

Electrical & Construction Symbol Legend + Takeoff QA Checklist

A plain-English reference to the symbols estimators count most — plus a checklist to make your count defensible before it goes in a bid.

One thing first: symbol shapes are not universal. Every drawing set carries its own legend (often the E0 or “symbols & abbreviations” sheet), and offices differ. Use this as a reference for what the common devices are and where they show up — then always count from the project’s own legend. That’s why SimplyCount is self-learning: teach it your legend once and it counts your symbols, not a generic set.

Electrical — power & lighting

SYMBOL / DEVICE	WHAT IT IS	WHERE YOU’LL SEE IT
Duplex receptacle	A standard two-outlet wall power receptacle.	Power plans — usually the most-counted device on a job.
GFCI receptacle	A ground-fault receptacle that trips on a fault; required in wet locations.	Kitchens, baths, exterior, mechanical rooms.
Quad / double-duplex receptacle	Four outlets ganged in one location.	Offices, workstations, AV walls.
Dedicated / special-purpose receptacle	A receptacle on its own circuit for one load, usually labeled.	Appliances, equipment, IT rooms.
Single-pole switch	Controls one lighting circuit from one place.	Lighting plans.
Three-way / four-way switch	Controls a light from two or more locations.	Stairs, hallways, large rooms.
Luminaire (ceiling / recessed / wall)	A light-fixture symbol; the type keys to the fixture schedule.	Reflected ceiling plans (RCP).
Exit sign / emergency light	Egress lighting and exit signage.	Life-safety / egress plans.
Panelboard	A distribution panel feeding branch circuits.	Power plans + panel schedules.
Junction box	A box where conductors are joined.	Power and systems plans.
Homerun	An arrowed line running a circuit back to its panel, tagged with the circuit number.	Power plans.
Motor / equipment connection	A powered piece of equipment, often with a disconnect.	Mechanical–electrical coordination.
Data / telecom outlet	A low-voltage outlet for data or voice.	Technology / systems plans.

Architectural — doors, hardware & openings

SYMBOL / DEVICE	WHAT IT IS	WHERE YOU’LL SEE IT
Door (single / double)	A door opening; each leaf is keyed to the door schedule.	Architectural floor plans + the door schedule.
Door tag / mark	The number or letter in a bubble that keys a door to its schedule (type, size, fire rating, hardware set). Count these.	Floor plans — then reconcile against the schedule.
Door hardware set	The hardware group (hinges, lock/latch, closer, exit device) assigned per door in the schedule.	Door / hardware schedule, not the plan.
Window / storefront / curtain wall	Glazed openings; storefront and curtain wall are counted by opening or by unit.	Elevations + floor plans.
Overhead / coiling door	Rolling service, dock, or grille doors.	Floor plans + details.
Louver / access panel / opening	Non-door wall openings often tallied for a bid.	Floor plans + RCPs.

Plumbing

SYMBOL / DEVICE	WHAT IT IS	WHERE YOU'LL SEE IT
Fixtures (water closet, lavatory, urinal, sink)	Plumbing fixtures, keyed to a fixture schedule.	Plumbing fixture plans.
Floor drain / cleanout	Drainage and access points.	Sanitary / waste plans.
Valves (gate, ball, check)	Isolation and flow-control valves.	Piping plans.
Riser / stack	Vertical piping runs.	Riser diagrams.

Mechanical / HVAC

SYMBOL / DEVICE	WHAT IT IS	WHERE YOU'LL SEE IT
Diffuser / grille / register	Supply and return air distribution devices.	Mechanical plans and RCPs.
VAV box	A variable-air-volume terminal unit.	Mechanical plans.
Thermostat / sensor	Zone control and sensing points.	Controls plans.
Equipment tag (RTU, AHU, etc.)	A tagged unit tied to an equipment schedule.	Mechanical plans.

Fire protection

SYMBOL / DEVICE	WHAT IT IS	WHERE YOU'LL SEE IT
Sprinkler head (pendent / upright / sidewall)	The discharge device — orientation matters for the count.	Fire-protection plans.
Riser / control valve / standpipe	System supply and control.	FP riser diagrams.

Fire alarm, low-voltage & security

SYMBOL / DEVICE	WHAT IT IS	WHERE YOU'LL SEE IT
Smoke / heat detector	Initiating devices.	Fire-alarm plans.
Pull station	A manual initiating device.	Fire-alarm plans.
Horn / strobe (notification appliance)	Audible / visible alarm devices.	Fire-alarm plans.
WAP / camera / card reader / data drop	Low-voltage and security devices.	Technology / security plans.

The 9-step takeoff QA checklist

1. Read the legend sheet first. Every set defines its own symbols (usually the E0 or “symbols & abbreviations” sheet). Count from the project’s legend, not a generic chart.
2. Confirm you’re on the latest revision, and note the drawing scale before you start.
3. Count one symbol type at a time across every sheet — don’t mix types in a single pass.
4. Separate look-alikes deliberately: duplex vs GFCI vs dedicated receptacle; pendent vs upright sprinkler head.
5. Pick up devices that live on schedules and details, not just the plan — fixture, panel, and equipment schedules.
6. Reconcile where you can: homeruns and circuits against device counts; fixture types against the fixture schedule.
7. Mark anything unclear as a floor ($\geq$), not a total, until it’s verified — never let a dressed-up number into a bid.
8. Re-count the high-value symbols a second time (or have the tool re-count) before the number goes out.
9. Keep the marked-up set as your audit trail so the count is defensible later.