

1. Low material quality: i.e., low concrete compression strength and application of plain rebar.
2. A small column or beam dimensions with light longitudinal reinforcement.
3. Insufficient transverse reinforcement: i.e., lack of hoops in the column and large spacing between transverse reinforcements in column or beam.
4. Transverse reinforcement with a 90° hook in column or beam.
5. Lap splice of rebar in hinge region in column or beam with an insufficient length of the splice.
6. Insufficient hoops or no hoops in exterior and interior beam-column joints.
7. Deficient anchorage of beam reinforcement to exterior beam-column joint.

These deficiencies reveal that enforcement of the latest building codes on design engineering and/or construction practice is still lacking in Padang city. The results of field investigation also show that government buildings have better structural details compared to private buildings.

NOMENCLATURE

A_{ch}	cross-sectional area of a structural member measured to the outside edges of transverse reinforcement	mm^2
A_g	gross area of concrete section	mm^2
A_v	total area of transverse reinforcement	mm^2
b, b_w	width of member	mm
b_c	core dimension of column measured between outside edges of the transverse reinforcement in the direction concerned	mm
d	effective depth of member	mm
d_b	diameter of rebar	mm
f_c'	compressive strength of concrete	MPa
f_y	yield strength of longitudinal reinforcement	MPa
f_{yt}	yield strength of transverse reinforcement	MPa
h	depth of member	mm
l_d	length of lap splice	mm
l_{dh}	length of anchorage	mm
l_{ext}	length of tail extension	mm
s	spacing of transverse reinforcement	mm
s^*	spacing of transverse reinforcement in hinge region	mm
s^{**}	spacing of transverse reinforcement in non-hinge region	mm
ρ	ratio of longitudinal reinforcement	no dimension
ρ_{min}	minimum ratio of longitudinal reinforcement	no dimension

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