

APPENDIX A - BREADTH TOPICS

BREADTH TOPICS

Each breadth topic corresponds to a previously mentioned technical analysis that is indicated accordingly. The breadths are subjected to individual analysis to test substantial knowledge of specific architectural engineering options that have been acquired over an academic career period.

STRUCTURAL BREADTH

***Corresponds to Technical Analysis Number One**

Technical Analysis Number One

Designing a prefabricated floor plank system to substitute the existing cast-in-place concrete flooring system will require a detailed loading examination. Each plank will have to be tested for strength durability and loading in relation to exhibiting drilled holes for floor placement activities. With expected supplementary support systems to be added to accommodate for proper floor plank connections, internal and external loading will be utilized for these components by hand calculations and software devices. Concrete strength and materials will have to be tested. An expected structural analysis will be conducted of the durability and strength for welding additional components to bisect the average 30'x28' bay.

ACOUSTICAL BREADTH

***Corresponds to Technical Analysis Number One**

Implementing the prefabricated floor plank system in a factory-based environment will demand an acoustical analysis. Materials associated with the production of the prefabrication can either enhance or demote features of the room constructability. Sound and time reverberations will be affected which could cause an obstacle for ceiling and wall placement. Finishes and connections will be extensively looked into for capabilities of efficiency.