

CASE STUDY

Puerto Caucedo Expansion: Pipe-Z Combination Wall

Puerto Caucedo, Dominican Republic

HISTORY

The Port of Caucedo (“Puerto Caucedo”) is the only deep water dedicated container terminal in the island of Hispaniola and is located on the Caucedo Peninsula of the Dominican Republic. The port is located 25 km from Santo Domingo, the political and commercial capital of the country. Puerto Caucedo is the youngest and most modern port facility, and is responsible for 30% of all maritime cargo handling in the Dominican Republic, making it the nation’s second busiest port.¹

Puerto Caucedo handles a mixture of local and transshipment cargo. The port’s marine terminal spans over 80.5 hectares and consists of a quay apron, container stacks and roads. Currently, there are 19 hectares of block paving used for container storage.

The port’s main gate is connected to the Autopista Las Americas by a dual access road measuring approximately 3.25km in length. Although, this is a public road, it is mainly used for port-related traffic.

Puerto Caucedo opened its doors in December of 2003. In October 2010, the port began its Phase II expansion project with a targeted completion date of December 2010.

The expansion will create an incremental capacity of 275,000 marine lifts, and is part of a US\$69 million capital expenditure program, including the construction of a new 300m quay/Breakwater Berth, the acquisition of 2 new mobile harbor cranes for the feeder berth, a 6th quay crane for the main quay and supporting equipment, and the development of staging yard space on the existing breakwater reclamation.



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These new investments will allow Puerto Caucedo to improve customer service, boost productivity and create more efficient operations. Full details on the project background are available at the IFC Summary of Proposed Investment.²

PROBLEM

Container Ship Terminal at Port of Caucedo, Dominican Republic was suffering from over capacity.

SOLUTION

New Jetty, finger pier and bulkhead for additional berth using Pipe-Z combination wall from Nucor Skyline.

THE NUCOR SKYLINE ADVANTAGE

Nucor Skyline served as a full project partner in creating the Pipe-Z combination wall that laid the foundation for the new jetty.

Drawing upon its efficiently coordinated supply chain, broad network of stocking locations and its extensive experience in supplying products to the Caribbean, Nucor Skyline could ensure the availability of the necessary piling materials – when and where they were needed for the project’s overall schedule.

Nucor Skyline also had a reputation for trustworthiness due to its long-established relationships in the Caribbean region. Since the company was known for its reliability

¹ http://en.wikipedia.org/wiki/Multimodal_Caucedo_Port

² <http://www.ifc.org/ifcext/spiwebsite1.nsf/1ca07340e47a35cd85256efb00700cee/19D95C7D0B237337852577B60078462F>

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Puerto Caucedo Expansion



in delivering results on similar projects, the project team from Puerto Caucedo trusted Nucor Skyline to stand behind its products.

The Nucor Skyline team did a thorough analysis of the project requirements with Lloyd Engineering, Inc. and Misener Marine Construction, Inc., and proposed a Pipe-Z combination wall, due to its wall strength and high modulus capacity to cost ratio. This type of combination wall made the best economic sense and also promised superior performance for the specifications of the Puerto Caucedo project.

Nucor Skyline’s strategically located supply chain also played an integral role in the project’s success. Nucor Skyline stocked the materials until they were needed, and all materials were

shipped at once, enabling a more efficient and orderly delivery and installation to the project site. Nucor Skyline drew upon its expertise in transportation logistics to ensure that the right type and quantity of steel piles were delivered on time and on budget.

Nucor Skyline supplied Puerto Caucedo with a full retaining wall package consisting of:

- Combination Pipe-Z wall with coal tar epoxy coating
- #20 Grade 75 Threaded Bar Tie-backs
- C-Channel Waler

PROJECT TIME FRAME

Project completion:
End of October 2010
(On Schedule)

PROJECT PARTNERS

Owner/Consultant
ZFMC – DP World Caucedo/
Mouchel Consulting

General Contractor
Misener Marine Construction Inc

Engineer
Lloyd Engineering

Pipe-Z System	Size	Tons
Pipe	48" x 0.625"	2,400
Sheet Pile Section	Z-shaped Sheets	2,400