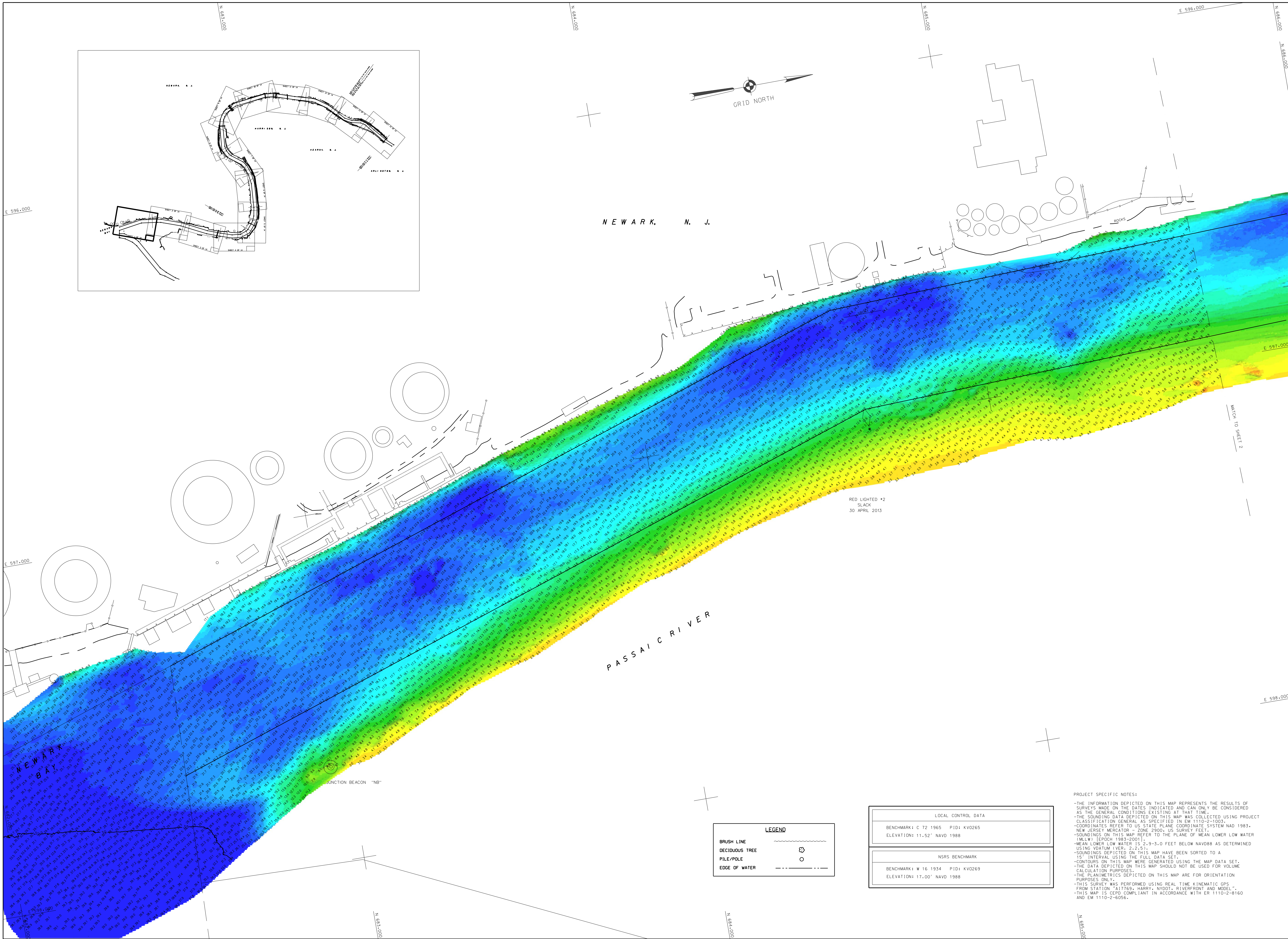




US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

DATES OF SURVEY: 2-21 JAN 2015 24 MARCH 2015	
SCALE: ONE INCH = 100 FEET	FIELD BOOKS: N/A

APPROVED: DOUGLAS MOORE
APPROVED: R. SMITH
APPROVED: D. CLARKE
APPROVED: J. MURPHY
DATE: 24 APRIL 2015

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

OPERATIONS DIVISION
SOUNDING TEAM
CDN-OP-8

NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER
CONDITION SURVEY

VH-101

SHEET 1 OF 14

FILE NO: 954
REQ. NO: 4256

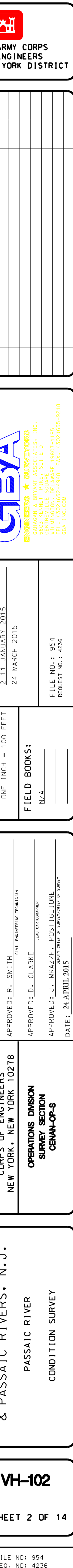
LEGEND	
BRUSH LINE	-----
DECIDUOUS TREE	⊗
PILE/POLE	○
EDGE OF WATER	-----

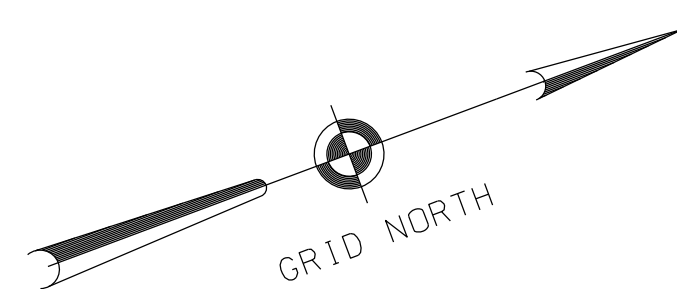
LOCAL CONTROL DATA	
BENCHMARK: C 72 1965	PID: KVO265
ELEVATION: 11.52' NAVD 1988	

NSRS BENCHMARK	
BENCHMARK: W 16 1934	PID: KVO269
ELEVATION: 17.00' NAVD 1988	

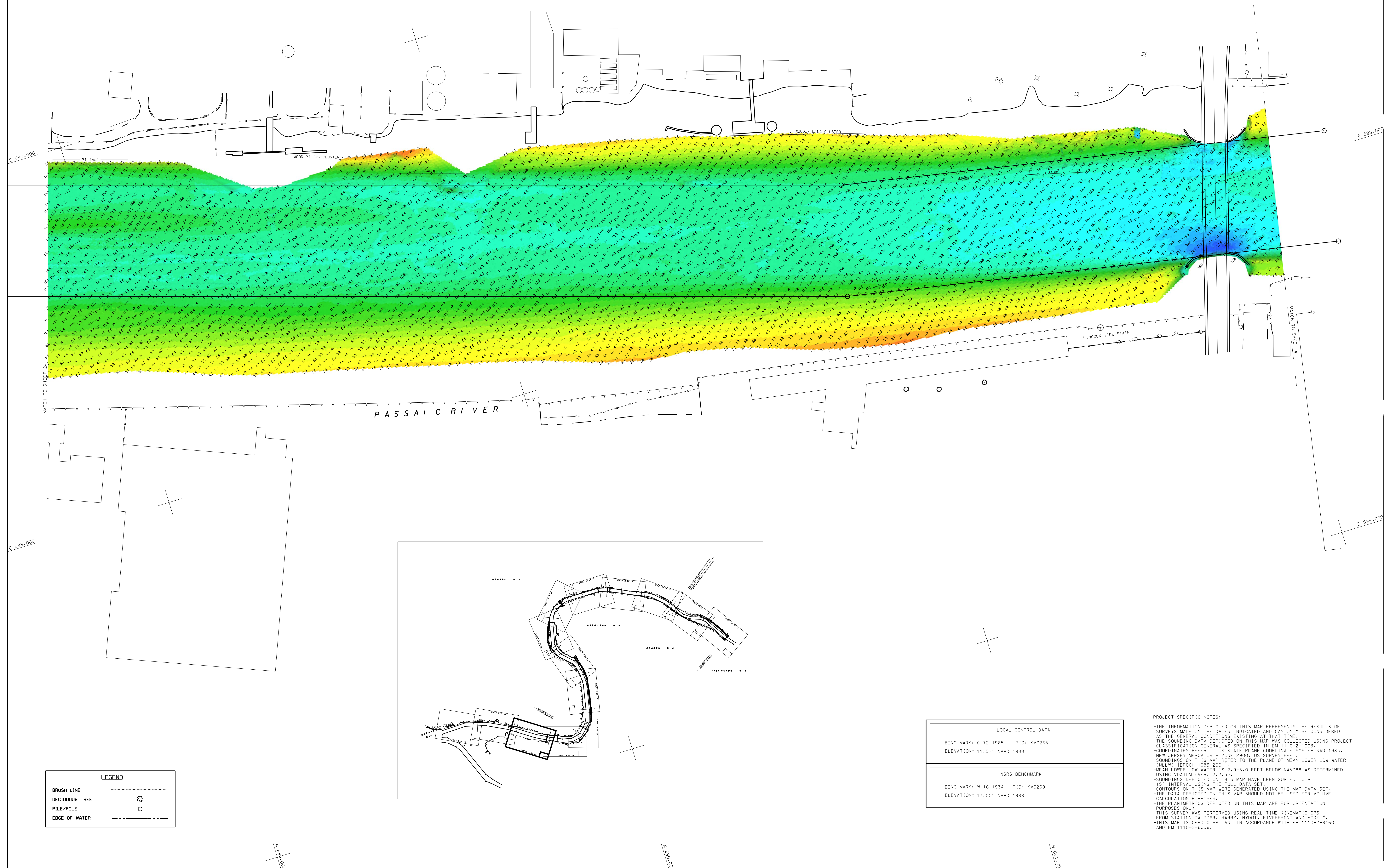
PROJECT SPECIFIC NOTES:

- 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 SOUNDING DATA DEPICTED ON THIS MAP WAS COLLECTED USING PROJECT CLASSIFICATION GENERAL AS SPECIFIED IN EM 1110-2-1003.
- 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) (PERIOD 1983-2001).
- MEAN LOWER LOW WATER IS 2.9-3.0 FEET BELOW NAVD88 AS DETERMINED USING VOATUM (VER. 2-0-51).
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 15' INTERVAL USING THE FULL DATA SET.
- 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.
- THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "A17769; HARRY, NYDD; RIVERFRONT AND MOBILE".
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.





NEWARK, N. J.



US ARMY CORPS
OF ENGINEERS
NEW YORK DISTRICT

GBA
 5803 KENNETH PIKE, SUITE D
 CENTREVILLE SQUARE
 TEL: (302) 362-4918 FAX: (302) 365-
 GBA - INC.COM

SCALE: ONE INCH = 100 FEET	DATES OF SURVEY: 2-11 JANUARY 2015 24 MARCH 2015
FIELD BOOKS: N/A _____ _____ _____	FILE NO.: 954 REQUEST NO.: 4236

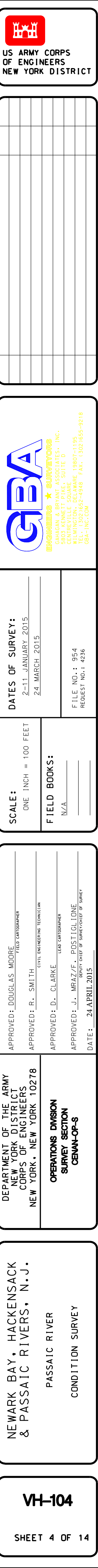
DEPARTMENT OF THE ARMY NEW YORK DISTRICT CORPS OF ENGINEERS NEW YORK, NEW YORK 10278	APPROVED: DOUGLAS MOORE CHIEF, DISTRICT
OPERATIONS DIVISION SURVEY SECTION CEWA-0-8	APPROVED: R. SMITH CHIEF, SURVEYING SECTION
	APPROVED: D. CLARKE CHIEF, DISTRICT
	APPROVED: J. WALZ CHIEF, SURVEYING SECTION
	DATE: 24 APRIL 2015

NEWARK BAY, HACKENSACK
& PASSAIC RIVERS, N.J.
PASSAIC RIVER
CONDITION SURVEY

VH-103

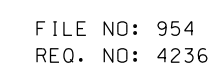
SHEET 3 OF 14

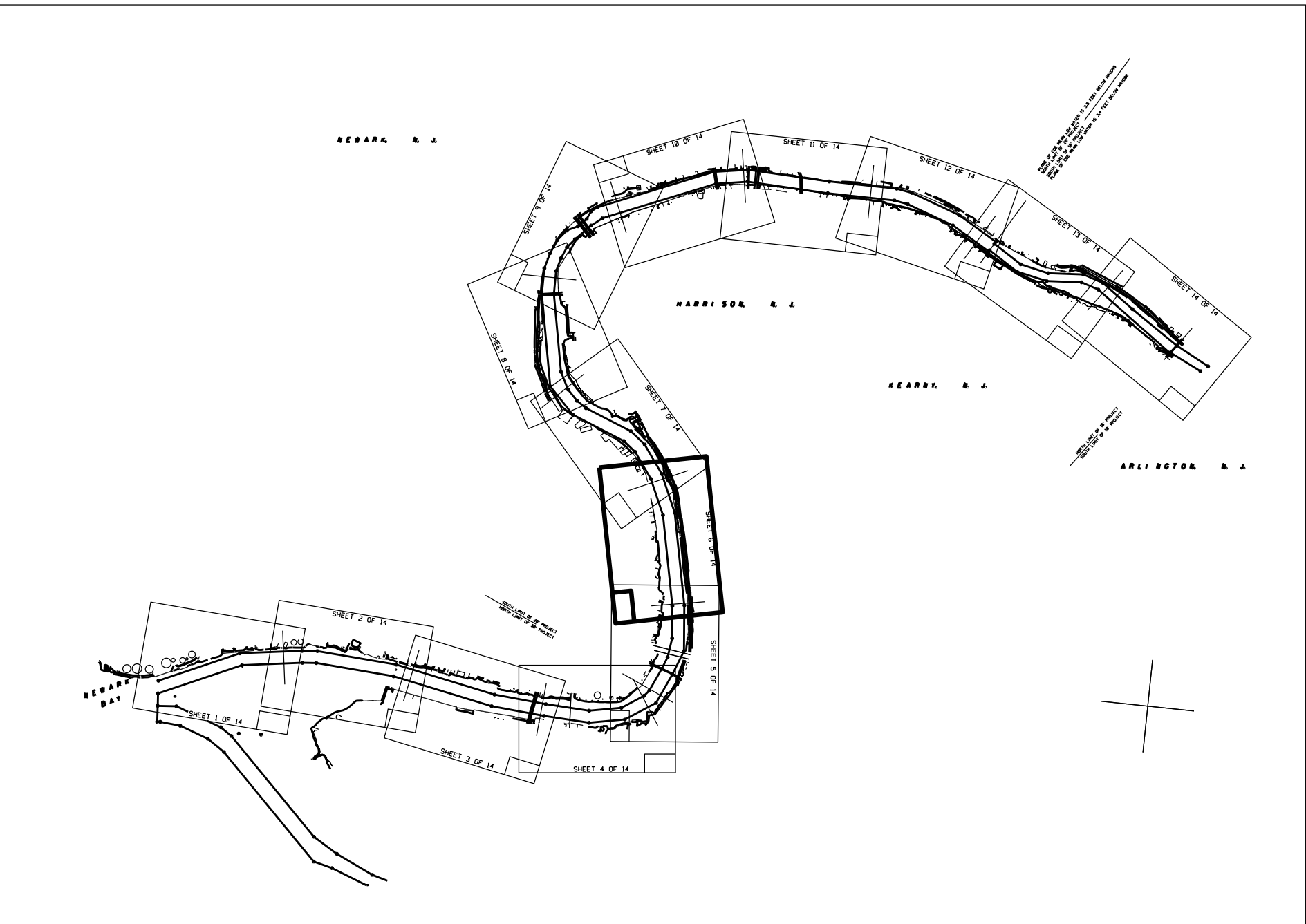
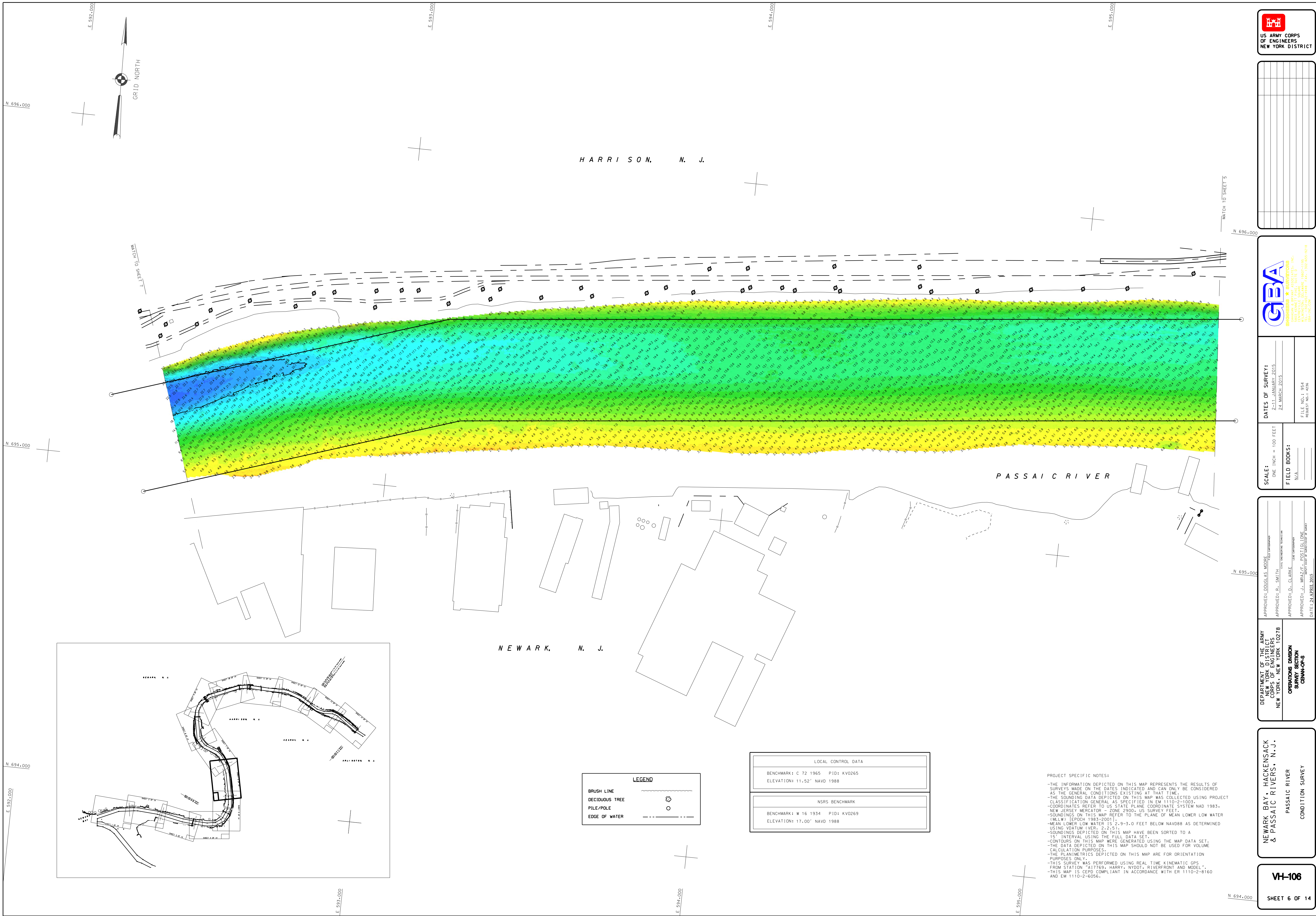
FILE NO: 954
REQ. NO: 4236



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 INFORMATION DEPICTED ON THIS MAP WAS SELECTED USING PROJECT CLASSIFICATION GENERAL AS SPECIFIED IN EN 1110-2-2003.
- THE SURVEY DATES FOR THIS MAP WERE JANUARY 1983, FEBRUARY 1983, NEW JERSEY MERGATOR - JUNE 2000, US SURVEY, FET.
- THE DATA FOR THIS MAP WERE OBTAINED FROM THE LOWER LOW WATER (MLLW) JERSEY 1983-2001.
- THE WATER SURFACE WATER ELEVATION 2.9-3.0 FEET BELOW NAVD83 AS DETERMINED USING VDOTM (VER 2.2.5).
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 10' INTERVAL.
- CONTOURS ON THIS MAP WERE GENERATED USING THE MAP DATA SET.
- THE DATA SET FOR THIS MAP WAS OBTAINED FROM THE VOLUME CALCULATION PURPOSES.
- THE PLANNING AND DESIGN OF THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION 174765, HARDY, NORTON, RIVERFORD AND MODEL".
- THIS MAP IS CEED COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160





LEGEND	
BRUSH LINE	~~~~~
DECIDUOUS TREE	⊗
PILE/POLE	○
EDGE OF WATER	---

LOCAL CONTROL DATA	
BENCHMARK: C 72 1965	PID: KY0265
ELEVATION: 11.52' NAVD 1988	
NSRS BENCHMARK	
BENCHMARK: W 16 1934	PID: KY0269
ELEVATION: 17.00' 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 SOUNDING DATA DEPICTED ON THIS MAP WAS COLLECTED USING PROJECT CLASSIFICATION GENERAL AS SPECIFIED IN EM 1110-2-1003.
- 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) (PERIOD 1983-2001).
- MEAN LOWER LOW WATER IS 2.9+3.0 FEET BELOW NAVD88 AS DETERMINED USING DATUM (VER: 2-2-51).
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 15' INTERVAL USING THE FULL DATA SET.
- 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.
- THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION 2417769, HARRI, NYD07, RIVERFRONT AND MODEL.
- THIS MAP IS CEPO COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

DATE: 24 APRIL 2015	FILE NO: 1 954
PROJECT NO: 4236	

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS NEW YORK, NEW YORK 10278	OPERATIONS DIVISION SURVEY UNIT CEAN-CP-8
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NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER
CONDITION SURVEY

VH-106

SHEET 6 OF 14

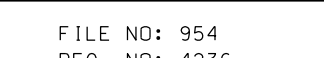
FILE NO: 954
REG. NO: 4236

DATES OF SURVEY:
2-11 JANUARY 2013
24 MARCH 2015

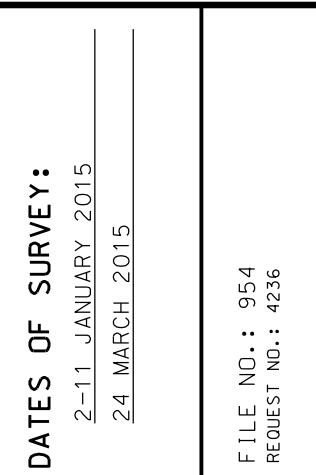
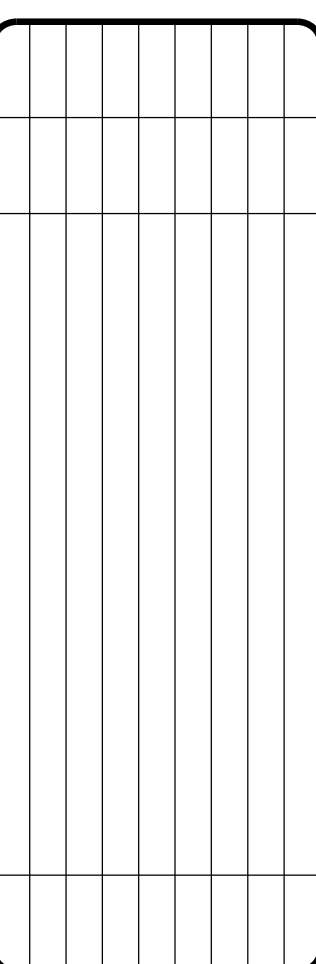
SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

GBA
GEOTECHNICAL & ENVIRONMENTAL
CORPORATION
1000 ROUTE 100
SUITE 100
ROSELAND, NJ 07068
TEL: 201-991-1100
FAX: 201-991-1101



- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED RELIABLE FOR THE PERIODS SPECIFIED.
- THE SOUNDING DATA DEPICTED ON THIS MAP WAS COLLECTED USING PROJECT NUMBER 80-067.
- COORDINATES REFER TO US STATE PLANE COORDINATE SYSTEM NAD 83.
- SOUNDINGS ON THIS MAP REFER TO THE PLANE OF MEAN LOWER LOW WATER.
- MEAN LOWER LOW WATER IS 2.9-3.0 FEET BELOW NAVD83 AS DETERMINED BY LOCAL TIDE GAUGES.
- SOUNDINGS DEPICTED ON THIS MAP HAVE BEEN SORTED TO A 1-METER 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 OR FURTHER ANALYSIS.
- THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINETIC GPS.
- NOAA STATION # 86000.
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160



SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: DOUGLAS. MOORE
FIELD SUPERVISOR

APPROVED: R. SMITH
CIVIL ENGINEERING SUPERVISOR

APPROVED: D. CLARKE
LEAD CARPENTERS

APPROVED: J. MRAZ/F. POSTILLONE
IDENTIFIED BY SUPERVISOR OF SURVEY

DATE : 24 APRIL 2015

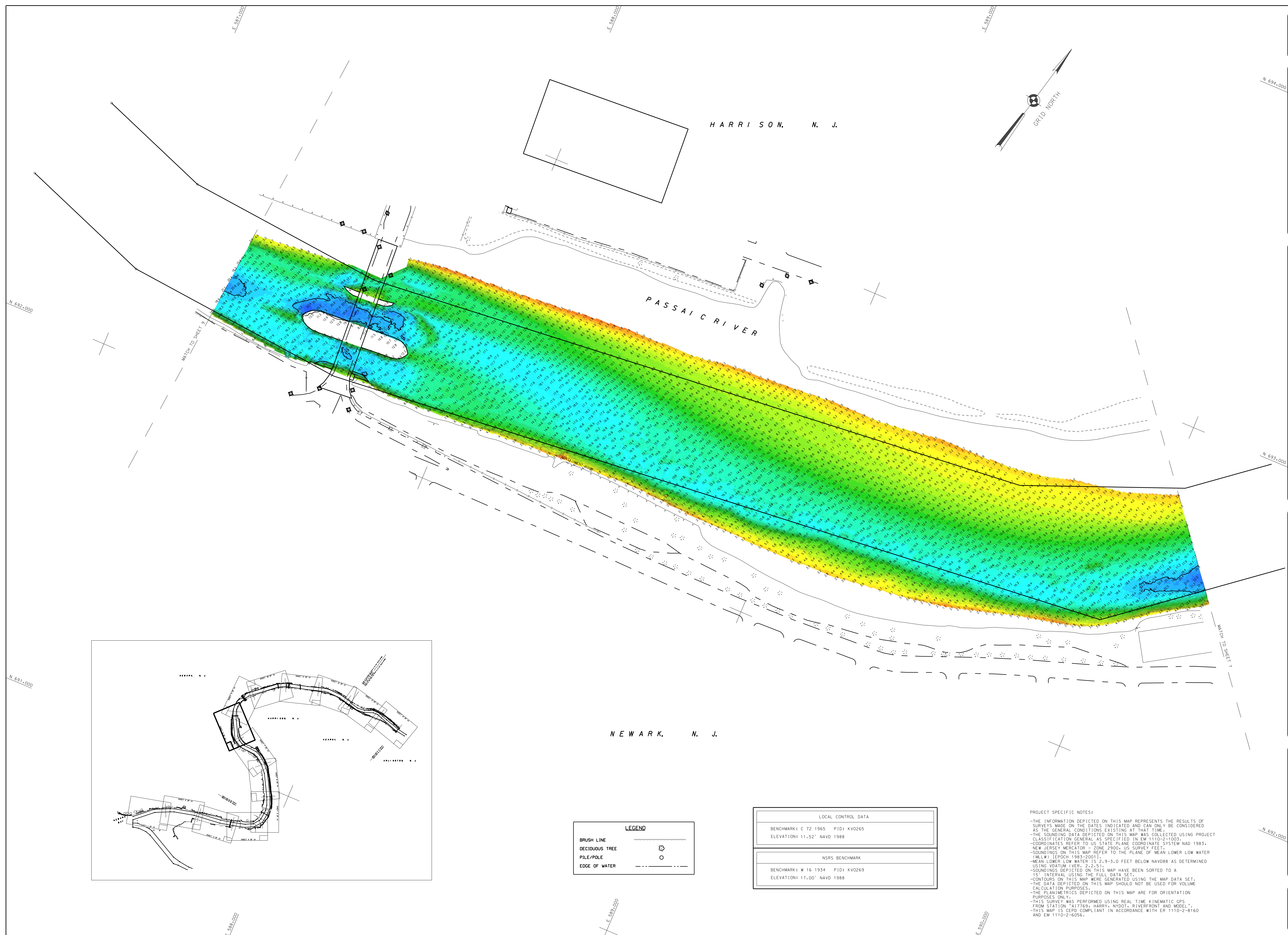
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT
CORPS OF ENGINEERS
NEW YORK, NEW YORK 10278

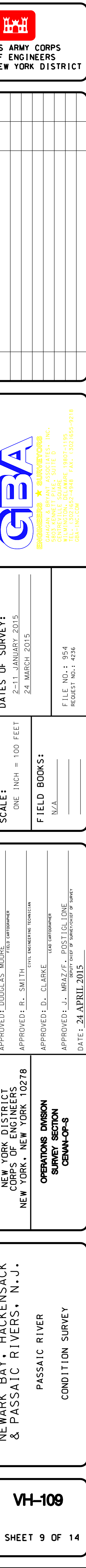
K. BAY, HACKENSACK
SAIC RIVERS, N.J.
PASSAIC RIVER
CONDITION SURVEY

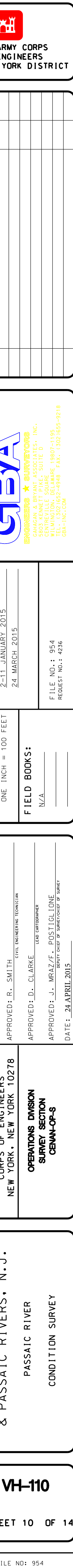
VH-108

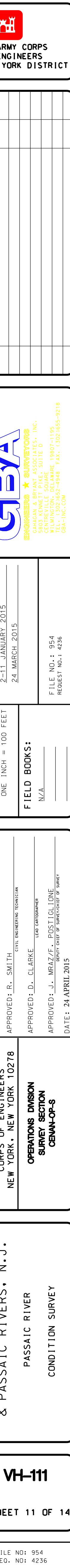
SHEET 8 OF 14

FILE NO: 954
REQ. NO: 4236



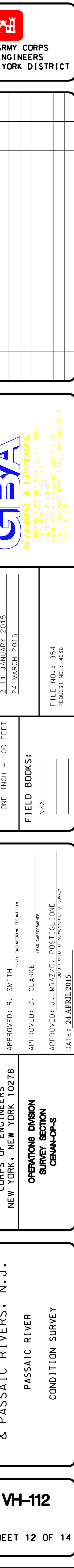


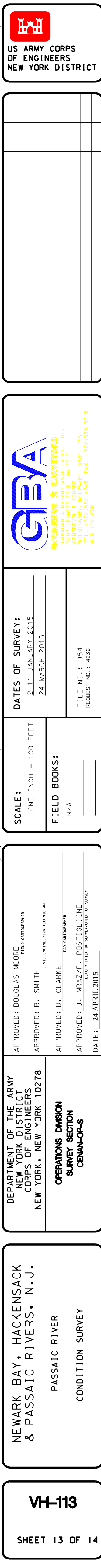


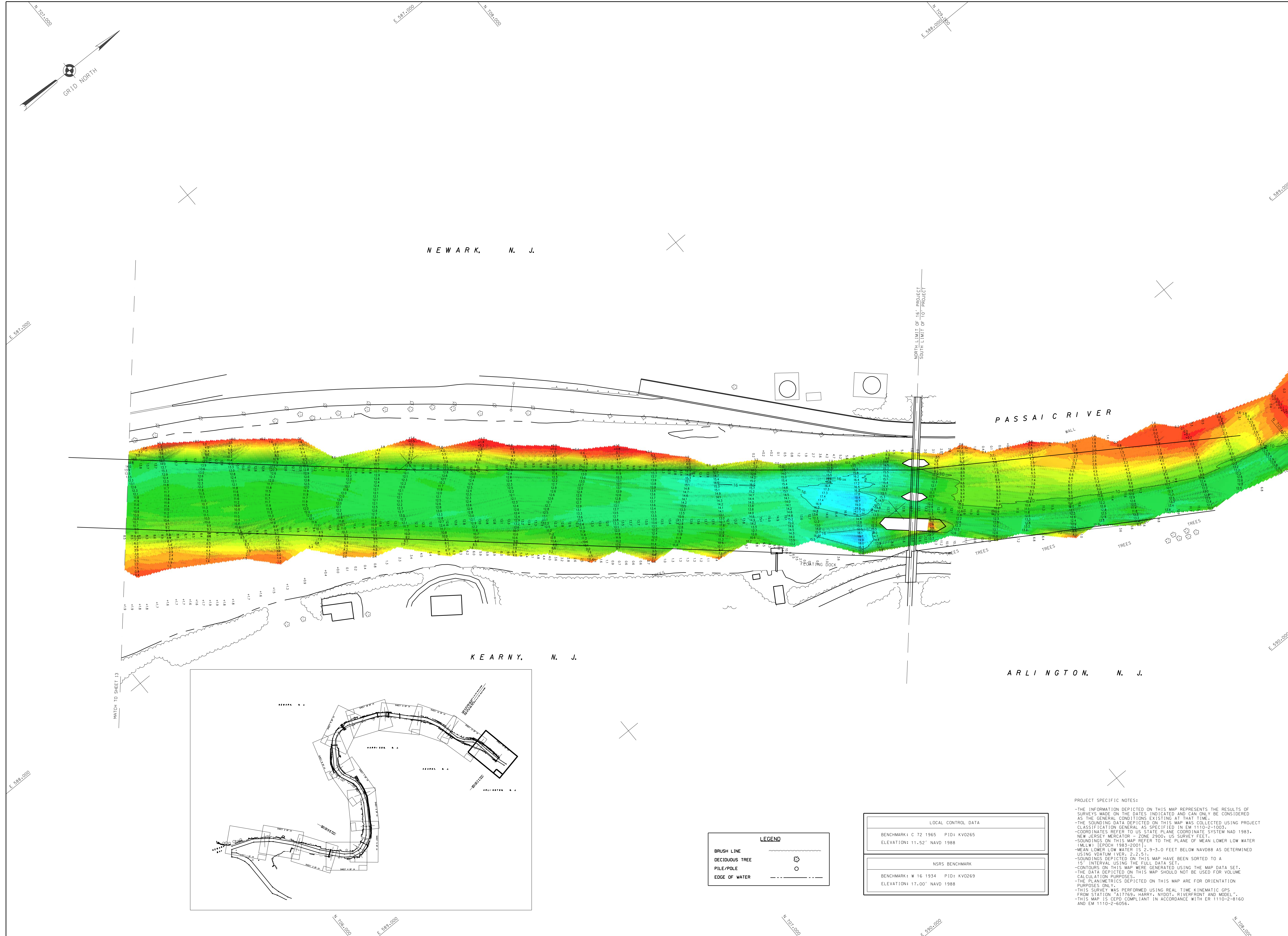
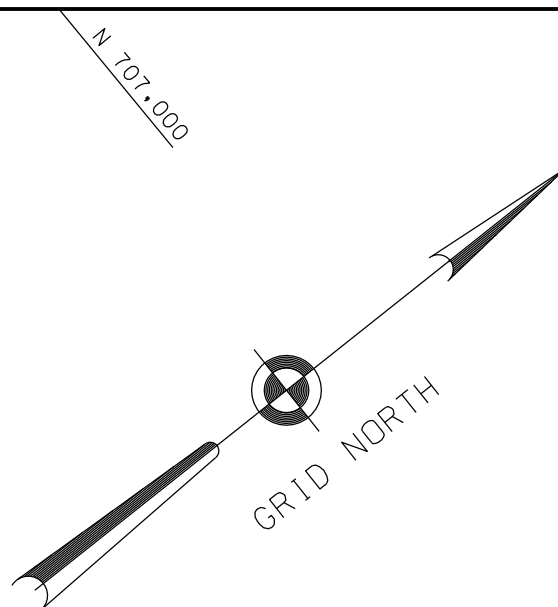


PROJECT SPECIFIC NOTES:

- THE INFORMATION DEPicted ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS A GENERAL GUIDE TO THE LOCATION OF THE DATA.
- THE SOUNDING DATA DEPicted ON THIS MAP WAS COLLECTED USING PROJECT CLASSIFICATION INFORMATION AS SPECIFIED IN ENCL. 1.
- THE DATA WAS COLLECTED USING THE HYDROGRAPHIC SYSTEM MAD 1983, NEW JERSEY MERCATOR - ZONE 1990, US SURVEY FEET.
- THE DATA WAS COLLECTED AT A DEPTH OF 10' TO 15' LOWER LOW WATER (MLLW) [JEOPHC 1983-2001].
- THE DATA WAS COLLECTED AT A DEPTH OF 2.0-9.3' FEET BELOW NAVD83 AS DETERMINED USING VDATUM VREF, UTM, 2,251.
- SOUNDINGS COLLECTED AT A DEPTH OF 2.0-9.3' FEET HAVE BEEN SORTED TO A 16" INTERVAL USING THE FULL DATA SET.
- THIS DATA SET CONTAINS ONLY DATA USING THE MAP DATA SET.
- THE DATA DEPicted ON THIS MAP SHOULD NOT BE USED FOR VOLUME CALCULATION PURPOSES.
- THE PLANNING DATA DEPicted ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "AT6566, HARRY, NYONT, RIVERMONT AND MODE".
- THIS MAP IS NOT COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EN 1110-2-41766.





[illegible]