IMPLEMENTING COORDINATION LAB AND LESSON INTO CM 413 - JOB SITE

Coordination can make or break a job. The act of coordination and the millions of pieces that go into a single project can directly affect both the schedule and budget of a construction project. Coordination is not a single part of the job; it is an on-going process that continuously involves all entities of the project. The importance of coordination and what it entails is not yet captured in the Cal Poly Construction Management curriculum. The purpose of this project would be to capture that importance and continue to build upon it to better prepare Cal Poly Builders for the construction world. To capture the idea of coordination, a "lab," or lesson, will be implemented into the Construction Management Lab of CM 413. This lesson will teach the importance of coordination through real life experience and stories and demonstrate the act of coordination with the implementation of the BIM coordination product, Navisworks. The lesson will be followed by an assignment, in which the students of CM 413 will undergo the coordination process by finding "clashes" in a model and explaining the effect of these "clashes," how they affect cost and time, and how to fix them. The overall goals and takeaways from this Lab would be to know what coordination entails, the work that goes into it, the communication required for it and how it can be a corner stone in today’s Construction Industry.

Key Words: Construction Coordination, BIM Coordination, Navisworks, Cal Poly, Curriculum

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The Reasons

• The aspect of Coordination is not yet captured in the CM Curriculum
• Coordination of the Job Site is becoming a corner stone of todays Construction industry
• Knowing the best practices for Coordination leads to an overall better understanding of your Job Site

Lesson Objectives

• Students understand the importance of Job Site coordination
• Students learn how to use Navisworks
• Students apply Navisworks and Coordination knowledge to complete Assignment

The Results

• Students identify clashes and involved parties
• Come up with solution
• Determine "Who Moves" in small explanation and turn in clashes to poly for review

M Vs. P (1)

Camera Position

+30.900ft. 33.921ft.

Plumbing pipe runs through HVAC register

M Vs. P (2)

Camera Position

+32.629ft. 33.656ft.

Mechanical contraror to move HVAC register by shortening duct work by 8 6" away from piping.

M Vs. P (3)

Camera Position

+37.819ft. 45.477ft.

Pipe needs more clearance, resting on HVAC