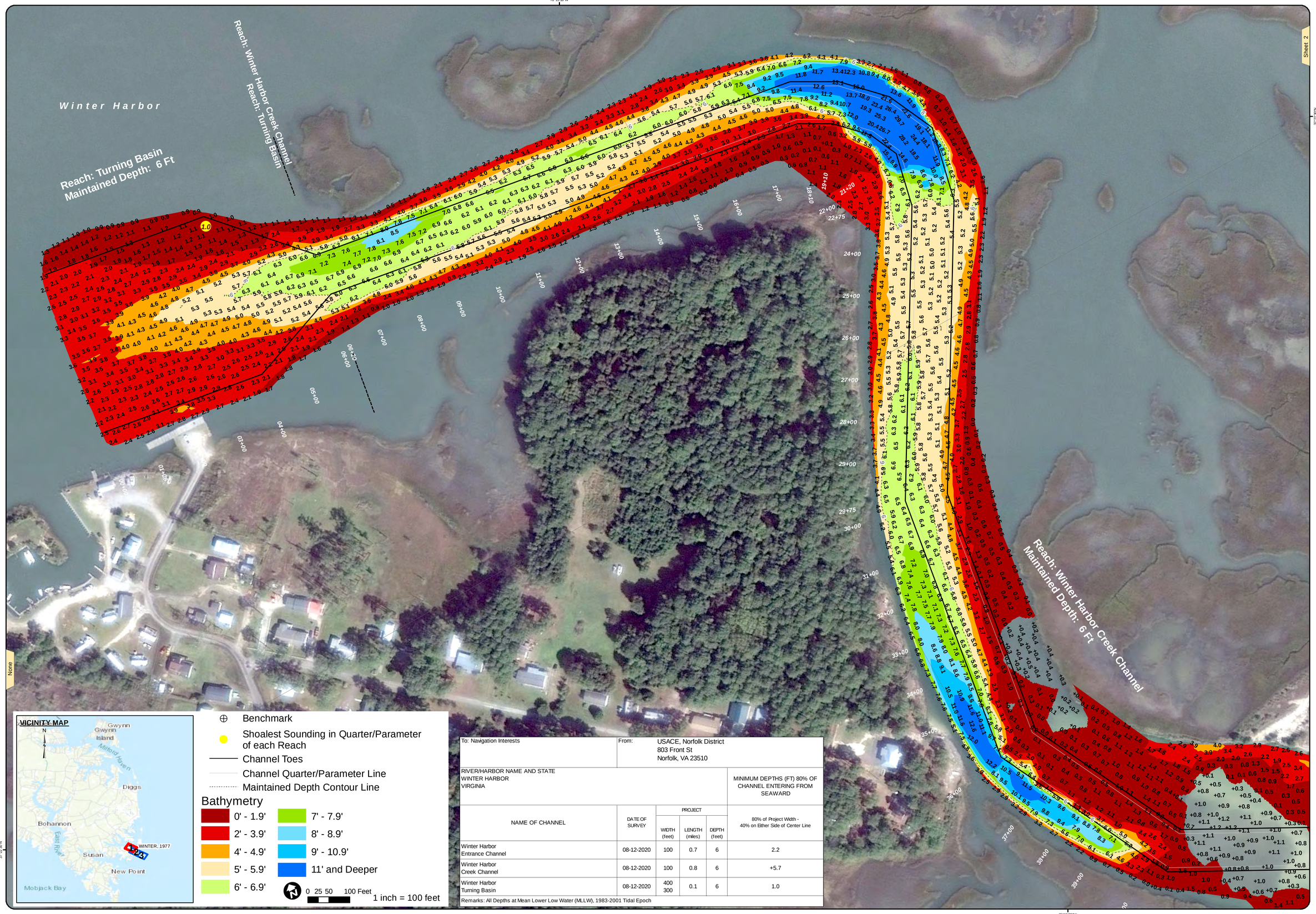

To: Navigation Interests	From:	USACE, Norfolk District 803 Front St Norfolk, VA 23510			
RIVER/HARBOR NAME AND STATE WINTER HARBOR VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
NAME OF CHANNEL	DATE OF SURVEY	PROJECT			80% of Project Width - 40% on Either Side of Center Line
		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	
Winter Harbor Entrance Channel	08-12-2020	100	0.7	6	2.2
Winter Harbor Creek Channel	08-12-2020	100	0.8	6	+5.7
Winter Harbor Turning Basin	08-12-2020	400 300	0.1	6	1.0

Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch

US Army Corps of Engineers
Norfolk District

NOTES

1. PROJECT A CHANNEL 12 FEET DEEP AND 100 FEET WIDE, EXTENDING FROM THE 12-FOOT CONTOUR IN CHESAPEAKE BAY INTO WINTER HARBOR TO A POINT JUST EAST OF THE PRESENT PUBLIC LANDING AREA A DISTANCE OF APPROXIMATELY 3,500 FEET, THENCE WITH A 400 FOOT WIDE TURNING BASIN 6 FEET DEEP AND 300 FEET WIDE, THENCE WITH A FLARED ENTRANCED 300 FEET LONG, ALL DEPTHS REFERRED TO MEAN LOW WATER. A TRAFFIC SURVEY REVEALED THAT THE PROJECT IS BEING USED BY SHALLOW DRAFT VESSELS. THE PROJECT WAS CONSTRUCTED AT THIS TIME. A 6-FOOT DEEP CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR A CHANGE.
2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIMES INDICATED & CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME.
3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 2 FT RADIUS GENERATED FROM HYDROSURVEY DATA.
4. BACKGROUND IMAGERY DOWNLOADED FROM DIGITAL GLOBE DATED AND IS DATED OCTOBER 6, 2020
5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.
6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY #HYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE HORIZONTAL DATUM: NAD 83 HORIZONTAL ZONE: VIRGINIA SOUTH ZONE PROJECTED COORDINATE UNITS: US SURVEY FEET HORIZONTAL ACCURACY: +/- 0.5 FEET HORIZONTAL CONTROL: LEICA SMART NET	VERTICAL REFERENCE DATUM: MLLW VERTICAL DATUM: NAVD 88 IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET VERTICAL CONTROL: NAVD 88 GEOID 12B VERTICAL ACCURACY: +/- 0.5 FEET SYSTEM/METHOD: RTK/LEICA SMART NET BIN SIZE: 3x3 BIN SELECTION METHOD: AVERAGE CELL CENTER		
GEODETIC CONTROL MONUMENTS			
MONUMENT CE WINTER, 1977	MLLW 7.97	NAVD88 5.97(GEOID12B)	MEAN RANGE OF TIDE 1.21
			AREA 0+00 to 0+00

WINTER HARBOR

PROJECT CONDITION SURVEY

SURVEY DATES:
August 12, 13 & October 7, 20, 26, 2020

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
eHYDRO FILE: W_01_WIN_20200812_CS

SHEET 1 of 3
Map Produced: 11/5/2020

APPROVED:
Jeff Swallow
Digitally signed by Jeff Swallow
Date: 2020.11.06 15:42:14 -05'00'
Chief, Navigation Analysis Section

APPROVED:
Robert W Sweitzer
Digitally signed by Robert W Sweitzer
Date: 2020.11.06 15:29:37 -05'00'
Chief, Navigation Support and Survey Section

To: Navigation Interests		From: USACE, Norfolk District 803 Front St Norfolk, VA 23510			
RIVER/HARBOR NAME AND STATE WINTER HARBOR VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
NAME OF CHANNEL	DATE OF SURVEY	PROJECT			80% of Project Width - 40% on Either Side of Center Line
		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	
Winter Harbor Entrance Channel	08-12-2020	100	0.7	6	2.2
Winter Harbor Creek Channel	08-12-2020	100	0.8	6	+5.7
Winter Harbor Turning Basin	08-12-2020	400 300	0.1	6	1.0
Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch					

- Benchmark
- Shoalest Sounding in Quarter/Parameter of each Reach
- Channel Toes
- Channel Quarter/Parameter Line
- Maintained Depth Contour Line

Bathymetry

- 0' - 1.9'
- 2' - 3.9'
- 4' - 4.9'
- 5' - 5.9'
- 6' - 6.9'
- 7' - 7.9'
- 8' - 8.9'
- 9' - 10.9'
- 11' and Deeper

0 25 50 100 Feet
1 inch = 100 feet

Sheet 3

US Army Corps of Engineers
Norfolk District

NOTES:

1. PROJECT A CHANNEL 12 FEET DEEP AND 100 FEET WIDE, EXTENDING FROM THE 12-FOOT CONTOUR IN CHESAPEAKE BAY INTO WINTER HARBOR TO A POINT JUST EAST OF THE PRESENT PUBLIC LANDING AREA A DISTANCE OF APPROXIMATELY 3,700 FEET, THENCE WITH A 400-FOOT WIDE TURNING BASIN 300 FEET SOUTHERLY FROM THE CHANNEL, THENCE WITH A FLARED ENTRANCE 300 FEET LONG, ALL DEPTHS REFERRED TO MEAN LOW WATER. A TRAFFIC SURVEY REVEALED THAT THE CHANNEL IS BEING MAINTAINED AT THE DEPTH AND WIDTH SPECIFIED AT THIS TIME. A 6-FOOT DEEP CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR A CHANGE.
2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIMES INDICATED & CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIMES.
3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 2 FT RADIUS GENERATED FROM HYDROSURVEY DATA.
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6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY #HYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE DATUM/ZONE: NAD83 HORIZONTAL ZONE: VIRGINIA SOUTH ZONE PROJECTED COORDINATE UNITS: US SURVEY FEET MAPPED HORIZONTAL ACCURACY: +/- 1.0 FEET HORIZONTAL CONTROL: LEICA SMART NET	VERTICAL REFERENCE DATUM: NGS MLLW VERTICAL DATUM: MEAN LOW WATER IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET VERTICAL CONTROL: RTK/LEICA SMART NET SYSTEM/METHOD: SONARMITE MULTI-BEAM & TOPO BIN SIZE: 3x3 BIN SELECTION METHOD: AVERAGE CELL CENTER		
GEODETIC CONTROL MONUMENTS			
MONUMENT CE 'WINTER, 1977'	NAVD88 5.97 (GEOID12B)	MLLW 7.37	MEAN RANGE OF TIDE 1.21
		AREA 0+00 to 0+00	

WINTER HARBOR
PROJECT CONDITION SURVEY

SURVEY DATES:
August 12, 13 & October 7, 20, 26, 2020

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
eHYDRO FILE: WI_01_WIN_20200812_CS

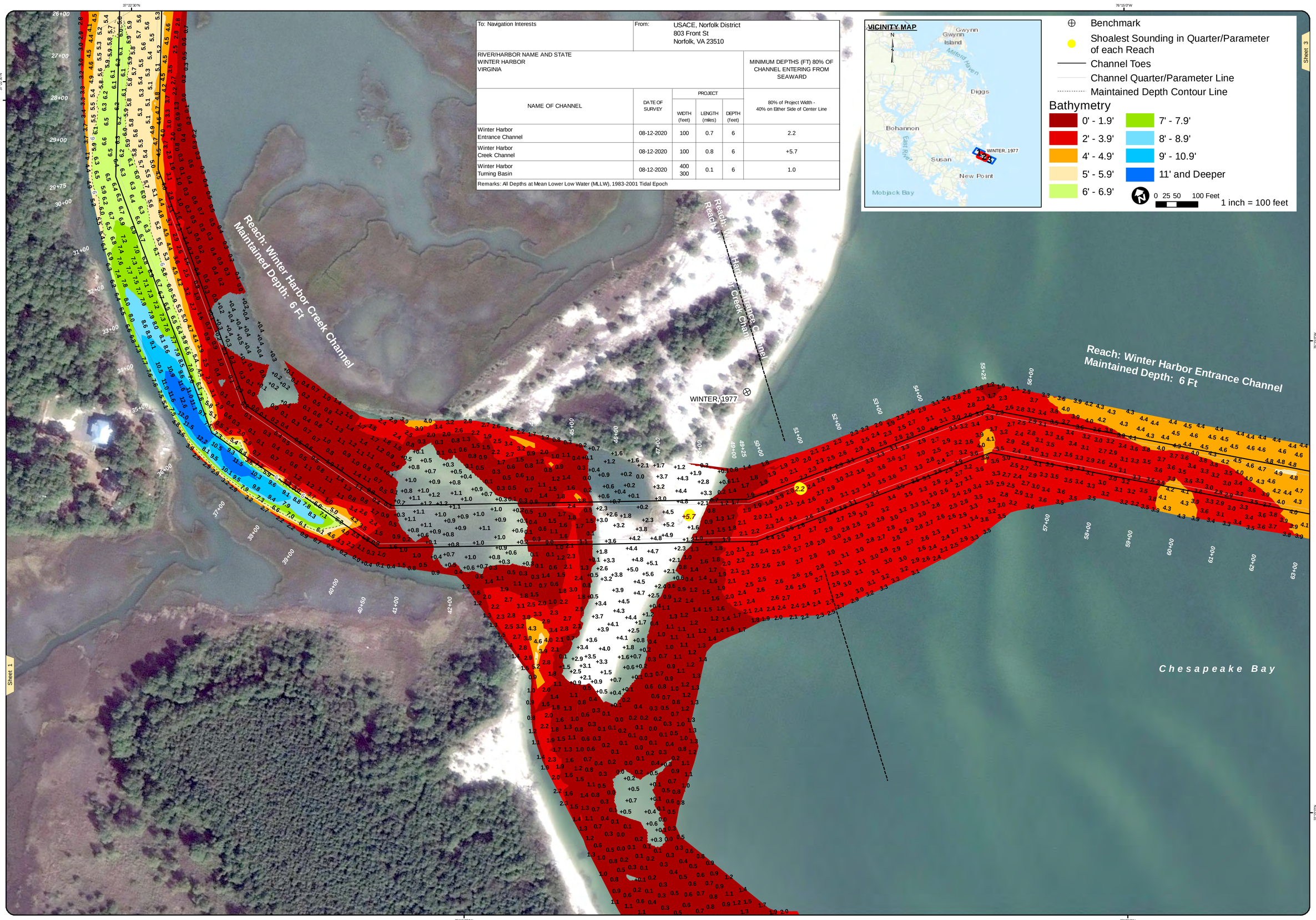
SHEET 2 of 3
Map Produced: 11/5/2020

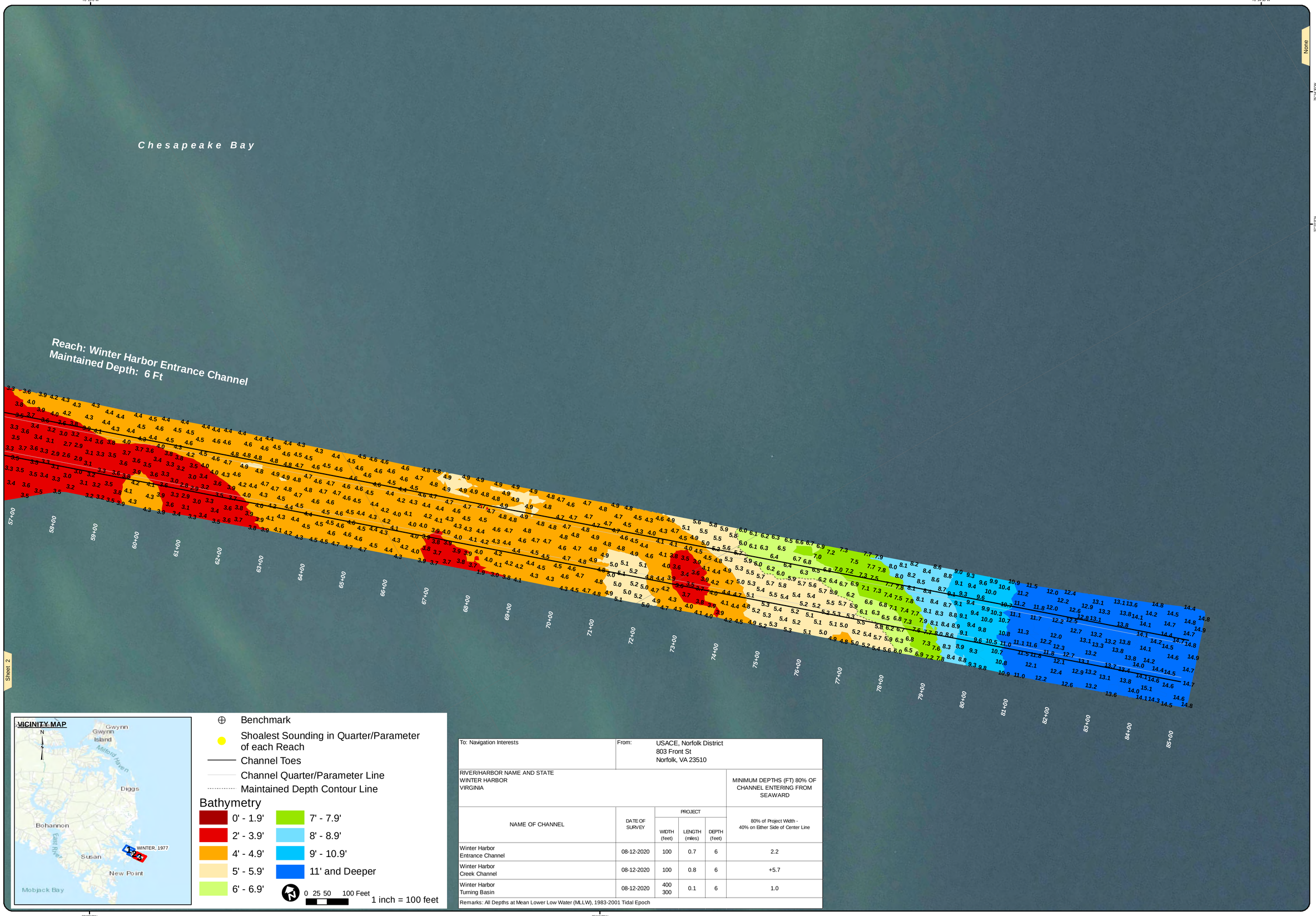
APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section





To: Navigation Interests	From:	USACE, Norfolk District 803 Front St Norfolk, VA 23510			
RIVER/HARBOR NAME AND STATE WINTER HARBOR VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
NAME OF CHANNEL	DATE OF SURVEY	PROJECT			80% of Project Width - 40% on Either Side of Center Line
		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	
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Winter Harbor Turning Basin	08-12-2020	400 300	0.1	6	1.0
Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch					

US Army Corps of Engineers
Norfolk District

NOTES

1. PROJECT A CHANNEL 12 FEET DEEP AND 100 FEET WIDE, EXTENDING FROM THE 12-FOOT CONTOUR IN CHESAPEAKE BAY INTO WINTER HARBOR TO A POINT JUST EAST OF THE PRESENT PUBLIC LANDING AREA A DISTANCE OF APPROXIMATELY 3,900 FEET, THENCE WITH A TURNING BASIN 400 FEET WIDE AND 300 FEET LONG, ALL DEPTHS REFERRED TO MEAN LOW WATER. A TRAFFIC SURVEY REVEALED THAT THE NAVIGATION ENTRANCE WITH A 6-FOOT CHANNEL WAS CONSIDERED AT THIS TIME A 6-FOOT DEEP CHANNEL WILL BE MAINTAINED UNTIL TRAFFIC INDICATES THE NEED FOR A CHANGE.
2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE AT THE TIME(S) INDICATED & CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THE TIME.
3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 2 FT RADIUS GENERATED FROM HYDROSURVEY DATA.
4. BACKGROUND IMAGERY DOWNLOADED FROM DIGITAL GLOBE DATED AND IS DATED OCTOBER 6, 2020
5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET.
6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY #HYDRO FILE NAME.

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: RTK/LEICA SMART NET
TIDE NOTE: +/- 1 FOOT ACCURACY
SYSTEM/METHOD: MULTI BEAM & TOPO
BIN SIZE: 2x2
BIN SELECTION METHOD: AVERAGE CELL CENTER

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM/AREA: NAD83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
MAPPED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: LEICA SMART NET

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
CZ, WINTER, 1977	7.07	5.87 (GEOID12B)	1.21	0+00 to 85+00

WINTER HARBOR
PROJECT CONDITION SURVEY

SURVEY DATES:
August 12, 13 & October 7, 20, 26, 2020

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
#HYDRO FILE: WI_01_WIN_20200812_CS

SHEET 3 of 3
Map Produced: 11/5/2020

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section