

Build Pests Out!

Design and Construction Guidelines for Schools

One of the most effective ways to eliminate potential pest problems is to follow the simple Integrated Pest Management design and construction guidelines presented below. By incorporating specific exclusionary strategies in structural designs, school officials can aggressively reduce childrens' and adults' exposure to potential health hazards while promoting healthy Colorado schools.

Entrance Ways

- Install door sweeps on all outside doors at the bottom edge; they should fit snugly against the threshold and be flush with the doorframe on both sides. Traffic type and volume, as well as specific location, influences product selection.
- Install weather-stripping on doorframe along both sides and top of frame.
- Exterior doors should not be propped open giving invading pests easy access to the building.
- Use CFL light fixtures with yellow CFL bulbs in order to attract fewer flying insects.



Above:
Unsealed doorway provides pests with direct entry to the building.



Keeping dumpsters closed will deter pests.

Kitchen

- Keep trash and food waste receptacles at least 100 feet from dock entrance.
- Use self-closing trash cans which are elevated off the ground.
- Place trash cans/dumpsters on a concrete slab, designed and graded so that it is possible to spray with water to clean.
- Caulk/seal around sink edges, where cabinets and countertops meet walls (particularly under the sink), between cupboards and countertops.
- Cover all floor drains with coarse mesh screens or floor sink baskets. The maximum size of the openings on the cover should not exceed one quarter (1/4) inch; openings may be round or square. Covers or baskets should be removable for cleaning.

Windows

- Fit all operable windows (crank, slider, flap) with screens with a gasket to prevent pest entry.
- Screens should be taut, without tears, and 10 mesh or smaller.
- Install weather stripping around window frame for a tight seal.



Exterior

- Use exclusion to deter birds from ledges, overhangs and sills. Many products including electric deterrent bird wire, bird exclusion nets, deterrent screens, “No-land” bird slide, and other mechanical exclusion devices can be used.
- Eliminate holes, cracks, crevices, and gaps by caulking/sealing. Larger holes (pipe openings, etc.) can be stuffed with steel or copper wool inside, and then filled with mixed cement or quality butyl caulk.
- Fit gutters with grated covers or a similar product to repel pests without hindering the gutters operation.
- Screen (10 mesh or smaller) outside air intakes/vents and install to be easily removed for cleaning.
- Install screens in foundation vents if they are not present.
- Avoid lights above doorways; use reflected light to illuminate doorways.



Above:
Sloped light fixture deters birds from building nests.

Building perimeter

- Keep trees, shrubs, and ornamental 3 feet or more away from the building. separation at full growth. Prune and maintain plantings far enough apart for one foot separation at full growth.
- Maintain the landscape next to buildings as a barrier to prevent pests; this can be rock, clay, concrete or pavement. Mulch is not an acceptable material for this application. Barriers should extend three feet away from building in order to prevent rodents from digging burrows next to buildings. If using rock, a diameter of one inch or larger and at least a 2 inch depth all around is recommended.
- Landscape/irrigation design should move water away from the building.



Above:
Sealed pipes under sink.



Left:
Landscape designed away from building.

Throughout building

- Caulk/seal along baseboards, floor and wall joints, window and door moldings, edges of electrical outlet covers, and radiator covers. Caulk smaller openings using elastomeric silicone sealant.
- Caulk/seal around all water, electrical pipes, cable and/or other wires coming into a unit.

Developed in consultation with UC Boulder IPM Operations and
http://ag.arizona.edu/urbanipm/schools/tool_box/architectural_guidelines_3.21.07version1.pdf

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