

PROJECT TEAM:

Client Santa Monica-Malibu Unified School District Design Architect Moore Ruble Yudell Architects Executive Architect & MEP Engineer **HED**

Project Description

This new \$155 million, 260,000 sq. ft., 5-story educational facility is the first school in the U.S. to feature Open Building principles in a K-12 setting. Open Buildings are designed to be adaptable for different configurations, utilizing features such as raised access floors and demountable partitions to provide flexibility to meet future needs. The high school structure is comprised of a "U" shaped 3-story steel building, with its two wings inter-connected with bridges at levels 2 and 3 atop two stories of concrete construction. The lower two stories are partial subterranean, with concrete flat slab and shear wall construction. These stories provide parking and back of the house functions for the 3-story building above, as well as a large truck dock and distribution center.





Activated learning: lounge-like collaboration areas open to classrooms and terraces.



Indoor / outdoor integration through operable storefronts opening the building to the public.

PROJECT OVERVIEW Typical grid dimension 32' x 38' for both ConXtech and concrete flat slab.



General Contractor McCarthy Building Companies, Inc. Structural Engineer of Record Saiful Bouquet, Inc.

THROUGH LONGEVITY

SUPPORTING FUTURE DEVELOPMENT

ConXtech column connected to concrete pilaster

maximized space utilization, creating a future-ready hub that evolves with educational and community needs. This significantly increases longevity, an important but often overlooked consideration in sustainability.

An unobstructed structural frame creates a blank palette for endless adaptions.

ConXtech space frame drop-in moment connection

DESIGN CHALLENGES

- The first educational building in the U.S. based on "Open Building" principles.
- Meet conventional expectations for construction cost of K-12 school buildings.
- Varying occupancy usage above-grade and below-grade requiring different solutions for optimization.
- Develop a consistent, aesthetically pleasing structural kit-of-parts that could be exposed.

ENGINEERING SOLUTIONS

- Structural steel framing designed for 100 psf live load, enabling flexible future occupancy.
- Repetitive beam, girder, and column sizes used for economy and aesthetics when exposed.
- A raised access floor system provides a plenum for utility supply and ease of reconfiguration.
- PLAN VIEW Learning and gathering spaces created from structural elements such as "social stairs," cantilevered bleachers, and rooftop open spaces with PV panel trellises.
 - A hybrid system of concrete flat slab substructure and ConXtech steel superstructure were selected for openness, functionality, robustness,

speed of construction, and efficiency, enabling the Open Building concept.

saiful - bouquet structural engineers