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Capital Campaign

STEWARDSHIP OF THE ENVIRONMENT AT 4900 WICHITA TRAIL

Coram Deo Academy has the privilege of developing the 15-acre property at 4900 Wichita Trail into a permanent campus that will be the cornerstone campus in implementing the mission to train ethical leaders and wise thinkers who will shape culture for the glory of God.

Design plans for the property are to build structures that are conducive to learning, reflect the beauty of the environment and appropriately incorporate natural resources. CDA leaders accept the responsibility to be stewards of the environment as structures are built that will also teach about creation, mass, energy and stewardship. It is desired that facilities on the property be sustainable buildings, sometimes called "green," "high performance," or "environmentally responsive." Sustainable buildings must be low-energy and climate-responsive, using minimal fossil fuels and cleaner, renewable energy. As the Academy develops the campus and its facilities, it also will teach, value, and advocate a balanced, holistic approach to building design. These ideas must be kept in context with other equally important design objectives, such as aesthetics, accessibility, cost effectiveness, flexibility, high productivity and security.

Buildings are responsible for more than a third of greenhouse gas emissions, annually consuming more than 40 percent of the energy in the U.S., which is primarily produced from nonrenewable, fossil fuel sources—coal, oil, and natural gas. Consequently, the build-up is intensifying in the atmosphere and changing the climate in ways that may affect weather patterns, sea level and the land masses that support life. Buildings often contribute to health problems such as asthma and allergies due to poor indoor environmental quality.

The Academy desires to build green structures that make a positive impact on the environment and on the quality of life of building occupants. The knowledge, materials and systems exist and are readily available. The federal government has developed Executive Orders and Mandates; the U.S. Green Building Council's LEED® rating system defines standards and measures for sustainable buildings. The private sector and industry have also responded by creating more products and systems that have multiple benefits.

Six principles the Academy will study and test in the process of creating a sustainable built environment are:

1. **Optimize potential of the site**: the proper site selection of new buildings and the reuse of existing buildings. The location, orientation, paving, and landscaping of each facility affects the local ecosystem and energy use. Use of native drought tolerant plants, pervious paving, and minimizing existing site topography change and tree removal.

2. **Minimize energy use**: each building should utilize conservation and passive design measures rather than fossil fuels for its operation. Use of photovoltaic, cross ventilation and high efficiency heating and cooling and lighting systems.

3. **Protect and conserve water**: each building and the site should reduce, control, reuse, and recycle water for on-site use where feasible. The use of rainwater collection, condensation reuse, and gray water systems.

4. **Use environmentally preferred products**: each building and site should be constructed of materials and systems that minimize life-cycle environmental impacts such as global warming, resource depletion, and human toxicity. The life-cycle includes the material acquisition, manufacturing, packaging, transportation, installation, and use as well as its eventual reuse and/or disposal.

5. **Enhance indoor environmental quality**: This has significant impact on user health, comfort, and productivity. Each building should maximize daylighting, and cross ventilation. Indoor construction should minimize or eliminate the use of materials with high-VOC emissions. Air filtration and ventilation should mitigate chemical and biological circulation.

6. **Optimize operation and maintenance procedures**: Specify materials and systems that simplify and reduce maintenance requirements by requiring less water, energy, and toxic chemicals and cleaners to maintain. This will contribute to an improved working environment, higher productivity, and reduced costs.

CORAM DEO ACADEMY

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