



Emergency Management
NC DEPARTMENT OF PUBLIC SAFETY

North Carolina Geodetic Survey (NCGS): Positioning NC today and for the future!



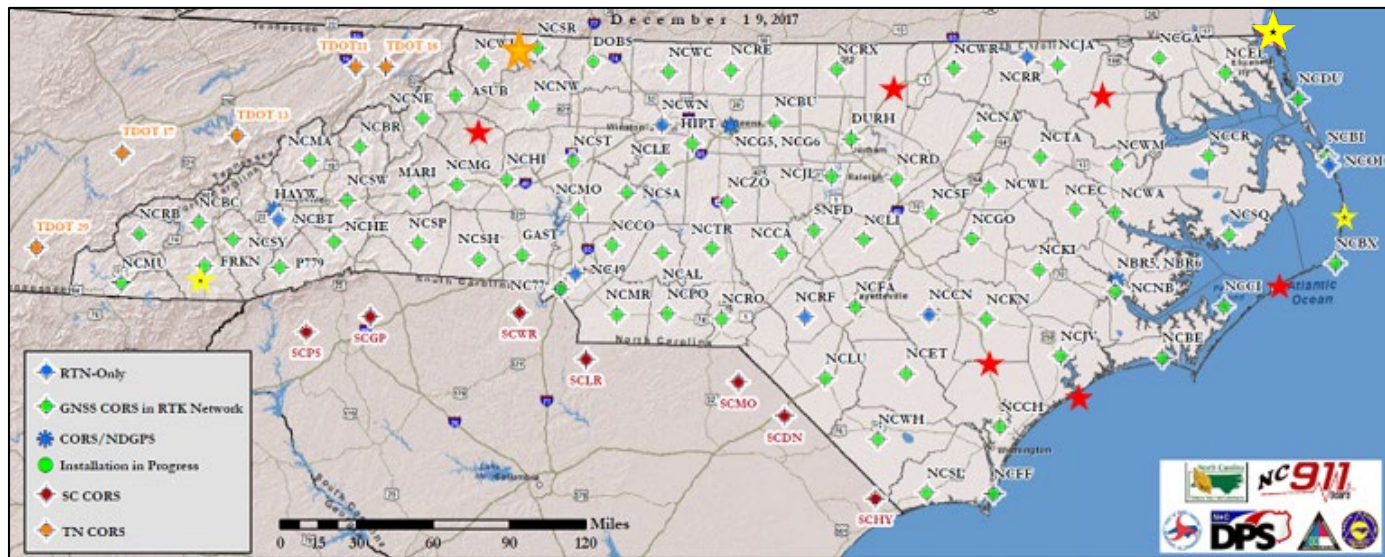
State Mapping Advisory Committee January 2024

Geodetic Control





North Carolina (NC) Continuously Operating Reference Station (CORS) Network



Future CORS location = ★
CORS installed = ★
Earthquake CORS = ★





home » gage » data » doi » dp2n c960

Data

- Help with Data
- Digital Object Identifiers
- Dataset DOI Search

NOTA Affiliated GPS Network - NCHW-Sparta_2023 P.S. - GPS/GNSS Observations Dataset

Related Links

- Data Policy
- Data Policy and DOI FAQ
- Attribution of GAGE Support & Community Contributed Datasets
- Acknowledgment of GAGE Support & Community Datasets

DOI: <https://doi.org/10.7283/DP2N-C960>

Title: NOTA Affiliated GPS Network - NCHW-Sparta_2023 P.S.

Authors: Leila Hashemi-Beni, Gary Thompson

Published: 2023

Publisher: The GAGE Facility operated by EarthScope Consortium

Description: GPS/GNSS station: Long-term continuous or semi-continuous occupation at a single location (Active: Still collecting data)

Date Range: 2023-12-08 through 2024-01-07

Citation: Hashemi-Beni, Leila, Thompson, Gary, 2023, NOTA Affiliated GPS Network - NCHW-Sparta_2023 P.S., The GAGE Facility operated by EarthScope Consortium, GPS/GNSS Observations Dataset, <https://doi.org/10.7283/DP2N-C960>.

Release Notes: This infrastructure was established as part of the 'A Baseline Development for Sparta Earthquake' project, a collaborative effort between NC A&T State University's Geomatics Program (Principal Investigator: Dr. Leila Hashemi-Beni) and the NC Geodetic Survey (Mr. Gary Thompson). The project received funding from the NC Collaboratory Policy, April 2022 -June 2024.

Related Publications: None available

Data Availability: Publicly available

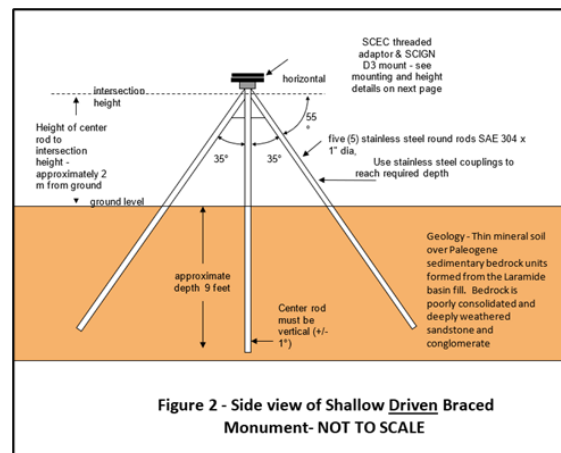
Data Access: [Download data](#)

Spatial Coverage: Point(s) (Lat Lon): 36.4866 -81.1054





New CORS to replace FRKN Accepted as a NOAA CORS

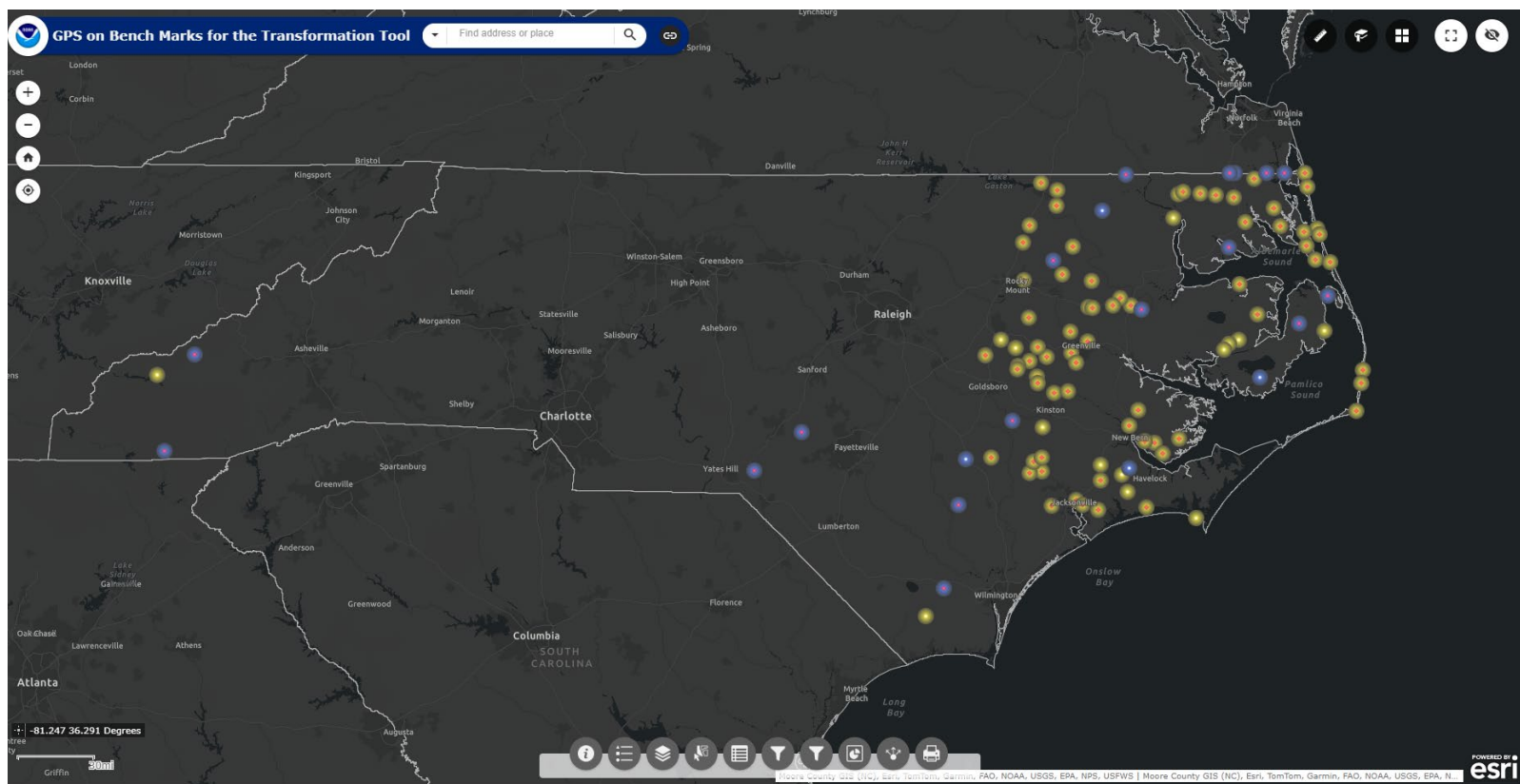


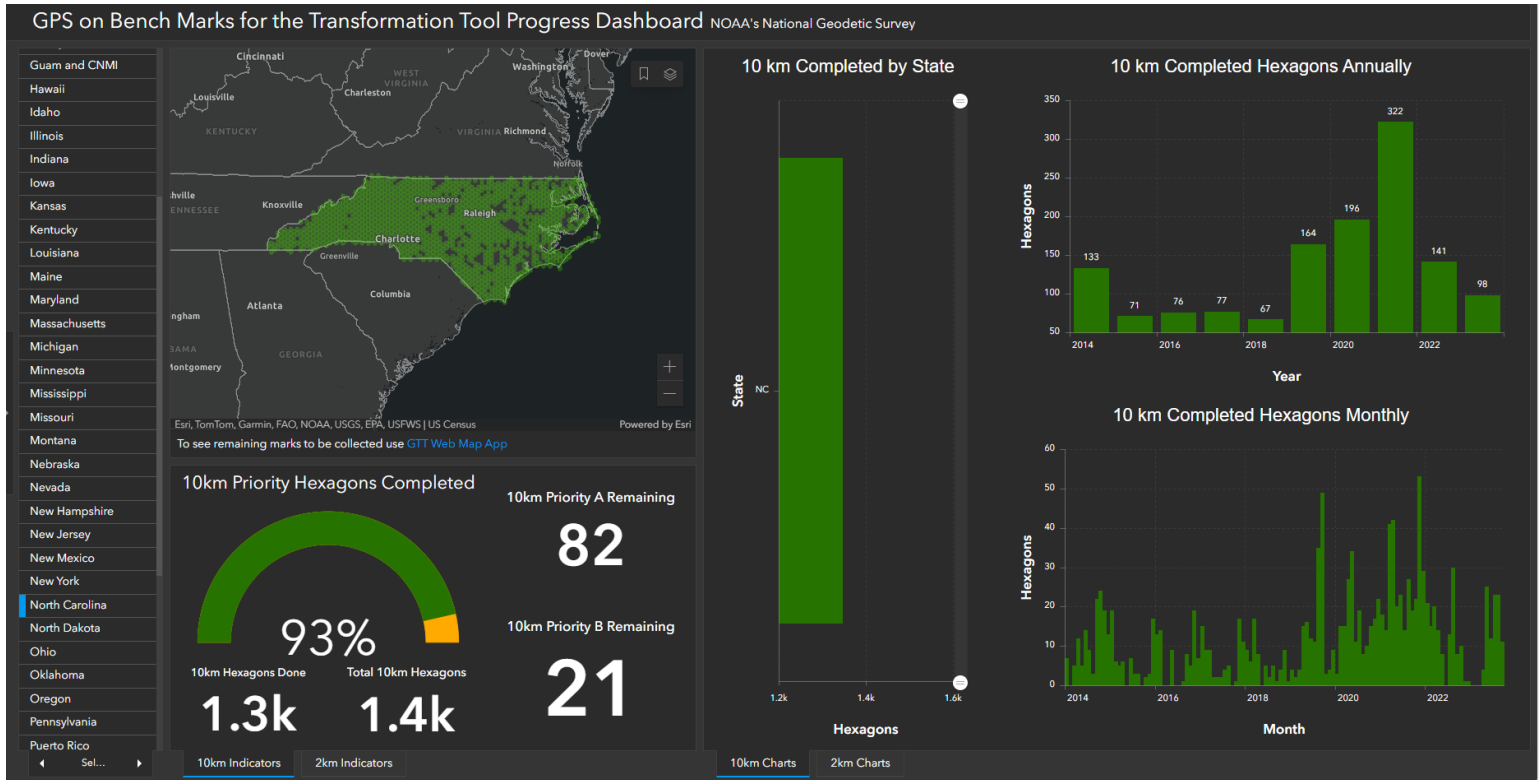
SCEC = Southern California Earthquake Center
SAE = SAE International





GPS on Bench Marks Project







New Datums are Coming! 2025

National Geodetic Survey Positioning America for the Future
geodesy.noaa.gov

New Datums Are Coming!

New Datums

NOAA is Replacing NAD 83 and NAVD 88.
NOAA's National Geodetic Survey (NGS) will be replacing the datums of the National Spatial Reference System (NSRS), including the **North American Datum of 1983 (NAD 83)** and the **North American Vertical Datum of 1988 (NAVD 88)**. NGS will provide the tools to easily transform between the new and old datums. Read the NGS Ten-Year Plan and visit the **New Datums Web page** on our site to learn more.

Benefits
The new reference frames (geometric and geopotential) will rely primarily on **Global Navigation Satellite Systems (GNSS)**, such as the Global Positioning System (GPS), as well as on a gravimetric geoid model resulting from NGS' **Gravity for the Redefinition of the American Vertical Datum (GRAV-D)** Project.

The target accuracy of differential orthometric heights (heights relative to sea level) in the geopotential reference frame will be 2 centimeters over any distance, where possible.

What You Can Expect
The magnitude of change with the new datums will vary depending on the datum you are using and your geographic location. The new geometric datum will change latitude, longitude, and ellipsoid height between 1 and 4 meters. In the conterminous United States (CONUS), the new vertical datum will change heights on average 50 centimeters, with approximately a 1-meter tilt towards the Pacific Northwest.

The new datums will extend across CONUS and U.S. territories. The terrestrial reference frames replacing NAD 83 will be consistent with geocentric global reference frames defining latitude and longitude. The geopotential datum replacing NAVD 88 will be based on a gravimetric geoid model, enhanced by data from NGS' Gravity for the Redefinition of the American Vertical Datum (GRAV-D) Project.

National Oceanic and Atmospheric Administration
National Geodetic Survey

