

MOBILE DEVICES IN CONSTRUCTION

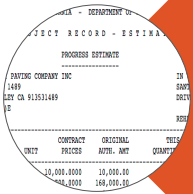
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Construction Chief, Caltrans



CURRENT STATE OF E-CONSTRUCTION AT CALTRANS

Production



Automated Contractor Pay System



Electronic Extra Work Billing System



Intelligent Compaction



Inertial Profile

Pilot



Mobile Devices - Tablets



Electronic Document and Retention Management System



Electronic Field Daily Reports



Automated Machine Guidance

CHALLENGES

- Information Technology Office
 - Standards
 - Support
 - Security
- Public Perception
 - Inappropriate use
- Procurement Method



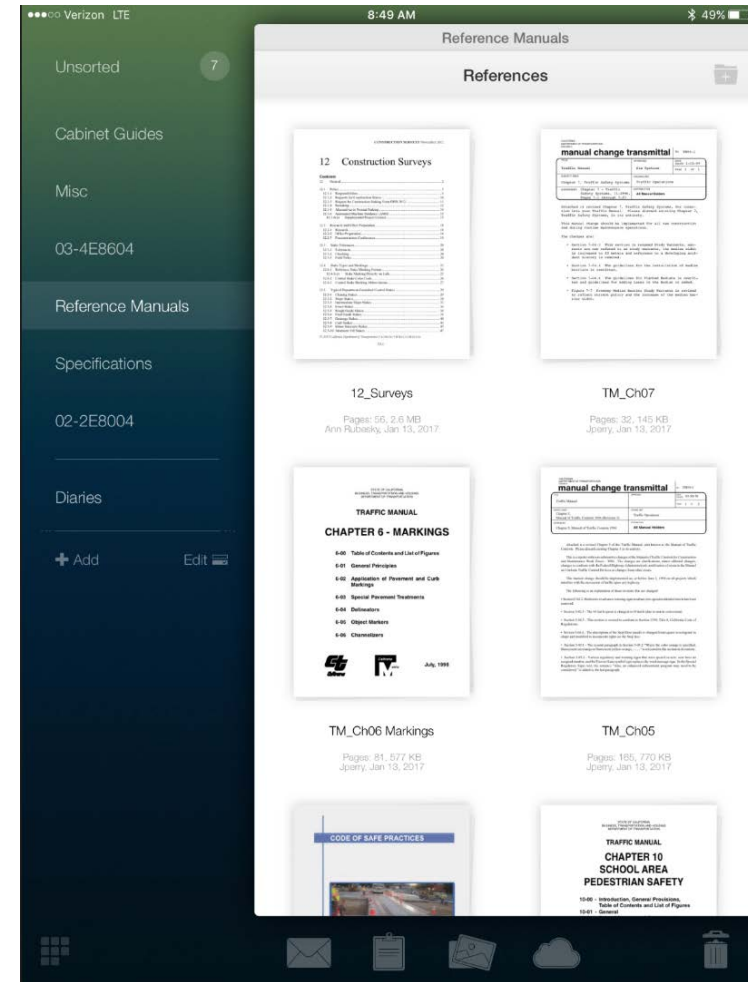
MOBILE DEVICE PILOT GOALS

- leverage current mobile technology
 - Improve staff performance and effectiveness
 - Incorporate long-term sustainable solutions
- Improve project communications
- Improve Partnering



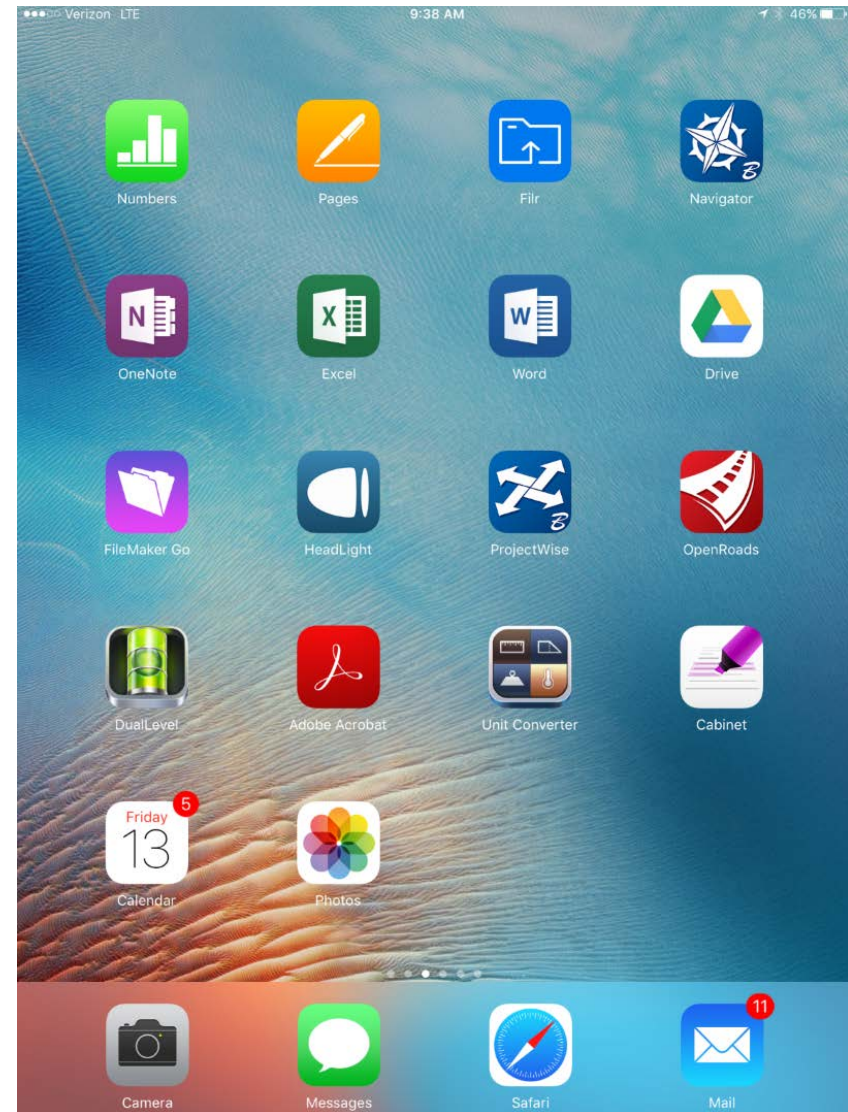
MOBILE DEVICE PILOT METHOD

- Eight contracts
- Electronic versions of project materials
- Tested field applications



APPLICATIONS

- Document Management
 - Projectwise by Bentley
 - PDF Cabinet
- Daily Report
 - Filemaker Pro developed in-house
 - Headlight by Pavia
- Microsoft Office
 - Excel
 - Word
- Calculators

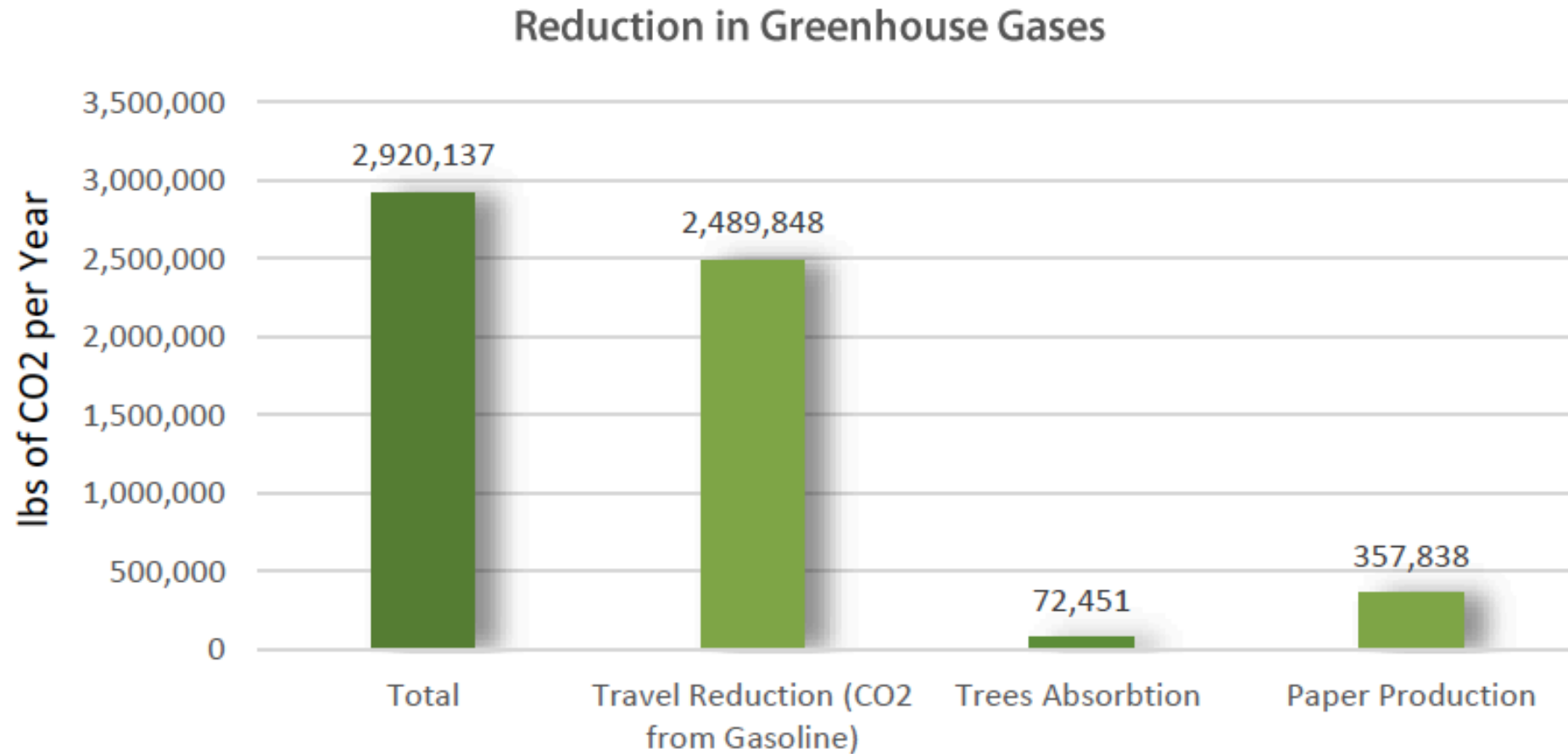


PILOT RESULTS

- Improved Staff Effectiveness
 - Email at the job site
 - Plans, specs, change orders, letters on tablets
 - Record information once
 - Travel Reduction



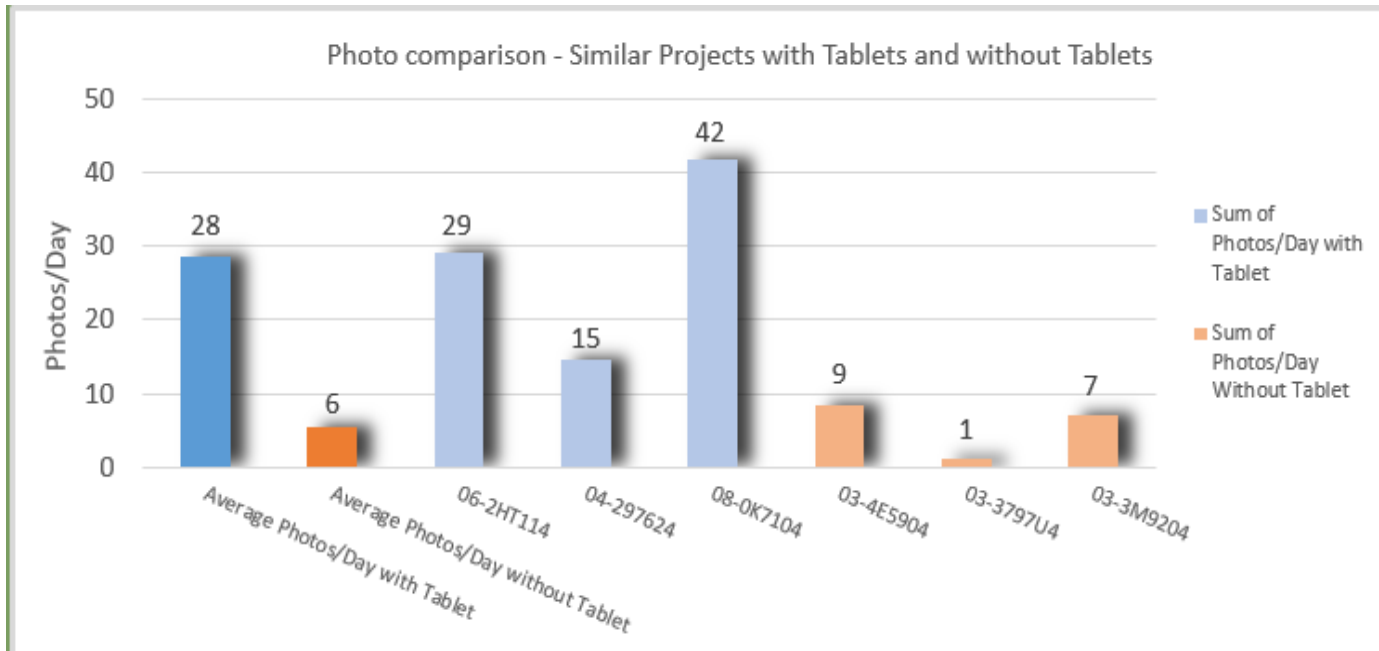
PILOT RESULTS continued



PILOT RESULTS

continued

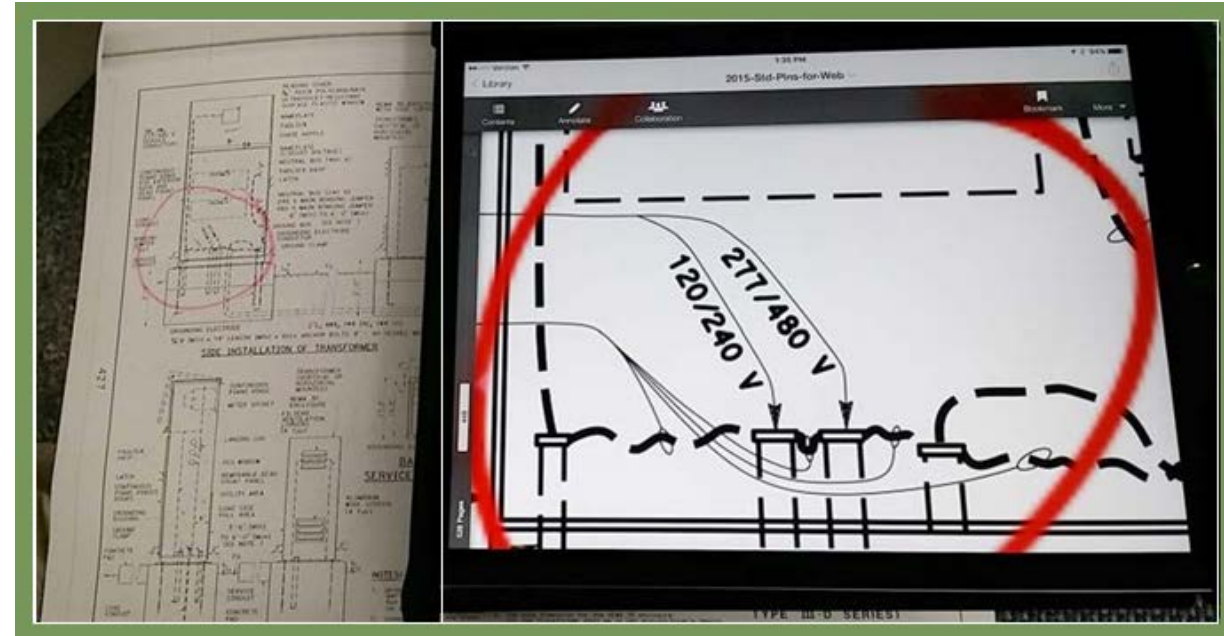
- Documenting Contractor's Activities
 - More photos
 - Easier documentation

[illegible]

The screenshot displays the PaaS application interface. At the top, there's a navigation bar with a search icon, a 'headlight.paviasystems.com' address bar, and a 'headLight' button. Below this is a secondary navigation bar with tabs for 'HWY-54 (Sou...', 'Observations', 'Reports', and a user profile icon. The main content area is divided into two sections. The first section, titled 'New Image - (Deleted)', shows a red square icon with a white 'X' and a 'Delete' button. Below this is a list of images, with the first one titled 'Narrative : 13 Jan 2017'. This image has a description: 'PG&E placing gravel on north side of Vulcan entrance. DGC uncovered the temporary shoring wall to try it up on Vallecitos Rd. No other work is going on.' It also includes a 'Tags' section with 'High security summary' and 'Old Boreas ID', and a 'Connections' section with 'Connections ID'. The second section, titled 'Weather : 13 Jan 2017', shows a large temperature display of '48°F' and a 'Clear Sky' icon. Below this, there are fields for 'Precipitation', 'Wind Speed', and 'Humidity'.

PILOT RESULTS continued

- Electronic vs. Paper Documents
 - Tablet Portability
 - Accessibility and ease
 - Real time
 - Records Management

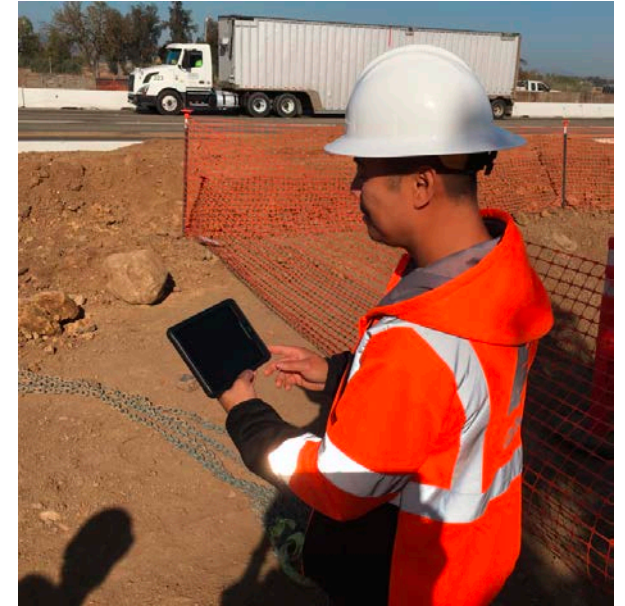


DEPLOYMENT

- Apple Device Enrollment Program (DEP)
- Corporate Mobile Device Management (MDM)
- Phased deployment
- Identify super users
- Implement a training plan



CONCLUSION



Innovative, Efficient, and
Environmentally Friendly

