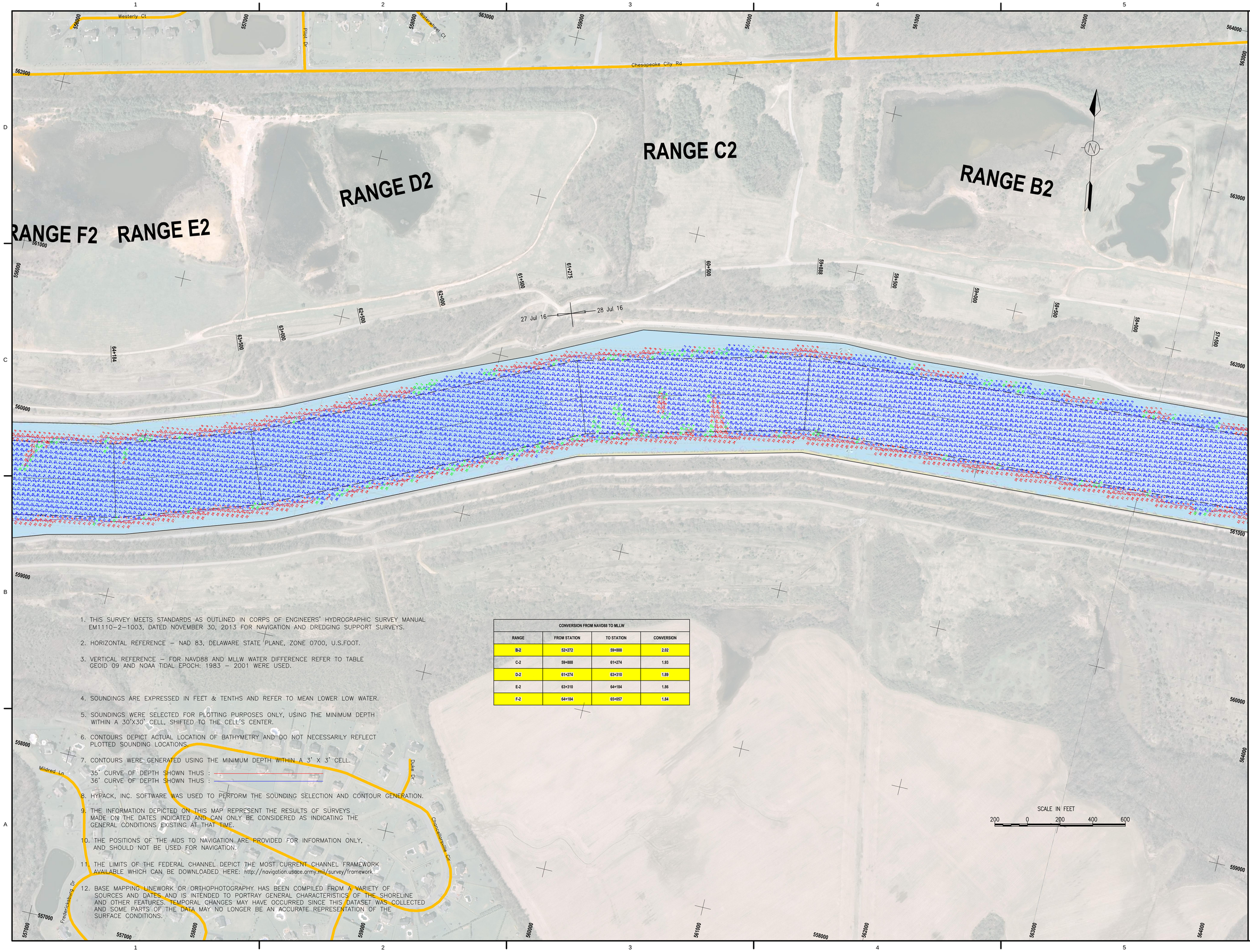

1. THIS SURVEY MEETS STANDARDS AS OUTLINED IN CORPS OF ENGINEERS' HYDROGRAPHIC SURVEY MANUAL EM1110-2-1003, DATED NOVEMBER 30, 2013 FOR NAVIGATION AND DREDGING SUPPORT SURVEYS.

2. HORIZONTAL REFERENCE – NAD 83, DELAWARE STATE PLANE, ZONE 0700, U.S.FOOT.

3. VERTICAL REFERENCE – FOR NAVD88 AND MLLW WATER DIFFERENCE REFER TO TABLE GEOID 09 AND NOAA TIDAL EPOCH: 1983 – 2001 WERE USED.

4. SOUNDINGS ARE EXPRESSED IN FEET & TENTHS AND REFER TO MEAN LOWER LOW WATER.

5. SOUNDINGS WERE SELECTED FOR PLOTTING PURPOSES ONLY, USING THE MINIMUM DEPTH WITHIN A 30'X30' CELL, SHIFTED TO THE CELL'S CENTER.

6. CONTOURS DEPICT ACTUAL LOCATION OF BATHYMETRY AND DO NOT NECESSARILY REFLECT PLOTTED SOUNDING LOCATIONS.

7. CONTOURS WERE GENERATED USING THE MINIMUM DEPTH WITHIN A 3' X 3' CELL.

   35' CURVE OF DEPTH SHOWN THUS :
   36' CURVE OF DEPTH SHOWN THUS :

8. HYPACK, INC. SOFTWARE WAS USED TO PERFORM THE SOUNDING SELECTION AND CONTOUR GENERATION.

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CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
B-2	52+272	59+888	2.02
C-2	59+888	61+274	1.93
D-2	61+274	63+310	1.89
E-2	63+310	64+184	1.86
F-2	64+184	65+057	1.84

US Army Corps of Engineers Philadelphia District

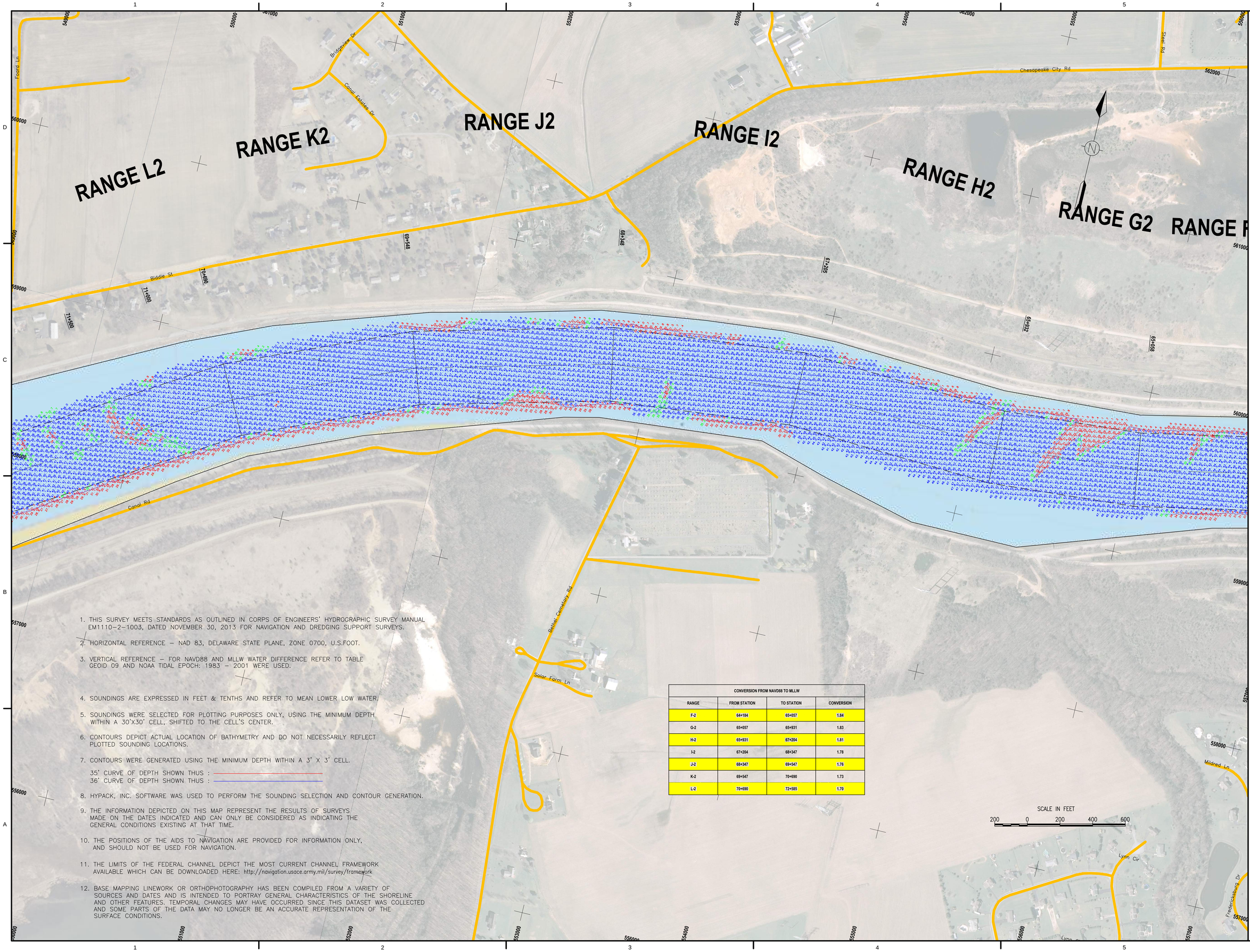
MARK	ACTION	DESCRIPTION	DATE	BY

PROCESSED BY: M.Gaughan
DWN BY: WHM
CKD BY: W.Miller
REVIEWED BY:
SURVEY DATE: As Shown
VESSEL: Sturman
DWG SCALE: 1"=200'
PLOT DATE: 30 Aug 16
REVISION REV
CONTRACT NUMBER:
APPROVED BY:
PLOTTED BY: W.Miller
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

CHESAPEAKE AND DELAWARE CANAL
RANGES B2 to F2
STATION 57+500 TO 64+200

SHEET NUMBER
V-108



1. THIS SURVEY MEETS STANDARDS AS OUTLINED IN CORPS OF ENGINEERS' HYDROGRAPHIC SURVEY MANUAL EM1110-2-1003, DATED NOVEMBER 30, 2013 FOR NAVIGATION AND DREDGING SUPPORT SURVEYS.
2. HORIZONTAL REFERENCE – NAD 83, DELAWARE STATE PLANE, ZONE 0700, U.S.FOOT.
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   36' CURVE OF DEPTH SHOWN THUS :
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CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
F-2	64+184	65+057	1.84
G-2	65+057	65+931	1.83
H-2	65+931	67+204	1.81
I-2	67+204	68+347	1.78
J-2	68+347	69+547	1.76
K-2	69+547	70+690	1.73
L-2	70+690	72+585	1.70

US Army Corps of Engineers Philadelphia District

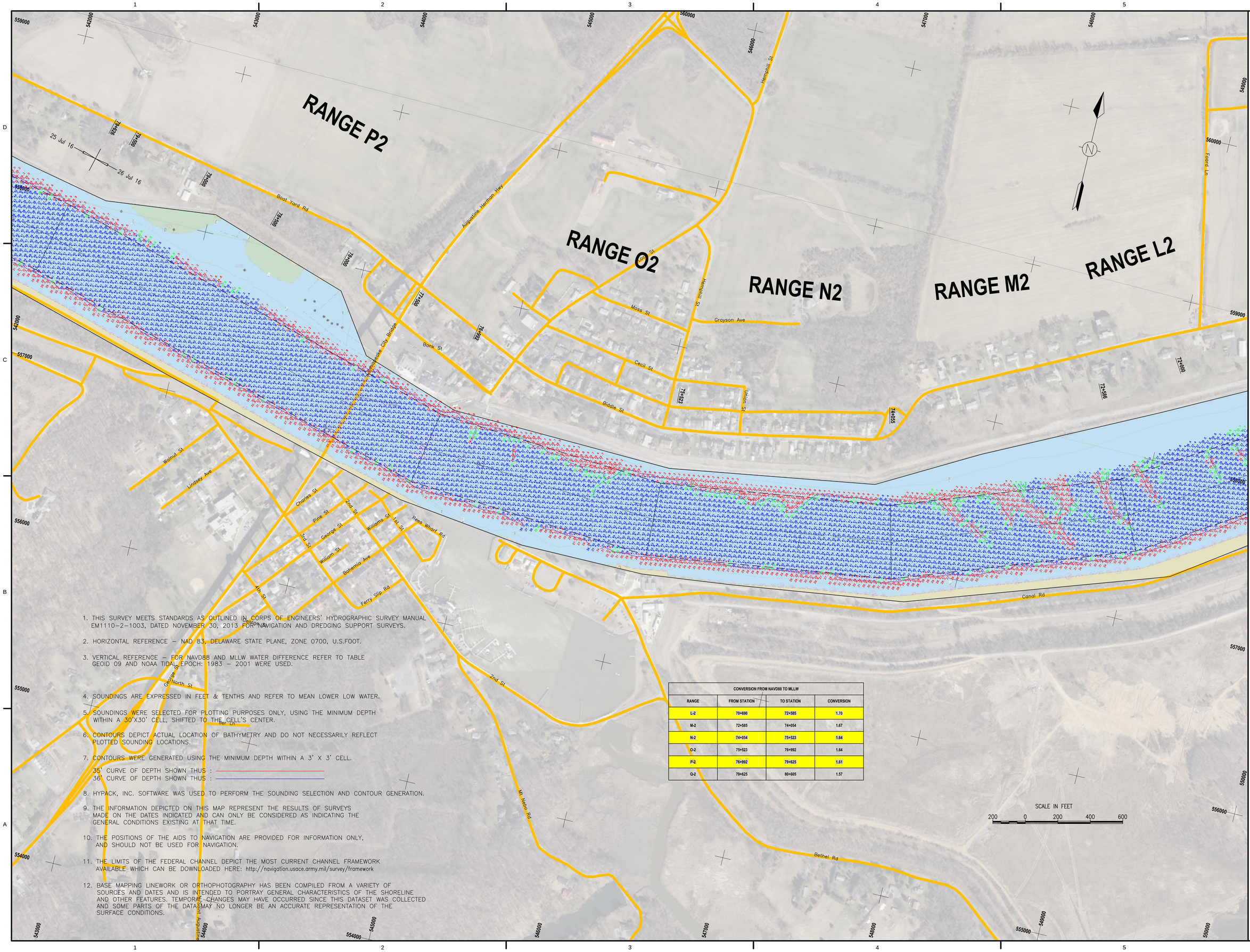
MARK	ACTION	DESCRIPTION	DATE	BY

PLOT DATE: 30 Aug 16 | REVISION: REV
CONTRACT NUMBER:
APPROVED BY:
PLOTTED BY: W.Miller
PROCESSED BY: M.Gaughan
DWN BY: WHM
CKD BY: W.Miller
REVIEWED BY:
SURVEY DATE: 27 Jul 16
VESSEL: Sturman
DWG SCALE: 1"=200'
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

CHESAPEAKE AND DELAWARE CANAL
RANGES F2 to L2
STATION 64+200 TO 71+500

SHEET NUMBER
V-109



1. THIS SURVEY MEETS STANDARDS AS OUTLINED IN CORPS OF ENGINEERS' HYDROGRAPHIC SURVEY MANUAL EM1110-2-1003, DATED NOVEMBER 30, 2013 FOR NAVIGATION AND DREDGING SUPPORT SURVEYS.

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CONVERSION FROM NAVD88 TO MLLW			
RANGE	FROM STATION	TO STATION	CONVERSION
L-2	70+690	72+585	1.70
M-2	72+585	74+054	1.67
N-2	74+054	75+523	1.64
O-2	75+523	76+992	1.64
P-2	76+992	79+625	1.61
Q-2	79+625	80+605	1.57

US Army Corps of Engineers Philadelphia District

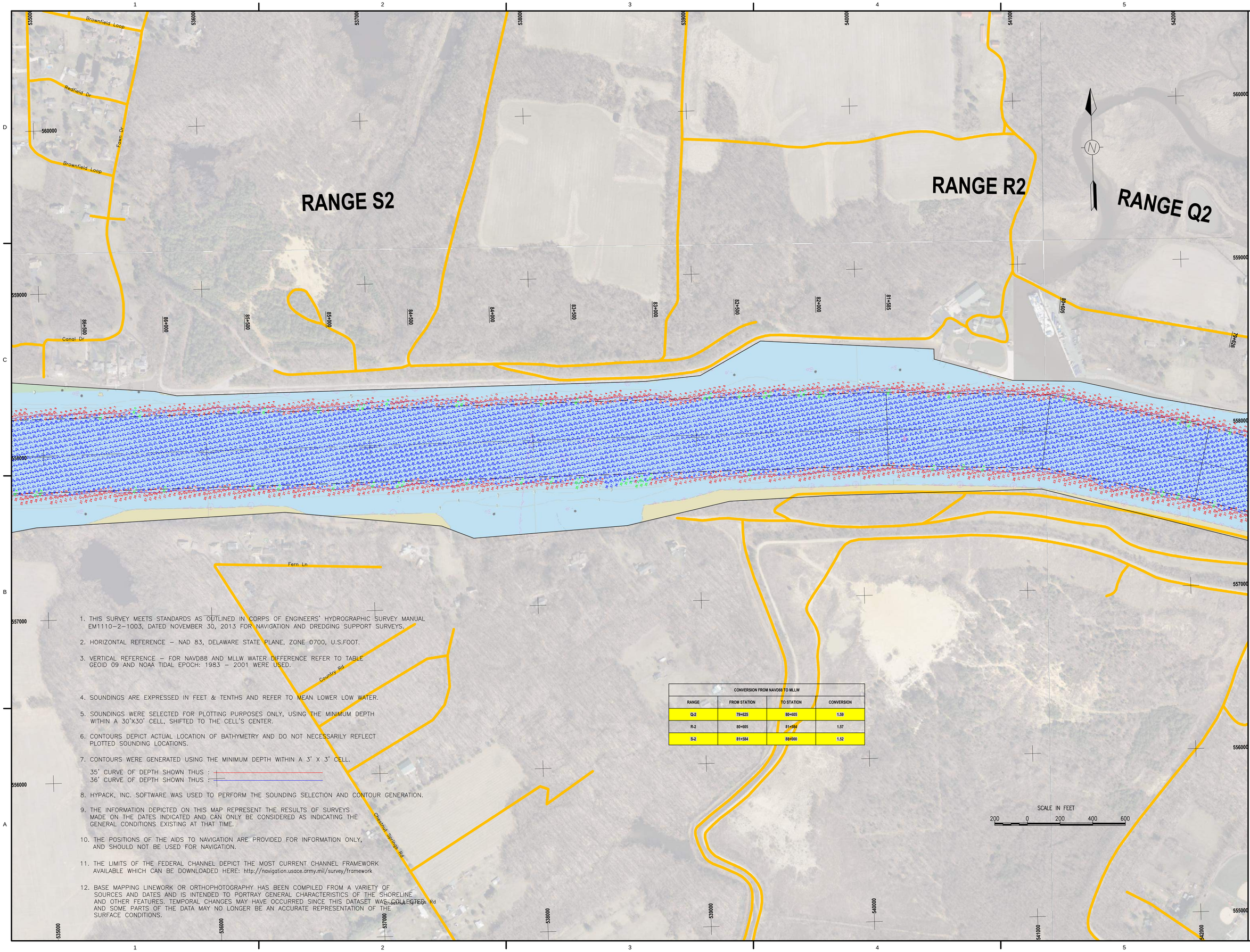
MARK	ACTION	DESCRIPTION	DATE	BY

PROCESSED BY: M.Gaughan
DWN BY: WWM
CKD BY: W.Miller
REVIEWED BY:
SURVEY DATE: 30 Aug 16
DWG SCALE: 1"=200'
VESSEL: Sturman
FILE NAME:
PLOT DATE: 30 Aug 16
REVISION REV
CONTRACT NUMBER:
APPROVED BY:
PLOTTED BY: W.Miller

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

CHESAPEAKE AND DELAWARE CANAL
RANGES L2 TO Q2
STATION 71+500 TO 79+626

SHEET NUMBER
V-110



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CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
Q-2	79+625	80+605	1.59
R-2	80+605	81+584	1.57
S-2	81+584	88+000	1.52

US Army Corps of Engineers Philadelphia District

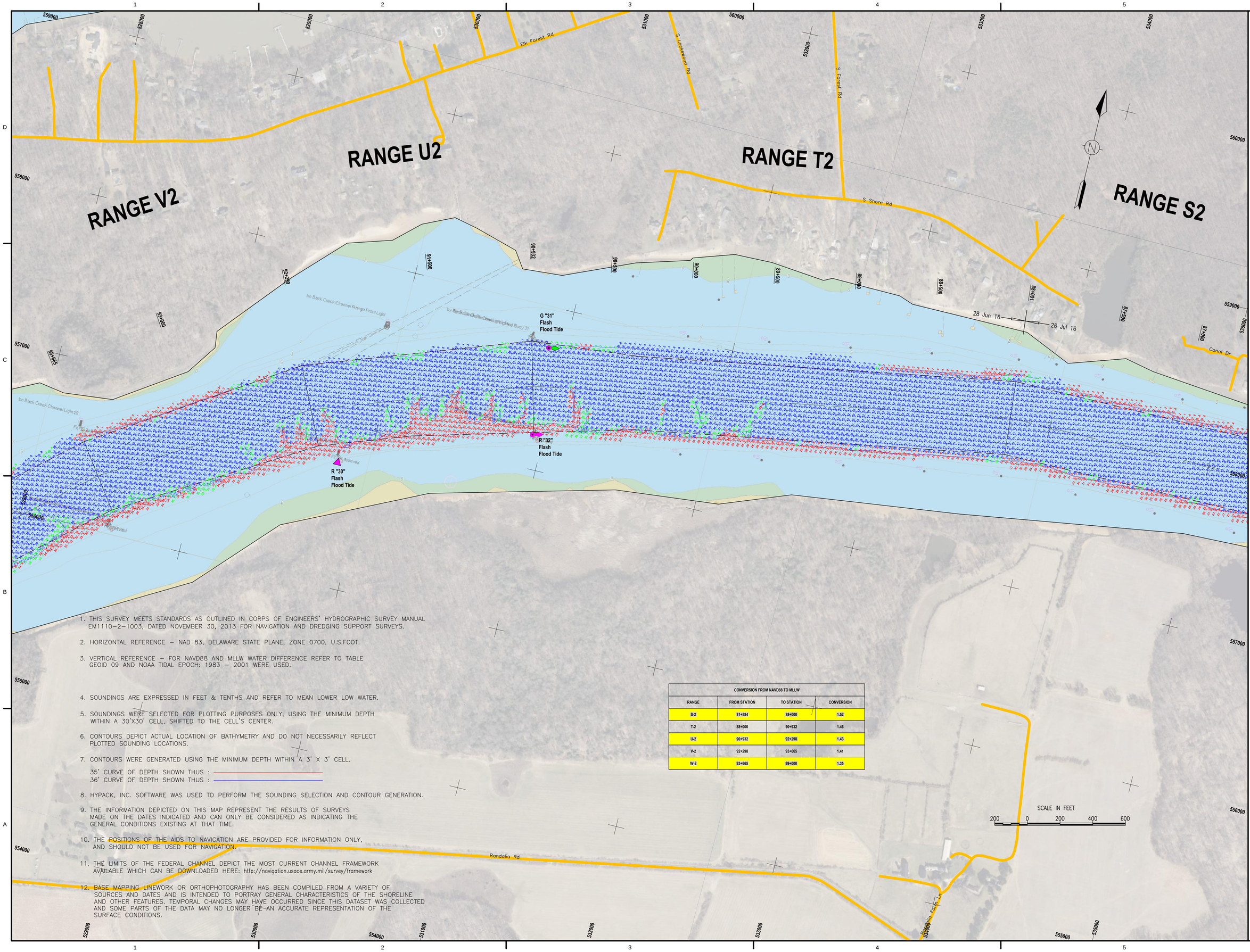
MARK	ACTION	DESCRIPTION	DATE	BY

PROCESSED BY: M.Gaughan
DWN BY: Wm Wells
DSN BY: W.Miller
REVIEWED BY:
APPROVED BY:
PLOT DATE: 30 Aug 16
REVISION: REV
CONTRACT NUMBER:
SURVEY DATE: 26 Jul 16
VESSEL: Sturman
PLOTTED BY: W.Miller
DWG SCALE: 1:2000
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

CHESAPEAKE AND DELAWARE CANAL
RANGES Q2 TO S2
STATION 79+625 TO 88+500

SHEET NUMBER
V-111



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CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
S-2	81+584	88+000	1.52
T-2	88+000	90+932	1.46
U-2	90+932	92+298	1.43
V-2	92+298	93+665	1.41
W-2	93+665	99+000	1.35

US Army Corps of Engineers
Philadelphia District

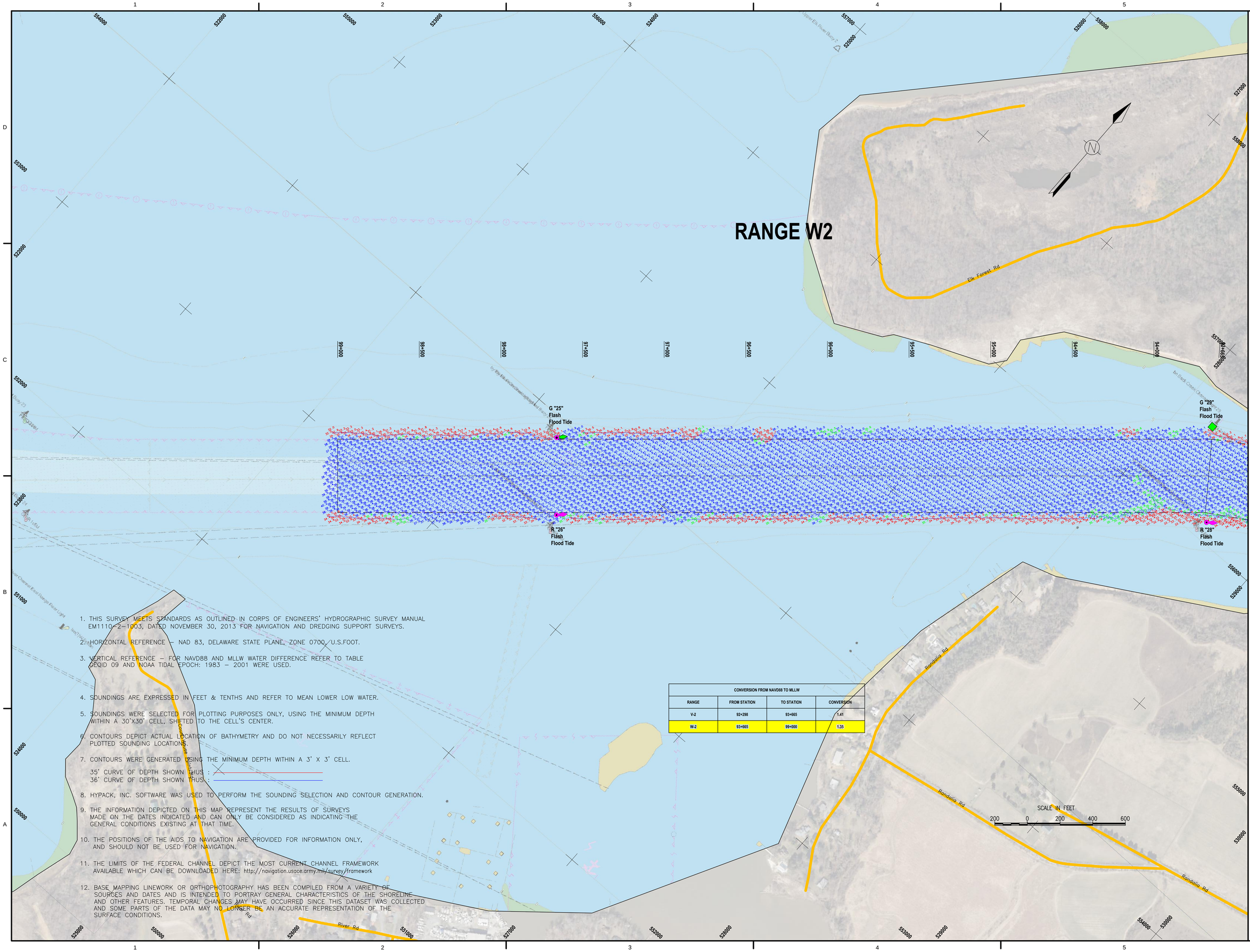
MARK	ACTION	DESCRIPTION	DATE	BY

PROCESSED BY: M.Gaughan
DWN BY: WHM
CKD BY: W.Miller
REVIEWED BY:
SURVEY DATE: As Shown
DWG SCALE: 1"=200'
PLOT DATE: 30 Aug 16
REVISION REV
CONTRACT NUMBER:
APPROVED BY:
PLOTTED BY: W.Miller
VESSEL: Sherman
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

CHESAPEAKE AND DELAWARE CANAL
RANGES S2 TO W2
STATION 86+500 TO 93+665

SHEET NUMBER
V-112



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CONVERSION FROM NAVD88 TO MLLW			
RANGE	FROM STATION	TO STATION	CONVERSION
V-2	92+298	93+665	1.41
W-2	93+665	99+000	1.35

US Army Corps of Engineers
Philadelphia District

MARK	ACTION	DESCRIPTION	DATE	BY

U.S. ARMY CORPS OF ENGINEERS
PHILADELPHIA DISTRICT
PHILADELPHIA, PA 19107-3390
www.nap.usace.army.mil

PROCESSED BY: M.Gaughan
DWN BY: M.Gaughan
REVIEWED BY:
SURVEY DATE: 28 Jun 16
DWG SCALE: 1"=200'
PLOT DATE: 30 Aug 16
REVISION: REV
CONTRACT NUMBER:
CKD BY: W.Miller
APPROVED BY:
VESSEL: Sherman
PLOTTED BY: W.Miller
FILE NAME:

CHESAPEAKE AND DELAWARE CANAL
RANGES V2 TO W2
STATION 93+665 TO 99+000

SHEET NUMBER
V-113