MASS TIMBER CODE CHANGES

ICC proposals create three new types of construction

Strategic plan to manage office costs
Design solutions for low-slope roofs
Proper GPR surveying techniques
3D printing opportunities
I am standing on liquified land that swallowed more than 1,000 houses and killed more than 500 people; more than 500 people are still missing. Presumably they are buried under this soil. An old man next to me said that houses moved more than half a kilometer. I see twisted, half-buried cars and broken houses awkwardly tilted and frozen, still in the soil. An imam’s prayer is blasting from a nearby mosque. It sounds beautiful, but eerie. Dusk is near under thick gray clouds. The surrounding mountains are getting darker.

On Sept. 28, 2018, a magnitude 7.5 earthquake triggered a massive soil liquefaction flow in the Indonesian province of Central Sulawesi. An earthquake fault ruptured directly underneath the provincial capital of Palu at 6:02 p.m. People had started cooking dinner, then the earthquake hit. Suddenly, the earth beneath them liquified and started moving at high velocity. It was essentially a horizontal landslide swallowing houses, cars, and people.

Visiting Japanese researchers theorized that “there could have been a void redistribution due to a layer of water-film between the liquefaction-prone soil and low-permeable cap layer, which acted as a lubricant for liquefaction flow.” It was a very rare form of liquefaction. I have never seen anything like this in my years of working on earthquake disasters.

Our team is a part of a mission for a multinational reconstruction bank to provide technical assistance in the disaster-affected area of Central Sulawesi. It is a remote area of Indonesian islands, just below the equator with incredibly beautiful jungles in a mountainous region. However, the population density is high; Indonesia is the largest Muslim country in the world with 264 million people. Towns are rustic, like something you may find in the Caribbean. People are friendly and smile quickly. Food is mostly fresh-caught fish and chicken grilled in exotic, colorful spices. Being a Muslim country, you don’t find many beers here, but you get used to drinking fresh-squeezed juices during meals. Most of the buildings you find here are constructed with reinforced concrete and brick infill as happens, it seems, in much of the world. It is fascinating to see the similarity of construction worldwide.

Ground floor columns on this modern, multi-story classroom building are ruptured, bent, and twisted.