

## **Assessing the Impact of Smartphone Usage While Driving in Work Zones Dataset**

Dataset available at: <https://doi.org/10.7910/DVN/HZPXW2>

(This dataset supports report **Assessing the Impact of Smartphone Usage While Driving in Work Zones**, [http://safersim.nads-sc.uiowa.edu/final\\_reports/UPR%201%20Y1\\_Final%20Report.pdf](http://safersim.nads-sc.uiowa.edu/final_reports/UPR%201%20Y1_Final%20Report.pdf))

This U.S. Department of Transportation-funded dataset is preserved by the SAFER-SIM University Transportation Center in the Harvard Dataverse Repository (<https://dataverse.harvard.edu/>), and is available at <https://doi.org/10.7910/DVN/HZPXW2>

The related final report **Assessing the Impact of Smartphone Usage While Driving in Work Zones**, is available from the National Transportation Library's Digital Repository at <https://rosap.ntl.bts.gov/view/dot/42278>

### **Metadata from the Harvard Dataverse Repository record:**

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Title: Assessing the Impact of Smartphone Usage while Driving in Work Zones

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Description: The use of smartphones has been increasing over the last decade. The increase of smartphone usage by drivers is particularly concerning in highway work zones when operations and maintenance activities are being performed. This research aims to investigate the impact of

sing smartphone applications, such as a global positioning system (GPS), when driving through a work zone. Initially, a survey was conducted to evaluate drivers' understanding of the typical components of a work zone and their preferences regarding safe operation conditions in a temporary traffic control setting. Afterward, 24 subjects were selected to participate in the study using the driving simulator at the University of Puerto Rico at Mayagüez. The scenarios had three different workspaces located at the left lane, right lane, and right shoulder. Furthermore, they had the presence of an inattentive worker invading the traffic space. The standard deviation of lateral position and mean speed were obtained in four different locations along the work zone. The results showed that at least 16.7% of subjects encroached the workspace while using an active GPS when the work zone was located in the right lane with the exit ramp closed. Also, the results demonstrated that 67% of the subjects avoided impacting the worker by performing an evasive maneuver.

Subject: Engineering

Keyword: Driving Behavior, Driving Simulation, Distractions, Work Zones, Temporary Traffic Control, Highway Safety, Human Factors

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**Dataset description:**

This dataset contains 1 .zip file collection described below.

**Smartphones\_WorkZone.zip:**

This collection contains one .xlsx file titled Variables\_WorkZone.xlsx and one .csv file titled WorkZone\_Data.csv.

- The .xlsx file is a Microsoft Excel file, which can be opened with Excel, and other free available software, such as OpenRefine
- The .csv, Comma Separated Value, file is a simple format that is designed for a database table and supported by many applications. The .csv file is often used for moving tabular data between two different computer programs, due to its open format. The most common software used to open .csv files are Microsoft Excel and RecordEditor, (for more information on .csv files and software, please visit <https://www.file-extensions.org/csv-file-extension>).

**National Transportation Library (NTL) Curation Note:**

As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (<https://ntl.bts.gov/public-access>) Section 7.4.2 Data, the NTL staff has performed *NO* additional curation actions on this dataset. NTL staff last accessed this dataset at <https://doi.org/10.7910/DVN/HZPXW2> on 2019-09-04. If, in the future, you have trouble

accessing this dataset at the host repository, please email [NTLDataCurator@dot.gov](mailto:NTLDataCurator@dot.gov) describing your problem. NTL staff will do its best to assist you at that time.