

**New Jersey Department of Transportation
QUALITY IMPROVEMENT ADVISORY**

QUALITY MANAGEMENT SERVICES

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QIA No. QIA035

Approved: B. Strizki

Date: Sept. 26, 2002

Subject: Design Issue

Process Affected:

Scope Design Right of Way Utilities Environmental Historic Construction

Bureaus Affected:

All Consultants

Procedure(s) Affected:

Design

Nature of Problem(s):

Article 44 of the Standard Agreement (Standards and Procedures Section), details the requirement to provide ground control survey for projects to meet the NJ State Plane Coordinate System (NJSPCS) standards. Accordingly, the horizontal datum will be the New Jersey State Plane Coordinate System of 1983, which is based on the North American Datum of 1983 (NAD83). The vertical datum will be the North American Vertical Datum of 1988 (NAVD88).

It has been noted however, that certain consultant designers have referenced the North American Datum of 1927 (NAD 27) & the National Geodetic Vertical Datum of 1929 (NGVD 29) on plans that they have submitted. Apparently, some consultants are under the impression that when the Department mandated that plans again be developed in the English system, the survey datum can be reverted back to NAD 27 & NGVD 29 also. NAD 27 & NGVD 29 survey datums are based on English units of measurement.

Recommendation(s):

The North American Datum of 1983 (NAD83) has been adopted as the datum for the horizontal control for all NJDOT projects. All NJDOT survey projects shall be connected and tied to the New Jersey Geodetic Reference Network. This will allow all surveys to be correlated to a single reference network.

The North American Vertical Datum of 1988 (NAVD88) has been adopted as the reference datum for all vertical control on NJDOT projects.

An assumed vertical datum or the National Geodetic Vertical Datum of 1929 (NGVD29) will **not** be used unless authorized by the Regional Survey Supervisor with the concurrence of the Survey Services Manager.

In all cases, the horizontal and vertical datums used shall be noted on the Construction and ROW plans. All elevations are to be referenced to the NAVD88 datum. Included shall be a list of the benchmarks used along with the date the benchmark was recovered. All state plane coordinates are to be referenced to the NAD83 datum. Included shall be a list of the monuments used along with the date the monument was recovered.

Implementation: *Immediately*

Impact Assessment:

Schedule Quality Cost Scope

Cost Impact: N.A.



Superseded