ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES
California

April 9, 2018

Subject: Endorsement of "Maintaining California's Geodetic Control System Strategic Assessment, Version 1.0"

To Whom It May Concern:

In December of 2017, the California Geographic Information System (GIS) Council approved and adopted a document entitled "Maintaining California's Geodetic Control System Strategic Assessment, Version 1.0," prepared by the Council's Geodetic Control Work Group (GCWG). The American Council of Engineering Companies, California (ACEC California) writes to endorse the document, its findings, and the included recommendations.

ACEC California is a statewide association representing over 800 private engineering, surveying, and geotechnical firms, with a total of over 22,000 full time employees in the State of California. Our member firms have a central role in developing and building infrastructure in support of transportation, energy, water, housing, and sanitation. Planning, design, and construction of infrastructure starts with reliable and accurate mapping, one of the first steps in the infrastructure development process to help ensure public health and safety, as well as cost-effective and sustainable infrastructure.

Mapping, GIS, and land boundaries are useful for nearly every resident, business, and public agency in the State. We have become a geospatial data driven society and there are ubiquitous mapping applications for travel, commerce, demographics, assessments, marketing, fire and police response, utilities, autonomous vehicles, flood analysis, and many other purposes. The key to interaction of the underlying mapping for all of these applications is a common frame of reference. The mapping used in the engineering and construction of infrastructure, especially on large projects like roads and pipelines, is critically dependent on common frame of reference (geodetic datum), as defined by a system of known points.

Historically, these known points consisted of stationary monuments set in remote places and highly stable locations to avoid disturbance or movement. (Measurement to these monuments was typically a lengthy and expensive undertaking due to travel and access issues, thus discouraging widespread use of the common reference frame.) In reality, there is constant movement in California due to plate tectonics and earthquakes. Nearly one thousand continuously running GPS (CGPS) stations were constructed in California in the 1990's as part of project "Earthscope" to study these forces. This network of stations are all referenced to the national geodetic datum and updated constantly. Since then, the publicly available data from these stations has been used by a wide variety of geospatial professionals for dozens of mapping, navigation, and location purposes at little or no cost. For surveyors, the CGPS network made it easy to perform highly accurate surveys linked to a common frame of reference in California, and the cost to the public and time required to perform infrastructure surveys has dropped dramatically.

Sadly, the funding behind the Earthscope project is due to sunset in 2018. Surveyors and other geospatial professionals would lose a valuable and effective resource behind much of the geospatial data used to benefit so many facets of California commerce, infrastructure, government, and public safety.

The GCWG document formulates an implementation plan to maintain a viable CGPS network. ACEC California congratulates the GCWG on the completion of this work and endorses "Maintaining California's Geodetic Control System Strategic Assessment." California has a legitimate public policy interest in ensuring that accurate geospatial data is available and accessible for public health and safety, economic development and standard of living, infrastructure construction and maintenance, and data used to serve its constituency in many other ways. Mapping and GIS, and the economical and accessible common reference frame provided by the CGPS network, are the concern of the entire state.

Sincerely,

Mike Cooper, P.E.
President
ACEC California

Travis Bohan, PLS
Chair
ACEC California
Professional Land Surveyors Committee