INSULATION
CONDITIONING CRAWLSPACES

Sealing and insulating a crawlspace will save energy and reduce the chance of mold and mildew compared to a vented crawl—but only if the builder uses careful air sealing and climate-appropriate insulation.

WHERE TO INSULATE

In warm climates, closed crawlspaces should have insulation installed on the walls.
In cold climates, install batts between the floor joists, even when ductwork is located in the crawlspace. This prevents the crawl from robbing heat from the main home above.

AIR AND MOISTURE SEALING

Weather-strip the crawlspace door, and seal all gaps and penetrations in the walls and floor. Small holes can be sealed with foam sealant. Bigger holes can be covered by rigid panels that are foam sealed at the edges.

In a dirt crawlspace, cover the floor with reinforced 10-mil poly sheets and lap them a foot up the exterior walls as well as up any masonry piers.

Carefully lap the poly around drainage pipes. Seal all joints with vapor barrier tape.

Poly sheets can be secured with 6-inch galvanized spikes driven through nailing tins. Apply duct tape and mastic over the tins for a tight seal.

DRYING THE AIR

Moisture from airborne humidity, condensation and small plumbing leaks needs to be mechanically removed. The most common approach is via a supply air duct. Codes recommend a minimum 1 cfm of supply air per 50 square feet of floor area, but home performance contractors recommend 1 cfm per 30 square feet. A low-sone continuous fan (**below**) that draws air from the main living space through a floor register and a short run of duct will keep the RH in the crawl close to that of the main house.

Allison Bailes

Drying the Air

A small opening in a supply duct is an inexpensive way to dry out the crawlspace, but it won't address moisture when the HVAC system isn't running, which can lead to unacceptably high crawlspace humidity in spring and fall. A robust dehumidifier will control moisture year-round. The model shown **below** is made for basements and crawlspaces.

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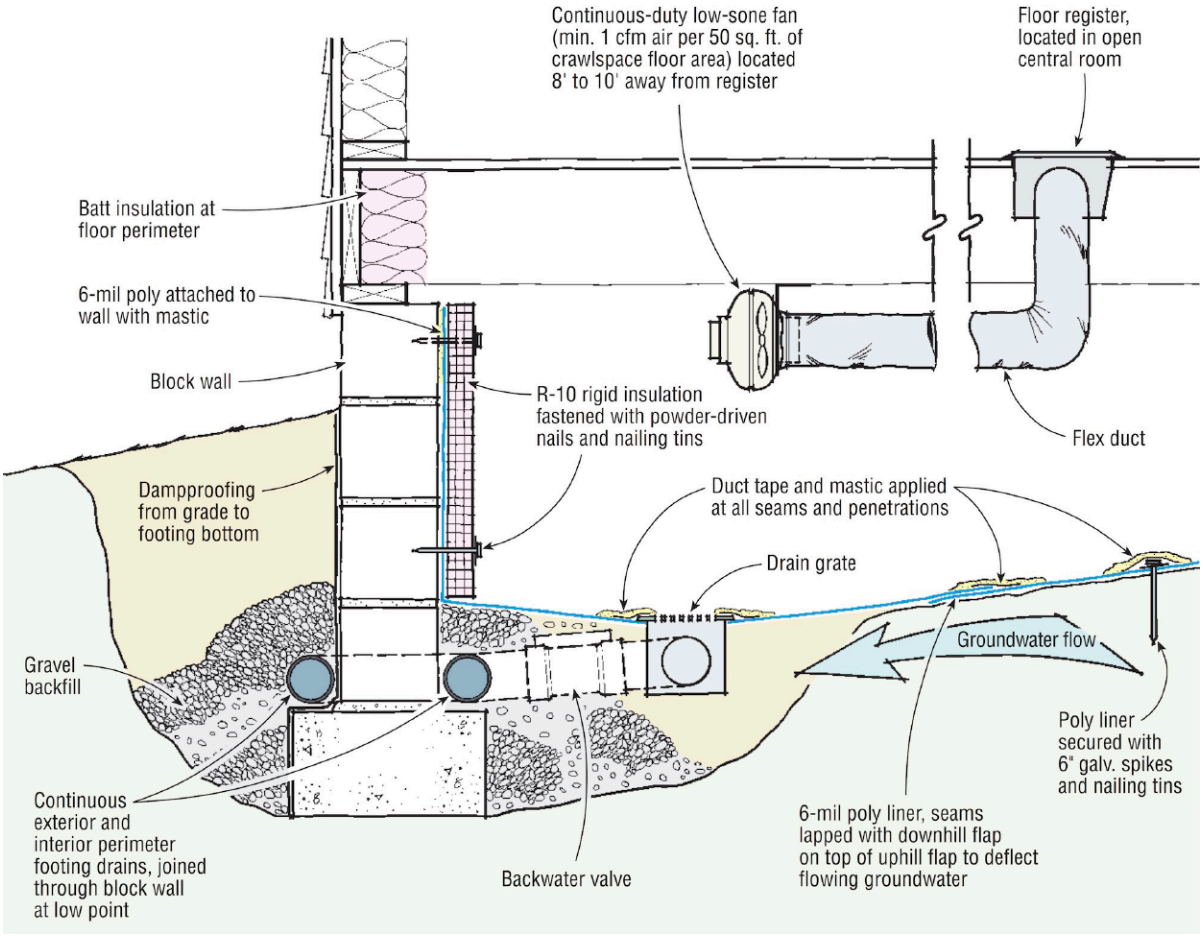
BULK WATER DRAINAGE

While mechanical ventilation and dehumidification should take care of condensation and small leaks, if there's high ground water it's best to slope the crawlspace floor to a drain grate connected to a foundation perimeter drain, as shown in the illustration **below**.



RADON CONTROL

Always test for radon whenever enclosing a crawlspace. In areas with a known radon risk, install an appropriate radon abatement system. For more, see JLC's Radon Abatement guide.