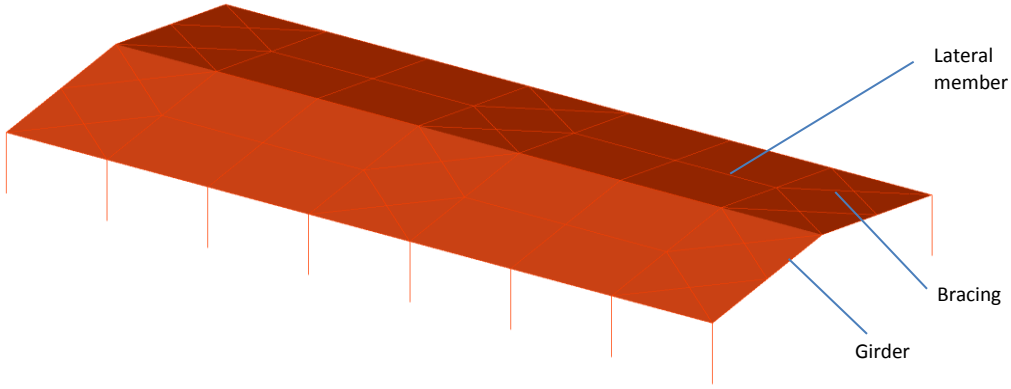
CE 482 TERM PROJECT
(Deadline: 13 June 2017)



Attached Files: project1.dwg (Autocad file)
class_presentation.sdb (SAP2000 file)

The building shown consists of reinforced concrete columns and a steel roof:

- The dimensions of the building can be obtained from the project1.dwg file and they are all given in unit of cm
- All the reinforced concrete columns have 60cm x 60 cm size; and the concrete is of grade C20
- All the columns are rigidly connected to the ground.
- The members of the girders (makas) are selected from either IPE or HEA section lists and they are of S355 steel grade
- The girders are pin-connected to the columns
- The diagonal and lateral members are selected from hollow circular sections, and they are of S355 steel grade
- The diagonal and lateral members are pin-connected at both ends

Loading:

- Dead load (self weight of the members)
- Purlin and Roof Cladding Load (Scover = 30 kg/m^2)
- Equipment load (Sequipment = 10 kg/m^2)
- Wind load (dynamic wind pressure = 50 kg/m^2)
- Snow load = 125 kg/m^2
- Temperature load = ±25°
- Earthquake load: (Zone: 1, soil classification Z3, R=4)

Do the following:

- Use class_presentation.sdb file as a basis for constructing an analysis model of this building in SAP2000
- Choose economical sections for the steel roof members according to ANSI/AISC 360-10 steel design code
- Check displacement limitations and modify your design accordingly if it is not satisfied
- Submit your final SAP2000 file as your term project

Good luck….