

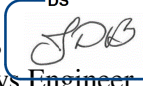


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

January 30, 2018

To: All L&S Staff; All L&S PEFs
From: J. Dale Burton, PE, PLS ^{DS}  1/30/2018
State Location & Surveys Engineer
Subject: Proc 2018-1
NCGS Baseline Calibrations

This memo modifies and supersedes the NCGS Baseline Calibrations policy as outlined in Proc 2015-3, NCGS Baseline Calibrations. The primary purpose of this new memo is to change the time required between EDM calibrations from three months to six months.

An EDM calibration is a test of a complete measurement system not just a test of an EDM. A complete set of equipment is needed to perform an EDM calibration including an EDM, tripods, tribrachs, prisms, and an experienced crew. It is expected that the same equipment and personnel used to execute the EDM calibration will remain intact and together during the setting of NCDOT control.

Upon receipt of this memo, any total station used in setting and measuring NCDOT survey controls and baselines must be tested and calibrated on one of the NCGS EDM calibration baselines no more than six months prior to the setting of those controls. Additionally, an EDM calibration should be performed after taking delivery of a new or used instrument, immediately after service, or anytime the operator feels the instrument is not working properly. The location of these calibration baselines can be found at <http://www.ncgs.state.nc.us/Pages/edm.aspx>.

As part of the deliverables for the task of setting controls and baselines, a statistical report of that calibration test must be provided. The report shall show that the total station has a scale error of 3.0 PPM or less and a constant error of 3.0 mm or less.

NCDOT has developed two tools to assist in preparing this statistical report. They can be found at:

- 1) EDMCheq.exe – A Windows application that processes EDM Calibration data files and creates a statistical report on the results. Found in the NCDOT workspace at: C:\NCDOT_V8_WORKSPACE\LOCATION_STDS\Standards\appl\EDMCheq.

- 2) EDMCheq – A Trimble Access plug-in that performs both the data collection and report generation of an EDM calibration. The plug-in is used with a Trimble Access data collector, and is available free from NCDOT (Contact the Location & Surveys GTS group for details on obtaining this plug-in)

This revised policy takes effect upon receipt.

JDB:rjg