

NOTES

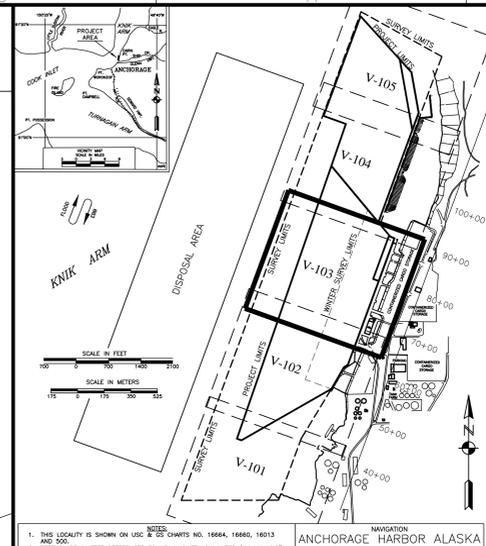
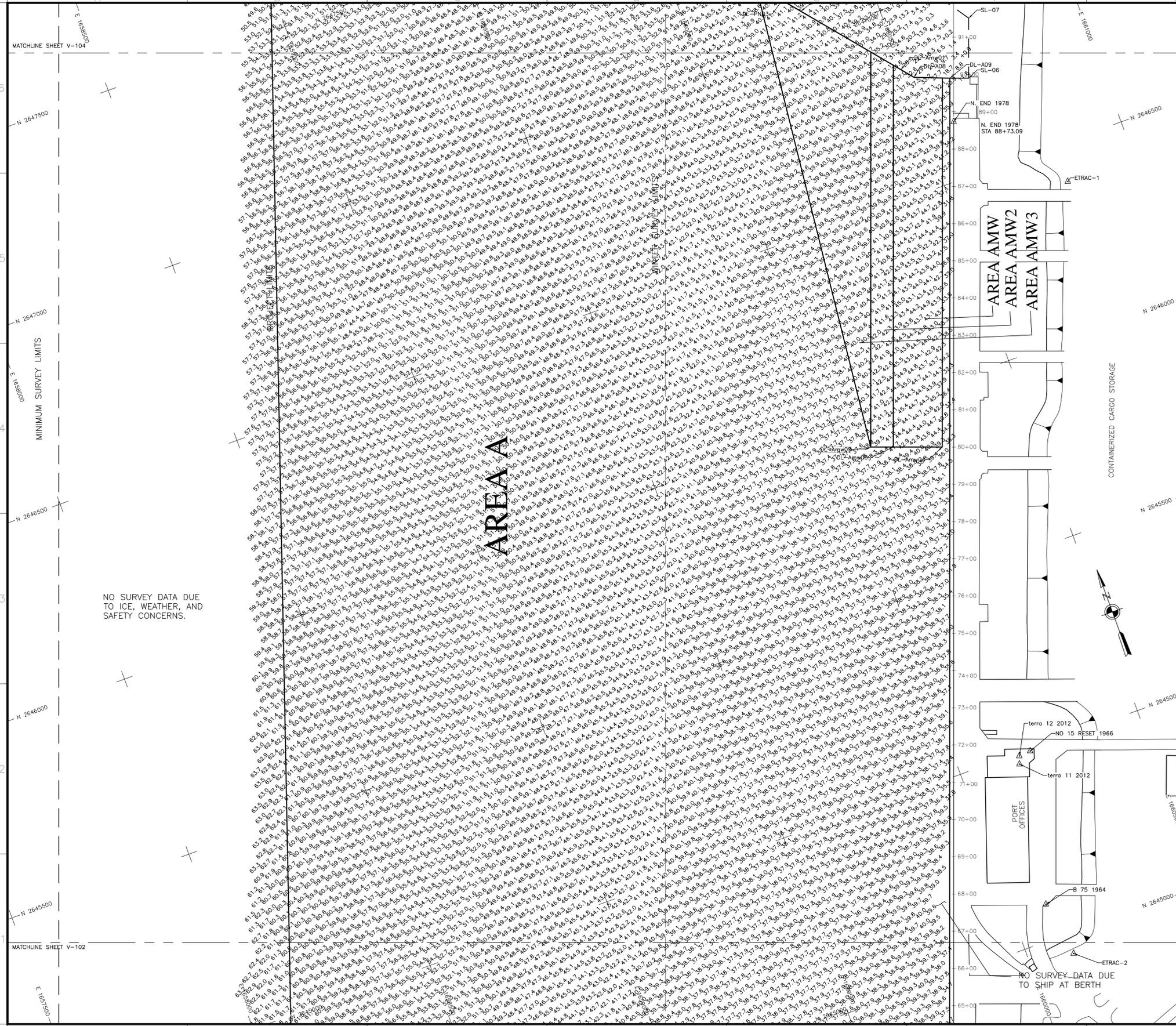
1. THIS LOCALITY IS SHOWN ON USCG 12 CHARTS NO. 16664, 16665, 16013 AND 500.

2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW) DATUM.

NAVIGATION ANCHORAGE HARBOR ALASKA
REVISED 2012

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2.646.649.75', E 1.660.584.91' AND USACE SBC "S END 1978" AS N 2.644.296.16', E 1.659.728.14'.
- VERTICAL CONTROL IS IN FEET REFERRING TO MEAN LOWER LOW WATER (MLLW)-0.0, BASED ON NOAA/NOS 1983-2001 TIDAL EPOCH BENCH MARK LIST "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.81'.
- BASE MAP AND PROJECT LIMITS WERE TRANSFORMED USING EXISTING BASELINE ("N END 1978" TO "S END 1978") PROVIDED BY USACE. TRANSLATED, ROTATED, AND SCALED TO 2012 BASELINE ("N END 1978" TO "S END 1978").
- BASE MAP FEATURES INCLUDING BUT NOT LIMITED TO DOCK FACES, BUILDINGS, PILING, AND ROADS ARE PROVIDED BY USACE AND ARE NOT VERIFIED BY ETRAC ENGINEERING.
- THIS SURVEY WAS PERFORMED BY ETRAC ENGINEERING ON 02 NOVEMBER, 2012.
- SOUNDINGS WERE COLLECTED USING A RSONIC 2024 MULTIBEAM ECHO SOUNDER OPERATING AT 200KHZ. SURFACE VELOCITY WAS MEASURED USING A VALEPORT SV-PLUS MOUNTED TO THE SONAR HEAD.
- SOUND VELOCITY PROFILES WERE COLLECTED USING A TELEDYNE ODOM DIGIBARS SVP UNIT.
- VESSEL POSITION, HEADING, ATTITUDE, AND RTK TIDES WERE ACQUIRED USING AN APLANIX POSMV WAVEMASTER GPS/INERTIAL POSITIONING SYSTEM RECEIVING RTK CORRECTIONS FROM A TIMBLE 750 GPS RECEIVER SET AT CONTROL STATION "TERRA 11 2012", LOCATED ATOP THE PORT OFFICE BUILDING.
- SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING QPS QINSY (V8.0). DATA PROCESSING WAS PERFORMED IN QPS QLOUD (V2.2.0.0).
- SOUNDING MINUS AND IN FEET UNLESS OTHERWISE INDICATED.
- SURVEY DATA IS VALID ONLY WITHIN THE TIMEFRAME IN WHICH THE SURVEY WAS CONDUCTED.

PROJECT AREA LIMITS	
CORNER	EASTING
DL-A01	2,644,010.53
DL-A02	2,643,923.23
DL-A03	2,643,835.93
DL-A04	2,643,748.63
DL-A05	2,643,661.33
DL-A06	2,643,574.03
DL-A07	2,643,486.73
DL-A08	2,643,399.43
DL-A09	2,643,312.13
DL-A10	2,643,224.83
DL-A11	2,643,137.53
DL-A12	2,643,050.23
DL-A13	2,642,962.93
DL-A14	2,642,875.63
DL-A15	2,642,788.33
DL-A16	2,642,701.03
DL-A17	2,642,613.73
DL-A18	2,642,526.43
DL-A19	2,642,439.13
DL-A20	2,642,351.83
DL-A21	2,642,264.53
DL-A22	2,642,177.23
DL-A23	2,642,090.93
DL-A24	2,642,003.63
DL-A25	2,641,916.33
DL-A26	2,641,829.03
DL-A27	2,641,741.73
DL-A28	2,641,654.43
DL-A29	2,641,567.13
DL-A30	2,641,479.83
DL-A31	2,641,392.53
DL-A32	2,641,305.23
DL-A33	2,641,217.93
DL-A34	2,641,130.63
DL-A35	2,641,043.33
DL-A36	2,640,956.03
DL-A37	2,640,868.73
DL-A38	2,640,781.43
DL-A39	2,640,694.13
DL-A40	2,640,606.83
DL-A41	2,640,519.53
DL-A42	2,640,432.23
DL-A43	2,640,344.93
DL-A44	2,640,257.63
DL-A45	2,640,170.33
DL-A46	2,640,083.03
DL-A47	2,639,995.73
DL-A48	2,639,908.43
DL-A49	2,639,821.13
DL-A50	2,639,733.83
DL-A51	2,639,646.53
DL-A52	2,639,559.23
DL-A53	2,639,471.93
DL-A54	2,639,384.63
DL-A55	2,639,297.33
DL-A56	2,639,210.03
DL-A57	2,639,122.73
DL-A58	2,639,035.43
DL-A59	2,638,948.13
DL-A60	2,638,860.83
DL-A61	2,638,773.53
DL-A62	2,638,686.23
DL-A63	2,638,598.93
DL-A64	2,638,511.63
DL-A65	2,638,424.33
DL-A66	2,638,337.03
DL-A67	2,638,249.73
DL-A68	2,638,162.43
DL-A69	2,638,075.13
DL-A70	2,637,987.83
DL-A71	2,637,900.53
DL-A72	2,637,813.23
DL-A73	2,637,725.93
DL-A74	2,637,638.63
DL-A75	2,637,551.33
DL-A76	2,637,464.03
DL-A77	2,637,376.73
DL-A78	2,637,289.43
DL-A79	2,637,202.13
DL-A80	2,637,114.83
DL-A81	2,637,027.53
DL-A82	2,636,940.23
DL-A83	2,636,852.93
DL-A84	2,636,765.63
DL-A85	2,636,678.33
DL-A86	2,636,591.03
DL-A87	2,636,503.73
DL-A88	2,636,416.43
DL-A89	2,636,329.13
DL-A90	2,636,241.83
DL-A91	2,636,154.53
DL-A92	2,636,067.23
DL-A93	2,635,979.93
DL-A94	2,635,892.63
DL-A95	2,635,805.33
DL-A96	2,635,718.03
DL-A97	2,635,630.73
DL-A98	2,635,543.43
DL-A99	2,635,456.13
DL-A100	2,635,368.83
DL-A101	2,635,281.53
DL-A102	2,635,194.23
DL-A103	2,635,106.93
DL-A104	2,635,019.63
DL-A105	2,634,932.33
DL-A106	2,634,845.03
DL-A107	2,634,757.73
DL-A108	2,634,670.43
DL-A109	2,634,583.13
DL-A110	2,634,495.83
DL-A111	2,634,408.53
DL-A112	2,634,321.23
DL-A113	2,634,233.93
DL-A114	2,634,146.63
DL-A115	2,634,059.33
DL-A116	2,633,972.03
DL-A117	2,633,884.73
DL-A118	2,633,797.43
DL-A119	2,633,710.13
DL-A120	2,633,622.83
DL-A121	2,633,535.53
DL-A122	2,633,448.23
DL-A123	2,633,360.93
DL-A124	2,633,273.63
DL-A125	2,633,186.33
DL-A126	2,633,099.03
DL-A127	2,633,011.73
DL-A128	2,632,924.43
DL-A129	2,632,837.13
DL-A130	2,632,749.83
DL-A131	2,632,662.53
DL-A132	2,632,575.23
DL-A133	2,632,487.93
DL-A134	2,632,400.63
DL-A135	2,632,313.33
DL-A136	2,632,226.03
DL-A137	2,632,138.73
DL-A138	2,632,051.43
DL-A139	2,631,964.13
DL-A140	2,631,876.83
DL-A141	2,631,789.53
DL-A142	2,631,702.23
DL-A143	2,631,614.93
DL-A144	2,631,527.63
DL-A145	2,631,440.33
DL-A146	2,631,353.03
DL-A147	2,631,265.73
DL-A148	2,631,178.43
DL-A149	2,631,091.13
DL-A150	2,631,003.83
DL-A151	2,630,916.53
DL-A152	2,630,829.23
DL-A153	2,630,741.93
DL-A154	2,630,654.63
DL-A155	2,630,567.33
DL-A156	2,630,480.03
DL-A157	2,630,392.73
DL-A158	2,630,305.43
DL-A159	2,630,218.13
DL-A160	2,630,130.83
DL-A161	2,630,043.53
DL-A162	2,629,956.23
DL-A163	2,629,868.93
DL-A164	2,629,781.63
DL-A165	2,629,694.33
DL-A166	2,629,607.03
DL-A167	2,629,519.73
DL-A168	2,629,432.43
DL-A169	2,629,345.13
DL-A170	2,629,257.83
DL-A171	2,629,170.53
DL-A172	2,629,083.23
DL-A173	2,628,995.93
DL-A174	2,628,908.63
DL-A175	2,628,821.33
DL-A176	2,628,734.03
DL-A177	2,628,646.73
DL-A178	2,628,559.43
DL-A179	2,628,472.13
DL-A180	2,628,384.83
DL-A181	2,628,297.53
DL-A182	2,628,210.23
DL-A183	2,628,122.93
DL-A184	2,628,035.63
DL-A185	2,627,948.33
DL-A186	2,627,861.03
DL-A187	2,627,773.73
DL-A188	2,627,686.43
DL-A189	2,627,599.13
DL-A190	2,627,511.83
DL-A191	2,627,424.53
DL-A192	2,627,337.23
DL-A193	2,627,249.93
DL-A194	2,627,162.63
DL-A195	2,627,075.33
DL-A196	2,626,988.03
DL-A197	2,626,900.73
DL-A198	2,626,813.43
DL-A199	2,626,726.13
DL-A200	2,626,638.83
DL-A201	2,626,551.53
DL-A202	2,626,464.23
DL-A203	2,626,376.93
DL-A204	2,626,289.63
DL-A205	2,626,202.33
DL-A206	2,626,115.03
DL-A207	2,626,027.73
DL-A208	2,625,940.43
DL-A209	2,625,853.13
DL-A210	2,625,765.83
DL-A211	2,625,678.53
DL-A212	2,625,591.23
DL-A213	2,625,503.93
DL-A214	2,625,416.63
DL-A215	2,625,329.33
DL-A216	2,625,242.03
DL-A217	2,625,154.73
DL-A218	2,625,067.43
DL-A219	2,624,980.13
DL-A220	2,624,892.83
DL-A221	2,624,805.53
DL-A222	2,624,718.23
DL-A223	2,624,630.93
DL-A224	2,624,543.63
DL-A225	2,624,456.33
DL-A226	2,624,369.03
DL-A227	2,624,281.73
DL-A228	2,624,194.43
DL-A229	2,624,107.13
DL-A230	2,624,019.83
DL-A231	2,623,932.53
DL-A232	2,623,845.23
DL-A233	2,623,757.93
DL-A234	2,623,670.63
DL-A235	2,623,583.33
DL-A236	2,623,496.03
DL-A237	2,623,408.73
DL-A238	2,623,321.43
DL-A239	2,623,234.13
DL-A240	2,623,146.83
DL-A241	2,623,059.53
DL-A242	2,622,972.23
DL-A243	2,622,884.93
DL-A244	2,622,797.63
DL-A245	2,622,710.33
DL-A246	2,622,623.03
DL-A247	2,622,535.73
DL-A248	2,622,448.43
DL-A249	2,622,361.13
DL-A250	2,622,273.83
DL-A251	2,622,186.53
DL-A252	2,622,099.23
DL-A253	2,622,011.93
DL-A254	2,621,924.63
DL-A255	2,621,837.33
DL-A256	2,621,750.03
DL-A257	2,621,662.73
DL-A258	2,621,575.43
DL-A259	2,621,488.13
DL-A260	2,621,400.83
DL-A261	2,621,313.53
DL-A262	2,621,226.23
DL-A263	2,621,138.93
DL-A264	2,621,051.63
DL-A265	2,620,964.33
DL-A266	2,620,877.03
DL-A267	2,620,789.73
DL-A268	2,620,702.43
DL-A269	2,620,615.13
DL-A270	2,620,527.83
DL-A271	2,620,440.53
DL-A272	2,620,353.23
DL-A273	2,620,265.93
DL-A274	2,620,178.63
DL-A275	2,620,091.33
DL-A276	2,620,004.03
DL-A277	2,619,916.73
DL-A278	2,619,829.43
DL-A279	2,619,742.13
DL-A280	2,619,654.83
DL-A281	2,619,567.53
DL-A282	2,619,480.23
DL-A283	2,619,392.93
DL-A284	2,619,305.63
DL-A285	2,619,218.33
DL-A286	2,619,131.03
DL-A287	2,619,043.73
DL-A288	2,618,956.43
DL-A289	2,618,869.13
DL-A290	2,618,781.83
DL-A291	2,618,694.53
DL-A292	2,618,607.23
DL-A293	2,618,519.93
DL-A294	2,618,432.63
DL-A295	2,618,345.33
DL-A296	2,618,258.03
DL-A297	2,618,170.73
DL-A298	2,618,083.43
DL-A299	2,617,996.13
DL-A300	2,617,908.83
DL-A301	2,617,821.53
DL-A302	2,617,734.23
DL-A303	2,617,646.93
DL-A304	2,617,559.63
DL-A305	2,617,472.33
DL-A306	2,617,385.03
DL-A307	2,617,297.73
DL-A308	2,617,210.43
DL-A309	2,617,123.13
DL-A310	2,617,035.83
DL-A311	2,616,948.53
DL-A312	2,616,861.23
DL-A313	2,616,773.93
DL-A314	2,616,686.63
DL-A315	2,616,599.33
DL-A316	2,616,512.03
DL-A317	2,616,424.73
DL-A318	2,616,337.43
DL-A319	2,616,250.13
DL-A320	2,616,162.83
DL-A321	2,616,075.53
DL-A322	2,615,988.23
DL-A323	2,615,900.93
DL-A324	2,615,813.63
DL-A325	2,615,726.33
DL-A326	2,615,639.03
DL-A327	2,615,551.73
DL-A328	2,615,464.43
DL-A329	2,615,377.13
DL-A330	2,615,289.83
DL-A331	2,615,202.53
DL-A332	2,615,115.23
DL-A333	2,615,027.93
DL-A334	2,614,940.63
DL-A335	2,614,853.33
DL-A336	2,614,766.03
DL-A337	2,614,678.73
DL-A338	2,614,591.43
DL-A339	2,614,504.13
DL-A340	2,614,416.83
DL-A341	2,614,329.53
DL-A342	2,614,242.23
DL-A343	2,614,154.93
DL-A344	2,614,067.63
DL-A345	2,613,980.33
DL-A346	2,613,893.03
DL-A347	2,613,805.73
DL-A348	2,613,718.43
DL-A349	2,613,631.13
DL-A350	2,613,



1. THIS LOCALITY IS SHOWN ON USCG 22 CHARTS NO. 16664, 16665, 16013 AND 500.
 2. DEPTHS ARE IN FEET REFERENCED TO MEAN LOWER LOW WATER (MLLW) DATUM.

- NOTES**
- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2646649.75', E 1.660584.91' AND USACE SBC "S END 1978" AS N 2644296.16', E 1.659728.14'.
 - VERTICAL CONTROL IS IN FEET REFERRING TO MEAN LOWER LOW WATER (MLLW)-0.0, BASED ON NOAA/NOS 1983-2001 TIDAL EPOCH BENCH MARK LIST "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCGS SBC "TIDAL 16 1966" AS 40.53', USCGS SBC "B 75 1964" AS 36.81'.
 - BASE MAP AND PROJECT LIMITS WERE TRANSFORMED USING EXISTING BASELINE ("N END 1978" TO "S END 1978") PROVIDED BY USACE, TRANSLATED, ROTATED, AND SCALED TO 2012 BASELINE ("N END 1978" TO "S END 1978").
 - BASE MAP FEATURES INCLUDING BUT NOT LIMITED TO DOCK FACIES, BUILDINGS, PILING, AND ROADS ARE PROVIDED BY USACE AND ARE NOT VERIFIED BY ETRAC ENGINEERING.
 - THIS SURVEY WAS PERFORMED BY ETRAC ENGINEERING ON 02 NOVEMBER, 2012.
 - SOUNDINGS WERE COLLECTED USING A RSONIC 2024 MULTIBEAM ECHO SOUNDER OPERATING AT 200KHZ. SURFACE VELOCITY WAS MEASURED USING A VALEPORT SV-PLUS MOUNTED TO THE SONAR HEAD.
 - SOUND VELOCITY PROFILES WERE COLLECTED USING A TELEDYNE ODOM DIGIBARS SVP UNIT.
 - VESSEL POSITION, HEADING, ATTITUDE, AND RTK TIDES WERE ACQUIRED USING AN APPLANIX POSMV WAVEMASTER GPS/INERTIAL POSITIONING SYSTEM RECEIVING RTK CORRECTIONS FROM A TIMBLE 750 GPS RECEIVER SET AT CONTROL STATION "TERRA 11 2012", LOCATED ATOP THE PORT OFFICE BUILDING.
 - SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING QPS QINSY (V8.0). DATA PROCESSING WAS PERFORMED IN QPS QLOAD (V2.2.0.0).
 - SOUNDING MINUS AND IN FEET UNLESS OTHERWISE INDICATED.
 - SURVEY DATA IS VALID ONLY WITHIN THE TIMEFRAME IN WHICH THE SURVEY WAS CONDUCTED.

PROJECT AREA LIMITS	
CORNER	EASTING
DL-A01	2644010.53
DL-A02	2643923.23
DL-A03	2643836.13
DL-A04	2643749.03
DL-A05	2643662.03
DL-A06	2643575.03
DL-B01	2649256.22
DL-B02	2649169.12
DL-B03	2649082.02
DL-B04	2648995.02
DL-B05	2648908.02
DL-B06	2648821.02
DL-B07	2648734.02
DL-B08	2648647.02
DL-B09	2648560.02
DL-B10	2648473.02
DL-B11	2648386.02
DL-B12	2648300.02
DL-B13	2648213.02
DL-B14	2648126.02
DL-B15	2648040.02
DL-B16	2647953.02
DL-B17	2647866.02
DL-B18	2647780.02
DL-B19	2647693.02
DL-B20	2647606.02
DL-B21	2647520.02
DL-B22	2647433.02
DL-B23	2647346.02
DL-B24	2647260.02
DL-B25	2647173.02
DL-B26	2647086.02
DL-B27	2647000.02
DL-B28	2646913.02
DL-B29	2646826.02
DL-B30	2646740.02
DL-B31	2646653.02
DL-B32	2646566.02
DL-B33	2646480.02
DL-B34	2646393.02
DL-B35	2646306.02
DL-B36	2646220.02
DL-B37	2646133.02
DL-B38	2646046.02
DL-B39	2645960.02
DL-B40	2645873.02
DL-B41	2645786.02
DL-B42	2645700.02
DL-B43	2645613.02
DL-B44	2645526.02
DL-B45	2645440.02
DL-B46	2645353.02
DL-B47	2645266.02
DL-B48	2645180.02
DL-B49	2645093.02
DL-B50	2645006.02
DL-B51	2644920.02
DL-B52	2644833.02
DL-B53	2644746.02
DL-B54	2644660.02
DL-B55	2644573.02
DL-B56	2644486.02
DL-B57	2644400.02
DL-B58	2644313.02
DL-B59	2644226.02
DL-B60	2644140.02
DL-B61	2644053.02
DL-B62	2643966.02
DL-B63	2643880.02
DL-B64	2643793.02
DL-B65	2643706.02
DL-B66	2643620.02
DL-B67	2643533.02
DL-B68	2643446.02
DL-B69	2643360.02
DL-B70	2643273.02
DL-B71	2643186.02
DL-B72	2643100.02
DL-B73	2643013.02
DL-B74	2642926.02
DL-B75	2642840.02
DL-B76	2642753.02
DL-B77	2642666.02
DL-B78	2642580.02
DL-B79	2642493.02
DL-B80	2642406.02
DL-B81	2642320.02
DL-B82	2642233.02
DL-B83	2642146.02
DL-B84	2642060.02
DL-B85	2641973.02
DL-B86	2641886.02
DL-B87	2641800.02
DL-B88	2641713.02
DL-B89	2641626.02
DL-B90	2641540.02
DL-B91	2641453.02
DL-B92	2641366.02
DL-B93	2641280.02
DL-B94	2641193.02
DL-B95	2641106.02
DL-B96	2641020.02
DL-B97	2640933.02
DL-B98	2640846.02
DL-B99	2640760.02
DL-B00	2640673.02

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACNMT/THOSAA CERTIFIED HYDROGRAPHER

W. MEL SAUNDERS CH(152)



SUMMER SURVEY LIMITS	
CORNER	EASTING
DL-A01	2644010.53
DL-A02	2643923.23
DL-A03	2643836.13
DL-A04	2643749.03
DL-A05	2643662.03
DL-A06	2643575.03
DL-B01	2649256.22
DL-B02	2649169.12
DL-B03	2649082.02
DL-B04	2648995.02
DL-B05	2648908.02
DL-B06	2648821.02
DL-B07	2648734.02
DL-B08	2648647.02
DL-B09	2648560.02
DL-B10	2648473.02
DL-B11	2648386.02
DL-B12	2648300.02
DL-B13	2648213.02
DL-B14	2648126.02
DL-B15	2648040.02
DL-B16	2647953.02
DL-B17	2647866.02
DL-B18	2647780.02
DL-B19	2647693.02
DL-B20	2647606.02
DL-B21	2647520.02
DL-B22	2647433.02
DL-B23	2647346.02
DL-B24	2647260.02
DL-B25	2647173.02
DL-B26	2647086.02
DL-B27	2647000.02
DL-B28	2646913.02
DL-B29	2646826.02
DL-B30	2646740.02
DL-B31	2646653.02
DL-B32	2646566.02
DL-B33	2646480.02
DL-B34	2646393.02
DL-B35	2646306.02
DL-B36	2646220.02
DL-B37	2646133.02
DL-B38	2646046.02
DL-B39	2645960.02
DL-B40	2645873.02
DL-B41	2645786.02
DL-B42	2645700.02
DL-B43	2645613.02
DL-B44	2645526.02
DL-B45	2645440.02
DL-B46	2645353.02
DL-B47	2645266.02
DL-B48	2645180.02
DL-B49	2645093.02
DL-B50	2645006.02
DL-B51	2644920.02
DL-B52	2644833.02
DL-B53	2644746.02
DL-B54	2644660.02
DL-B55	2644573.02
DL-B56	2644486.02
DL-B57	2644400.02
DL-B58	2644313.02
DL-B59	2644226.02
DL-B60	2644140.02
DL-B61	2644053.02
DL-B62	2643966.02
DL-B63	2643880.02
DL-B64	2643793.02
DL-B65	2643706.02
DL-B66	2643620.02
DL-B67	2643533.02
DL-B68	2643446.02
DL-B69	2643360.02
DL-B70	2643273.02
DL-B71	2643186.02
DL-B72	2643100.02
DL-B73	2643013.02
DL-B74	2642926.02
DL-B75	2642840.02
DL-B76	2642753.02
DL-B77	2642666.02
DL-B78	2642580.02
DL-B79	2642493.02
DL-B80	2642406.02
DL-B81	2642320.02
DL-B82	2642233.02
DL-B83	2642146.02
DL-B84	2642060.02
DL-B85	2641973.02
DL-B86	2641886.02
DL-B87	2641800.02
DL-B88	2641713.02
DL-B89	2641626.02
DL-B90	2641540.02
DL-B91	2641453.02
DL-B92	2641366.02
DL-B93	2641280.02
DL-B94	2641193.02
DL-B95	2641106.02
DL-B96	2641020.02
DL-B97	2640933.02
DL-B98	2640846.02
DL-B99	2640760.02
DL-B00	2640673.02

DISPOSAL AREA LIMITS	
CORNER	EASTING
DL-D01	2650135.73
DL-D02	2650048.63
DL-D03	2649961.53
DL-D04	2649874.43
DL-D05	2649787.33
DL-D06	2649700.23
DL-D07	2649613.13
DL-D08	2649526.03
DL-D09	2649439.03
DL-D10	2649352.03
DL-D11	2649265.03
DL-D12	2649178.03
DL-D13	2649091.03
DL-D14	2649004.03
DL-D15	2648917.03
DL-D16	2648830.03
DL-D17	2648743.03
DL-D18	2648656.03
DL-D19	2648569.03
DL-D20	2648482.03
DL-D21	2648395.03
DL-D22	2648308.03
DL-D23	2648221.03
DL-D24	2648134.03
DL-D25	2648047.03
DL-D26	2647960.03
DL-D27	2647873.03
DL-D28	2647786.03
DL-D29	2647700.03
DL-D30	2647613.03
DL-D31	2647526.03
DL-D32	2647440.03
DL-D33	2647353.03
DL-D34	2647266.03
DL-D35	2647180.03
DL-D36	2647093.03
DL-D37	2647006.03
DL-D38	2646920.03
DL-D39	2646833.03
DL-D40	2646746.03
DL-D41	2646660.03
DL-D42	2646573.03
DL-D43	2646486.03
DL-D44	2646400.03
DL-D45	2646313.03
DL-D46	2646226.03
DL-D47	2646140.03
DL-D48	2646053.03
DL-D49	2645966.03
DL-D50	2645880.03
DL-D51	2645793.03
DL-D52	2645706.03
DL-D53	2645620.03
DL-D54	2645533.03
DL-D55	2645446.03
DL-D56	2645360.03
DL-D57	2645273.03
DL-D58	2645186.03
DL-D59	2645100.03
DL-D60	2645013.03
DL-D61	2644926.03
DL-D62	2644840.03
DL-D63	2644753.03
DL-D64	2644666.03
DL-D65	2644580.03
DL-D66	2644493.03
DL-D67	2644406.03
DL-D68	2644320.03
DL-D69	2644233.03
DL-D70	2644146.03
DL-D71	2644060.03
DL-D72	2643973.03
DL-D73	2643886.03
DL-D74	2643800.03
DL-D75	2643713.03
DL-D76	2643626.03
DL-D77	2643540.03
DL-D78	2643453.03
DL-D79	2643366.03
DL-D80	2643280.03
DL-D81	2643193.03
DL-D82	2643106.03
DL-D83	2643020.03
DL-D84	2642933.03
DL-D85	2642846.03
DL-D86	2642760.03
DL-D87	2642673.03
DL-D88	2642586.03
DL-D89	2642500.03
DL-D90	2642413.03
DL-D91	2642326.03
DL-D92	2642240.03
DL-D93	2642153.03
DL-D94	2642066.03
DL-D95	2641980.03
DL-D96	2641893.03
DL-D97	2641806.03
DL-D98	2641720.03
DL-D99	2641633.03
DL-D00	2641546.03

POINT ID	NORTHING	EASTING	ELEV. (MGS)	ELEV. (NAD83)	DESCRIPTION
5920 D 1980	2640284.57	2645986.34	44.69	34.2	
5920 THERM 1988	2642744.64	2640181.94	37.19	26.7	
645 PHOTOGRAPH	2644249.91	2649275.86	40.53	30.86	
ANZ	2637462.07	2643484.12	176.66	166.17	
ANDERSON DOCK	2639486.86	2637453.53	66.84	56.27	
B 75 1964	2644592.40	2640096.71	36.83	26.32	
ETRAC 1	2646395.45	2640284.83	38.38	27.89	
ETRAC 2	2644842.91	2640120.79	39.21	28.69	
N END 1978	2646649.75	2640584.91	43.56	33.07	USACE SBC 1978
SBC	2640589.07	2640120.79	40.53	30.86	USACE SBC 1978
N END 1978	2644993.12	2640158.28	37.14	26.66	
PORT 1989	2639284.24	2640255.53	39.27	28.78	
TERRA 11 2012	2644909.70	2640120.79	40.43	30.86	ALL THREAD ON ROOF POA BLDG
TERRA 12 2012	2644990.60	2640166.65	81.16	70.67	ALL THREAD ON ROOF POA BLDG
TSA	2640589.07	2640584.12	68.84	57.95	
UAAG	2637295.76	2637455.72	205.75	196.26	
ZANI	2641258.26	2639485.49	251.77	243.28	

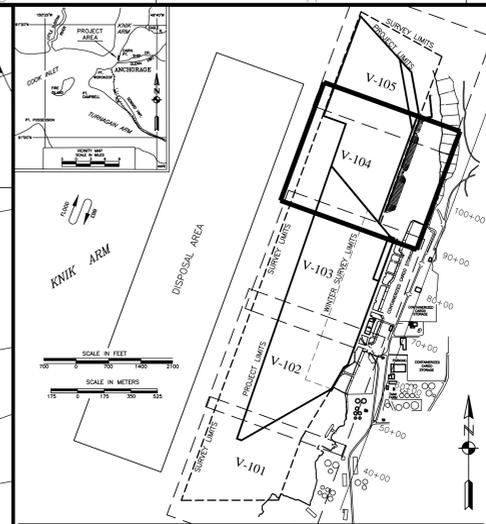
SCALE IN FEET HORIZONTAL SCALE: 1"=100'

BATHYMETRY



CONTRACT NO. W911KB-12-C-0004
 CONTRACTOR: MANSON CONSTRUCTION CO.
 CITY: SEATTLE STATE: WASHINGTON
 Recommended: [Signature] Date: [Date]
 Approved: [Signature] Date: [Date]

Date	
------	--



ANCHORAGE HARBOR ALASKA

- NOTES**
- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, US SURVEY FEET, HOLDING USACE SBC "N END 1978" AS N 2,646,649.75', E 1,660,584.91' AND USACE SBC "S END 1978" AS N 2,644,296.16', E 1,659,728.14'.
 - VERTICAL CONTROL IS IN FEET REFERRING TO MEAN LOWER LOW WATER (MLLW-0.0), BASED ON NOAA/NOS 1983-2001 TIDAL EPOCH BENCH MARK LIST "9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA" PUBLISHED 4/21/2003, HOLDING USCS SBC "TIDAL 16 1966" AS 40.53', USCS SBC "B 75 1964" AS 36.81'.
 - BASE MAP AND PROJECT LIMITS WERE TRANSFORMED USING EXISTING BASELINE ("N END 1978" TO "S END 1978") PROVIDED BY USACE, TRANSLATED, ROTATED, AND SCALED TO 2012 BASELINE ("N END 1978" TO "S END 1978").
 - BASE MAP FEATURES INCLUDING BUT NOT LIMITED TO DOCK FACES, BUILDINGS, PILING, AND ROADS ARE PROVIDED BY USACE AND ARE NOT VERIFIED BY ETRAC ENGINEERING.
 - THIS SURVEY WAS PERFORMED BY ETRAC ENGINEERING ON 02 NOVEMBER, 2012.
 - SOUNDINGS WERE COLLECTED USING A RSONIC 2024 MULTIBEAM ECHO SOUNDER OPERATING AT 200KHZ. SURFACE VELOCITY WAS MEASURED USING A VALEPORT SV-PLUS MOUNTED TO THE SONAR HEAD.
 - SOUND VELOCITY PROFILES WERE COLLECTED USING A TELEDYNE ODOM DIGIBARS SVP UNIT.
 - VESSEL POSITION, HEADING, ATTITUDE, AND RTK TIDES WERE ACQUIRED USING AN APPLANIX POSMV WAVEMASTER GPS/INERTIAL POSITIONING SYSTEM RECEIVING RTK CORRECTIONS FROM A TIMBLE 750 GPS RECEIVER SET AT CONTROL STATION "TERRA 11 2012", LOCATED ATOP THE PORT OFFICE BUILDING.
 - SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING QPS QINSY (V8.0). DATA PROCESSING WAS PERFORMED IN QPS QLOUD (V2.2.0.0).
 - SOUNDING MINUS AND IN FEET UNLESS OTHERWISE INDICATED.
 - SURVEY DATA IS VALID ONLY WITHIN THE TIMEFRAME IN WHICH THE SURVEY WAS CONDUCTED.

PROJECT AREA LIMITS

CORNER	NORTHING	EASTING
DL-A01	2,644,010.53	1,659,632.55
DL-A02	2,643,952.23	1,659,524.59
DL-A03	2,644,083.83	1,659,234.45
DL-A04	2,642,359.80	1,657,316.67
DL-A05	2,642,398.88	1,655,216.38
DL-A06	2,644,421.32	1,659,254.00
DL-B01	2,649,256.22	1,659,556.97
DL-B02	2,649,430.21	1,659,036.40
DL-B03	2,651,004.46	1,659,895.47
DL-B04	2,650,982.00	1,660,961.32
DL-B05	2,649,799.89	1,661,152.52
DL-PND1	2,649,498.41	1,661,135.91
DL-PND2	2,649,123.21	1,661,000.00
DL-PND3	2,647,112.20	1,660,827.74
DL-A07	2,647,767.42	1,660,926.60
DL-A08	2,646,789.09	1,660,912.52
DL-A09	2,646,703.41	1,660,615.09
DL-A010	2,646,529.43	1,660,550.79
DL-A011	2,645,833.07	1,660,276.28
DL-A012	2,645,877.50	1,660,254.15
DL-WB01	2,649,014.91	1,661,021.12
DL-WB02	2,650,663.91	1,660,728.64

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THOS/A CERTIFIED HYDROGRAPHER

W. Mel Saunders
W MEL SAUNDERS CH(152)

Summer Survey Limits

CORNER	NORTHING	EASTING
DL-A01	2,644,010.53	1,659,632.55
DL-A02	2,643,983.57	1,659,254.35
DL-A07	2,647,002.41	1,660,904.43
DL-A08	2,646,789.09	1,660,912.52
DL-A09	2,646,703.41	1,660,615.09
DL-A010	2,651,702.21	1,660,898.33
SL-01	2,650,726.25	1,661,637.33
SL-02	2,642,398.54	1,658,809.00
SL-03	2,641,002.81	1,658,148.19
SL-04	2,641,002.81	1,656,837.63
SL-05	2,646,746.20	1,650,602.03
SL-06	2,646,807.87	1,649,712.23
SL-07	2,647,352.20	1,649,406.89

DISPOSAL AREA LIMITS

DESCRIPTION	NORTHING	EASTING
D001	2,650,135.73	1,658,618.23
D002	2,650,809.89	1,656,779.24
D003	2,642,154.11	1,643,709.90
D004	2,641,070.05	1,643,579.94

CONTROL DATA

POINT ID	NORTHING	EASTING	ELEV. (MGSN)	ELEV. (NAVD83)	DESCRIPTION
5520 D 1980	2,640,284.57	1,659,986.34	44.69	34.2	
5500 THERM 1988	2,642,784.64	1,660,181.96	37.19	26.7	
445 WOODHALL	2,644,840.81	1,660,975.86	40.53	30.84	
ANZC	2,637,462.07	1,643,384.12	176.66	166.17	
ANDERSON DOCK	2,639,486.86	1,657,147.53	46.56	36.27	
B 75 1964	2,644,592.40	1,660,096.71	36.83	26.32	
ETRAC 1	2,646,355.41	1,660,824.83	38.38	27.89	
ETRAC 2	2,644,842.91	1,660,120.78	39.21	28.89	
N END 1978	2,646,649.75	1,660,584.91	41.56	31.07	USACE SBC 1978
N END 1978	2,644,296.16	1,660,520.39	40.43	30.84	USACE SBC 1978
NO 15 REEF 1966	2,644,993.12	1,660,158.28	37.14	26.65	
PORT 1989	2,639,924.24	1,656,925.53	39.27	28.78	
TERRA 11 2012	2,644,906.70	1,660,120.78	40.43	30.84	ALL THREAD ON ROOF POA BLDG
TERRA 12 2012	2,644,990.60	1,660,166.65	41.16	30.67	ALL THREAD ON ROOF POA BLDG
TSA	2,650,809.89	1,656,858.12	43.84	33.95	
UAGG	2,637,255.76	1,651,455.72	205.75	195.26	
ZANI	2,641,258.26	1,679,445.49	251.77	243.28	



CONTRACT NO. W911KB-12-C-0004
 CONTRACTOR: MANSON CONSTRUCTION CO.
 CITY: SEATTLE STATE: WASHINGTON
 Recommended: [Signature] DATE: [Blank]
 Approved: [Signature] DATE: [Blank]

Date	Drawn	Checked	Reviewed	Permitted
11/08/12	S. OLSON	S. OLSON	J. ANDERSON	A. CHURCHILL

U.S. ARMY ENGINEER DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

POSTDREDGE SURVEY

ANCHORAGE, ALASKA
 PORT OF ANCHORAGE
 2012-2014
 MAINTENANCE DREDGING
 02 NOVEMBER, 2012
 POSTDREDGE SURVEY

Reference number:
V-104
 Sheet 4 of 6

NO SURVEY DATA DUE TO ICE, WEATHER, AND SAFETY CONCERNS.

SCALE IN FEET
 HORIZONTAL SCALE: 1"=100'

BATHYMETRY

THIS HYDROGRAPHIC SURVEY WAS COMPLETED UNDER THE OVERSIGHT OF AN ACSM/THOSOA CERTIFIED HYDROGRAPHER

W MEL SAUNDERS CH(152)



NOTES

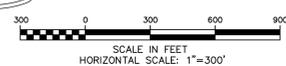
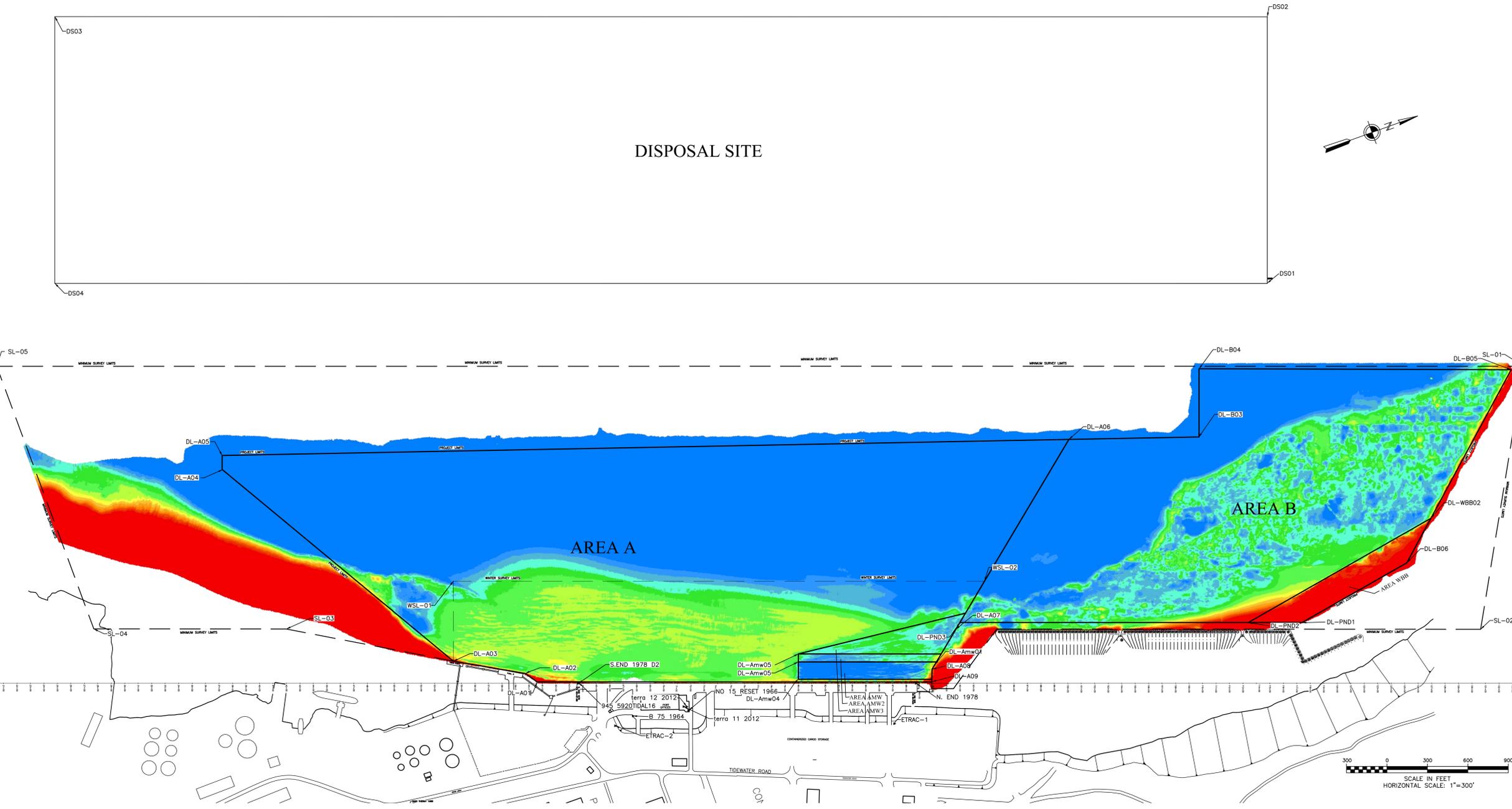
- 1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83, US SURVEY FEET, HOLDING USACE SBC 'N END 1978' AS N 2,646,649.75', E 1,660,584.91' AND USACE SBC 'S END 1978' AS N 2,644,296.16', E 1,659,728.14'.
2. VERTICAL CONTROL IS IN FEET REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0), BASED ON NOAA/NOS 1983-2001 TIDAL EPOCH BENCH MARK LIST '9455920 ANCHORAGE, KNIK ARM, COOK INLET, ALASKA' PUBLISHED 4/21/2003, HOLDING USCGS SBC 'TIDAL 16 1966' AS 40.53', USCGS SBC 'B 75 1964' AS 36.81'.
3. BASE MAP AND PROJECT LIMITS WERE TRANSFORMED USING EXISTING BASELINE ('N END 1978' TO 'S END 1978') PROVIDED BY USACE, TRANSLATED, ROTATED, AND SCALED TO 2012 BASELINE ('N END 1978' TO 'S END 1978').
4. BASE MAP FEATURES INCLUDING BUT NOT LIMITED TO DOCK FACES, BUILDINGS, PILINGS, AND ROADS ARE PROVIDED BY USACE AND ARE NOT VERIFIED BY ETRAC ENGINEERING.
5. THIS SURVEY WAS PERFORMED BY ETRAC ENGINEERING ON 02 NOVEMBER, 2012.
6. SOUNDINGS WERE COLLECTED USING A RESONIC 2024 MULTIBeam ECHO SOUNDER OPERATING AT 200KHz. SURFACE VELOCITY WAS MEASURED USING A VALEPORT SV-PLUS MOUNTED TO THE SONAR HEAD.
7. SOUND VELOCITY PROFILES WERE COLLECTED USING A TELEDYNE ODOM DIGIBAR-S SVP UNIT.
8. VESSEL POSITION, HEADING, ATTITUDE, AND RTK TIDES WERE ACQUIRED USING AN APPLIX POSMV WAVEMASTER GPS/INERTIAL POSITIONING SYSTEM RECEIVING RTK CORRECTIONS FROM A TIMBLE 750 GPS RECEIVER SET AT CONTROL STATION 'TERRA 11 2012', LOCATED ATOP THE PORT OFFICE BUILDING.
9. SURVEY NAVIGATION AND DATA COLLECTION WERE PERFORMED USING QPS QINSY (V8.0). DATA PROCESSING WAS PERFORMED IN QPS QLOUD (V2.2.0.0)
10. SOUNDING MINUS AND IN FEET UNLESS OTHERWISE INDICATED.
11. SURVEY DATA IS VALID ONLY WITHIN THE TIMEFRAME IN WHICH THE SURVEY WAS CONDUCTED.

SOUNDING ELEVATIONS TABLE with columns: MINIMUM ELEVATION, MAXIMUM ELEVATION, COLOR. Includes color-coded depth scale from -44 & BELOW to +10.



CONTRACT NO. W911KB-12-C-0004
CONTRACTOR: MANSON CONSTRUCTION CO.
CITY: SEATTLE
STATE: WASHINGTON
Date:
Approved:
PRIME CONTRACTOR
RESIDENT ENGINEER

DISPOSAL SITE



BATHYMETRY

Table with columns: Description, Station, Date, Scale. Includes a note: Date: 11/08/12, Desc: Scale: 1"=300', Proj. Scale: 1:1.

Design: S. OLSON
Drawn: S. OLSON
Reviewed: J. ANDERSON
Submitted: A. CHURCHILL
USACE Survey No.: 3051-12

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA
POSTDREDGE SURVEY

ANCHORAGE, ALASKA
PORT OF ANCHORAGE
2012-2014
MAINTENANCE DREDGING
02 NOVEMBER, 2012
POSTDREDGE SURVEY

Reference number:
V-106
Sheet 6 of 6