

KONE EcoSpace™

A moving showcase – Chicago style!



PROJECT

Add a convenience elevator for a new restaurant and public area

CLIENT

5th Avenue Station
Naperville, Illinois

SEGMENT

Office/Retail/Residential

TIMELINE

4th Quarter 2005

PROPERTY MANAGER

Kathleen Mortensen

CONSTRUCTION MANAGER

Guy Cummins
Prinmar Corporation

ARCHITECT

David Lindquist
& Associates

PRODUCT SOLUTION

A KONE EcoSpace elevator



“We wouldn’t have suggested creating the look of this elevator had it not been for KONE. Because of their attention to detail and their accessibility, we knew that KONE was going to come through.”

Guy Cummins, Vice President, Prinmar Corporation

the savings

EcoSpace benefits:

60 PERCENT LESS ENERGY
compared to a hydraulic elevator

6.7 HORSEPOWER motor
compared to a 25 horsepower motor for a hydraulic unit

40 PERCENT QUIETER
because it does not use a hydraulic pump unit

the challenge

- Install a third elevator in a structure with two existing elevators
- Change the location of the controller
- Create a quiet, sophisticated atmosphere
- Develop a solution for limited amount of building space
- Minimize disruption to existing tenants

the KONE solution

- Relocate the controller
- Install a quiet, environmentally friendly EcoSpace elevator in an open restaurant and public area
- Place the EcoSpace elevator into a glass case
- Customize the EcoSpace equipment to fit the existing framework

“We liked the simplicity of the EcoSpace, the quietness of it, and not having to have hydraulics. It looks really sharp – industrial but classy.”

Kathleen Mortensen, Fifth Avenue Station



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the client's situation

Kathleen Mortensen's spacious Fifth Avenue Station in Naperville, Ill., is a former furniture factory. She wanted to maintain the atmosphere of the open-beam, red-cedar building that has been renovated into a restaurant, offices and residential space. Mortensen considered adding a hydraulic elevator in the office space of the facility that already had two elevators.

Mortensen also needed to change the new elevator's machine room location. A hydraulic elevator system would need a separate machine room, but with the EcoSpace, you eliminate the need for a machine room.

the KONE achievement

Jeff Peterson, Area Machine-Room-Less Business Development Manager who handles the Midwest region for KONE, determined that the KONE EcoSpace would not only provide the perfect solution, but also eliminate issues inherent with a hydraulic elevator.

“If you've ever walked by a machine room, you hear that hydraulic pump,” Peterson said. “The KONE EcoSpace is electric, so there's virtually no sound at all. You don't even know you're moving when you're riding inside the elevator cab.” With the KONE EcoSpace elevator, Peterson said, “You also avoid all the negative issues regarding hydraulic fluid, because it doesn't need any.”

Mortensen wanted to know more about the KONE EcoSpace elevator, so she and the construction manager accompanied Peterson to another job site with a complete KONE machine-room-less installation for review. “They were able to see the product in action,” Peterson said. “They climbed on top of the cab, saw how the machine worked, and liked the energy savings, how quiet it was and how smooth it was.”

The potential for odor was Mortensen's main concern about using a hydraulic elevator. “And we liked the simplicity of the EcoSpace, the quietness of it, and not having to have hydraulics,” she said. She met with the design team that included the architect, construction manager and Peterson. The EcoSpace allowed for complete flexibility with placement of the controller, which appealed to architect David Lindquist.

the bottom line

The owner and design team chose the KONE EcoSpace because it is an odorless, noiseless solution that adapted to the unique design of the building.

“We installed the KONE EcoSpace in a building with difficult existing conditions such as low headroom,” Lindquist said. “Their design requires a certain floor-to-floor dimension, but they were able to adjust it downward slightly and we were able to adjust the floor-to-floor height. We were able to ramp up our platform where the elevator lands, and they were able to reduce the travel a couple of inches. It was a project that relied on teamwork.

“It meant that KONE really had to go the extra mile,” Lindquist said. “Every time we needed to do something with their equipment, they were able to accommodate and maintain the aesthetics.”

Guy Cummins, Vice President of Prinmar Corporation, determined that the workings of the KONE EcoSpace elevator would look “raw and pure” coming up through the huge old wood floor. “You've seen glass elevators,” said Cummins. “Actually seeing the elevator car go up and down through a glass hoistway is an even more fascinating sight.

“It was our idea to make it glass, but we wouldn't have suggested it had it not been for KONE,” Cummins said. “The challenge presented to us was a 12 on a scale of 1–10. The difficulty level was second to none, and they came through with flying colors.”

Structurally, two sides of the hoistway are masonry, and two sides are glass. “Behind the two sides that are glass is the track that the elevator travels on,” Cummins said. “The challenge was keeping the track stationary without breaking the glass and without having the masonry sway, while not compromising the integrity of the elevator shaft itself.”

Installing the EcoSpace elevator into a partially transparent hoistway created new challenges. The design team had to consider how to place the steel in the hoistway without interfering with equipment.

The EcoSpace machinery was painted with Georgian Brick and Newburg Green (a steely blue) to complement the building, Mortensen said. “It looks really sharp – industrial but classy,” she said. Now someone standing at the top level on the second floor can see the machinery in the KONE EcoSpace elevator that has become an attraction in a huge open atrium. “It started out as an elevator and ended up as a showpiece,” Peterson said.

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