

## C. Vertical and Horizontal Control

Per Section 5.2.2.1.3 of the 2020 Field Procedures Manual, no Horizontal and Vertical Control Report has been generated for H13413.

### 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 ERZT	S-N923_Vdatum_100m_NAD83-MLLW_geoid12b.csar

*Table 11: ERS method and SEP file*

Ellipsoidal Referenced Survey (ERS) methods were used as the final means of reducing H13413 to MLLW Datum for submission. VDatum separation model was provided with the project instructions. Sounding elevations relative to the ellipsoid were post-processed with the daily logged POSpac data to create a best statistical estimate of trajectory (SBET) file, as detailed in the DAPR. All of H13413 meets HSSD vertical accuracy requirements.

### 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 10.

The following PPK methods were used for horizontal control:

- Smart Base

Precise Positioning-SmartBase processing methods were used in Applanix POSpac MMS 8.4 software to produce SBETs for post-processing horizontal correction. All of H13413 meets HSSD horizontal accuracy requirements.