Pickett, Kelm & Associates, Inc.
Consulting Structural Engineers

Bill Burden Elementary School

PROJECT LOCATION: LIBERTY HILL, TEXAS

PROJECT OWNER: LIBERTY HILL ISD

ARCHITECT: FIELDS & ASSOCIATES

GENERAL CONTRACTOR: AMERICAN CONSTRUCTORS

COMPLETED: 2006

CONSTRUCTION COST: $12,000,000

PROJECT DESCRIPTION:
Pickett, Kelm & Associates, Inc. provided structural engineering for this two-story, 92,000 square foot elementary school facility.

The u-shaped, two-story classroom wing includes classrooms on each side of the central corridors, with mechanical mezzanines above the second floor corridor. The administrative offices, library, cafetorium, stage, kitchen and gymnasium are housed in a single story portion of the building with mechanical mezzanines above.

The first floor consists of a concrete ground supported slab with perimeter grade beams. The second floor of the classroom wing consists of composite floor decks supported by composite steel beams, girders and a combination of steel columns and exterior load bearing tilt-up concrete walls. Columns and perimeter tilt-up wall panels are supported on concrete drilled pier foundations. Lateral loads are resisted by a system of roof and floor diaphragms, the concrete tilt-up walls and braced steel frames. Mezzanine framing above corridors consists of plywood decks supported by light gage steel framing and light gage steel stud bearing walls. Larger mezzanines consist of concrete slabs on metal deck supported by composite steel beams and columns.

The roofs of the school are gabled with hips at the ends. The roof framing of the classroom building consists of metal roof decking supported by open web steel joists, girders and a combination of a steel columns and exterior load-bearing precast concrete tiltwall panels. Roof framing over the gymnasium consists of a metal deck supported by sloped open-web steel joists, steel beams, steel trusses and exterior load bearing tilt-up concrete wall panels. Roof framing at the remainder of the administrative area consists of metal roof decking supported by open-web joists, steel beams and steel columns.

Exterior cladding at the gymnasium and two-story classroom wings consists of uninsulated concrete tilt-up wall panels. Cladding at the remainder of the one-story area consists of a masonry veneer backed with light gage steel studs.

An outdoor play field and parking areas were also included as part of the project.