

# Instructions for WiFi Site Evaluations

A webform is being developed to allow for streamlined and consistent data collection. The webform will not integrate with the applications described below, to the data will need to be collected in these applications and reported in the form. There will be three rounds of testing recorded: at the entrance to the building, at the nearest parking spot, and at the furthest parking spot (or furthest you get signal). The step will be the same for each test.

In addition to answering some questions two tests will need to be performed, the signal strength and the connection speed. For consistency sake, it would be best if all tests were run on an iPhone or iPad, but Android instructions are provided as well.

## **I. Strength of Signal Test**

iPhone or iPad: [Airport Utility app](#)

Android: [Wi-Fi Analyzer](#)

Please review this article on how to use either of these apps:

<https://www.howtogeek.com/426642/how-to-check-your-wi-fi-signal-strength/>

- *If you see -30, you have a “perfect connection,” and likely, are standing next to the Wi-Fi router. However, if you spot a Wi-Fi signal listed at -90, the service is so weak you probably can’t connect to that network. An excellent connection is -50 dBm, while -60 dBm is likely good enough to stream, handle voice calls, and anything else.*
- *To measure Wi-Fi signal strength on your phone or tablet, you can use the Airport Utility App for iPhone and iPad, or Wi-Fi Analyzer for Android. Both are easy to use and show results for any wireless networks in your area.*
- *For iPhone users, the Airport Utility App does require you to go into your device settings and turn on the Wi-Fi scanner. Just go to your iPhone or iPad settings (not the app’s settings), tap Airport Utility in the list of settings, and then toggle Wi-Fi Scanner. Now, go back to the Airport Utility app and start a scan. You’ll see dBm measurements expressed as RSSI.*

## **II. Network Speed Test**

iPhone or iPad: [Speedtest by Ookla](#)

Android: [Speedtest by Ookla](#)

PC/Mac Computer: <https://www.speedtest.net/>

Please review this article on how to use either of these apps:

<https://www.howtogeek.com/426757/how-do-internet-speed-tests-work-and-how-accurate-are-they/>

## **III. Survey Questions ([Survey123 Link](#))**

- 1. Time and date of the test**
- 2. Site Name, Location and Contact Information**
- 3. Weather conditions** (or insist that it not be rainy since that impacts the signal)
- 4. Device(s) used** – We encourage all RPCs to use the same device for each test – and iPhone or iPad would be great.
- 5. Network SSID Name** (ex: River Run Library)
  - a. Password protected?** Y/N
  - b. If yes, provide details** (ex: password, registration type password etc.)

**6. Test One – Front Door/Steps of the Location**

- a. **Strength of Signal** – The value recorded will be a negative #. The first thing to know is measurements of dBm will display in negative numbers. The scale runs from -30 to -90.
- b. **Run a speed test** and record the following information
  - i. **Network Provider** (i.e. Comcast, Consolidated, First Light, etc.)
  - ii. **Download Speed** (xx.xx Mbps)
  - iii. **Upload Speed** (x.xx Mbps)

**6. Test Two - Closest parked location**

- a. **Distance to the closest parking spot(s)** – in feet (if not measuring, can do strides/paces and consider a pace about 3 feet)
- b. **Strength of Signal** – The value recorded will be a negative #.
- c. **Run a speed test** and record the following information
  - i. **Download Speed** (xx.xx Mbps)
  - ii. **Upload Speed** (x.xx Mbps)

**7. Test Three – How far can you travel from the building and still connect to the network?**

- a. **Distance from the first test location** – in feet (if not measuring, can do strides/paces and consider a pace about 3 feet)
- b. **Strength of Signal** - The value recorded will be a negative #.
- c. **Run a speed test** and record the following information
  - i. **Download Speed** (xx.xx Mbps)
  - ii. **Upload Speed** (x.xx Mbps)

- 8. **Comments** – Include any other information that would be useful for the end-user. This could include whether there are outdoor places to sit, how much parking is available, lighting, etc.