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Lighting/Electrical Option

Virginia Tech Basketball Practice Facility

Blacksburg, VA

## Thesis Presentation Outline

1. Introduction to presentation and outline for presentation (2 slides)
  - a. Background about me
  - b. Different topics
    - i. 4 different lighting spaces
    - ii. Electrical depth
    - iii. Mechanical breadth
    - iv. Structural breadth
2. Site/building context (1 slide)
  - a. Map of Virginia Tech Campus
  - b. Longitude and Latitude for daylighting analysis
3. Lighting space 1: building façade (5 slides)
  - a. Campus architectural context
  - b. Highlight architectural features of building, and how lighting can reflect this (schematic context)
  - c. Show lighting plan and luminaire photographs
  - d. Calculations and renderings
4. Lighting space 2: Lobby (5 slides)
  - a. Describe architecture of space, and transition from outside to inside
  - b. Discuss how lighting reflects architecture
  - c. Lighting plan with luminaire photographs
  - d. Calculations and renderings
5. Lighting space 3: Locker room and lounge (5 slides)
  - a. Discuss architecture and important role that these areas play in the building
  - b. Lighting plan and luminaires
  - c. Calculations and renderings
6. Lighting space 4: Gymnasium (6 slides) –**Daylighting MAE Study**
  - a. Discuss main idea: bring daylighting into space
  - b. Lighting and sky lighting plan
  - c. Show skylight material properties
  - d. Show energy and lighting results from Daysim
7. Mechanical Breadth (2 slides)
  - a. Show the change in HVAC load from sky lighting in the gym
  - b. Show the increase in the HVAC equipment size to handle the loads
8. Structural Breadth – do not plan on going into much detail, but just demonstrate the change I made (1 slide)
9. Electrical Depth (3 slides)
  - a. Talk about the cost/benefit analysis of copper vs. aluminum feeders

- b. Show the conductor size increase of going to aluminum
  - c. Show cost data broken down by conduit and feeder
- 10. Conclusion (1 slide)
- 11. Acknowledgments (1 slide)
- 12. Questions (1 slide)

33 slides Total