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## **Integrated Science Facility Sustainable Strategies**

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### **Overall Strategies**

#### **Site work**

- Building envelope is minimized to reduce skin exposure and maximize volume.
- Building is sited to limit the disturbance of the surrounding environment and to retain as many natural features as possible.
- Existing asphalt parking lot has been reused for fill material on-site.
- Native, drought-tolerant plants used in landscape design.
- Clean storm water is channeled to recharge the adjacent wetlands.

### **Mechanical, Electrical, Plumbing**

#### **Natural light**

- North, south and east-facing glazed apertures as well as west-facing clerestory windows draw daylight into the large atrium.
  - South-facing main entry harvests the limited sunlight from the low solar angle in winter.
- Faculty offices, general labs and specialty labs have maximized glazing to allow for the most daylight penetration.

#### **Lighting systems**

- Lighting control system with automatic control devices at each zone
- Occupancy sensors controlling lights at teaching labs, offices and conference rooms.
- Energy efficient lighting equipment including T5 lamps in most locations.

#### **Mechanical systems**

- Air-to-air heat recovery system between laboratory supply and exhaust systems.
- Variable air volume fume hoods (exception: the organic chemistry teaching lab). The organic chemistry teaching lab is served by a separate system that can be turned off completely when the labs are not in use.
- Variable-speed primary only chilled water pumping system configuration
- High-efficiency variable speed chillers. (Only one vendor can do this, but this approach will be base bid)
- Mechanically-assisted natural ventilation of the atrium via the atrium's smoke exhaust fans.
- Radiant floor heating in the atrium.
- Premium efficiency motors are used on all HVAC equipment 1 HP and over.
- Refrigerants used at chillers will be both non-ozone depleting and will minimize direct contributions to global warming.

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## Exterior Materials

### Structure

#### Steel

- Recyclable material

### Cladding

#### Shingles

##### *Natural Slate*

- Quarried in the USA.

## Interior Materials

### Paint

#### Interior Paint

##### *Harmony Coating System*

##### *Sherwin Williams*

- Contains zero VOCs.
- Durable, low-odor, anti-microbial, manufactured without silica.

### Flooring

#### Resilient Sheet Flooring

##### *Oasis Rolled Rubber Flooring*

##### *Marathon*

- Contains no harmful asbestos, cadmium, CFCs, formaldehyde, halogens or PVCs.
- Naturally occurring inhibitors that resist the growth of bacteria, fungus and mold.
- Low maintenance requirements, which reduces impact on waste water management systems.
- Made in Canada

#### Resilient Tile Flooring

##### *Stonescape Polymer Composition Tile*

##### *American Biltrite*

- A PVC-free alternative to vinyl composition tile.
- Contains no halogens, plasticizers, asbestos or chlorines, and emits no volatile organic compounds (VOCs).
- Uses post-industrial waste in the manufacturing process.
- Much harder than most VCT and should require far less regular surface treatment (stripping and waxing) than VCT, which reduces impact on waste water management systems.
- Made in Canada

## **Carpet**

### ***Shaw Contract Group***

- Cradle to cradle lifecycle process
- Eco Solution Q premium branded nylon fiber
  - 25% recycled content
  - Minimal use of raw materials
- EcoWorx Sustainable Backing System
  - Industry's first 100% sustainable, non-PVC tile backing system
  - Environmental Protection Agency awarded EcoWorx the Presidential Green Chemistry Award for its environmental and performance benefits.
  - Low-VOC emissions – passes CRI Green Label and Green Label Plus requirements.
  - Contains 40% recycled content
    - Reclamation program by Shaw for no added fee.

## **Ceramic Tile**

### ***Terra Traffic***

### ***Terra Green Ceramics, Inc.***

- SCS Certified 55% recycled glass
- Made in the USA

## **Millwork**

### **Wall paneling and casework**

#### ***Plyboo Bamboo Plywood***

#### ***Smith & Fong Company***

- A rapidly renewable resource
  - Since bamboo is a grass, it does not need to be replanted after harvesting.
  - Harvested by hand from managed forests in China.
- Adhesives are emissions free

### **Doors**

#### ***Select White Maple***

- Forest Stewardship Council Certified veneer
- Adhesives and composite wood products do not contain urea formaldehyde

## **Ceiling**

### **Acoustical Ceiling Tiles**

#### ***Dune Second Look***

#### ***Armstrong***

- 44%-49% recycled content