

**South Fork
Wind**

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Sea-to-Shore Conceptual Drawings

May 2021

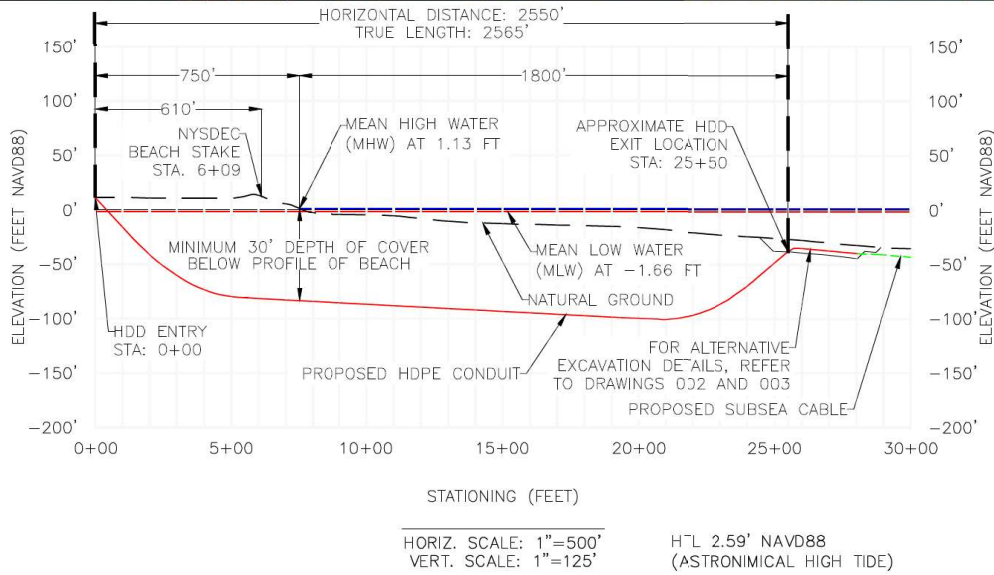
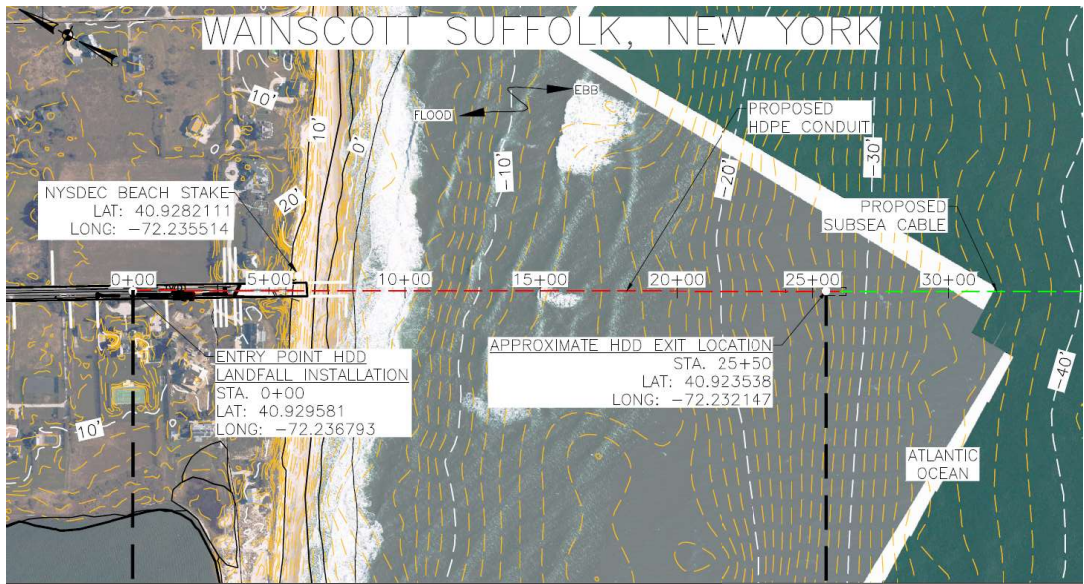
Drawings

The following figures are included in this Appendix.

Sea-to-Shore Transition

Plan and Profile – Beach Lane Landing Site

Plan and Profile – Hither Hills Landing Site



HDD Notes:

1. Vertical datum: NAVD 83, Horizontal datum: UTM Zone 19, Feet
2. All elevations are referenced to NAV88 (0.00'). 0.00' NAVD88 = -1.78' MLLW, -1.66' MLW, +1.13' MWH and +2.59' HTL (based on highest astronomical tide).
3. Dimensions provided on drawing are in feet unless otherwise noted.
4. All chainages are horizontal
5. Method of HDPE conduit construction shall be by horizontal directional drilling.
6. HDD Exit Point is located within an excavation. This excavation will help achieve the required burial depth of the HDPE conduit.
7. Drill path shown on the drawings refers to the centerline of the proposed HDD installation. Drilling tolerances may result in slight deviations from these stations and elevations.
8. Approximate exit pit location may include temporary cofferdam (or equal) and temporary support structures. Temporary structures including but not limited to conduit support piles and secondary protection may be installed at the exit pit location to aid in the installation of the HDD. These features would be located within the currently proposed footprint of the cofferdam or excavation and would be removed upon completion of the cable installation.
9. The initial exit pit excavation to be conducted with the use of an environmental clamshell bucket. Dredged sediment may be placed in a hopper scow(s) or similar for temporary storage. The scow(s) may require occasional decanting to remove excess water during dredging operations. Upon completion of the HDD installation, the dredged sediment will be used to backfill and restore the exit pit to its pre-excavation conditions. The dredged sediment will be analyzed for contamination prior to its use as a backfill. Should the sediment be determined unsuitable for placement, the sediment will be disposed of at a NYSDEC-authorized upland disposal facility or alternative with appropriate approvals. If additional fill is necessary to restore the area to its pre-excavated conditions, clean fill of similar grain size will be acquired from an upland source and placed as backfill.
10. Prior to cable pull in, the dredged area at the end of the HDPE conduit may require targeted removal/clearing of accumulated sediment due to infilling, to avoid damaging the conduit; this work would be conducted with the use of an airlift, controlled flow excavation, and/or suction dredging or similar equipment.
11. Permanent secondary protection may be placed above the HDPE conduit at the exit pit excavation. If concrete mattresses are used for secondary protection, individual mattress dimensions will be approximately 8' wide by 20' length by 1' thick. If other secondary protection methods are proposed, dimensions may differ.
12. The depicted cofferdam and dredge footprint are intended to represent maximum design scenarios. The actual footprints of these activities are dependent on the final installation methodology and engineered design but are anticipated to be smaller than the footprints depicted.
13. Rock bags or equivalent may be temporarily placed within excavation to prevent infilling during HDD operations.
14. Depicted are the current design volume and anticipated maximum dredge volume. Actual dredge footprint dimensions and volume will be dependent on site conditions at the time of construction.

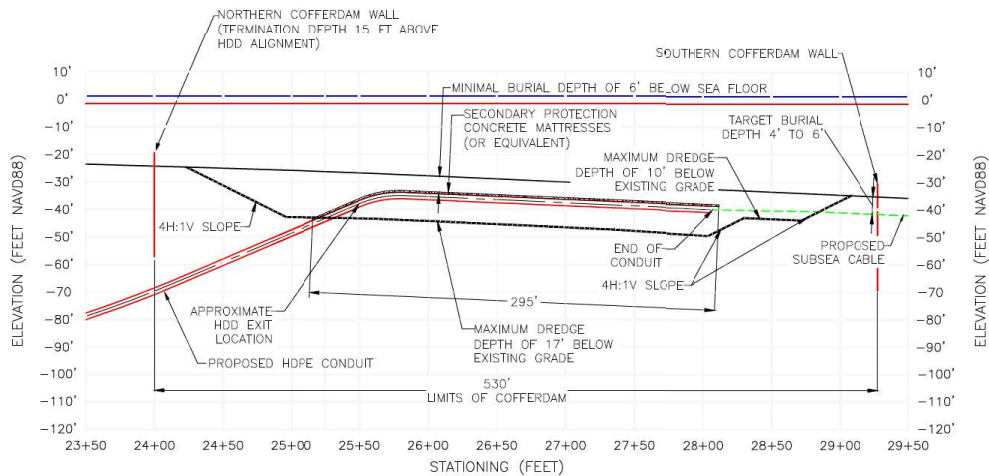
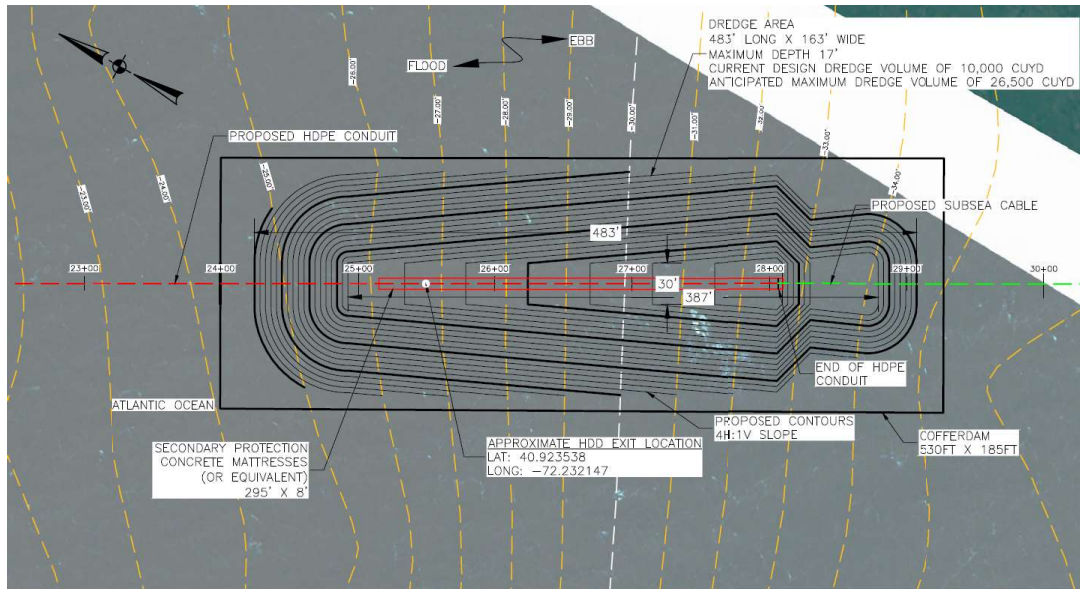
Notes:

1. The sea-to-shore transition for the SFEC-NYS will be installed using HDD between onshore underground cable installation vault and the offshore HDD exit location.
2. HDD exit location may utilize offshore sheet pile cofferdam, gravity cell cofferdam, or no cofferdam. The exit location will be approximately 1,750 feet (533 m) from the MHW, sited at location with approximately 35 to 40 feet (7.6 to 12.2 m) of water depth.
3. The cable will be installed at least 30 feet (9.1 m) below the current profile of the beach. Depth depicted in the figure is approximate and final depth will be determined during final engineering design.
4. A new underground transition vault will be placed within the roadway approximately 800 feet (243 m) onshore from the MHWL.

**SFEC Plan and Profile
HDD Installation**

**Atlantic Ocean
Sheet 1 of 3**

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PROFILE
 HORIZ. SCALE: 1"=40'
 VERT. SCALE: 1"=20'

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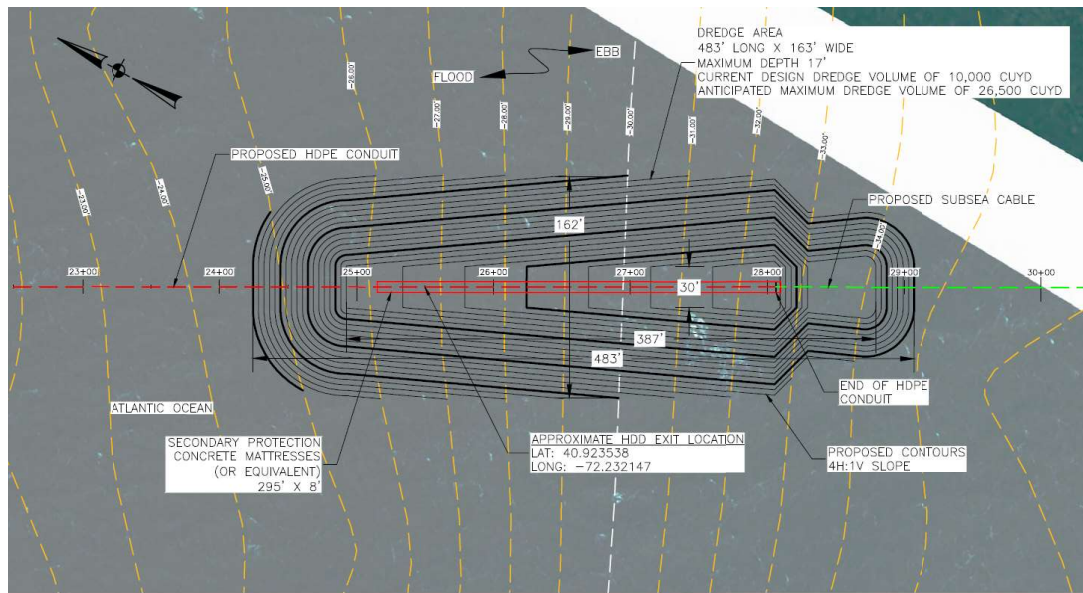
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4. A new underground transition vault will be placed within the roadway approximately 800 feet (243 m) onshore from the MHWL.

**SFEC Plan and Profile
 HDD Installation (w/Cofferdam)**

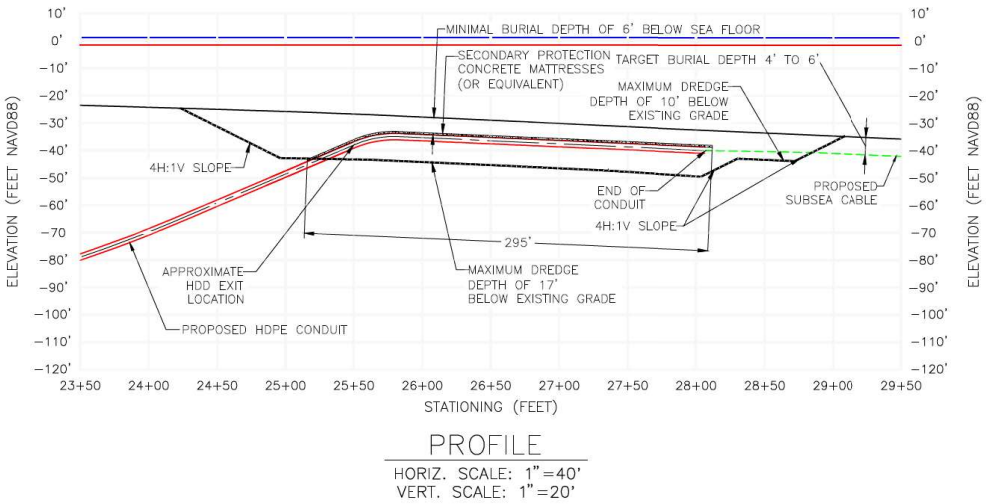
**Atlantic Ocean
 Sheet 2 of 3**

**South Fork
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**SFEC Plan and Profile
 HDD Installation (No Cofferdam)**

**Atlantic Ocean
 Sheet 3 of 3**

**South Fork
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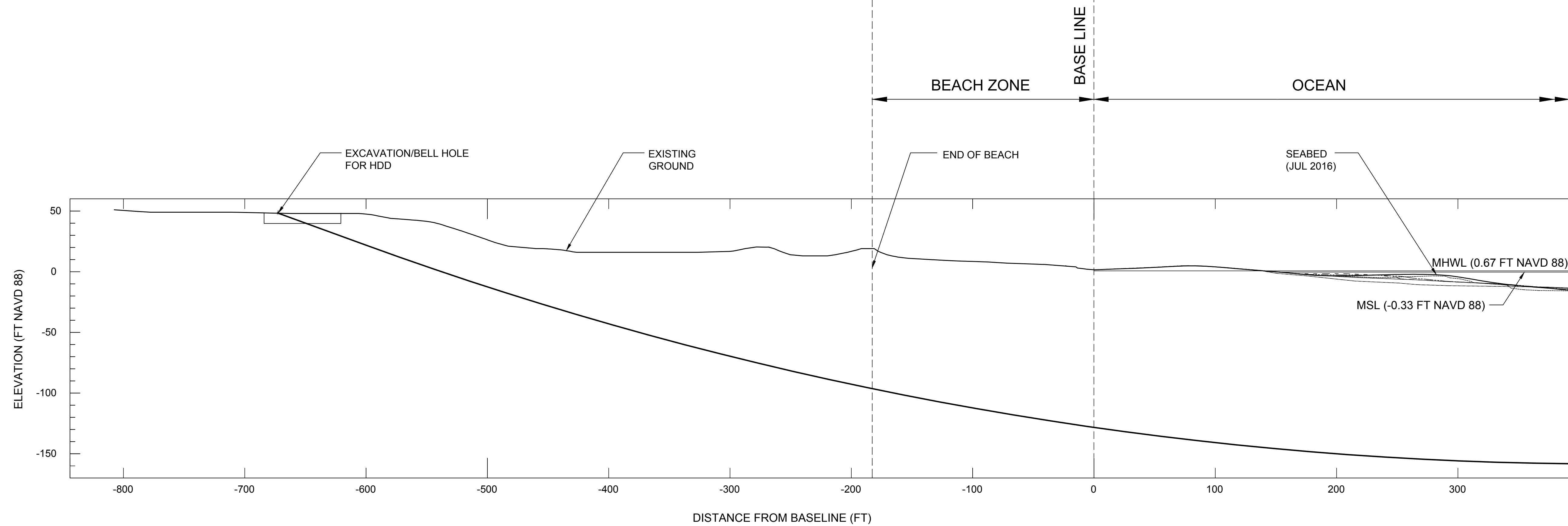


SHEET 1
SHEET 2

SEABED PROFILES BY DATES	
---	AUG 2013
---	FEB 2014
---	JUN 2014
---	NOV 2014
---	JUL 2015
---	JUL 2016

NOTES

1. THE SEABED PROFILE OFFSHORE OF BEACH LANE IS TEMPORARILY ASSUMED TO BE SIMILAR TO THE SEABED PROFILE OFFSHORE OF HITHER HILLS AND THE SAME PROFILE IS USED IN THE DEVELOPMENT OF THIS HDD ALIGNMENT SKETCH. THE SEABED PROFILE AND HDD ALIGNMENT CAN BE UPDATED IF THE HITHER HILLS SITE SPECIFIC BATHYMETRY INFORMATION BECOMES AVAILABLE.
2. DUE TO THE STEEP NATURAL SLOPE AT THE SOUTHEAST EDGE OF THE PARKING LOT A 20 DEGREES HDD ENTRY ANGLE HAS BEEN USED. THIS DRILL ANGLE IS STEEPER THAN WHAT IS CONVENTIONALLY USED AND THE FEASIBILITY OF THE HDD DRILLING ANGLE SHOULD BE REVIEWED AND CONFIRMED BY A DRILLING CONTRACTOR.
3. ALL HDD DEPTHS SHOWN ARE PRELIMINARY AND SHALL BE CONTINGENT UPON FINAL DESIGN BY THE HDD DRILLING CONTRACTOR. FOLLOWING ONSHORE AND OFFSHORE GEOTECHNICAL INVESTIGATION AND ANALYSIS TO ESTABLISH SUBSURFACE GROUND COMPOSITION AND BEDROCK LOCATIONS.
4. THE MHWL AND MSL ELEVATIONS ARE DEDUCED FROM NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) DATA AT THE MONITORING STATION 8510560 MONTAUK NY. THE RESPECTIVE ELEVATION DATA AT THE SAID STATION ARE ASSUMED TO BE APPLICABLE TO THE PROJECT HDD LANDING SITE.



PROFILE VIEW
NTS

**PRELIMINARY
DO NOT USE FOR PROCUREMENT
OR CONSTRUCTION**

No	REVISION DESCRIPTION	DATE (Y/M/D)	INITIALS: * DESIGNED ** APPROVED
A	ISSUED INTERNALLY FOR REVIEW	2018/02/28	
B	ISSUED FOR CLIENT REVIEW	2018/03/01	
C	ISSUED FOR PERMITTING	2018/05/11	
D	RE-ISSUED FOR PERMITTING	2018/05/25	
E	RE-ISSUED FOR PERMITTING	2018/05/31	

SNC-LAVALIN

PROFESSIONAL SEAL

PREPARATION

DESIGNED J. ZANDBERGEN

DRAWN A. QI

CHECKED F. LAM

DATE FEB 23, 2018

SCALE SHEET 1 OF 3

SOUTH FORK WIND FARM

CLIENT
DEEPWATER WIND SOUTH FORK, LLC

PROJECT
SOUTH FORK WIND FARM

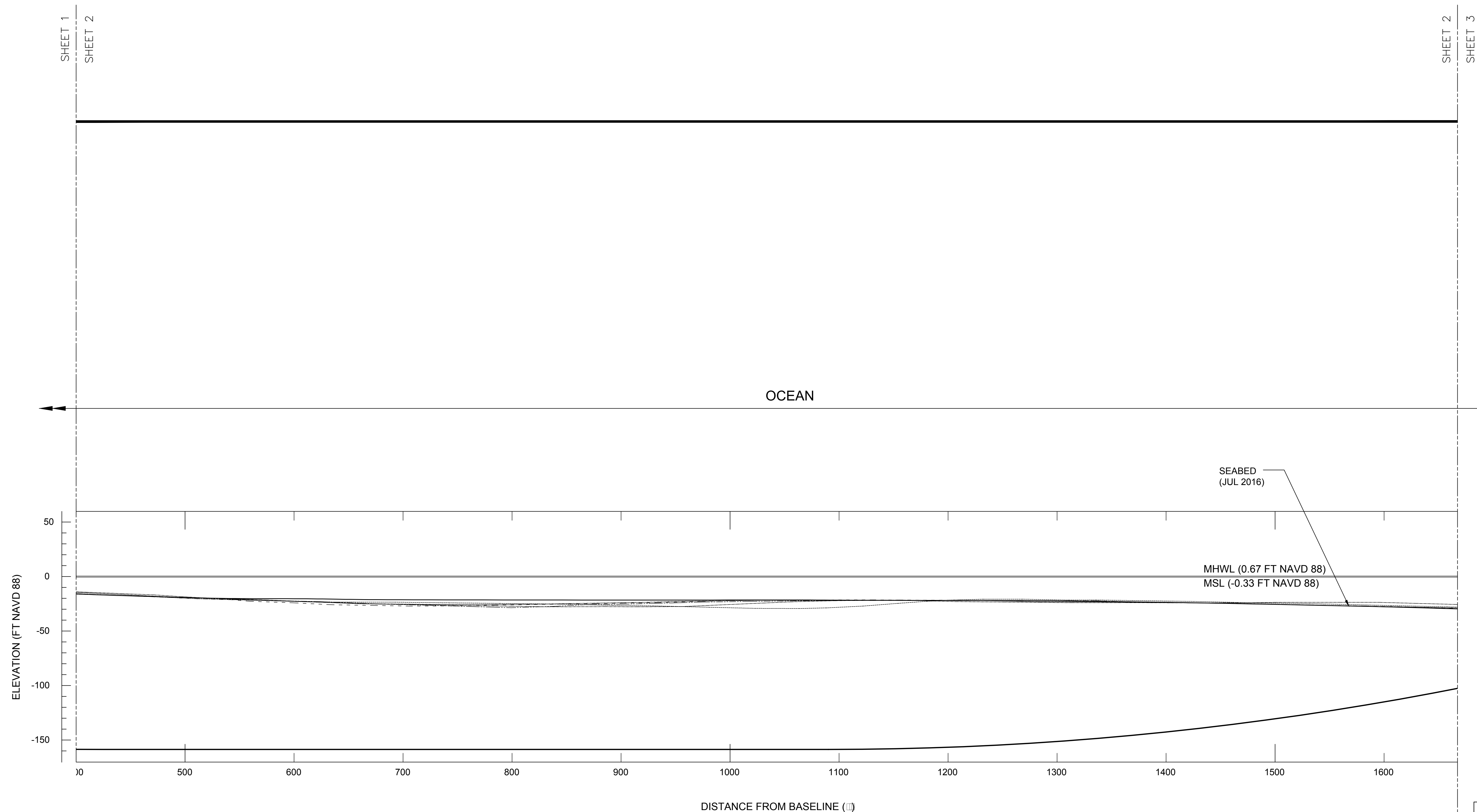
TITLE
TRANSMISSION CABLE LANDING AT HITHER HILLS
PLAN AND PROFILE SKETCH

DOCUMENT No.
648902-0000-40DD-0012

SIZE D

REV E

SEABED PROFILES BY DATES	
---	AUG 2013
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---	JUN 2014
---	NOV 2014
---	JUL 2015
---	JUL 2016



DISTANCE FROM BASELINE (ft)

PROFILE VIEW
NTS

**PRELIMINARY
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No	REVISION DESCRIPTION	DATE (Y/M/D)	*	**
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E	RE-ISSUED FOR PERMITTING	2018/05/31		

SNC-LAVALIN

PROFESSIONAL SEAL

PREPARATION

DESIGNED J. ZANDBERGEN

DRAWN A. QI

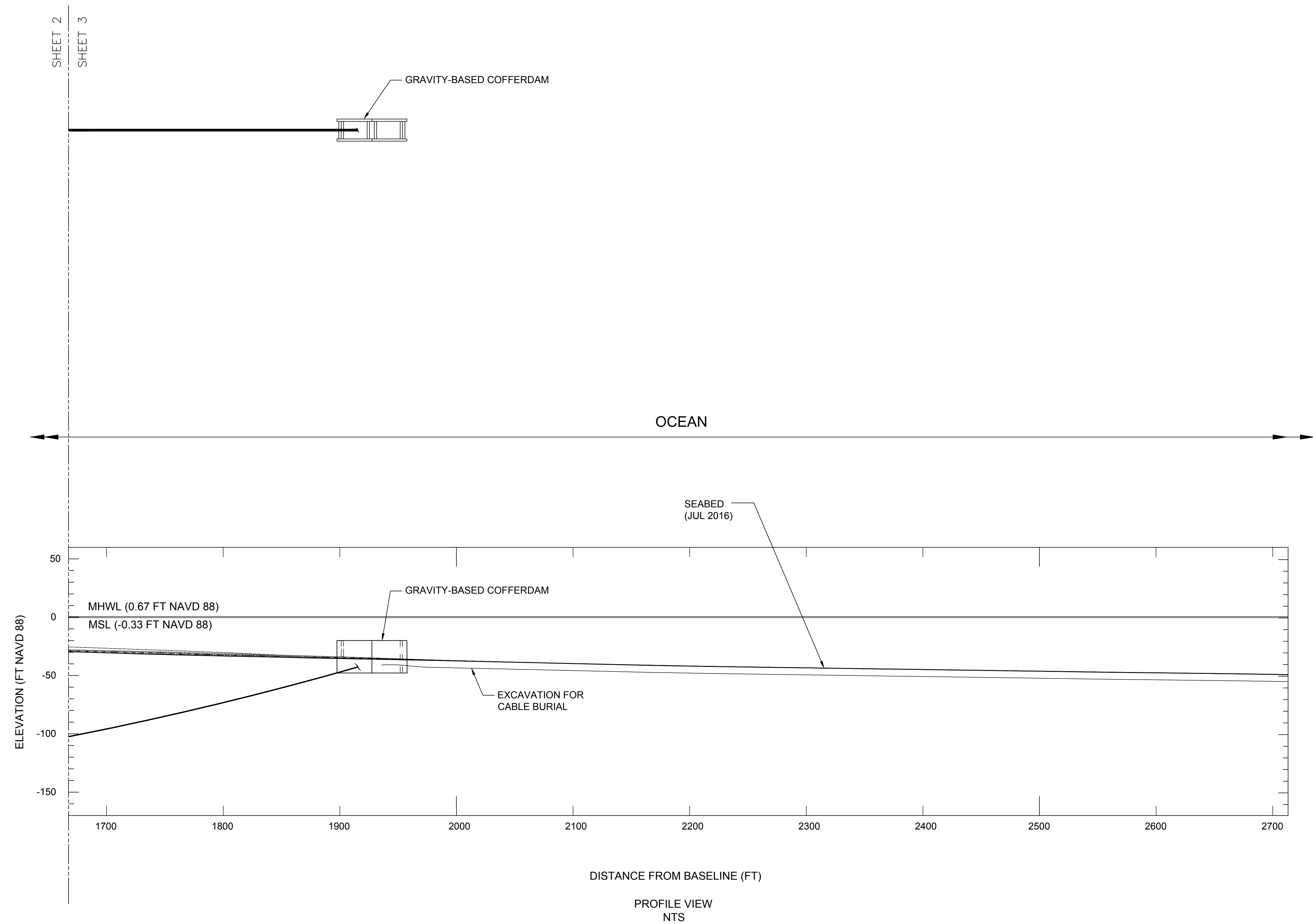
CHECKED F. LAM

DATE FEB 23, 2018

SCALE SHEET NTS 2 OF 3

CLIENT	DEEPWATER WIND SOUTH FORK, LLC
PROJECT	SOUTH FORK WIND FARM
TITLE	TRANSMISSION CABLE LANDING AT HITHER HILLS PLAN AND PROFILE SKETCH
DOCUMENT No.	648902-0000-40DD-0012
SIZE	D
REV	E

SEABED PROFILES BY DATES	
---	AUG 2013
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	PROFESSIONAL SEAL		PREPARATION	
			DESIGNED	J. ZANDBERGEN
			DRAWN	A. QI
			CHECKED	F. LAM
			DATE	FEB 23, 2018
		SCALE	SHEET	3 OF 3

CLIENT		DEEPWATER WIND SOUTH FORK, LLC	
PROJECT		SOUTH FORK WIND FARM	
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DOCUMENT No.	648902-0000-40DD-0012	SIZE	REV
		D	E