

PROVIDENCE TOWERS

DALLAS, TEXAS



For Information Call
Engenuity
SYSTEMS
PHONE: (480) 782-5600 OR (800) 375-3363
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Project Profile

Project	Integrated energy management and security system
Property	12-story, twin tower office building Owned and managed by Cambridge Realty Partners L.P.
Square Feet	500,000
Facilities Staff	4
CSI Equipment	I/NET® with I/DISC™ Access Control, an integrated PC-based system with 2-color graphics workstations on an Ethernet LAN and 1,600+ control points
Installation	May 1993
Changeout	Approximately 30 days for EMS
Actual Payback	1 1/2 to 3 years (projected)

“Today, we have one of the best buildings in the city, and we make better, faster decisions because the information we need is always at our fingertips.”

-John Connors
Chief Engineer
Providence Towers

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Built in 1986, Providence Towers rises majestically against a backdrop of the North Dallas skyline. Inside and out, the attention to design detail and aesthetics conjures up images of elegance and success. In 1993, BOMA (Building Owners and Managers Association) cited this property for excellence.

Today, Providence Towers is a showcase for contemporary office design and building management. But the road to success was often bumpy.

The original HVAC system had operational problems from Day 1. And for several years before Cambridge Realty bought the property in 1993, the system was operated 24 hours a day in an attempt to maintain comfortable levels for air conditioning and air flow. But even that strategy did not work.

System design and equipment problems presented other challenges. Dampers and valves often had to be operated manually, and coils froze because of control problems. Also, the chillers had no strainers to prevent extraneous particles from entering and clogging the system. Problems such as these increased the risk of damage to the equipment and ultimately prevented the building from operating efficiently.

Additionally, the system was not user-friendly. According to Connors, "You could watch a monitor to see what was happening in the system, but you had very little control over it. It used to take 10 minutes just to turn off the fans."

The original system also required a costly maintenance contract that only covered the front end — not field devices. But that contract fell short of performance expectations, too.

"Imagine what it's like having to call for programming assistance just to change your system over to daylight-savings time," Connors recalled. "Then imagine what it's like to discover that the only person who knows how to make that change is on vacation."

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Timing was a critical issue. Not only were there 30 days remaining until the utility company's summer demand rates began, but TU Electric had just announced a rate hike beginning summer 1993. These factors helped hasten the decision to proceed.

After exploring various alternatives, Cambridge Realty selected CSI's I/NET System for Providence Towers because of its leading-edge technology, modularity, ease of use and ability to integrate multiple systems.

So as not to adversely impact building operations when changing the existing building controls, the installation crew wanted to make the changeover as seamless as possible. Since the building engineer was already familiar with CSI equipment, mounting CSI controllers into existing cabinets was easy, eliminating many piping and wiring changes. This ease of installation enabled the CSI equipment to be successfully installed within the 30-day deadline.

Today, Providence Towers uses its integrated system for various applications:

- Energy Management features control air handling units, chillers, cooling towers and pumps while also providing smoke control and demand limiting capabilities.
- Environmental Control components oversee HVAC fans, dampers, valves, chillers and pumps to maintain desired setpoints for chilled water, condenser water, supply air, return air and space temperatures.
- Lighting Control features operate the lighting by zones and utilize occupancy schedules to conserve energy and reduce operating costs.
- "After-Hours" Override capabilities give tenants flexibility to extend HVAC and lighting usage to meet their needs via any touchtone telephone.
- Maintenance Management features provide comprehensive control and information about equipment usage and performance.

- Access Control components utilize Touch Memory devices and readers at all parking entrances/exits, elevators and public doors.
- Security elements, such as door contacts and motion detectors, enable the facilities staff to monitor transactions throughout the premises.

Before/After Data

	1986	1994
EMS	Landis-Gyr Powers 600	CSI's I/NET®
Easy to Program	No	Yes
Access Control	Card Key	CSI's I/NET® with I/DISC™ Touch Memory Technology
Integrated w/EMS	No	Yes
Telephone Override	No	Yes

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CSI's integrated system provides the building management staff with unprecedented control and detailed information about its operations. For instance, facilities staff can determine in 30 to 45 seconds whether a trouble report is tenant-specific or an overall building problem.

"We also like the fact that we can monitor and program our system simply by pointing and clicking at a workstation screen," Connors said.

The system's trend logging capabilities also enable the management company to track actual operating costs and to generate reports assessing individual tenants for additional services, such as "after-hours" HVAC and parking garage usage. For instance, the ability to charge a tenant for additional parking spaces can add up to as much as \$150 per day in revenue.

The management company also saves time and money because building engineers can replace their own system components quickly and easily. Also, if a problem arises, system alarms quickly notify facilities staff at their workstations and by dialing their digital pagers. In addition to providing remote access via modem capabilities, the system's design also ensures that if one controller fails it will not hamper operation of the remaining controllers.

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Property managers covet the prestigious BOMA "Office Building of the Year Award" because it recognizes excellence in both building management and design. In 1993, an evaluation team for the Dallas BOMA Chapter rated Providence Towers on its appearance, operations, building systems, maintenance and operating records, and tenant satisfaction. Based on their evaluation, Providence Towers was designated the best building in its category 250,000 – 500,000 sq. ft.).