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SUBCOMMITTEE TO CREATE SLIDE SETS ON THE SEPTEMBER 19, 1985 MEXICO EARTHQUAKE

MEXICO - SET III:

EXAMPLES OF DAMAGE TO BUILDINGS IN MEXICO CITY

MEMBERS:

Chris Arnold, Vit Bertero, George Brogan, Ted Canon, Ted Christensen, Lloyd Cluff, Gene Cole, Bob Hanson, Walter Hays, E. V. Leyendecker, Miguel Santiago, J. P. Singh, and Peter Yanev

FEBRUARY 1987

BACK TO MAIN MENU

Gene Cole

Concrete Parking Garage

Time and Location of Slide: October 9, 1985, Gante & Venisetiano Street

Nine story parking structure. Cast in place concrete. Damage to adjacent building from pounding. Building is much larger than it appears here. Continues nearly a full block and wraps around adjacent building.

Gene Cole

Concrete Parking Structure

Time and Location of Slide:i.;November 21, 1985 - see slide #1

Rear view of building in slide #1. This portion is nearly a block away and shows how large the building is. The pile of rubble in the foreground shows reinforcing steel which will be reclaimed.

Gene Cole

Tilted Building

Time and Location of Slide: October 9, 1985, Jose MaVertiz & Rio Drive

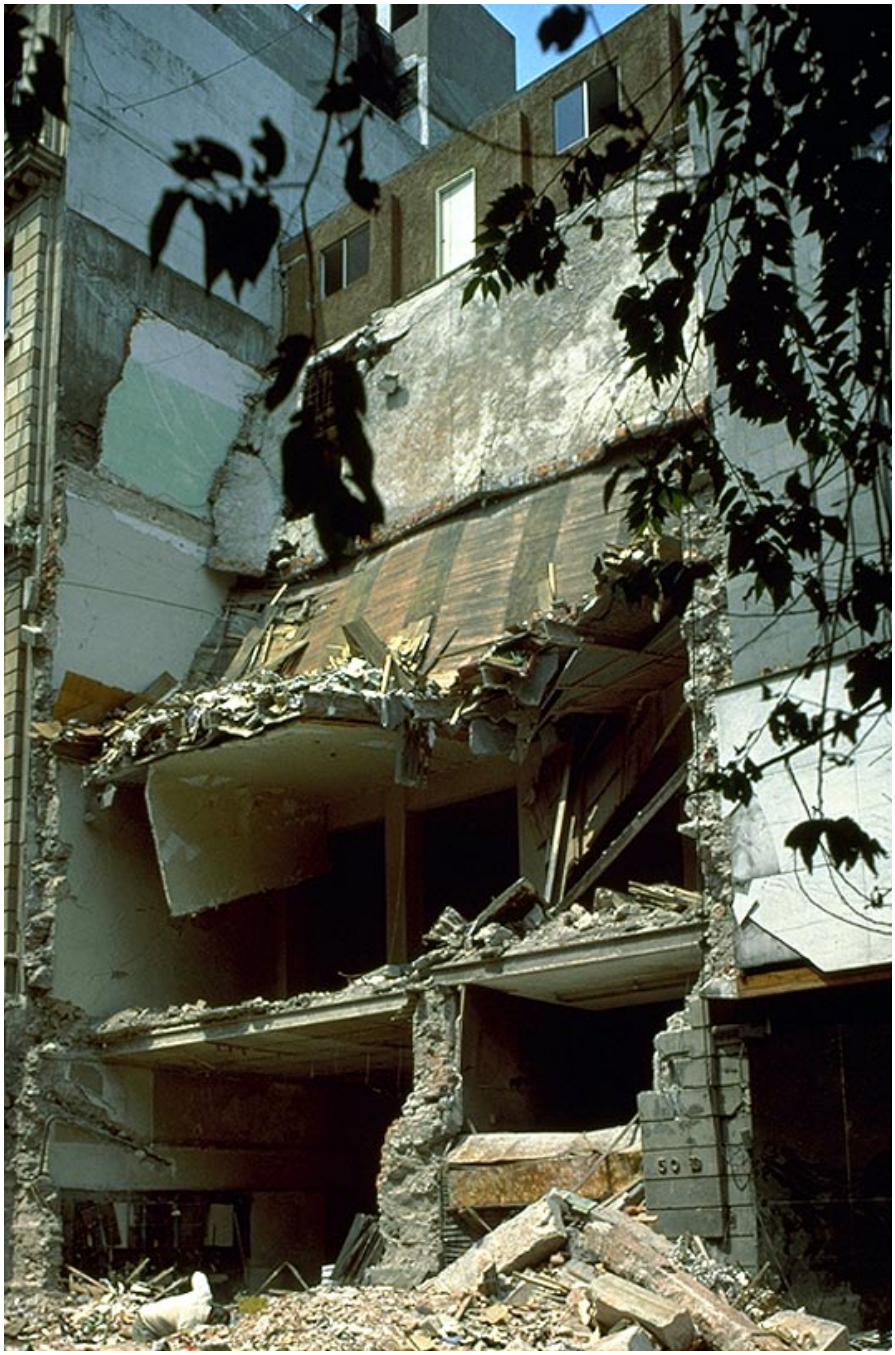
Approximately 10 stories. Concrete braced frame with brick infill. Top is tilted approximately 8 feet. Shows evidence of foundation failure.

Gene Cole

Bank of Mexico

Time and Location of Slide: October 9, 1985, Valero Trujano & Edalgo

New buildings under construction. Concrete frame with unreinforced brick walls. Where infill walls were not in place, lightly reinforced (non-ductile) concrete frames failed.



Gene Cole

Infill Building

Time and Location of Slide: October 9, Venisetiano Street

Small 4 story building, built between common walls. Apparently as adjacent supporting walls moved with adjacent buildings, floors and roof lost vertical support.

Gene Cole

Benito Juarez Housing Development

Time and Location of Slide: October 10, 1985

Eleven story apartment building. Concrete frame with unreinforced brick:

1) infill walls full height at ends-transverse,
2) infill walls to window sill in longitudinal direction,
3) interior partitions - 4 1/2" thick unreinforced brick. Cantilevered concrete pylon at exterior stair. Plan dimensions approximately 30' x 190'.

Slide #6

Gene Cole

Benito Juarez Housing Development

Time and Location of Slide: October 10, 1985

See slide #6

Other SEAOC team members: Ted Christensen and Victor Robles

Slide #7

Gene Cole

Benito Juarez Housing Development

Time and Location of Slide: October 10, 1985

See slide #6. Additional comments: Demolition contractor has drilled closely spaced holes in walls to receive demolition charges.

Gene Cole

Benito Juarez Housing Development

Time and Location of Slide: October 10, 1985

See slide #6. Additional comments: End transverse walls showing large amount of movement.

Other SEAOC team members: Ted Christensen & Victor Robles

Gene Cole

Benito Juarez Housing Development

Time and Location of Slide: October 10, 1985

See slide #6. Additional comments: 1) Demolition contractor monitoring settlement and tilting, and 2) Tilting is progressing at approximately 2 cm. per day.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Oncology Building

Time and Location of Slide: October 11, 1985, Av. Cuauhtemoc

Eight stories concrete frame with infill walls; 4 bays transverse; 9 bays longitudinal. Heavy water storage tank on roof has caused failure of columns near entrance. Canopy has collapsed over ambulance entrance.

Other SEAOC team members: Ted Christensen and Victor Robles

Slide #11

Gene Cole

Centro Medico Mechanical Building

Time and Location of Slide: October 11, 1985, Av. Cuauhtemoc

Two story concrete frame structure. Total collapse. First story houses electrical generator. Second story housed laboratories.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Courtyard near classrooms

Time and Location of Slide: October 11, 1985, Av. Cuauhtemoc

Drainage gutter showing displacement of grills. Gutter width has been reduced so that grills will no longer fit.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Cardiology and Neurology Unit II

Time and Location of Slide: October 12, 1985, Av. Cuauhtemoc

Eight stories concrete frame. Separation joint at mid point of building has grown to approximately 1 meter. North portion has drifted, south has not. South portion has concrete walls around the elevator shaft which apparently stiffened that wing.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Cardiology and Neurology Unit II

Time and Location of Slide: October 12, 1985, Av. Cuauhtemoc

See slide #14. Additional comments: North end of building, 1) First story columns are heavily reinforced and have acted in a ductile manner, and 2) Upper floors have unreinforced brick walls along corridor, keeping the relative story drifts low.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Cardiology and Neurology Unit II

Time and Location of Slide: October 12, 1985, Av. Cuauhtemoc

See slides #14 and #15. Additional comments: Interior damage at lobby.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Classroom Unit I

Time and Location of Slide: October 12, 1985, Av. Cuauhtemoc

Four story classroom building. West portion has collapsed. Fairly new pre-stressed concrete parking garage to south was undamaged.

Other SEAOC team members: Ted Christensen and Victor Robles

Gene Cole

Centro Medico Meetings Unit B

Time and Location of Slide: October 11, 1985, Av. Cuauhtemoc

End wall made of unreinforced brick infill has collapsed, damaging concrete cantilever stairs.

Other SEAOC team members: Ted Christensen & Victor Robles

Slide #18

Gene Cole

Garment District

Time and Location of Slide: October 12, 1985

Pancake type collapse resulting in severe loss of life.

Gene Cole

Garment District

Time and Location of Slide: October 13, 1985

See slide #19. Volunteer and military workers worked around the clock with small equipment to remove building.