



County of Riverside

TLMA

Building & Safety

4080 Lemon St.

Riverside CA, 92501

(951) 955-1800

Residential Generator Requirements For an over the counter (OTC) permit

General Information

Permits may be obtained through one of the following:

- The Property Owner or his/her Insured California State Licensed Contractor:
 - A "C-10 or B" licensed contractor
- Project is subject to Land Use approval, for ordinance and setback requirements
- A Fire Department permit will be required prior to permit issuance if:
 - A new Propane Tank is required
- Formal plan review may be required if design exceeds limitations set forth in this packet

Submittal Requirements

The following documents are required at time of permit submittal:

- Permit Application completed and signed
- Letter of Authorization if agent of Owner/Licensed Contractor
- Site Plan, see page "3" for example
- Spec sheets for all proposed equipment
- Manufacture's installation guide/instructions for the proposed Generator

Inspections

Required Inspections for Residential Generators:

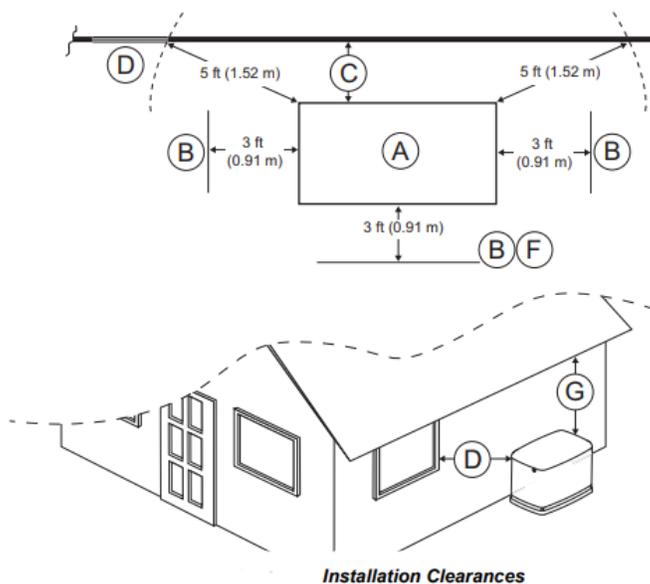
- 1st Inspection – Setbacks, Conduit, Gas test:
 - *Equipment Setbacks, conduit, and gas lines in trench (as applicable), conduit and gas lines supported (as applicable), and gas line has been pressurized to 10psi on a max 15psi gauge*
- 2nd Inspection – Rough electrical, Grounding/Bonding, Final:
 - *Disconnects, wiring methods, grounding and bonding, Grounding Electrode, and Labels*

GENERATOR SITE LOCATION AND PREPARATION

- A. All equipment shall be a min 5 ft. from the property line (this includes any pipes erecting from the ground).
- B. Area around generator to be clear of all brush
- C. Minimum clearance to buildings is 5 ft.
- D. Generator to be a min 5 ft. from any operable windows, doors, openings, or intakes.
- E. Overhead clearance to be a min 5 ft. from any structure, overhang, or projection. DO NOT install under wood structures unless this minimum distance is maintained, and manufacture installations allow it.
- F. Any fences around the Generator shall maintain a 3 ft. work clearance.

Site Selection and Preparation

Site Selection



SITE PLAN REQUIREMENTS

- 1. Identify barriers around property or generator (Riverside County Noise Ordinance – 847).
- 2. Indicate setbacks from generator to the property line, nearby structures, operable windows, etc. (see site prep).
- 3. Provide location of main service, fuel (gas/propane), and indicate if new or existing.
- 4. Show new gas/electric lines to all proposed equipment.
- 5. Specify the make/model of the new equipment (to match spec sheets).
- 6. See example of site plan on page 3.

ELECTRIC LINE DIAGRAM REQUIREMENTS

- 1. Complete the line diagram with the applicable table given.
- 2. If transfer switch disconnect is not near the main service panel, an alternative disconnect will be required.
- 3. Voltage drop will be required on any new wires exceeding 100 linear ft., wire will be upsized.
- 4. Spec sheets shall be provided for all new equipment.
- 5. Generator Installation Guide is required.
- 6. All new equipment shall be listed for its use, any modifications made to new or existing equipment shall require a 3rd party evaluation report to certify the equipment, this report shall be provided to the building inspector.

GAS/PROPANE REQUIREMENTS

- 1. Gas/Propane pipe size shall be installed per the manufacture specifications (Generator Installation Guide).

P/L

(N) PROPANE TANK

* INDICATE DISTANCE

FOR DISTANCE LIMITATIONS SEE PAGE 2

(N) GENERATOR

(N) GAS LINE

(N) ELECTRIC LINE

PROPERTY ADDRESS

INDICATE (E) OR (N) BARRIERS

SUB

ATS

M

G

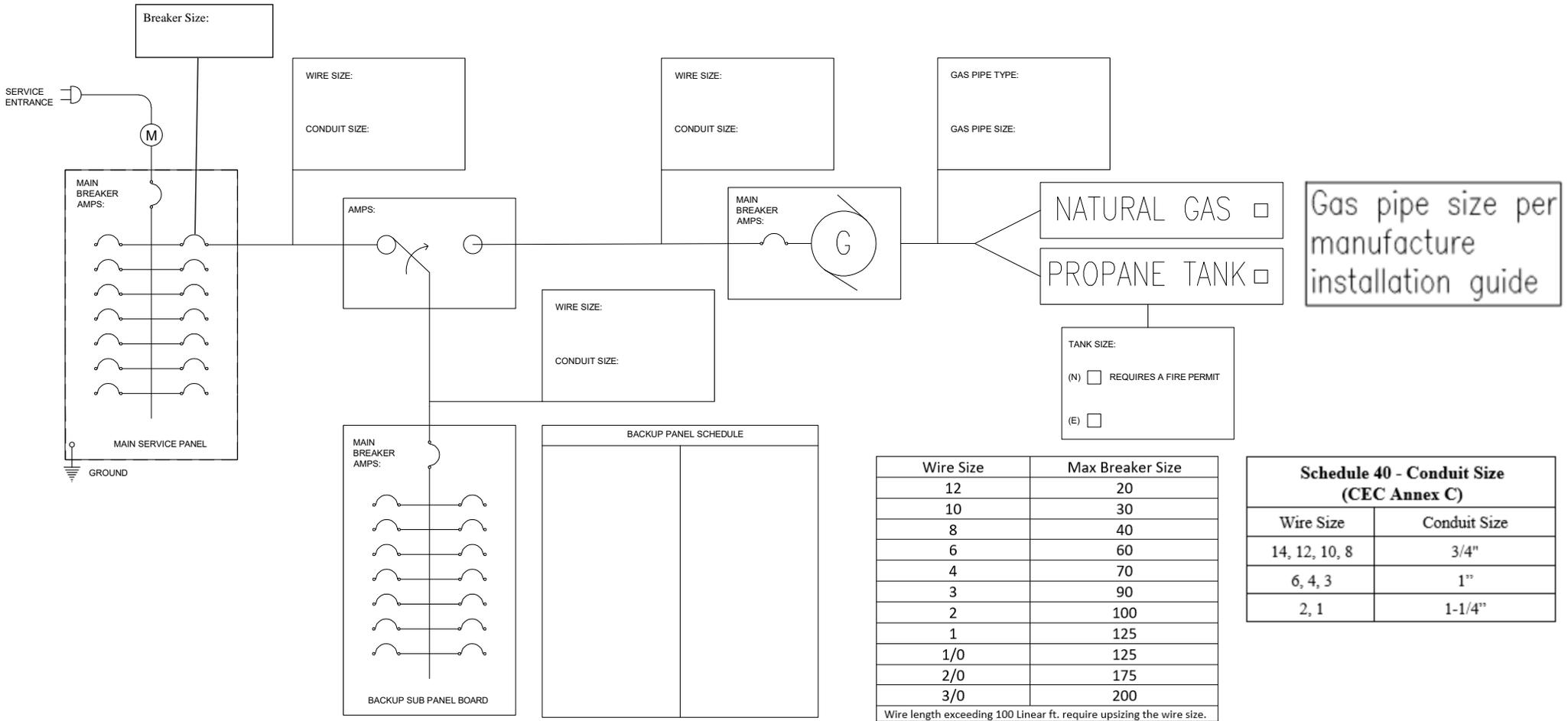
Distance for Electric Line:

Distance for Gas Line:

FOR REFERENCE ONLY

RESIDENTIAL GENERATOR LINE DIAGRAM

SINGLE-PHASE 120/240 SERVICE ONLY



Notes:

1. Project to comply with 2022 CRC, CBC, CEC, CMC, CPC.
2. Conduit Burial Depth 18" minimum, measured from the top of the installed conduit
3. AFCI protection is required when loads are relocated more than 6' [210.12(D)]
4. Dig alert (811) is to be contacted and compliance with excavation safety in accordance with government code 4216 will be followed prior to any excavation taking place" this statement must be *signed*:

X _____

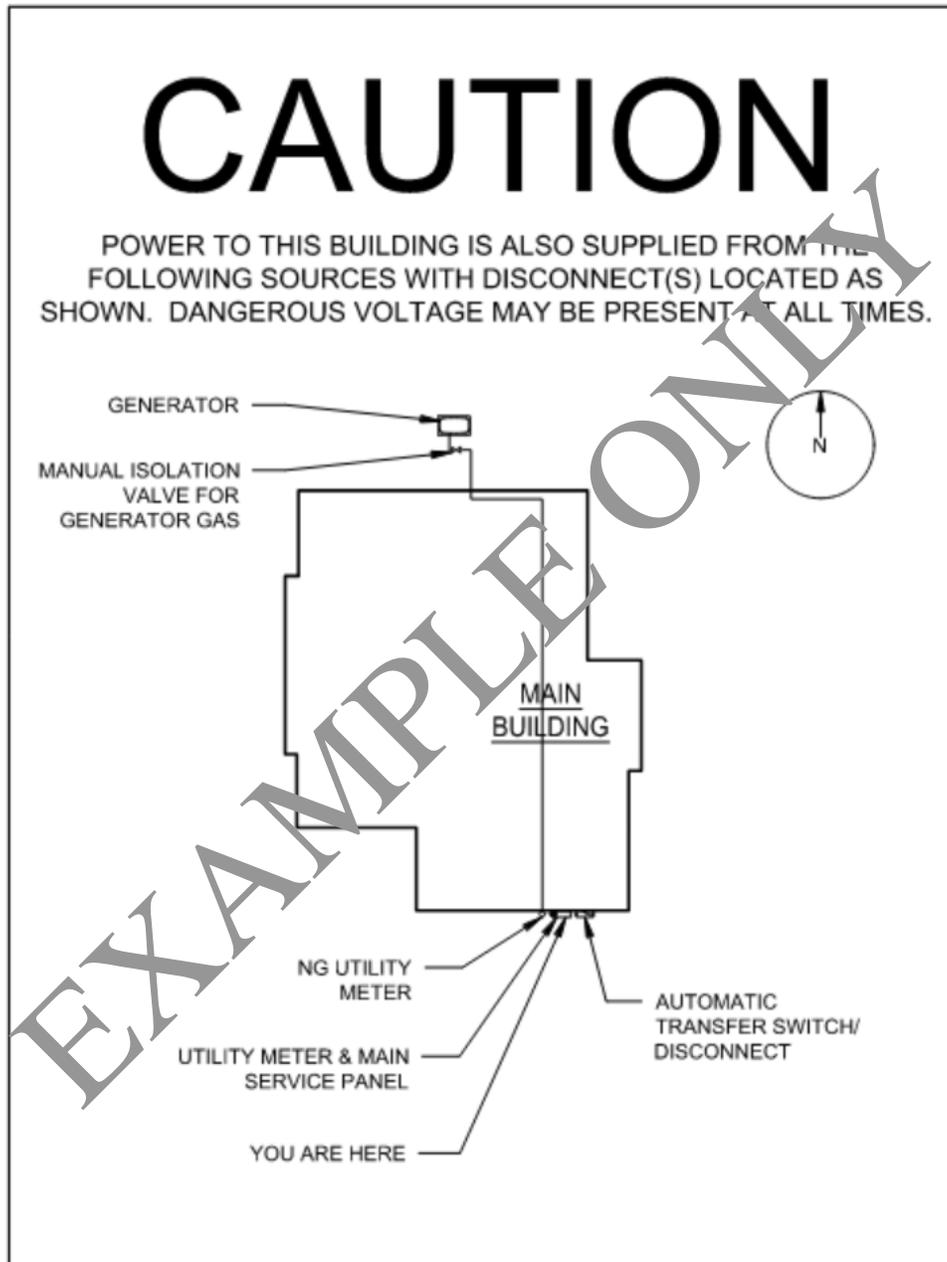
DISCLAIMER:

An alternative design may be possible when provided with a C-10/Electrical Engineer analysis. The use of this handout design is at the user's risk and carries no implied or inferred guarantee against failure or defects.

RESIDENTIAL GENERATOR PLACARD

Notes:

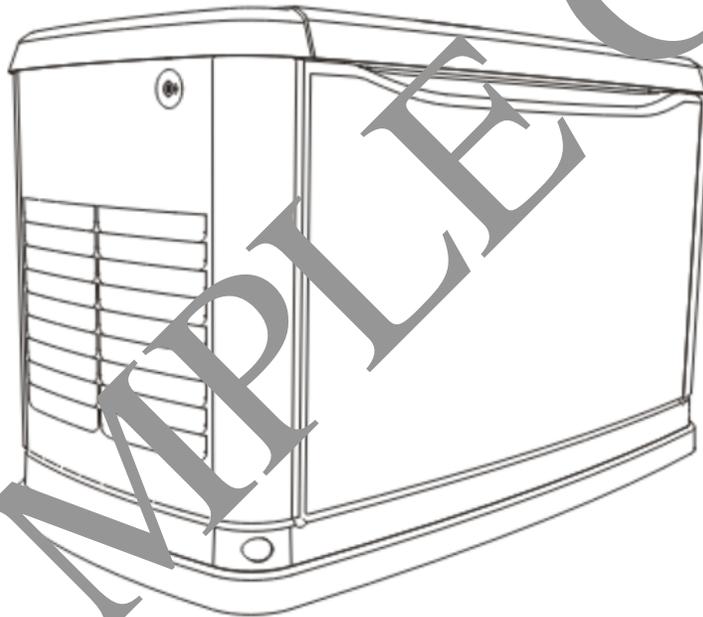
1. Placard required at the main service panel [CEC 705.10].
2. The marking shall be made using effective words, colors, symbols, or any combination thereof.
3. The label shall be attached using adhesive (No RIVETS allowed as this may void panel listing).
4. The label shall not be handwritten.
5. The placard shall be made of sufficient durability to withstand its environment.



Installation Guidelines

60 Hz Air-Cooled Generators

9 kW to 22 kW



WARNING

This product is not intended to be used in a critical life support application. Failure to adhere to this warning could result in death or serious injury.

Register your Generac product at

WWW.GENERAC.COM

1-800-GENERAC

(800-400-6722)

Natural Gas Pipe Sizing

To determine correct gas pipe size, find the kW rating of the generator in the left column, and trace to the right. The number to the right is the maximum length (measured in meters / feet) allowed for the pipe sizes on top. Pipe sizes are measured by inside diameter (ID) to include any fittings, valves (must be full flow), elbows, tees, or angles.

NOTE: Add 2.5 ft (0.76 m) per any bend, tee, or angle in the pipe to the overall distance. Tables are for schedule 40 black pipe. If installing any other piping system, follow the pipe sizing charts for the selected piping system.

Table 5-1. Natural Gas Pipe Sizing

	For 5–7 in of water column (9–13 mmHg)					For 3.5–5 in of water column (7–9 mmHg)		
	Allowable Pipe Distances (feet / meters)							
Pipe Size (in / mm)	0.75 / 19	1 / 25	1.25 / 32	1.5 / 38	2 / 51	1 / 25	1.25 / 32	1.5 / 38
9 kW	55 / 16.76	200 / 60.96	820 / 249.94	—	—	20 / 6.1	60 / 18.29	175 / 53.34
11 kW	20 / 6.1	85 / 25.91	370 / 112.78	800 / 243.84	—	—	60 / 18.29	175 / 53.34
16–22 kW	—	20 / 6.1	130 / 39.62	305 / 92.96	15 / 4.57	10 / 3.05	60 / 18.29	125 / 38.1

LP Vapor Pipe Sizing

To determine correct LP vapor pipe size, find the kW rating of the generator in the left column, and trace to the right. The number to the right is the maximum length (measured in meters / feet) allowed for the pipe sizes on top. The pipe sizes are measured by inside diameter (ID) to include any fittings, valves (must be full flow), elbows, tees, or angles. Add 2.5 ft (0.76 m) per any bend, tee, or angle in the pipe to the overall distance.

NOTE: Pipe sizes are using a second stage regulator.

NOTE: The minimum LP tank size is 250 gal (946 L), unless unit calculations dictate use of a larger tank. Vertical tanks, which are measured in pounds (or kilograms), are permitted if properly sized for the generator.

Table 5-2. LP Vapor Pipe Sizing

	For 10–12 in of water column (19–22 mmHg)		
	Allowable Pipe Distances (feet / meters)		
Pipe Size (in / mm)	0.75 / 19	1 / 25	1.25 / 32
9 kW	165 / 50.29	570 / 173.74	—
11 kW	70 / 21.33	255 / 77.72	1000 / 304.8
16 kW	25 / 7.62	130 / 39.62	540 / 164.59
20-22 kW	15 / 4.57	115 / 35.05	480 / 146.3