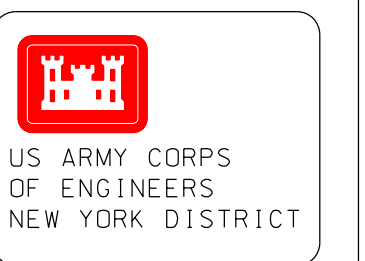
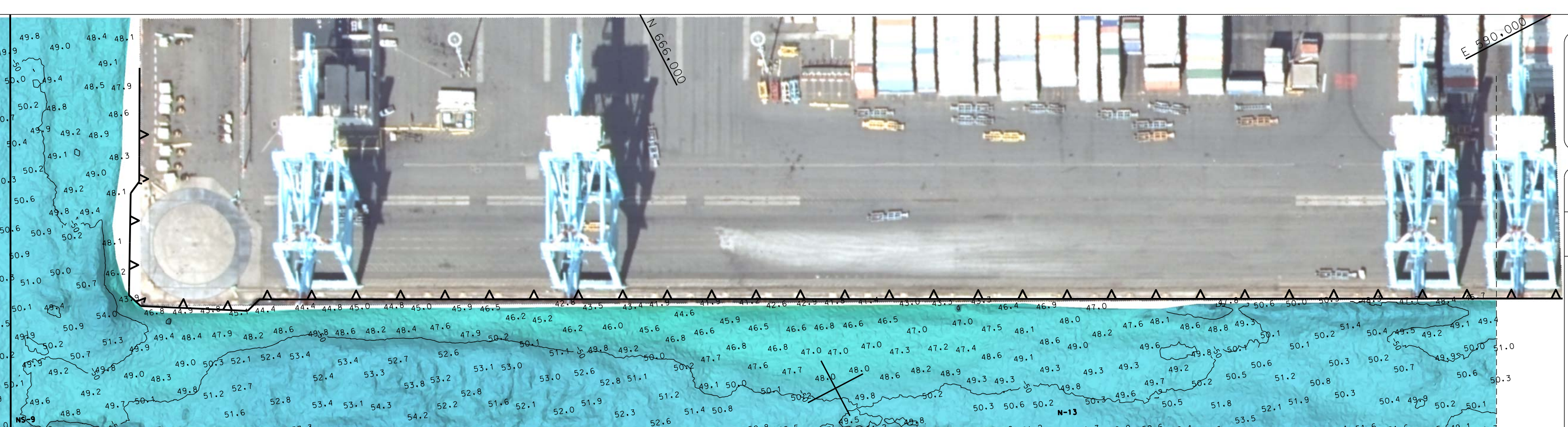
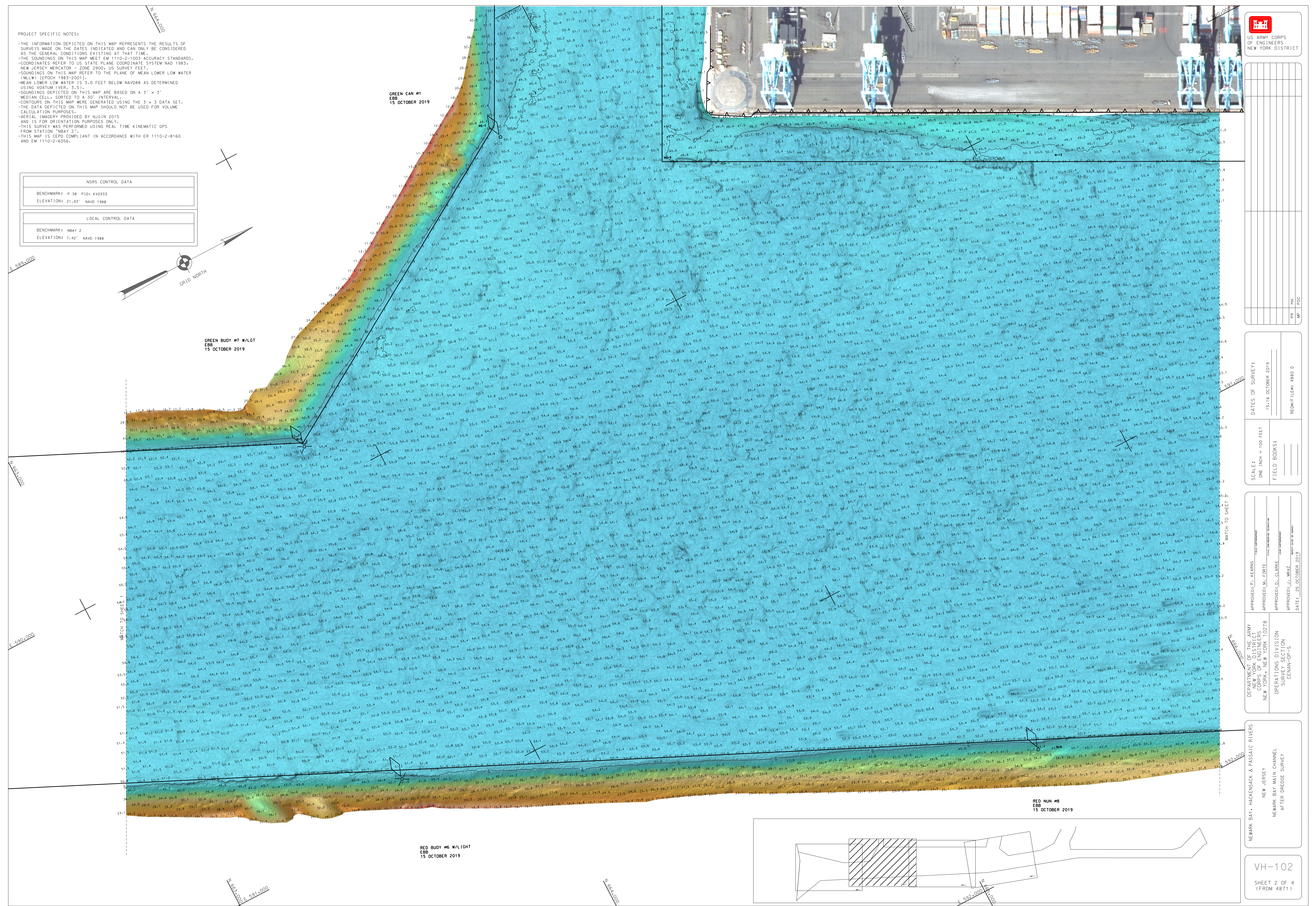
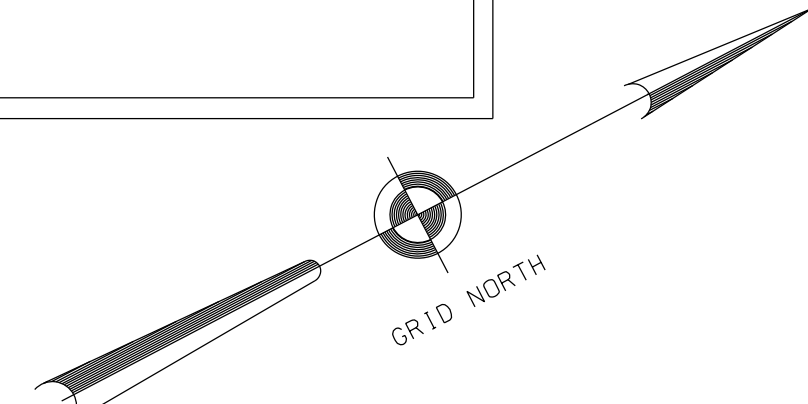


PROJECT SPECIFIC NOTES:
 -THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
 -THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
 -COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2004 US SURVEY FEET.
 -SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) (EPOCH 1983-2001).
 -MEAN LOWER LOW WATER IS 3.0 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 3.51).
 -SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' DATA SET, MEDIAN CELL, SORTED TO A 30' INTERVAL.
 -CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
 -THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
 -AERIAL IMAGERY PROVIDED BY NGIN 2015 AND IS FOR ORIENTATION PURPOSES ONLY.
 -THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "NBAY 2".
 -THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

NSRS CONTROL DATA	
BENCHMARK:	P 38 PID: KV0333
ELEVATION:	21.93' NAVD 1988
LOCAL CONTROL DATA	
BENCHMARK:	NBAY 2
ELEVATION:	7.42' NAVD 1988



DATE OF SURVEY:	15-16 OCTOBER 2019
SCALE:	ONE INCH = 100 FEET
FIELD BOOKS:	
APPROVED:	
DATE:	25 OCTOBER 2019

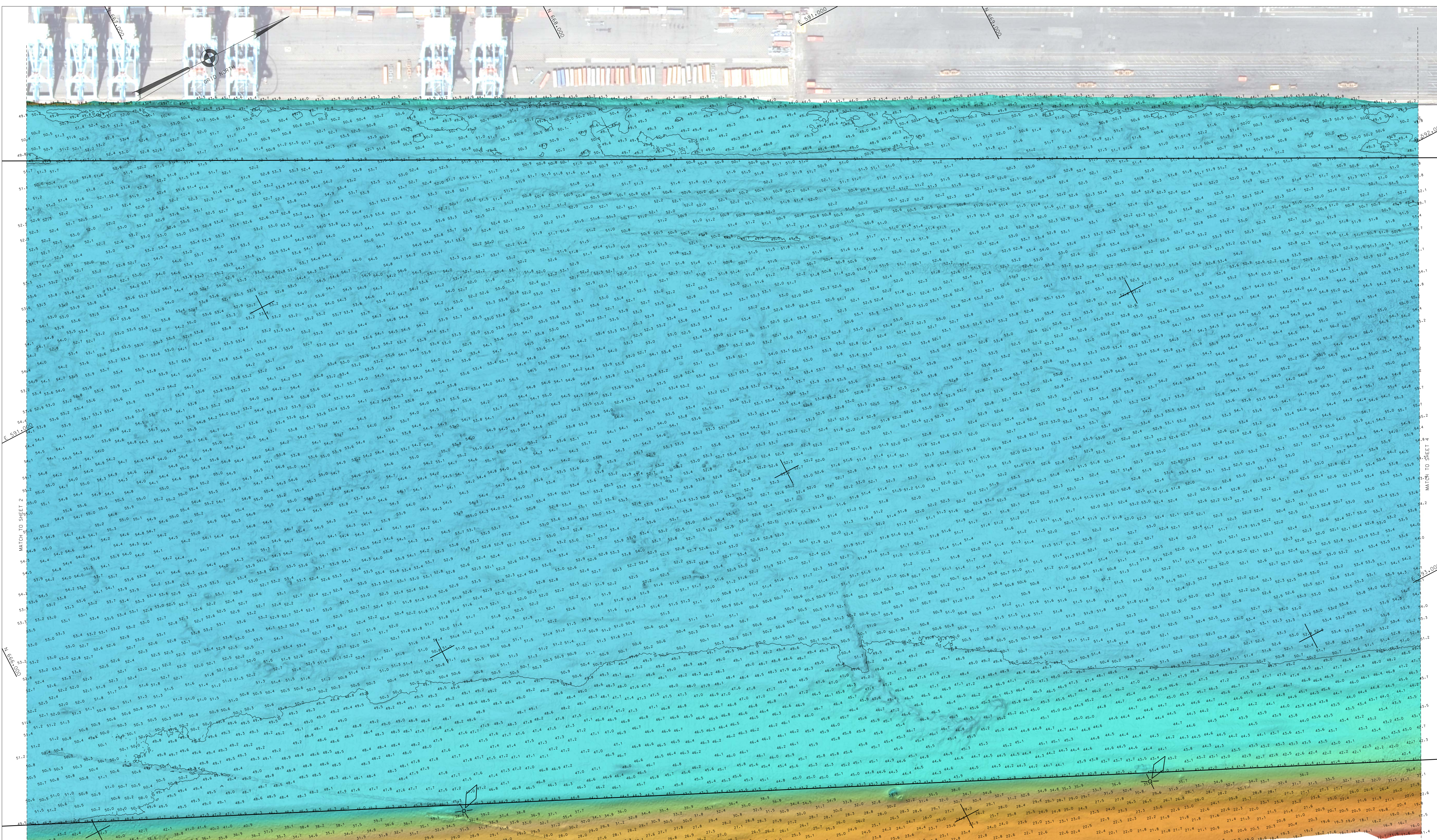
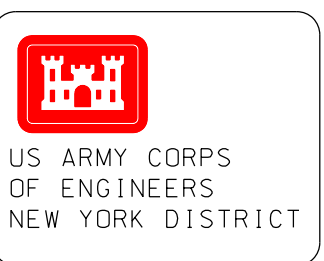
APPROVED:	
DATE:	25 OCTOBER 2019

APPROVED:	
DATE:	25 OCTOBER 2019

DEPARTMENT OF THE ARMY
 CORPS OF ENGINEERS
 NEW YORK, NEW YORK 10278
 OPERATIONS DIVISION
 SURVEY SECTION
 CENAN-OP-S

NEW JERSEY
 NEWARK BAY MAIN CHANNEL
 AFTER DREDGE SURVEY

VH-102
 SHEET 2 OF 4
 (FROM 4871)

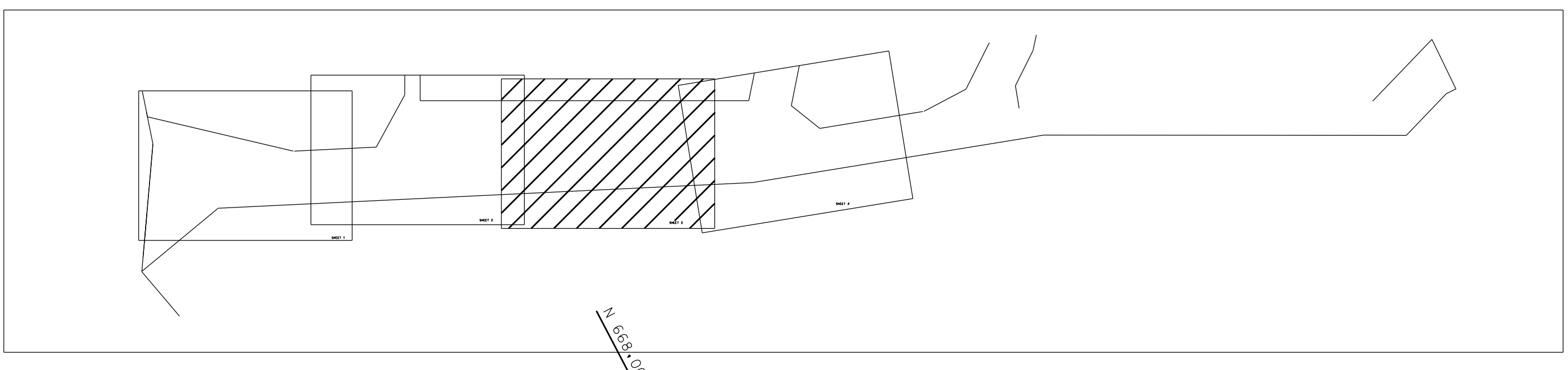


RED #10 W/LIGHT
FLOOD
26 AUGUST 2019

PROJECT SPECIFIC NOTES:

- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET EM 1110-2-1003 ACCURACY STANDARDS.
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2900, US SURVEY FEET.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- MEAN LOWER LOW WATER IS 3.0 FEET BELOW NAVD83 AS DETERMINED USING VOXTAM (VER. 3.51).
- SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL, SORTED TO A 20' INTERVAL.
- CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- AERIAL IMAGERY PROVIDED BY NJGIN 2015
- IS FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "NBAY 2".
- THIS MAP IS CEED COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6556.

NSRS CONTROL DATA	
BENCHMARK: P 38 PDI: KV0333	ELEVATION: 21.93' NAVD 1988
LOCAL CONTROL DATA	
BENCHMARK: NBAY 2	ELEVATION: 7.42' NAVD 1988



RED NUM #12
FLOOD
26 AUGUST 2019

DATE	DESCRIPTION

DATE OF SURVEY:	21-23-26 AUGUST 2019
SCALE:	ONE INCH = 100 FEET
FIELD BOOKS:	
REVISIONS:	

APPROVED: M. APPELO	DATE: 27 AUGUST 2019
APPROVED: M. EGGIE	
APPROVED: D. CLORKE	
APPROVED: J. WRZ	

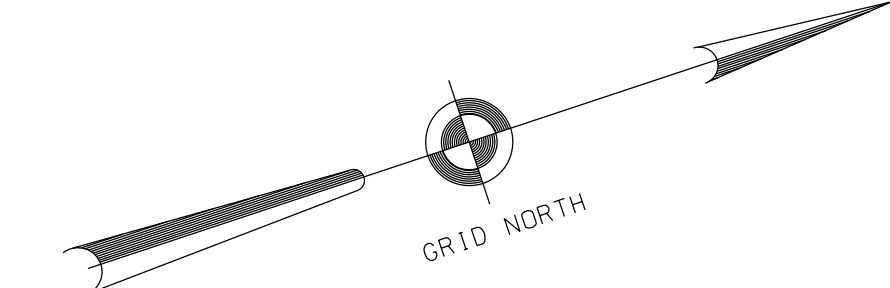
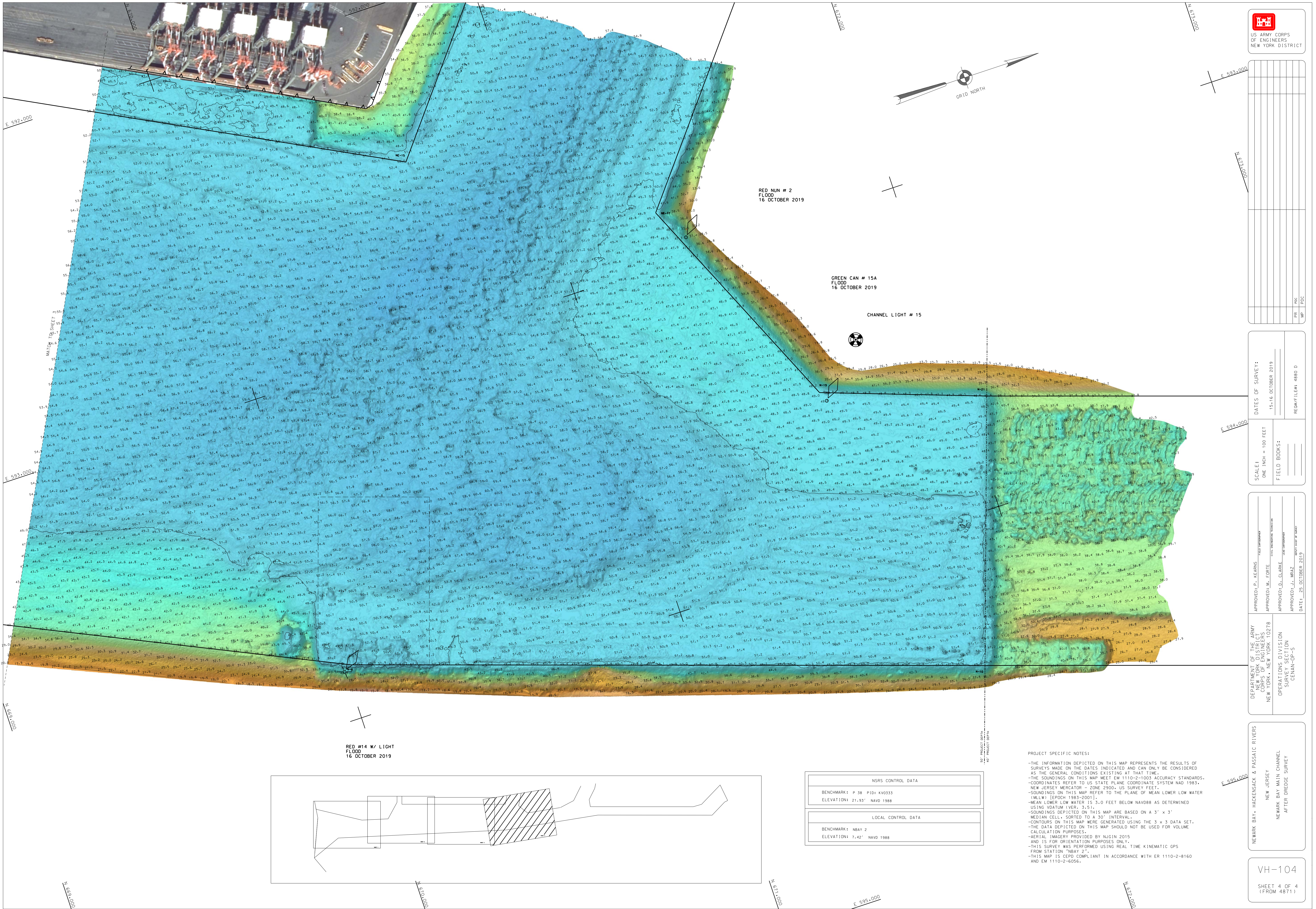
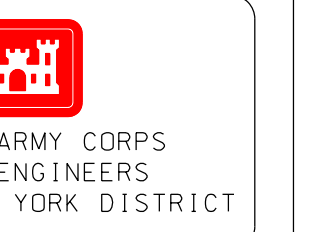
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION
SHELTER SECTION
CENAN-OP-5

NEWARK BAY, HACKENSACK & PASSAIC RIVERS
NEWARK BAY MAIN CHANNEL
AFTER DREDGE SURVEY

VH-103
SHEET 3 OF 4

REVISIONS: 4871 N3

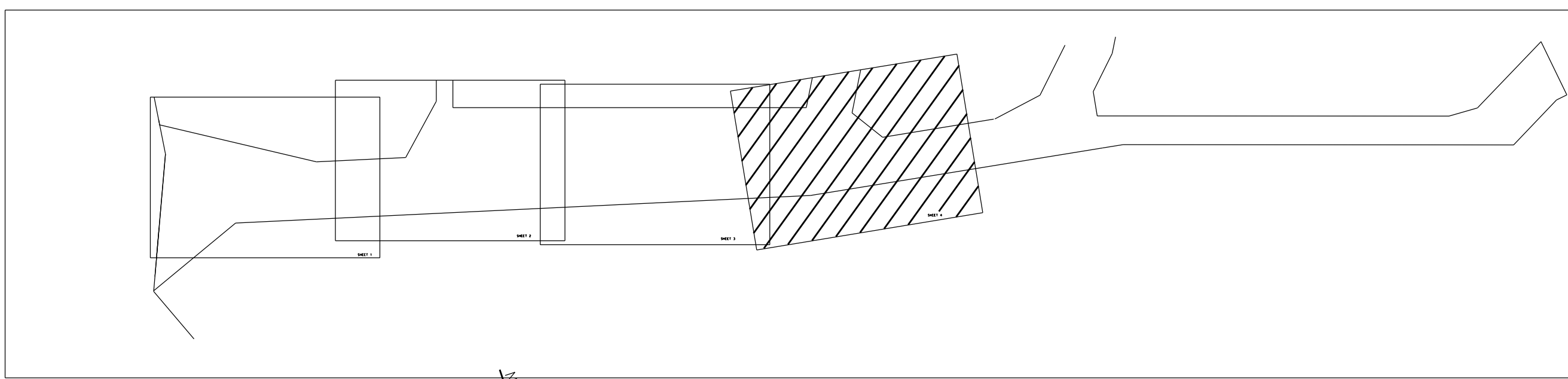


RED NUM # 2
FLOOD
16 OCTOBER 2019

GREEN CAN # 15A
FLOOD
16 OCTOBER 2019

CHANNEL LIGHT # 15

RED #14 W/ LIGHT
FLOOD
16 OCTOBER 2019



NSRS CONTROL DATA	
BENCHMARK: # 38 P10: KV0333	
ELEVATION: 21.93' NAVD 1988	
LOCAL CONTROL DATA	
BENCHMARK: N84 2	
ELEVATION: 7.42' NAVD 1988	

PROJECT SPECIFIC NOTES:

- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS THE GENERAL CONDITIONS EXISTING AT THAT TIME.
- THE SOUNDINGS ON THIS MAP MEET ME 1110-2-1003 ACCURACY STANDARDS.
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2900, US SURVEY FEET.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) (FROTH 1983-2001).
- MEAN LOWER LOW WATER IS 3.0 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 3.5).
- SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL, SORTED TO A 30' INTERVAL.
- CONTOURS ON THIS MAP WERE GENERATED USING THE 3 x 3 DATA SET. THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- AERIAL IMAGERY PROVIDED BY NJGIN 2015
- IS FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION N84 2.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND ME 1110-2-6056.

DATE OF SURVEY:	15-16 OCTOBER 2019
SCALE:	ONE INCH = 100 FEET
FIELD BOOKS:	
REVISIONS:	
DATE:	25 OCTOBER 2019

APPROVED BY:	DATE:
APPROVED BY:	DATE:
APPROVED BY:	DATE:

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS NEW YORK, NEW YORK 10278	APPROVED BY: KEARNS	DATE: 25 OCTOBER 2019
OPERATIONS DIVISION SHELLEY LECHE CENAN-OP-S	APPROVED BY: EGGIE	
	APPROVED BY: CLORKE	
	APPROVED BY: MRJZ	

NEWARK BAY, HACKENSACK & PASSAIC RIVERS
NEW JERSEY
NEWARK BAY MAIN CHANNEL
AFTER DREDGE SURVEY