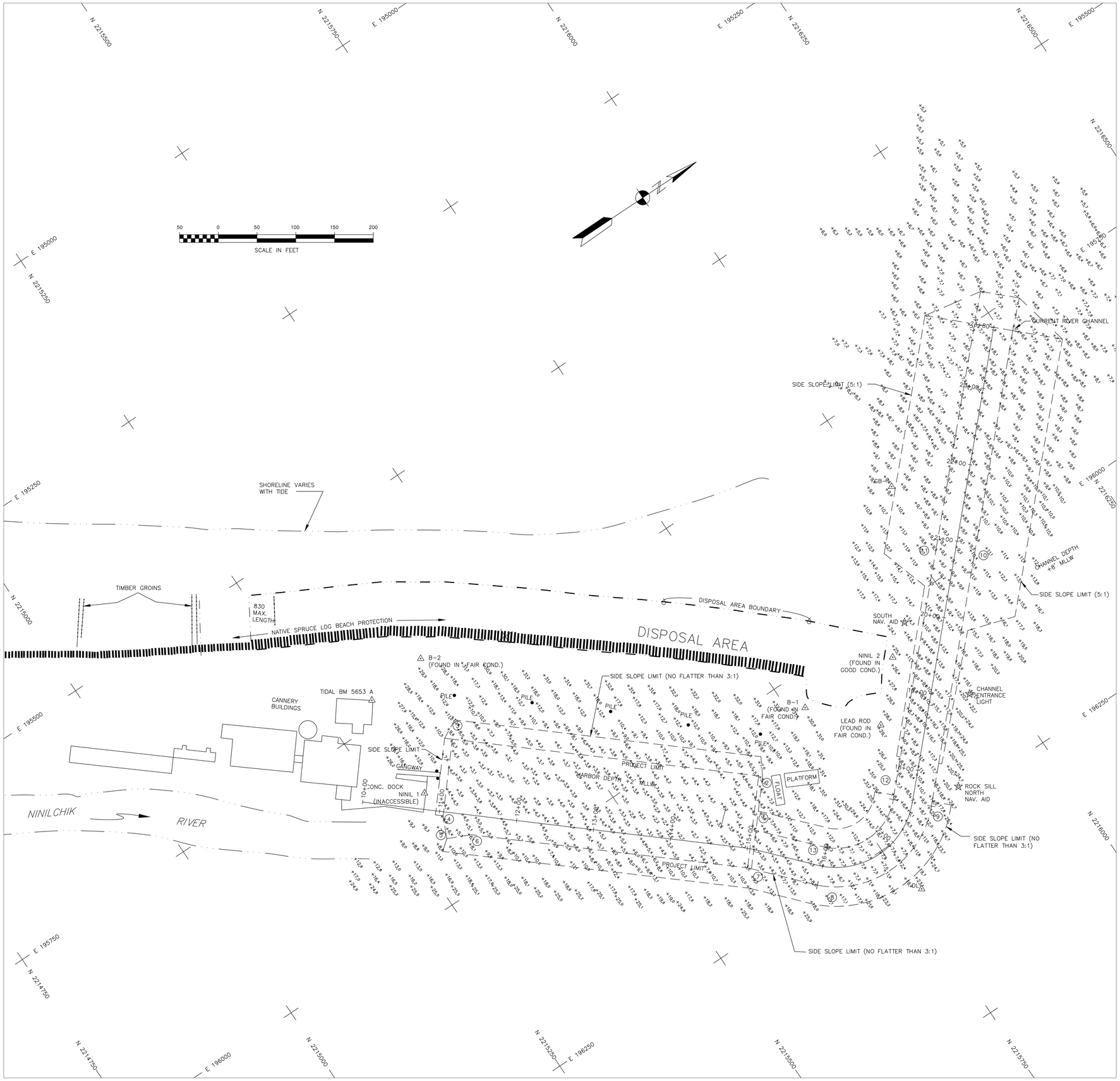

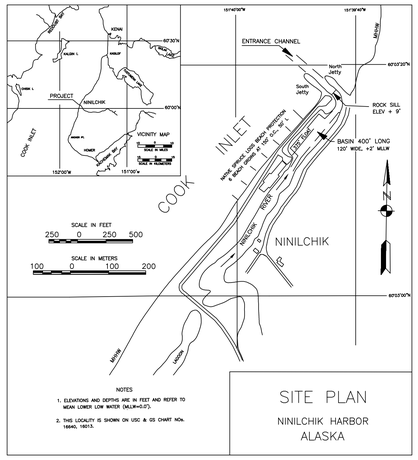

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, IN FEET, NAD 27, HOLDING SBC "NINIL 2" AS N 2,215,900.33, E 196,050.77 AND USACE SBC "B-2" AS N 2,215,393.19, E 195,713.32.
2. VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW=0.0'), HOLDING NOAA BENCHMARK "945 5653 E" (LEAD ROD) AT 29.45',
3. SOUNDINGS ARE IN FEET AND ARE NEGATIVE UNLESS OTHERWISE INDICATED.
4. THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
5. THIS POST DREDGE SURVEY WAS CONDUCTED ON APRIL 23, 2015 BY HUGHES & ASSOCIATES, WASILLA, AK. SOUNDINGS WERE COLLECTED USING AN RESON NAVISOUND 210 PRECISION DEPTH SOUNDER WITH A 200KHZ, 3-DEGREE BEAM-WIDTH TRANSDUCER. SOUNDER CALIBRATION WAS PERFORMED USING A DIGIBAR PRO SOUND VELOCITY PROBE. POSITIONING AND TIDES WERE PROVIDED IN REAL TIME USING A TRIMBLE R8 RTK GPS RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE R8 RTK BASE RECEIVER SET AT CONTROL STATION, "NINIL 2". VESSEL NAVIGATION, DATA COLLECTION AND PROCESSING WERE PERFORMED USING HYPACK 2015 INTEGRATED SOFTWARE.
6. TOPOGRAPHIC DATA WAS COLLECTED ON APRIL 23, 2015 USING A TRIMBLE R8 RTK GPS RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE R8 RTK BASE RECEIVER SET AT "NINIL 2".

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,215,626.07	196,134.54	9A	2,215,873.46	196,197.50
2	2,215,671.45	196,081.67	10	2,216,061.02	196,599.98
3	2,215,369.31	195,822.37	10A	2,216,263.59	195,786.65
4	2,215,304.48	195,897.91	11A	2,216,227.33	195,752.22
5	2,215,292.03	195,925.05	11	2,216,024.80	195,965.51
6	2,215,321.04	195,938.36	12A	2,215,837.20	196,163.07
7	2,215,593.66	196,172.31	12	2,215,802.77	196,199.33
8	2,215,656.00	196,241.00	13	2,215,693.03	196,207.40
9	2,215,839.03	196,233.76			

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
B-1	2,215,770.21	196,041.98	32.23	USACE SBC 1979
B-2	2,215,393.19	195,713.32	32.33	USACE SBC 1979
DEEP	2,203,353.41	188,093.31	--	USC & GS SBC 1964
GB-1	2,216,021.69	195,866.98	8.17	--
HAYNES	2,209,664.61	191,151.17	199.29	USC & GS SBC 1979
N. END	2,216,807.77	196,909.70	26.11	1980
S. END	2,211,878.85	193,593.93	25.83	1980
NINIL 1	2,215,300.78	195,860.20	26.29	3" SBC IN CONC. DECK OF DOCK
EL-1	2,214,856.65	195,349.30	29.57	USACE SBC IN HOR. CONC. SHELF
DL	2,215,765.15	196,319.88	--	REBAR W/ ALCAP "DL 1998"
LEAD ROD	2,215,838.87	196,114.88	29.45	LEAD/STEEL ROD IN ROCK
NINIL 2	2,215,900.33	196,050.77	28.28	2" SBC IN ROCK

HARBOR VOLUME COMPUTATIONS

VOLUME AVAILABLE TO PROJECT DEPTH (+2')	3,547 cy
VOLUME AVAILABLE BETWEEN P.D. (+2') AND MAX-PAY DEPTH (+1')	1,765 cy
VOLUME AVAILABLE TO SIDE-SLOPES	1,067 cy
TOTAL AVAILABLE AVAILABLE IN HARBOR	6,379 cy

ENTRANCE CHANNEL VOLUME COMPUTATIONS

VOLUME AVAILABLE TO PROJECT DEPTH (+8')	2,181 cy
VOLUME AVAILABLE BETWEEN P.D. (+8') AND MAX-PAY DEPTH (+7')	1,371 cy
VOLUME AVAILABLE TO SIDE-SLOPES	1,677 cy
TOTAL AVAILABLE IN ENTRANCE CHANNEL	5,229 cy

OVERDREDGE VOLUME COMPUTATION

TOTAL OVERDREDGE VOLUME REMOVED	N/A

STATE OF ALASKA 49TH
TONY S. HUGHES
LS-13609
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-12-C-0005
CONTRACTOR ALASKA MARINE EXCAVATION
CITY ANCHOR POINT STATE ALASKA
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym.	Action	Description	Date	Approv.
	REV 1	8.0 SS Design Template Update	5/22	

Date: 04/23/2015
Dwg Scale: 1" = 50'
Plot Scale: 1 : 1
File: 2015 Ninilchik Pre Dredge 4_23
Drawing #:
Section:
Branch:
3261-15

Designed:
Drawn: BTH
Reviewed: CSH
Chief:
Computed:
Chief:

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

HUGHES & ASSOCIATES, INC.
2970 COTTLE LOOP
WASILLA, ALASKA

NINILCHIK, ALASKA
NINILCHIK HARBOR
PRE DREDGE SURVEY
APRIL 23, 2015

Reference number:

Sheet 1 of 4

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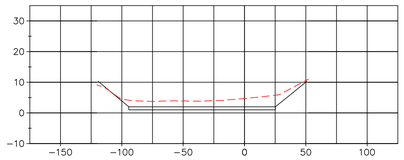

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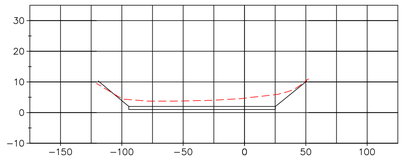

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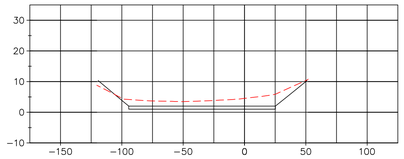

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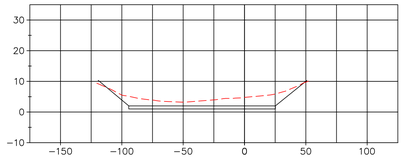

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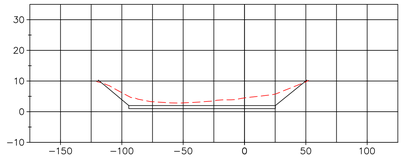

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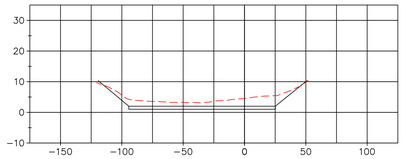

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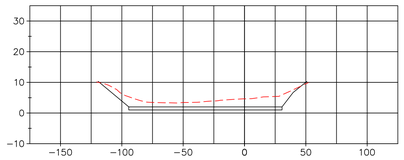

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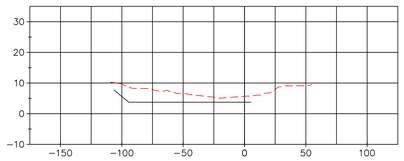

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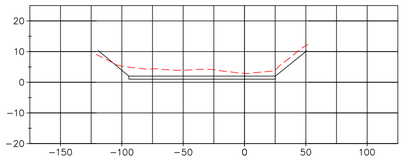

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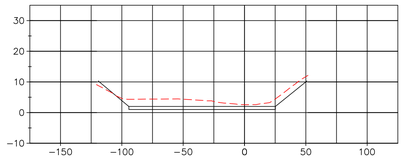

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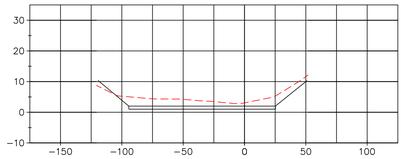

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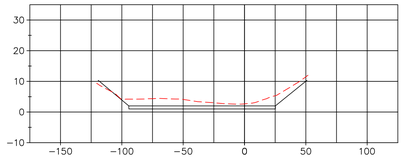

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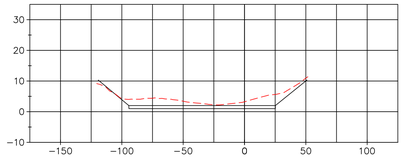

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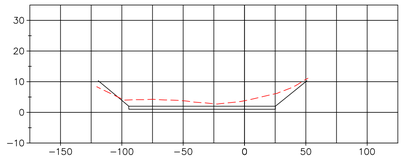

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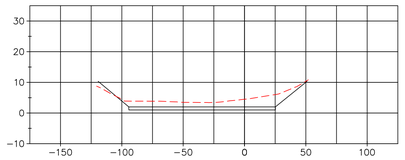

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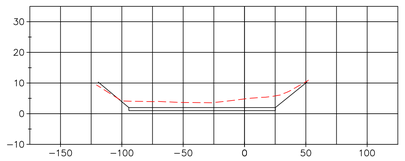

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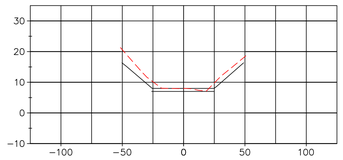

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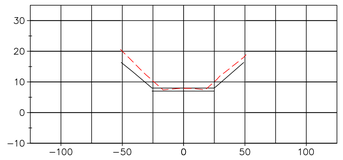

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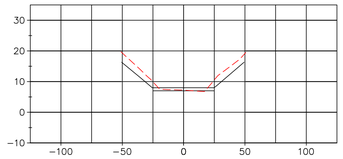

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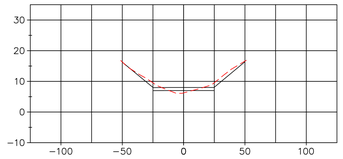

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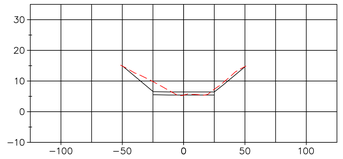

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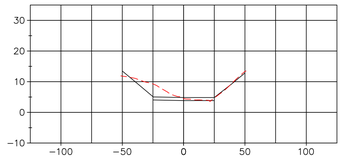

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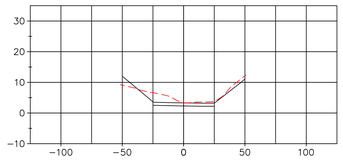

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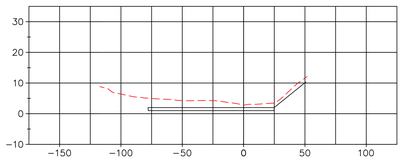

PRE-DREDGE SURVEY
APRIL 23, 2015

POST-DREDGE SURVEY
APRIL XX & MAY X, 2015

SCALE
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 20'

STATE OF ALASKA
49TH
GARY S. HUGHES
LS-13469
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-12-C-0005
CONTRACTOR ALASKA MARINE EXCAVATION
CITY ANCHOR POINT STATE ALASKA
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Approv
	REV 1	18.0 SS Design Template Update	5/22	

Date: 04/23/2015
Dwg Scale: 1" = 50'
Plot Scale: 1 : 1
File: 2015 Ninilchik Pre Dredge 4_23
Drawing #:
Section
Branch
3261-15

Designed:
Drawn: BTH
Reviewed: CSH
Chief:
Checked:
Chief:

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

HUGHES & ASSOCIATES, INC.
2970 COTTLE LOOP
WASILLA, ALASKA

NINILCHIK, ALASKA
NINILCHIK HARBOR
PRE DREDGE SURVEY
APRIL 23, 2015

Reference number:

Sheet 2 of 4

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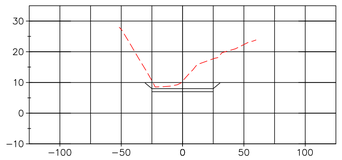

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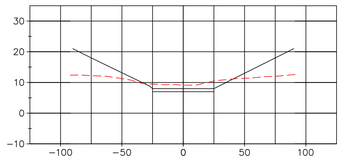

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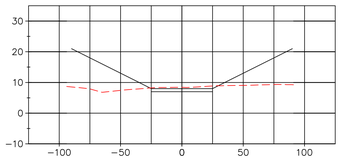

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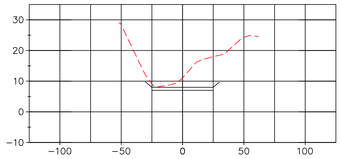

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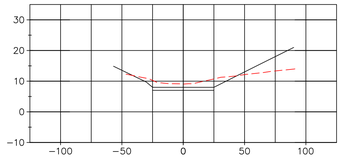

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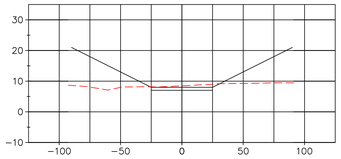

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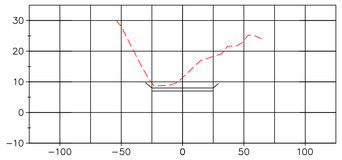

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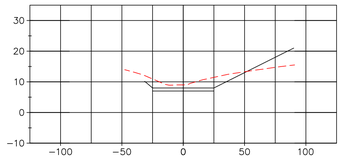

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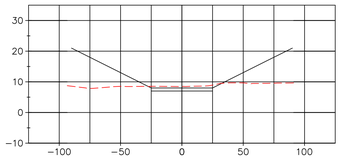

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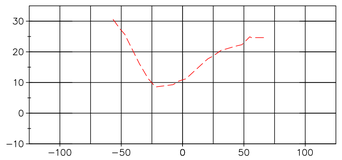

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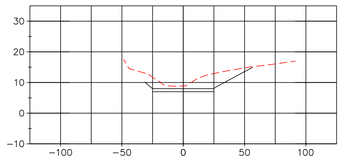

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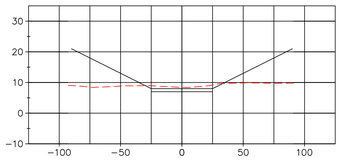

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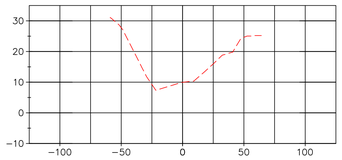

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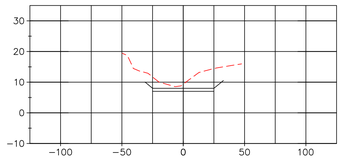

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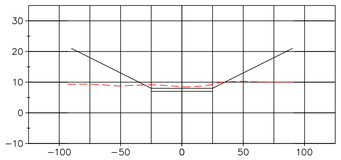

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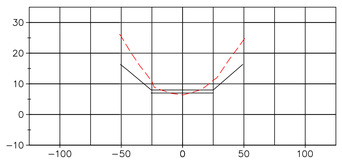

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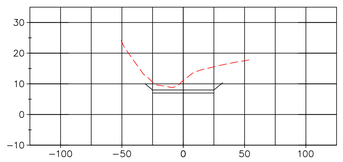

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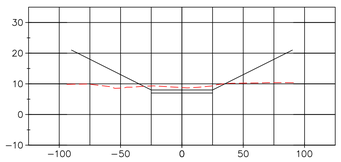

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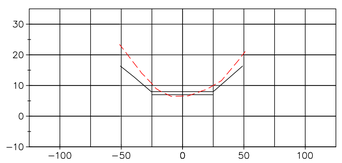

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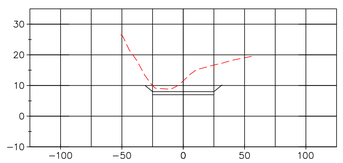

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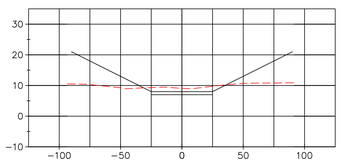

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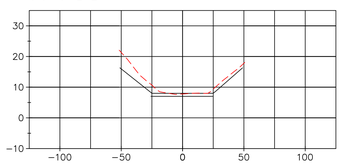

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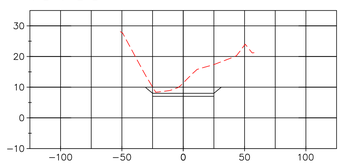

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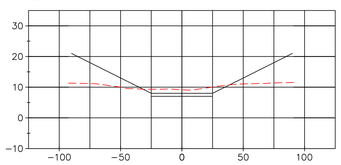


PRE-DREDGE SURVEY
APRIL 23, 2015

POST-DREDGE SURVEY
APRIL XX & MAY X, 2015

SCALE
HORIZONTAL: 1" = 50'
VERTICAL: 1" = 20'

STATE OF ALASKA
49TH
CORY S. HUGHES
LS-13089
REGISTERED PROFESSIONAL LAND SURVEYOR

SURVEY

US ARMY CORPS OF ENGINEERS
ALASKA DISTRICT

CONTRACT NO. W911KB-12-C-0005
CONTRACTOR ALASKA MARINE EXCAVATION
CITY ANCHOR POINT STATE ALASKA
Recommended: PRIME CONTRACTOR
Approved: RESIDENT ENGINEER
Date:

Sym	Action	Description	Date	Approv
REV 1		18.0 SS Design Template Update	5/22	

Date: 04/23/2015
Dwg Scale: 1" = 50'
Plot Scale: 1 : 1
File: 2015 Ninilchik Pre Dredge 4_23
Drawing #:
Section
Branch
3261-15

Designed:
Drawn: BTH
Reviewed: CSH
Chief:
Submitted:
Chief:

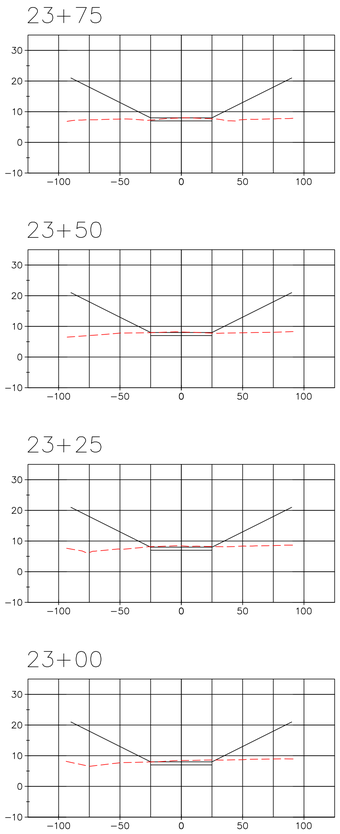
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

HUGHES & ASSOCIATES, INC.
2970 COTTLE LOOP
WASILLA, ALASKA

NINILCHIK, ALASKA
NINILCHIK HARBOR
PRE DREDGE SURVEY
APRIL 23, 2015

Reference number:

Sheet 3 of 4



PRE–DREDGE SURVEY
APRIL 23, 2015

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APRIL XX & MAY X, 2015

SCALE
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Sheet 4 of 4