Structural Option Thesis Proposal Lewisburg Pa 12/15/06

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## **Breadth Summary**

Breadth Topic #1: LEED Certification

The first breadth topic will be a study of LEED Certification. A study will be done to determine what design changes could be incorporated in order to receive a LEED Certification for this building. This requires a 26 out of a possible 69 points on the Green Building Rating System, Version 2.2. Moreover, one category on the checklist will be selected and the subcategories will be designed.

Breadth Topic #2: HVAC Delivery System

The second breadth topic will be a redesign of the duct system in the natatorium. Being in a natatorium, mechanical vibrations transferred through metal duct working cause a noticeable amount of noise due to the large amount of hard surfaces such as the tile floors and walls and the water. Because of this the use of a soft cloth duct system will be designed in order to reduce the amount of mechanical noise being transferred to the room.