C. VERTICAL AND HORIZONTAL CONTROL *See also Evaluation Report*

Refer to the Horizontal and Vertical Control Report* for a detailed description of the horizontal and vertical control used during this survey. A summary of horizontal and vertical control used for the survey follows.

C.1 VERTICAL CONTROL

Vertical control for this survey was based on MLLW at the National Water Level Observation Network (NWLON) station at Virginia Key, FL (8723214). *Concur*

Station details are as follows:

		NAD83	
Gauge	**Location**	**Latitude (N)**	**Longitude (W)**
8723214	Virginia Key, FL	25° 43.9'	80° 09.7'

C.2 ZONING

Tide zones that cover the extent of the survey were derived from tide zone coordinates supplied by NOAA. Each of these tide zones use time and range correctors relative to the Virginia Key tide station. These are as follows:

Tide Zone	GS Identifier	Time Corrector	Range Corrector	Reference Station
FSE1	TA1	-48 minutes	x1.12	8723214
FSE2	TA2	-48 minutes	x1.12	8723214
FSE5	TA3	-30 minutes	x1.05	8723214
FSE6	TA4	-30 minutes	x1.07	8723214
FSE8	TA5	-18 minutes	x1.02	8723214
FSE9	TA6	-6 minutes	x1.00	8723214
FSE10	TA7	-18 minutes	x1.02	8723214
FSE11	TA8	-18 minutes	x1.00	8723214
FSE14	TA9	-6 minutes	x0.98	8723214
FSE16	TA10	+12 minutes	x0.98	8723214
FSE18	TA11	+24 minutes	x0.98	8723214
FSE18A	TA12	+36 minutes	x0.95	8723214
FSE20	TA13	+42 minutes	x0.98	8723214
FSE21	TA14	+36 minutes	x1.00	8723214
FSE21A	TA15	+42 minutes	x0.98	8723214
FSE22	TA16	+24 minutes	x1.00	8723214
FSE23	TA17	+12 minutes	x1.00	8723214
FSE24	TA18	+6 minutes	x1.00	8723214

Tide Zone	GS Identifier	Time Corrector	Range Corrector	Reference Station
FSE25	TA19	+24 minutes	x1.02	8723214
FSE26	TA20	+18 minutes	x1.02	8723214
FSE27	TA21	+6 minutes	x1.02	8723214
FSE28	TA22	-6 minutes	x1.05	8723214
FSE29	TA23	-18 minutes	x1.07	8723214
FSE34	TA24	+12 minutes	x1.07	8723214
SA227	TA25	-54 minutes	x1.22	8723214
SA228	TA26	-48 minutes	x1.20	8723214

For final tide application, the time and range correctors were applied to the smoothed tidal data provided by JOA. Soundings were then reduced to MLLW using these corrected tides. An analysis of depth benchmark and crossline comparisons, and overlaps of the mainlines of sounding concluded that final tide zoning was adequate.

The derived value for the difference between MLLW and MHW at the Virginia Key tide gauge is 0.66m. From the final zoning, a range factor of 1.22, 1.20, 1.02, 1.02, 1.02, 1.05, 1.07, 1.12, 1.07, and 1.07 was applicable for Sheet B, resulting in a MHW value of 0.72m.