

Breadth Options

Building Envelope

An analysis and redesign of the building envelope will involve replacing the existing plaster exterior façade with predominantly glass. This will include additions that limit incoming light and heat which in turn will affect the buildings architecture. With the western motif evident in the surrounding buildings, this change will make the Temecula Medical Center very unique. Horizontal extensions above the windows will appear to lengthen the building while blocking the incoming summer heat. An example of these extensions is shown to the right which appears on the Life Sciences building on the Penn State University campus. An all glass façade will present many obstacles but in the end will produce a more enjoyable day time interior as well as a more pronounced exterior at night. Calculations will be performed to prove (or disprove) the significant interior environment changes resulting in mechanical and electrical savings.



Construction Management

The second breadth will involve the constructability, time, and cost savings regarding the structure system being designed with steel instead of concrete. The scheduling impact due to the structural changes will be analyzed in order to compare with the current critical path of the schedule. While the building has not been constructed yet, this study will entail the comparison of steel erection time compared with typical concrete construction times. Also included will be an analysis of cost comparisons between steel and concrete floor and lateral resistant systems. Included in this analysis by default is the constructability of the steel system in the heavy seismic zone.