Tate Access Floors

Throughout the world, Tate raised access floor systems are renown for superior quality and performance. Featuring the most comprehensive product line worldwide, Tate Access Floors, Inc. provides systems capable of meeting any specification requirement.

With unrivaled industry experience of over forty years, Tate is the leading authority in the design and manufacture of raised access floors. Over 450 million square feet of Tate Floors are installed in commercial office buildings, computer rooms and clean rooms throughout the world. Recently, Tate's resources have been enhanced by its new parent, the multi-national Kingspan Group plc, a leader in specialized building products.

Tate access floor systems assure strength, stability and efficiency, which substantially contribute to a building's structural integrity and value. Every system component has been designed, developed and rigorously tested to ensure that overall performance exceeds even the most stringent international standards. Tate's Building Technology Platform® provides underfloor voice, data and cable management. Plus, with the addition of underfloor HVAC distribution systems from strategic alliance partners, the optimum flexibility and accessibility of critical building services is realized.

Some benefits include neutral first construction cost with substantial savings in operation, building ownership and reconfiguration cost. Fast response to your needs, combined with the most effective solutions for new construction and renovation projects, are provided by Tate Access Floors, Inc. through a network of authorized international dealers and skilled installers. Specific regional construction requirements are satisfied through Tate's wealth of experience and expertise.

This Best Practice Design and Specification Guide will assist building owners, architects, real estate developers, tenants and contractors in utilizing the unlimited advantages of underfloor HVAC and voice/data cable management through related cost and time-effective construction methods.

Russell Shiels

President
Tate Access Floors, Inc.

Corporate Headquarters – Jessup, Maryland, USA

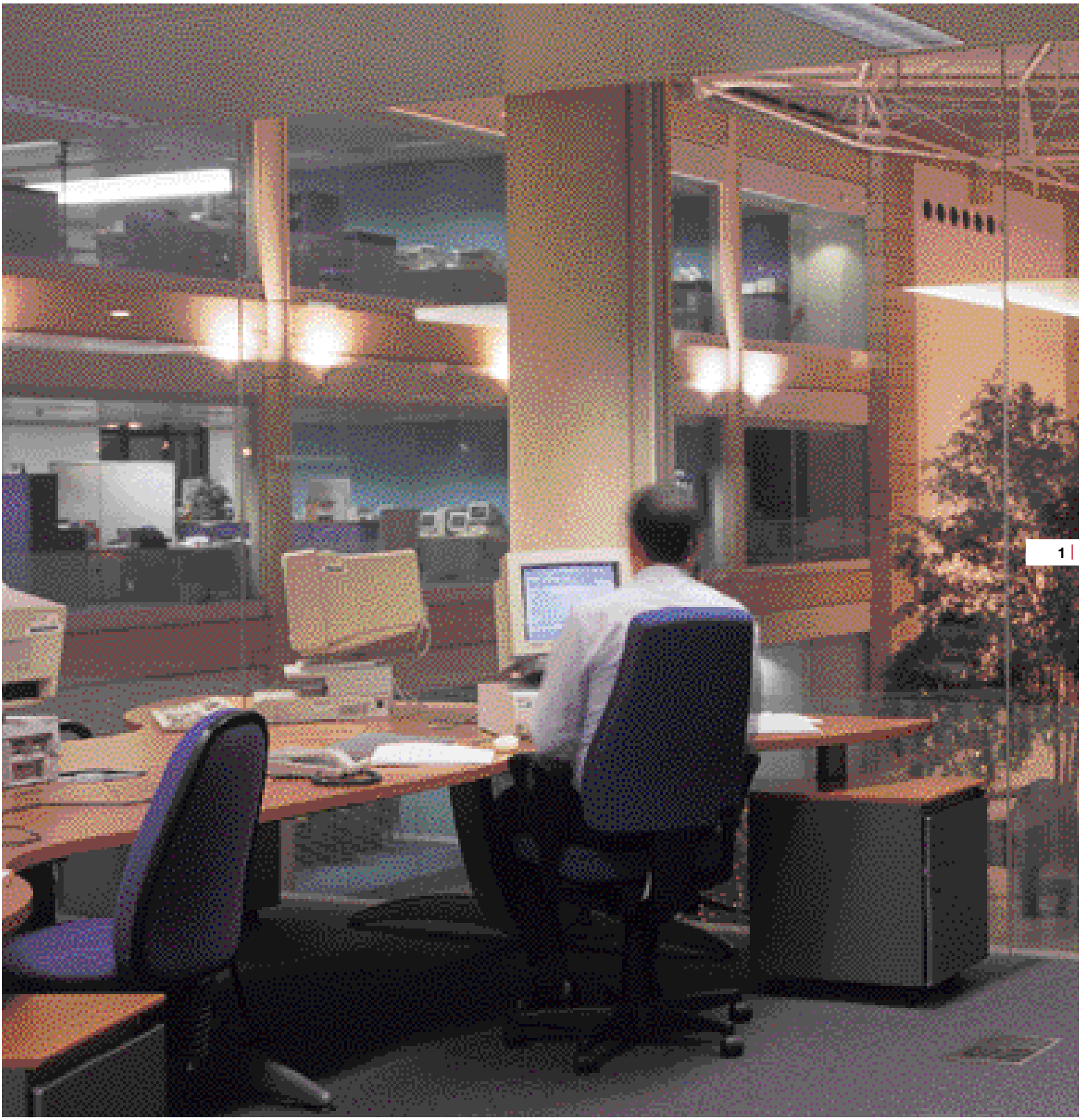
Completed office access floor with modular wire & cable

Completed office access floor with underfloor air

Download CAD Drawings, Details, Specifications and more at www.tateaccessfloors.com
Questions can be directed to the Tate Technical Hotline at 800-231-7788

Tate Building Technology Platform®

Underfloor HVAC, Wire & Cable Management System



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Create a Green and Sustainable Working Environment

A well-designed green building improves indoor environmental quality, provides flexibility, and saves significant resources in construction, operation, and maintenance. Additionally, it reduces waste and cuts first- and life-cycle costs compared to conventional design.

The key to cost-effective green design is the practice of 'Integrated Design'. The project team must think holistically, early in the design process. By understanding the relationship between the natural environment and the built environment, advantages are gained so the resultant whole is greater than the sum of the individual parts.

Tate provides the expertise to utilize the Building Technology Platform® (BTP) as a key ingredient to integrated systems. Through underfloor distribution of power, voice & data cabling, and HVAC services, the BTP enables cost-effective integration of building components, including structure, lighting, furniture and wall systems.

This integral approach provides increased flexibility and control throughout your building.

Foundry Square, San Francisco CA: 385,000 ft²

LEED™ *Driven*

Tate Access Floors, Inc. components are proudly made in the U.S.A.

MIT, Ray & Maria Stata Center, Boston MA: 713,000 ft²

Solution Flexibility

Tate Access Floors offer a fluid capacity to react and respond to your facility's need for change. Whether it is the creation of a flexible infrastructure system designed to respond to organizational changes, or adapting to new technologies and integrating the next generation of communication tools, Tate Access Floors provide easy and simple solutions now, and in the future.

Environmental Control

Tate Access Floors play an important role in improving air quality and maintaining the physical integrity of the facility environment. Tate Access Floors provide you with the ability to control thermal, energy, and air quality control levels, zone by zone, throughout the facility.

With Tate Access Floors and underfloor air distribution, your facilities have the ability to deliver improved personal comfort control, enhanced ventilation effectiveness, and improved indoor air quality while saving energy and delivering the safest, healthiest environment possible.

Cost Control

Tate understands that even the most advanced technology needs to offer long-term value if it is to provide a positive return on your investment. That is why Tate Access Flooring solutions have been designed to control costs through durability and long-term service, adaptability to future expansion and change, along with easy, low-cost maintenance requirements. Additional cost savings are also realized through easy installation as well as lower operating and system requirement costs for power, communication, and air services.

By deciding to renovate an existing structure you have taken major steps to reduce the impact of construction on the environment and create a green and sustainable design. Tate Building Technology Platform® provides a cost-effective solution that will help you create 'green' indoor environment levels of air, sound, and light quality that promote good health, and create a more productive and comfortable working environment. The Tate Building Technology Platform® also enhances the aesthetic value of your building - adding significant worth to your business in terms of image and attractiveness for prospective clients and staff.

Indoor Environmental Quality (IEQ)

Tate's Building Technology Platform® with underfloor air is a cost effective strategy for improving a facility's indoor environmental quality. IEQ accounts for 23% of LEED® Credits and has a significant impact on the health, well being, and productivity of personnel and staff.

Energy and Atmosphere

The Tate Building Technology Platform® outperforms past energy efficiencies by reducing HVAC chiller size by up to 10% and reducing cooling energy consumption by at least 20%.

Materials and Resources

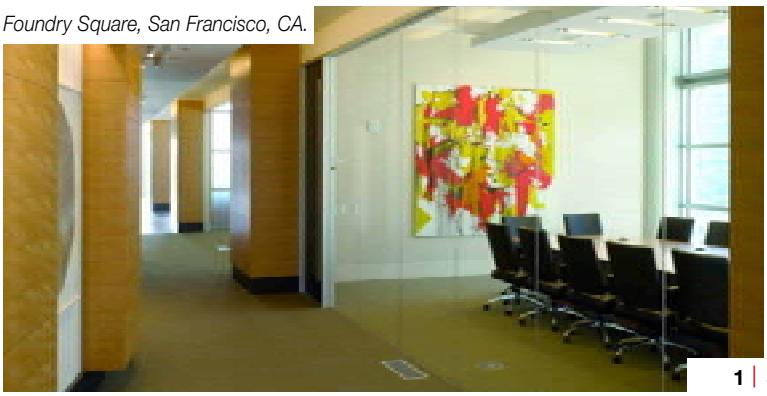
The Tate Building Technology Platform® is made in the USA and is constructed of recycled materials that help meet LEED® standards for efficient use of materials and resources. Every element of the Tate Building Technology Platform® has been designed to provide the ultimate in environmental protection and efficiency.

LEED™ *Driven*

Premier Automotive Group Headquarters, Irvine, CA

Visteon Village, Van Buren Township, MI

Foundry Square, San Francisco, CA.



Solutions for Green Building Status

Tate Access Floors created the Tate Building Technology Platform® to provide businesses with the solutions they need to reach Green Building status*. The Tate Building Technology Platform® offers a number of significant opportunities for your business to achieve LEED® environmental goals and credits. The Tate Building Technology Platform® contributes to points in three of the five LEED® credit categories – delivering optimum performance in the critical areas of Indoor environmental quality, materials and resources, and in energy and atmosphere.

Sustainable Solutions

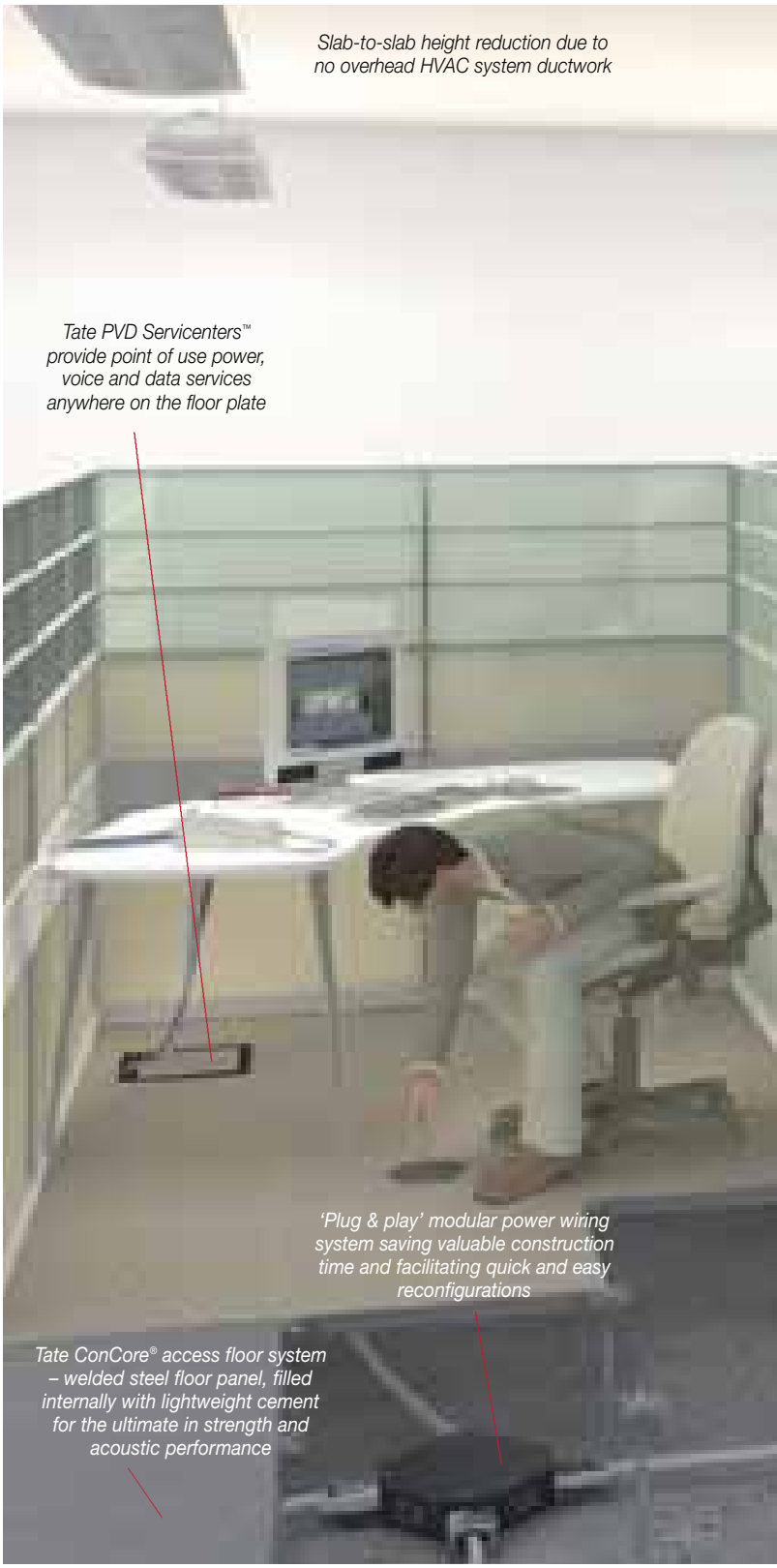
Tate professionals can show you the most effective solutions for reaching your goal of creating a long-lasting, healthy environment. They can also show you how you can most cost effectively meet your most immediate needs for technology support, communications, data, and power, while building-in opportunities for manageable and low cost reconfiguration in the future. Tate technicians and engineers can direct you to solutions that have worked for businesses like yours in the past, or provide unique approaches that can solve unusual office challenges.

Creating the Perfect Indoor Environment

The create the perfect environment in a facility you need to address a variety of needs. These needs include maintaining high-quality clean air, improving personal comfort control, attenuating noise, responding to organizational and technology changes quickly and easily, and supporting the overall aesthetic value of the facility – all while being cost-effective in both during building and operation. With Tate's Building Technology Platform®, you'll be able to address all of the factors required to enhance occupant experiences and create the perfect environment that reflects the goals and image of your organization.

Advantages

- Enhanced indoor environmental quality through superior IAQ, improved acoustics, and increased daylighting opportunities
- Maximum occupant comfort control at design inception and throughout the life of the building using underfloor air with modular 'plug & play' VAV or passive diffusers
- Energy efficiency through economizer operation, and less fan energy
- Easily adapts to technological and organizational changes over the building's lifecycle at low cost
- Point-of-use services wherever you need them with complete flexibility, accessibility, and unlimited capacity
- Accelerated tax depreciation opportunities
- Reduced first cost and construction time due to significant reduction in HVAC ductwork and use of underfloor pre-fabricated 'plug & play' wire/cable services
- Reduced operating costs and lower facility and maintenance costs through accessible, flexible, and adaptable services

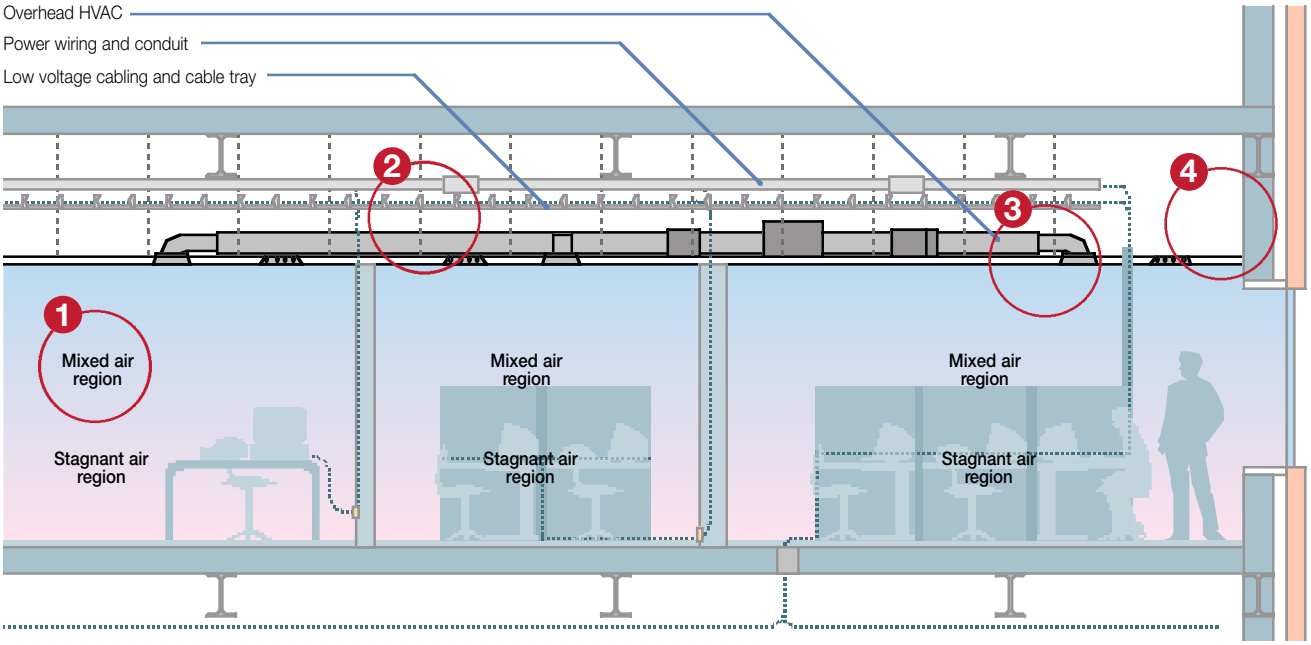


Tate Underfloor Air Management Solution

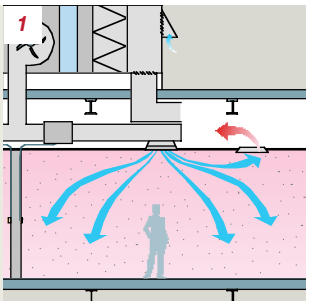
Avoid the complaints. Conventional overhead HVAC systems do not provide optimum efficiency or personal comfort control.

With Tate's underfloor HVAC system, consisting of modular 'plug & play' floor mounted diffusers, ultimate flexibility, energy efficiency, and personal comfort control can be assured.

Conventional Overhead HVAC Method

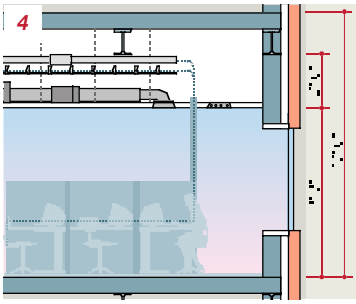


Wastes energy
Hot air rises, yet conventional HVAC distribution is designed to force cool clean air from the ceiling and mix it with the hottest, most pollutant-filled air before getting to the occupants.



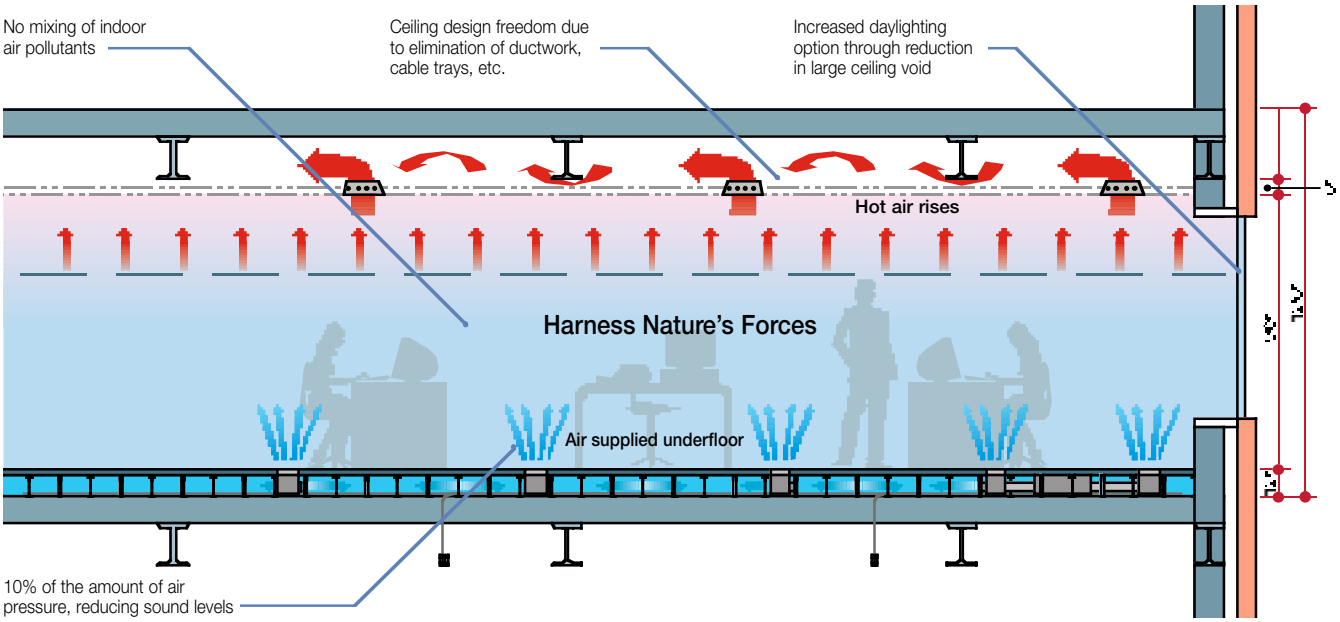
Lack of individual control
Hot/cold complaints consistently rank top of the list of issues raised by building occupants. Conventional systems are difficult to access and expensive to change. Therefore, they rarely are changed.

Expensive and inflexible
Rigid, fixed ductwork makes changes expensive and disruptive. Extensive amounts of ductwork and labor intensive installation slows down construction and drives cost up.



Poor space utilization
Large ceiling void space required due to poor integration of fixed service pathways.

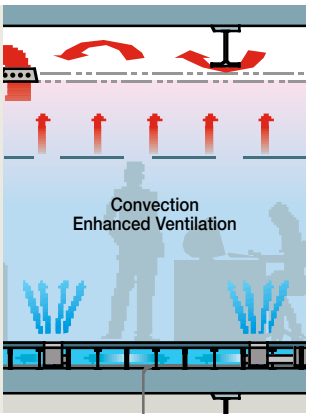
Tate BTP Underfloor Air Management System



Unrivaled Flexibility
With the entire space under the access floor used as an air distribution pathway, you can plug modular VAV or passive diffusers in anywhere, and when you make changes in your space, simply adjust air direction or unplug and relocate in minutes!

Improved Personal Comfort Control
With the entire space under the access floor used as an air distribution pathway, you can plug modular VAV or passive diffusers in anywhere, and when you make changes in your space, simply adjust air direction or unplug and relocate in minutes!

Improved Energy Efficiency
Save 20% of your HVAC energy cost using underfloor air. How? Significant fan energy savings, more hours of economizer operation, and reduced outside air option due to better ventilation effectiveness.



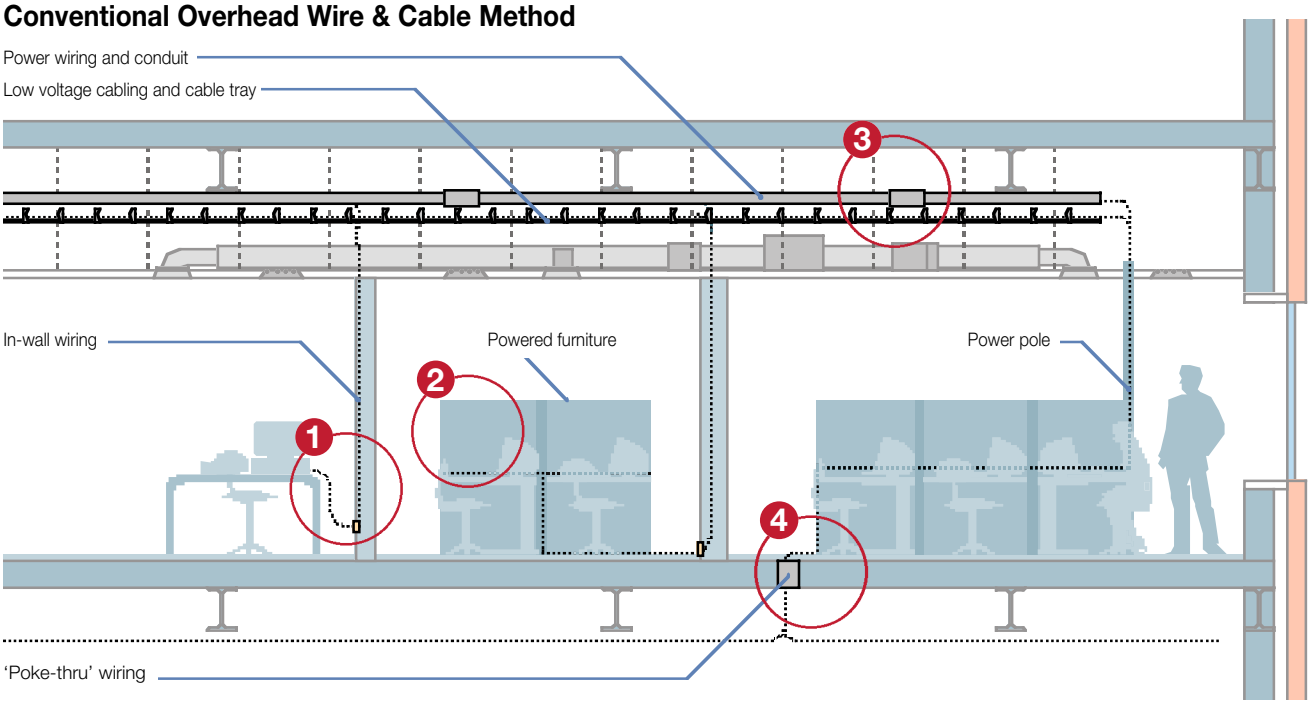
Improved Indoor Environment Quality

- Better ventilation effectiveness - superior indoor air quality (IAQ)
- Quieter operation - improved acoustics
- Optimized ceiling void - increased daylighting opportunities

Tate Wire & Cable Management System

Avoid the trap of using inflexible and expensive wire and cable systems in your building. With Tate's Wire and Cable Management solution, consisting of a Tate Access Floor with modular 'plug & play' power wiring and zone cabling solutions, you can be assured your building will provide ultimate flexibility that allows you to respond to organizational and technology changes quickly, easily, and cost effectively.

Conventional Overhead Wire & Cable Method



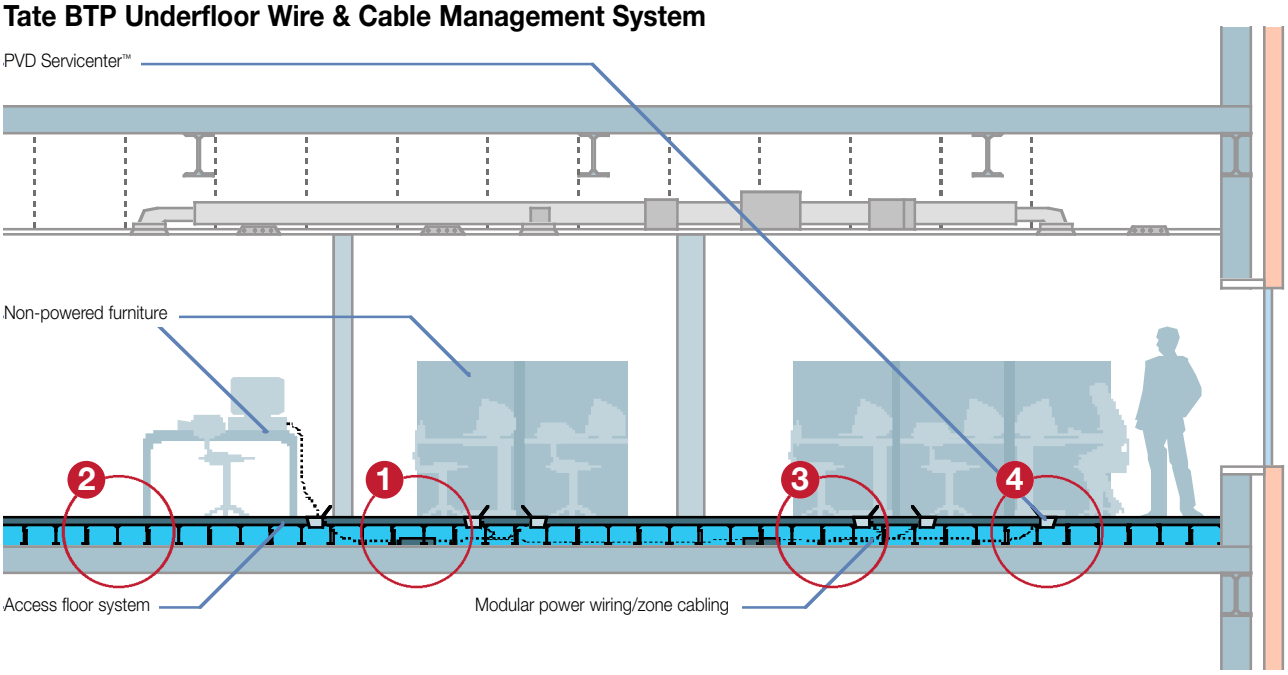
Rigid and non-adaptive
Wiring and cabling embedded in walls and columns is fundamentally inflexible, making moves/adds/changes to technology expensive, disruptive, and wasteful.

Poor integration and wasteful
Ceiling pathway for wiring and cabling increases vertical run lengths, labor, and suspension material costs, making subsequent changes disruptive and expensive.

Expensive and inflexible
Running wiring and cabling in highly reconfigurable furniture is expensive, limits capacity, and severely compromises its reconfigurability.

Disruptive
Fixed 'poke-thru' devices for wire and cable delivery cause disruption and security issues with occupants both above and below.

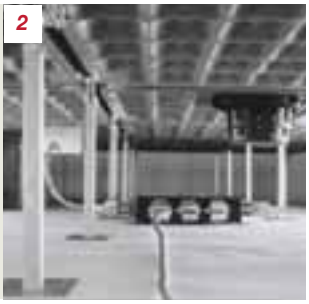
Tate BTP Underfloor Wire & Cable Management System



Complete flexibility and reconfiguration capability
An access floor with modular 'plug & play' power wiring, and cabling components provides complete flexibility.
As your business needs change so too can your service distribution system – quickly, easily and cost-effectively!

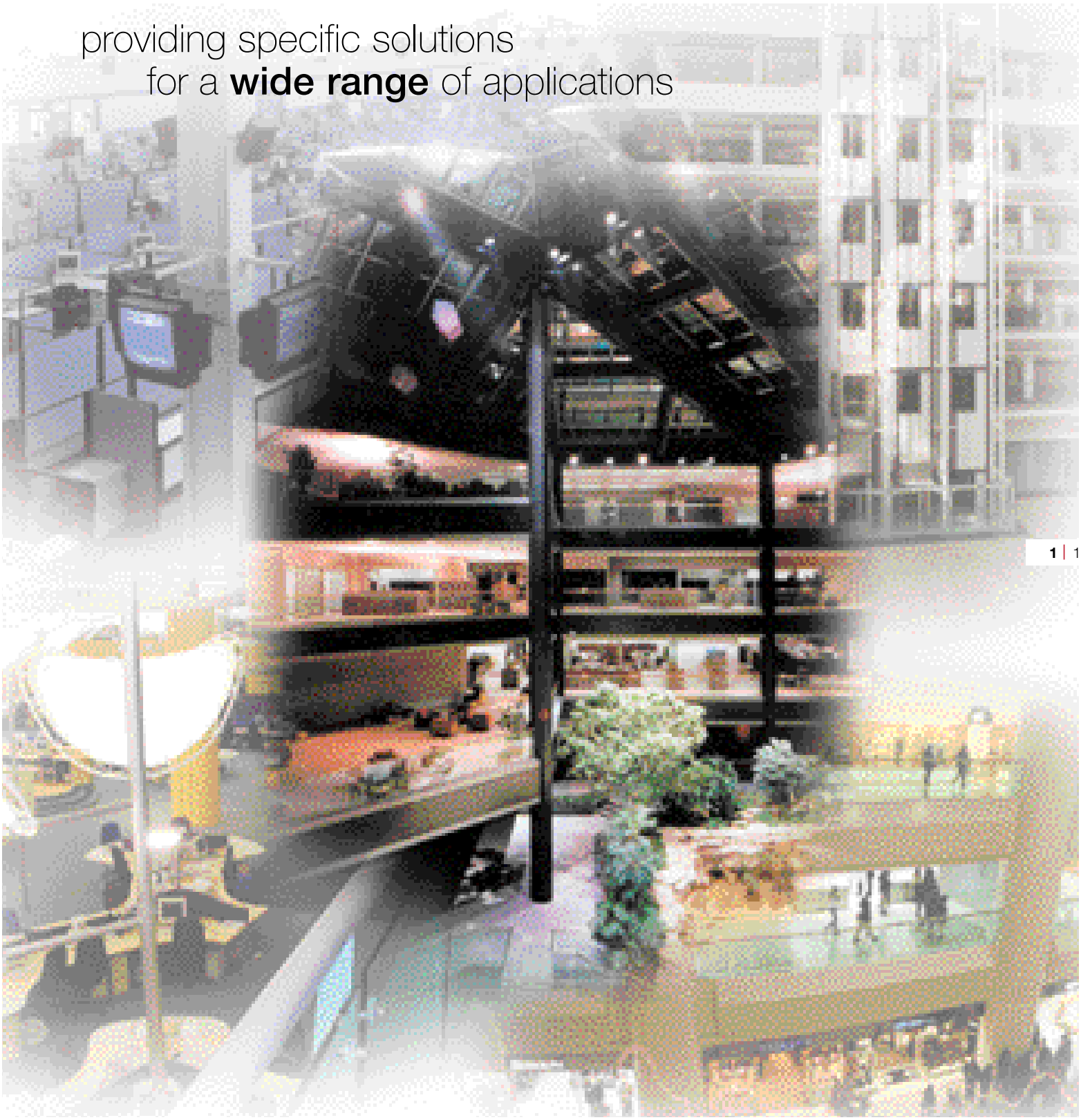
Reduced impact on base building
Access floors eliminate the need to embed wiring and cabling within concealed rigid structures such as walls and columns, thereby allowing tenants the freedom to access their wiring and cabling quickly and easily.

Complete accessibility and unlimited capacity
An access floor provides you with access to your service pathway at any location on the floor plate, with finished floor heights that accommodate any capacity needs.



Point of use services wherever you need them
PVD Servicenters™ with modular 'plug & play' connections provide point of use termination of power, voice, and data at any location on the floor plate for any type of workstation and application.

providing specific solutions
for a **wide range** of applications



Green/LEED™ Buildings

Government

Photographs courtesy of Erhard Pfeiffer and 3D/I

Project	Capital Area East End Block 225
Location	Sacramento, CA
Floor Area	280,000 gross ft² 225,000 ft² access floor
Product(s)	ConCore® 1000 Underfloor Wire, Cable and Air Systems
Architect	Fentress Bradburn Denver, CO
Authorized Dealer	Partition Specialties West Sacramento, CA
General Contractor	Hensel Phelps San Jose, CA
Engineering Firm	Critchfield Mechanical Menlo Park, CA

Capital Area East End Block 225 Sacramento, CA

Green, Green, Green! The State of California has a new favorite color and Block 225 of the Capitol Area East End complex is a shining example. The Governor's Sustainable Building Task Force, a unique partnership of more than 40 government agencies, helped to design and construct these buildings, which are the 'greenest' ever built by the state. Specific goals of indoor environmental quality, flexibility, use of recycled material and energy reduction set the stage for this project to showcase a variety of sustainable features. Block 225 includes over a quarter of a million square feet of office space with a raised floor, underfloor wiring/cabling and underfloor air distribution (UFAD) system. This is the first state office building to utilize an underfloor air distribution system.

Tate Access Floors was proud to follow the State of California's lead in 'greening' the Capitol Area East End, Block 225 building. The underfloor air distribution system provides enhanced ventilation, supplying conditioned air in the immediate vicinity of the occupants. In this system, the entire subfloor is pressurized, allowing greater individual control of ventilation in the cubicle work environment, reducing future costs related to rerouting ventilation ducting as a result of reconfiguring office space, and energy savings. The wire and cable underfloor service distribution provides for easier access to information system cables and electrical supply, giving the flexibility desired and reducing the cost of making changes to these systems. Tate's use of recycled content in its cement-filled panels completed the package presented to GSA to help 'green' Block 225!

LEED®
Certified Project

Green/LEED™ Buildings

Owner Occupied Office

RAND Corporate Headquarters
Santa Monica, CA

The RAND Corporation, one of the world's leading research institutions for more than 50 years, has relocated about 1,000 staff members to its new headquarters building in Santa Monica, CA, signaling an important new step in the non-profit organization's evolution.

Four principles guided the creation of the new headquarters: 1. stimulate and inspire creativity in research and education; 2. promote efficient interaction among different parts of the organization; 3. demonstrate corporate commitment to conservation of natural, client, and institutional resources; and 4. enable effective adaptation to change. These principles reflect the ways RAND staff look to their physical surroundings to support their work. On top of these considerations, RAND wanted its new headquarters qualified for a Leadership in Energy and Environmental Design rating.

Most striking of its elements to qualify are the vented windows and 'fins' to deflect afternoon sunlight. Less noticeable but most important is the underfloor air conditioning and heating system. *"It's more efficient since individuals can control their own vents, and the concrete floor helps keep it cool,"* architect Palacios said. *"It also puts the air where it's needed, at employee level"*, he added. The underfloor modular wiring provides the flexibility and adaptation to change that Rand was looking for. In their quest for LEED™ Certification, RAND selected carpet and furniture with high-recycled content. Tate Access Floors underfloor service distribution, whose system conforms to three of the five LEED™ credit categories, will also provide assistance in achieving this goal.

LEED® *Gold Project*

Project	RAND Corporate Headquarters
Location	Santa Monica, CA
Floor Area	253,000 gross ft²
Product(s)	ConCore® 1250 Modular Wiring Underfloor Air System
Modular Wiring	Communications Integrators, Inc. Mesa, AZ
Architect	DMJM Design Los Angeles, CA
Authorized Dealer	Partition Specialties, Inc. Santa Fe Springs, CA
General Contractor	Turner Construction Los Angeles, CA

Union Pacific Headquarters
Omaha, NE

Union Pacific Corporation is one of America's leading transportation companies. While planning for their new $260 million corporate headquarters building in Omaha, Nebraska, the focus was on a healthy, comfortable environment for its 4,000+ employees. The end result is a beautiful 20-story, 1.3 million ft², glass exterior structure complete with design innovations that come together to make this happen.

One of these progressive, efficiency-driven design innovations is Tate's access floors with underfloor service distribution. Using an underfloor VAV system for cooling with 'swirl' diffusers, installed every ten feet, employees have the ability to adjust the ventilation manually to meet their individual comfort levels. The underfloor electrical and data systems enable workstations to be easily reconfigured as necessary. Such innovations support Union Pacific's culture of promoting healthy lifestyles for its employees and Tate Access Floors is pleased to have been a part of this prestigious project.

Photographs courtesy of Michele Litvin

Project	Union Pacific Headquarters
Location	Omaha, NE
Floor Area	1.3 million gross ft² 880,000 ft² Access Floor
Product(s)	CCN 1000 PVD Modular Wiring and Underfloor Air System HPL and Modular Carpet
Architect	Gensler Dallas, TX
Authorized Dealer	Data Power Technology Corp. Omaha, NE
General Contractor	Holder Construction Atlanta, GA
Engineering Firm	Alvine & Associates Omaha, NE

"Both Hines' operating experience at similar facilities and other relevant studies have shown that underfloor air systems can lead to increased employee performance and a reduction in absenteeism. When the comfort of the underfloor air is considered along with other building features, we believe the character of Union Pacific's new workplace to be among the world's finest and most cost-effective."

Bill Hartman, Design Principal, Gensler.

Owner Occupied Office Buildings

Visteon Village
Van Buren Township, MI

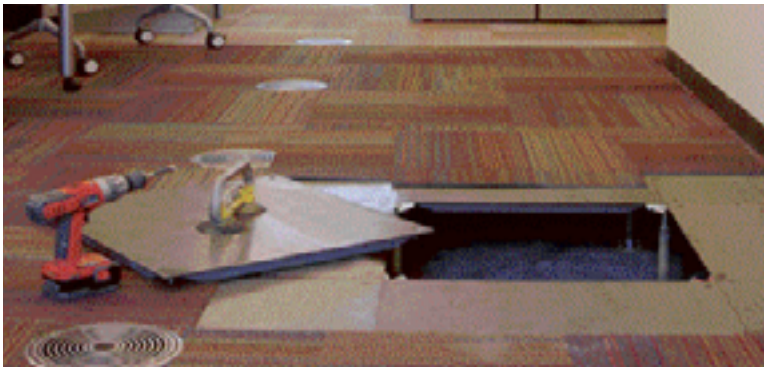
Visteon Corporation is a leading full-service supplier that delivers consumer-driven technology solutions to automotive manufacturers worldwide and through multiple channels within the global automotive aftermarket. Its new, 800,000 ft² corporate office and innovation center in Van Buren Township, Michigan consolidates employees from 13 Southeast Michigan facilities. From the beginning, Visteon decided to use the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) guidelines for the development of Visteon Village, emphasizing high quality solutions for sustainable site development, energy efficiency, water savings, materials selection and indoor environmental quality.

As a member of the U.S. Green Building Council, Tate Access Floors has long been a proponent of environmentally sound building practices and supported Visteon's vision of creating a healthy environment for their employees. The buildings of Visteon Village feature up to 75% recycled material content by weight. With Tate's raised floor system of recycled content and low emitting materials, as well as the utilization of hydrochlorofluorocarbon (HCFC)-free air handling units, Visteon has an underfloor air distribution system that allows for individual user control of temperature and airflow rate throughout the office space. Tate's commitment to sustainable design was an integral part of 'greening' Visteon Village!

"When we set out to design Visteon Village, one of the keys for us was to create a 'smart' office site, both in terms of cost-efficiency and in the way that we work."

Stacy Fox, Visteon Senior Vice President, corporate transactions and legal affairs.

Project	Visteon Village
Location	Van Buren Township, MI
Floor Area	1 million gross ft²
Product(s)	ConCore® Raised Access Floor PVD Modular Wiring and Underfloor Air System HPL and Modular Carpet
Architect	SmithGroup Detroit, MI
Authorized Dealer	Lakeside Interior Contractors Maumee, OH
General Contractor	Walbridge Aldinger Co. Detroit, MI
Engineering Firm	SmithGroup Detroit, MI



LEED® *Certified Project*

Developer & Multi-Tenant Offices

Arundel Mills Corporate Park
Hanover, MD

Developer Linden Associates, Inc. closed in December 2004 on the sale of 20.2 acres of land directly across from the 1.3 million ft² Arundel Mills in Hanover, Maryland. The site, known as the Arundel Mills Corporate Park, is a 500,000 ft² mixed-use project that will include two five-story office buildings with ground floor retail, as well as a hotel and daycare center. Linden Associates' vision of creating two 150,000 ft² environment-friendly office buildings was based upon green standards developed by the U.S. Green Building Council's Leadership in Energy and Environmental Design Program (LEED™) and included several key goals: efficient use of recycled building materials, increased daylighting, energy efficiency, a healthy environment for employees, and higher productivity.

Tate Access Floors' underfloor service distribution contributes to three of the five LEED™ categories which greatly supports Linden Associates' objective of a green building. By supplying 110,000 ft² of raised flooring with an underfloor air system, Arundel Mills Corporate Park's first building will feature an energy-efficient environment with cleaner air and more natural lighting. In buildings with these advantages, worker productivity has been proven to increase as much as 15%, according to case studies done by the Rocky Mountain Institute and the U.S. Department of Energy. The recycled material used in the production of Tate floor panels only adds to the 'green' effect! By integrating Tate's underfloor service distribution system in their design, the Arundel Mills Corporate Park is well on its way to becoming a green and sustainable LEED™ certified building!

"The benefits of a green building are greater than the rent the tenant pays. You're talking about something that has huge economic benefits to the companies that occupy the space."

Christopher Kurz, President of Linden Associates.

Project	Arundel Mills Corporate Park
Location	Hanover, MD
Floor Area	150,000 gross ft² 110,000 ft² Access Floor
Product(s)	ConCore® 1000 Underfloor Air System
Developer	AMCP2 Baltimore, MD
Architect	RTKL Associates Baltimore, MD
Authorized Dealer	Irvine Access Floors, Inc. Laurel, MD
General Contractor	Hostetter Construction Corp. Hanover, PA
Engineering Firm	RTKL Associates Baltimore, MD

Developer & Multi-Tenant Offices

Photographs courtesy of Tim Griffith

Foundry Square, San Fransisco, CA

This multi-block, mid-rise urban complex in downtown San Francisco is a landmark project for sustainable design in commercial office developments. Dominating the busy intersection of 1st and Howard Streets in San Francisco, this 1.5 million ft² complex sets a new standard for state-of-the-art office buildings. Incorporating office, retail, public plazas and underground parking areas in this massive undertaking, the project developer wanted efficient, high-quality, and environmentally-conscious building systems that would help attract and retain a sophisticated and reliable tenant base, as well as steer the project toward LEED™ accreditation. With this in mind, Foundry Square was the perfect project for Tate Access Floors.

The building features floor-to-floor heights of 10', increased natural lighting and raised floor distribution systems where mechanical, electrical and data delivery systems are efficiently contained in the subfloor areas providing 'plug & play' flexibility and reducing energy as much as 15%. Offering a cost-effective way to improve the building's market attractiveness and gain a competitive edge, Tate's underfloor service distribution is not only flexible and adaptable, but also improves indoor environment quality, provides personal comfort control, and reduces tenant initial fit-out and operating costs while at the same time increasing the buildings value.

LEED® *Certified Project*

Project	Foundry Square
Location	San Francisco, CA
Floor Area	502,200 gross ft² 385,000 ft² access floor
Product(s)	ConCore® 1250 PVD Modular Wiring and Underfloor Air System HPL and Modular Carpet
Developer	Wilson Meany Sullivan/Equity Office
Architect	Studios Architecture San Francisco, CA
Authorized Dealer	Pugliese Interior Systems PSI
General Contractor	Webcor Builders San Mateo, CA
Engineering Firm	Flack & Kurtz San Francisco, CA

"The full underfloor HVAC system uses fresh filtered air, which is distributed under the office floor. This allows occupants to control the air temperature of their workspace."

Fernando Quintero, Chong Partners Architecture, Tenant at Foundry Square

Harvard School of Public Health, Boston, MA

Harvard School of Public Health (HSPH) was founded in 1922 to advance public health through learning, discovery and communication. Through research and training programs, HSPH recognized the need for an environmentally economic and efficient workspace when designing new administrative offices in the historic Landmark Center in downtown Boston; however, they were faced with the challenge of transforming a warehouse into office space. Studies had proven that a 'green' approach results in a more comfortable, healthier and productive workforce while providing a high performance facility able to accommodate future technology. These goals were adopted by the project team and became prime factors in planning the new HSPH facility.

To assist HSPH in meeting their goals, Tate's underfloor service distribution system was selected. Tate's system provides an efficient, effective method to build high-performance, flexible office space by integrating raised floors with modular air distribution and wiring services. The underfloor air distribution system provides a healthy, productive environment proven to increase indoor air quality, create a more comfortable environment through individually-controlled air diffusers, and contribute to increased productivity. The use of modular wiring gives the HSPH the ability to reduce the cost of workspace reconfiguration and maintain a facility that will meet changing requirements. And speaking of cost? It was assumed that the long-term payoffs of the Green Building approach would far outweigh the initial higher costs of implementation; however, as it turned out, total project cost with an underfloor air distribution system was less than conventional overhead systems! Tate is pleased to have been part of this prestigious project and assist HSPH in meeting their laudable goals.

"We didn't want a Sick Building. We wanted to create an example of a future-proof, sustainable, valuable shared space."

John D. Spengler, PhD, Department of Environmental Health, Harvard School of Public Health.

Project	Harvard School of Public Health - Renovation
Location	Boston, MA
Floor Area	40,000 ft²
Product(s)	ConCore® 1250 Underfloor Air System PVD Modular Wiring System
Architect	Janovsky/Hurley Architects, Inc. Lexington, MA
Authorized Dealer	Office Environments of New England Boston, MA
General Contractor	Bond Bros., Inc. Everett, MA
Engineering Firm	Shooshanian Engineering, Inc. Boston, MA

Education Facilities
Library

San Mateo Public Library, San Mateo, CA

Built in 1968, the San Mateo Library had served the community well. However, the needs of the community had grown, and the San Mateo Library needed to grow with it. The City of San Mateo required a much larger and technological saavy library. The old library had only half the space needed to serve a population of 92,000. Its power and mechanical systems were unable to meet the demands of changing technology. So when the City decided to build a new facility, their goal was to build a library with the flexibility that would stand the test of time, provide a comfortable atmosphere, and display the City's commitment to the environment. The "greening" of the new library and its dedication to state-of-the-art technology and learning was a focus that emerged during the approximately 50 community meetings held to determine what the city wanted and needed. Tate Access Floors' underfloor service distribution fit the bill.

The San Mateo Library is a state-of-the-art resource center for literacy and ongoing learning; a destination that is inviting, comfortable and accessible, a place for families, community groups and people of all ages; and a vibrant bridge to multicultural understanding. This landmark public library features 100 public internet computers, specially designed areas for children and teens, study rooms, community meeting rooms, a café and 157 underground parking spaces. Its 'green' design makes it one of the most energy-efficient buildings on the West Coast. Tate's HVAC systems and underfloor air supply reduces energy consumption and improves indoor air quality. Its raised access floors provide technological flexibility by running cables and wires in the underfloor plenum. The recycled content of Tate's raised flooring also contributes toward the sustainable goals of the City of San Mateo. As a public building with over 3,000 visitors a day, the new San Mateo Library will educate and increase the awareness of environmentally responsible building. Tate Access Floors is proud to be a part of it.

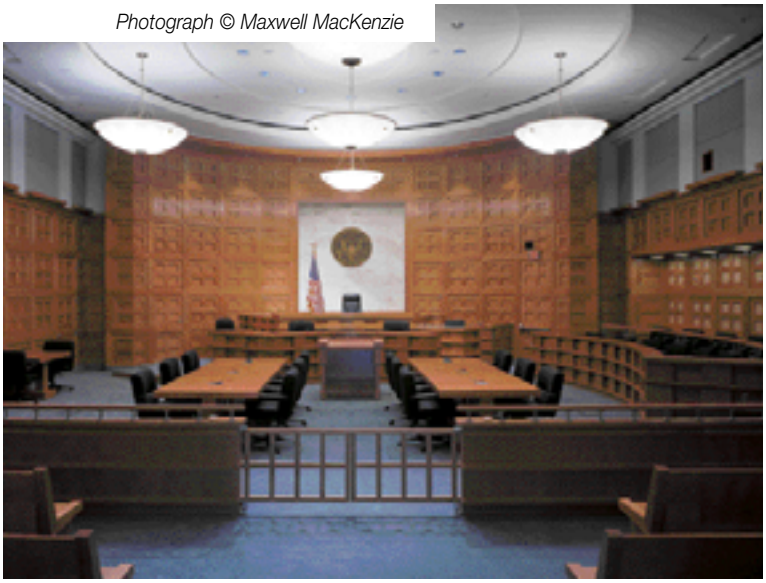
Project	San Mateo Public Library
Location	San Mateo, CA
Floor Area	90,000 gross ft² 68,000 ft² access floor
Product(s)	ConCore® 1250 and ConCore® 1500 Underfloor Wire, Cable and Air Systems
Architect	Esherick Homsey Dodge & Davis San Francisco, CA
Authorized Dealer	BT Mancini Milpitas, CA
General Contractor	Charles Pankow Builders San Francisco, CA
Engineering Firm	ARUP San Francisco, CA

E. Barrett Prettyman Courthouse, Washington D.C.

In the early 1990's, the Administrative Office of the U.S. Courts determined that the Judiciary's housing was approaching a state of crisis; nearly one in every three courthouses would be out of space within a decade. To meet this critical demand for space, the General Services Administration (GSA) would need to undertake the largest courthouse construction program in more than fifty years. The E. Barrett Prettyman Courthouse, one of the most important trial courts in the nation, was targeted for renovation and expansion. To meet the Courts 30-year needs, the design included 9 new courtrooms and 15 chambersets. Not only was an annex added to the courthouse, but the courthouse itself was renovated to provide more space, updated architecture, and improve the efficiency and flexibility of the workplace. An important issue in the design of the E. Barrett Prettyman Courthouse, and GSA-owned structures in general, has been the utilization of an access floor system for the horizontal distribution of power, data, telecommunication, and other low-voltage system cabling. GSA needed this underfloor service flexibility to create a courthouse that would serve the needs of its occupants for the life of the building.

When the renovation and expansion of the E. Barrett Prettyman Courthouse was announced, Tate Access Floors was chosen to provide the raised flooring and underfloor service distribution system.

Photograph © Maxwell MacKenzie



With GSA's commitment to access flooring in new courthouses, as well as highly recommending access flooring for large modernization projects as noted in their 2003 Facilities Standards, Tate was able to address the needs of this project: maintaining high-quality clean air, improving personal comfort control, attenuating noise, responding to organizational and technology changes quickly and easily, and supporting the overall aesthetic value of the facility - all while being cost-effective during building and operation. Raised flooring and underfloor service distribution by Tate has provided a flexible system that will meet GSA's needs for years to come.

Project	E. Barrett Prettyman Courthouse Renovation & Expansion
Location	Washington D.C.
Floor Area	120,000 ft² Access Floor
Product(s)	ConCore® 1000 Underfloor Wiring & Cabling Modular Carpet
Architect	Michael Graves Associates Princeton, NJ
Authorized Dealer	Irvine Access Floors, Inc. Laurel, MD
General Contractor	Centex Construction Fairfax, VA
Engineering Firm	Jacobs Engineering Group Arlington, VA

Government Buildings

Project	U.S. Patent & Trademark Office
Location	Alexandria, VA
Floor Area	174,000 ft²
Product(s)	ConCore® 1000 - Office ConCore® 1250 - Data Center Underfloor Wiring & Cabling
Architect	Gensler Alexandria, VA
Authorized Dealer	Irvine Access Floors, Inc. Laurel, MD
General Contractor	Turner Construction Alexandria, VA
Engineering Firm	Syska Hennessy Washington, D.C.

U.S. Patent & Trademark Office, Alexandria, VA

For more than 30 years, the United States Patent & Trademark Office had been issuing patents and trademarks at its facility in Crystal City, Virginia. As years went by, the USPTO leased extra office space as the need arose, resulting in a sprawling complex of 18 separate buildings. Consequently, the USPTO staff was unable to operate efficiently and the need for consolidation was clear. This consolidation of all entities has produced a 2.4 million ft², 5-building office complex on 15 acres in Alexandria, Virginia, requiring a well-coordinated effort of a variety of disciplines. However, a state-of-the-art facility necessitated state-of-the-art design that would satisfy future flexibility needs as well as immediate requirements. With this in mind, GSA saw that adaptation to change and cost savings were integral to the success of the project and adhered to their commitment of using access flooring and underfloor service distribution.

Tate Access Floors knew that an underfloor wire and cable system would give the USPTO building the flexibility it needs to survive future growth, as well as the ability to adapt to new technologies. However, Tate understands that even the most advanced technology needs to offer long-term value if it is to provide a positive return on your investment.

That is why Tate Access Flooring for government facilities has been designed to control costs through durability and long-term service, adaptability to future expansion and change, along with easy, low-cost maintenance requirements. Additional cost savings are also realized through easy installation as well as lower operating and system requirement costs for power and communication. Tate is proud to have supplied this flexible and efficient system for the US Patent & Trademark Office headquarters, a building that promises to be a landmark design for government construction projects.

Snead Building, Louisville, KY

Qk4, a large local architectural, engineering and construction firm in Louisville, Kentucky, outgrew their headquarters on Main Street in the year 2000. Searching for a new home, Qk4 became aware that the Snead Building, a 1910 reinforced concrete building on the National Historic Register, was being renovated and chose to join the project team in the Phase 1 renovation of the Louisville Glassworks development which anchors the west end of downtown Louisville. A major design consideration for this historic venture was the implementation of a raised floor system. This system would allow the project team to incorporate an underfloor service distribution of air, wire and cable, creating a flexible environment with cleaner indoor air quality.

Allowing minimal disruption of ceiling spaces and providing for future flexibility, Tate's underfloor service distribution system was the perfect fit for this project. Access floor creates a pressurized plenum used to evenly distribute conditioned air through the space providing a higher quality of indoor air. A separate plenum wraps each floor and washes the exterior wall with heated or cooled air as the outside temperature dictates. It also provides runways for all data, electrical and telephone cabling, giving the Snead Building flexibility for future change. By using Tate's underfloor service distribution system, the Snead Building was transformed from an industrial building into a thriving mixed-use facility ready for the future.

Project	Snead Building
Location	Louisville, KY
Floor Area	50,000 ft² Access Floor
Product(s)	ConCore® 1250 Underfloor Wire, Cable and Air Systems
Architect	Qk4 Louisville, KY
Authorized Dealer	Architectural Specialties New Albany, IN
General Contractor	Qk4 Louisville, KY
Engineering Firm	Qk4 Louisville, KY

BP WOW Project, Houston, TX

Energy industry leader BP is understandably proud of its 10,000 ft² space located in its Westlake office building in Houston. Dubbed BP WOW (Working Our Way), it was created as a living laboratory of workspace design, a glimpse into BP's next generation of office space. The American Institute of Architects also was suitably impressed, selecting the WOW project for its Annual Interiors Award for 2004. BP WOW is part of a corporate-wide move to improve efficiency and foster collaboration, to pull its employees out of enclosed offices and place them in a more fluid, workstation-based setting. WOW's open format represents a significant change for BP and a bold step within its industry. Energy companies traditionally are extremely hierarchical in nature so BP's decision to open things up probably raised some eyebrows among its peers. With goals of energy efficiency and comfort, BP decided that an underfloor air distribution system would contribute to the environment they were shooting for.

Project	BP WOW Project
Location	Houston, TX
Floor Area	10,000 ft² Access Floor
Product(s)	ConCore® 1000 - 8" Finished Floor Height Underfloor Air System PosiTile® Carpet
Architect	Gensler Houston, TX
Authorized Dealer	McCoy Workplace Solutions Houston, TX
General Contractor	Arbuckle Builders Houston, TX
Engineering Firm	IA Naman Houston, TX

With underfloor air, the lab allows employees to control the air flow to their own personal work space providing its workers with an individual comfort never before experienced; however, managing their environment is not the only benefit. Underfloor air also improves indoor air quality and has proven to be an energy efficient system. Therefore, the combination of Tate Access Floors' underfloor service distribution and BP's vision of utilizing the latest in space design and technology created a project that not only satisfied BP but also gave its employees an environment in which they could be productive and comfortable.

"BP Amoco charged me to come up with an innovative design of their showcase 'WOW' office space to represent the latest in cutting edge technologies in an office environment. We investigated several options and decided to design an underfloor air distribution system. The main benefits of this design for BP were to reduce energy costs, lower the cost of the clients churn rate and provide better air quality to the space. The client was also interested in the LEED™ aspect of the underfloor air distribution system even though the tenant remodel space would not qualify for any LEED™ certifications."

Marvin Leach, E.I.T., LEED AP, IA Naman + Associates, Inc.

Tulalip Casino, Marysville, WA

Casinos are meant to be memorable visual experiences, and the new Tulalip Casino has brought Las Vegas dazzle to Marysville, Washington. But one of its best attractions is something you won't see… smoky air. Many aspects of this casino are unique among building construction projects; however, the goal of a healthy, smoke-free atmosphere was truly ambitious, especially considering the renovation of Tulalip would increase its size four-fold. But the tribal Board was adamant that their new casino would have a smoke-free environment for the casino staff and patrons, creating a healthier atmosphere for all. It was known that underfloor air is used in offices, but the casino market had not truly taken advantage of this technology. The project team decided that it was the answer to a cleaner environment for their casino.

Tate was pleased to be a part of this exciting project by providing raised flooring throughout the casino, dining and retail facilities to house the massive amount of electrical wiring and cabling as well as deliver a unique underfloor air system designed to improve the air quality for both smokers and non-smokers. The majority of the gaming floor is built over a 2ft raised floor plenum. This accommodates a unique ventilation system designed to reduce the effects of cigarette smoke in the facility by forcing air up through the floor, up through the occupied casino, then out of the building, carrying the smoke with it. By choosing Tate Access Floors and underfloor service distribution, the Tulalip's will have a casino that delivers to its patrons and staff a healthier environment and an infrastructure system that provides the ultimate in flexibility allowing equipment layout and technology changes quickly, easily and cost-effectively.

Project	Tulalip Casino
Location	Marysville, WA
Floor Area	227,000 gross ft² 195,000 ft² access floor
Product(s)	ConCore® 2000 Casino, ConCore® 1250 Office Underfloor Air System HPL and Modular Carpet
Architect	Ruhl-Parr & Associates Bellevue, WA
Authorized Dealer	ASD Seattle, WA
General Contractor	Mortenson-Gobin Seattle, WA
Engineering Firm	AE Associates Seattle, WA

"Nonsmokers sitting next to a smoker in the casino won't even notice the smoke. The secret to the system is something else the public won't see. The casino, restaurants and most other areas of the building have been built on raised floors, allowing space underneath not only for massive clusters of electrical wiring and electronics cabling but also for fresh-air vents."

Brad Weaver, AE Associate.

Turning Stone Casino, Verona, NY

The Turning Stone Casino Resort in Verona, NY, operated by the Oneida Indian Nation, had a problem with environmental tobacco smoke (ETS). During peak hours, a blue haze would cover occupants of the gaming floor, and the existing ventilation system didn't do enough to clear the air. Interestingly enough, smoking is prohibited in public buildings throughout New York, but visitors to the casino are permitted to smoke, because the facility is located on sovereign land. The Oneida Indian Nation, while wanting to permit smoking, felt strongly about eliminating as much ETS as possible. Drastic measures were needed to solve this problem; possibly even tearing out all the existing mechanical system in order to improve the air quality within the casino.

And that's just about what happened. When it was determined that Tate's underfloor air distribution system would solve the ETS problem, a two-phase construction project commenced. The first phase of the construction consisted of an 80,000 ft^2 expansion of the gaming room and the second phase involved a complete renovation of the existing 70,000 ft^2 gaming floor including demolition of the existing mechanical system. Eighteen months later, a new underfloor air system has helped eliminate the ETS problem, and patrons (and owners) can breathe easy.

"I don't know how long the underfloor system has been available, but it's something that's really helped us out considerably."

Bill Hollenbeck, senior facilities supervisor, Turning Stone Casino.

Project	Turning Stone Casino
Location	Verona, NY
Floor Area	30,000 ft^2
Product(s)	CCN 1500 Underfloor Wire, Cable and Air Systems
Architect	Douglas J Cardinal Ontario, Canada
Authorized Dealer	Henderson-Johnson Co. Syracuse, NY
General Contractor	Murnane Building Contractors Syracuse, NY
Engineering Firm	Sacks & Associates Seattle, WA

Plus there was a bonus: Although the primary purpose of the underfloor plenum was for air distribution, once the space was created, everyone wanted to take advantage of it. As a result, the plenum has been utilized for power, data, and control wiring giving the casino a flexibility it never had before. Underfloor service distribution by Tate Access Floors helped to create a healthy, adaptable casino environment.

Data & Call Centers

Convergys Corporation, Tamarac, FL

As the world's largest provider of integrated customer care and billing services, Convergys thrives on its reputation for exceptional service and its ability to connect companies to customers worldwide. While Convergys realizes their services are people-driven, they also recognize solutions as technology dependent. They have continually pushed the boundaries of possibility – ensuring their position as the industry leader. Recently, Convergys forged new technological territory with the use of Tate's BTP in the design and construction of its call center in Tamarac, Florida. After researching their existing facilities, Convergys found reconfiguration costs to be extremely high. And, as churn rates increase, it is critical to incorporate flexibility into the design of office space. In addition, extensive research performed using the existing Convergys facilities revealed an extraordinarily large number of 'It's too hot or it's too cold' complaints. Convergys greatly values its highly skilled workforce and designed its latest call center facility accordingly.

With Tate's ConCore® raised access floor panels, modular wiring, and underfloor air, Convergys can now easily accommodate changing work hours, densities, and technology. Panels are effortlessly relocated, wiring is simply moved with Tate's 'plug & play' technology, and underfloor air terminals are easily relocated as workspace is transformed.

"The International Facilities Management Association recently reported churn rates to be a whopping 44%. This makes flexibility imperative in designing today's facility and Tate's Underfloor Service Distribution system provides the solution."

Roger Kingsland, Principal Architect, KSBA Architects.

In fact, utilizing Tate's BTP concept, Convergys can realize a 77% savings associated with moves, adds, and changes. Also, these changes no longer require the use of expensive electricians, information technologists and general contractors – promoting greater cost savings over the entire lifecycle of the building. In addition to creating office space that promotes better indoor air quality for its associates, Convergys can also expect to increase worker productivity and retention by decreasing absenteeism and providing individual comfort and control. Underfloor HVAC also leads to reduced energy use, fewer required system maintenance calls and repairs, and cheaper and faster office reconfiguration space using in-house personnel. For a facility operating 24 hours a day, 7 days a week, these benefits are immeasurable!

Project	Convergys Corporation
Location	Tamarac, FL
Floor Area	98,000 ft^2
Product(s)	ConCore® 1000 and ConCore® 1250 PosiLock® Understructure Underfloor Air System Shaw Modular Carpet
Architect	KSBA Architects Pittsburgh, PA
Authorized Dealer	Henderson-Johnson Co. Syracuse, NY
General Contractor	Miller Construction
Engineering Firm	Ray Engineering

Data & Call Centers

Inflow, Denver, CO

The Inflow DNX floor contains many features that make services within the DNX facility easily accessible. Tate's raised floors provide quick and easy access to the power and network cabling that lies below the raised floor. All cabling is organized and labeled for easy identification and use. This results in faster installations and increased service.

- Raised floors provide easy, controlled access to power and network connections.
- Cold air from our HVAC units flows through our subfloor up through vents in the raised floor to maintain an internal temperature.
- Fiber enters the facility in multiple locations. Redundant entrance points for network connectivity and power.
- Power and network cabling is installed to eliminate interference and other related problems.
- Pre-laid CAT 5 cabling in the floor facilitates faster installs and easy accessibility by operations staff.

Project	Inflow
Location	Denver, CO
Product(s)	ConCore® 1250 with HPL Underfloor Wire, Cable and Air Systems Air Conditioner Units (CRAC)

Tate Service Package

Customer Service

Head Office Team

Customer Service, Technical Support, Manufacturing and Quality.

Tate Regional Sales Managers

Local Technical and Sales Support.

Locally Based Dealers

Project Take-offs, Management, Product Supply and Installation.

www.tateaccessfloors.com/design_manual.html

Download pdf version of the Design & Specification Guide.

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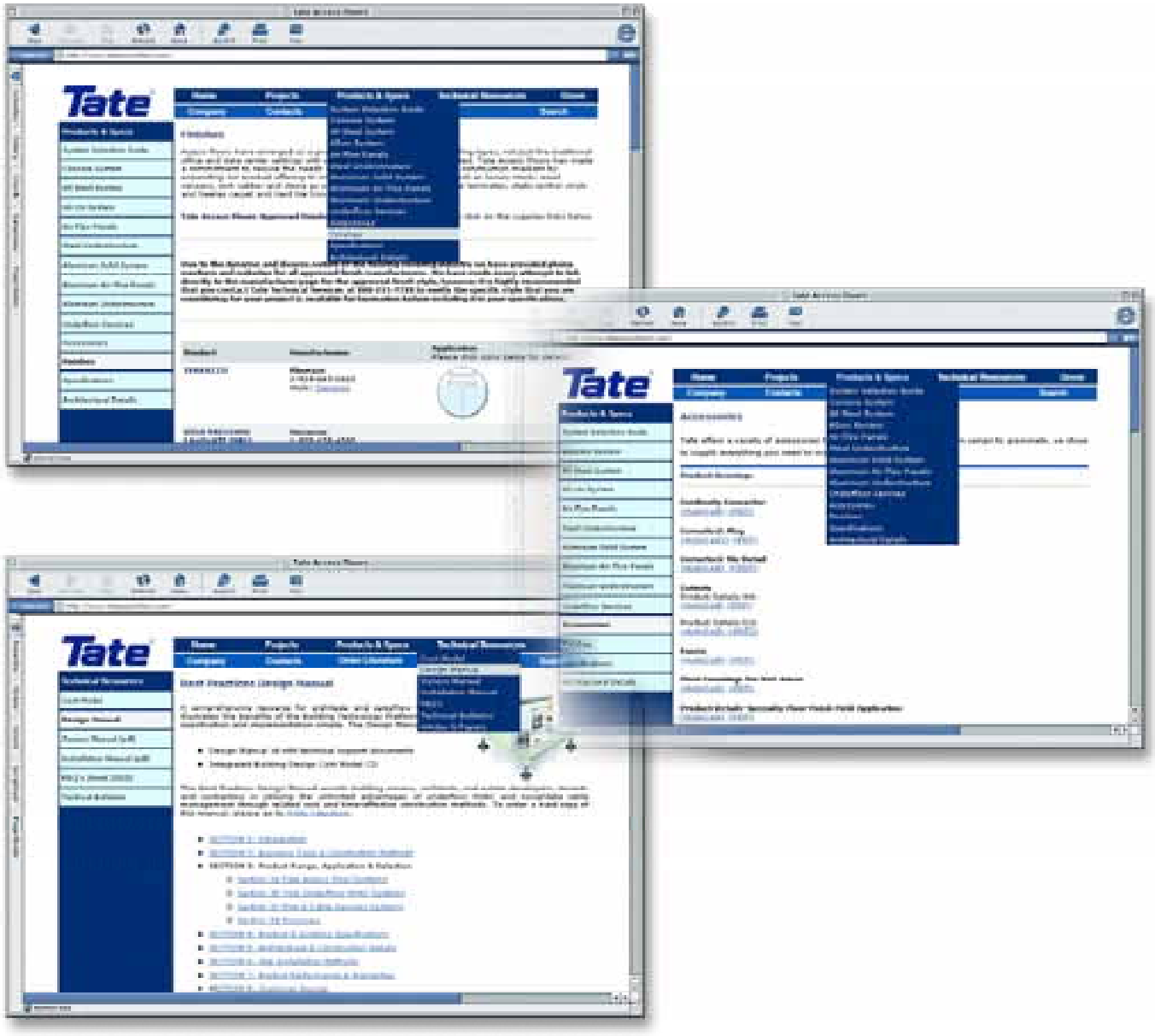
Dealer Locator

Dealer Network

Fast response, and the most effective solutions to new and renovation construction projects are provided by Tate Access Floors, Inc. through a network of authorized international dealers and skilled installers. Specific regional construction requirements are satisfied through Tate's wealth of experience and expertise.

To find the dealer nearest you, please visit **www.tateaccessfloors.com**, and click on the contacts as shown above. Under the drop down menu you can locate US dealers by using the interactive map or find international dealers by selecting your country from the list of provided.

Tate Access Floors On-Line



Everything needed to design and specify Tate Access Floors with underfloor service distribution can be found on our website at **www.tateaccessfloors.com**.

There you can download specifications, review performance charts and get relevant technical information. CAD and PDF drawings for all the details contained in this manual are available for download under the Products & Specs tab as shown above. You can even get detailed information about factory laminated finishes including application photos in the finishes section under Products & Specs.

If you cannot find the detail, specification or other information you are looking for please contact the Tate hotline at **800-231-7788**.