



Expanded Shale, Clay and Slate Institute
Rotary Kiln Structural Lightweight Aggregate

Joseph F. Smith Building – BYU Campus (Provo, Utah)



OWNER	The Church of Jesus Christ of Latter-Day Saints Salt Lake City, UT
ARCHITECT	FFKR Architects Salt Lake City, UT
GENERAL CONTRACTOR	Okland Construction Salt Lake City, UT
STRUCTURAL ENGINEER	Tanner, Smith, & Barfuss Engineers Centerville, UT
READY MIX PRODUCER	Westroc Pleasant Grove, UT
LOCATION	Brigham Young University Provo, UT

PROJECT DESCRIPTION

This new 290,000 square-foot, five-level building features 27 classrooms, 401 administrative offices, theatre, a 265-stall, three-level underground parking structure and a landscaped courtyard. The building required the usage of structural lightweight concrete on metal deck and composite steel beams. The lateral forces are resisted by steel moment frames, steel concentric braced frames or concrete shear walls.

A few reasons for choosing structural lightweight concrete include the following:

1. Lighter vertical dead load.
2. Reduced seismic loads resisted by the frames and shear walls.
3. Greater fire rating with thinner slabs.

PROJECT REQUIREMENTS

- ✧ 4000 psi Structural Lightweight Concrete
- ✧ 110 lbs. cu. ft. +/- 3 lbs @ 28 days
- ✧ 6% +/- 1.5 Air Entrainment
- ✧ 2 Hr. UL Fire Rating