoor exhaust openings shall be located so as not to create a nuisance. Exhaust air shall not be directed onto walkways.

- ❖ Mechanical exhaust air openings must not be directed onto walkways or be located where they create a nuisance. A "Nuisance" is defined in Chapter 2 of the *International Plumbing Code* as "... whatever is dangerous to human life or detrimental to health; whatever structure or premises is not sufficiently ventilated, sewerred, drained, cleaned or lighted, with respect to its intended occupancy; and whatever renders the air, or human food, drink or water supply unwholesome." A nuisance is defined as much more than or much worse than simply "bothersome." This definition is rather broad, and allows the code official to decide what may or may not constitute a nuisance. Unfortunately, it is not an easy task to determine whether or not a nuisance will be present because the conditions under which an exhaust system performs vary considerably with the change of seasons, the ambient temperatures and the prevailing winds. The code official should gather as much information regarding the installation as possible to evaluate the hypothetical worst-case scenario. This would include the characteristics and geometry of the installation as well as the local ambient conditions, so that an educated guess may be made to determine the "nuisance effect" of the exhaust outlet.

For obvious health reasons, exhaust air cannot be directed onto walkways in such a manner that the users of the walkway are subjected to the exhaust airstream.

The requirements for termination of vents, chimneys and power exhausters are located in Chapter 8 and the IFGC. The requirements for the termination of commercial kitchen exhaust systems are located in Chapter 5.

ventilation air of a building or to avoid the exhaust of contaminants into other buildings or areas that may be occupied.

**R303.4.1 Intake openings.** Mechanical and gravity outdoor air intake openings shall be located a minimum of 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code. Where a source of contaminant is located within 10 feet (3048 mm) of an intake opening, such opening shall be located a minimum of 2 feet (610 mm) below the contaminant source.

For the purpose of this section, the exhaust from dwelling unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.

❖ In the context of this section, intake openings include windows, doors, gravity air intakes, soffit vents, combustion air intake openings, outside air intakes for air handlers, makeup air intakes and similar openings that naturally or mechanically draw in air from the building exterior. This section identifies specific locations that are known to generate or emit noxious contaminants and requires both mechanical and gravity air intake openings be located a minimum of 10 feet (3048 mm) from such hazards to avoid introducing contaminants into the building. As an alternative, mechanical and gravity air intakes can be located within 10 feet (3048 mm) of such sources of contamination if the intakes are at an elevation of at least 2 feet (610 mm) below the contaminant source. A 2-foot (610 mm) vertical separation will allow the noxious gases and contaminants to disperse into the atmosphere before they can be drawn into an air intake opening. Placing the source of contamination above an air intake takes advantage of the fact that normally encountered sources of contamination are lighter (less dense) than the surrounding air and therefore will rise above the vicinity of an air intake located below. Commentary Figure R303.4.1 shows an example of the relative locations for intake air openings for a building where sources of contaminants are present.

Particular types of exhausts may have more specific restrictions on their location that would supercede this section (see Section M1602.2, for example).

The air exhausts discharging from a dwelling unit (clothes dryer, kitchen and bathroom) are not considered to be significantly hazardous or noxious and are of low volume. In these situations, the code official must determine an appropriate distance or location for the relative placement of intake and exhaust openings. In evaluating each installation, consideration should be given to the orientation of the exhaust or intake louver and its spatial relationship to any source of contaminant or adjacent intake opening, as well as to the direction of the prevailing winds at the location.

**R303.4.2 Exhaust openings.** Outside exhaust openings shall be located so as not to create a nuisance. Exhaust air shall not be directed onto walkways.

❖ Mechanical exhaust air openings must not be directed onto walkways or be located where they create a nuisance. A "nuisance" is defined in Chapter 2 of the *International Plumbing Code* as "whatever is dangerous to human life or detrimental to health; whatever structure or premises is not sufficiently ventilated, sewered, drained, cleaned or lighted, with respect to its intended occupancy; and whatever renders the air, or human food, drink or water supply unwholesome." A nuisance is much worse than simply "bothersome." This definition is rather broad and allows the code official to decide what may or may not constitute a nuisance. Unfortunately, it is not an easy task to determine whether or not a nuisance will be present because the conditions under which an exhaust system performs vary considerably with the change of seasons, the ambient temperatures, and the prevailing winds. The code official should gather as much information regarding the installation as possible to evaluate the hypothetical worst-case scenario. This would include the characteristics and geometry of the installation as well as the local ambient conditions, so that an educated guess may be made to determine the "nuisance effect" of the exhaust outlet.

For obvious health reasons, exhaust air cannot be directed onto walkways in such a manner that the users of the walkway are subjected to the exhaust air stream.

**R303.5 Outside opening protection.** Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles having a minimum opening size of 1/4 inch (6.4 mm) and a maximum opening size of 1/2 inch (12.7 mm), in any dimension. Openings shall be protected against local weather conditions. Outdoor air exhaust and intake openings shall meet the provisions for exterior wall opening protectives in accordance with this code.

❖ Outside air exhaust and intake openings must be provided with corrosion-resistant screens, grilles, or louvers to prevent foreign objects (such as insects or debris) from entering the system or building. Also, such openings must be protected against the entry of falling or wind-driven water, snow, and ice. Exhaust systems sometimes incorporate rotating hoods over the opening to prevent high winds from restricting the flow of exhaust gases out of the system. The hoods align themselves with the direction of the wind to allow the unimpeded, and actually induced, discharge from the exhaust outlet. Rotating turbines are also employed to serve as both weather protection and as a means of inducing airflow.

The opening sizes for louvers and grilles and the mesh sizes for screens must be within the specified range as indicated. The opening size must be large enough to inhibit blockage by debris to prevent signifi-

F  
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