

CE 439 Structural Steel Design, Fall-2019 Building Design Project (RAM Structural)

We will design an **Office Building**. The features for the office building are given below:

Location:

18111 Nordhoff St, Northridge, CA 91330.

Building Features:

1. Approximate floor space = 25,000 sft per floor.
2. No. of Floors = 7 (including ground floor)
3. Floor to Floor height, First Floor = 15 ft, other floors = 12 ft.

Structural System:

Gravity System:

The gravity system consists of steel (Gr. A992) beams and columns with simple shear connections.

Lateral System:

The lateral system consists of steel (Gr. A992) moment frames or braced frames or dual system (comprising both moment frame & braced frames in one direction).

Important Data: **$S_s = 2.186$, $S_1 = 0.696$**

Steel Roof & Floor System:

The roof and the floor systems consist of VERCO W3 steel deck with 3.5 inch concrete fill.

Foundation:

Normal RCC spread footing for gravity columns and combined footing for moment frame columns or braced frame columns.

Note:

Students are needed to come up with an architectural plan for the. You may take advantage from the internet or consult with an architect.

Important Dates:

By November 8 – RAM Presentation of the project (5 points)
By November 15, 2019 by 5.00 pm. Final Submission of the project.