# Command Alkon®



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# Graniterock

Granite Rock Co., now Graniterock, is family-owned and operated, with ready mix, aggregate, and construction operations ranging from south San Francisco to Monterey, California.

## The Challenge

A.R. Wilson Quarry is one of the largest quarries in the western United States, and they realized that their legacy systems weren't providing the visibility that they required during their check-in/out, weigh-in/out, asphalt loadout, and scale ticketing operations. They needed advanced scale ticketing software in conjunction with automation technologies to improve the speed, efficiency, and throughput of their site operations.

## The Solution

In 2014 Granite Rock chose Apex to replace their legacy systems. While all of the Apex features were important, the flexibility of the Auto ID module was critical in that decision. The Auto ID functionality is used at all of their aggregate and asphalt locations, but the A.R. Wilson Quarry uses nearly every option available as well as a few new features added specifically to meet their needs at the site including:

• **Apex Ticketing**: At the core of the system is the Apex ticketing software, providing an intuitive

Windows™ user interface for data management and ticket printing at the site.

• **Auto ID:** This module interfaces with the core ticketing application to allow the use of RFID readers and remote user input devices to automate the ticketing process.

• **3rd Party Controls Interface:** Apex systems can

**LOCATION**
## California

**INDUSTRY**
## Aggregate

**RESULTS**
## Faster Gate Times

communicate with a 3rd Party PLC using a standard OPC (OLE for Process Control) interface. This allows the Apex application to provide information such as Target Weights, Bin ID, etc. to the loadout control system and to monitor status conditions.

• **Remote Ticket Printing:** An environmental enclosure, designed specifically for outdoor printing in conditions found in the bulk materials industry, houses an industrial printer for rapid delivery of tickets to the driver.

• **Scale Watcher:** Integrated video capture provides a still image of truck license and side door view for every ticket generated. These images are stored with the ticket, eliminating the need for driver signatures. Each loadout lane includes an RFID Terminal, Remote Printer and Integrated Video Capture.

## The Result

The site automation technologies gets trucks on the road quicker by keeping drivers in trucks and reducing time on site. During the check-in process, RFID tags mounted on the vehicle identify the trucks and display the current load assignment to the driver on the display screen. By enforcing a check-in for every load, Graniterock is able to capture good gate-to-gate times for every check-in and accurately display all trucks in the yard for all users, including the loader operators.

The check-in station consists of RFID readers, activated by a vehicle presence sensor to eliminate cross reads between lanes; a full spring display; and a phone for direct connection to the scale house, which allows the driver to confirm all of the relevant information for their load, including whether the product is currently available in the auto load lanes.

The PLC flashes a light to indicate which bin the driver needs to line up under. The driver pulls on the cord to start the loading process. Once complete, the PLC provides Apex with the actual weight and a ticket is generated. The truck then pulls forward out of the load house to the print station to receive their

ticket. All 10 print stations at the site include Scale Watcher, eliminating the need for drivers' signature copies of tickets. This feature also mitigates the risk of theft and assists with claims by capturing video/still footage and truck license image to store with each ticketing activity.

The print station and scales include a display, where current ticket information can be reviewed and printed. Some of the stations also include a phone to contact the scale house, and all stations include the Scale Watcher cameras. At the A.R. Wilson Quarry, they were unable to physically locate the license plate camera forward of one of the scales, so instead they capture the image as the trucks enter the scale. This is a feature that was added specifically for their needs at this site.

Allen Bryant, Senior Software Engineer at Graniterock says, "We are very proud of our gate-to-gate times and completely transparent, printing them on every ticket and providing daily reports summarizing our performance to many of our customers."

**Command Alkon**

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