

**Cost**

Construction: \$30,000,000  
MEPT Const: \$15,000,000  
Size: 150,000 sf  
MEPT \$/sf: \$100

**Owner**

Wellabe  
Des Moines, Iowa  
Medha Johson  
Assistant Vice President  
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**CM/General Contractor:**

Ryan Companies, Des Moines, IA  
Jon Holmen  
Senior Project Manager  
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Jon.Holmen@ryancompanies.com

**Awards**

2016 AIA National  
Honor Award for Architecture  
  
2015 AIA Central States  
Honor Award for Design Excellence  
  
2015 AIA Kansas City  
Honor Award for Design Excellence  
  
2016 IES Illumination  
- Award of Excellence Finalist  
- Award of Merit  
  
Iowa State Historical Society  
- 2017 William J Wagner Award  
  
USGBC LEED Silver Certified



**Project History**

Formerly known as the American Enterprise Group, the Wellabe building is a 150,000 square foot, eight-story office building located downtown Des Moines. This architecturally significant facility was designed by Gordon Bunshaft of Skidmore, Owings and Merrill in 1965. Primary goals of the project were to bring the building back to its original stature and upgrade the infrastructure to meet the Owner's needs for the next 50 years.

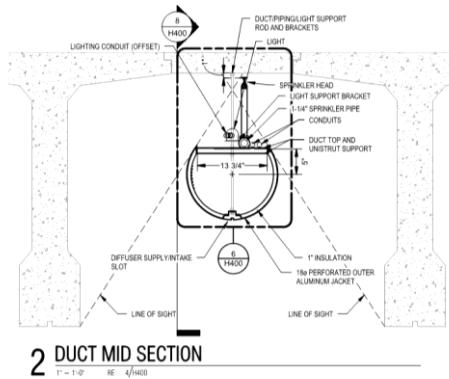
**Challenges**

The restoration provided a great opportunity for the design team to work side by side with the contractors from the start of the project. With a condensed design time frame and a construction period of less than a year, close collaboration between the design and contractor teams was required. Creativity and a willingness to think outside the box was key to solving long-standing comfort, code and energy use problems while remaining true to the original architectural vision of the project. Comfort, efficiency, and beauty were all priorities.

**Integrated Solutions**

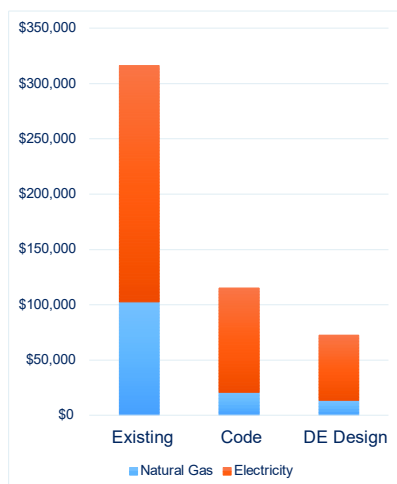
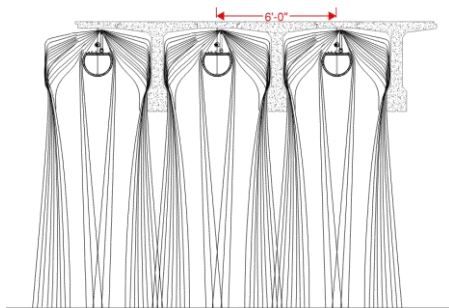
Features include dramatically improved temperature controls, wireless networked lighting controls, controlled receptacle power and careful coordination of all exposed components throughout the building. Enhanced access control, intrusion detection and video surveillance systems were provided for building's extensive art collection.

A key architectural element consisted of exposed concrete structure with integrated ductwork and lighting. Maintaining this architectural feature while bringing the building into compliance with current building codes presented one of the most significant challenges of the project. The design and construction team collaboratively developed a custom duct which concealed fire smoke dampers, sprinkler piping and new LED lighting. This concept was tested and further refined through multiple mockups with airflow and light level tests. The end result is true to the original architectural vision from the 1960's but incorporates current code, life safety, and energy efficiency standards.



*"This is a fine example of an exceptional restoration of a modern building."*

AIA Honor Award Jury



### Mechanical & Electrical Design

The project upgraded from 6 to 60 zones to allow separate controls. Providing this level of zone control while maintaining the clean lines of the original exposed duct system required separate concealed terminal units in the shafts along the exterior walls.

Sub-metering was provided to allow the Owner to separately track mechanical, lighting and receptacle loads. A 200kW generator was added. Panelboards utilizing motorized circuit breakers were installed to control receptacle power in private and open offices.

Great care was taken in adding fire suppression in a manner sensitive to the original architecture. A unique distribution system was developed to conceal the piping above the exposed ductwork. A full-scale mock up with water flow measurement and fire modeling was required to confirm fire sprinkler head configurations met code requirements. A new fire alarm system was provided to meet current high-rise requirements.

### Lighting

The main goal of the lighting was to provide an energy efficient, low maintenance system while bringing the building back to its original design intent. Color temperatures and illuminance were selected with the help of lighting mock-ups. 4000K LED linear fixtures were used to blend the primary lighting with the day lit spaces while warmer 3000K downlights were used to mimic the original incandescent fixtures.

The final results lowered the open office lighting power density to .84 W/SF, more than 50% less than the existing system. Wireless lighting controls were installed to add daylight harvesting and individual control of lighting in private offices, classrooms and conference rooms.

### Energy Results

The energy consumption of the building was dramatically reduced by replacing the original systems with new energy efficient systems including condensing boilers, variable speed chillers, LED lighting and sophisticated controls. Annual utility costs are projected to be reduced by 80 percent.