

# Hard Hat - Seattle Construction Mobile App

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With the extensive and ever-changing construction in Seattle, it can be difficult to move across the city and keep track of where travel is restricted. Even when construction does not disrupt normal traffic, it can make walking or biking in an area dangerous or even impossible. The goal of Hard Hat is to provide specific visual information about current construction in Seattle, allowing users to safely navigate through or avoid these areas.

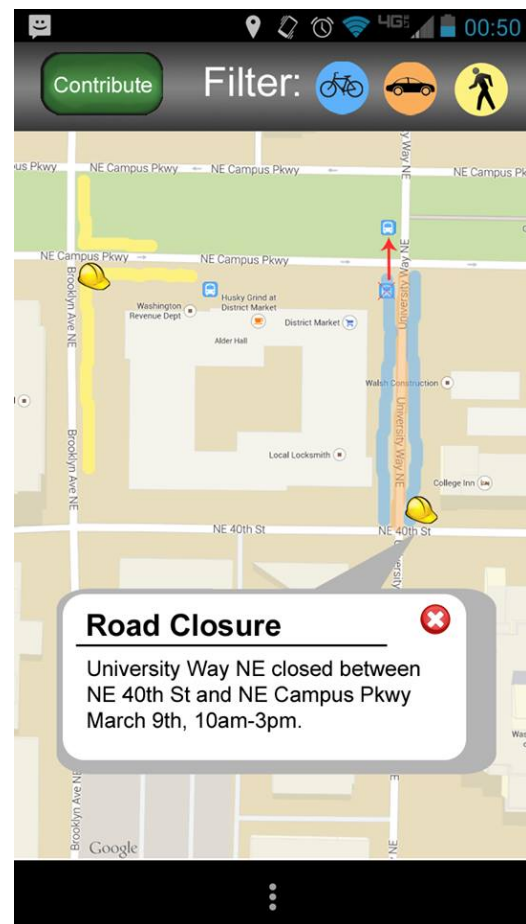
## *Obtaining Data*

Hard Hat's information will come from two primary sources. The first is the city of Seattle's table of current construction projects (found on [seattle.gov](http://seattle.gov)), which we will parse and include as pinpoints on the app's map.

The second source of information will be users themselves. When traveling near a construction zone, users will have the ability to update the map by drawing where sidewalks, bike lanes/paths, and roads are affected by construction. This could include adding, extending, or removing an inaccessible path. Users will also be able to indicate if a bus stop has closed or moved due to construction.

## *Features/Display*

Hard Hat will be built on top of Google maps, which will give users the basic zooming, scrolling, and searching features they are already familiar with. Construction zones listed on [seattle.gov](http://seattle.gov) will be marked on the map as



shown here by a yellow hard hat. When selected, these points will provide information about the dates, times, extent, and reason for the construction. User input will mark restricted or closed sidewalks, bike lanes/paths, and roads in different colors. This information can be filtered out by selecting a mode of transportation. Changes to bus stops will be displayed as shown in the image above.

### *Stretch Features*

If time and resources permit, it would be useful to implement an alternate route finding feature that avoids construction zones. Hard Hat could also be extended to include information about neighboring cities. If a web version of the app were built, incorporating some sort of date filter to show projected construction zones would allow users to plan ahead better.

### *Challenges*

New technologies for this project include using the Google maps API, using a server, and parsing data from a website. These tasks may be more difficult or time consuming than expected. Dealing with malicious users and/or verifying user input may also present a challenge.

### *Existing Alternatives*

The existing Android app, Seattle Traffic, already marks construction zones (in addition to traffic, accidents, and police activity). Although this may meet the needs of motorists, this app does not include any helpful information for pedestrians or cyclists. Nor does it allow user input, or give details regarding the extent of thoroughfare obstruction. Hard Hat should still be a novel and valuable application for those for whom driving is not their sole mode of transportation.