

UNDERFLOOR SERVICE DISTRIBUTION

by Tate Access Floors

Champaign Public Library
Champaign, IL

HIGHER EDUCATION PROJECT

122,600 gross sq ft
66,000 sq ft access floor

Products Used:

ConCore 1250
14" FFH
Posilock Understructure
Underfloor Air System
Modular Wiring & Cable



Subject

Champaign Public Library

In 1978, the original Champaign Public Library was built, but the needs of the community put a strain on the small library within a few years. As the collection size doubled and library use tripled, a serious shortage of space and a number of building deficiencies limited the library's ability to serve its patrons. Renovation was out of the question since, when the current facility was developed in the 1970s, plans were scaled back and construction quality was sacrificed to fit a budget that was cut in half. As a result, the library building could not be expanded upward and was energy inefficient and difficult to maintain. The decision to build an entirely new library was agreed upon; however, it was important for the new library to be environmentally-sound.

The new Champaign Public Library was born. It has two stories for public use, plus a partial third floor with staff areas. It sits atop a lower level with a FriendShop for used books and plenty of well-planned room for expansion. The library has also increased the number of computers from 19 to 87. Additional features include five study rooms, a discovery room for young kids, a children's programming space and "Teen Space," a dedicated area for kids that houses computers, a projection system and speakers for listening to music. All of this atop an access floor! As part of creating a library that is built-to-last, the design team employed a "green" methodology. With underfloor wire and cable, changes can be made quickly and efficiently. The largest energy consumer in buildings like the Champaign Public Library isn't heating; it's air-conditioning. Underfloor air distribution improves energy efficiency through the virtual elimination of ductwork thereby reducing the amount of pressure required to deliver air to the occupied zone in a UFAD system. This reduced pressure requirement directly correlates to a smaller horsepower fan in the buildings HVAC mechanical equipment, typically around 30%, significantly reducing a buildings indirect carbon emissions. By using underfloor air service distribution beneath a raised floor, the Champaign Public Library provides a sustainable energy-efficient space for its community.

Tate

"With underfloor wire and cable management the library has the ability to change the layout and move computer terminals quickly with minimal disruption. The increased ventilation and stratified space offers better indoor air quality and thermal comfort creating a healthier indoor environment."

Eric C. Martin, Ross Barney Architects

TATE AUTHORIZED DEALER

Allied Construction
Peoria, IL

ARCHITECTURAL FIRM

Ross Barney Architects
Chicago, IL

GENERAL CONTRACTOR

PKD
Champaign, IL

MECHANICAL ENGINEERING FIRM

A & R Mechanical Contractors, Inc.
Champaign, IL