

# Appendix F

**NOAA National Geodetic Survey Coordinate Conversion  
and Transformation Tool**



# NGS Coordinate Conversion and Transformation Tool (NCAT)

National Geodetic Survey

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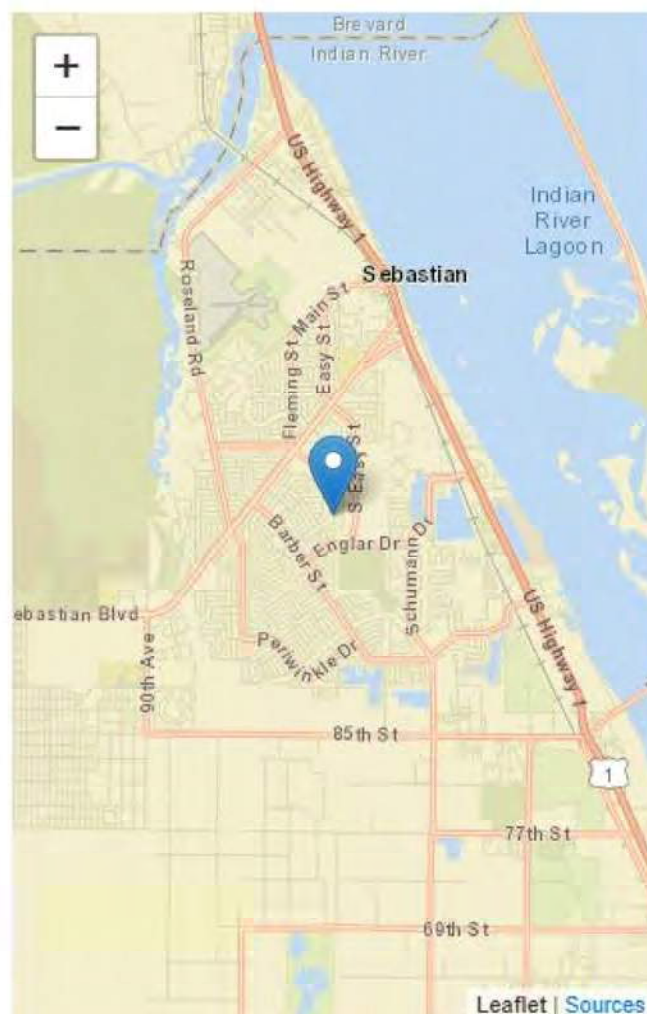
Convert/Transform from:

☐ Horizontal☒ Horizontal+height☐ XYZ

Select the type of horizontal coordinate:

☒ Geodetic lat-long☐ SPC☐ UTM☐ USNG

Select a height

☐ Ellipsoidal☒ Orthometric

Enter lat-lon in decimal degrees

Lat

Lon

or degrees-minutes-seconds

Lat

Lon

or drag map marker to a location of interest

Input reference frame  
(historically called 'horizontal datum')

Output reference frame  
(historically called 'horizontal datum')

*Don't see a reference frame in the list?  
Click [here](#) to learn more.*

Orthometric Height

Units of height

Input geopotential datum  
(historically called 'vertical datum')

Output geopotential datum  
(historically called 'vertical datum')

SPC zone

[Submit](#)

Click blue bar(s) to expand/collapse

| Transformed Coordinate    |                     |                           |                     |                                            |
|---------------------------|---------------------|---------------------------|---------------------|--------------------------------------------|
| Input Coordinate          |                     | Output Coordinate         |                     | Total Change + Uncertainty                 |
| Latitude                  | N27° 46' 55.15190"  | Latitude                  | N27° 46' 55.15190"  | Latitude 0.00000" ±0.000000"               |
|                           | N274655.15190       |                           | N274655.15190       | (0.000 m ±0.0000 m)*                       |
|                           | 27.7819866385       |                           | 27.7819866385       |                                            |
| Longitude                 | E279° 31' 14.45984" | Longitude                 | E279° 31' 14.45984" | Longitude 0.00000" ±0.000000"              |
|                           | W0802845.54016      |                           | W0802845.54016      | (0.000 m ±0.0000 m)*                       |
|                           | -80.4793167114      |                           | -80.4793167114      |                                            |
| Ellipsoid Height (usft)   | Not given           | Ellipsoid Height (usft)   | Not given           | Ellipsoid Height Not given                 |
| Orthometric Height (usft) | 22.500              | Orthometric Height (usft) | 21.037              | Orthometric Height -1.463 usft ±0.043 usft |
| Reference Frame           | NAD83(2011)         | Reference Frame           | NAD83(2011)         |                                            |
| Geopotential Datum        | NGVD29              | Geopotential Datum        | NAVD88              |                                            |
| Converted Coordinate      |                     |                           |                     |                                            |
| Customize Export          |                     |                           |                     |                                            |

\*Approximate value to aid interpretation and not an actual distance. See [TM NOS NGS 82](#) for more details.