

# City of Bowie Parks and Grounds Facility - Bowie's First Green Building - Located at 3106 Mitchellville Road

Heating and air conditioning are provided by a ground source heat pump system. A treated water solution circulates through a series of 21 underground wells under the back parking lot. The liquid is heated or cooled as it circulates through the wells by the constant temperature of the ground to provide heat or air conditioning to the building.

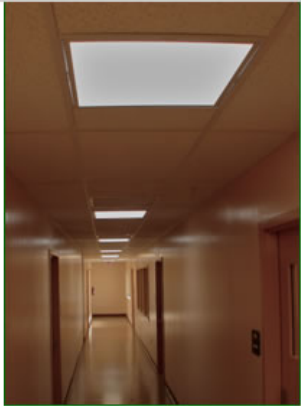
Since the liquid moves through the wells at a constant temperature of about 50 degrees, the heat pump has to do less work than a traditional heat pump which uses outside air. Because it's beginning at a temperature of 50 degrees, it requires less energy to maintain a comfortable room temperature.



Sections of the roof have green plants growing on them. These "living" roofs will provide natural insulation, increase the amount of "landscaping" on the property and will retain rainwater to keep them healthy.



Natural light from windows and skylights illuminates rooms and hallways and cuts down on electricity costs.



Materials were reused on the project wherever possible. Here existing asphalt, removed from one location on site, was ground up and used as fill material in another location on the site.







A bio-retention pond is constructed on site to capture water runoff and naturally filter it before it is released into the ground.

Photovoltaic (PV) panels produce electricity and constantly pump it back into the grid, reducing the amount of power that must be purchased.

Solar heated hot water panels on the roof of the vehicle storage building use the energy of the sun to heat water used for washing vehicles and equipment. Water comes from rainwater collected on site.



Two of the walls here (one on the side and one on the back of the structure) are constructed out of bales of straw, covered in plaster. The highly compressed straw is fireproof and provides an outstanding level of insulation, using a renewable material.

