

## Appendix A

Aside from the critical industry issue and construction management issue, there are two separate breadth options mentioned in this proposal. The first breadth is the third analysis, which is a structural breadth. It takes a close look at the structure's design on the west elevation. Looking into an automated lighting and shade system design for the curtainwall is the second analysis, which is a mechanical/electrical/lighting breadth. Also included in this appendix is a schedule for the Spring semester of 2009.

### Structural Breadth

The current design is to slope the curtainwall at a  $5.63^\circ$  angle outward from the ground floor all the way up to the roof. The proposed idea is to straighten out the façade, which would require the structure on the west side of the building to be slightly altered. The curtainwall ties into the concrete slabs of the building's structure. Calculations would be necessary to determine if the slabs could be extended to ultimately straighten out the façade of the west elevation.

### Mechanical/Electrical/Lighting Breadth

The curtainwall glazing provides some insulation and does prevent some extra solar gain but it is not comparable to other wall assemblies. The proposed idea in analysis four is to assist the curtainwall with some sophisticated automated systems. Providing automatic shades for the curtainwall can prevent extra solar gain in the summer but still allow some natural light to seep into the building. While minimal, the shades could also provide a little extra insulation in the winter. In addition to automated shades, the idea of an automated lighting system could monitor natural lighting in the building and turn lights on/off at the appropriate times.

### Schedule for Spring 2009

The schedule proposed is a rough estimate of how the research will be completed. Note that dates are subject to change.

	January	February	March
Week 1	Christmas Break	Analysis 2	Analysis 4
Week 2		Calculate Column Loading Obtain Quotes for Costs Consider Savings	Calculate Energy Loads Obtain Quotes for Costs Consider Cost/Energy Savings
Week 3	Analysis 1	Analysis 3	Report
Week 4	Interview Owner Analyze Energy Costs New direction for Industry	Calculate Structural Loads Determine Feasibility Consider Savings	Organize Analyses Write Report Corrections