

J. ERIK JONSSON CENTRAL LIBRARY DALLAS, TEXAS

KEY PARAMETERS

- Type of Facility – Existing
- Function – Public Library (Government)
- Area – 8 stories, 563,000 sq.ft.
- Project Completed – 2009

Challenge: Optimize Indoor Air Quality and reduce maintenance costs. The owner wanted clean indoor air to protect the library contents in an urban environment and wanted to replace outdated electronic air cleaners and rolled media filters that were installed when the building was opened in 1982. In addition, the owners desired energy efficiency by maintaining low static pressures.

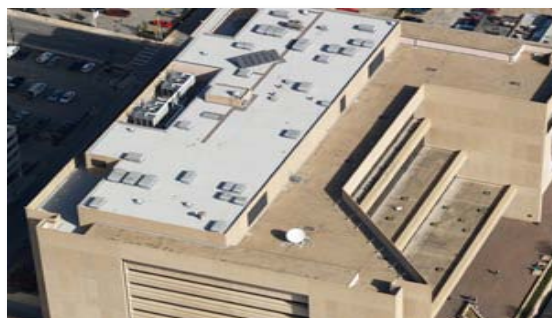


Solution: Dynamic 1 inch V-Bank Air Cleaners were installed in seventeen air handling units.

Results: The library has been pleased with the results. Overall indoor environmental quality was measured in 2011 using an Aircuity Optima™ building optimization system. The report indicated that the building achieved 100 out of a possible 100 points in both the air cleanliness index and the



Photo by Miguel Casanova



building pollutants index. Scores of 50 or higher indicate building performance at or above accepted guidelines. In this case, a building performance index of 78 means that 78% of all tested buildings scored at or below this level.

Type	Absolute Score	Percentile Score
Comfort/Ventilation Index	34	21
Air Cleanliness Index	100	100
Building Pollutants Index	100	99
Building Performance Index	78	39

According to the mechanical contractor, Metco Engineering, the library was pleased with the improvement in the indoor air quality after the air cleaners were installed. In addition, they liked the 24-volt power input, and the longer filter maintenance intervals.

“The filters performance greatly exceeded our expectations. Our staff spent 1.5 days changing the old filters every month. We went to change the new filters after 9 months, and found them only 50% depleted.”

*Jesse Dillard, P.E.
Energy Manager - City of Dallas*

Longer filter maintenance intervals are also translating into additional operational savings in ordering, material handling, labor, and disposal costs.



TEAM

- Owner – City of Dallas, Texas
- Engineering – City of Dallas
- Mechanical Contractor – Metco Engineering, Inc.
- Facility Contact – Jesse Dillard, P.E.

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