RTX Site calibration

RTX broadcasts in ITRF 2008 (current epoch) and receiver transforms to 2005 epoch

- If customer wants to work in a Trimble Access project using the state plane NAD83 datum, they have 2 options:
    o Use the RTK to RTX offset
        ▪ Requires you to shoot in a point with RTK and RTX before you can shoot in and apply the offset
        ▪ This may not be the best option for some customers since they may not be using RTK in this particular setup

    o Use a Site calibration
        ▪ You **must** have control data (in terms of NAD83(some epoch)) loaded in your project beforehand
        ▪ Perform a site calibration

- A 3rd option would be to work in the same datum as the RTX corrections
    o Work will need to be performed before going out into the field.
    o Convert the project data to ITRF2008 before loading onto a data collector, then when you use RTX there would be no transformation.
    o Use the HTDP tool from NGS to transform the coordinates
        ▪ http://www.ngs.noaa.gov/TOOLS/program_descriptions.html#HTDP

in this paper we will be describing RTX Site calibration in 5 easy steps

RTX Site calibration Steps

Step 1: Run static on at least one point, or 2 points to check.

Step 2: Submit to OPUS and get a solution

Step 3: key in control points in the data collector

Step 4: Site calibration RTX ITRF 2008 to Control point NAD 83

Step 5: Start measuring RTX in the NAD 83 calibrated site

Workflow:

Start a new project with state plane NAD 83 then start measurement using RTX survey style
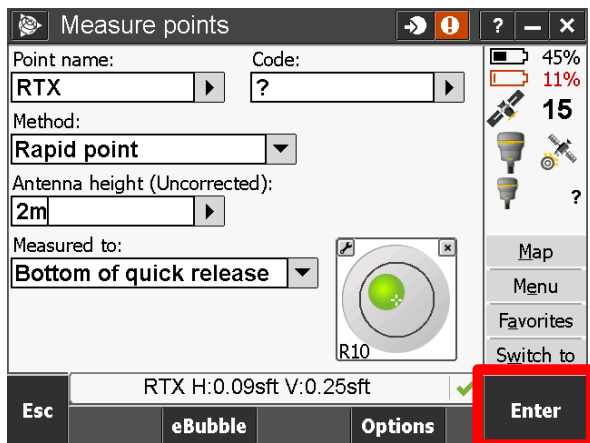
Wait 30 minutes for the satellite signal to Converge, click on the satellite icon to view RTX status
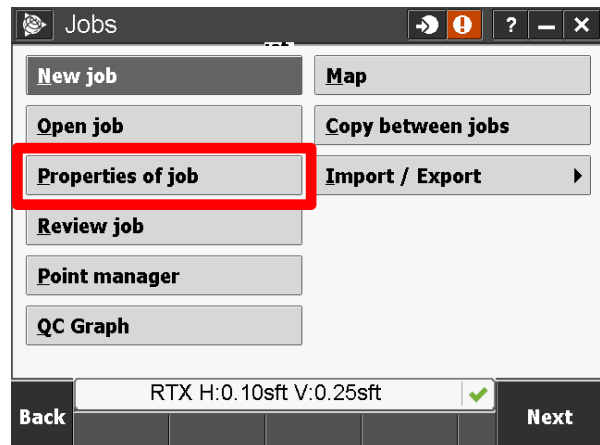

Take a measurement with RTX
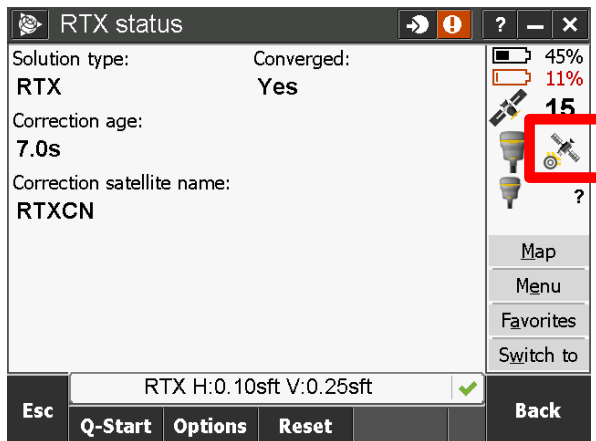
Go back to Jobs to inset your points as a csv file or **Key in** to enter the OPUS coordinates measured in NAD 83

Click on Properties of job

Click on Linked files

One file should be linked now

Select CSV file that has the points OPUS solution

Select Measure

Select Site Calibration

Select Add

From the Grid point list should be the point from CSV file (OPUS solution)
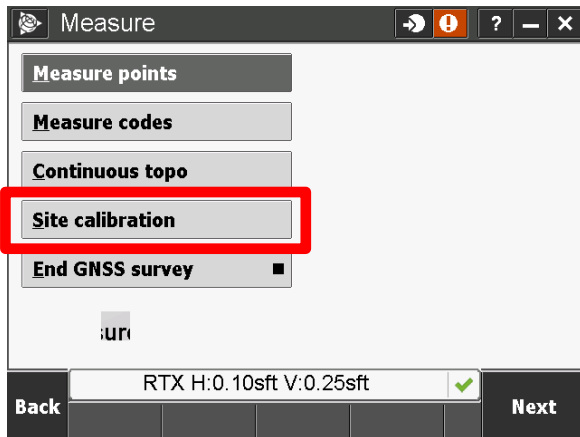
Select the appropriate point
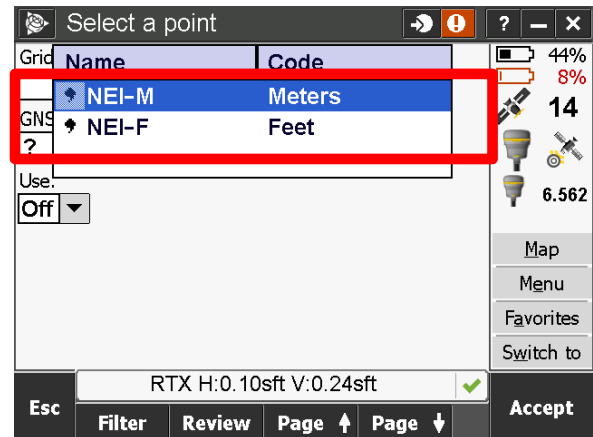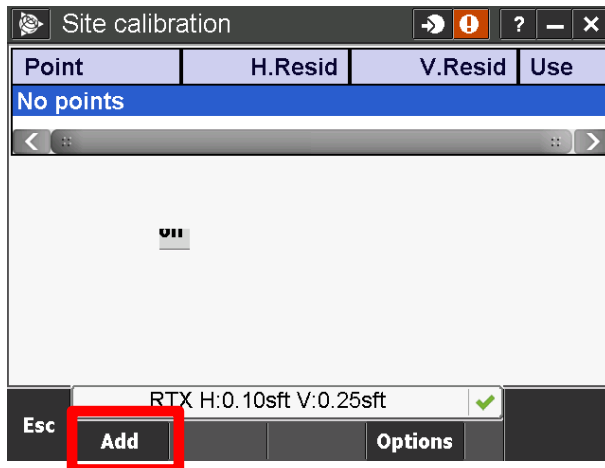
GNSS point should be the point was taken in RTX measurement
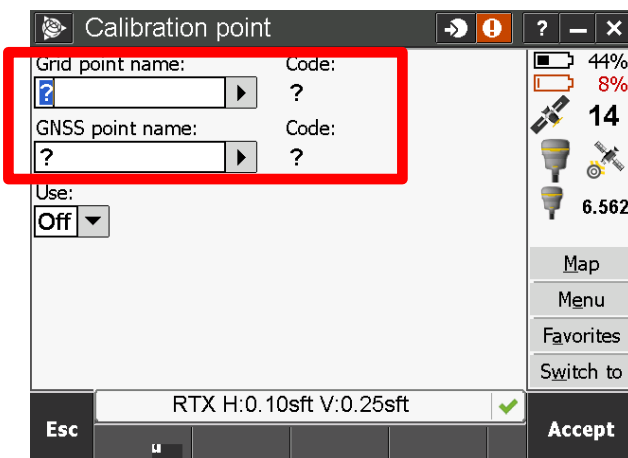
Select RTX shot
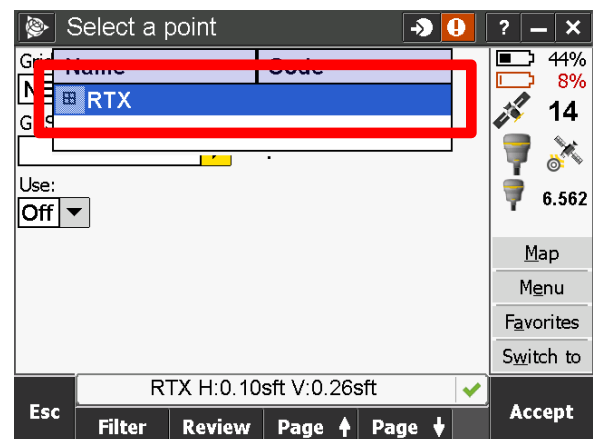
USE Horizontal and Vertical select Enter

Hit Apply to apply Site calibration

If you go back to job properties
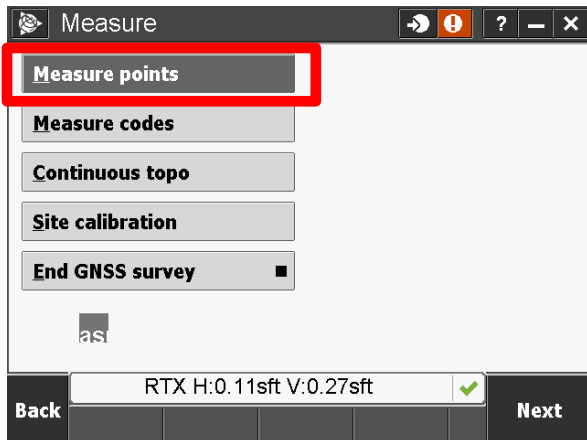

Properties of the job the coordinate system will be in Local Site

Back to measure

Measure Point

Any measurement in RTX will be in the
calibrated NAD 83 coordinate system after that!