



INDIANAPOLIS INTERNATIONAL AIRPORT

Indianapolis, IN

First airport terminal campus in the U.S. to win LEED® certification.

Designed as a 21st century gateway to the city, the Colonel H. Weir Cook Terminal consists of a large ticketing departure hall, two security halls, two concourses, the large interior Civic Plaza and arrival hall as well as retail and office spaces. Sustainability, user comfort and convenience, and low maintenance and operating costs were main goals for the project.

NORESCO's LEED consultants guided the project team through the certification process from pre-design through construction, maintaining consensus by leading goal-setting sustainable design charrettes. During the design process, NORESO's analysts helped the design team weigh alternative strategies for improving building performance, reducing operating costs, and complying with energy -performance goals through detailed energy, daylighting, and airflow modeling.

During the schematic design phase of the project, NORESO's energy modeling and analysis helped set the project's energy efficiency goals and compare energy-saving design alternatives. NORESO's comparison of the proposed model to the baseline incorporated the following potential energy efficiency measures: alternate HVAC system designs, high performance glazing and skylights, aggressive daylighting, external shading, and radiant heating and cooling in the Civic Plaza.

To achieve stringent energy efficiency goals, a range of the modeled daylighting, heating and cooling strategies were implemented into the project to reduce energy costs. Glass curtain walls and roof overhands provide side-daylighting and reduce glare and solar heat while skylights provide lighting to the departure and security halls and the Civic Plaza. To reduce energy costs associated with heating and cooling, the Civic Plaza uses a radiant floor system, while high-efficiency mechanical systems with displacement air distribution are used throughout the terminal.



Certification:

- LEED® Certified™
LEED® for New Construction™ v2.1
- Best of the Regional Projects ENR magazine

Services:

- LEED Certification consulting
- Energy, daylight & airflow modeling

Environmental Impact:

- 25% estimated annual energy savings (ASHRAE 90.1-1999)
- 75% of occupants receive natural daylighting
- 91% of occupants have views
- 35% less potable water use due to low-flow fixtures
- Cool roof reduces the heat island effect
- Achieved points for LEED EAc1

Services for this project were provided by Architectural Energy Corporation (AEC), which is now part of NORESO.

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