## US WIND MARYLAND OFFSHORE WIND PROJECT INDIAN RIVER BAY EXPORT CABLES



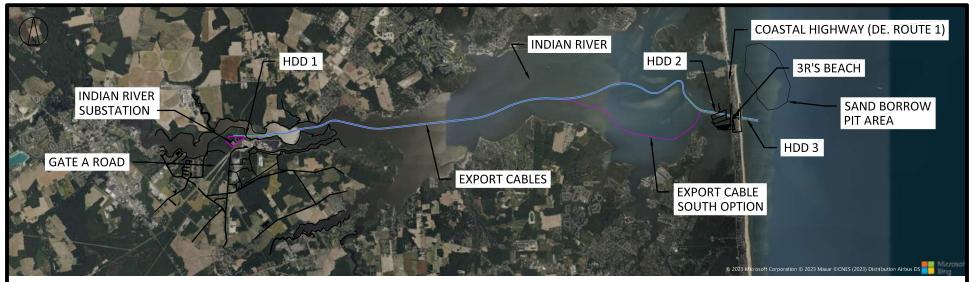
BLACK & VEATCH CORPORATION OVERLAND PARK, KS PROJECT NO. 410735 2023

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BLACK & VEATCH  Building a world of difference.			US WIND							PROJECT DR	DRAWING NUMBER				
Buildi	INDIAN RIVER BAY - EXPORT CABLES								410735 - 000					В	
DESIGNER GS	DRAWN SLH	COVER SHEET							CODE						
CHECKED RW	DATE 06/14/23								AREA						

TITLE	DRAWING NO.	REV	TITLE	DRAWING NO	D. REV
COVER SHEET	000	В	PLAN & PROFILE 20 - INDIAN RIVER BAY SOUTHERN ROUT	TE 023	В
INDEX	001	В	ONSHORE PLAN & PROFILE 3R'S PARKING LOT	024	В
VICINITY MAP & GENERAL NOTES	002	В	DUCT BANK SECTION	025	В
KEY MAP	003	В	TYPICAL CABLE CORRIDOR CROSS SECTION	026	В
PLAN & PROFILE 1 - INDIAN RIVER BAY NORTHERN ROUTE	004	В	NEAR NAVIGATIONAL CHANNEL		
PLAN & PROFILE 2 - INDIAN RIVER BAY NORTHERN ROUTE	005	В	TYPICAL CABLE CORRIDOR CROSS SECTION AWAY FROM NAVIGATIONAL CHANNEL	027	В
PLAN & PROFILE 3 - INDIAN RIVER BAY NORTHERN ROUTE	006	В			
PLAN & PROFILE 4 - INDIAN RIVER BAY NORTHERN ROUTE	007	В	HDD SECTION	028	В
PLAN & PROFILE 5 - INDIAN RIVER BAY NORTHERN ROUTE	008	В	SPLICING VAULT ON LAND -PLAN VIEW	029	В
PLAN & PROFILE 6 - INDIAN RIVER BAY NORTHERN ROUTE	009	В	SPLICING VAULT ON LAND -SECTION VIEW	030	В
PLAN & PROFILE 7 - INDIAN RIVER BAY NORTHERN ROUTE	010	В	TRANSITION VAULT DETAILS -NOTES	031	В
PLAN & PROFILE 8 - INDIAN RIVER BAY NORTHERN ROUTE	011	В	TRANSITION VAULT DETAILS -PLAN VIEW	032	В
PLAN & PROFILE 9 - INDIAN RIVER BAY NORTHERN ROUTE	012	В	TRANSITION VAULT DETAILS -SECTION VIEW	033	В
PLAN & PROFILE 10 - INDIAN RIVER BAY NORTHERN ROUTE	013	В	TRANSITION VAULT DETAILS -SECTION 2 VIEW	034	В
PLAN & PROFILE 11 - INDIAN RIVER BAY NORTHERN ROUTE	014	В	TRANSITION VAULT DETAILS -SECTION 3 VIEW	035	В
PLAN & PROFILE 12 - INDIAN RIVER BAY NORTHERN ROUTE	015	В	HDD 1 PLAN & PROFILE WEST LANDING	036	В
PLAN & PROFILE 13 - INDIAN RIVER BAY NORTHERN ROUTE	016	В	HDD 2 PLAN & PROFILE EAST LANDING - IRB	037	В
PLAN & PROFILE 14 - INDIAN RIVER BAY NORTHERN ROUTE	017	В	HDD 3 PLAN & PROFILE EAST LANDING - ATLANT	TC 038	В
PLAN & PROFILE 15 - INDIAN RIVER BAY NORTHERN ROUTE	018	В	3R'S PARKING LOT PERMANENT DISTURBANCE A	REA 039	В
PLAN & PROFILE 16 - INDIAN RIVER BAY SOUTHERN ROUTE	019	В	3R'S PARKING LOT TEMPORARY DISTURBANCE A	REA 040	В
PLAN & PROFILE 17 - INDIAN RIVER BAY SOUTHERN ROUTE	020	В	WEST LANDING PERMANENT DISTURBANCE ARE	A 041	В
PLAN & PROFILE 18 - INDIAN RIVER BAY SOUTHERN ROUTE	021	В	WEST LANDING TEMPORARY DISTURBANCE ARE	A 042	В
PLAN & PROFILE 19 - INDIAN RIVER BAY SOUTHERN ROUTE	022	В		NOT TO BE USE FOR CONSTRU	
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BLACK & VEATCH  Building a world of difference.	INDIAN F		WIND Y - EXPORT CABLES  PROJECT 410735	DRAWING NUMBER - 001	REV B
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CHECKED DATE RW 06/14/23					

# Project Route Overview and General Notes



#### **PLAN VIEW**

#### **GENERAL NOTES:**

- 1. Coordinates are in US Survey Feet, NAD 83, Delaware State Plane (SPCS 700)
- 2. Elevations are in US Survey Feet NAVD 88.
  - a.Tidal Elevations at Indian River Inlet, MLLW -1.82', MSL -0.41', MHHW 1.12'
  - b. Tidal Elevation at Rosedale Beach on Indian River, MLLW -1.50', MSL 0.14', MHHW 1.83'
- 3. Route is not final. Minor adjustments in routing may be required as additional information is collected.
- 4. Disturbance area in water is based on the proposed installation methods.
- 5. Barge access dredge line is bottom of trench. Extents shown do not include slide slopes. Slide slope widths may vary.

0 500 10000 FEET

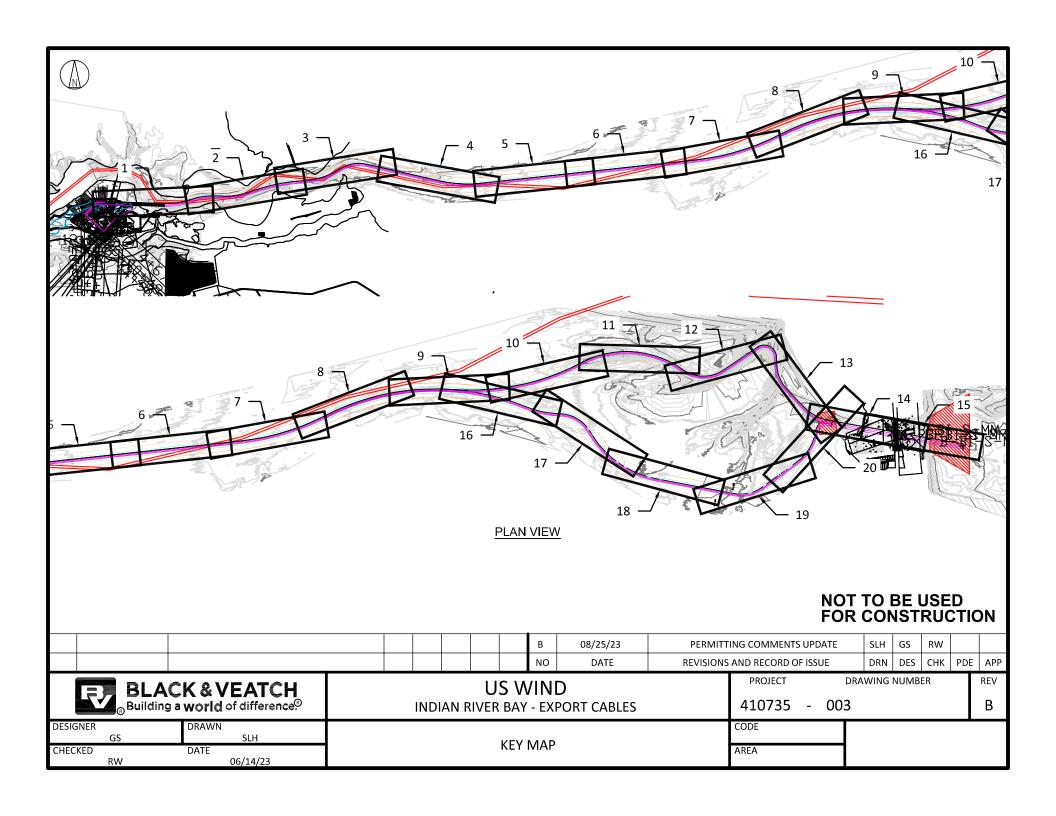
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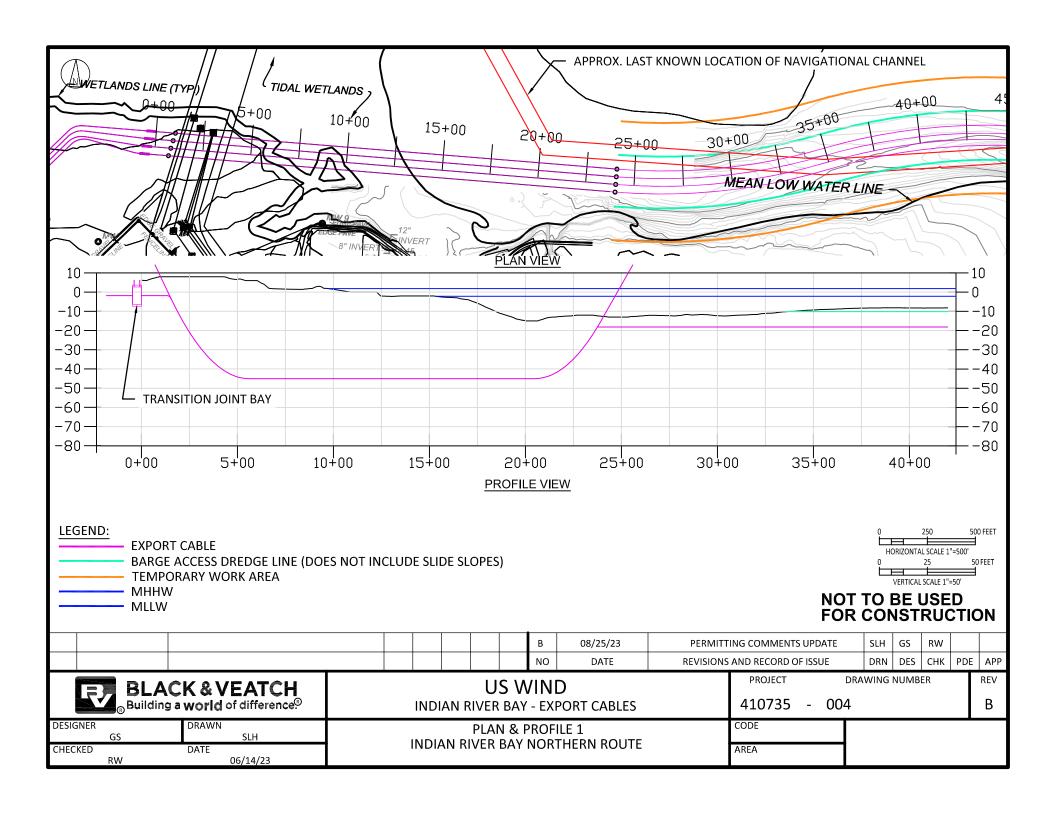
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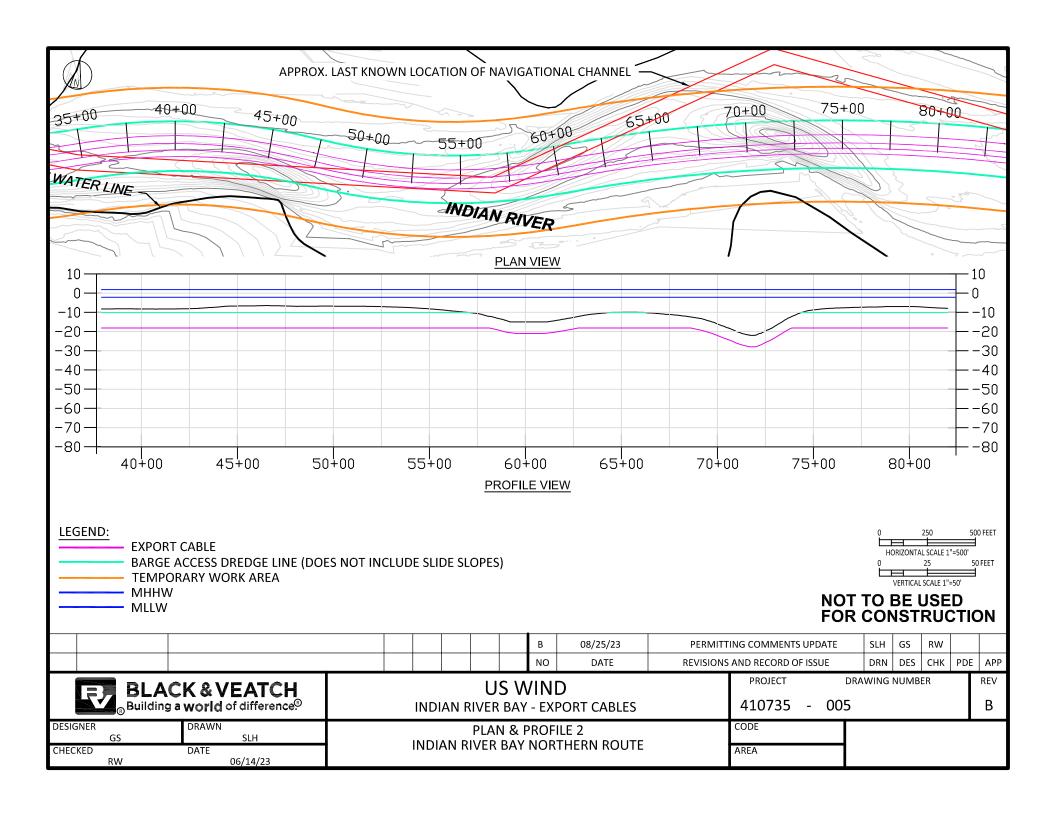
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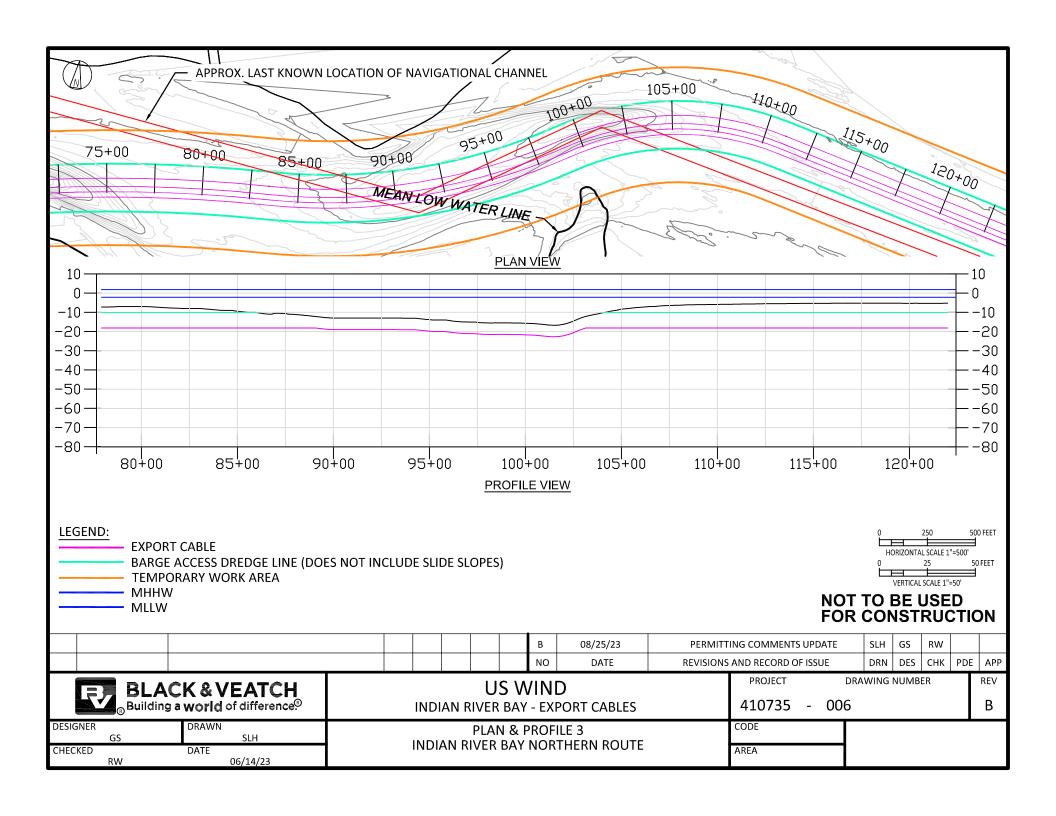
### Plan and Profile Drawing Sheet Key Map

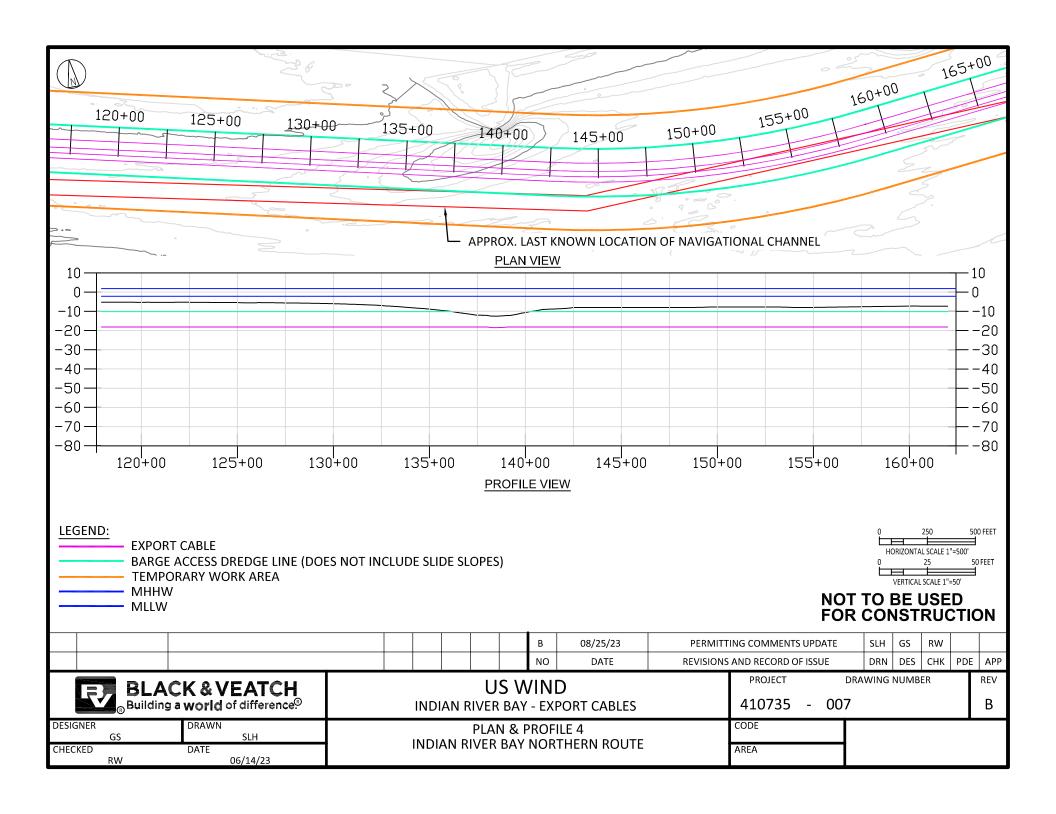


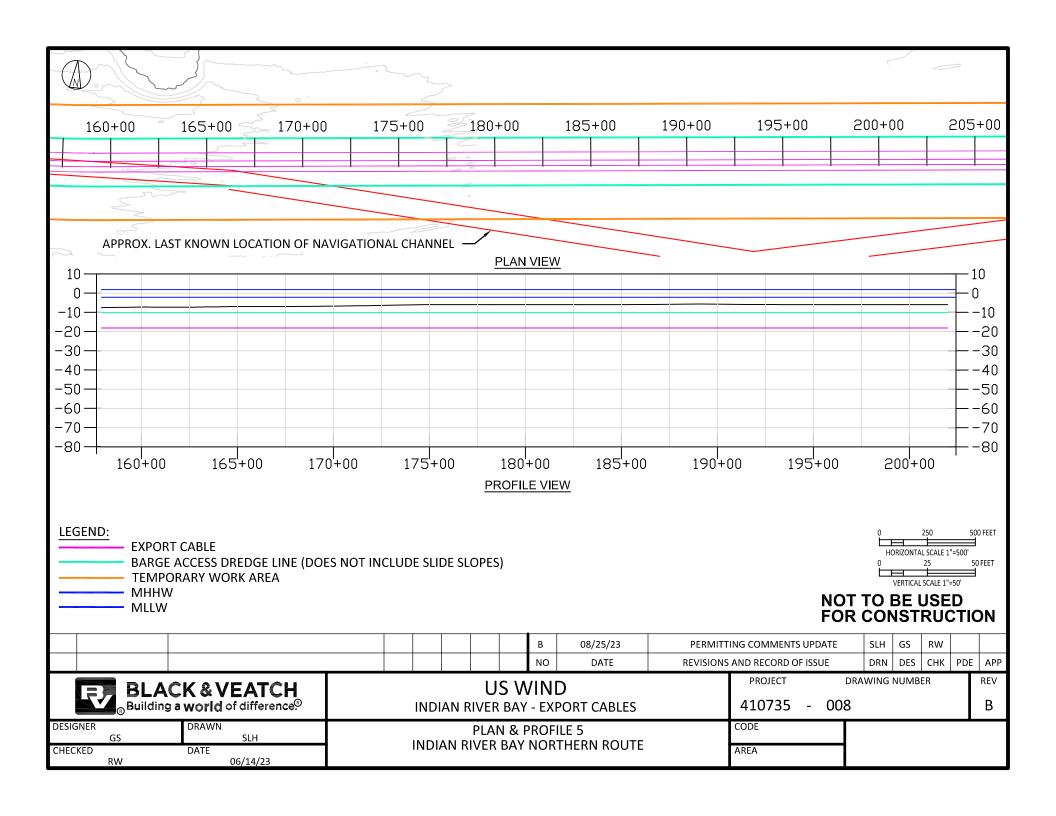
### Plan and Profiles Indian River Bay - Northern Route

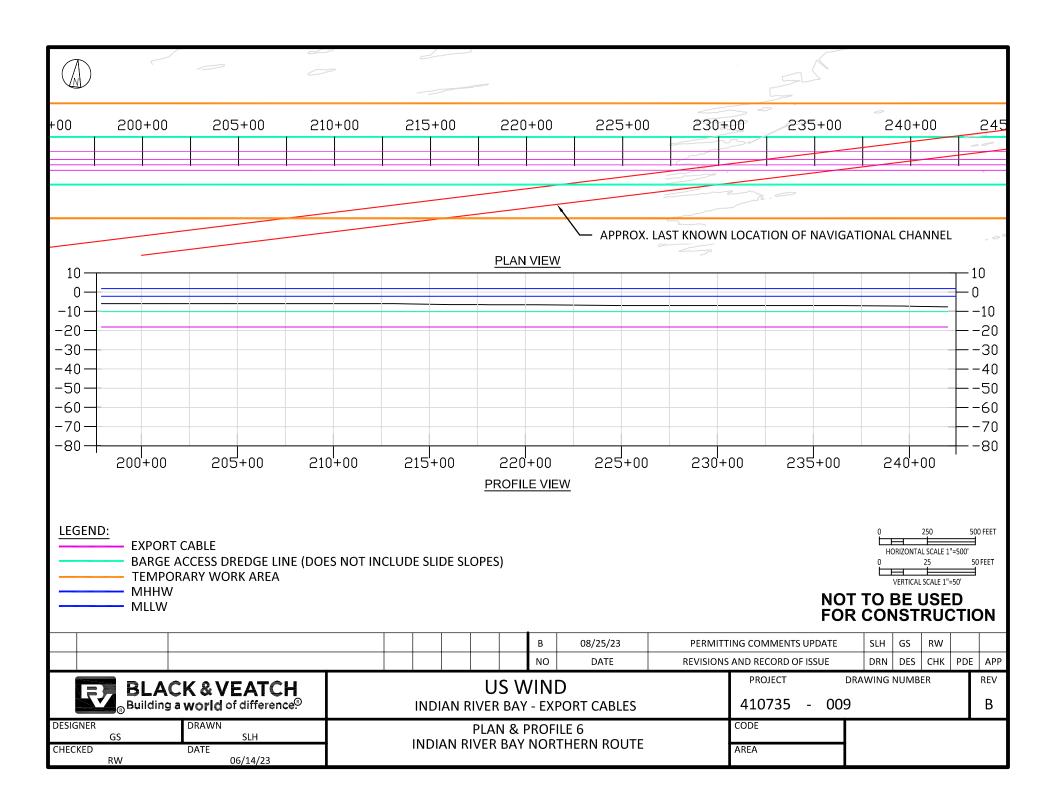


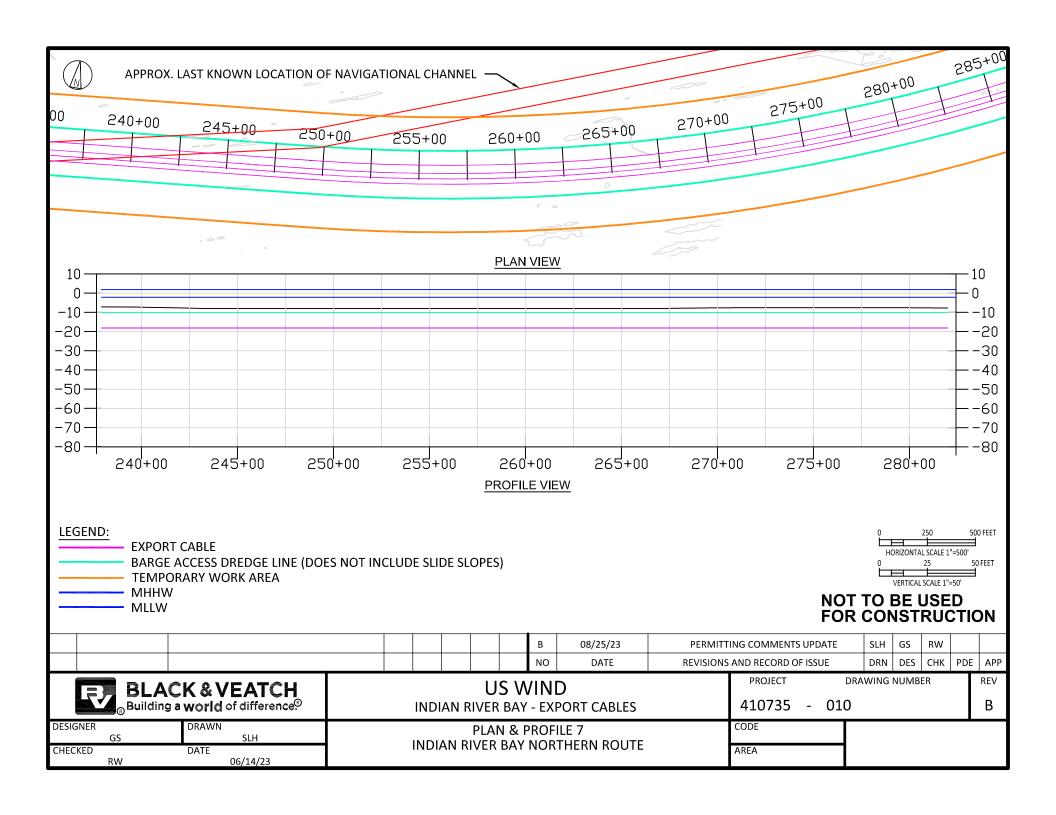


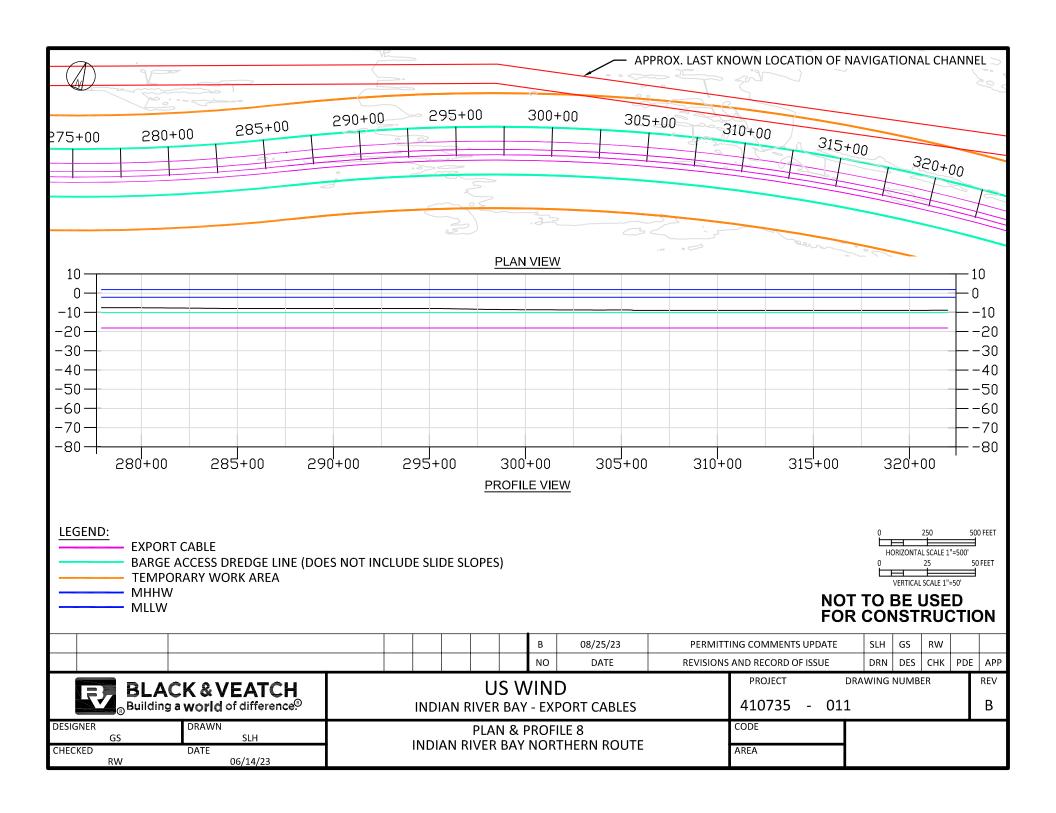


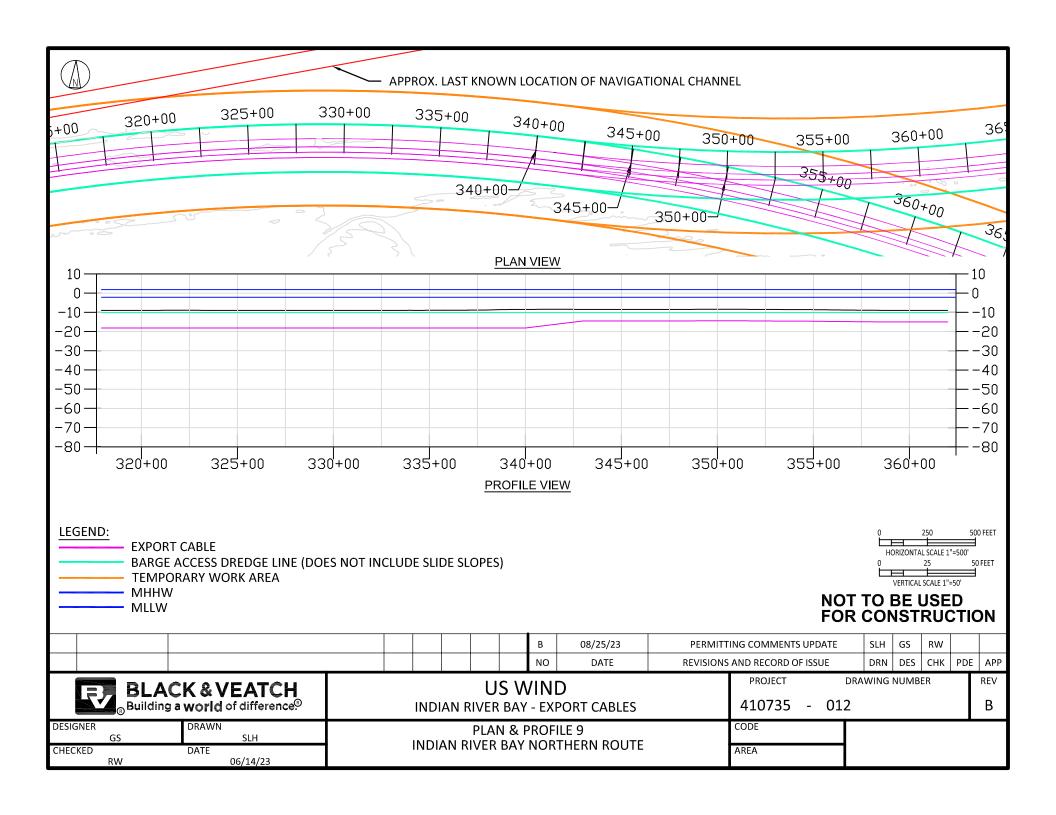


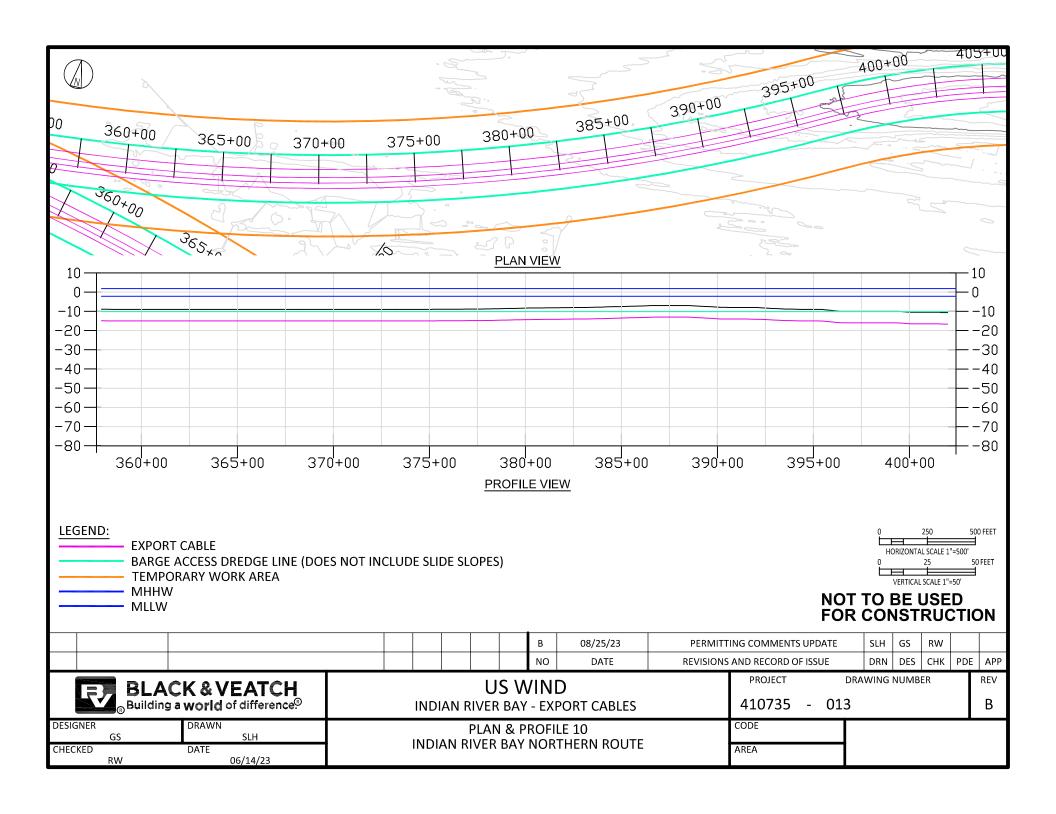


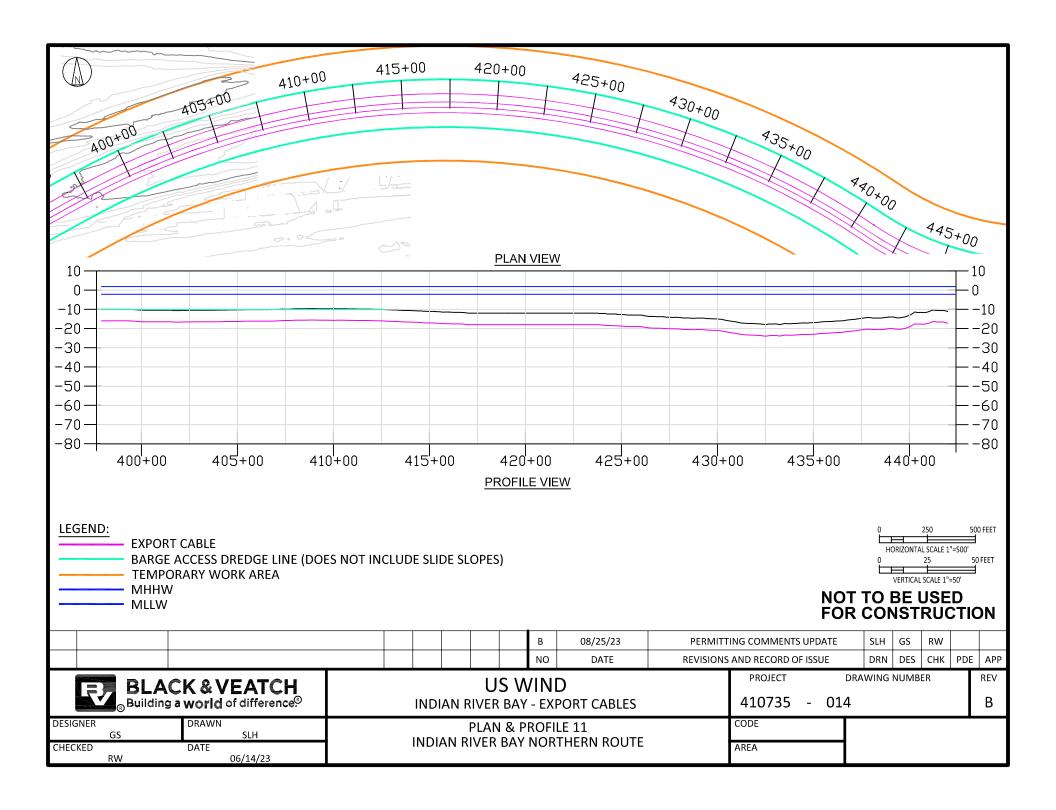


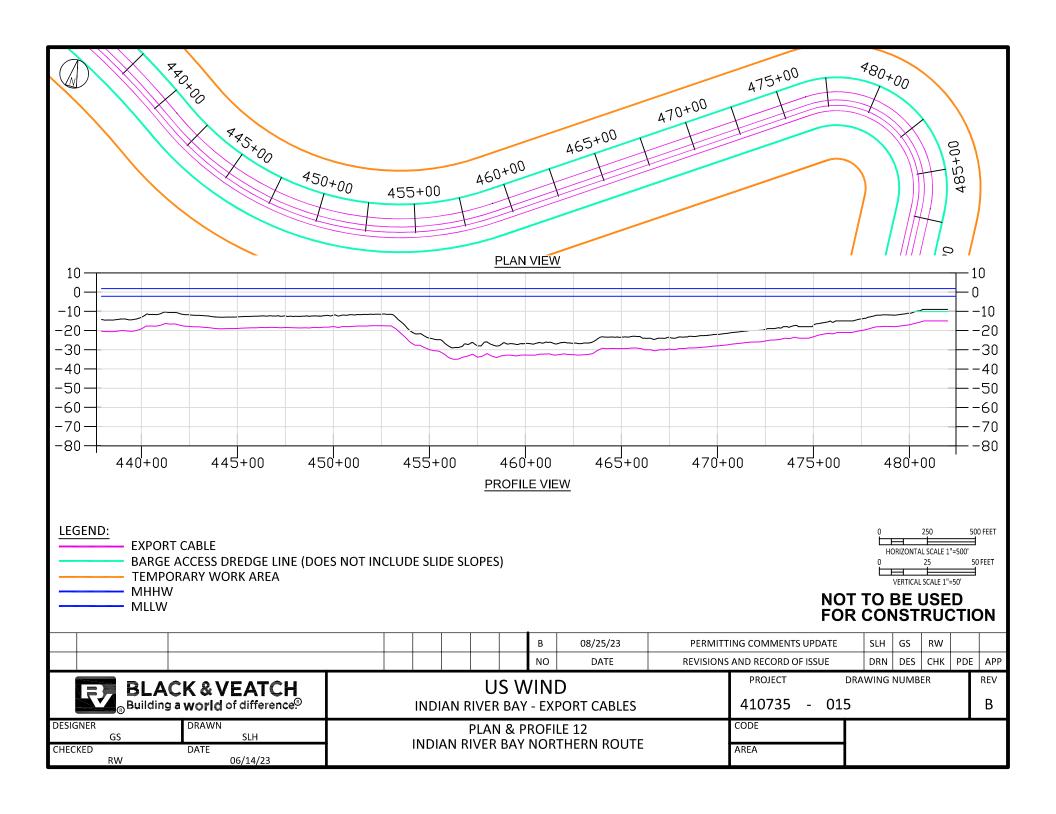


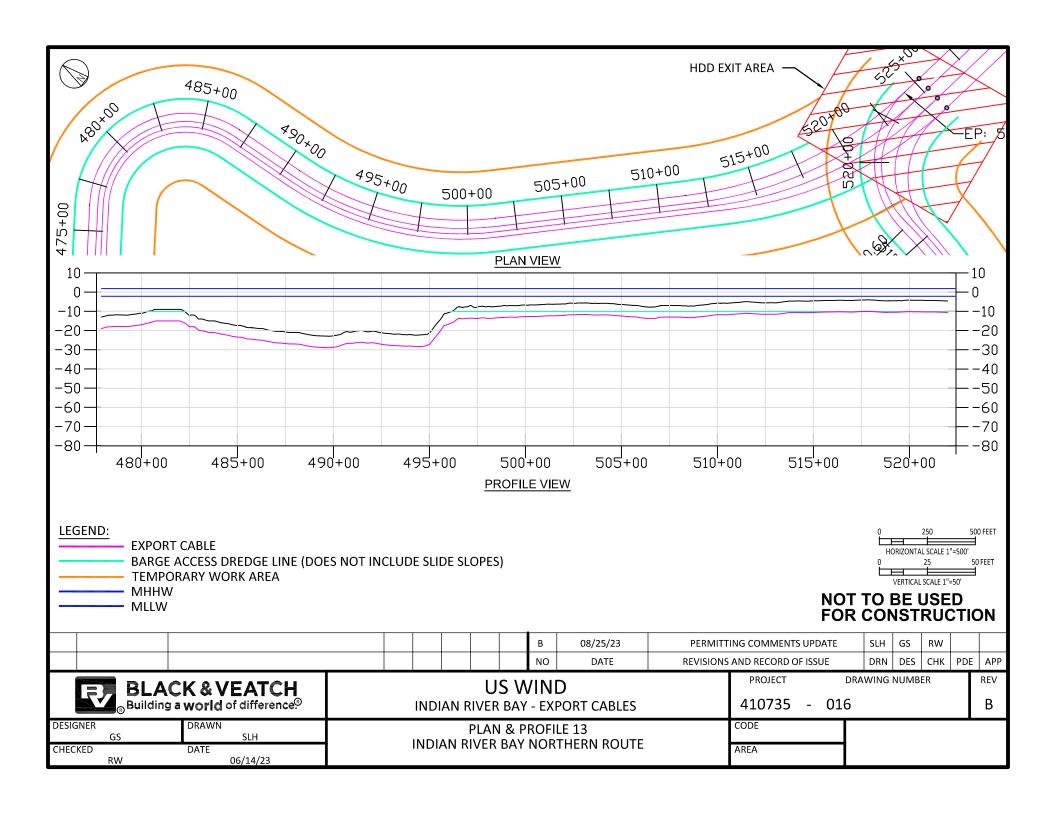


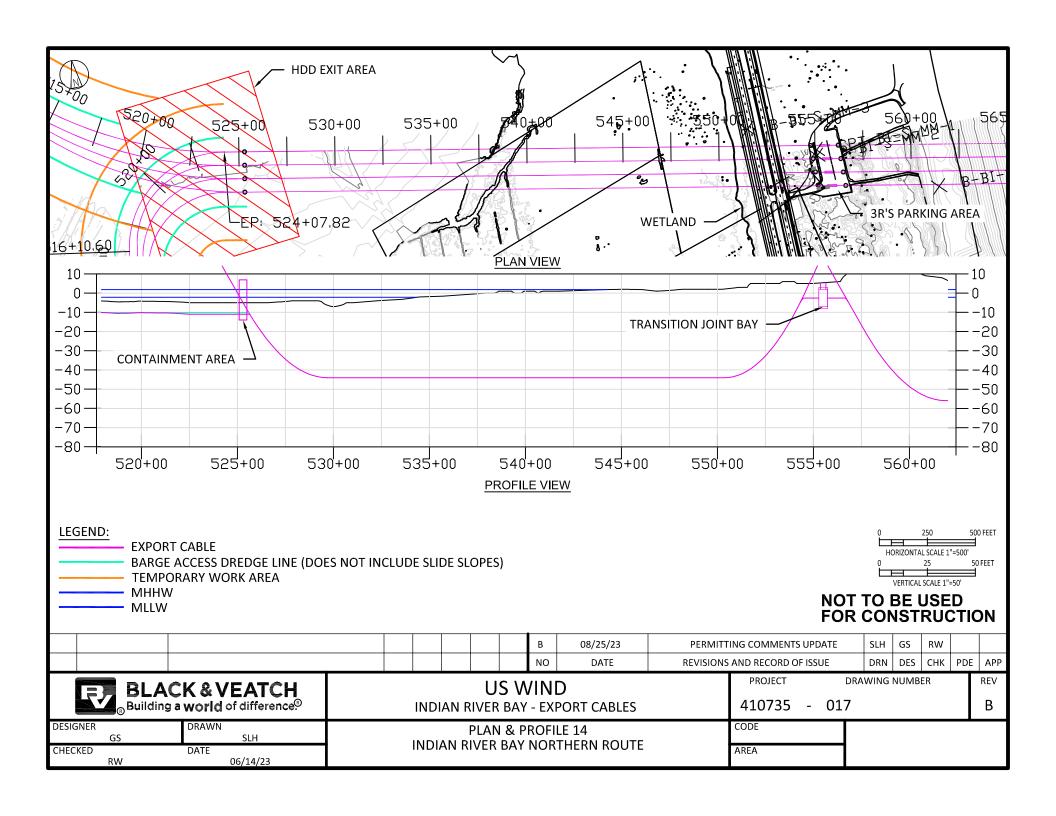


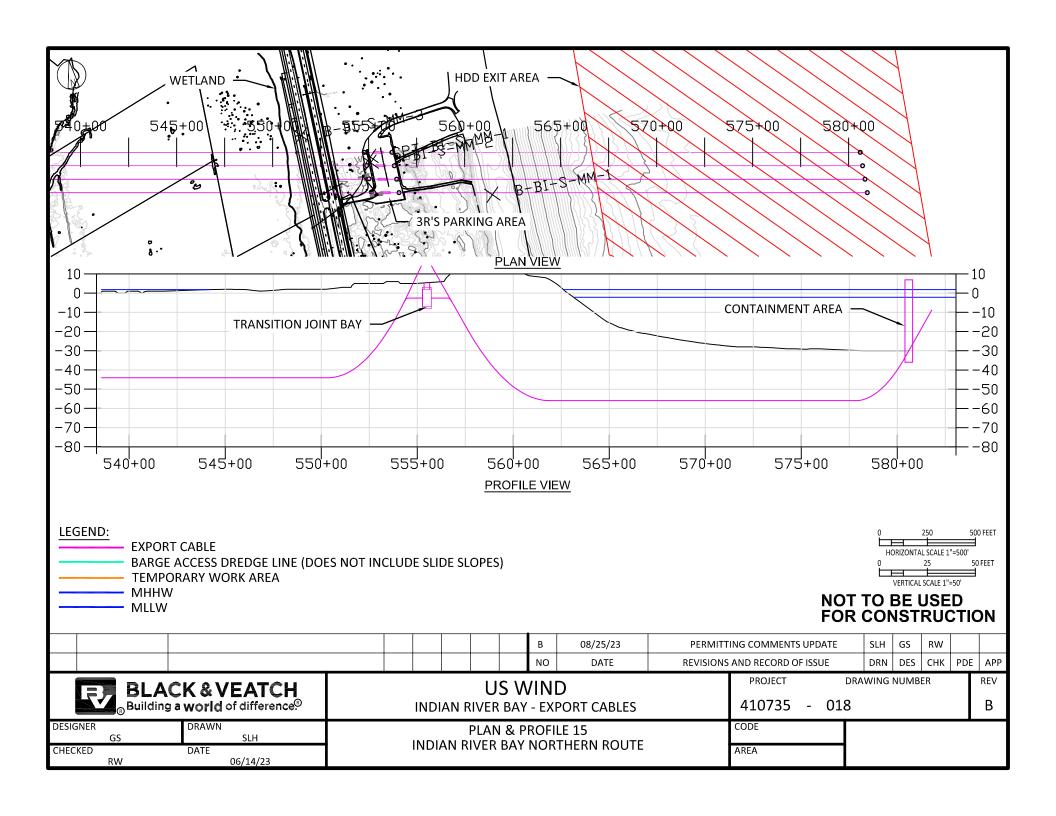




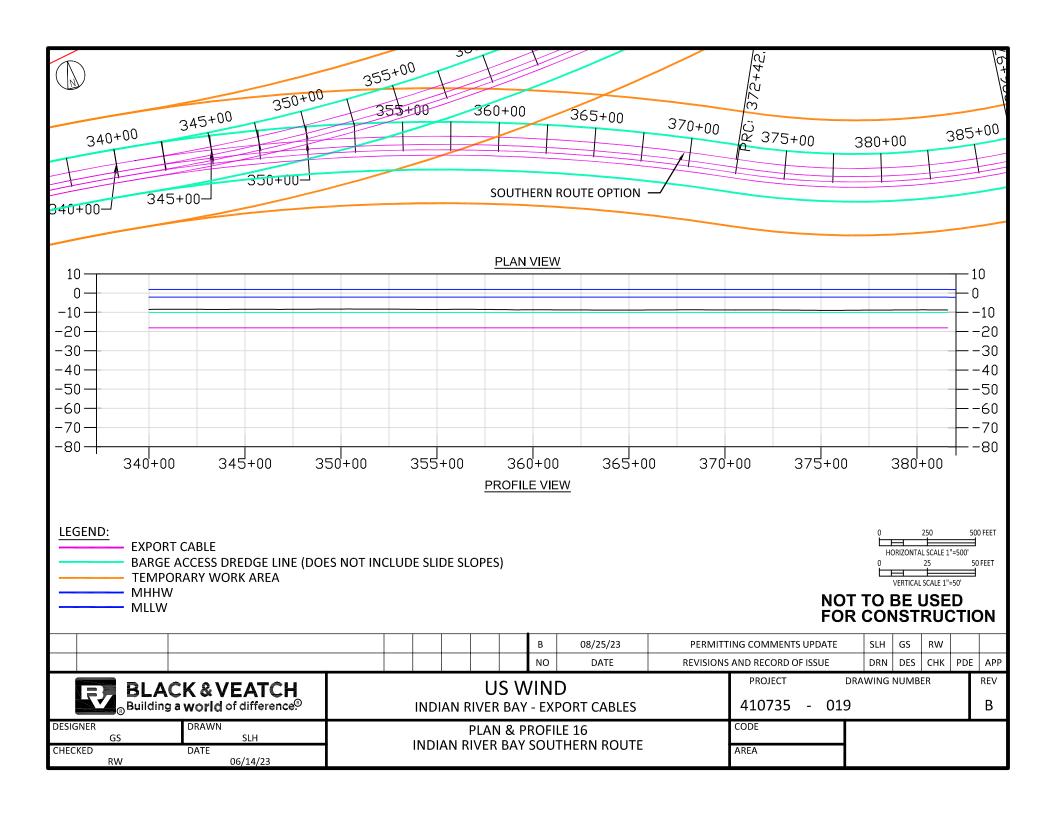


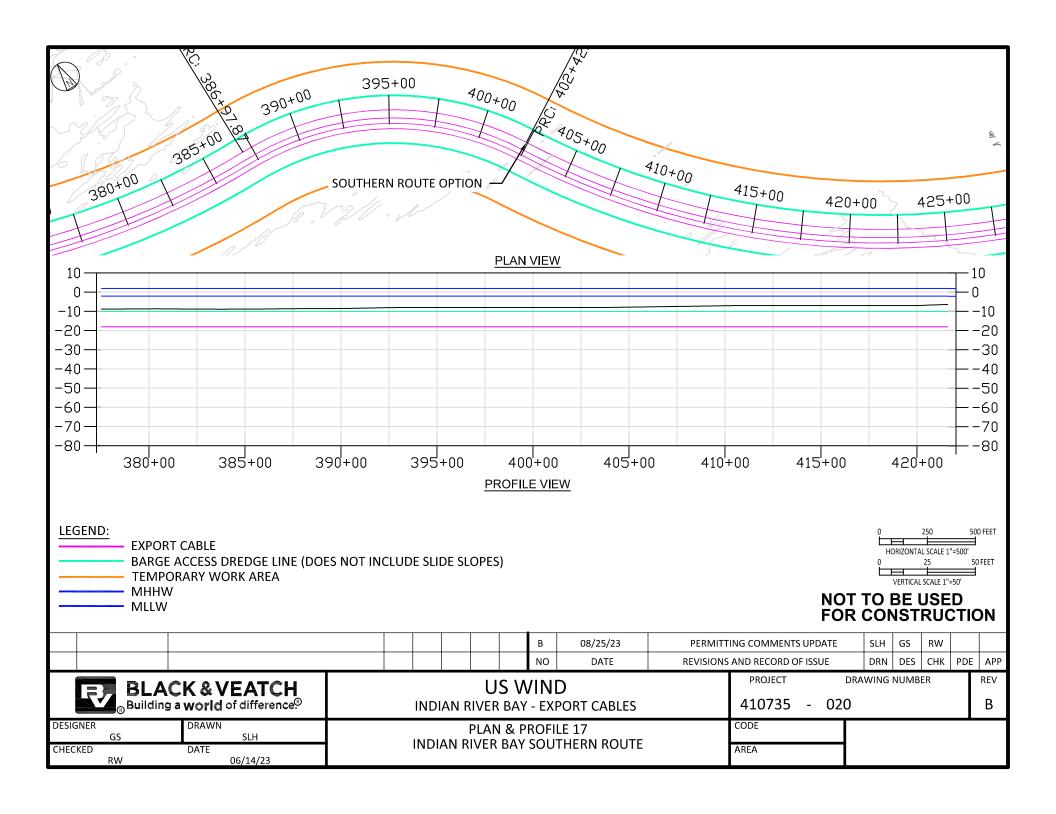


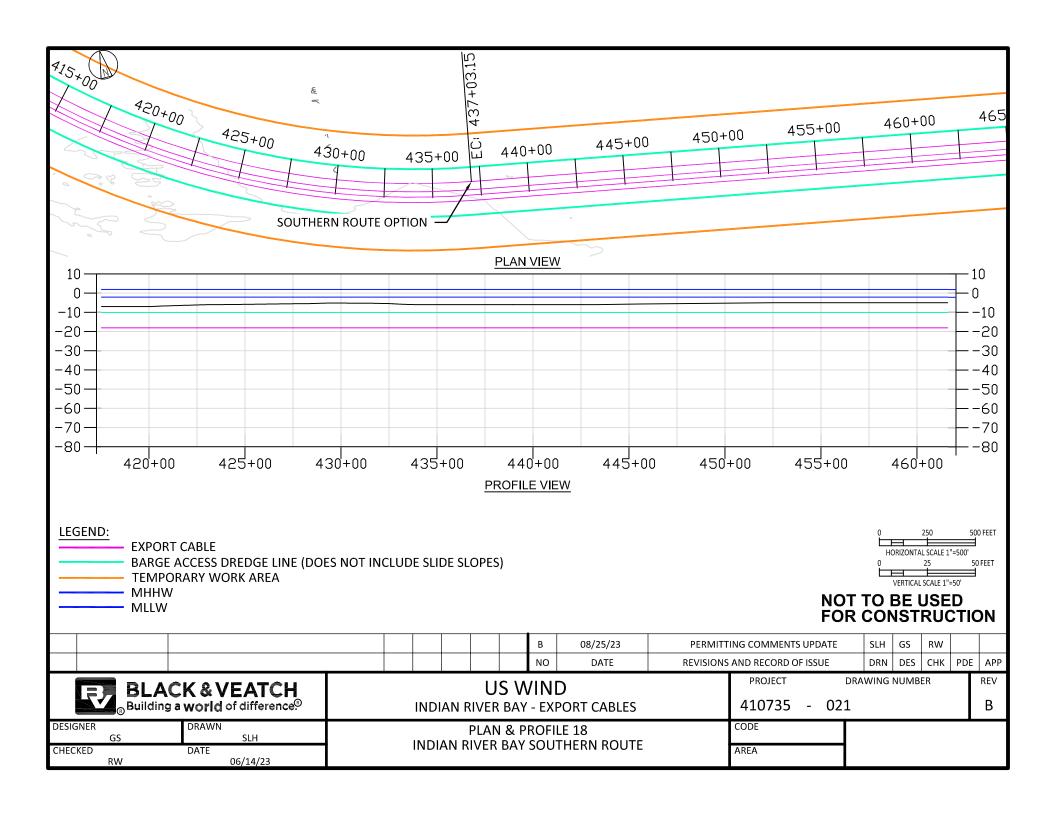


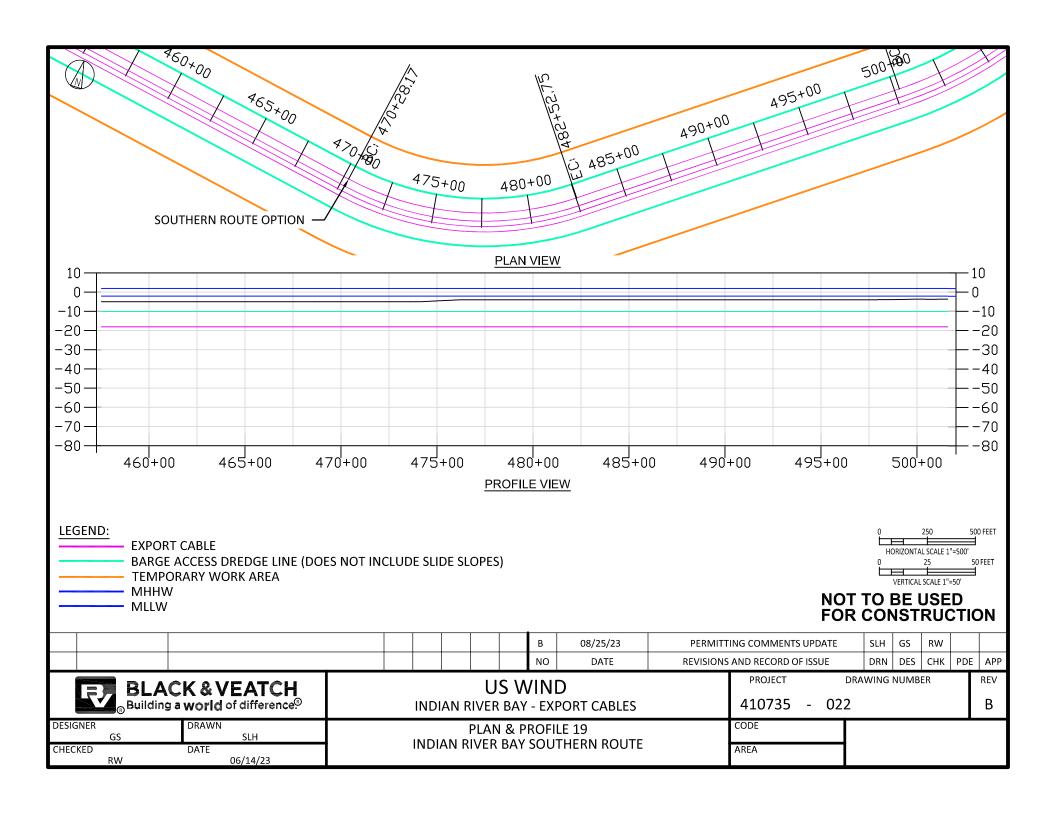


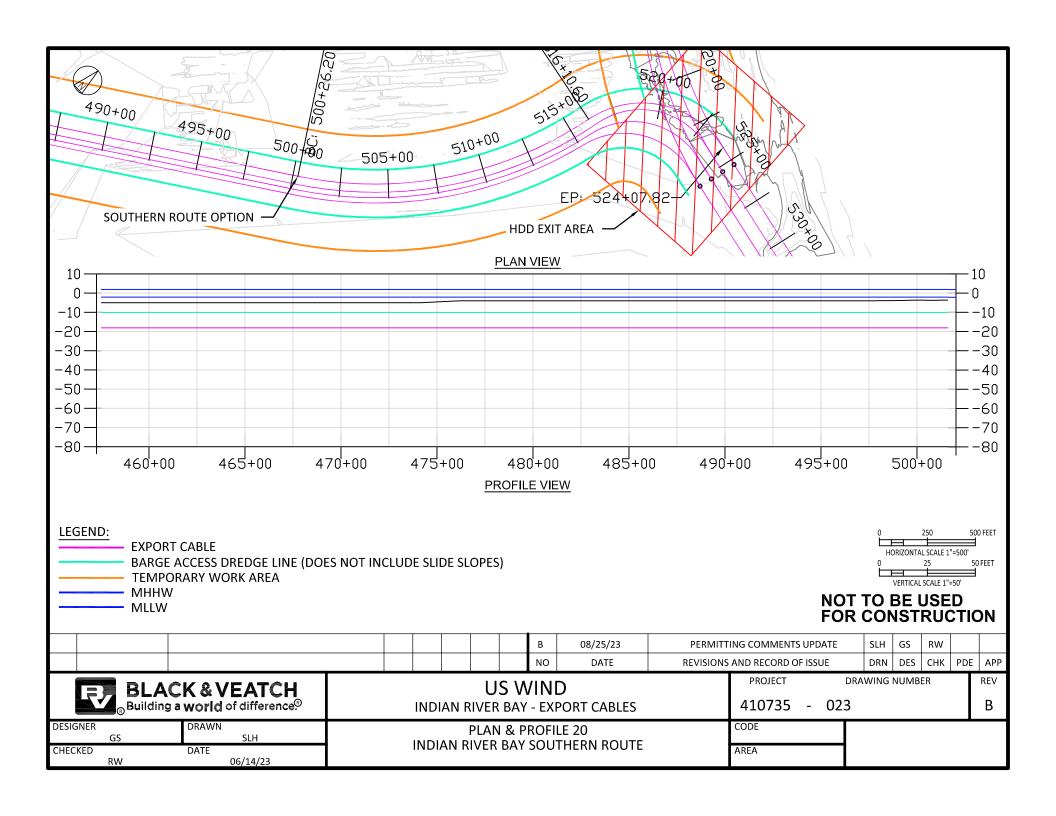
### Plan and Profiles Indian River Bay – Southern Route

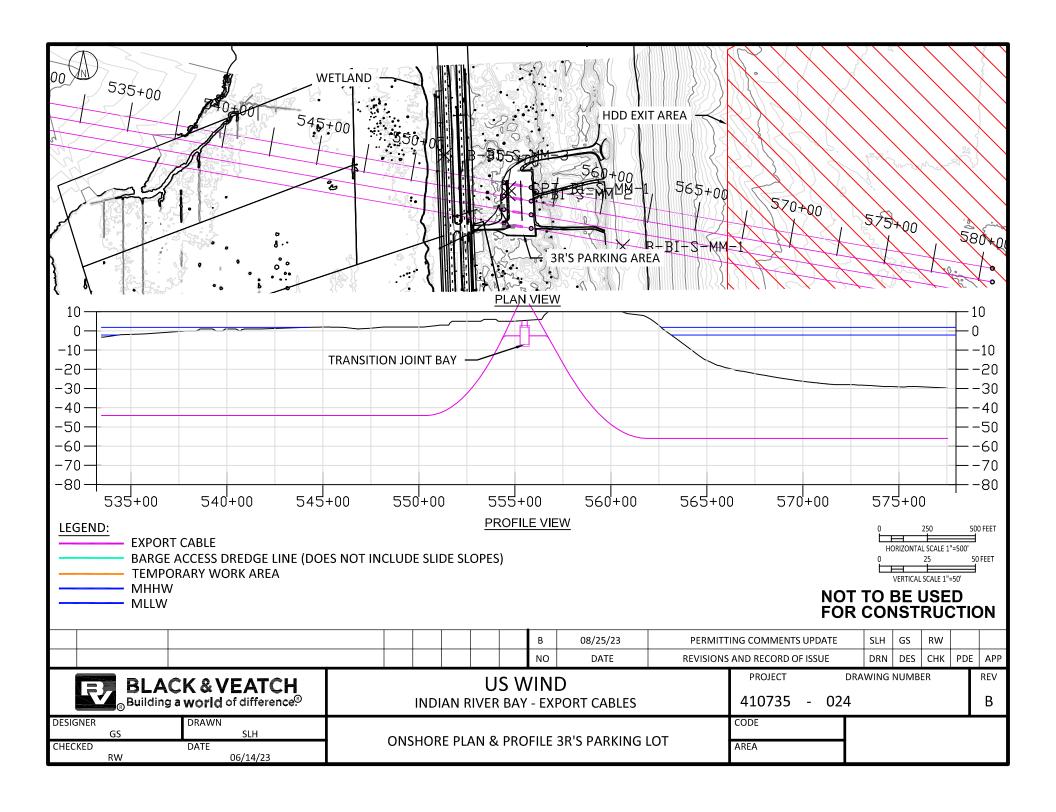




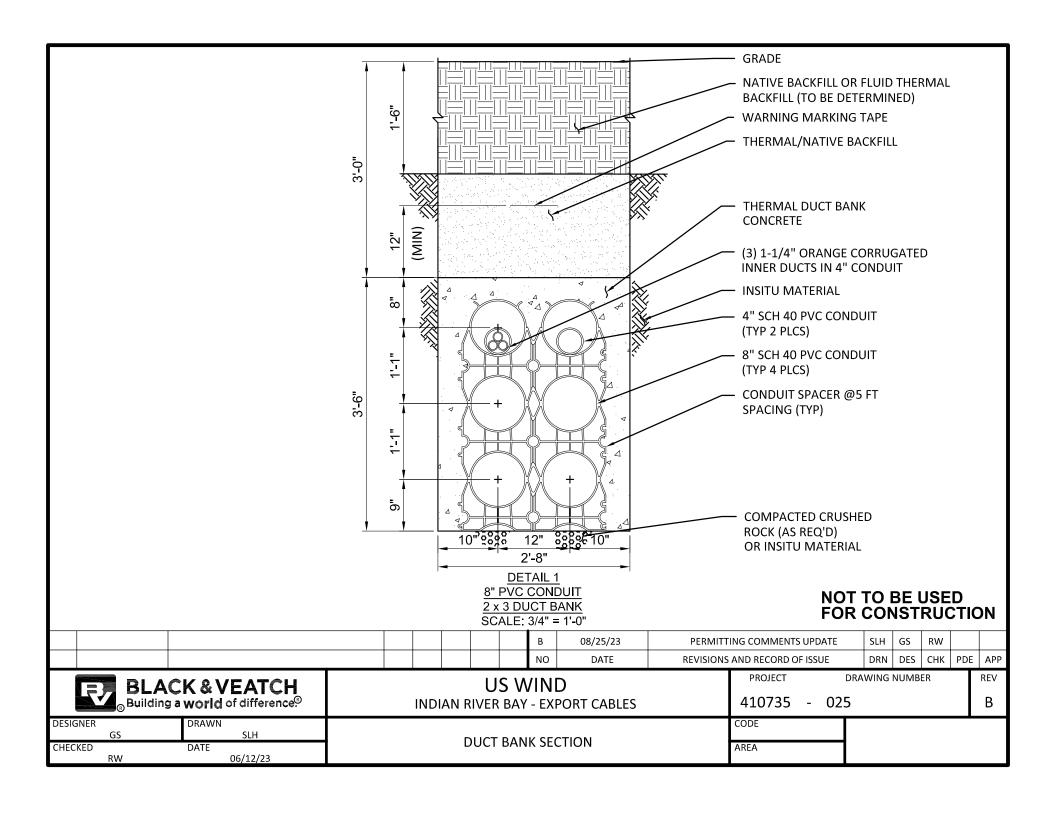




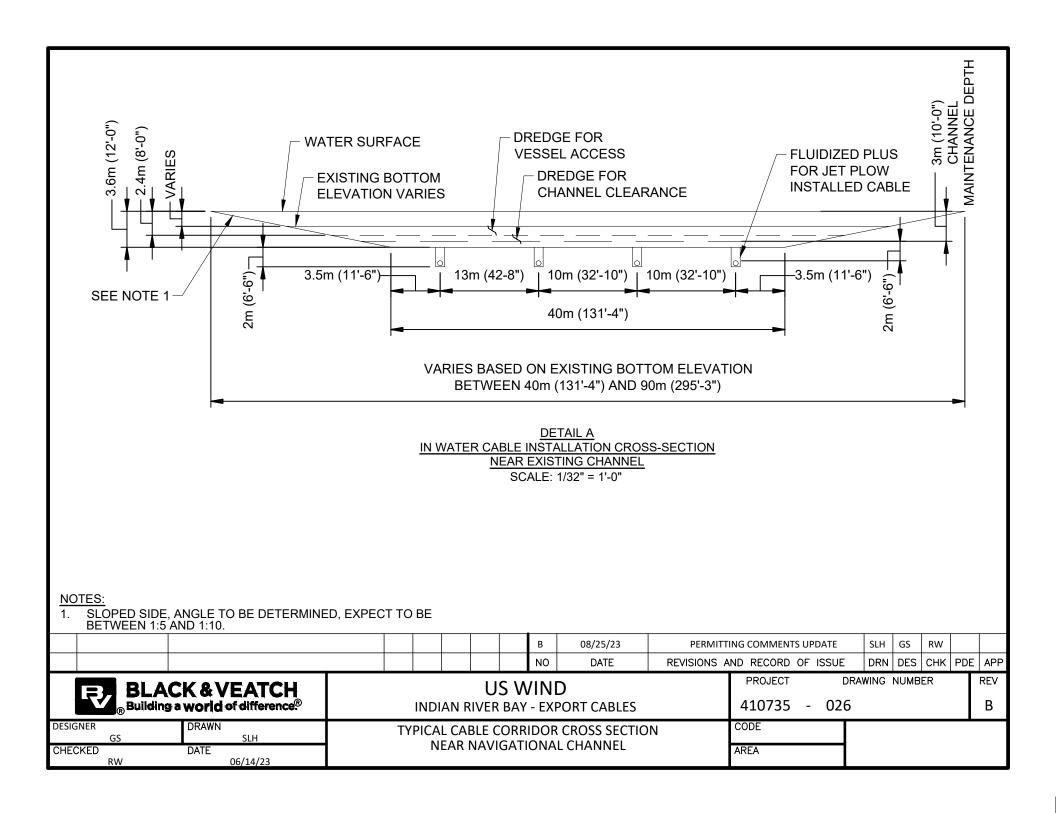


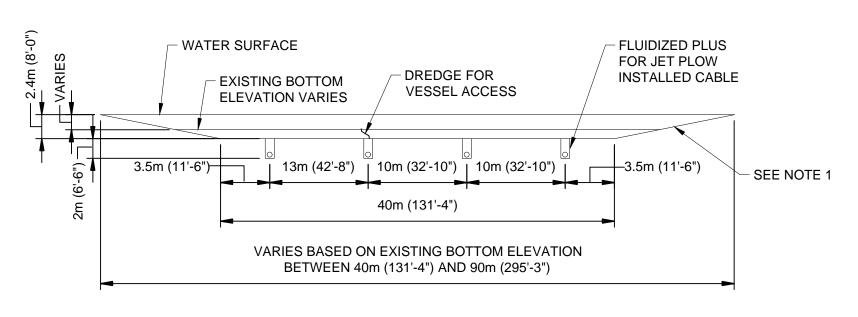


# Ductbank Cross Section (Westside Land-based From Transition Vault To Substation)



### Typical Submarine Cable Trench Details During Installation





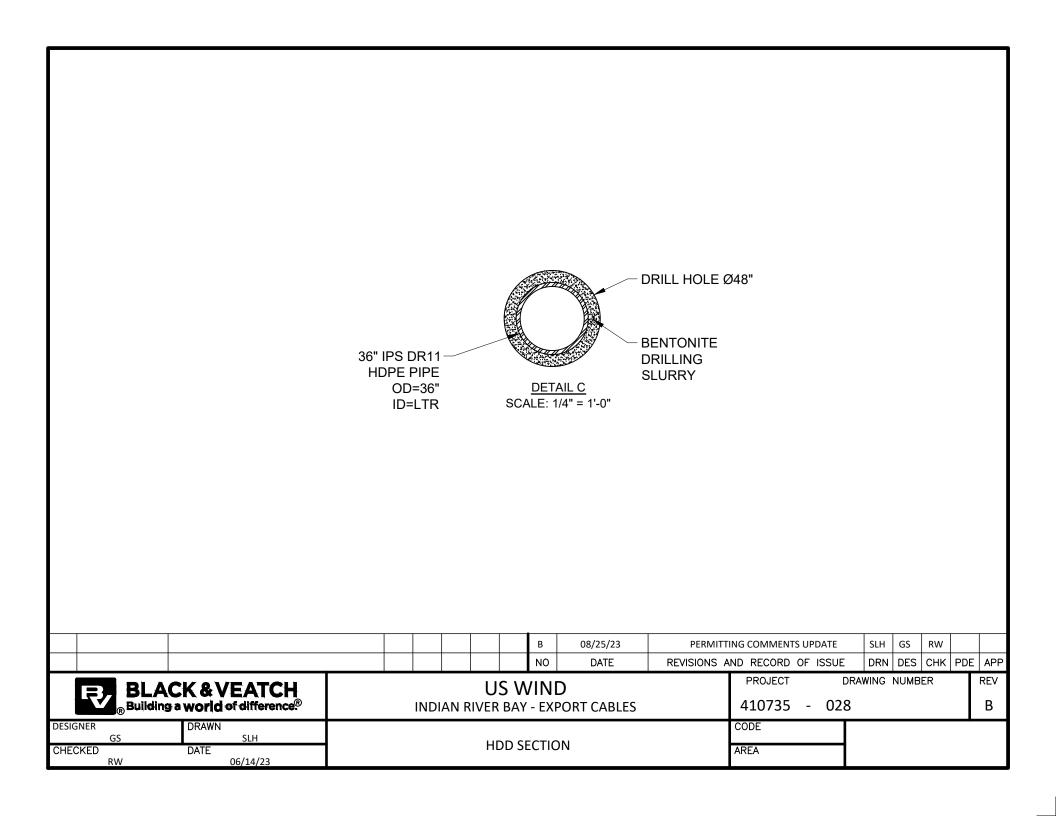
#### IN WATER CABLE INSTALLATION CROSS-SECTION (AWAY FROM NAVIGATIONAL CHANNEL) SCALE: 1/32" = 1'-0"

#### NOTES:

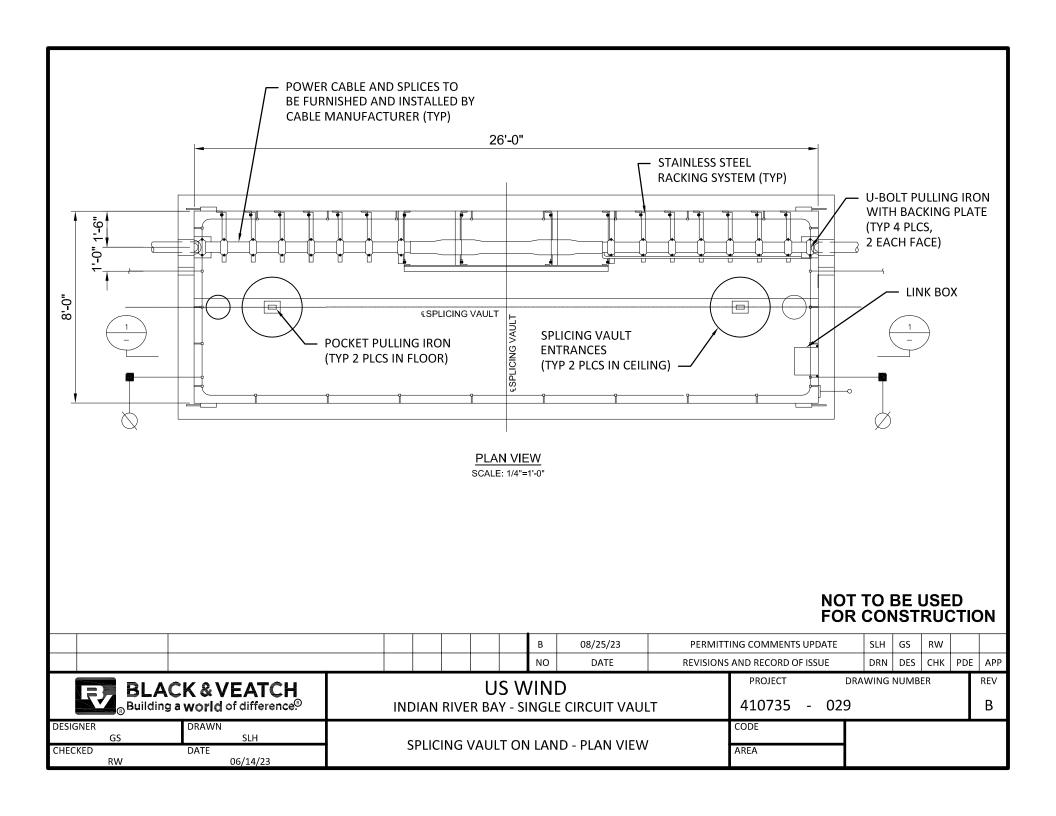
1. SLOPED SIDE, ANGLE TO BE DETERMINED, EXPECT TO BE BETWEEN 1:5 AND 1:10.

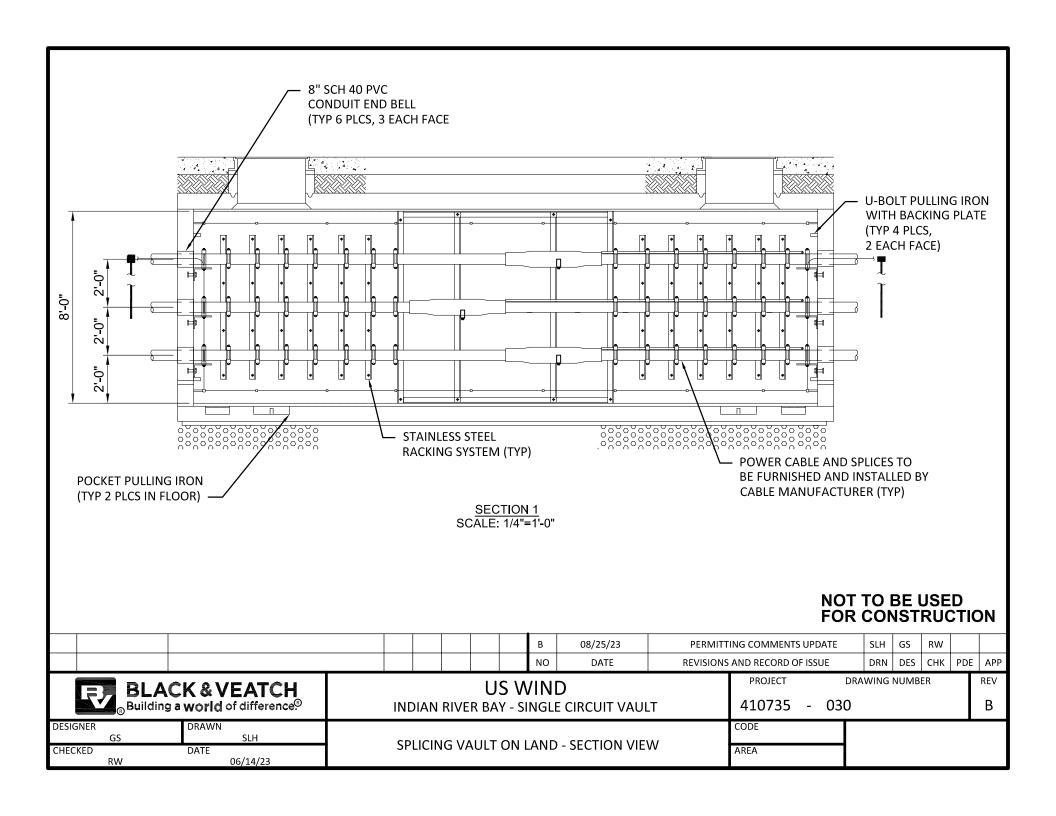
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#### Horizontal Directional Drill Cross Section



# West Side Splicing Vault Details (Near Substation If Needed)



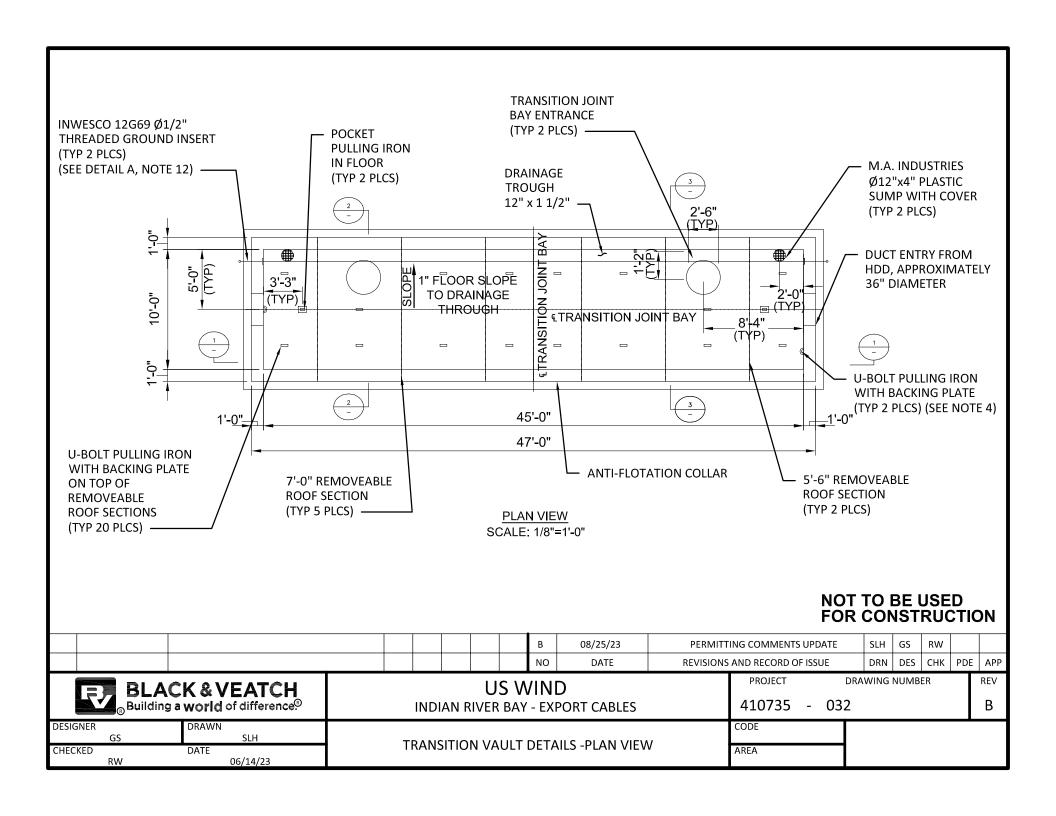


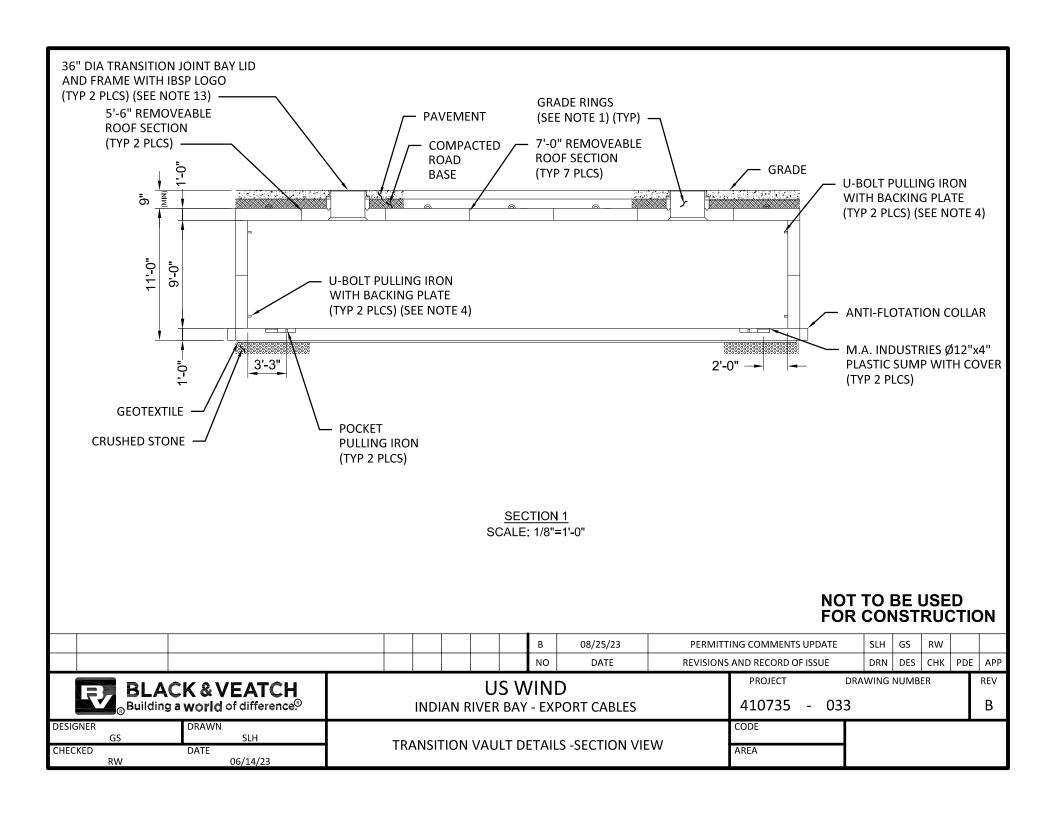
# Transition Vault Details -3 R's Parking Lot Submarine Cable to Submarine Cable Splices -West Landing Submarine Cable to Land Cable Splices

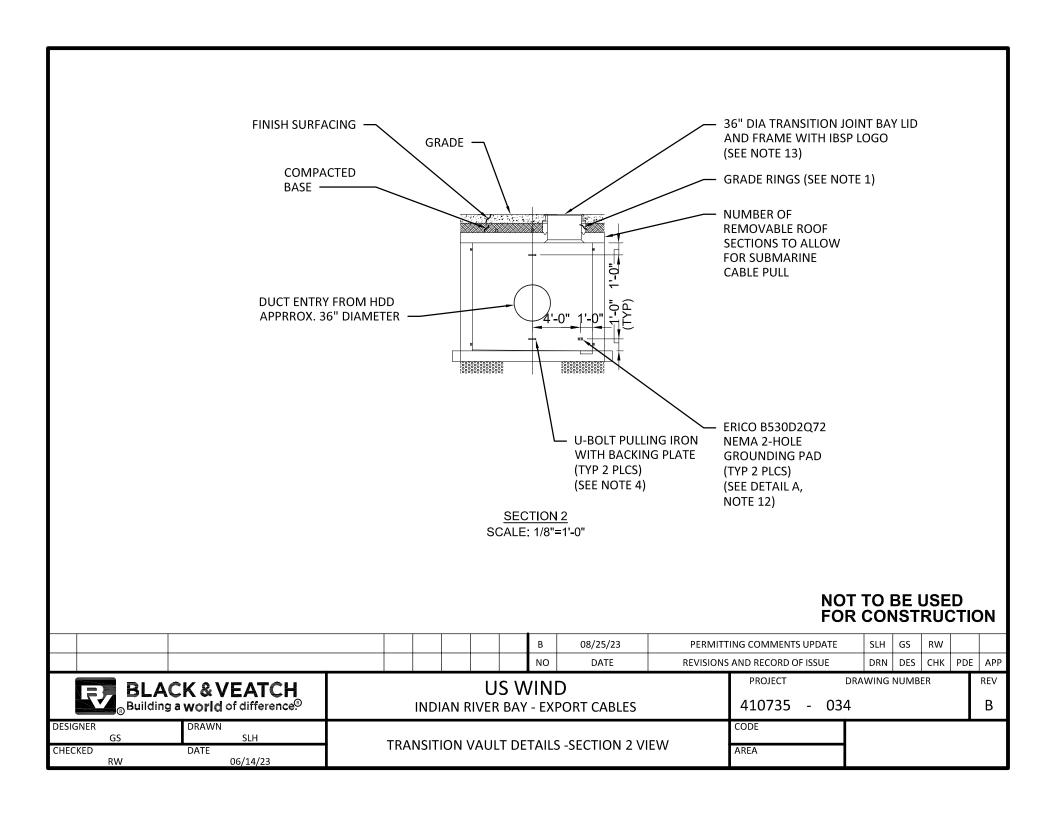
- 1. THE TRANSITION JOINT BAY SUPPLIER SHALL PROVIDE A SUFFICIENT NUMBER OF GRADE RINGS TO FACILITATE INSTALLATION OF THE TRANSITION JOINT BAY TO A DEPTH OF 4'-0" (TOP OF TRANSITION JOINT BAY TO GRADE) IF REQUIRED. TRANSITION JOINT BAY SHALL BE INSTALLED WITH A MINIMUM OF 1'-6" COVER.
- 2. EXTERIOR TRANSITION JOINT BAY SURFACES SHALL BE COATED WITH DAMP PROOFING, AND INTERIOR TRANSITION JOINT BAY SURFACES SHALL BE SEALED IN ACCORDANCE WITH THE SPECIFICATIONS.
- 3. THE TRANSITION JOINT BAY SHALL BE SUPPLIED WITH AN ADEQUATE QUANTITY OF JOINT SEALANT TO COMPLETELY SEAL ALL TRANSITION JOINT BAY JOINT INTERFACES, INCLUDING THE TRANSITION JOINT BAY COVER FRAME. JOINT SEALANT IS AVAILABLE AND APPLIED TO JOINT SURFACES WHEN SETTING TRANSITION JOINT BAYS.
- 4. PULLING IRONS SHALL BE RATED FOR A MINIMUM OF 32,000 LBS TENSION AT A LOADING ANGLE PERPENDICULAR TO THE WALL AND A SAFETY FACTOR OF 2.
- 5. TRANSITION JOINT BAY SUPPLIER SHALL PRECAST A MINIMUM 2" DEEP BY 2'-6" WIDE BY 4'-6" HIGH RECESS IN THE TRANSITION JOINT BAY OUTSIDE END WALL CENTERED AROUND EACH OF THE TWO DUCT ENTRANCES. TRANSITION JOINT BAY SUPPLIER SHALL FURNISH AND INSTALL 10 THREADED CONCRETE ANCHORS AND THREADED #4 BY 14 INCH LONG CONCRETE REINFORCING STEEL BARS AT EACH OF THE TWO DUCT ENTRANCES. CIVIL CONSTRUCTION SUBCONTRACTOR SHALL ENSURE A SUFFICIENT AMOUNT OF DUCT CONCRETE IS PLACED TO COMPLETELY FILL EACH RECESS.
- 6. TRANSITION JOINT BAY SUMP COVER SHALL BE FABRICATED USING MINIMUM 1/8"X3/4" STEEL BAR STOCK AND WELDED IN A CONFIGURATION FOR SUPPORT OF 300 PSF MINIMUM. COVER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. SUBCONTRACTOR SHALL SUBMIT COVER DESIGN FABRICATION DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION. TRANSITION JOINT BAY FLOOR SHALL BE SLOPED 1/16"/FT TOWARDS THE SUMP OPENING.
- 7. TRANSITION JOINT BAY FABRICATOR SHALL CAST WITHIN THE TRANSITION JOINT BAY END WALL PVC/HDPE MOLDED END BELL AND LONG BELL COUPLING FITTINGS TO FACILITATE INSTALLATION OF CONDUIT BY OTHERS. END BELLS SHALL BE SIZED AND LOCATED ON THE INTERIOR WALL AS SHOWN ON THE DRAWINGS.
- 8. TRANSITION JOINT BAY SHALL BE DESIGNED TO WITHSTAND AASHTO HS-25 HEAVY LOADINGS, USING WHICHEVER COMBINATION OF FORCES PRODUCES THE MAXIMUM STRESS.
- 9. FOR ADDITIONAL DESIGN PARAMETERS, SEE SPECIFICATIONS.
- 10. THE TRANSITION JOINT BAY SUPPLIER SHALL DESIGN AND INSTALL LIFTING LUGS SO AS TO SUPPORT THE WEIGHT OF EACH SECTION DURING PLACEMENT. LIFTING LUGS SHALL BE DESIGNED AND INSTALLED RECESSED INTO CONCRETE SLAB AND SHALL NOT PROTRUDE ABOVE FLOOR SURFACE.
- 11.REBAR WITHIN TRANSITION JOINT BAY WALLS SHALL NOT FORM A CLOSED LOOP AROUND ANY INDIVIDUAL 8 INCH CONDUIT OPENINGS. REBAR LOOPS ARE ACCEPTABLE WHEN ENCIRCLING ALL OF THE 8 INCH CONDUIT OPENINGS.
- 12. TRANSITION JOINT BAY SUPPLIER SHALL PROVIDE TWO (2) GROUNDING CONNECTIONS, EACH CONSISTING OF ONE (1) NEMA 2-HOLE PAD CONNECTED TO A BARE CONDUCTOR PIGTAIL CAST INTO THE TRANSITION JOINT BAY END WALL. CONNECTIONS SHALL BE EXOTHERMALLY WELDED AND CONTINUITY TESTED BEFORE AND AFTER INSTALLATION. PIGTAIL SHALL EXTEND A MINIMUM OF 8'-0" OUTSIDE OF THE WALL. SEE DETAIL A.
- 13. ALL FABRICATION DETAIL DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
- 14. AT NO POINT SHOULD A CLOSED METAL LOOP BE CREATED AROUND ANY ONE SINGLE CABLE.
- 15. VAULT WILL BE EXPOSED TO SEA WATER, WHICH CLASSIFIES AS EXPOSURE CLASS C2 PER ACI 318 WHICH REQUIRES ADDITIONAL MEASURE TO BE TAKEN TO PROTECT THE REINFORCEMENT FROM CORROSION. VAULT CONCRETE MIX DESIGN WILL REQUIRE A MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 5,000 psi AND A MAXIMUM WATER CEMENT RATIO OF 0.40.

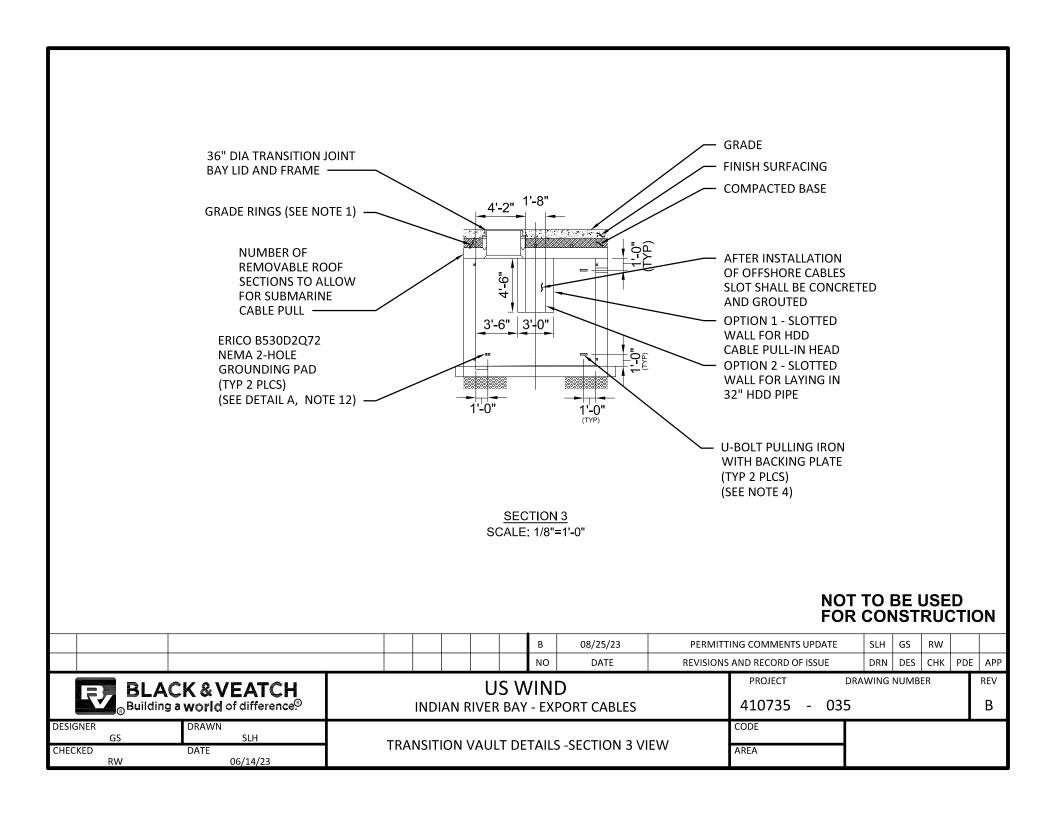
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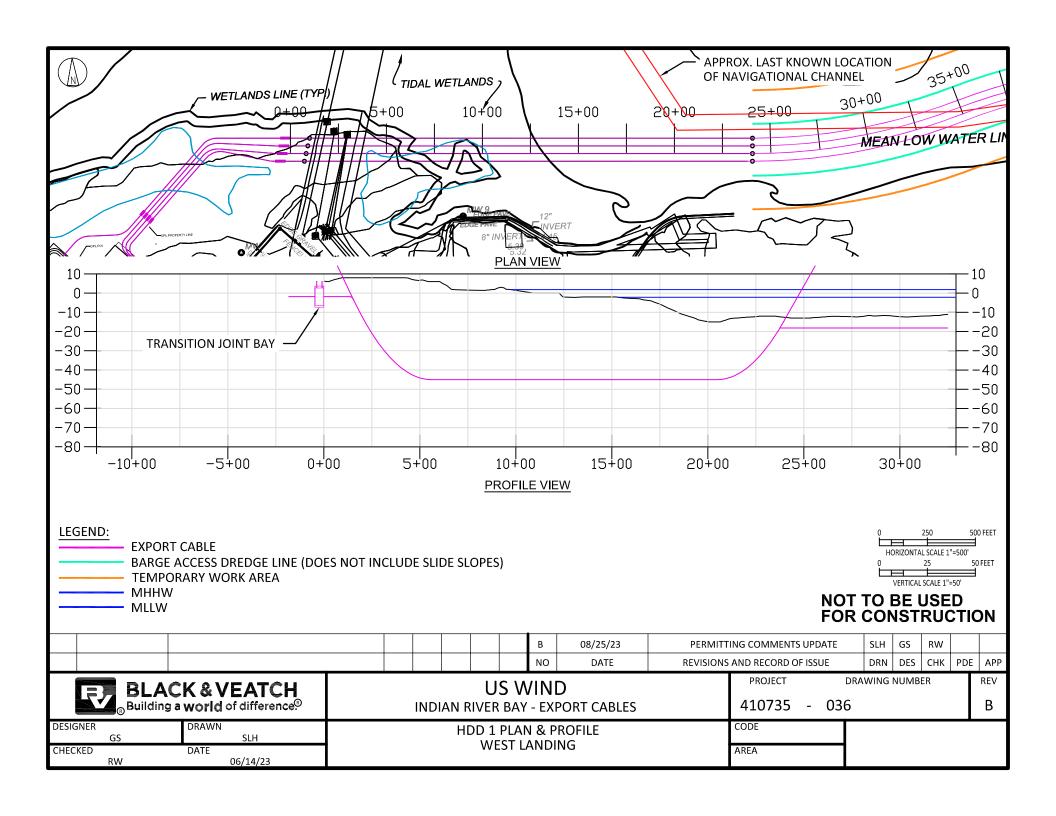


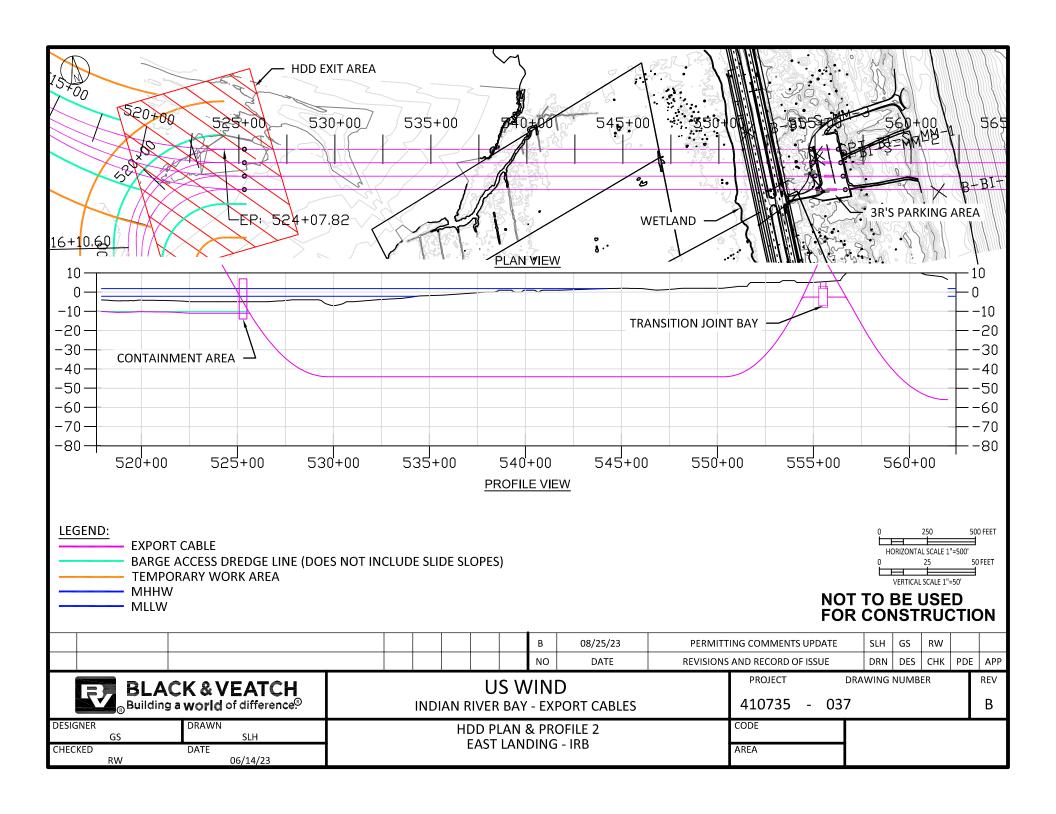


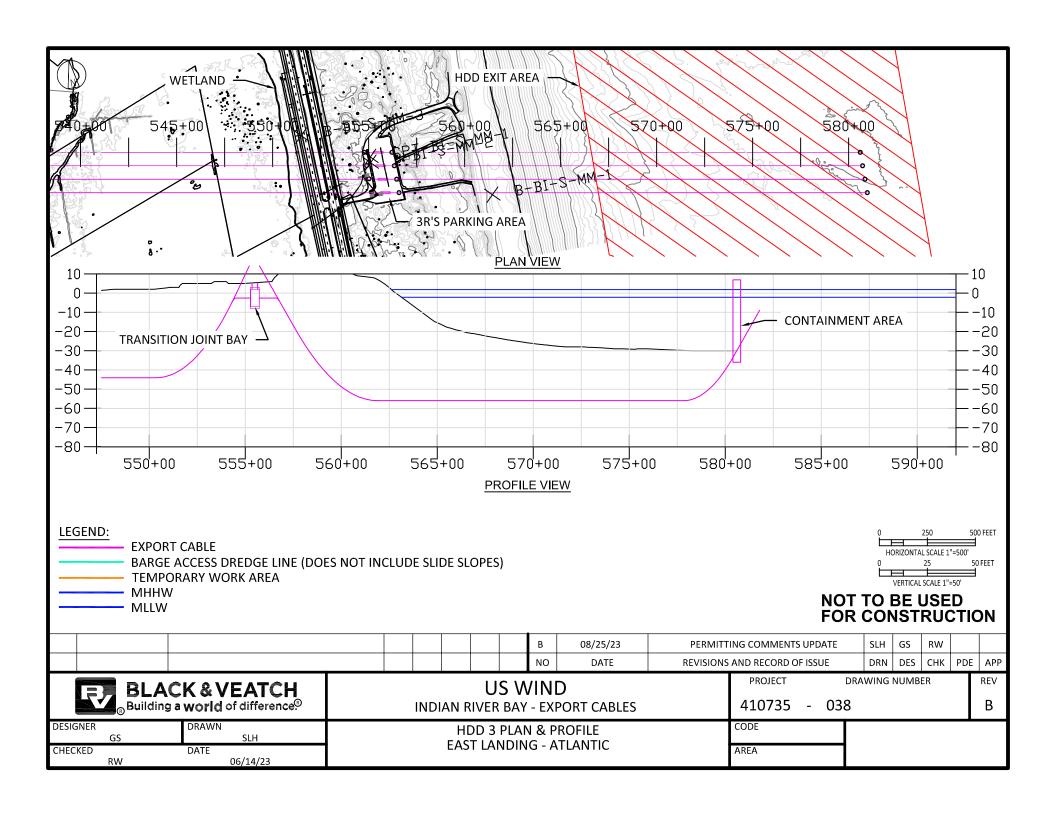




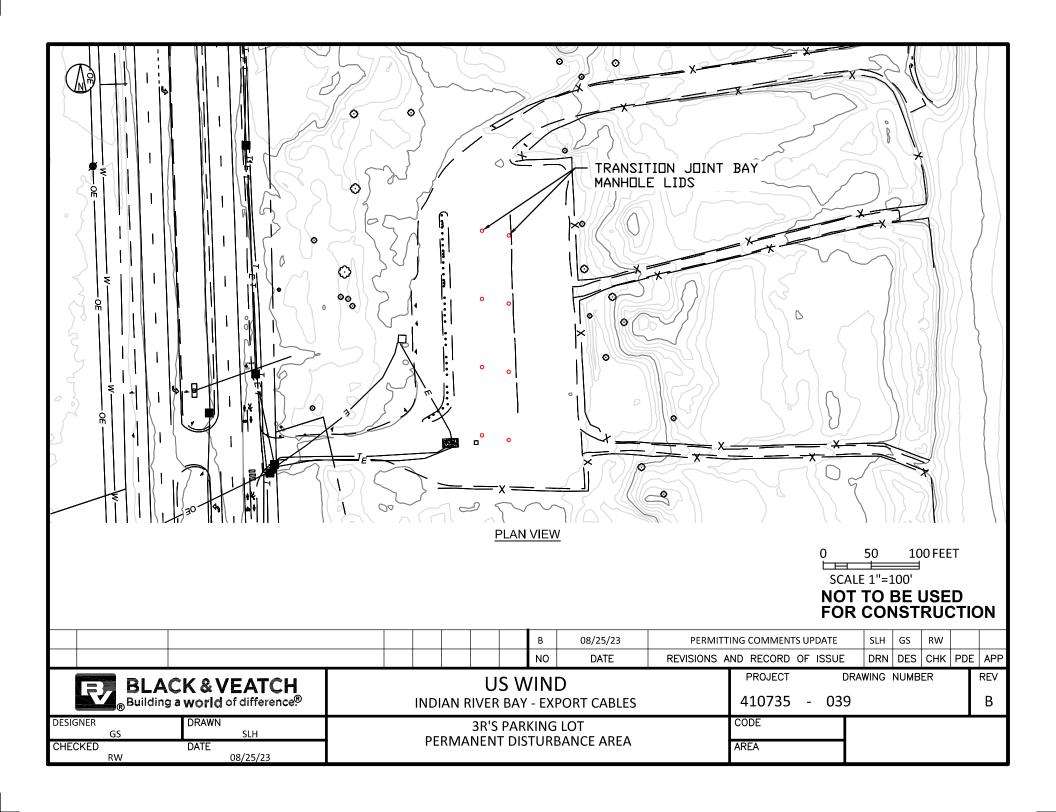
### Horizontal Directional Drill Plan and Profiles



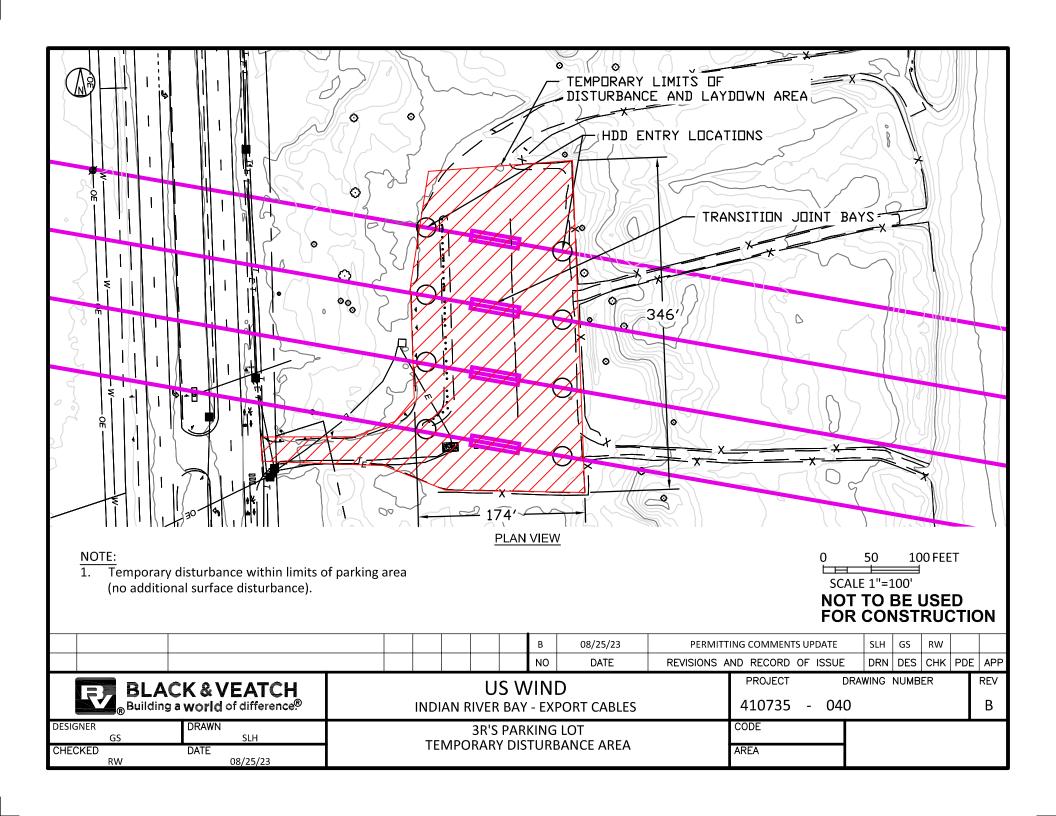




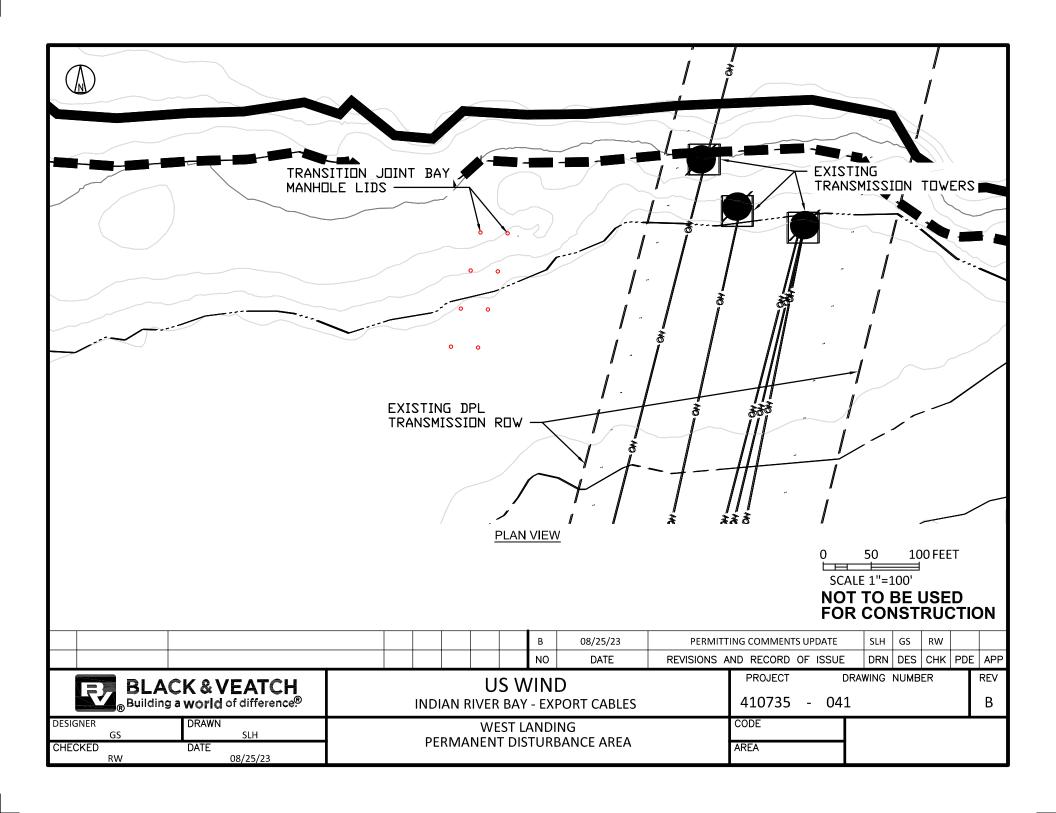
#### East Landing – 3 R's Parking Lot Permanent Disturbance (Manhole Lids Only)



#### East Landing – 3 R's Parking Lot Temporary Disturbance During Installation



# West Landing – Vicinity Of Substations Permanent Disturbance (Manhole Lids Only)



## West Landing – Vicinity of Substations Temporary Disturbance During Installation

