Structural Analysis Report

Generated by Civil Engineering Web Tool

1. Project Information

Date: 2025-07-31 14:03

Design Code: ACI

Element Type: beam

2. Input Parameters

type: Normal

code: ACI

fc: 30

fy: 420

width: 30

depth: 50

length: 1

cover: 3

rebar:

   - count: 4

   - diameter: 12

loads:

   - dead: 100

   - live: 70

   - wind: 0

   - snow: 0

element: beam

3. Seismic Analysis

zone: 2

soil: medium

base_shear (kN): 150

status: safe

note: Simplified ACI seismic check based on ASCE 7

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Note: This is a preliminary seismic assessment based on zone, soil type, and system type. It is not a replacement for full dynamic analysis.

4. Structural Analysis

element: concrete_beam

type: Normal

fc (MPa): 30

As (mm²): 452.39

Mn (kN·m): 78.25

Mu (kN·m): 21.25

phi: 0.9

status: safe

Details:

effective_depth d (mm): 470

total_uniform_load w (kN/m): 170

length (m): 1

code: ACI

note: Analysis performed using ACI design parameters