

**P E R K I N S  
+ W I L L**

August 2, 2011

Janet James  
Richland College  
12800 Abrams Road,  
Dallas, TX 75243-2199

Re: Richland Sabine Hall Science Building LEED innovation

Dear Janet,

The Richland Sabine Hall Science Building construction used several innovative design and construction techniques in the pursuit of the Leadership in Energy and Environmental Design (LEED) Platinum certification, which included a high amount of fly ash in the concrete mixes for the structure of the building. Using fly ash as a direct replacement for Portland cement in a concrete mix is considered a recycling technique by the LEED program provided by the United States Green Building Council (USGBC), and assisted the project in receiving credits for Materials and Resources credit (MR C4) – Recycled content greater than 20%.

The use of fly ash within a concrete mix is not a new technique in commercial construction, and an amount of up to 10-15% is considered common. The Sabine Hall project utilized mix designs including between 30% and 50% fly ash replacement in the mix designs, with the majority of the design using the 50% mix. 50% fly ash mix is considered to be the maximum amount allowable in a mix design by the concrete industry.

The amounts used in the piers, foundations, floor and roof slabs and concrete columns were considered to be innovative due to the lack of available mix designs for the region, on file with the concrete supplier, with greater than 20% fly ash. The mix designs and curing rates observed during the construction phase were used as a test project for the region, and will allow real data including high end strength achievement, curing times, necessary concrete protection techniques and finishing schedule for future projects that use the high fly ash mix designs. Richland Sabine Hall Science Building set the bar for achievable recycled content in concrete mix design to a new level with its use of high fly ash in the major elements of the building.

Sincerely,



Tony Schmitz, RA LEED AP BD+C  
Project Manager  
Perkins+Will

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