Presentation Outline

I. Introduction (2 slides - 6 screens)
   a. Personal (3)
   b. Building, location, site (3)

II. Existing Structural System (4 slides – 8 screens)
   a. Current structural system overview (4)
      i. Foundation, floor system, gravity system, lateral system

III. Thesis Proposal (2 slides - 4 screens)
   a. Explain structural depth (2)
   b. Explain construction management breadth (1)
   c. Explain mechanical breadth (1)

IV. Structural Depth (9 slides - 18 screens)
   a. Gravity system redesign (6)
      i. Flat slab with drop panel design
         1. Hand calculations
         2. spColumn Design
      ii. Column design
         1. RAM model
   b. Lateral System Redesign (6)
      i. Wind and Earthquake Design Loads
      ii. Shear wall design
         1. ETABS model
         2. Hand calculations
   c. Vibration Analysis (6)
      i. Current vibration design
      ii. SAP2000 model
      iii. Calculations and results
      iv. Comparison

V. Construction Management Breadth (3 slides - 6 screens)
   a. Existing cost and schedule (2)
   b. Cost Analysis of two systems (2)
   c. Schedule Analysis of two systems (2)

VI. Mechanical Breadth (3 slides - 6 screens)
   a. Existing glazing (2)
   b. TRACE modeling (2)
   c. Comparison (2)

VII. Conclusion (2 slides - 3 screens)
   a. Acknowledgements (2)
   b. Questions and comments (1)

Total Number of Screens = 51 screens
Gravity System Redesign

Flat Slab with Drop Panels
- Keep existing bay dimensions
- Calculations done by hand
- Check performed with spSlab
- Drops 10.5’ by 10.5’
- Initial design called for 5.5” drop panel depth
- Investigated changing concrete to 6 ksi
- Resulted in 3.5” drop panel depth
Presentation Outline

Introduction
Existing Structural System
Thesis Proposal
Structural Depth
Construction Management Breadth
• Existing Cost and Schedule
• Redesign Cost Analysis
• Redesign Schedule Analysis
Mechanical Breadth
Conclusion

Construction Management Breadth

Redesign Cost Analysis
• Insert specific pricing calculations