



THE BUS STOPS HERE

DENVER PUBLIC SCHOOLS'
NEW BUS MAINTENANCE
FACILITY SCORES AN

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THE WHEELS ON THE BUSES GO ‘ROUND AND ‘ROUND a lot, especially when you’re responsible for transporting 73,000 students to 149 different schools every day.

“Getting the students to and from school safely and efficiently is a big project,” said Gene Hammond, manager of transportation operations for Denver Public Schools.

That’s why the facilities that house and maintain the district’s fleet of buses must be up to the task. The existing northeast DPS bus maintenance facility was built on a landfill, and the site was settling badly, putting a strain on the natural gas lines and creating problems in the parking lots and access roads, Hammond said.

The district built the new Northeast Bus Terminal to solve those problems. One of two terminals where DPS stores and maintains buses, and from which it coordinates the district’s transportation needs, the state-of-the-art Stapleton facility includes eight fuel-pumps, several wash stations and cutting-edge vehicle maintenance capabilities. The DPS Transportation Administration offices are also located there, along with the DPS Security Department and its 24/7 radio dispatch service.

EMPLOYEE BENEFITS

OZ Architecture, the project designer, created a building rich with character that ultimately meets the district's high durability standards and requires little regular maintenance.

"The design challenge was two-fold," said OZ Principal-in-Charge Joe Levi, AIA. "First, we needed to create something very durable while maintaining the established budget. Second, we wanted to create a more enjoyable and comfortable space for the drivers and other employees."

The design team brought daylight into the building, resulting in a more inviting area for the drivers and onsite staff. A user-friendly aspect of the design includes an employee lounge and additional spaces for drivers to relax during the down time between routes. A wellness center offers treadmills, elliptical and weight machines while a training room doubles as a "quiet room" where drivers can escape the facility's buzz of activity.

COLOR AND FORM

The new bus terminal facility is diminutive in comparison to its surrounding industrial buildings. However, to accommodate the traffic flow of buses, OZ was forced to situate the building in the very center of the triangular site, a design challenge that made it impossible to visually attach the building to an "edge."

"It's like a little island floating in a flat ocean," explained Levi, "so we designed it with a bigger presence — sort of a larger personality — than we would have normally done for a structure of this size."

The building's personality comes alive with a series of strong, school bus-yellow horizontal stripes that accentuate the upper quadrant of the building and the functional exterior elements.

"You don't often get to use bright yellow on the exterior of a building, but it really worked here, and we liked the connection to the buses parked all around the building," said Levi. Even functional, non-building elements such as the row of cord reels are painted bright yellow.

Another element that adds presence to the building is the dark gray precast that runs around the entire top of the building, creating a "gravitas" and strength that helps define the structure against the open sea of surface parking. Heavy foot traffic by the drivers who must come in and out of the building to pick up schedules, take short breaks or change vehicles demanded that the design provide efficient circulation patterns throughout the facility. Three glass towers provide visual elements that support the circulation spine within the building.

CONCRETE SOLUTIONS

"The client determined that we should use the district's school design guidelines for the maintenance facility," explained Levi. "It was important for us to interpret standards for school buildings in an intelligent and useful way."

School standards are oriented toward buildings filled with children; however, the bus facility is mostly an industrial building. As a result, OZ was challenged to create a design that conformed to district standards while ensuring that "we didn't go overboard or overspend to meet standards that were meant for a different building use," Levi said.

OZ met the project's need for durability by using stained tilt-up concrete for the building's exterior. "It was an excellent medium for us," said Levi. "The stained concrete is a durable material that we were able to mold in order to give the building character while still being cost effective."

Project Manager Rob Lawrence of general contractor FCI Constructors noted that the tilt-up concrete walls also helped meet the project's fast-track schedule, one of the most critical components of the project. The \$9 million building would normally require a nine-month construction schedule, but it had to be completed in six months to meet DPS's start-of-the-school-year deadline. Construction began in Jan. 2005 and was done by the end of July, despite an unusual amount of rainfall in the spring that created several delays.

"We had a good plan and schedule from the very start and a lot of cooperation from our subs," said Lawrence.

The large amount of concrete was also a particularly challenging aspect of the project. The old facility had seen a lot of flooding in recent years, and ground swell had created numerous potholes and other issues in the parking area. To prevent future occurrences, all of the road surfaces at the new facility were designed with 12-in.-thick concrete.

"We had a constant flow of concrete trucks going to and from the site," said Lawrence. That paid off, however, with smooth roadbeds and easier access for the DPS vehicles, ultimately reducing the chance of accidents.

The new facility's design also includes one-way vehicle ingress and egress and widening of all traffic lanes, resulting in improved traffic flow.

"Overall, it was a successful project," said Hammond. "We had a tight schedule and a real need for a modern facility. No question that it has been a resounding success for everyone — the district, our drivers and certainly for the kids we get safely from home to school and back again." ◆



PREVIOUS LEFT Buses at Stapleton's new state-of-the-art Northeast Bus Terminal are responsible for transporting 73,000 DPS students to 149 schools every day. **PREVIOUS RIGHT** The east entry vestibule welcomes visitors with its brightly contrasting accents and American flag. **TOP LEFT** The stained concrete floors and exposed ceilings help lower maintenance costs during the life of the building. **TOP RIGHT** Precast concrete panels allowed for ease of construction and an accelerated schedule. **MIDDLE LEFT** The training room incorporates recent technology to update employees with the latest district information. **MIDDLE RIGHT** Wide-open common areas lead to offices on the outer edges of the building. **BOTTOM LEFT** The concrete drive on the northeast side of the property leads drivers toward the gas pumps and maintenance bays. **BOTTOM RIGHT** Buses line up.

**OTHER NOTABLE PROJECTS
BY OZ ARCHITECTURE**

- > Brunetti Lofts, Denver
- > The Hard Rock Hotel, Copper Mountain
- > William Smith Alternative School, Aurora
- > Town of Black Hawk Design Guidelines, Black Hawk
- > Denver Detention Center, Denver

**OTHER NOTABLE PROJECTS
BY FCI CONSTRUCTORS**

- > Logan County Justice Center, Sterling
- > Kinard Core Knowledge Junior High School, Ft. Collins
- > Aspen Airport Rescue and Fire, Aspen
- > Denver International Airport Mod. 4 West Parking Structure, Denver
- > Fitzsimons Building 500, 6th Floor Renovation, Aurora

DENVER PUBLIC SCHOOL DISTRICT NORTHEAST BUS TERMINAL

LOCATION 4937 Dallas St., Stapleton Redevelopment, Denver
CONSTRUCTION COST \$9.5 million
SCOPE 41,178 sq ft
PURPOSE A new facility for storage and maintenance of DPS buses and utility vehicles, as well as a welcoming place for transportation staff. The durable new terminal provides an updated, efficient facility with a comfortable and inspiring environment for employees.
COMPLETION July 2005

OWNER Denver Public Schools
ARCHITECT OZ Architecture
MECHANICAL ENGINEER MIE Group & The Szynski Group
STRUCTURAL ENGINEER JVA Inc.
CIVIL ENGINEER Harris Kocher Smith
GENERAL CONTRACTOR FCI Constructors
AMONG THE SUBCONTRACTORS Eaton Sales and Service, Kimmel Mechanical, Quality Electric, Concrete Foundations, Panel Masters, Steel Star, Arapahoe Roofing & Sheet Metal, Kuck Mechanical