IPRO 315
DESIGN OF A LARGE SCALE STRUCTURE

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IPRO 315
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• PROJECT OVERVIEW
• TEAM ORGANIZATION
• PROJECT ORGANIZATION
• PROGRESS
• OBSTACLES
THE PURPOSE OF THIS PROJECT IS TO DESIGN A 22-STORY HOTEL LOCATED IN OAKBROOK, IL.
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PROBLEM ORGANIZATION

STRUCTURAL
- FOUNDATION SITE
- ICB CODE
- SAP2000 MODEL
- LOAD CASES

ARCHITECTURAL
- INITIAL DESIGN
- FLOOR PROGRAM
- FLOOR PLANS
- FINALIZE DESIGN

MECHANICAL
- MEP CODES
- HVAC CALCS

PRELIMINARY (ARCH DESIGN) PHASE

ENGINEERING DESIGN PHASE
- FINALIZE LOADS
- FINALIZE MODEL
- DESIGN STEEL
- FOUNDATION
- GREEN ROOF DESIGN
- FAÇADE DESIGN
- AESTHETIC DESIGN
- FINALIZE SCHEDULE

END PHASE
- FINALIZE SCHEDULE
- FINILIZE PLANS
- SCALE MODEL
- FINALIZE LOAD CALC
- DESIGN HVAC
- MEP ROUTING

- MEP SCHEDULE
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PROGRESS
Architectural Group

[Diagram of a large scale structure with labeled rooms and areas such as hotel rooms, bathrooms, laundry area, and interior spaces.]
• HVAC loads have been calculated, tentative units have been sized.
• Duct work has been sized and designs are underway.
• Electrical code researched.
• Load Cases are complete and have been given to the SAP/Modeling Group

• SAP Modeling has begun and will use the Load Cases to determine Governing Load

• Based on calculations, steel members will be designed for the framework of the building

• CAD Drawings of each floor completed
  ➢ Details will be added later
OBSTACLES

• Initial designs were revised multiple times
• Architect majors in Mumbai, India, initially
• Number of people within groups and sub-groups
• Communication between groups
• Equal work among group members
QUESTIONS