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February 02, 2001 | JOHN-THOR DAHLBURG | TIMES STAFF WRITER

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AHMADABAD, India — When India's great quake shook this city last week, the four-story Shantanu Residency collapsed like a sandcastle buffeted by a wave. Next door, a building like it rode out the seismic shocks unscathed.

Although Ahmadabad is more than 200 miles from the epicenter of the Jan. 26 earthquake, 191 buildings here, some as high as 10 stories, tumbled to the ground, said Rajindra Trivedi, a local government spokesman. Firefighters estimate that 1,500 people in Ahmadabad were crushed to death, out of the country's total confirmed death toll of 14,241.

Slipshod construction, lax enforcement of national building codes, infrequent use of architects and the economic drive to build at the lowest price possible were clear factors in the collapse of some high-rises in Gujarat state's leading city, officials and professionals in the building trades said.

Jayindra Patel, whose three daughters died when the Shantanu Residency crashed to earth, is a measured, quiet man. But he seethes with anger when he speaks of the two brothers who constructed the building, where 42 people were entombed last week.

"If I catch these men," the 42-year-old sound engineer said, "I will bury them alive."

But Dhruv Developers co-owners Kamlesh and Raju Patel—no relation to Jayindra—can't be found.

Jayindra Patel and other owners in the almost-new building, all now homeless, formed a posse to track down the brothers, but the men's house is empty, their office says their whereabouts are unknown, and their mobile phone has been switched off.

In its revelation of construction shortcuts, India's tragedy is sadly reminiscent of other recent quakes in developed areas, such as Turkey in 1999 and Armenia in 1988.

"Look at this concrete, how light in color it is," Mehernosh Dastoor, station officer with the Ahmadabad Fire Brigade, said as he surveyed the pillars of another four-story building, the Maruti Apartments, that fell to the ground in the quake, killing three girls. "If you use the proper amount of cement, it should be dark gray."

Instead, the interior of the pillars, which had broken like pencils, was the light gray of cigar ash.

Criminal investigations have been opened against some local real estate moguls whose cost-cutting and flouting of building regulations may have doomed many of their tenants. In the Mahinagar neighborhood of Ahmadabad, Rakesh Shah had built three four-story apartment complexes in the last 1 1/2 years. All three were leveled in the quake. Nine people died, 20 others were injured, and 40 families lost everything, or nearly everything, they owned.

"I think Mr. Shah used too much sand when making the concrete, to save money," said Uday Bhasvar, who owned a small graphics arts shop in the basement of one of the buildings. In a hole in the rubble gouged by excavators, he can spot his computer, which lies smashed under a concrete beam.

Shah's company, Jai Estate Developer Pvt. Ltd., was closed Thursday, an iron gate barring access to its fifth-floor office. Storekeepers in the building told a reporter that Shah had vanished.

There were specifically Indian factors, however, in why the magnitude 7.9 quake caused such vast destruction in Ahmadabad. In the last half-decade, this city of 4 million, capital of the country's textile industry, has experienced a building boom, in large part because of India's liberalizing economic reforms.

In many cases, government regulation of the resulting construction has been pro forma, if not nonexistent. At the same time, many of India's highest-skilled construction workers have been lured overseas to the Persian Gulf and other regions by higher salaries, leaving jobs on building sites to be filled by untrained migrants from the countryside.

Many of the stricken edifices in Ahmadabad date from this boom phase and had been destined to provide more comfortable and prestigious addresses for India's burgeoning middle class. Particularly at risk, initial surveys have shown, were three- and four-story apartment blocks perched on concrete stilts to provide parking underneath for another coveted badge of India's rising prosperity, the private car.

"It's like you're a strong man but have weak legs," said Sailesh R. Mahimtura, a structural engineer from Bombay and member of a four-person team summoned by Ahmadabad officials to investigate why some buildings here crumbled and others didn't. "It's like the whole building was snapped off at the ankles."

He pointed out that a similar building collapsed in the 1994 Northridge quake. Sixteen people died when the Northridge Meadows apartment complex fell down in that temblor.

In some instances, Mahimtura said, the vertical pillars were sunk without being linked with lateral beams, which would have helped distribute the enormous stresses caused by a quake's ground motion.

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Often, these edens for Ahmadabad's aspiring middle class were built with a communal water tank perched over the staircase, so as to leave the rooftop terrace unencumbered for owners' soirees or other leisure-time activities. Such tanks can weigh 60 tons when full.

In more than one of these multistory buildings, the tank plummeted through the ceiling as residents were fleeing to what they thought would be safety. In one apartment house, eight people were crushed to death on the stairs and another eight were injured.

Taller buildings in Ahmadabad generally fared better, although some, such as the Holiday Inn, one of the city's best hotels, are now riddled with finger-width cracks in the walls. Many older buildings are unscathed, including the one-story bungalow, made of brick and mortar, where Mohandas K. Gandhi lived with his followers on the bank of the Sabarmati River during the 1920s.

As Ahmadabad grew, former lakes were filled in to provide more living space. That meant more land for construction but made for uncertain foundations if countermeasures weren't taken by architects and builders.

In some cases, they weren't. The Maruti Apartments building was one of several that dropped straight to the ground last week as its pillars gave way. Firefighters organizing the removal of residents' furniture and other belongings Thursday said the structure might have weathered the quake had the columns' footings been shaped like camel hoofs or inverted Ys, to better spread the load on soft ground.

The destruction and loss of life also highlighted the government's frequent, if not endemic, failure to verify the quality of construction work.

"The architect certifies the plans, but no one from the city actually goes to inspect what is being done," said Dastoor, the fire brigade official. "What is actually being done, no one knows. In India, there is a tendency to go for the cheapest thing possible."

"If you build a low-rise building, often architects and consultants are never even used," said Nitin Jobanputra, a Gujarati businessman who manufactures chemicals for concrete and other construction uses. "Often, the contractor suffers from a total lack of knowledge, total ignorance, and opts for a donkey-like solution."

India does have a national code of building practices, but Jobanputra said that "it has just remained a thing that nobody refers to."

Geological experts cautioned, however, that the forces produced by an earthquake are far from uniform and that some doomed buildings here may have been better built than others that survived.

"I'm sure some buildings were not constructed with proper materials," said J.R. Kayal, a geophysicist from the Geological Survey of India. "On the other hand, some were built with the right materials and within proper parameters."

Identical Towers Fared Differently

In the coming days, inspection teams will try to establish exactly what occurred. They will be confronted with riddles such as the bizarre fate of the Apollo Apartments, a complex of four identical three-story towers on stilts, with parking underneath. Two of the buildings are now tilted at crazy angles and are no longer habitable, while the other pair, just 15 feet away, still stand.

"These buildings have been up from 1978 to 2001 . . . so we can't give the blame to the contractor," said Ashok Rawal, 36, a used-car dealer whose apartment was in one of the ruined buildings.

For Jayindra Patel, the collapse of Shantanu Residency was the appalling end of his efforts to provide his family with greater comfort and a better life. He was the original owner of the land but deeded it to the Patel brothers in exchange for a three-bedroom, 495-square-foot apartment on the top floor. He and his family moved in only four months ago.

The morning of the quake, Patel's wife and 14-year-old son caught a bus to visit a Hindu temple and thus escaped what befell the rest of the family. At home, his daughters, Jinal, 16, Nitra, 14, and Mausam, 12, were eating a breakfast of bread and milk.

When the quake struck, the girls, joined by a cousin, bolted down the stairs. Patel paused to turn off his computer. That may have saved his life. The building collapsed when he was just starting down, and he was pinned under a fallen pillar and concrete slab. The girls were already on the second floor and were trapped under much more debris. Entombed alive, they died that night.

Although Patel longs to bring the contractors to justice, or to subject them to the same death that befell his daughters, he thinks that such men are above the law in India.

"This is as usual," he said. "Everywhere it is the same story."