



RCBC PLAZA

Ayala Avenue, Makati City, Philippines

Structural Design of RCBC PLAZA

Presented By:

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R.S. CAPARROS ASSOCIATES AND CO.



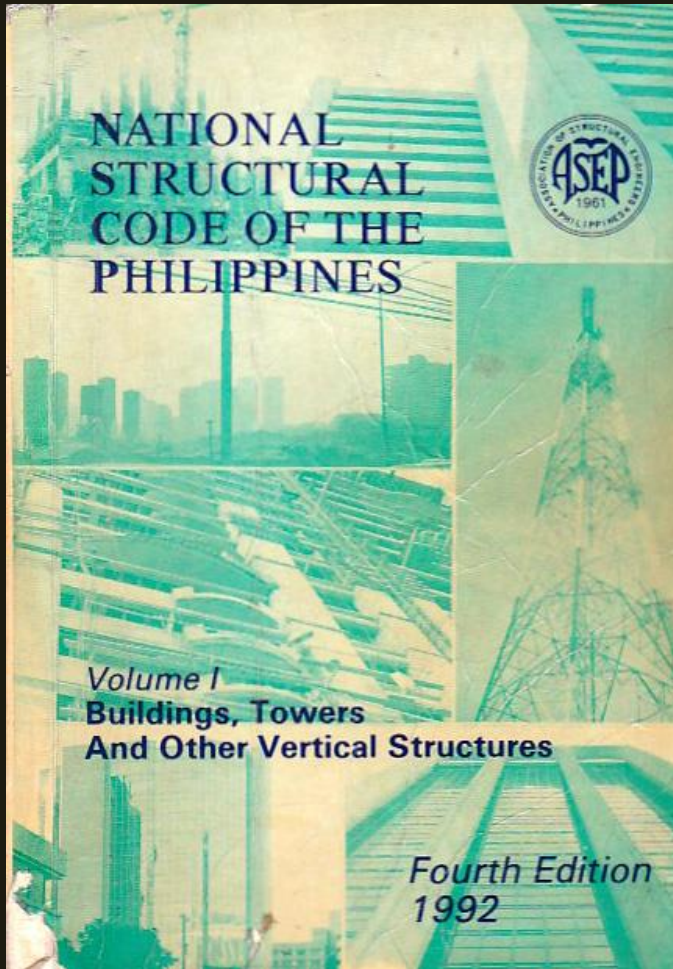
Seismic Moment Resisting Frame (SMRF)

A structural system with essentially complete space frame providing support for gravity loads. Moment resisting frame space frames provide resistance to lateral load primarily flexural action of members.

Dual System

A structural system with the following features:

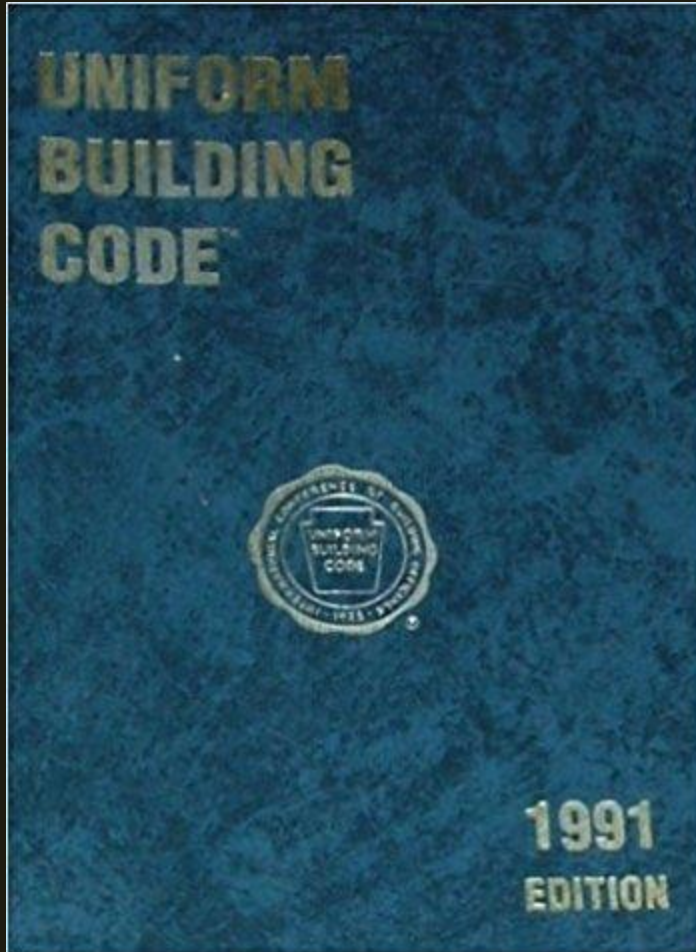
1. Essentially complete space frame providing support for gravity loads.
2. Resistance to lateral loads is provided by:
 - 2.1 A specially designed moment resisting space frame (concrete or steel) which is capable of resisting 25% of the base shear.
 - 2.2 Shear walls or brace frames capable of resisting at least 75% of the base shear.



National Structural Code of the Philippines (NSCP)

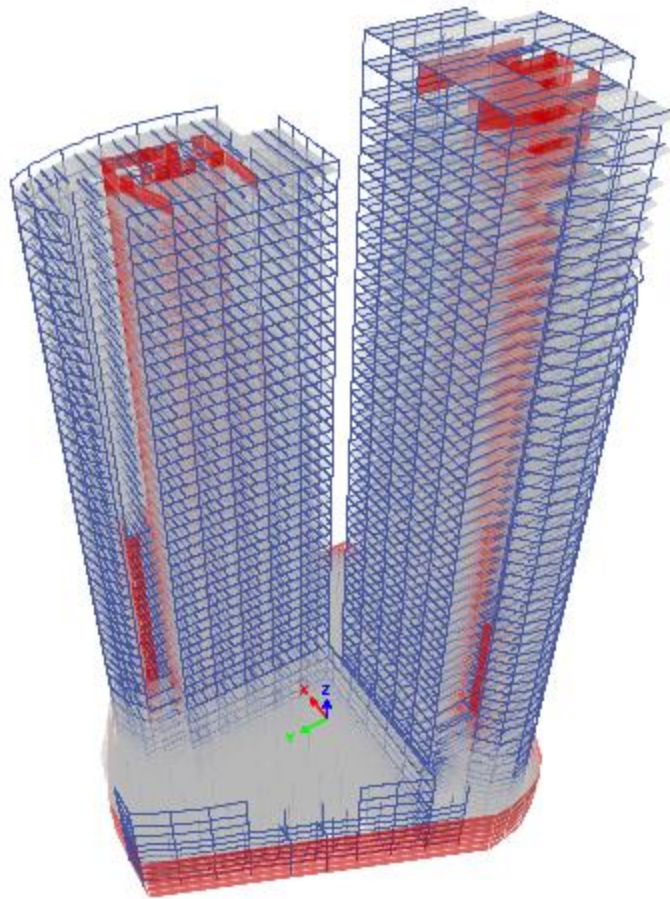
Volume 1
Buildings, Towers
And Other Vertical Structures

Fourth Edition 1992

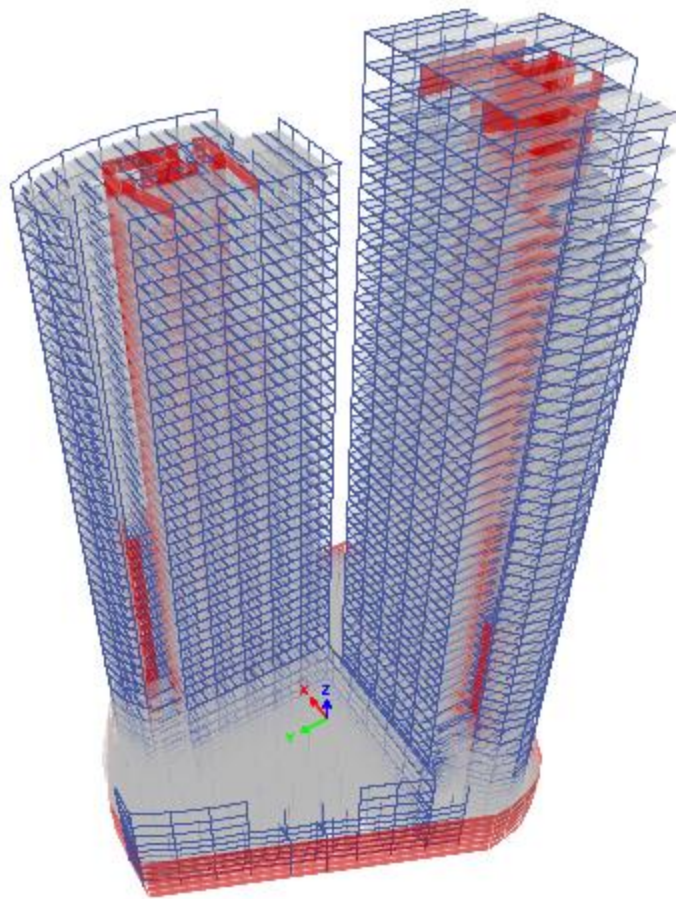


Uniform Building Code (UBC)

1991 Edition



Earthquake Along X axis
Displacement = 1.7 m



Earthquake Along Y axis
Displacement = 1.7 m

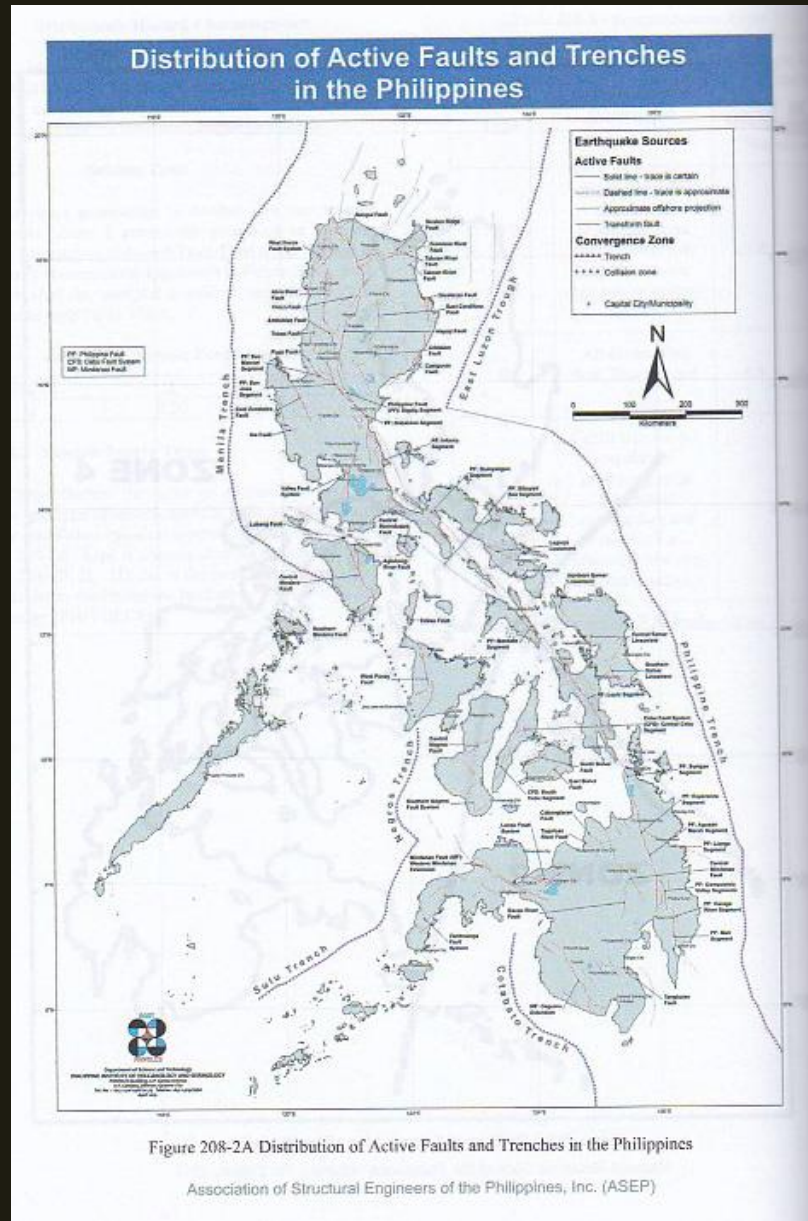


Figure 208-2A Distribution of Active Faults and Trenches in the Philippines

Association of Structural Engineers of the Philippines, Inc. (ASEP)

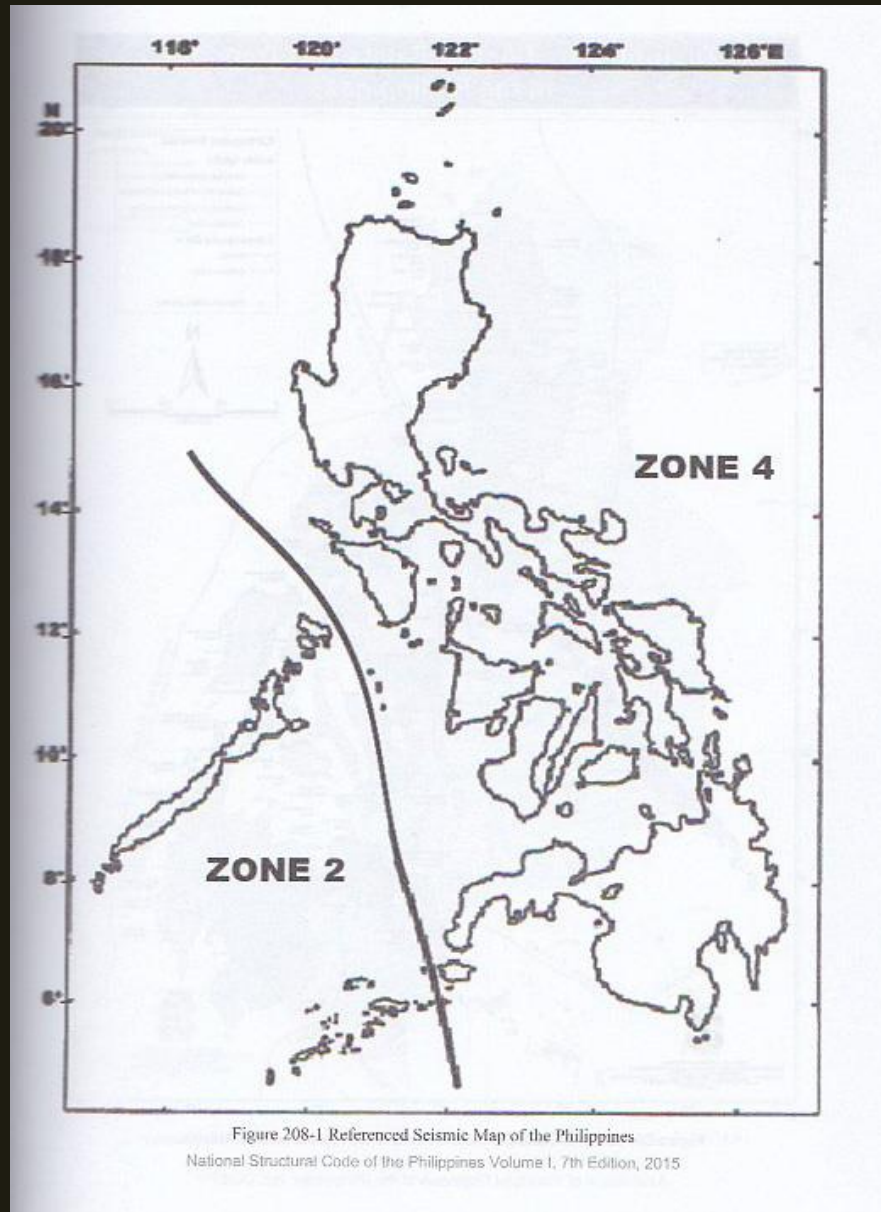


Figure 208-1 Referenced Seismic Map of the Philippines
National Structural Code of the Philippines Volume I, 7th Edition, 2015

Table 208-4 - Seismic Source Types¹

Seismic Source Type	Seismic Source Description	Seismic Source Definition
		Maximum Moment Magnitude, <i>M</i>
A	Faults that are capable of producing large magnitude events and that have a high rate of seismic activity.	$7.0 \leq M \leq 8.4$
B	All faults other than Types A and C.	$6.5 \leq M < 7.0$
C	Faults that are not capable of producing large magnitude earthquakes and that have a relatively low rate of seismic activity.	$M < 6.5$

¹Subduction sources shall be evaluated on a site-specific basis.

Table 208-6 - Seismic Source Types¹

Seismic Source Type	Seismic Source Description	Seismic Source Definition
		Maximum Moment Magnitude, <i>M</i>
A	Faults that are capable of producing large magnitude events and that have a high rate of seismic activity.	$M \geq 7.0$
B	All faults other than Types A and C.	$6.5 \leq M < 7.0$
C	Faults that are not capable of producing large magnitude earthquakes and that have a relatively low rate of seismic activity.	$M < 6.5$

¹Subduction sources shall be evaluated on a site-specific basis.

Table 208-7 - Seismic Source Types¹



End of Presentation