includes up to 400 housing units, over 500 parking spaces, a public square or park, plus 40,000 ft^2 of commercial space on 9.4 acres, for a net residential density of 43 units per acre (106 per hectare). It will require more sophisticated design and construction technology due to its height and the inclusion of 240 decked-over parking spaces, but offers the convenience and minimum-maintenance lifestyle popular with a growing segment of the residential market. Hydraulic elevators provide accessibility and convenience, but many residents of a more health conscious community will probably choose to walk up the maximum of three flights of stairs. Every unit has been designed for natural through-ventilation, as well as outlooks to the greater landscape beyond the wide south-facing landscaped courts and intimately-scaled elevated pedestrian access 'streets'.

Commercial area infill opportunities

In addition, two opportunities for infill development in existing commercial areas were investigated (Figure 13.7).

Strip centre parking infill

This first proposal fronts the perimeter streets of a typical 'big box' or strip centre parking lot, providing additional ground level

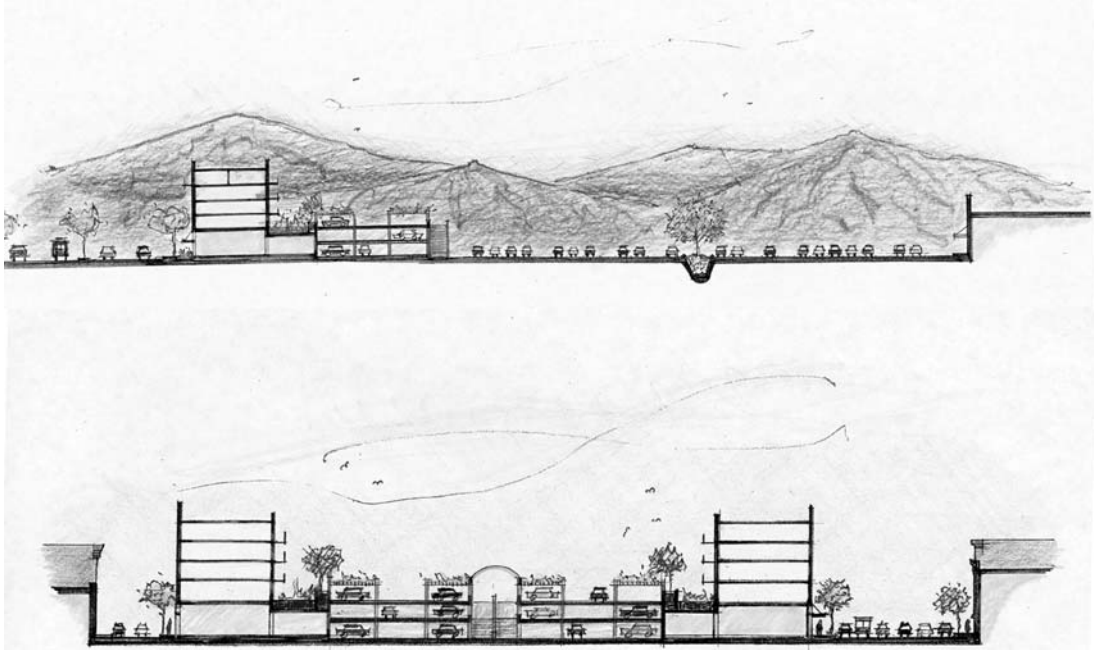

Figure 13.7
Infill typologies: suburban 'strip' retail parking-lot infill site section and downtown full-block infill site section.

retail topped by several levels of housing, all built on the periphery of the existing parking lot. The typical 'strip centre' or 'big box' parking lot was sized in response to conventional planning wisdom and developer-generated parking ratios of the 1950s; they are seldom full in Western towns. Soaring retail rents suggest that the revenue generated from this additional development would quickly offset the cost of any parking structures required to replace the lost spaces. An asphalt wasteland can become affordable housing, convenient for shopping, creating a far more pleasant streetscape and enlivening a typically unattractive, lifeless, automobile dominated zone of the city.

Traditional downtown block infill

The second diagram suggests a high-density infill development of an entire downtown Bozeman city block. A scale-less office project with minimal street activity and no on-site parking has been proposed for the vacant site formerly occupied by the historic Firestone Building on Main Street. This counterproposal shows four levels of housing over street-front retail and office space, surrounding (and screening) a parking structure buried in the middle of the block. There is increasing interest in Bozeman in providing adequate parking downtown to keep the core alive. This proposal provides adequate parking for all uses without destroying the urban fabric, and contributes to a walk-able residential downtown as well. The uppermost partial level of the parking deck is reserved for the residential units, and is heavily landscaped. This typology would provide 128 residential units on this block with 1.5 dedicated parking spots per unit, plus over 55,000 ft^2 of commercial space with parking at a ratio of 4.5 cars per 1000 ft^2. The net housing density is 35 units per acre (86.5 per hectare) in a mixed-use infill configuration.

A test case

The design prototypes proposed above were applied in a comparative theoretical test comparison with a recent typical suburban development located at the extreme edge of the Bozeman city limits. The existing development consisted of 418 plots of approximately one-third acre, 130 smaller plots and 16 larger multifamily plots, for a total capacity of 932 housing units. The alternative design could have increased local densities enough to produce up to 300 additional housing units while