

# DESIGN OF AN OPEN AIR CAFETERIA

Prepared by: Erwin Rudy

## ABSTRACT

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The main objective of this project is to design the cafeteria is safe. This project has been designed out; it is based on RC design, Steel design and Structural analysis.

In the report, calculation must be done are design of purlins, roof, columns, beam, slab and foundation.

Purlins, is the beam that support the sheeting and insulation board. All the dead load and imposed will be given in BS code.

Roof, is a truss which joint the members. After using method of joint to figure out the maximum compression and tension forces, then determined those all size of bolt.

Beam, in this project, used to support the truss. This beam is designed under steel design. The dead load must considered the truss, roof, purlin load and the live load is quite small, since it is used to support those truss only, but we must considered it too.

Column, there is a various type to calculate column. In this project, biaxial bending is used in designing the column.

Slab, using 2 way slab, and figure out 4 different slabs. Support moment has to be checked during this calculation.

Foundation, it is last part for calculation of this project. Pad footing is applied to determine the foundation or footing.