

1. Do I need to pay to use MoDOT's VRS GNSS system?

No, it is a free network.

2. How do I access the system for Real time corrections?

Go to <http://gpsweb3.modot.mo.gov/> and download and fill out the User Agreement. Once completed, send it in and MoDOT will enter the information and grant you access. MoDOT will send you an email back with all of the connection information.

3. What does the access get me?

You will have access to real time corrections and also Rinex data from the Reference Data Shop on the webpage.

4. Do I need a specific brand of equipment to access the system?

No, the network will work with most, if not all, brands of receivers. We push GPS data in many formats: RTCM2.1, RTCM2.3, RTCM3.1, CMR+, CMRx, and RTCM3Net_Autocell. Consult your dealer as to which message format will work best with your equipment.

The Radio Technical Commission for Maritime Services (RTCM) sets the standards. This message type is an open source message that is understood by most, if not all, GPS receivers. This is recommended by most dealers other than Trimble.

Compact Message Record (CMR) is a correction proprietary to Trimble.

5. Do I need a dual frequency receiver to access the data?

No you do not. If you want accuracies in the range of 2-3cm you will need a dual frequency receiver. If your accuracy requirement is in the 1 meter range then you can use a single frequency receiver. You will need to check with your dealer to check the compatibility of your particular equipment.

6. What Horizontal and Vertical Datum does the MoDOT VRS GNSS network use?

The VRS mountpoints will provide corrections consistent with NGS's NAD83(2011) Epoch 2010.00 adjustment. To get NAVD88 elevations from the NAD83(2011) ellipsoid heights you should use the latest Geoid model from NGS. <https://www.ngs.noaa.gov/GEOID/GEOID12A/>

7. Do I need to do a calibration/localization?

If you want your survey to match the local control as close as possible, you might want to do a calibration. Contact your equipment dealer as to how to do one with your equipment.

8. Do all of the stations also use Glonass satellites?

Yes, all the stations in MoDOT's VRS network utilize Glonass satellites.

9. How far can I work outside the network of base stations and still get survey grade corrections?

The software specifications say that you are safe to use the network within 10 miles of the exterior stations. You can still receive corrections considerably further outside than that, but you should be more diligent in checking into know control in order to meet the accuracies of your survey.

10. What cellular provider works best with the network?

This is one that would best be answered by your dealer or other users in your area. They would be able to tell you what plan you would need and what provider works best in the area you would work in.

Remember that GPS coverage in your area does not mean that you will have cellular coverage and be able to use MoDOT's VRS network. You need all three for this RTK method to work.

11. What should I expect for downtime with the network?

We will continue to strive for a 100% uptime for the network even though we realize that this is not a reality. There are 86 stations, 8 servers, software, and multiple other pieces of equipment that make the network happen. With this much equipment and an internet based system we are going to have times in which the network will be down. We will work diligently to get it up and running again.

12. How can I contact MoDOT if I am having a network issue or a question about the network?

If you have general questions about the network you can email us at gpsnetwork@modot.mo.gov. If you are having issues and need assistance you can call our operator at 573-751-5000. Tell them that you are having a GPS issue and they will get a hold of us with your contact information. We will call you back at our earliest convenience. You can receive text messages from our Twitter account by texting 'follow ModotGPS' to 40404.
