

100 POTOMAC AVENUE PUD MODIFICATION

Environmental Features of the Project:

The Project incorporates the following state-of-the-art environmental features:

SITE DEVELOPMENT: the following features will be incorporated into the final design and engineering of the Project:

- A. Water Conservation / Landscape Planting**
 - 1. The project will utilize native and low water use plants.
 - 2. The project will utilize high water holding soils
 - 3. The project will utilize rain harvesting combined with a Agrey water@ recyclable water system to eliminate permanent irrigation from the site
- B. Natural Stormwater Management Techniques:**
 - 1. The stormwater runoff will be reduced by more than 25% through the use of green roofs and retention within the planting areas.
 - 2. Water quality will be controlled using on-site surface biofiltration beds and green roofs to remove more than 80% of the suspended solids and more than 40% of the phosphorus. On-site filtration will include gross solids separation beds, fine particle filtration beds and infiltration area. These facilities will be designed as an integral part of the designed landscape in all areas of the site.
- C. Natural Microclimate Control:**
 - 1. Natural Shading of Paved areas: within 5 years of completion, more than 30% of the paved area will be shaded through the extensive planting of trees.

BUILDING DESIGN: some or all of the following features will be incorporated in the final design and engineering of the Project buildings:

- A. Energy and Resource Conservation:**
 - 1. Solar Sun Control Devices: various combinations of external solar shading and interior light shelves may be utilized to control the solar gain and supplement the building interior lighting through daylighting techniques.
 - 2. High Performance Glazing: vision glass panels of high-performance insulating glass utilizing tinting and high performance coatings to reduce solar gain and air conditioning requirements may be utilized for the Project buildings.
 - 3. Ice Storage: this technique which manufactures ice during off-peak electrical demand periods and stores it for use as a coolant during peak demand periods may be utilized
 - 4. State-of-the-Art Energy Management Systems: these computerized

controls may be utilized to minimize the buildings= energy use in different zones with different exposures.

5. Heat Recovery Devices: such as an enthalpy wheel may be used to recapture waste heat for re-use in the building=s air conditioning system.
6. Building Commissioning: this process will be utilized at the Fundamental Level to assure that the building systems are performing as intended in the design. Additional Commissioning as defined by the USGBC may be utilized to optimize the performance of the building systems through and beyond the warranty period.
7. Use of Water Conserving Plumbing Fixtures: specify plumbing fixtures with water conservation features which meet or exceed the performance requirements of the Energy Policy Act of 1992 to reduce water use by 20%.
8. Use of Systems Modeling: reduce design energy cost compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESNA 90.1-1999, 20% and 60% through systems modeling. Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting and other regulated systems as defined by ASHRAE.
9. Use of Renewable Energy Sources: Reduction in reliance on fossil fuels through the use of renewable energy sources such as solar, wind and biomass power generation equipment.
10. Commitment to Long Term Monitoring and Optimization of Energy and Water Consumption: provide for the ongoing accountability and optimization of building energy an water consumption performance over time by complying with the long term continuous measurement of performance as stated in Option B: Methods by Technology of the US DOE=s International Performance Measurement and Verification Protocol (IPMVP) for:
 - a. Lighting systems and controls.
 - b. Constant and variable motors.
 - c. Variable frequency drive operation.
 - d. Chiller efficiency at variable loads.
 - e. Cooling load.
 - f. Air and water economizer and recovery cycles.
 - g. Air distribution static pressures and ventilation air volumes.
 - h. Boiler efficiencies.

B. Sustainable/Environmentally Friendly Building Design and Management Practices:

1. **Light Pollution Reduction:** design interior and exterior lighting not to exceed IESNA footcandle requirements and to reduce direct beam illumination leaving the site.
2. **Elimination of Halon and HCFC=s:** reduce damage to the ozone layer through the use of base building level HVAC and refrigeration equipment and fire suppression systems that do not contain HCFC=s or Halon.
3. **Waste Management Plan for Construction Phase:** develop and implement a waste management plan to recycle and or salvage between 50% and 75% of construction, demolition and land clearing debris.
4. **Use of Salvaged and/or Refurbished Building Materials:** reduce environmental impacts related to materials manufacturing and transport by specifying salvaged or refurbished materials for 5% to 10% of building materials.
5. **Use of Post Consumer Recycled Building Materials:** reduce impacts resulting from extracting new materials by specifying a minimum of 25% building materials that contain various specified amounts of post consumer recycled content materials.
6. **Use of Locally Manufactured Materials:** reducing environmental impacts from transportation by specifying 20% of materials manufactured regionally within a radius of 500 miles. Additionally 50% of the specified materials may be extracted, harvested or manufactured within 500 miles.
7. **Use of Rapidly Renewable Materials;** specifying 5% of building materials that are rapidly renewable to reduce the use and depletion of finite raw and long cycle renewable materials.
8. **Use of Non-Endangered Wood in Building Design and Construction Process:** encourage environmentally responsible forest management by specifying the use of 50% of wood based materials that are certified in accordance with the Forest Stewardship Guidelines for wood building components and temporary construction applications such as bracing, concrete form work and pedestrian barriers.
9. **Carbon Dioxide Monitoring:** install a permanent carbon dioxide monitoring system and specify minimum operating requirements to sustain long-term occupant health and comfort.
10. **Indoor Air Quality Management:** prevent indoor air quality problems resulting from the construction process to sustain long term occupant health and comfort by developing and implementing an Indoor Air Quality (IAQ) Management Plan for the construction and preoccupancy phases of the building.
11. **Contaminant Reduction:** reduce the quantity of indoor air contaminants by specifying materials that meet or exceed the VOC

limits for adhesives, sealants, paints, composite wood products and carpet systems.

12. **User Control of Indoor Environment:** provide a high level of occupant control of thermal, ventilation and lighting systems to support optimum health, productivity and comfort conditions by specifying minimum requirements for operable windows and lighting and controls.