

CASE STUDY

Plaza Santander

Culiacán, Mexico

HISTORY

The city of Culiacán is located in northwestern Mexico. It is the largest city and the capital of the state of Sinaloa. Culiacán sits at the confluence of the Tamazula and Humaya rivers, where they form the Culiacán River.

Founded in 1531 by the Spanish, it was a quiet town until the 1950s, when the federal government built dams in the area and the city began to grow rapidly as agriculture took a strong foothold. The economy is still fueled by agriculture and commerce, and Culiacán is a trade center for produce, meat, and fish.

PROBLEM

The growing population of the area, along with the interest in tourism, is creating new opportunities for building in the area. The newest addition to the economy is Plaza Santander, a 5-story multi-purpose retail space and hotel built by Grupo Premier.

SOLUTION

Space is limited in the downtown Culiacán area, so underground parking was needed for the new tower. The contractor excavated the main part of the 1-story below grade parking garage before using an ICE 612 vibratory hammer to install the sheet pile at the perimeter of the site.

Time was a big factor in this project, as the customer wanted to be finished by the end of the year. Nucor Skyline partnered with Versum Ingenieria for the installation of a steel sheet pile wall for the finished parking garage. The use of sheet pile as the finished wall of the parking structure saved time and money, as no concrete wall was necessary. Using sheet pile



also increased available parking space, because the sheet pile could be driven to the perimeter of the property, maximizing all available space. And with the welded interlocks of the Z-shaped sheet pile, the wall is watertight.

The soils at the site consisted of one meter of fill, over a sandy silt. From three meters down to excavation depth, it was a dense sandy gravel with no visual water present. These conditions lent themselves perfectly to the sheet pile foundation wall. Using Z-shaped sheet pile, which Nucor Skyline stocks, the job was finished within the tight schedule constraints of the customer.

PROJECT PARTNERS

Owner:

Grupo Premier, Culiacán – Sinaloa, México

Piling Installer:

Versum Ingenieria –
Mexicali Baja, California

PRODUCTS

Z-shaped Sheet Piles: @ 20 and 23 feet –
341 tons

PROJECT TIME FRAME

October 2018 through June 2019