

## C.1 Vertical Control

The vertical datum for this project is Mean Lower Low Water.

### ERS Datum Transformation

The following ellipsoid-to-chart vertical datum transformation was used:

Method	Ellipsoid to Chart Datum Separation File
ERS via VDATUM	OPR-R355-KR-20_ERTDM_WGS84- MLLW_04142020.qgfvom

*Table 11: ERS method and SEP file*

In order to reference soundings to Mean Low Low Water Datum, a VDatum separation model was applied to the Qinsy DB files via a separation file in the acquisition software.

## C.2 Horizontal Control

The horizontal datum for this project is North American Datum of 1983 (NAD 83).

The projection used for this project is Universal Transverse Mercator (UTM) Zone 4.

The following PPK methods were used for horizontal control:

- RTX

Applanix PosPac MMS was utilized to post process realtime positioning data utilizing Trimble's PP-RTX implementation of Trimble CenterPoint RTX to create a Smoothed Best Estimate of Trajectory (SBET).

### RTK

GNSS satellite corrections were received on each vessel using the G2+ carrier signal from the Marinestar Global Correction System maintained by Fugro.