CASE STUDY BROUGHT TO YOU BY DALINGHAUS CONSTRUCTION, INC

"Never Settle"

DALINGHAUS

Project: Orange County Transit Authority - Slab Leveling
Project Location: Newport Beach, CA

Project Background Information:

The project location is located at a major transportation hub for the Orange County Transit Authority in Newport Beach. The bus hub has large 20 ton busses, that arrive at the terminals and pick up passengers every 15 minutes to transport them to other bus terminals throughout Orange County. An issue that had come up and had not been getting any better, was every-time that the busses entered the station, they would have to drive over an area of the road that had a misaligned crack running perpendicularly across it. This crack was misaligned by about 2 inches in some areas and it was causing the drivers and passengers to bounce as they traveled over the crack. After doing this bouncing multiple times a day, for multiple years, the bus drivers and passengers were starting to develop back pains and some were even experiencing kidney pains in the more severe cases.

Project Design Phase:

The initial design concept for the project consisted of shutting down one of the bus lanes at a time to break out and remove the existing concrete. Once the concrete was removed, base material could be brought in and compacted. The new steel would be installed and the new concrete would be poured. This process would take approximately 3 days and then the buses would have to wait another 30 days for the concrete to dry and build enough strength for the buses to drive over the newly poured slabs. Once one lane was completed, they would complete the same process on the other lane. Total length of the project would be 60+ days to completion.

Dalinghaus Solution:

During our job walk with Jim from OCTA, we introduced the idea of raising the existing concrete to realign the current crack. We would also perform a deep injection procedure utilizing polyurethane grout, to densify the existing soils to prevent future settlement of the slab.

We started the project at 8am and proceeded to close down 1 lane of the bus terminal to work on the other lane. We drilled through the existing slab and proceeded to densify the soils. Once the soils were densified, we began to lift the 20" concrete slab. We raised the slab approximately 2" and realigned the previously misaligned crack. We then demobilized from that lane and mobilized into the adjacent bus lane during the 15 minute scheduled intervals as to keep the busses on schedule. Once we were mobilized in the adjacent lane, we drilled and injected polyurethane grout and raised that lane up approximately 2" to realign that previously misaligned crack. We infilled the cracks with a DOT approved crack mender and then demobilized from the site. The entire project was finished and cleared by 4pm that same day!

Project Team

General Contractor: Dalinghaus Construction, Inc
Polyurethane Grout Installer: Dalinghaus Construction, Inc

Products Installed

- 1,200lbs of NCFI 010