By Isabel Kershner

RAMLA, Israel — When the sirens warning of incoming rockets split the skies, Israel’s national blood bank moves into high alert to keep the nation’s blood supply safe. The heavy machinery for blood processing, plasma freezers and centrifuges are transferred to a basement bomb shelter, a cumbersome operation that takes 10 to 12 hours.

That is about to change.

By the end of the year, the blood bank will be relocated to a bright, state-of-the-art subterranean facility built to withstand chemical, biological and conventional weapons, including a direct hit from a large missile, as well as earthquakes and cyberattacks.

The barrages of rockets fired at Tel Aviv last year underscored the vulnerability of a crucial national resource.
facilities, the new, nearly completed, $135 million facility is being described by officials as the world’s most protected known blood bank.

“It will save the lives of our loved ones, our frontline workers and our soldiers in times of routine emergencies and conflict,” Benny Gantz, Israel’s defense minister, said at the building’s dedication ceremony, “and it will serve as a model to the world.”

Since the late 1980s, the central blood bank has been housed in a stately but increasingly impractical facility on the campus of the Sheba Medical Center in a Tel Aviv suburb. Its glass walls and panoramic windows flood the building with light.

But in recent years, as the Tel Aviv area has increasingly become a target of rocket attacks, the building has been judged unsafe.

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In addition, Israel sits on two seismic faults that in the event of a major earthquake would leave only the lobby of the existing center intact.

The new facility — the Marcus National Blood Services Center, named for the American philanthropists Bernard Marcus, the co-founder of Home Depot, and his wife, Billi, who donated $35 million to the project — is in Ramla, a central city at the juncture of several of the country’s main highways, close to Ben-Gurion International Airport and the headquarters of the military’s Home Front command.

The operation will move in phases from the old facility to the new one in the coming months. The new center has three floors above ground and three below, with the processing lab, engine rooms, electrical generators and the blood vault all underground.

The vault, 50 feet down, is cocooned in concrete and steel, and has a separate air supply and filtering system. Moshe Noyovich, the engineer overseeing the project, said the inventory of blood components stored in the vault should suffice for four or five days of war.

The main generator room sits behind another set of massive blast doors, one of about 80 blast doors in the new building, some with airlocks and safety chambers between them.

Israel’s population has grown since the late 1980s from about 4.3 million to over 9 million. The new facility will be able to process double the amount of blood, a capacity that is expected to suffice for at least the next 30 years.

The building’s planners are counting on the facility’s tons of concrete and reinforced steel to protect the nation’s blood supply in the event of war. But for good measure, they also attached a small, plastic-cased mezuzah to the door post leading to the vault.