

Stairs and Hallways

Foyers are the entry vestibule to a home. Ambient lighting usually is sufficient for foyers and hallways. Accent lighting can provide visual interest. See Ambient and Accent techniques for more information.

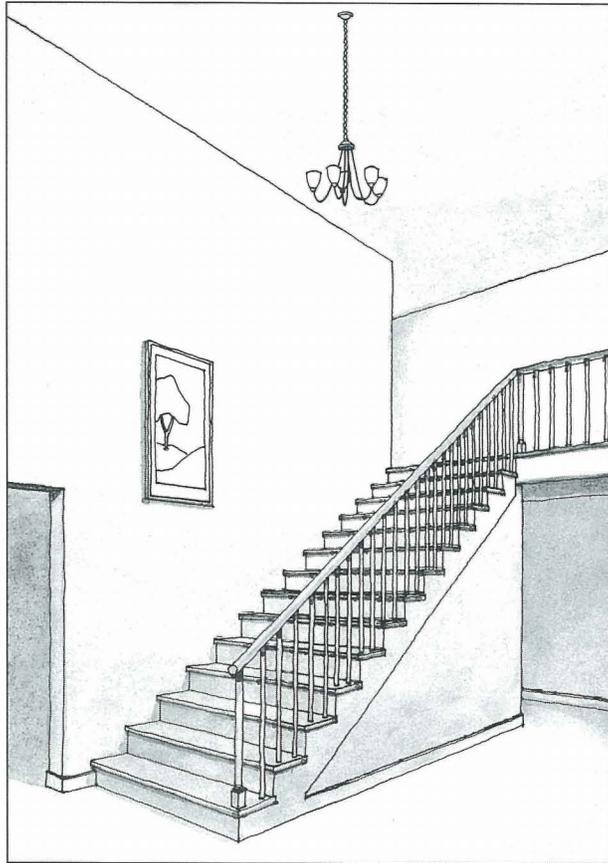
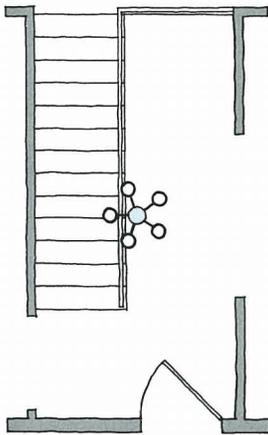
Foyer with Open Stair

Typical

A chandelier containing five 60-watt candle lamps provides ambient lighting and is controlled by three-way wall-mounted switches.

Replace lamps

If lower light output is acceptable, replace the 60-watt lamps with 40-watt candle lamps.

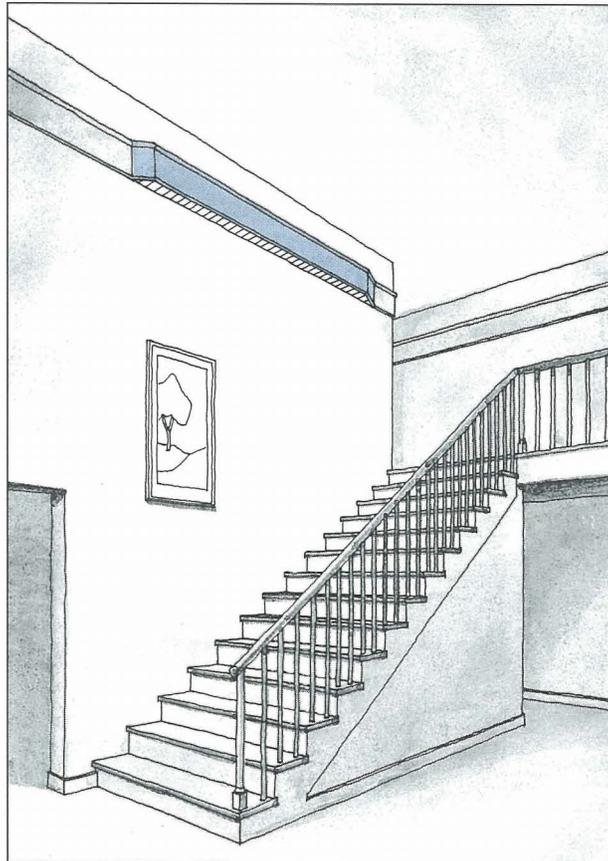
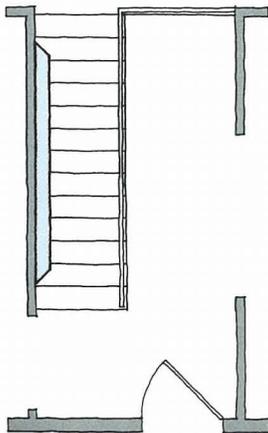


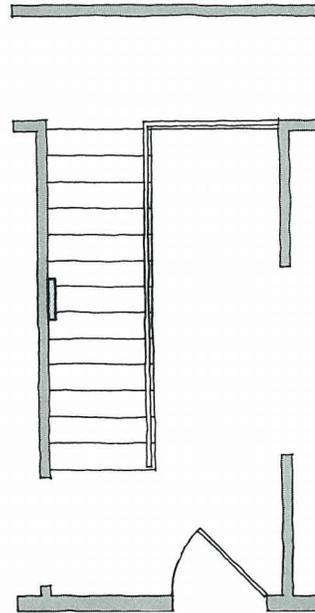
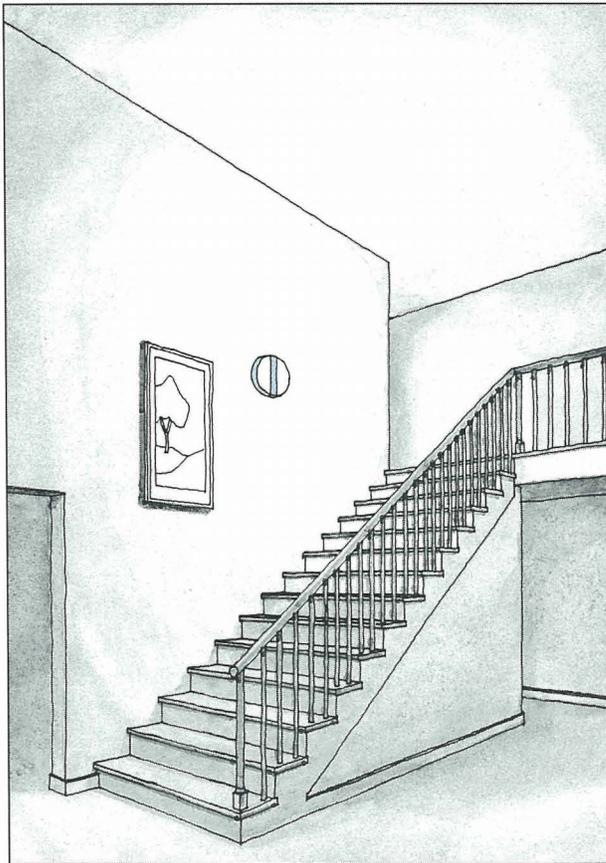
Remodel or new construction

A valance containing two 32-watt, 4-foot T8 RE730 linear fluorescent lamps provides ambient lighting and wall washing. This design provides a higher light output than the other designs and distributes light more evenly on the stairs.



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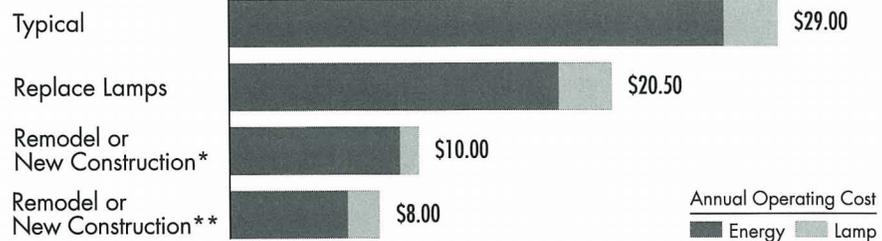




Remodel or new construction

Replace the chandelier with a wall-mounted diffuser containing one 32-watt, 12-inch RE730 circline lamp.

Annual Operating Cost at \$0.10 per kWh



*T8 **Circline
 For all of the lamps, assume 4 hours of use per day and 1 hour per start.

Closed Stair

Typical

Two recessed downlights, each containing one 100-watt A-lamp, provide ambient lighting; they are controlled by three-way wall-mounted switches.

Replace lamps

Replace the 100-watt lamps with 50-watt PAR30 halogen flood lamps.

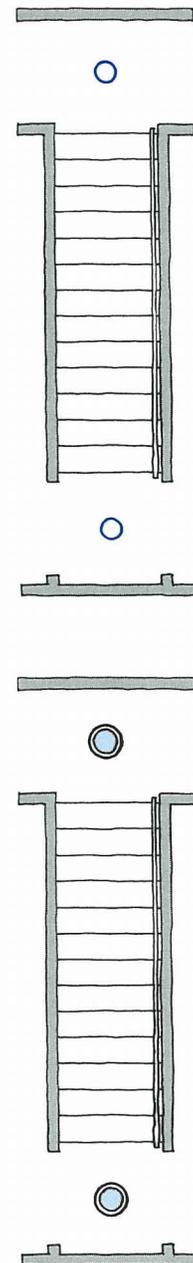
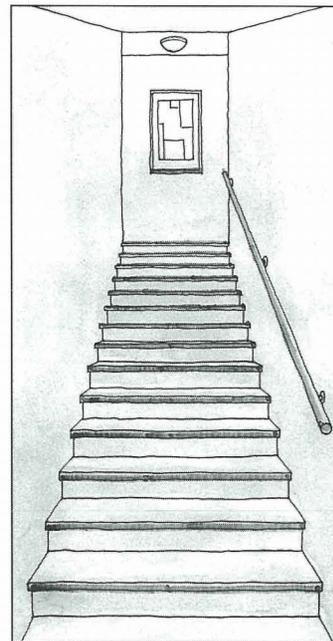
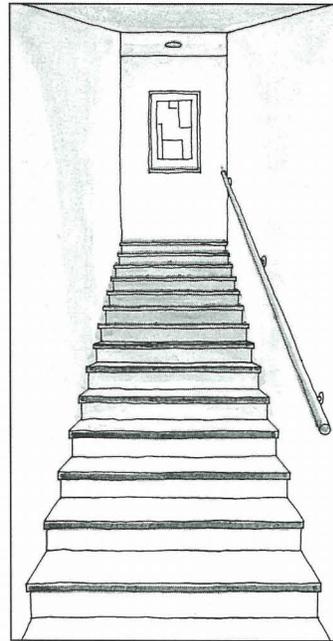
Replace controls

If the stairs are not used frequently and residents leave the lamps operating for many hours, as they might for a basement or attic stair, consider replacing the wall-mounted switches with electronic interval timers. Inform residents that the control should be activated each time a person uses the stairs, to avoid the luminaire switching off while the person is on the stairs.

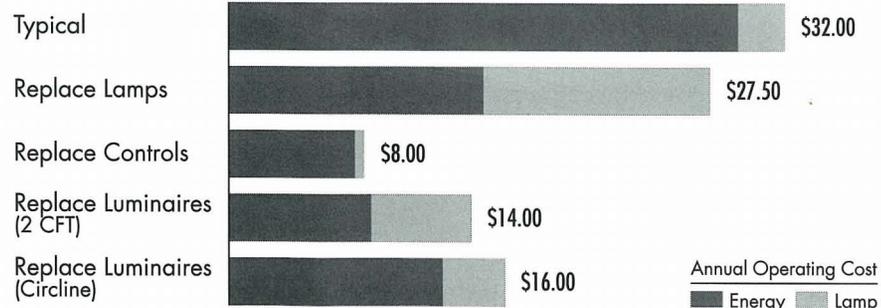
Replace luminaires

Modify each of the downlights with a conversion kit that houses a reflector, a magnetic ballast, and two 13-watt compact fluorescent twin-tube lamps.

For higher light output than the compact fluorescent lamps provide, replace the downlight luminaires with ceiling-mounted diffusers, each containing one 32-watt, 12-inch RE730 circline lamp.



Annual Operating Cost at \$0.10 per kWh



CFT = compact fluorescent twin-tube
 For all of the lamps, assume 4 hours of use per day and 1 hour per start.
 If an interval timer is used, assume 1 hour of use per day.

Hallway

Typical

Three recessed downlights, each containing one 50-watt R20 lamp, provide ambient lighting. They are controlled by three-way wall-mounted switches.

Replace lamps

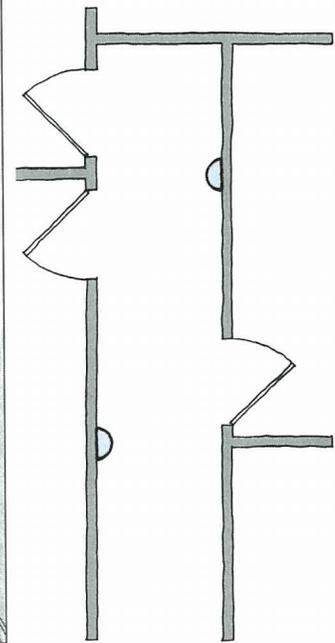
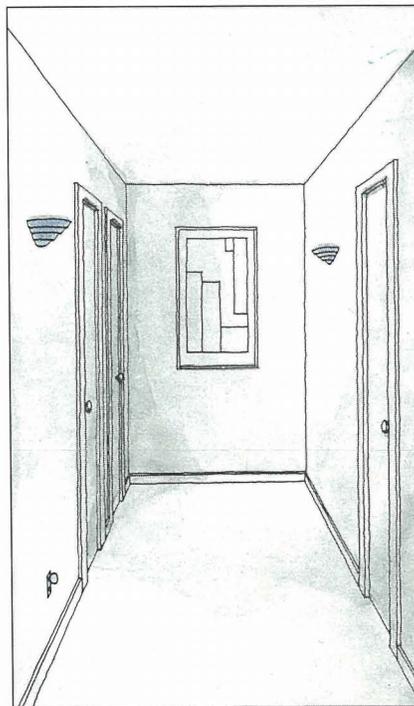
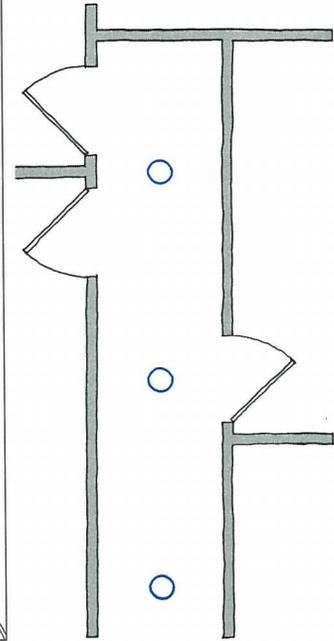
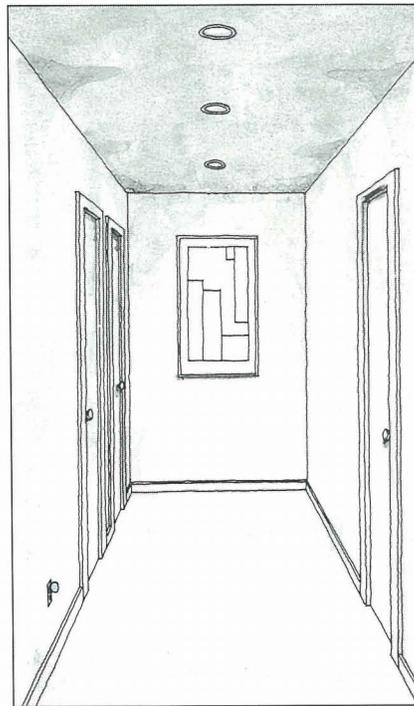
If the luminaire housings are large enough, replace each 50-watt lamp with an electronically ballasted 15-watt screwbase compact fluorescent lamp with an integral reflector. Add a night light if the lamps in the hallway are operated for orientation.

Replace luminaires

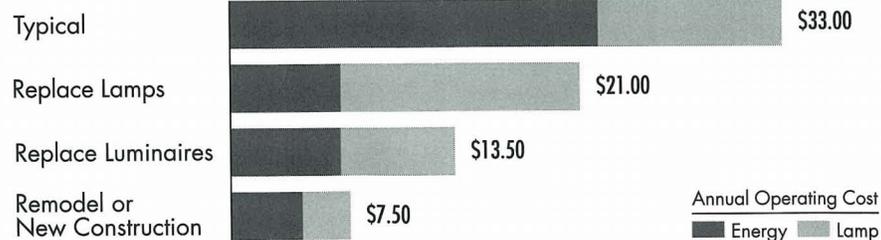
Modify each of the recessed downlights with a conversion kit that houses a reflector, a magnetic ballast, and one 13-watt compact fluorescent quad-tube lamp.

Remodel or new construction

For a different light distribution pattern, two sconces, each containing one 13-watt compact fluorescent twin-tube lamp and a magnetic ballast, provide ambient lighting. They are controlled by a three-way wall-mounted switch.



Annual Operating Cost at \$0.10 per kWh



For all of the lamps, assume 4 hours of use per day and 1 hour per start.