



An Extended Guide · No. 1651

Standby Generator Install: Pad, Placement, and Clearances

Siting a permanent unit
the safe, code-right way

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! Read this first — carbon monoxide is the real danger

A running generator's exhaust contains carbon monoxide — an invisible, odorless gas that can kill in minutes. Never run a generator indoors, in a garage, in a shed, or on a porch, not even with the door open and a fan going. Run it outside only, well away from the house — the safety agencies say at least 20 feet — with the exhaust pointed away from every window, door, and vent. Put battery-backup carbon-monoxide alarms on each floor and outside the bedrooms. If an alarm sounds, or anyone feels dizzy, sick, or sleepy, get everyone into fresh air first and ask questions later. Even a permanently installed unit's exhaust is carbon monoxide — which is exactly why the clearances from windows, doors, and vents in this guide are a safety rule, not a suggestion.

Siting a permanent generator the safe, code-right way

A standby generator is the permanently installed kind — wired in, fueled from your gas line or a propane tank, and starting on its own when the power fails. Where it sits, and how far it stands from your house, is a decision made by the manual and the code. This guide explains what to expect.

I'm Bill. For 30-plus years I've helped folks around Portage County plan and set up the gear in their homes. A standby unit is a bigger project than a portable — it brings in a licensed electrician and a licensed gas professional, plus permits and an inspection — so the planning up front really matters, and that's where I'm glad to help.

I'll be honest with you right away: I don't do the electrical or the gas work myself — those aren't my licenses, and your safety deserves the real thing. What I do is help you plan the spot, choose a unit that fits, and coordinate the licensed pros who do the work.

★ The planning is where I shine

Picking a safe, code-right, sensible spot — and lining up the right pros — is exactly the kind of thing I love to help with, at your kitchen table, with nothing to sell. Call or text me at (330) 200-8042.

The 60-second version

If you read nothing else in this guide, read this page.

- ❑ A standby generator is permanently installed — wired in, fueled by natural gas or propane, and starting automatically through an automatic transfer switch.
- ❑ It sits on a level, well-drained pad — poured concrete or a manufacturer-approved composite pad — kept up out of flooding and drifting snow.
- ❑ Clearances are the heart of it: set back from the house and especially from every window, door, and vent, following both the manufacturer's manual and local code.
- ❑ Leave room all around the unit too, for airflow and for a technician to service it.
- ❑ It's a team job: a licensed electrician for the wiring and transfer switch, a licensed gas pro for the fuel, plus a permit and an inspection.
- ❑ Setbacks, HOA rules, and noise all shape where it can go — worth checking early, before anything is poured.

! Engineered exhaust is still exhaust

A standby unit's exhaust is designed to vent safely, but it's still carbon monoxide. Never let it sit under eaves or blow toward an intake, a window, or a door — the clearances exist for exactly that reason.

How a standby generator is different

If you've read our portable-generator guides, a standby unit works on the same idea but lives a very different life.

A portable generator is rolled out, filled with fuel, started by hand, and connected with a cord when you need it. A standby generator is permanently installed and mostly invisible until it's needed. It's hardwired into your home, fueled continuously from your natural-gas line or a propane tank, and it starts automatically — often within seconds of an outage — without anyone lifting a finger.

The piece that makes that automatic magic safe is an automatic transfer switch, which senses the outage, disconnects your home from the utility, and switches it to generator power — then switches back and shuts the unit down when utility power returns. Because it's all automatic and hardwired, a standby install is more involved than any portable hookup, and every part of it is a licensed professional's work.

This guide focuses on one crucial part of that project: where the unit sits. The pad, the placement, and the clearances are decisions you're closely involved in, and getting them right is both a safety matter and a code matter.

✓ Set-and-forget, but not install-and-forget

The beauty of a standby unit is that it runs itself in an outage. The catch is that it only earns that trust if it's sited, installed, and inspected correctly from the start — which is what the rest of this guide is about.

Siting the pad: level, dry, and up out of trouble

A standby generator lives outdoors year-round, so the ground it sits on has to be right from the start.

The unit needs a firm, level base that stays put and drains well. That usually means a poured concrete pad or a manufacturer-approved composite pad made for the job — not bare dirt, gravel, or a couple of patio blocks. Your installer will confirm what your specific unit calls for.

Just as important is keeping it up out of trouble. The pad should sit above the spots where water pools in a heavy rain, and high enough that drifting or plowed snow won't bury the unit. A generator standing in a puddle or under a snowbank is a generator that can't do its job — and can be damaged trying.

- A firm, level pad — poured concrete or a manufacturer-approved composite pad.
- Well-drained ground, above where water collects in a storm.
- High enough that drifting or plowed snow won't bury the unit.
- Solid, stable footing that won't shift or settle over the years.

✓ Think about February, not just today

Picture the spot in the worst weather it'll ever see — the spring puddle, the plowed snowbank, the ice off the roof. The best pad location is one that stays clear and reachable in all of it.

The clearances: distance from windows, doors, and vents

This is the most important part of placement, and it's not a matter of taste or convenience. It's set by the manufacturer's manual and by local code.

A standby unit must sit a required distance back from the house, and especially from every window, door, and vent — anything that opens into the home or draws air into it. The exact distances come from two places at once: the manufacturer's installation manual for your specific unit, and your local building and fire code. Your installer follows both, and where they differ, the stricter one wins.

Here's the reasoning, in plain English. A standby unit's exhaust is engineered to vent away safely, far better than a portable's — but it is still carbon monoxide. The same thinking from our carbon-monoxide guides still applies: exhaust must never pool under eaves or an overhang, and must never blow toward a window, a door, or a fresh-air intake for your furnace or air conditioner. Distance and direction keep it out of the house.

! Clearances are a safety rule, not a suggestion

Never let anyone shave the required distance to make the spot more convenient or better hidden. The clearances from windows, doors, vents, and overhangs exist to keep carbon monoxide out of your home. The manual and the code set them — follow the stricter of the two.

Room all around: airflow and service access

Beyond its distance from the house, a standby unit needs breathing room on every side.

The engine needs clear airflow to draw in cool air and shed heat, so the manufacturer specifies a minimum open space around the unit — kept clear of shrubs, fences, stacked firewood, trash bins, and anything else that might crowd it or block a vent. A unit boxed in too tightly can overheat or run poorly.

There's also the human side: a technician needs room to open the panels and service it, and you'll want easy access to keep it clear of leaves and snow. A spot that's tight to reach today becomes a real headache at every maintenance visit for years to come.

- Keep the manufacturer's minimum clearance open on every side of the unit.
- No shrubs, fences, firewood, or bins crowding the intake or exhaust.
- Leave room for a technician to open it up and work.
- Pick a spot you can easily reach to brush off leaves and snow.

✓ Plants grow — plan for that

That little shrub by the pad won't stay little. When you picture the clearances, picture the hedge and the fence a few years from now, not just on planting day.

Fuel: natural gas or propane — always a gas pro's job

A standby unit runs on natural gas or propane, and connecting either one is, without exception, a licensed professional's work.

In town, that usually means tapping your existing natural-gas line, sized so the generator gets enough gas to run under load. Out in the country, it usually means a propane tank — which brings its own placement rules, setbacks, and a plan for delivery access. Which fuel makes sense depends on what's already at your home and what's available.

Either way, connecting the fuel is never a do-it-yourself job and never mine — it's a licensed gas fitter or plumber's work, coordinated with the electrician and covered by the permit. Our connecting-to-gas guide goes deeper on the fuel side, including the golden rule: if you ever smell gas, leave immediately and call the gas company or 911 from outside.

! Never DIY a gas connection

Gas work carries real fire and explosion risk and is always a licensed professional's job. If you ever smell gas near the unit or anywhere else, don't investigate — get everyone outside and call the gas company or 911 from a safe distance.

The automatic transfer switch

The part that lets a standby unit start on its own — safely — is the automatic transfer switch.

Where a portable generator uses a manual transfer switch or interlock kit that you operate by hand, a standby unit uses an automatic transfer switch that does the whole dance for you. It constantly watches the utility power. When the power fails, it disconnects your home from the grid, signals the generator to start, and switches your home to generator power — then reverses it all and shuts the unit down when the utility returns.

That automatic switching does the same essential safety job as its manual cousin: it keeps generator power and utility power from ever meeting, so the generator can never backfeed the lines. It's wired in by a licensed electrician as part of the install, and it's covered by the permit and inspection like the rest of the electrical work. Our transfer-switch guides cover the manual versions in detail if you'd like the contrast.

✓ Automatic, but still tested

An automatic transfer switch is wonderfully hands-off, but it isn't set-and-forget. It's confirmed working at inspection and exercised during the unit's regular self-tests — more on that later.

Who does what: the team behind a standby install

A standby generator is a team project, and knowing who handles which part helps you keep it all coordinated.

- **You and I** plan the spot, choose a unit that fits, and line up and coordinate the pros.
- **A licensed electrician** handles the wiring and the automatic transfer switch, and usually pulls the electrical permit.
- **A licensed gas professional** connects the natural-gas line or sets up the propane tank and fuel line.
- **The manufacturer's requirements and local code** set the pad, the clearances, and the setbacks everyone follows.
- **A local inspector** checks the finished work before it's signed off.

It sounds like a lot of moving parts, and it is — which is exactly why having someone help coordinate it, keep the sequence straight, and make sure nothing falls between the trades is worth so much. Our guides on hiring a licensed electrician and on permits and inspection go deeper on those pieces.

★ I'm the one keeping it all straight

I don't hold the electrical or gas license, but I'm glad to be your coordinator — helping you plan, choosing among honest pros, and making sure the electrician, the gas fitter, and the inspector are all on the same page. Reach me at (330) 200-8042.

Setbacks, HOA rules, and being a good neighbor

Where a standby unit can legally and neighborly go is shaped by more than the manufacturer's clearances.

Local zoning often sets property-line setbacks — how far the unit must sit from the edges of your lot. If you're in a neighborhood with a homeowners association, there may be extra rules about where equipment can go, how it's screened, and even the hours a generator may run its self-test. These vary a great deal from place to place, so I won't guess at your specific rules — but they're worth checking early, before a pad is poured.

Then there's noise. A standby unit is quieter than a portable, but it isn't silent, and it runs a regular self-test on a schedule. Siting it thoughtfully — away from your own bedrooms and your neighbor's, mindful of that test time — keeps the peace. Our noise, neighbors, and setbacks guide goes deeper on all of this.

✓ Check the rules before the concrete

Setbacks and HOA rules are far easier to honor before anything's installed than to fix afterward. A few phone calls early — to the local building office and, if you have one, your HOA — save real headaches later.

What I do, and what I leave to the pros

Worth saying plainly, since it shapes exactly how I can help you.

- **What I help with:** planning a safe, code-aware spot, choosing a unit that fits your home and fuel, lining up licensed pros I trust, and keeping the whole project coordinated.
- **What only the licensed pros can do:** the electrical wiring and the automatic transfer switch, the gas connection, and pulling the permits.
- **What I never do:** electrical or gas work myself — those aren't my licenses, and your safety deserves the real thing.

★ Call while you're still dreaming about it

The most useful time to reach me is early, while you're still picturing the spot and weighing your options. Call or text me at (330) 200-8042 and we'll start with a walk around your yard.

Two kinds of homes, two sets of needs

Where a standby unit can go, and what fuels it, looks quite different in a tight in-town lot than out on rural acreage.

If you live in town or the suburbs

In town or the suburbs, a standby unit usually runs on natural gas, tapped from your existing line — no tank to place. The challenge is space: a tighter lot means the required clearances, the property-line setbacks, and any HOA rules all press in at once, and your neighbor's windows may be close by.

- Natural gas means no fuel tank to site — one less placement puzzle.
- On a tight lot, the manufacturer's clearances and the zoning setbacks can compete — plan carefully.
- Mind close neighbors' windows and doors, not just your own, for both exhaust and noise.
- Check HOA rules early — some limit placement, screening, or self-test hours.

If you are out in the country on a well

Out in the country, a standby unit usually runs on propane, which means placing a tank — with its own setbacks and a clear path for the delivery truck. You'll have more room to meet the clearances easily, but the unit faces more open weather: wind-driven snow, drifting, and exposure.

- A propane tank needs its own safe placement, setbacks, and room for deliveries.
- More land makes the house clearances easy — use the space rather than crowding the wall.
- Plan for exposure: drifting snow and wind mean siting the unit where it stays clear and reachable.
- Keep the pad and a path to it accessible so the tank can be filled and the unit serviced in winter.

★ Town lot or country acres, let's find the spot

Tell me about your lot and whether you're on natural gas or propane, and I'll help you find a spot that satisfies the clearances, the setbacks, and common sense — then coordinate the pros. Call (330) 200-8042.

The honest cost picture

A standby install is the biggest project in this category, so let's be straight about it — without pretending I can quote your job.

A standby generator costs more than a portable, and the install adds up because it brings in two trades — a licensed electrician and a licensed gas pro — plus the pad, the automatic transfer switch, permits, and inspection. I won't guess a number, because the unit, your fuel, your panel, your yard, and local rates differ far too much for a figure from the internet to be honest. Get quotes from licensed pros.

A few things shape the cost: which fuel you use and whether the line or tank already exists, how far the unit sits from the panel and the fuel source, and any site work the pad needs. Planning the spot well — close enough to keep the runs short, clear enough to meet the clearances — can genuinely hold the cost down, which is one more reason the early planning pays off.

★ I'll help you plan the whole project, not just the box

I don't sell generators or earn a commission, so my advice is just advice. Tell me about your home and I'll help you map out the full picture and get honest quotes — before you commit to anything.

What the project looks like, start to finish

Knowing the rough sequence takes the mystery out of a bigger install.

- ❑ Plan the spot and confirm the clearances, setbacks, and any HOA rules all work together.
- ❑ Choose the fuel and a unit sized for what you want to back up.
- ❑ Line up the licensed electrician and gas pro, and pull the permits.
- ❑ Prepare the pad — poured concrete or an approved composite pad — on level, well-drained ground.
- ❑ Install the unit, the automatic transfer switch, and the fuel connection.
- ❑ Pass inspection, then test the whole system so you see it start, switch over, and shut down.

★ I like to be there for the first test

Whenever I can, I join for that first real test so I understand your specific system alongside you — how it starts, what the self-test sounds like, and what the normal behavior is. Then I can reassure you anytime something seems off.

Living with it: self-tests and winter

Once it's in, a standby unit mostly takes care of itself — but a little attention keeps it dependable.

Standby units run a regular self-test, briefly starting themselves on a schedule to stay ready. Get to know that sound and timing so it never startles you, and glance at any status light or indicator now and then. The unit needs periodic professional maintenance too — oil, filters, and the like — which the installer or a service plan handles, since it's engine work, not a homeowner fix.

Winter deserves special care. Keep the required clearances clear of drifting and plowed snow, make sure the exhaust outlet never gets buried, and keep a path so a technician or the propane truck can reach it. A standby unit that's snowed in can't protect you.

! Never let snow bury the unit or its exhaust

A blocked exhaust or a snowed-in unit is both a performance problem and a carbon-monoxide risk. After heavy snow, clear the unit, its vents, and the required clearances around it — the same distance thinking that governs where it was placed.

Common mistakes people make

A handful of avoidable slip-ups cause most of the regret I hear about with standby installs.

- **Shaving the clearances** to hide the unit or fit a tight spot — the distances from windows, doors, and vents are not negotiable.
- **Placing it in a low spot** that floods, or where snow drifts and plows pile up.
- **Skipping the setback or HOA check** until after the pad is poured, then having to move it.
- **Crowding it with shrubs, fences, or firewood** that block airflow and service access.
- **Treating it as set-and-forget** and skipping the professional maintenance that keeps it dependable.

! The clearance mistake is the dangerous one

Most of these cost money or hassle. Shaving the required distance from a window, door, or vent can cost far more — it's the one that lets exhaust find its way indoors. Never trade that distance for looks or convenience.

Questions to ask the pros

These help you land a safe, code-right install you understand, not just one that's finished.

Q: Where exactly can the unit go on my lot?

Ask the installer to reconcile the manufacturer's clearances, local setbacks, and any HOA rules into one workable spot — ideally before anything is poured.

Q: Natural gas or propane — which makes sense for me?

It depends on what's at your home and available. The gas pro can size the supply, and if it's propane, plan the tank's placement and delivery access too.

Q: What pad does my unit require?

Ask whether it needs poured concrete or an approved composite pad, and how it'll be kept level, drained, and up out of flooding and snow.

Q: What permits and inspections are involved, and who pulls them?

Both the electrical and gas work typically need permits and inspection. Ask who handles each, and keep the records for insurance and resale.

✓ There's no silly question

Good pros expect these and welcome them. If one waves off the clearance or setback questions, that's worth noting, not ignoring — those are exactly the details that keep you safe and legal.

Myths people believe — and the truth

A few mistaken beliefs come up again and again. Here's the honest version of each.

Myth	Fact
'A standby vents cleanly, so clearances don't matter.'	Its exhaust is still carbon monoxide. Clearances from windows, doors, and vents are required.
'I can set it on patio blocks or gravel.'	It needs a proper level, drained pad — poured concrete or an approved composite pad.
'It runs itself, so I never touch it.'	It self-tests, but needs professional maintenance and clear snow to stay dependable.
'I can put it wherever it looks best.'	Placement is set by the manual, local code, setbacks, and HOA rules — not looks alone.
'I can save money doing the gas hookup myself.'	Gas work is always a licensed pro's job. Never DIY it.

! A belief doesn't have to be true to feel true

When something you've heard doesn't match this guide, trust the rule, not the rumor — especially anything that suggests trimming a clearance or skipping a licensed pro.

Common Questions

The questions I hear most from folks considering a standby unit, answered plainly.

Q: How far from the house does a standby unit have to be?

It's set by the manufacturer's manual and local code, with specific distances from windows, doors, and vents. There's no single universal number — the installer follows both, and the stricter one wins.

Q: Do I still have to think about carbon monoxide with a permanent unit?

Yes. The exhaust is engineered to vent safely but it's still carbon monoxide, which is exactly why the clearances exist. Keep CO alarms tested inside, as always.

Q: Can you install it for me, Bill?

Not the licensed parts — the electrical and gas work aren't my licenses. What I do is help you plan the spot, choose the unit, and coordinate the licensed pros who do the install. Your safety deserves the real thing.

Q: Natural gas or propane — does it change where it goes?

It can. Natural gas means no tank to place; propane means siting a tank with its own setbacks and delivery access. Both still require the unit's clearances from the house.

★ Ready to plan yours?

Call or text me at (330) 200-8042 and tell me about your lot and your fuel. I'll help you find a safe, sensible spot and line up the pros to make it real.

Bringing it all together

A standby generator is a permanent, automatic backup — and siting it well is where a safe, code-right install begins.

It sits on a proper level, well-drained pad, kept up out of flooding and snow, at the clearances the manual and code require from every window, door, and vent, with room all around for airflow and service. A licensed electrician wires it and the automatic transfer switch, a licensed gas pro handles the fuel, and a permit and inspection make it official.

From here, our connecting-to-gas guide covers the fuel side, our guide to hiring a licensed electrician helps you find the right pro, our permits-and-inspection guide covers the paperwork, and our noise, neighbors, and setbacks guide helps you keep the peace. Whichever way you go, the clearances keep the exhaust out of the house.

★ Let's plan yours together

Call or text me at (330) 200-8042 and tell me about your lot and your fuel. I'll help you plan the spot, choose the unit, and coordinate the pros — free, with nothing to sell you.

If you remember only one thing

Out of everything in this guide, one idea keeps everyone safe.

The clearances are the whole game. A standby unit must sit the required distance from every window, door, and vent — set by the manufacturer's manual and local code, never shaved for looks or convenience. Get the placement right, leave the licensed work to the pros, and the rest of the project falls into place.

! Engineered exhaust is still carbon monoxide

Even a permanent, professionally installed unit puts out carbon monoxide. Clearances from windows, doors, and vents are a safety rule, not a suggestion — and CO alarms stay tested inside, just as they do for any generator.

You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made planning and placing a standby generator feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical or gas work myself — for that I'll help you line up a trustworthy local pro.

★ Bill's Home Tech — real help, close to home

Call or text me at (330) 200-8042, or visit BillsHomeTech.com. Serving Atwater and all of Portage County. 30+ years of patient, plain-English tech help — and if you're ever not 100% happy with a visit, I'll make it right or refund it. That's a promise. — Bill

Pad and Placement Checklist

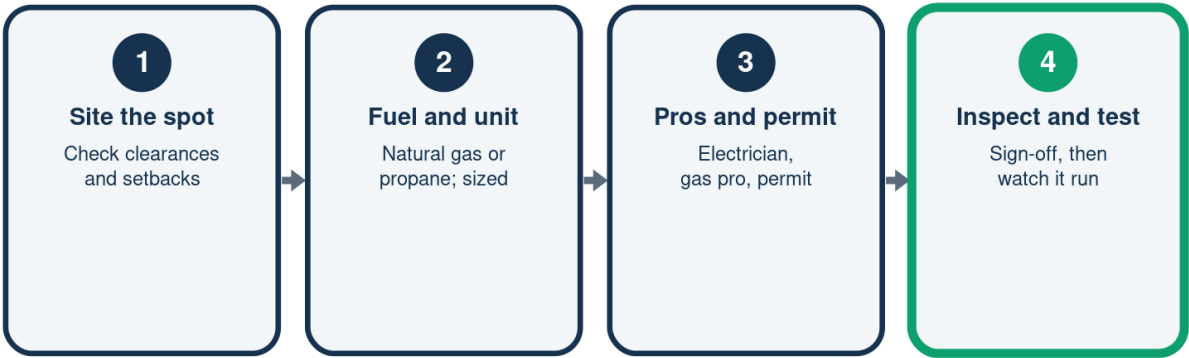
The siting musts, and why they matter

	Requirement	Why
Base	Level pad	Won't shift
Drainage	Above puddles	Sheds water
Snow	Above drifts	Stays clear
Clearances	Set back far	Keeps CO out
Airflow	Open around	Cools engine

The manual and local code set the exact distances -- follow the stricter.

Planning a Standby Install

The calm path to a permanent unit



The electrical and gas work are licensed pros' jobs, with permits and inspection.

Who Does What

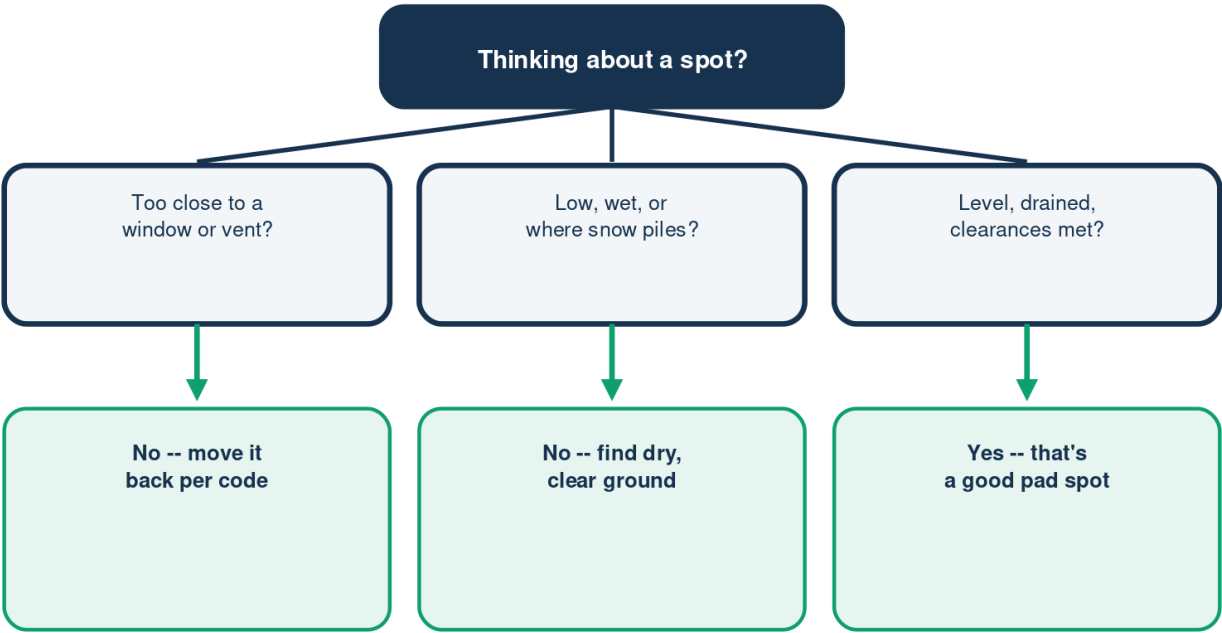
The team behind a standby install

Task		Who
Wiring	Panel and switch	Electrician
Fuel	Gas or propane	Gas pro
Pad	Level base	Installer
Permits	Pull and file	The pros
Planning	Spot and pros	You and Bill
Inspection	Final check	Local inspector

Bill plans and coordinates; the licensed pros do the electrical and gas work.

Is This a Good Spot for the Pad?

Let the clearances and the ground decide



The manual and local code set the distances -- follow the stricter of the two.

Illustration - a schematic, not to scale. Your setup may differ.



Need a Real Person?

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Prefer help without a visit?

Bill can screen-share and fix many things remotely — a flat \$49, free for Support Plan members.



A Note From Bill

A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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