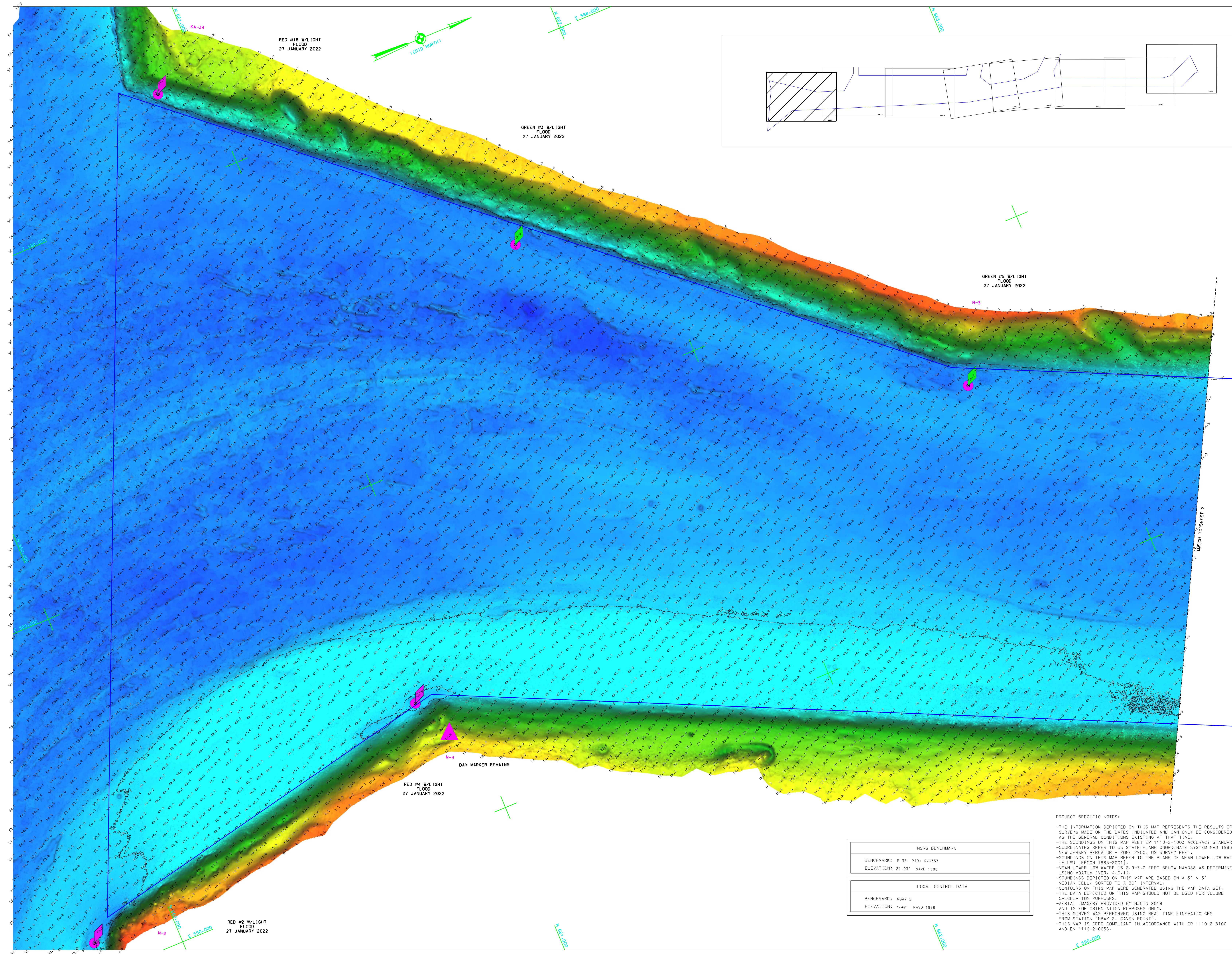


SHEET 1 OF 8



- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE DATES INDICATED AND CAN ONLY BE CONSIDERED ACCURATE AT THE DATES INDICATED AND NOT AT ANY OTHER DATE.
- THE SOUNDINGS ON THIS MAP MEET EN 1102-2-003 ACCURACY STANDARDS
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 83.
- THE SOUNDING DEPTH IS MEASURED TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-2001].
- THE SOUNDING DEPTHS ARE 0.0, 0.9, 3.0 FEET BELOW NAVDAS AS DETERMINED USING DATUM V (VME, 4.0, 1.1).
- SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' x 3' MEDIAN CELL SIZE SURVEY INTERVAL.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATIONS.
- AERIAL IMAGERY PROVIDED BY NUGIN 2019
- IS FOR ORIENTAL PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINETIC GPS FROM STATION 222, CAVERN POINT.
- THIS MAP IS NOT IN COMPLIANT IN ACCORDANCE WITH EN 1102-2-9160 AND EN 1102-2-6056.

NSRS BENCHMARK	
BENCHMARK: P 38	PID: #V0333
ELEVATION: 21.93'	NAVD 1988

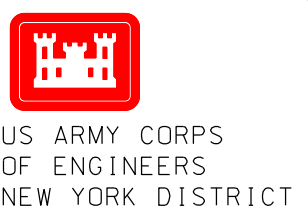
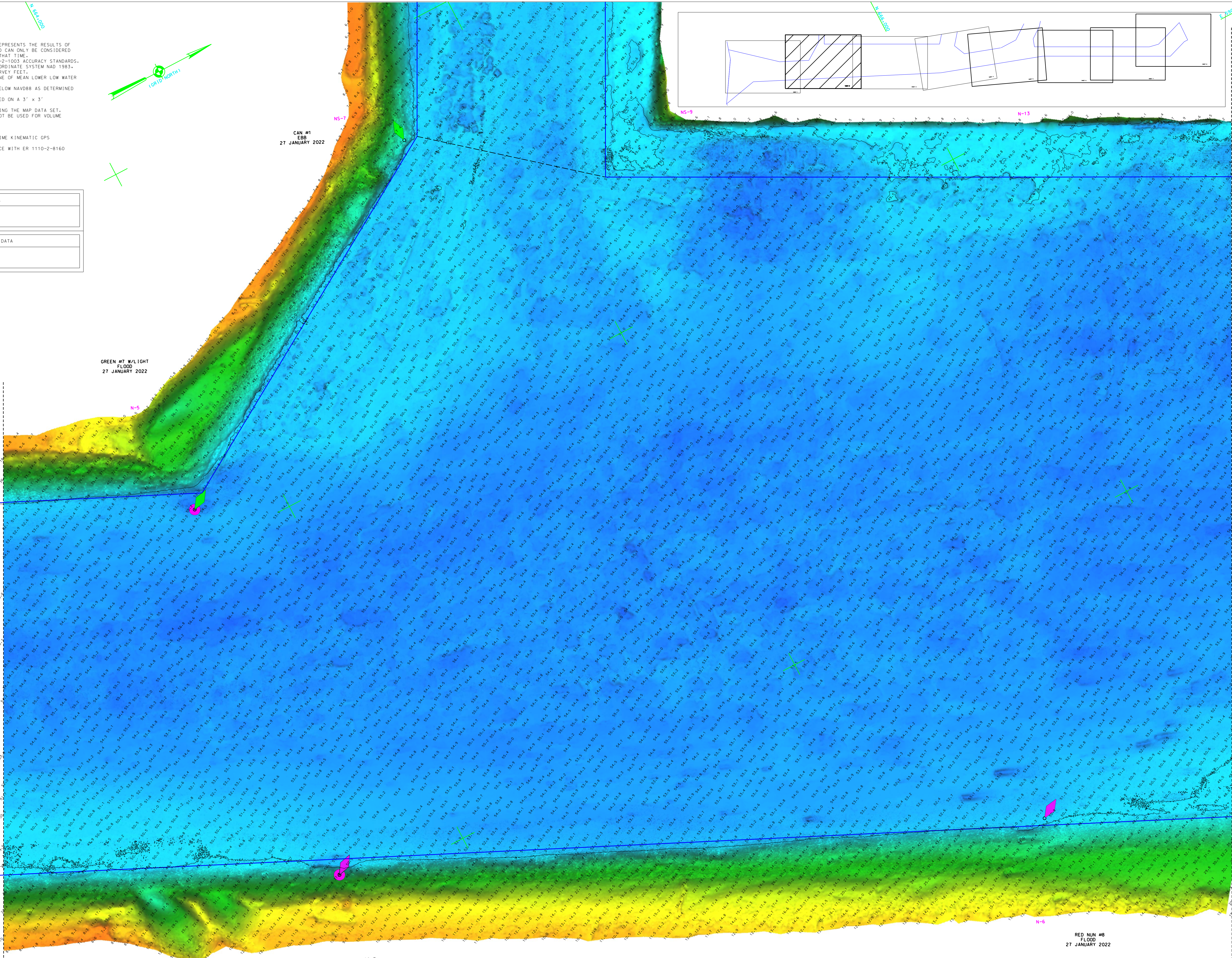
  

LOCAL CONTROL DATA	
BENCHMARK: NBAY 2	
ELEVATION: 7.42'	NAVD 1988

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 EM 1110-2-1003 ACCURACY STANDARDS.  
-COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 1983, NEW JERSEY MERCATOR - ZONE 2000, 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 2.9-3.0 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.0.11).  
-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 MAP DATA SET.  
-THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.  
-AERIAL IMAGERY PROVIDED BY NGIN 2019 AND IS FOR ORIENTATION PURPOSES ONLY.  
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "NBAY 2, CAVEN POINT".  
-THIS MAP IS CPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

NSRS BENCHMARK	
BENCHMARK: P 38	PID: KV0333
ELEVATION: 21.93'	NAVD 1988

LOCAL CONTROL DATA	
BENCHMARK: NBAY 2	
ELEVATION: 7.42'	NAVD 1988



DATE OF SURVEY:	21-22-26 JAN 2022
DATE OF MAP:	1-27 FEBRUARY 2022
FIELD BOOKS:	DMA10.2021216
REC. NO./FILE NO.:	5134/N1/N3/N4
DATE:	9 FEBRUARY 2022

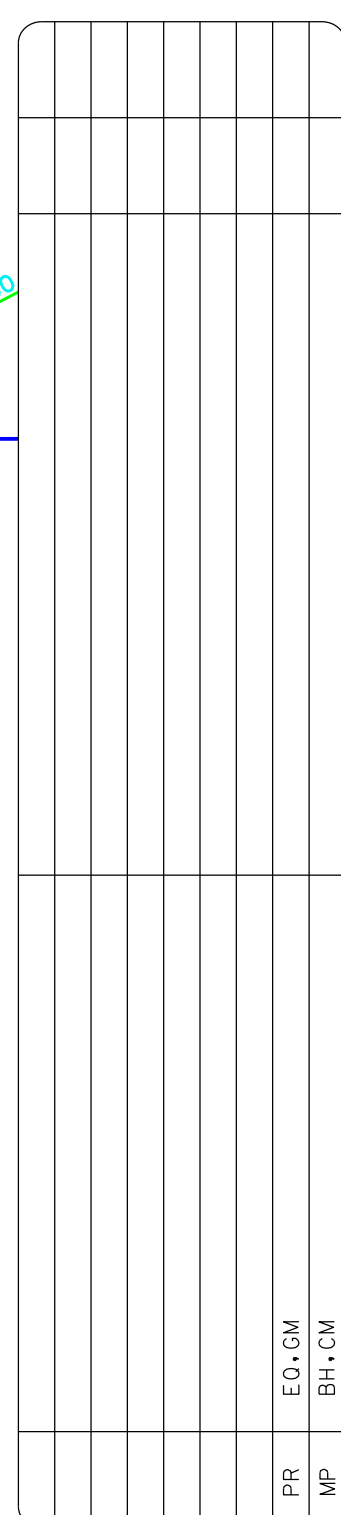
SCALE:	ONE INCH = 100 FEET
FIELD BOOKS:	DMA10.2021216

APPROVED: P. KEARNS	DATE: 9 FEBRUARY 2022
APPROVED: M. FORTE	DATE: 9 FEBRUARY 2022
APPROVED: P. BRIDOR	DATE: 9 FEBRUARY 2022
APPROVED: J. MRAZ	DATE: 9 FEBRUARY 2022

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

NEWARK BAY, HACKENSACK & PASSAIC RIVERS NEW JERSEY NEWARK BAY MAIN CHANNEL CONDITION SURVEY
--

VH-102
SHEET 2 OF 8



DATES OF SURVEY:  
 21.24-26.31 JANUARY 2022  
 1.2 FEBRUARY 2022

REG. NO./FILE NO.: 5134/N

SCALE:  
ONE INCH = 100 FEET

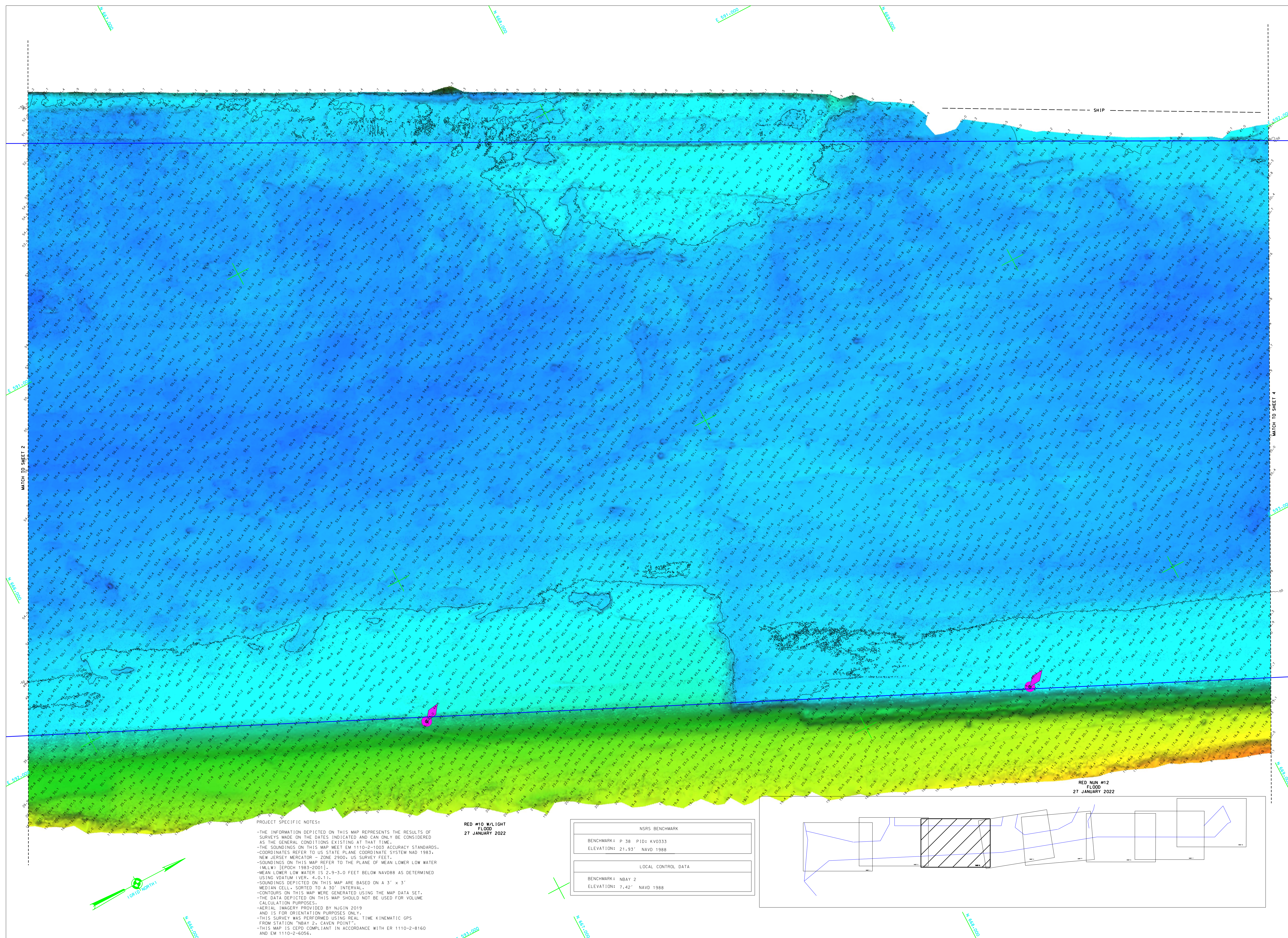
FIELD BOOKS:  
DNA10-20211216  
\_\_\_\_\_  
\_\_\_\_\_

DEPARTMENT OF THE ARMY NEW YORK DISTRICT CORPS OF ENGINEERS NEW YORK, NEW YORK 10278	APPROVED: P. KEARNS FIELD PERFORMANCE
	APPROVED: M. FORTE CIVIL ENGINEERING FUNCTION
	APPROVED: P. BHADUR TEST COMMENTARY
	APPROVED: J. MRAZ BRIEF CASE OF SURVEY DATE: 9 FEBRUARY 2022

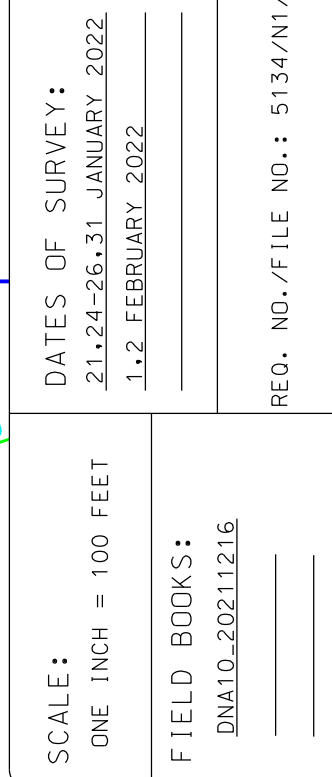
NEWARK BAY, HACKENSACK  
& PASSAIC RIVERS  
NEW JERSEY  
NEWARK BAY MAIN CHANNEL  
CONDITION SURVEY

VH-103

SHEET 3 OF 8



REQ. NO./FILE NO.: 5134/N1/N3/N4



APPROVED: P. KEARNS  
FIELD OFFICER#464

APPROVED: M. FORTE  
CITY DOMESTIC TENSION

APPROVED: P. BHADUR  
LEAD OFFICER#464

APPROVED: J. MRAZ  
SUPPORT CHIEF OF SQUAD

DATE: 9 FEBRUARY 2022

DEPARTMENT OF THE ARMY  
NEW YORK DISTRICT  
CORPS OF ENGINEERS  
NEW YORK, NEW YORK 10272

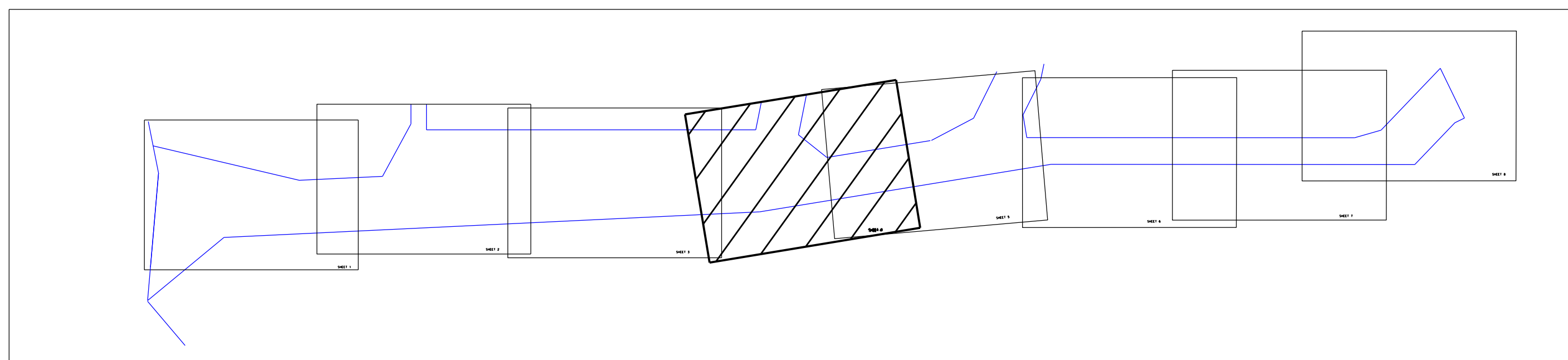
OPERATIONS DIVISION  
SURVEY SECTION  
CENAN-OP-S

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

VH-104

SHEET 4 OF 8

REQ. NO./FILE NO.: 5134/N1/N3/N4



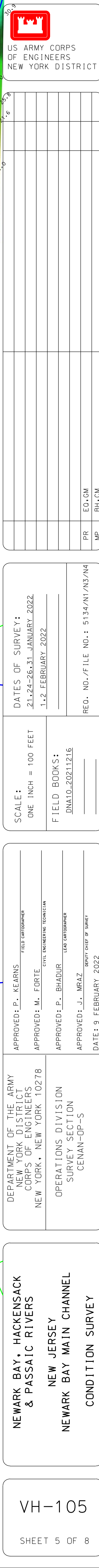
NSRS BENCHMARK	
BENCHMARK: P 38	PID: KV0333
ELEVATION: 21.93'	NAVD 1988

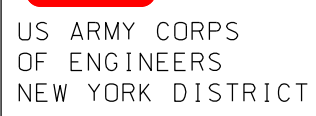
  

LOCAL CONTROL DATA	
BENCHMARK: NBAY 2	
ELEVATION: 7.42'	NAVD 1988

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 A GUIDE TO THE CONDITION EXISTING AT THE TIME.
- THE SOUNDINGS ON THIS MAP ARE TO THE U.S. 1110-2-003 COORDINATE STANDARDS.
- COORDINATES REFER TO U.S. STATE PLANE COORDINATE SYSTEM NAD 83.
- THE SOUNDINGS ON THIS MAP ARE TO THE U.S. 1110-2-003 COORDINATE STANDARDS.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER (MLLW) [EPOCH 1983-1989].
- MEAN LOWER LOW WATER (MLLW) IS 2.9-3.0 FEET BELOW NAVD83 AS DETERMINED USING DATUM (EVER, 4.0-1.1).
- SOUNDINGS DEPICTED ON THIS MAP ARE BASED ON A 3' X 3' SECTION.
- SOUNDINGS ARE GIVEN AT 10 SECOND INTERVAL.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATIONS.
- AERIAL IMAGERY PROVIDED BY NUGIN 2019.
- THIS IS FOR ORIENTATION PURPOSES ONLY.
- THIS SOUNDING MAP IS NOT TO BE USED FOR TIME KINEMATIC GPS FROM STATION "NBY 2 CAVERN POINT".
- THIS MAP IS LEAD COMPLIANT IN ACCORDANCE WITH ENR 1110-2-8160



[illegible]

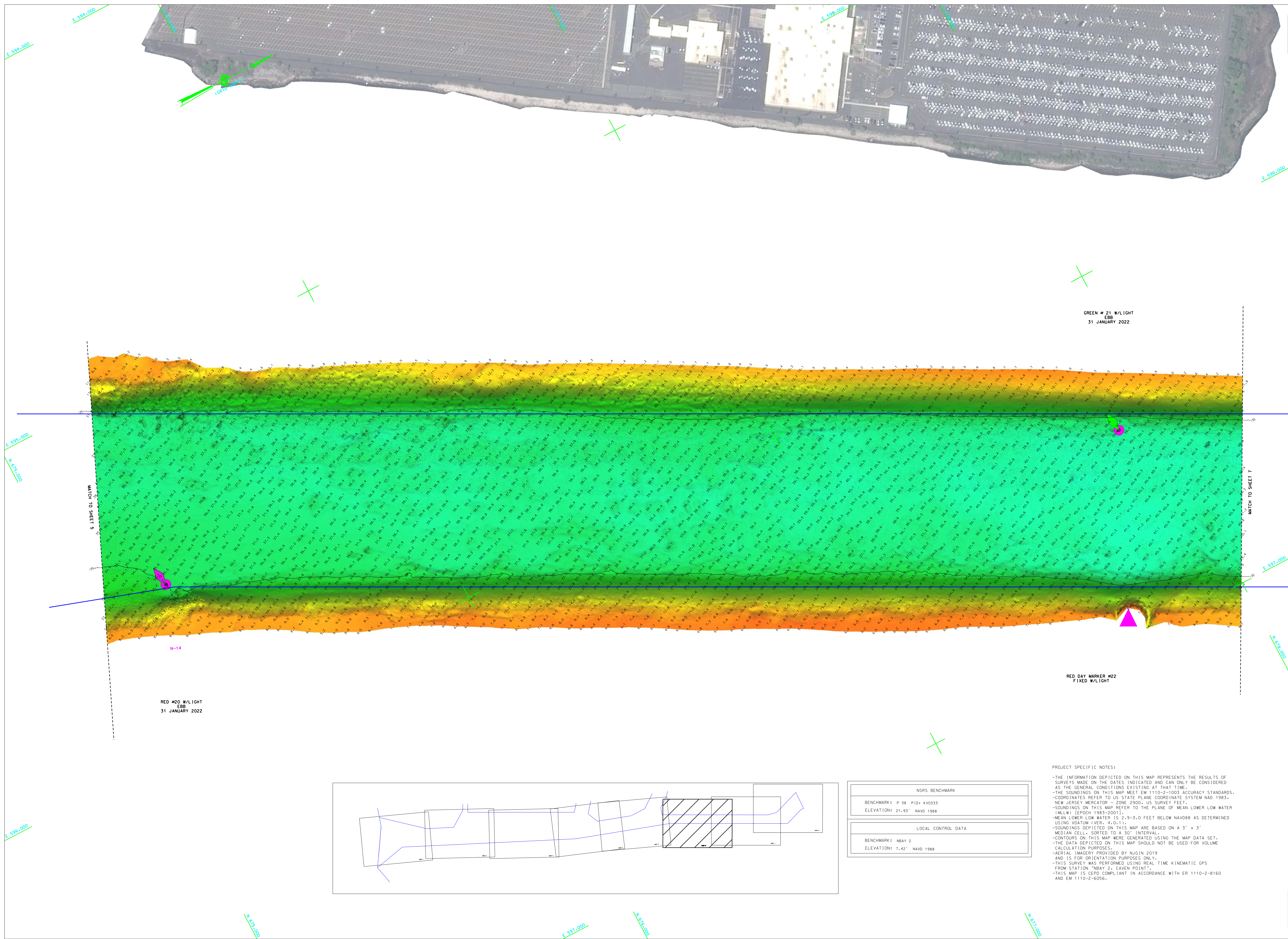
SCALE : ONE INCH = 100 FEET	DATES OF SURVEY : 21.24-26.31 JANUARY 2022 1.2 FEBRUARY 2022
FIELD BOOKS : DNA10_20211216	REG. NO./FILE NO. : 5134/N1/N3/A4

DEPARTMENT OF THE ARMY NEW YORK DISTRICT CORPS OF ENGINEERS NEW YORK, NEW YORK 10278	APPROVED: P. KEARNS FIELD COMMANDER
	APPROVED: M. FORTE FIELD ENGINEERING TECHNICIAN
OPERATIONS DIVISION SURVEY SECTION CENAN-OP-S	APPROVED: P. BHADUR TEAM COMMANDER
	APPROVED: J. MRAZ PROPERTY CLERK OF SUPPLY
	DATE: 19 FEBRUARY 2022

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

VH-106

SHEET 6 OF 8



[illegible]

SCALE : ONE INCH = 100 FEET	DATES OF SURVEY : 21.24-26.31 JANUARY 2022 1.2 FEBRUARY 2022
FIELD BOOKS : D1010-20211216	REG. NO./FILE NO. : 5134/N1/N3/M4

DEPARTMENT OF THE ARMY NEW YORK DISTRICT CORPS OF ENGINEERS NEW YORK, NEW YORK 10278	APPROVED: P. J. KEARNS FIELD COMMANDER
	APPROVED: M. FORTE DIST. ENGINEERING COORDINATOR
OPERATIONS DIVISION SURVEY SECTION CENAN-OP-S	APPROVED: P. BHADUR LEAD COMMANDER
	APPROVED: J. MRAZ PROPERTY CLERK OF CORPS
	DATE: 19 FEBRUARY 2022

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

VH-107

SHEET 7 OF 8

REQ. NO./FILE NO.: 5134/N1/N3/N4

