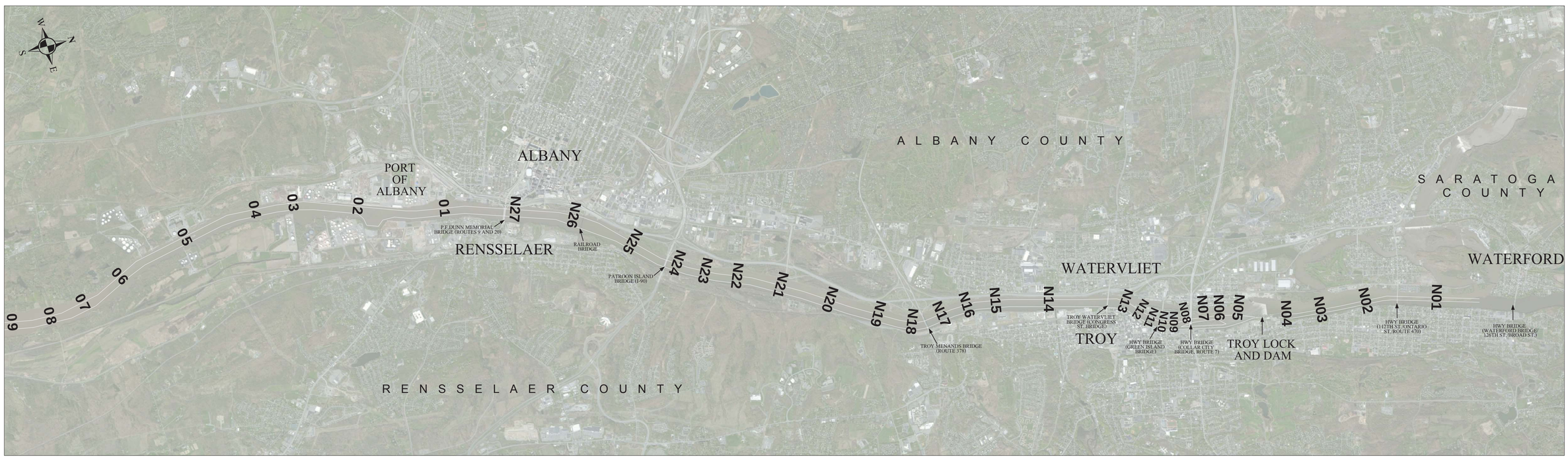
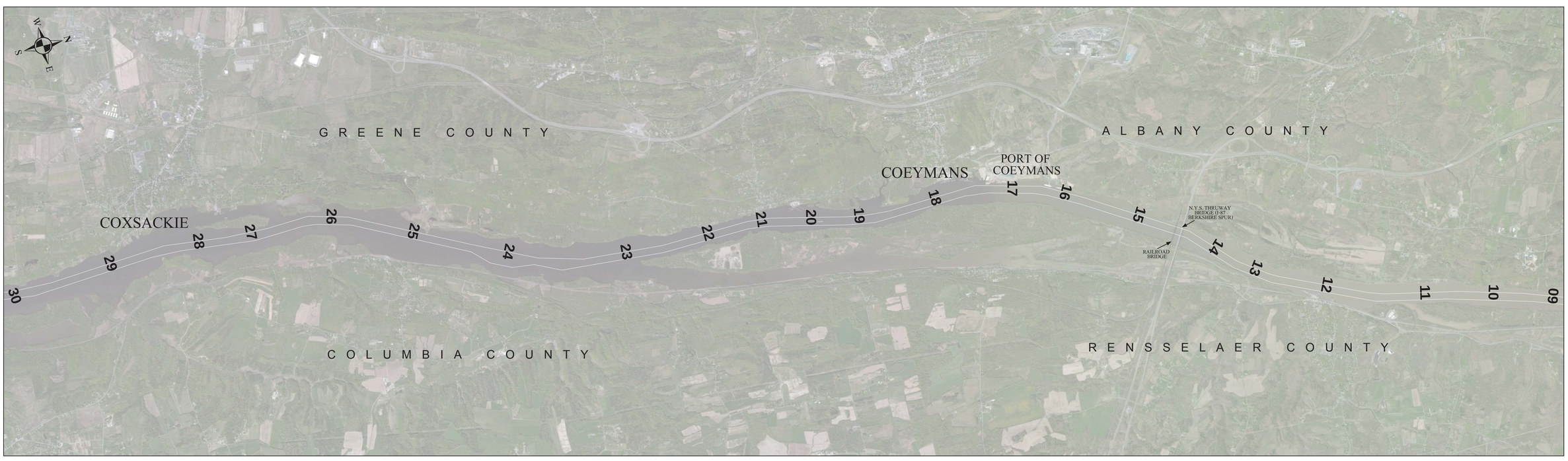
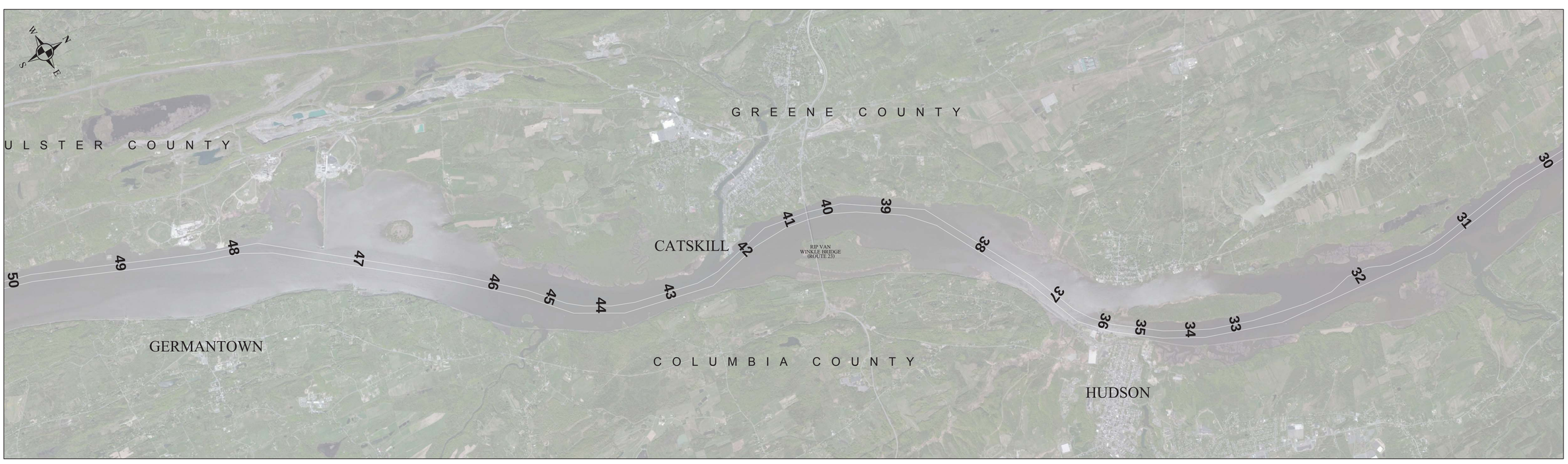


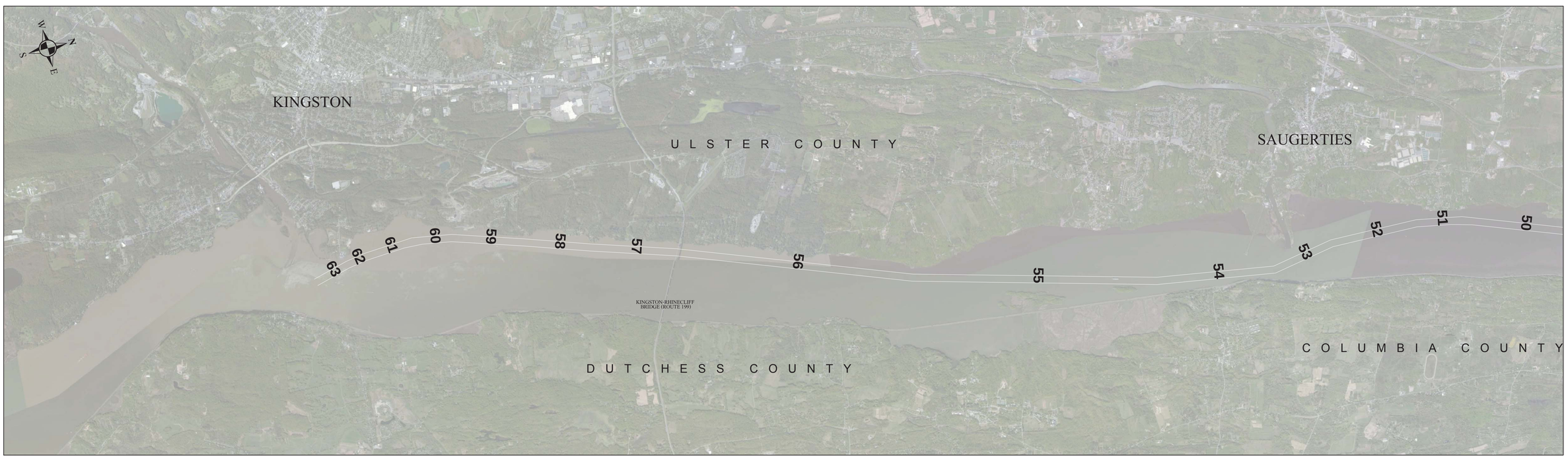
PLAN A: REACH N01 - REACH 09



PLAN B: REACH 09 - REACH 30



PLAN C: REACH 30 - REACH 50



PLAN D: REACH 50 - REACH 63

NOTES
AERIAL PHOTOGRAPHY OBTAINED FROM CD01-MCB30FT
CORRELATION AND ITS DATA, EITHER EXPRESSED
OR IMPLIED, DOES NOT REPRESENT ONE-TIME USE.IN
PHOTOGRAPHY MAY HAVE CHANGED SINCE DATE OF CAPTURE.
NOT TO BE USED FOR NAVIGATION.

Sheet reference number:
1 of 1

HUDSON RIVER
KINGSTON TO WATERFORD, NY
SURVEY REACH KEY

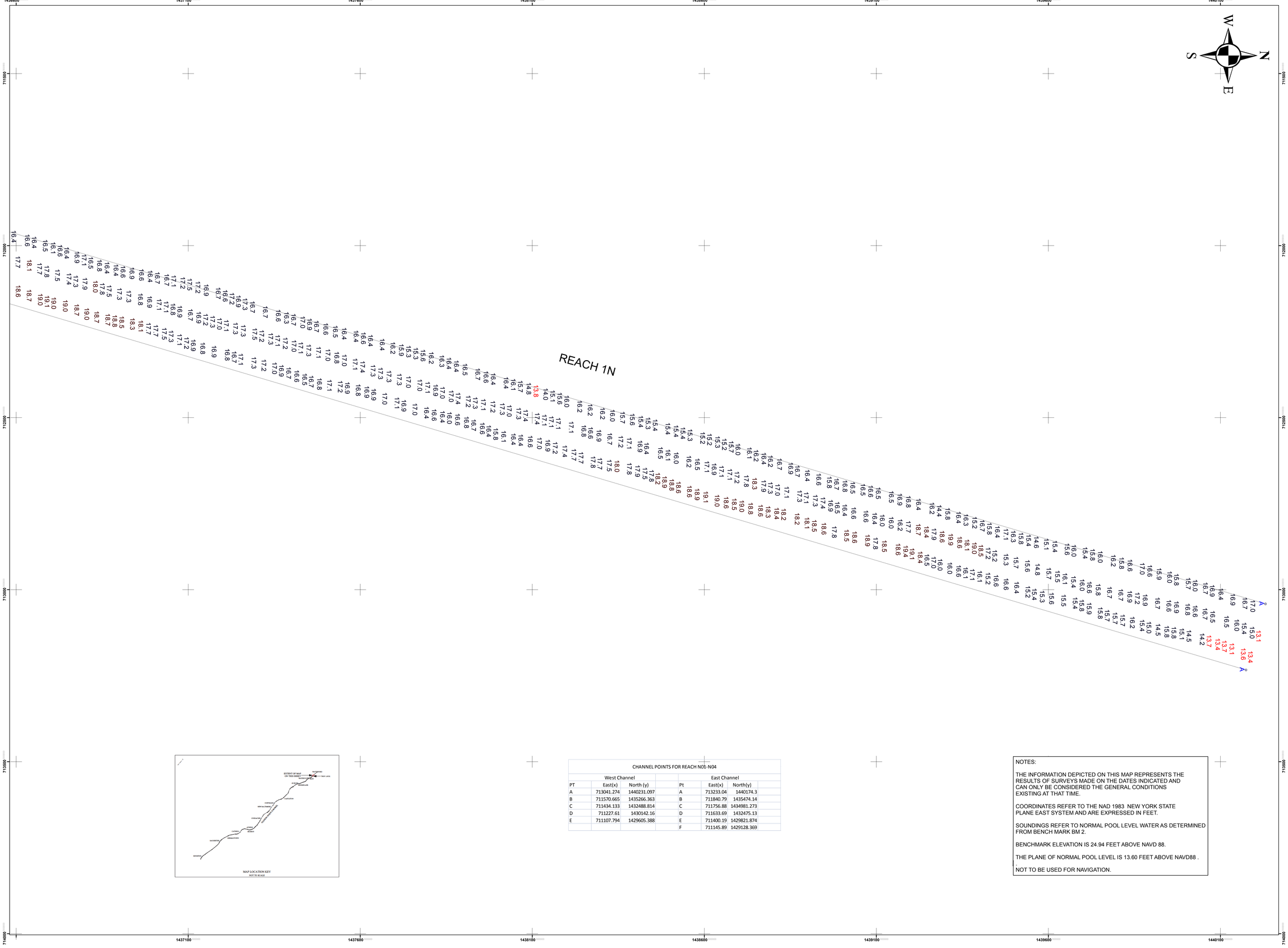
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

SUBMITTED BY: MATHEW HAY, CARTOGRAPHIC TECHNICIAN
APPROVED BY: WILLIAM F. PETRONIS, CHIEF, ALBANY FIELD OFFICE

	Date: MARCH 22, 2013
DRAWN BY M.HAY	Date of Survey:
DESIGNED BY M. HAY	Contract no.:
REVIEWED BY D. KARLOK REVIEWED BY J. SMITH	Plot date: MARCH 2013 Plot by: M.HAY Scale: NOT TO SCALE

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

US Army Corps of Engineers
New York District



CHANNEL POINTS FOR REACH N01-N04

West Channel			East Channel		
PT	East(x)	North (y)	Pt	East(x)	North(y)
A	713041.274	1440231.097	A	713233.04	1440174.3
B	711570.665	1435266.363	B	711840.79	1435474.14
C	711434.133	1432488.814	C	711756.88	1434981.273
D	711227.61	1430142.16	D	711633.69	1432475.13
E	711107.794	1429605.388	E	711400.19	1429821.874
			F	711145.89	1429128.369

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO NORMAL POOL LEVEL WATER AS DETERMINED FROM BENCH MARK BM 2.

BENCHMARK ELEVATION IS 24.94 FEET ABOVE NAVD 88.

THE PLANE OF NORMAL POOL LEVEL IS 13.60 FEET ABOVE NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Apvr.	Mark	Description	Date	Apvr.

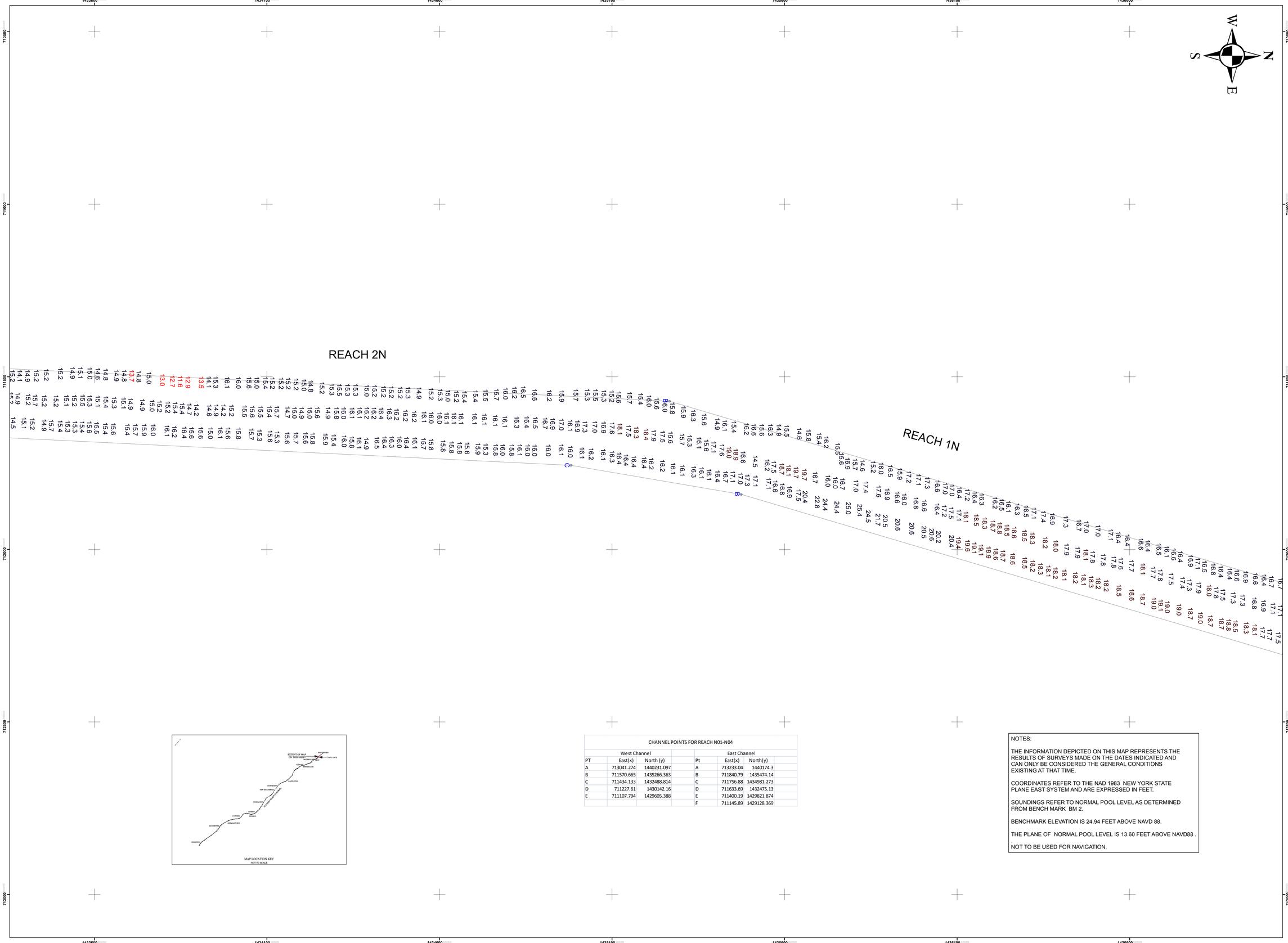
Date: 02/23/15
Survey Date:05/01/14
DRAWN BY D. Karlok
DESIGNED BY J. Smith
REVIEWED BY J. Smith
REVIEWED BY W. Petrone
Contract no.:
Plot date:
Plot by: Daniel J. Karlok
Scale: 1" = 100'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrone, CHIEF, ALBANY FIELD OFFICE

Waterford to Troy Lock and Dam
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 of 4



CHANNEL POINTS FOR REACH N01-N04					
West Channel			East Channel		
PT	East(x)	North (y)	Pt	East(x)	North(y)
A	713041.274	1440231.097	A	713233.04	1440174.3
B	711570.665	1435266.363	B	711840.79	1435474.14
C	711434.133	1432488.814	C	711756.88	1434981.273
D	711227.61	1430142.16	D	711633.69	1432475.13
E	711107.794	1429605.388	E	711400.19	1429821.874
			F	711145.89	1429128.369

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BENCHMARK ELEVATION IS 24.94 FEET ABOVE NAVD 88.

THE PLANE OF NORMAL POOL LEVEL IS 13.60 FEET ABOVE NAVD88 .

NOT TO BE USED FOR NAVIGATION.

MAP LOCATION KEY
NOT TO SCALE

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Pietrovnis, CHIEF, ALBANY FIELD OFFICE

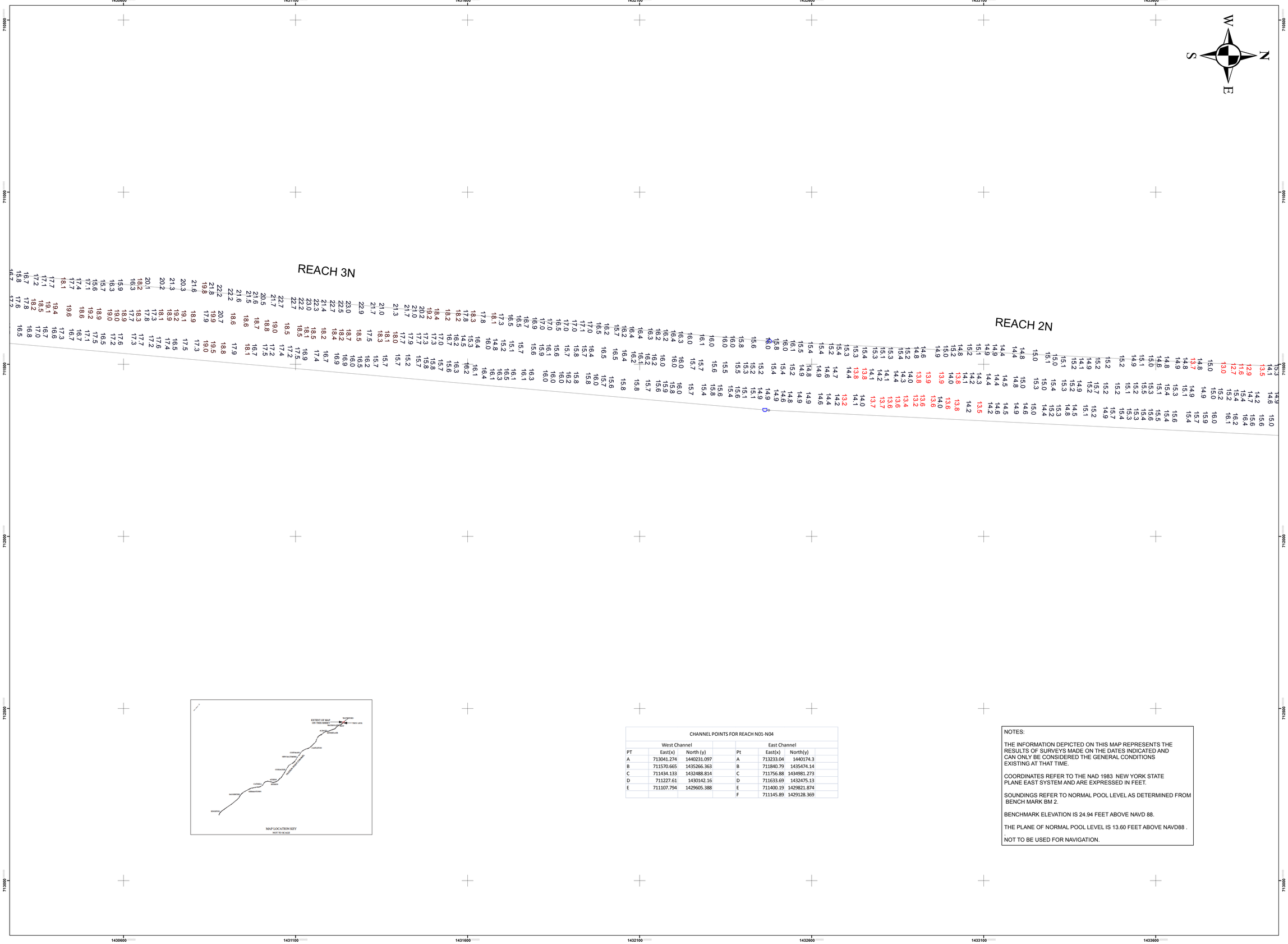
DRAWN BY: Dr. Karlok
DESIGNED BY: Dr. Karlok
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Pietrovnis

Date: 02/20/15
Survey Date:05/01/14
Contract no.:
Plot date:
Plot by: Daniel J. Karlok
Scale: 1" = 100'

Waterford to Troy Lock and Dam
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 of 4



CHANNEL POINTS FOR REACH N01-N04

West Channel			East Channel		
PT	East(x)	North (y)	Pt	East(x)	North(y)
A	713041.274	1440231.097	A	713233.04	1440174.3
B	711570.665	1435266.363	B	711840.79	1435474.14
C	711434.133	1432488.814	C	711756.88	1434981.273
D	711227.61	1430142.16	D	711633.69	1432475.13
E	711107.794	1429605.388	E	711400.19	1429821.874
			F	711145.89	1429128.369

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

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SOUNDINGS REFER TO NORMAL POOL LEVEL AS DETERMINED FROM BENCH MARK BM 2.

BENCHMARK ELEVATION IS 24.94 FEET ABOVE NAVD 88.

THE PLANE OF NORMAL POOL LEVEL IS 13.60 FEET ABOVE NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Apv.	Mark	Description	Date	Apv.

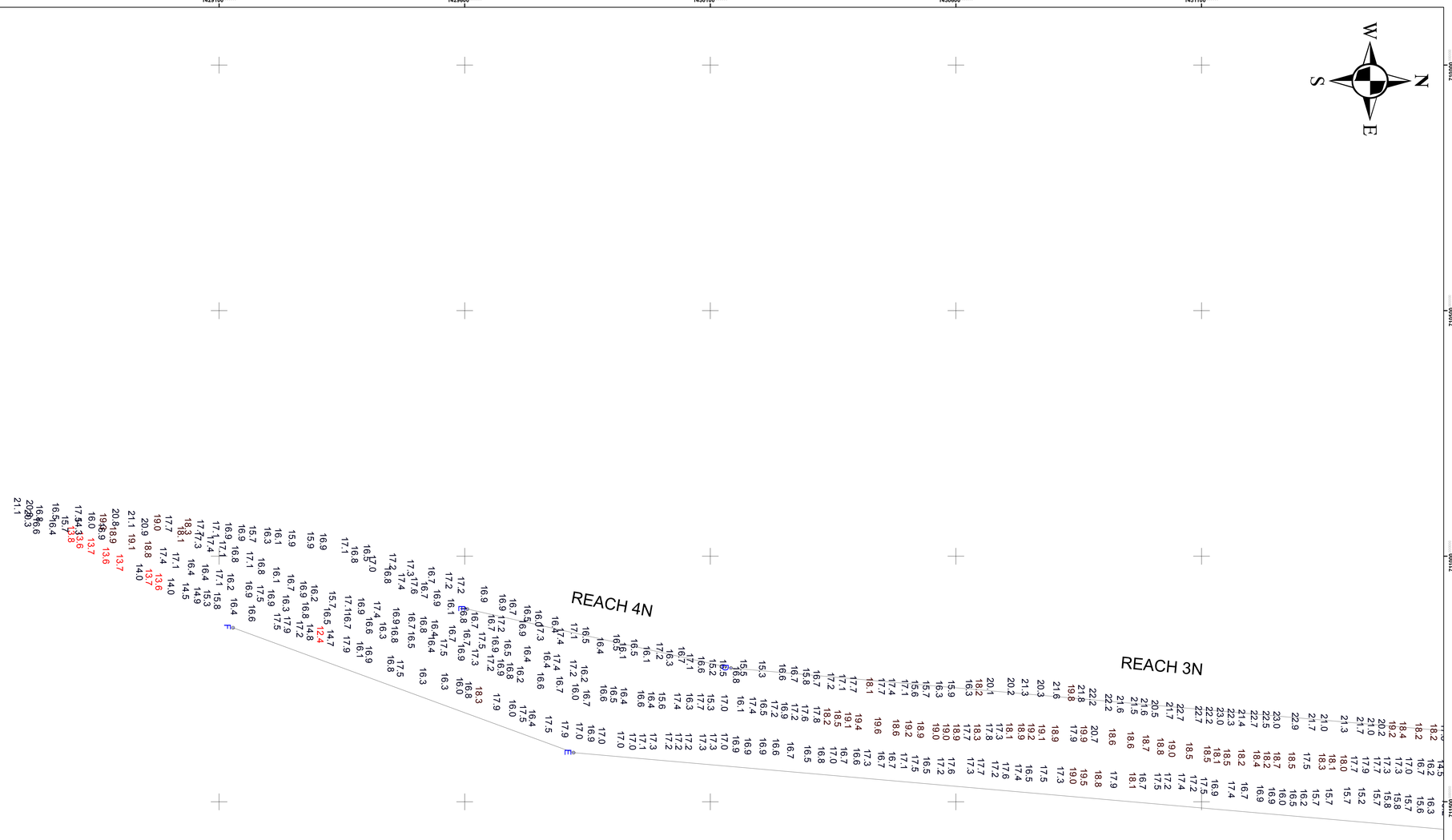
Date: 02/23/15
Survey Date:05/01/14

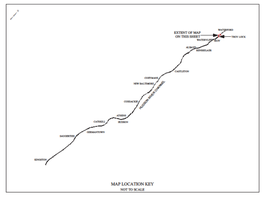
DRAWN BY: S. Kanok
DESIGNED BY: R. Perrotti
Contract no.:
REVIEWED BY: J. Smith
Plot date:
Plot by: Daniel J. Kanok
Scale: 1" = 100'
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrovits, CHIEF, ALBANY FIELD OFFICE
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY
WO. F. Petrovits

Waterford to Troy Lock and Dam
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

3 of 4





CHANNEL POINTS FOR REACH N01-N04

West Channel			East Channel		
PT	East(x)	North (y)	Pt	East(x)	North(y)
A	713041.274	1440231.097	A	713233.04	1440174.3
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C	711434.133	1432488.814	C	711756.88	1434981.273
D	711227.61	1430142.16	D	711633.69	1432475.13
E	711107.794	1429605.388	E	711400.19	1429821.874
			F	711145.89	1429128.369

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THE PLANE OF NORMAL POOL LEVEL IS 13.60 FEET ABOVE NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

Date: 02/23/15
Survey Date:05/01/14-05/08/14
DRAWN BY: D. Garrick
DESIGNED BY: Author
CHECKED BY: Reviewer
Contract no.:
Plot date:
Plot by: Daniel J. Kanick
Scale: 1" = 100'
Base:
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petrenis

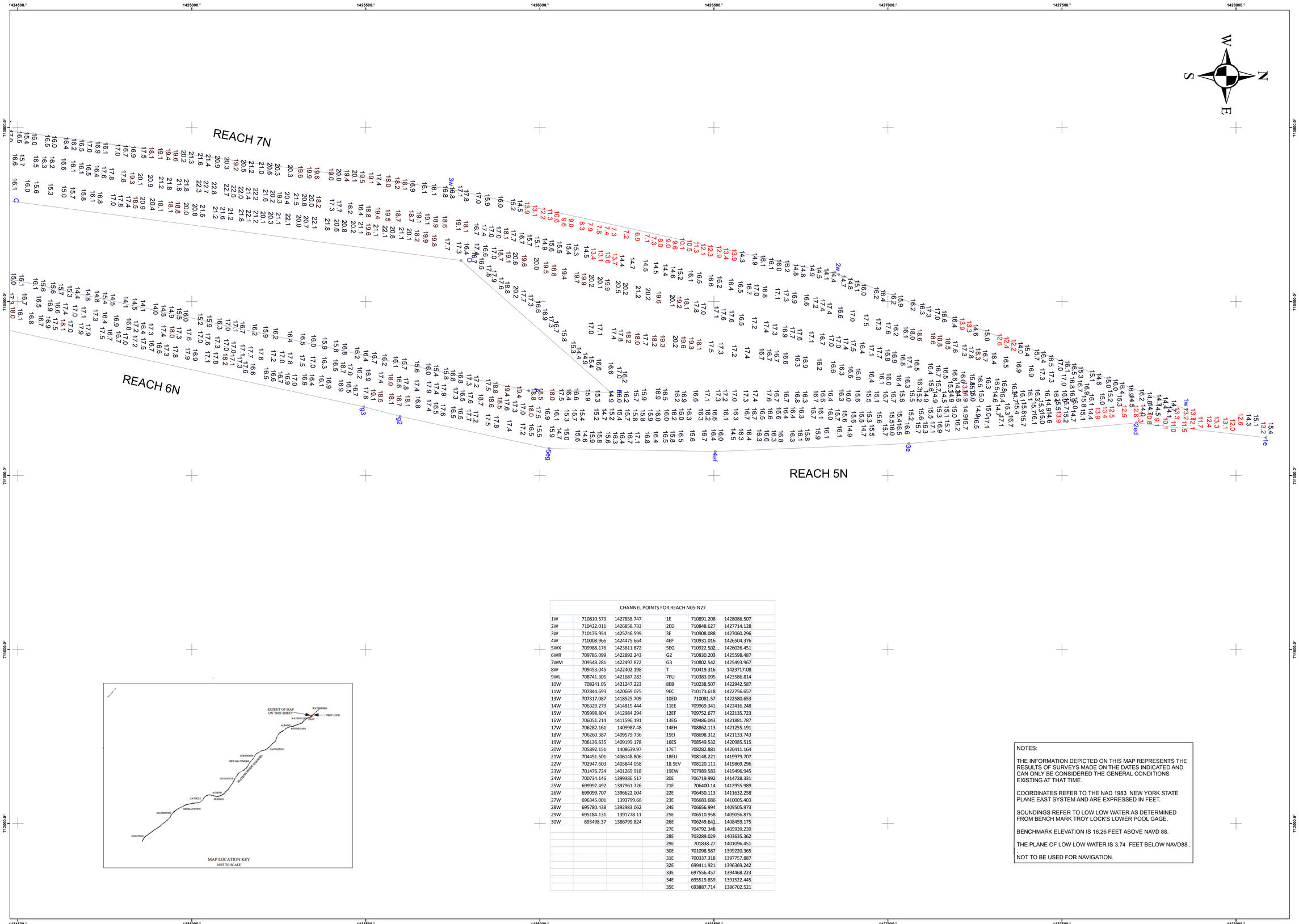
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrenis, CHIEF, ALBANY FIELD OFFICE

Waterford to Troy Lock and Dam
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

4 of 4



MAP LOCATION KEY
NOT TO SCALE

CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747	1E	710891.208	1428086.507
2W	710422.011	1426858.733	2ED	710848.627	1427714.128
3W	710176.954	1425746.599	3E	710908.088	1427060.296
4W	710008.966	1424475.664	4EF	710931.016	1426504.376
5WX	709988.176	1423611.872	5EG	710922.502	1426026.451
6WR	709785.099	1422892.243	G2	710830.203	1425598.487
7WM	709548.281	1422497.872	G3	710802.542	1425493.967
8W	709453.045	1422402.198	T	710419.316	1423717.08
9WL	708741.305	1421687.283	7EU	710383.095	1423586.814
10W	708241.05	1421247.223	8EB	710238.507	1422942.587
11W	707844.693	1420669.075	9EC	710173.618	1422756.657
13W	707317.087	1418525.709	10ED	710081.57	1422580.653
14W	706329.279	1414815.444	11EE	709969.341	1422416.248
15W	705998.804	1412984.294	12EF	709752.677	1422135.723
16W	706051.214	1411596.191	13EG	709486.043	1421881.787
17W	706282.161	1409987.48	14EH	708862.113	1421255.191
18W	706260.387	1409579.736	15EI	708698.312	1421133.743
19W	706136.635	1409199.178	16ES	708549.532	1420985.515
20W	705892.151	1408639.97	17ET	708282.881	1420411.164
21W	704451.501	1406148.806	18EU	708148.221	1419979.707
22W	702947.603	1403844.058	18.5EV	708120.111	1419869.296
23W	701476.724	1401269.918	19EW	707989.583	1419496.945
24W	700734.146	1399386.517	20E	706719.992	1414728.331
25W	699992.492	1397961.726	21E	706400.14	1412955.989
26W	699099.707	1396622.004	22E	706450.113	1411632.258
27W	696345.001	1393799.66	23E	706683.686	1410005.403
28W	695780.438	1392983.062	24E	706656.994	1409505.973
29W	695184.131	1391778.11	25E	706510.958	1409056.875
30W	693498.37	1386799.824	26E	706249.641	1408459.175
			27E	704792.348	1405939.239
			28E	703289.029	1403635.362
			29E	701838.27	1401096.451
			30E	701098.587	1399220.365
			31E	700337.318	1397757.887
			32E	699411.921	1396369.242
			33E	697556.457	1394468.223
			34E	695519.859	1391522.445
			35E	693887.714	1386702.521

NOTES:

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SOUNDINGS REFER TO LOW LOW WATER AS DETERMINED FROM BENCH MARK TROY LOCK'S LOWER POOL GAGE.

BENCHMARK ELEVATION IS 16.26 FEET ABOVE NAVD 88.

THE PLANE OF LOW LOW WATER IS 3.74 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Pantopis, CHIEF, ALBANY FIELD OFFICE

Date: 02/13/15
Survey Date:05/30/14
DRAWN BY: D. Kanok
DESIGNED BY: B. Harris
Contract no.:
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Pantopis
File date:
Plot by: Daniel J. Kanok
Scale: 1" = 1:00'

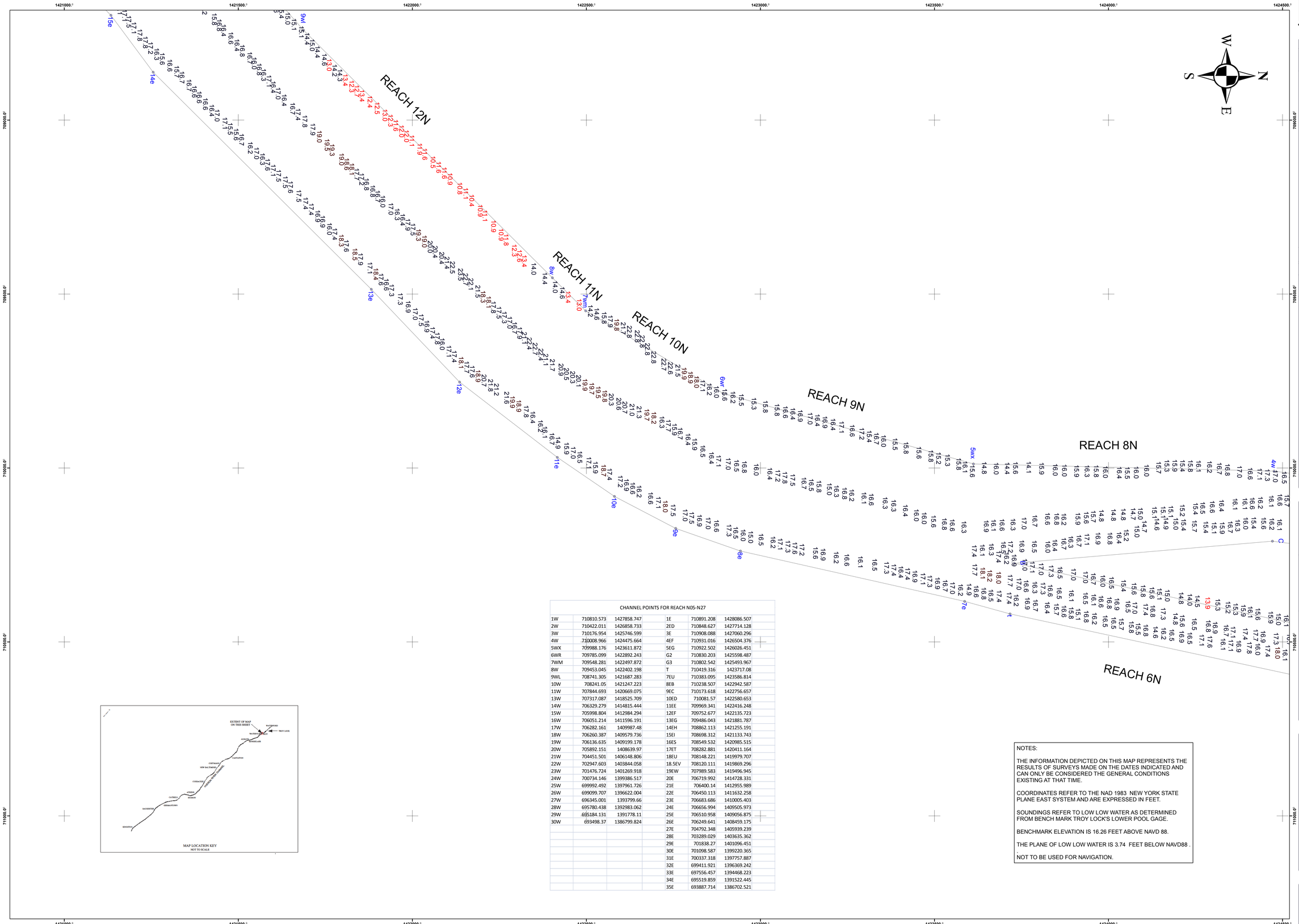
Troy Lock and Dam to Collar City Bridge

Condition Survey

Fathometer Soundings in Feet

Sheet reference number:

1 OF 1



CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747	1E	710891.208	1428086.507
2W	710422.011	1426858.733	2ED	710848.627	1427714.128
3W	710176.954	1425746.599	3E	710908.088	1427060.296
4W	710008.966	1424475.664	4EF	710931.016	1426504.376
5WX	709988.176	1423611.872	5EG	710922.502	1426026.451
6WR	709785.099	1422892.243	G2	710830.203	1425598.487
7WM	709548.281	1422497.872	G3	710802.542	1425493.967
8W	709453.045	1422402.198	T	710419.316	1423717.08
9WL	708741.305	1421687.283	7EU	710383.095	1423586.814
10W	708241.05	1421247.223	8EB	710238.507	1422942.587
11W	707844.693	1420669.075	9EC	710173.618	1422756.657
13W	707317.087	1418525.709	10ED	710081.57	1422580.653
14W	706329.279	1414815.444	11EE	709969.341	1422416.248
15W	705998.804	1412984.294	12EF	709752.677	1422135.723
16W	706051.214	1411596.191	13EG	709486.043	1421881.787
17W	706282.161	1409987.48	14EH	708862.113	1421255.191
18W	706260.387	1409579.736	15EI	708698.312	1421133.743
19W	706136.635	1409199.178	16ES	708549.532	1420985.515
20W	705892.151	1408639.97	17ET	708282.881	1420411.164
21W	704451.501	1406148.806	18EU	708148.221	1419979.707
22W	702947.603	1403844.058	18.5EV	708120.111	1419869.296
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27W	696345.001	1393799.66	23E	706683.686	1410005.403
28W	695780.438	1392983.062	24E	706656.994	1409505.973
29W	695184.131	1391778.11	25E	706510.958	1409056.875
30W	693498.37	1386799.824	26E	706249.641	1408459.175
			27E	704792.348	1405939.239
			28E	703289.029	1403635.362
			29E	701838.27	1401096.451
			30E	701098.587	1399220.365
			31E	700337.318	1397757.887
			32E	699411.921	1396369.242
			33E	697556.457	1394468.223
			34E	695519.859	1391522.445
			35E	693887.714	1386702.521

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO LOW LOW WATER AS DETERMINED FROM BENCH MARK TROY LOCK'S LOWER POOL GAGE.

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NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: CIVIL ENGINEER — James B. Smith

APPROVED BY: CHIEF, ALBANY FIELD OFFICE — William F. Pietronis

DRAWN BY: D. Kanok
CHECKED BY: R. Berman
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Pietronis

Date: 02/13/15
Survey Date:06/03/14
Contract No.:
Plot date:
Plot by: Daniel J. Kanok
Scale: 1" = 100'

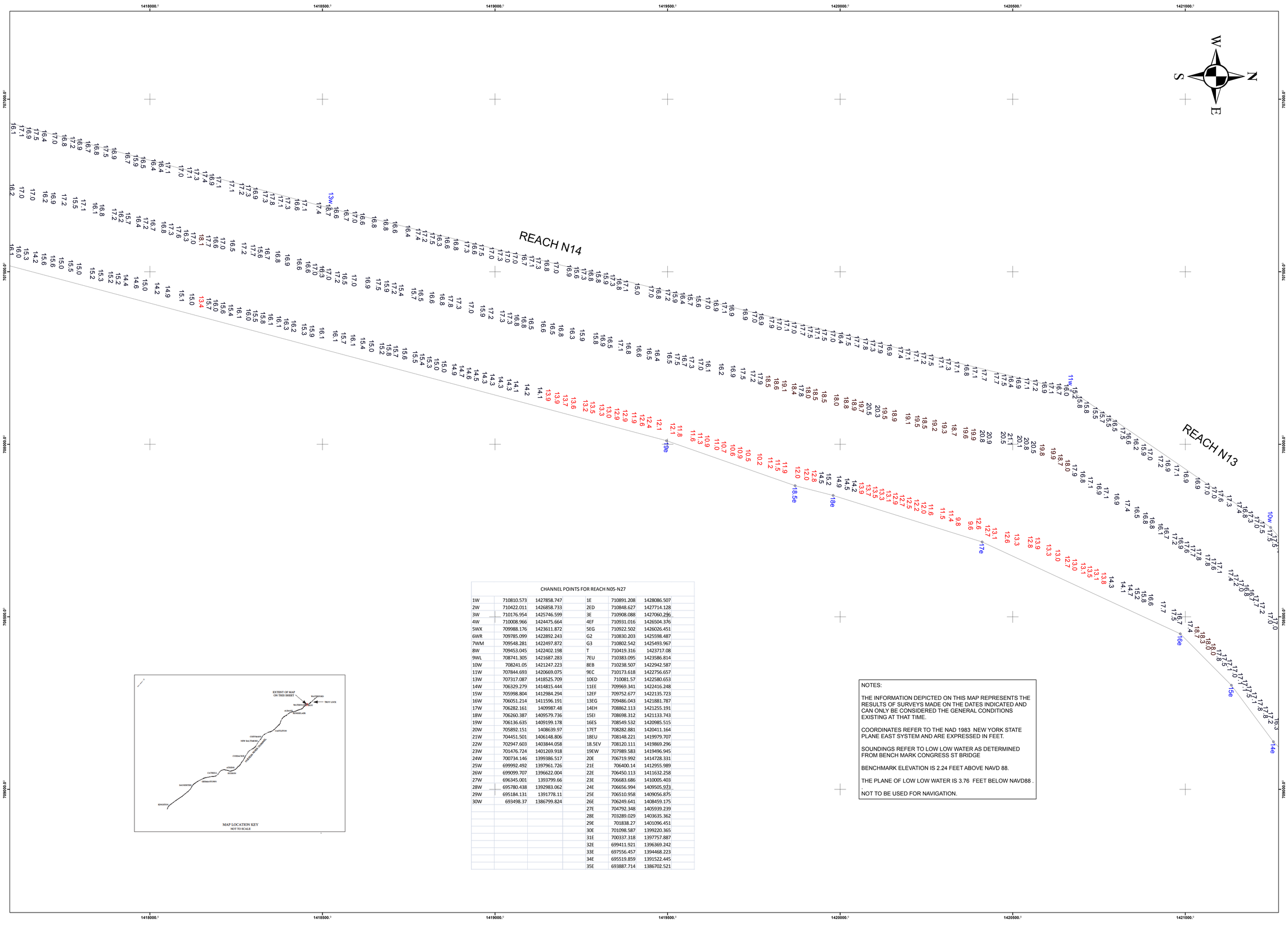
Collar City Bridge to Congress ST Bridge

Condition Survey

Fathometer Soundings in Feet

Sheet reference number:

1 OF 2



CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747		1E	710891.208	1428086.507
2W	710422.011	1426858.733		2ED	710848.627	1427714.128
3W	710176.954	1425746.599		3E	710908.088	1427060.236
4W	710008.966	1424475.664		4EF	710931.016	1426504.376
5WX	709988.176	1423611.872		5EG	710922.502	1426026.451
6WR	709785.099	1422892.243		G2	710830.203	1425598.487
7WM	709548.281	1422497.872		G3	710802.542	1425493.967
8W	709453.045	1422402.198		T	710419.316	1423717.08
9WL	708741.305	1421687.283		7EU	710383.095	1423586.814
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14W	706329.279	1414815.444		11EE	709969.341	1422416.248
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16W	706051.214	1411596.191		13EG	709486.043	1421881.787
17W	706282.161	1409987.48		14EH	708862.113	1421255.191
18W	706260.387	1409579.736		15EI	708698.312	1421133.743
19W	706136.635	1409199.178		16ES	708549.532	1420985.515
20W	705892.151	1408639.97		17ET	708282.881	1420411.164
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22W	702947.603	1403844.058		18.5EV	708120.111	1419869.296
23W	701476.724	1401269.918		19EW	707989.583	1419496.945
24W	700734.146	1399386.517		20E	706719.992	1414728.331
25W	699992.492	1397961.726		21E	706400.14	1412955.989
26W	699099.707	1396622.004		22E	706450.113	1411632.258
27W	696345.001	1393799.66		23E	706683.686	1410005.403
28W	695780.438	1392983.062		24E	706656.994	1409505.973
29W	695184.131	1391778.11		25E	706510.958	1409056.875
30W	693498.37	1386799.824		26E	706249.641	1408459.175
				27E	704792.348	1405939.239
				28E	703289.029	1403635.362
				29E	701838.27	1401096.451
				30E	701098.587	1399220.365
				31E	700337.318	1397757.887
				32E	699411.921	1396369.242
				33E	697556.457	1394468.223
				34E	695519.859	1391522.445
				35E	693887.714	1386702.521

NOTES:

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SOUNDINGS REFER TO LOW LOW WATER AS DETERMINED FROM BENCH MARK CONGRESS ST BRIDGE

BENCHMARK ELEVATION IS 2.24 FEET ABOVE NAVD 88.

THE PLANE OF LOW LOW WATER IS 3.76 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: CIVIL ENGINEER — James B. Smith
APPROVED BY: CHIEF, ENGINEERING DIVISION — William T. Pennola

Drawn by: D. Kasnik
Designed by: R. Berman
Reviewed by: J. Kasnik
Approved by: W. F. Pennola

Date: 02/13/15
Survey Date:06/03/14
Contract no.:
Proj date:
Plot Date: Tuesday 3 March
Scale: 1" = 100'

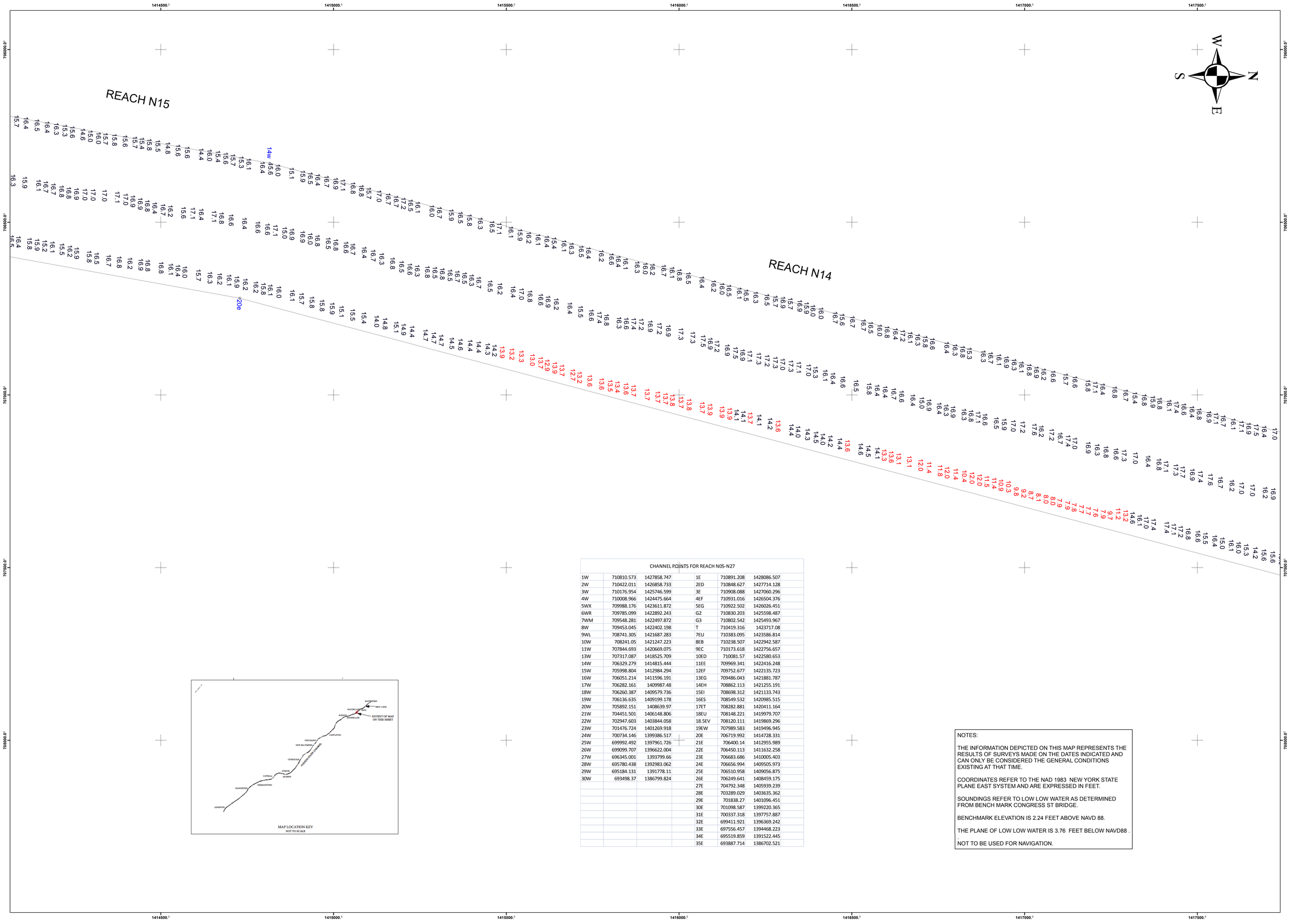
Collar City Bridge to Congress ST Bridge

Condition Survey

Fathometer Soundings in Feet

Sheet reference number:

2 OF 2



MAP LOCATION KEY
NOT TO SCALE

CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747	1E	710891.208	1428086.507
2W	710422.011	1426858.733	2ED	710848.627	1427714.128
3W	710176.954	1425746.599	3E	710908.088	1427060.296
4W	710008.966	1424475.664	4EF	710931.016	1426504.376
5WX	709988.176	1423611.872	5EG	710922.502	1426026.451
6WR	709785.099	1422892.243	G2	710830.203	1425598.487
7WM	709548.281	1422497.872	G3	710802.542	1425493.967
8W	709453.045	1422402.198	T	710419.316	1423717.08
9WL	708741.305	1421687.283	7EU	710383.095	1423586.814
10W	708241.05	1421247.223	8EB	710238.507	1422942.587
11W	707844.693	1420669.075	9EC	710173.618	1422756.657
13W	707317.087	1418525.709	10ED	710081.57	1422580.653
14W	706329.279	1414815.444	11EE	709969.341	1422416.248
15W	705998.804	1412984.294	12EF	709752.677	1422135.723
16W	706051.214	1411596.191	13EG	709486.043	1421881.787
17W	706282.161	1409987.48	14EH	708862.113	1421255.191
18W	706260.387	1409579.736	15EI	708698.312	1421133.743
19W	706136.635	1409199.178	16ES	708549.532	1420985.515
20W	705892.151	1408639.97	17ET	708282.881	1420411.164
21W	704451.501	1406148.806	18EU	708148.221	1419979.707
22W	702947.603	1403844.058	18.5EV	708120.111	1419869.296
23W	701476.724	1401269.918	19EW	707989.583	1419496.945
24W	700734.146	1399386.517	20E	706719.992	1414728.331
25W	699992.492	1397961.726	21E	706400.14	1412955.989
26W	699099.707	1396622.004	22E	706450.113	1411632.258
27W	696345.001	1393799.66	23E	706683.686	1410005.403
28W	695780.438	1392983.062	24E	706656.994	1409505.973
29W	695184.131	1391778.11	25E	706510.958	1409056.875
30W	693498.37	1386799.824	26E	706249.641	1408459.175
			27E	704792.348	1405939.239
			28E	703289.029	1403635.362
			29E	701838.27	1401096.451
			30E	701098.587	1399220.365
			31E	700337.318	1397757.887
			32E	699411.921	1396369.242
			33E	697556.457	1394468.223
			34E	695519.859	1391522.445
			35E	693887.714	1386702.521

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO LOW LOW WATER AS DETERMINED FROM BENCH MARK CONGRESS ST BRIDGE.

BENCHMARK ELEVATION IS 2.24 FEET ABOVE NAVD 88.

THE PLANE OF LOW LOW WATER IS 3.76 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	App'r

Date: 02/13/15
Survey Date:06/03/14
Contract no.:
Plot date:
Plot by: Daniel J. Kulick
Scale: 1" = 100'

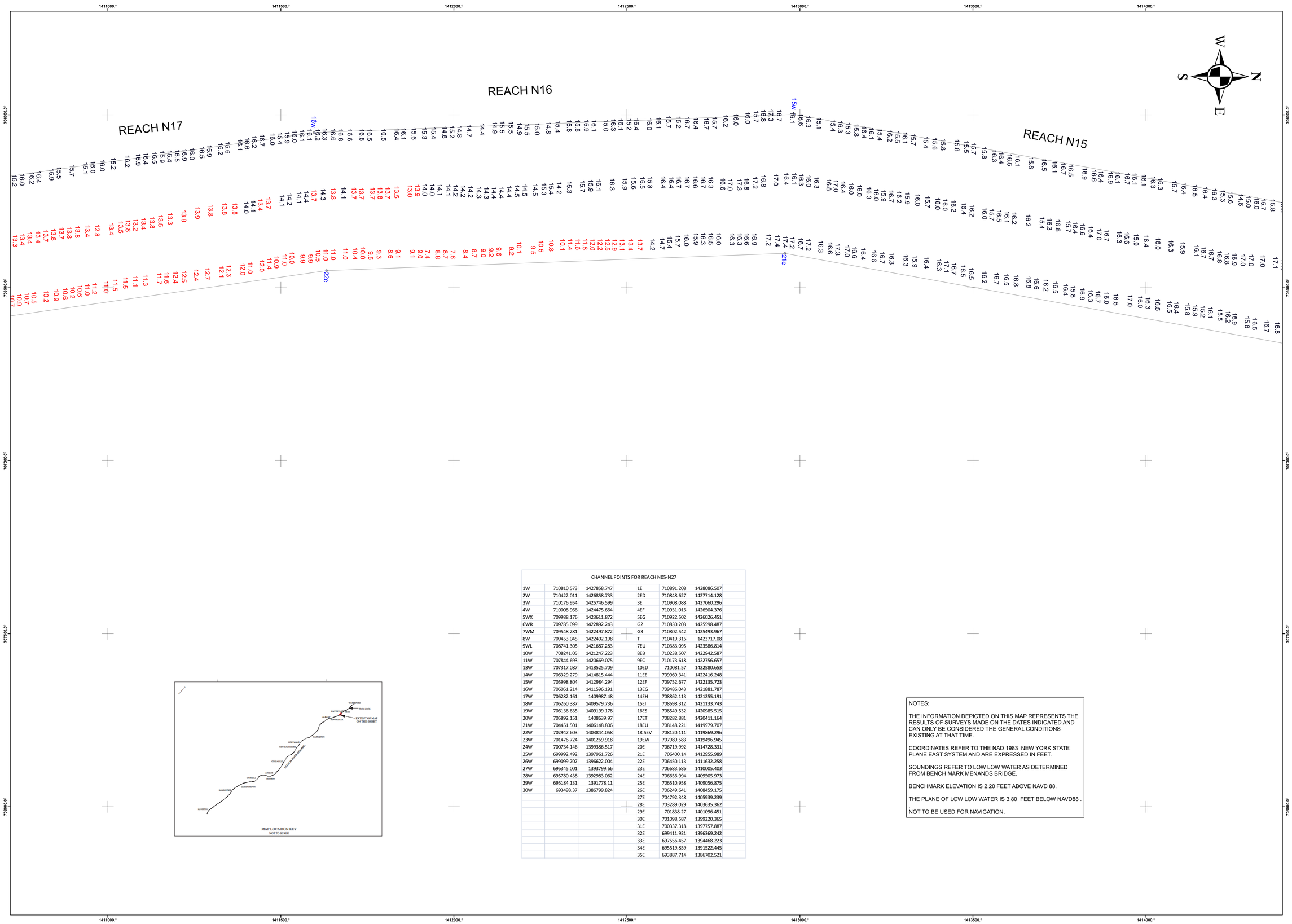
DRAWN BY D. Kulick
DESIGNED BY R. Berrian
REVIEWED BY J. Smith
REVIEWED BY W. F. Petrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CHIEF,HydroUnit
APPROVED BY: William F. Petrone, CHIEF, COASTAL FEASIBILITY OFFICE

Congress ST Bridge to Menands Bridge
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 3



CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747	1E	710891.208	1428086.507
2W	710422.011	1426858.733	2ED	710848.627	1427714.128
3W	710176.954	1425746.599	3E	710908.088	1427060.296
4W	710008.966	1424475.664	4EF	710931.016	1426504.376
5WX	709988.176	1423611.872	5EG	710922.502	1426026.451
6WR	709785.099	1422892.243	G2	710830.203	1425598.487
7WM	709548.281	1422497.872	G3	710802.542	1425493.967
8W	709453.045	1422402.198	T	710419.316	1423717.08
9WL	708741.305	1421687.283	7EU	710383.095	1423586.814
10W	708241.05	1421247.223	8EB	710238.507	1422942.587
11W	707844.693	1420669.075	9EC	710173.618	1422756.657
13W	707317.087	1418525.709	10ED	710081.57	1422580.653
14W	706329.279	1414815.444	11EE	709969.341	1422416.248
15W	705998.804	1412984.294	12EF	709752.677	1422135.723
16W	706051.214	1411596.191	13EG	709486.043	1421881.787
17W	706282.161	1409987.48	14EH	708862.113	1421255.191
18W	706260.387	1409579.736	15EI	708698.312	1421133.743
19W	706136.635	1409199.178	16ES	708549.532	1420985.515
20W	705892.151	1408639.97	17ET	708282.881	1420411.164
21W	704451.501	1406148.806	18EU	708148.221	1419979.707
22W	702947.603	1403844.058	18.5EV	708120.111	1419869.296
23W	701476.724	1401269.918	19EW	707989.583	1419496.945
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25W	699992.492	1397961.726	21E	706400.14	1412955.989
26W	699099.707	1396622.004	22E	706450.113	1411632.258
27W	696345.001	1393799.66	23E	706683.686	1410005.403
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29W	695184.131	1391778.11	25E	706510.958	1409056.875
30W	693498.37	1386799.824	26E	706249.641	1408459.175
			27E	704792.348	1405939.239
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			29E	701838.27	1401096.451
			30E	701098.587	1399220.365
			31E	700337.318	1397757.887
			32E	699411.921	1396369.242
			33E	697556.457	1394468.223
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			35E	693887.714	1386702.521

MAP LOCATION KEY
NOT TO SCALE

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BENCHMARK ELEVATION IS 2.20 FEET ABOVE NAVD 88.

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.
NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Date: 02/13/15
Survey Date:06/03/14
Contract no.:
Plot date:
Plot by: Daniel J. Kalita
Scale: 1 = 100

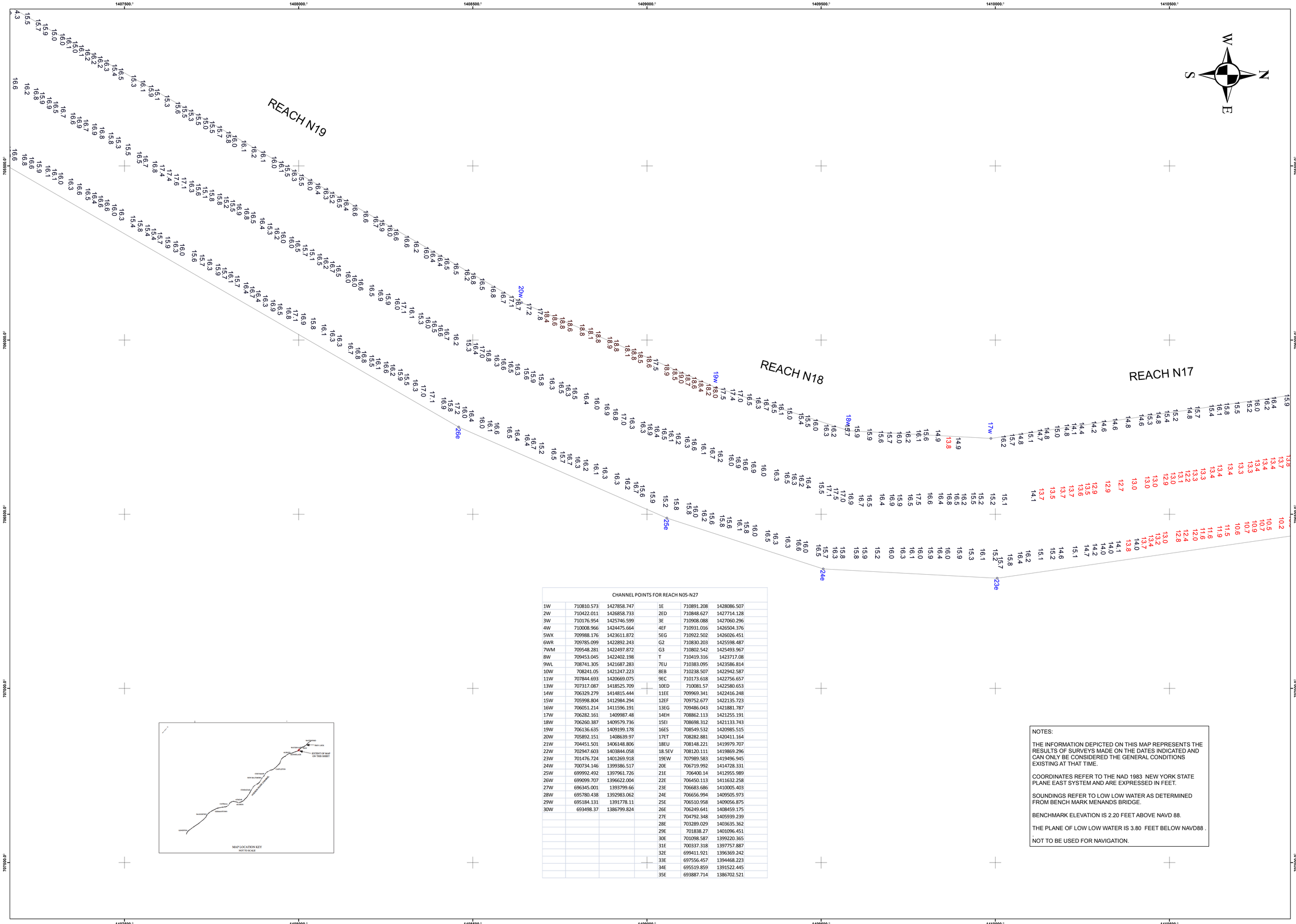
DRAWN BY: D. Karsik
DESIGNED BY: R. Berrian
REVIEWED BY: J. Smith
VERIFIED BY: W. F. Pennone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Pennone, CHIEF, PLANNING DIVISION

Congress ST Bridge to Menands Bridge
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 3



CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747		1E	710891.208	1428086.507
2W	710422.011	1426858.733		2ED	710848.627	1427714.128
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5WX	709988.176	1423611.872		5EG	710922.502	1426026.451
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8W	709453.045	1422402.198		T	710419.316	1423717.08
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21W	704451.501	1406148.806		18EU	708148.221	1419979.707
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24W	700734.146	1399386.517		20E	706719.992	1414728.331
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30W	693498.37	1386799.824		26E	706249.641	1408459.175
				27E	704792.348	1405939.239
				28E	703289.029	1403635.362
				29E	701838.27	1401096.451
				30E	701098.587	1399220.365
				31E	700337.318	1397757.887
				32E	699411.921	1396369.242
				33E	697556.457	1394468.223
				34E	695519.859	1391522.445
				35E	693887.714	1386702.521

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US Army Corps of Engineers
New York District

Mark	Appr.	Date	Description

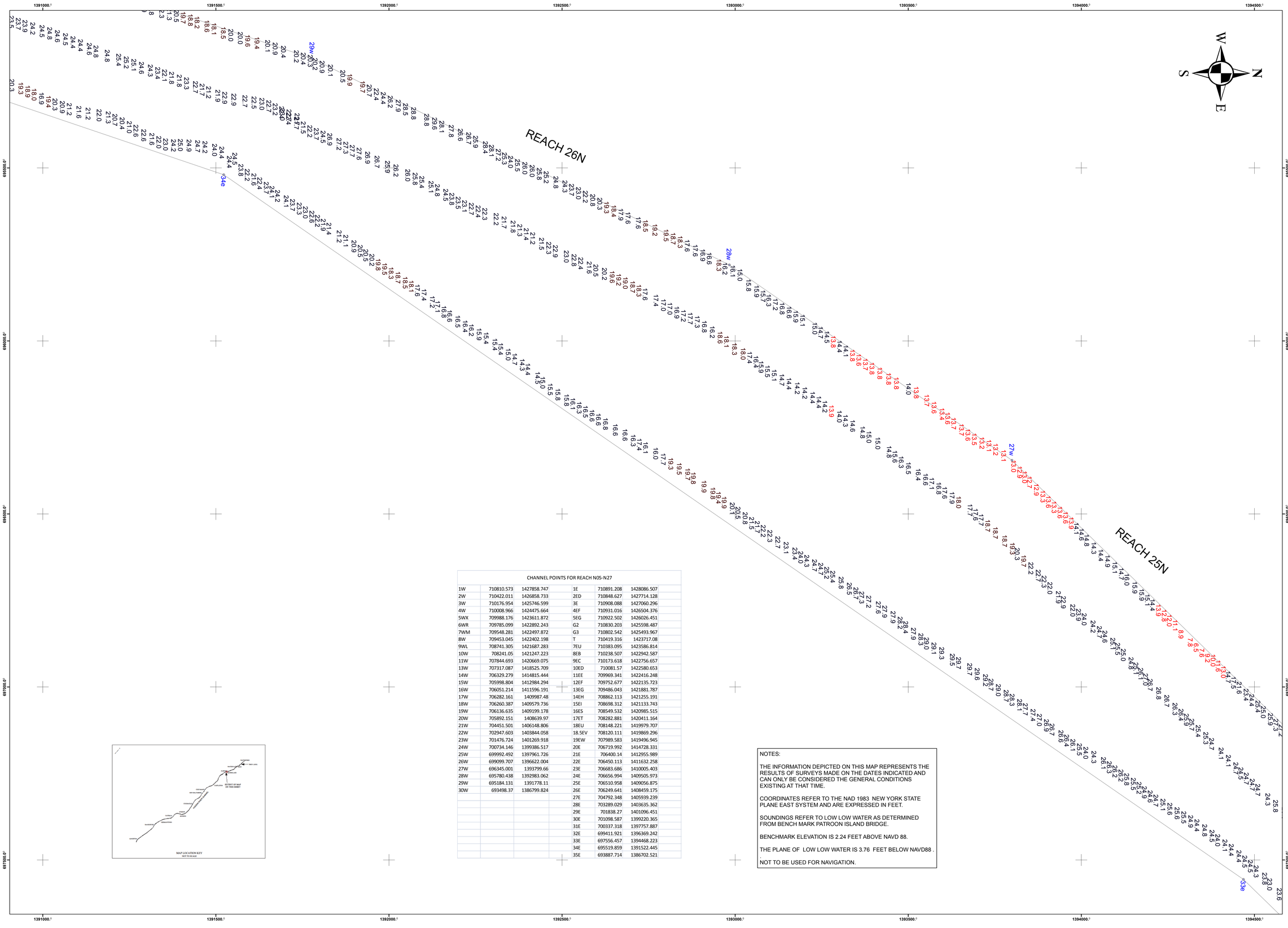
Date: 02/13/15
Survey Date:06/03/14
Contract no.:
Plot date:
Scale: 1" = 100'
Drawn by: D. Karsik
Designed by: R. Berrian
Reviewed by: J. Smith
Approved by: W. F. Petronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ALBANY FIELD OFFICE

Congress ST Bridge to Menands Bridge
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
3 OF 3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REACH 25N
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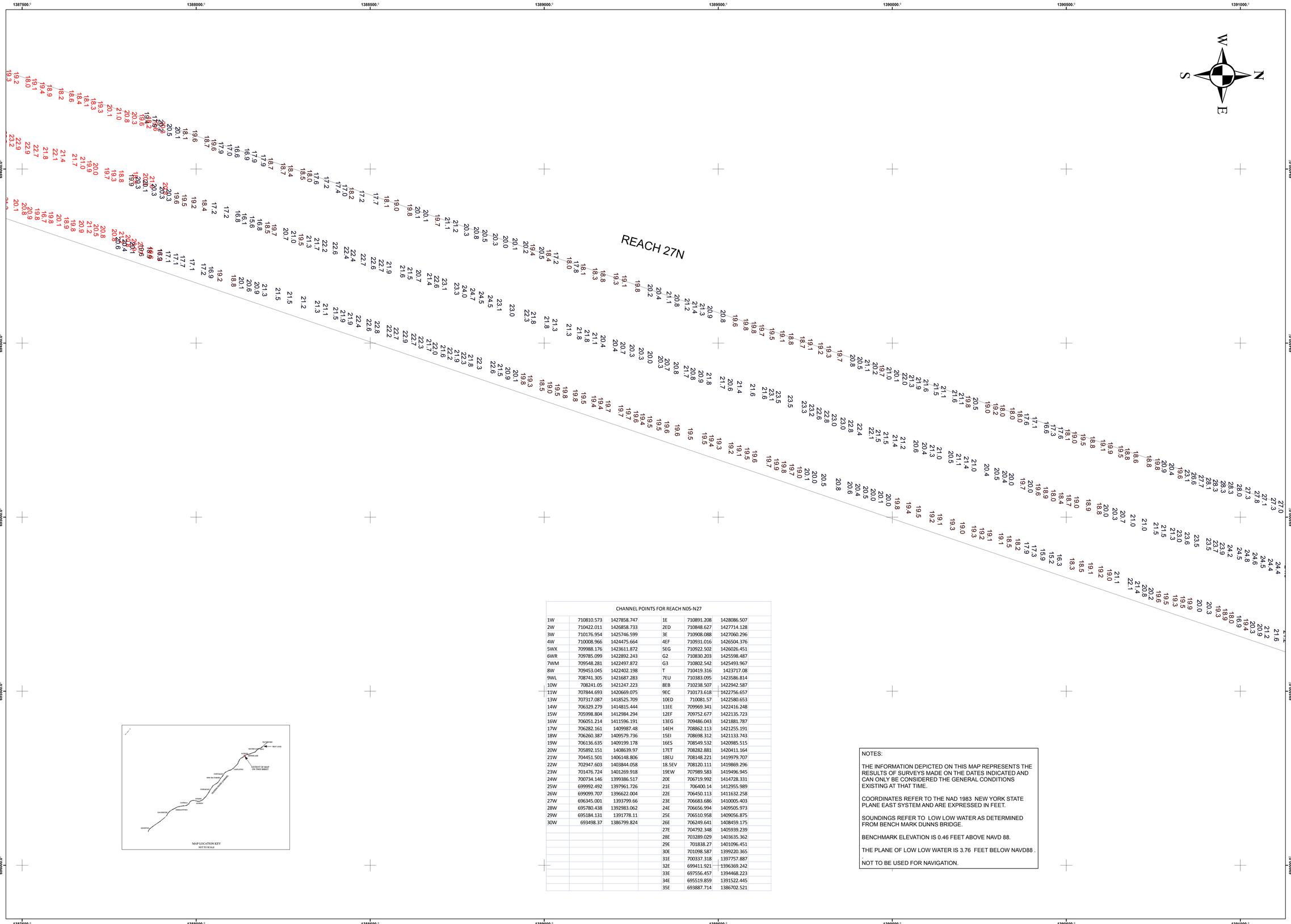


CHANNEL POINTS FOR REACH N05-N27

1W	710810.573	1427858.747	1E	710891.208	1428086.507
2W	710422.011	1426858.733	2ED	710848.627	1427714.128
3W	710176.954	1425746.599	3E	710908.088	1427060.296
4W	710008.966	1424475.664	4EF	710931.016	1426504.376
5WX	709988.176	1423611.872	5EG	710922.502	1426026.451
6WR	709785.099	1422892.243	G2	710830.203	1425598.487
7WM	709548.281	1422497.872	G3	710802.542	1425493.967
8W	709453.045	1422402.198	T	710419.316	1423717.08
9WL	708741.305	1421687.283	7EU	710383.095	1423586.814
10W	708241.05	1421247.223	8EB	710238.507	1422942.587
11W	707844.693	1420669.075	9EC	710173.618	1422756.657
13W	707317.087	1418525.709	10ED	710081.57	1422580.653
14W	706329.279	1414815.444	11EE	709969.341	1422416.248
15W	705998.804	1412984.294	12EF	709752.677	1422135.723
16W	706051.214	1411596.191	13EG	709486.043	1421881.787
17W	706282.161	1409987.48	14EH	708862.113	1421255.191
18W	706260.387	1409579.736	15EI	708698.312	1421133.743
19W	706136.635	1409199.178	16ES	708549.532	1420985.515
20W	705892.151	1408639.97	17ET	708282.881	1420411.164
21W	704451.501	1406148.806	18EU	708148.221	1419979.707
22W	702947.603	1403844.058	18.5EV	708120.111	1419869.296
23W	701476.724	1401269.918	19EW	707989.583	1419496.945
24W	700734.146	1399386.517	20E	706719.992	1414728.331
25W	699992.492	1397961.726	21E	706400.14	1412955.989
26W	699099.707	1396622.004	22E	706450.113	1411632.258
27W	696345.001	1393799.66	23E	706683.686	1410005.403
28W	695780.438	1392983.062	24E	706656.994	1409505.973
29W	695184.131	1391778.11	25E	706510.958	1409056.875
30W	693498.37	1386799.824	26E	706249.641	1408459.175
			27E	704792.348	1405939.239
			28E	703289.029	1403635.362
			29E	701838.27	1401096.451
			30E	701098.587	1399220.365
			31E	700337.318	1397757.887
			32E	699411.921	1396369.242
			33E	697556.457	1394468.223
			34E	695519.859	1391522.445
			35E	693887.714	1386702.521

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO LOW LOW WATER AS DETERMINED FROM BENCH MARK DUNNS BRIDGE.

BENCHMARK ELEVATION IS 0.46 FEET ABOVE NAVD 88.

THE PLANE OF LOW LOW WATER IS 3.76 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	With	Description	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Parisoria, CHIEF, ENGINEERING DIVISION

Drawn by: D. Karla
Designed by: R. Berton
Reviewed by: J. Smith
Reviewed by: W. F. Parisoria

Date: 02/13/15
Survey Date: 06/26/14
Contract no.:
Plot date:
Plotted by: Daniel J. Karlik
Scale: 1" = 100'

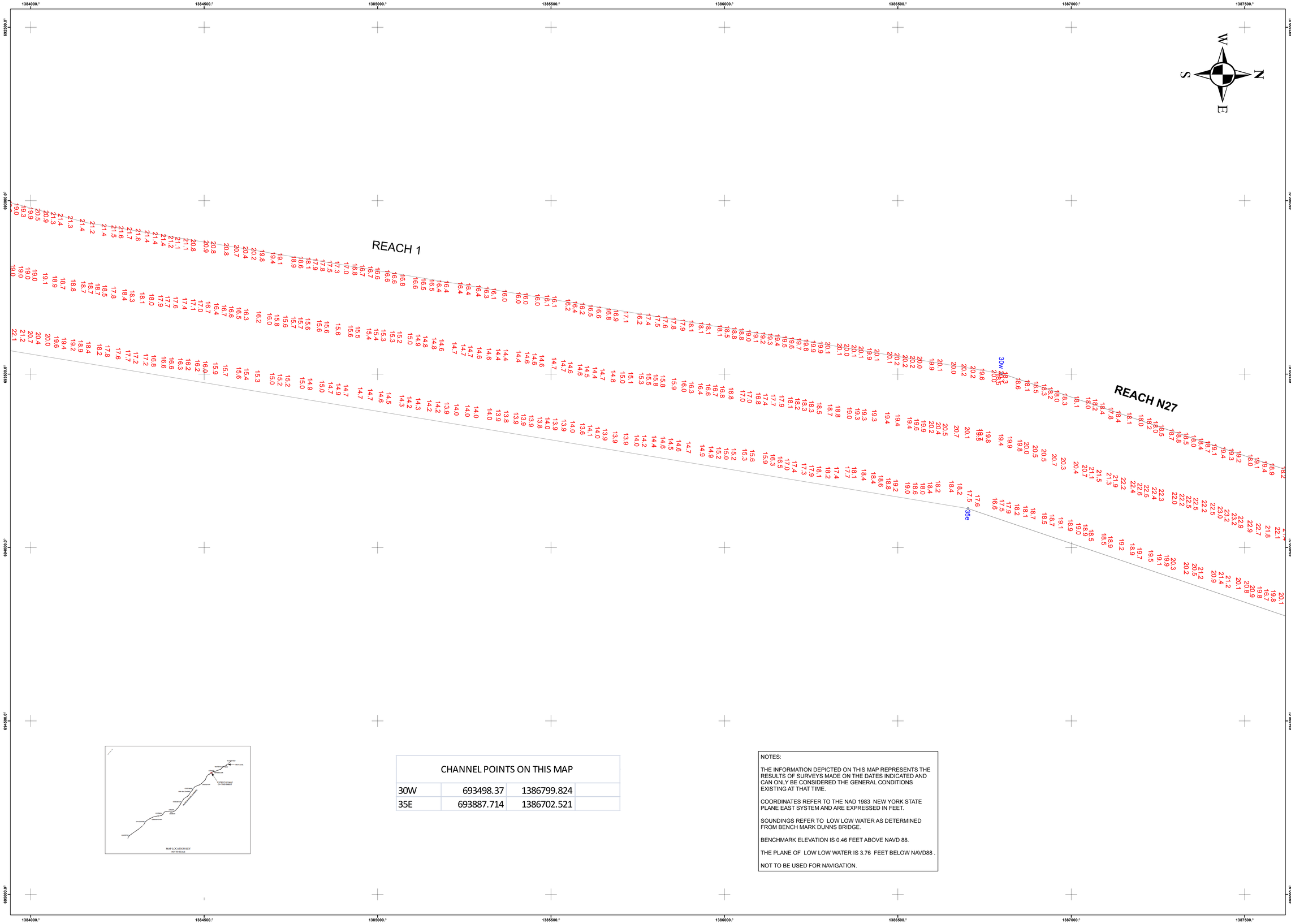
South 900ft of Dunns Bridge to Head of 32ft Project

Condition Survey

Fathometer Soundings in Feet

Sheet reference number:

1 OF 2



CHANNEL POINTS ON THIS MAP			
30W	693498.37	1386799.824	
35E	693887.714	1386702.521	

NOTES:

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NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Fellows, CHIEF, ENGINEERING DIVISION

DRAWN BY: D. Kalok
DESIGNED BY: R. Berman
REVIEWED BY: J. Lopez
REVIEWED BY: W. F. Fellows

Date: 02/13/15
Survey Date: 06/20/14
Contract no.:
Plot date: Thursday, Jul 2, 2015
Plot by: D. Kalok
Scale: 1" = 100'

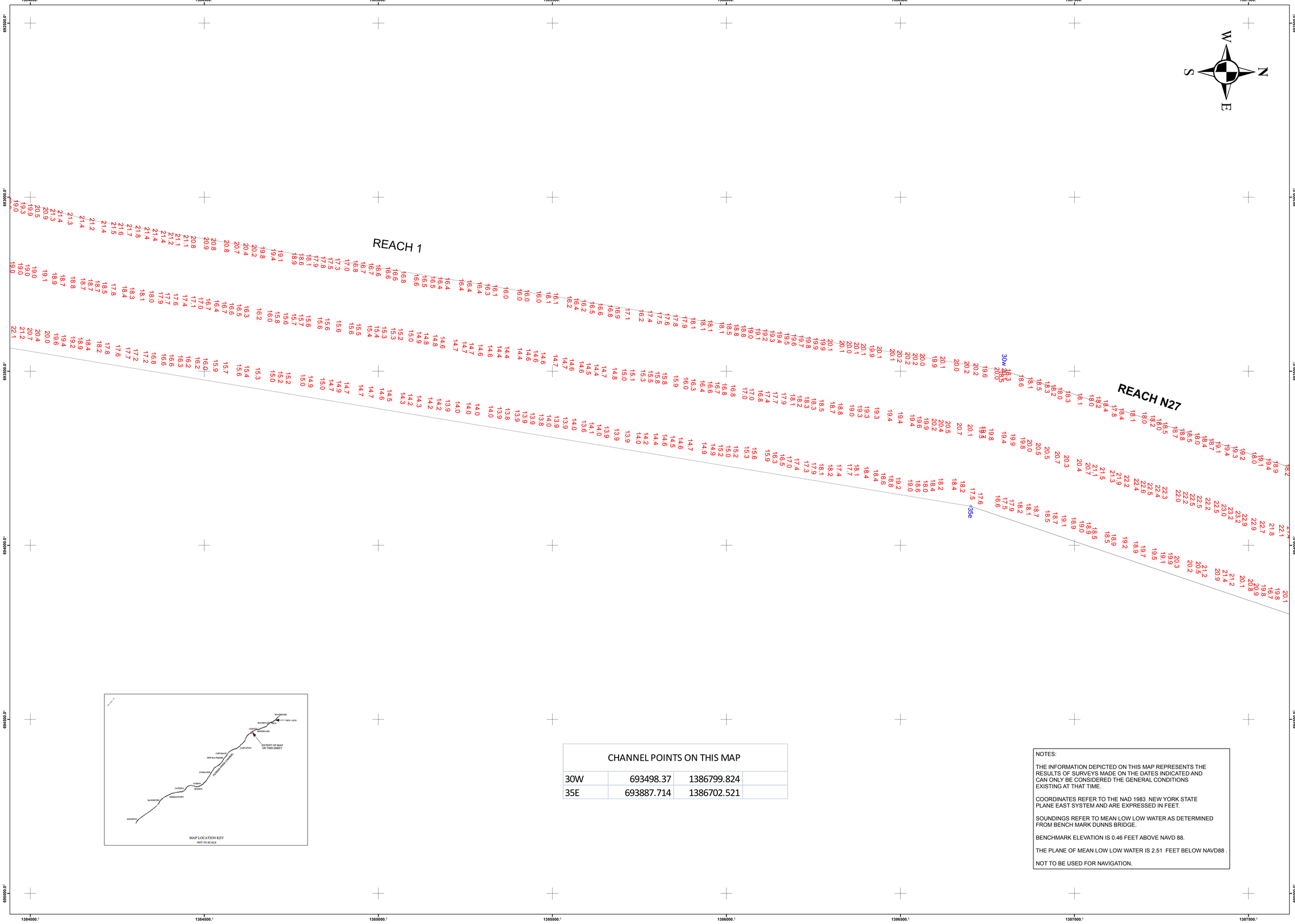
South 900ft of Dunns Bridge to Head of 32ft Project

Condition Survey

Fathometer Soundings in Feet

Sheet reference number:

2 OF 2



CHANNEL POINTS ON THIS MAP			
30W	693498.37	1386799.824	
35E	693887.714	1386702.521	

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK DUNNS BRIDGE.

BENCHMARK ELEVATION IS 0.46 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Fahrbach, CHIEF, ENGINEERING DIVISION

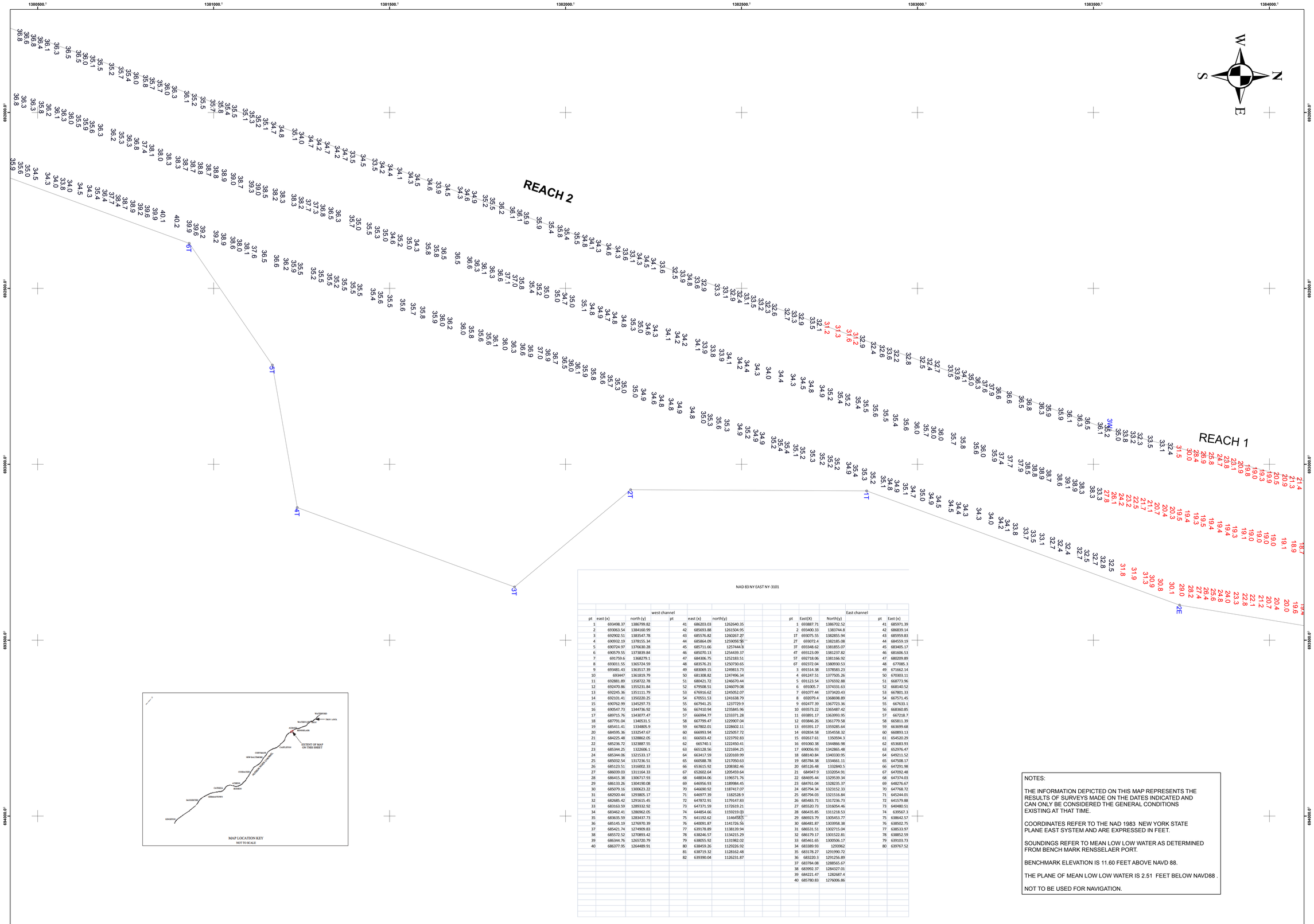
DRAWN BY: D. Karlok
DESIGNED BY: R. Berman
REVIEWED BY: J. Lewis
REVIEWED BY: W. F. Fahrbach

Date: 02/13/15
Survey Date: 07/02/14
Contract no.:
Plot date: Friday, Daniel J. Karlok
Scale: 1" = 100'

Head of the 32ft Project to Reach 2
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

1 OF 2



NAD 83 NY EAST NY-3101

west channel							East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)		pt	East(X)	North(y)	pt	East (x)	
1	693498.37	1386799.82	41	686203.03	1262640.35		1	693887.71	1386702.52	41	685971.39	
2	693063.54	1384160.99	42	685693.88	1261504.95		2	693400.33	1383744.8	42	686839.14	
3	692902.51	1383547.78	43	685576.82	1260267.27		1T	693075.55	1382855.94	43	685959.83	
4	690932.19	1378155.34	44	685864.09	1259056.36		2T	693072.4	1382185.08	44	684559.19	
5	690724.97	1376630.28	45	685711.66	1257444.8		3T	693348.62	1381855.07	45	683405.17	
6	690579.55	1373839.84	46	685070.13	1254439.37		4T	691123.09	1381237.82	46	681606.53	
7	691759.6	1368279.1	47	684306.75	1252183.51		5T	692718.06	1381166.92	47	680209.89	
8	693011.55	1365724.59	48	683576.21	1250730.65		6T	692372.04	1380930.53	48	677085.3	
9	693481.43	1363517.39	49	683069.15	1249813.73		3	691514.38	1378583.23	49	671662.14	
10	693447	1361819.79	50	681308.82	1247496.34		4	691247.51	1377505.26	50	670303.11	
11	692881.89	1358722.78	51	680421.72	1246670.44		5	691123.54	1376692.88	51	668773.96	
12	692470.86	1355231.84	52	679508.51	1246079.08		6	691005.7	1374331.63	52	668140.52	
13	692245.36	1351111.79	53	676916.62	1245052.07		7	691077.44	1373420.43	53	667801.33	
14	692101.41	1350220.25	54	670551.53	1241638.79		8	692079.4	1368698.89	54	667571.45	
15	690762.99	1345297.73	55	667941.25	1237729.9		9	692477.39	1367723.36	55	667633.1	
16	690547.73	1344736.92	56	667410.94	1235845.96		10	693573.22	1365487.42	56	668360.85	
17	689715.76	1343077.47	57	666994.77	1233371.28		11	693891.17	1363993.95	57	667218.7	
18	687791.04	1340531.5	58	667799.47	1229907.04		12	693846.26	1361779.58	58	665811.39	
19	685411.41	1334805.9	59	667802.01	1228602.11		13	693391.17	1359285.64	59	663699.68	
20	684595.36	1332547.67	60	666993.94	1225057.72		14	692834.58	1354558.32	60	660893.13	
21	684225.48	1328862.05	61	666503.42	1223792.83		15	692617.61	1350594.3	61	654520.29	
22	685236.72	1323887.55	62	665740.1	1222450.41		16	691060.38	1344866.98	62	653683.93	
23	685344.25	1322606.1	63	665128.56	1221694.25		17	690056.93	1342865.48	63	652976.47	
24	685344.06	1321533.17	64	663417.59	1220169.99		18	688140.84	1340330.95	64	649211.52	
25	685032.54	1317236.51	65	660588.78	1217050.63		19	685784.38	1334661.11	65	647508.17	
26	685123.51	1316002.33	66	653615.92	1208382.46		20	685126.48	1332840.5	66	647291.98	
27	686039.03	1311164.33	67	652602.64	1205459.64		21	684947.9	1332054.91	67	647092.48	
28	686415.38	1306717.93	68	648834.06	1196571.76		22	684695.44	1329539.34	68	647374.03	
29	686133.26	1304190.08	69	646956.93	1189984.45		23	684761.04	1328235.37	69	648276.67	
30	685079.16	1300623.22	70	646690.92	1187417.07		24	685794.34	1323152.33	70	647768.72	
31	682920.44	1293805.17	71	646977.39	1182528.9		25	685794.03	1321516.84	71	645244.01	
32	682685.42	1291615.45	72	647872.91	1179147.83		26	685483.71	1317236.73	72	641579.88	
33	683163.59	1289332.92	73	647371.59	1172619.21		27	685520.73	1316054.46	73	640480.51	
34	683462.41	1286962.05	74	644854.66	1159219.03		28	686435.85	1311218.53	74	639567.3	
35	683635.59	1283437.73	75	641192.62	1146458.5		29	686923.79	1305453.77	75	638642.57	
36	685145.19	1276970.39	76	640091.87	1141726.56		30	686481.87	1303958.38	76	638502.75	
37	685421.74	1274909.83	77	639178.89	1138139.94		31	686531.51	1302715.04	77	638533.97	
38	685572.52	1270893.42	78	638246.57	1134215.29		32	686179.17	1301522.81	78	638852.59	
39	686344.76	1265720.79	79	638055.52	1131982.02		33	685461.65	1300506.17	79	639103.73	
40	686377.95	1264489.91	80	638459.26	1129226.92		34	683389.93	1293962	80	639767.52	
			81	638719.32	1128162.48		35	683178.27	1291990.72			
			82	639390.04	1126231.87		36	683220.3	1291256.89			
							37	683784.08	1288565.67			
							38	683992.37	1284127.01			
							39	684221.47	1282687.4			
							40	685780.83	1276006.86			

MAP LOCATION KEY
NOT TO SCALE

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RENSSELAER PORT.

BENCHMARK ELEVATION IS 11.60 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

Date: 02/13/15
Survey Date:07/02/14
Contract no.:
Proj date:
Proj Mgr: Tuesaj J. Kanick
Scale: 1" = 100'

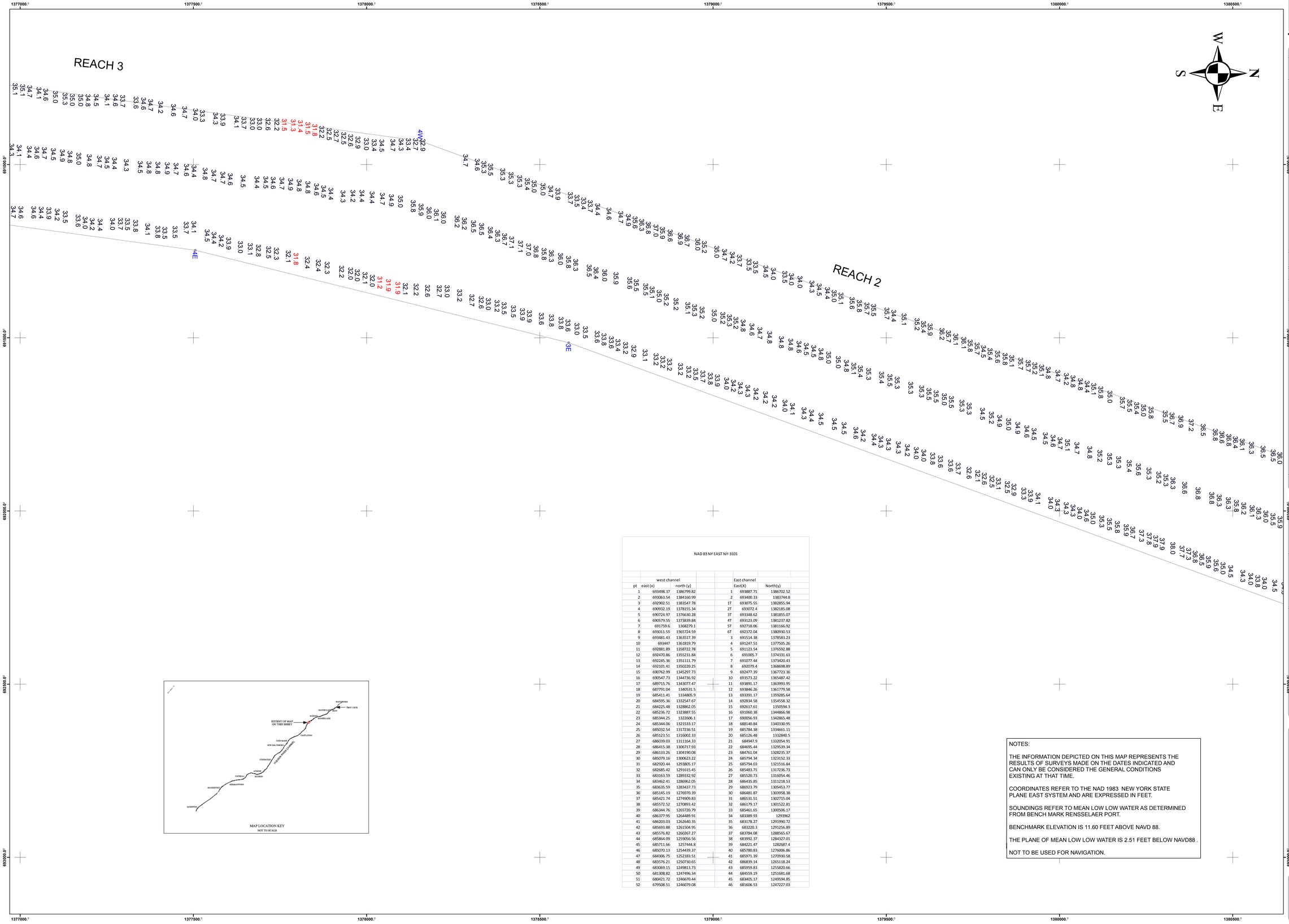
Drawn by: D. Kanick
DESIGNED BY: R. Berman
REVIEWED BY: Kathy Ryan
REVIEWED BY: W. F. Petronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ENGINEERING DIVISION

Head of the 32ft Project to Reach 2
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 2



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82		693887.71	1386702.52
2	693063.54	1384160.99		693400.33	1383744.8
3	692902.51	1383547.78		693075.55	1382855.94
4	690932.19	1378155.34		693072.4	1382185.08
5	690724.97	1376630.28		693348.62	1381855.07
6	690579.55	1373839.84		693123.09	1381237.82
7	691759.6	1368279.1		692718.06	1381166.92
8	693011.55	1365724.59		692372.04	1380930.53
9	693481.43	1363517.39		691514.38	1378583.23
10	693447	1361819.79		691247.51	1377505.26
11	692881.89	1358722.78		691123.54	1376592.88
12	692470.86	1355231.84		691005.7	1374331.63
13	692245.36	1351111.79		691077.44	1373420.43
14	692101.41	1350220.25		692079.4	1368698.89
15	690762.99	1345297.73		692477.39	1367723.36
16	690547.73	1344736.92		693573.22	1365487.42
17	689715.76	1343077.47		693891.17	1363993.95
18	687791.04	1340531.5		693846.26	1361779.58
19	685411.41	1334805.9		693391.17	1359285.64
20	684595.36	1332547.67		692834.58	1354558.32
21	684225.48	1328862.05		692617.61	1350594.3
22	685236.72	1323887.55		691060.38	1344866.98
23	685344.25	1322606.1		690056.93	1342865.48
24	685344.06	1321533.17		688140.84	1340330.95
25	685032.54	1317236.51		685784.38	1334661.11
26	685123.51	1316002.33		685126.48	1332840.5
27	686039.03	1311164.33		684947.9	1332054.91
28	686415.38	1306717.93		684695.44	1329539.34
29	686133.26	1304190.08		684761.04	1328235.37
30	685079.16	1300623.22		685794.34	1323152.33
31	682920.44	1293805.17		685794.03	1321516.84
32	682685.42	1291615.45		685483.71	1317236.73
33	683163.59	1289332.92		685520.73	1316054.46
34	683462.41	1286962.05		686435.85	1311218.53
35	683635.59	1283437.73		686923.79	1305453.77
36	685145.19	1276970.39		686481.87	1303958.38
37	685421.74	1274909.83		686531.51	1302715.04
38	685572.52	1270893.42		686179.17	1301522.81
39	686344.76	1265720.79		685461.65	1300506.17
40	686377.95	1264489.91		683389.93	1293962
41	686203.03	1262640.35		683178.27	1291990.72
42	685691.88	1261504.95		683220.3	1291256.89
43	685576.82	1260267.27		683784.08	1288565.67
44	685864.09	1259056.56		683992.37	1284327.01
45	685711.66	1257444.8		684221.47	1282687.4
46	685070.13	1254439.37		685780.83	1276006.86
47	684306.75	1252183.51		685971.39	1270930.58
48	683576.21	1250730.65		686839.14	1265118.24
49	683069.15	1249813.73		685959.83	1255820.66
50	681308.82	1247496.34		684559.19	1251681.68
51	680421.72	1246670.44		683405.17	1249594.85
52	679508.51	1246079.08		681606.53	1247227.03

MAP LOCATION KEY
NOT TO SCALE

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RENSSELAER PORT.

BENCHMARK ELEVATION IS 11.60 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Mark	Description	Date

Date: 02/13/15
Survey Date:06/23/14
Contract no.:
Plot date:
Scale: 1" = 150'

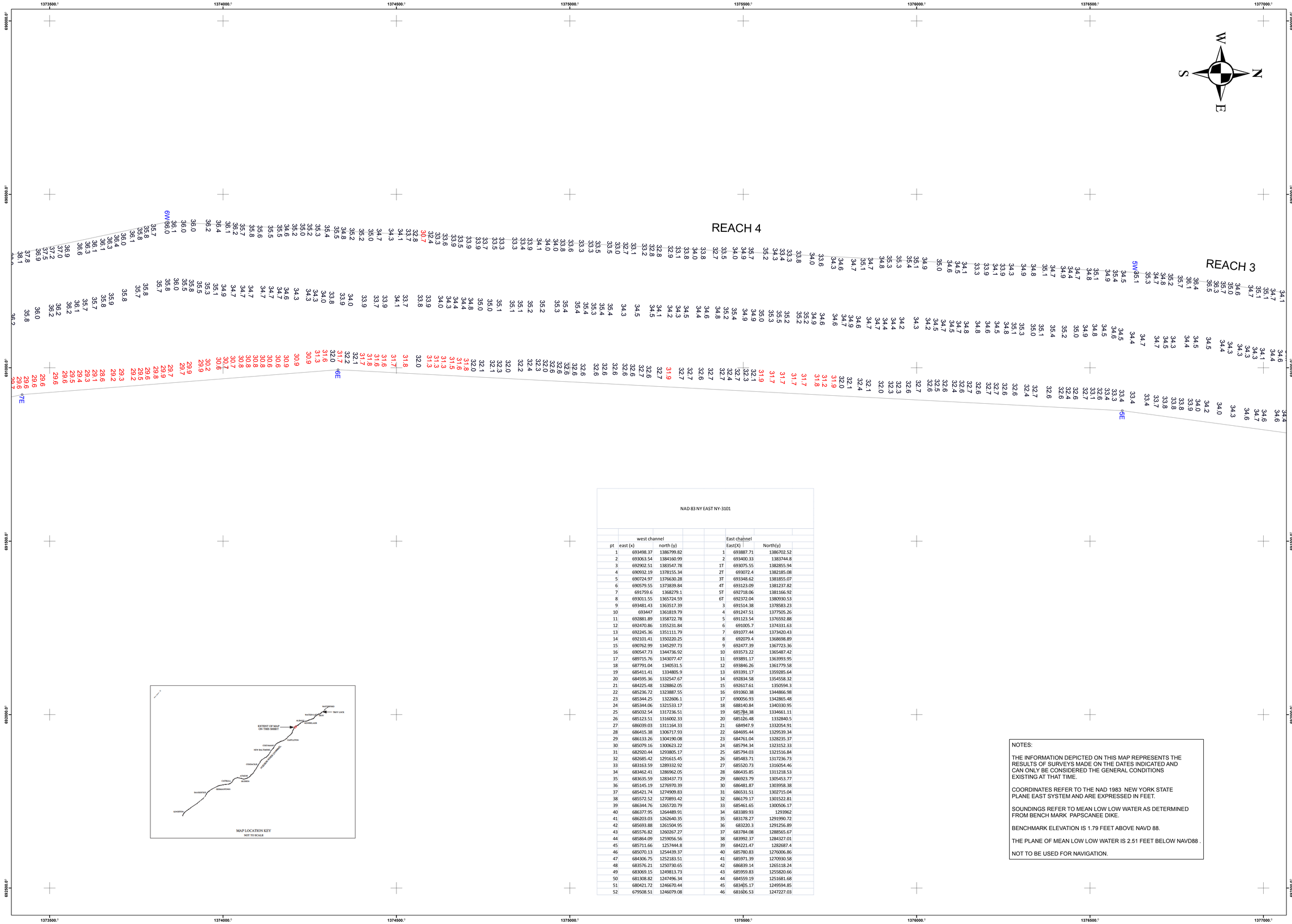
Drawn by: D. Karok
DESIGNED BY: R. Berman
REVIEWED BY: D. Karok
REVIEWED BY: W. F. Petrovis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrovis, CHIEF PLANNING & ENGINEERING

Light 221 to Light 215
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 4



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693345.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK PAPSCANEE DIKE.

BENCHMARK ELEVATION IS 1.79 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

Date: 02/13/15
Survey Date:06/23/14
Contract no.:
Plot date:
File by: David J. Kanick
Scale: 1" = 700'

DRAWN BY: D. Kanick
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Petronis

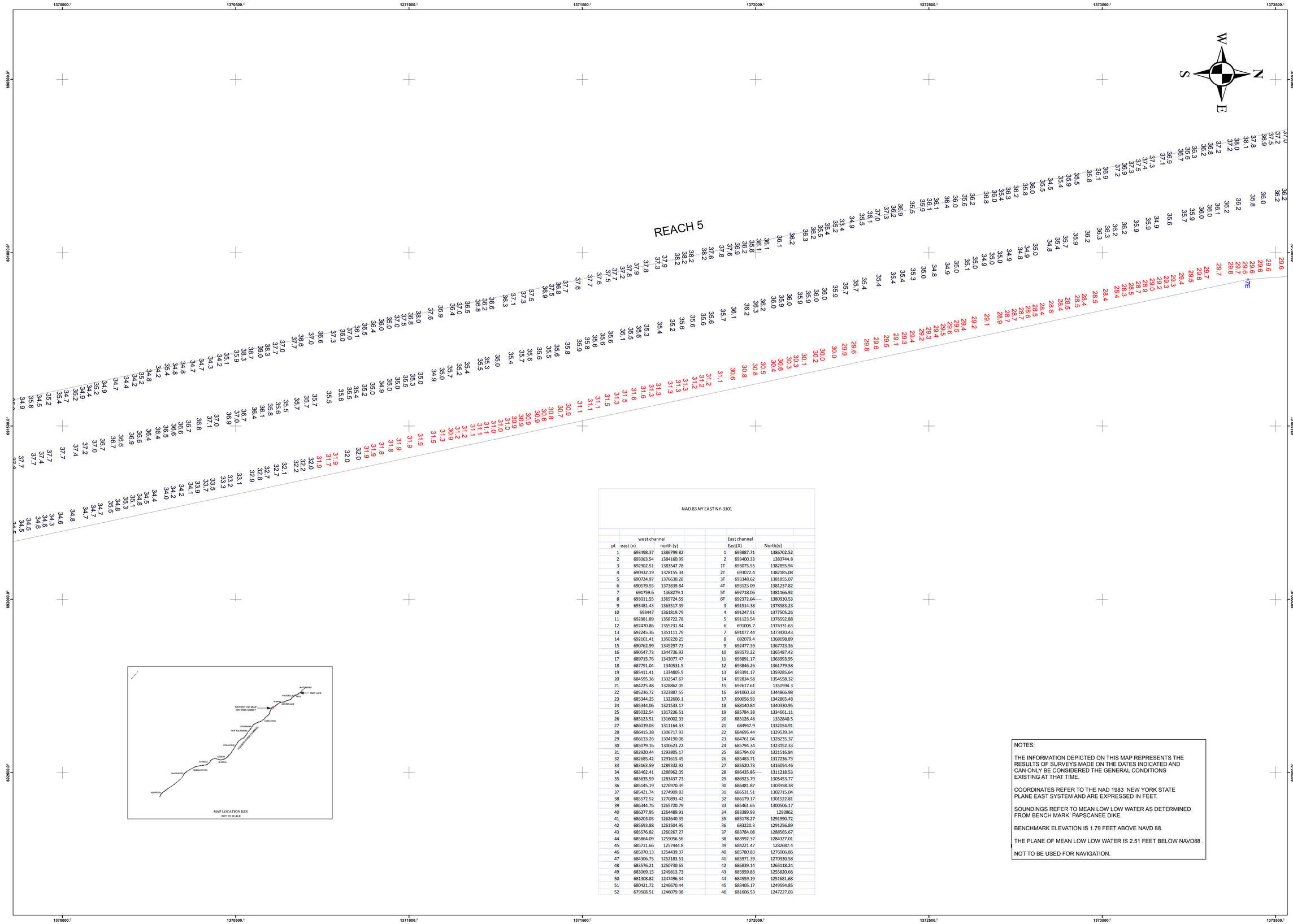
U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ASSIST FIELD OFFICE

Light 221 to Light 215
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 OF 4



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82		693887.71	1386702.52
2	693063.54	1384160.99		693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378115.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK PAPSCANEE DIKE.

BENCHMARK ELEVATION IS 1.79 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

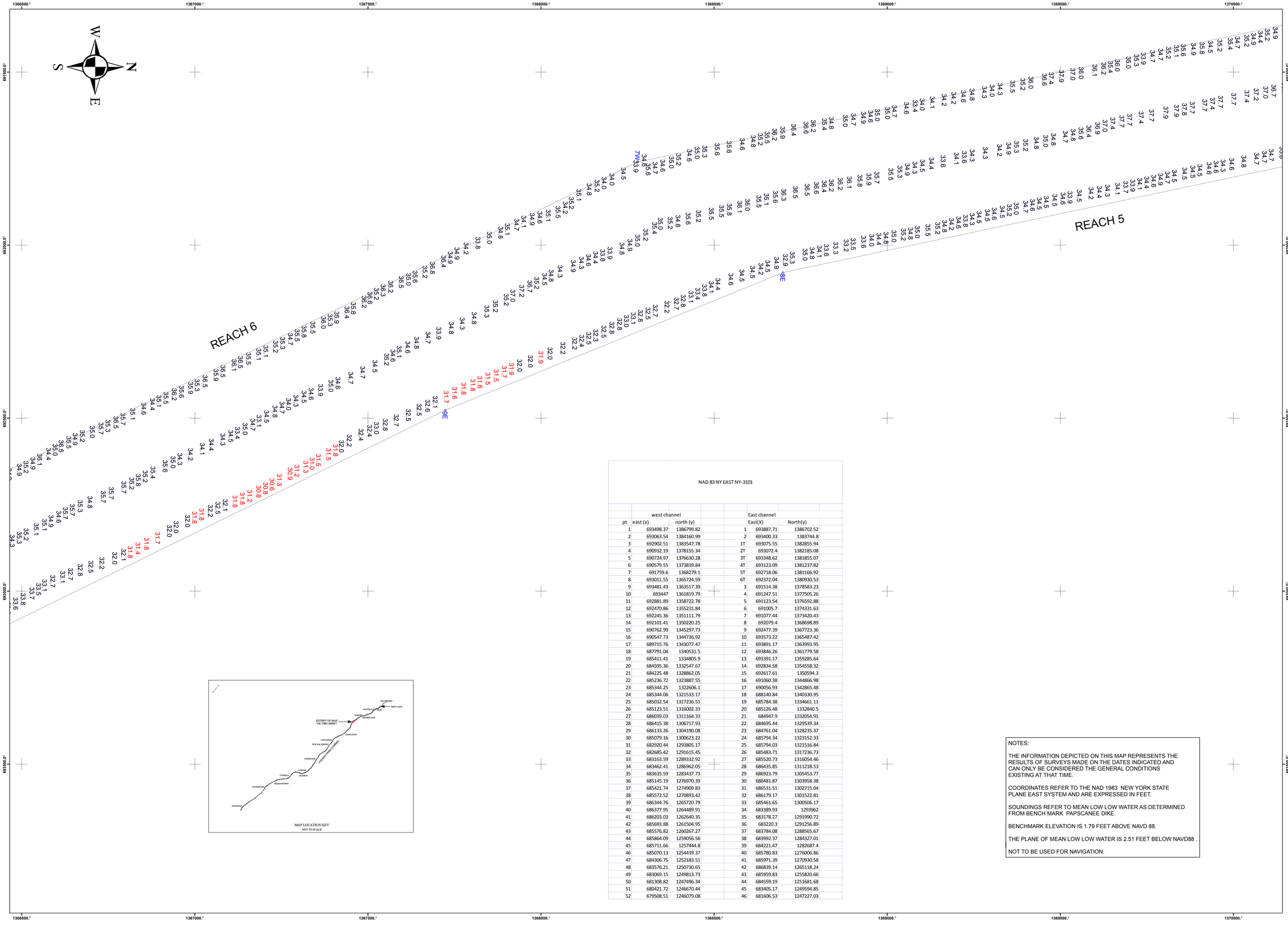
RECOMMENDED BY:	James B. Smith, CIVIL ENGINEER	DRAWN BY: D. Clarke	DESIGNED BY: R. Barnar
APPROVED BY:	William F. Pelsonis, CHIEF, ASBURY FIELD OFFICE	REVIEWED BY: J. Smith	REVIEWED BY: W. F. Pelsonis

Date: 02/13/15
Survey Date:06/23/14
Contract No.:
Plot date:
Plot By: Daniel J. Kanick
Scale: 1" = 100'

Light 221 to Light 215
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

3 OF 4



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK PAPSCANEE DIKE.

BENCHMARK ELEVATION IS 1.79 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Date	Appr.	Mark	Description	Description	Appr.

Date: 02/13/15
Survey Date:09/23/14

U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK, NY

drawn by:
D. Smith

checked by:
R. Berman

reviewed by:
J. Smith

approved by:
W.F. Petronis

RECOMMENDED BY:
James B. Smith
CIVIL ENGINEER

APPROVED BY:
William F. Petronis
CHIEF, ASBURY FIELD OFFICE

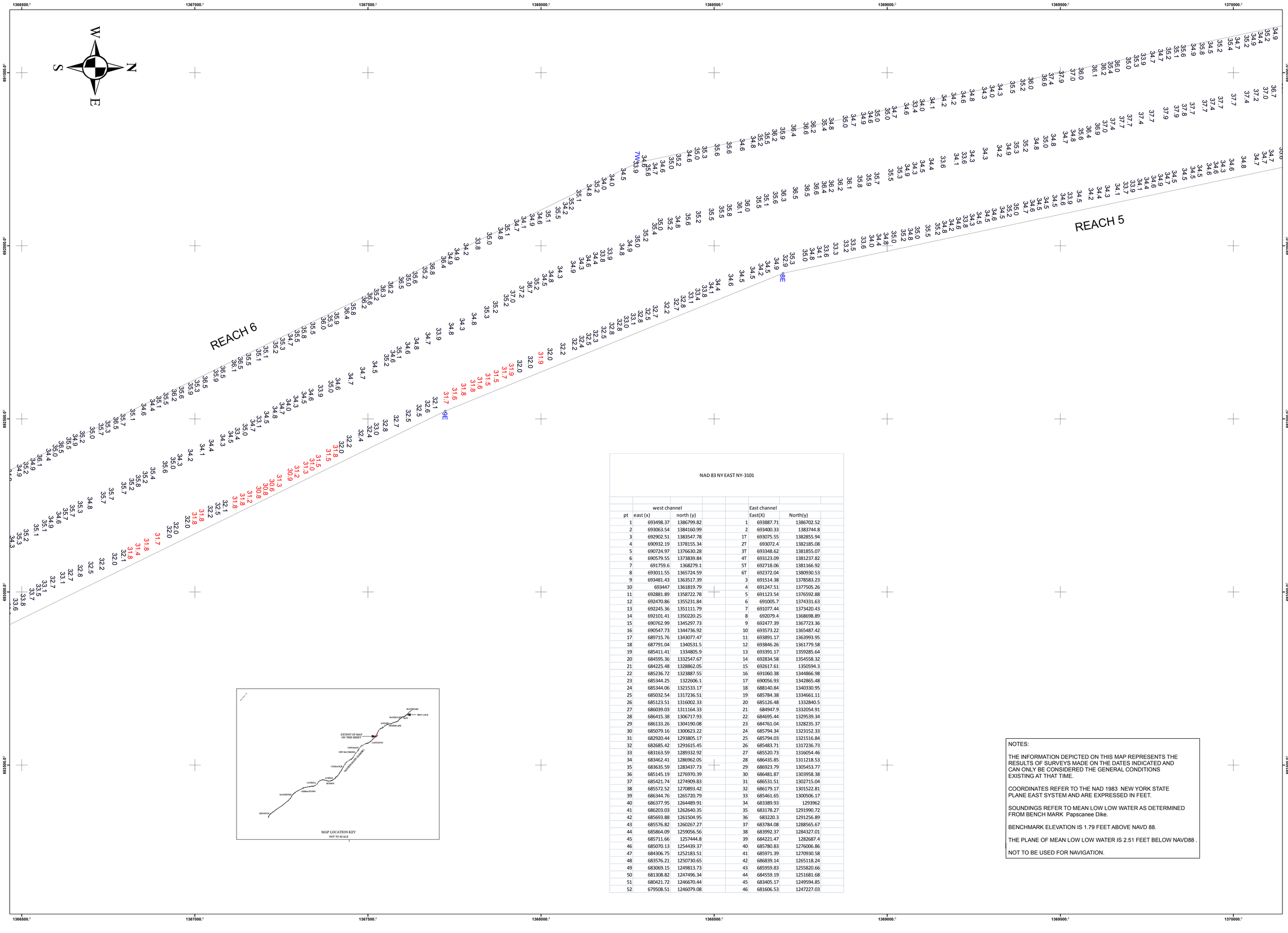
Contract no.:

Plot date:
File by: David J. Kanick
Scale: 1" = 700'

Light 221 to Light 215
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

4 OF 4



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82		693887.71	1386702.52
2	693063.54	1384160.99		693400.33	1383744.8
3	692902.51	1383547.78		693075.55	1382855.94
4	690932.19	1378155.34		693072.4	1382185.08
5	690724.97	1376630.28		693348.62	1381855.07
6	690579.55	1373839.84		693123.09	1381237.82
7	691759.6	1368279.1		692718.06	1381166.92
8	693011.55	1365724.59		692372.04	1380930.53
9	693481.43	1363517.39		691514.38	1378583.23
10	693447	1361819.79		691247.51	1377505.26
11	692881.89	1358722.78		691123.54	1376592.88
12	692470.86	1355231.84		691005.7	1374331.63
13	692245.36	1351111.79		691077.44	1373420.43
14	692101.41	1350220.25		692079.4	1368698.89
15	690762.99	1345297.73		692477.39	1367723.36
16	690547.73	1344736.92		693573.22	1365487.42
17	689715.76	1343077.47		693891.17	1363993.95
18	687791.04	1340531.5		693846.26	1361779.58
19	685411.41	1334805.9		693391.17	1359285.64
20	684595.36	1332547.67		692834.58	1354558.32
21	684225.48	1328862.05		692617.61	1350594.3
22	685236.72	1323887.55		691060.38	1344866.98
23	685344.25	1322606.1		690056.93	1342865.48
24	685344.06	1321533.17		688140.84	1340330.95
25	685032.54	1317236.51		685784.38	1334661.11
26	685123.51	1316002.33		685126.48	1332840.5
27	686039.03	1311164.33		684947.9	1332054.91
28	686415.38	1306717.93		684695.44	1329539.34
29	686133.26	1304190.08		684761.04	1328235.37
30	685079.16	1300623.22		685794.34	1323152.33
31	682920.44	1293805.17		685794.03	1321516.84
32	682685.42	1291615.45		685483.71	1317236.73
33	683163.59	1289332.92		685520.73	1316054.46
34	683462.41	1286962.05		686435.85	1311218.53
35	683635.59	1283437.73		686923.79	1305453.77
36	685145.19	1276970.39		686481.87	1303958.38
37	685421.74	1274909.83		686531.51	1302715.04
38	685572.52	1270893.42		686179.17	1301522.81
39	686344.76	1265720.79		685461.65	1300506.17
40	686377.95	1264489.91		683389.93	1293962
41	686203.03	1262640.35		683178.27	1291990.72
42	685693.88	1261504.95		683220.3	1291256.89
43	685576.82	1260267.27		683784.08	1288565.67
44	685864.09	1259056.56		683992.37	1284327.01
45	685711.66	1257444.8		684221.47	1282687.4
46	685070.13	1254439.37		685780.83	1276006.86
47	684306.75	1252183.51		685971.39	1270930.58
48	683576.21	1250730.65		686839.14	1265118.24
49	683069.15	1249813.73		685959.83	1255820.66
50	681308.82	1247496.34		684559.19	1251681.68
51	680421.72	1246670.44		683405.17	1249594.85
52	679508.51	1246079.08		681606.53	1247227.03

MAP LOCATION KEY
NOT TO SCALE

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK Papscanee Dike.

BENCHMARK ELEVATION IS 1.79 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Date	Description	Mark	Date	Description

Date: 02/23/15
Survey Date:09/23/14
Contract no.:
First date:
Field by: Daniel J. Kanick
Scale: 1" = 100'

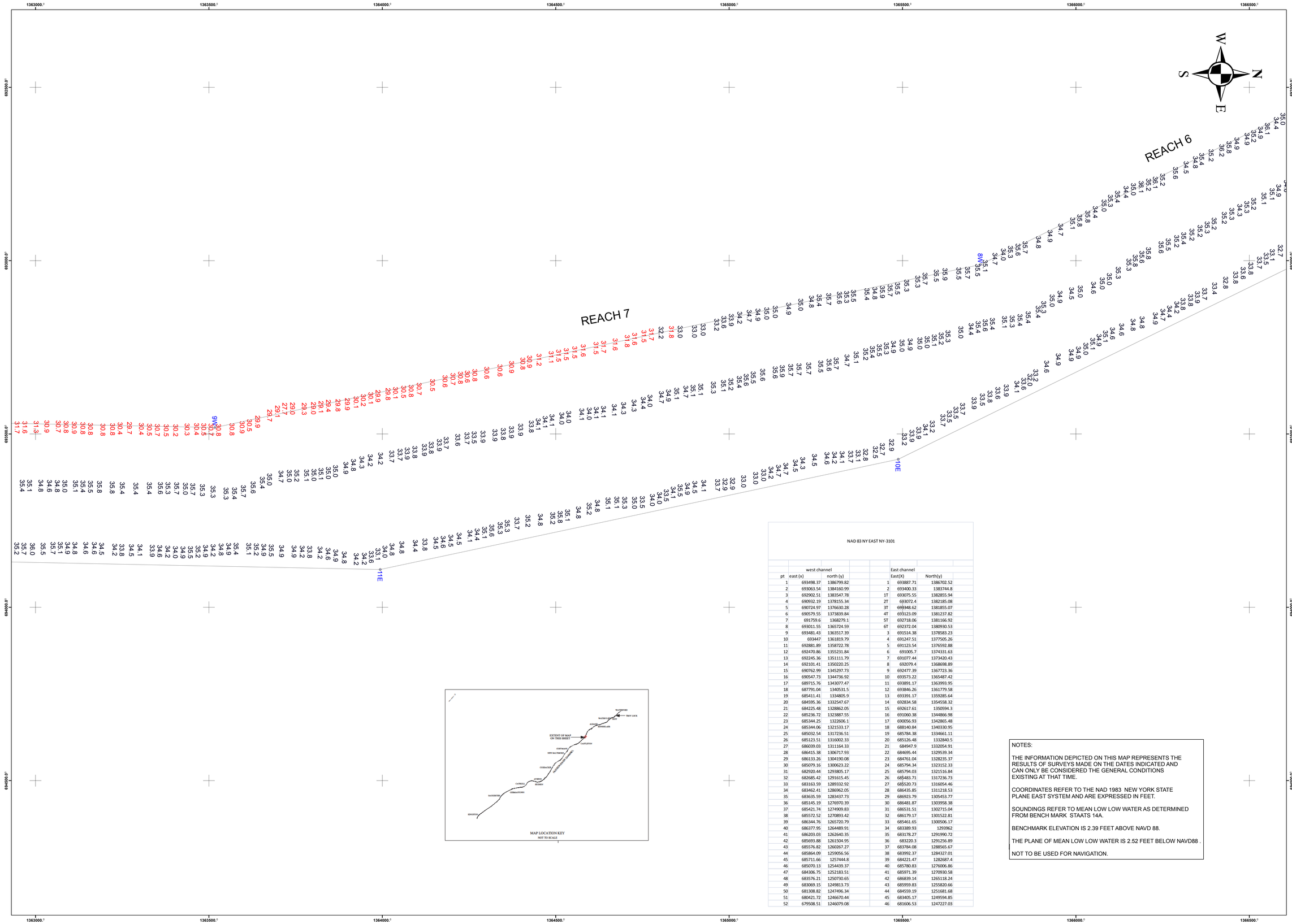
U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Pietronia, CHIEF, ASBURY FIELD OFFICE

DRAWN BY: D. Kanick
TRACINGS BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Pietronia

Light 215 to Light 209
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 4



NAD 83 NY EAST NY-3101

west channel			East channel		
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693948.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STAATS 14A.

BENCHMARK ELEVATION IS 2.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.52 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Date	Description	Appr.
Mark	Date	Description	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Pietronira, CHIEF, ALBANY FIELD OFFICE

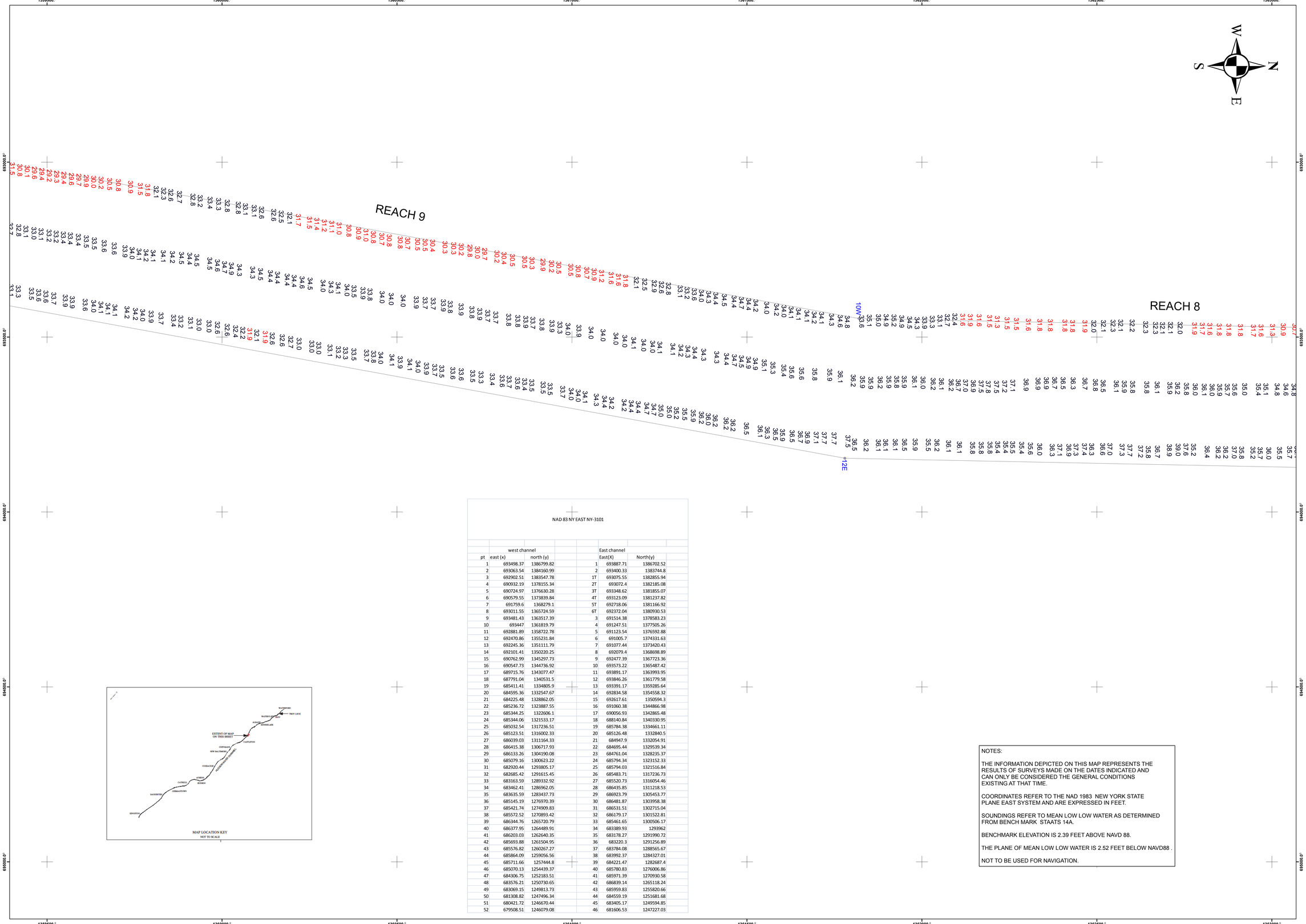
DRAWN BY: J. Kaitnik
DESIGNED BY: R. Berrian
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petronira

Date: 02/23/15
Survey Date: 06/23/14
Contract no.:
Plot date:
Plot by: David J. Kaitnik
Scale: 1" = 500'

Light 215 to Light 209
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 OF 4



NAD 83 NY EAST NY-3101

	west channel				East channel	
pt	east (x)	north (y)			East(X)	North(y)
1	693498.37	1386799.82		1	693887.71	1386702.52
2	693063.54	1384160.99		2	693400.33	1383744.8
3	692902.51	1383547.78		1T	693075.55	1382855.94
4	690932.19	1378155.34		2T	693072.4	1382185.08
5	690724.97	1376630.28		3T	693348.62	1381855.07
6	690579.55	1373839.84		4T	693123.09	1381237.82
7	691759.6	1368279.1		5T	692718.06	1381166.92
8	693011.55	1365724.59		6T	692372.04	1380930.53
9	693481.43	1363517.39		3	691514.38	1378583.23
10	693447	1361819.79		4	691247.51	1377505.26
11	692881.89	1358722.78		5	691123.54	1376592.88
12	692470.86	1355231.84		6	691005.7	1374331.63
13	692245.36	1351111.79		7	691077.44	1373420.43
14	692101.41	1350220.25		8	692079.4	1368698.89
15	690762.99	1345297.73		9	692477.39	1367723.36
16	690547.73	1344736.92		10	693573.22	1365487.42
17	689715.76	1343077.47		11	693891.17	1363993.95
18	687791.04	1340531.5		12	693846.26	1361779.58
19	685411.41	1334805.9		13	693391.17	1359285.64
20	684595.36	1332547.67		14	692834.58	1354558.32
21	684225.48	1328862.05		15	692617.61	1350594.3
22	685236.72	1323887.55		16	691060.38	1344866.98
23	685344.25	1322606.1		17	690056.93	1342865.48
24	685344.06	1321533.17		18	688140.84	1340330.95
25	685032.54	1317236.51		19	685784.38	1334661.11
26	685123.51	1316002.33		20	685126.48	1332840.5
27	686039.03	1311164.33		21	684947.9	1332054.91
28	686415.38	1306717.93		22	684695.44	1329539.34
29	686133.26	1304190.08		23	684761.04	1328235.37
30	685079.16	1300623.22		24	685794.34	1323152.33
31	682920.44	1293805.17		25	685794.03	1321516.84
32	682685.42	1291615.45		26	685483.71	1317236.73
33	683163.59	1289332.92		27	685520.73	1316054.46
34	683462.41	1286962.05		28	686435.85	1311218.53
35	683635.59	1283437.73		29	686923.79	1305453.77
36	685145.19	1276970.39		30	686481.87	1303958.38
37	685421.74	1274909.83		31	686531.51	1302715.04
38	685572.52	1270893.42		32	686179.17	1301522.81
39	686344.76	1265720.79		33	685461.65	1300506.17
40	686377.95	1264489.91		34	683389.93	1293962
41	686203.03	1262640.35		35	683178.27	1291990.72
42	685693.88	1261504.95		36	683220.3	1291256.89
43	685576.82	1260267.27		37	683784.08	1288565.67
44	685864.09	1259056.56		38	683992.37	1284327.01
45	685711.66	1257444.8		39	684221.47	1282687.4
46	685070.13	1254439.37		40	685780.83	1276006.86
47	684306.75	1252183.51		41	685971.39	1270930.58
48	683576.21	1250730.65		42	686839.14	1265118.24
49	683069.15	1249813.73		43	685959.83	1255820.66
50	681308.82	1247496.34		44	684559.19	1251681.68
51	680421.72	1246670.44		45	683405.17	1249594.85
52	679508.51	1246079.08		46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STAATS 14A.

BENCHMARK ELEVATION IS 2.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.52 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

Date: 02/23/15
Survey Date:06/23/14,12/12/14
Contract No.:
First date:
Plot by: Daniel J. Kanick
Scale: 1" = 100'

DRAWN BY: D. Kanick
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Petronis

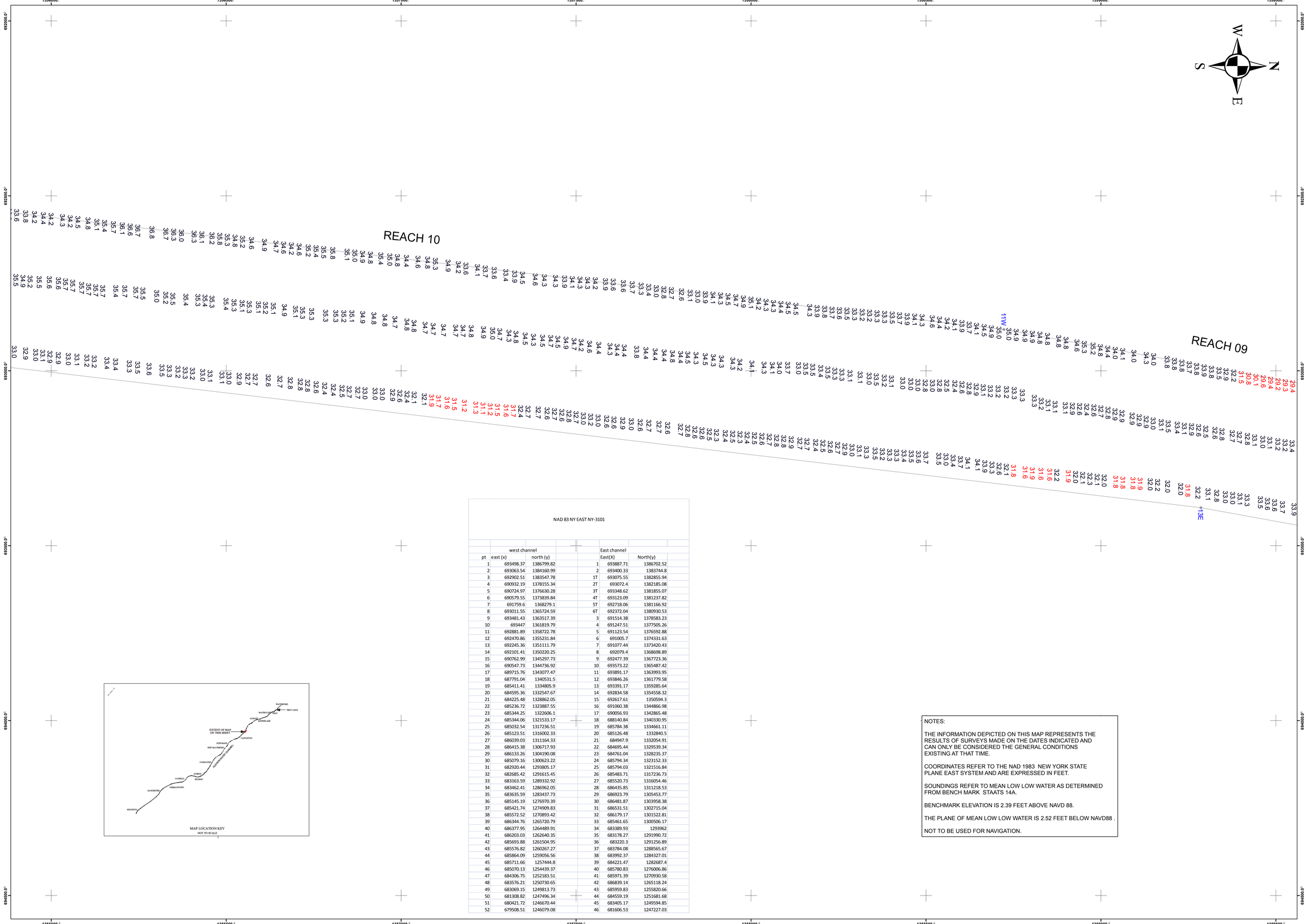
U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ASSIST FIELD OFFICE

Light 215 to Light 209
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

3 OF 4



NAD 83 NY EAST NY-3101

	west channel				East channel	
pt	east (x)	north (y)			East(X)	North(y)
1	693498.37	1386799.82		1	693887.71	1386702.52
2	693063.54	1384160.99		2	693400.33	1383744.8
3	692902.51	1383547.78		1T	693075.55	1382855.94
4	690932.19	1378155.34		2T	693072.4	1382185.08
5	690724.97	1376630.28		3T	693348.62	1381855.07
6	690579.55	1373839.84		4T	693123.09	1381237.82
7	691759.6	1368279.1		5T	692718.06	1381166.92
8	693011.55	1365724.59		6T	692372.04	1380930.53
9	693481.43	1363517.39		3	691514.38	1378583.23
10	693447	1361819.79		4	691247.51	1377505.26
11	692881.89	1358722.78		5	691123.54	1376592.88
12	692470.86	1355231.84		6	691005.7	1374331.63
13	692245.36	1351111.79		7	691077.44	1373420.43
14	692101.41	1350220.25		8	692079.4	1368698.89
15	690762.99	1345297.73		9	692477.39	1367723.36
16	690547.73	1344736.92		10	693573.22	1365487.42
17	689715.76	1343077.47		11	693891.17	1363993.95
18	687791.04	1340531.5		12	693846.26	1361779.58
19	685411.41	1334805.9		13	693391.17	1359285.64
20	684595.36	1332547.67		14	692834.58	1354558.32
21	684225.48	1328862.05		15	692617.61	1350594.3
22	685236.72	1323887.55		16	691060.38	1344866.98
23	685344.25	1322606.1		17	690056.93	1342865.48
24	685344.06	1321533.17		18	688140.84	1340330.95
25	685032.54	1317236.51		19	685784.38	1334661.11
26	685123.51	1316002.33		20	685126.48	1332840.5
27	686039.03	1311164.33		21	684947.9	1332054.91
28	686415.38	1306717.93		22	684695.44	1329539.34
29	686133.26	1304190.08		23	684761.04	1328235.37
30	685079.16	1300623.22		24	685794.34	1323152.33
31	682920.44	1293805.17		25	685794.03	1321516.84
32	682685.42	1291615.45		26	685483.71	1317236.73
33	683163.59	1289332.92		27	685520.73	1316054.46
34	683462.41	1286962.05		28	686435.85	1311218.53
35	683635.59	1283437.73		29	686923.79	1305453.77
36	685145.19	1276970.39		30	686481.87	1303958.38
37	685421.74	1274909.83		31	686531.51	1302715.04
38	685572.52	1270893.42		32	686179.17	1301522.81
39	686344.76	1265720.79		33	685461.65	1300506.17
40	686377.95	1264489.91		34	683389.93	1293962
41	686203.03	1262640.35		35	683178.27	1291990.72
42	685693.88	1261504.95		36	683220.3	1291256.89
43	685576.82	1260267.27		37	683784.08	1288565.67
44	685864.09	1259056.56		38	683992.37	1284327.01
45	685711.66	1257444.8		39	684221.47	1282687.4
46	685070.13	1254439.37		40	685780.83	1276006.86
47	684306.75	1252183.51		41	685971.39	1270930.58
48	683576.21	1250730.65		42	686839.14	1265118.24
49	683069.15	1249813.73		43	685959.83	1255820.66
50	681308.82	1247496.34		44	684559.19	1251681.68
51	680421.72	1246670.44		45	683405.17	1249594.85
52	679508.51	1246079.08		46	681606.53	1247227.03

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STAATS 14A.

BENCHMARK ELEVATION IS 2.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.52 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

Date: 02/23/15
Survey Date: 10/12/14
Contract no.:
File date:
File by: David J. Kanick
Scale: 1" = 100'

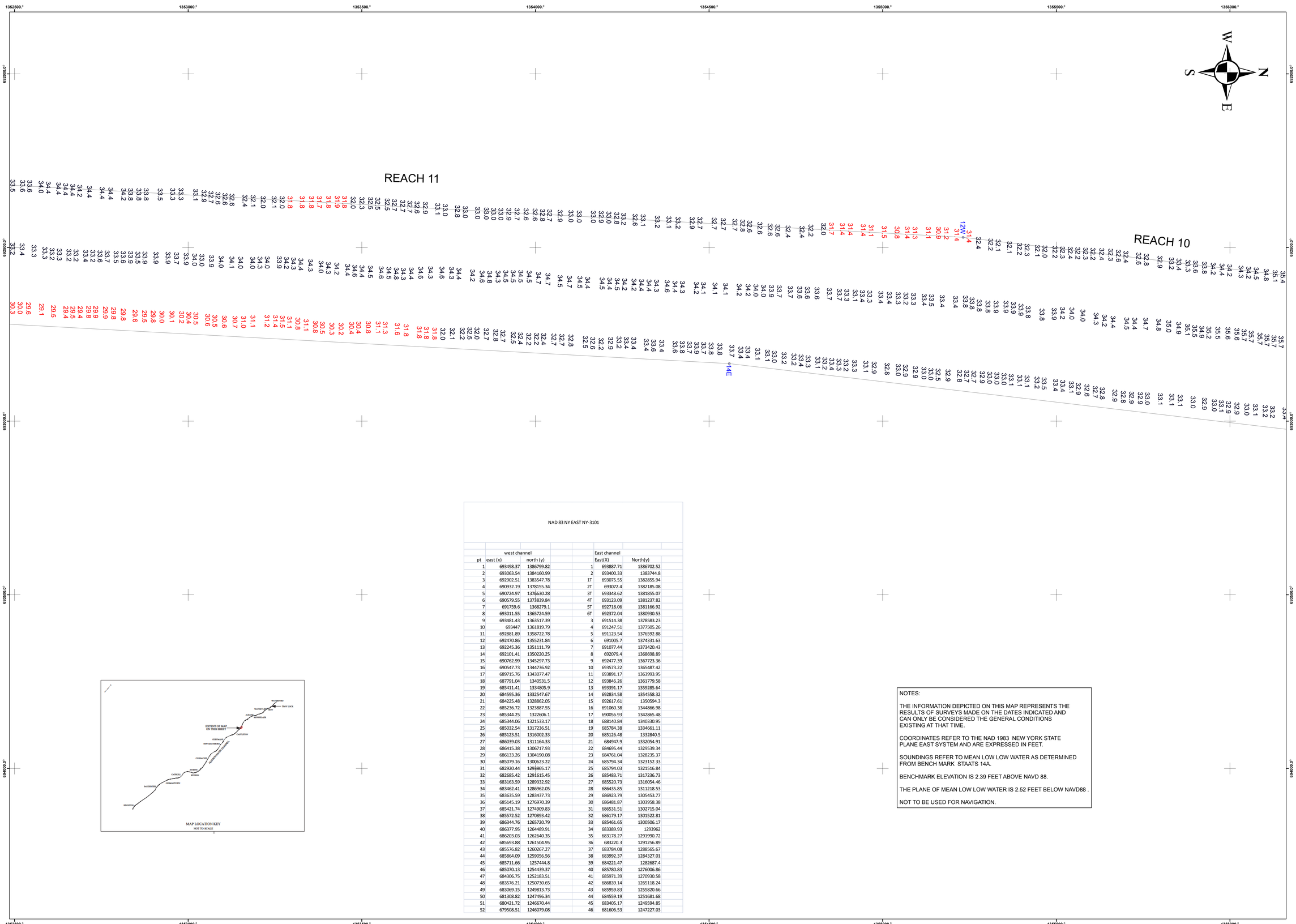
DRAWN BY: D. Kanick
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Petronis

U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ASBURY FIELD OFFICE

Light 215 to Light 209
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
4 OF 4



NAD 83 NY EAST NY-3101

	west channel				East channel	
pt	east (x)	north (y)			East(X)	North(y)
1	693498.37	1386799.82		1	693887.71	1386702.52
2	693063.54	1384160.99		2	693400.33	1383744.8
3	692902.51	1383547.78		1T	693075.55	1382855.94
4	690932.19	1378155.34		2T	693072.4	1382185.08
5	690724.97	1376630.28		3T	693348.62	1381855.07
6	690579.55	1373839.84		4T	693123.09	1381237.82
7	691759.6	1368279.1		5T	692718.06	1381166.92
8	693011.55	1365724.59		6T	692372.04	1380930.53
9	693481.43	1363517.39		3	691514.38	1378583.23
10	693447	1361819.79		4	691247.51	1377505.26
11	692881.89	1358722.78		5	691123.54	1376592.88
12	692470.86	1355231.84		6	691005.7	1374331.63
13	692245.36	1351111.79		7	691077.44	1373420.43
14	692101.41	1350220.25		8	692079.4	1368698.89
15	690762.99	1345297.73		9	692477.39	1367723.36
16	690547.73	1344736.92		10	693573.22	1365487.42
17	689715.76	1343077.47		11	693891.17	1363993.95
18	687791.04	1340531.5		12	693846.26	1361779.58
19	685411.41	1334805.9		13	693391.17	1359285.64
20	684595.36	1332547.67		14	692834.58	1354558.32
21	684225.48	1328862.05		15	692617.61	1350594.3
22	685236.72	1323887.55		16	691060.38	1344866.98
23	685344.25	1322606.1		17	690056.93	1342865.48
24	685344.06	1321533.17		18	688140.84	1340330.95
25	685032.54	1317236.51		19	685784.38	1334661.11
26	685123.51	1316002.33		20	685126.48	1332840.5
27	686039.03	1311164.33		21	684947.9	1332054.91
28	686415.38	1306717.93		22	684695.44	1329539.34
29	686133.26	1304190.08		23	684761.04	1328235.37
30	685079.16	1300623.22		24	685794.34	1323152.33
31	682920.44	1299805.17		25	685794.03	1321516.84
32	682685.42	1291615.45		26	685483.71	1317236.73
33	683163.59	1289332.92		27	685520.73	1316054.46
34	683462.41	1286962.05		28	686435.85	1311218.53
35	683635.59	1283437.73		29	686923.79	1305453.77
36	685145.19	1276970.39		30	686481.87	1303958.38
37	685421.74	1274909.83		31	686531.51	1302715.04
38	685572.52	1270893.42		32	686179.17	1301522.81
39	686344.76	1265720.79		33	685461.65	1300506.17
40	686377.95	1264489.91		34	683389.93	1293962
41	686203.03	1262640.35		35	683178.27	1291990.72
42	685693.88	1261504.95		36	683220.3	1291256.89
43	685576.82	1260267.27		37	683784.08	1288565.67
44	685864.09	1259056.56		38	683992.37	1284327.01
45	685711.66	1257444.8		39	684221.47	1282687.4
46	685070.13	1254439.37		40	685780.83	1276006.86
47	684306.75	1252183.51		41	685971.39	1270930.58
48	683576.21	1250730.65		42	686839.14	1265118.24
49	683069.15	1249813.73		43	685959.83	1255820.66
50	681308.82	1247496.34		44	684559.19	1251681.68
51	680421.72	1246670.44		45	683405.17	1249594.85
52	679508.51	1246079.08		46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STAATS 14A.

BENCHMARK ELEVATION IS 2.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.52 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Date: 02/23/15
Survey Date:07/18/14,12/12/14
DRAWN BY: D. Kanka
CHECKED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Petrovis
Contract No.:
Plot date:
Plot by: Daniel J. Kanka
Scale: 1" = 700'

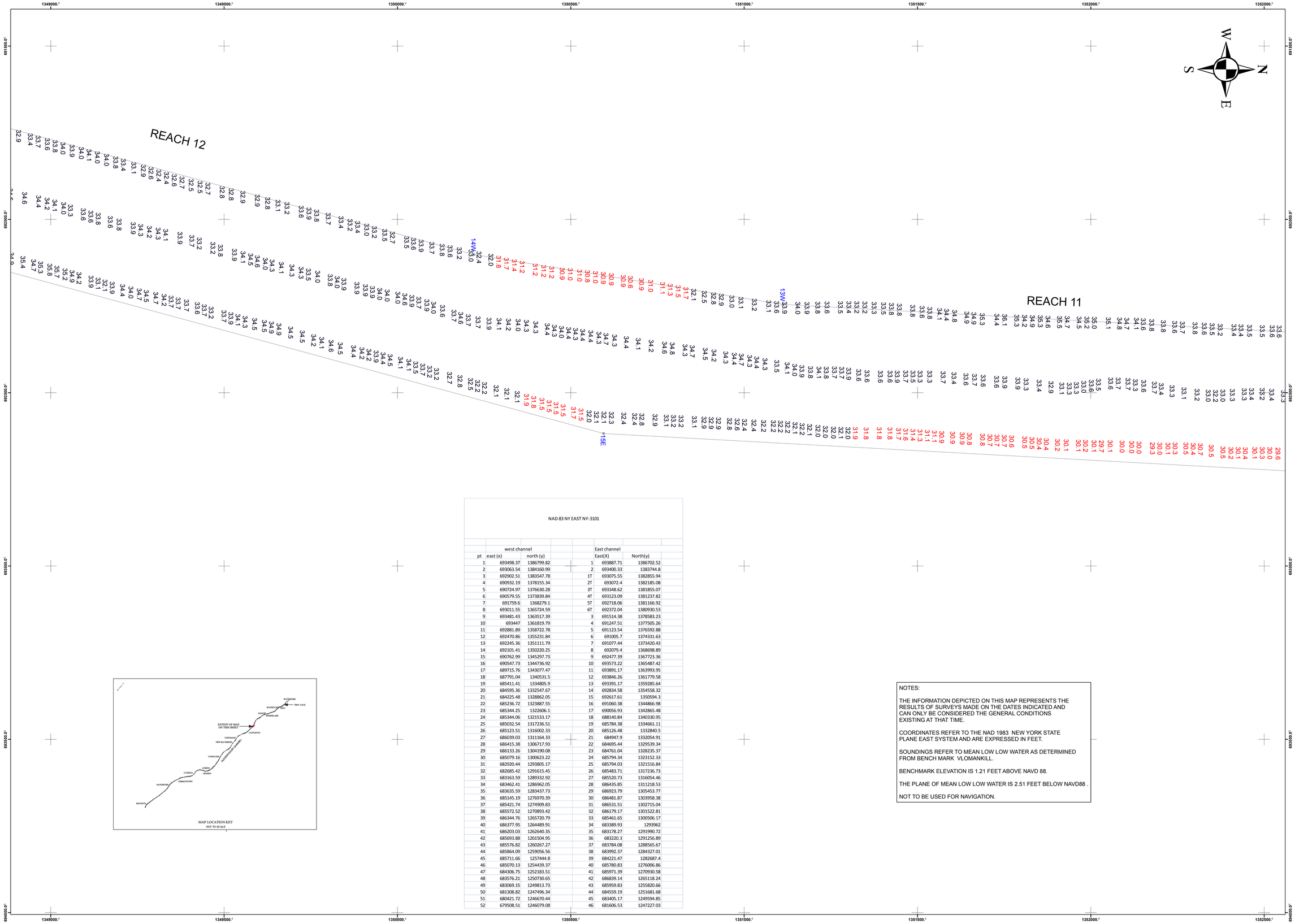
U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrovis, CHIEF, ASSIST FIELD OFFICE

GB 207 to Light 204
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

1 OF 2



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel			East channel		
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK VLOMANKILL.

BENCHMARK ELEVATION IS 1.21 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Appr.	Date	Description	Mark	Appr.	Date	Description

Date: 02/23/15
Survey Date:07/18/14
Contract no.:
Plot date:
File by: Daniel J. Kanick
Scale: 1" = 100'

DRAWN BY: D. Kanick
DESIGNED BY: B. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Petronis

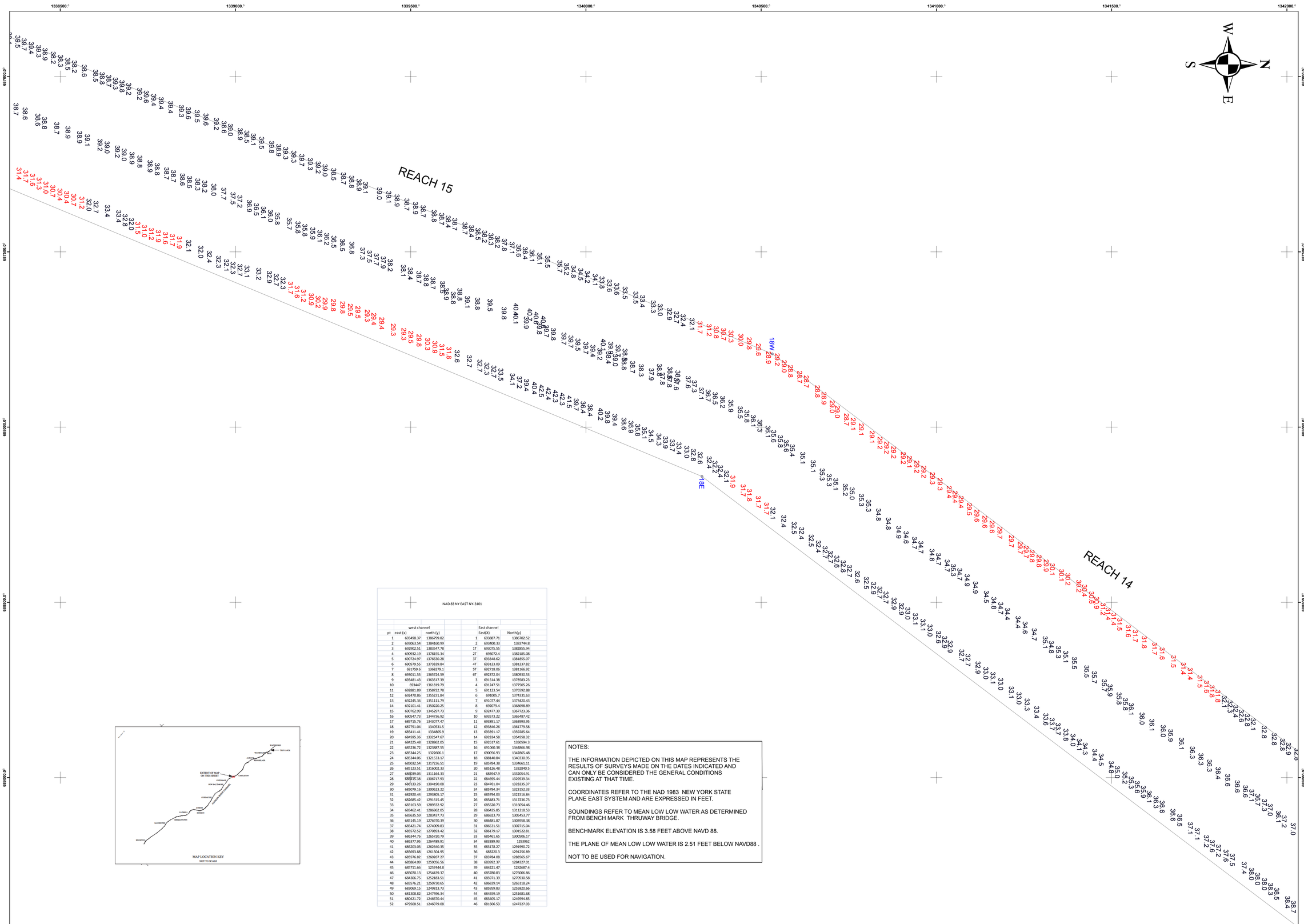
U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ASSIST FIELD OFFICE

GB 207 to Light 204
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 OF 2



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	687715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684996.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686239.03	1311164.33	21	684947.9	1332054.91
28	686815.38	1306717.93	22	684695.44	1329539.34
29	686533.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283417.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686777.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.1	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK THRUWAY BRIDGE.

BENCHMARK ELEVATION IS 3.58 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

Date: 02/23/15
Survey Date:05/20/14
Contract no.:
Plot date:
Plot scale: Project Stands
Scale: 1" = 500'

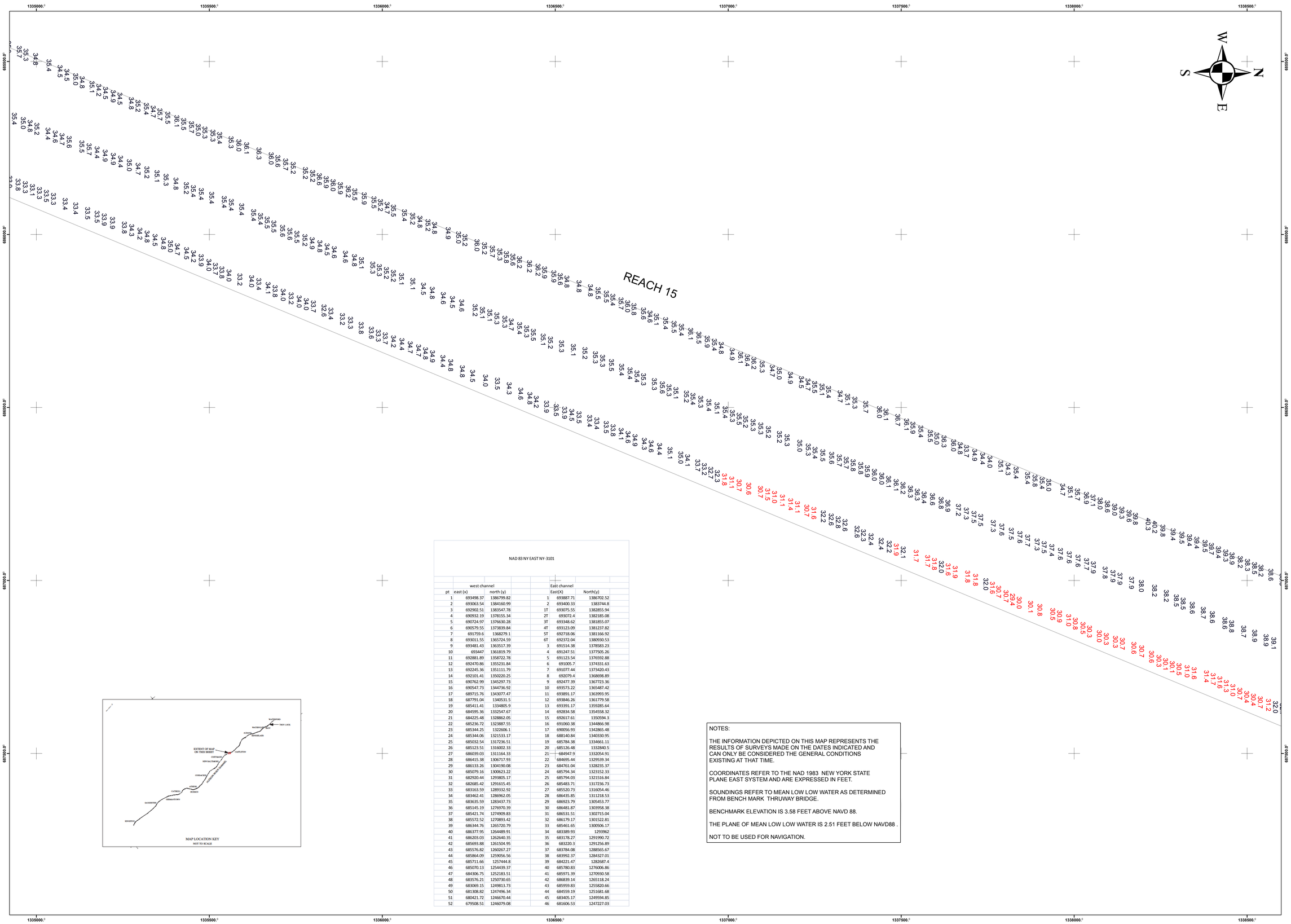
DRAWN BY: D. Kanik
DESIGNED BY: R. Bernan
REVIEWED BY: Chris Kendall
REVIEWED BY: W. F. Pertrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CHIEF, SURVEY SECTION
APPROVED BY: William F. Pertrone, CHIEF, PLANNING DIVISION

North and South of NY Thruway
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 2



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel			East channel		
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378115.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321513.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685320.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK THRUWAY BRIDGE.

BENCHMARK ELEVATION IS 3.58 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Pettorossi, CHIEF, ASSIST FIELD OFFICE

DRAWN BY: D. Sullivan
TRACED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Pettorossi

Date: 02/23/15
Survey Date:09/30/14
Contract No.:
Plot date:
Proj by: Daniel J. Kanick
Scale: 1" = 500'

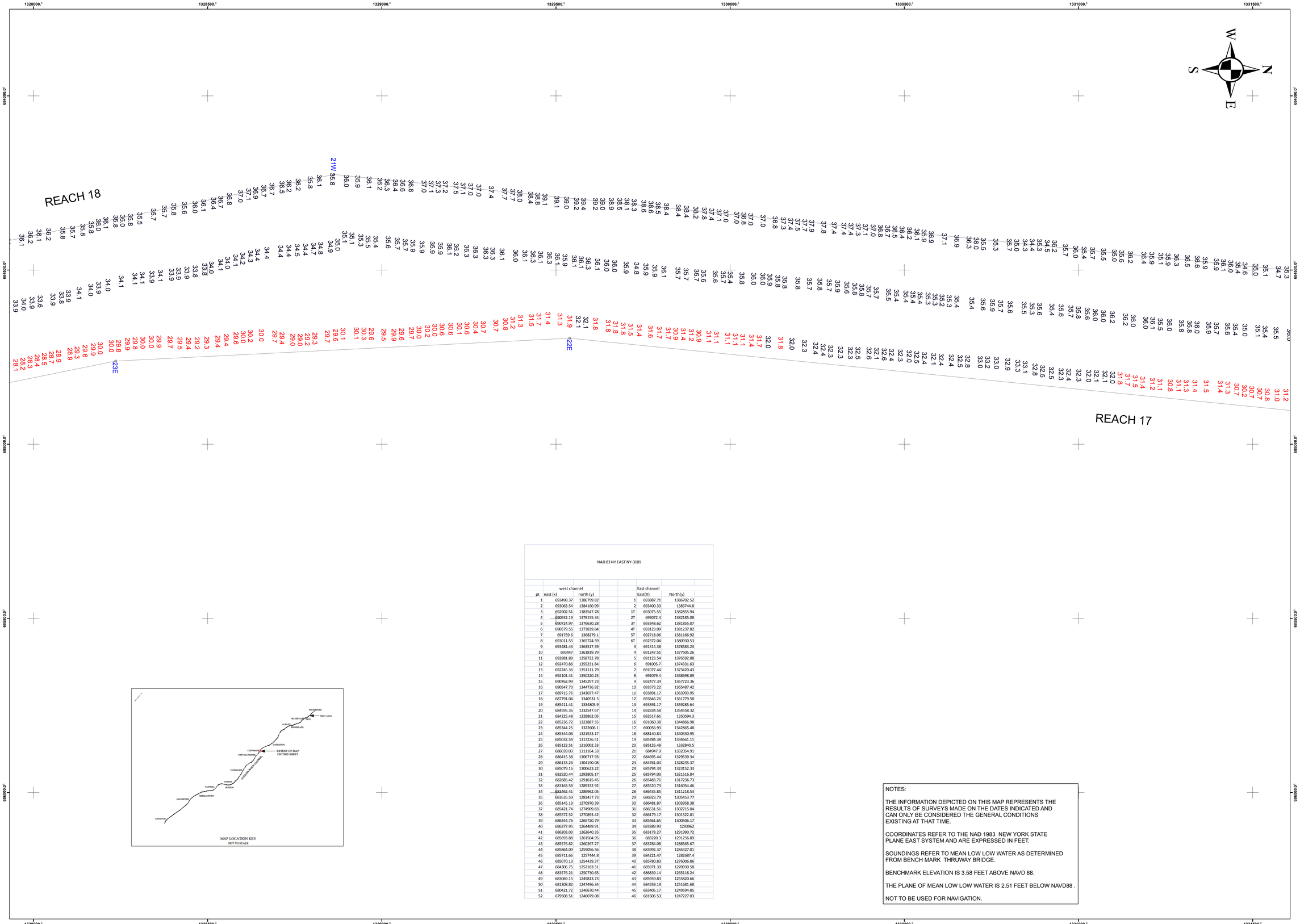
North and South of NY Thruway
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 OF 2

U.S. Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.



NAD 83 NY EAST NY-3101

	west channel		East channel	
pt	east (x)	north (y)	East(X)	North(y)
1	693498.37	1386799.82	693887.71	1386702.52
2	693063.54	1384160.99	693400.33	1383744.8
3	692902.51	1383547.78	693075.55	1382855.94
4	690932.19	1378155.34	693072.4	1382185.08
5	690724.97	1376630.28	693348.62	1381855.07
6	690579.55	1373839.84	693123.09	1381237.82
7	691759.6	1368279.1	692718.06	1381166.92
8	693011.55	1365724.59	692372.04	1380930.53
9	693481.43	1363517.39	691514.38	1378583.23
10	693447	1361819.79	691247.51	1377505.26
11	692881.89	1358722.78	691123.54	1376592.88
12	692470.86	1355231.84	691005.7	1374331.63
13	692245.36	1351111.79	691077.44	1373420.43
14	692101.41	1350220.25	692079.4	1368698.89
15	690762.99	1345297.73	692477.39	1367723.36
16	690547.73	1344736.92	693573.22	1365487.42
17	689715.76	1343077.47	693891.17	1363993.95
18	687791.04	1340531.5	693846.26	1361779.58
19	685411.41	1334805.9	693391.17	1359285.64
20	684595.36	1332547.67	692834.58	1354558.32
21	684225.48	1328862.05	692617.61	1350594.3
22	685236.72	1323887.55	691060.38	1344866.98
23	685344.25	1322606.1	690056.93	1342865.48
24	685344.06	1321533.17	688140.84	1340330.95
25	685032.54	1317236.51	685784.38	1334661.11
26	685123.51	1316002.33	685126.48	1332840.5
27	686039.03	1311164.33	684947.9	1332054.91
28	686415.38	1306717.93	684695.44	1329539.34
29	686133.26	1304190.08	684761.04	1328235.37
30	685079.16	1300623.22	685794.34	1323152.33
31	682920.44	1293805.17	685794.03	1321516.84
32	682685.42	1291615.45	685483.71	1317236.73
33	683163.59	1289332.92	685520.73	1316054.46
34	683462.41	1288962.05	685435.85	1311218.53
35	683635.59	1283437.73	686923.79	1305453.77
36	685145.19	1276970.39	686481.87	1303958.38
37	685421.74	1274909.83	686531.51	1302715.04
38	685572.52	1270893.42	686179.17	1301522.81
39	686344.76	1265720.79	685461.65	1300506.17
40	686377.95	1264489.91	683389.93	1293962
41	686203.03	1262640.35	683178.27	1291990.72
42	685693.88	1261504.95	683220.3	1291256.89
43	685576.82	1260267.27	683784.08	1288565.67
44	685864.09	1259056.56	683992.37	1284327.01
45	685711.66	1257444.8	684221.47	1282687.4
46	685070.13	1254439.37	685780.83	1276006.86
47	684306.75	1252183.51	685971.39	1270930.58
48	683576.21	1250730.65	686839.14	1265118.24
49	683069.15	1249813.73	685959.83	1255820.66
50	681308.82	1247496.34	684559.19	1251681.68
51	680421.72	1246670.44	683405.17	1249594.85
52	679508.51	1246079.08	681606.53	1247227.03

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK THRUWAY BRIDGE.

BENCHMARK ELEVATION IS 3.58 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.51 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.
Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Pietronia, CHIEF, ASBURY FIELD OFFICE

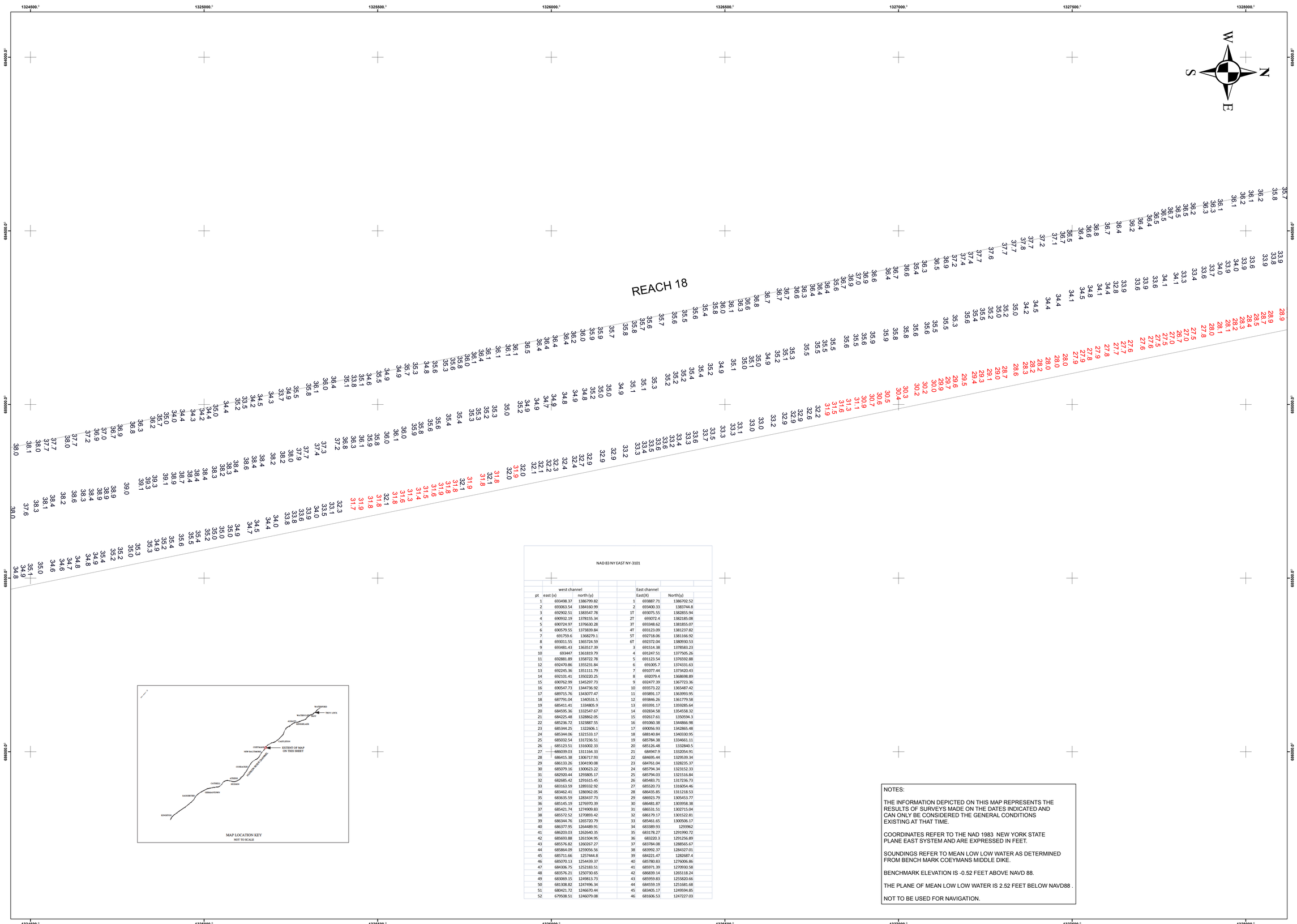
DRAWN BY: D. Davis
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Pietronia

Date: 02/23/15
Survey Date:06/30/14,07/09/14
Contract no.:
Plot date:
Proj by: Daniel J. Kanick
Scale: 1" = 700'

Light 191 to GB 181
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

1 OF 6



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	691573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1323606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1288962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK COEYMANS MIDDLE DIKE.

BENCHMARK ELEVATION IS -0.52 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.52 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Appr.	Date	Description	Mark	Appr.	Date	Description

Date: 02/23/15
Survey Date 07/30/14
Contract no.:
Plot date:
Plot by: Thomas J. Kalok
Scale: 1" = 100'

Drawn by
D. Karlok

ENGINEERED BY:
R. Beman

REVIEWED BY:
J. Ziegler

REVIEWED BY:
W. F. Petrovits

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

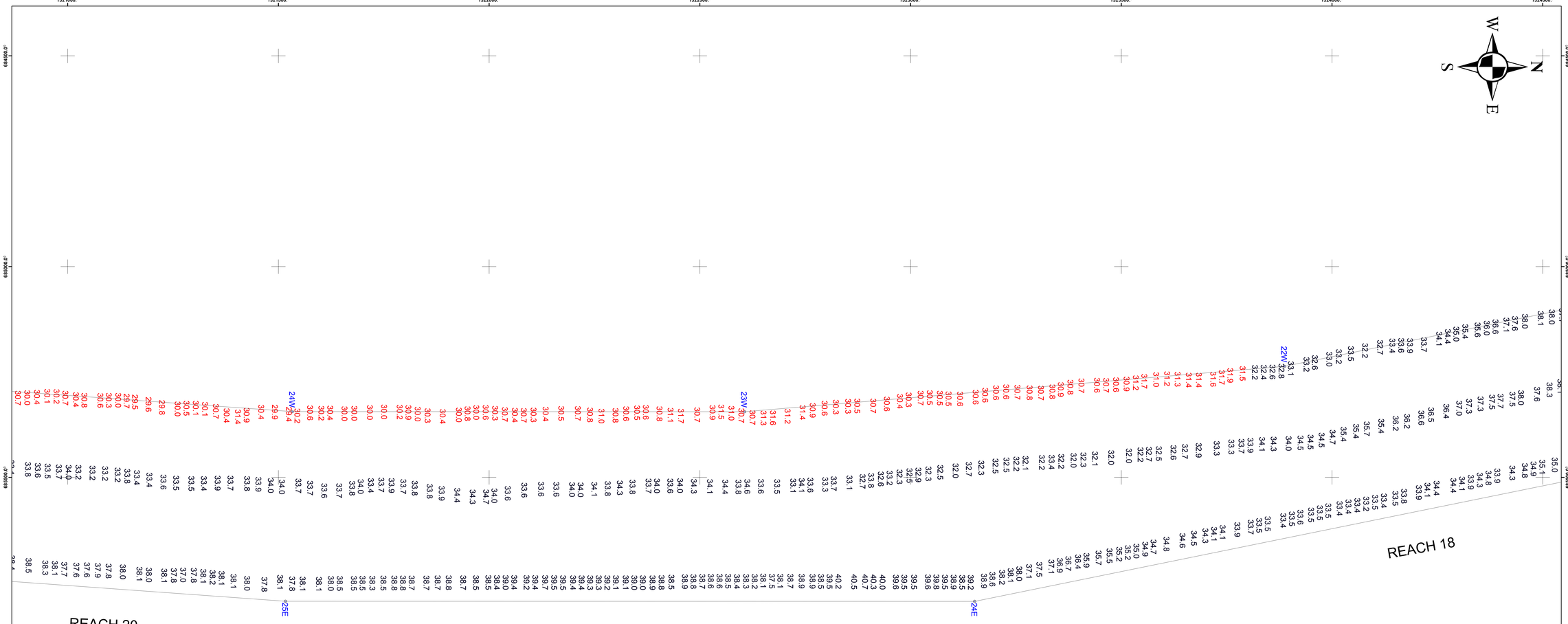
RECOMMENDED BY: TITLE HYDROGRAPHER James B. Smith

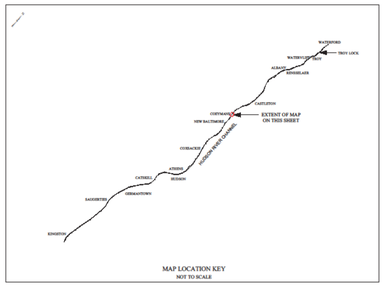
APPROVED BY: CHIEF, MARINE FIELD OFFICE William F. Petrovits

Light 191 to GB 181
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 OF 6





NAD 83 NY EAST NY-3101

	west channel		East channel		
pt	east (x)	north (y)	East(X)	North(y)	
1	693498.37	1386799.82	693887.71	1386702.52	
2	693063.54	1384160.99	693400.33	1383744.8	
3	692902.51	1383547.78	693075.55	1382855.94	
4	690932.19	1379155.34	693072.4	1382185.08	
5	690724.97	1376630.28	693348.62	1381855.07	
6	690579.55	1373839.84	693123.09	1381237.82	
7	691759.6	1368279.1	692718.06	1381166.92	
8	693011.55	1365724.59	692372.04	1380930.53	
9	693481.43	1363517.39	691514.38	1378583.23	
10	693447	1361819.79	691247.51	1377505.26	
11	692881.89	1358722.78	691123.54	1376592.88	
12	692470.86	1355231.84	691005.7	1374331.63	
13	692245.36	1351111.79	691077.44	1373420.43	
14	692101.41	1350220.25	692079.4	1368698.89	
15	690762.99	1345297.73	692477.39	1367723.36	
16	690547.73	1344736.92	693573.22	1365487.42	
17	689715.76	1343077.47	693891.17	1363993.95	
18	687791.04	1340531.5	693846.26	1361779.58	
19	685411.41	1334805.9	693391.17	1359285.64	
20	684595.36	1332547.67	692834.58	1354558.32	
21	684225.48	1328862.05	692617.61	1350594.3	
22	685236.72	1323887.55	691060.38	1344866.98	
23	685344.25	1322606.1	690056.93	1342865.48	
24	685344.06	1321533.17	688140.84	1340330.95	
25	685032.54	1317236.51	685784.38	1334661.11	
26	685123.51	1316002.33	685126.48	1332840.5	
27	686039.03	1311164.33	684947.9	1332054.91	
28	686415.38	1306717.93	684695.44	1329539.34	
29	686133.26	1304190.08	684761.04	1328235.37	
30	685079.16	1300623.22	685794.34	1323152.33	
31	682920.44	1293805.17	685794.03	1321516.84	
32	682685.42	1291615.45	685483.71	1317236.73	
33	683163.59	1289332.92	685520.73	1316054.46	
34	683462.41	1288962.05	686435.85	1311218.53	
35	683635.59	1283437.73	686923.79	1305453.77	
36	685145.19	1276970.39	686481.87	1303958.38	
37	685421.74	1274909.83	686531.51	1302715.04	
38	685572.52	1270893.42	686179.17	1301522.81	
39	686344.76	1265720.79	685461.65	1300506.17	
40	686377.95	1264489.91	683389.93	1291962	
41	686203.03	1262640.35	683178.27	1291990.72	
42	685693.88	1261504.95	683220.3	1291256.89	
43	685576.82	1260267.27	683784.08	1288565.67	
44	685864.09	1259056.56	683992.37	1284327.01	
45	685711.66	1257444.8	684221.47	1282687.4	
46	685070.13	1254439.37	685780.83	1276006.86	
47	684306.75	1252183.51	685971.39	1270930.58	
48	683576.21	1250730.65	686839.14	1265118.24	
49	683069.15	1249813.73	685959.83	1255820.66	
50	681308.82	1247496.34	684559.19	1251681.68	
51	680421.72	1246670.44	683405.17	1249594.85	
52	679508.51	1246079.08	681606.53	1247227.03	

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK COEYMANS MIDDLE DIKE.

BENCHMARK ELEVATION IS -0.52 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.52 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

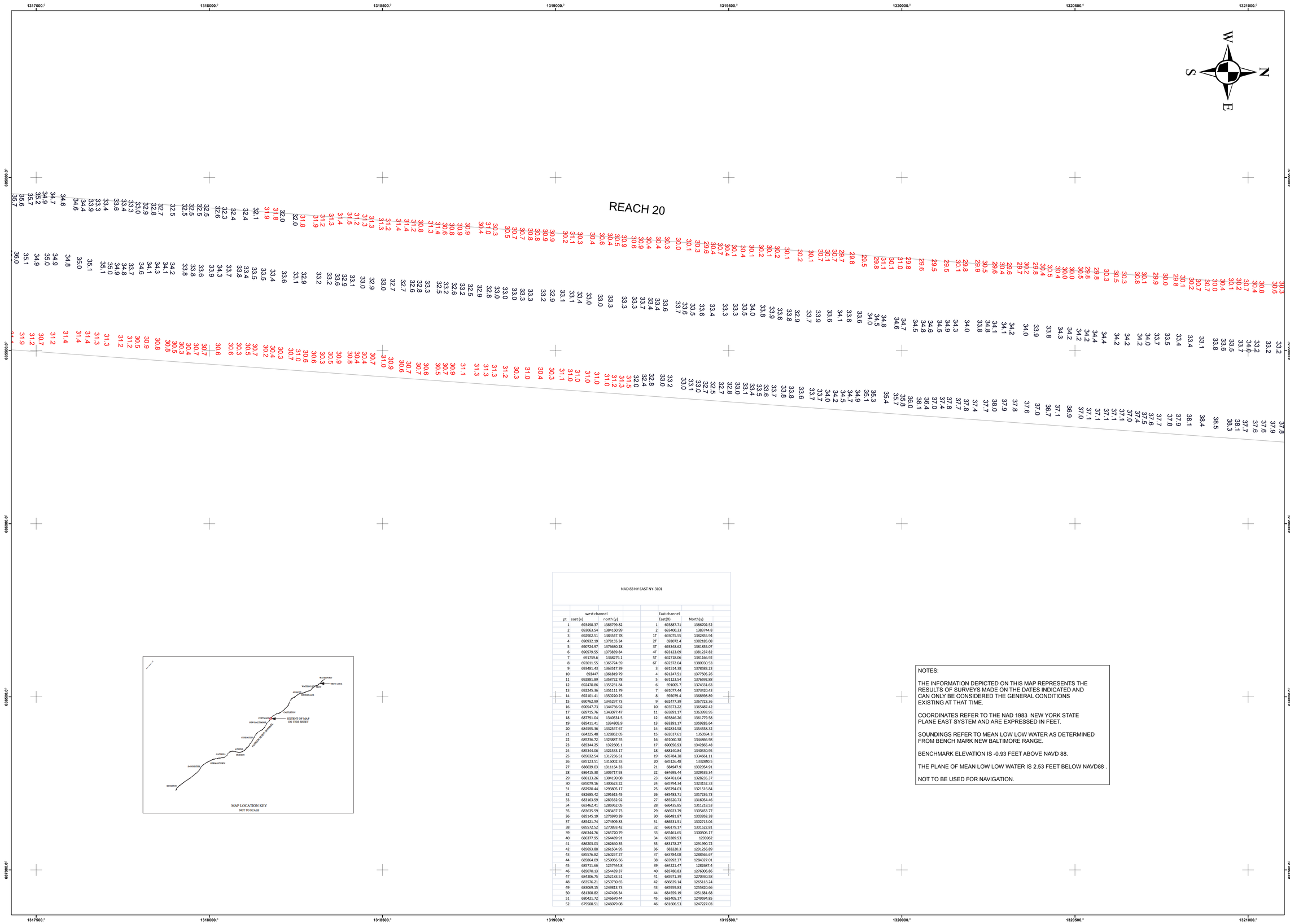
Date: 02/23/15
Survey Date:07/09/14,09/04/14
DRAWN BY D. Sandoz
CHECKED BY R. Barnan
REVIEWED BY J. Smith
REVIEWED BY W.F. Patsonis
Contract No.:
Plot date:
Plot by: Daniel J. Kanick
Scale: 1" = 500'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Patsonis, CHIEF, ASBURY FIELD OFFICE

Light 191 to GB 181
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
3 OF 6



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1331054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK NEW BALTIMORE RANGE.

BENCHMARK ELEVATION IS -0.93 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.53 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

U.S. Army Corps of Engineers
New York District

Mark	Description	Date	Appr.
Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

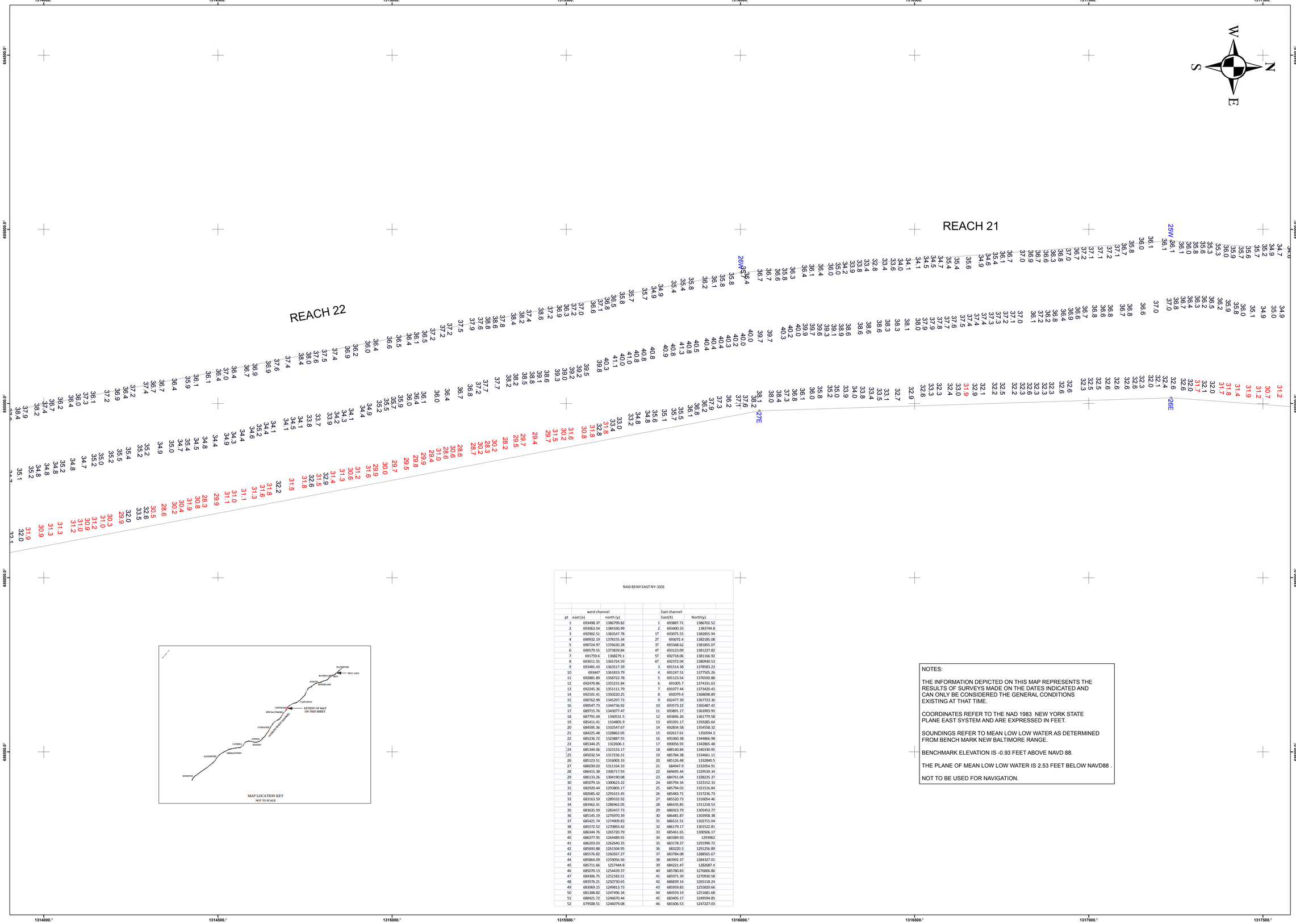
APPROVED BY: William F. Pedronda, CHIEF, ASSIST FIELD OFFICE

Date: 02/23/15
Survey Date:09/04/14
Contract No.:
Field data:
Plot by: David J. Kanick
Scale: 1" = 100'

DRAWN BY: D. Kanick
TRACINGS BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W.F. Pedronda

Light 191 to GB 181
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
4 OF 6



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82		693887.71	1386702.52
2	693063.54	1384160.99		693400.33	1383744.8
3	692902.51	1383547.78		693075.55	1382855.94
4	690932.19	1378155.34		693072.4	1382185.08
5	690724.97	1376630.28		693348.62	1381855.07
6	690579.55	1373839.84		693123.09	1381237.82
7	691759.6	1368279.1		692718.06	1381166.92
8	693011.55	1365724.59		692372.04	1380930.53
9	693481.43	1363517.39		691514.38	1378583.23
10	693447	1361819.79		691247.51	1377505.26
11	692881.89	1358722.78		691123.54	1376592.88
12	692470.86	1355231.84		691005.7	1374331.63
13	692245.36	1351111.79		691077.44	1373420.43
14	692101.41	1350220.25		692079.4	1368698.89
15	690762.99	1345297.73		692477.39	1367723.36
16	690547.73	1344736.92		693573.22	1365487.42
17	689715.76	1343077.47		693891.17	1363993.95
18	687791.04	1340531.5		693846.26	1361779.58
19	685411.41	1334805.9		693391.17	1359285.64
20	684595.36	1332547.67		692834.58	1354558.32
21	684225.48	1328862.05		692617.61	1350594.3
22	685236.72	1323887.55		691060.38	1344866.98
23	685344.25	1322606.1		690056.93	1342865.48
24	685344.06	1321533.17		688140.84	1340330.95
25	685032.54	1317236.51		685784.38	1334661.11
26	685123.51	1316002.33		685126.48	1332840.5
27	686039.03	1311164.33		684947.9	1331054.91
28	686415.38	1306717.93		684695.44	1329539.34
29	686133.26	1304190.08		684761.04	1328235.37
30	685079.16	1300623.22		685794.34	1323152.33
31	682920.44	1293805.17		685794.03	1321516.84
32	682685.42	1291615.45		685483.71	1317236.73
33	683163.59	1289332.92		685520.73	1316054.46
34	683462.41	1286962.05		686435.85	1311218.53
35	683635.59	1283437.73		686923.79	1305453.77
36	685145.19	1276970.39		686481.87	1303958.38
37	685421.74	1274909.83		686531.51	1302715.04
38	685572.52	1270893.42		686179.17	1301522.81
39	686344.76	1265720.79		685461.65	1300506.17
40	686377.95	1264489.91		683389.93	1293962
41	686203.03	1262640.35		683178.27	1291990.72
42	685693.88	1261504.95		683220.3	1291256.89
43	685576.82	1260267.27		683784.08	1288565.67
44	685864.09	1259056.56		683992.37	1284327.01
45	685711.66	1257444.8		684221.47	1282687.4
46	685070.13	1254439.37		685780.83	1276006.86
47	684306.75	1252183.51		685971.39	1270930.58
48	683576.21	1250730.65		686839.14	1265118.24
49	683069.15	1249813.73		685959.83	1255820.66
50	681308.82	1247496.34		684559.19	1251681.68
51	680421.72	1246670.44		683405.17	1249594.85
52	679508.51	1246079.08		681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK NEW BALTIMORE RANGE.

BENCHMARK ELEVATION IS -0.93 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.53 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

U.S. ARMY CORPS OF ENGINEERS
ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Pedronis, CHIEF, ASSIST FIELD OFFICE

DRAWN BY: D. Sayers
TRACINGS BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Pedronis

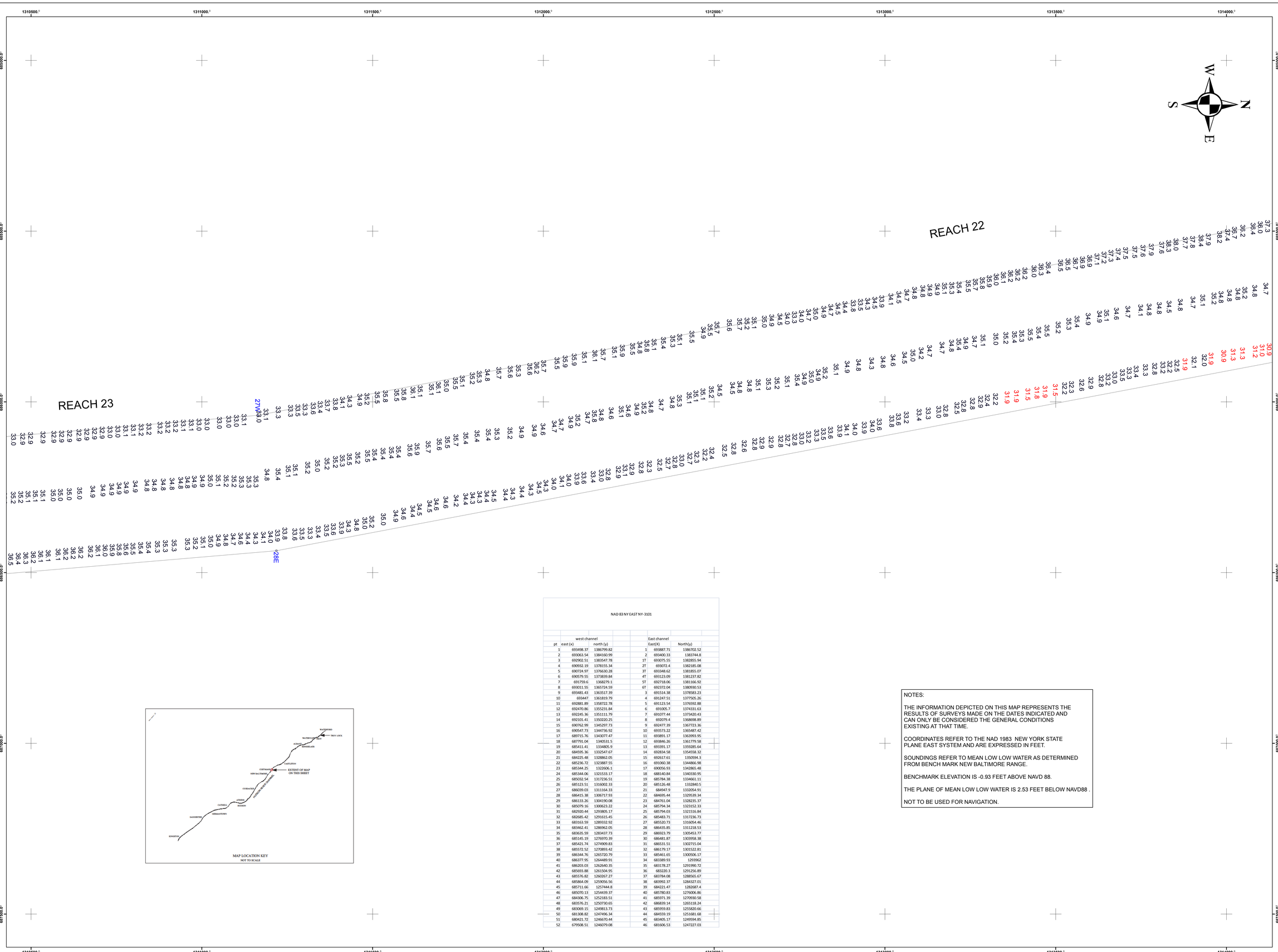
Date: 02/23/15
Survey Date:09/04/14
Contract no.:
Plot date:
Proj by: David J. Kanick
Scale: 1" = 750'

Light 191 to GB 181
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
5 OF 6

U.S. Army Corps of Engineers
New York District

Mark	Appr.	Date	Description	Mark	Appr.	Date	Description



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82		693887.71	1386702.52
2	693063.54	1384160.99		693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1331054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK NEW BALTIMORE RANGE.

BENCHMARK ELEVATION IS -0.93 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.53 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

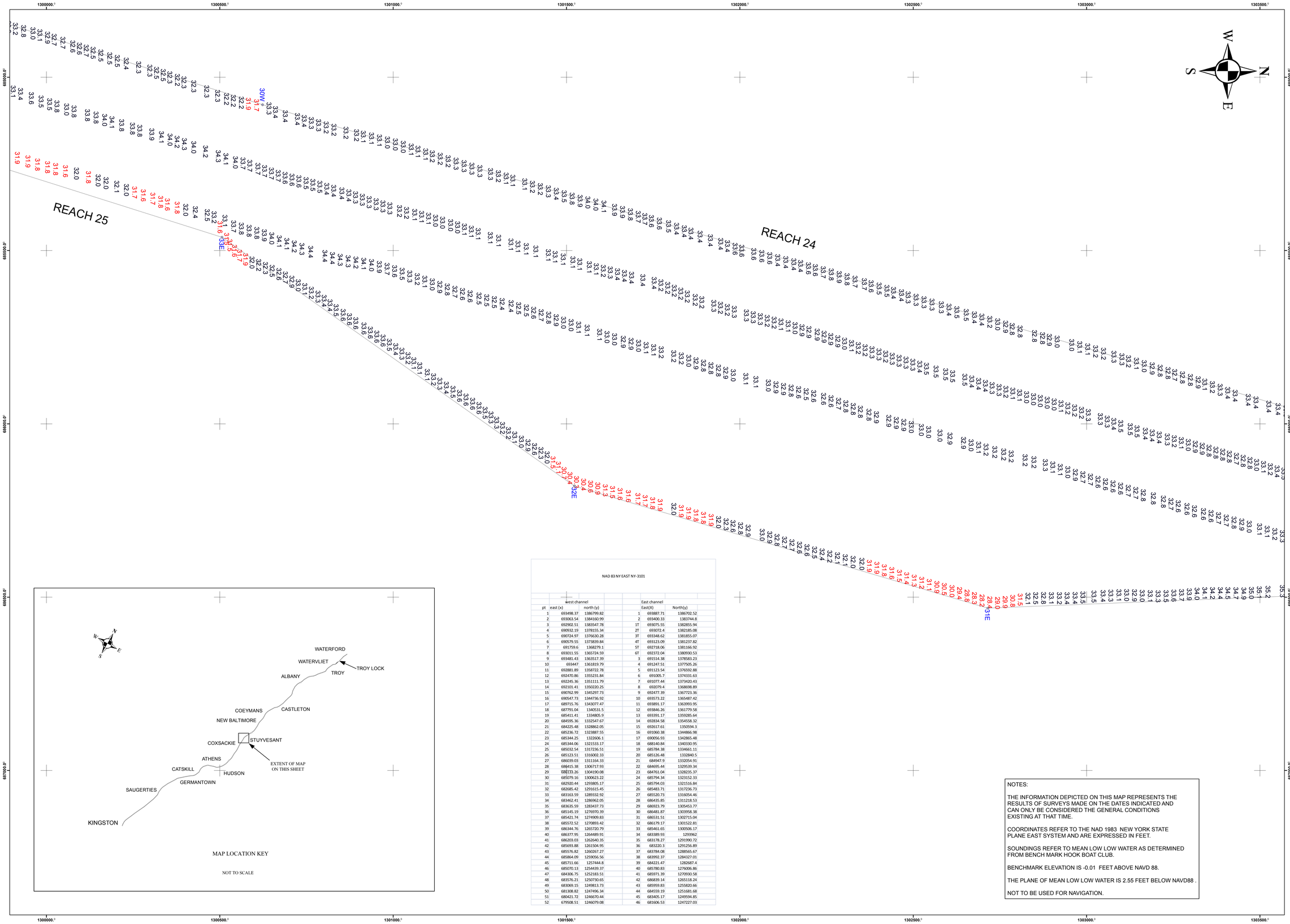
APPROVED BY: William F. Petrovis, CHIEF, ALBANY FIELD OFFICE

DRAWN BY: D. Sayers
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petrovis

Date: 02/23/15
Survey Date:09/04/14; 10/17/14
Contract No.:
Plot date:
Plot by: Daniel J. Kanick
Scale: 1" = 700'

Light 191 to GB 181
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
6 OF 6



MAP LOCATION KEY

NOT TO SCALE

NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686397.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685691.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK HOOK BOAT CLUB.

BENCHMARK ELEVATION IS -0.01 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Date	Description	Appr.	Mark	Date	Description	Appr.

Date: 02/18/15
Survey Date:09/09/14,12/17/14
DRAWN BY: D. Kanick
CHECKED BY: R. Barnan
Contract No.:
REVIEWED BY: J. Smith
Plot date:
Plot by: Dandy J. Kanick
Scale: 1" = 700'
REVISED BY: W.F. Patronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

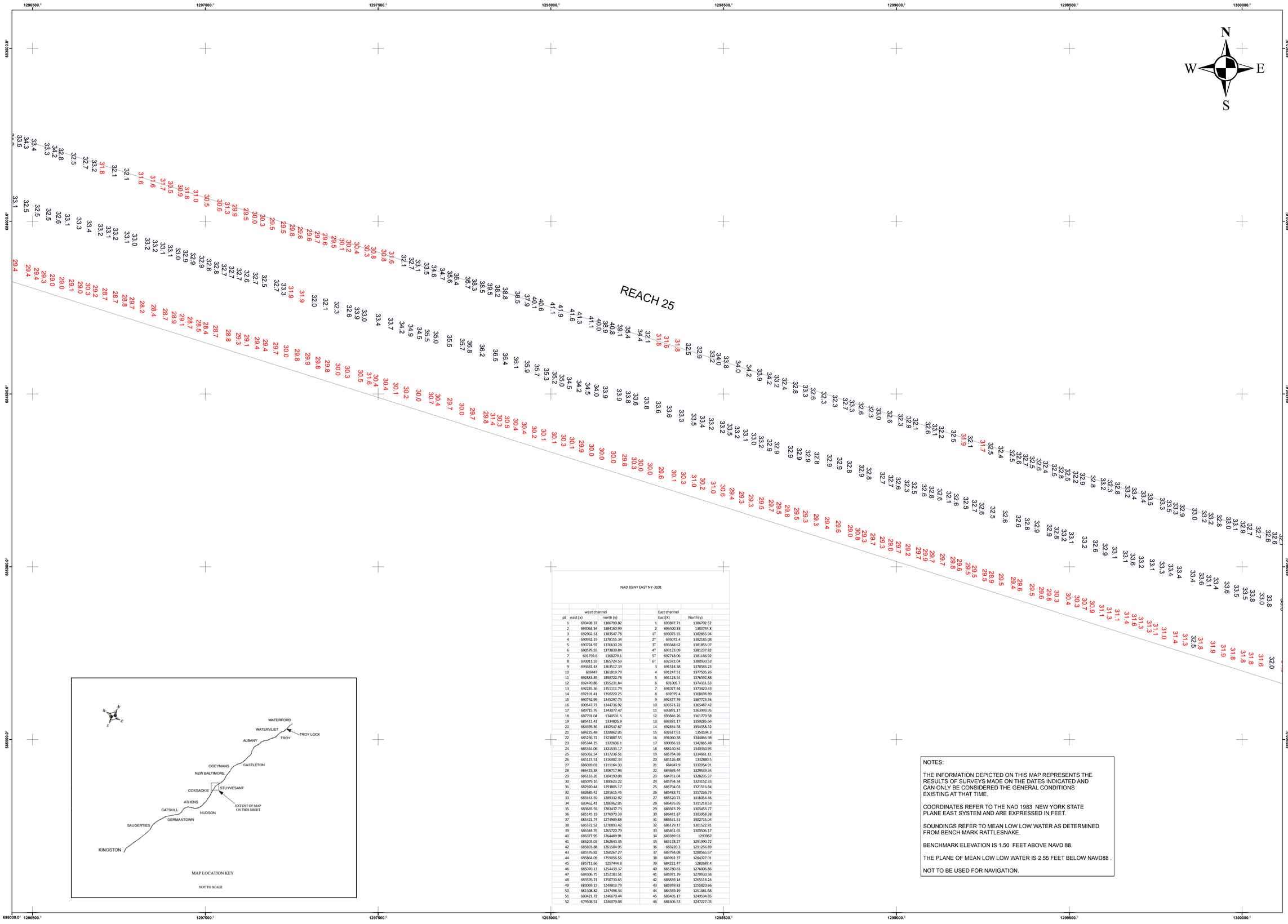
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Patronis, CHIEF, ALBANY FIELD OFFICE

Light 169 to Light RI
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

1 OF 4



NAD 83 NY EAST NY-3101

	west channel			East channel		
pt	east (x)	north (y)		East(X)	North(y)	
1	693498.37	1386799.82	1	693887.71	1386702.52	
2	693063.54	1384160.99	2	693400.33	1383744.8	
3	692002.51	1383547.78	1T	693075.55	1382855.94	
4	690932.19	1378155.34	2T	693072.4	1382185.08	
5	690724.97	1376630.28	3T	693348.62	1381855.07	
6	690579.55	1373839.84	4T	693123.09	1381237.82	
7	691759.6	1368279.1	5T	692718.06	1381166.92	
8	693011.55	1365724.59	6T	692372.04	1380930.53	
9	693481.43	1363517.39	3	691514.38	1378583.23	
10	693447	1361819.79	4	691247.51	1377505.26	
11	692881.89	1358722.78	5	691123.54	1376592.88	
12	692470.86	1355231.84	6	691005.7	1374331.63	
13	692245.36	1351111.79	7	691077.44	1373420.43	
14	692101.41	1350220.25	8	692079.4	1368698.89	
15	690762.99	1345297.73	9	692477.39	1367723.36	
16	690547.73	1344736.92	10	693573.22	1365487.42	
17	689715.76	1343077.47	11	693891.17	1363993.95	
18	687791.04	1340531.5	12	693846.26	1361779.58	
19	685411.41	1334805.9	13	693391.17	1359285.64	
20	684595.36	1332547.67	14	692834.58	1354558.32	
21	684225.48	1328862.05	15	692617.61	1350594.3	
22	685236.72	1323887.55	16	691060.38	1344866.98	
23	685344.25	1322606.1	17	690056.93	1342865.48	
24	685344.06	1321533.17	18	688140.84	1340330.95	
25	685032.54	1317236.51	19	685784.38	1334661.11	
26	685123.51	1316002.33	20	685126.48	1332840.5	
27	686039.03	1311164.33	21	684947.9	1332054.91	
28	686415.38	1306717.93	22	684695.44	1329539.34	
29	686133.26	1304190.08	23	684761.04	1328235.37	
30	685079.16	1300623.22	24	685794.34	1323152.33	
31	682920.44	1293805.17	25	685794.03	1321516.84	
32	682685.42	1291615.45	26	685483.71	1317236.73	
33	683163.59	1289332.92	27	685520.73	1316054.46	
34	683462.41	1286062.05	28	686435.85	1311218.53	
35	683635.59	1283437.73	29	686923.79	1305453.77	
36	685145.19	1276970.39	30	686481.87	1303958.38	
37	685421.74	1274909.83	31	686531.51	1302715.04	
38	685572.52	1270893.42	32	686179.17	1301522.81	
39	686344.76	1260720.79	33	685461.65	1300506.17	
40	686377.95	1264489.91	34	683389.93	1293962	
41	686203.03	1262640.35	35	683178.27	1291990.72	
42	685693.88	1261504.95	36	683220.3	1291256.89	
43	685576.82	1260267.27	37	683784.08	1288565.67	
44	685864.09	1259056.56	38	683992.37	1284327.01	
45	685711.66	1257444.8	39	684221.47	1282687.4	
46	685070.13	1254439.37	40	685780.83	1276006.86	
47	684306.75	1252183.51	41	685971.39	1270930.58	
48	683576.21	1250730.65	42	686839.14	1265118.24	
49	683069.15	1249813.73	43	685959.83	1255820.66	
50	681308.82	1247496.34	44	684559.19	1251681.68	
51	680421.72	1246670.44	45	683405.17	1249594.85	
52	679508.51	1246079.08	46	681606.53	1247227.03	

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RATTLESNAKE.

BENCHMARK ELEVATION IS 1.50 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

U.S. Army Corps of Engineers
New York District

Mark	Date	Description	Appr.

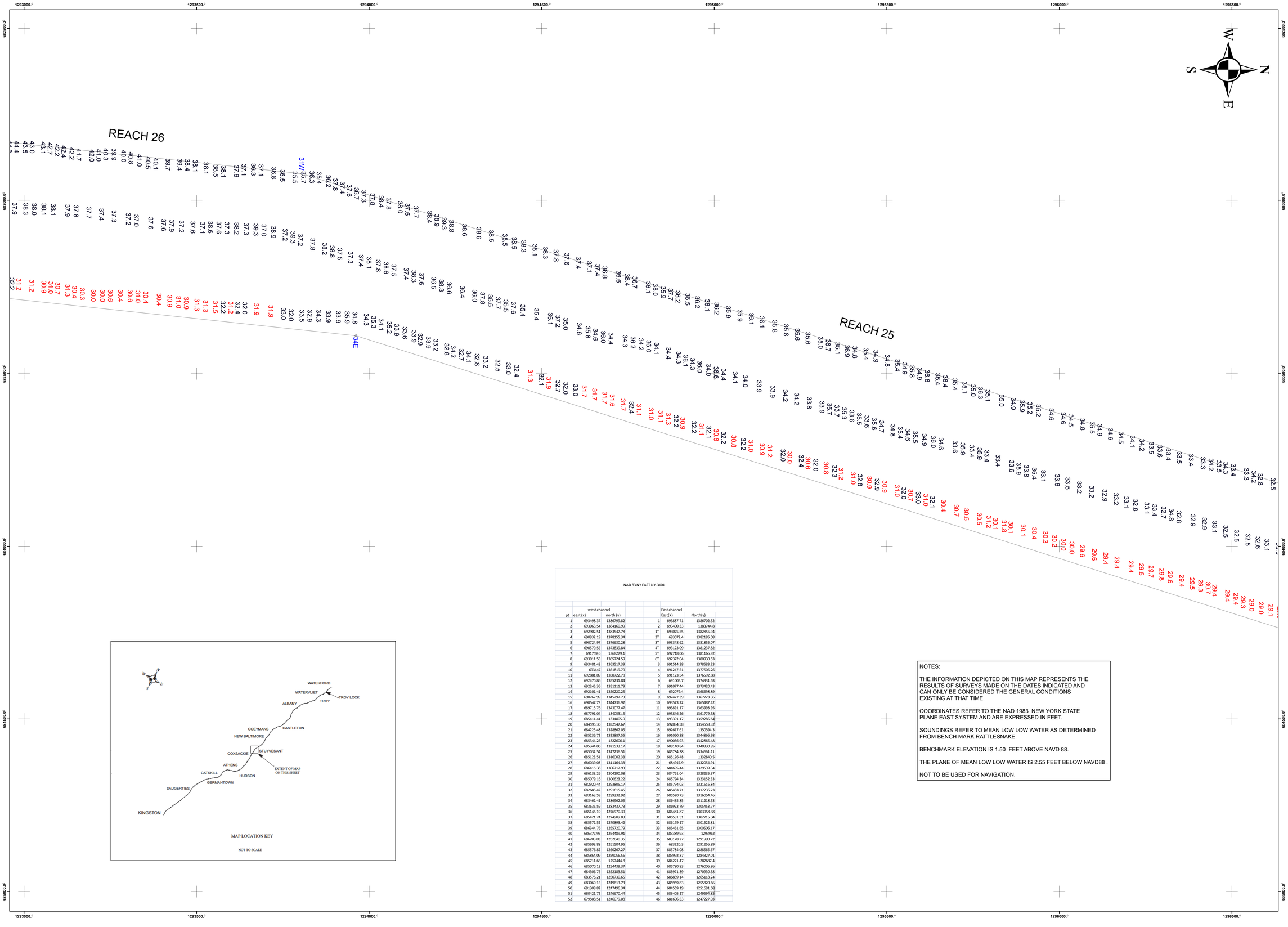
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

	Drawn by: M.Mc Donough	Date: 02/18/15
		Survey Date:09/09/14
RECOMMENDED BY:	James B. Smith, CIVIL ENGINEER	Contract no.:
	REVIEWED BY: R. Berman	
APPROVED BY:	William F. Pentonis, CHIEF, ALBANY FIELD OFFICE	Plot date: Plot by: Daniel J. Fantis Scale: 1" = 100'
	REVIEWED BY: J. Smith	
	REVIEWED BY: W. F. Pentonis	

Light 169 to Light RI
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

2 OF 4



NAD 83 NY EAST NY-3101

	west channel		East channel		
pt	east (x)	north (y)	East(X)	North(y)	
1	693498.37	1386799.82	693887.71	1386702.52	
2	693063.54	1384160.99	693400.33	1383744.8	
3	692902.51	1383547.78	693075.55	1382855.94	
4	690932.19	1378155.34	693072.4	1382185.08	
5	690724.97	1376630.28	693348.62	1381855.07	
6	690579.55	1373839.84	693123.09	1381237.82	
7	691759.6	1368279.1	692718.06	1381166.92	
8	693011.55	1365724.59	692372.04	1380930.53	
9	693481.43	1363517.39	693154.38	1378583.23	
10	693447	1361819.79	691247.51	1377505.26	
11	692881.89	1358722.78	691123.54	1376592.88	
12	692470.86	1355231.84	691005.7	1374331.63	
13	692245.36	1351111.79	691077.44	1373420.43	
14	692101.41	1350220.25	692079.4	1368698.89	
15	690762.99	1345297.73	692477.39	1367723.36	
16	690547.73	1344736.92	693573.22	1365487.42	
17	689715.76	1343077.47	693891.17	1363993.95	
18	687791.04	1340531.5	693846.26	1361779.58	
19	685411.41	1334805.9	693391.17	1359285.64	
20	684595.36	1332547.67	692834.58	1354558.12	
21	684225.48	1328862.05	692617.61	1350594.3	
22	685236.72	1323887.55	691060.38	1344866.98	
23	685344.25	1322606.1	690056.93	1342865.48	
24	685344.06	1321533.17	688140.84	1340330.95	
25	685032.54	1317236.51	685794.38	1334661.11	
26	685123.51	1316002.33	685126.48	1332840.5	
27	686039.03	1311164.33	684947.9	1332054.91	
28	686415.38	1306717.93	684695.44	1329539.34	
29	686133.26	1304190.08	684761.04	1328235.37	
30	685079.16	1300623.22	685794.34	1323152.33	
31	682920.44	1293805.17	685794.03	1321516.84	
32	682685.42	1291615.45	686483.71	1317236.73	
33	683163.59	1289332.92	687520.73	1316054.46	
34	683462.41	1288962.05	686435.85	1311218.53	
35	683635.59	1283437.73	686923.79	1305453.77	
36	685145.19	1276970.39	686481.87	1303958.38	
37	685421.74	1274909.83	686531.51	1302715.04	
38	685572.52	1270893.42	686179.17	1301522.81	
39	686344.76	1265720.79	685461.65	1300506.17	
40	686377.95	1264489.91	683389.93	1293962	
41	686203.03	1262640.35	683178.27	1291990.72	
42	685693.88	1261504.95	683220.3	1291256.89	
43	685576.82	1260267.27	683784.08	1288565.67	
44	685864.09	1259056.56	683992.37	1284327.01	
45	685711.66	1257444.8	684221.47	1282687.4	
46	685070.13	1254439.37	685780.83	1276006.86	
47	684306.75	1252183.51	685971.39	1270930.58	
48	683576.21	1250730.65	686839.14	1265118.24	
49	683069.15	1249813.73	685959.83	1255820.66	
50	681308.82	1247496.34	684559.19	1251681.68	
51	680421.72	1246670.44	683405.17	1249594.85	
52	679508.51	1246079.08	681606.53	1247227.03	

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RATTLESNAKE.

BENCHMARK ELEVATION IS 1.50 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

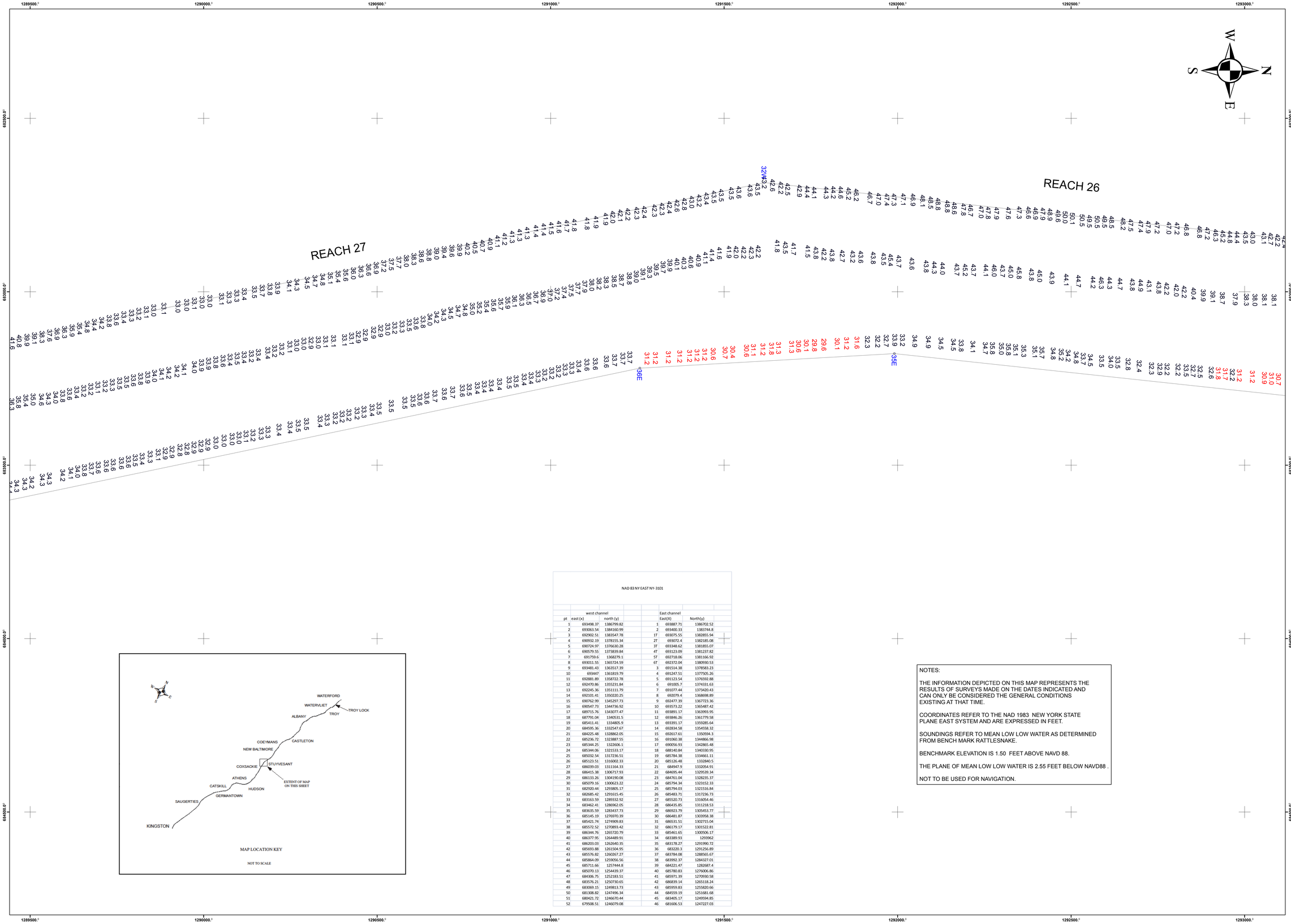
Date: 02/18/15
Survey Date:09/08/14
Drawn by: J. Smith
DESIGNED BY: R. Berman
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petronis
Contract no.:
Plot date:
Plot by: Daniel J. Karlik
Scale: 1" = 500'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ALBANY FIELD OFFICE

Light 169 to Light RI
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
3 OF 4



MAP LOCATION KEY

NOT TO SCALE

NAD 83 NY EAST NY-3101

	west channel		East channel		
pt	east (x)	north (y)	East(X)	North(y)	
1	693498.37	1386799.82	693887.71	1386702.52	
2	693063.54	1384160.99	693400.33	1383744.8	
3	692902.51	1383547.78	693075.55	1382855.94	
4	690932.19	1379155.34	693072.4	1382185.08	
5	690724.97	1376630.28	693348.62	1381855.07	
6	690579.55	1373839.84	693123.09	1381237.82	
7	691759.6	1368279.1	692718.06	1381166.92	
8	693011.55	1365724.59	692372.04	1380930.53	
9	693481.43	1363517.39	691514.38	1378583.23	
10	693447	1361819.79	691247.51	1377925.26	
11	692881.89	1358722.78	691123.54	1376592.88	
12	692470.86	1355231.84	691005.7	1374331.63	
13	692245.36	1351111.79	691077.44	1373420.43	
14	692101.41	1350220.25	692079.4	1368698.89	
15	690762.99	1345297.73	692477.39	1367723.36	
16	690547.73	1344736.92	693573.22	1365487.42	
17	689715.76	1343077.47	693891.17	1363993.95	
18	687791.04	1340531.5	693846.26	1361779.58	
19	685411.41	1334805.9	693391.17	1359285.64	
20	684595.36	1332547.67	692834.58	1354558.32	
21	684225.48	1328862.05	692617.61	1350594.3	
22	685236.72	1323887.55	691060.38	1344866.98	
23	685344.25	1322606.1	690056.93	1342865.48	
24	685344.06	1321533.17	688140.84	1340330.95	
25	685032.54	1317236.51	685784.38	1334661.11	
26	685123.51	1316002.33	685126.48	1332840.5	
27	686039.03	1311164.33	684947.9	1332054.91	
28	686415.38	1306717.93	684695.44	1329539.34	
29	686133.26	1304190.08	684761.04	1328235.37	
30	685079.16	1300623.22	685794.34	1323152.33	
31	682920.44	1293805.17	685794.03	1321516.84	
32	682685.42	1291615.45	685483.71	1317236.73	
33	683163.59	1289332.92	685320.73	1316054.46	
34	683462.41	1286962.05	686435.85	1311218.53	
35	683635.59	1283437.73	686923.79	1305453.77	
36	685145.19	1276970.39	686481.87	1303958.38	
37	685421.74	1274909.83	686531.51	1302715.04	
38	685572.52	1270893.42	686179.17	1301522.81	
39	686344.76	1265720.79	685461.65	1300506.17	
40	686377.95	1264489.91	683389.93	1293962	
41	686203.03	1262640.35	683178.27	1291990.72	
42	685693.88	1261504.95	683220.3	1291256.89	
43	685576.82	1260267.27	683784.08	1288565.67	
44	685864.09	1259056.56	683992.37	1284327.01	
45	685711.66	1257444.8	684221.47	1282687.4	
46	685070.13	1254439.37	685790.83	1276006.86	
47	684306.75	1252183.51	685971.39	1270930.58	
48	683576.21	1250730.65	686839.14	1265118.24	
49	683069.15	1249813.73	685959.83	1255820.66	
50	681308.82	1247496.34	684559.19	1251681.68	
51	680421.72	1246670.44	683405.17	1249594.85	
52	679508.51	1246079.08	681606.53	1247227.03	

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RATTLESNAKE.

BENCHMARK ELEVATION IS 1.50 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/18/15
Survey Date:09/09/14,12/17/14

DRAWN BY D. Sarles
DESIGNED BY R. Barnan
REVIEWED BY J. Smith
PROJECT MANAGER W. F. Patsonis

Contract No.:

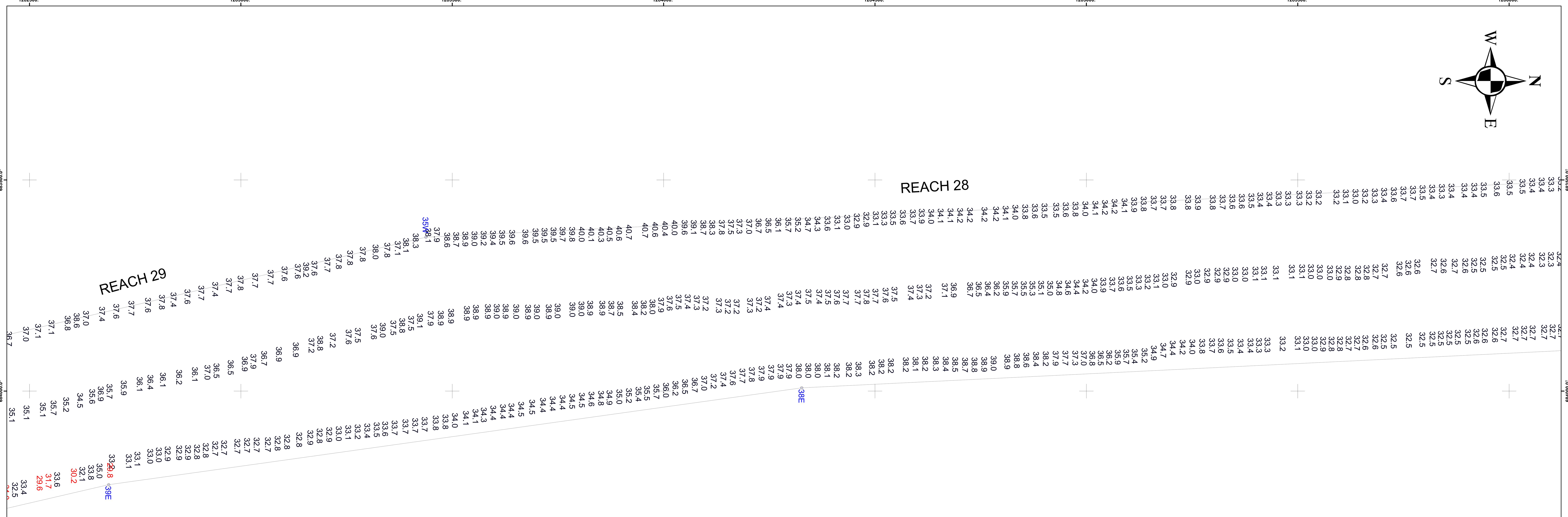
Plot date:
Plot by: Daniel J. Kanick
Scale: 1" = 700'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Patsonis, CHIEF, ALBANY FIELD OFFICE

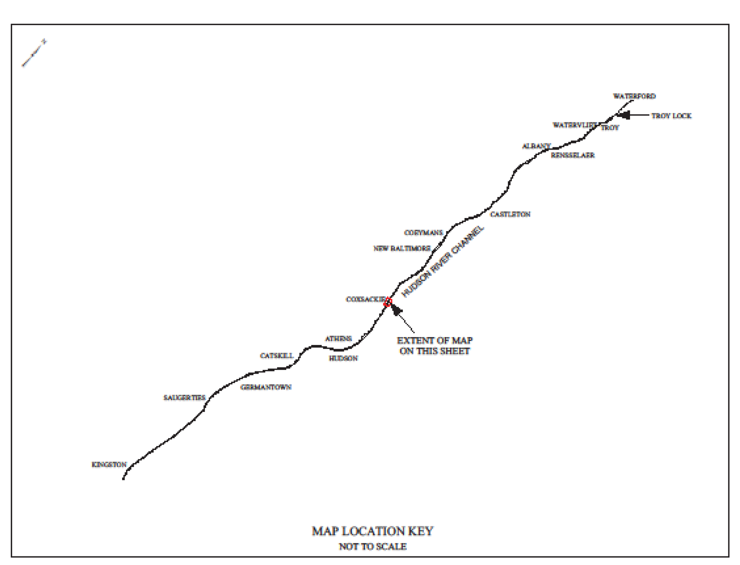
Light 169 to Light RI
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
4 OF 4



NAD 83 NY EAST NY-3101

	west channel			East channel	
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03



MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK THOMAS EAST.

BENCHMARK ELEVATION IS 0.78 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith
CIVIL ENGINEER

APPROVED BY: William F. Petronis
CHIEF, ALBANY FIELD OFFICE

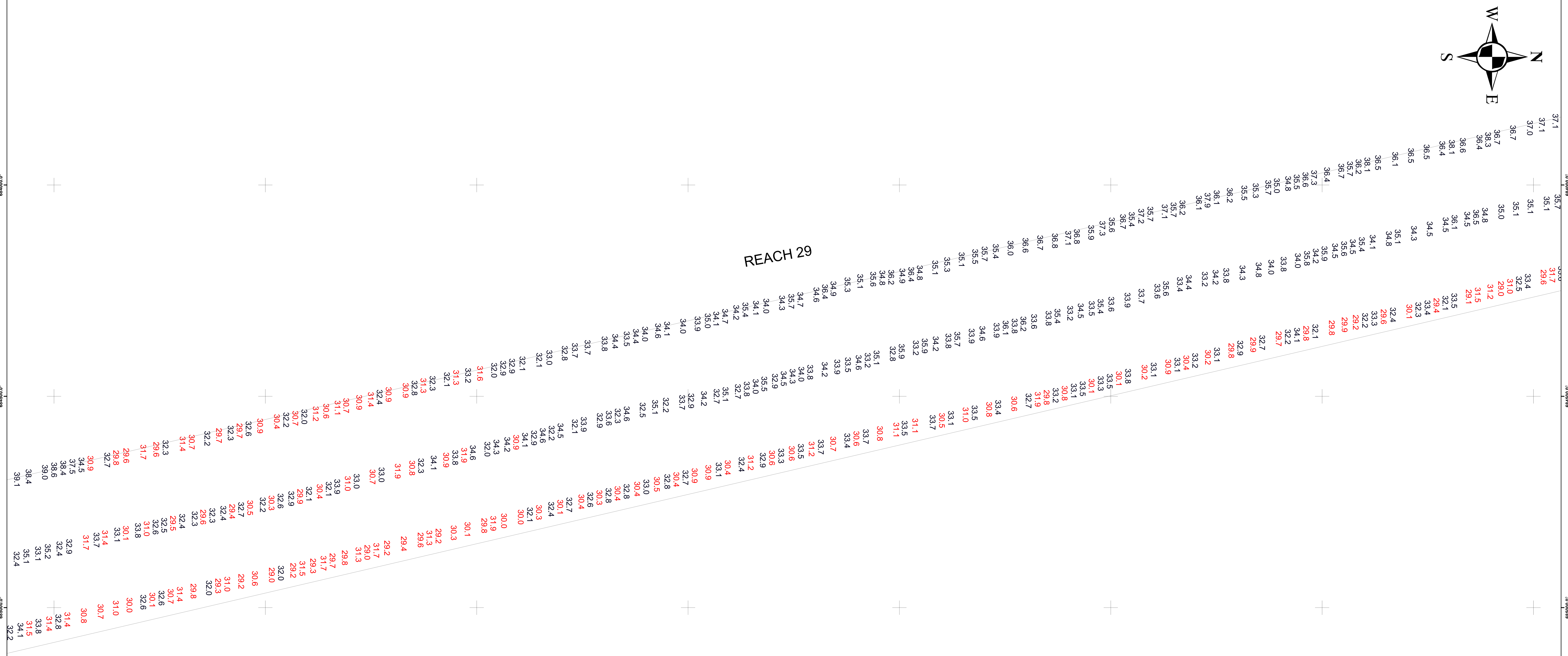
DRAWN BY D. Karlok
DESIGNED BY R. Berrian
REVIEWED BY J. Smith
REVIEWED BY W. F. Petronis

Date: 02/19/15
Survey Date:09/09/14;12/17/14
Contract no.:
Plot date:
Plot by: Daniel J. Karlok
Scale: 1" = 100'

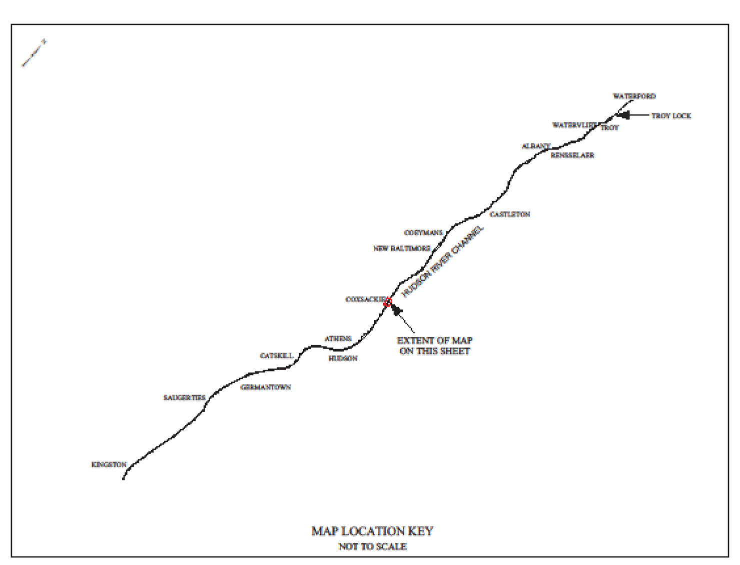
Light 161 to GB 151
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:

1 OF 5



NAD 83 NY EAST NY-3101					
west channel			East channel		
pt	east (x)	north (y)		East(X)	North(y)
1	693498.37	1386799.82	1	693887.71	1386702.52
2	693063.54	1384160.99	2	693400.33	1383744.8
3	692902.51	1383547.78	1T	693075.55	1382855.94
4	690932.19	1378155.34	2T	693072.4	1382185.08
5	690724.97	1376630.28	3T	693348.62	1381855.07
6	690579.55	1373839.84	4T	693123.09	1381237.82
7	691759.6	1368279.1	5T	692718.06	1381166.92
8	693011.55	1365724.59	6T	692372.04	1380930.53
9	693481.43	1363517.39	3	691514.38	1378583.23
10	693447	1361819.79	4	691247.51	1377505.26
11	692881.89	1358722.78	5	691123.54	1376592.88
12	692470.86	1355231.84	6	691005.7	1374331.63
13	692245.36	1351111.79	7	691077.44	1373420.43
14	692101.41	1350220.25	8	692079.4	1368698.89
15	690762.99	1345297.73	9	692477.39	1367723.36
16	690547.73	1344736.92	10	693573.22	1365487.42
17	689715.76	1343077.47	11	693891.17	1363993.95
18	687791.04	1340531.5	12	693846.26	1361779.58
19	685411.41	1334805.9	13	693391.17	1359285.64
20	684595.36	1332547.67	14	692834.58	1354558.32
21	684225.48	1328862.05	15	692617.61	1350594.3
22	685236.72	1323887.55	16	691060.38	1344866.98
23	685344.25	1322606.1	17	690056.93	1342865.48
24	685344.06	1321533.17	18	688140.84	1340330.95
25	685032.54	1317236.51	19	685784.38	1334661.11
26	685123.51	1316002.33	20	685126.48	1332840.5
27	686039.03	1311164.33	21	684947.9	1332054.91
28	686415.38	1306717.93	22	684695.44	1329539.34
29	686133.26	1304190.08	23	684761.04	1328235.37
30	685079.16	1300623.22	24	685794.34	1323152.33
31	682920.44	1293805.17	25	685794.03	1321516.84
32	682685.42	1291615.45	26	685483.71	1317236.73
33	683163.59	1289332.92	27	685520.73	1316054.46
34	683462.41	1286962.05	28	686435.85	1311218.53
35	683635.59	1283437.73	29	686923.79	1305453.77
36	685145.19	1276970.39	30	686481.87	1303958.38
37	685421.74	1274909.83	31	686531.51	1302715.04
38	685572.52	1270893.42	32	686179.17	1301522.81
39	686344.76	1265720.79	33	685461.65	1300506.17
40	686377.95	1264489.91	34	683389.93	1293962
41	686203.03	1262640.35	35	683178.27	1291990.72
42	685693.88	1261504.95	36	683220.3	1291256.89
43	685576.82	1260267.27	37	683784.08	1288565.67
44	685864.09	1259056.56	38	683992.37	1284327.01
45	685711.66	1257444.8	39	684221.47	1282687.4
46	685070.13	1254439.37	40	685780.83	1276006.86
47	684306.75	1252183.51	41	685971.39	1270930.58
48	683576.21	1250730.65	42	686839.14	1265118.24
49	683069.15	1249813.73	43	685959.83	1255820.66
50	681308.82	1247496.34	44	684559.19	1251681.68
51	680421.72	1246670.44	45	683405.17	1249594.85
52	679508.51	1246079.08	46	681606.53	1247227.03



MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK Thomas East.

BENCHMARK ELEVATION IS 0.78 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

APPROVED BY: William F. Petronis, CHIEF, ALBANY FIELD OFFICE

DRAWN BY D. Karlok
DESIGNED BY R. Berrian
REVIEWED BY J. Smith
REVIEWED BY W. F. Petronis

Date: 02/19/15
Survey Date:09/09/14
Contract no.:
Plot date:
Plot by: Daniel J. Karlok
Scale: 1" = 100'

Light 161 to GB 151
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 5

NAD 83 NY EAST NY-3101

West channel						East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	691123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684917.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK THOMAS EAST.

BENCHMARK ELEVATION IS 0.78 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

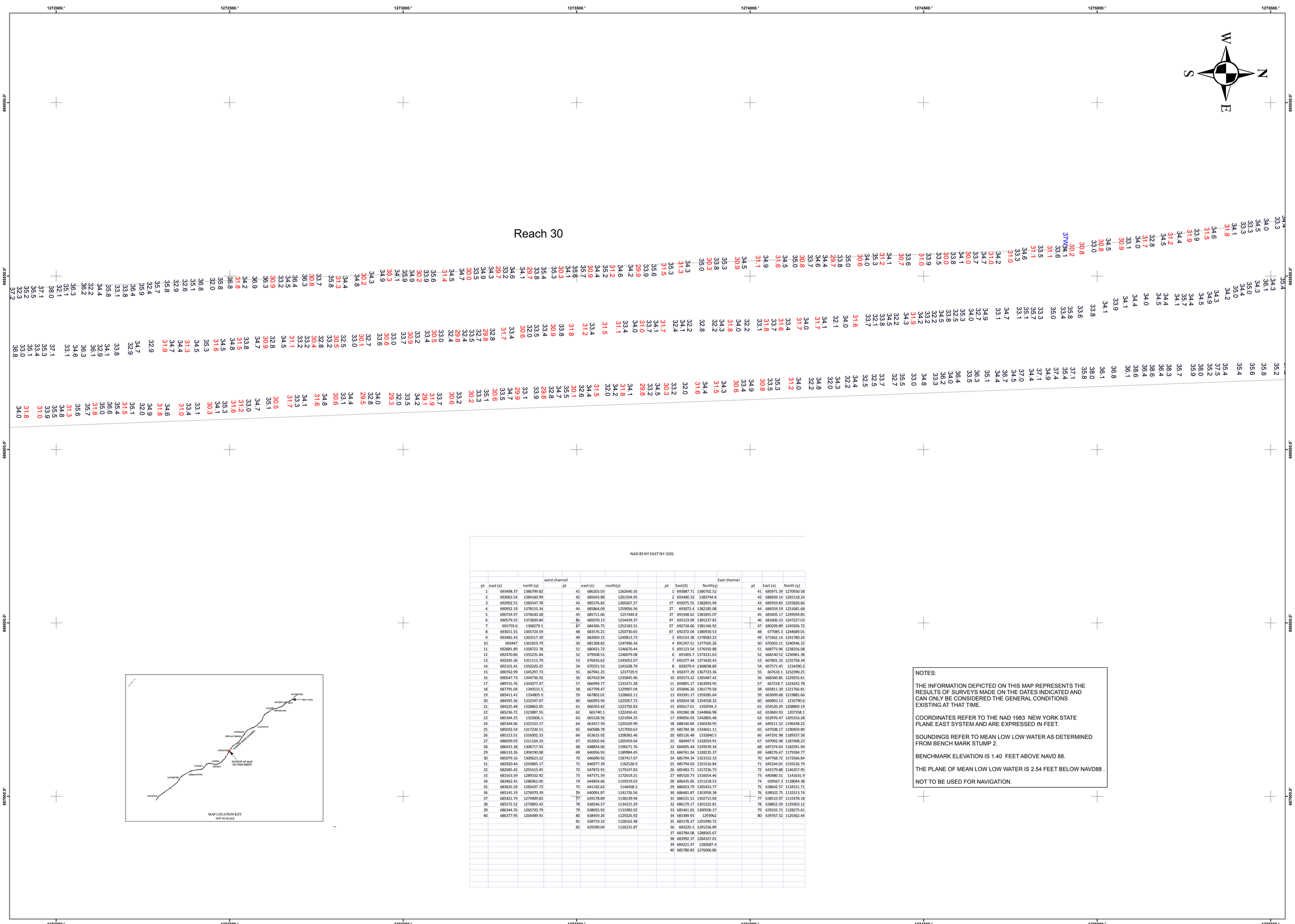
Date: 02/19/15
Survey Date:09/09/14
Contract No.:
Drawn by: D.Kabok
Designed by: R. Berman
Reviewed by: J. Smith
Reviewed by: W. F. Pretorius
Field date:
Field by: Daniel J. Kabok
Scale: 1" = 100'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Pretorius, CHIEF, ALBANY FIELD OFFICE

Light 161 to GB 151
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
3 OF 5



NAD 83 NY EAST NY-3101

			west channel							East channel			
pt	east (x)	north (y)	pt	east (x)	north(y)			pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35			1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95			2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27			1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56			2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8			3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37			4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51			5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65			6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73			3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34			4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44			5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08			6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07			7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79			8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9			9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96			10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28			11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04			12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11			13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72			14	692834.58	1354558.32	60	660893.13	1216790.6
21	684425.48	1328862.05	61	666503.42	1223792.83			15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41			16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25			17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99			18	688140.84	1340330.95	64	649211.52	1196438.22
25	685092.54	1317236.51	65	660588.78	1217050.63			19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46			20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64			21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76			22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45			23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07			24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9			25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83			26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21			27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03			28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5			29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56			30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94			31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29			32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02			33	685461.65	1300506.17	79	639103.71	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92			34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48			35	683178.27	1291990.72			
			82	639390.04	1126231.87			36	683220.3	1291256.89			
								37	683784.08	1288565.67			
								38	683992.37	1284327.01			
								39	684221.47	1282687.4			
								40	685780.83	1276006.86			

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STUMP 2.

BENCHMARK ELEVATION IS 1.40 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

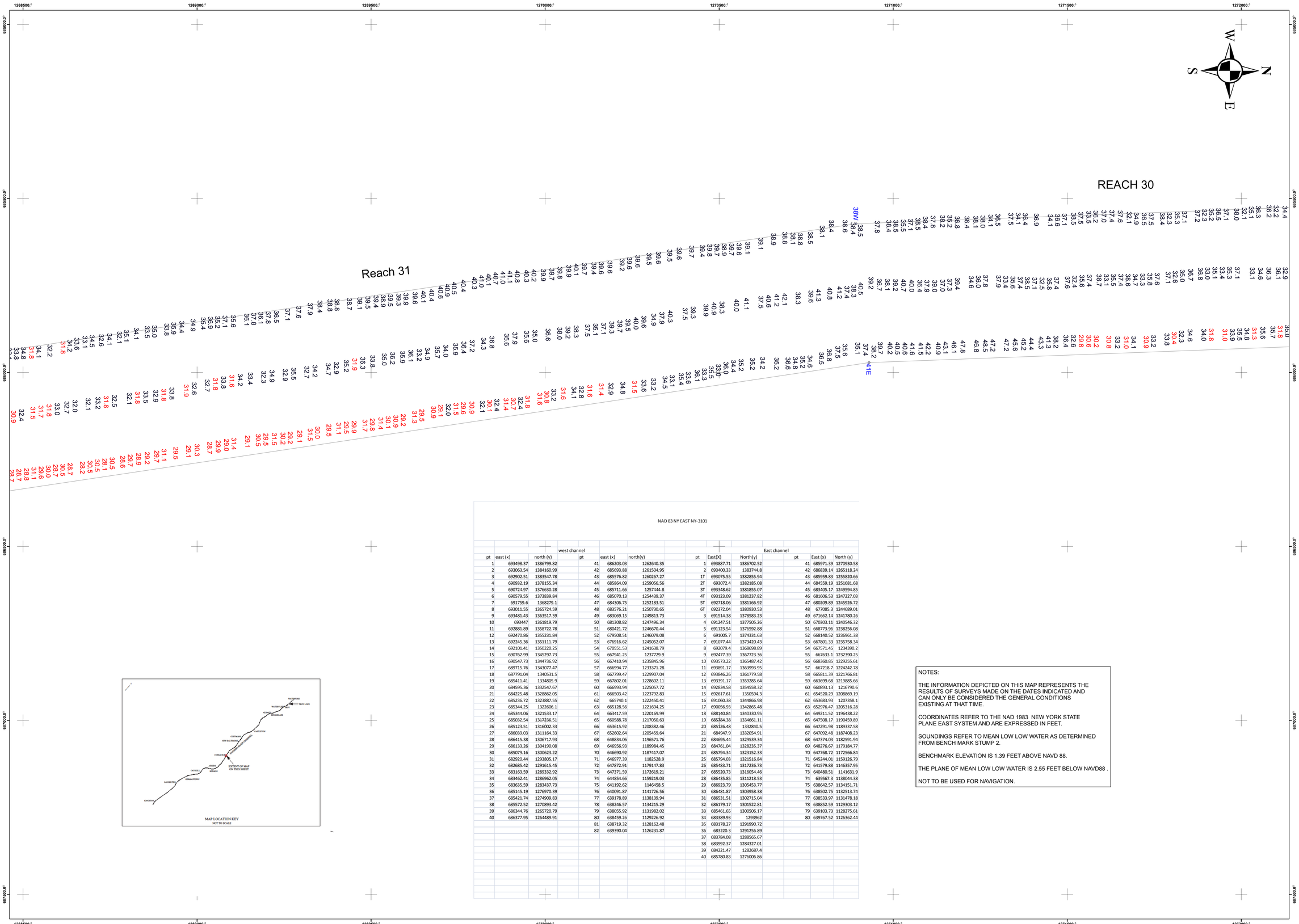
RECOMMENDED BY: CIVIL ENGINEER — James B. Smith
APPROVED BY: CHIEF, ENGINEERING DIVISION — William F. Petrone

DRAWN BY: D. Karlok
DESIGNED BY: R. Bertain
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petrone

Date: 02/19/15
Survey Date:05/08/14
Contract no.:
Plot date:
Plot by: David J. Karlok
Scale: 1" = 100'

Light 161 to GB 151
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
4 OF 5



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel						East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STUMP 2.

BENCHMARK ELEVATION IS 1.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/18/15
Survey Date:09/09/14,09/10/14
Contract no.:
Plot date:
Plot by: Daniel J. Kurlak
Scale: 1" = 100'

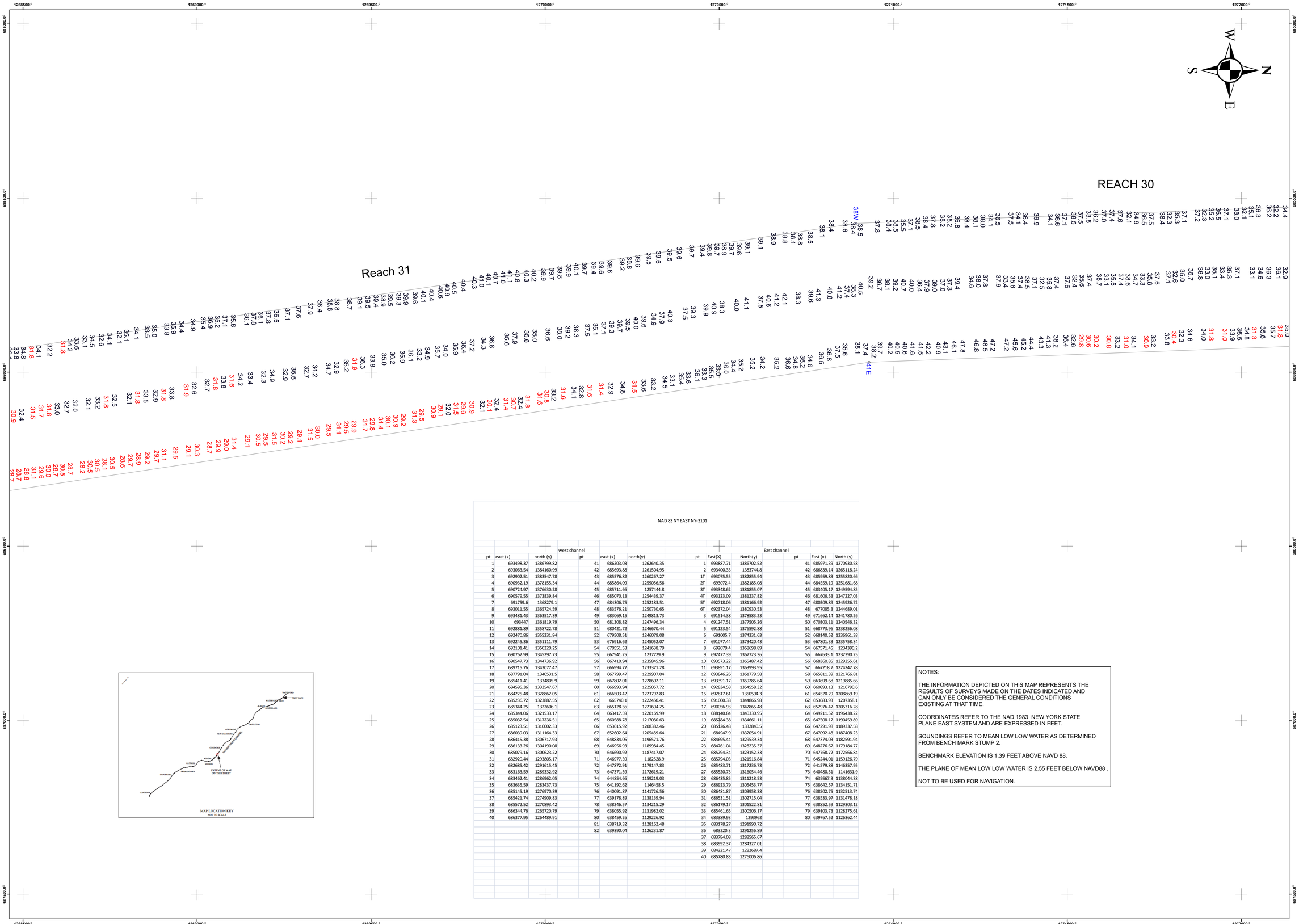
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DRAWN BY: D. Kurlak
DESIGNED BY: R. Bertain
REVIEWED BY: Jeffrey Tinney
REVIEWED BY: W. F. Petrone

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrone, CHIEF, NAVIGATION BRANCH

Light 161 to GB 151
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
5 OF 5



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

			west channel								East channel						
pt	east (x)	north (y)	pt	east (x)	north(y)				pt	East(X)	North(y)		pt	East (x)	North (y)		
1	693498.37	1386799.82	41	686203.03	1262640.35				1	693887.71	1386702.52		41	685971.39	1270930.58		
2	693063.54	1384160.99	42	685693.88	1261504.95				2	693400.33	1383744.8		42	686839.14	1265118.24		
3	692902.51	1383547.78	43	685576.82	1260267.27				1T	693075.55	1382855.94		43	685959.83	1255820.66		
4	690932.19	1378155.34	44	685864.09	1259056.56				2T	693072.4	1382185.08		44	684559.19	1251681.68		
5	690724.97	1376630.28	45	685711.66	1257444.8				3T	693348.62	1381855.07		45	683405.17	1249594.85		
6	690579.55	1373839.84	46	685070.13	1254439.37				4T	693123.09	1381237.82		46	681606.53	1247227.03		
7	691759.6	1368279.1	47	684306.75	1252183.51				5T	692718.06	1381166.92		47	680209.89	1245926.72		
8	693011.55	1365724.59	48	683576.21	1250730.65				6T	692372.04	1380930.53		48	677085.3	1244689.01		
9	693481.43	1363517.39	49	683069.15	1249813.73				3	691514.38	1378583.23		49	671662.14	1241780.26		
10	693447	1361819.79	50	681308.82	1247496.34				4	691247.51	1377505.26		50	670303.11	1240546.32		
11	692881.89	1358722.78	51	680421.72	1246670.44				5	691123.54	1376592.88		51	668773.96	1238256.08		
12	692470.86	1355231.84	52	679508.51	1246079.08				6	691005.7	1374331.63		52	668140.52	1236961.38		
13	692245.36	1351111.79	53	676916.62	1245052.07				7	691077.44	1373420.43		53	667801.33	1235758.34		
14	692101.41	1350220.25	54	670551.53	1241638.79				8	692079.4	1368698.89		54	667571.45	1234390.2		
15	690762.99	1345297.73	55	667941.25	1237729.9				9	692477.39	1367723.36		55	667633.1	1232390.25		
16	690547.73	1344736.92	56	667410.94	1235845.96				10	693573.22	1365487.42		56	668360.85	1229255.61		
17	689715.76	1343077.47	57	666994.77	1233371.28				11	693891.17	1363993.95		57	667218.7	1224242.78		
18	687791.04	1340531.5	58	667799.47	1229907.04				12	693846.26	1361779.58		58	665811.39	1221766.81		
19	685411.41	1334805.9	59	667802.01	1228602.11				13	693391.17	1359285.64		59	663699.68	1219885.66		
20	684595.36	1332547.67	60	666993.94	1225057.72				14	692834.58	1354558.32		60	660893.13	1216790.6		
21	684225.48	1328862.05	61	666503.42	1223792.83				15	692617.61	1350594.3		61	654520.29	1208869.19		
22	685236.72	1323887.55	62	665740.1	1222450.41				16	691060.38	1344866.98		62	653683.93	1207358.1		
23	685344.25	1322606.1	63	665128.56	1221694.25				17	690056.93	1342865.48		63	652976.47	1205316.28		
24	685344.06	1321533.17	64	663417.59	1220169.99				18	688140.84	1340330.95		64	649211.52	1196438.22		
25	685032.54	1317236.51	65	660588.78	1217050.63				19	685784.38	1334661.11		65	647508.17	1190459.89		
26	685123.51	1316002.33	66	653615.92	1208382.46				20	685126.48	1332840.5		66	647291.98	1189337.58		
27	686039.03	1311164.33	67	652602.64	1205459.64				21	684947.9	1332054.91		67	647092.48	1187408.23		
28	686415.38	1306717.93	68	648834.06	1196571.76				22	684695.44	1329539.34		68	647374.03	1182591.94		
29	686133.26	1304190.08	69	646956.93	1189984.45				23	684761.04	1328235.37		69	648276.67	1179184.77		
30	685079.16	1300623.22	70	646690.92	1187417.07				24	685794.34	1323152.33		70	647768.72	1172566.84		
31	682920.44	1293805.17	71	646977.39	1182528.9				25	685794.03	1321516.84		71	645244.01	1159126.79		
32	682685.42	1291615.45	72	647872.91	1179147.83				26	685483.71	1317236.73		72	641579.88	1146357.95		
33	683163.59	1289332.92	73	647371.59	1172619.21				27	685520.73	1316054.46		73	640480.51	1141631.9		
34	683462.41	1286962.05	74	644854.66	1159219.03				28	686435.85	1311218.53		74	639567.3	1138044.38		
35	683635.59	1283437.73	75	641192.62	1146458.5				29	686923.79	1305453.77		75	638642.57	1134151.71		
36	685145.19	1276970.39	76	640091.87	1141726.56				30	686481.87	1303958.38		76	638502.75	1132513.74		
37	685421.74	1274909.83	77	639178.89	1138139.94				31	686531.51	1302715.04		77	638533.97	1131478.18		
38	685572.52	1270893.42	78	638246.57	1134215.29				32	686179.17	1301522.81		78	638852.59	1129303.12		
39	686344.76	1265720.79	79	638055.92	1131982.02				33	685461.65	1300506.17		79	639103.73	1128275.61		
40	686377.95	1264489.91	80	638459.26	1129226.92				34	683389.93	1293962		80	639767.52	1126362.44		
			81	638719.32	1128162.48				35	683178.27	1291990.72						
			82	639390.04	1126231.87				36	683220.3	1291256.89						
									37	683784.08	1288565.67						
									38	683992.37	1284327.01						
									39	684221.47	1282687.4						
									40	685780.83	1276006.86						

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STUMP 2.

BENCHMARK ELEVATION IS 1.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/18/15

Survey Date:09/09/14,09/10/14

Contract no.:

Plot date:
Plot by: Daniel J. Kurlak
Scale: 1" = 100'

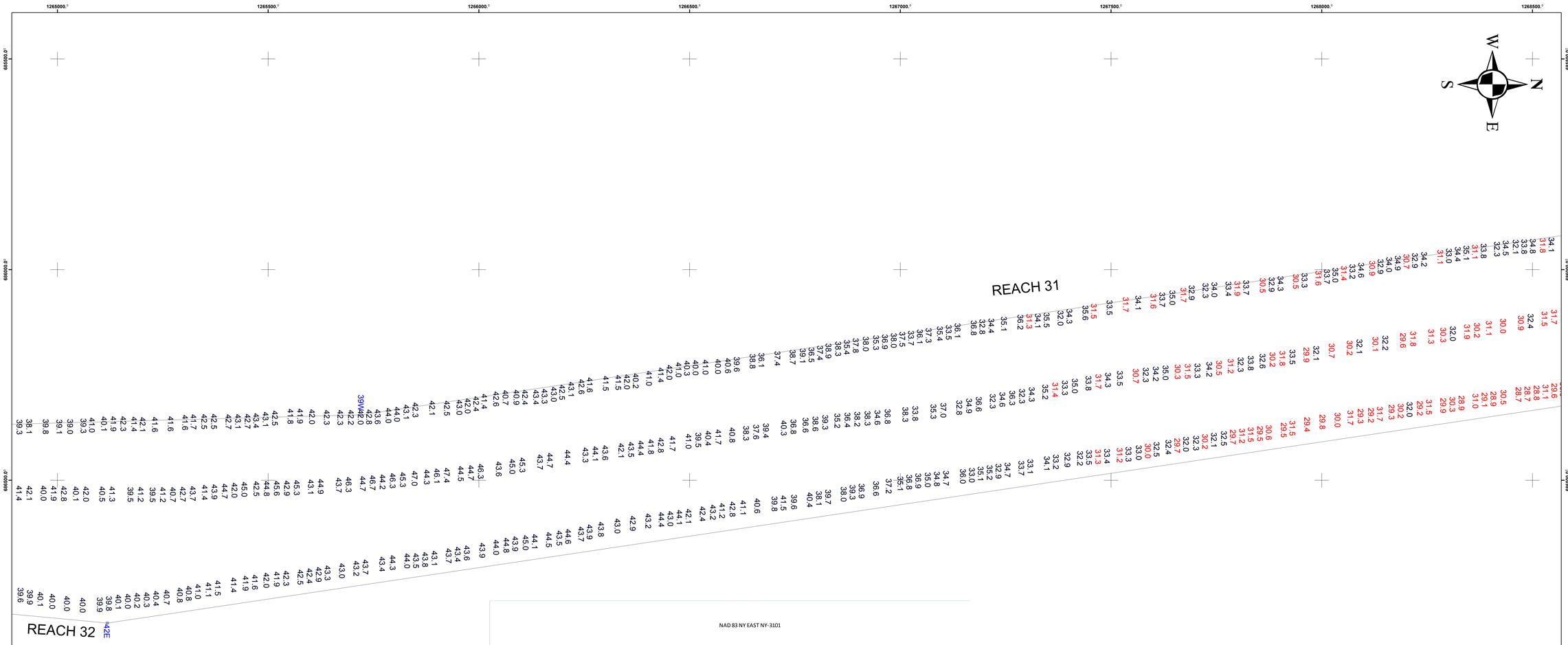
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DRAWN BY: D. Kurlak
DESIGNED BY: R. Bertain
REVIEWED BY: W. F. Petrone
REVIEWED BY: W. F. Petrone

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrone, CHIEF, PLANNING DIVISION

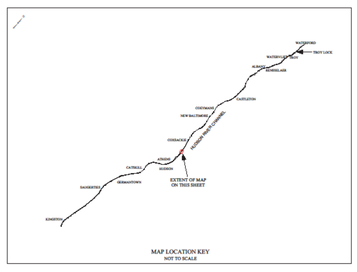
GB 151 to GB 139
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 5



NAD 83 NY EAST NY-3101

	west channel					East channel				
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			



MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK Stump 2.

BENCHMARK ELEVATION IS 1.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/19/15
Survey Date:09/10/14
Contract No.:
Plot date:
Plot by: Daniel J. Kacik
Scale: 1" = 100'

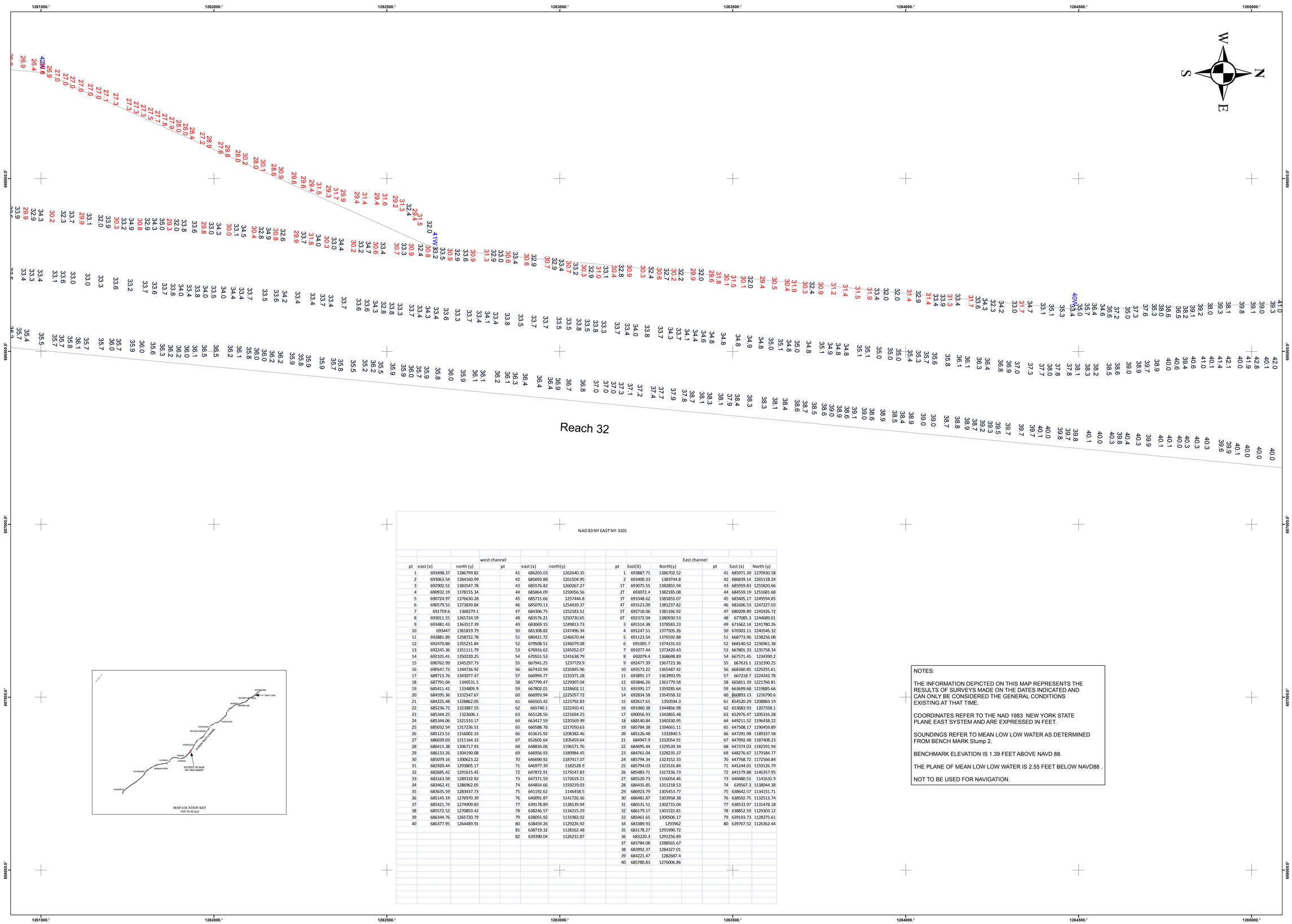
Drawn by: J. Smith
Recommended by: R. Bensen
Reviewed by: J. Smith
Reviewed by: W. F. Petronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ALBANY FIELD OFFICE

GB 151 to GB 139
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 5



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel						
pt	east (x)	north (y)	pt	east (x)	north(y)	
1	693498.37	1386799.82	41	686203.03	1262640.35	
2	693063.54	1384160.99	42	685693.88	1261504.95	
3	692902.51	1383547.78	43	685576.82	1260267.27	
4	690932.19	1378155.34	44	685864.09	1259056.56	
5	690724.97	1376630.28	45	685711.66	1257444.8	
6	690579.55	1373839.84	46	685070.13	1254439.37	
7	691759.6	1368279.1	47	684306.75	1252183.51	
8	693011.55	1365724.59	48	683576.21	1250730.65	
9	693481.43	1363517.39	49	683069.15	1249813.73	
10	693447	1361819.79	50	681308.82	1247496.34	
11	692881.89	1358722.78	51	680421.72	1246670.44	
12	692470.86	1355231.84	52	679508.51	1246079.08	
13	692245.36	1351111.79	53	676916.62	1245052.07	
14	692101.41	1350220.25	54	670551.53	1241638.79	
15	690762.99	1345297.73	55	667941.25	1237729.9	
16	690547.73	1344736.92	56	667410.94	1235845.96	
17	689715.76	1343077.47	57	666994.77	1233371.28	
18	687791.04	1340531.5	58	667799.47	1229907.04	
19	685411.41	1334805.9	59	667802.01	1228602.11	
20	684595.36	1332547.67	60	666993.94	1225057.72	
21	684225.48	1328862.05	61	666503.42	1223792.83	
22	685236.72	1323887.55	62	665740.1	1222450.41	
23	685344.25	1322606.1	63	665128.56	1221694.25	
24	685344.06	1321533.17	64	663417.59	1220169.99	
25	685032.54	1317236.51	65	660588.78	1217050.63	
26	685123.51	1316002.33	66	653615.92	1208382.46	
27	686039.03	1311164.33	67	652602.64	1205459.64	
28	686415.38	1306717.93	68	648834.06	1196571.76	
29	686133.26	1304190.08	69	646956.93	1189984.45	
30	685079.16	1300623.22	70	646690.92	1187417.07	
31	682920.44	1293805.17	71	646977.39	1182528.9	
32	682685.42	1291615.45	72	647872.91	1179147.83	
33	683163.59	1289332.92	73	647371.59	1172619.21	
34	683462.41	1286962.05	74	644854.66	1159219.03	
35	683635.59	1283437.73	75	641192.62	1146458.5	
36	685145.19	1276970.39	76	640091.87	1141726.56	
37	685421.74	1276909.83	77	639178.89	1138339.94	
38	685572.52	1270893.42	78	638246.57	1134215.29	
39	686344.76	1265720.79	79	638055.92	1131982.02	
40	686377.95	1264489.91	80	638459.26	1129226.92	
			81	638719.32	1128162.48	
			82	639390.04	1126231.87	

East channel						
pt	East(X)	North(y)	pt	East (x)	North (y)	
1	693887.71	1386702.52	41	685971.39	1270930.58	
2	693400.33	1383744.8	42	686839.14	1265118.24	
1T	693075.55	1382855.94	43	685959.83	1255820.66	
2T	693072.4	1382185.08	44	684559.19	1251681.68	
3T	693348.62	1381855.07	45	683405.17	1249594.85	
4T	693123.09	1381237.82	46	681606.53	1247227.03	
5T	692718.06	1381166.92	47	680209.89	1245926.72	
6T	692372.04	1380930.53	48	677085.3	1244689.01	
3	691514.38	1378583.23	49	671662.14	1241780.26	
4	691247.51	1377505.26	50	670303.11	1240546.32	
5	691123.54	1376592.88	51	668773.96	1238256.08	
6	691005.7	1374331.63	52	668140.52	1236961.38	
7	691077.44	1373420.43	53	667801.33	1235758.34	
8	692079.4	1368698.89	54	667571.45	1234390.2	
9	692477.39	1367723.36	55	667633.1	1232390.25	
10	693573.22	1365487.42	56	668360.85	1229255.61	
11	693891.17	1363993.95	57	667218.7	1224242.78	
12	693846.26	1361779.58	58	665811.39	1221766.81	
13	693391.17	1359285.64	59	663699.68	1219885.66	
14	692834.58	1354558.32	60	660893.13	1216790.6	
15	692617.61	1350594.3	61	654520.29	1208869.19	
16	691060.38	1344866.98	62	653683.93	1207358.1	
17	690056.93	1342865.48	63	652976.47	1205316.28	
18	688140.84	1340330.95	64	649211.52	1196438.22	
19	685784.38	1334661.11	65	647508.17	1190459.89	
20	685126.48	1332840.5	66	647291.98	1189337.58	
21	684947.9	1332054.91	67	647092.48	1187408.23	
22	684695.44	1329539.34	68	647374.03	1182591.94	
23	684761.04	1328235.37	69	648276.67	1179184.77	
24	685794.34	1323152.33	70	647768.72	1172566.84	
25	685794.03	1321516.84	71	645244.01	1159126.79	
26	685483.71	1317236.73	72	641579.88	1146357.95	
27	685520.73	1316054.46	73	640480.51	1141631.9	
28	686435.85	1311218.53	74	639567.3	1138044.38	
29	686923.79	1305453.77	75	638642.57	1134151.71	
30	686481.87	1303958.38	76	638502.75	1132513.74	
31	686531.51	1302715.04	77	638533.97	1131478.18	
32	686179.17	1301522.81	78	638852.59	1129303.12	
33	685461.65	1300506.17	79	639103.73	1128275.61	
34	683389.93	1293962	80	639767.52	1126362.44	
35	683178.27	1291990.72				
36	683220.3	1291256.89				
37	683784.08	1288565.67				
38	683992.37	1284327.01				
39	684221.47	1282687.4				
40	685780.83	1276006.86				

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK Stump 2.

BENCHMARK ELEVATION IS 1.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Apv

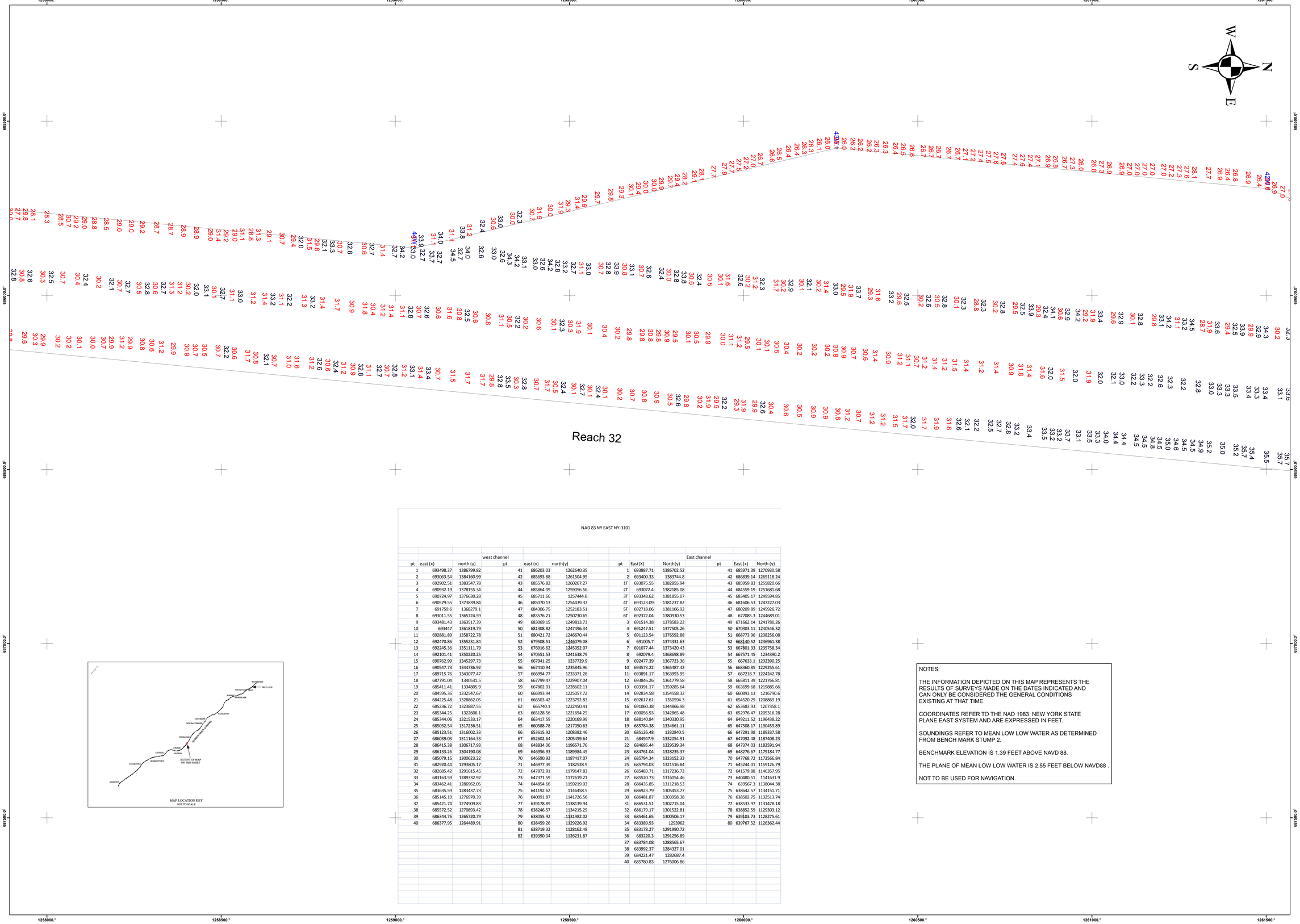
Date: 02/19/15
Survey Date:02/10/14
Contract no.:
Plot date:
Plot by: David J. Kasik
Scale: 1" = 100'

DRAWN BY: D. Kasik
DESIGNED BY: R. Bertan
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, DESIGN & CONSTRUCTION SECTION

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

GB 151 to GB 139
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
3 OF 5



NAD 83 NY EAST NY-3101

	west channel					East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	6934447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK STUMP 2.

BENCHMARK ELEVATION IS 1.39 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.55 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/18/15
Survey Date:09/10/14
Contract no.:
Plot date:
Plot by: Daniel J. Kanik
Scale: 1" = 100'

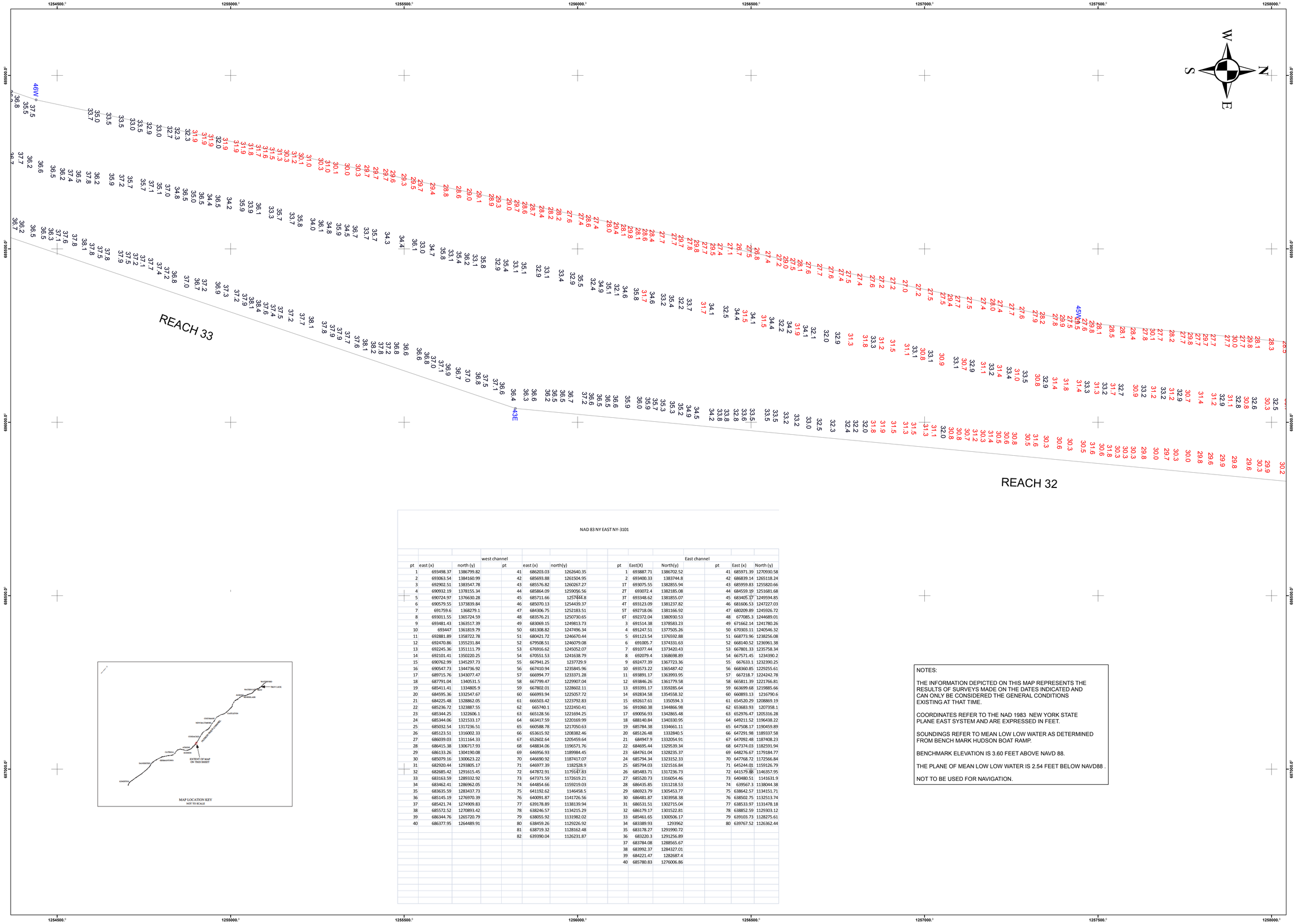
DRAWN BY: D. Kanik
DESIGNED BY: R. Bertain
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Patrone, CHIEF, PLANNING DIVISION

GB 151 to GB 139
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
4 OF 5



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel

pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257844.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

East channel

pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.37	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK HUDSON BOAT RAMP.

BENCHMARK ELEVATION IS 3.60 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Date	Description	Mark	Date	Description	Mark	Date	Description	Mark	Date	Description

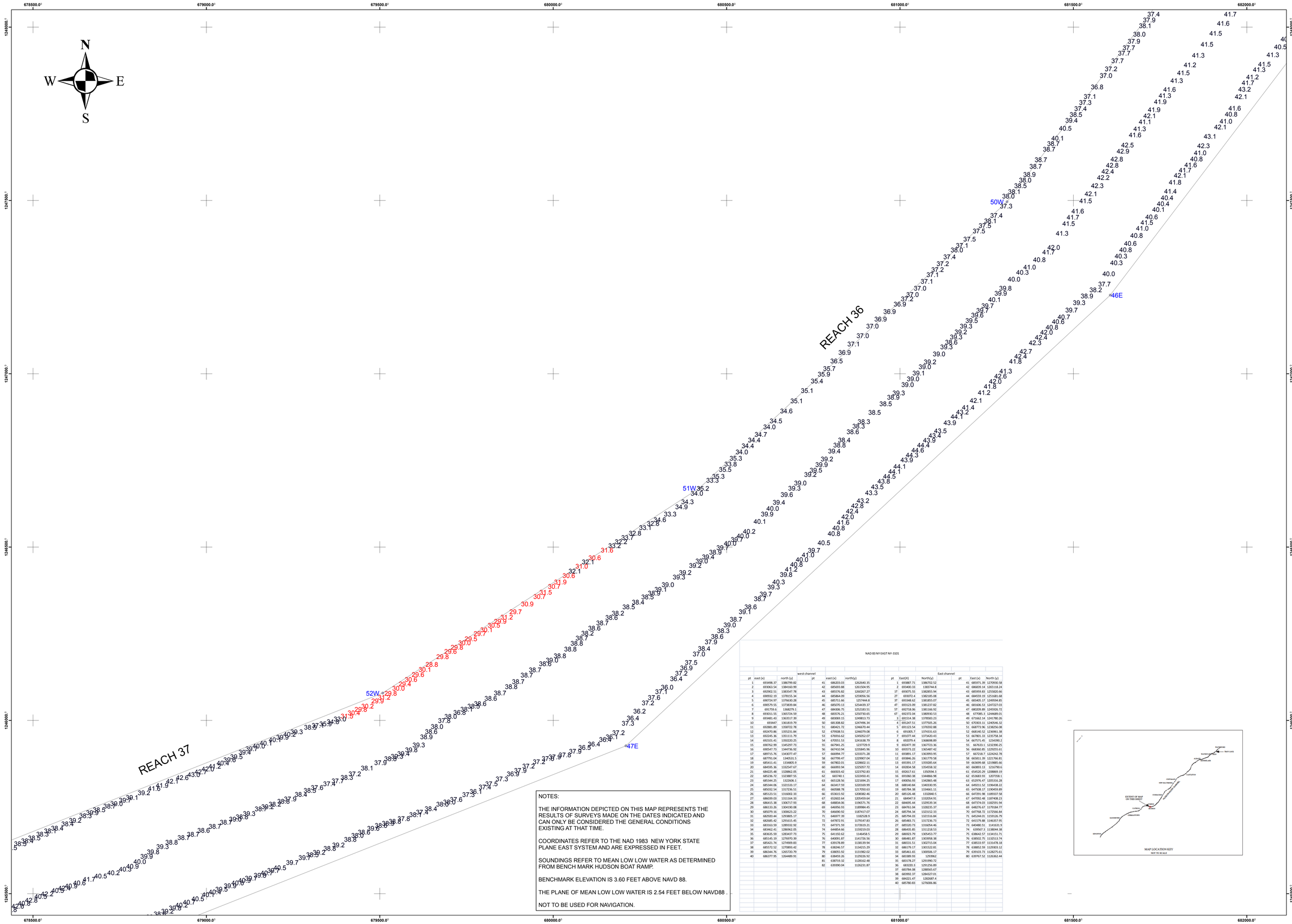
Date: 02/18/15
Survey Date:08/10/14,09/29/14
Contract no.:
Plot date:
Plot by: Daniel J. Kanik
Scale: 1" = 100'

DRAWN BY: D. Kanik
DESIGNED BY: R. Barnan
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, PLANNING & ENGINEERING

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

GB 151 to GB 139
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
5 OF 5



NAD 83 NY EAST NY-3101

west channel

pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.17	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.53	1254439.37
7	691759.6	1366279.1	47	684306.75	1252183.51
8	693015.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1365517.39	49	683069.15	1248813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1359722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1315002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686543.38	1309717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646698.92	1187417.07
31	682920.44	1291805.17	71	646977.39	1182528.9
32	682585.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

East channel

pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
3	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.39	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.5	1244689.01
1	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1239256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350934.1	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1343865.48	63	652976.47	1205516.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	687594.38	1334661.11	65	647508.17	1190439.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332554.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1329235.37	69	648276.67	1179184.77
24	685794.34	1323232.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146337.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.1	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638513.97	1131478.58
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639203.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	681678.27	1291990.72			
36	683220.3	1291256.89			
37	681784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK HUDSON BOAT RAMP.

BENCHMARK ELEVATION IS 3.60 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

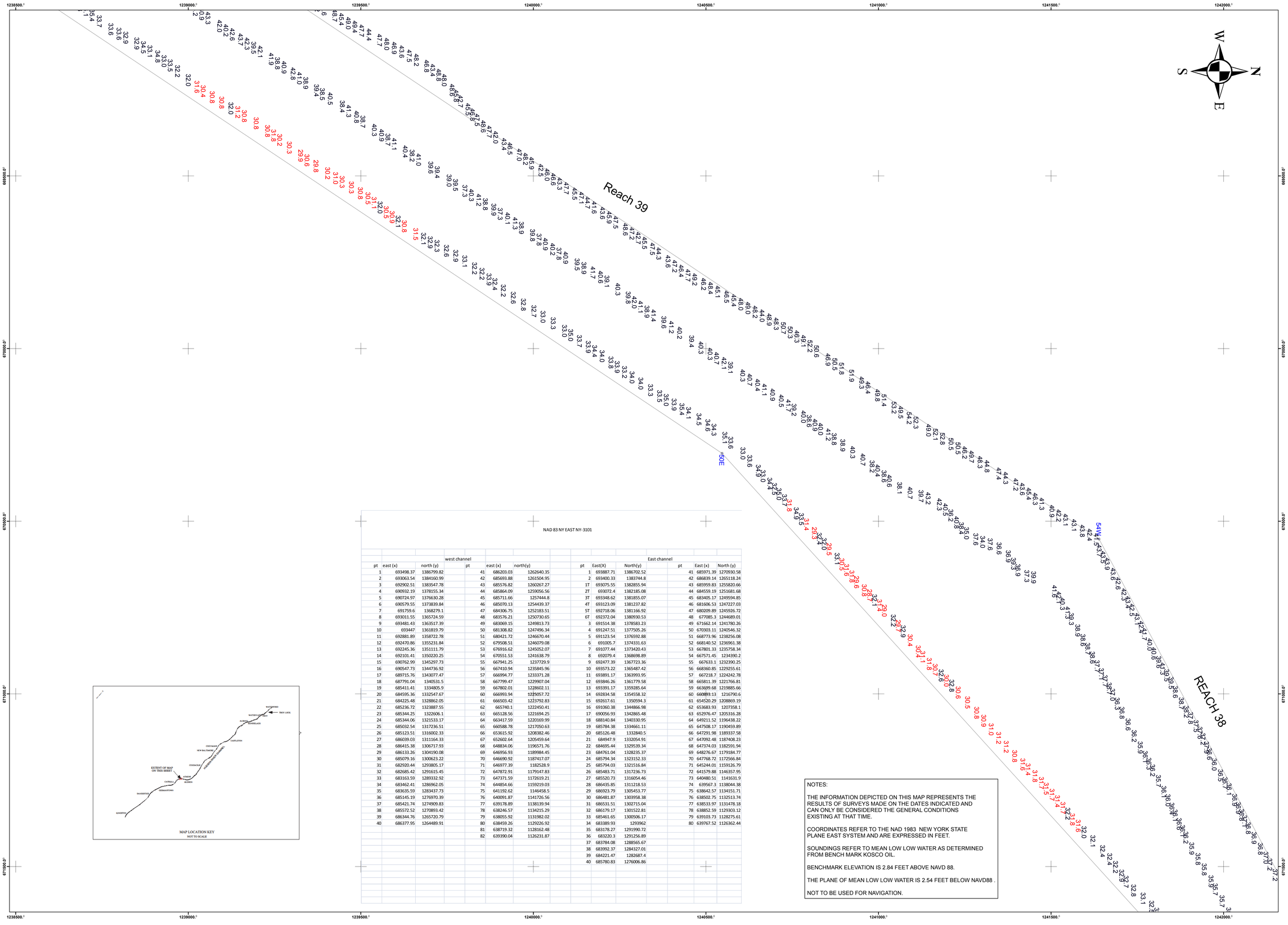
APPROVED BY: William F. Petronis, CHIEF, PLANNING & ASSESSMENT BRANCH

DRAWN BY: D. Karsik
DESIGNED BY: R. Barnum
REVIEWED BY: D. Karsik
REVIEWED BY: W. F. Petronis

Date: 02/23/15
Survey Date:09/23/14
Contract no.:
Plot date:
Plot by: Daniel J. Karsik
Scale: 1" = 50'

Hudson Light House North 1000Ft
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 1



NAD 83 NY EAST NY-3101

	west channel				
pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

	East channel				
pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
3	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340380.95	64	649211.52	1196438.22
19	685794.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK KOSCO OIL.

BENCHMARK ELEVATION IS 2.84 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/19/15
Survey Date:09/23/14,09/24/14
Contract no.:
Plot date:
Plot by: Michael J. Kalisik
Scale: 1" = 100'

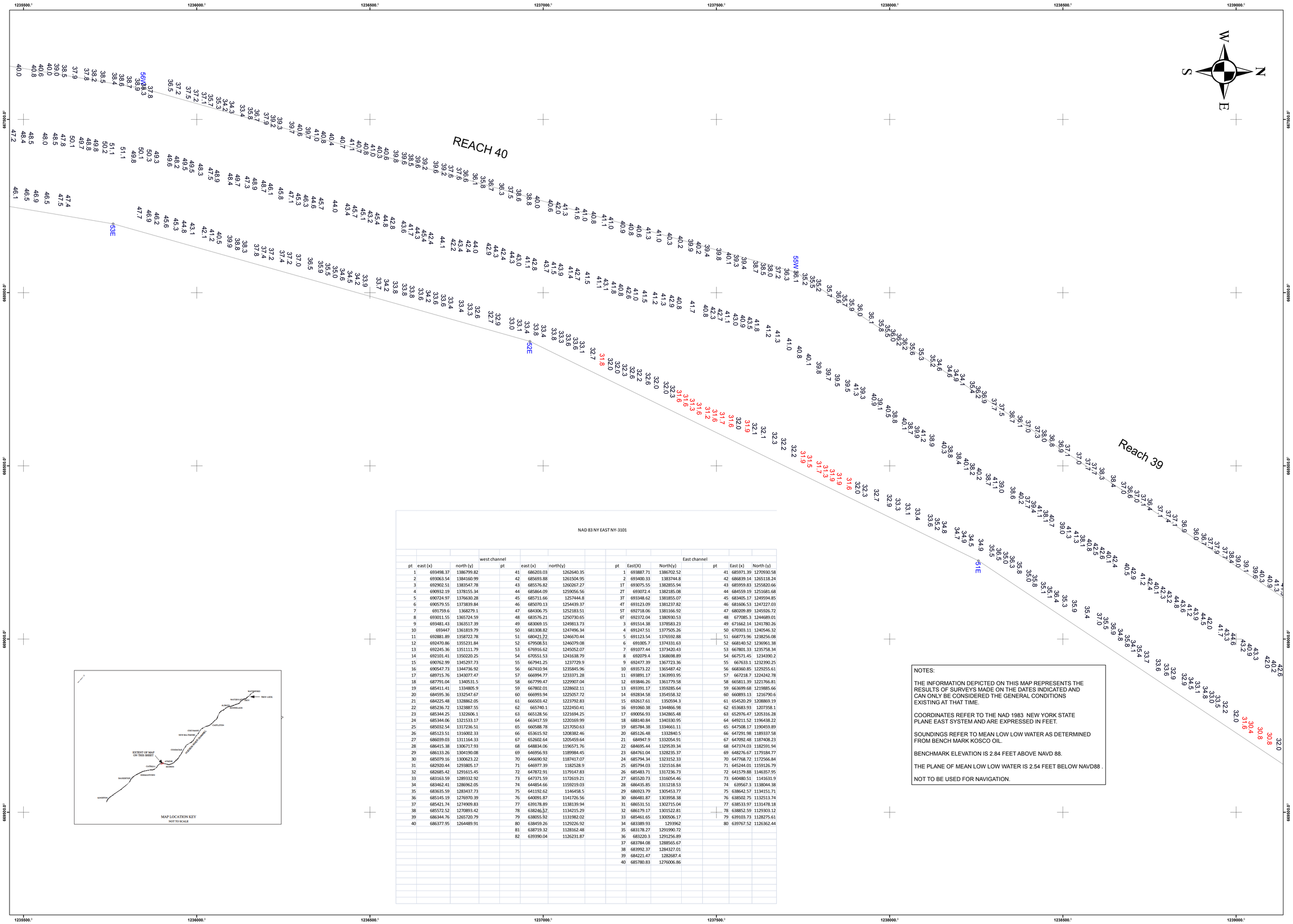
DRAWN BY: D. Kalisik
DESIGNED BY: R. Berman
REVIEWED BY: Jim Smith
RE-REVIEWED BY: W. F. Petronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, PLANNING AND POLICY

Brandow PT to Light 126
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 2



MAP LOCATION KEY
NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel

pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1288332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

East channel

pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK KOSCO OIL.

BENCHMARK ELEVATION IS 2.84 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

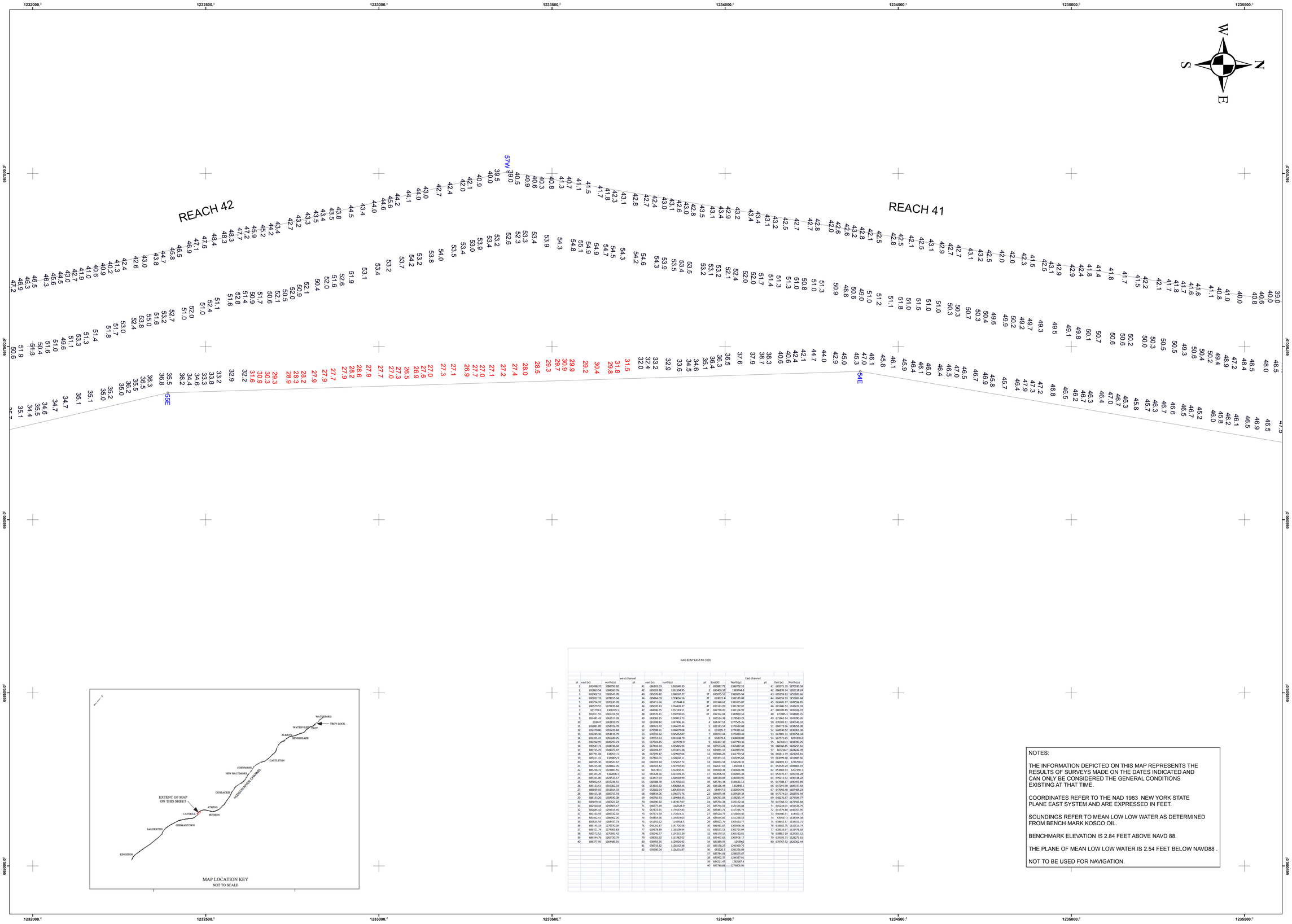
Date: 02/19/15
Survey Date:08/24/14
Contract no.:
Plot date:
Plot scale: Scale: 1" = 50'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DRAWN BY: D. Karlok
DESIGNED BY: R. Samain
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
REVIEWED BY: Richard J. Karlok, Supervisor Hydrographer
APPROVED BY: William F. Petronis, CHIEF, ENGINEERING DIVISION

Brandow PT to Light 126
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 2



NAD-83 NY EAST NY-3101

	west channel					East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	691498.37	1386799.82	41	686203.03	1262640.95	1	691887.71	1386702.52	41	685971.39	1270930.58
2	691063.54	1384560.99	42	685693.88	1261504.95	2	691400.18	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	691675.92	1382855.94	43	685959.83	1259240.66
4	690932.19	1378015.34	44	685864.09	1259056.56	2T	691672.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	691348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	691219.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684906.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245026.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	679585.3	1244689.05
9	693481.43	1363517.39	49	683069.15	1249813.73	7	691514.38	1378583.23	49	673162.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	8	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	9	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	10	691035.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	11	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	676551.53	1241638.79	12	691079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	13	692477.39	1367723.36	55	667631.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	14	691573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	15	691895.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229607.04	16	691846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	17	691391.17	1355285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	18	691014.58	1354558.32	60	660893.13	1216796.6
21	684225.48	1328662.05	61	666503.42	1223702.83	19	692617.61	1350594.3	61	654520.29	1208869.39
22	685236.72	1323897.55	62	665740.1	1222450.41	20	691060.38	1344866.98	62	653683.93	1207058.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	689140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	689784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208362.46	20	685126.48	1332840.5	66	647295.98	1189107.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332554.91	67	647092.48	1187408.23
28	686415.38	1309717.93	68	648834.06	1196071.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179584.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1321512.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646077.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647072.91	1179047.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289132.92	73	647071.59	1172619.21	27	685520.73	1316554.46	73	640480.51	1143631.9
34	683462.41	1286962.05	74	644854.66	1155019.03	28	686435.85	1311218.53	74	639547.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1144658.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276701.39	76	640391.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686719.17	1301522.81	78	638852.59	1129203.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686777.95	1264489.91	80	638459.26	1129226.92	34	683389.55	1293962	80	639767.52	1126262.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	681020.3	1291256.89			
						37	681784.08	1288565.67			
						38	681992.37	1284327.01			
						39	684221.43	1282687.4			
						40	685780.43	1279006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK KOSCO OIL.

BENCHMARK ELEVATION IS 2.84 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/23/15
Survey Date:09/24/14
Contract no.:
Plot date:
Plot by: Thomas J. Kanick
Scale: 1" = 100'

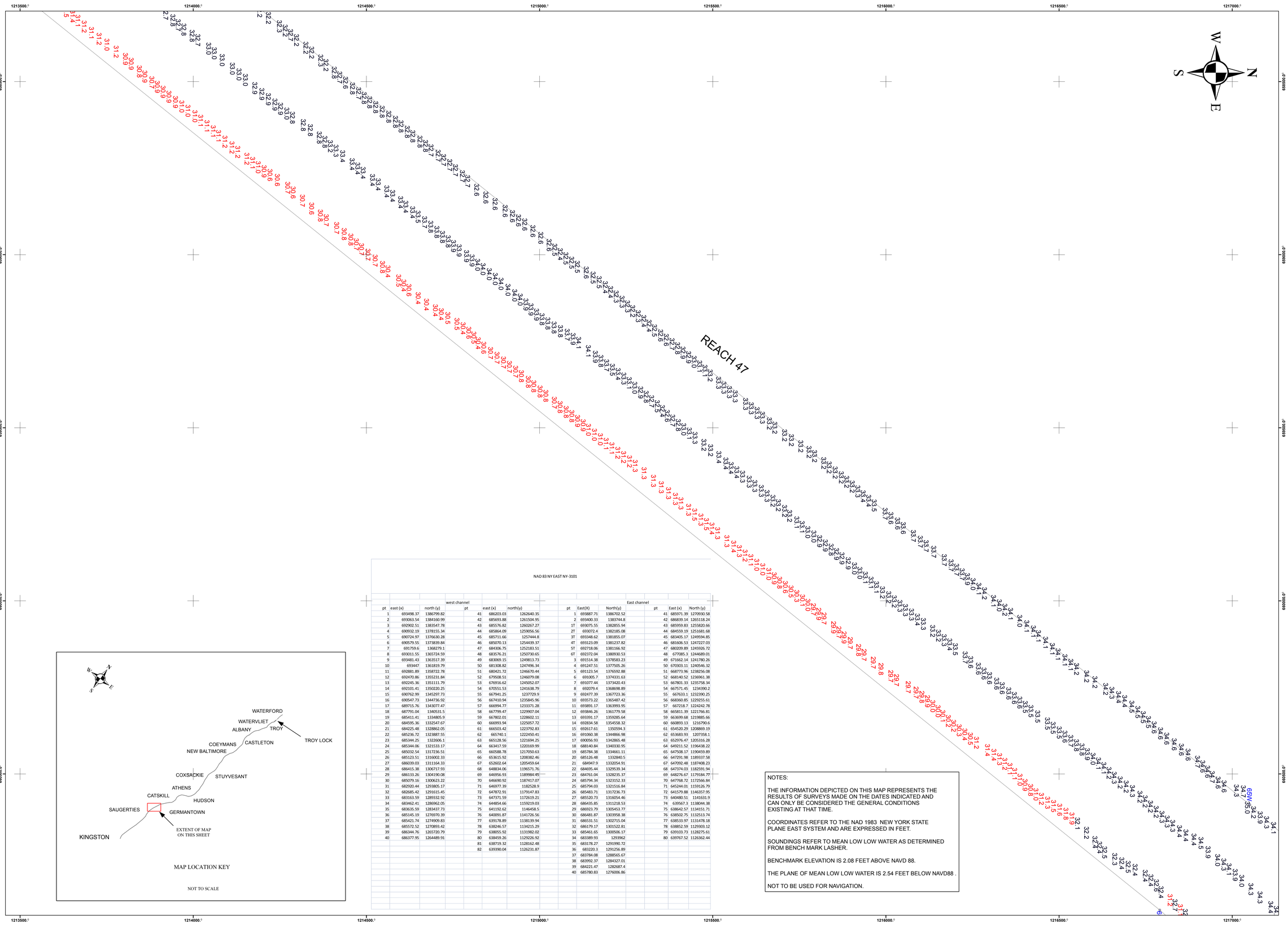
DRAWN BY: D. Kanick
DESIGNED BY: R. Beinain
REVIEWED BY: Jim Smith
REVIEWED BY: W. F. Petrovis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: CIVIL ENGINEER — James B. Smith
APPROVED BY: CHIEF, PROJECT MANAGEMENT — William F. Petrovis

RB 121 to Catskill Light
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 1



NAD 83 NY EAST NY-3101

west channel					
pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684806.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189884.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1279070.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

East channel					
pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683794.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK LASHER.

BENCHMARK ELEVATION IS 2.08 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

Date: 02/18/15
Survey Date:09/30/14
Contract no.:
Plot date:
Plot by: Daniel J. Kanik
Scale: 1" = 100'

DRAWN BY: D. Kanik
DESIGNED BY: R. Serrian
REVIEWED BY: Daniel J. Kanik
REVISED BY:
REVIEWED BY: W. F. Parsons

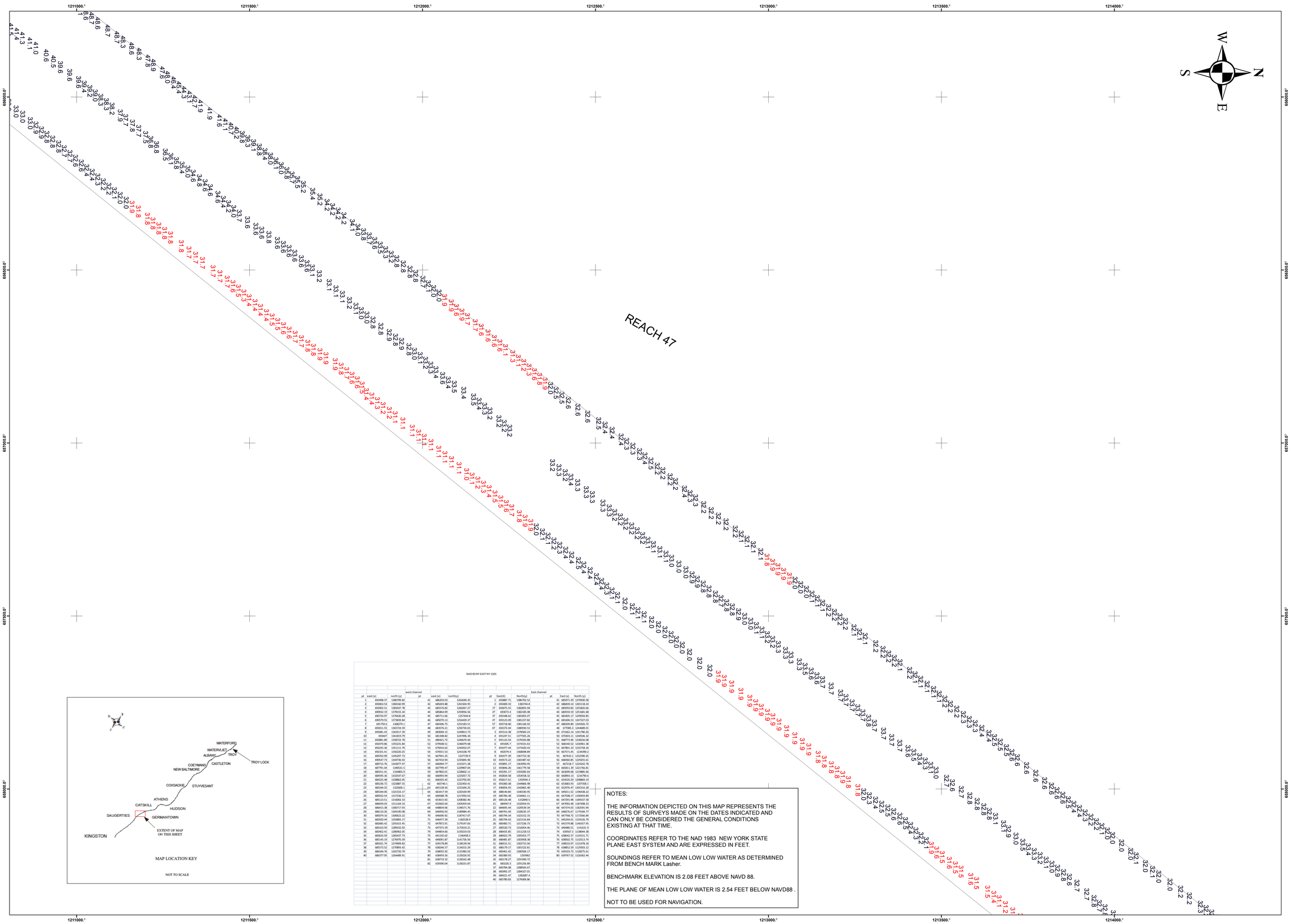
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith
CIVIL ENGINEER

APPROVED BY: William F. Parsons
CHIEF, PROJECT MANAGEMENT

North Germantown Reach
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 4



NAD 83 NY EAST NY: 3103

West channel

pt	east (x)	north (y)
1	693408.37	1386799.82
2	693063.54	1384160.39
3	692902.51	1383547.78
4	690032.19	1378155.34
5	690724.97	1373630.28
6	690579.55	1373839.84
7	691759.6	1368279.1
8	693015.55	1365724.59
9	693481.43	1363517.39
10	693447	1361819.79
11	692881.89	1358722.78
12	692470.86	1355231.84
13	692245.36	1351111.79
14	692331.41	1350220.25
15	692762.99	1345297.73
16	692547.73	1344736.92
17	689715.76	1343077.47
18	687791.04	1340521.5
19	685411.41	1334805.9
20	684595.36	1332547.67
21	684225.48	1328862.05
22	685236.72	1323887.55
23	685344.25	1322606.1
24	685344.06	1321531.17
25	685032.54	1317236.51
26	685123.51	1316653.33
27	686039.03	1311564.33
28	686471.38	1308137.93
29	686133.26	1304190.38
30	685079.36	1303623.23
31	682920.44	1293805.17
32	682685.42	1291615.45
33	683163.59	1289132.92
34	683462.41	1286962.05
35	683635.59	1283437.73
36	685145.19	1279370.39
37	685421.74	1274909.83
38	685572.52	1272693.42
39	686344.76	1265720.79
40	686377.95	1264689.91

pt	east (x)	north(y)
41	686203.03	1262640.35
42	685693.88	1261504.95
43	685576.82	1260267.27
44	685864.09	1259056.56
45	685711.66	1253444.8
46	685070.13	1254439.37
47	684306.75	1252183.51
48	683576.21	1250730.65
49	683069.15	1249813.73
50	681308.82	1247496.34
51	680421.72	1246670.44
52	679038.51	1246079.28
53	676916.62	1245052.07
54	676911.53	1245638.79
55	667941.25	1237729.9
56	667419.94	1235845.96
57	668994.77	1233371.28
58	667799.47	1229907.04
59	667802.01	1228632.11
60	668993.94	1225017.72
61	666503.42	1223792.83
62	665740.1	1223450.41
63	665128.56	1221694.25
64	663417.59	1220169.99
65	660588.78	1217050.63
66	653621.92	1208302.46
67	652602.64	1205419.64
68	649146.06	1198171.76
69	646956.93	1189984.45
70	646600.92	1187147.07
71	646077.39	1182628.9
72	647872.91	1179147.83
73	647371.59	1173619.21
74	644854.66	1159219.03
75	641332.62	1146458.5
76	640991.87	1141726.56
77	639178.89	1138139.94
78	638246.57	1134215.29
79	638055.92	1131982.02
80	638459.26	1129226.92
81	638719.32	1128162.48
82	639990.04	1126231.87

East channel

pt	East(X)	North(y)
1	693887.71	1386702.52
2	693400.33	1383344.8
1T	693075.55	1382855.94
2T	693072.4	1382185.08
3T	693348.62	1381855.07
4T	693121.09	1381227.82
5T	692718.06	1381166.92
6T	692723.04	1380930.53
3	693114.38	1379583.23
4	691247.51	1377505.26
5	691123.54	1376592.88
6	691005.7	1374331.63
7	691077.44	1373420.43
8	691079.4	1368698.89
9	692477.39	1367723.36
10	692573.22	1365487.42
11	691891.17	1363993.95
12	691846.26	1361779.58
13	691931.17	1359285.64
14	692014.58	1354558.32
15	692017.61	1352594.3
16	691060.38	1344866.08
17	690656.93	1342865.48
18	688140.84	1340330.95
19	685784.38	1334661.11
20	685126.48	1333840.5
21	684947.9	1332554.91
22	684695.44	1329539.34
23	684761.04	1328235.37
24	685736.34	1321512.33
25	685794.03	1321516.84
26	685483.71	1317236.73
27	685520.73	1316554.46
28	686435.85	1311218.53
29	686629.79	1305453.77
30	686481.87	1303958.38
31	686531.51	1302715.04
32	686179.17	1301522.81
33	685461.65	1300506.17
34	683389.93	1291962
35	683178.27	1291390.72
36	683220.3	1291256.89
37	683784.08	1288565.67
38	683992.37	1284327.01
39	684221.47	1282687.4
40	685780.83	1276006.86

pt	East (x)	North (y)
41	685971.39	1270930.58
42	686839.14	1265118.24
43	685959.83	1259280.66
44	684059.19	1251681.68
45	683405.17	1249594.85
46	681606.53	1247227.03
47	680209.89	1245926.72
48	677685.1	1244689.01
49	676662.14	1241780.26
50	676003.11	1240546.32
51	668773.96	1238256.08
52	668140.52	1236963.38
53	667801.33	1235758.34
54	667571.45	1234390.2
55	667633.1	1232390.25
56	668360.85	1229255.61
57	667218.7	1224242.78
58	665811.39	1221756.81
59	663699.68	1219885.66
60	660993.13	1216790.65
61	654520.29	1208869.19
62	653683.93	1207558.1
63	652976.47	1205316.28
64	649211.52	1196428.22
65	647508.17	1190439.89
66	647291.98	1189157.58
67	647092.48	1187408.23
68	647374.03	1182591.96
69	648276.67	1179184.77
70	647768.72	1172566.84
71	645244.01	1159126.79
72	641579.88	1146527.95
73	640460.51	1141631.9
74	639527.3	1138044.38
75	638642.57	1134151.71
76	638502.75	1132513.74
77	638019.97	1131478.18
78	638852.59	1129303.12
79	639503.79	1125875.61
80	639707.52	1126362.44

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK Lasher.

BENCHMARK ELEVATION IS 2.08 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

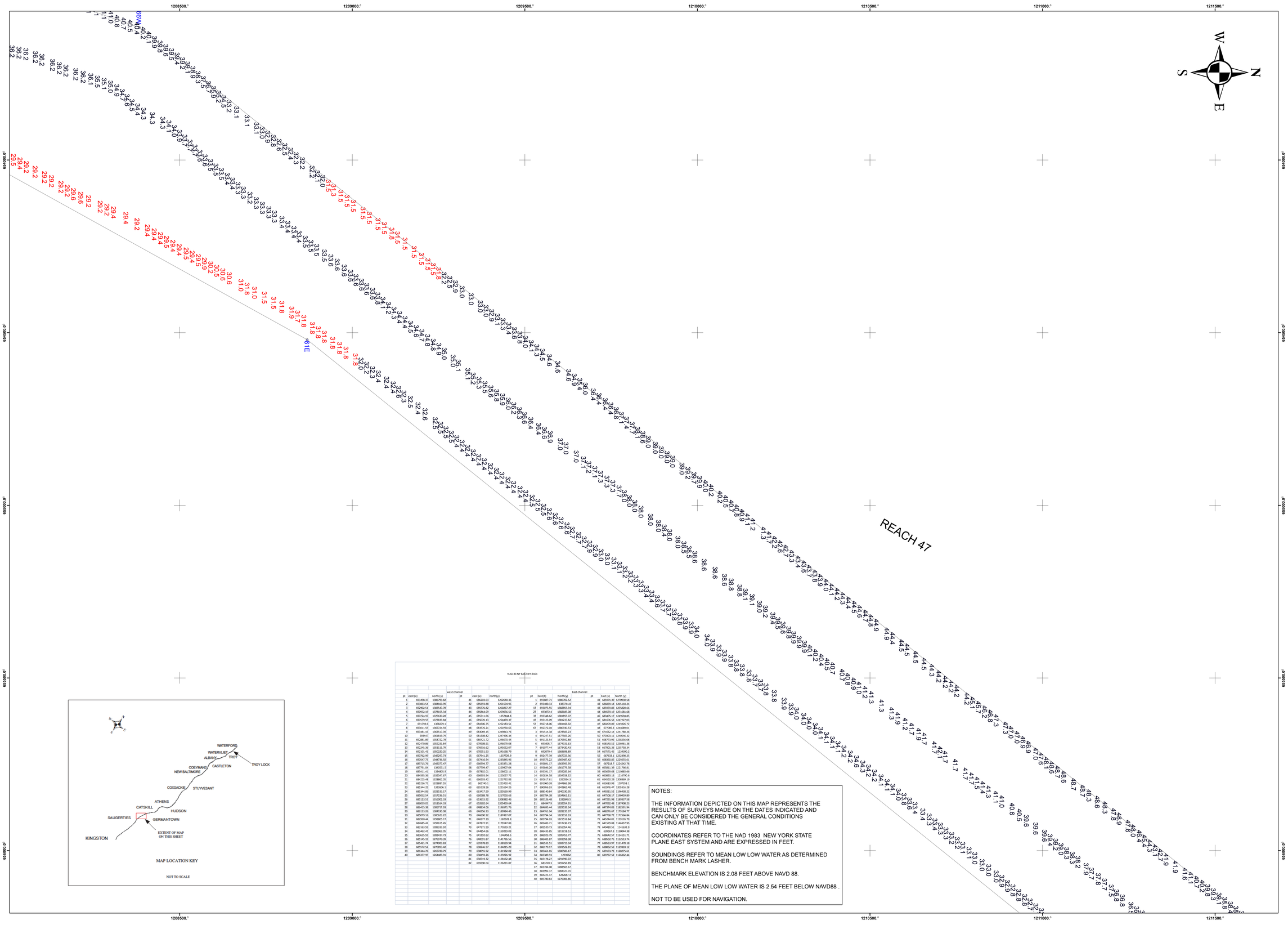
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Pietronis, CHIEF, PLANNING DIVISION

DRAWN BY: D. Karlok
DESIGNED BY: R. Berman
REVIEWED BY: D. Karlok
REVIEWED BY: W. F. Pietronis

Date: 02/18/15
Survey Date:05/20/14
Contract no.:
Plot date: 02/18/15
Plot by: Daniel J. Karlok
Scale: 1" = 300'

North Germantown Reach Condition Survey Fathometer Soundings in Feet

Sheet reference number:
2 OF 4



NAD 83 NY EAST NY-3101

			west channel										East channel						
pt	east (x)	north (y)	pt	east (x)	north(y)					pt	East(X)	North(y)		pt	East (x)	North (y)
1	693488.37	1386799.82				41	686203.03	1362640.35		1	691887.71	1386700.52		41	685971.39	1270930.58
2	693003.54	1386560.99				42	685693.88	1361504.95		2	691400.33	1383744.8		42	686839.14	1265118.24
3	692932.51	1385547.78				43	685576.82	1260267.27		3T	691075.55	1382855.94		43	685955.83	1255820.66
4	690932.19	1378255.34				44	685864.09	1259056.56		3T	691073.4	1382185.08		44	684559.39	1251681.68
5	690724.97	1376630.28				45	685711.66	1257444.8		3T	691048.62	1381855.07		45	683405.57	1249594.85
6	690579.51	1373839.84				46	685570.13	1254439.37		4T	691023.09	1381217.82		46	681606.53	1247227.03
7	691759.6	1368279.1				47	684306.75	1251853.51		5T	690718.06	1381166.92		47	680209.89	1245926.72
8	693011.55	1365724.59				48	683576.21	1250738.65		6T	691072.04	1380955.53		48	677085.3	1244689.01
9	693481.43	1363317.39				49	683069.15	1249813.73		8	691514.38	1378563.23		49	671662.14	1241780.26
10	693447	1361810.79				50	681308.82	1247496.34		9	691347.51	1377925.26		50	670301.11	1240546.32
11	692881.89	1358732.78				51	680421.72	1246670.44		9	691123.54	1376092.88		51	668773.96	1238256.08
12	692475.86	1355235.84				52	679508.51	1244979.98		9	691005.7	1374311.63		52	666140.51	1235861.38
13	692245.36	1351115.79				53	679016.62	1243052.07		9T	690974.44	1373430.43		53	667801.33	1233758.34
14	692101.41	1350220.25				54	678551.53	1241638.79		9	690974.4	1368698.89		54	667575.45	1234362.2
15	690763.99	1345207.73				55	667941.35	1237729.9		9	692477.39	1367733.36		55	667631.1	1232390.25
16	690547.73	1344736.92				56	667610.94	1235845.96		10	693573.22	1365487.42		56	668360.65	1229253.61
17	689715.76	1343077.47				57	666994.77	1233371.28		11	693891.17	1363993.95		57	667218.7	1224242.78
18	687791.04	1340531.5				58	667799.47	1229607.04		12	693846.26	1361779.58		58	665811.39	1221766.81
19	685411.41	1334805.9				59	667802.01	1228602.11		13	693391.17	1359285.64		59	663699.68	1219885.46
20	684595.36	1332547.67				60	666993.94	1225057.72		14	692834.58	1354558.12		60	660893.13	1216796.6
21	684229.48	1328862.05				61	666503.42	1223792.83		15	692617.61	1350594.3		61	654520.29	1208889.19
22	685236.72	1323887.55				62	665740.1	1222451.41		16	691060.38	1344866.98		62	653683.93	1207358.1
23	685344.25	1322606.1				63	665128.56	1221694.25		17	690056.93	1342865.48		63	652976.47	1205316.28
24	685344.06	1321310.17				64	663617.59	1220169.99		18	688140.84	1340330.95		64	649231.52	1196428.22
25	685051.54	1317236.51				65	660588.78	1217050.63		19	685784.88	1334661.11		65	647508.17	1190459.89
26	685123.51	1316002.33				66	653615.92	1208382.46		20	685126.48	1332865.5		66	647291.98	1189337.58
27	686039.03	1311164.33				67	653632.64	1205459.64		21	684947.9	1332054.91		67	647092.48	1187408.23
28	686415.38	1306717.93				68	648834.06	1190571.76		22	684695.44	1329539.34		68	647374.03	1182591.94
29	687000.26	1304190.08				69	646956.93	1189984.45		23	684761.04	1328235.37		69	646276.47	1175584.77
30	685079.16	1300623.22				70	646690.92	1187417.07		24	685794.34	1323152.33		70	647768.72	1172566.84
31	682920.44	1293805.17				71	646977.39	1182528.9		25	685794.03	1321516.84		71	649244.03	1155126.79
32	682685.42	1291615.45				72	647872.91	1179147.83		26	685483.71	1317236.73		72	641579.88	1146357.95
33	681916.59	1289132.92				73	647375.59	1173219.21		27	685320.73	1316056.46		73	640488.51	1141011.9
34	683462.41	1286962.05				74	644854.66	1159219.03		28	686435.85	1311218.53		74	639567.3	1138044.38
35	683635.59	1283437.73				75	641152.62	1144658.5		29	686923.79	1305453.77		75	638642.57	1134151.71
36	685145.19	1276970.39				76	640091.87	1141726.56		30	686481.87	1303958.38		76	638520.75	1133513.74
37	685421.74	1274693.83				77	639178.89	1138139.94		31	686551.51	1302715.04		77	638539.97	1131478.18
38	685572.52	1272893.42				78	638246.57	1134215.29		32	686179.57	1301522.81		78	638852.59	1129303.12
39	686344.76	1267230.79				79	638055.92	1131982.02		33	685461.65	1300506.17		79	639103.73	1126275.93
40	686377.95	1264889.91				80	638459.26	1129226.92		34	683389.93	1299962		80	639767.72	1123682.44
						81	638719.32	1128162.48		35	683178.27	1299590.72				
						82	639390.04	1126231.87		36	683203.3	1291256.89				
										37	683784.08	1288565.67				
										38	683992.37	1284327.01				
										39	684221.47	1282687.4				
										40	685780.83	1279006.86				

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK LASHER.

BENCHMARK ELEVATION IS 2.08 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER

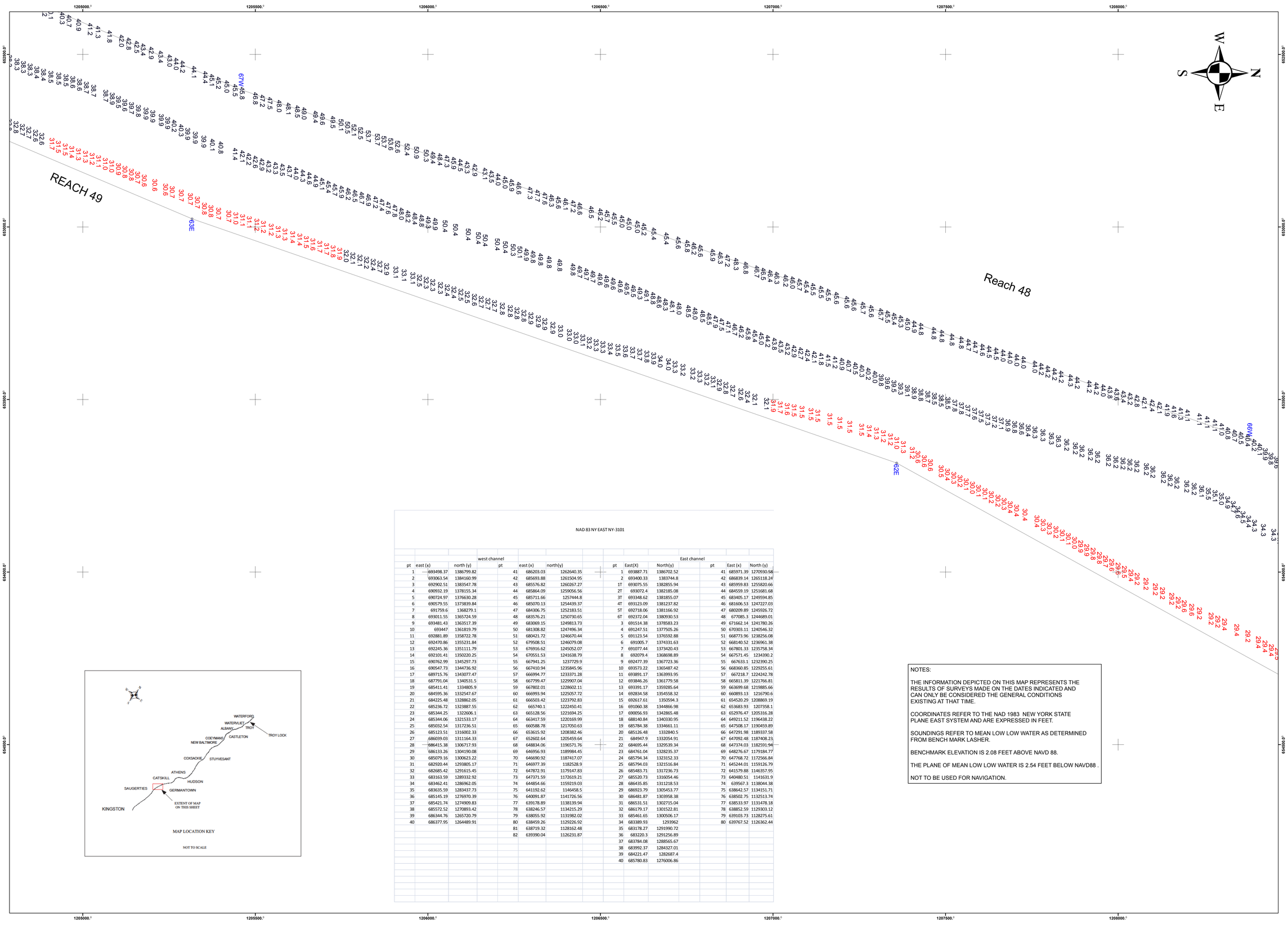
APPROVED BY: William F. Parisoela, CHIEF, PLANNING & ENGINEERING

DRAWN BY: D. Karlok
DESIGNED BY: R. Serrian
REVIEWED BY: J. Karlok
REVIEWED BY: W. F. Parisoela

Date: 02/18/15
Survey Date:09/30/14
Contract no.:
Plot date:
Plotted by: Daniel J. Karlok
Scale: 1" = 100'

North Germantown Reach Condition Survey Fathometer Soundings in Feet

Sheet reference number:
3 OF 4



MAP LOCATION KEY

NOT TO SCALE

NAD 83 NY EAST NY-3101

west channel						East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683889.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK LASHER.

BENCHMARK ELEVATION IS 2.08 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/18/15

Survey Date:09/30/14-10/09/14

Contract no.:

Plot date:
Plot by: Gerald J. Kanick
Scale: 1" = 100'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

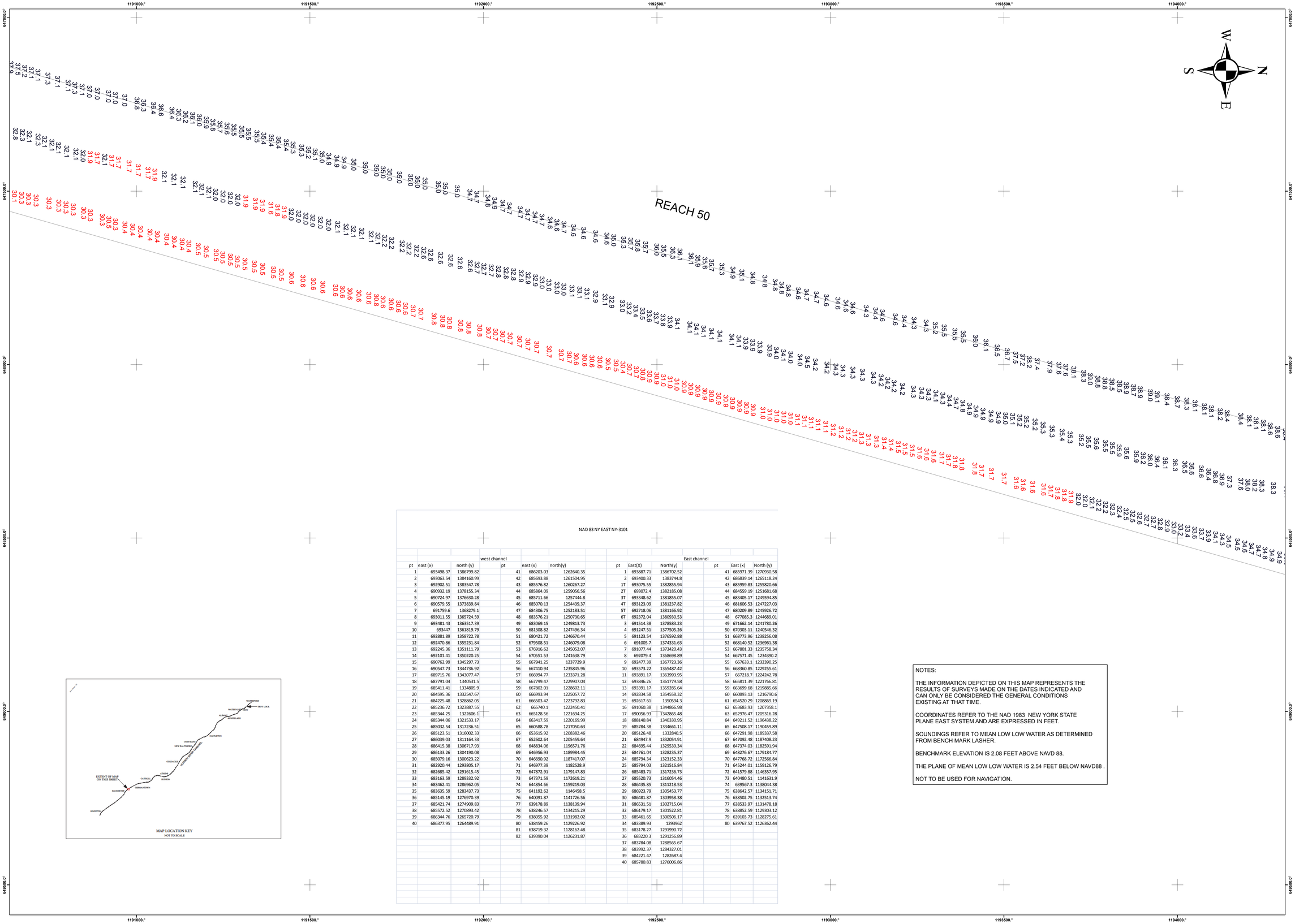
PREPARED BY: D. Kanick
DESIGNED BY: R. Serrian
REVIEWED BY: Gerald J. Kanick
REVIEWED BY: W. F. Parisons

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Parisons, CHIEF, PROJECT MANAGEMENT

North Germantown Reach Condition Survey Fathometer Soundings in Feet

Sheet reference number:

4 OF 4



NAD 83 NY EAST NY-3101

	west channel				
pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	649834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

	East channel				
pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK LASHER.

BENCHMARK ELEVATION IS 2.08 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

Date: 02/18/15
Survey Date:10/09/14
Contract no.:
File date:
Plot Date: Thursd J. Kotak
Scale: 1" = 100'

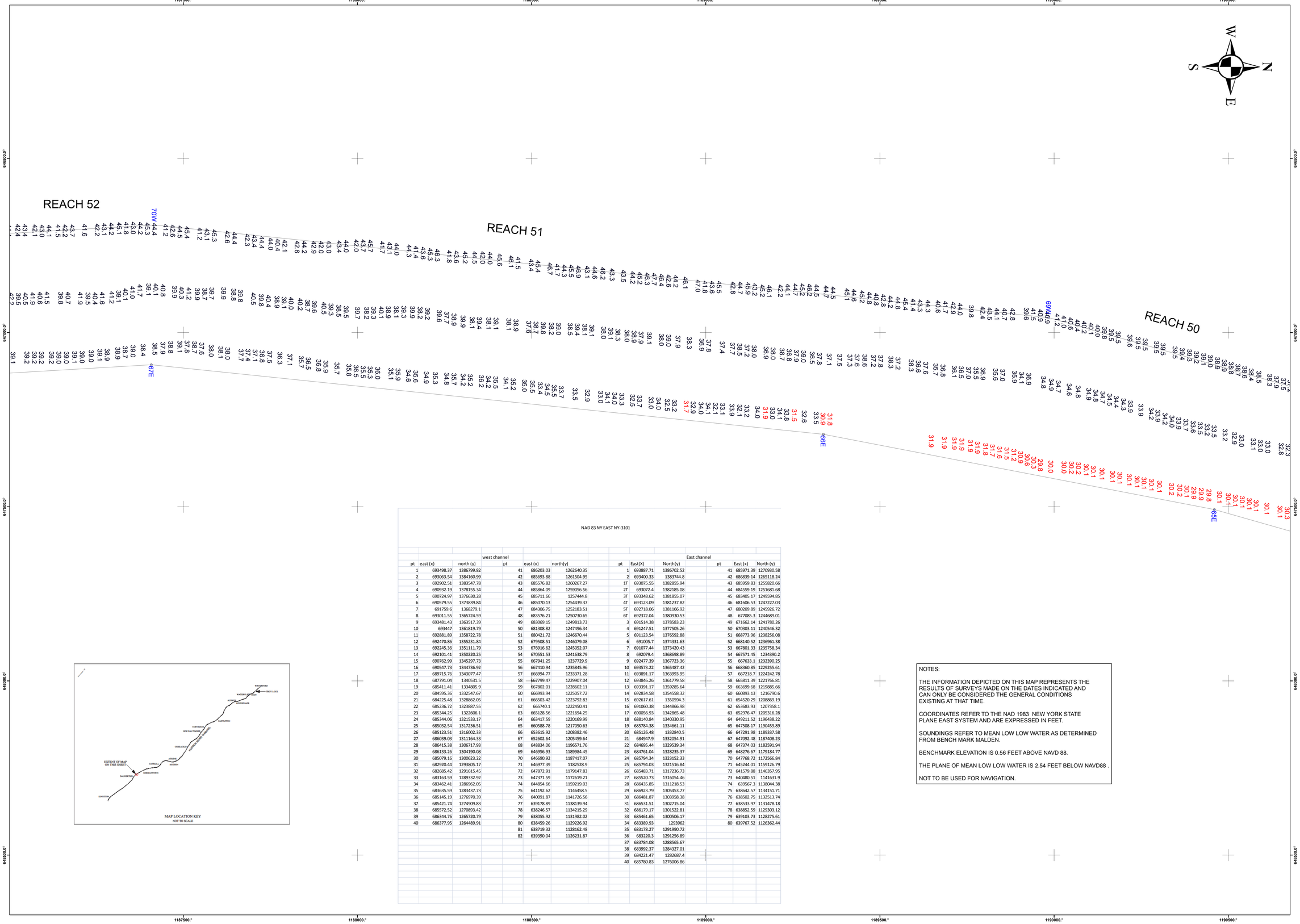
DRAWN BY: D. Kotak
DESIGNED BY: R. Bertain
REVIEWED BY: D. Kotak
REVIEWED BY: W. F. Petronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, PLANNING DIVISION

Malden Reach Condition Survey Fathometer Soundings in Feet

Sheet reference number:
1 OF 2



NAD 83 NY EAST NY-3101

	west channel					East channel				
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK MALDEN.

BENCHMARK ELEVATION IS 0.56 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	By

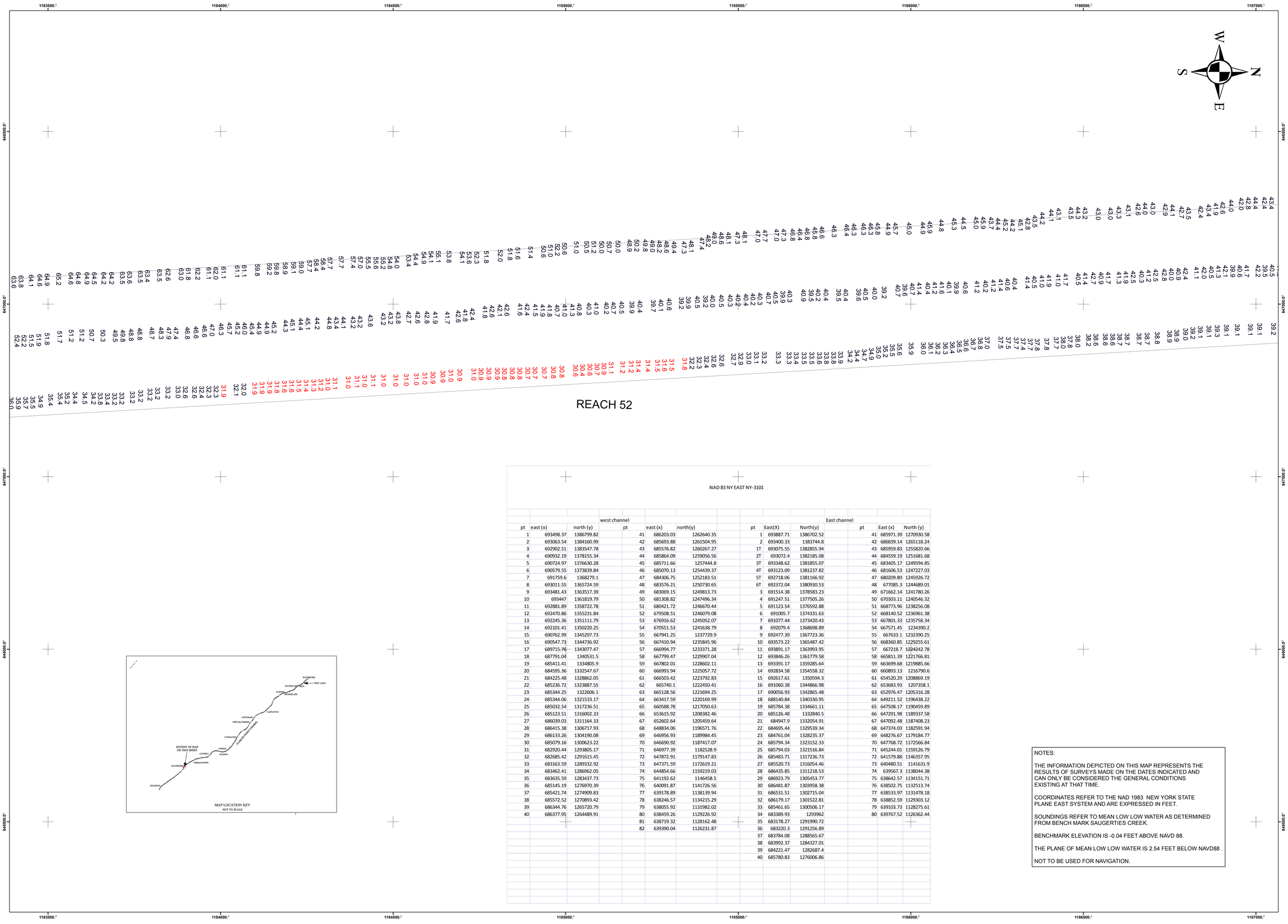
Date: 02/18/15
Survey Date:10/09/14,10/10/14
Contract no.:
Plot date:
Plot by: Sean J. Kanik
Scale: 1" = 100'

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DRAWN BY: D. Kanik
DESIGNED BY: R. Serrian
RECEIVED BY: Jim Fitzgerald
REVIEWED BY: W. F. Parisons
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Parisons, CHIEF, PROJECT MANAGEMENT

Malden Reach Condition Survey Fathometer Soundings in Feet

Sheet reference number:
2 OF 2



NAD 83 NY EAST NY-3101

west channel					
pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

East channel					
pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

MAP LOCATION KEY
NOT TO SCALE

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK SAUGERTIES CREEK.

BENCHMARK ELEVATION IS -0.04 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.54 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

Date: 02/19/15
Survey Date:10/16/14
Contract no.:
Proj date:
Plot Date: Tuesd J. Kurlok
Scale: 1" = 100'

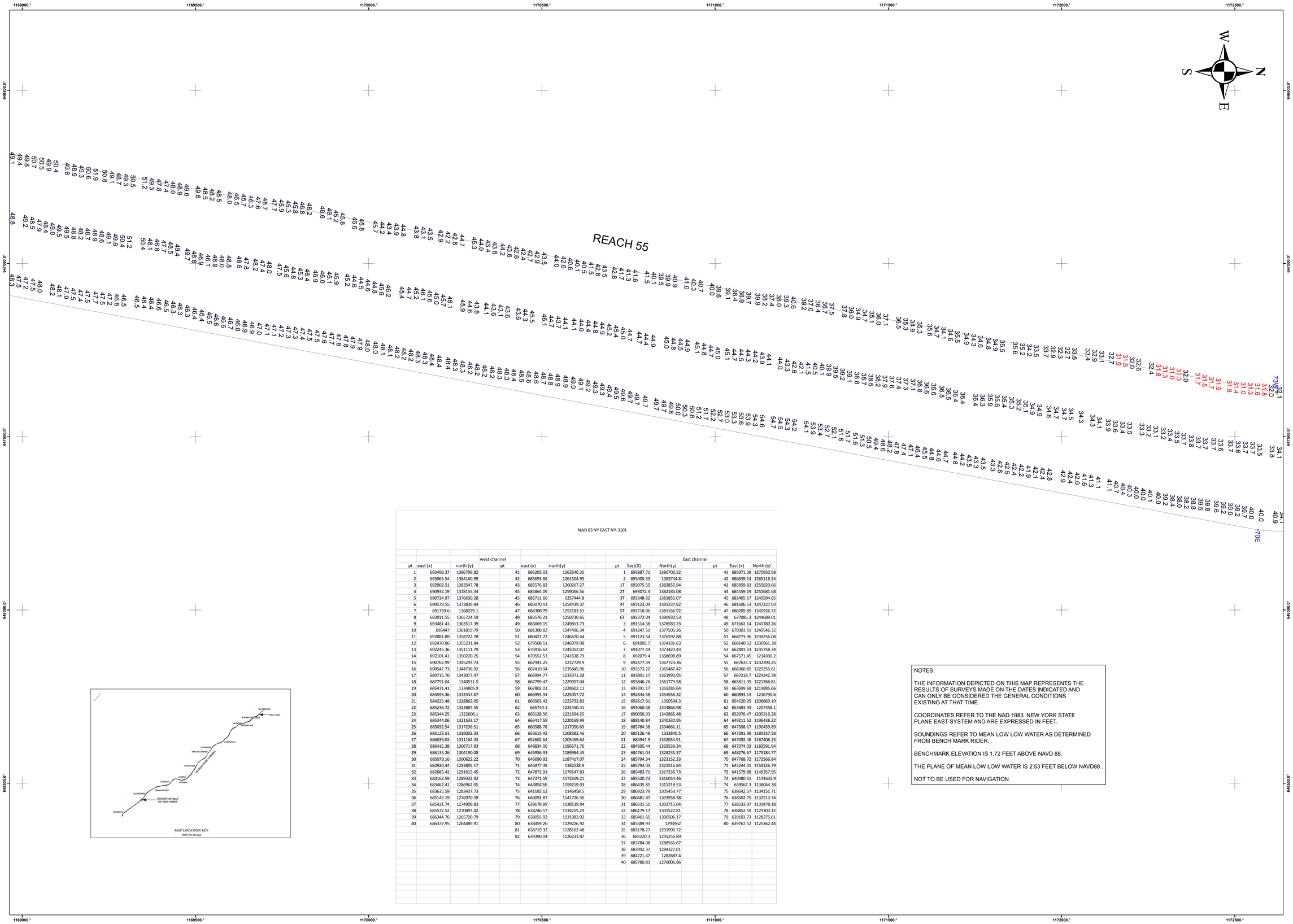
DRAWN BY: D. Kurlok
DESIGNED BY: R. Bersan
REVIEWED BY: Chris Tomaszewski
REVIEWED BY: W. F. Petrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, COL, Commanding
APPROVED BY: William F. Petrone, Chief, Hydrology & Hydraulics

RB 94 north 4000 ft
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 1



NAD 83 NY EAST NY-3101

			west channel						East channel		
pt	east (x)	north (y)	pt	east (x)	north(y)	pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48	35	683178.27	1291990.72			
			82	639390.04	1126231.87	36	683220.3	1291256.89			
						37	683784.08	1288565.67			
						38	683992.37	1284327.01			
						39	684221.47	1282687.4			
						40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RIDER.

BENCHMARK ELEVATION IS 1.72 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.53 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Apv

Date: 02/18/15
Survey Date: 10/06/14
Contract no.:
Plot date:
Plot by: Gregg J. Kanik
Scale: 1" = 300'

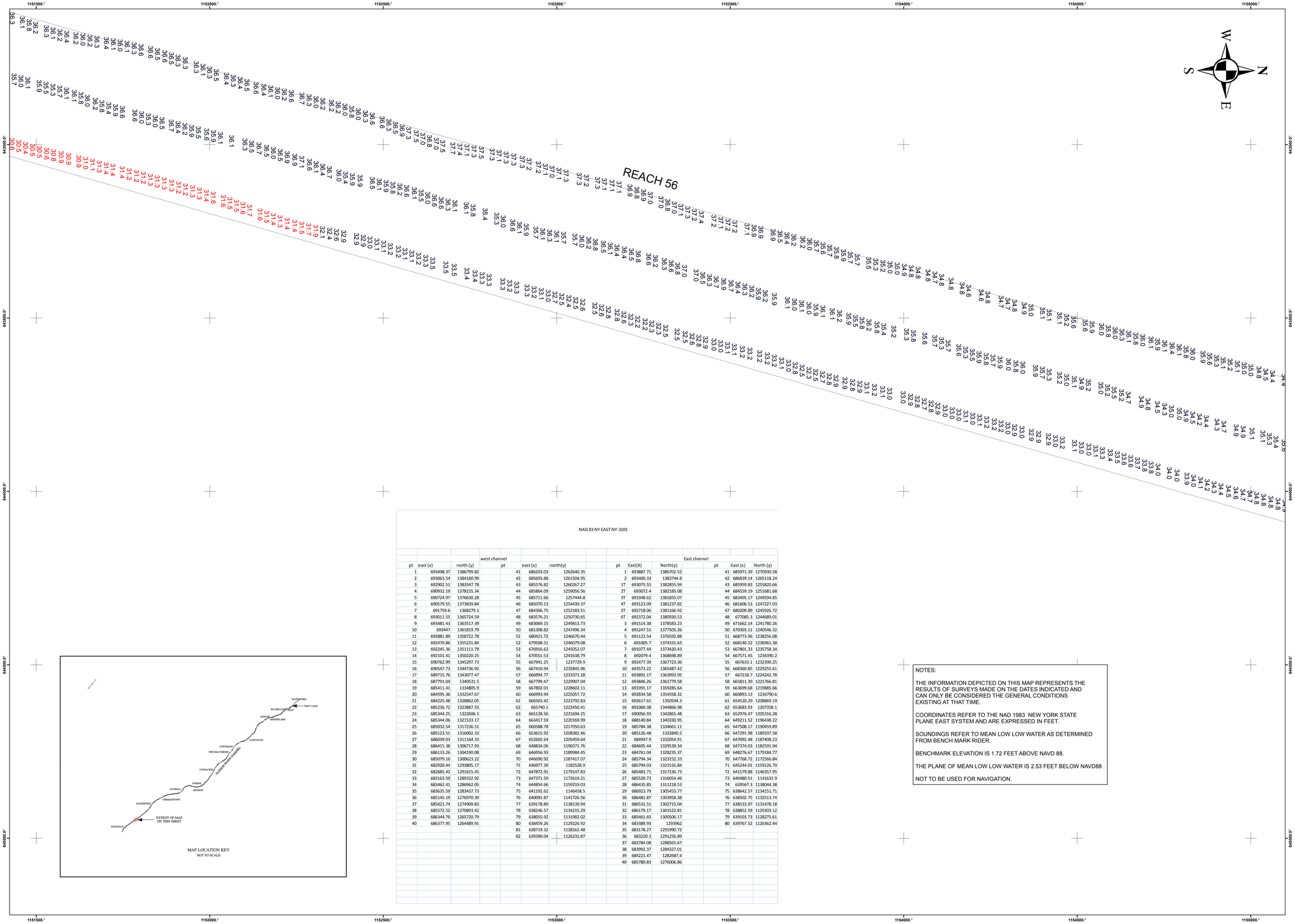
DRAWN BY D. Kanik
DESIGNED BY R. Berman
REVIEWED BY J. Smith
REVIEWED BY W. F. Pettorossi

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Pettorossi, CHIEF, PLANNING DIVISION

Tivoli Reach Condition Survey Fathometer Soundings in Feet

Sheet reference number:
1 OF 1



NAD 83 NY EAST NY-3101

	west channel				
pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682922.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1286962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

	East channel				
pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

MAP LOCATION KEY
NOT TO SCALE

NOTES:

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COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RIDER.

BENCHMARK ELEVATION IS 1.72 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.53 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Date	Description	Mark	Date	Description	Mark

Date: 02/20/15
Survey Date:10/06/14
Contract no.:
Proj date:
Proj Mgr: Daniel J. Kalish
Scale: 1" = 100'

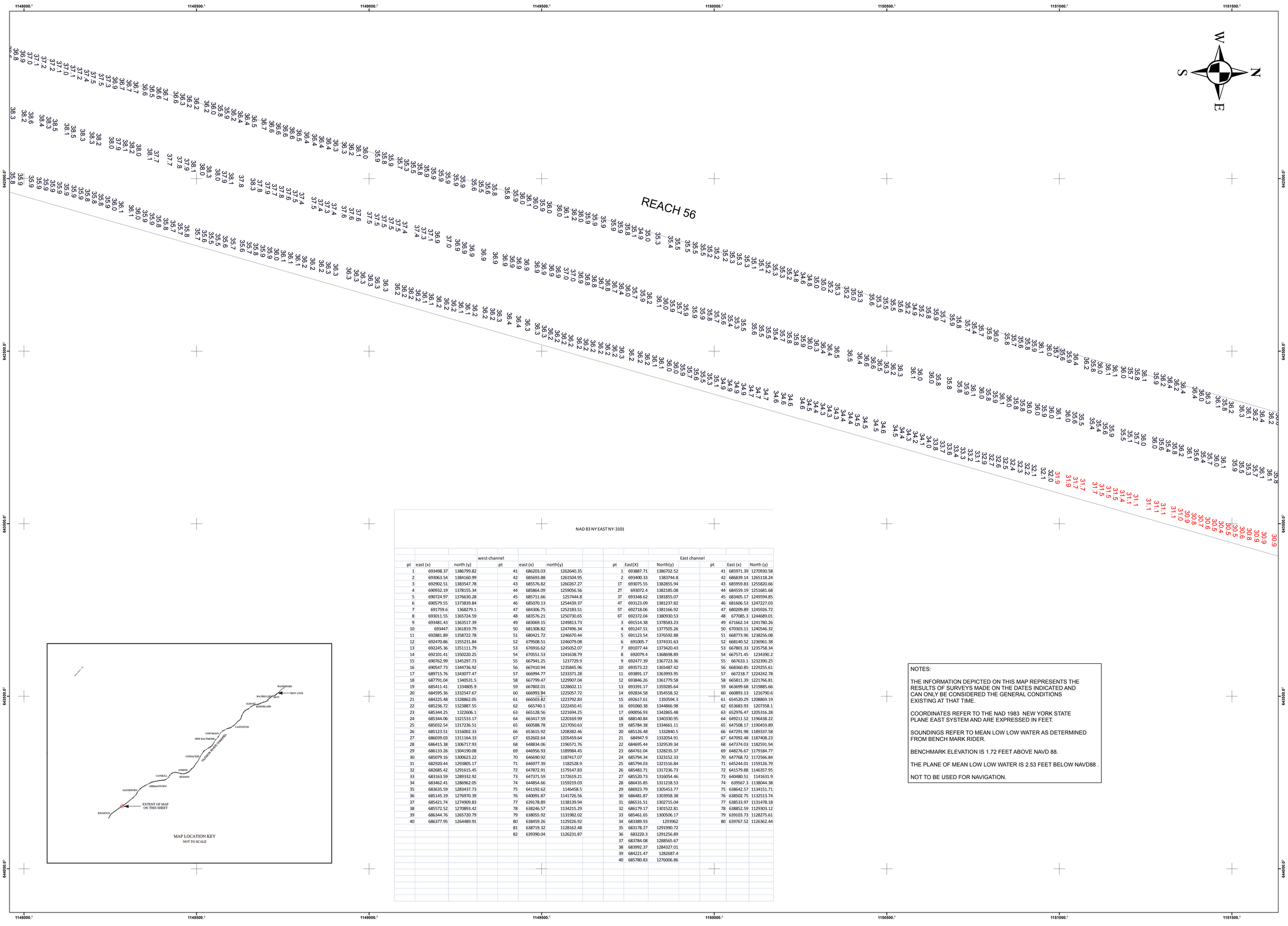
DRAWN BY: D. Kalish
DESIGNED BY: R. Bertain
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrone, CHIEF, ENGINEERING DIVISION

RB 82 to Kingston-Rhinecliff Bridge
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 2



NAD 83 NY EAST NY-3101

	west channel				
pt	east (x)	north (y)	pt	east (x)	north(y)
1	693498.37	1386799.82	41	686203.03	1262640.35
2	693063.54	1384160.99	42	685693.88	1261504.95
3	692902.51	1383547.78	43	685576.82	1260267.27
4	690932.19	1378155.34	44	685864.09	1259056.56
5	690724.97	1376630.28	45	685711.66	1257444.8
6	690579.55	1373839.84	46	685070.13	1254439.37
7	691759.6	1368279.1	47	684306.75	1252183.51
8	693011.55	1365724.59	48	683576.21	1250730.65
9	693481.43	1363517.39	49	683069.15	1249813.73
10	693447	1361819.79	50	681308.82	1247496.34
11	692881.89	1358722.78	51	680421.72	1246670.44
12	692470.86	1355231.84	52	679508.51	1246079.08
13	692245.36	1351111.79	53	676916.62	1245052.07
14	692101.41	1350220.25	54	670551.53	1241638.79
15	690762.99	1345297.73	55	667941.25	1237729.9
16	690547.73	1344736.92	56	667410.94	1235845.96
17	689715.76	1343077.47	57	666994.77	1233371.28
18	687791.04	1340531.5	58	667799.47	1229907.04
19	685411.41	1334805.9	59	667802.01	1228602.11
20	684595.36	1332547.67	60	666993.94	1225057.72
21	684225.48	1328862.05	61	666503.42	1223792.83
22	685236.72	1323887.55	62	665740.1	1222450.41
23	685344.25	1322606.1	63	665128.56	1221694.25
24	685344.06	1321533.17	64	663417.59	1220169.99
25	685032.54	1317236.51	65	660588.78	1217050.63
26	685123.51	1316002.33	66	653615.92	1208382.46
27	686039.03	1311164.33	67	652602.64	1205459.64
28	686415.38	1306717.93	68	648834.06	1196571.76
29	686133.26	1304190.08	69	646956.93	1189984.45
30	685079.16	1300623.22	70	646690.92	1187417.07
31	682920.44	1293805.17	71	646977.39	1182528.9
32	682685.42	1291615.45	72	647872.91	1179147.83
33	683163.59	1289332.92	73	647371.59	1172619.21
34	683462.41	1288962.05	74	644854.66	1159219.03
35	683635.59	1283437.73	75	641192.62	1146458.5
36	685145.19	1276970.39	76	640091.87	1141726.56
37	685421.74	1274909.83	77	639178.89	1138139.94
38	685572.52	1270893.42	78	638246.57	1134215.29
39	686344.76	1265720.79	79	638055.92	1131982.02
40	686377.95	1264489.91	80	638459.26	1129226.92
			81	638719.32	1128162.48
			82	639390.04	1126231.87

	East channel				
pt	East(X)	North(y)	pt	East (x)	North (y)
1	693887.71	1386702.52	41	685971.39	1270930.58
2	693400.33	1383744.8	42	686839.14	1265118.24
1T	693075.55	1382855.94	43	685959.83	1255820.66
2T	693072.4	1382185.08	44	684559.19	1251681.68
3T	693348.62	1381855.07	45	683405.17	1249594.85
4T	693123.09	1381237.82	46	681606.53	1247227.03
5T	692718.06	1381166.92	47	680209.89	1245926.72
6T	692372.04	1380930.53	48	677085.3	1244689.01
3	691514.38	1378583.23	49	671662.14	1241780.26
4	691247.51	1377505.26	50	670303.11	1240546.32
5	691123.54	1376592.88	51	668773.96	1238256.08
6	691005.7	1374331.63	52	668140.52	1236961.38
7	691077.44	1373420.43	53	667801.33	1235758.34
8	692079.4	1368698.89	54	667571.45	1234390.2
9	692477.39	1367723.36	55	667633.1	1232390.25
10	693573.22	1365487.42	56	668360.85	1229255.61
11	693891.17	1363993.95	57	667218.7	1224242.78
12	693846.26	1361779.58	58	665811.39	1221766.81
13	693391.17	1359285.64	59	663699.68	1219885.66
14	692834.58	1354558.32	60	660893.13	1216790.6
15	692617.61	1350594.3	61	654520.29	1208869.19
16	691060.38	1344866.98	62	653683.93	1207358.1
17	690056.93	1342865.48	63	652976.47	1205316.28
18	688140.84	1340330.95	64	649211.52	1196438.22
19	685784.38	1334661.11	65	647508.17	1190459.89
20	685126.48	1332840.5	66	647291.98	1189337.58
21	684947.9	1332054.91	67	647092.48	1187408.23
22	684695.44	1329539.34	68	647374.03	1182591.94
23	684761.04	1328235.37	69	648276.67	1179184.77
24	685794.34	1323152.33	70	647768.72	1172566.84
25	685794.03	1321516.84	71	645244.01	1159126.79
26	685483.71	1317236.73	72	641579.88	1146357.95
27	685520.73	1316054.46	73	640480.51	1141631.9
28	686435.85	1311218.53	74	639567.3	1138044.38
29	686923.79	1305453.77	75	638642.57	1134151.71
30	686481.87	1303958.38	76	638502.75	1132513.74
31	686531.51	1302715.04	77	638533.97	1131478.18
32	686179.17	1301522.81	78	638852.59	1129303.12
33	685461.65	1300506.17	79	639103.73	1128275.61
34	683389.93	1293962	80	639767.52	1126362.44
35	683178.27	1291990.72			
36	683220.3	1291256.89			
37	683784.08	1288565.67			
38	683992.37	1284327.01			
39	684221.47	1282687.4			
40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK RIDER.

BENCHMARK ELEVATION IS 1.72 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.53 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	By

Mark	Description	Date	By

Date: 02/20/15
Survey Date:10/06/14
Contract no.:
Plot date:
Plot by: Michael J. Kanik
Scale: 1" = 100'

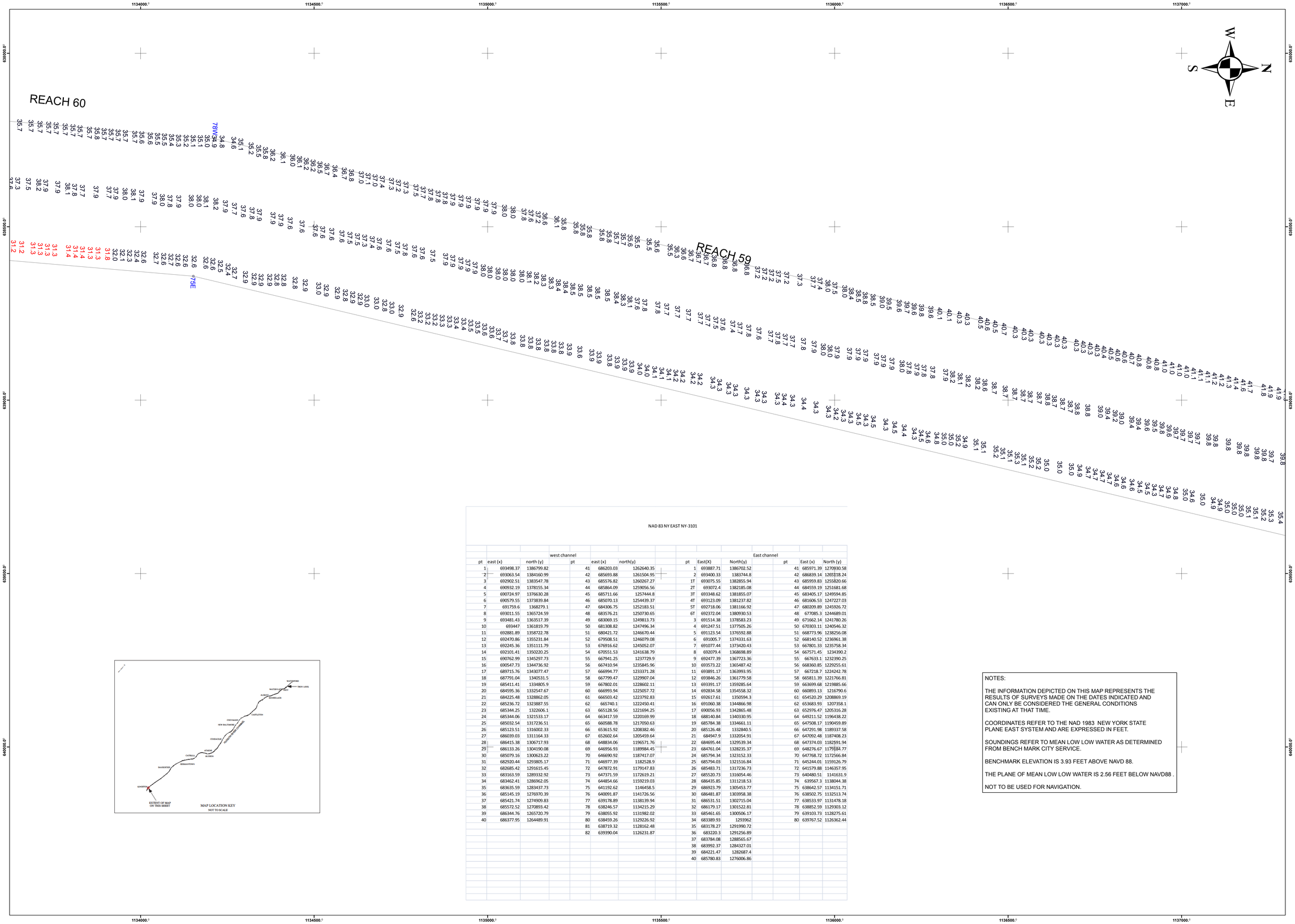
DRAWN BY D. Kanik
DESIGNED BY R. Bertain
REVIEWED BY J. Gaus
REVIEWED BY W. F. Petrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petrone, CHIEF, HYDROGRAPHIC SURVEY

RB 82 to Kingston-Rhinecliff Bridge
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 2



NAD 83 NY EAST NY-3101

west channel						
pt	east (x)	north (y)		pt	east (x)	north(y)
1	693498.37	1386799.82		41	686203.03	1262640.35
2	693063.54	1384160.99		42	685693.88	1261504.95
3	692902.51	1383547.78		43	685576.82	1260267.27
4	690932.19	1378155.34		44	685864.09	1259056.56
5	690724.97	1376630.28		45	685711.66	1257444.8
6	690579.55	1373839.84		46	685070.13	1254439.37
7	691759.6	1368279.1		47	684306.75	1252183.51
8	693011.55	1365724.59		48	683576.21	1250730.65
9	693481.43	1363517.39		49	683069.15	1249813.73
10	693447	1361819.79		50	681308.82	1247496.34
11	692881.89	1358722.78		51	680421.72	1246670.44
12	692470.86	1355231.84		52	679508.51	1246079.08
13	692245.36	1351111.79		53	676916.62	1245052.07
14	692101.41	1350220.25		54	670551.53	1241638.79
15	690762.99	1345297.73		55	667941.25	1237729.9
16	690547.73	1344736.92		56	667410.94	1235845.96
17	689715.76	1343077.47		57	666994.77	1233371.28
18	687791.04	1340531.5		58	667799.47	1229907.04
19	685411.41	1334805.9		59	667802.01	1228602.11
20	684595.36	1332547.67		60	666993.94	1225057.72
21	684225.48	1328862.05		61	666503.42	1223792.83
22	685236.72	1323887.55		62	665740.1	1222450.41
23	685344.25	1322606.1		63	665128.56	1221694.25
24	685344.06	1321533.17		64	663417.59	1220169.99
25	685032.54	1317236.51		65	660588.78	1217050.63
26	685123.51	1316002.33		66	653615.92	1208382.46
27	686039.03	1311164.33		67	652602.64	1205459.64
28	686415.38	1306717.93		68	648834.06	1196571.76
29	686133.26	1304190.08		69	646956.93	1189984.45
30	685079.16	1300623.22		70	646690.92	1187417.07
31	682920.44	1293805.17		71	646977.39	1182528.9
32	682685.42	1291615.45		72	647872.91	1179147.83
33	683163.59	1289332.92		73	647371.59	1172619.21
34	683462.41	1286962.05		74	644854.66	1159219.03
35	683635.59	1283437.73		75	641192.62	1146458.5
36	685145.19	1276970.39		76	640091.87	1141726.56
37	685421.74	1274909.83		77	639178.89	1138139.94
38	685572.52	1270893.42		78	638246.57	1134215.29
39	686344.76	1265720.79		79	638055.92	1131982.02
40	686377.95	1264489.91		80	638459.26	1129226.92
				81	638719.32	1128162.48
				82	639390.04	1126231.87

East channel						
pt	East(X)	North(y)		pt	East (x)	North (y)
1	693887.71	1386702.52		41	685971.39	1270930.58
2	693400.33	1383744.8		42	686839.14	1265118.24
1T	693075.55	1382855.94		43	685959.83	1255820.66
2T	693072.4	1382185.08		44	684559.19	1251681.68
3T	693348.62	1381855.07		45	683405.17	1249594.85
4T	693123.09	1381237.82		46	681606.53	1247227.03
5T	692718.06	1381166.92		47	680209.89	1245926.72
6T	692372.04	1380930.53		48	677085.3	1244689.01
3	691514.38	1378583.23		49	671662.14	1241780.26
4	691247.51	1377505.26		50	670303.11	1240546.32
5	691123.54	1376592.88		51	668773.96	1238256.08
6	691005.7	1374331.63		52	668140.52	1236961.38
7	691077.44	1373420.43		53	667801.33	1235758.34
8	692079.4	1368698.89		54	667571.45	1234390.2
9	692477.39	1367723.36		55	667633.1	1232390.25
10	693573.22	1365487.42		56	668360.85	1229255.61
11	693891.17	1363993.95		57	667218.7	1224242.78
12	693846.26	1361779.58		58	665811.39	1221766.81
13	693391.17	1359285.64		59	663699.68	1219885.66
14	692834.58	1354558.32		60	660893.13	1216790.6
15	692617.61	1350594.3		61	654520.29	1208869.19
16	691060.38	1344866.98		62	653683.93	1207358.1
17	690056.93	1342865.48		63	652976.47	1205316.28
18	688140.84	1340330.95		64	649211.52	1196438.22
19	685784.38	1334661.11		65	647508.17	1190459.89
20	685126.48	1332840.5		66	647291.98	1189337.58
21	684947.9	1332054.91		67	647092.48	1187408.23
22	684695.44	1329539.34		68	647374.03	1182591.94
23	684761.04	1328235.37		69	648276.67	1179184.77
24	685794.34	1323152.33		70	647768.72	1172566.84
25	685794.03	1321516.84		71	645244.01	1159126.79
26	685483.71	1317236.73		72	641579.88	1146357.95
27	685520.73	1316054.46		73	640480.51	1141631.9
28	686435.85	1311218.53		74	639567.3	1138044.38
29	686923.79	1305453.77		75	638642.57	1134151.71
30	686481.87	1303958.38		76	638502.75	1132513.74
31	686531.51	1302715.04		77	638533.97	1131478.18
32	686179.17	1301522.81		78	638852.59	1129303.12
33	685461.65	1300506.17		79	639103.73	1128275.61
34	683389.93	1293962		80	639767.52	1126362.44
35	683178.27	1291990.72				
36	683220.3	1291256.89				
37	683784.08	1288565.67				
38	683992.37	1284327.01				
39	684221.47	1282687.4				
40	685780.83	1276006.86				

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK CITY SERVICE.

BENCHMARK ELEVATION IS 3.93 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.56 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Apv

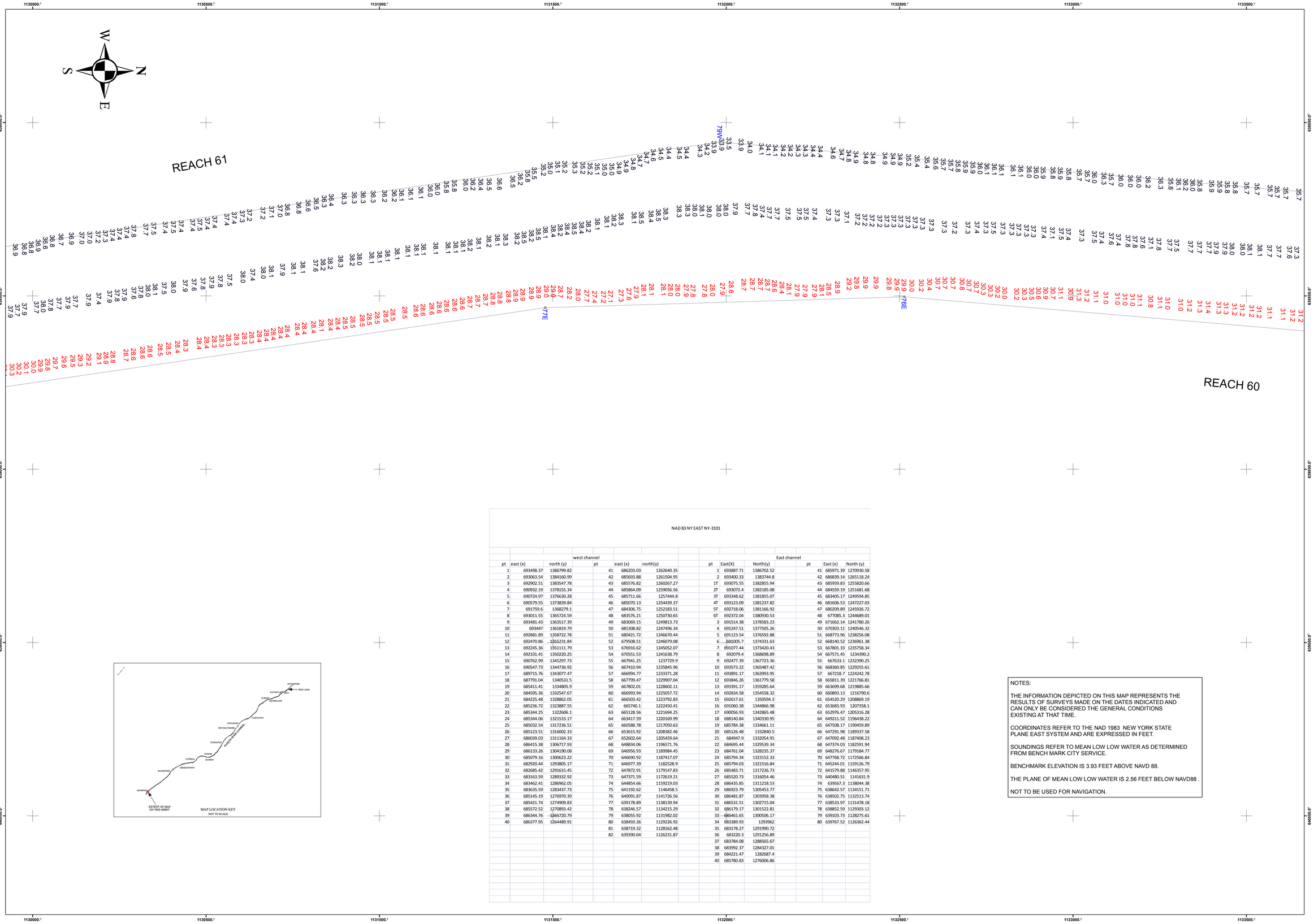
Date: 02/20/15
Survey Date:10/03/14
Contract no.:
Pro date:
Plot by: Daniel J. Kacik
Scale: 1" = 100'

DRAWN BY: D. Kacik
DESIGNED BY: R. Bertain
RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
RECOMMENDED BY: J. Allen, CHIEF, SURVEY & MAPPING
APPROVED BY: William F. Petrone, CHIEF, ENGINEERING DIVISION
REVIEWED BY: W. F. Petrone

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

Kingston Point Reach
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
1 OF 3



NAD 83 NY EAST NY-3101

			west channel				East channel					
pt	east (x)	north (y)	pt	east (x)	north(y)		pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82		41	686203.03	1262640.35	1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99		42	685693.88	1261504.95	2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78		43	685576.82	1260267.27	1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34		44	685864.09	1259056.56	2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28		45	685711.66	1257444.8	3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84		46	685070.13	1254439.37	4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1		47	684306.75	1252183.51	5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59		48	683576.21	1250730.65	6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39		49	683069.15	1249813.73	3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79		50	681308.82	1247496.34	4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78		51	680421.72	1246670.44	5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84		52	679508.51	1246079.08	6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79		53	676916.62	1245052.07	7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25		54	670551.53	1241638.79	8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73		55	667941.25	1237729.9	9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92		56	667410.94	1235845.96	10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47		57	666994.77	1233371.28	11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5		58	667799.47	1229907.04	12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9		59	667802.01	1228602.11	13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67		60	666993.94	1225057.72	14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05		61	666503.42	1223792.83	15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55		62	665740.1	1222450.41	16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1		63	665128.56	1221694.25	17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17		64	663417.59	1220169.99	18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51		65	660588.78	1217050.63	19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33		66	653615.92	1208382.46	20	685126.48	1332840.5	66	647291.58	1189337.58
27	686039.03	1311164.33		67	652602.64	1205459.64	21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93		68	648834.06	1196571.76	22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08		69	646956.93	1189984.45	23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22		70	646690.92	1187417.07	24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17		71	646977.39	1182528.9	25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45		72	647872.91	1179147.83	26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92		73	647371.59	1172619.21	27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05		74	644854.66	1159219.03	28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73		75	641192.62	1146458.5	29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39		76	640091.87	1141726.56	30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83		77	639178.89	1138139.94	31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42		78	638246.57	1134215.29	32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79		79	638055.92	1131982.02	33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91		80	638459.26	1129226.92	34	683389.93	1293962	80	639767.52	1126362.44
				81	638719.32	1128162.48	35	683178.27	1291990.72			
				82	639390.04	1126231.87	36	683220.3	1291256.89			
							37	683784.08	1288565.67			
							38	683992.37	1284327.01			
							39	684221.47	1282687.4			
							40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK CITY SERVICE.

BENCHMARK ELEVATION IS 3.93 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.56 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Apv

Date: 02/20/15
Survey Date:10/03/14
Contract no.:
Plot date:
Plot by: Daniel J. Karlok
Scale: 1" = 500'

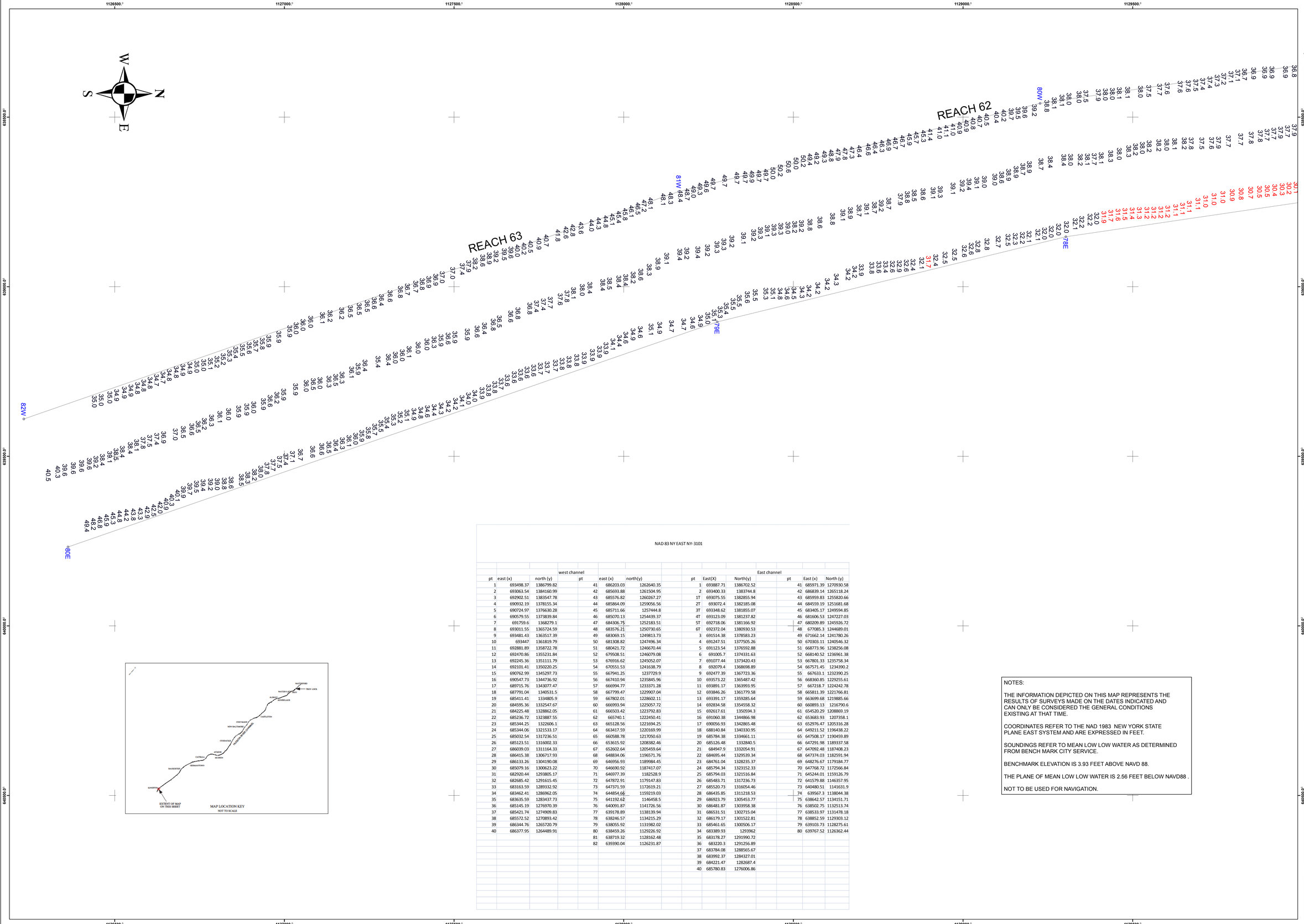
DRAWN BY: James B. Smith
DESIGNED BY: R. Beriam
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petronis

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ALBANY FIELD OFFICE

Kingston Point Reach
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
2 OF 3



NAD 83 NY EAST NY-3101

			west channel							East channel			
pt	east (x)	north (y)	pt	east (x)	north(y)		pt	East(X)	North(y)	pt	East (x)	North (y)
1	693498.37	1386799.82	41	686203.03	1262640.35		1	693887.71	1386702.52	41	685971.39	1270930.58
2	693063.54	1384160.99	42	685693.88	1261504.95		2	693400.33	1383744.8	42	686839.14	1265118.24
3	692902.51	1383547.78	43	685576.82	1260267.27		1T	693075.55	1382855.94	43	685959.83	1255820.66
4	690932.19	1378155.34	44	685864.09	1259056.56		2T	693072.4	1382185.08	44	684559.19	1251681.68
5	690724.97	1376630.28	45	685711.66	1257444.8		3T	693348.62	1381855.07	45	683405.17	1249594.85
6	690579.55	1373839.84	46	685070.13	1254439.37		4T	693123.09	1381237.82	46	681606.53	1247227.03
7	691759.6	1368279.1	47	684306.75	1252183.51		5T	692718.06	1381166.92	47	680209.89	1245926.72
8	693011.55	1365724.59	48	683576.21	1250730.65		6T	692372.04	1380930.53	48	677085.3	1244689.01
9	693481.43	1363517.39	49	683069.15	1249813.73		3	691514.38	1378583.23	49	671662.14	1241780.26
10	693447	1361819.79	50	681308.82	1247496.34		4	691247.51	1377505.26	50	670303.11	1240546.32
11	692881.89	1358722.78	51	680421.72	1246670.44		5	691123.54	1376592.88	51	668773.96	1238256.08
12	692470.86	1355231.84	52	679508.51	1246079.08		6	691005.7	1374331.63	52	668140.52	1236961.38
13	692245.36	1351111.79	53	676916.62	1245052.07		7	691077.44	1373420.43	53	667801.33	1235758.34
14	692101.41	1350220.25	54	670551.53	1241638.79		8	692079.4	1368698.89	54	667571.45	1234390.2
15	690762.99	1345297.73	55	667941.25	1237729.9		9	692477.39	1367723.36	55	667633.1	1232390.25
16	690547.73	1344736.92	56	667410.94	1235845.96		10	693573.22	1365487.42	56	668360.85	1229255.61
17	689715.76	1343077.47	57	666994.77	1233371.28		11	693891.17	1363993.95	57	667218.7	1224242.78
18	687791.04	1340531.5	58	667799.47	1229907.04		12	693846.26	1361779.58	58	665811.39	1221766.81
19	685411.41	1334805.9	59	667802.01	1228602.11		13	693391.17	1359285.64	59	663699.68	1219885.66
20	684595.36	1332547.67	60	666993.94	1225057.72		14	692834.58	1354558.32	60	660893.13	1216790.6
21	684225.48	1328862.05	61	666503.42	1223792.83		15	692617.61	1350594.3	61	654520.29	1208869.19
22	685236.72	1323887.55	62	665740.1	1222450.41		16	691060.38	1344866.98	62	653683.93	1207358.1
23	685344.25	1322606.1	63	665128.56	1221694.25		17	690056.93	1342865.48	63	652976.47	1205316.28
24	685344.06	1321533.17	64	663417.59	1220169.99		18	688140.84	1340330.95	64	649211.52	1196438.22
25	685032.54	1317236.51	65	660588.78	1217050.63		19	685784.38	1334661.11	65	647508.17	1190459.89
26	685123.51	1316002.33	66	653615.92	1208382.46		20	685126.48	1332840.5	66	647291.98	1189337.58
27	686039.03	1311164.33	67	652602.64	1205459.64		21	684947.9	1332054.91	67	647092.48	1187408.23
28	686415.38	1306717.93	68	648834.06	1196571.76		22	684695.44	1329539.34	68	647374.03	1182591.94
29	686133.26	1304190.08	69	646956.93	1189984.45		23	684761.04	1328235.37	69	648276.67	1179184.77
30	685079.16	1300623.22	70	646690.92	1187417.07		24	685794.34	1323152.33	70	647768.72	1172566.84
31	682920.44	1293805.17	71	646977.39	1182528.9		25	685794.03	1321516.84	71	645244.01	1159126.79
32	682685.42	1291615.45	72	647872.91	1179147.83		26	685483.71	1317236.73	72	641579.88	1146357.95
33	683163.59	1289332.92	73	647371.59	1172619.21		27	685520.73	1316054.46	73	640480.51	1141631.9
34	683462.41	1286962.05	74	644854.66	1159219.03		28	686435.85	1311218.53	74	639567.3	1138044.38
35	683635.59	1283437.73	75	641192.62	1146458.5		29	686923.79	1305453.77	75	638642.57	1134151.71
36	685145.19	1276970.39	76	640091.87	1141726.56		30	686481.87	1303958.38	76	638502.75	1132513.74
37	685421.74	1274909.83	77	639178.89	1138139.94		31	686531.51	1302715.04	77	638533.97	1131478.18
38	685572.52	1270893.42	78	638246.57	1134215.29		32	686179.17	1301522.81	78	638852.59	1129303.12
39	686344.76	1265720.79	79	638055.92	1131982.02		33	685461.65	1300506.17	79	639103.73	1128275.61
40	686377.95	1264489.91	80	638459.26	1129226.92		34	683389.93	1293962	80	639767.52	1126362.44
			81	638719.32	1128162.48		35	683178.27	1291990.72			
			82	639390.04	1126231.87		36	683220.3	1291256.89			
							37	683784.08	1288565.67			
							38	683992.37	1284327.01			
							39	684221.47	1282687.4			
							40	685780.83	1276006.86			

NOTES:

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED THE GENERAL CONDITIONS EXISTING AT THAT TIME.

COORDINATES REFER TO THE NAD 1983 NEW YORK STATE PLANE EAST SYSTEM AND ARE EXPRESSED IN FEET.

SOUNDINGS REFER TO MEAN LOW LOW WATER AS DETERMINED FROM BENCH MARK CITY SERVICE.

BENCHMARK ELEVATION IS 3.93 FEET ABOVE NAVD 88.

THE PLANE OF MEAN LOW LOW WATER IS 2.56 FEET BELOW NAVD88 .

NOT TO BE USED FOR NAVIGATION.

US Army Corps of Engineers
New York District

Mark	Description	Date	Approved

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DRAWN BY: D. Gatlik
DESIGNED BY: R. Bennett
REVIEWED BY: J. Smith
REVIEWED BY: W. F. Petronis

RECOMMENDED BY: James B. Smith, CIVIL ENGINEER
APPROVED BY: William F. Petronis, CHIEF, ALBANY FIELD OFFICE

Date: 02/20/15
Survey Date:10/03/14
Contract no.:
Plot date:
Plot by: Daniel J. Kanok
Scale: 1" = 500'

Kingston Point Reach
Condition Survey
Fathometer Soundings in Feet

Sheet reference number:
3 OF 3