

Thesis Presentation Draft Outline

- I. Introduction (3 Screens)**
 - i. Name, Major, Project, Faculty Advisor (1)
 - ii. Project Team (1)
 - iii. Building Statistics (1)
- II. Presentation Topics/Outline (1 Screen)**
- III. Discussion on Existing Structural Conditions (3 Screens)**
 - i. Overall Building Layout (1)
 - ii. Existing Gravity and Lateral System (1)
 - iii. Existing Floor System (1)
- IV. Introduce Thesis Proposal (4 Screens)**
 - i. Explain Decision to Move to High Seismic Region (2)
 1. Susceptible Building Shape
 2. Explore Steel Construction and Braced Frame Design (MAE)
 - ii. Minimize Architectural Disturbance (Breadth Topic 1) (1)
 1. Keep the Desired Hyatt Place Façade
 2. Minimal Hotel Room Disturbance
 - iii. Compare Construction Cost of a Typical Hotel in Low Seismic Region to High Seismic Region (minimally discussed in presentation) (Breadth Topic 2) (.5)
 - iv. Explore the Positives and Negatives of Each Structural System (.5)
- V. Lateral System Redesign for California (8 Screens)**
 - i. Goals of Lateral System Redesign (2)
 1. Minimize Building Torsion
 - a. Separate Into Wings
 - b. Even Wall Layout
 2. Minimize Disturbance to Building Façade
 - a. Frames Around Openings
 - b. Frames in Locations Without Openings
 - ii. Location of Lateral Elements (3)
 1. Layout of Each Building Wing and Resulting Building Torsion
 2. Force in Walls
 - iii. Braced Frame Design (MAE) (2)
 1. Design Considerations For Special Concentric Braced Frame
 2. Sample Calculation
 - iv. Model in ETABS (1)
 1. Deflection of Each Wing and Determination of Separation Joint
- VI. Gravity System Redesign in Steel and Girder Slab System (7 Screens)**
 - i. Goals of Floor System Redesign (1)
 - ii. Design of Composite Steel Precast Concrete Plank System (2)
 1. Span Direction and Plank Size
 2. Design of D-Beam
 - iii. Design of Gravity Columns (2)
 1. Layout
 2. Loads
 - iv. Design of Perimeter Beams (1)
 - v. Model in RAM (1)

VII. Architectural Breadth (5 Screens)

- i. Goals of Architectural Breath (1)
 - 1. Limit Floor Plan Disturbance
 - 2. Keep Existing Facade
- ii. Layout of Separation Joint (1)
- iii. Layout of Braced Frames (2)
 - 1. Disturbance to Façade and Plan
 - 2. Possible Solutions
- iv. Layout of Columns (1)

VIII. Construction Cost and Scheduling Breadth (1 Screen)

- i. Masonry vs. Steel Cost and Schedule
- ii. Conclusions on Breadth Study

IX. Conclusion of Senior Thesis (2 Screens)

- i. Reintroduce Proposed Goals and Verify if Goals Were Met
- ii. Overall Effect of Changing Building Location

X. Acknowledgements (1 Screens)

- i. Thank everyone who made this senior thesis project a positive learning experience

XI. Questions and Answers (1 Screens)

Total Number of Screens: 36