Signal Hound®

	Frequency	1.000000 GHz
	Bandwidth	10.000000 MHz
	Power	-20.29 dBm
	Peak	-20.29 dBm
	Occupied Bandwidth	30.517578 kHz
	Time	14/10/2021 15:55:32:450
	Latitude	45.7818527
	Longitude	-122.5299045
	Pixels from Left	1145
	Pixels from Top	600
	Directional	☑
	Azimuth	270.000 deg

Points: 12 / 5000   Mode: Click

-18.29 dBm
-92.11 dBm

Spectrum
-20.36 dBm*
Spectrum Plot
-40.23 dBm
-40.34
-60.32
-80.30
-100.28
-120.26

Measurements
File

	Freq	Bandwidth	Power (dBm)	Peak (dBm)	Occupied Bandwidth	Time	Latitude	Longitude	Position (p
1	10.050050 GHz	10.000000 MHz	-90.03	-109.75	19.799805 MHz	14/10/2021 15:43:39:627	45.7694432	-122.5229886	(1420, 1262
2	10.050050 GHz	10.000000 MHz	-90.11	-110.83	19.787598 MHz	14/10/2021 15:54:04:195	45.7795470	-122.5389833	(784, 723)
3	1.000000 GHz	10.000000 MHz	-30.25	-30.25	30.517578 kHz	14/10/2021 15:54:26:303	45.7835773	-122.5367450	(873, 508)
4	1.000000 GHz	10.000000 MHz	-40.25	-40.25	30.517578 kHz	14/10/2021 15:54:34:616	45.7799219	-122.5206749	(1512, 703)
5	1.000000 GHz	10.000000 MHz	-50.23	-50.23	30.517578 kHz	14/10/2021 15:54:42:648	45.7784410	-122.5336014	(998, 782)
6	1.000000 GHz	10.000000 MHz	-60.38	-60.38	30.517578 kHz	14/10/2021 15:54:56:796	45.7788347	-122.5312877	(1090, 761)
7	1.000000 GHz	10.000000 MHz	-60.37	-60.37	30.517578 kHz	14/10/2021 15:54:57:341	45.7782348	-122.5294016	(1165, 793)

OSM Map Import Guide
for **Mapping Mode in Spike.**

OSM Map Import Guide

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Contents

1 Introduction

The purpose of this document is to provide instructions for importing a map from OpenStreetMap (OSM) into Mapping Mode in Spike, ensuring it is correctly georeferenced.

1.1 OSM Overview

[OpenStreetMap](#) is a free source of worldwide geographic data, including street maps, with nonrestrictive licensing. It is supported by the international nonprofit OpenStreetMap Foundation.

1.2 Requirements

- A Signal Hound spectrum analyzer.

- The [Spike](#) spectrum analyzer software installed on a PC meeting the software and hardware requirements specified in the [Spike User Manual](#) and the corresponding spectrum analyzer device manual.

2 Map Import Guide

This section outlines the steps required to import a map from OpenStreetMap into Mapping Analysis Mode of the Spike spectrum analyzer software.

2.1 Navigate to the OSM website

In a web browser, navigate to https://www.openstreetmap.org/.
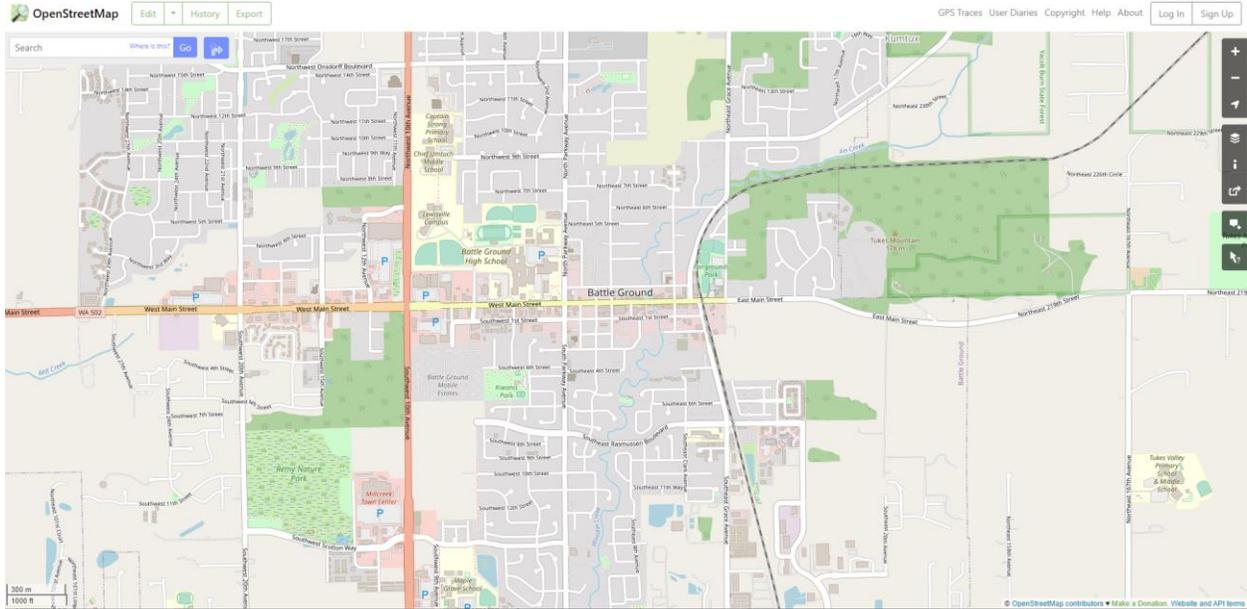
Figure 1: The OpenStreetMap website.

Map Import Guide

2.2 **Display the Referencing Coordinates**

Open the Export panel by clicking the *Export* button in the upper left navigation bar. The bounding longitude and latitude coordinates will be displayed.

WARNING: The referencing coordinates will show **exactly** what is visible in the map window. So when the Share panel is pulled up in the next step, covering up some of the map, it will change the referencing coordinates slightly. Resizing the web browser window will also change the coordinates. Therefore, make sure that both panels are open, and the browser window is not resized, when downloading and taking down the coordinates.
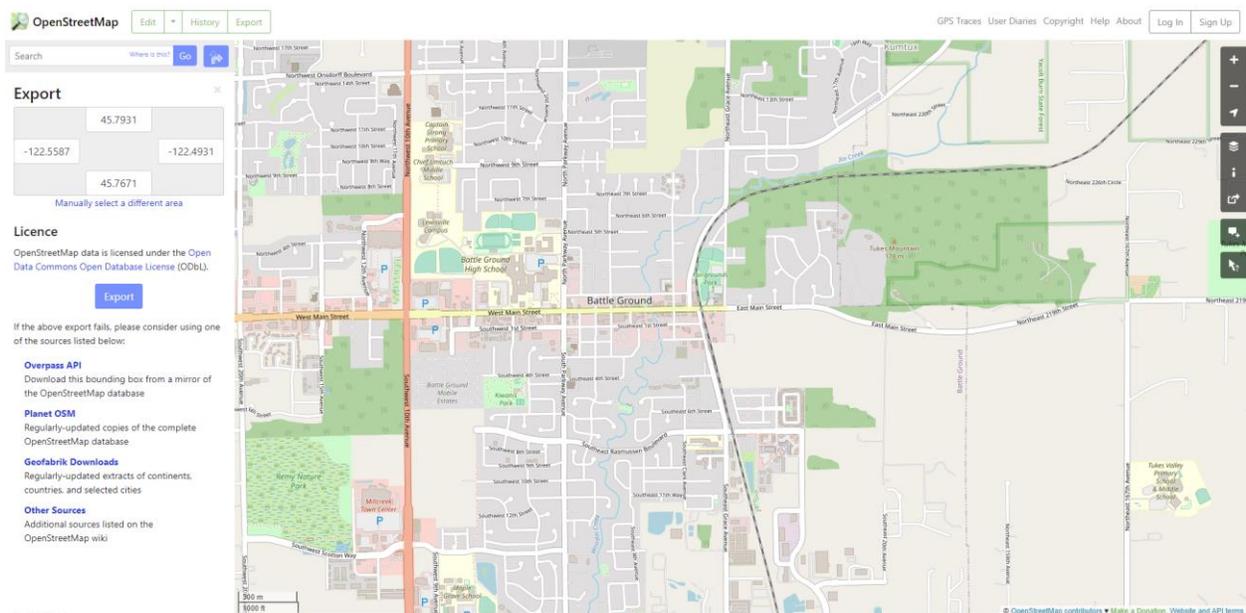
Figure 2: An OSM map with Export panel visible.

2.3 **Display the Share Panel for Image Download**

Open the Share panel by clicking on the share icon in the upper right vertical toolbar. Set the scale to the desired size so the map will fit comfortably on your screen, within the map view area in Mapping Analysis Mode in Spike.

Download the map by clicking the blue *Download* button.
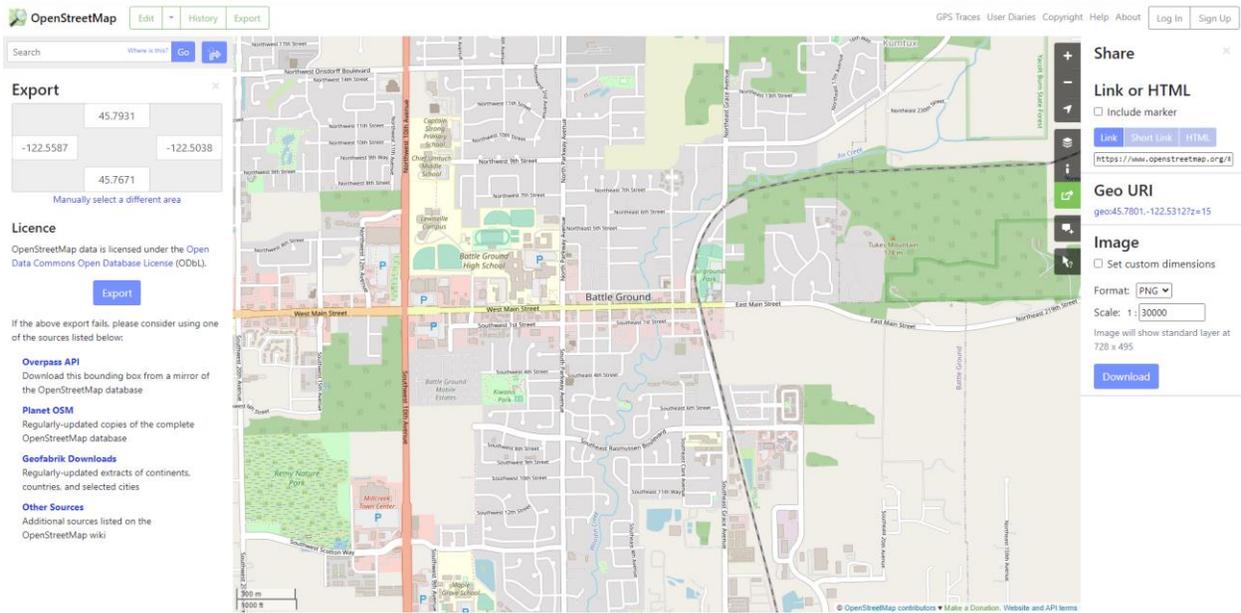
Figure 3: An OSM map with Export and Share panels visible.

2.4 **Open the Map in Spike**

Open Spike, and navigate to Mapping mode by clicking *Analysis Mode* in the menu bar, and then *Mapping*.

Click the *File* menu in the toolbar at the top of the map view area, choose *Load Map*, and select the image you downloaded from OSM.
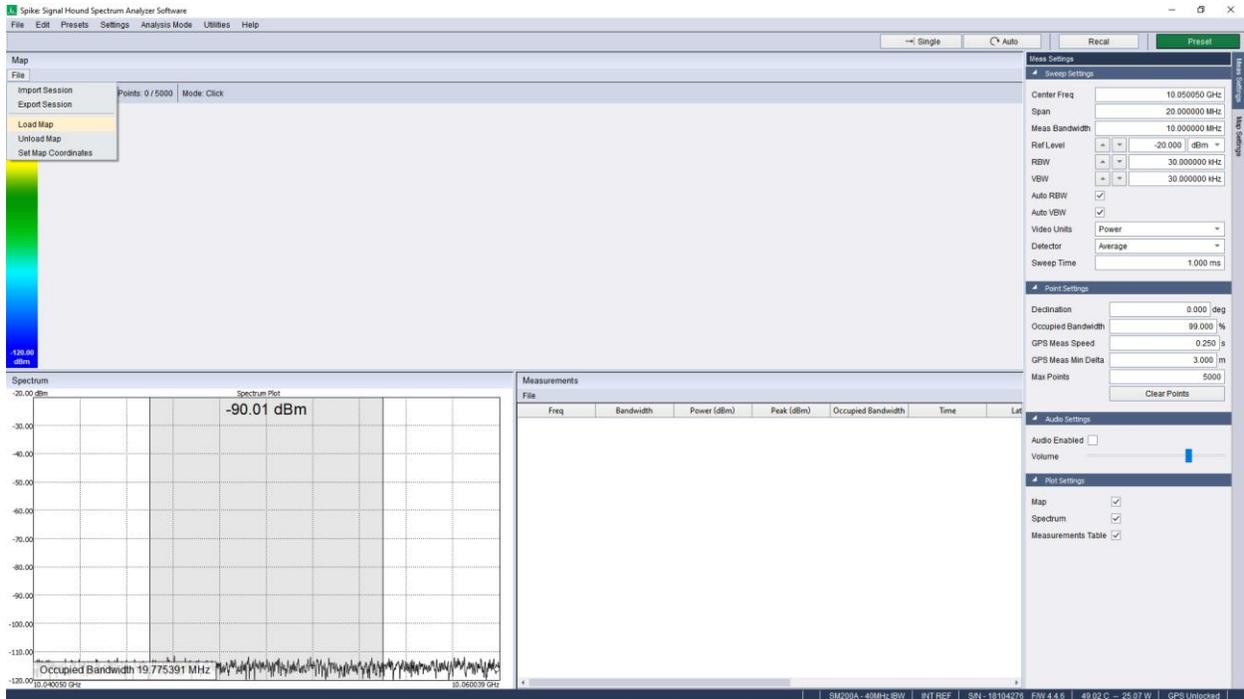
*Figure 4: Spike Mapping Mode before importing map.*

Map Import Guide
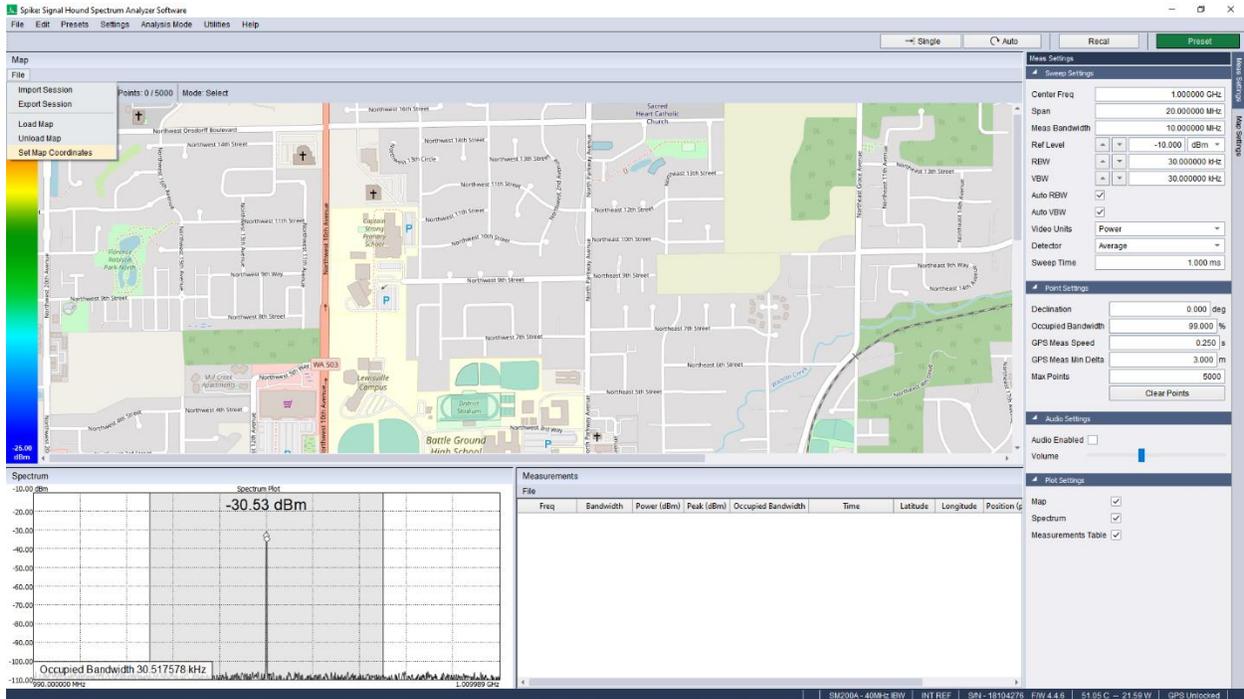
Figure 5: Spike Mapping Mode with OSM map imported and visible in map view area, ready to set coordinates.

2.5 **Set the Georeferencing Coordinates in Spike**

Click the *File* menu in the toolbar at the top of the map view area, choose *Set Map Coordinates*, and in the dialog that appears, enter the values shown in the Export panel of the OSM website.
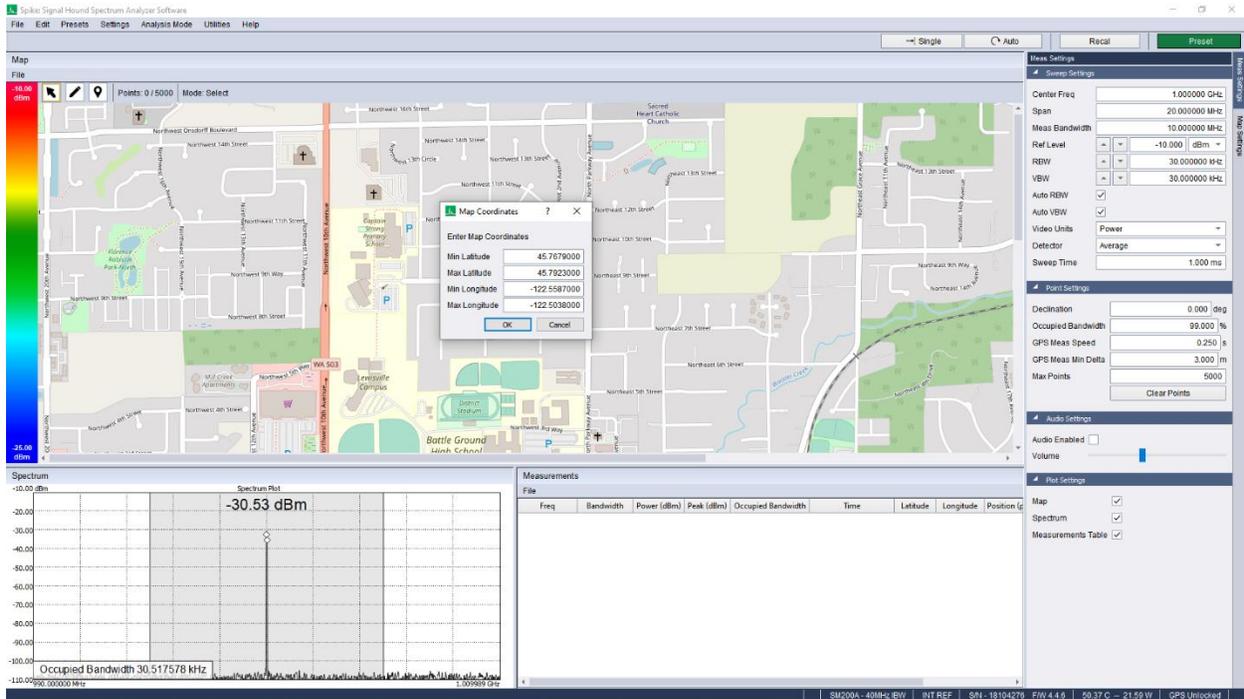

Figure 6: The Map referencing coordinates entry dialog in Spike.

2.6 **Verify Correctness**

Verify that the map is correctly georeferenced by doing the following.

- In Spike, click somewhere on the map to take a measurement and add a point.

    o The latitude and longitude coordinates of the point will be shown in a detail panel to the right of the map.
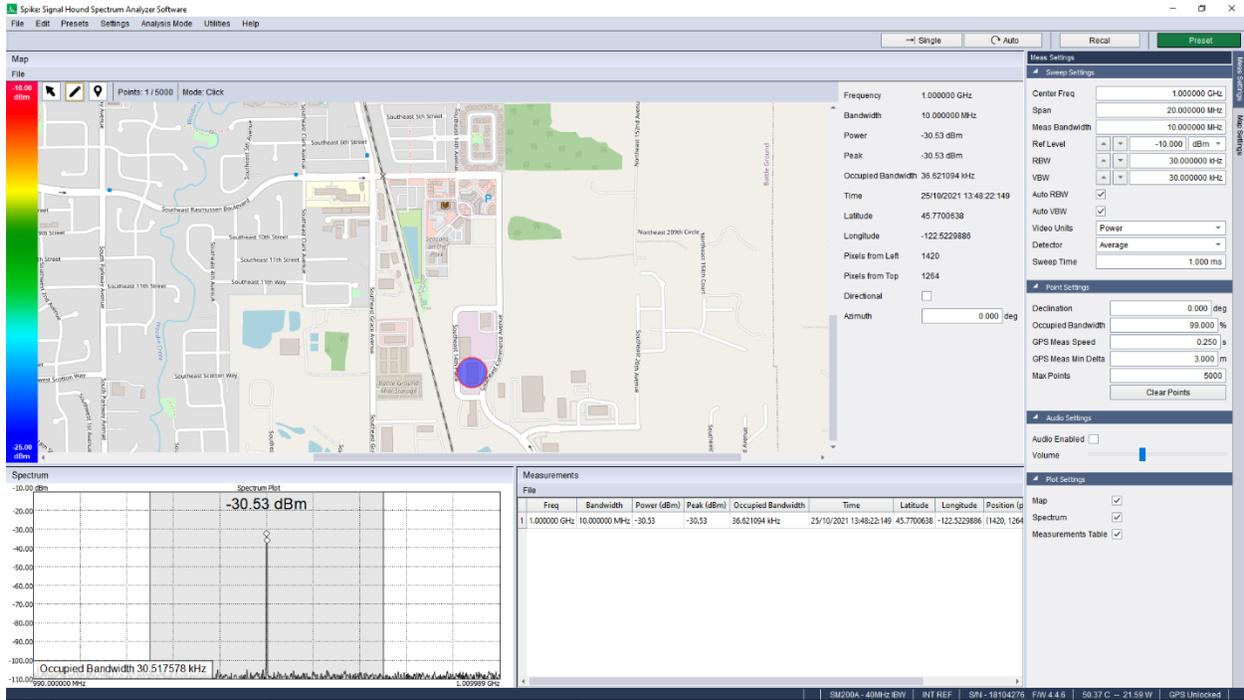

Figure 7: One measurement point with geocoordinates visible in the map detail panel.

- On the OSM website, right click the same location on the map, and select "Show address".

    o The coordinates of the point will be shown in a detail panel to the left of the map.

Troubleshooting
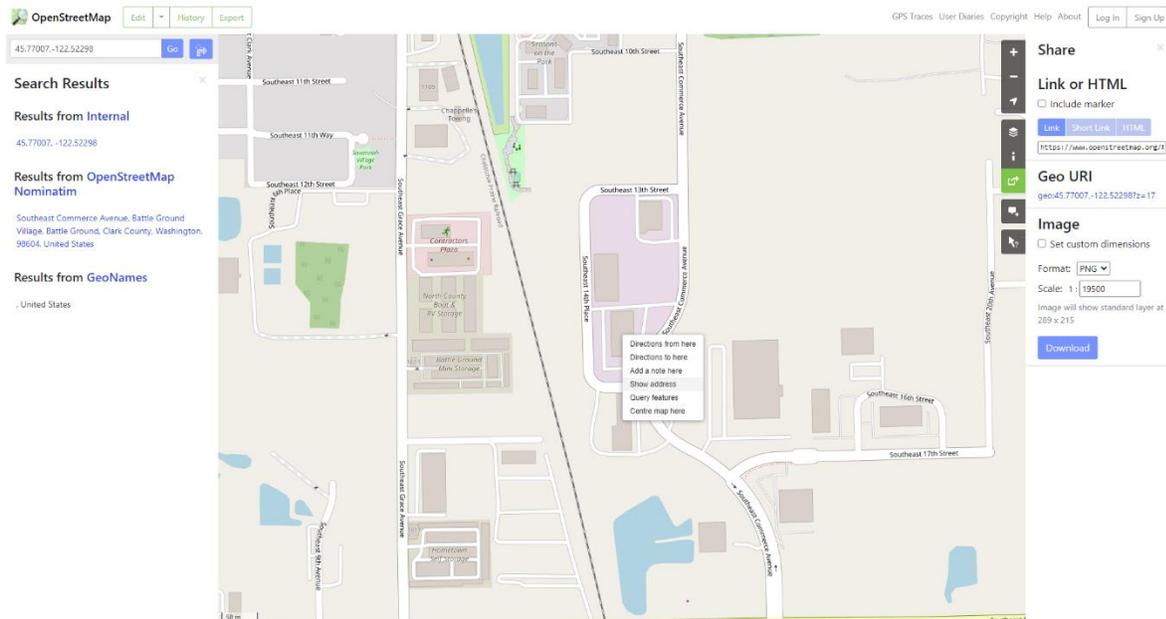
- Verify that these coordinates are the same or very similar.

If the coordinates are off by a significant amount, check that the referencing coordinates were entered correctly in Spike. They should match the referencing coordinates from OSM at the time of image export.

As a last resort, re-download the image and re-enter the coordinates, being careful to heed the warning in section 2.2.

3 Troubleshooting

If the map image is not showing in Spike, or not georeferencing properly, and you have followed the directions in section 2.6, then contact support@signalhound.com.