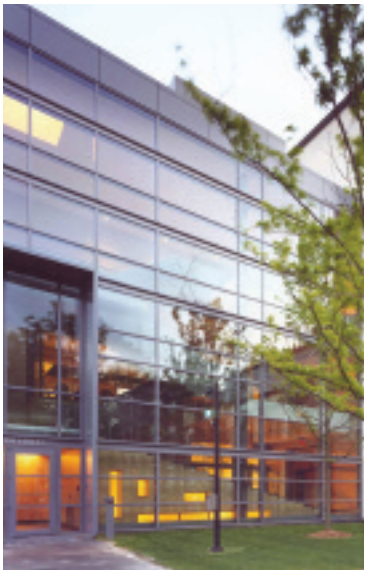
Sustainable Design



Green building practices focus on conserving energy and natural resources while increasing a facility's long-term value. Using the United States Green Building Council's LEED-NC-2.2 as a reference standard, the goals of the design concept are to establish fixed methods of delivering daylight, natural ventilation and landscape views, while maintaining a controlled interior climate to limit use of non-renewable resources.

RJA consultants, many of whom are LEED Accredited Professionals (AP), participate as part of design teams to offer the type of fire protection and security system design and specification that contributes to LEED certification and building sustainability.

Code Analysis – Addressing the sustainable design needs of a project in the context of code requirements, such as unprotected or operable windows to achieve daylighting and natural ventilation criteria.

Performance-Based Modeling– Computer modeling of a facility to reduce the amount of mechanical equipment by modeling mechanical system supply and exhaust air requirements in both normal and smoke control modes and incorporating natural ventilation and the stack effect to ventilate a building space normally and during a fire. By utilizing natural ventilation and the stack effect, a reduction in mechanical fan systems can represent a cost savings, both immediate and long term, as well as greater space utilization.

Water Supply Conservation – Determining alternative water conservation strategies for fire sprinkler systems and developing site drainage solutions.

System Specification – Specifying simplified fire protection and security system components to facilitate maintenance. Selecting the right components - including fittings, fasteners and sealants – will allow for quicker disassembly and easier removal of reusable materials.

Fire Suppression System Design Innovation – Employing innovative design approaches to fire suppression system design to conserve water, such as utilizing reclaimed water not only to supply irrigation systems but also for use in fire sprinkler systems, or using low water usage water-mist type fire suppression systems in lieu of traditional wet pipe sprinkler systems.

Special Hazard Protection – Designing of special hazard fire protection systems where the agent released will not adversely affect the environment, or where system testing results in zero agent discharge.

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