



INVITING DESIGN

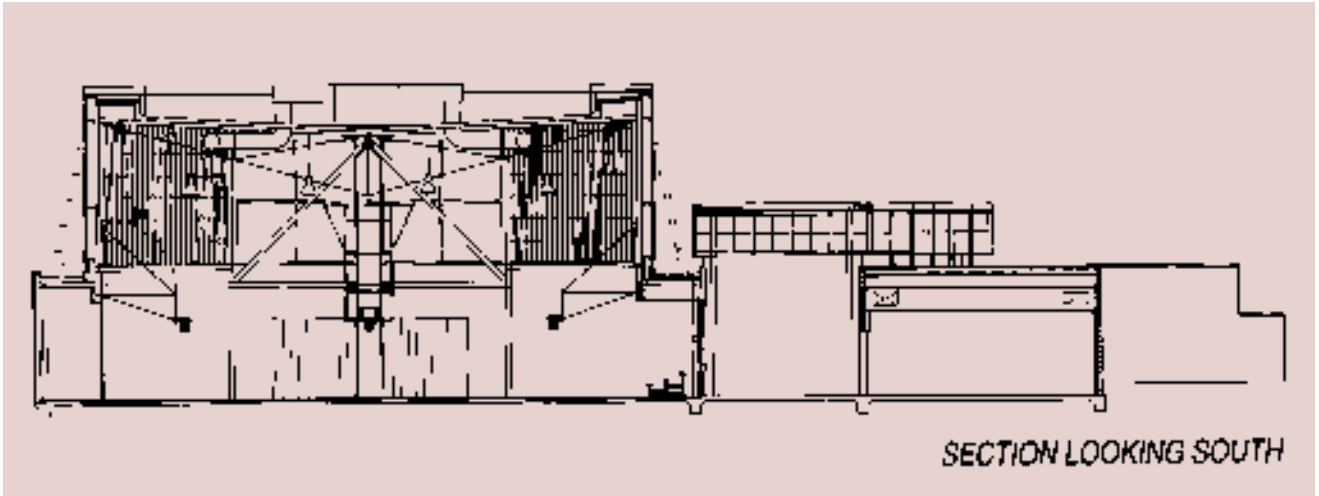
The exposed steel design of a new community center in Fremont, CA is both beautiful and vandal-resistant

THE DESIGNERS OF A NEW COMMUNITY CENTER IN FREMONT, CA, WERE FACED WITH A NUMBER OF CONCERNS, not the least of which was creating a multi-use structure that would not only be inviting to young people, but also vandal-resistant. "The owner's program was to provide a gymnasium for use by several groups, particularly teenagers, but also include space for a day-care center," explained Clarence Mamuyac, an architect with ELS/Elbasani & Logan Architects in Berkeley, CA. "From an urban design standpoint, the building needed to address both the main street in front of the building and the park surrounding it. And it was essential that the building be vandal-resistant."

Finally, as design got underway, a final piece was added to the center: a community meeting room equipped for teleconferencing. "While it wasn't part of the original program, the teleconferencing facility was extremely successful as a revenue generator," Mamuyac explained. "It was booked for almost two solid years even before construction was completed."

The 14,750-sq.-ft. building serves the Irvington neighborhood of Fremont. The immediate area is dominated by suburban subdivisions, including a high school (with playing fields), a church and its parking lot, and a continuation high school. With one front door on the street and another facing the existing park, the design embodies the building's dual civic and recreational functions. The west wing has a slight cant in plan to respond to the adjacent street.

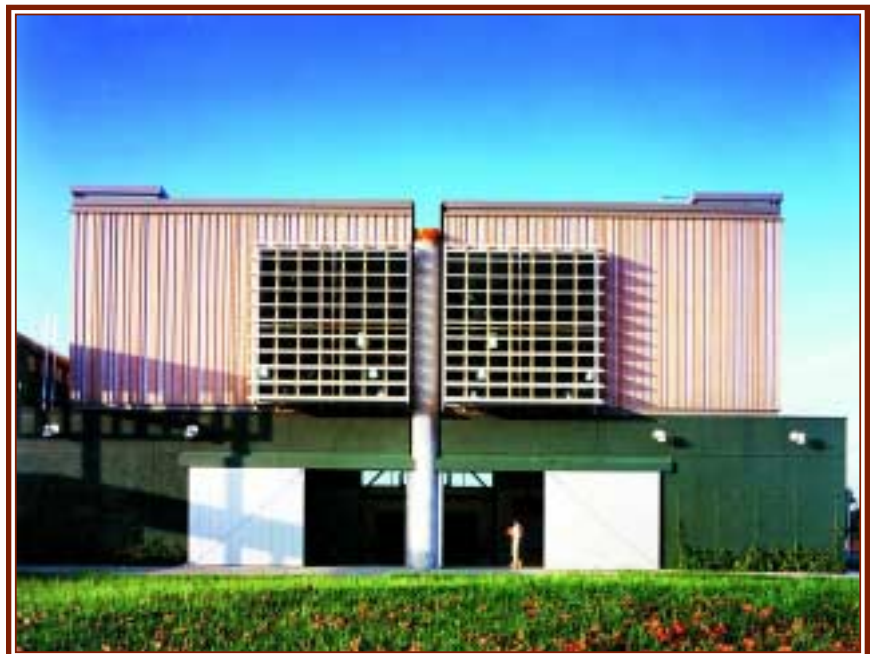
In the back, the building is windowless for the bottom 16' of the structure, with two large "barn" doors opening into the gymnasium area. The front, however, is a framework of glass and steel, which acts as an inviting beacon to the community. While very different, each acts as a "main" entrance. Vandal resistance on the park side is provid-



The street-side entrance is designed to both attract attention and invite passers-by to enter. The glass entryway is readily monitored from the main lobby, discouraging any vandalism.
Photo by David Wakely

The park-side entrance opens directly into the gymnasium. Since that side of the building is hidden from the street, windows are absent from the bottom 16' of the structure. Also, vines were planted at the base of the building both to soften its appearance and discourage vandalism.

Photo by David Wakely





The architects left most of the steel frame exposed in the gymnasium both to express the building's structure and to create a more open design.

Photo by David Wakely



The design of the clerestory at the top of the lobby reflects the design of the exposed Vierendeel trusses.

Photo by David Wakely

ed both by the limited window area and a covering of vines on the lower 8' of the building. In addition, the vines serve to soften the appearance of the structure.

The building is bisected by a central lobby, with the gymnasium on one side and a community meeting room, day-care center and restrooms on the other. The cross section features a dramatic roof structure with skylights in the gymnasium, exposed steel framing and clerestory in the lobby and high ceilings and skylights in the community rooms.

"We wanted a modern design palette, what we refer to as 'tectonics,'" said Mamuyac. "The building is very expressive structurally. We wanted to show how the building comes together, so almost all of the structural details are exposed."

The majority of the structural system consists of a concentrically braced frame with both wide flange sections and hollow structural sections (HSS) and a roof diaphragm and metal decking.

Structurally, the most dramatic part of the building is in the entrance gallery, which is framed with a combination of wide flange members, flat bar and stiffeners, all welded together. The W8x31 wide flange members support simple Vierendeel trusses with W6x20 members, explained Ephraim Hirsh, S.E., of E.G. Hirsh & Associates, the project's San Francisco-based structural engineers. "We like to expose wide flange members," added Mamuyac. "The edges add to the visual interest of the building's design." The Vierendeel trusses visually complement the large clerestory running through the lobby area.

The gymnasium features an 8'-deep inverted king post roof trusses with tie rods spanning the length of the gym and supported by two steel columns encased in concrete. Spanning the width are inverted, splayed steel trusses composed of pairs of steel rods, pipes and wide flanges. The transverse trusses have W8x24

top chords and 5" round HSS bottom chords and 3" round HSS diagonal members. Truss panel points are emphasized with clevis and gusset connections. Additional structural steel is emphasized by exposing a wide flange that visually separates cement plaster from wood finishes at both the interior and exterior of the building. Structurally, the exposed wide flange supports gravity loads of the exterior wood panel system.

The braced steel frame within the walls is composed of wide flange and hollow structural sections. Most of the steel system is expressed in the architecture, including the columns, the lateral bracing at mid-court and the lateral bracing at the north and south walls.

In addition to the exposed structural system, the gymnasium and lobby are roofed with wood decking. General contractor on the \$3 million project was W.A. Thomas Co., Inc., San Francisco.