

## The Design

The building forms a semicircular curve around the center lobby. Each floor is stepped back from the inside curve of the floor below and is aligned on the outside curve. This design allows for exterior roof decks and walkways as well as creating interior light wells. At the lobby, stepping glass roofs and walls leading from the one-story entry height to the 56' ridge encase the building while allowing all of the elements to be open to viewing. Manufactured steel joist by Vulcraft with metal decking by Epic form each floor. The girders are trusses welded from tube steel, configured to match the joists. The girders span along the circumference of the curve to full height tube steel columns. Inverted chevron braced frames are blended into the structure in each direction.

The structural engineer, ZFA Structural Engineers (Santa Rosa, CA) and architect worked closely to develop a framing system that would both create the desired curved form and be economical to build. A regular, symmetrical grid was established with straight segments forming the curve. Within each segment, framing is orthogonal, avoiding the need for any individual curved members. The segments consist of steel joists at eight feet spacing spanning 32' to steel girders. Each segment is skewed by 3.2 degrees from the adjacent segment. Economy is achieved through repetition, reducing the number of custom fabricated trusses required.

## Proportion, regularity and simplicity

Given that the structure is the essence of the architectural design, every element of the steel system was reviewed and coordinated with the architect. Proportion, regularity and simplicity were all considered in developing the structural details; for example, the girder to column connection, with

sandwiched plates extending from the tube steel column to form a simple corbel connection. This detail repeats at the roof with smaller corbel plates. In addition, architectural elements such as window and skylight mullions were designed to blend with and be supported by the structural steel, requiring closer

than customary coordination between the engineer and architect.

## Custom Fabrication

Structural drawings were prepared with fabrication requirements in mind. Each girder truss had an identification number and detailed elevation showing dimen-



*Inverted chevron braced frame foundation connections utilize embedded shear lugs.*



*Tube steel girder trusses span along circumference of the building, with joist top chords extending to form exterior walkways.*