



# Evaluating and Codifying Historic Highway Elements Along Island Roads

## Overview

- [Pantel del Cueto & Associates LLC](#) was tasked with evaluating historic highway elements along island roads that had been impacted by hurricanes
- [INSPECT](#) was used for the survey to give detailed photo documentation and real-time coordination
- The team achieved clear, concise data with full report creation in minutes

Agamemnon G. Pantel, Ph.D. at Pantel del Cueto & Associates LLC, has worked in ground penetrating radar on archaeological projects in Puerto Rico and the Caribbean since 2003 using [GPR Slice software](#). As a result of the acquisition of GPR Slice by Screening Eagle, Agamemnon became aware of our hardware and software products.

When Agamemnon first saw the online presentation of Screening Eagle's INSPECT software, he saw the potential it held to expedite his cultural resources projects both in the field and in the office, since the types of data it was recording was clearly adaptable to archaeology and cultural resources management.

## Challenge

Much of the archeological work in the Caribbean is more and more involved in regional surveys and overviews of cultural resources covering wide areas. As with all large surveys, one is obligated to work with large data sets containing diverse types of information. Although Geographic Information Systems exist on the market, most require a lengthy and complex learning curve. Consequently, the team wanted more intuitive software to carry out this work.

The opportunity to test INSPECT on archaeology and cultural resources projects presented itself when the team were awarded a U.S. federally funded Puerto Rico Highway project to record, evaluate and codify potentially historic highway elements along island roads that had been impacted by the series of hurricanes which devastated the island in 2017.

This highway project required background research on identifying potential historic resources along approximately 500 kilometers of island roadways as an initial project. Photographs with georeferenced data, linked to cartographic and engineering graphics also needed to be incorporated into the analysis and reports.

# Solution

The firm's core team was composed of three professionals: a senior level archeologist, an architect with academic degrees in conservation and an architect with knowledge in project management. All team members were equipped with iPads using the OS-15 operating system with an M-1 chip, and a PC-based computer in the central office.

The INSPECT software was set up easily on the PC, and the mobile app was installed on the iPads ready for the survey. The team noted that the learning curve for the intelligent software was very short and they were able to quickly utilize INSPECT in the field with a significantly low amount of trial-and-error.

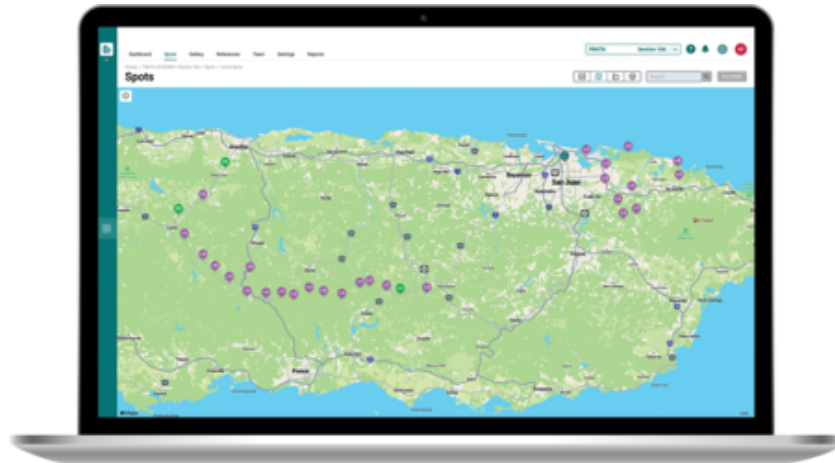
# Results

Using INSPECT on the iPads, the team were able to quickly link the photographic documentation in the field with the previously entered template data in the office which far expedited their fieldwork far and beyond their anticipated time gain. Additionally, the ability to do real-time coordination and check-and-balance of the data as the fieldwork progressed, served to limit data errors. The intelligent app also provided a vehicle to make corrections in the field, without the need to review the information once the team returned to the office and processed the data, but more effectively could be adjusted while in the field and onsite.

The generation of detailed reports "automatically" via the INSPECT report option was not only a time-saver, but also allowed Boolean searches of combinations of data variables that are necessary to evaluate both the location and condition of any cultural resources in a variety of manners. This was essential for the presentation of the data in a clear, concise and graphic manner to the highway authority.

Key to the best report results when using INSPECT software for this type of work is editing the templates to "non-building based" variables for which the software was originally programmed.

With flexibility of the templates, the software can serve as an efficient and graphically clear survey tool for archaeologists, cultural resources managers and architectural building surveys.



caption

Although INSPECT is renowned for use on the iPad, as we can see from this case study, the web application is an important 'field tool' for the mobile app. By customizing the templates on [INSPECT](#) web app at the office, the team saved hours of time in the field and the data from the iPads could be viewed in the office in real-time.

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