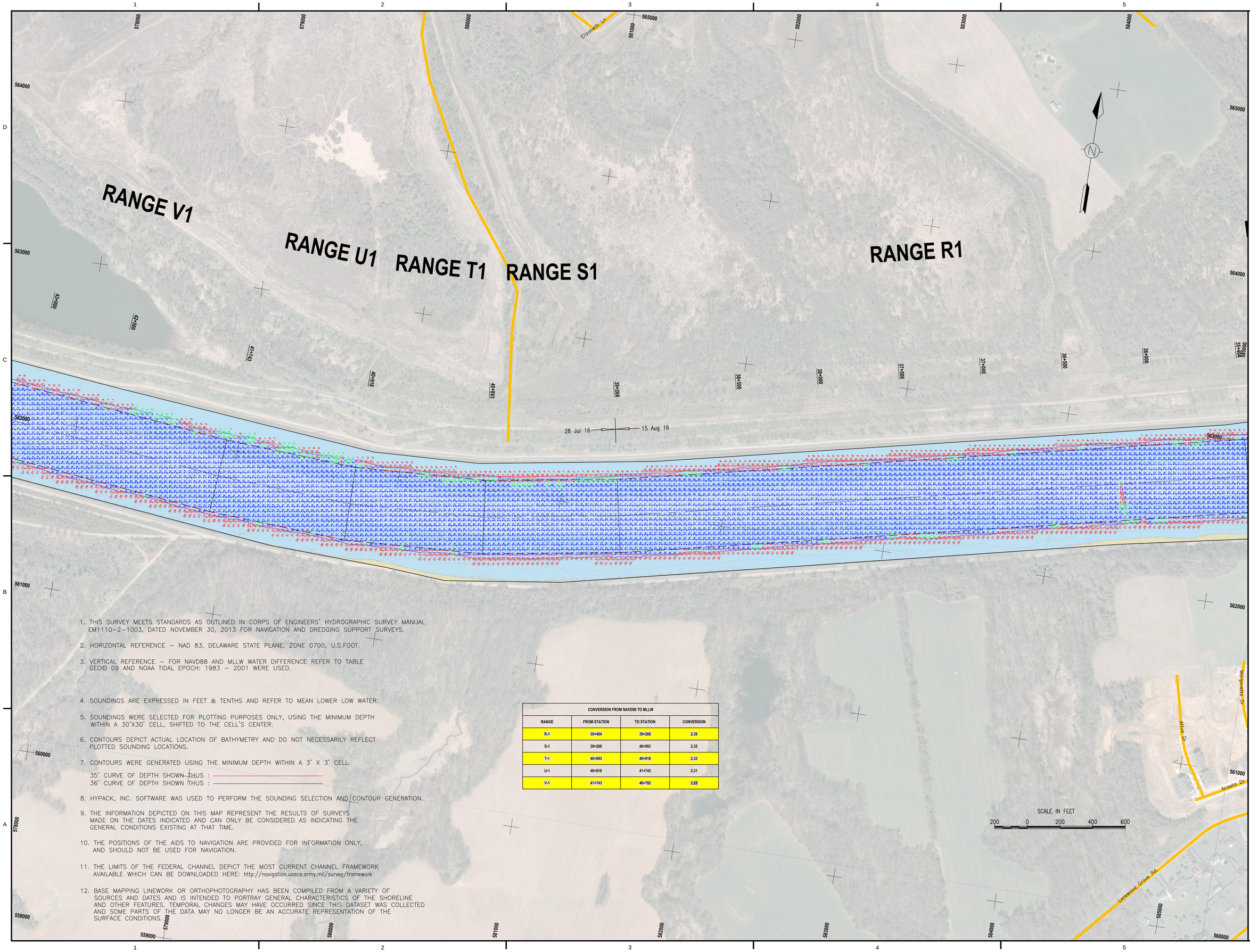


1. THIS SURVEY MEETS STANDARDS AS OUTLINED IN CORPS OF ENGINEERS' HYDROGRAPHIC SURVEY MANUAL EM1110-2-1003, DATED NOVEMBER 30, 2013 FOR NAVIGATION AND DREDGING SUPPORT SURVEYS.

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.

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

10. THE POSITIONS OF THE AIDS TO NAVIGATION ARE PROVIDED FOR INFORMATION ONLY, AND SHOULD NOT BE USED FOR NAVIGATION.

11. THE LIMITS OF THE FEDERAL CHANNEL DEPICT THE MOST CURRENT CHANNEL FRAMEWORK AVAILABLE WHICH CAN BE DOWNLOADED HERE: http://navigation.usace.army.mil/survey/framework

12. BASE MAPPING LINEWORK OR ORTHOPHOTOGRAPHY HAS BEEN COMPILED FROM A VARIETY OF SOURCES AND DATES AND IS INTENDED TO PORTRAY GENERAL CHARACTERISTICS OF THE SHORELINE AND OTHER FEATURES. TEMPORAL CHANGES MAY HAVE OCCURRED SINCE THIS DATASET WAS COLLECTED AND SOME PARTS OF THE DATA MAY NO LONGER BE AN ACCURATE REPRESENTATION OF THE SURFACE CONDITIONS.

CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
R-1	35+404	39+268	2.39
S-1	39+268	40+093	2.35
T-1	40+093	40+918	2.33
U-1	40+918	41+743	2.31
V-1	41+743	46+782	2.25

US Army Corps of Engineers
Philadelphia District

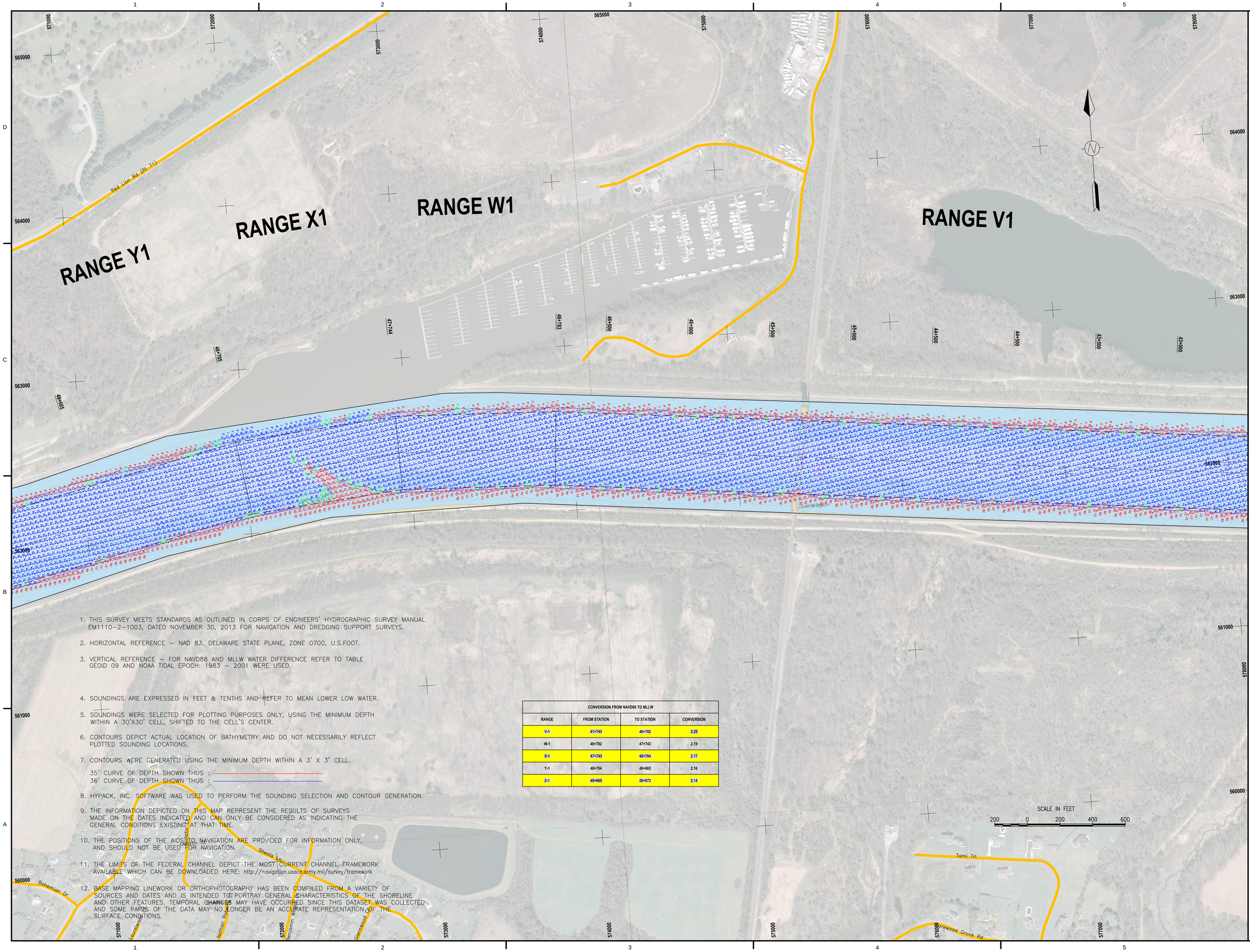
MARK	ACTION	DESCRIPTION	DATE	BY

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

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

CHESAPEAKE AND DELAWARE CANAL
RANGES R1 TO V1
STATION 39+268 TO 43+000

SHEET NUMBER
V-105



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CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
V-1	41+743	46+782	2.25
W-1	46+782	47+743	2.19
X-1	47+743	48+704	2.17
Y-1	48+704	49+665	2.16
Z-1	49+665	50+673	2.14

US Army Corps of Engineers Philadelphia District

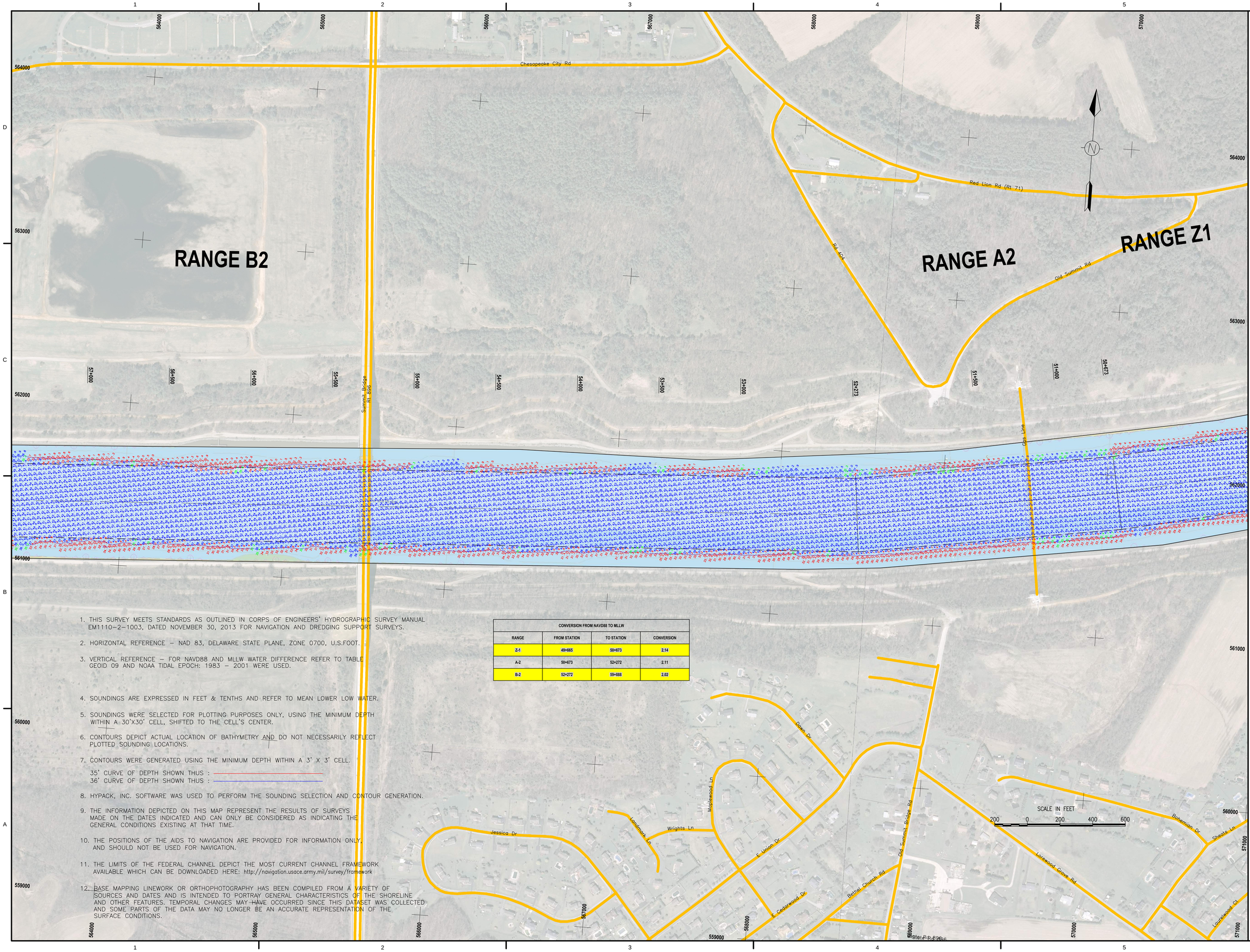
MARK	ACTION	DESCRIPTION	DATE	BY

PROCESSED BY: M.Gaughan
DWN BY: WHM
CKD BY: W.Miller
REVIEWED BY:
SURVEY DATE: 28 Jul 16
VESSEL: Sherman
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 V1 TO Z1
STATION 43+000 TO 49+665

SHEET NUMBER
V-106



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CONVERSION FROM NAVD88 TO MLLW

RANGE	FROM STATION	TO STATION	CONVERSION
Z-1	49+665	50+673	2.14
A-2	50+673	52+272	2.11
B-2	52+272	59+888	2.02

US Army Corps of Engineers
Philadelphia District

MARK	ACTION	DESCRIPTION	DATE	BY

PROCESSED BY: M.Gaughan
PLOT DATE: 30 Aug 16
REVISION: REV
DRAWN BY: W.Miller
PLOTTED BY: W.Miller
CONTRACT NUMBER:
REVIEWED BY:
APPROVED BY:
SURVEY DATE: 28 Jul 16
VESSEL: Sturgis
PLOTTED BY: W.Miller
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 Z1 to B2
STATION 49+665 TO 57+500

SHEET NUMBER
V-107