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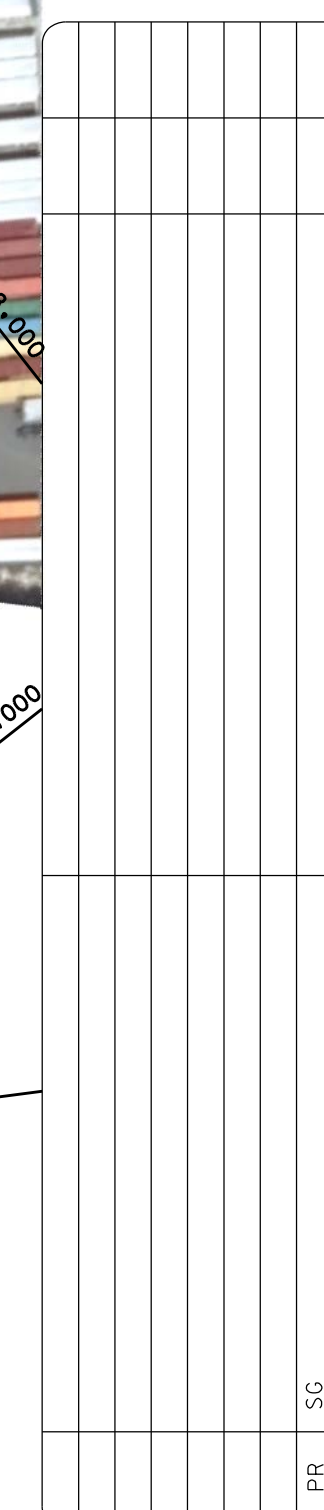
DEPARTMENT OF THE ARMY



VH-101

SHEET 1 OF 1

BEO NO 45115 NO : 5107(N)



DATES OF SURVEY:  
13.14 OCTOBER 2021

SCALE:  
ONE INCH = 100 FEET

FIELD BOOKS:  
N/A

APPROVED: J. MCKELVEY  
FIELD SUPERVISOR

APPROVED: M. FORTE  
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR  
LEAD CARPENTER

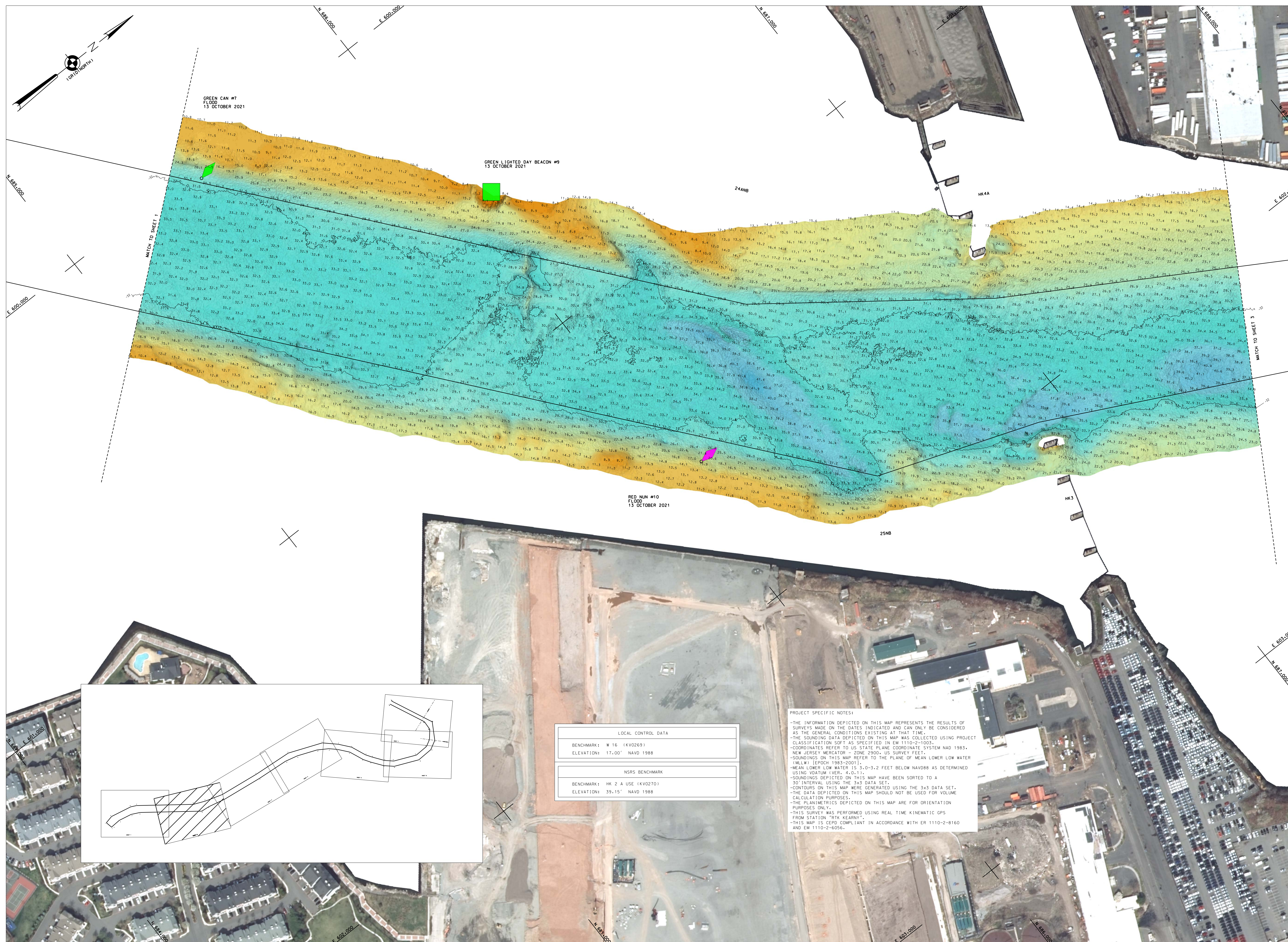
APPROVED: J. MRAZ  
DEPUTY CHIEF OF SURVEYS

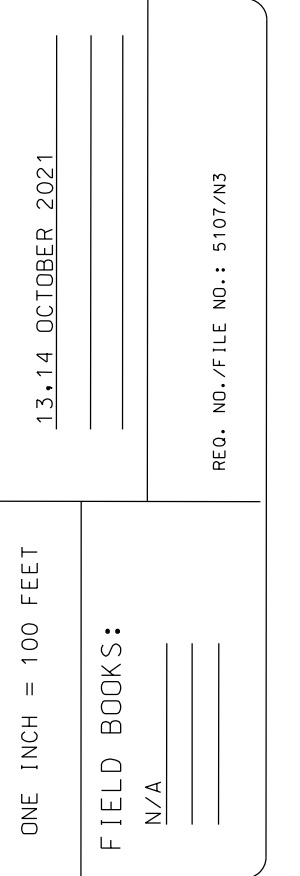
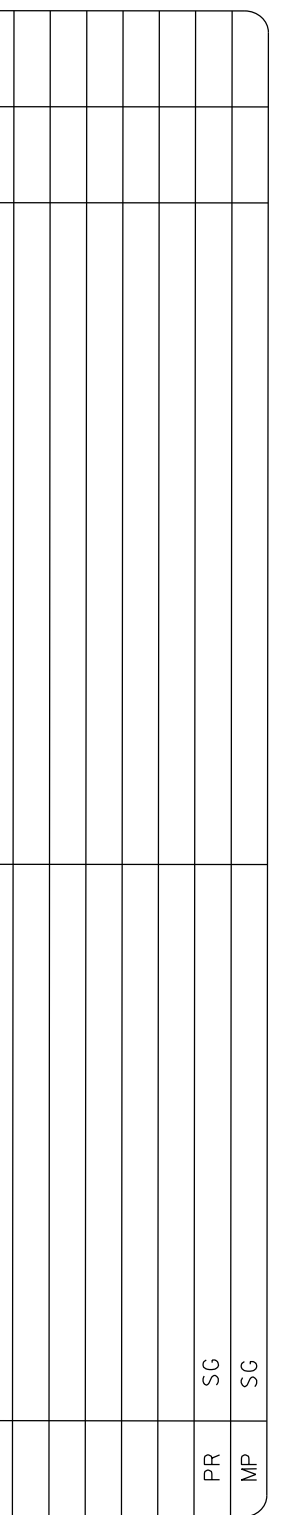
ARK BAY, HACKENSACK &  
PASSAIC RIVERS  
HACKENSACK RIVER  
CONDITION SURVEY

VH-102

SHEET 2 OF 7

REQ. NO./FILE NO.: 5107/N3



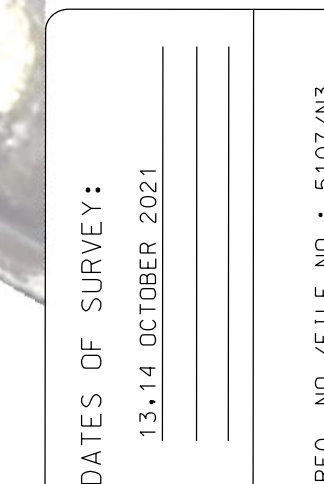
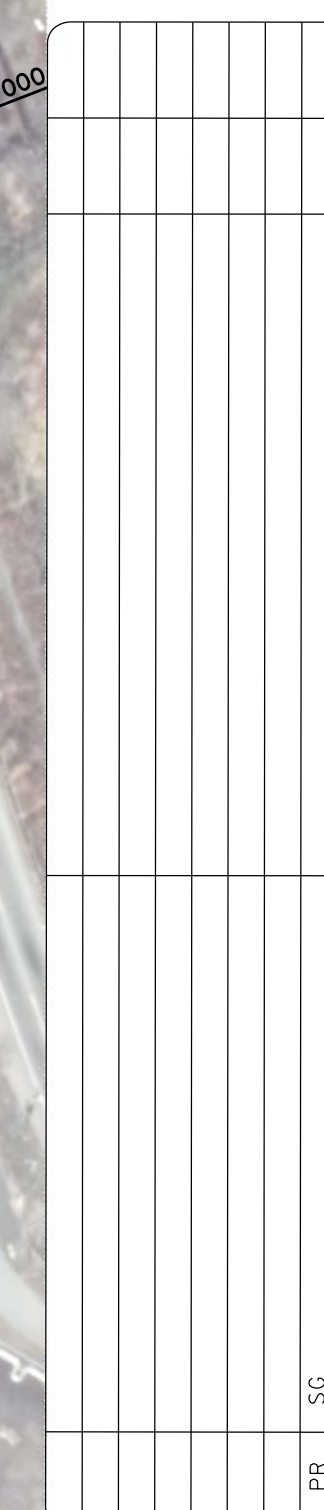


<p>OPERATIONS DIVISION SURVEY SECTION CENAV-OP-S</p>	<p>APPROVED: M. FORTE CHIEF, POLYGRAPHIC FUNCTION</p>	<p>DATE: 20 OCTOBER 1921</p>
<p>NEW YORK, NEW YORK 10278</p>	<p>APPROVED: P. BHAJIR CHIEF, POLYGRAPHIC FUNCTION</p>	<p>DATE: 20 OCTOBER 1921</p>
<p>CORPS OF ENGINEERS</p>	<p>APPROVED: J. WELZ CHIEF, POLYGRAPHIC FUNCTION</p>	<p>DATE: 20 OCTOBER 1921</p>
<p>U.S. ARMY</p>	<p>APPROVED: J. WELZ CHIEF, POLYGRAPHIC FUNCTION</p>	<p>DATE: 20 OCTOBER 1921</p>

HACKENSACK RIVER  
CONDITION SURVEY

VH-103

SHEET 3 OF 7



SCALE:  
ONE INCH = 100 FEET

FIELD BOOKS:  
N/A

APPROVED: J. MCKELVEY  
FIELD CHAIRMAN

APPROVED: M. FORTE  
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR  
LEAD CHAIRMAN

APPROVED: J. MRAZ  
SOCIETY CHIEF OF STUDENTS

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

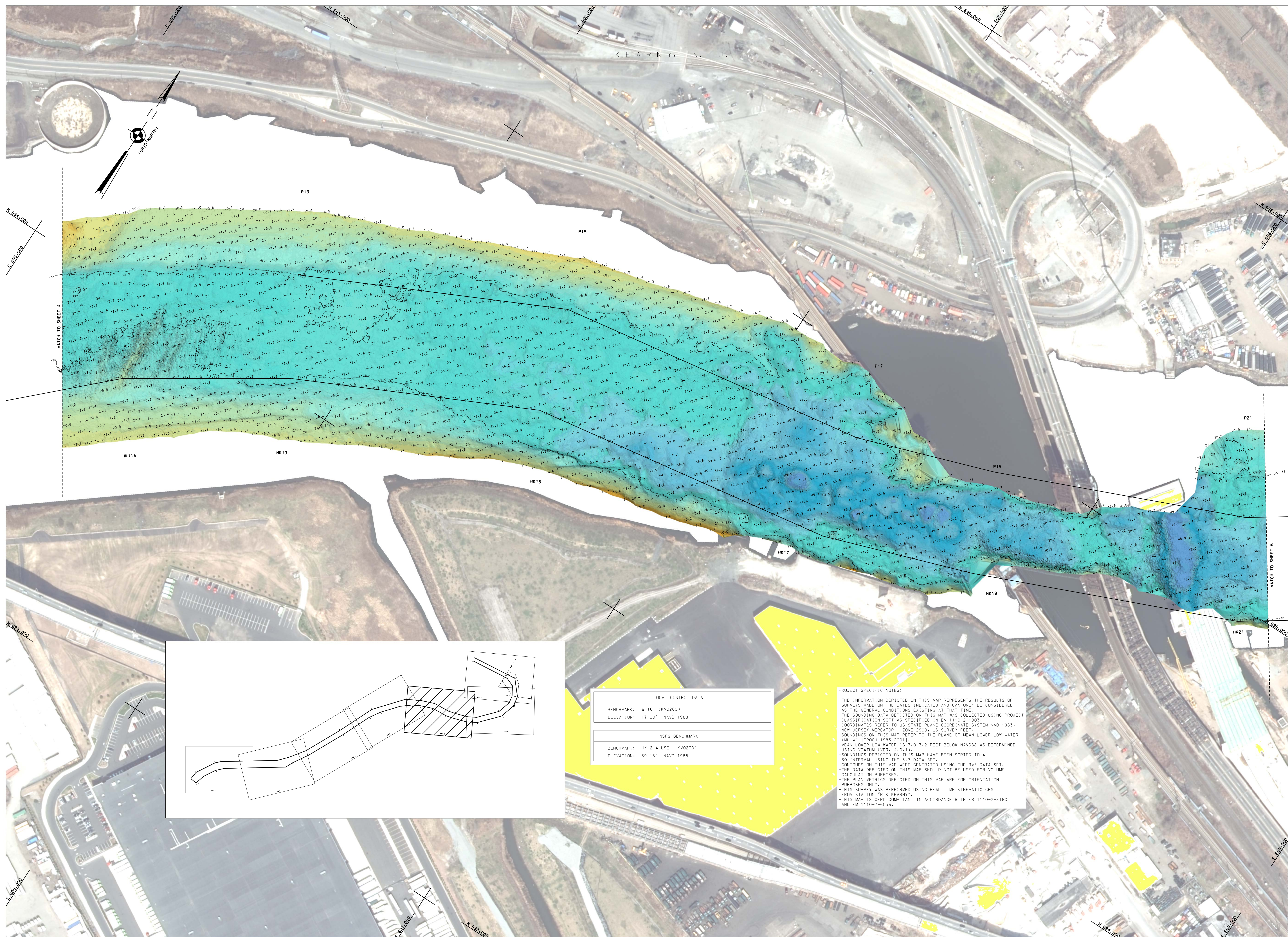
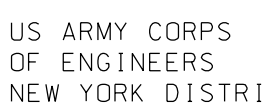
OPERATIONS DIVISION  
SURVEY SECTION  
CENAN-OP-S

MARK BAY, HACKENSACK &  
PASSAIC RIVERS  
HACKENSACK RIVER  
CONDITION SURVEY

VH-104

SHEET 4 OF 7

REC. NO./FILE NO.: 5

[illegible]

SCALE: ONE INCH = 100 FEET	DATES OF SURVEY: 13-14 OCTOBER 2021 _____ _____
FIELD BOOKS: N/A _____ _____	REQ. NO./FILE NO.: 5107/MS _____

APPROVED: J. MOXLEY FULLY CERTIFIED	APPROVED: P. BHADUR VISA CERTIFICATION
APPROVED: M. FORTE CIVIL ENGINEERING TECHNICIAN	APPROVED: J. MAZZ CIVIL ENGINEER

DATE: 20 October 2021

NEWARK BAY, HACKENSACK &  
PASSAIC RIVERS  
HACKENSACK RIVER  
CONDITION SURVEY

[illegible]

ONE INCH = 100 FEET SCALE:	DATES OF SURVEY: 13.14 OCTOBER 2021 _____ _____
FIELD BOOKS: N/A _____ _____	REG. NO./FILE NO.: 5107/N3

APPROVED: J. MCKELVEY  
FIELD CARDPAPER

APPROVED: M. FORTE  
CIVIL ENGINEERING TECHNICIAN

APPROVED: P. BHADUR  
LEAD CARDPAPER

APPROVED: J. MRAZ  
EMERGENCY CHIEF OF SUPPLIES

DATE: 20 OCTOBER 2021

NEW YORK DISTRICT  
CORPS OF ENGINEERS  
NEW YORK, NEW YORK 10278

OPERATIONS DIVISION  
SURVEY SECTION  
CENAN-OP-S

NEWARK BAY, HACKENSACK &  
PASSAIC RIVERS

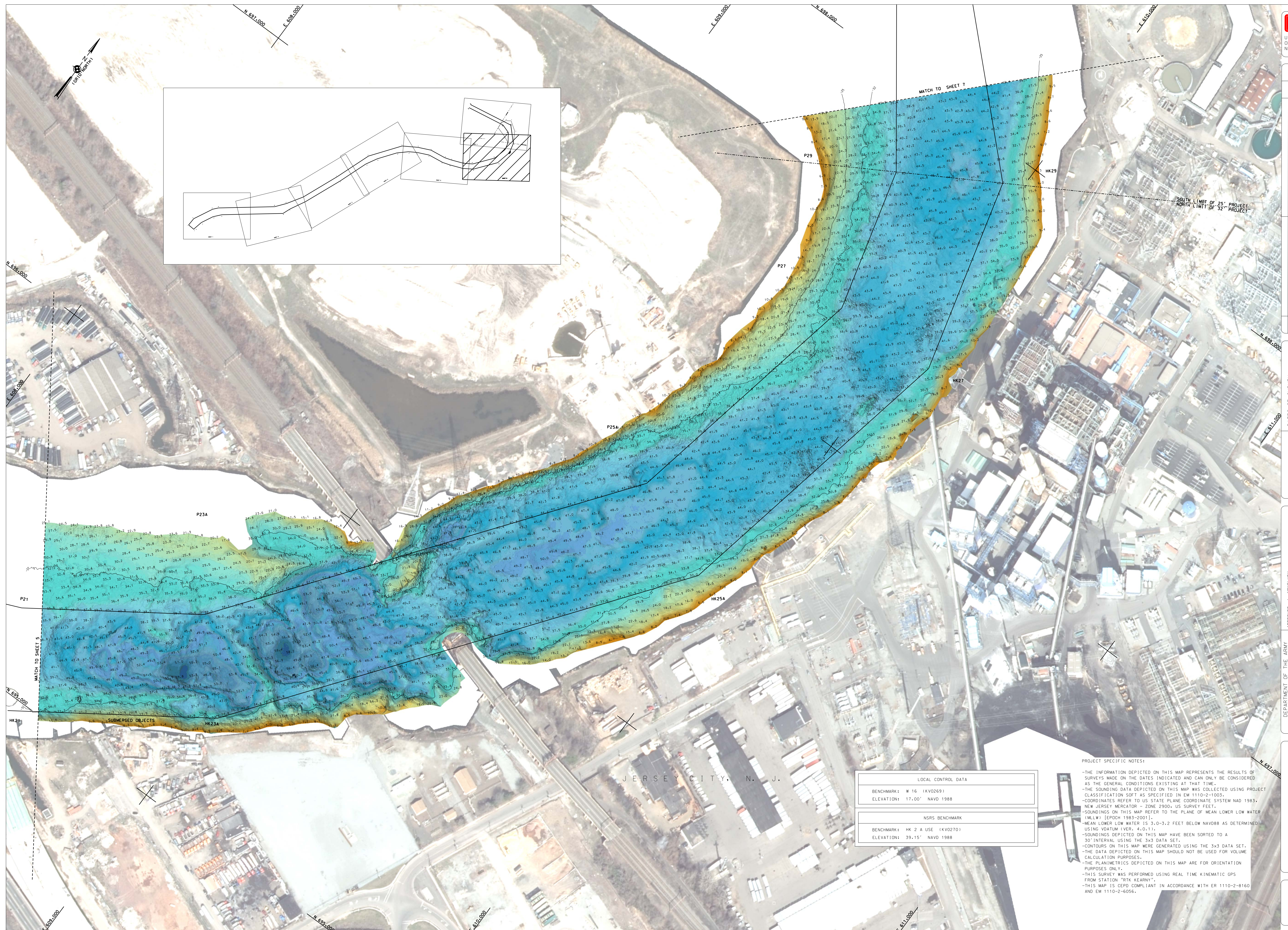
HACKENSACK RIVER

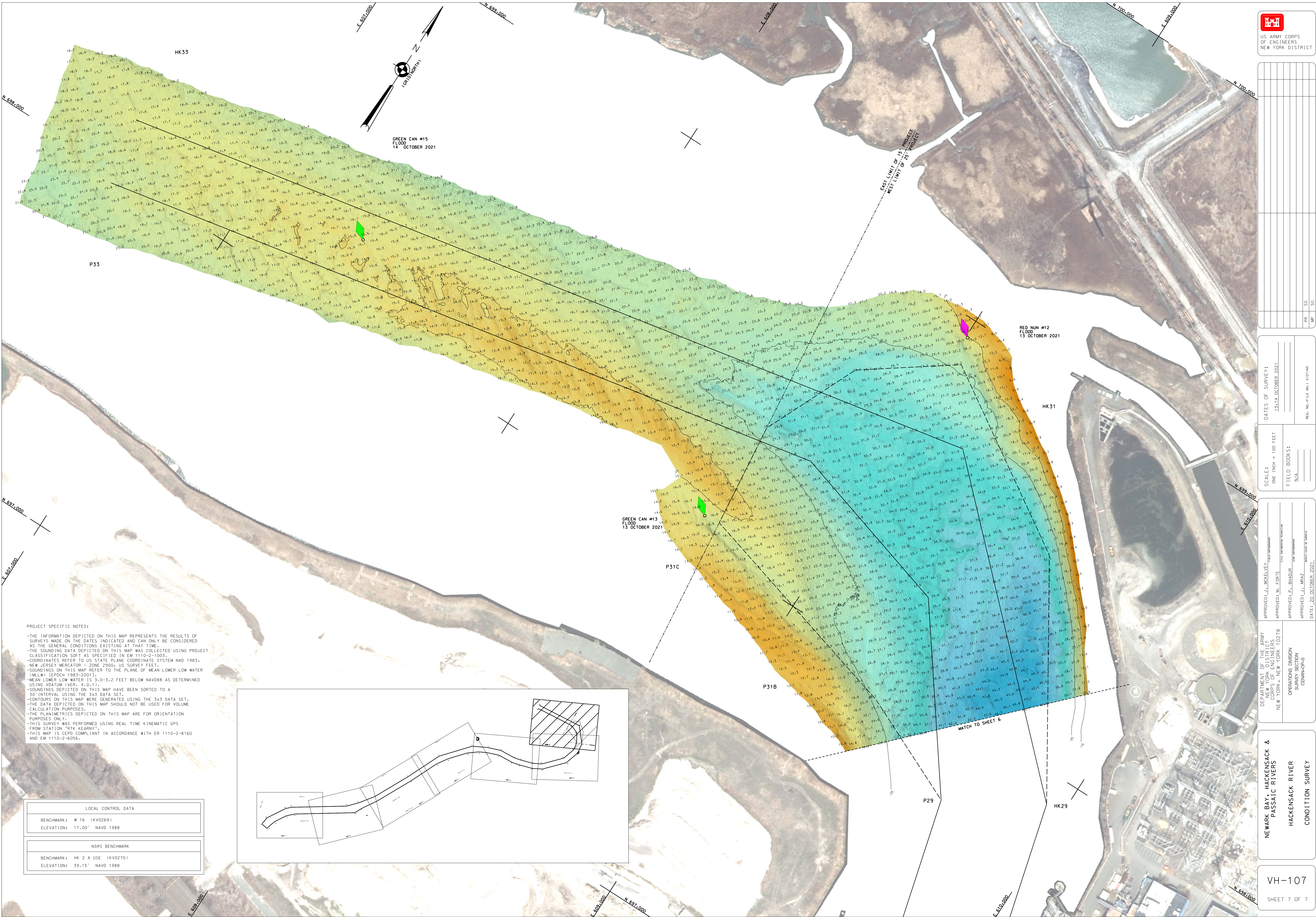
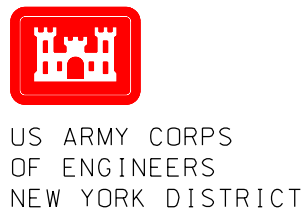
CONDITION SURVEY

H-106

SHEET 6 OF 7

Q. NO./FILE NO.: 5107/N3



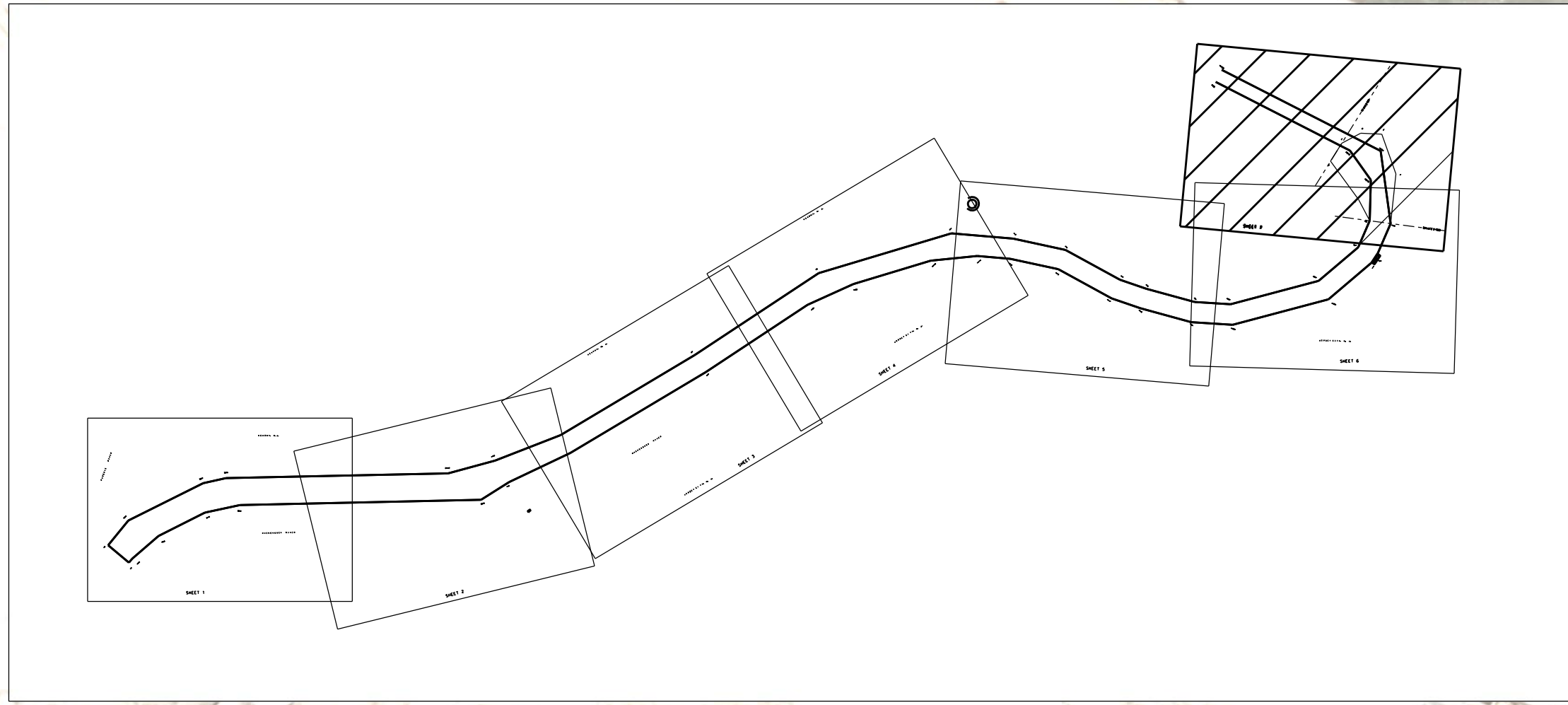


PROJECT SPECIFIC NOTES:

- 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 SOUNDING DATA DEPICTED ON THIS MAP WAS COLLECTED USING PROJECT CLASSIFICATION SFT AS SPECIFIED IN EM 1110-2-1003.
- 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 1985-2001].
- MEAN LOWER LOW WATER IS 3.0-3.2 FEET BELOW NAVD88 AS DETERMINED USING VDATUM (VER. 4.0.11).
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 30' INTERVAL USING THE 3x3 DATA SET.
- CONTOURS ON THIS MAP WERE GENERATED USING THE 3x3 DATA SET.
- THE DATA DEPICTED ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANNIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "RTK KEARNY".
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

LOCAL CONTROL DATA	
BENCHMARK:	M 16 (KV0269)
ELEVATION:	17.00' NAVD 1988

NSRS BENCHMARK	
BENCHMARK:	HK 2 A USE (KV0270)
ELEVATION:	39.15' NAVD 1988



DATES OF SURVEY:	
13.15 OCTOBER 2021	

SCALE:	
ONE INCH = 100 FEET	

FIELD BOOKS:	
N/A	

PR	SC
MP	SC

APPROVED:	
APPROVED: J. MCKELVEY	DATE: 20 OCTOBER 2021

APPROVED:	
APPROVED: M. CORTE	DATE: 20 OCTOBER 2021

APPROVED:	
APPROVED: D. BARRIE	DATE: 20 OCTOBER 2021

APPROVED:	
APPROVED: J. WPAZ	DATE: 20 OCTOBER 2021

DEPARTMENT OF THE ARMY	
NEW YORK DISTRICT	

OPERATIONS DIVISION	
NEW YORK DISTRICT	

HACKENSACK RIVER	
NEW YORK DISTRICT	

CONDITION SURVEY	
NEW YORK DISTRICT	

DEPARTMENT OF THE ARMY	
NEW YORK DISTRICT	

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NEW YORK DISTRICT	

CONDITION SURVEY	
NEW YORK DISTRICT	

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NEW YORK DISTRICT	