# TEMPE, ARIZONA SURVEY CONTROL

I, Steven A. Wood, hereby certify that I am a registered Land Surveyor in the State of Indiana that the map correctly represents a survey made under my supervision and that the survey was performed in accordance with specifications defined by the Federal Geodetic Control Committee for the conduct of Second Order, Class I horizontal traverse control. All points indicated on this map as "Quarter Section Corners" are such corrected by common usage, or as designated for the purposes of this survey by the City Engineer of Tempe, Arizona.

Certified this 29th day of March, 1994

MID-STATES ENGINEERING CO., INC.

Steven A. Wood
Registered Land Surveyor "10324" - Indiana

I, Rudy J. Stratton, hereby certify that I am a registered Land Surveyor in the state of Arizona, and that the data presentation on this map correctly represents specifications made under my supervision.

All coordinates shown hereon indicate project datum ground coordinates, projected from the Arizona Coordinate System, Central Zone, by a combination scale and sea level factor of 1.000287(used transitted by -200,000 in the X direction, and by -400,000 in the Y direction. Coordinate values hereon are listed in Y-X, or Northing-Easting, in accordance with conventional usage. Where known to be incorrect, or conflicting with Arizona Coordinate Systems, utilize the following formulas

X ACS = X coordinate value on Arizona Coordinate System
Y ACS = Y coordinate value on Arizona Coordinate System
X PG = X project datum coordinate
Y PG = Y project datum coordinate

$X_{ACS} = (X_{PG} + 200{,}000) \times 0.999948$
$Y_{ACS} = (Y_{PG} + 400{,}000) \times 0.999948$

Distances shown hereon indicate ground level(200 feet AMSL) distances converted from sea level datum.

Bearings are referred to grid north of the Arizona Coordinate System, Central Zone.

+ Derivation of Combination Factor:

In the Central Zone of the Arizona State Plane Coordinate System, the grid distances are 0.999948 times the corresponding sea level distances. Between Tempe and Anderson Mountain, a distance that has adjusted ground distances. The appropriate scale factor to apply along the Centerline is 1.000200. Average scale factor is derived for the City of Tempe were

0.999948 ground to grid
1.000200 grid to ground

The sea level reduction factor, assuming a mean radius of the earth of 20,906,000 feet and an average ground elevation of 1200 feet, is approximately:

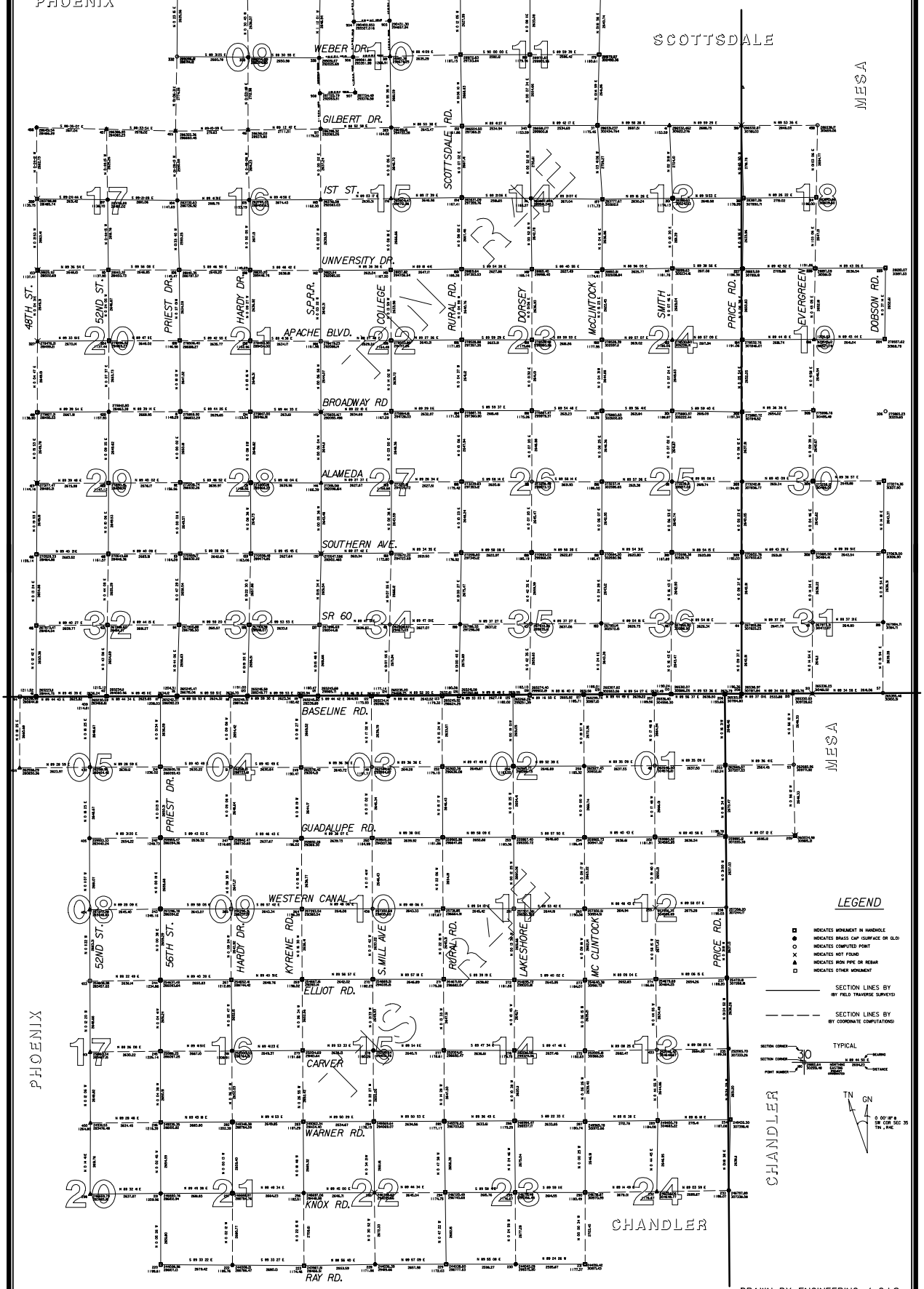
$$\frac{20{,}906{,}000}{20{,}906{,}000 + 1200} = .999426 \quad \text{ground to sea level}$$

1.000574 sea level to ground

The combined factors therefore become:

0.999200 X 0.999426 = 0.999628 ground to sea level grid
1.000299 X 1.000574 = 1.000872 sea level grid to ground

0 500 1000 2000
SCALE
MARCH 1993




## LEGEND

- INDICATES MONUMENT IN HANDHOLE
- INDICATES BRASS CAP (SURFACE OR CLD)
- INDICATES COMPUTED POINT
- INDICATES NOT FOUND
- INDICATES IRON PIPE OR REBAR
- INDICATES OTHER MONUMENT
- SECTION LINES BY (BY FIELD TRAVERSE SURVEYS)
- SECTION LINES BY (BY COORDINATE COMPUTATIONS)

TYPICAL

SECTION CORNER — BEARING
SECTION CORNER — DISTANCE
POINT NUMBER

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