

Problem 1:

Given: Student Design Project

Find:

1. Determine suitable metal roof deck to accommodate construction and permanent loads.
2. Determine fastening details for roof diaphragm to accommodate the design lateral loads in each orthogonal direction.
3. Determine maximum diaphragm deflection in each orthogonal direction.

Problem 2:

Given: Student Design Project.

Find:

1. Design open web roof joist and girder system for the roof.
2. Determine total deflection of the roof system.
3. Check for stability of the roof system with regards to ponding.

Problem 3:

Given: Student design project.

Find:

1. Design the most efficient floor slab and deck system using composite deck. Disregard composite beams and girders.
2. Design the most efficient floor slab and deck system using form deck. Disregard composite beams and girders.