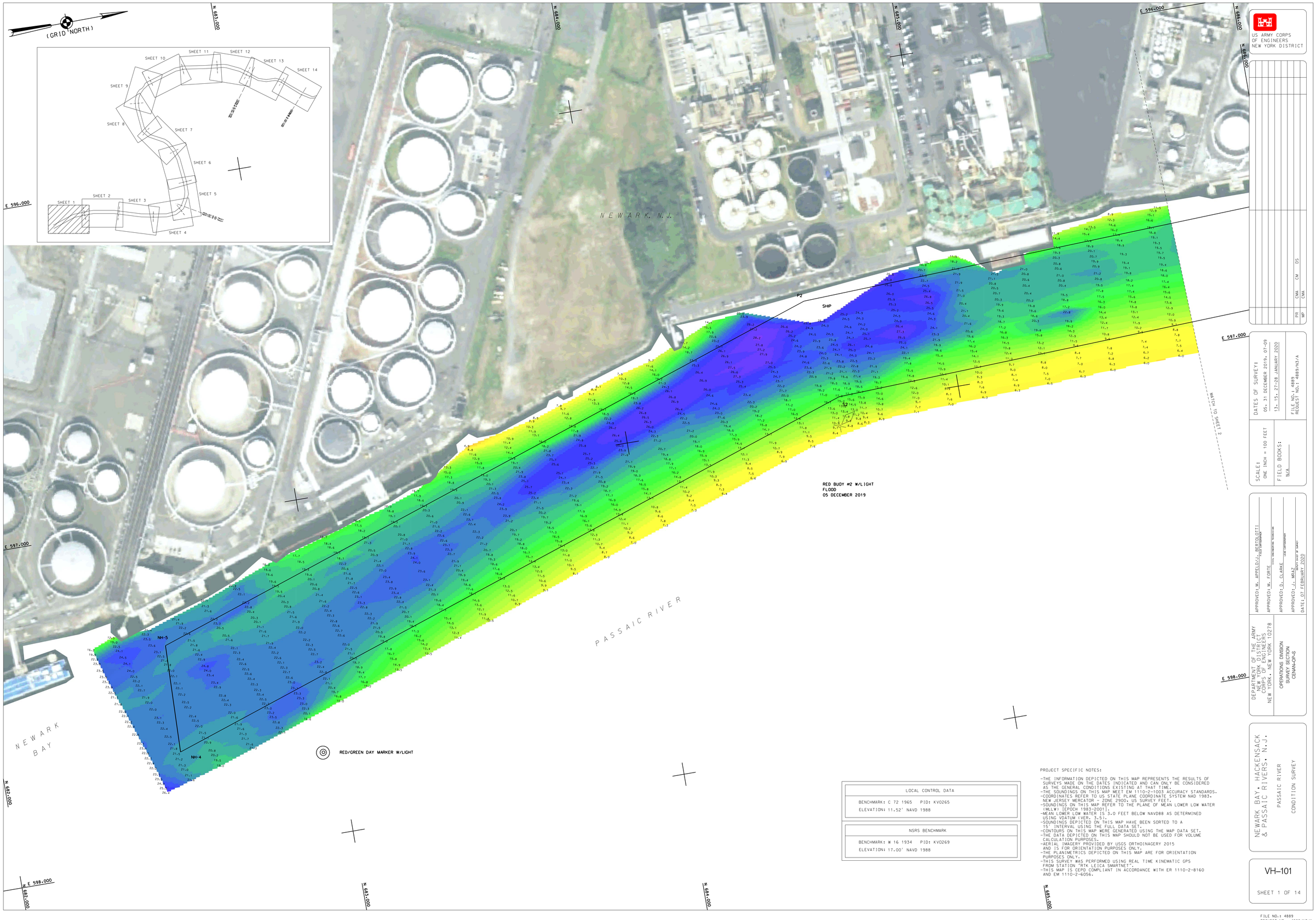
CORPS OF ENGINEERS

U. S. ARMY



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
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 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].
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-THE PLANIMETRICS DEPICTED ON THIS MAP ARE FOR ORIENTATION PURPOSES ONLY.
-THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "RTK LEICA SMARTNET".
-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09, 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N.A.

APPROVED: M. APPELO/J. BERTOLOTTI
PROJECT MANAGERS

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
DIRECTOR OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

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

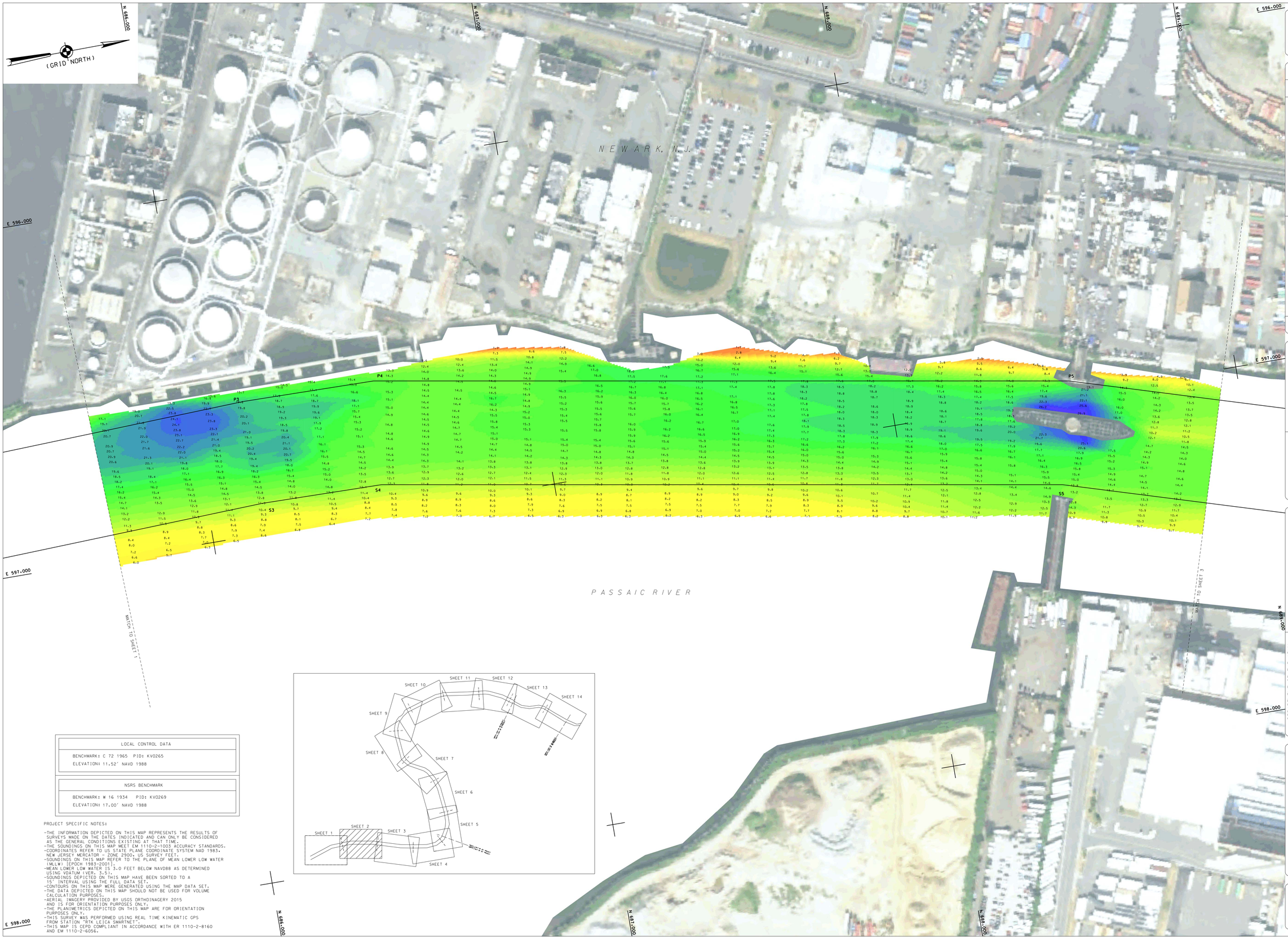
PASSAIC RIVER

CONDITION SURVEY

VH-101

SHEET 1 OF 14

FILE NO.: 4889
REQUEST NO.: 4889/N3/A



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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-THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09, 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N.A.

APPROVED: M. APPELBO/J. BERTOLOTTI
PROJECT MANAGER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

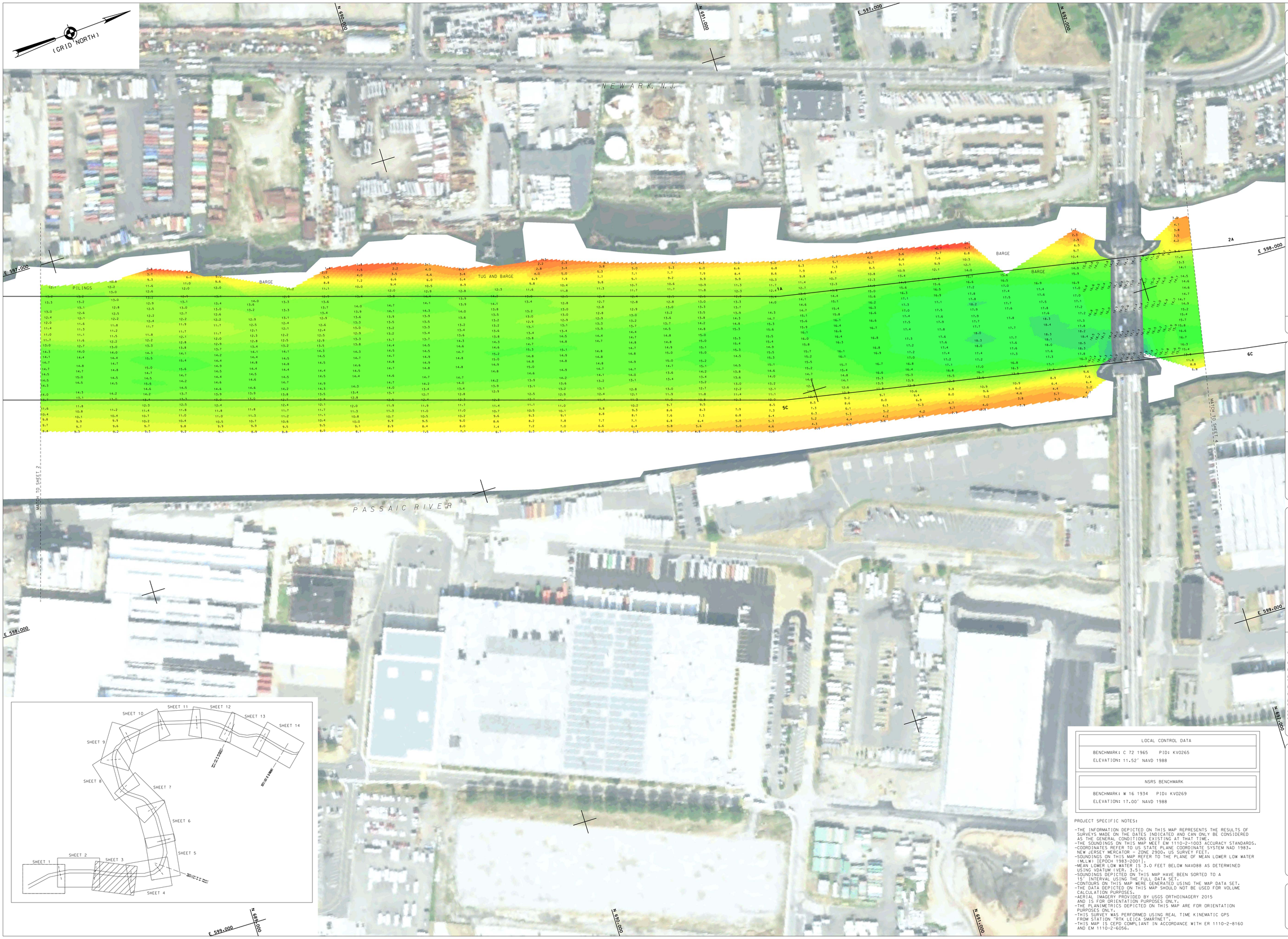
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-102

SHEET 2 OF 14



US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09, 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N.A.

APPROVED: M. APPELQVIST, PE(TO,OT)1 / CHIEF, SURVEY SECTION
APPROVED: M. FORTE / CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE / LEAD CARTOGRAPHER
APPROVED: J. MRAZ / DEPUTY CHIEF OF SURVEY
DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

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

PASSAIC RIVER

CONDITION SURVEY

VH-103

SHEET 3 OF 14

LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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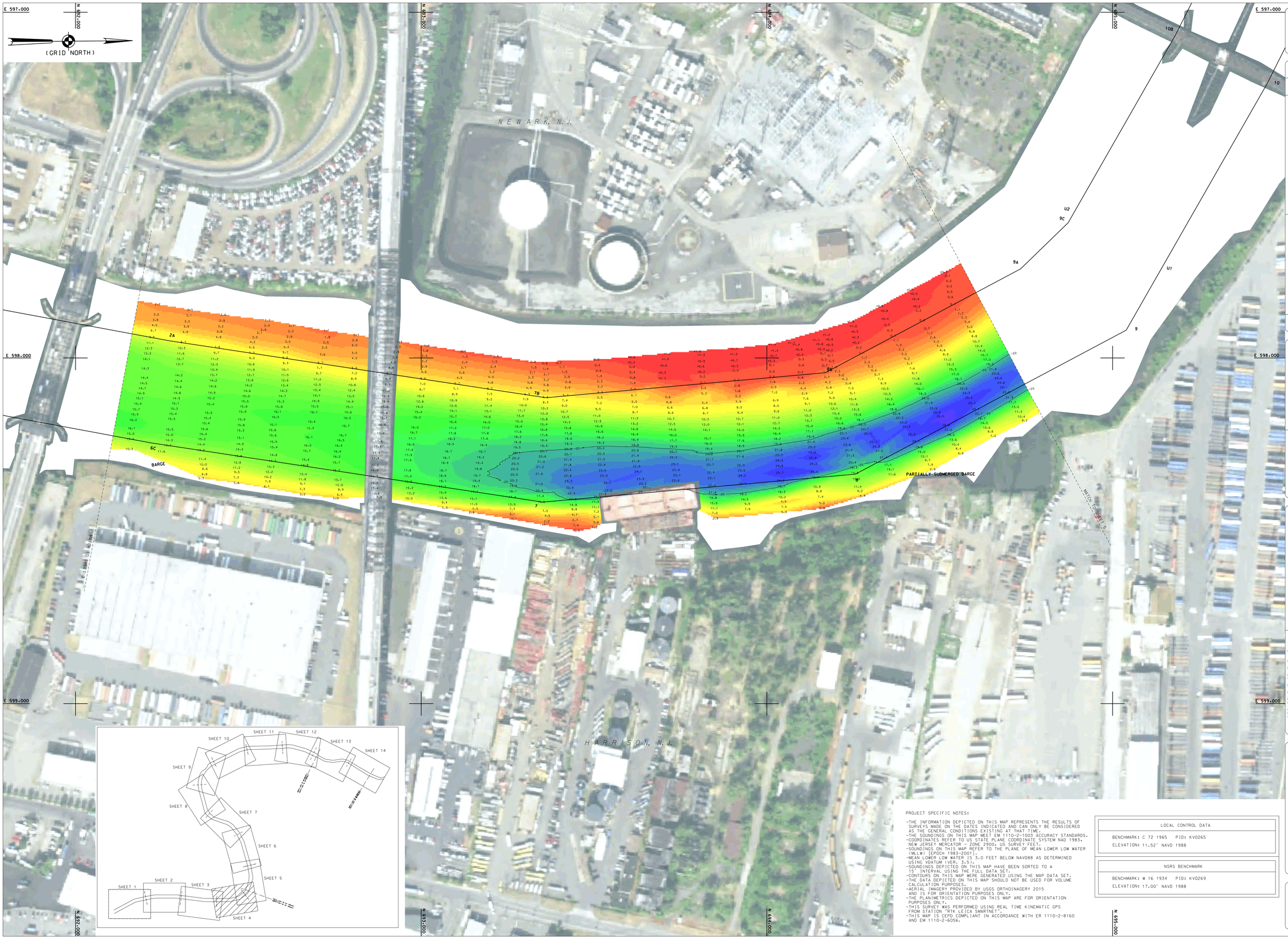

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LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PIR	CMA	DS
WBP	CMA	

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09, 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
1022

APPROVED: M. APPELO/J. BERTOLOTTI
CHIEF, HYDROGRAPHIC SURVEYS

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
SENIOR PILOT OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

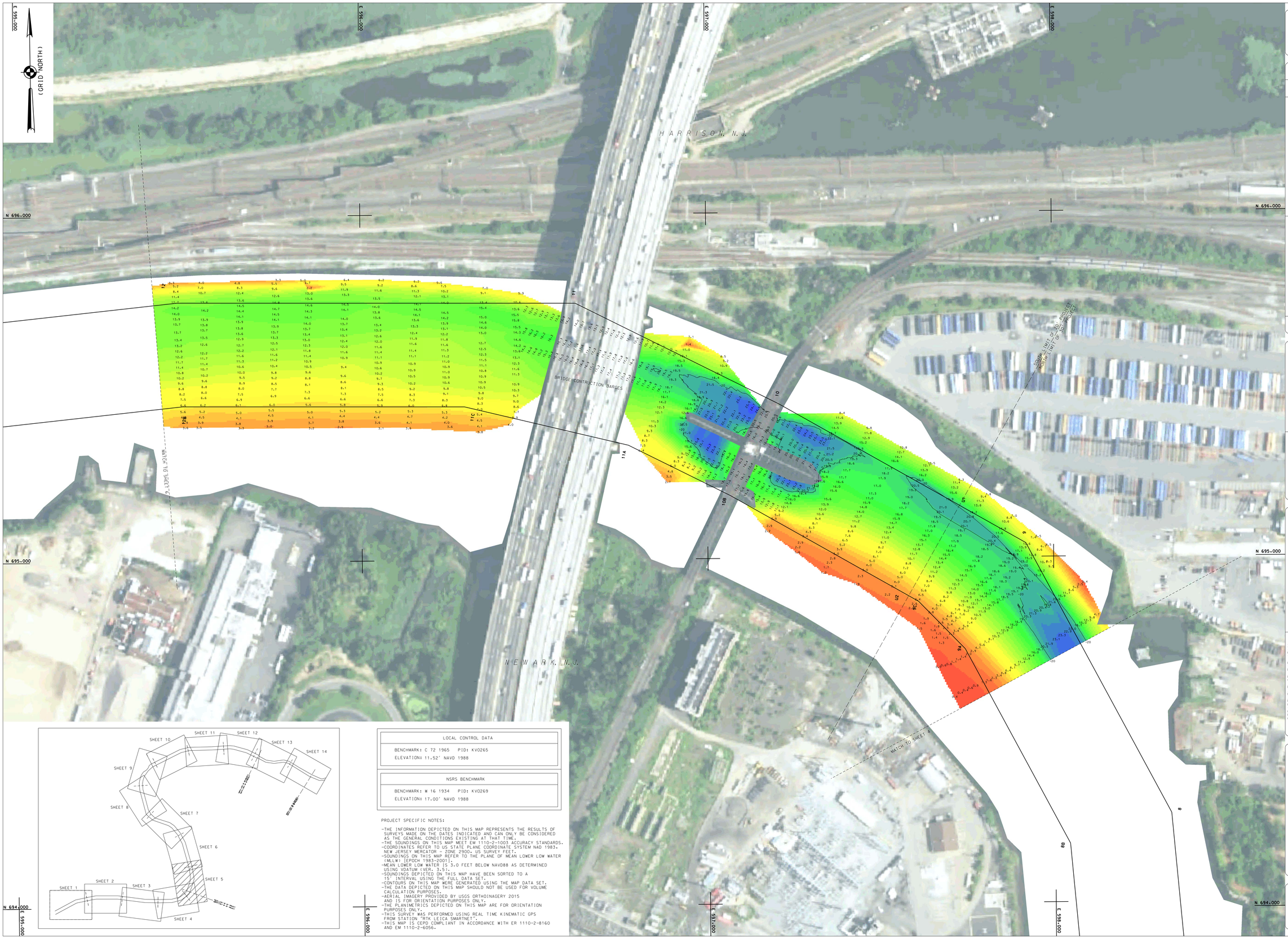
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-104

SHEET 4 OF 14



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N.A.

APPROVED: M. APPELO/J. BERTO (ITT)
PROJECT MANAGERS

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

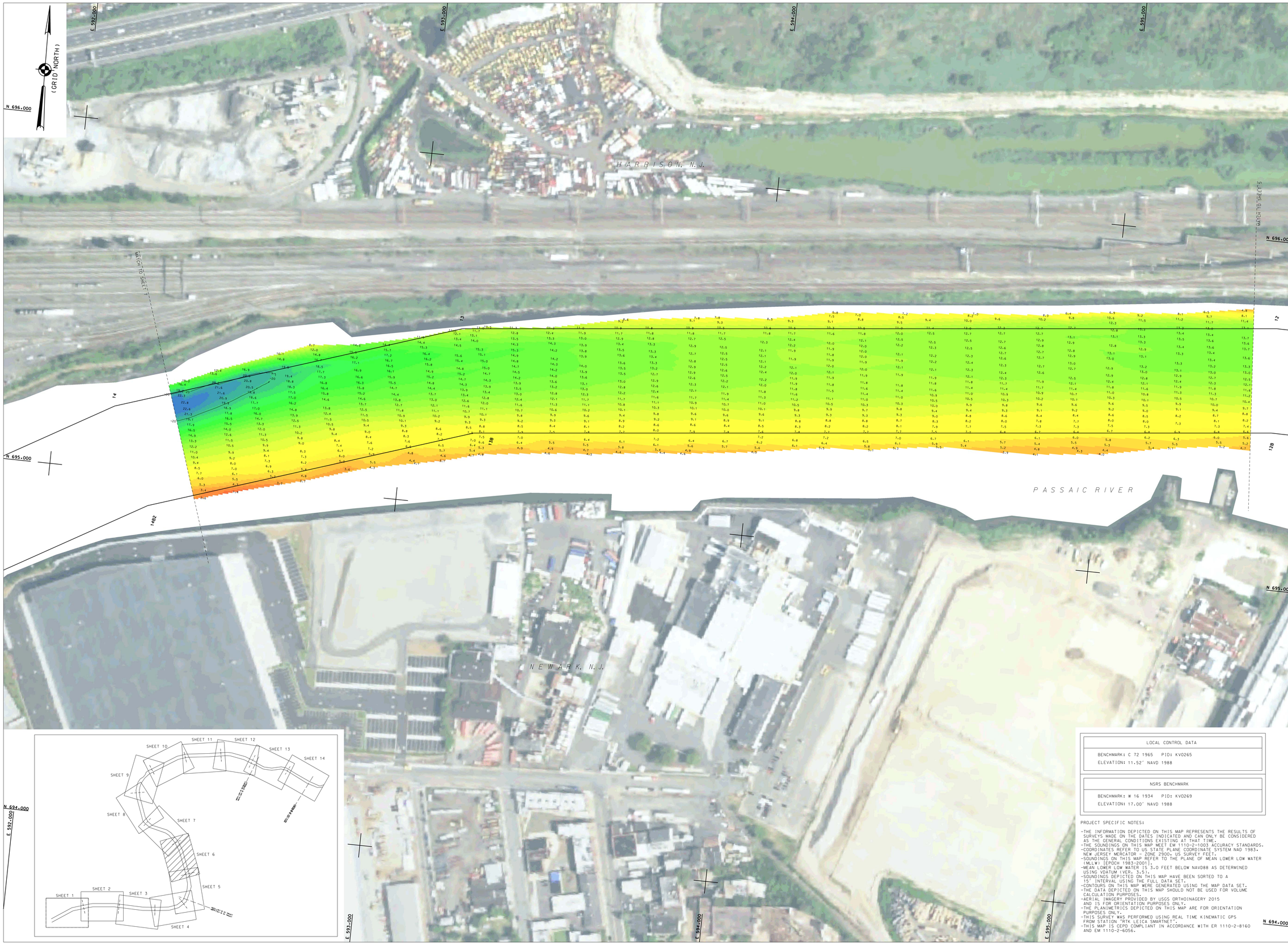
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-105

SHEET 5 OF 14



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS
MP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

APPROVED: M. APPELQVIST, BERTO OTTI
CIVIL ENGINEERING TECHNICIAN / FIELD SUPERVISOR

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
LEAD CARTOGRAPHER

APPROVED: J. MRAZ
CHIEF, COAST OF MAINE

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

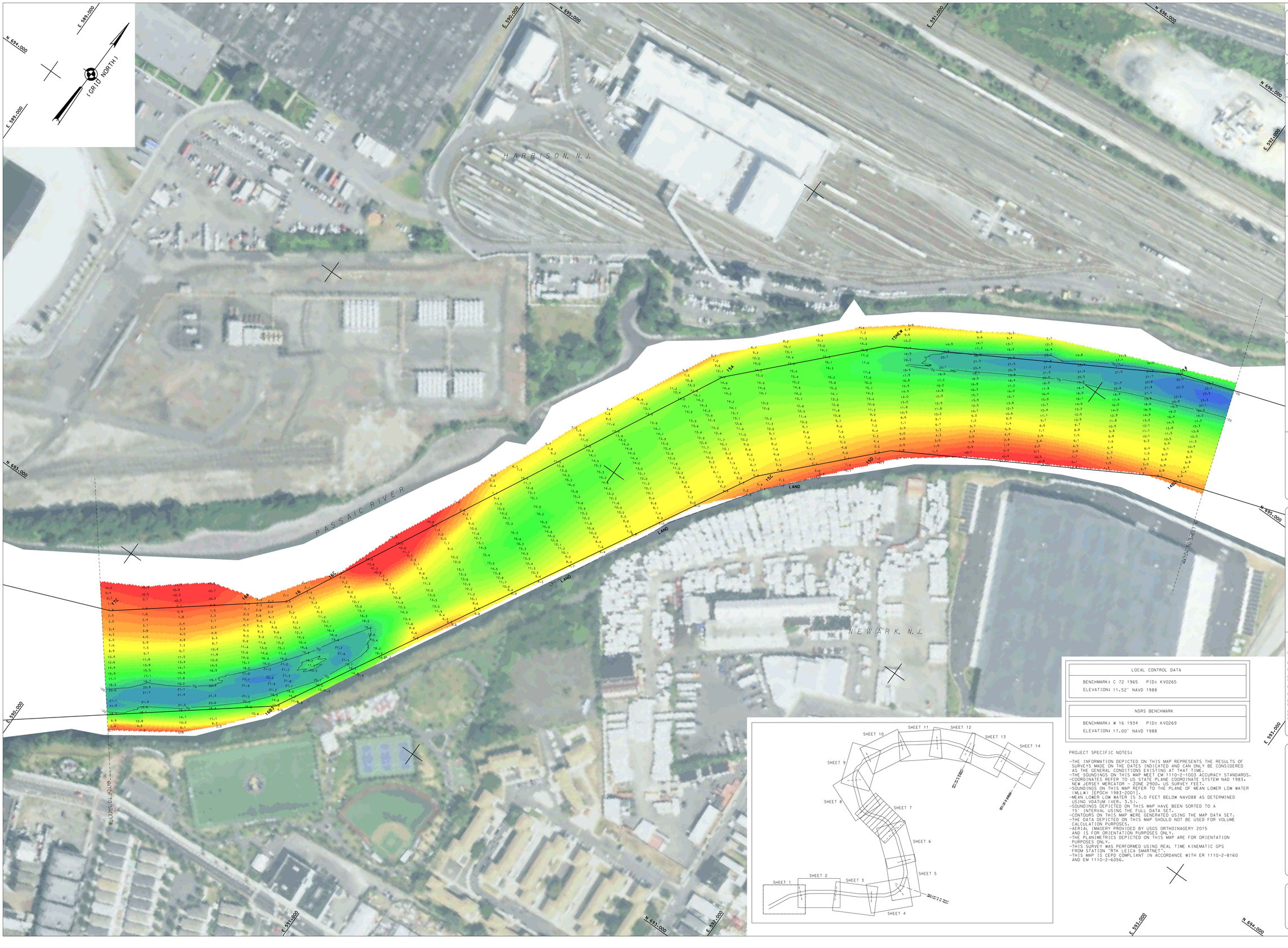
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-106

SHEET 6 OF 14



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

SCALE: ONE INCH = 100 FEET

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

FIELD BOOKS: N.A.

APPROVED: M. APPELBAUM, PROJECT MANAGER
APPROVED: M. FORTE, CIVIL ENGINEERING TECHNICIAN
APPROVED: D. CLARKE, CHIEF CARTOGRAPHER
APPROVED: J. MRAZ, CHIEF, CHIEF OF SURVEY
DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

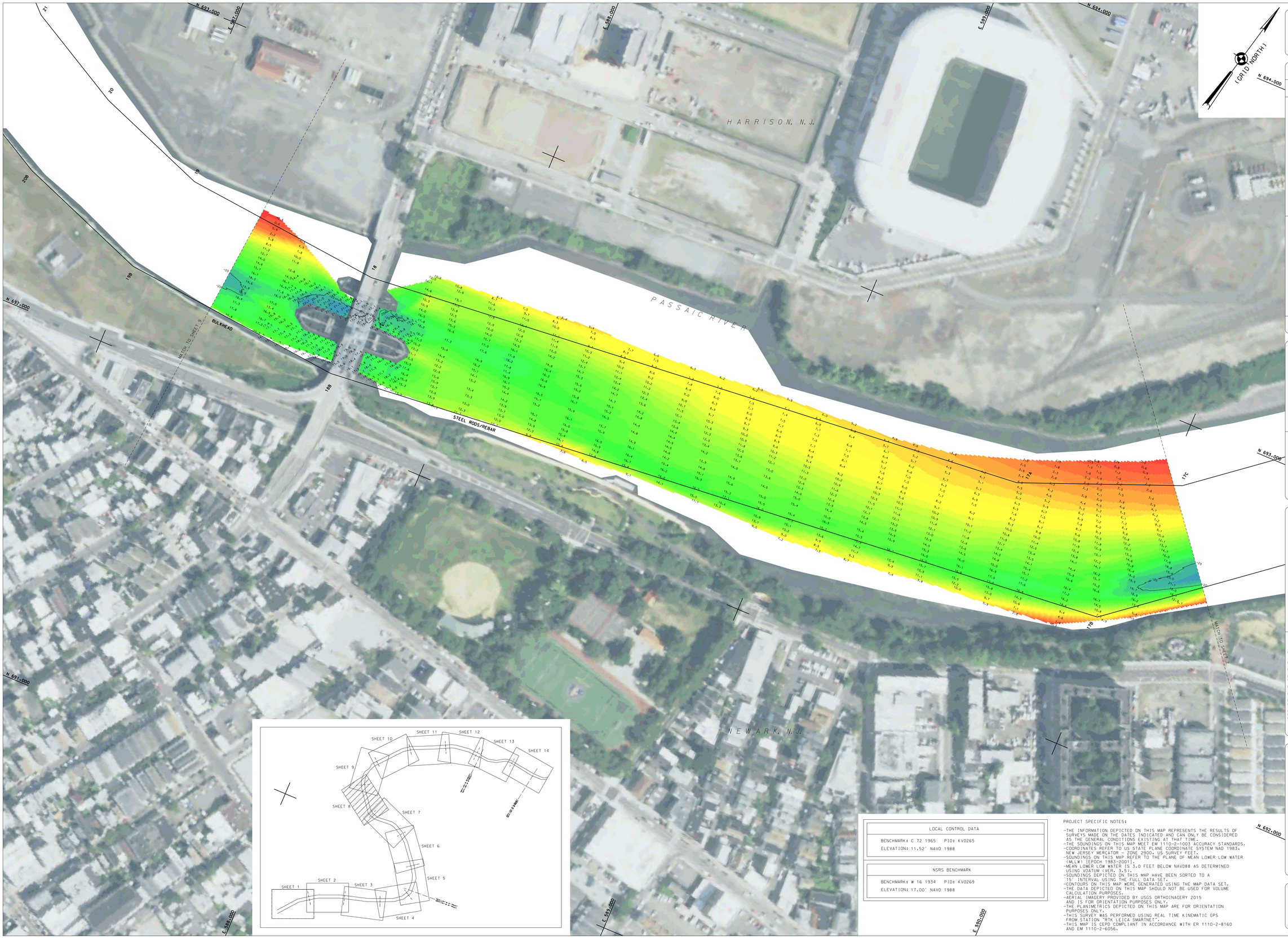
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH–107

SHEET 7 OF 14



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS	
WP	CMA			

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N.A.

APPROVED: M. APPELBO/J. BERTOLOTTI
PROJECT MANAGER

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
BRANCH CHIEF OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

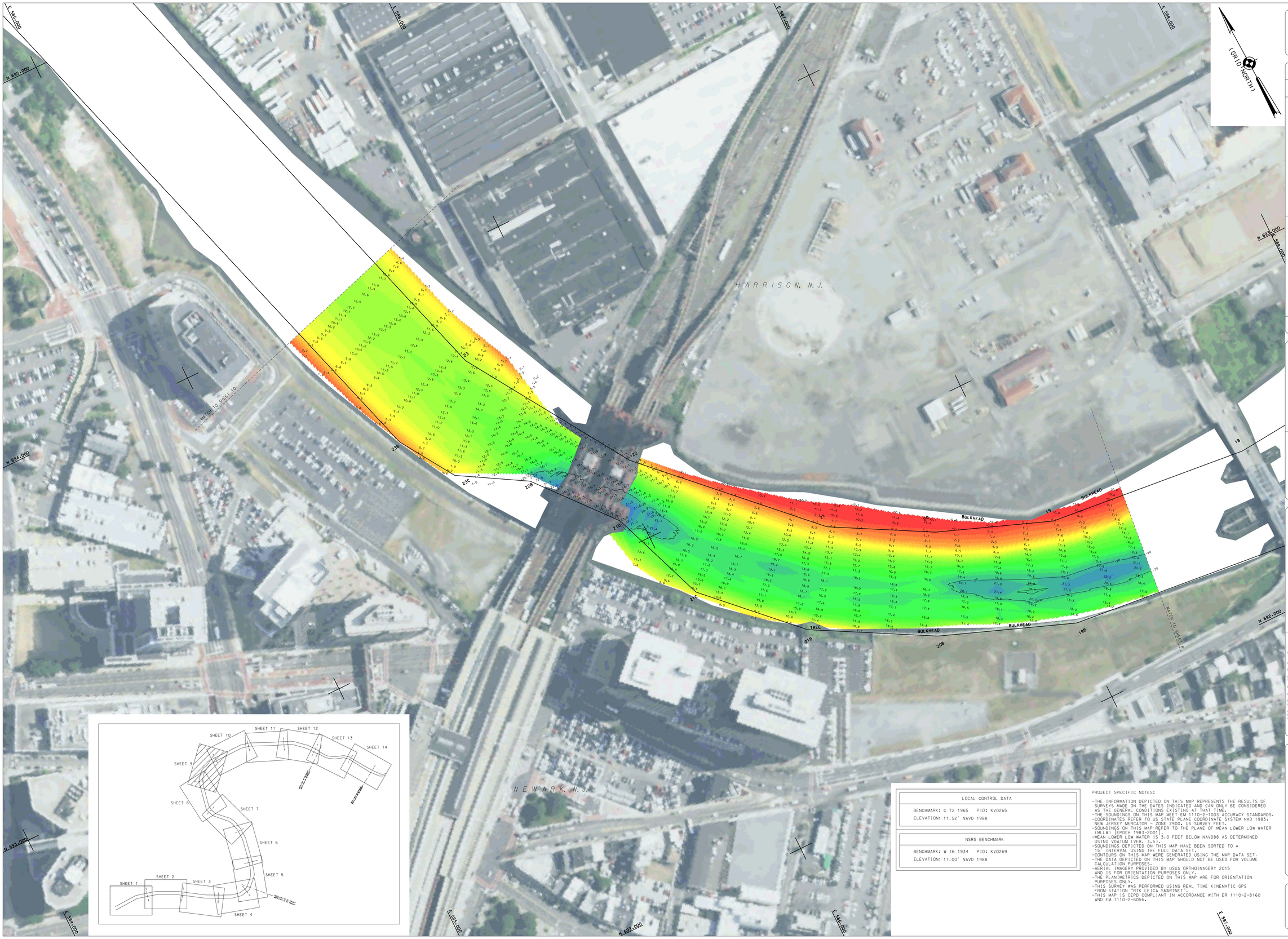
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-108

SHEET 8 OF 14



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

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- THIS SURVEY WAS PERFORMED USING REAL TIME KINEMATIC GPS FROM STATION "RTK LEICA SMARTNET".
- THIS MAP IS CEPD COMPLIANT IN ACCORDANCE WITH ER 1110-2-8160 AND EM 1110-2-6056.

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CMA	CM DS
WP	CMA	

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

APPROVED: M. APPELQVIST, RERTD,OTT1 CHIEF, HYDROGRAPHIC SURVEYS & CARTOGRAPHY

APPROVED: M. FORTE CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE LEAD CARTOGRAPHER

APPROVED: J. MRAZ SECTION CHIEF OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

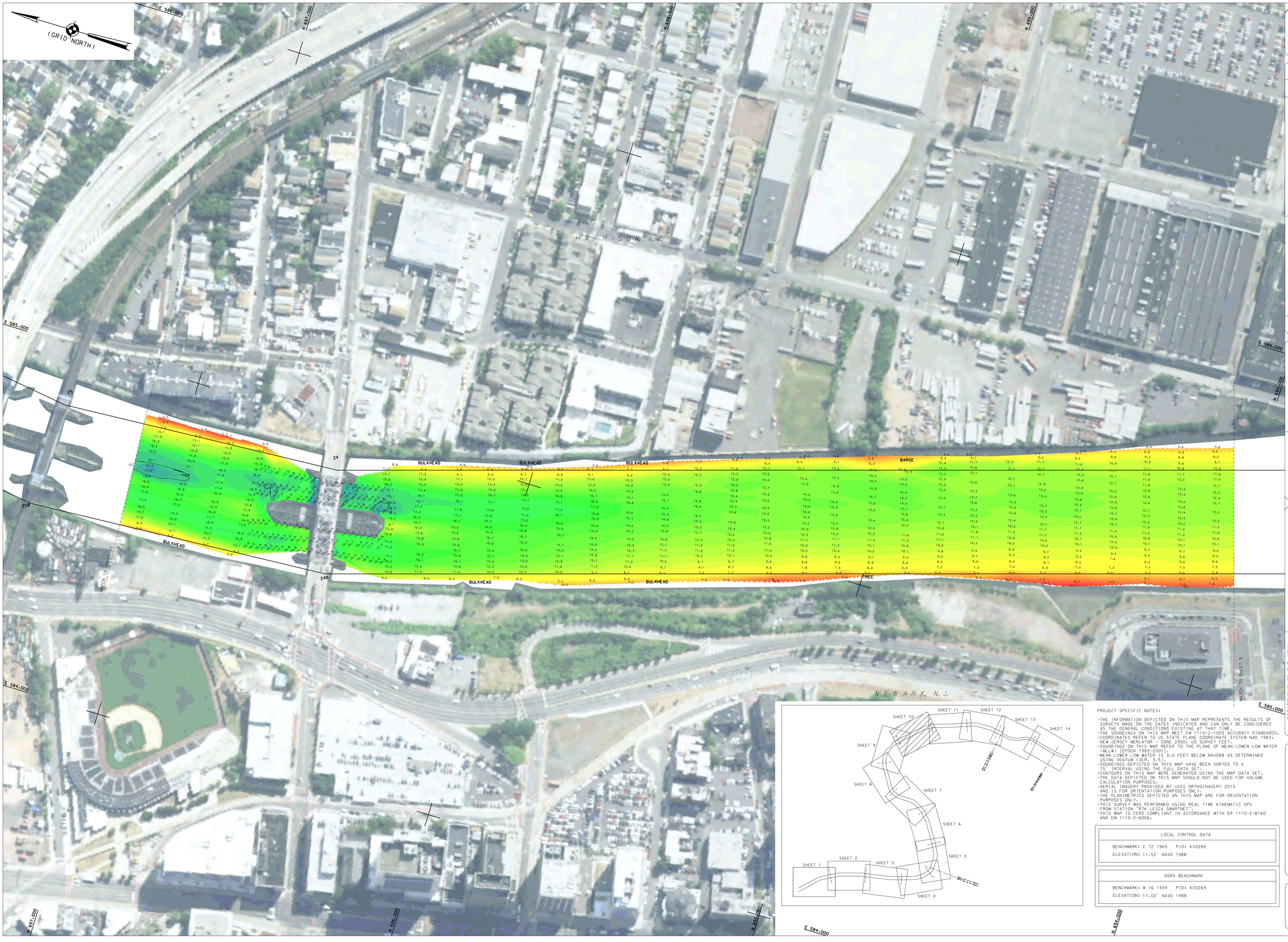
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-109

SHEET 9 OF 14



PROJECT SPECIFIC NOTES:

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LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS
MP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: M. APPELO/J. BERTOLOTTI
CHIEF, SURVEYING & MAPPING
APPROVED: M. FORTE
CHIEF, ENGINEERING TECHNICIAN
APPROVED: D. CLARKE
CHIEF, OPERATIONS DIVISION
APPROVED: J. MRAZ
DEPUTY CHIEF OF SURVEY
DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

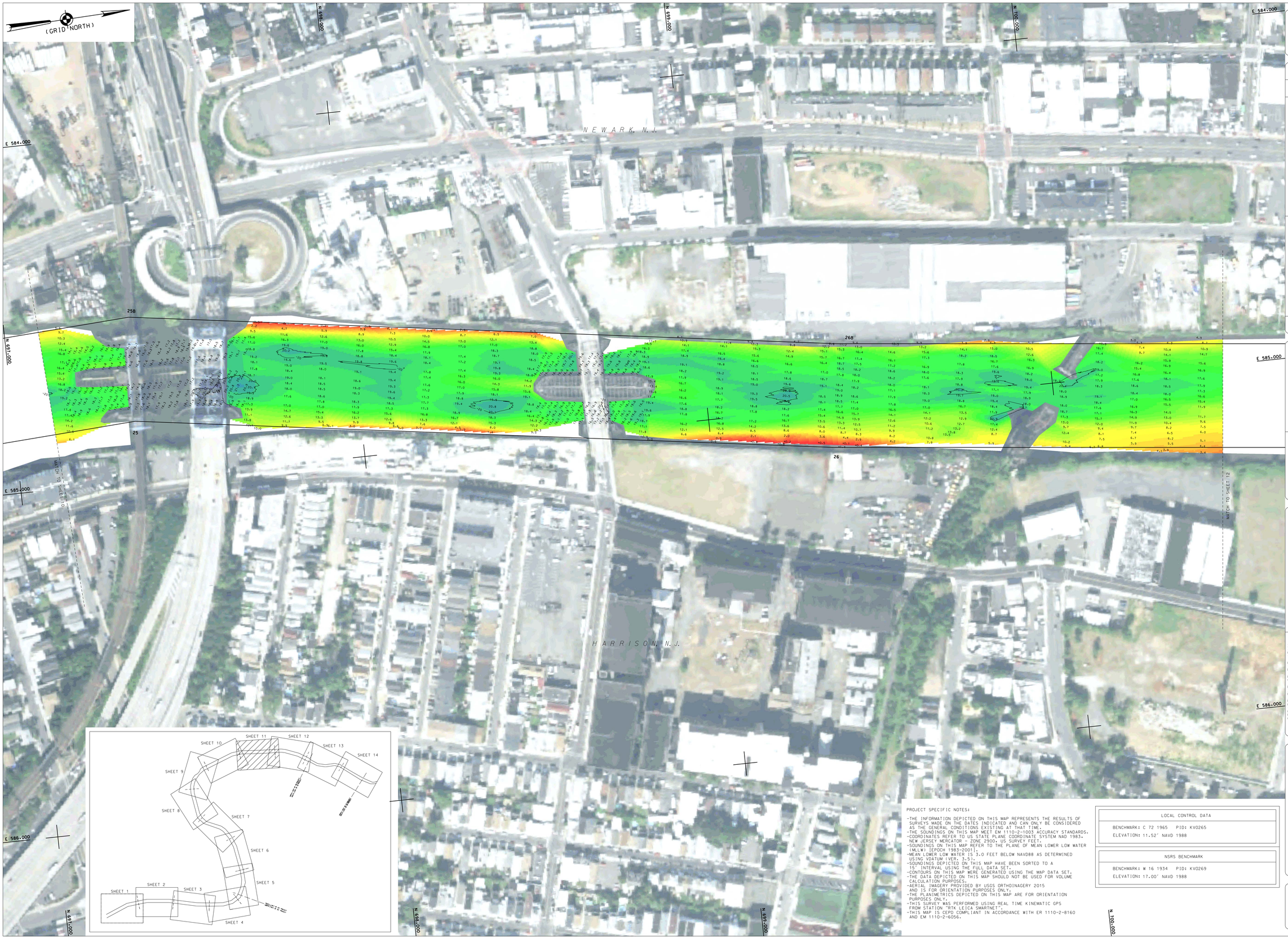
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-110

SHEET 10 OF 14



PROJECT SPECIFIC NOTES:

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LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

US ARMY CORPS OF ENGINEERS NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: M. APPELDORN (BERTOLOTTI) CHIEF, ENGINEERING DIVISION
APPROVED: M. FORTE CHIEF, ENGINEERING TECHNICIAN
APPROVED: D. CLARKE CHIEF SURVEYOR
APPROVED: J. MRAZ SECTION CHIEF OF SURVEY
DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

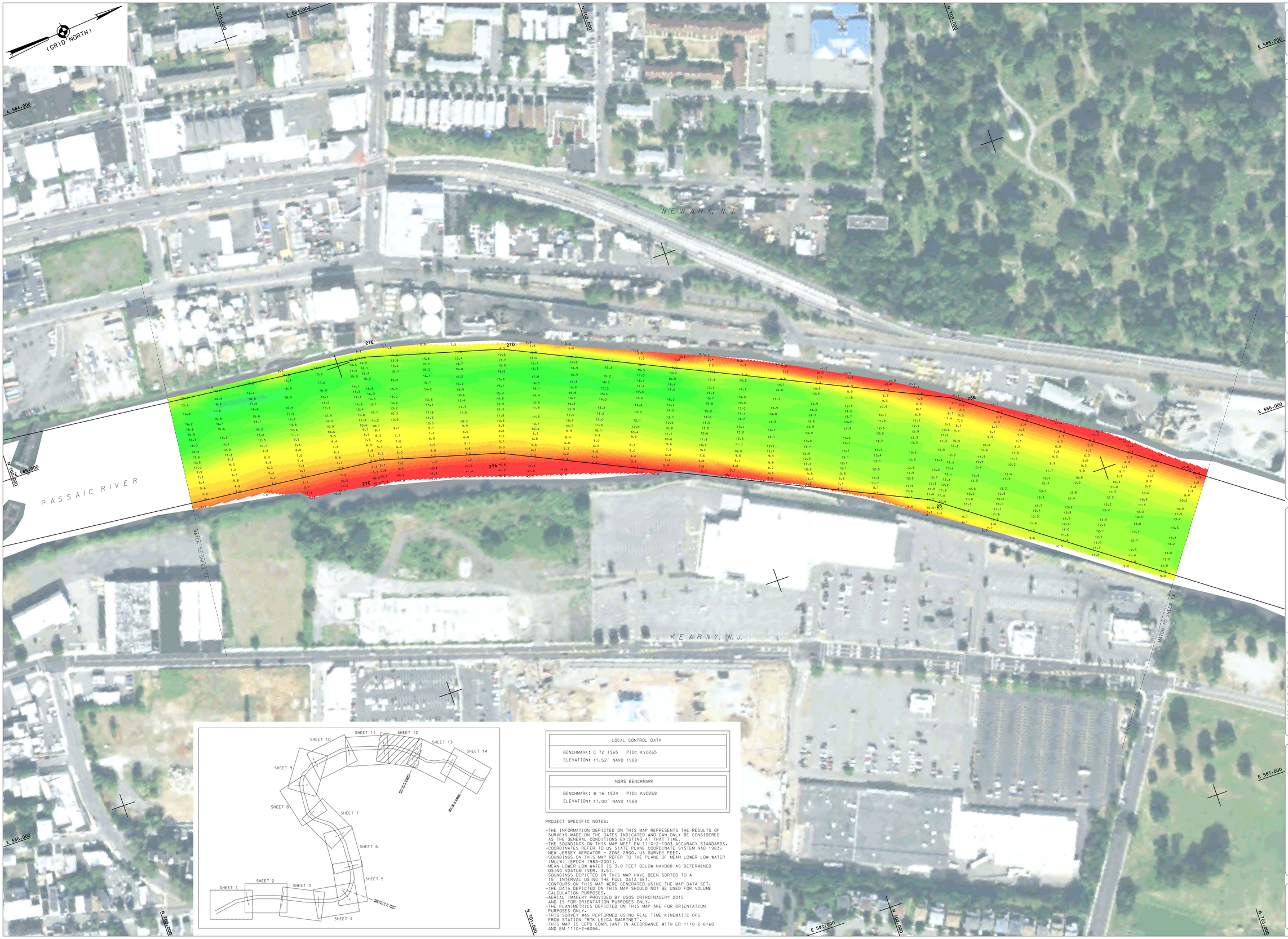
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-111

SHEET 11 OF 14



LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS
MP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09, 13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE: ONE INCH = 100 FEET

FIELD BOOKS: N/A

APPROVED: M. APPELQUIST, REPTOLOGIST!
CHIEF, PHOTOGRAMMETRY & CARTOGRAPHY
APPROVED: M. FORTE
CHIEF, PHOTOGRAMMETRY TECHNICIAN
APPROVED: D. CLARKE
CHIEF CARTOGRAPHER
APPROVED: J. MRAZ
SURVEY GROUP OF SURVEY
DATE: 01 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

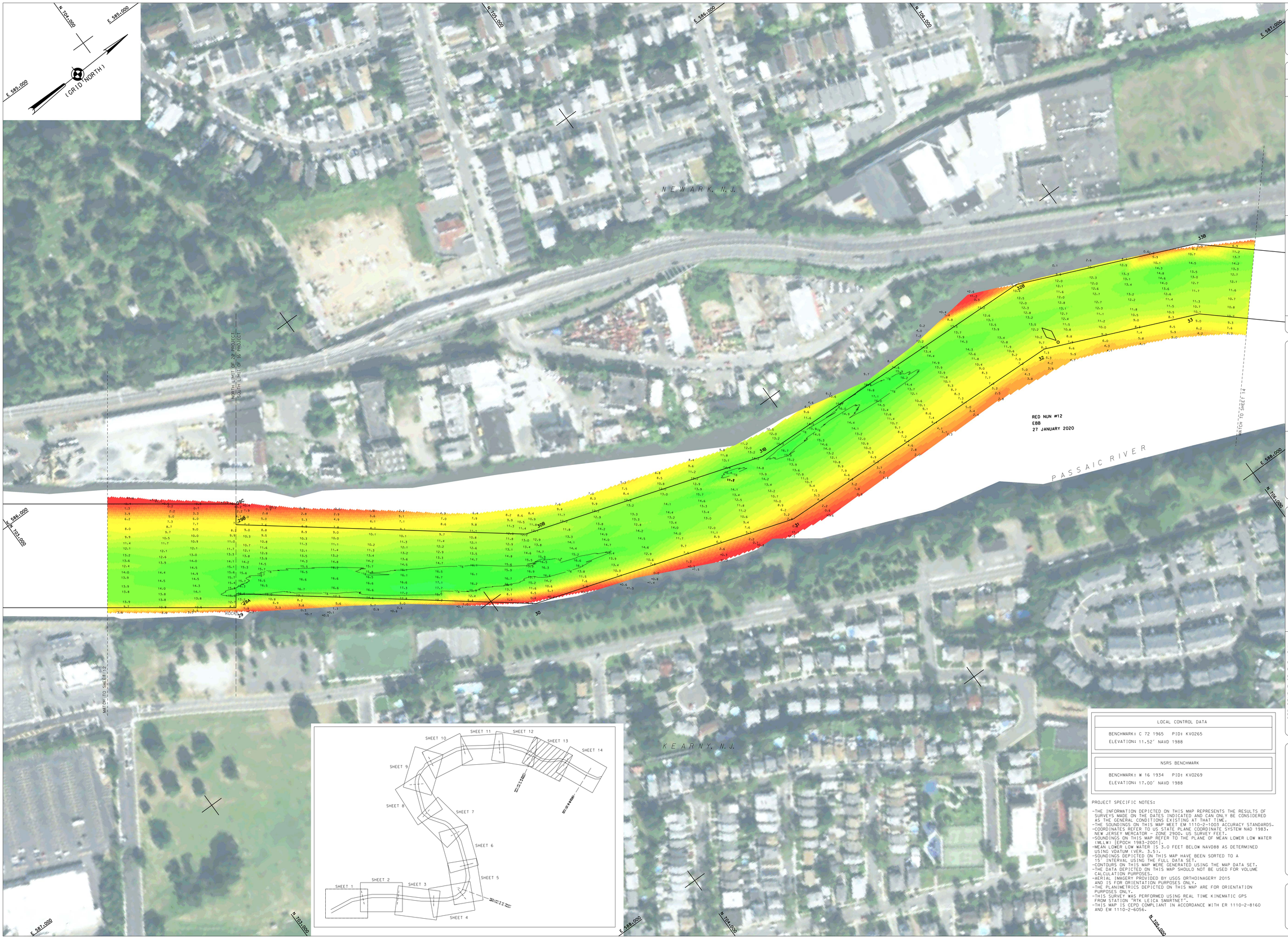
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-112

SHEET 12 OF 14



US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS
MP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09
13, 15, 27-28 JANUARY 2020.

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N/A

APPROVED: M. APPELQVIST, BERTD.OTT1
CHIEF, HYDROGRAPHIC SURVEYS & MAPPING

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
CHIEF, SURVEY SECTION

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

NSRS BENCHMARK
BENCHMARK: W 16 1934 PID: KV0269
ELEVATION: 17.00' NAVD 1988

PROJECT SPECIFIC NOTES:

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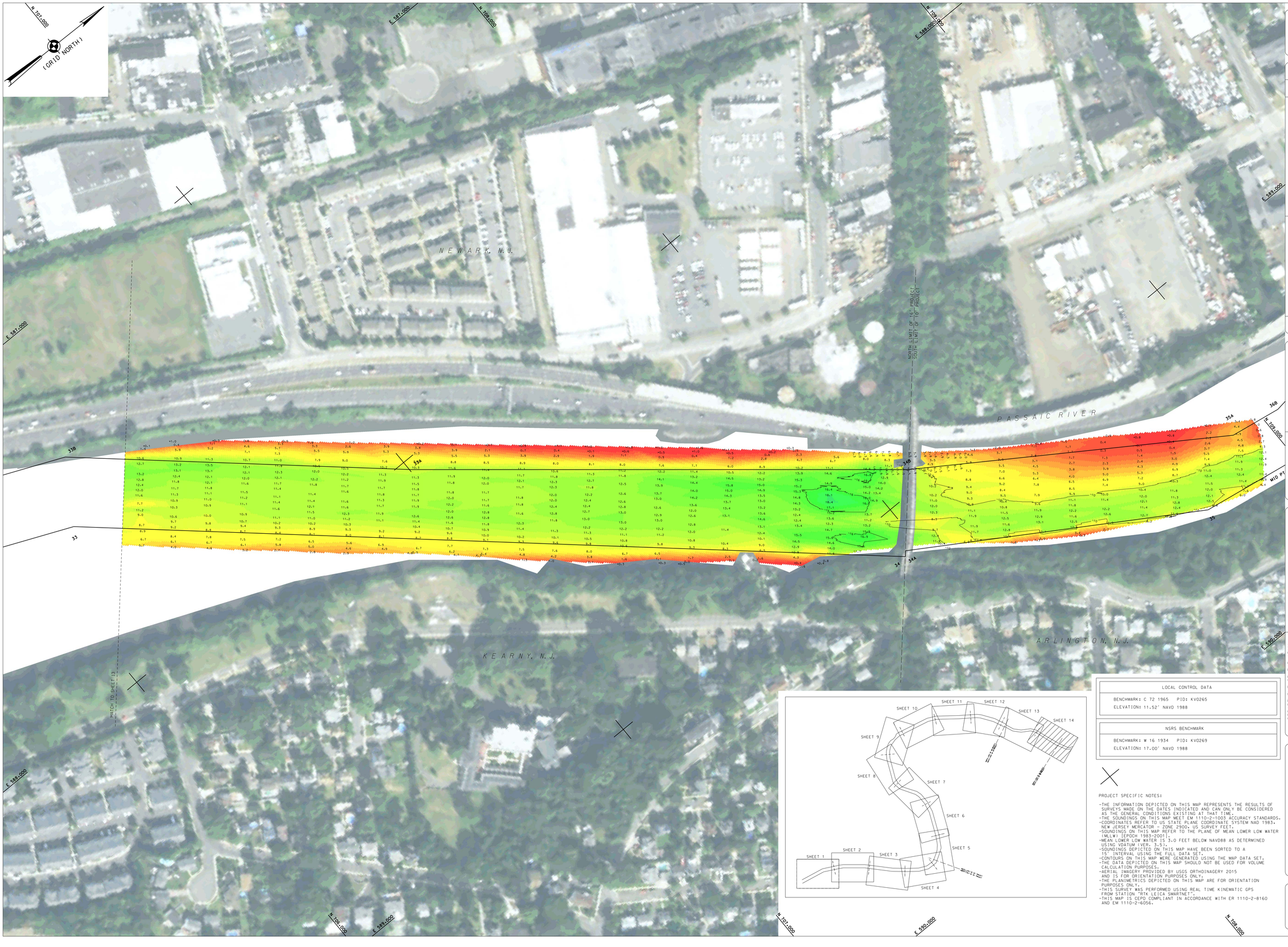
NEWARK BAY, HACKENSACK & PASSAIC RIVERS, N.J.

PASSAIC RIVER

CONDITION SURVEY

VH-113

SHEET 13 OF 14



US ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT

PR	CMA	CM	DS
WP	CMA		

DATES OF SURVEY:
05, 31 DECEMBER 2019, 07-09
13, 15, 27-28 JANUARY 2020

FILE NO.: 4889
REQUEST NO.: 4889/N3/A

SCALE:
ONE INCH = 100 FEET

FIELD BOOKS:
N.A.

APPROVED: M. APPELO/J. BERTOLOTTI
PUBLIC INFORMATION

APPROVED: M. FORTE
CIVIL ENGINEERING TECHNICIAN

APPROVED: D. CLARKE
CHIEF CARTOGRAPHER

APPROVED: J. MRAZ
CHIEF, FIELD OF SURVEY

DATE: 07 FEBRUARY 2020

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

OPERATIONS DIVISION
SURVEY SECTION
CENAN-OP-S

LOCAL CONTROL DATA
BENCHMARK: C 72 1965 PID: KV0265
ELEVATION: 11.52' NAVD 1988

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

PASSAIC RIVER

CONDITION SURVEY

VH-114

SHEET 14 OF 14