



BELNET 2011 move to COBRN 2018 SUMMARY

Since our intent was to maintain the City of Bellevue's survey control network through an active/real-time network rather than a passive/static network, we decided to base our network on 10 NGS CORS stations surrounding the city. We selected these stations to provide a combination of 5 stations about 100 miles away to provide a check on the troposphere and 5 stations within 8 to 25 miles to provide a closer proximity and some WSRN stations.

We made this decision based on our analysis of a global positioning system (GPS) survey we performed on August 17, 2017, to analyze the difference between the position of the controlling points of BELNET 2011 and a new position of the same, based on the 10 NGS CORS stations. This move results in a relatively small (0.01' S and 0.10' W Mean Delta of 3157 control points) adjustment from the current BELNET 2011 position to the new City of Bellevue Reference Network (COBRN 2018) position.

BELNET 2011 was based on the position of 7 HARN Stations (AV12, HAFF, MEAD, MERC, OVER, PT_B, and FUNK). To make the adjustment in STARNET, we incorporated 6 of the same 7 HARN stations (FUNK was not able to occupy) along with our 3 City of Bellevue Stations (CITY, FIRE, and SUMM) and held the NGS CORS positions of these stations as fixed and adjusted the network, resulting in the new COBRN 2018.