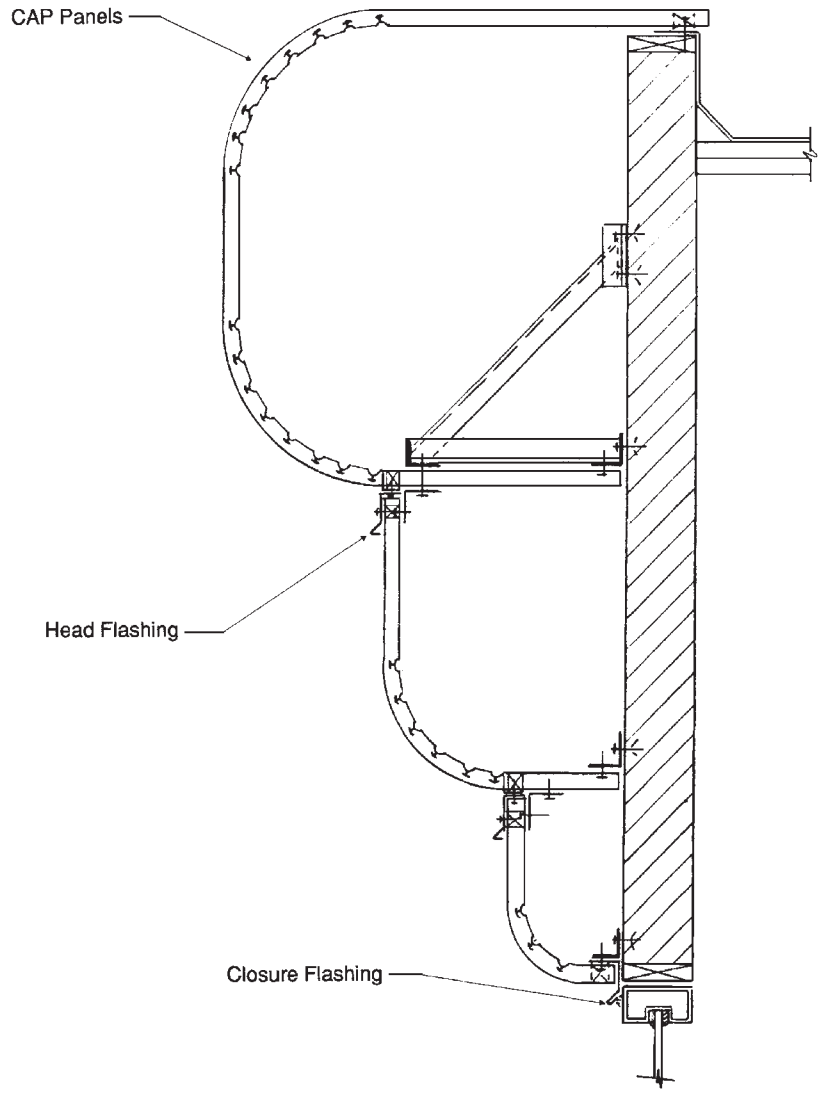

FIGURE 13.9 Triple-step curved fascia. (*Centria.*)

the price trends, which might prove transient, steel has some real advantages over wood: It is noncombustible, dimensionally stable, does not warp or rot, and is unaffected by termites. The major disadvantage of steel is its poor thermal properties.

To be sure, houses of steel have been tried before. Peter Naylor's "portable iron houses," described in Chap. 1, were offered for California Gold Rush fortune seekers as far back as the mid-nineteenth century. A century later, after World War II, the U.S. government granted a loan to Lustron Corp. of Columbus, Ohio, to build homes of steel. The Lustron Homes were made of steel framing and sheathed with porcelain-coated steel exterior panels. Even the interior partitions and

SOME CURRENT DESIGN TRENDS

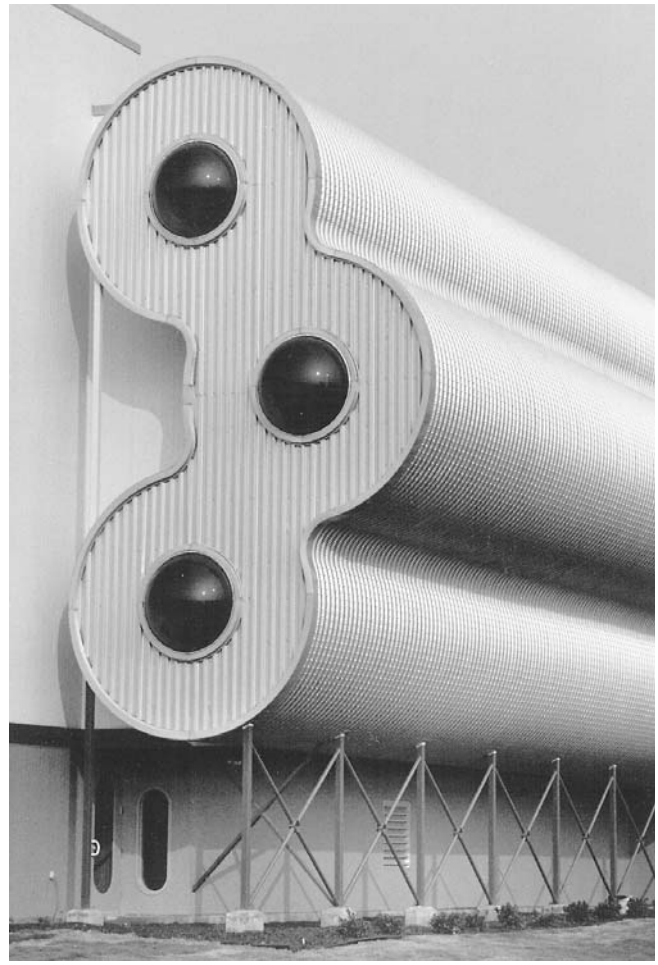

FIGURE 13.10 Complex curves grace the U.S. Space Camp in Huntsville, Alabama. (*Curveline, Inc.*)

ceilings were made of steel. According to a web site devoted to Lustron Homes, these houses were produced in 1949 and 1950; they retailed for approximately $7000.

There are three methods of building the house of steel. The first is to simply substitute steel studs and joists for wood, essentially following traditional construction of studs and joists spaced 16 or 24 in on centers. Everything else—roofing, siding, doors, windows—stays the same as in a wood-framed house. This method allows for an easy framing conversion to steel in both standard and custom-designed houses; it is undoubtedly used in most steel-framed houses.

The second method of framing is panelized construction: The structure is built from preassembled steel-stud wall panels and roof trusses. Both studs and trusses are spaced 32 to 68 in on centers, with hat-section subgirts and subpurlins similar to those in Fig. 13.4 spanning in between. Despite the claims of efficiency, this system is rather complex structurally and may require more bracing and anchorage than others.[5] It is unfamiliar to both traditional house builders and pre-engineered building erectors and can introduce a lot of confusion at the jobsite.