

# United Bulk Terminal Sky Hopper Support Structure Engineering

## Description

**Industry:** Ports & Terminals | **Service:** Structural & Mechanical Engineering

**Location:** United Bulk Terminal, Davant, LA

## The Challenge

As part of a terminal expansion at United Bulk Terminal, a new C2 conveyor was to be installed parallel to the existing C1 conveyor on the C1-C2-C6 transfer tower. The new conveyor required the addition of new structural columns which rendered the existing support connections for the sky hopper unusable. The sky hopper, originally built in 2000 to feed limestone from self-unloading ships to the C1 conveyor, needed to be re-supported on the modified structure with minimal changes to the existing hopper frame.

## The Solution

DSE redesigned the connections for the sky hopper's two vertical support legs to work within the constraints of the modified transfer tower structure. The tubular support frame was retained with only minor modification primarily shortening while the connection points were redesigned to suit the new column arrangement.

One vertical leg was designed to bear on the existing column of the original C1-C6 transfer structure. The other was connected to a truss pin connection engineered by DSE. Lateral support for the frame was provided off the new columns added for the C1-C2-C6 transfer expansion.

## Result

The sky hopper was successfully re-supported on the expanded transfer tower structure with minimal modification to the existing hopper frame, meeting the client's requirement to preserve as much of the original structure as possible while accommodating the terminal expansion.

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Contact DSE to discuss structural engineering for terminal expansion and equipment re-support projects.

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