DESIGN OF A COVERED TENNIS COURT AND CLUBHOUSE

Prepared by: Adrian Kho Ket Hiung

ABSTRACT

Through this project, one may obtain information regarding the structural design of a simple single storey building, tennis court foundation and a fabric canopy structure. First, a brief introduction regarding the structure such as fabric canopy, clubhouse and tennis courts will be given. The fabric canopy will be designed to cover the tennis courts and grandstands, which is approximately 40meters x 40 meters. Since it has a height of 20 meters, wind loads have to be accounted for and the method of calculating wind loads will also be shown. The project report also explains the methods of steel design for purlins, roof trusses and columns. Design methods for reinforced concrete slabs, beams, columns and pad footings are also included. Each part f the structure is checked under Limit State Design based on BS 5950: Part 1 (steel structures), BS 8110: Part 1 (concrete structures), and BS 6399: Part 1 (loadings).

Upon successful completion of this project course, students would have applied various design concepts to meet requirements. It encourages students to be resourceful in their work as well as to have interpersonal skills which lead to good communication.