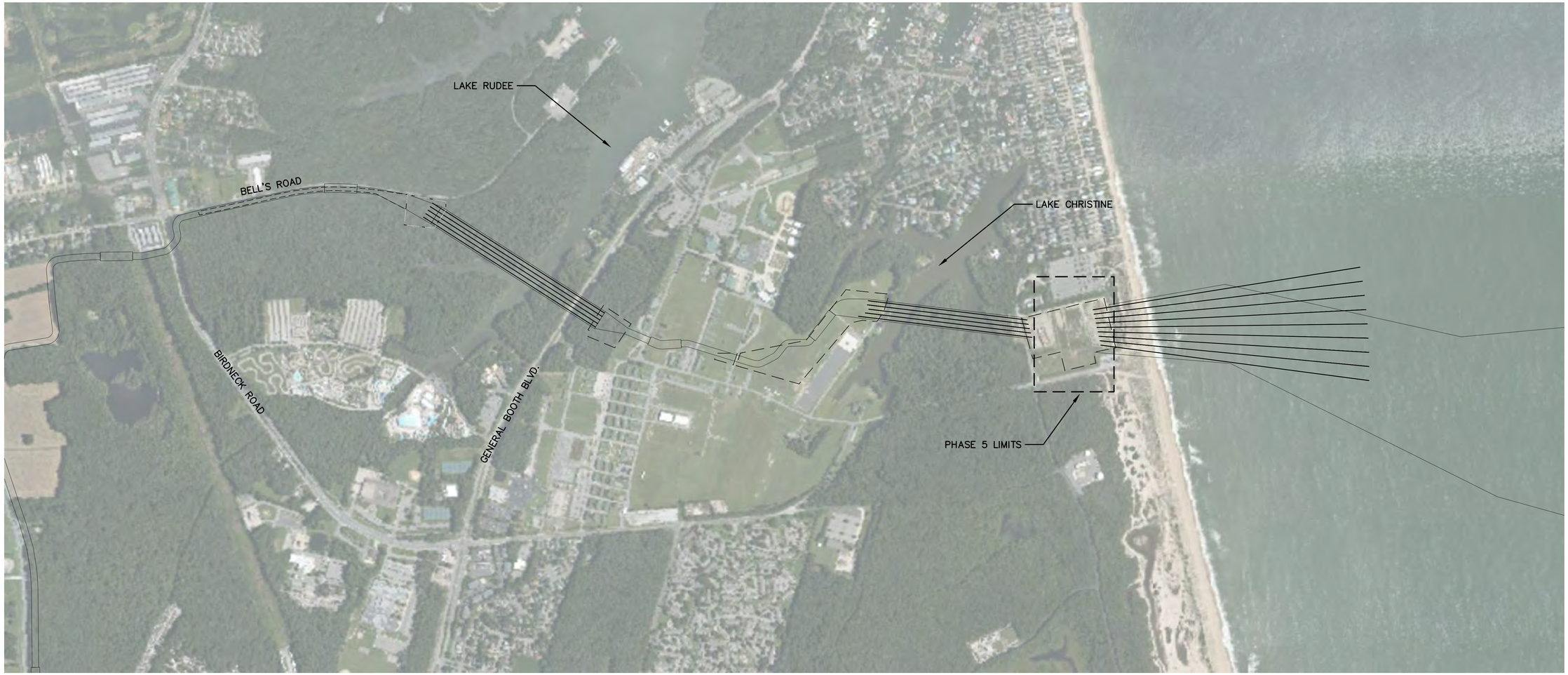
USACE-NLW
RCVD 7/15/2022

COASTAL VIRGINIA OFFSHORE WIND
230-kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



PRELIMINARY – NOT FOR CONSTRUCTION

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	1 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-200.DWG
PLOTTED: 3/28/2022 3:07 PM

Drawing No. UG-EX-P5-200

UG-EX-P-200.DWG
PLOTTED: 3/28/2022 3:07 PM
GAINES, JACK

No.	Date	By	Checked/Appr.	Description	Project Number	B/M	Project Number	H&A
A	03/25/2022	PWD	AH	ISSUED FOR 60% REVIEW	0200157			

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

GAINES, JACK
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

USACE-NLW
RCVD 7/15/2022

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 24168531420000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

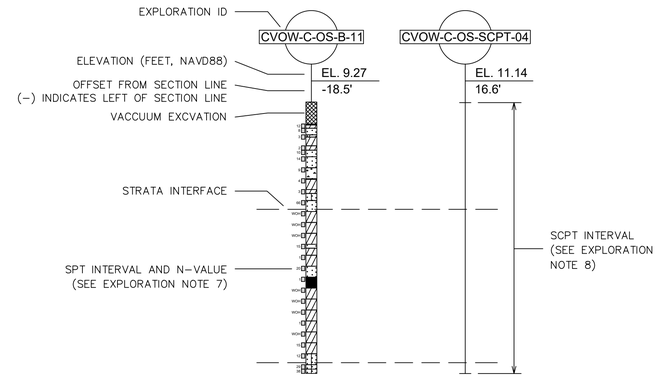
DIRECT PIPE NOTES:

1. PLACEHOLDER – TBD

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy®

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 3/28/2022 3:07 PM
Drawing No. UG-EX-P5-201

UG-EX-P-201.DWG
PLOTTED: 3/28/2022 3:07 PM
GAINES, JACK

No	Date	By	Description	Project Number
				B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 H&A

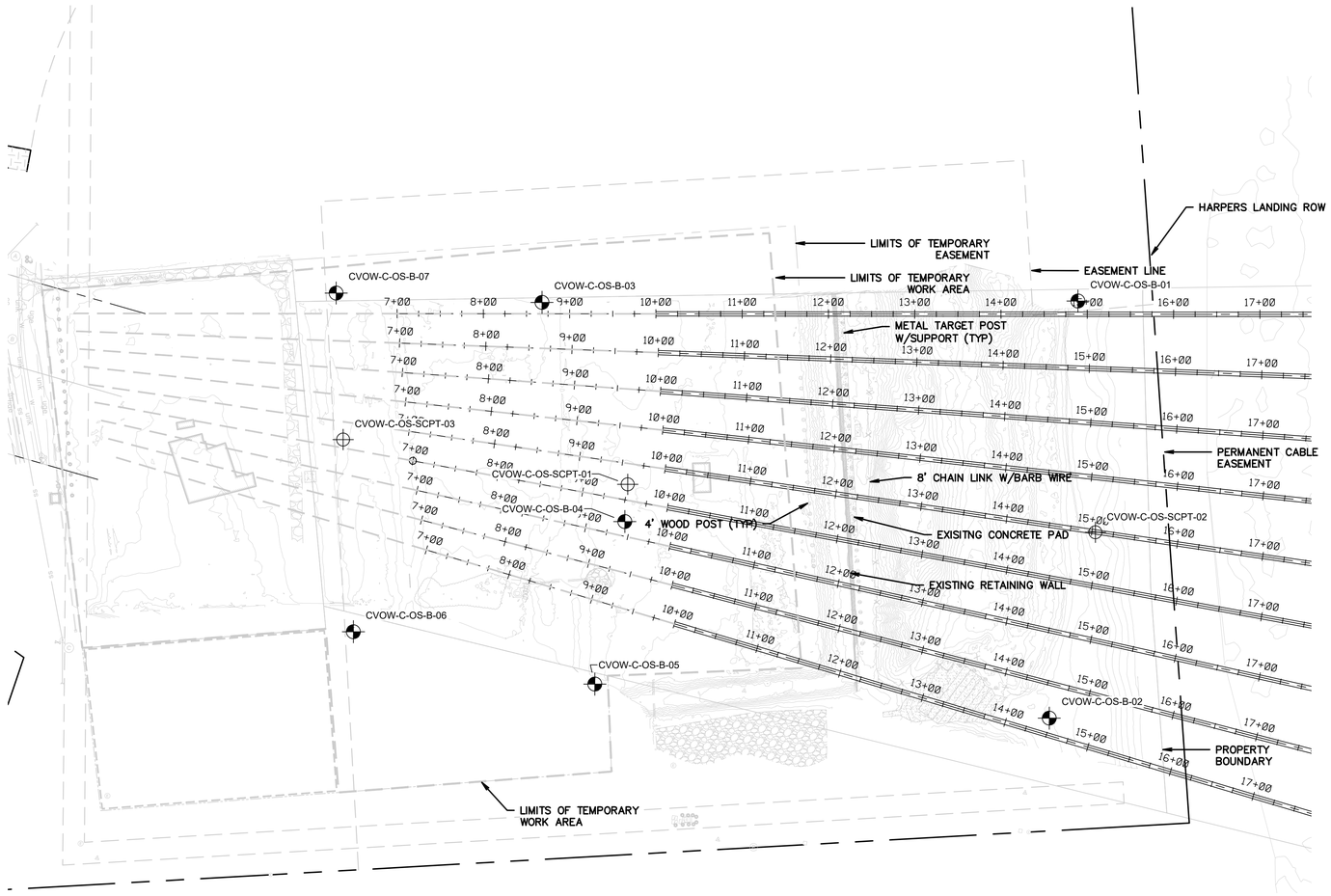
Revisions

GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 1 ENTRY TEMPORARY WORK AREA" PLAN VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A
				B/M

Revisions

GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
LANDFALL ENTRY WORK AREA

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	3 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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UG-EX-P5-201-218.DWG
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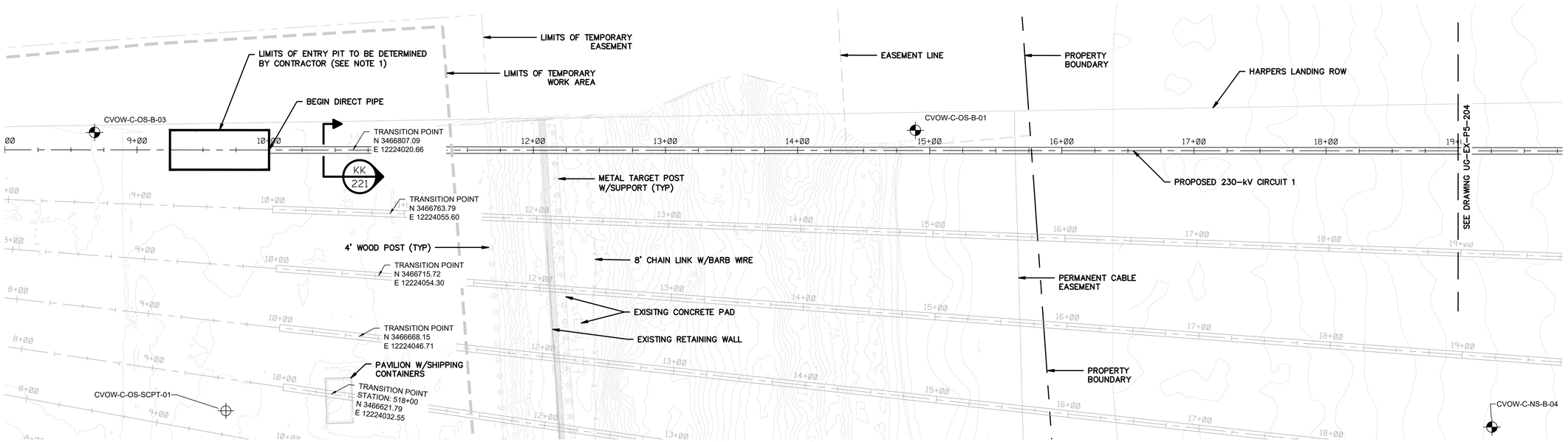
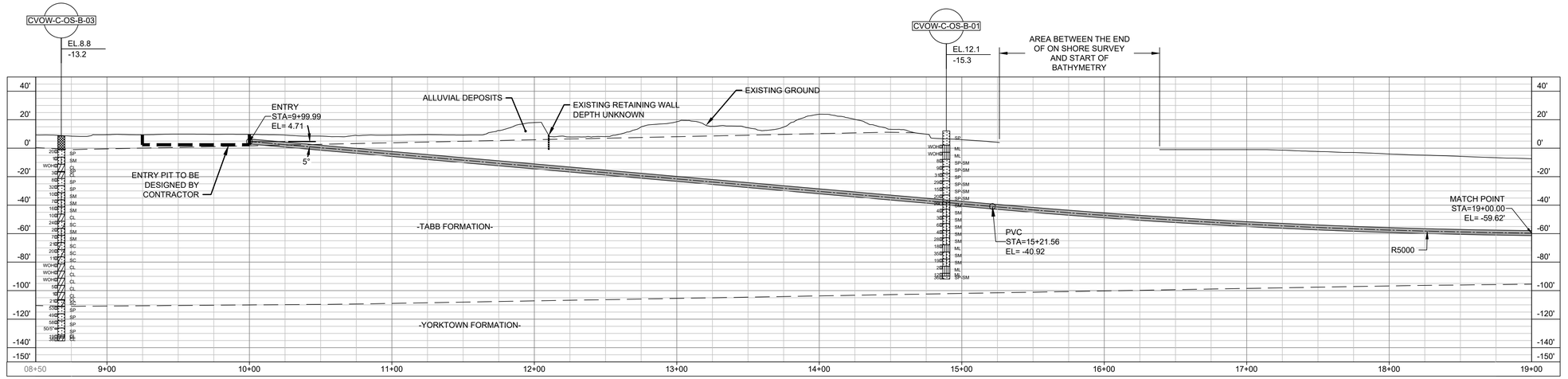
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 1 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 1 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 1 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	4 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No. UG-EX-P5-203

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

Revisions

GAINES, JACK

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
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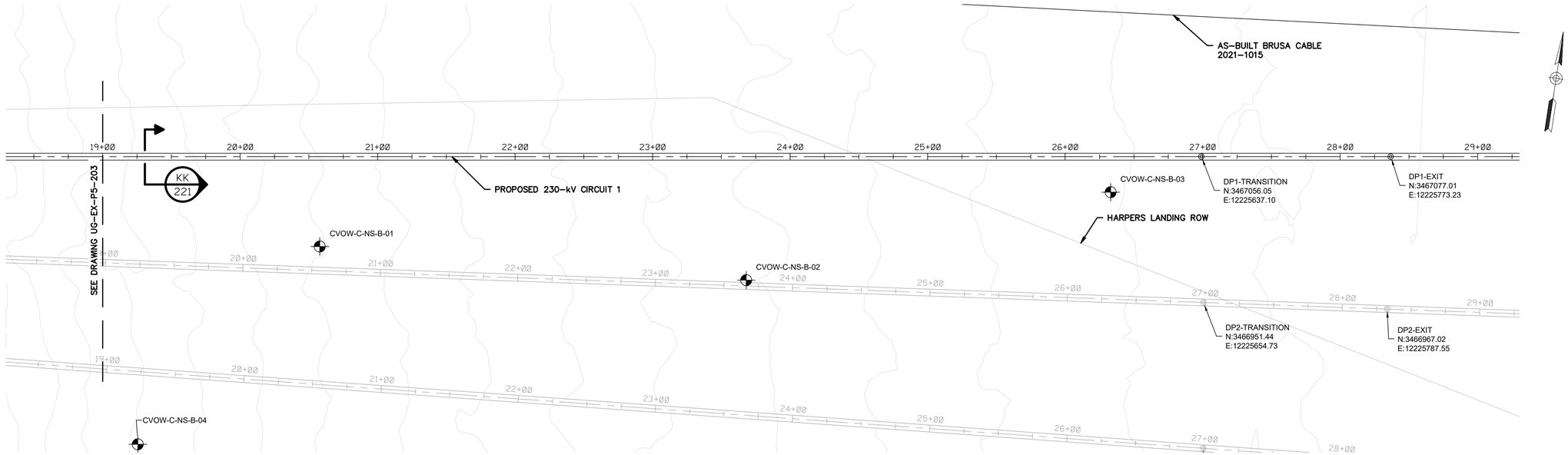
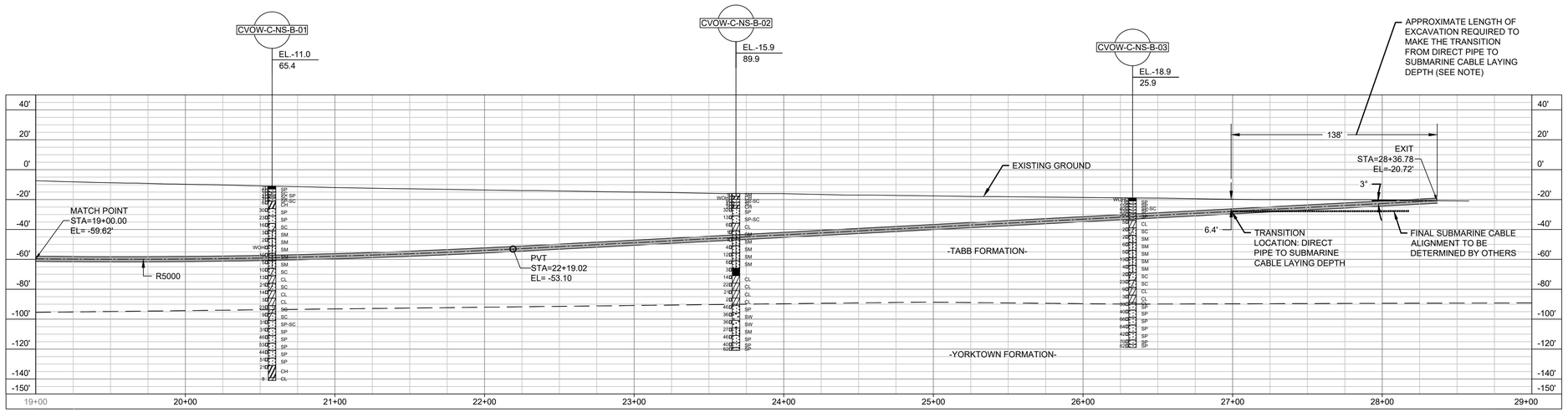
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 1 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 1 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 1 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	5 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No.
UG-EX-P5-204

No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			

Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
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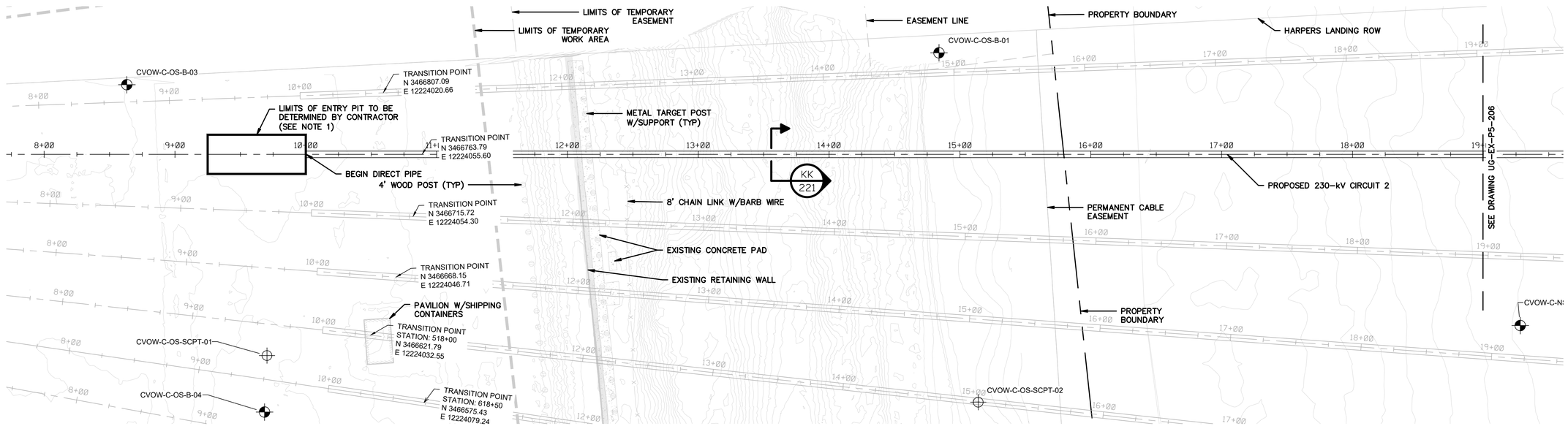
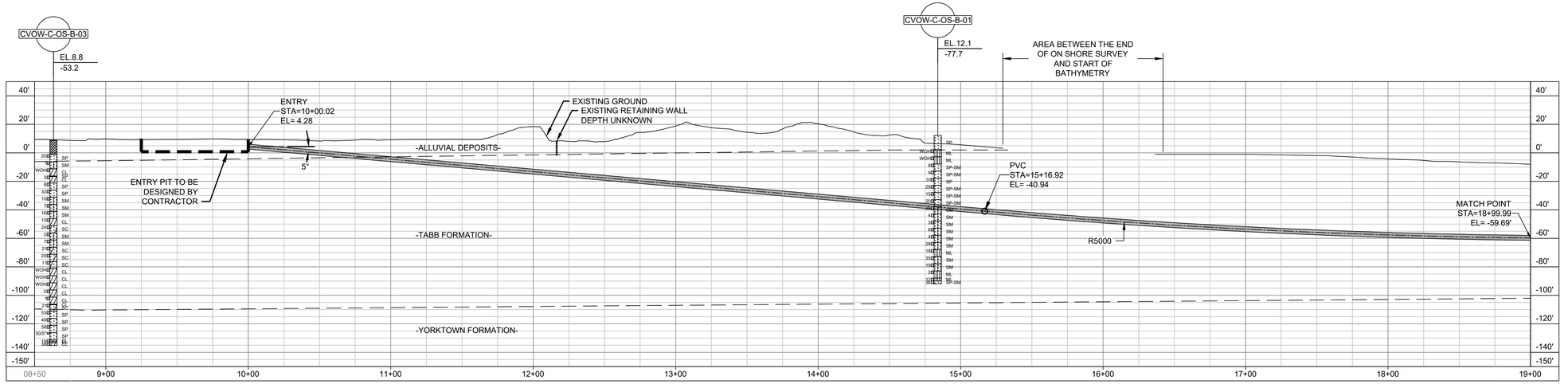
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 2 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 2 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 2 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	6 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No.
UG-EX-P5-205

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:09 PM
GAINES, JACK

No	Date	By	Description	Project Number	
				Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A

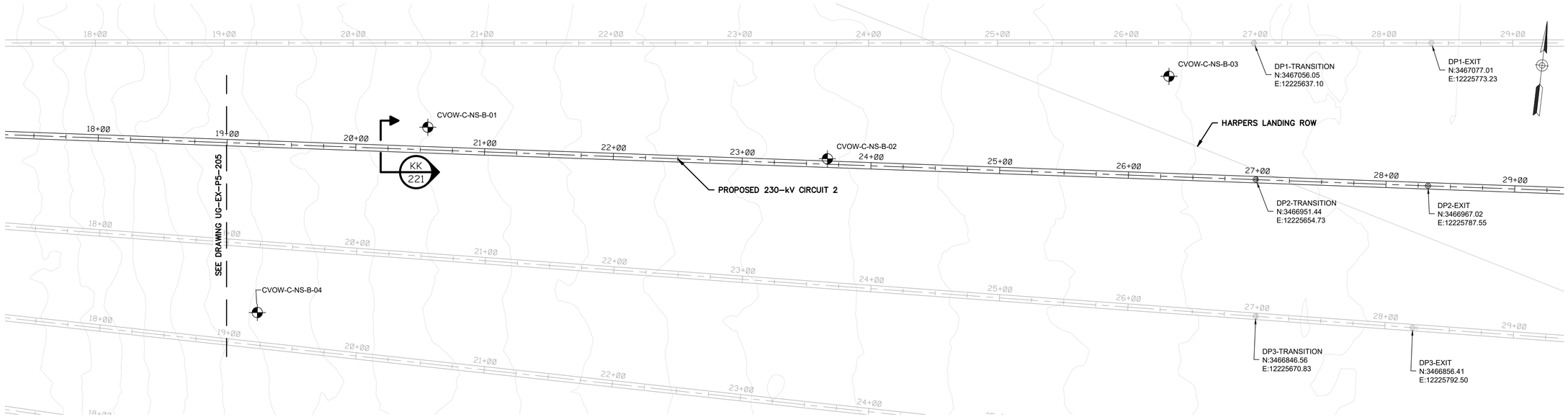
Revisions

GAINES, JACK

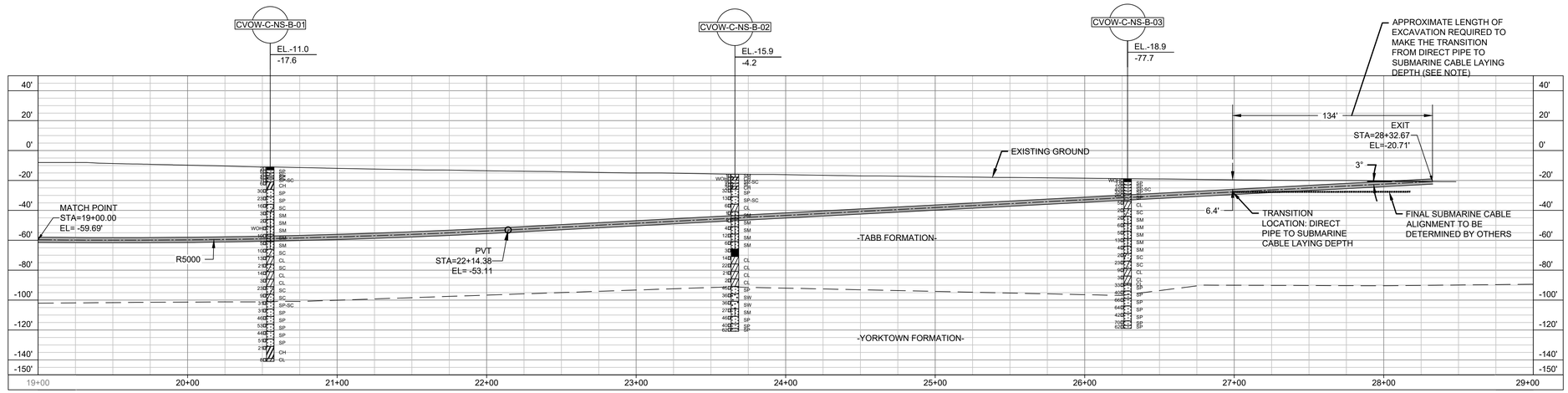
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 2 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 2 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 2 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	7 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No.
UG-EX-P5-206

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:10 PM
GAINES, JACK

No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

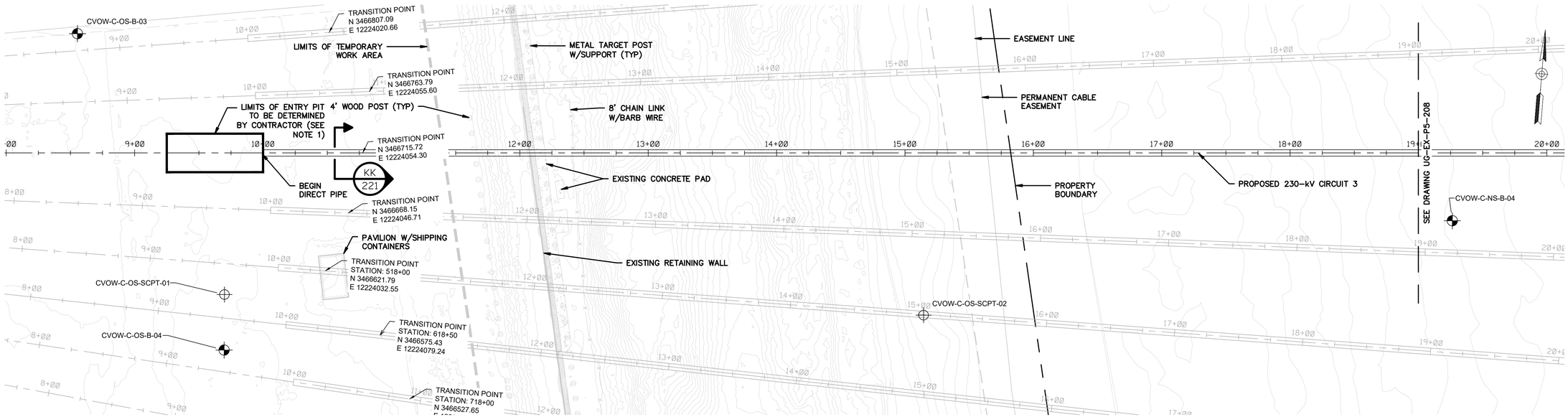
Revisions

GAINES, JACK

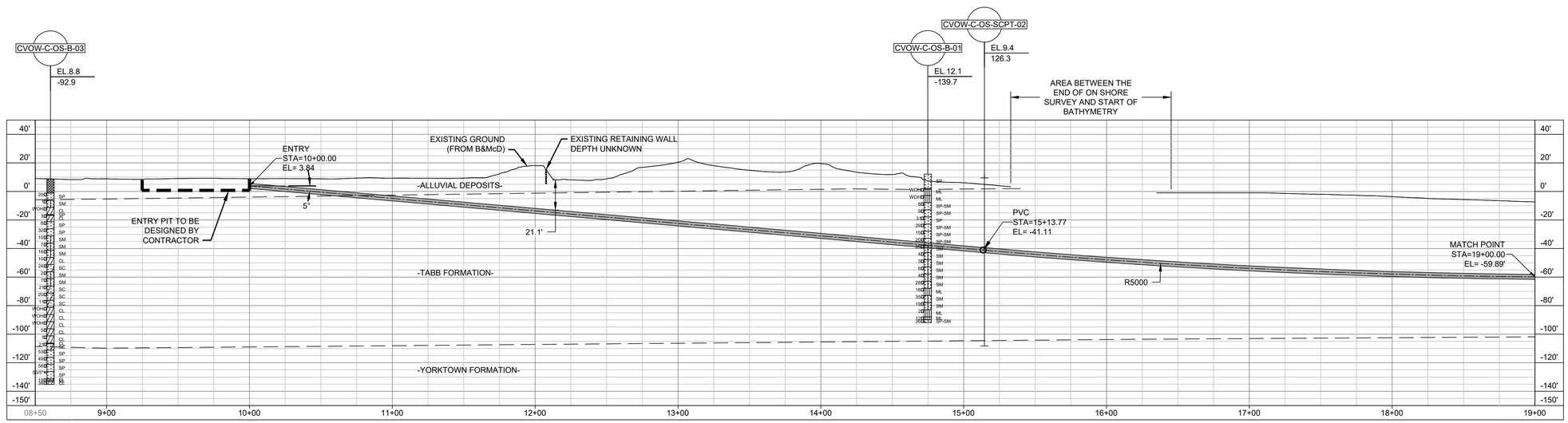
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 3 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 3 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0 40' 80'

VERTICAL SCALE IN FEET: 0 40' 80'

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 3 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	8 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:10 PM

Drawing No.: UG-EX-P5-207

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:10 PM
GAINES, JACK

No.	Date	By	Description	Project Number	
				B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				0200157	

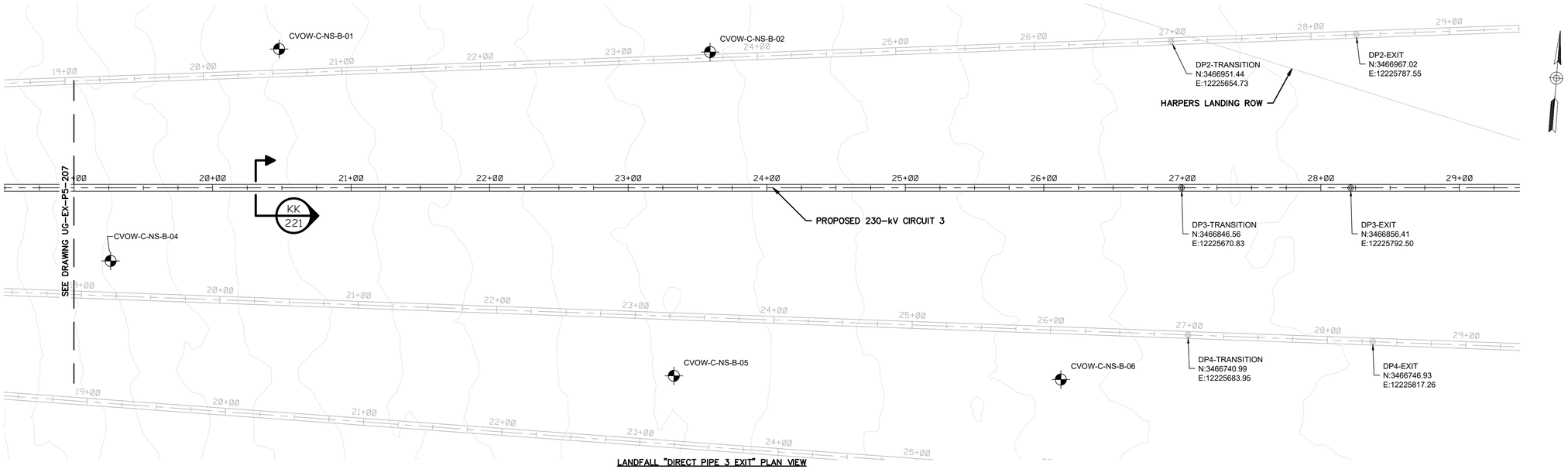
Revisions

GAINES, JACK

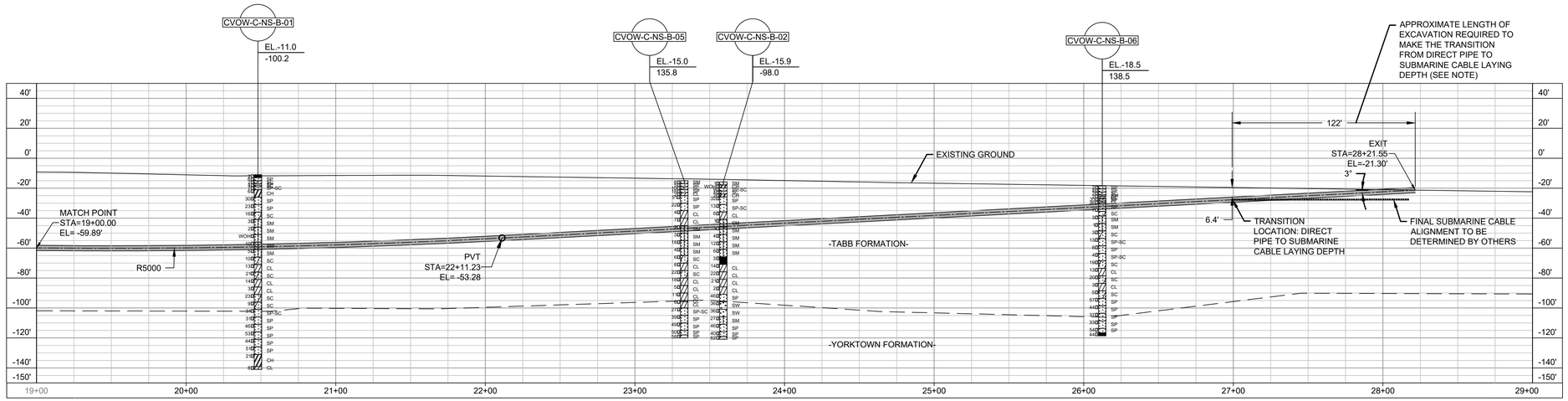
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 3 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 3 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 3 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	9 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM

Drawing No. UG-EX-P5-208

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM
GAINES, JACK

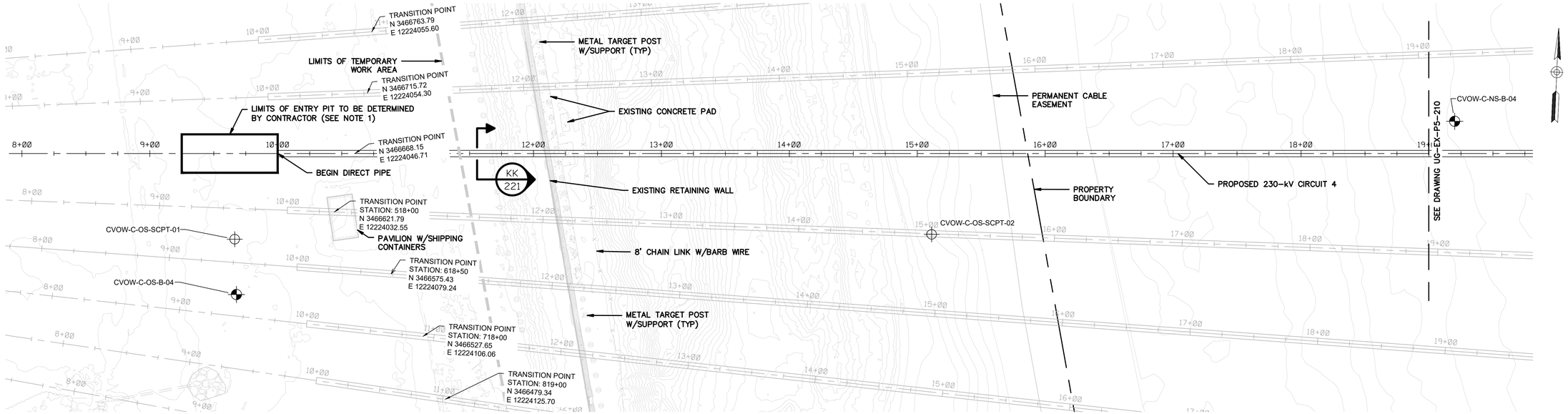
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
					H&A
					PWD

Revisions

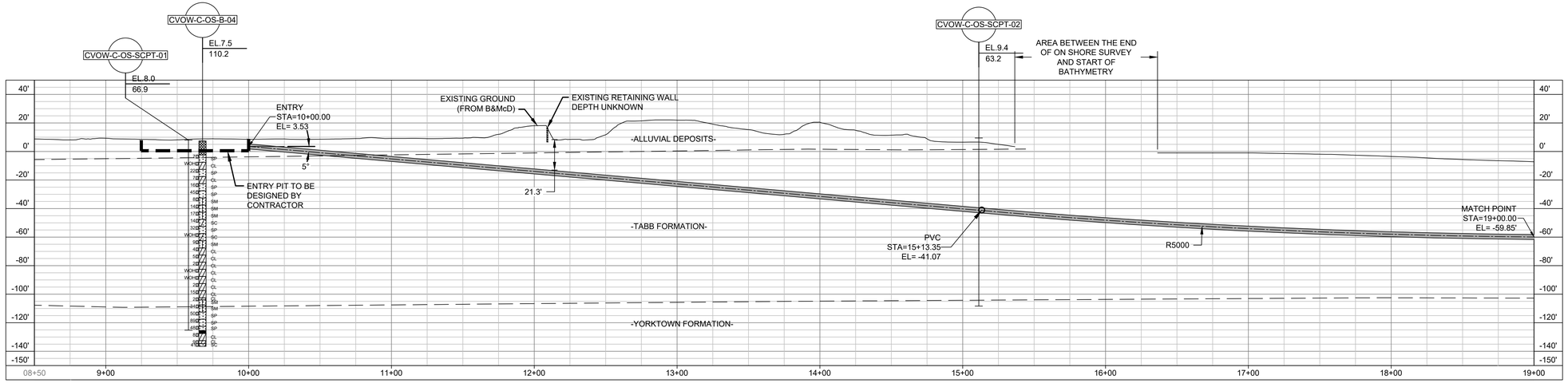
GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 4 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 4 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 4 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	10 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM

Drawing No. UG-EX-P5-209

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM
GAINES, JACK

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
					H&A
					PWD

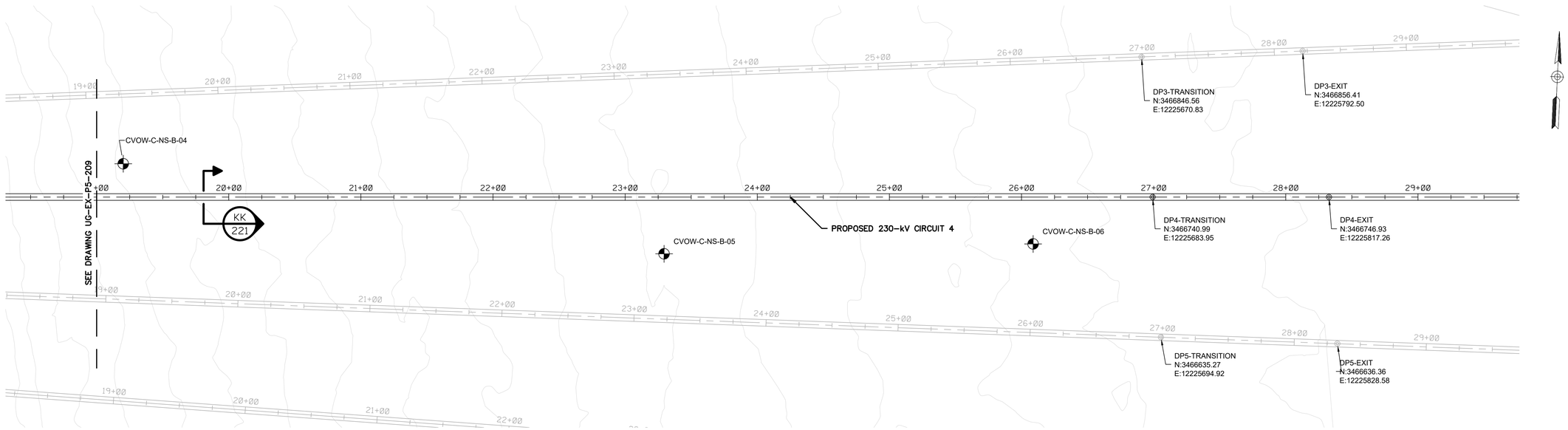
Revisions

GAINES, JACK

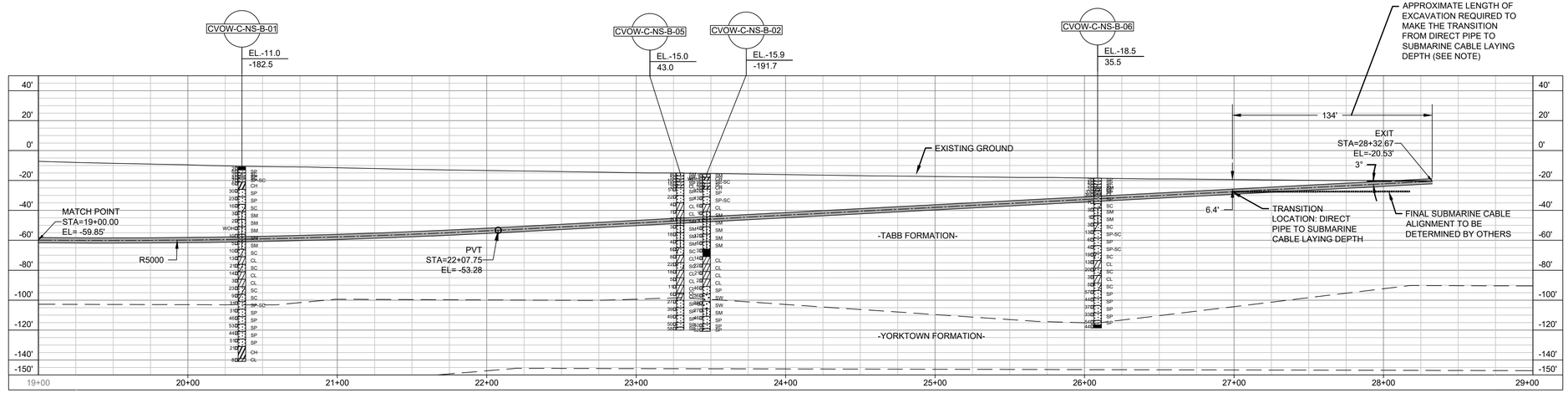
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 4 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 4 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	11 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM

Drawing No. UG-EX-P5-210

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:11 PM
GAINES, JACK

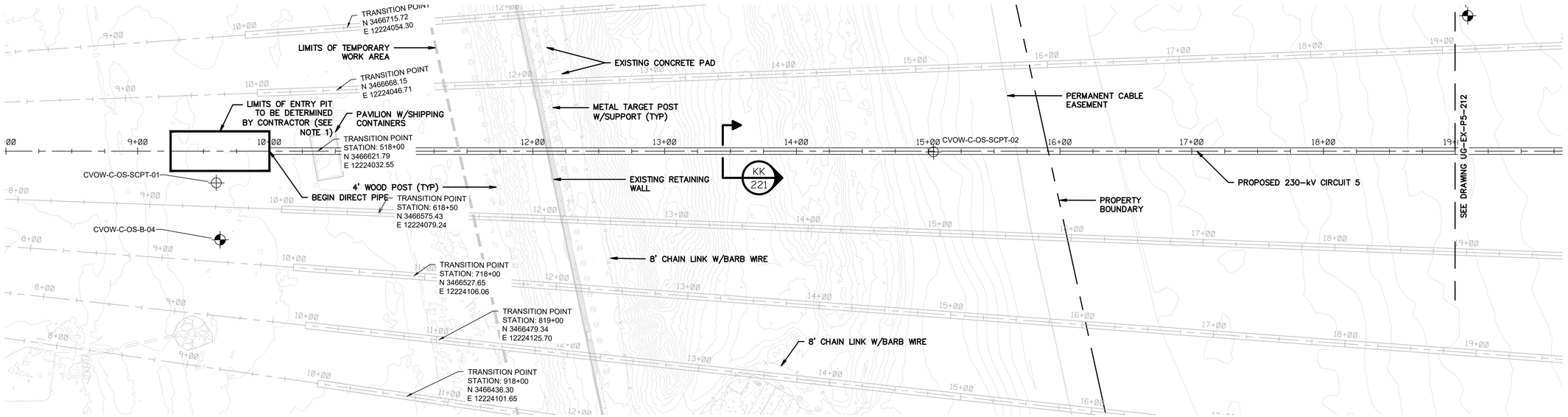
No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

Revisions

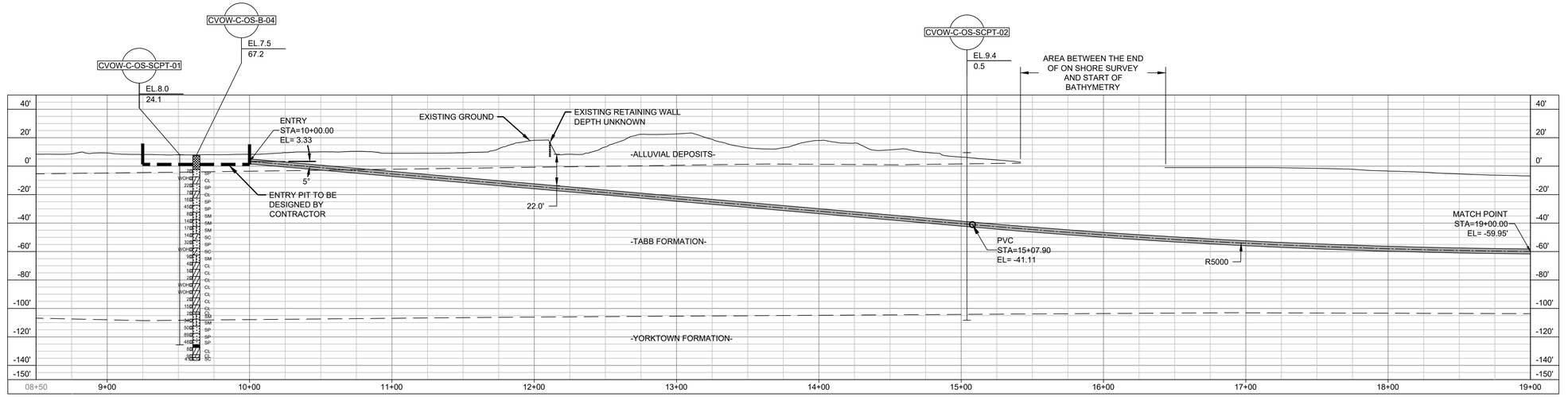
GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 5 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 5 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0 40' 80'

VERTICAL SCALE IN FEET: 0 40' 80'

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 5 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	12 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM

Drawing No. UG-EX-P5-211

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM
GAINES, JACK

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
				B/M H&A

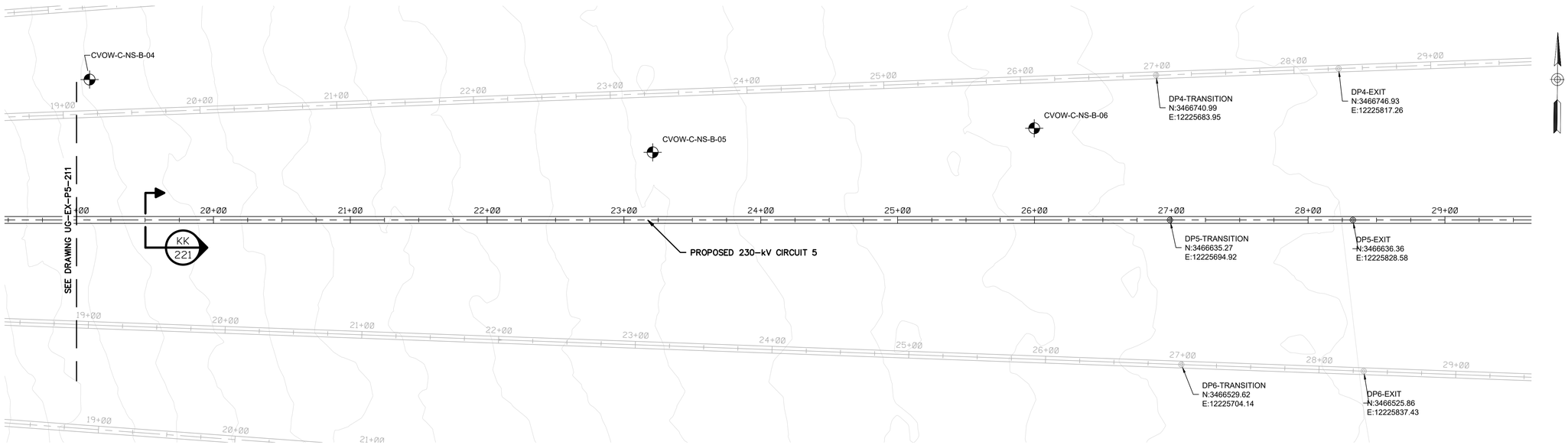
Revisions

GAINES, JACK

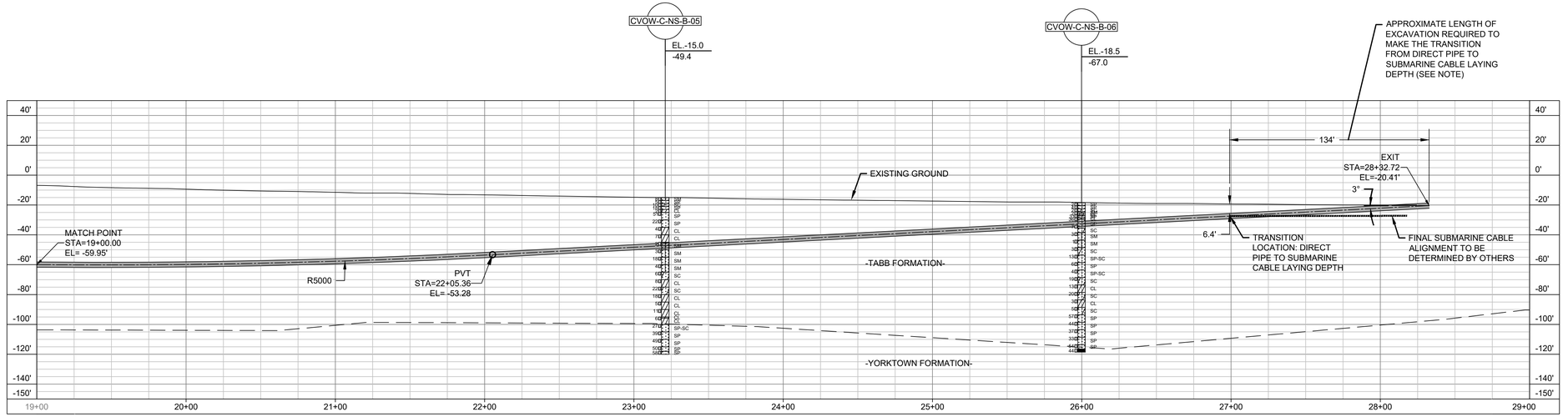
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 5 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 5 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 5 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	13 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM

Drawing No.
UG-EX-P5-212

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:12 PM
GAINES, JACK

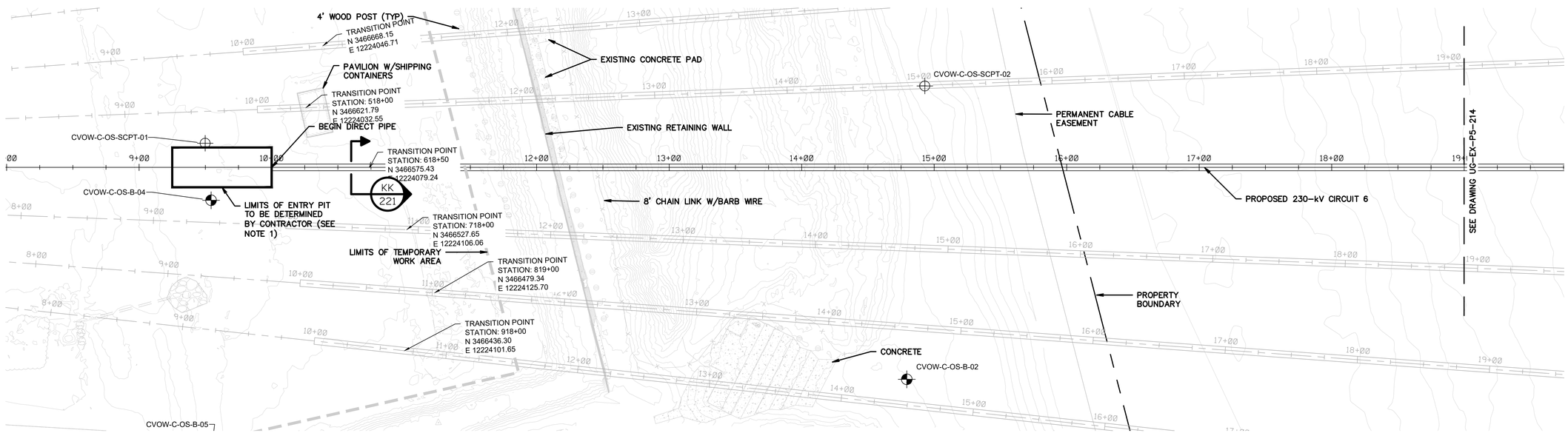
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
					H&A
					PWD

Revisions

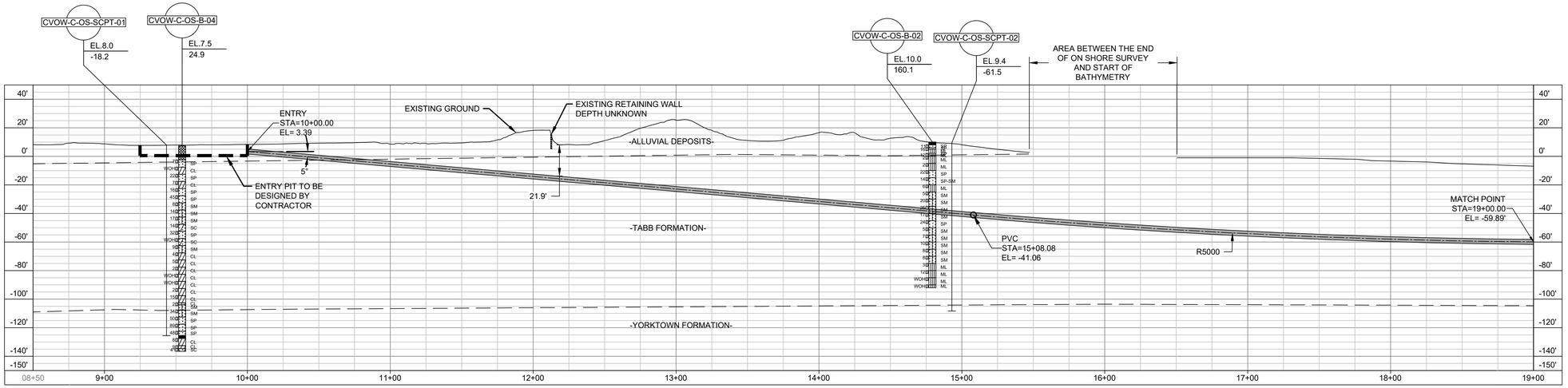
GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 6 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 6 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 6 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	14 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
			B/M No.	Revisions

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM

Drawing No. UG-EX-P5-213

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM
GAINES, JACK

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
		PWD		H&A

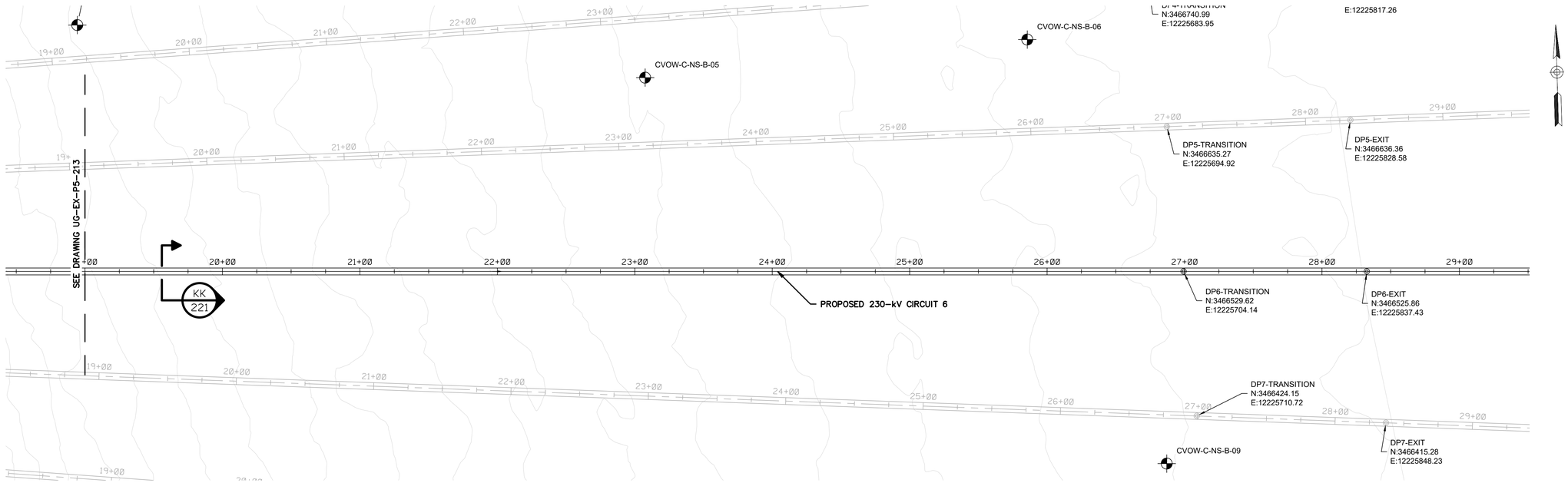
Revisions

GAINES, JACK

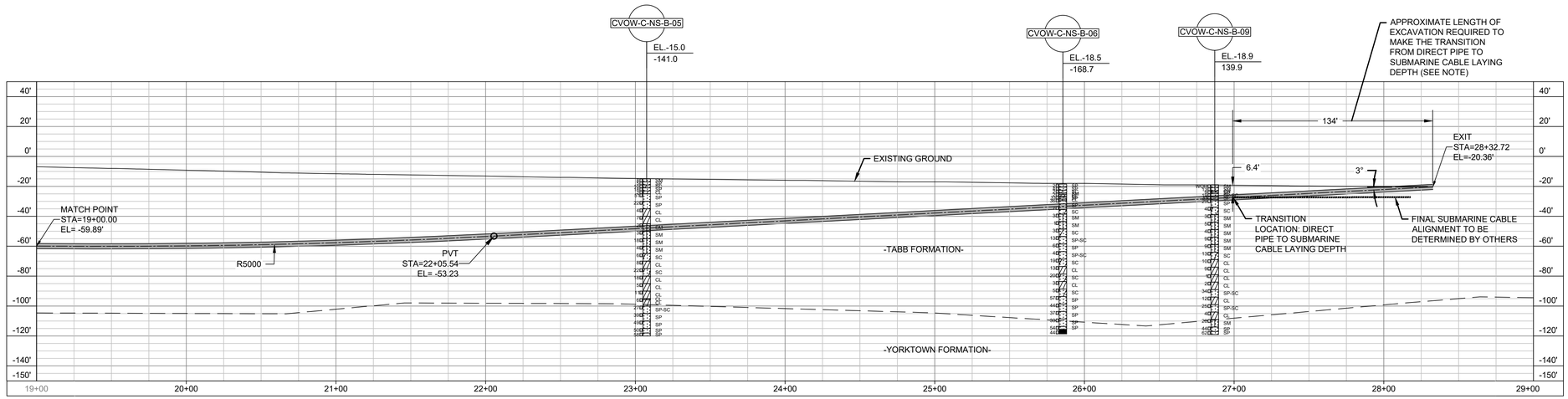
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 6 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 6 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 6 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	15 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM

Drawing No. UG-EX-P5-214

No.	Date	By	Description	Project Number B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A

Revisions

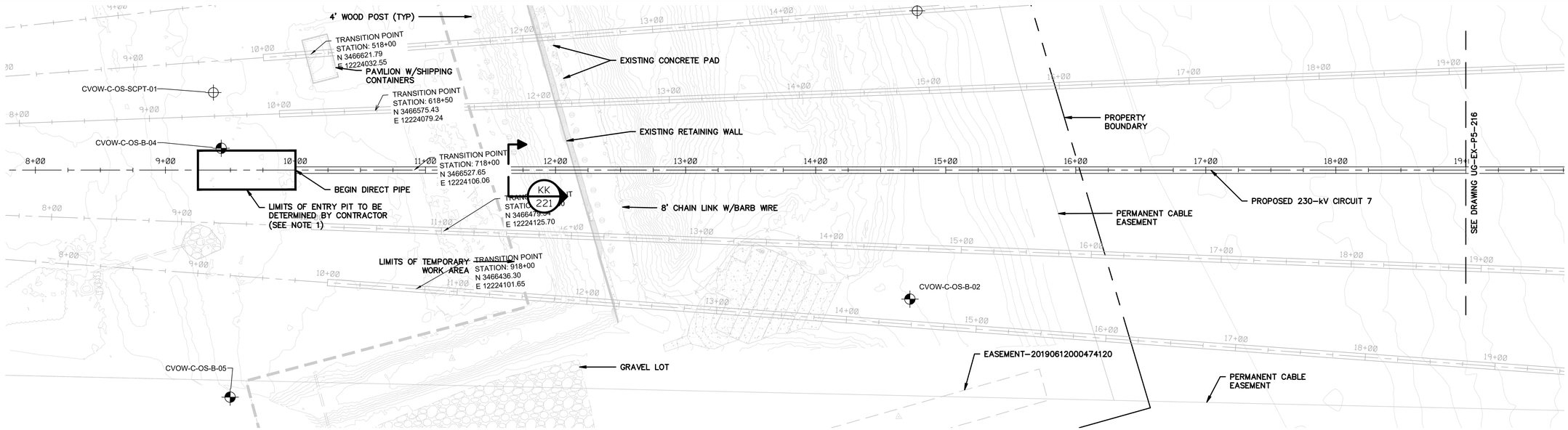
GAINES, JACK

Typical Drawing Information

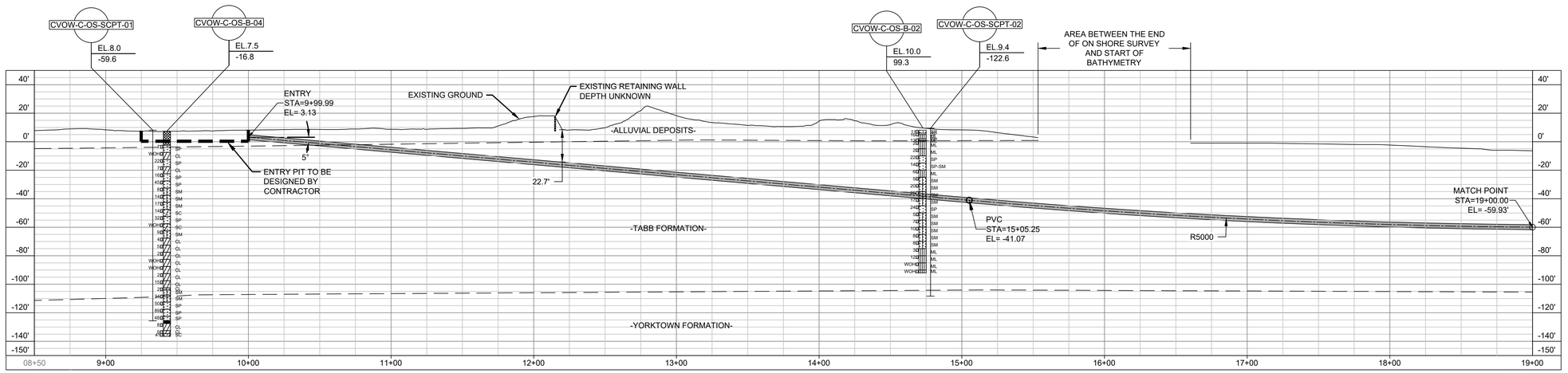
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:13 PM
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 7 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 7 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 7 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	16 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM

Drawing No.
UG-EX-P5-215

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
GAINES, JACK

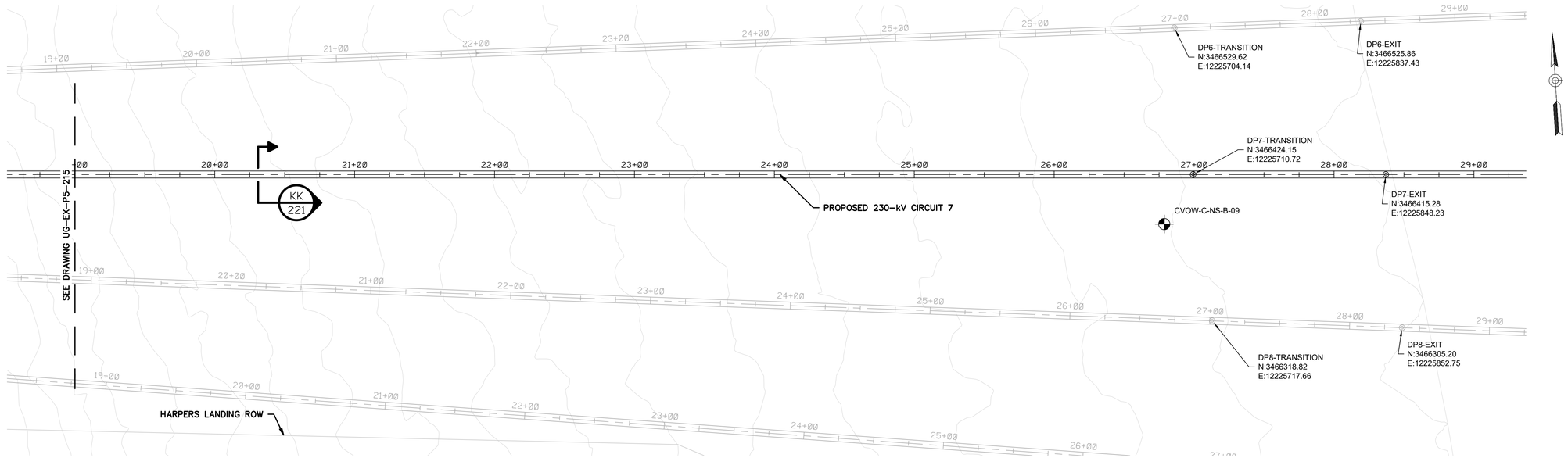
No.	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				0200157	

Revisions

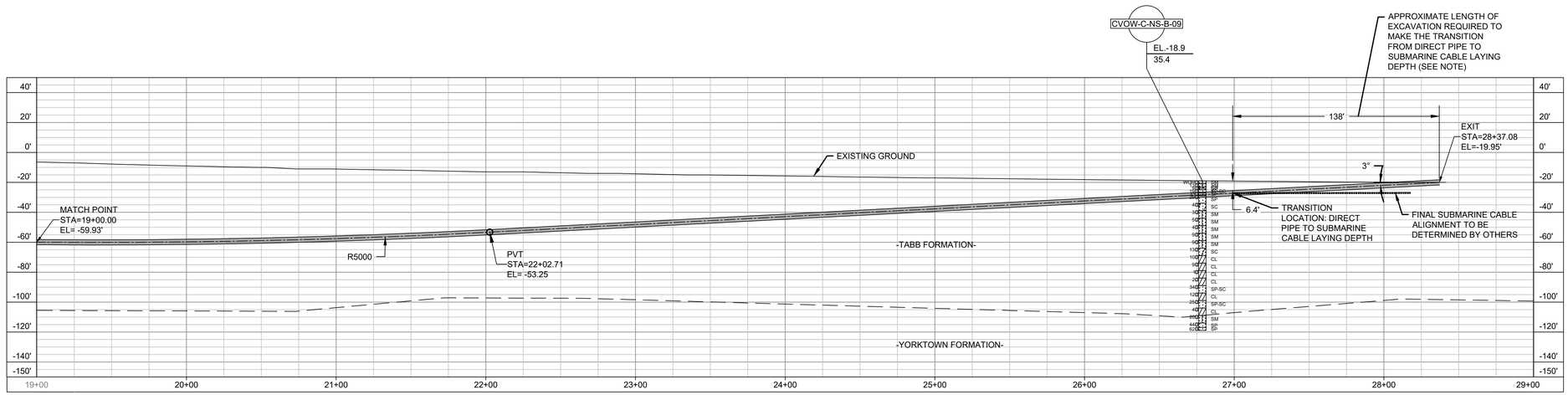
GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 7 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 7 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 7 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	17 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM

Drawing No.
UG-EX-P5-216

No.	Date	By	Description	Project Number B/M	Project Number 0200157	H&A
A	03/25/22	AH	ISSUED FOR 60% REVIEW			PWD

Revisions

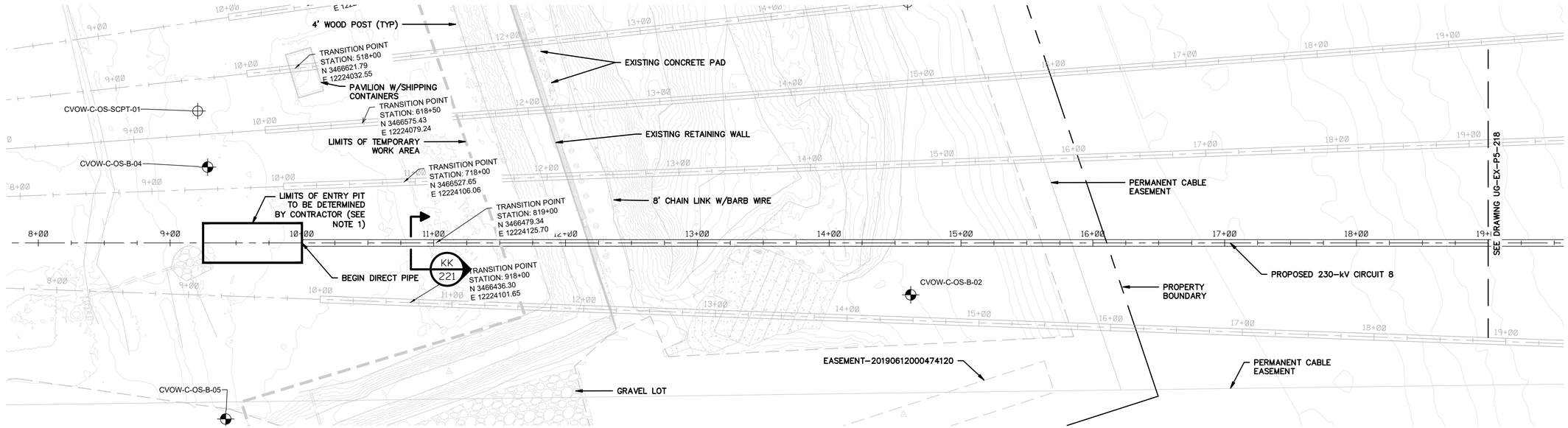
GAINES, JACK

Typical Drawing Information

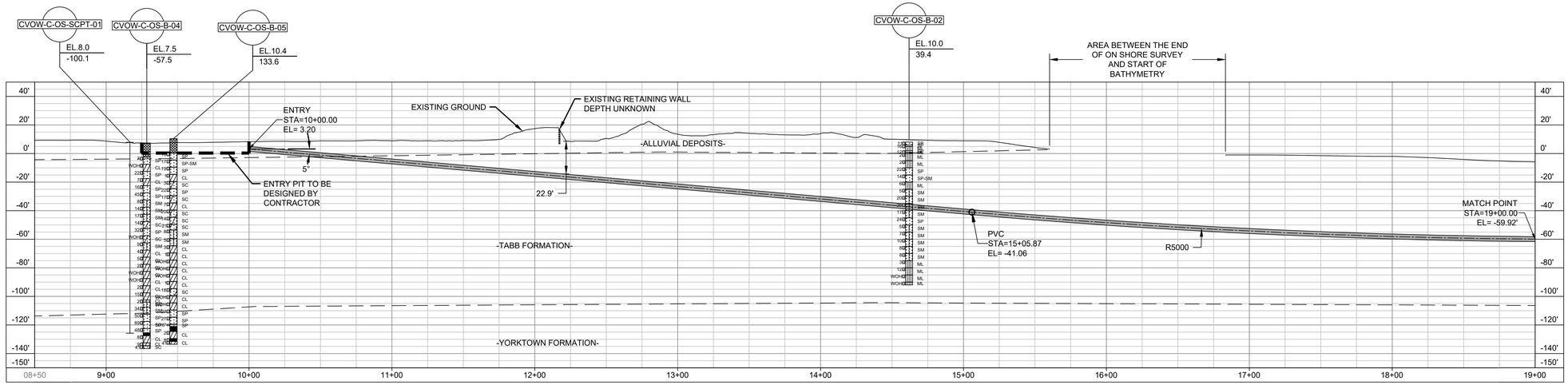
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 8 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 8 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	18 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
Drawing No. UG-EX-P5-217

No.	Date	Checked/Appr.	By	Description	Project Number B/M
A	03/25/22	AH	PWD	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A

Revisions

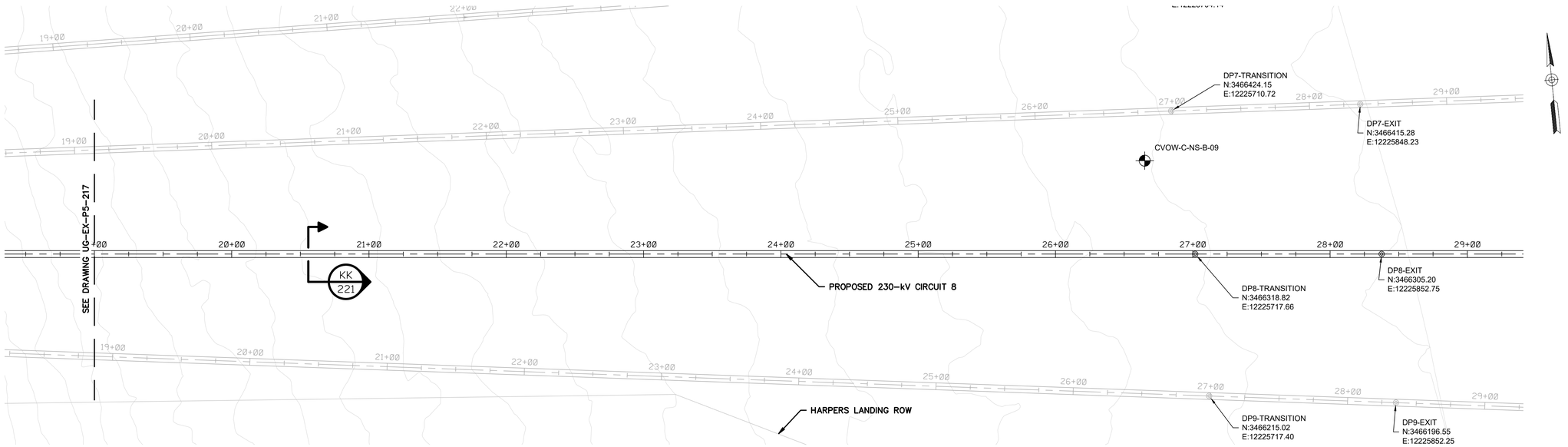
GAINES, JACK

Typical Drawing Information

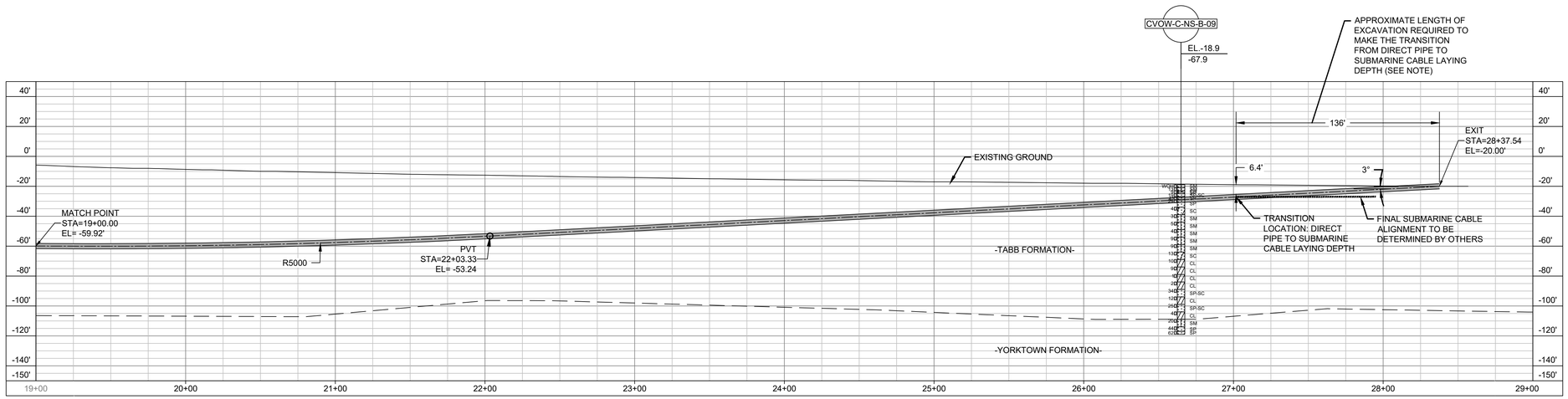
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:14 PM
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 8 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 8 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

No.	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
		PWD		0200157	

Revisions

GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 8 PLAN AND PROFILE (STA. 19+00 TO 28+00)

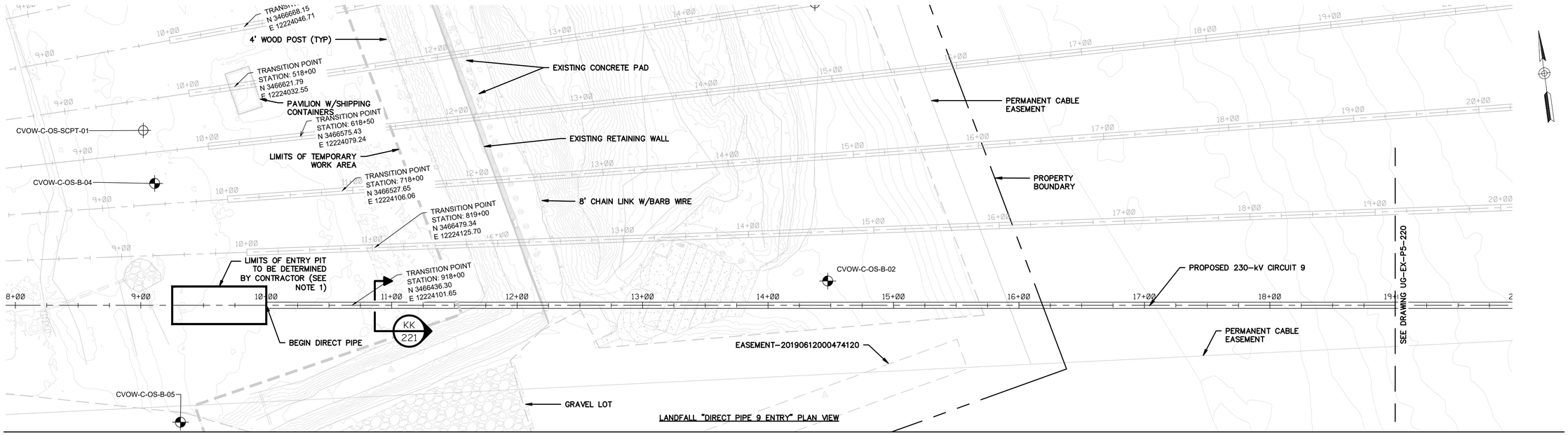
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	19 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM

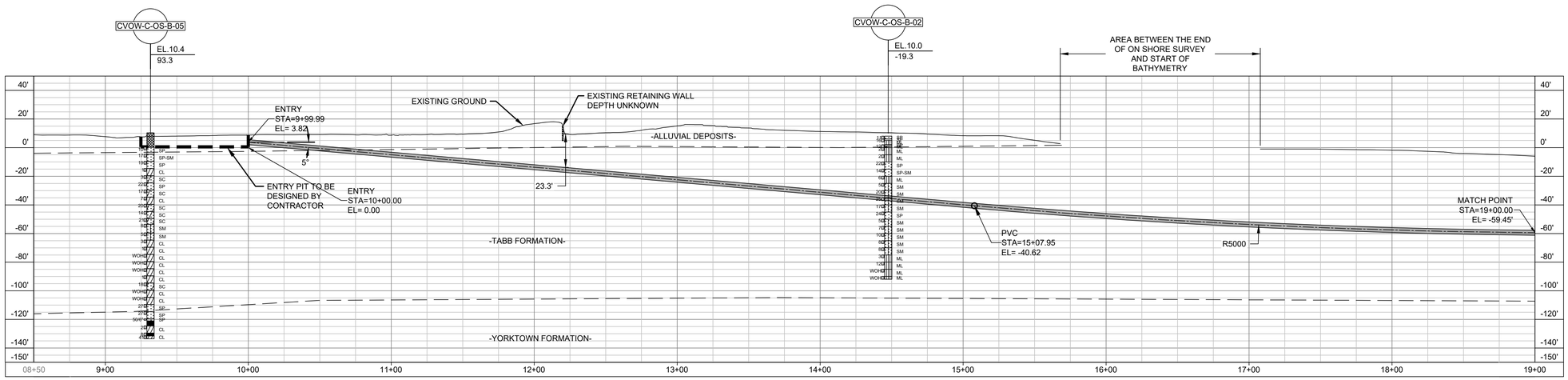
Drawing No.
UG-EX-P5-218

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 9 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE 9 ENTRY" PROFILE VIEW

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITH IN OWNER PROVIDED EASEMENT

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 9 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	20 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM

Drawing No. UG-EX-P5-219

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:15 PM
GAINES, JACK

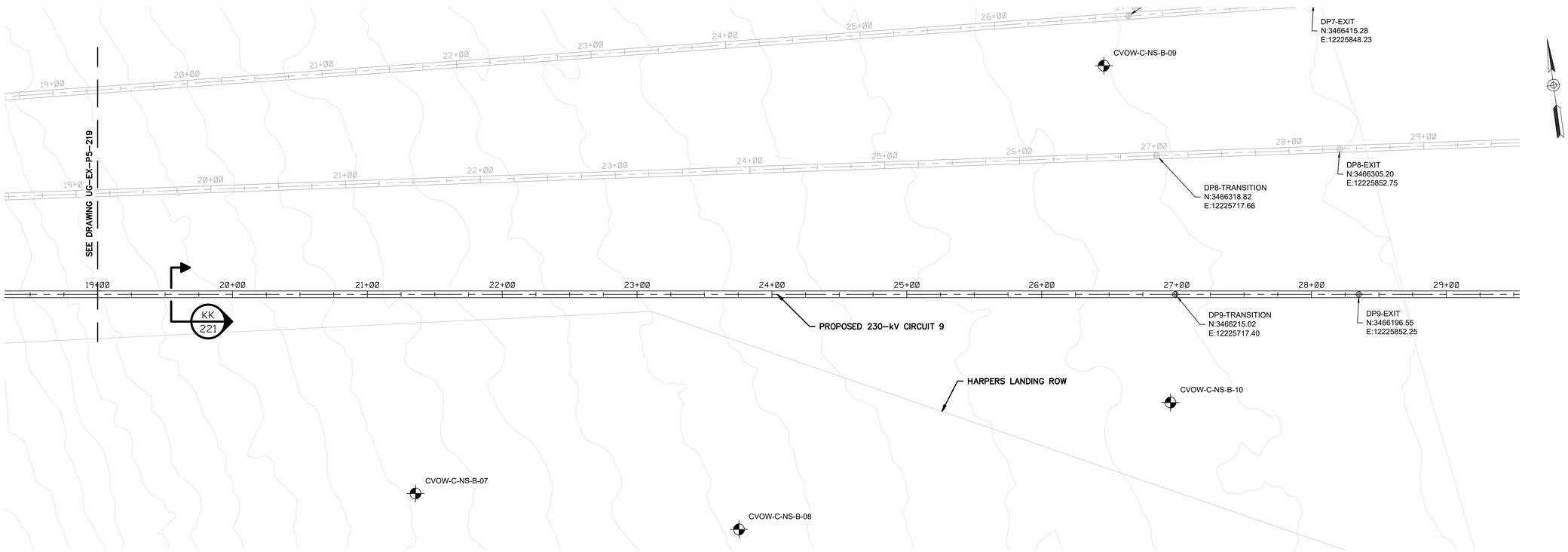
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157	H&A

Revisions

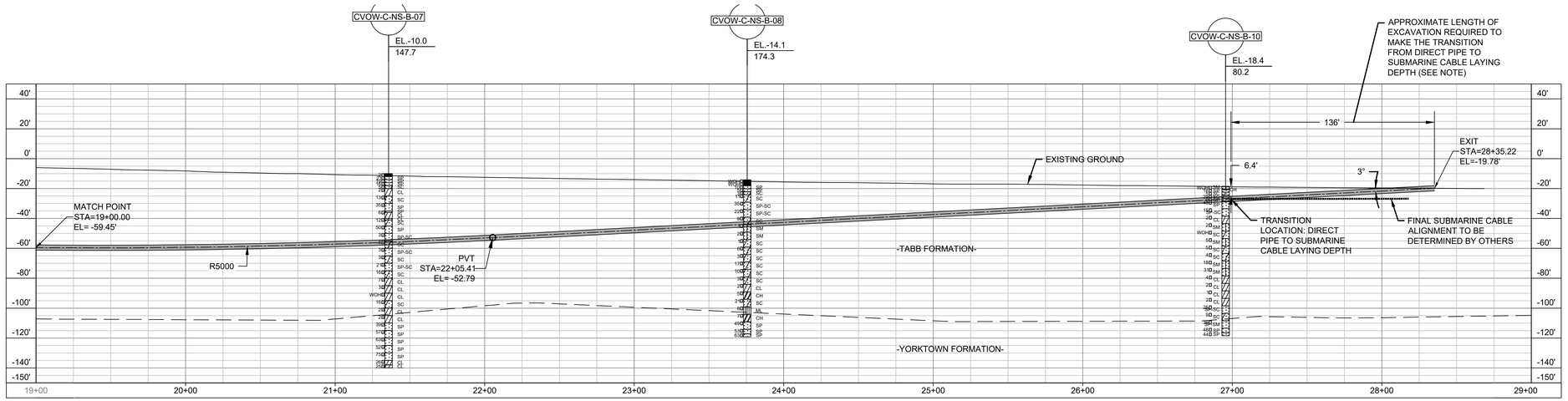
GAINES, JACK

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE 9 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE 9 EXIT" PROFILE VIEW

NOTES:

1. LENGTH OF EXCAVATION MAY VARY BASED ON FACTORS INCLUDING, BUT NOT LIMITED TO, DIRECT PIPE ALIGNMENT ACCURACY, CHANGES IN THE MUDLINE ELEVATION AT THE TRANSITION LOCATION AND CABLE BURIAL DEPTH

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 9 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	21 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:16 PM

Drawing No.
UG-EX-P5-220

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
				B/M H&A

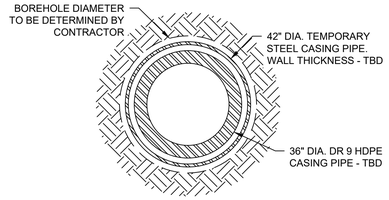
Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

GAINES, JACK

UG-EX-P5-201-218.DWG
PLOTTED: 3/28/2022 3:16 PM
GAINES, JACK

USACE-NLW
RCVD 7/15/2022



KK

CONDUIT CONFIGURATION FOR LANDFALL DIRECT PIPE® INSTALLATIONS
NOT TO SCALE

NOTES:

1. **42" DIAMETER TEMPORARY STEEL CASING PIPE USED FOR THE DIRECT PIPE® INSTALLATION SHALL BE REMOVED PRIOR TO THE DIRECT PIPE (R) CONTRACTOR DEMOBILIZING.**

PRELIMINARY – NOT FOR CONSTRUCTION

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157
	Checked/Appr.			B/M

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly
GAINES, JACK								

Dominion Energy®

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
GENERAL NOTES

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	22 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 3:16 PM

Drawing No.
UG-EX-P5-221

UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 3:16 PM
GAINES, JACK

USACE-NLW
RCVD 7/15/2022

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



PRELIMINARY – NOT FOR CONSTRUCTION

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BURNS McDONNELL

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
Δ	03/25/2022	AH	ISSUED FOR 60% REVIEW	0200157
PwD				H&A

Revisions

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	1 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	
Cad File Name	UG-EX-P-200.DWG		Drawing No.	
PLOTTED:	3/28/2022 4:32 PM		UG-EX-P3-200	

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

POSTOLOWSKI, KEVIN
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

UG-EX-P-200.DWG
PLOTTED: 3/28/2022 4:32 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
   7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    12.1. USACE PERMITS
    12.2. CITY OF ____
    12.3. COUNTY OF ____
    12.4. DEWATERING PERMITS
    12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

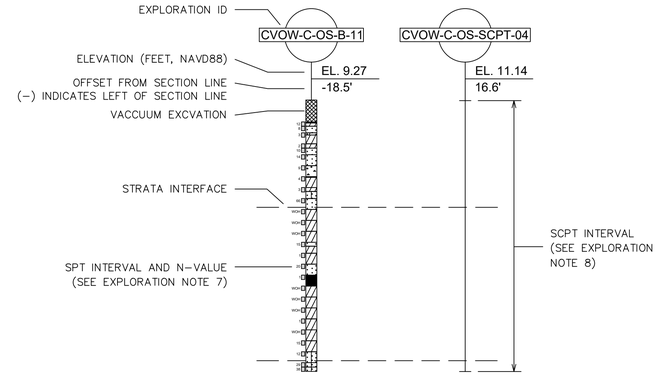
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   C. USE OF "MUD ENGINEER" TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 3/28/2022 4:33 PM
Drawing No. UG-EX-P3-201

UG-EX-P-201.DWG
PLOTTED: 3/28/2022 4:33 PM
POSTOLOWSKI, KEVIN

No	Date	Checked/Appr.	By	Description	Project Number B/M	Project Number	
a	03/25/22	AH		ISSUED FOR 60% REVIEW	0200157	H&A	PwD

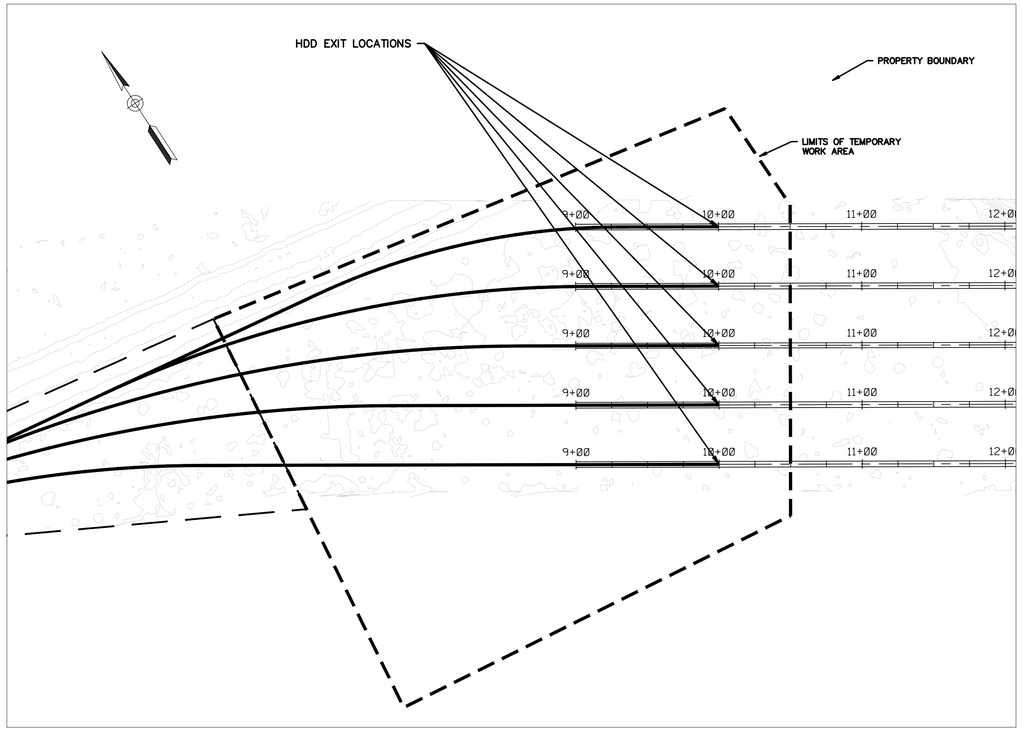
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

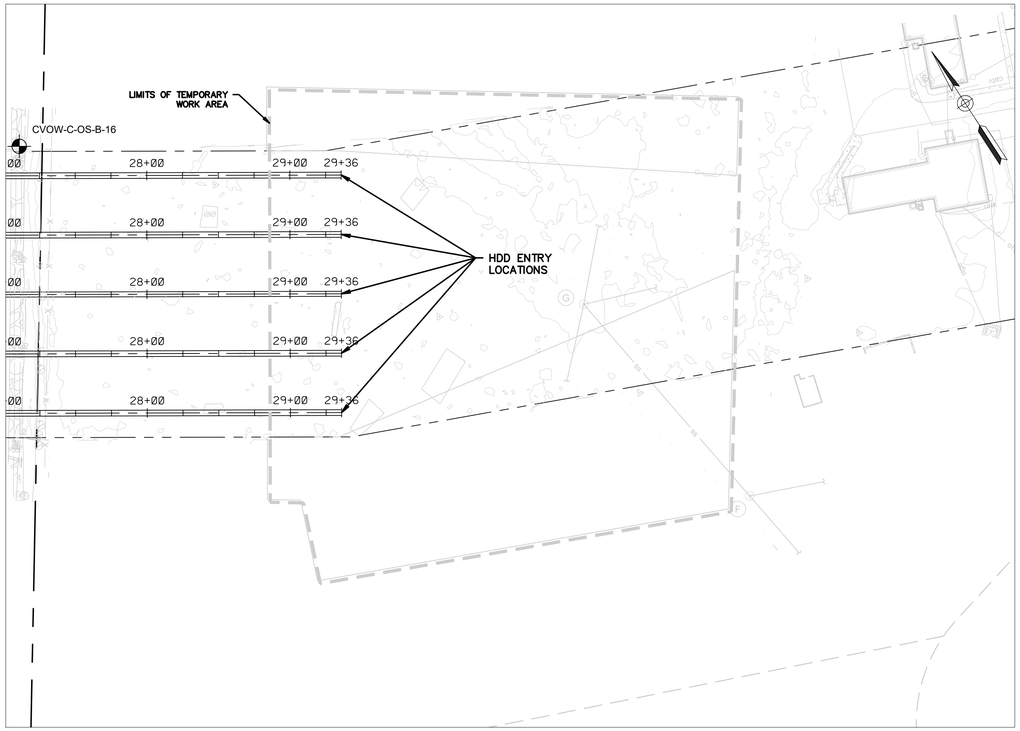
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	

USACE-NLW
RCVD 7/15/2022



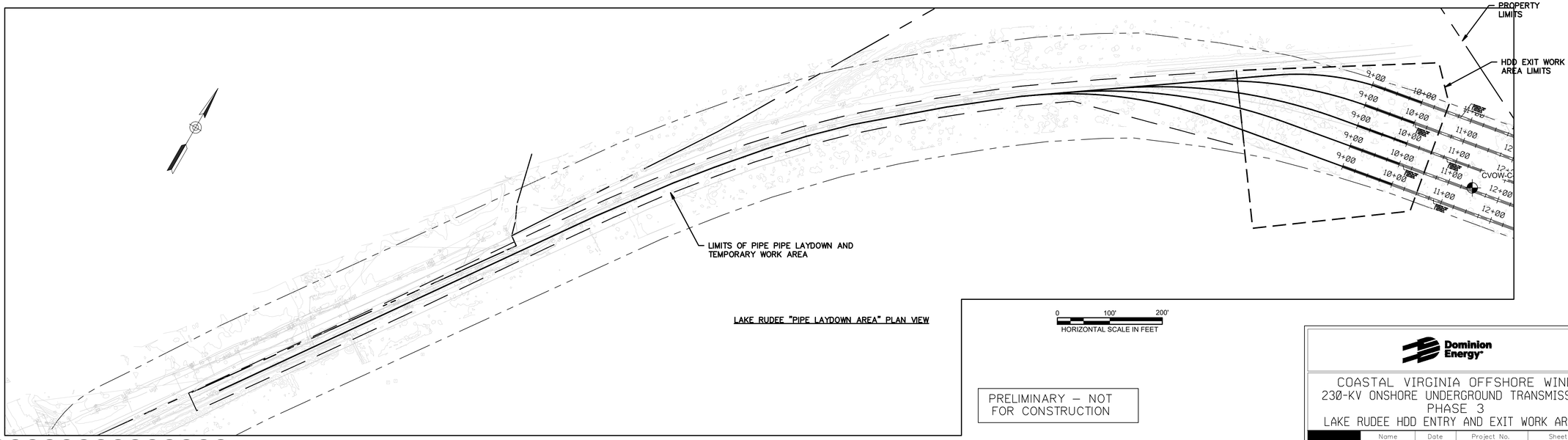
LAKE RUDEE "HDD EXIT TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "PIPE LAYDOWN AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

PRELIMINARY – NOT FOR CONSTRUCTION

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
LAKE RUDEE HDD ENTRY AND EXIT WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	3 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:34 PM

Drawing No. UG-EX-P3-202

No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	AH		ISSUED FOR 60% REVIEW	Project Number 0200157	H&A
		PWD				

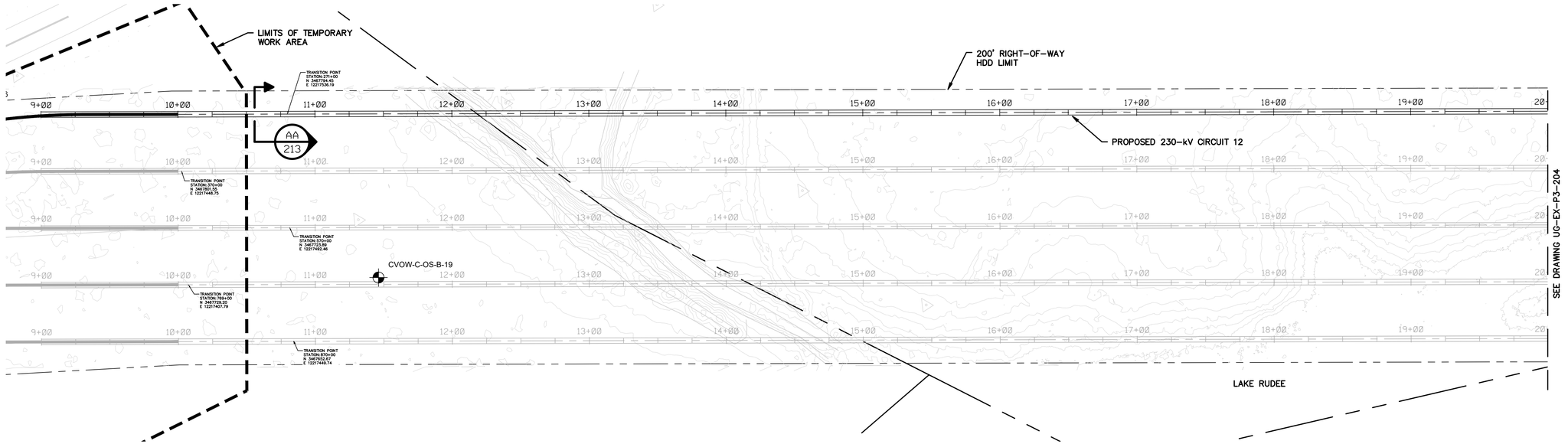
Revisions

POSTOLOWSKI, KEVIN

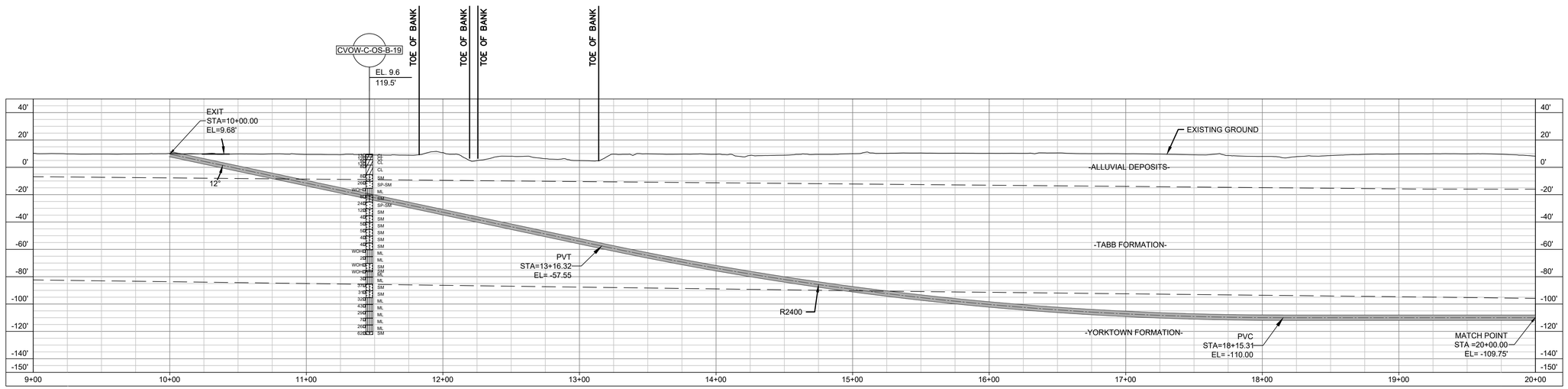
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:34 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 1 EXIT" PLAN VIEW



LAKE RUDEE "HDD 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 1 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	4 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:35 PM

Drawing No. UG-EX-P3-203

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

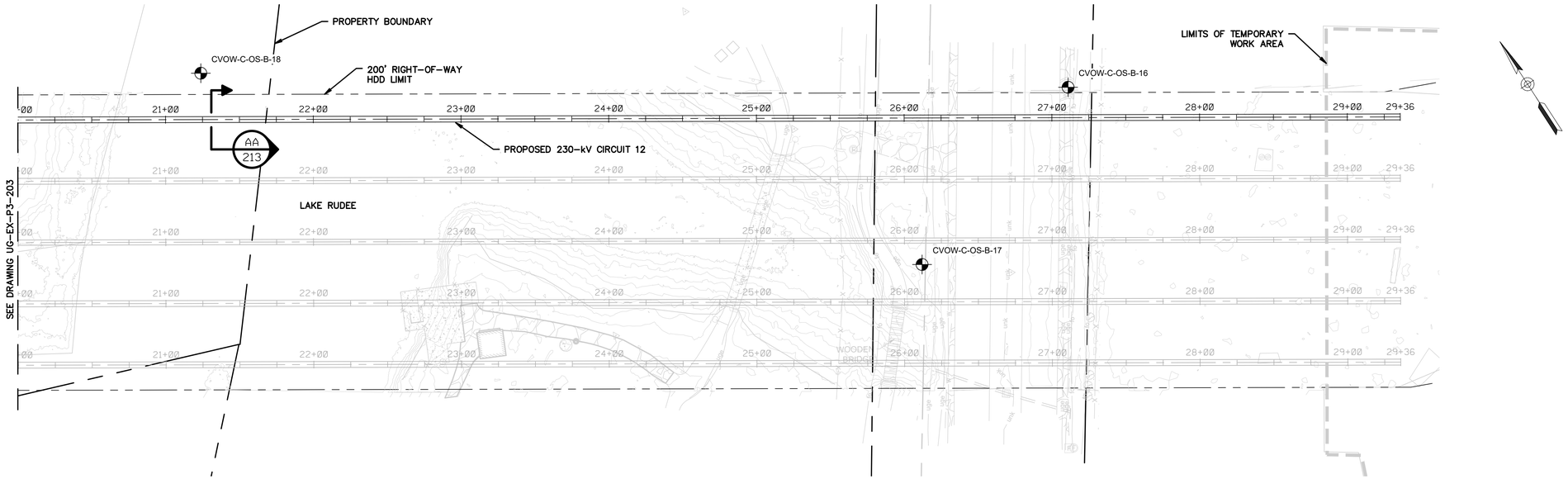
Revisions

POSTOLOWSKI, KEVIN

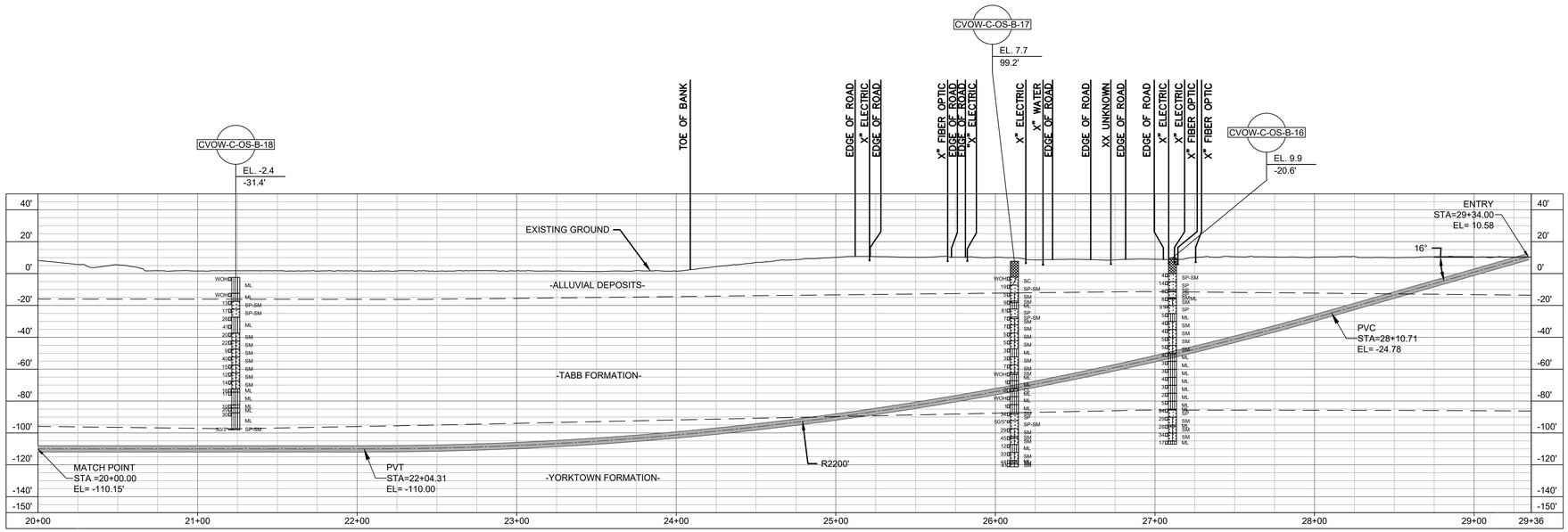
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:35 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 1 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 1 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 1 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	5 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:36 PM

Drawing No.
UG-EX-P3-204

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:36 PM
POSTOLOWSKI, KEVIN

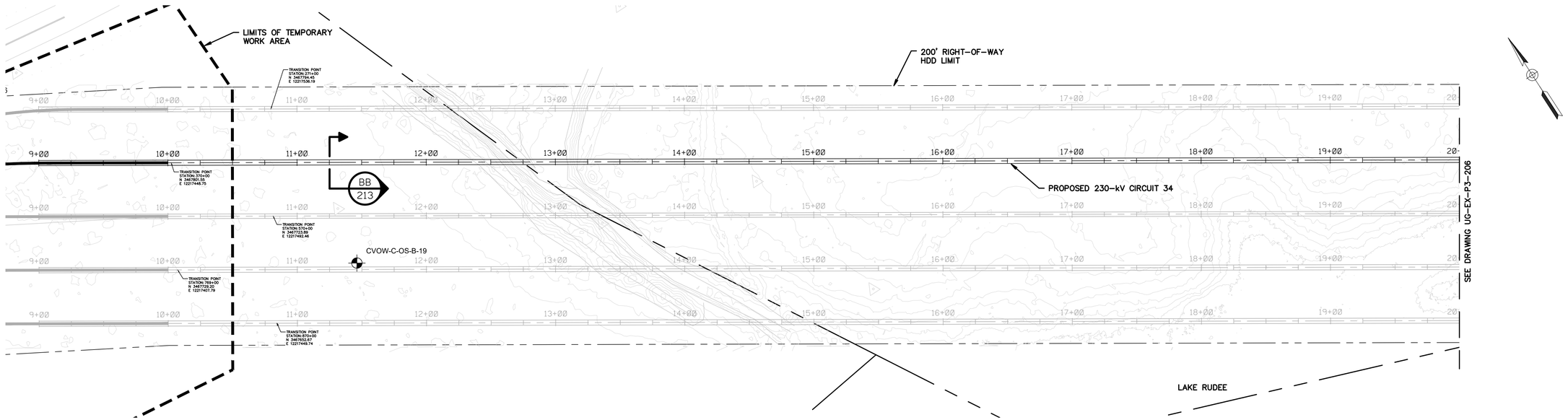
No.	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
				0200157	

Revisions

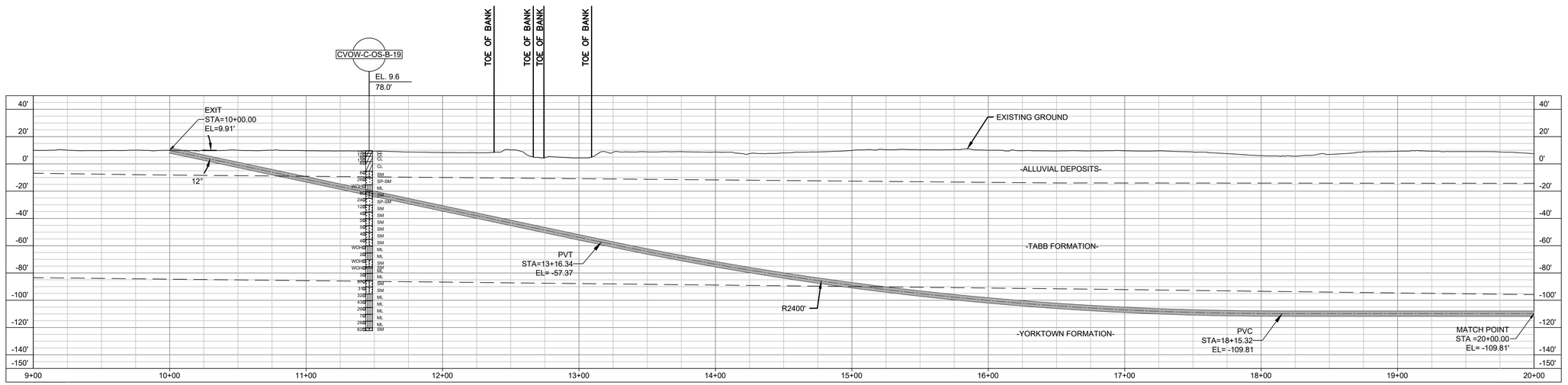
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 2 EXIT" PLAN VIEW



LAKE RUDEE "HDD 2 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:
1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 2 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	6 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:37 PM
Drawing No. UG-EX-P3-205

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

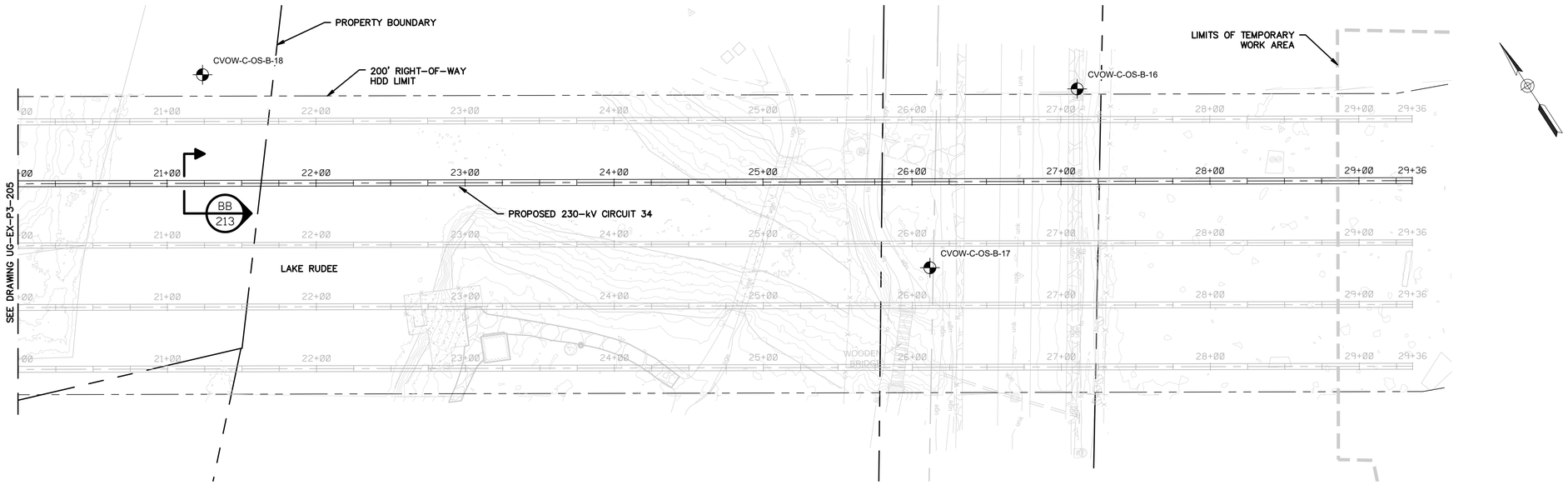
Revisions

POSTOLOWSKI, KEVIN

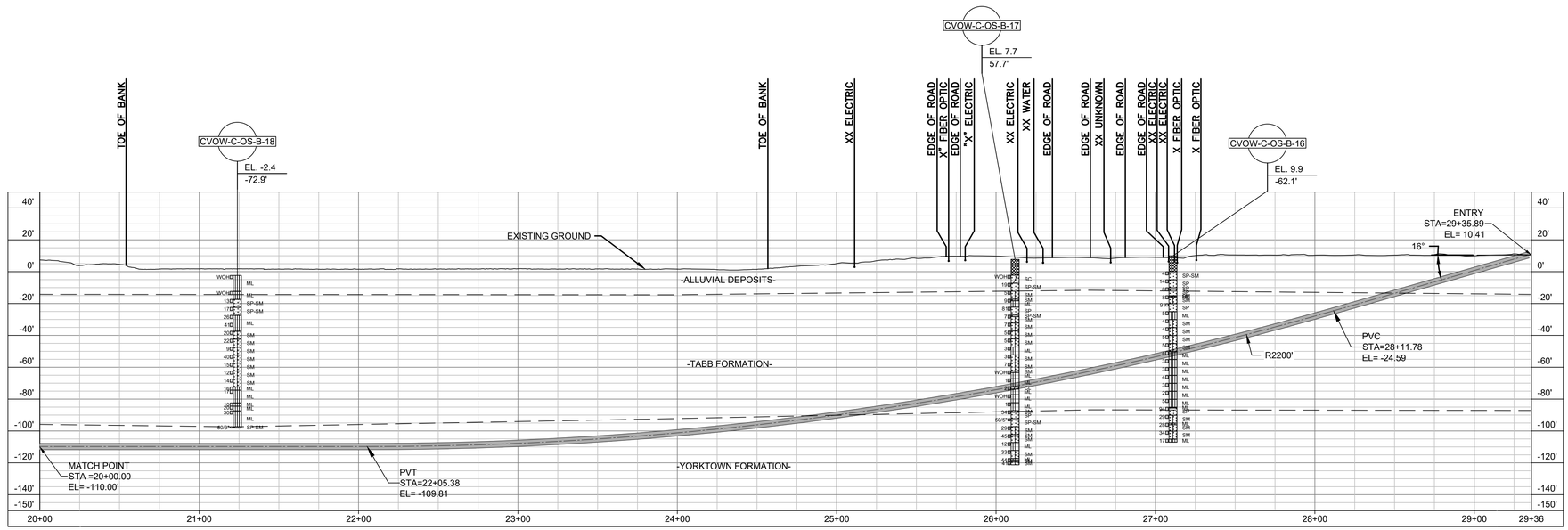
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:37 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 2 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	7 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:38 PM

Drawing No.
UG-EX-P3-206

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:38 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
					0200157
					B/M

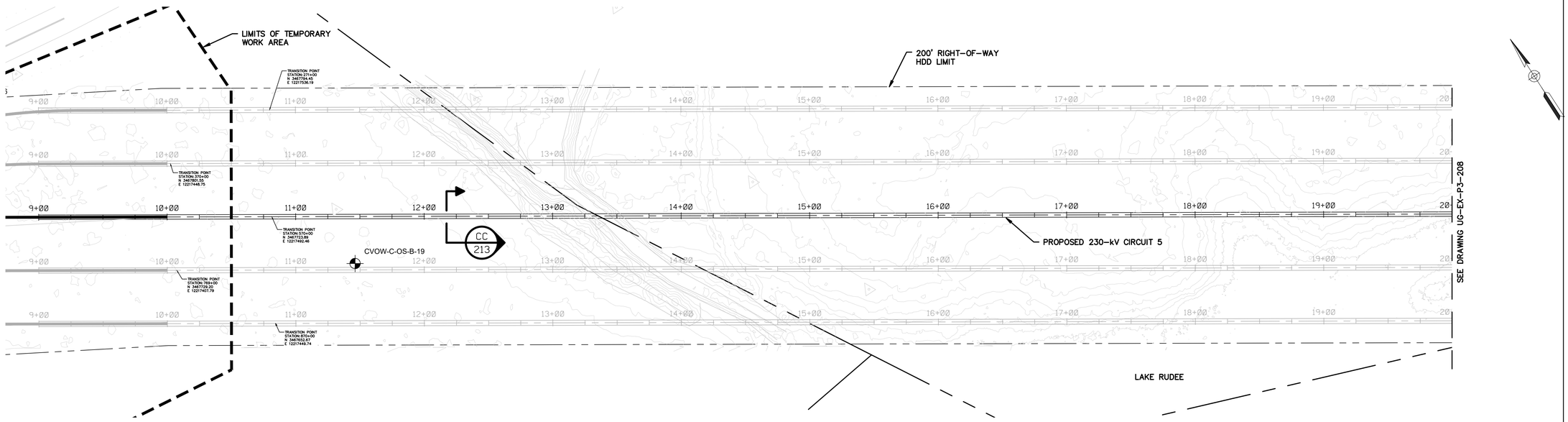
Revisions

POSTOLOWSKI, KEVIN

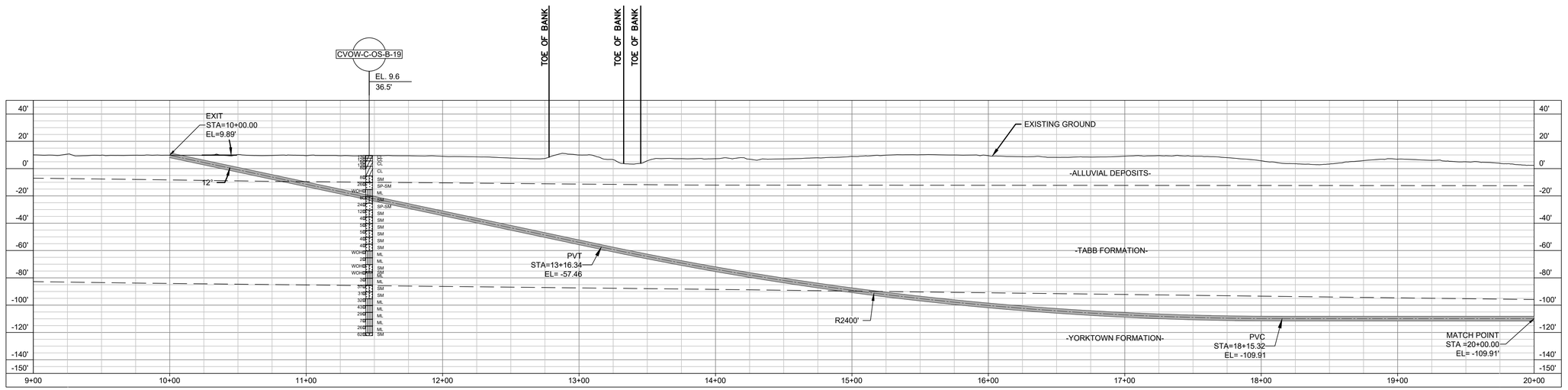
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 3 EXIT" PLAN VIEW



LAKE RUDEE "HDD 3 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 3 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	8 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 5:20 PM

Drawing No. UG-EX-P3-207

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	0200157
	Checked/Appr.				H&A

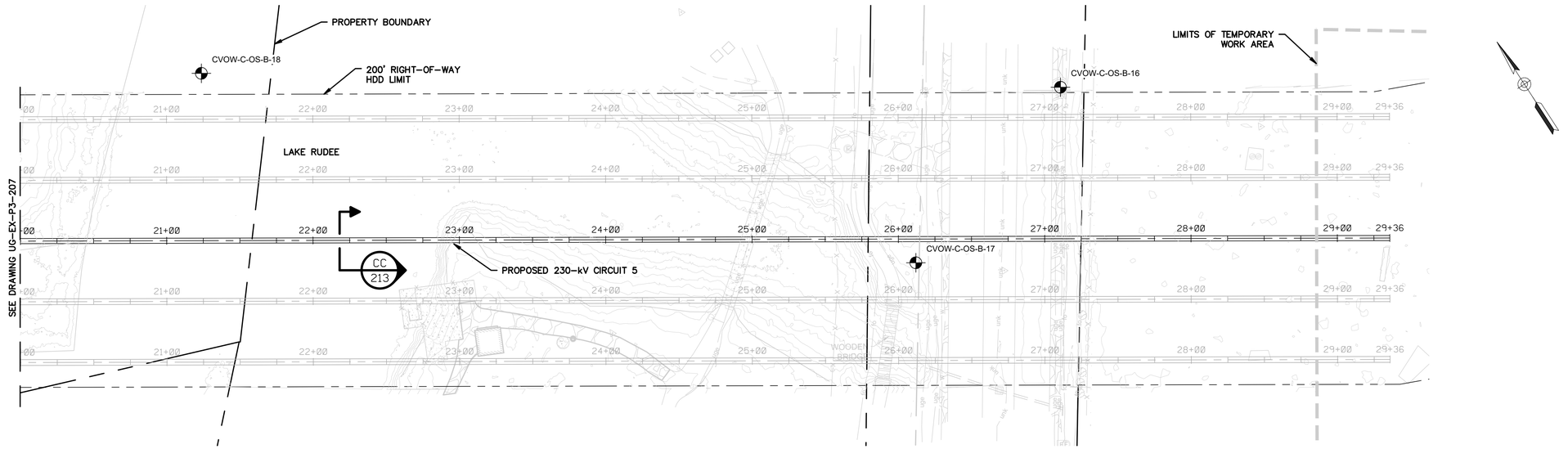
Revisions

POSTOLOWSKI, KEVIN

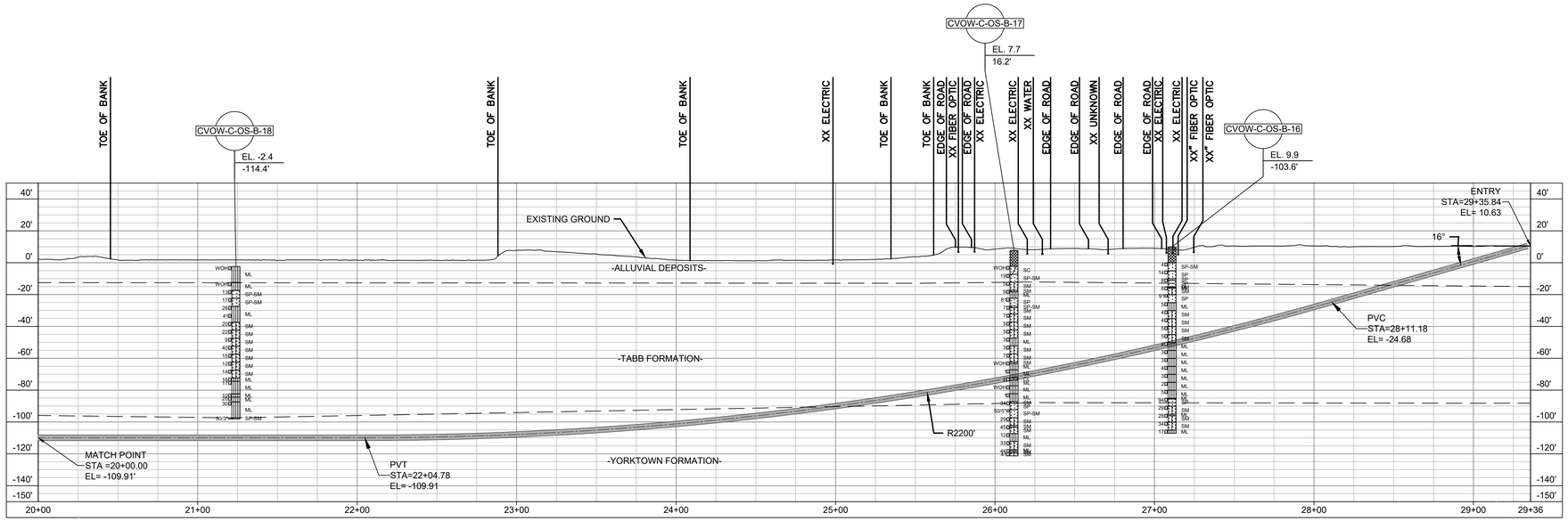
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 5:20 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 3 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 3 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 3 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	9 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	

B/M No. | Revisions

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PLOTTED: 3/28/2022 4:40 PM

Drawing No.: UG-EX-P3-208

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PLOTTED: 3/28/2022 4:40 PM
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
	Checked/Appr.			B/M H&A

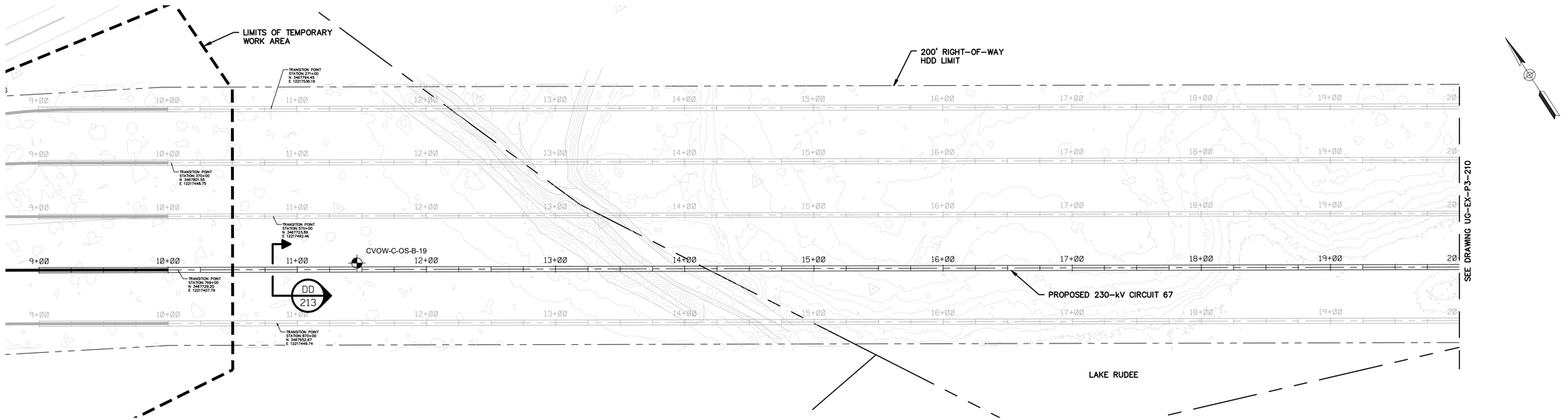
Revisions

POSTOLOWSKI, KEVIN

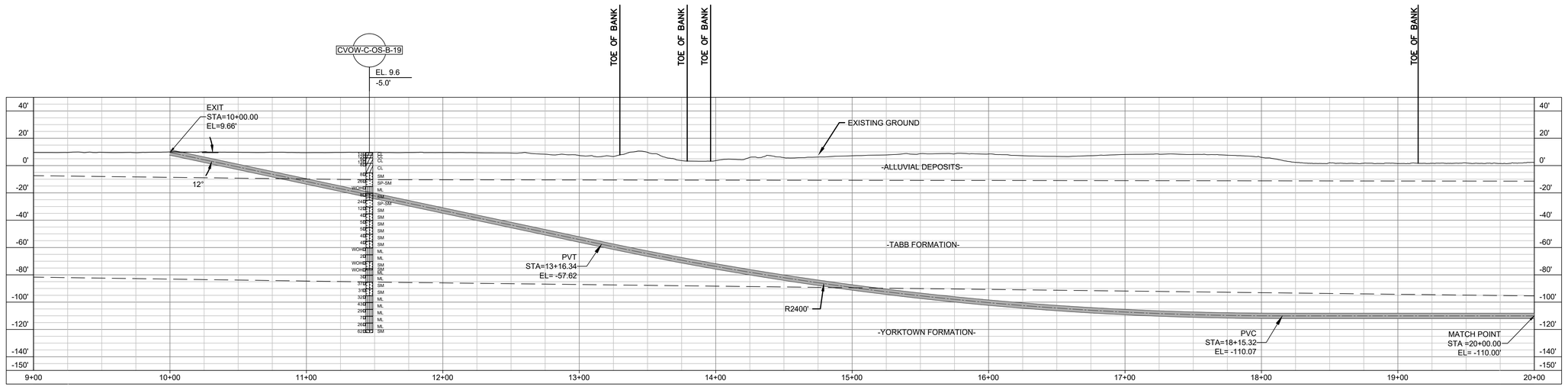
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 4 EXIT" PLAN VIEW



LAKE RUDEE "HDD 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 4 PLAN AND PROFILE (STA. 10+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	10 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No. UG-EX-P3-209

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PLOTTED: 3/28/2022 4:40 PM
POSTOLOWSKI, KEVIN

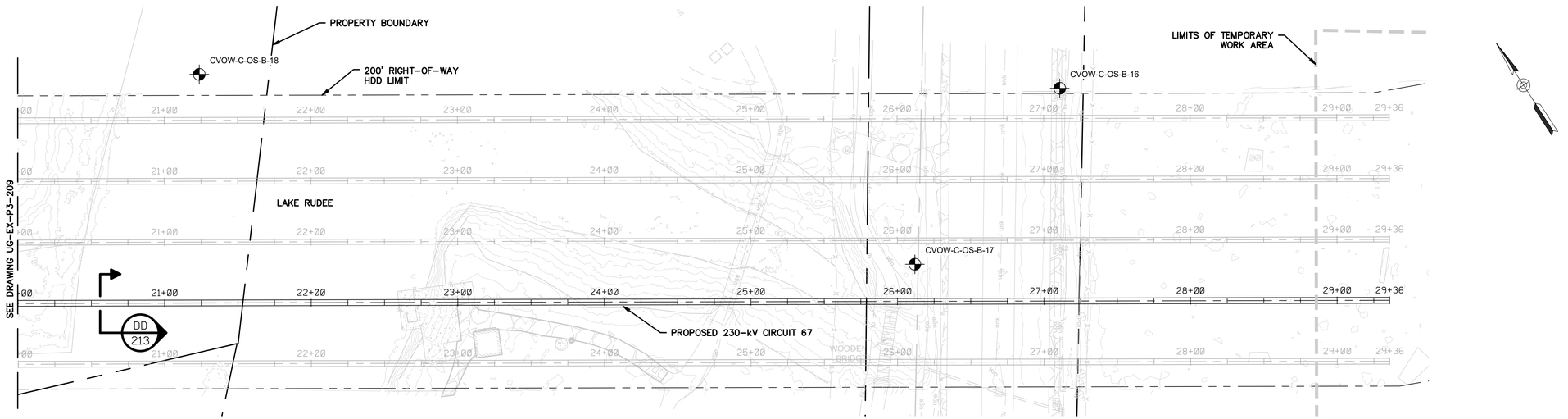
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

Revisions

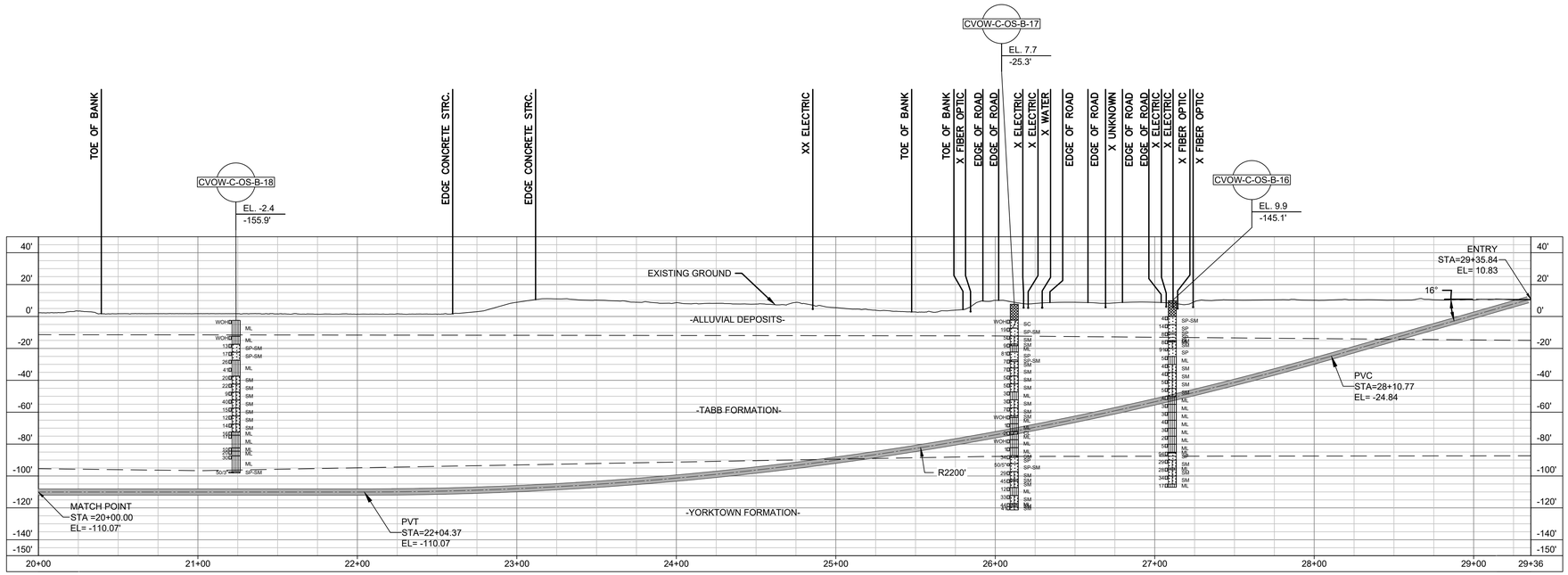
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 4 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 4 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 4 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	11 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:41 PM

Drawing No.
UG-EX-P3-210

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:41 PM
POSTOLOWSKI, KEVIN

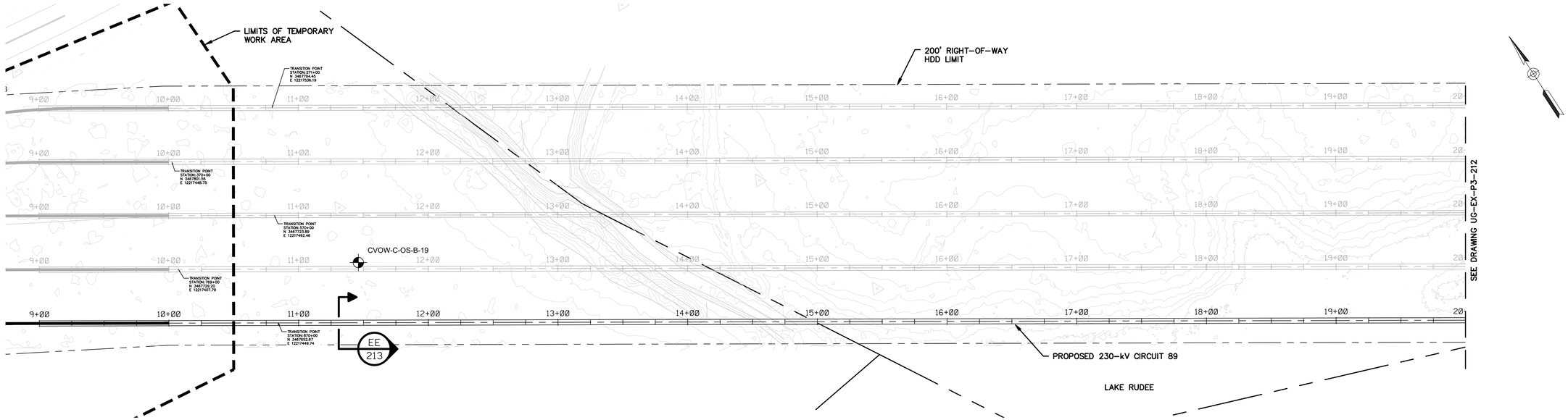
No.	Date	By	Description	Project Number	
				B/M	0200157
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.				PWD

Revisions

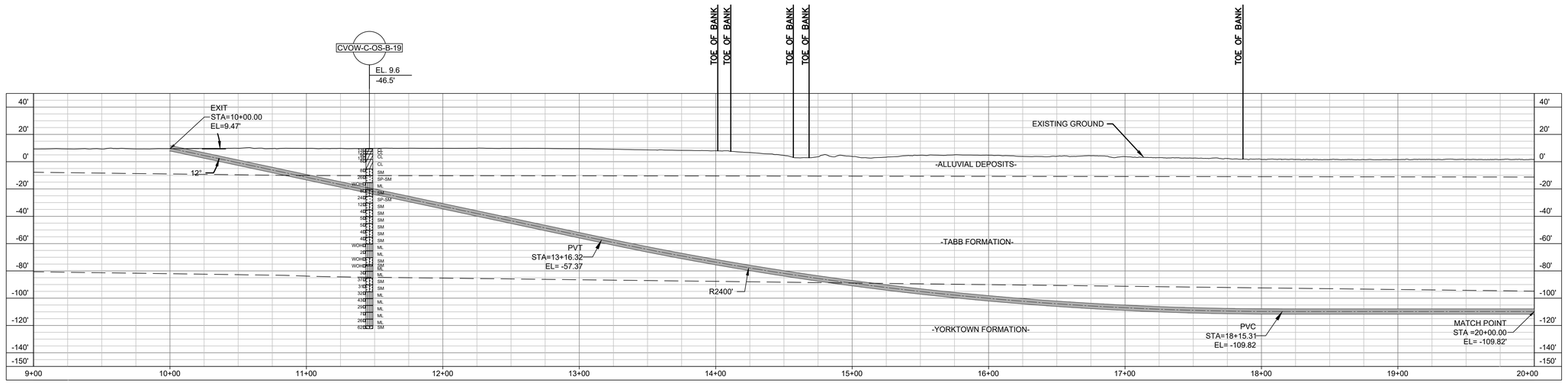
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 5 EXIT" PLAN VIEW



LAKE RUDEE "HDD 5 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 5 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	12 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:42 PM

Drawing No. UG-EX-P3-211

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	B/M 0200157 H&A

Revisions

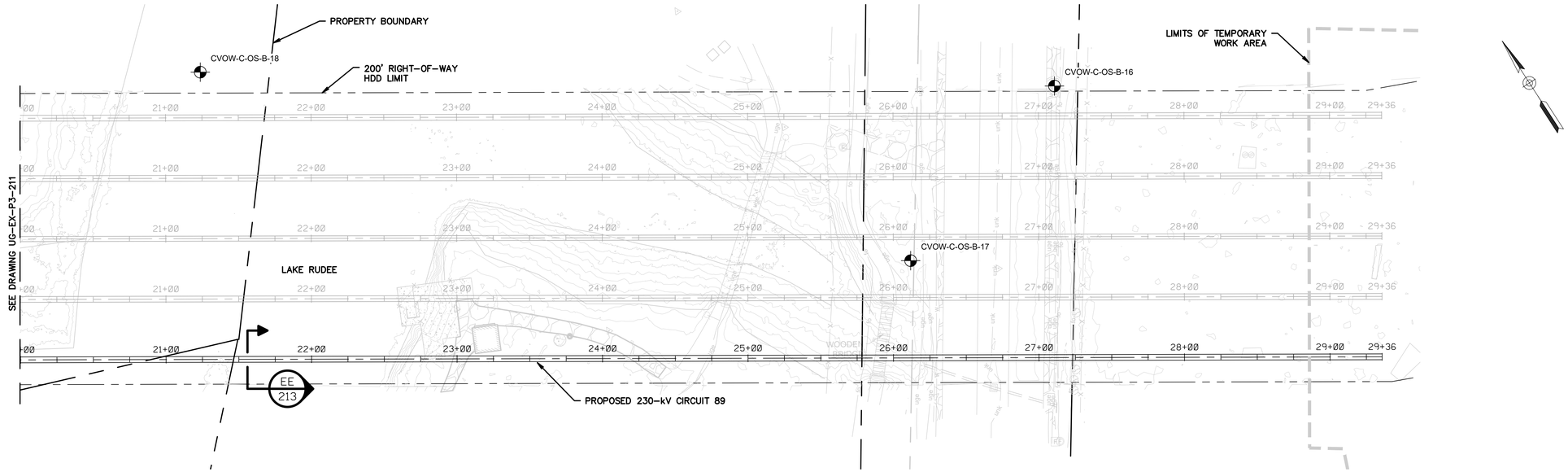
POSTOLOWSKI, KEVIN

Typical Drawing Information

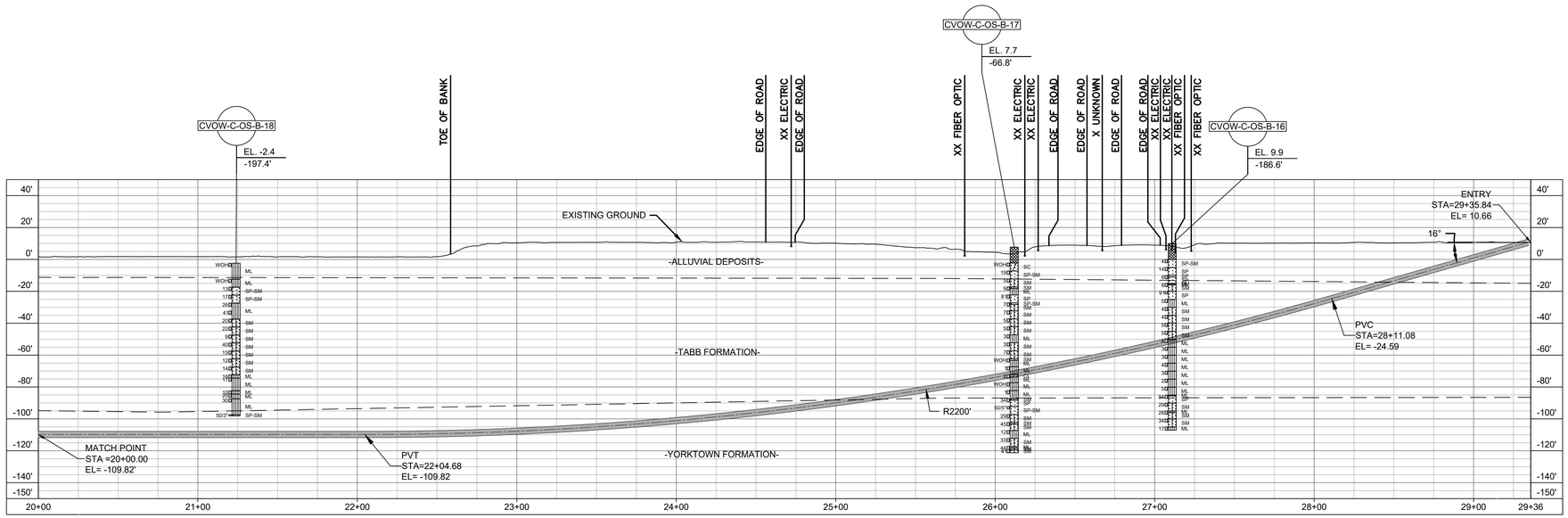
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:42 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3

HDD 5 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	13 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name: UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:43 PM

Drawing No.: UG-EX-P3-212

UG-EX-P3-202-212.DWG
PLOTTED: 3/28/2022 4:43 PM
POSTOLOWSKI, KEVIN

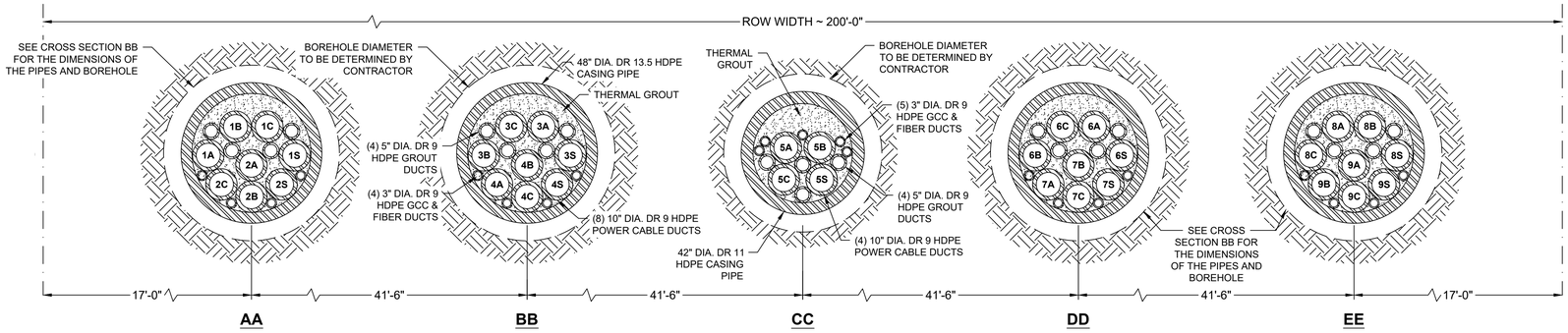
No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	AH	PWD	ISSUED FOR 60% REVIEW	Project Number	H&A
					0200157	

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



230-kV HDD INSTALLATION CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

PRELIMINARY – NOT FOR CONSTRUCTION

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	B/M	0200157
	Checked/Appr.			Project Number	H&A

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

POSTOLOWSKI, KEVIN

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	14 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 4:44 PM

Drawing No. UG-EX-P3-213

UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 4:44 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



PRELIMINARY – NOT FOR CONSTRUCTION

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	1 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-200.DWG
PLOTTED: 3/28/2022 6:53 PM
Drawing No. UG-EX-P4-200

UG-EX-P-200.DWG
PLOTTED: 3/28/2022 6:53 PM
POSTOLOWSKI, KEVIN

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/2022	AH	PWD
Project Number		Project Number		H&A
B/M		0200157		

Revisions

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

POSTOLOWSKI, KEVIN
\\HALEYALDRICK.COM\SHARE\CF\PROJECTS\0200157\CAD

USACE-NLW
RCVD 7/15/2022

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
   7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    12.1. USACE PERMITS
    12.2. CITY OF ____
    12.3. COUNTY OF ____
    12.4. DEWATERING PERMITS
    12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

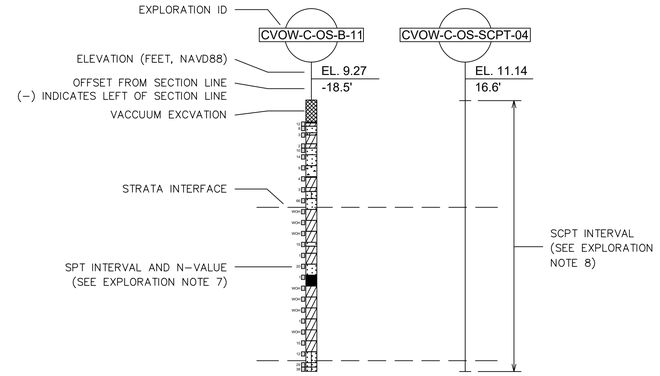
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   C. USE OF "MUD ENGINEER" TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM	SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW	WELL GRADED SANDS, GRAVELLY SANDS
SP	POORLY GRADED SANDS, GRAVELLY SANDS
SM	SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC	CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT	PEAT AND OTHER HIGHLY ORGANIC SOILS
BR	BEDROCK
NR	NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 3/28/2022 6:53 PM
Drawing No. UG-EX-P4-201

UG-EX-P-201.DWG
PLOTTED: 3/28/2022 6:53 PM
POSTOLOWSKI, KEVIN

No	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
1	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A
					PwD

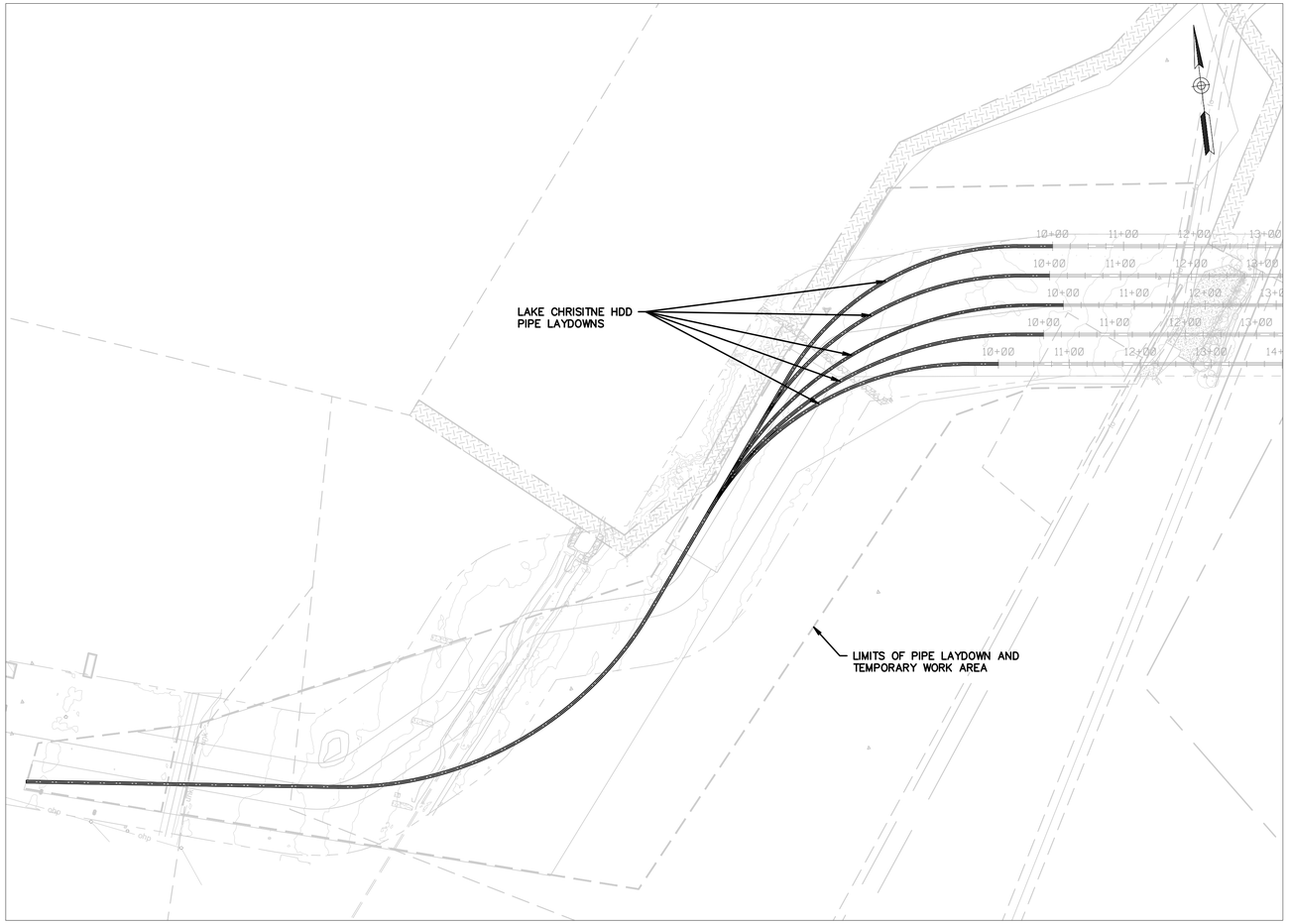
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "PIPE LAYDOWN AND HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET



LAKE CHRISTINE "HDD 1 EXIT WORK AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES SEE DRAWINGS

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
LAKE CHRISITNE PIPE LAYDOWN / WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	3 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:23 PM

Drawing No. UG-EX-P4-202

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/22	AH	PWD

Project Number 0200157 H&A
Project Number B/M

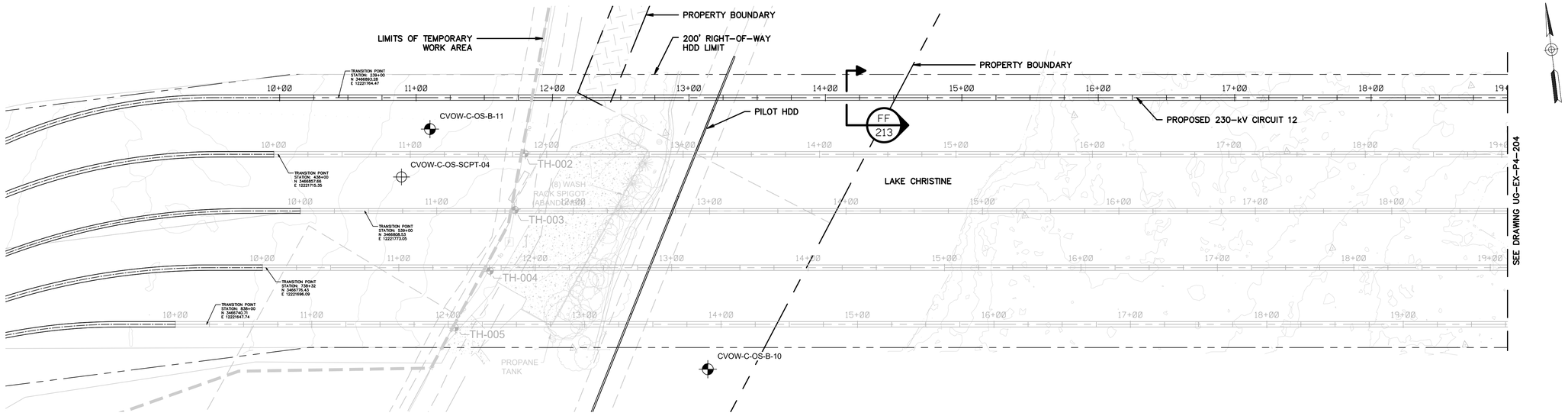
Revisions

POSTOLOWSKI, KEVIN

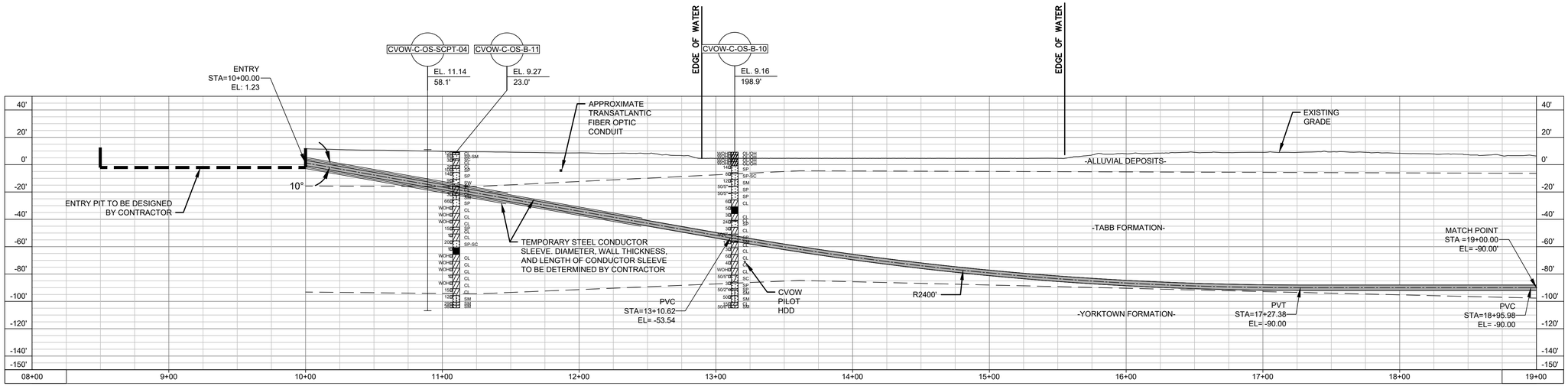
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:23 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 1 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 1 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 1 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	4 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:24 PM

Drawing No. UG-EX-P4-203

No.	Date	By	Description	Project Number
			ISSUED FOR 60% REVIEW	Project Number 0200157
A	03/25/22	AH		H&A
		PWD		B/M

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
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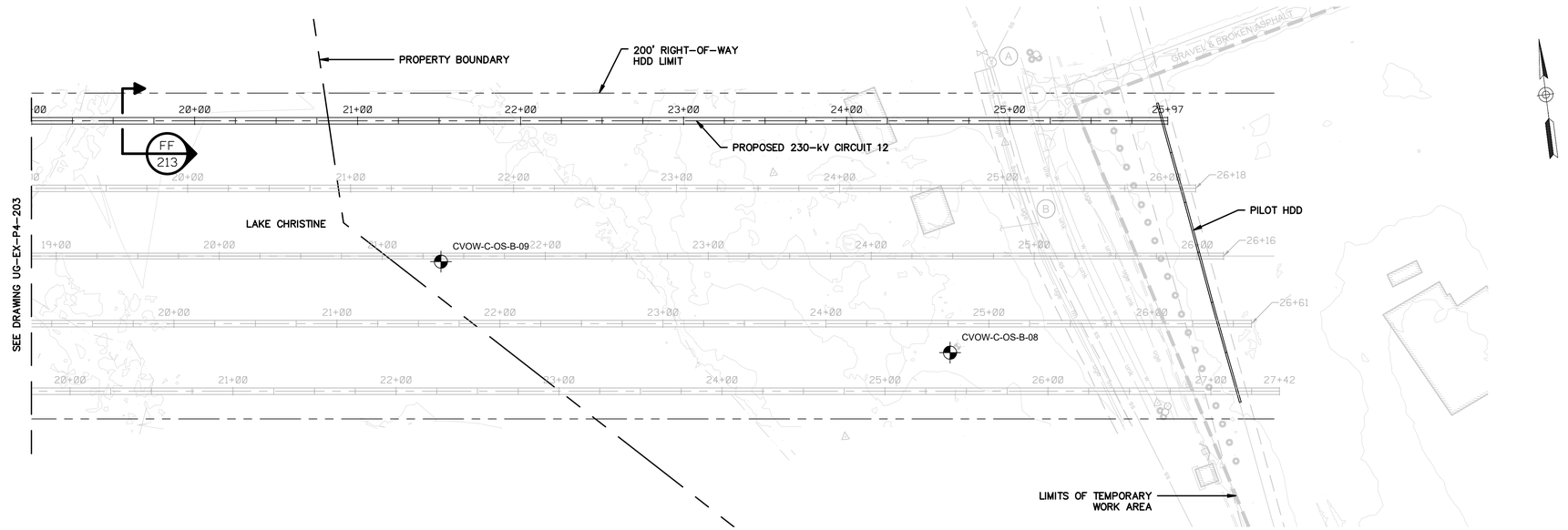
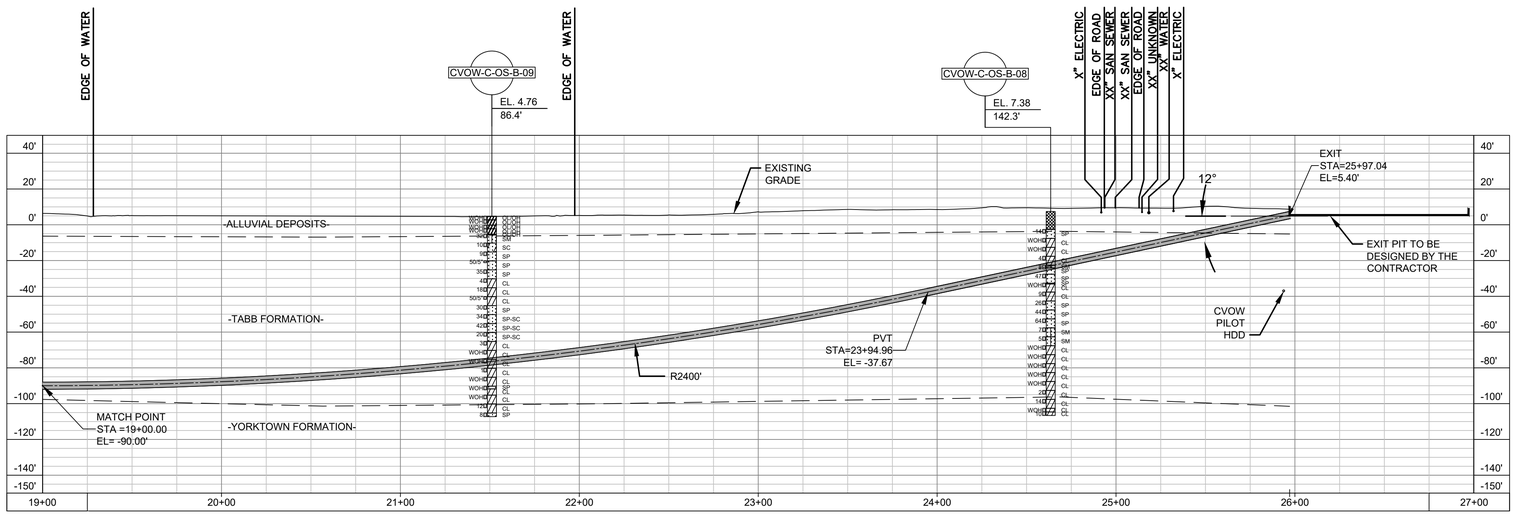
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 1 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 1 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 1 PLAN AND PROFILE (STA. 19+00 TO 27+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	5 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:24 PM

Drawing No. UG-EX-P4-204

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:24 PM
POSTOLOWSKI, KEVIN

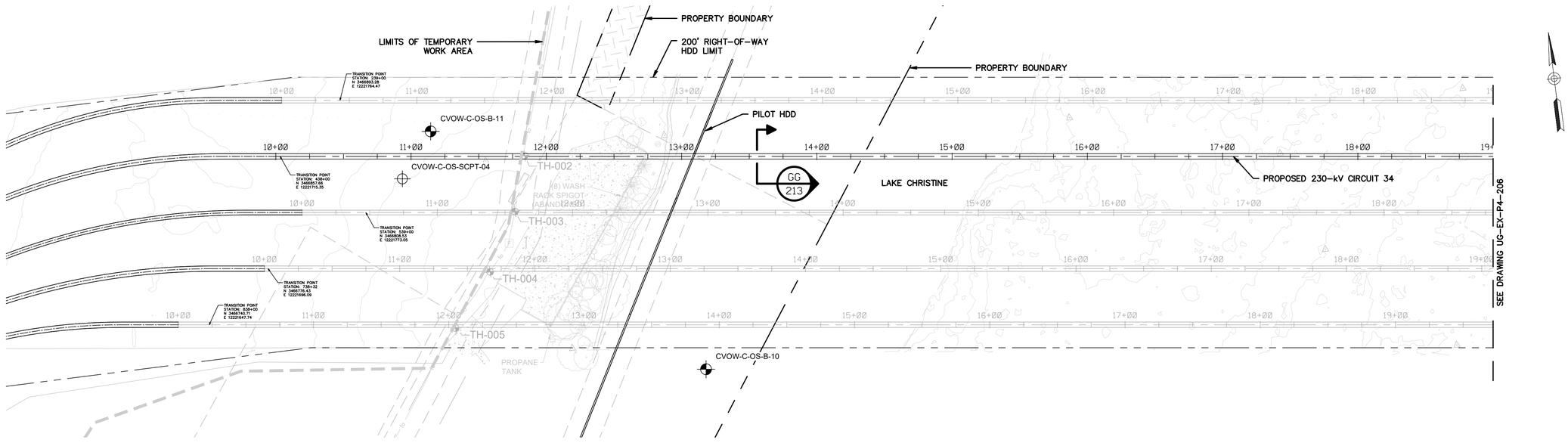
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			0200157	

Revisions

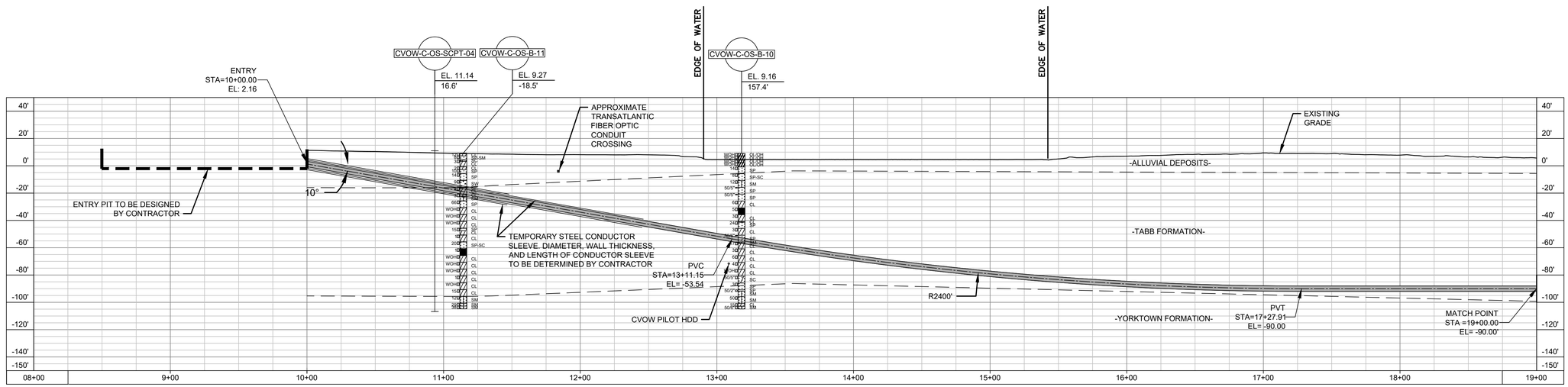
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 2 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 2 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 2 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	6 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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PLOTTED: 3/28/2022 7:25 PM

Drawing No. UG-EX-P4-205

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM
POSTOLOWSKI, KEVIN

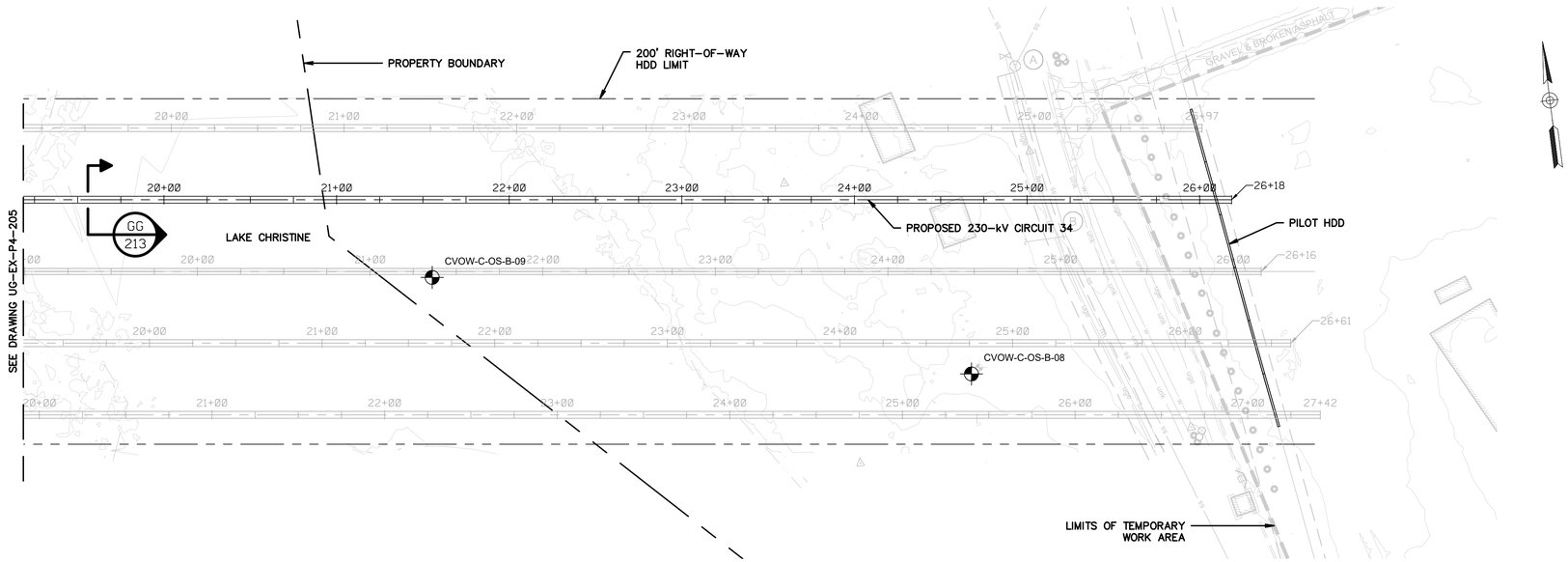
No	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157	H&A
			Revisions		

POSTOLOWSKI, KEVIN

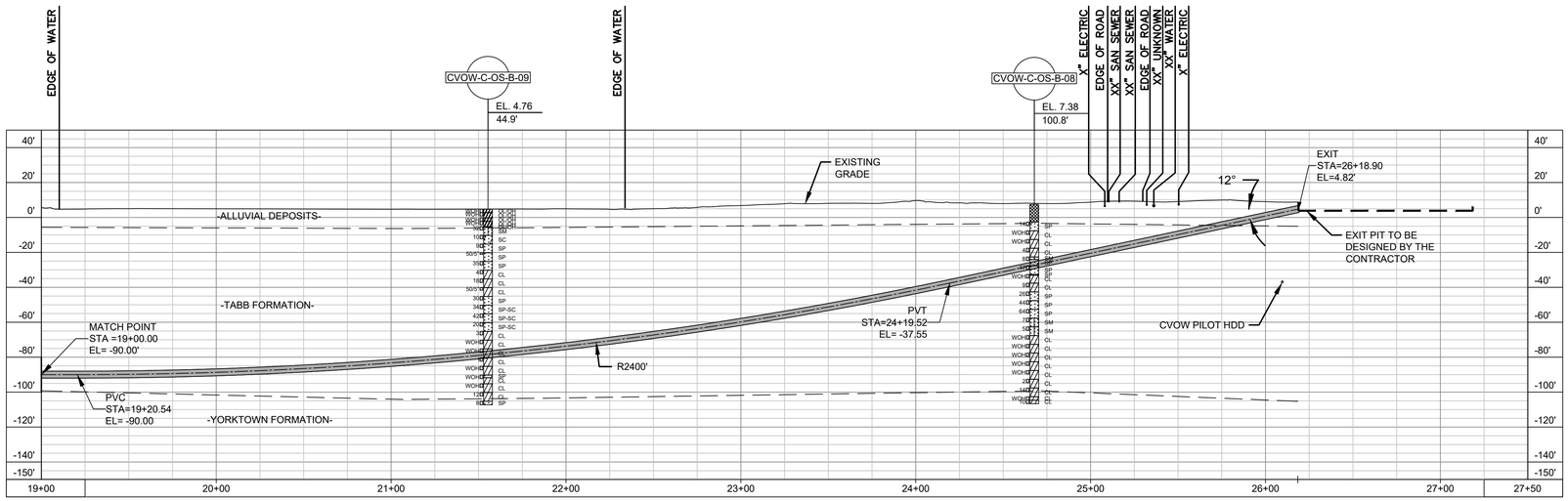
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)		Pipe Stand Foundation Cells (Spread)		Foundation Cells for Other Typical Structures		Steel Detail & Assembly
							(Pier)	(Spread)	

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 2 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 2 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 2 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	7 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM

Drawing No. UG-EX-P4-206

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:25 PM
POSTOLOWSKI, KEVIN

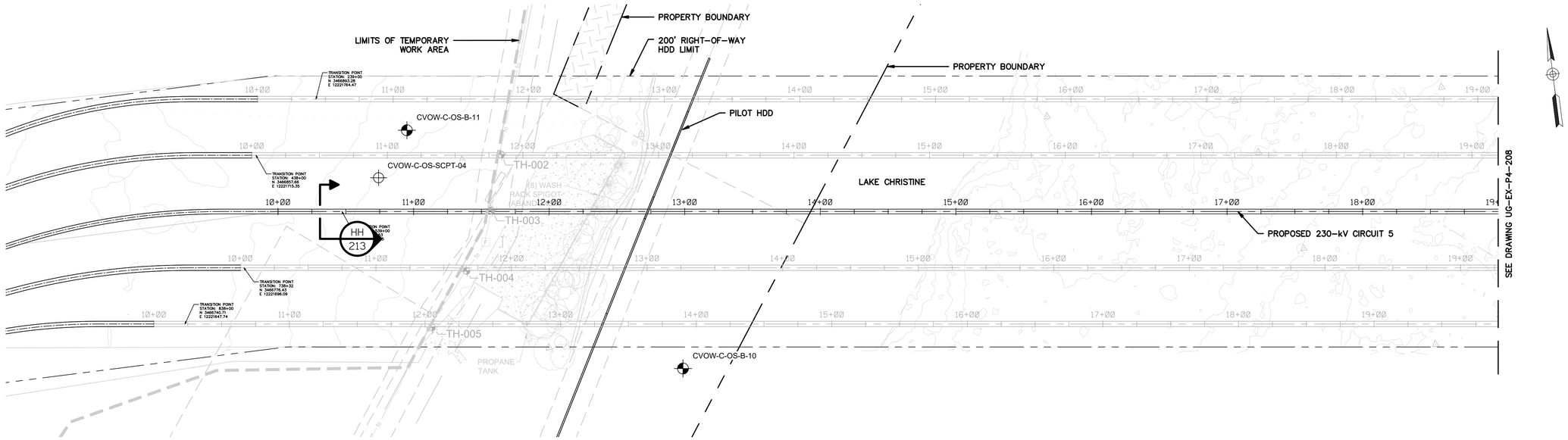
No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			0200157	

Revisions

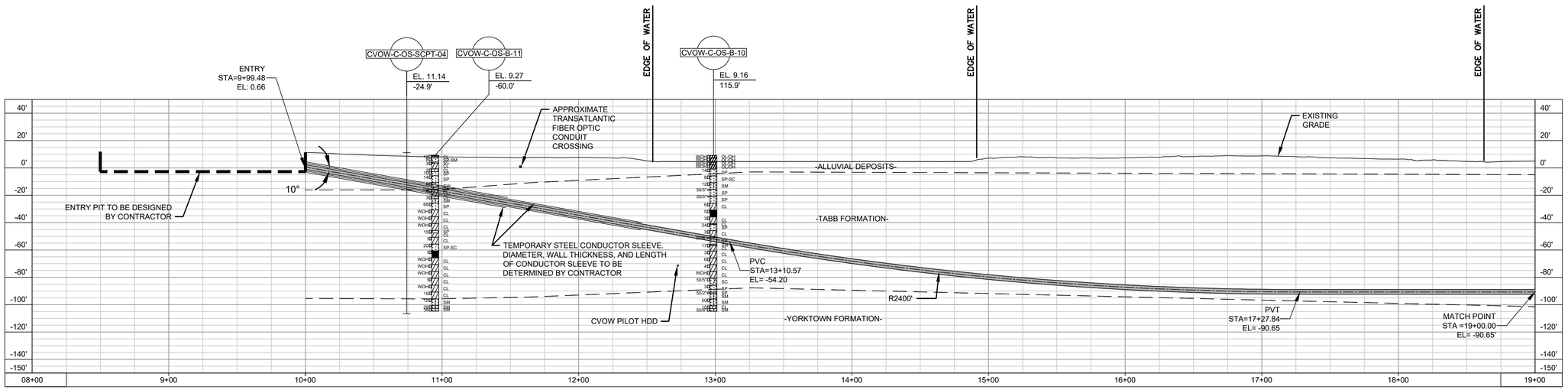
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 3 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 3 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157 H&A
	Checked/Appr.			B/M

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 3 PLAN AND PROFILE (STA. 08+00 TO 19+00)

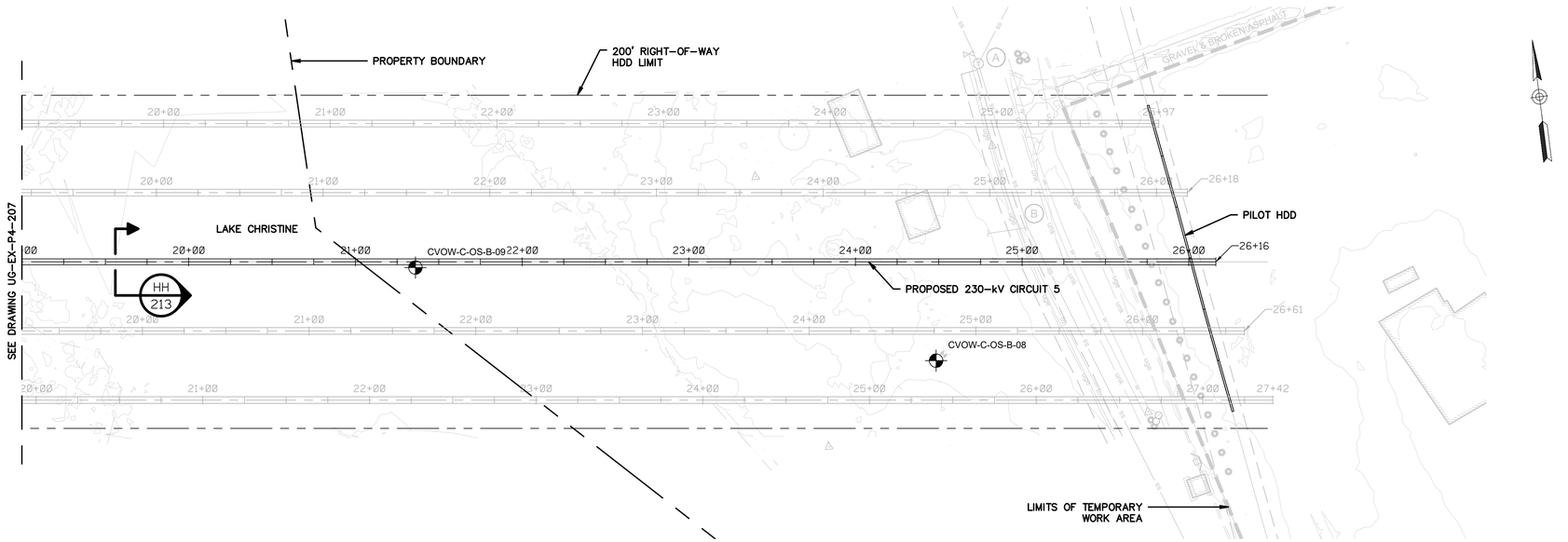
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	8 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM

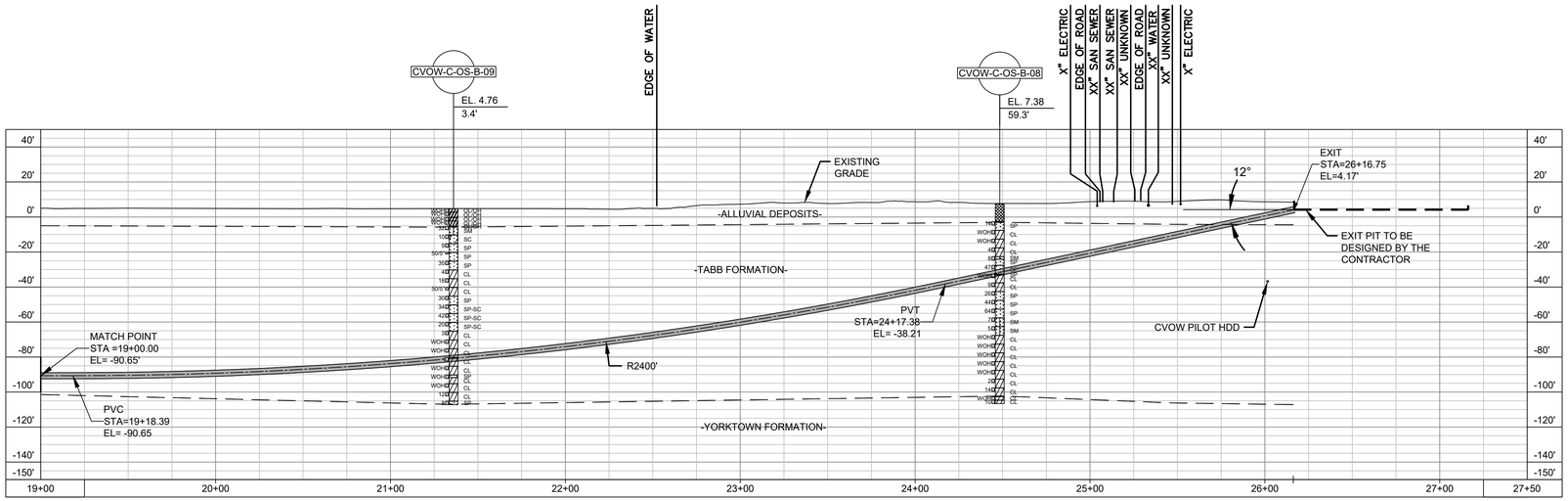
Drawing No. UG-EX-P4-207

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 3 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 3 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD3 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	9 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No. UG-EX-P4-208

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PLOTTED: 3/28/2022 7:26 PM
POSTOLOWSKI, KEVIN

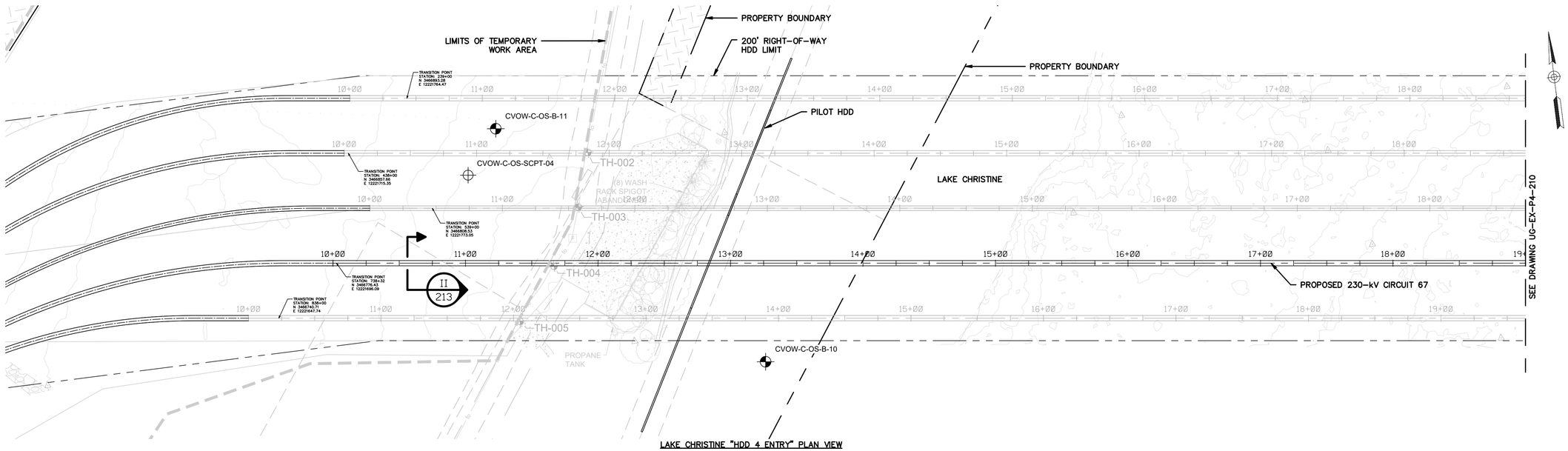
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157	H&A
	Checked/Appr.			B/M	

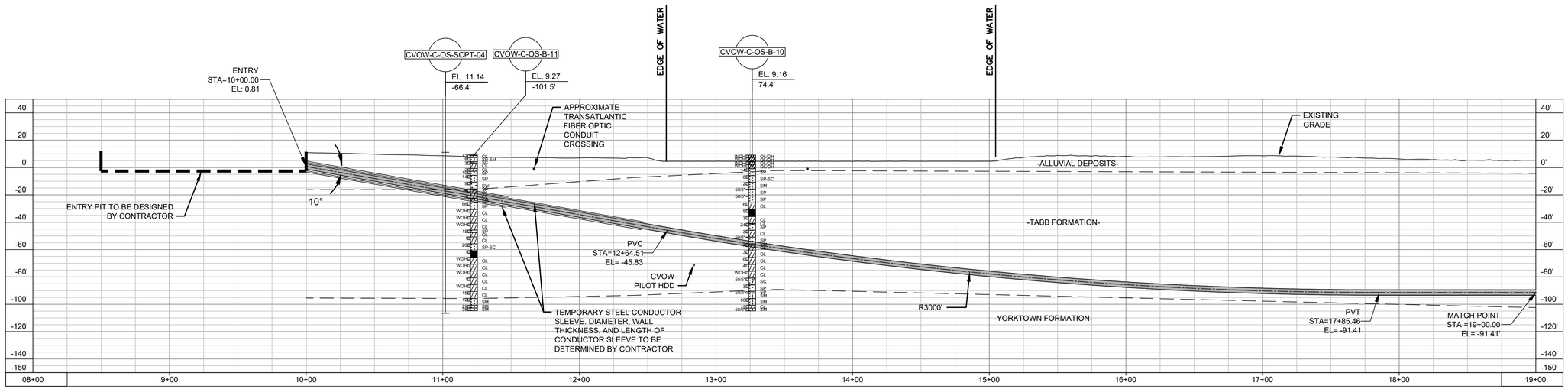
Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022





LAKE CHRISTINE "HDD 4 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	10 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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PLOTTED: 3/28/2022 7:26 PM

Drawing No.
UG-EX-P4-209

No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157
			Revisions		

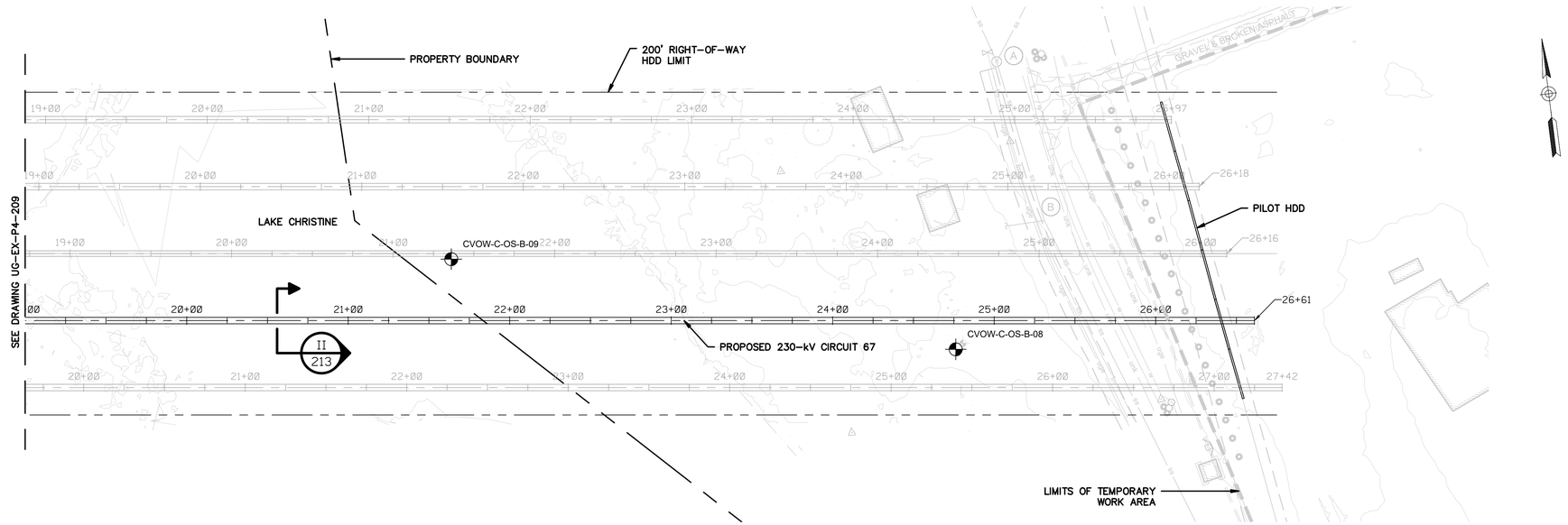
POSTOLOWSKI, KEVIN

Typical Drawing Information

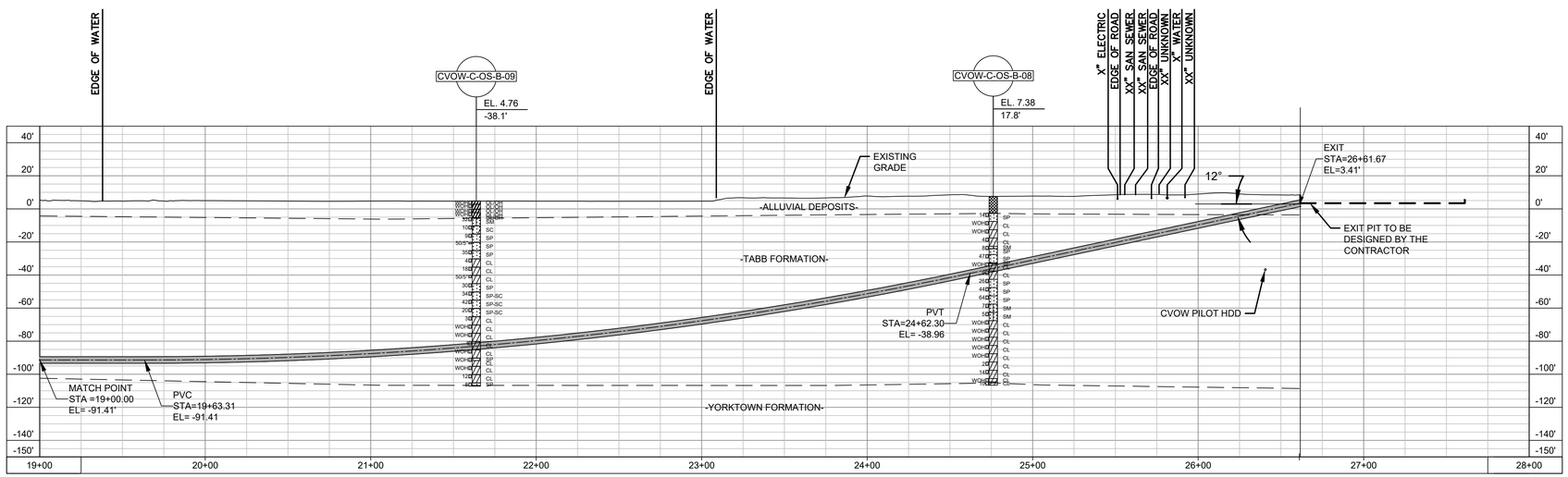
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:26 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 4 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 4 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:
1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	11 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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PLOTTED: 3/28/2022 7:27 PM
Drawing No. UG-EX-P4-210

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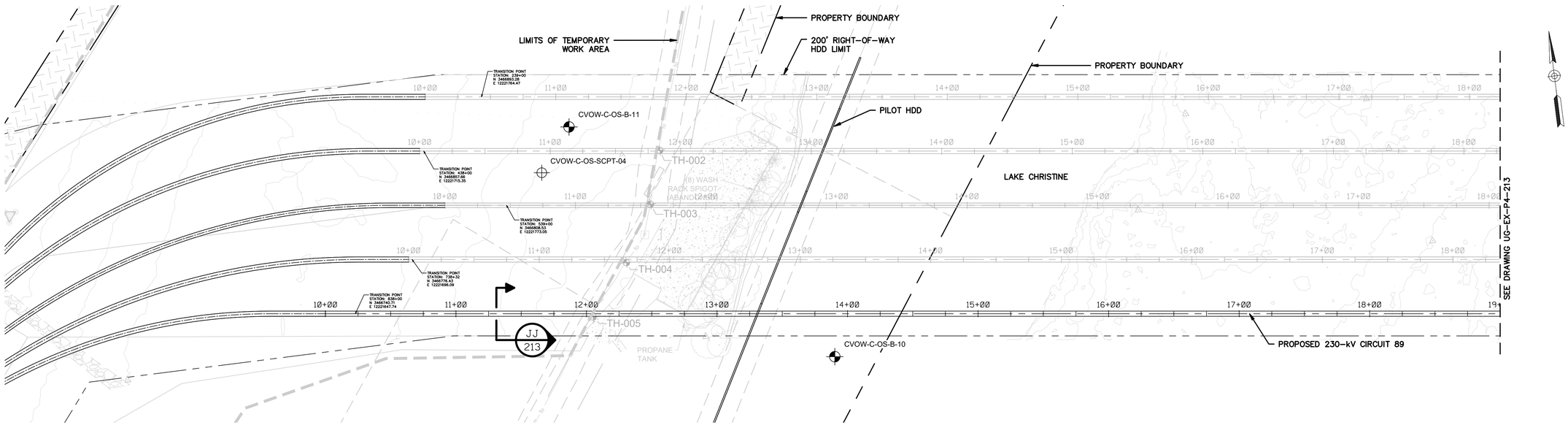
POSTOLOWSKI, KEVIN

No.	Date	By	Description	Project Number	
	Checked/Appr.			B/M	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
			Revisions		0200157

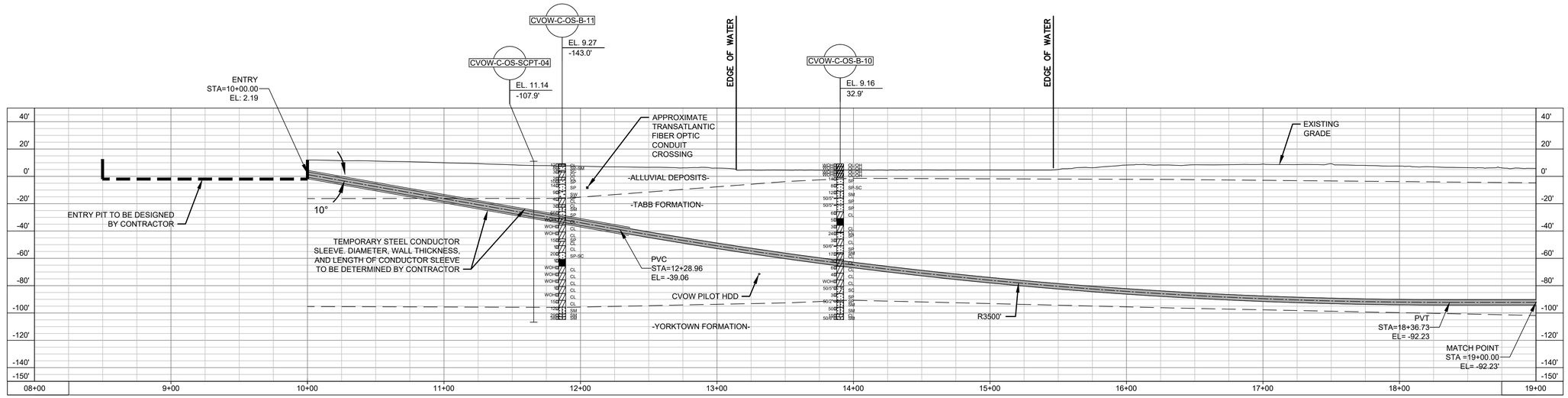
POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 5 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 5 ENTRY" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4

HDD 5 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	12 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
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Drawing No. UG-EX-P4-211

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/22	AH	PWD

Project Number 0200157 H&A
Project Number B/M

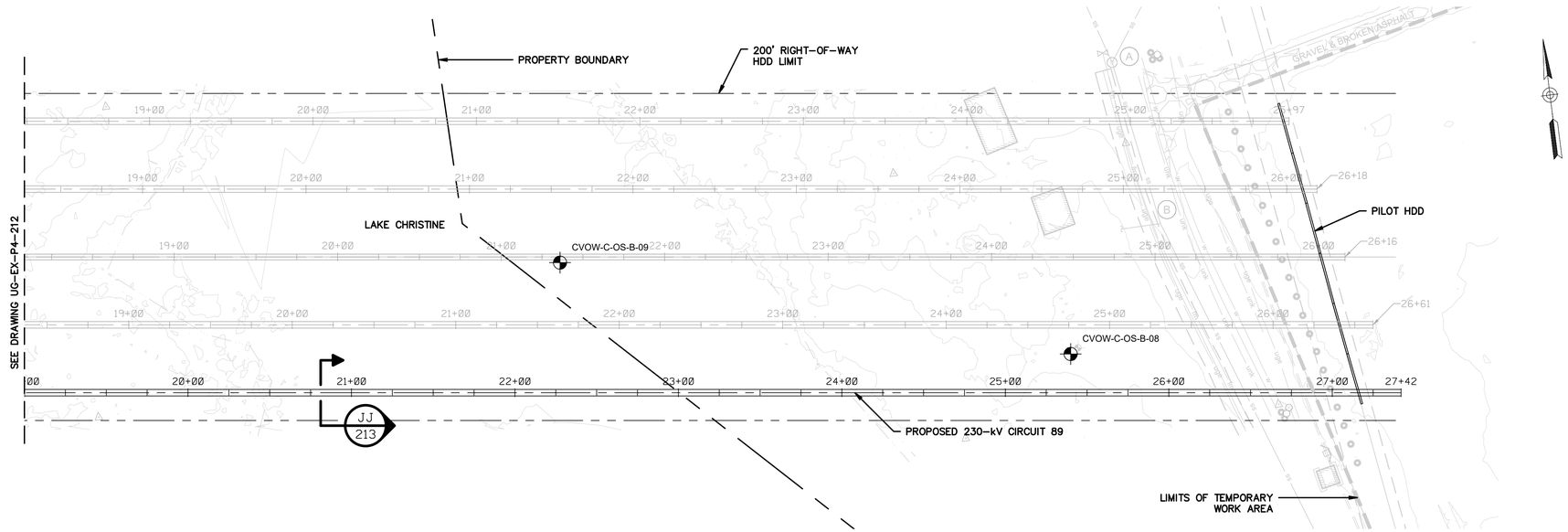
Revisions

POSTOLOWSKI, KEVIN

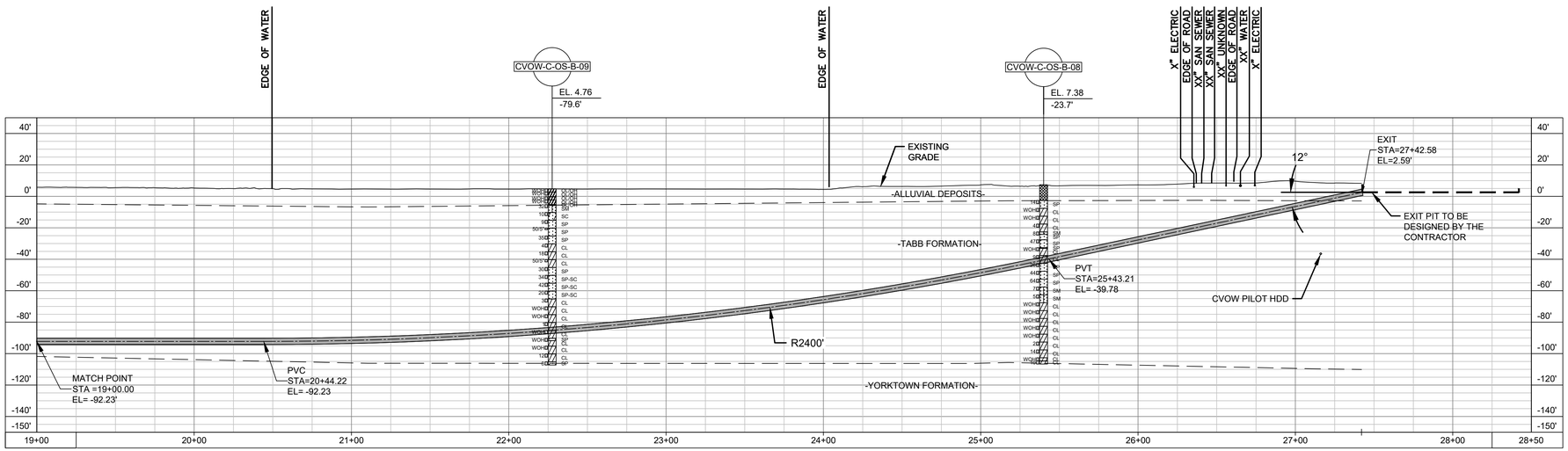
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 5 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 5 EXIT" PROFILE VIEW

PRELIMINARY – NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4

HDD 5 PLAN AND PROFILE (STA. 19+00 TO 28+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	13 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM

Drawing No. UG-EX-P4-212

UG-EX-P4-202-212.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN

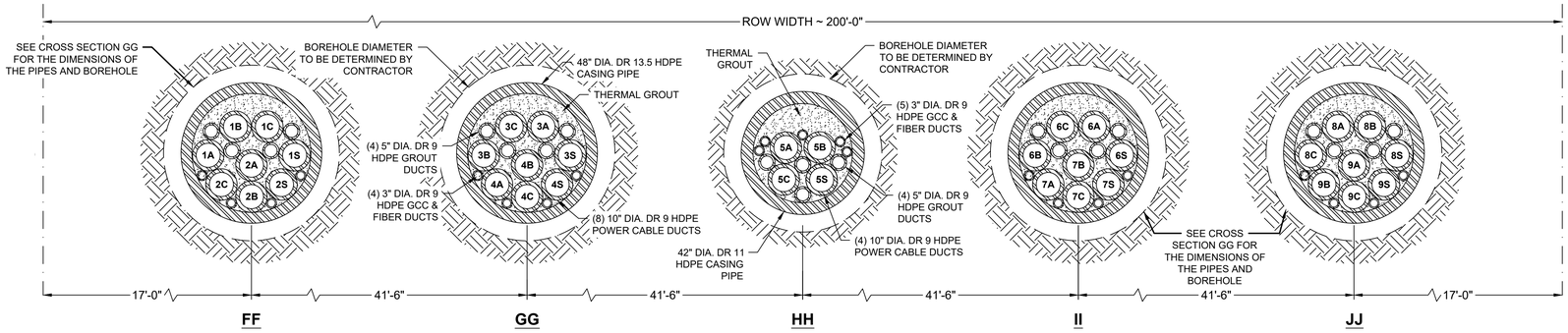
No.	Date	By	Description	Project Number	
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number	H&A
	Checked/Appr.			B/M	0200157

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



230-kV HDD INSTALLATION
CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

PRELIMINARY – NOT FOR CONSTRUCTION

HALEY ALDRICH

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No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	Project Number 0200157
				B/M H&A

Revisions

POSTOLOWSKI, KEVIN

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	14 OF 14
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 7:27 PM

Drawing No. UG-EX-P4-213

UG-EX-P-DETAILS.DWG
PLOTTED: 3/28/2022 7:27 PM
POSTOLOWSKI, KEVIN

USACE-NLW
REVIEW SET

SHIP LOOSE ITEMS

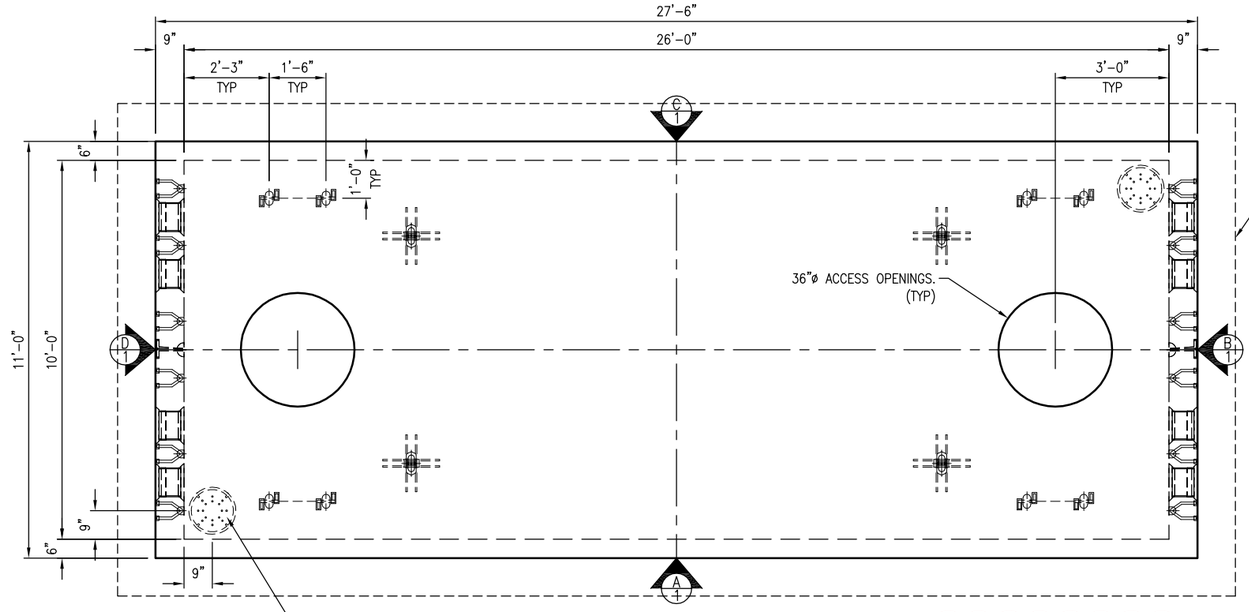
P/N	QTY	DESCRIPTION	AX #
	6 ROLLS	SEALANT - CS-102 CONSEAL	5439200
	EA.	½" - 13X12X2" HOOKED ANCHOR BOLT	5417004

STRUCTURE WEIGHTS

STRUCTURE WEIGHT		STRUCTURE TYPE
30.23 TONS	60,463 LBS	TOP SECTION
28.04 TONS	56,085 LBS	BASE SECTION

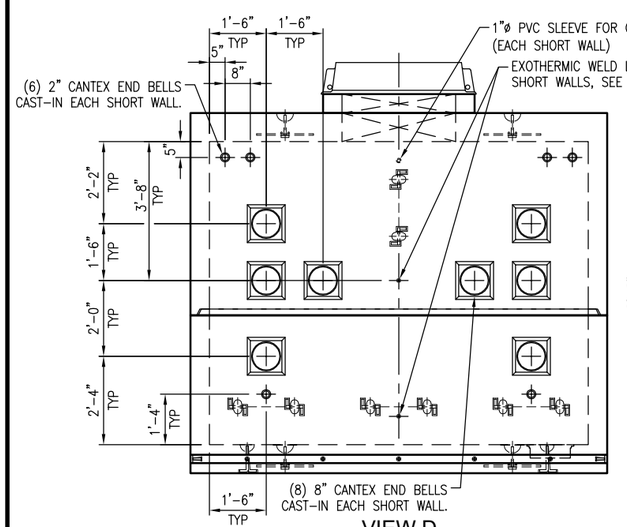
NOTES:
1. APPROXIMATELY 16 MILS. OF COOPERS CREEK SP WATERPROOFING TO BE APPLIED TO THE EXTERIOR OF BOTH THE TOP AND BASE SECTIONS. (EQUIVALENT TO SONNEDRIN HYDROCIDE 700)

COMMONWEALTH OF VIRGINIA
DUNCAN W. MACOMBER
No. 033548
3/27/19
PROFESSIONAL ENGINEER

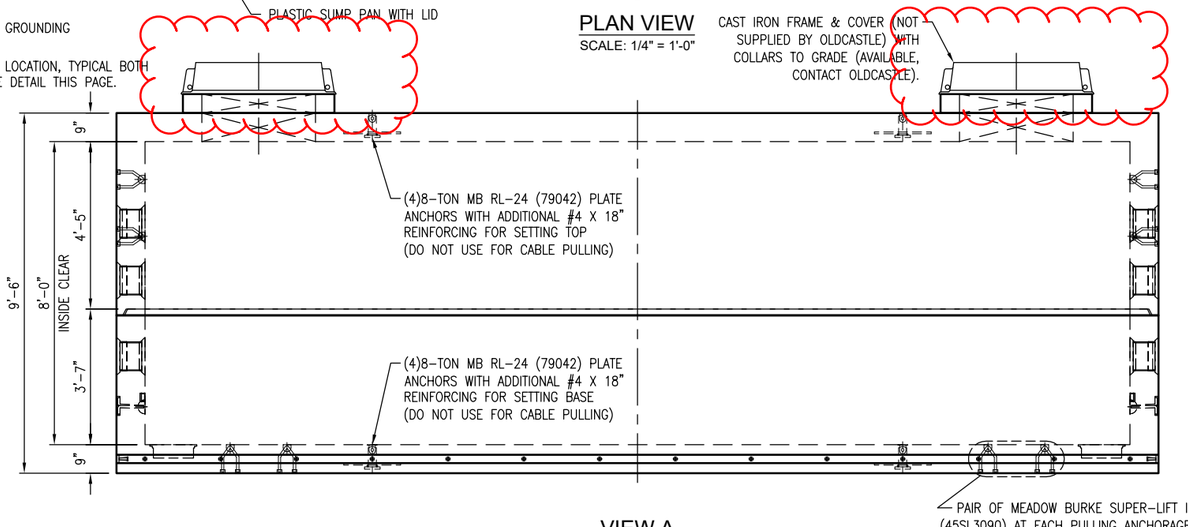


PLAN VIEW
SCALE: 1/4" = 1'-0"

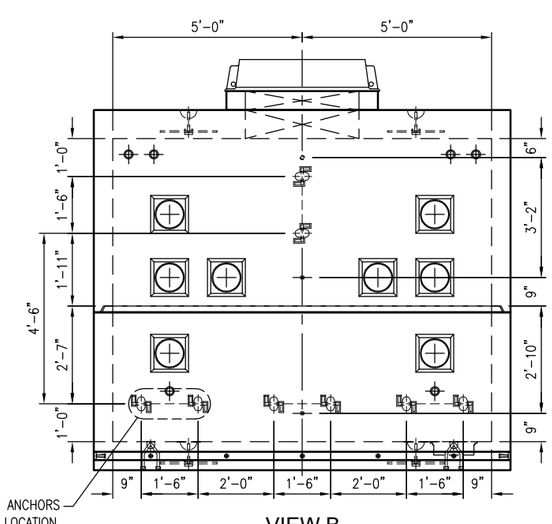
CAST IRON FRAME & COVER (NOT SUPPLIED BY OLDCASTLE) WITH COLLARS TO GRADE (AVAILABLE, CONTACT OLDCASTLE).



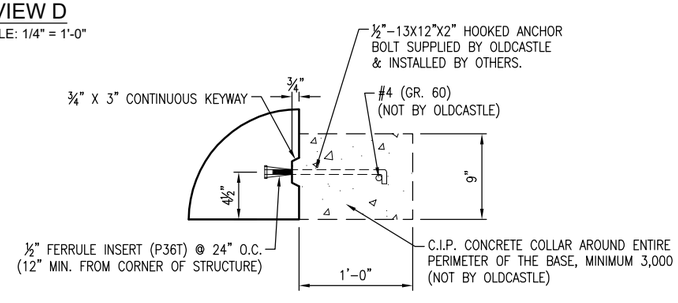
VIEW D
SCALE: 1/4" = 1'-0"



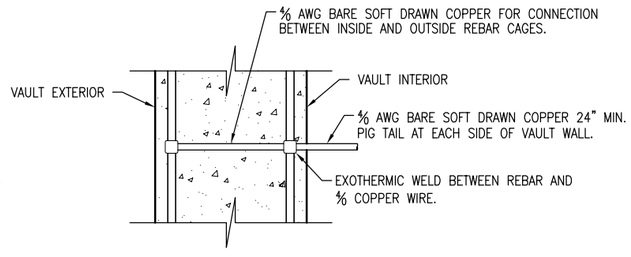
VIEW A
VIEW C IS TYPICAL
SCALE: 1/4" = 1'-0"



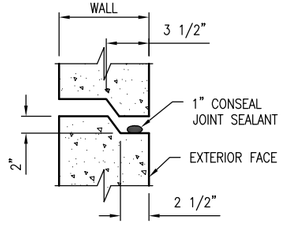
VIEW B
SCALE: 1/4" = 1'-0"



ANTI-FLOTATION COLLAR DETAIL
REQUIRED IF WATER TABLE IS ABOVE 3'-6" BELOW GRADE
*SEE NOTE 6 ON SHEET 1
SCALE: 3/4" = 1'-0"



EXOTHERMIC WELD DETAIL
SCALE: 1" = 1'-0"



WALL SHIPLAP JOINT DETAIL
N.T.S.

REVISION TABLE

REV	REV DATE	BY	DESCRIPTION

Oldcastle Infrastructure™
A CRH COMPANY
OPI-CHESAPEAKE-INFO@OLDCASTLE.COM
1401 TRIMBLE RD, EDGEWOOD, MD 21040 410-612-1213
5115 MASSAPONAX CHURCH RD, FREDERICKSBURG, VA 22407 540-898-5300

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10'-0" x 26'-0" x 8'-0" TRANSMISSION VAULT

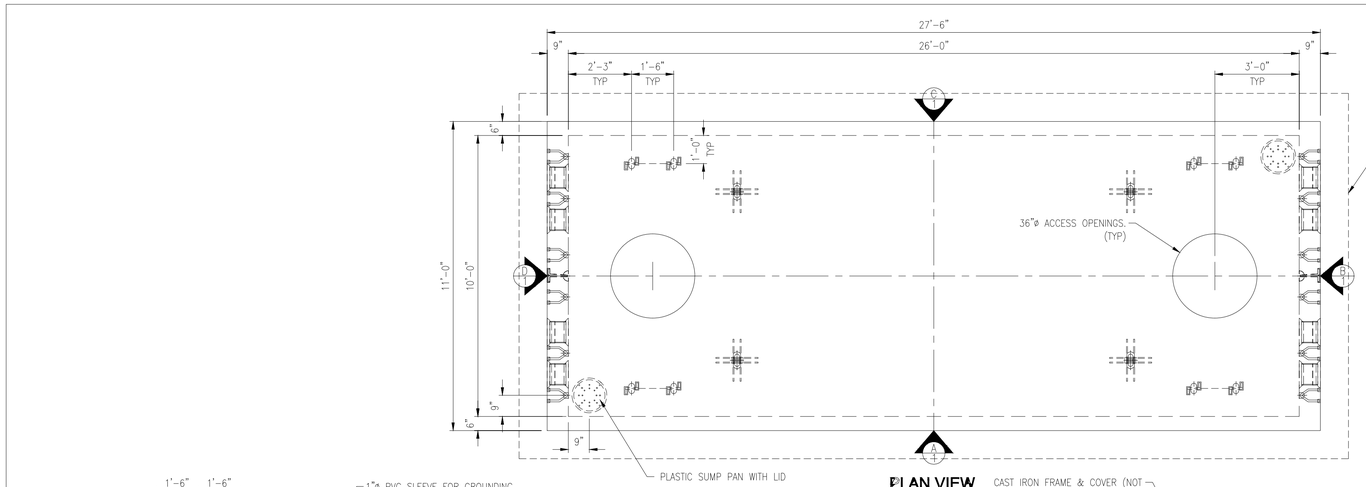
SUBMITTAL DRAWING
DOMINION ARLINGTION TRANSMISSION LINE
ARLINGTON, VA

CUSTOMER
DOMINION ENERGY

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
3/27/19	KB	AH	DWM	DWM	43733

DRAWING NUMBER	REVISION	SHEET
365-S043733-001	REV DATE	2 OF 3

USACE-NLW
RCVD 7/15/2022



PLAN VIEW
SCALE: 1/4" = 1'-0"

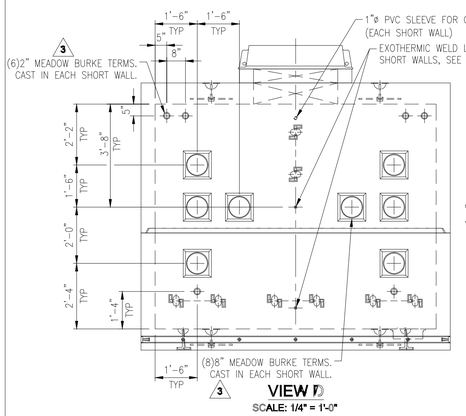
SHIP-LOOSE ITEMS

P/N	QTY	DESCRIPTION	AX #
	6 ROLLS	SEALANT - CS-102 CONSEAL	5439200
	EA.	½" - 13X12X2" HOOKED ANCHOR BOLT	5417004

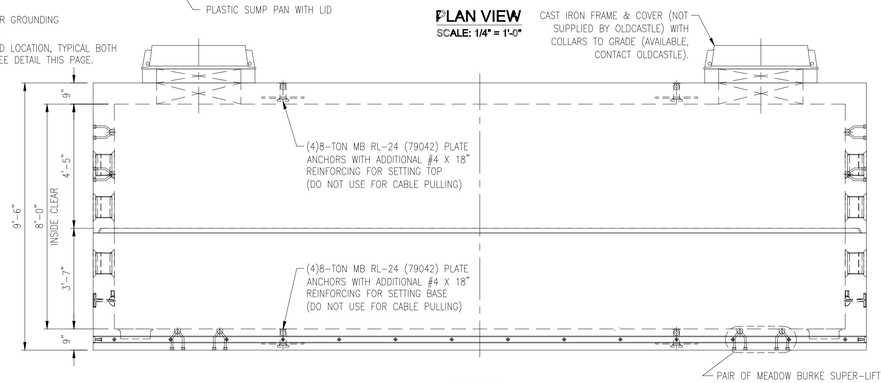
STRUCTURE WEIGHTS

STRUCTURE WEIGHT		STRUCTURE TYPE
30.23 TONS	60,463 LBS	TOP SECTION
28.04 TONS	56,085 LBS	BASE SECTION

NOTES:
1. APPROXIMATELY 16 MILS. OF COOPERS CREEK SP WATERPROOFING TO BE APPLIED TO THE EXTERIOR OF BOTH THE TOP AND BASE SECTIONS. (EQUIVALENT TO SONNEDRIN HYDROCIDE 700)



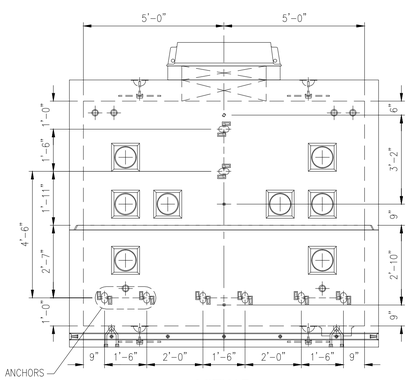
VIEW D
SCALE: 1/4" = 1'-0"



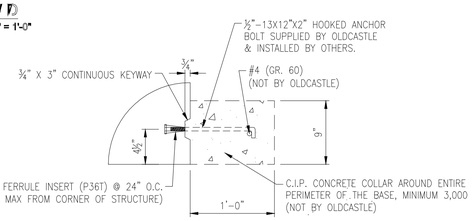
VIEW A
VIEW C IS TYPICAL
SCALE: 1/4" = 1'-0"

CAST IRON FRAME & COVER (NOT SUPPLIED BY OLDCASTLE) WITH COLLARS TO GRADE (AVAILABLE, CONTACT OLDCASTLE).

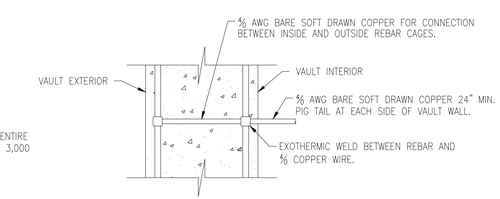
PAIR OF MEADOW BURKE SUPER-LIFT III ANCHORS (45SL3090) AT EACH PULLING ANCHORAGE LOCATION. SWL=28,000 LBS PER PAIR (SEE NOTE 5/SHT 1)



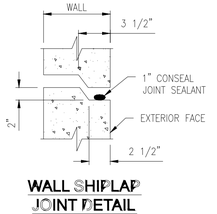
VIEW B
SCALE: 1/4" = 1'-0"



ANTI-FLOTATION COLLAR DETAIL
REQUIRED IF WATER TABLE IS ABOVE 3'-6" BELOW GRADE
*SEE NOTE 6 ON SHEET 1
SCALE: 3/4" = 1'-0"



EXOTHERMIC WELD DETAIL
SCALE: 1" = 1'-0"



WALL SHIPLAP JOINT DETAIL
N.T.S.

REVISION TABLE

REV	REV DATE	BY	DESCRIPTION
3	7/23/2019	DWM	CHANGED CANTEX END BELLS TO MEADOW BURKE TERMINATORS

NOTES:
1. MINIMUM DEPTH OF COVER, AS MEASURED AT ANY POINT OF THE BURIED SPLICE VAULTS, SHALL BE A MINIMUM OF 3'-0" AND A MAXIMUM OF 15'-0".
2. MINIMUM DESIGN LOAD RATING TO AASHTO HS-25.
3. CABLE RACKING SHALL BE PROVIDED BY CABLE INSTALLER.
4. REBAR WITHIN SPLICE CHAMBER WALLS SHALL NOT FORM A CLOSED LOOP AROUND ANY 8" CONDUIT OPENING.
5. ASSUMED WATER TABLE DEPTH 3'-0" BELOW GRADE.
6. SPLICE VAULT GROUND RING TO BE INSTALLED 6" ABOVE SPLICE VAULT FLOOR.
7. FOR BOTH SPLICE VAULT LIDS AND FRAMES, USE NEENAH FOUNDRY PART# #1507189

PRELIMINARY – NOT FOR CONSTRUCTION

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BURNS McDONNELL

Oldcastle Infrastructure™
A CRH COMPANY
CP-CHESAPEAKE-INFO@OLDCASTLE.COM
1401 TRIMBLE RD, EDGEWOOD, MD 21040 410-612-1213
5115 MASSAPONAX CHURCH RD, FREDERICKSBURG, VA 22407 540-898-6300

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10'-0" x 26'-0" x 8'-0" TRANSMISSION VAULT

SUBMITTAL DRAWING
DOMINION ARLINGTION TRANSMISSION LINE
ARLINGTON, VA

CUSTOMER
DOMINION ENERGY

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
3/27/19	KB	AH	DWM	DWM	43733

DRAWING NUMBER	REVISION	SHEET
365-S044780-001	3 REV DATE 7/23/19	2 OF 3

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
OVERALL PROJECT
SPLICE VAULT DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	ATH (BMCD)	04/15/22	82466C.1.7.1	Ø1 OF Ø3
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	
			A	

Cad File Name UG-EX-3.DWG
PLOTTED: 4/13/2022 1:59 PM
Drawing No. UG-EX-301

UG-EX-3.DWG
PLOTTED: 4/13/2022 1:59 PM
DODD, PATRICK W

No.	Date	By	Description	Project Number
A	04/15/2022	PWD	ISSUED FOR 60% REVIEW	128578
	Checked/Appr.	ATH		B/M
			Revisions	B/M

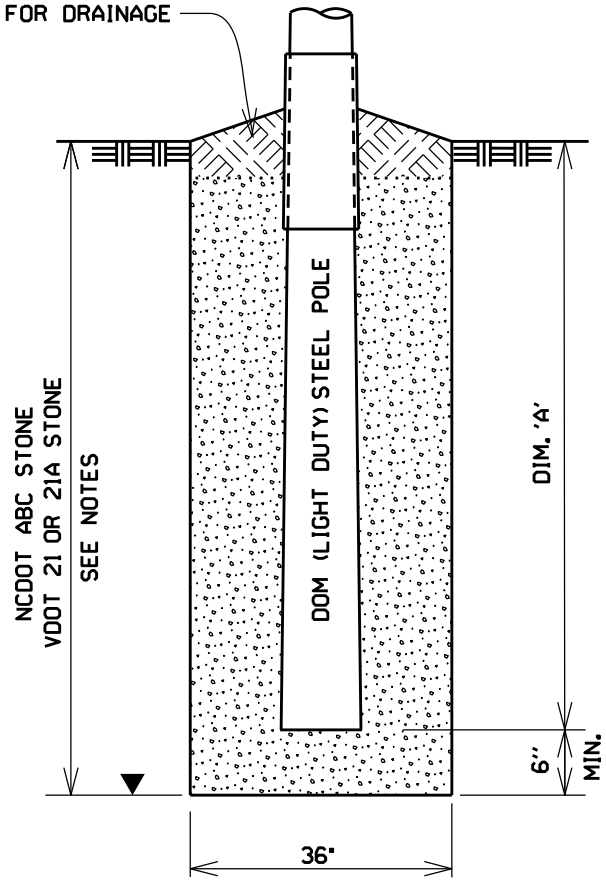
Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

DODD, PATRICK W

\\BMCD\DFS\CLIENTS\TND\DOMINIONENR_UNDERGROUND\128578.CVDWG\DESIGN\UNDERGROUND\CADD\WORKING\P8

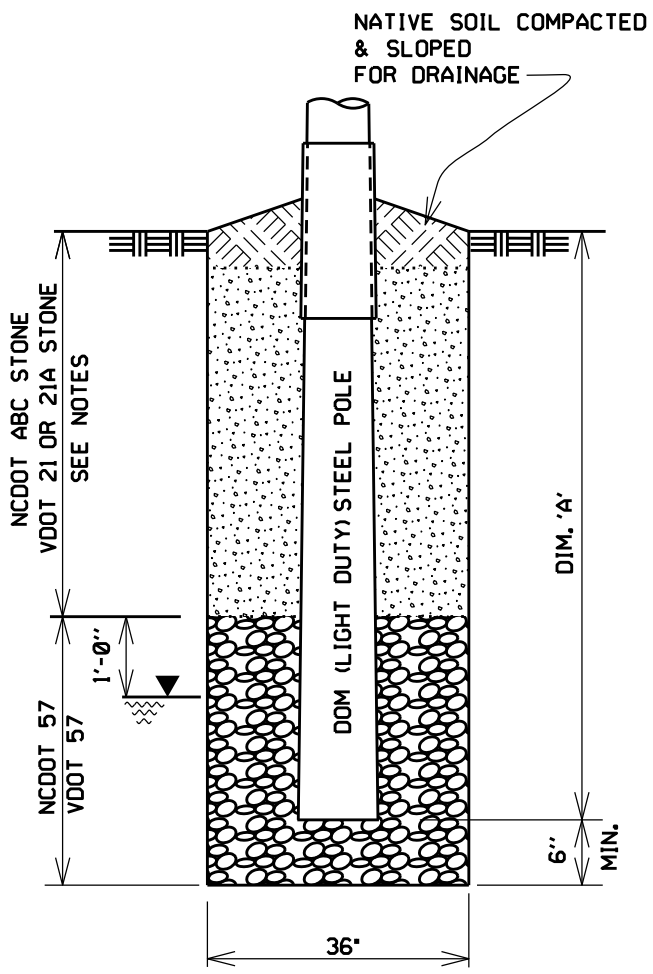
$SYTIME$

USACE-NLW
RCVD 7/15/2022



POLE INSTALLATION: DRY HOLE

MINOR WATER REMOVED AND THE EXCAVATION CAN BE MAINTAINED DRY DURING THE PLACEMENT OF BACKFILL



POLE INSTALLATION: WET HOLE

WATER LEVEL IN THE EXCAVATION CANNOT BE MAINTAINED AT THE BOTTOM OF THE HOLE DURING THE PLACEMENT OF BACKFILL

DIM. 'A' = 10% POLE HT + 2'

COMPACTION PROCEDURES FOR BOTTOM OF HOLE AND ANNULUS:

1. SPECIFIED BACKFILL MATERIAL SHALL BE PLACED IN 4 INCH LIFTS.
2. EACH LAYER IS TO BE COMPACTED AND INTERLOCKED WITH THE SIDES OF THE EXCAVATION USING MECHANICAL OR PNUEMATIC TAMPERS. A MINIMUM OF 3 PASSES SHALL BE MADE OVER EACH LAYER. ADDITIONAL PASSES ARE TO BE MADE IF DISPLACEMENT OF THE BACKFILL IS STILL EVIDENT ON THE THIRD PASS.
3. ROD EXTENSIONS SHALL BE ADDED TO THE TAMPER, AS REQUIRED, IN ORDER FOR THE OPERATOR TO MAINTAIN DOWNWARD PRESSURE ON THE UNIT AT ALL TIMES.

▼ - WATER LEVEL
NCDOT - NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
VDOT - VIRGINIA DEPARTMENT OF TRANSPORTATION

Transmission Construction

DOM STEEL POLE INSTALLATION DETAILS DIRECT EMBEDDED W/ ENGR BACKFILL

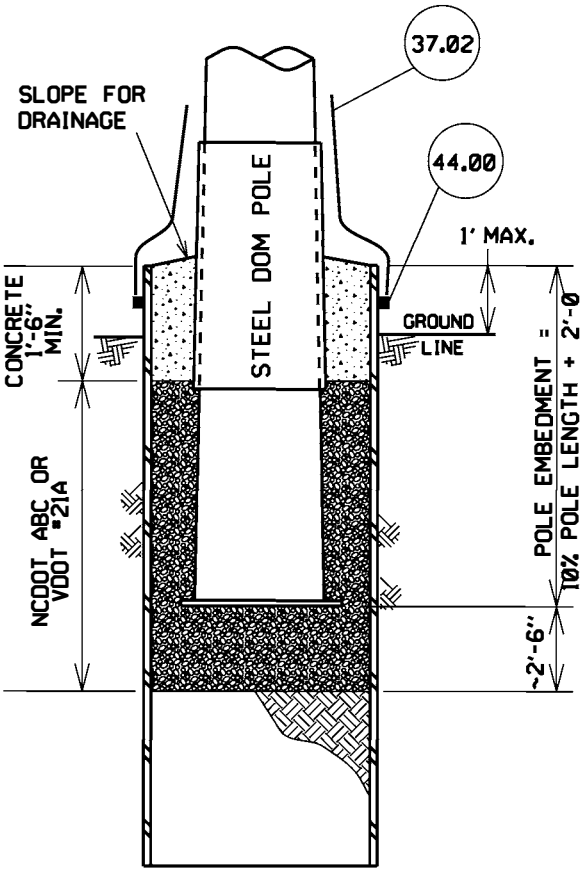
Dominion Energy
Dominion Energy
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL	JPA	KCH	DLC	05/20/14	90.035
REVISION					CAD NO. 90.035

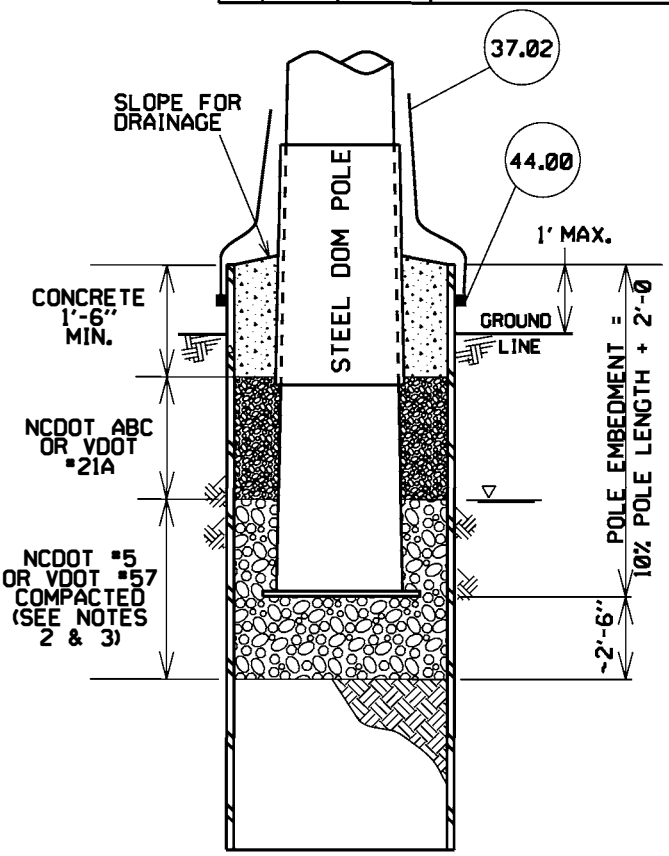
$DGNSPEC$
TESBORD1

B/M REQ'D FOR ONE INSTALLATION			
1	37.02	42177693	WIRE, TIN, CCS, #4, SOLID
2	44.00	57823000	CONN., TRF. GROUND
1	733.12	42330225	PIPE PILE, GALV STL 36" OD X 12"

USAGE NLW
RCVD 7/15/2022



POLE INSTALLATION: DRY HOLE
NO WATER INSIDE THE PILE
DURING THE PLACEMENT
OF BACKFILL



POLE INSTALLATION: WET HOLE
WATER INSIDE THE PILE
DURING THE PLACEMENT
OF BACKFILL

GENERAL NOTES:

1. CLEAN OUT PIPE PILE TO REQ'D DEPTH: 10% POLE LENGTH + 2'-0" + 2'-6" MIN.

2. ADD SPECIFIED COMPACTED STONE BACKFILL - MINIMUM OF 2'-6" BELOW THE BASE PLATE OF THE POLE. WHERE WATER IS PRESENT INSIDE THE PIPE PILE, NCDOT #5 OR VDOT #57 SHALL BE PLACED TO THE LEVEL OF THE WATER.

3. BACKFILL MATERIAL SHALL BE PLACED IN 4 INCH LIFTS. EACH LAYER SHALL BE COMPACTED USING MECHANICAL OR PNUEMATIC TAMPERS. A MINIMUM OF 3 PASSES SHALL BE MADE OVER EACH LAYER. ADDITIONAL PASSES ARE TO BE MADE IF DISPLACEMENT OF THE BACKFILL IS STILL EVIDENT ON THE THIRD PASS. ROD EXTENSIONS SHALL BE ADDED TO THE TAMPER, AS REQUIRED, IN ORDER FOR THE OPERATOR TO MAINTAIN DOWNWARD PRESSURE ON THE UNIT AT ALL TIMES.

4. PLACE CONCRETE BACKFILL AS SPECIFIED. CONCRETE TO BE A MINIMUM OF 3500 PSI AT 28 DAYS.

5. EXISTING GROUND LEADS TO BE ATTACHED TO POLE AS DETAILED IN DWG 60.201.

Transmission Construction

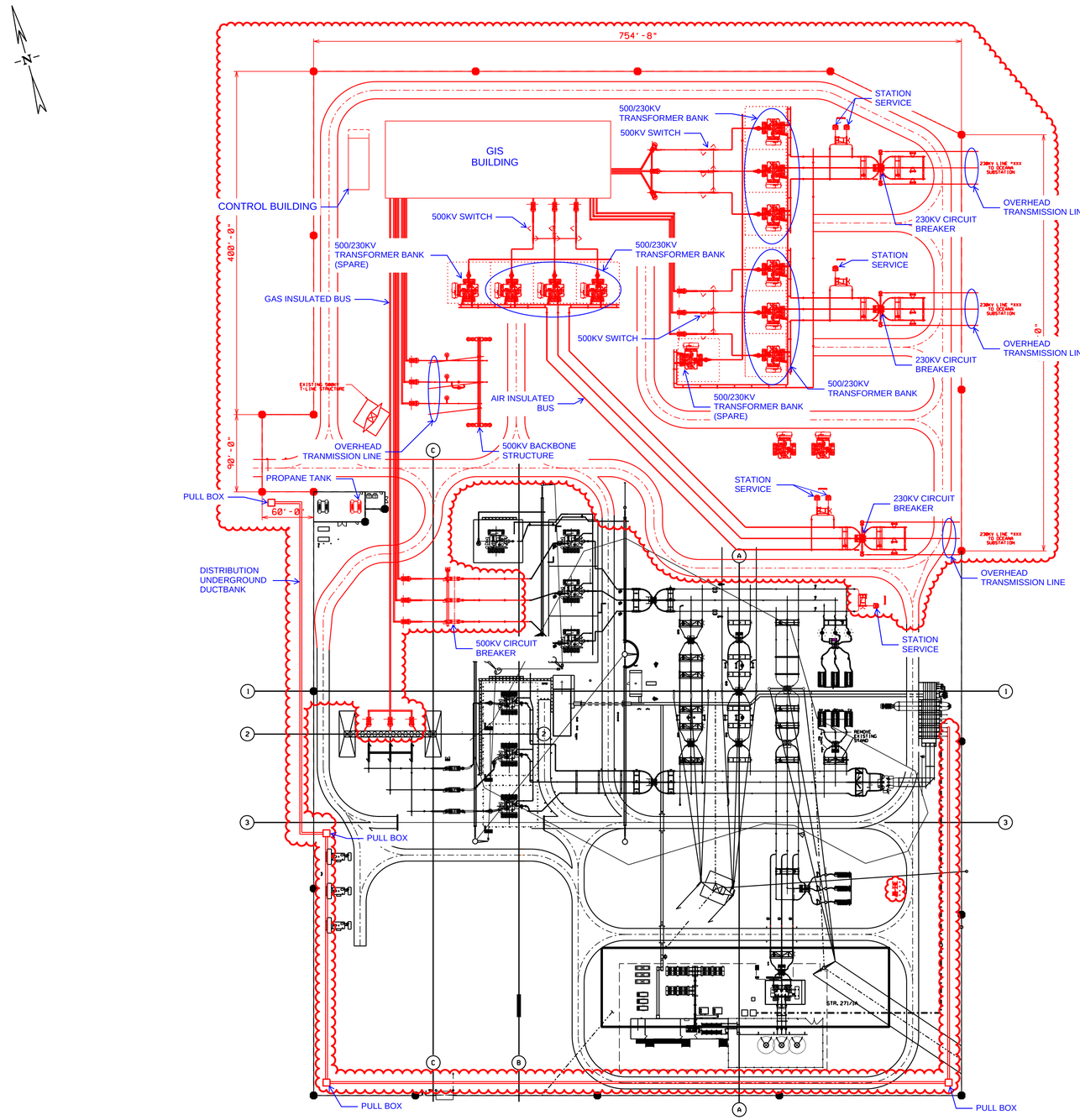
DOM POLE INSTALLATION DETAILS / PIPE PILE

Dominion
701 E. Cary Street
Richmond, VA 23219

	DRAWN	CHECKED	APPROVED	DATE	DRAWING NO.
ORIGINAL	SLS		CNH	5/1/20	
REVISION					CAD NO.

$DGNSPEC$
TESBORD1

USACE-NLW
RCVD 7/15/2022



CONCEPTUAL ONLY
NOT FOR CONSTRUCTION

No.	Date	By	Description	Project Number	B/M
23	01-08-18	BYO	I/S GEN. MONITOR, KIOSK LIGHTS AND FENCE MODIFICATIONS	94-8058	15989
24	01-14-18	BYO	REPLACE LINE 271 CCVT M.U. BOX	94-6040	16482
25	-	CRB	EXPANDED 500/230KV YARD AND ADDED 3 NEW FENTRESS LINE	PRELIMINARY	-
15	03-30-14	TWV	R/P 230 KV SW'S & BREAKERS	94-4050	7237
16	03-30-17	TWV	R/P LINE 588 WAVE TRAP	99-2398	2414
17	01-04-15	JDH	SECURITY FENCE	94-4654	10808
18	05-29-15	TWV	INSTALL STATCOM	99-2397	11042
19	1-31-15	DMB	INSTALL 230KV CAP BANK	99-2588	11193
20	02-23-16	JDH	INSTALL SECURITY KIOSK	94-4654V10	12799
21	07-02-17	TWV	R/P TX*3 500-230 KV	94-4766	13404
22	09-30-17	TWV	NEW OIL CONTAINMENT LINER & OUTFALLS	99-2397	11042

Revisions

References	Library	Cell Name	B/M Assembly

USER: jpwerner

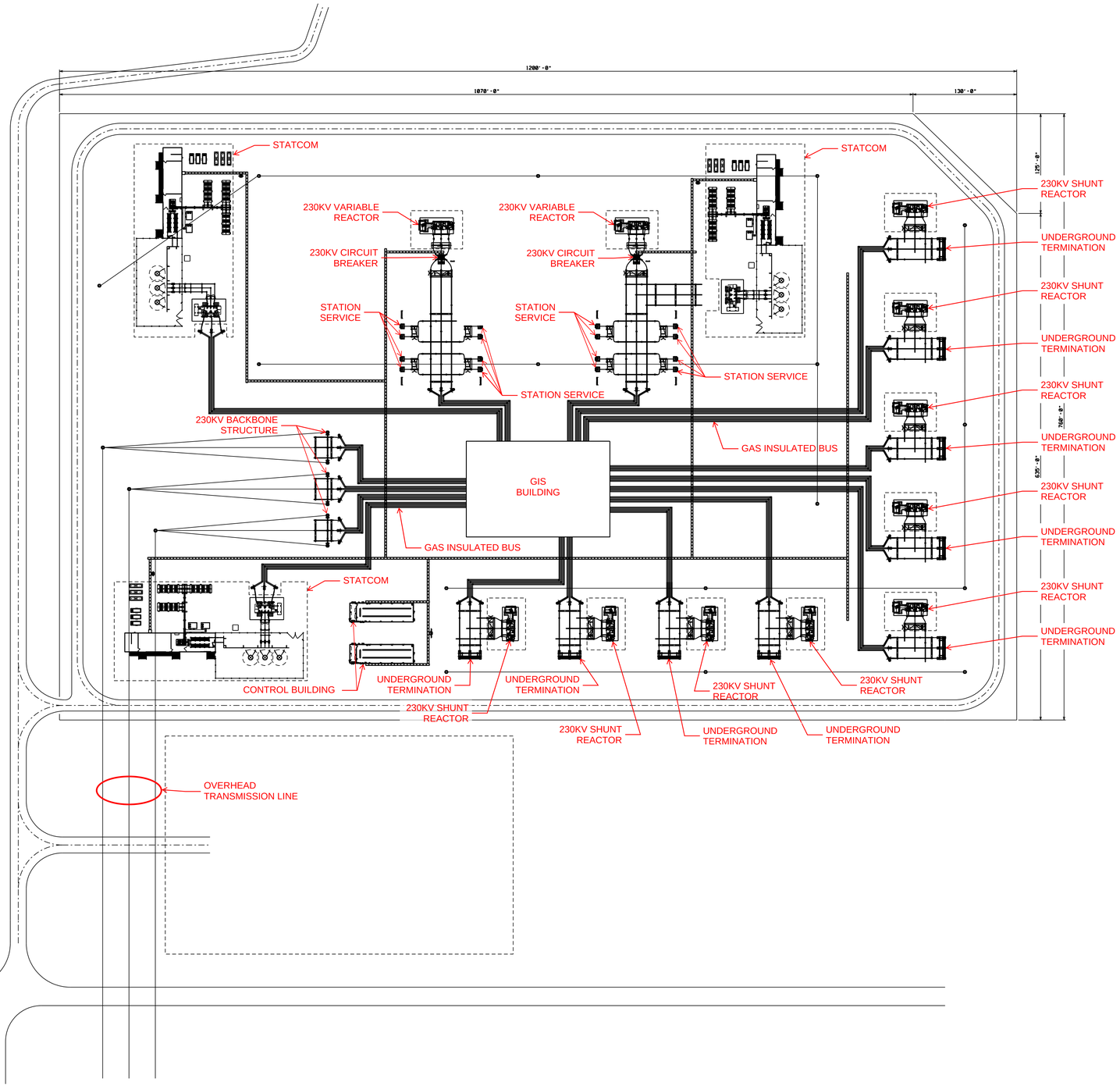
Dominion Energy

GENERAL ARRANGEMENT PLAN
FENTRESS SUBSTATION
CHESAPEAKE, VIRGINIA

	Name	Date	Project No.	Sheet No.
Designed by:				1 OF 1
Approvals			Scale	
Approvals			1"=70'-0"	
		B/M No.	Revisions	
			23 24 14 15 16 17 18 19 20 21 22	
Cad File Name	1244094e.dgn		Drawing No.	
PLOTTED:	10/1/2021		1244-094	

BORDER2

USACE-NLW
RCVD 7/15/2022



CONCEPTUAL ONLY
NOT FOR CONSTRUCTION

Dominion Energy

GENERAL ARRANGEMENT PLAN
HARPERS SWITCHING STATION

	Name	Date	Project No.	Sheet No.
Designed by:				1 OF 1
Approvals			Scale	
Approvals			1"=60'-0"	
		B/M No.	Revisions	

Cad File Name XXXX001a.dgn
PLOTTED: 9/30/2021
Drawing No. XXXX-GA

$FILENAME$
PLOTTED: 9/30/2021
USER: dsmiller

No.	Date	By	Description	Project Number B/M
		Checked/Appr.		

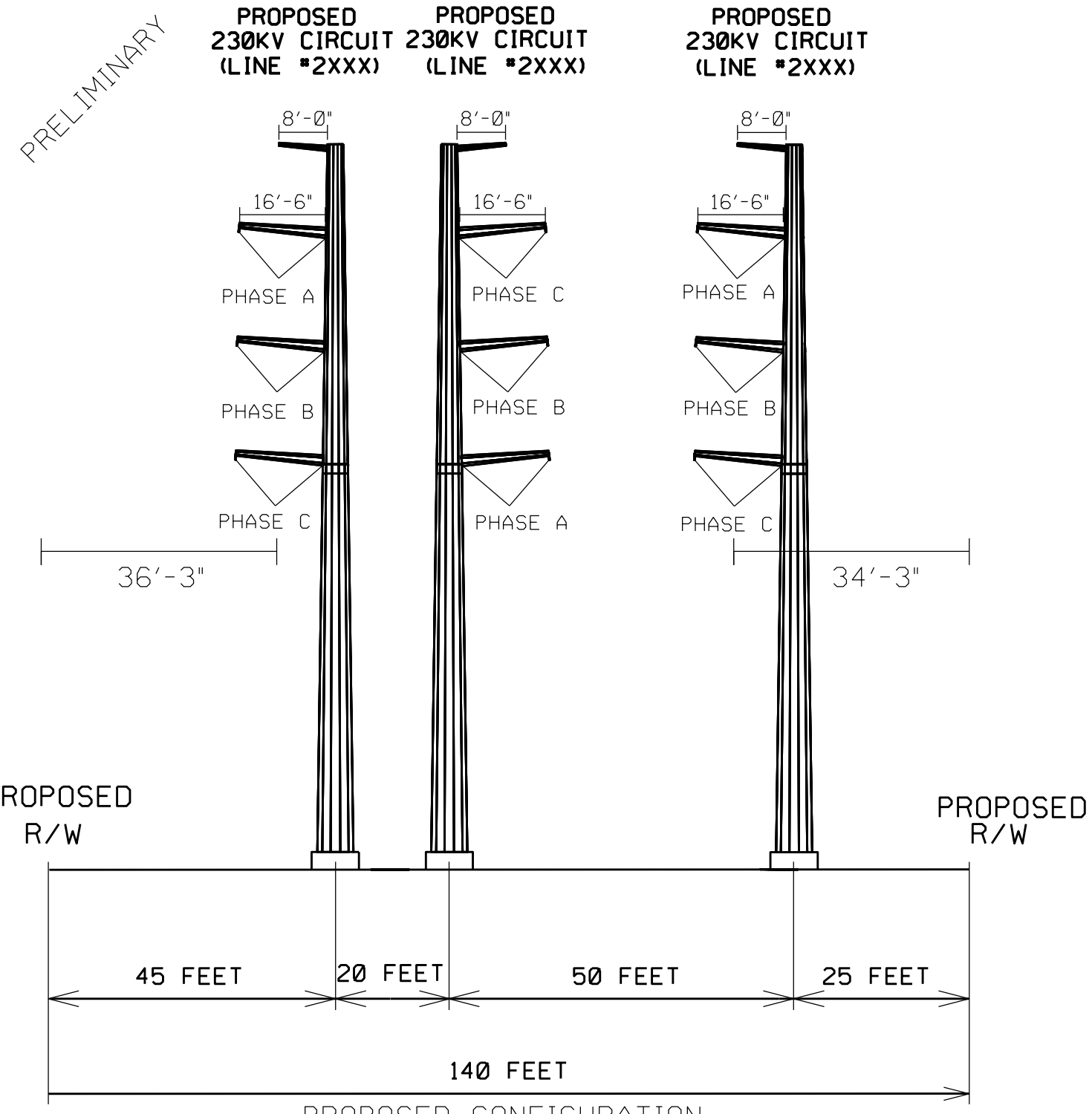
Revisions

USER: dsmiller

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022

TYPICAL CONFIGURATION FOR GREENFIELD AREAS



PROPOSED CONFIGURATION

TYPICAL CORRIDOR LOOKING TOWARD HARPERS

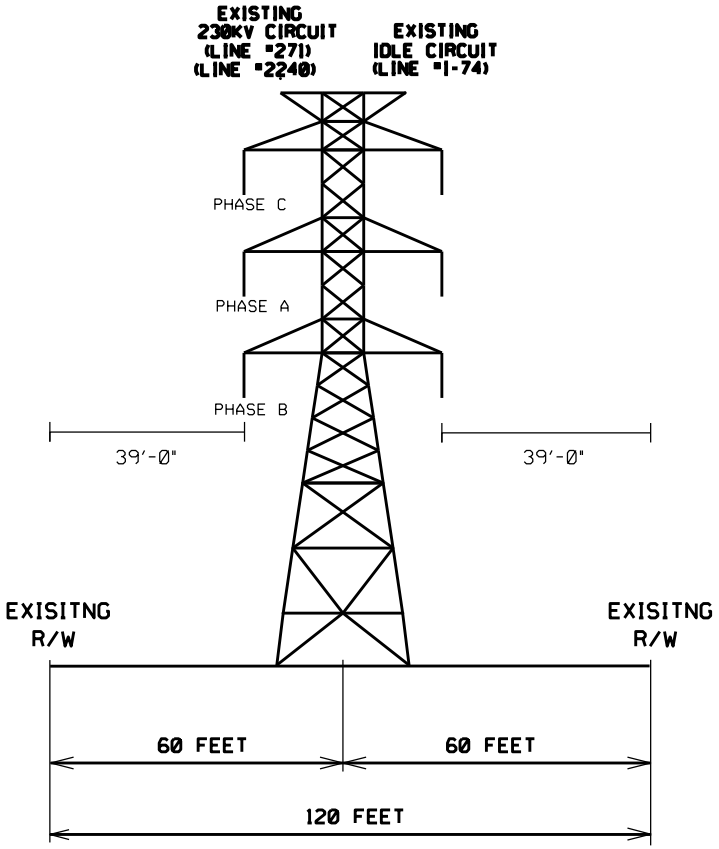
NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

$DGNSPEC$

USACE-NLW
RCVD 7/15/2022

TYPICAL CONFIGURATION

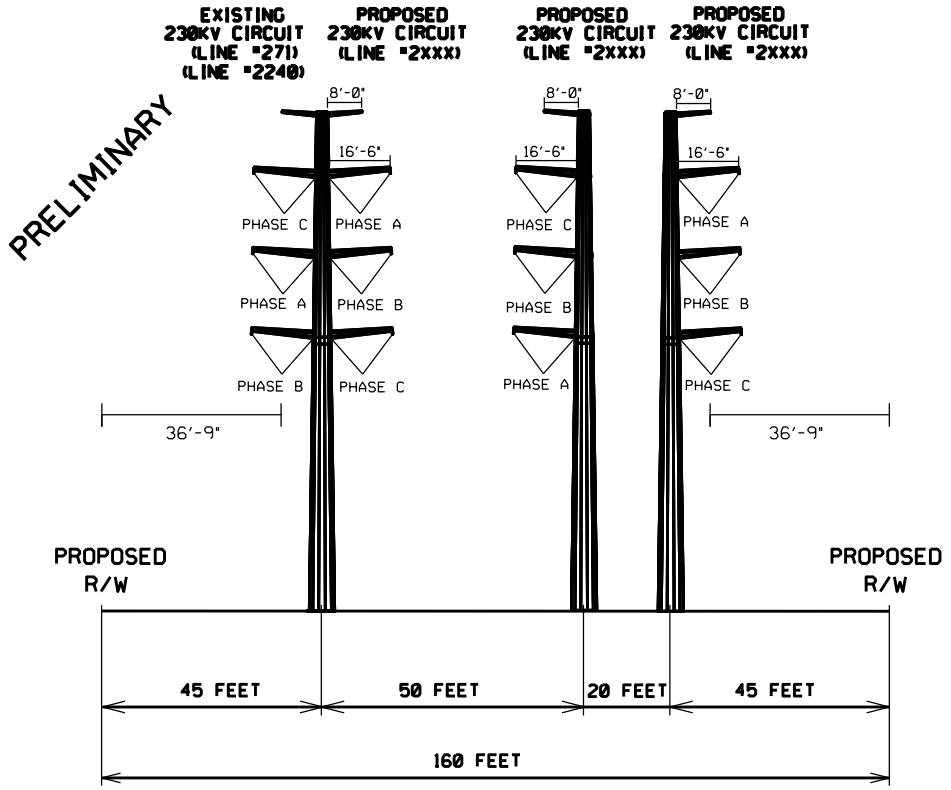
REBUILD SEGMENTS (LINE #271 & LINE #2240)



EXISTING CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

TYPICAL CONFIGURATION

REBUILD SEGMENTS (LINE #271 & LINE #2240)



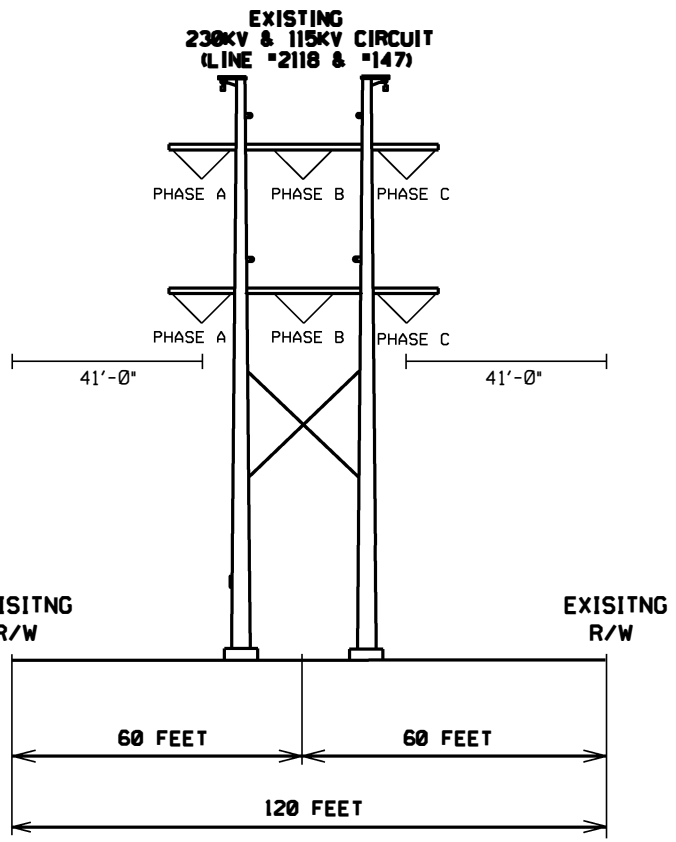
PROPOSED CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

USACE-NLW
RCVD 7/15/2022

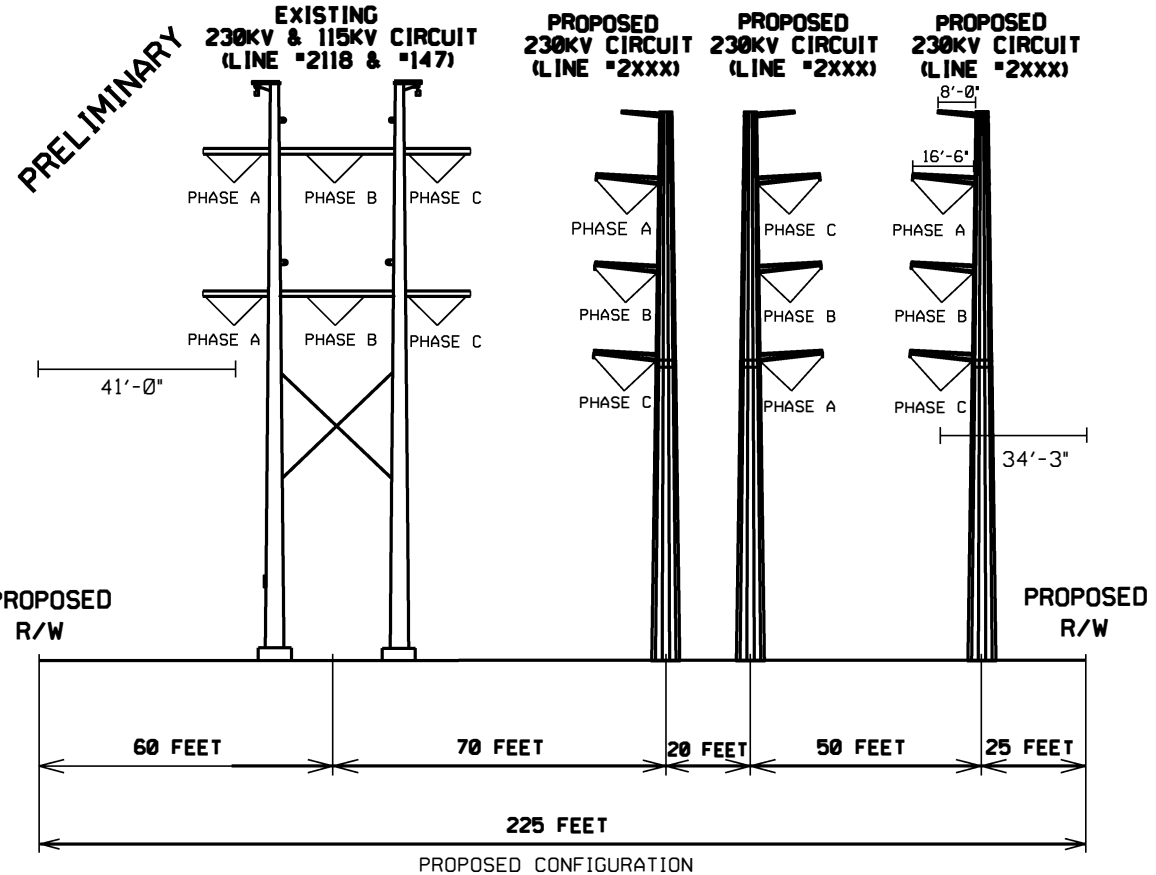
ATTACHMENT II.A.5.c

TYPICAL CONFIGURATION
ROUTE SEGMENTS ADJACENT TO LINE #2118/#147



EXISTING CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

TYPICAL CONFIGURATION
ROUTE SEGMENTS ADJACENT TO LINE #2118/#147



PROPOSED CONFIGURATION
TYPICAL CORRIDOR LOOKING TOWARD HARPERS

NOTE: Information contained on drawing is to be considered preliminary in nature and subject to change based on final design.

USACE-NLW
RCVD 7/15/2022

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



ISSUED FOR BID
NOT FOR CONSTRUCTION

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	1 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:25 PM

Drawing No.
UG–EX–P3–200

No.	Description	By	Date	Checked/Appr.
A	ISSUED FOR 60% REVIEW	AH	03/25/2022	CL
B	ISSUED FOR BID	AH	07/15/2022	CL
Project Number	0200157	B/M	H&A	JGK/P.ZG

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

GARDNER, ZACHARY
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

UG–EX–P–200.DWG
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GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 24168531420000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

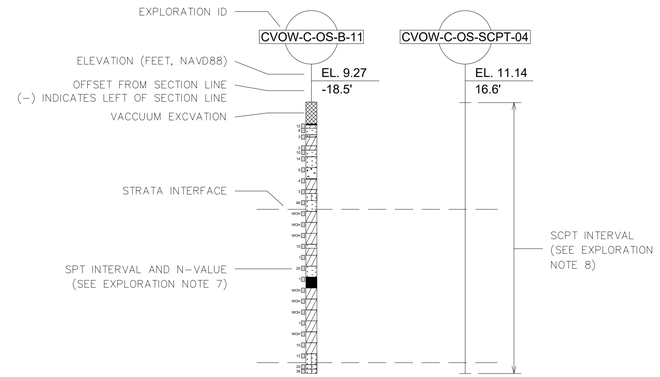
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   - A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   - B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   - C. USE OF 'MUD ENGINEER' TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

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NOT FOR CONSTRUCTION

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	2 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No.
UG-EX-P3-201

UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY

No.	Description	Date	By	Checked/Appr.
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL
B	ISSUED FOR BID	07/15/22	AH	CL

Project Number 0200157 | B/M | 0200157 | H&A | JS,KP,ZG | H&A | JS,KP,ZG

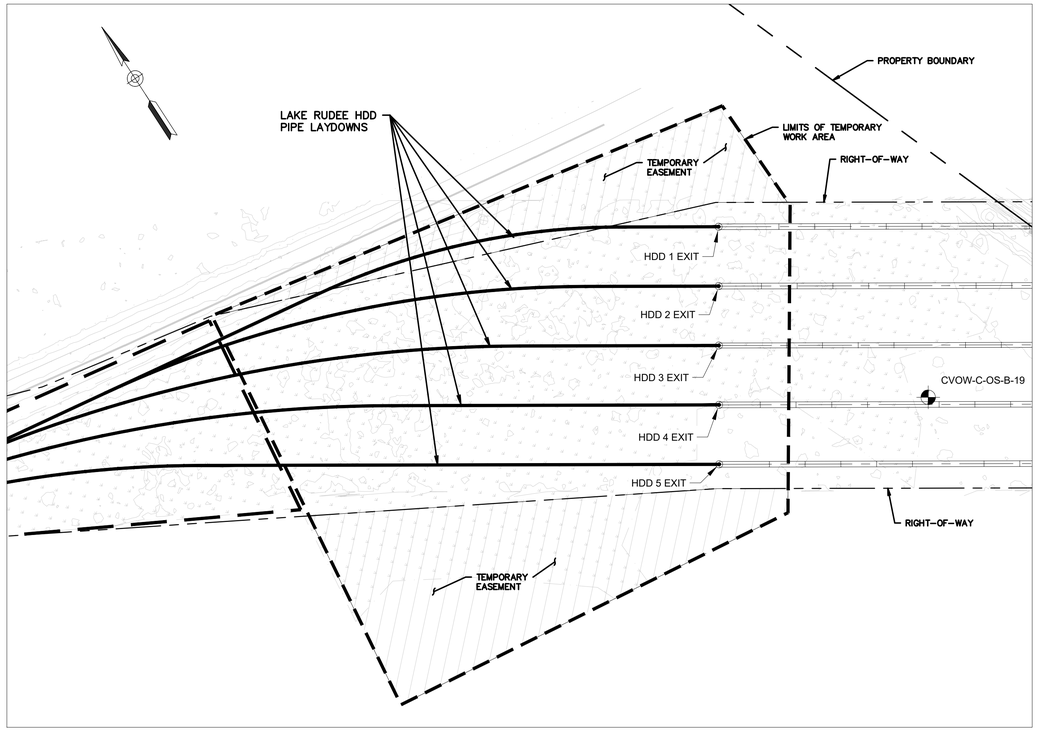
Revisions

GARDNER, ZACHARY

Typical Drawing Information

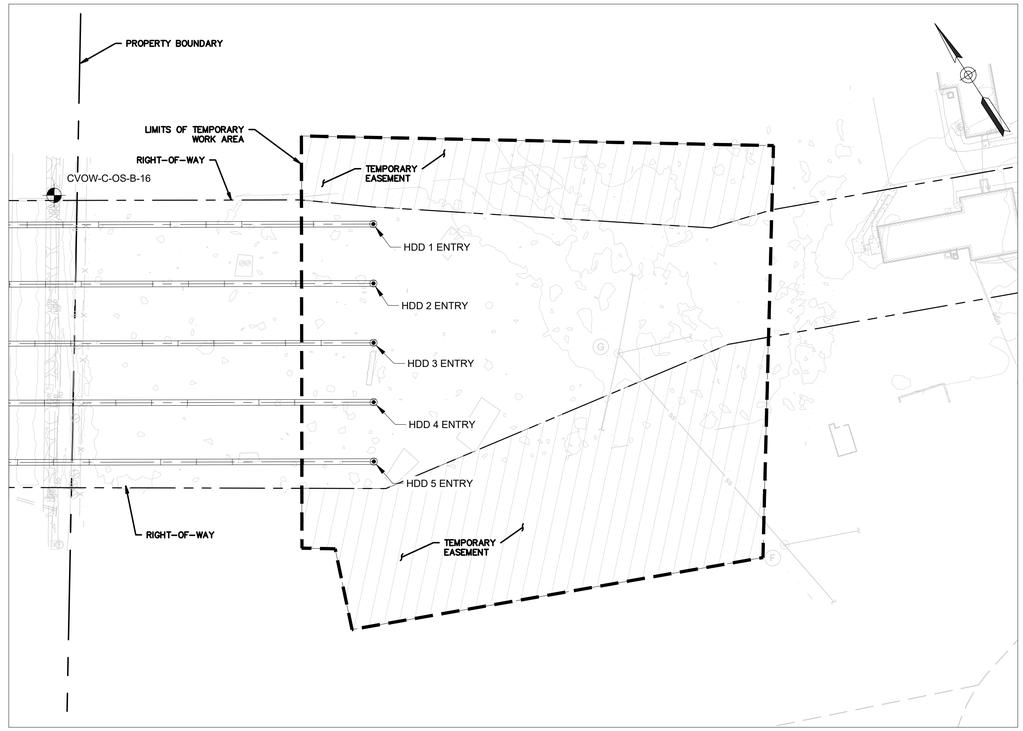
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



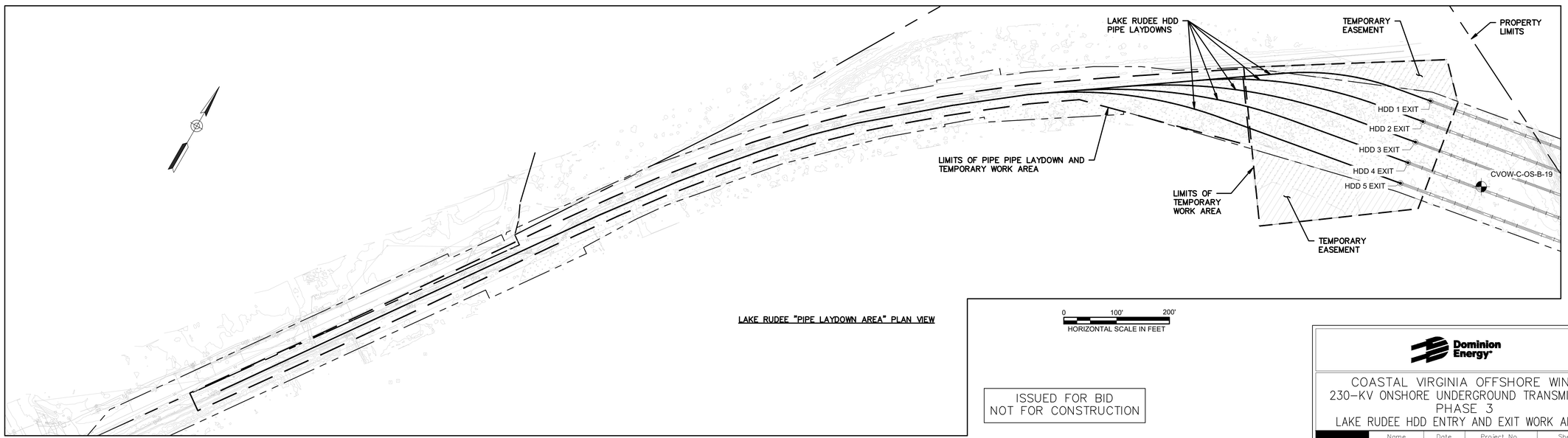
LAKE RUDEE "HDD EXIT TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW

0 50' 100'
HORIZONTAL SCALE IN FEET



LAKE RUDEE "PIPE LAYDOWN AREA" PLAN VIEW

0 100' 200'
HORIZONTAL SCALE IN FEET

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
LAKE RUDEE HDD ENTRY AND EXIT WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	3 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

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Drawing No. UG-EX-P3-202

No.	Date	By	Description	Project Number	B/M
A	03/25/22	KP/JGZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP/ZG	ISSUED FOR BID	0200157	H&A

Checked/Appr.: AH, CL

Revisions

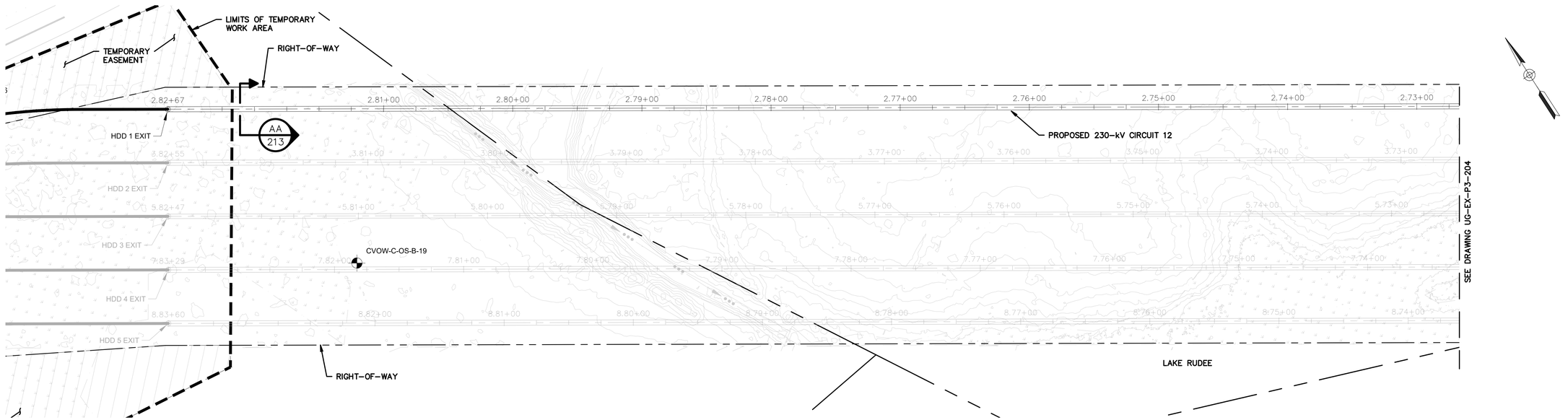
GARDNER, ZACHARY

Typical Drawing Information

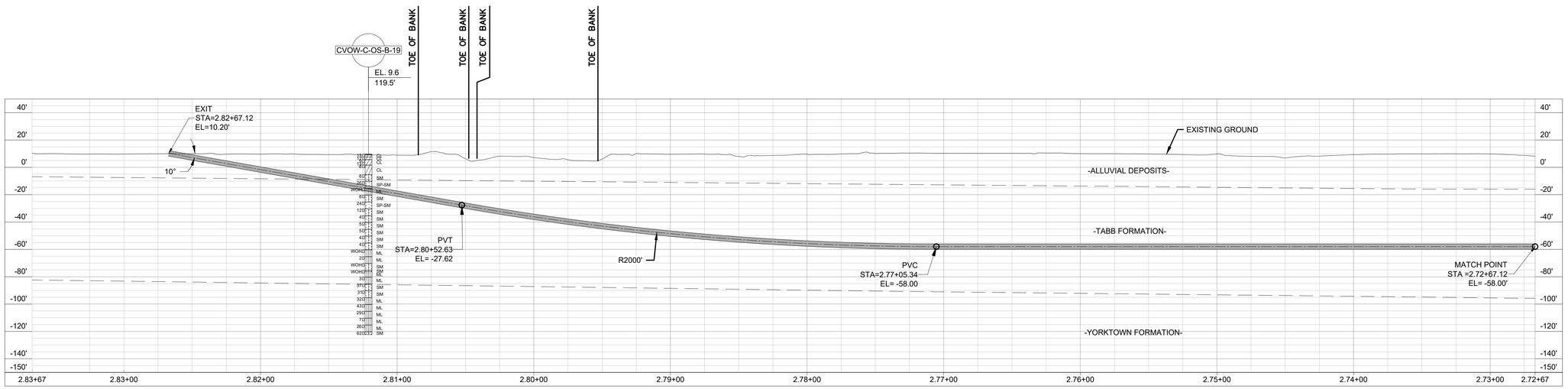
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:06 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 1 EXIT" PLAN VIEW



LAKE RUDEE "HDD 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-518 THROUGH UG-EX-P3-521.

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NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET 0 40' 80'

VERTICAL SCALE IN FEET 0 40' 80'

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 1 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	4 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM

Drawing No. UG-EX-P3-203

No.	Date	By	Checked/Appr.	Description	Project Number
A	03/25/22	KP JG ZC	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A B/M
B	07/15/22	JG KP ZC	AH CL	ISSUED FOR BID	0200157 H&A

Revisions

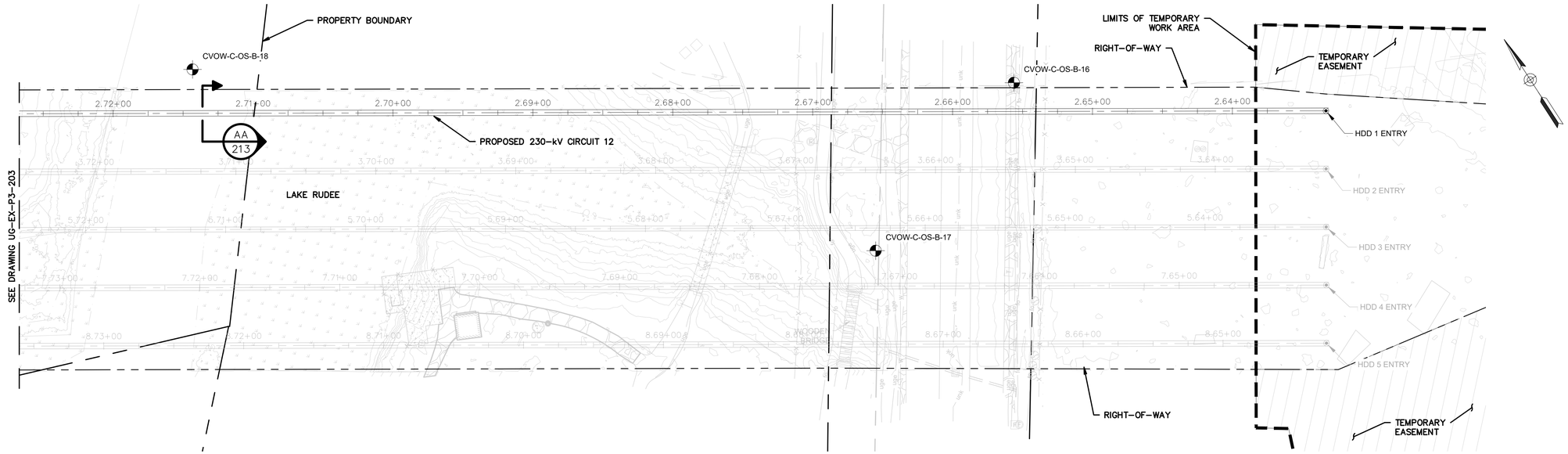
GARDNER, ZACHARY

Typical Drawing Information

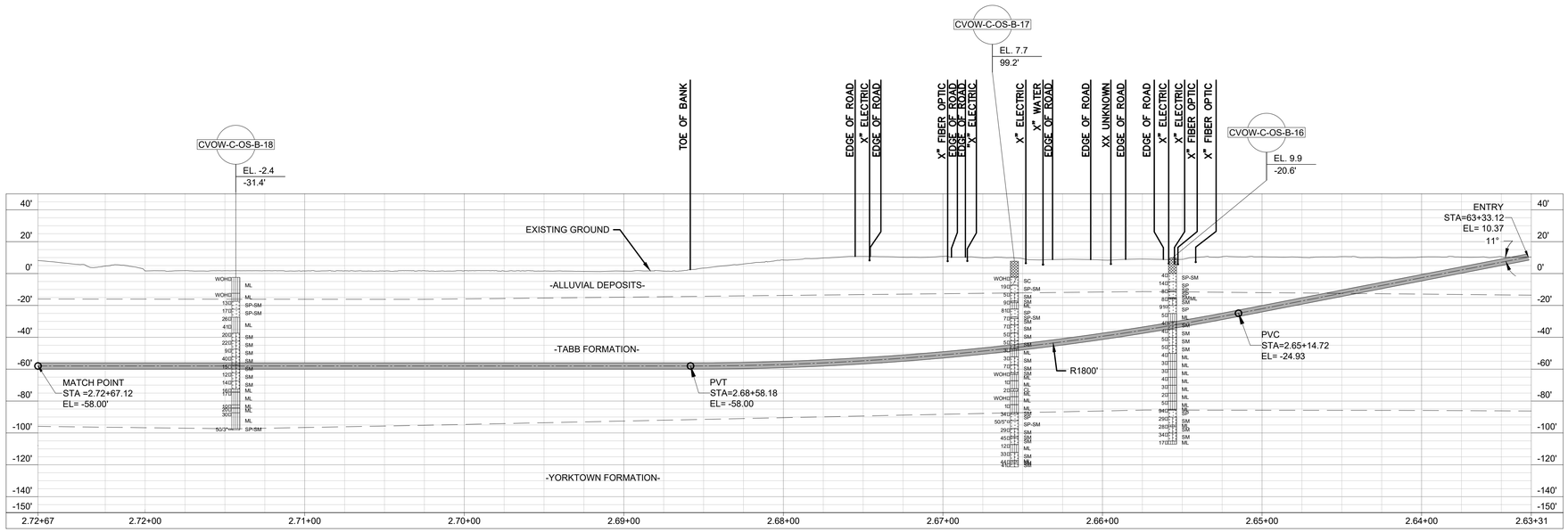
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 1 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 1 ENTRANCE" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-518 THROUGH UG-EX-P3-521.

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 1 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	5 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
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Drawing No.
UG-EX-P3-204

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:07 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	CL	ISSUED FOR BID	0200157 H&A

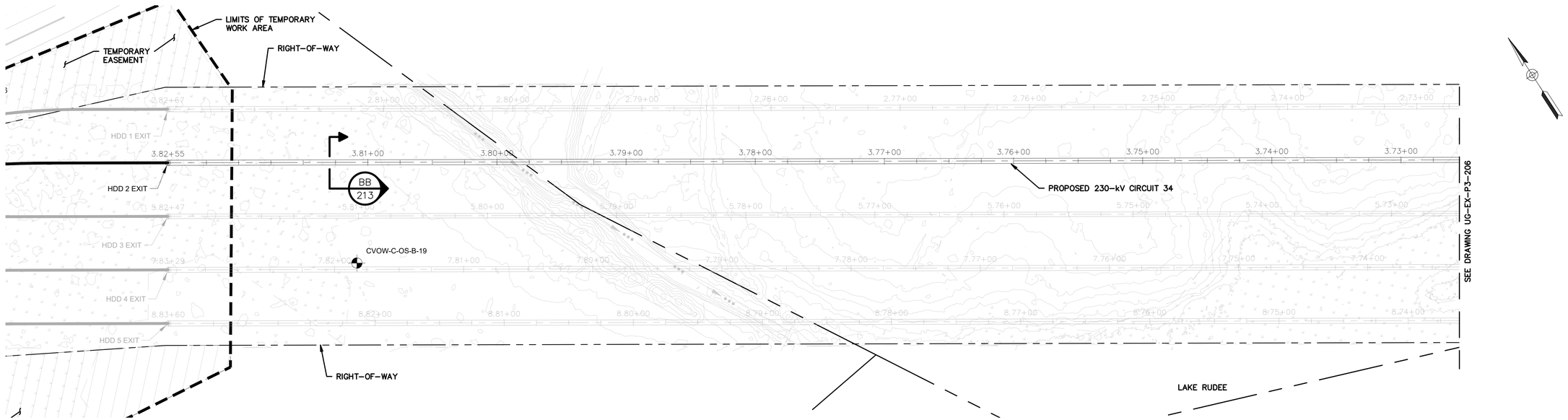
Revisions

GARDNER, ZACHARY

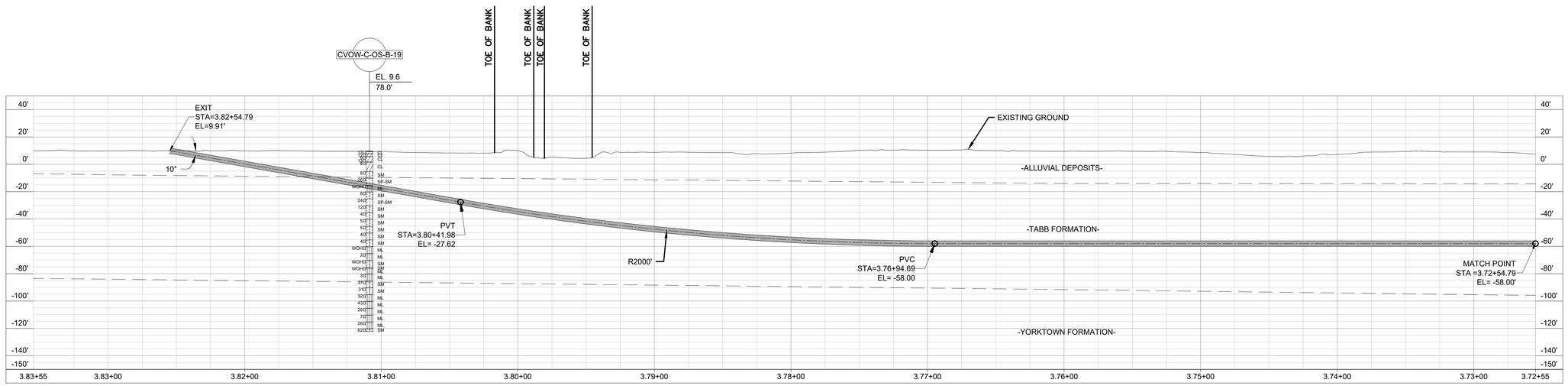
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 2 EXIT" PLAN VIEW



LAKE RUDEE "HDD 2 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-534 THROUGH UG-EX-P3-537.

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 2 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	6 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM

Drawing No. UG-EX-P3-205

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

Revisions

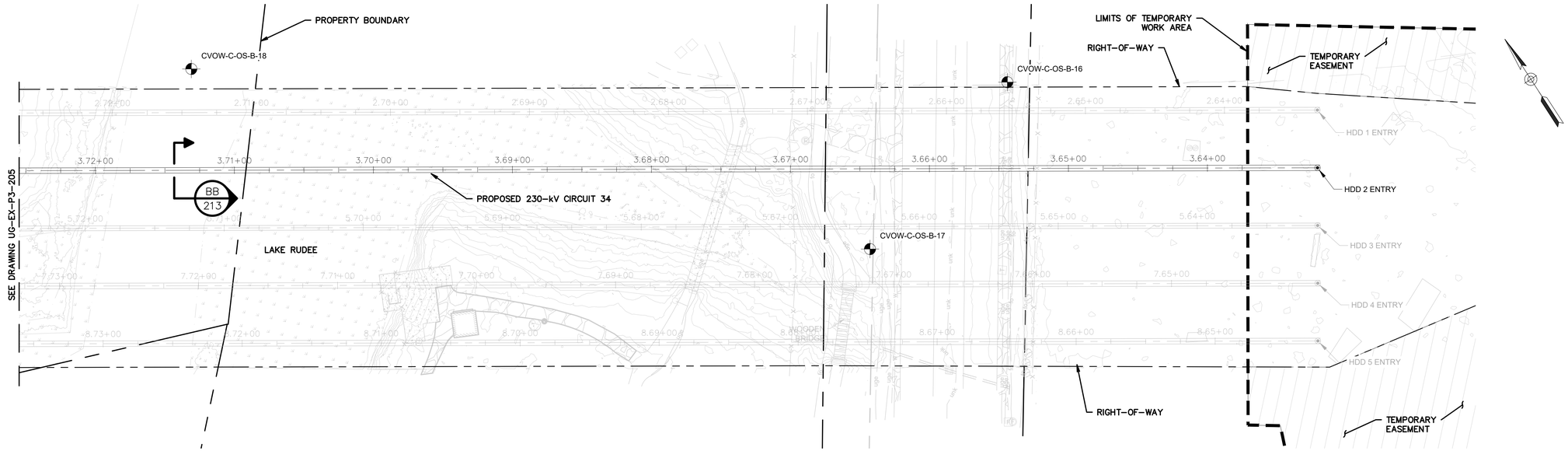
GARDNER, ZACHARY

Typical Drawing Information

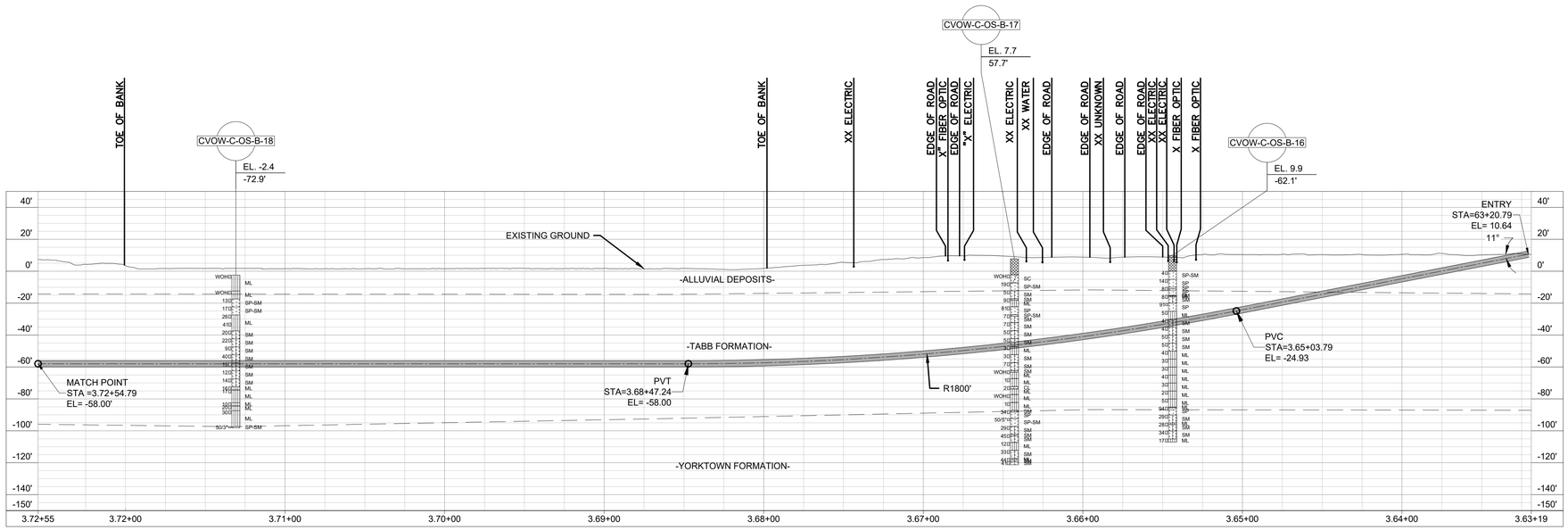
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-534 THROUGH UG-EX-P3-537.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0, 40', 80'
VERTICAL SCALE IN FEET: 0, 40', 80'

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

No.	Date	By	Description	Project Number
Checked/Appr.				
B	07/15/22	AH / CL	ISSUED FOR BID	0200157 H&A
A	03/25/22	AH / CL	ISSUED FOR 60% REVIEW	0200157 H&A
				B/M

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 2 PLAN AND PROFILE (STA. 20+00 TO 29+36)

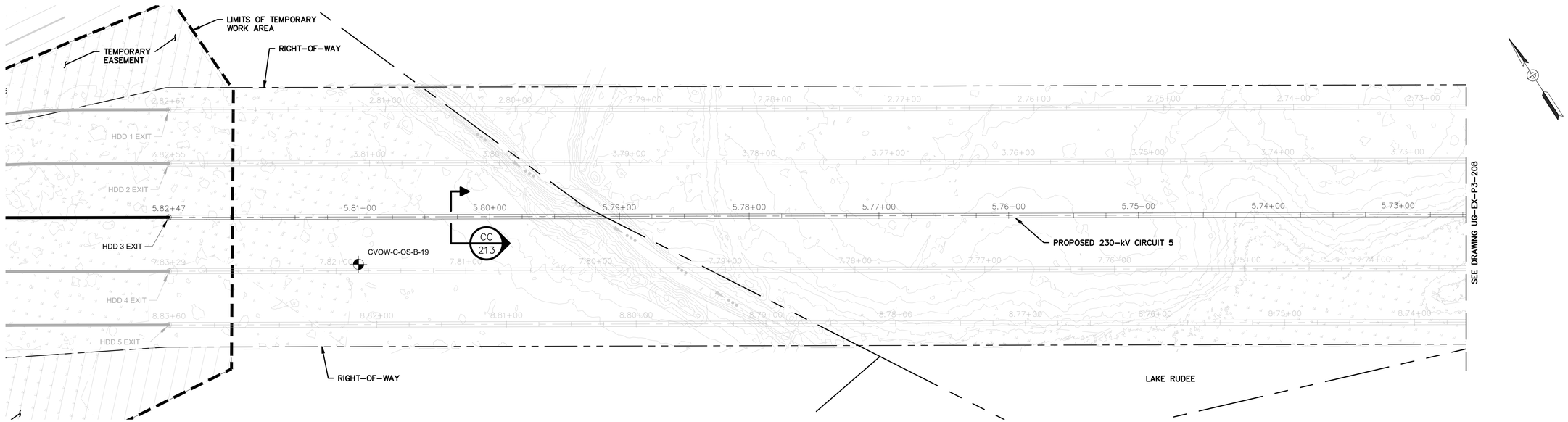
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	7 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM

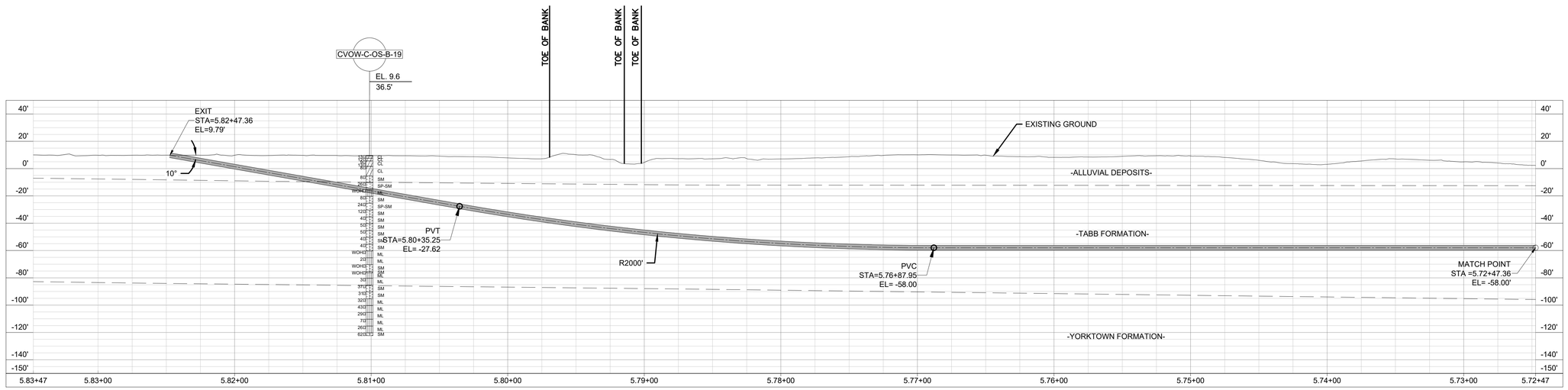
Drawing No.
UG-EX-P3-206

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:08 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 3 EXIT" PLAN VIEW



LAKE RUDEE "HDD 3 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-539 THROUGH UG-EX-P3-542.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 3 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	8 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM

Drawing No. UG-EX-P3-207

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	CL	ISSUED FOR BID	0200157 H&A

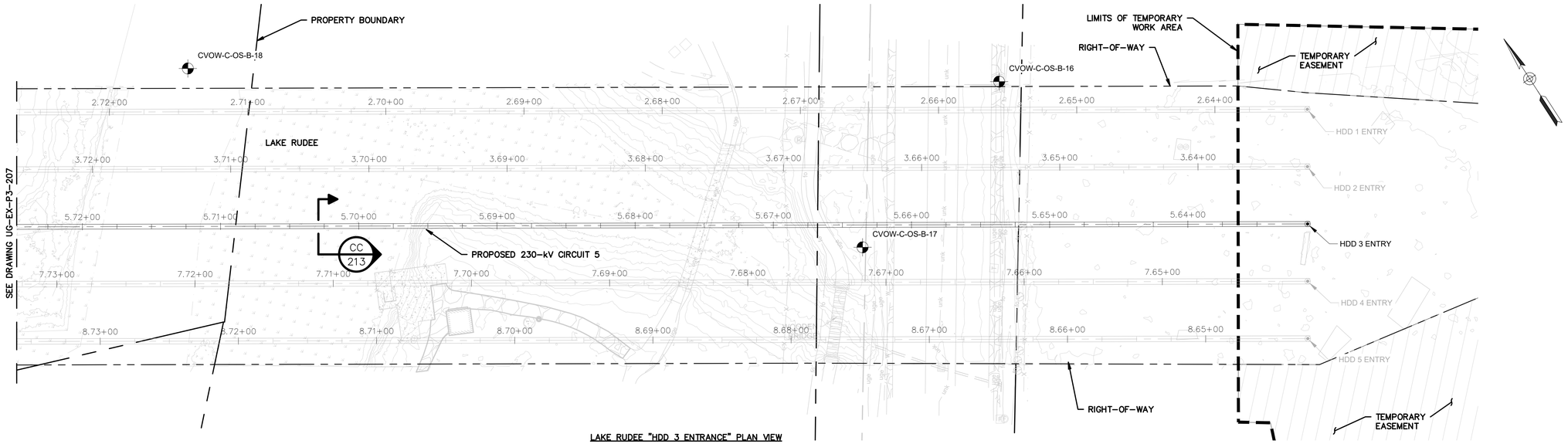
Revisions

GARDNER, ZACHARY

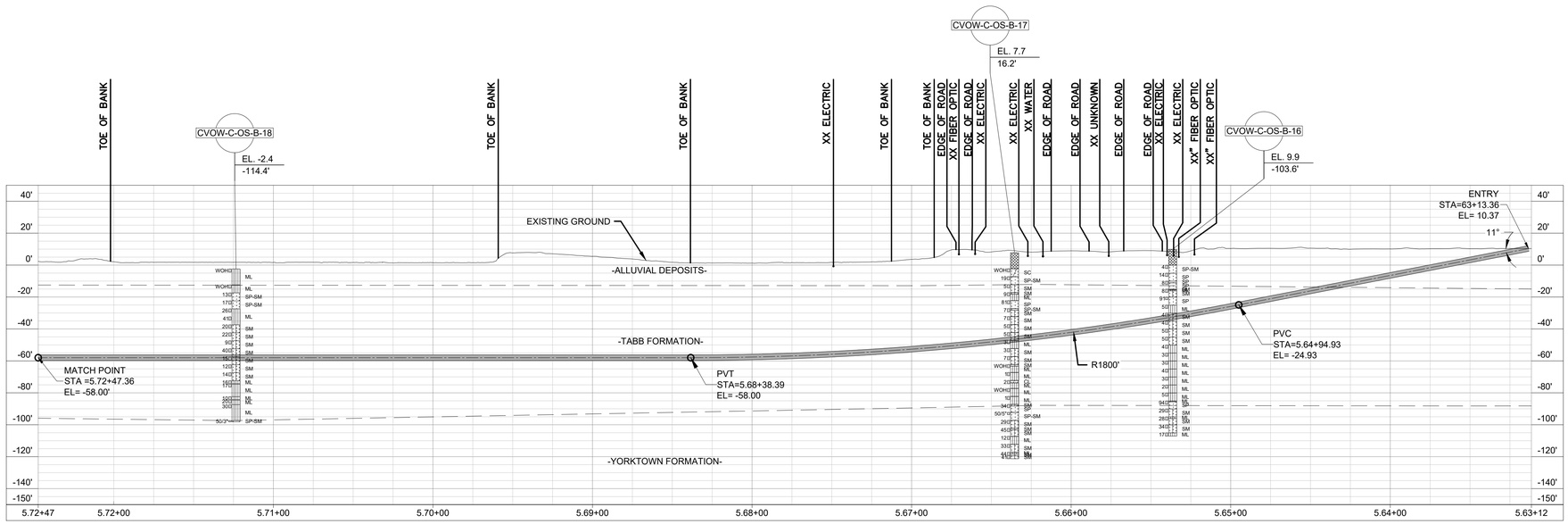
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 3 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 3 ENTRANCE" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-539 THROUGH UG-EX-P3-542.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 3 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	9 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM
Drawing No. UG-EX-P3-208

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:09 PM
GARDNER, ZACHARY

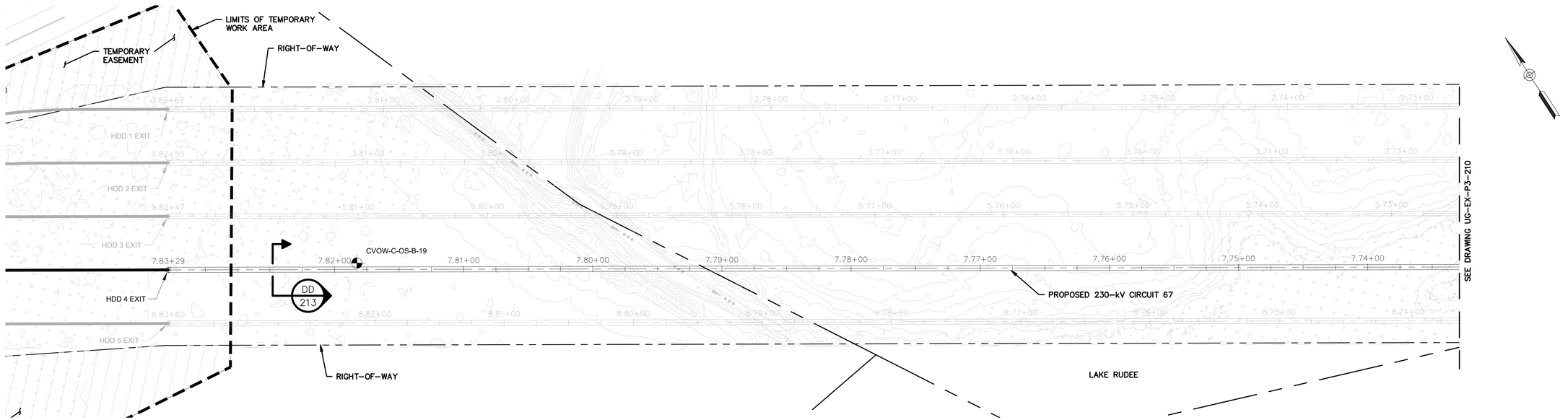
No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	KP-JG-ZG	CL. AH	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG-KP-ZG	CL. AH	ISSUED FOR BID	0200157	H&A

Revisions

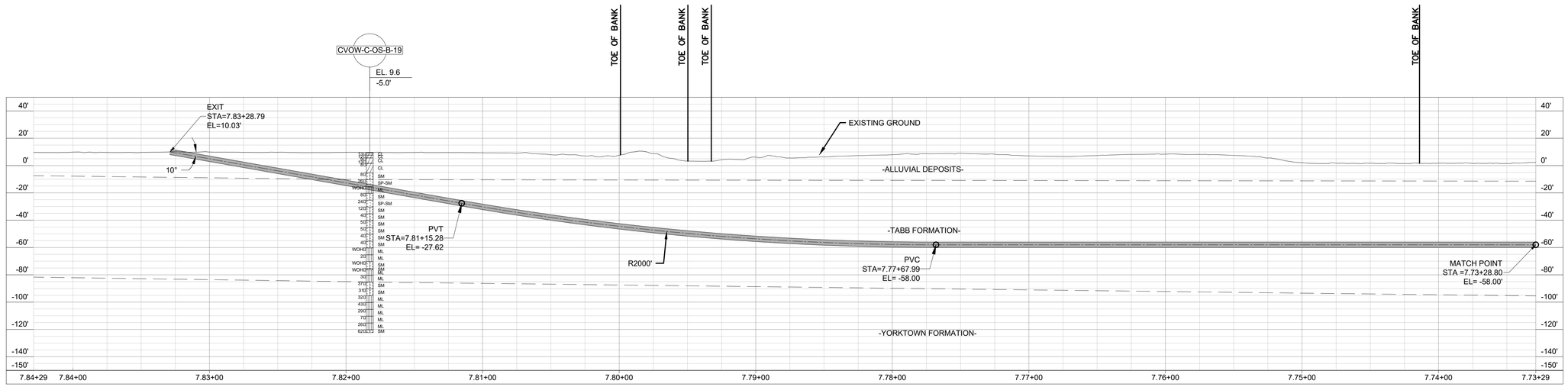
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 4 EXIT" PLAN VIEW



LAKE RUDEE "HDD 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-555 THROUGH UG-EX-P3-558.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 4 PLAN AND PROFILE (STA. 10+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	10 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:10 PM

Drawing No. UG-EX-P3-209

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:10 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

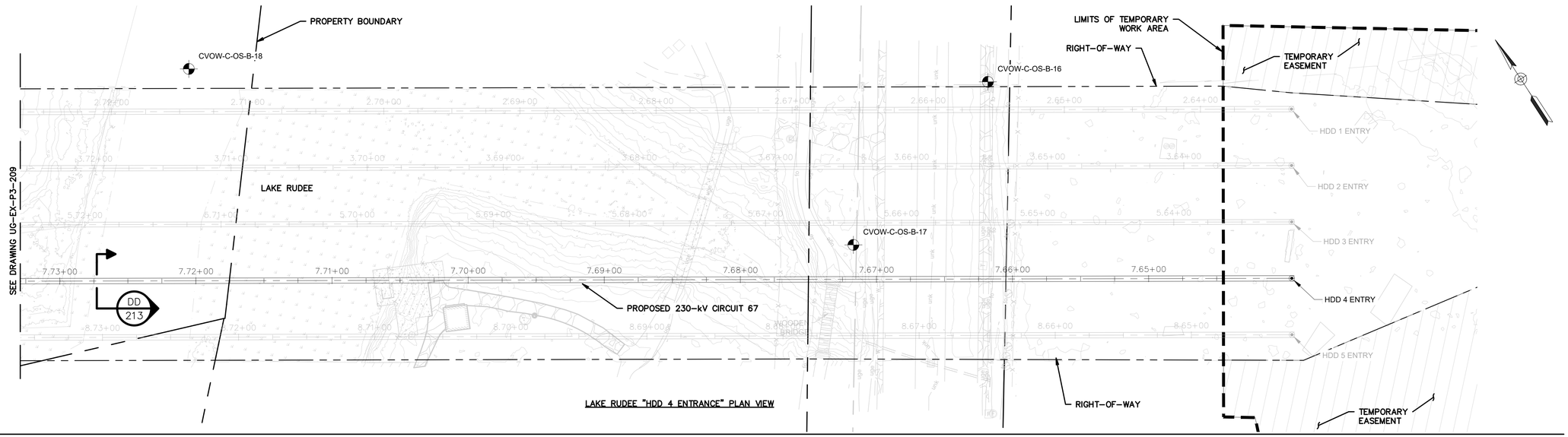
Revisions

GARDNER, ZACHARY

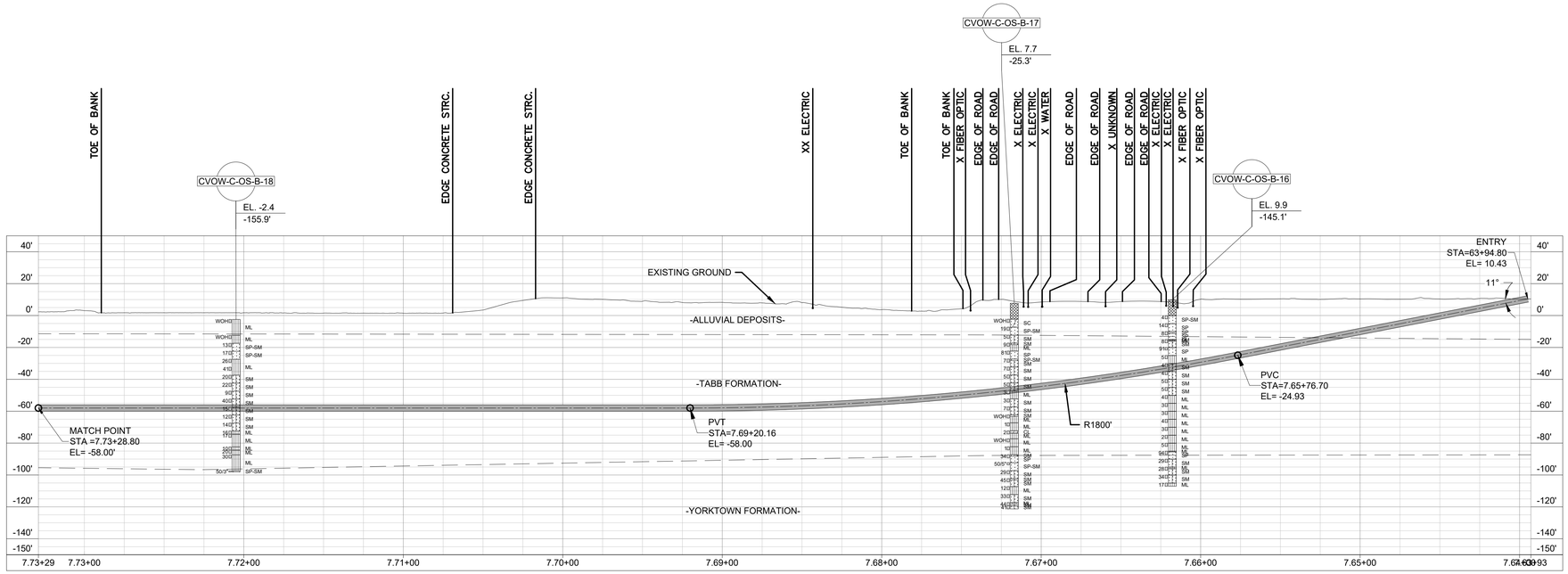
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 4 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 4 ENTRANCE" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P3-555 THROUGH UG-EX-P3-558.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD 4 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	11 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM

Drawing No.
UG-EX-P3-210

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	KP JG ZG	ISSUED FOR 60% REVIEW	0200157 H&A
	AH	CL		
B	07/15/22	JG KP ZG	ISSUED FOR BID	0200157 H&A
	AH	CL		

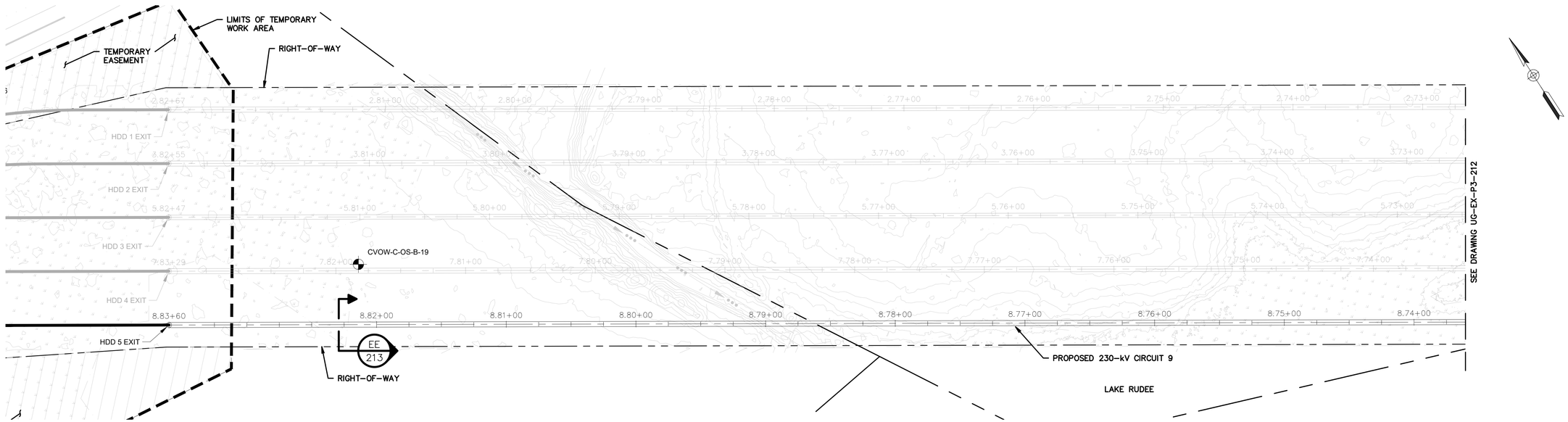
Revisions

GARDNER, ZACHARY

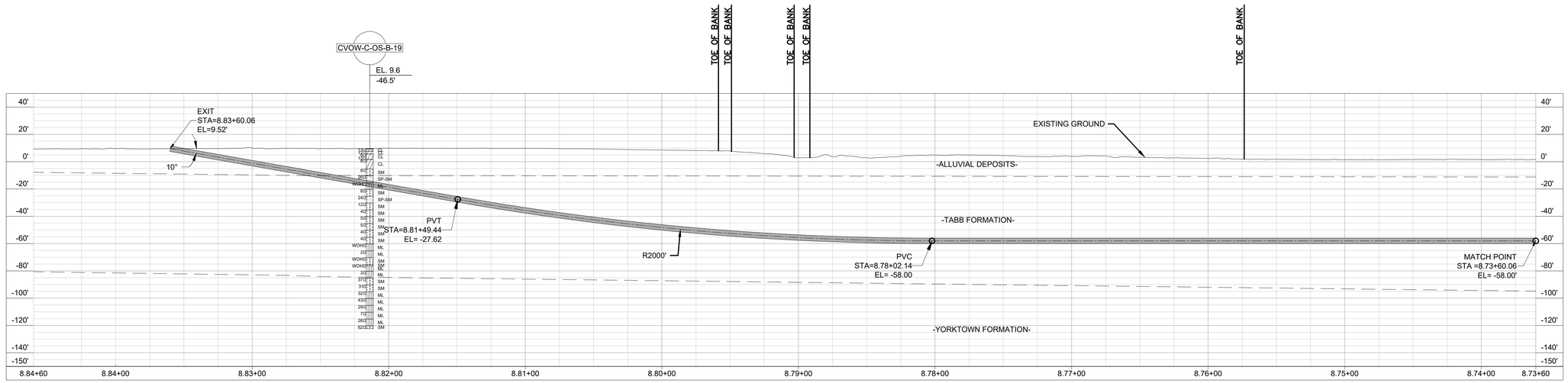
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 5 EXIT" PLAN VIEW



LAKE RUDEE "HDD 5 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 5 PLAN AND PROFILE (STA. 09+00 TO 20+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	12 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM

Drawing No. UG-EX-P3-211

No.	Date	By	Description	Project Number
A	03/25/22	KP,JG,ZG	ISSUED FOR 60% REVIEW	0200157 B/M H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157 H&A

Revisions

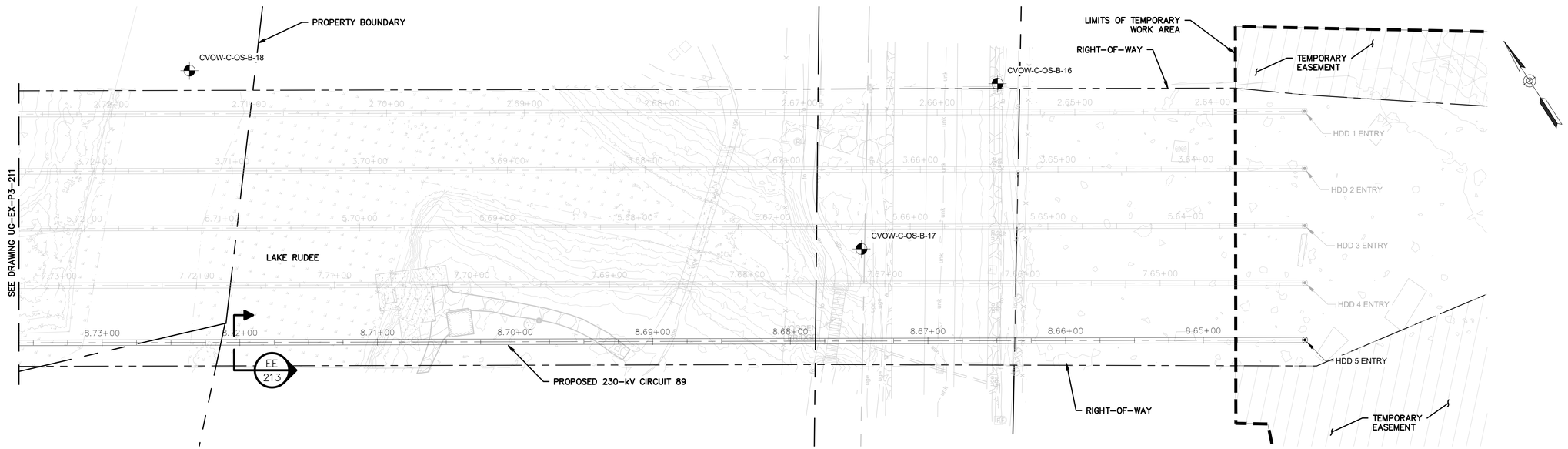
GARDNER, ZACHARY

Typical Drawing Information

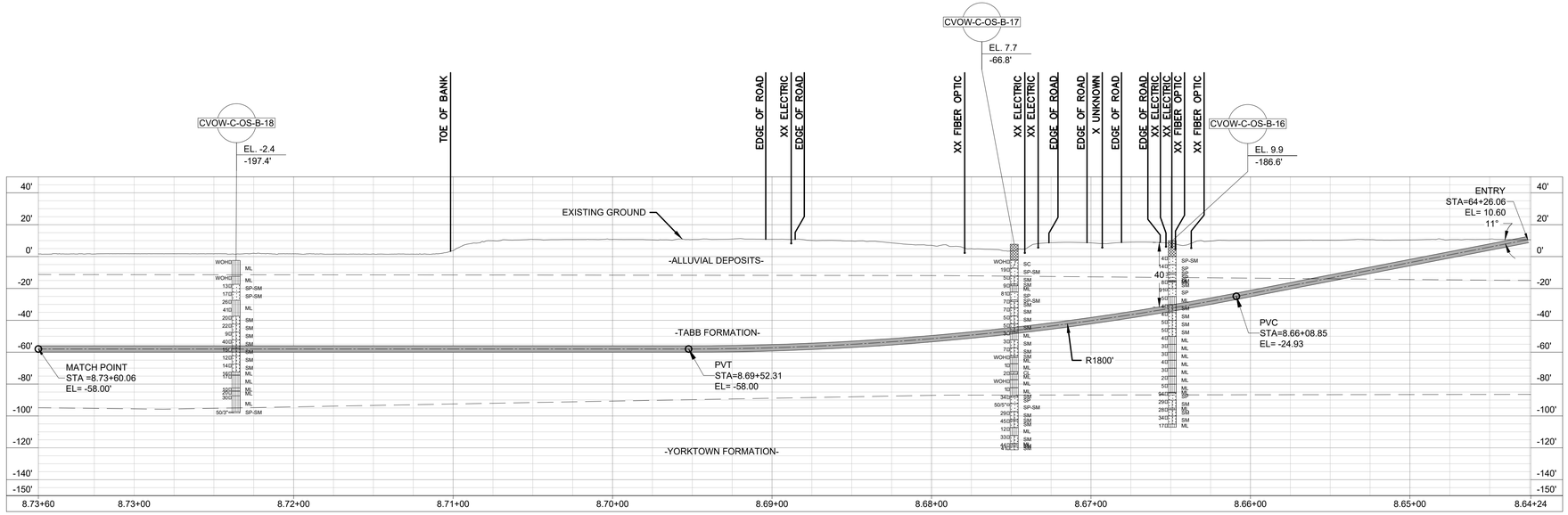
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:11 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE RUDEE "HDD 5 ENTRANCE" PLAN VIEW



LAKE RUDEE "HDD 5 ENTRANCE" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS XX

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 3
HDD 5 PLAN AND PROFILE (STA. 20+00 TO 29+36)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	13 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:12 PM

Drawing No. UG-EX-P3-212

UG-EX-P3-202-212.DWG
PLOTTED: 6/27/2022 2:12 PM
GARDNER, ZACHARY

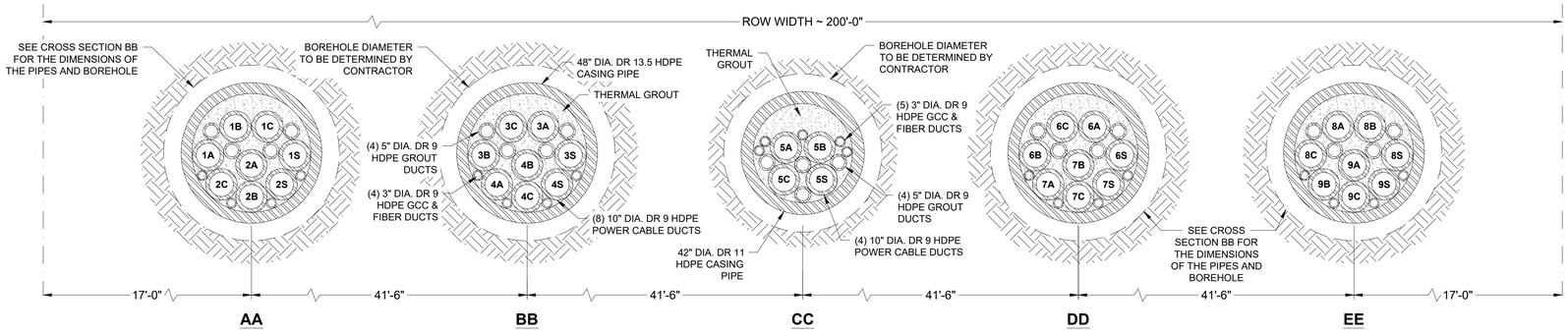
No.	Date	By	Description	Project Number
A	03/25/22	KP/JG/ZG	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	JG/KP/ZG	ISSUED FOR BID	0200157 H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



230-kV HDD INSTALLATION CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 3
HDD SECTIONS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	14 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P3-213.DWG
PLOTTED: 6/27/2022 2:26 PM
Drawing No. UG–EX–P3–213

No.	Date	By	Description	Project Number	B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157	H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P3-213.DWG
PLOTTED: 6/27/2022 2:26 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



ISSUED FOR BID
NOT FOR CONSTRUCTION

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COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	1 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:20 PM

Drawing No.
UG–EX–P4–200

No.	Description	By	Date	Checked/Appr.
A	ISSUED FOR 60% REVIEW	AH	03/25/2022	CL
	Project Number	B/M	0200157	H&A
B	ISSUED FOR BID	AH	07/15/2022	CL
	Project Number	B/M	0200157	H&A

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

GARDNER, ZACHARY
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UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:20 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

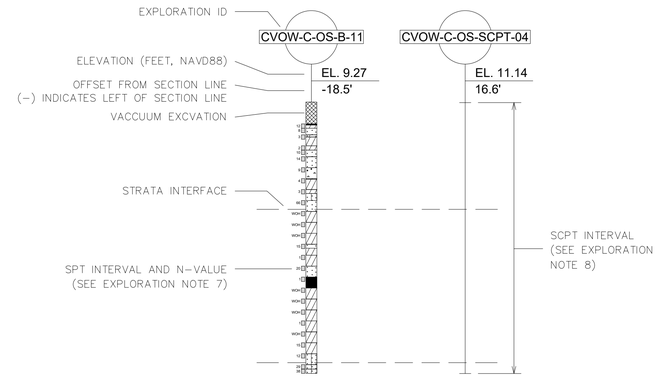
HORIZONTAL DIRECTIONAL DRILL NOTES:

1. CONTRACTOR SHALL EMPLOY APPROPRIATE MEASURES AND DRILLING PRACTICES TO ELIMINATE GROUND SURFACE SETTLEMENT, REDUCE SUBSURFACE DISTURBANCE AND ENSURE THE INTEGRITY OF THE CONDUIT BUNDLE AGAINST EXCESSIVE DEFLECTION, PULL LOADS, STRESSES AND BUCKLING DURING PULLBACK. EXAMPLES OF SUCH MEASURES MAY INCLUDE BUT NOT BE LIMITED TO:
   - A. MAINTAIN NEUTRAL BUOYANCY OF THE CONDUIT BUNDLE DURING PULLBACK.
   - B. USE OF TEMPORARY STEEL SURFACE CASINGS.
   - C. USE OF 'MUD ENGINEER' TO MONITOR THE DRILL FLUID PROPERTIES.
2. UPON COMPLETION OF FINAL REAM, THE CONTRACTOR SHALL MAKE EVERY EFFORT TO REMOVE THE EXISTING DRILL CUTTINGS FROM THE BOREHOLE AND MAINTAIN THE STABILITY OF THE BOREHOLE DURING PULLBACK. THE DRILL MUD SHALL BE MONITORED DURING PULLBACK AND EVERY EFFORT SHALL BE MADE TO REDUCE THE FRICTION AND DRAG FORCES SO AS TO LOWER THE PULLING LOAD ON THE PRODUCT BUNDLE.
3. CONTRACTOR SHALL EMPLOY APPROPRIATE CONTINGENCY MEASURES TO ADDRESS INADVERTENT DRILL FLUID RETURNS ON LAND OR UNDERWATER DURING THE DRILLING PROCESS. IN CASE OF INADVERTENT DRILL FLUID RETURNS, CONTINGENCY MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO DRILL FLUID IDENTIFICATION, CONTAINMENT, MITIGATION, EXTRACTION, STORAGE, TRANSPORTATION AND CLEAN-UP.

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	2 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:21 PM

Drawing No.
UG-EX-P4-201

UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:21 PM
GARDNER, ZACHARY

No.	Description	Date	By	Checked/Appr.
Project Number		0200157		B/M
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL
B	ISSUED FOR BID	07/15/22	AH	CL
		0200157		H&A
				JS,KP,ZG

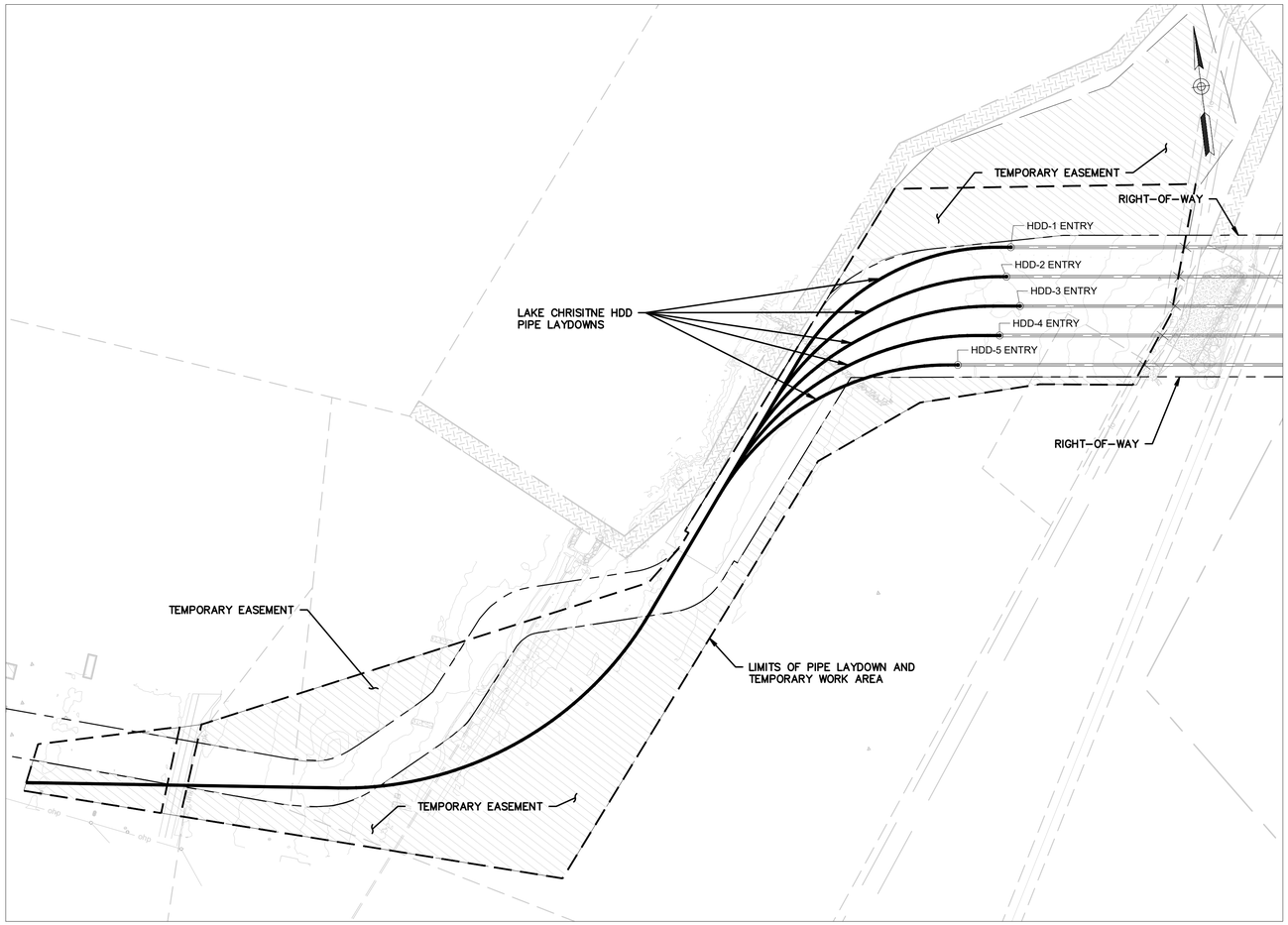
Revisions

GARDNER, ZACHARY

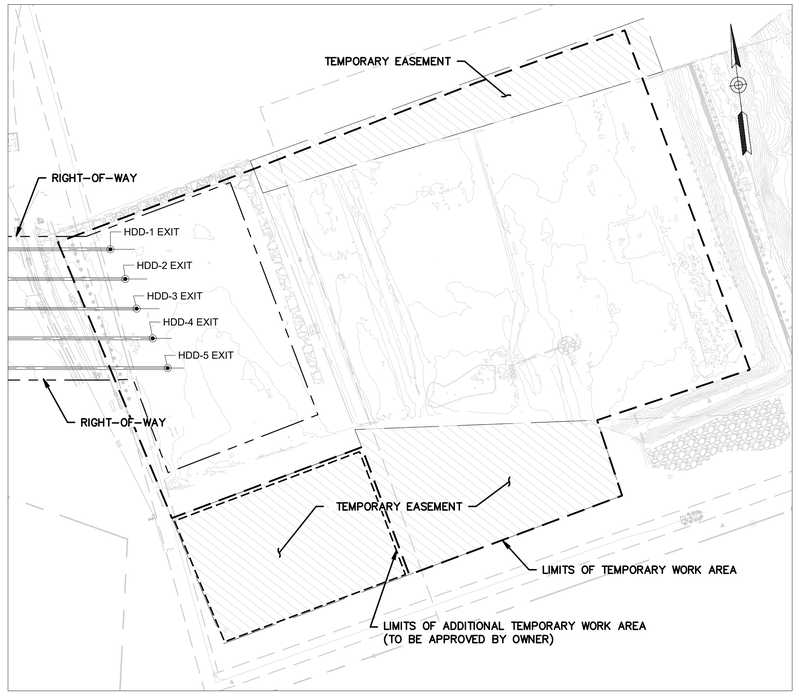
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "PIPE LAYDOWN AND HDD ENTRY TEMPORARY WORK AREA" PLAN VIEW



LAKE CHRISTINE "HDD 1 EXIT WORK AREA" PLAN VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
LAKE CHRISITNE PIPE LAYDOWN / WORK AREAS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	3 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
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Drawing No.
UG-EX-P4-202

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:21 PM
GARDNER, ZACHARY

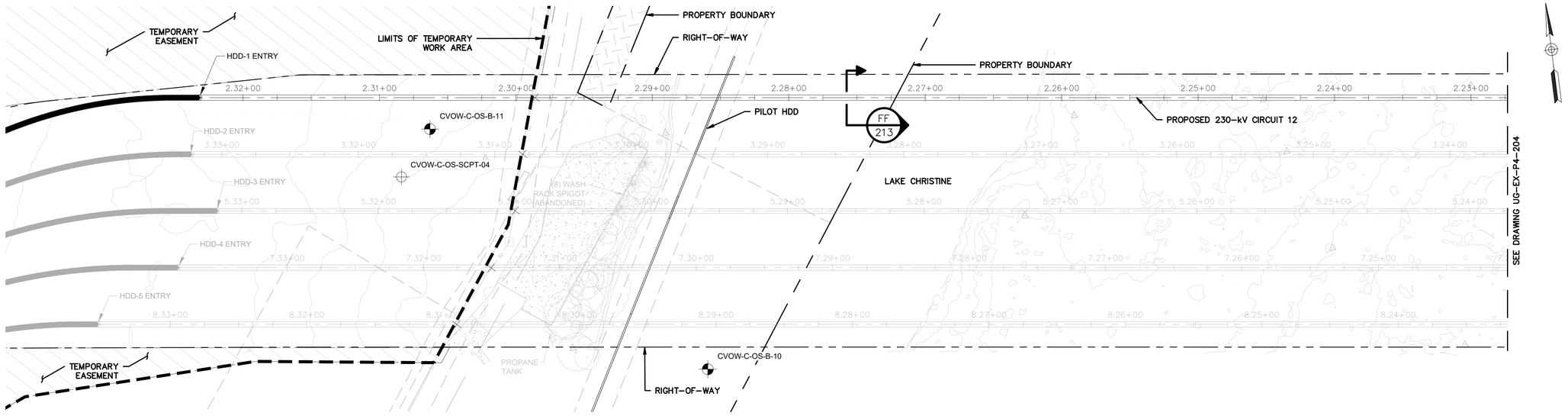
No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	JG,KP,ZG	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	AH CL	ISSUED FOR BID	0200157	H&A

Revisions

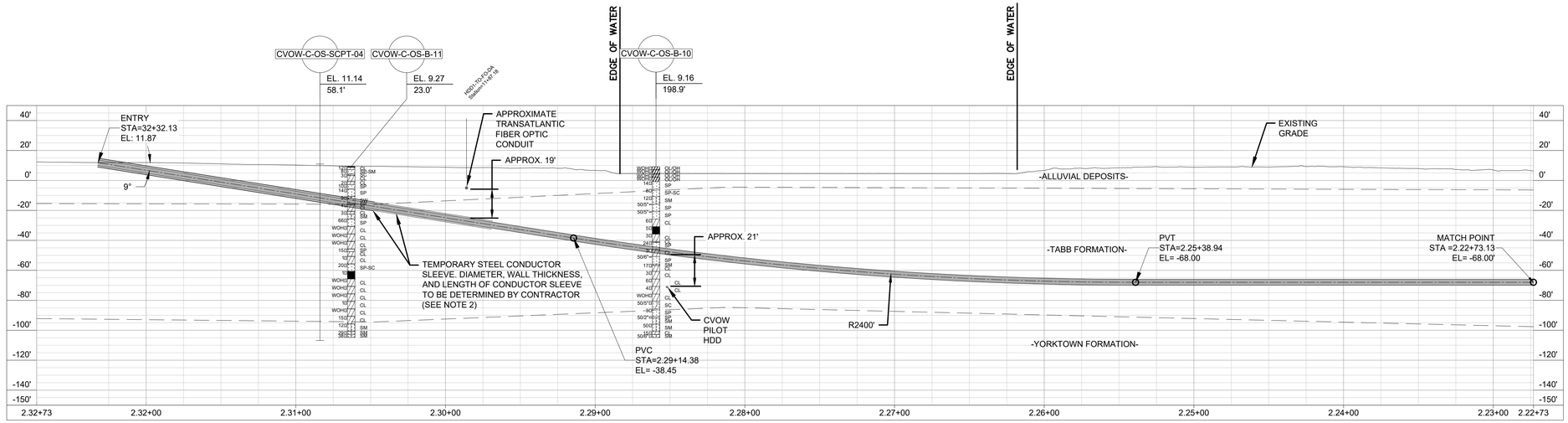
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 1 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 1 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-506 THROUGH UG-EX-P4-509.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 1 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	4 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
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Drawing No.
UG-EX-P4-203

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157
		AH		H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157
		AH		H&A
		CL		

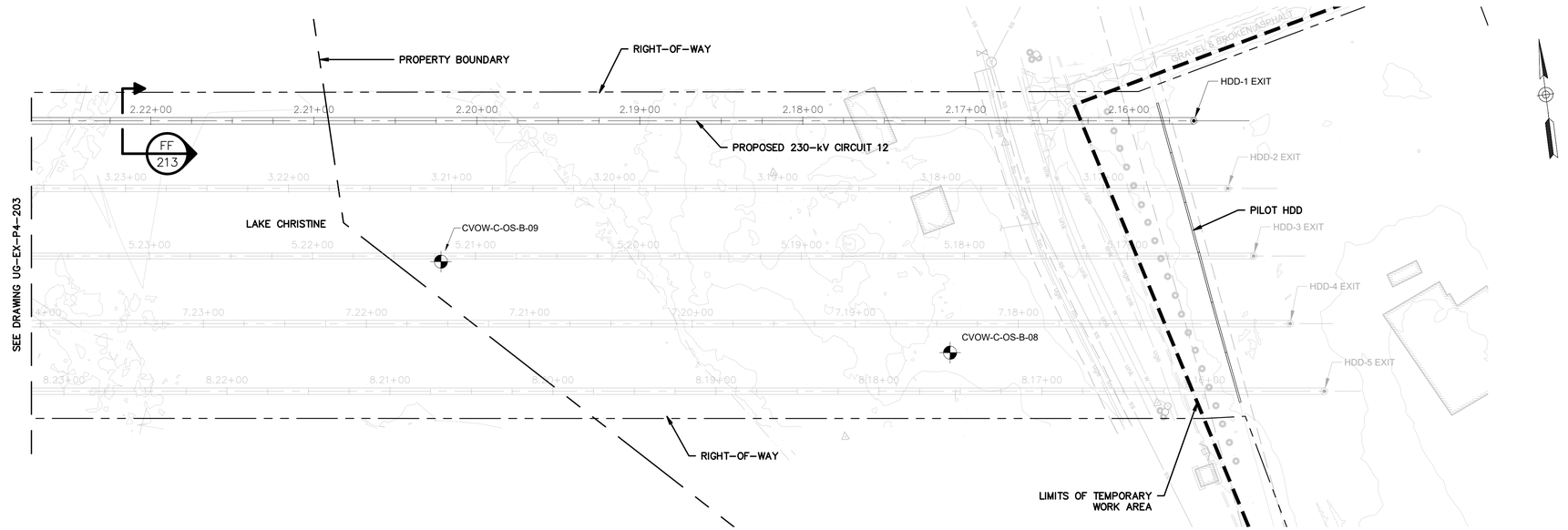
Revisions

GARDNER, ZACHARY

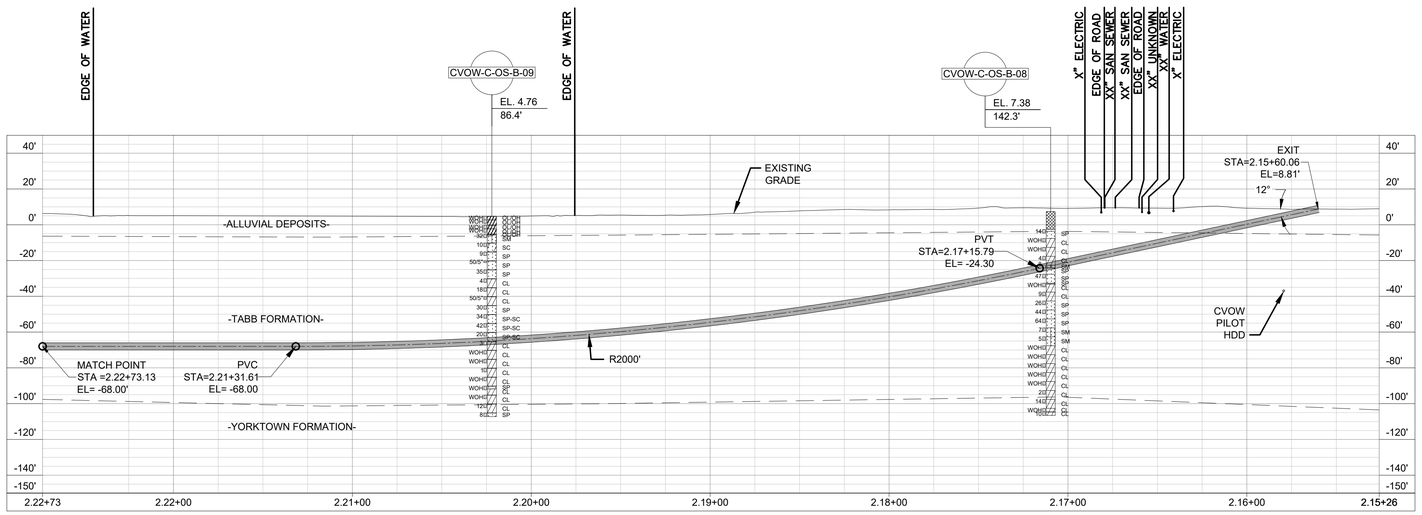
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 1 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 1 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-506 THROUGH UG-EX-P4-509.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0 40' 80'

VERTICAL SCALE IN FEET: 0 40' 80'

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 1 PLAN AND PROFILE (STA. 19+00 TO 27+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	5 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM

Drawing No. UG-EX-P4-204

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157 H&A
	AH	CL		

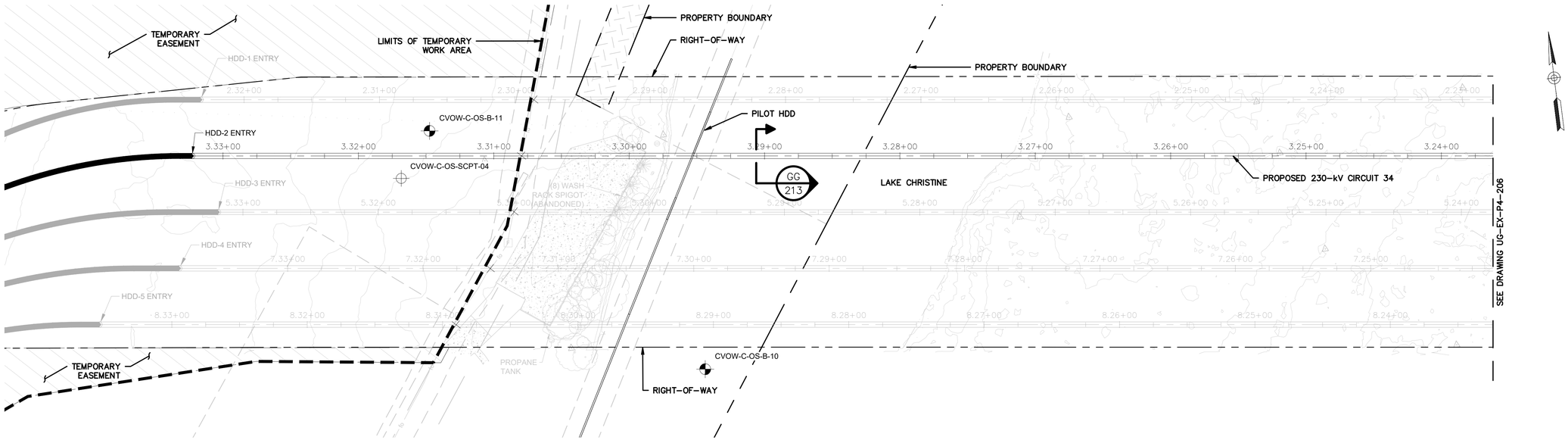
Revisions

GARDNER, ZACHARY

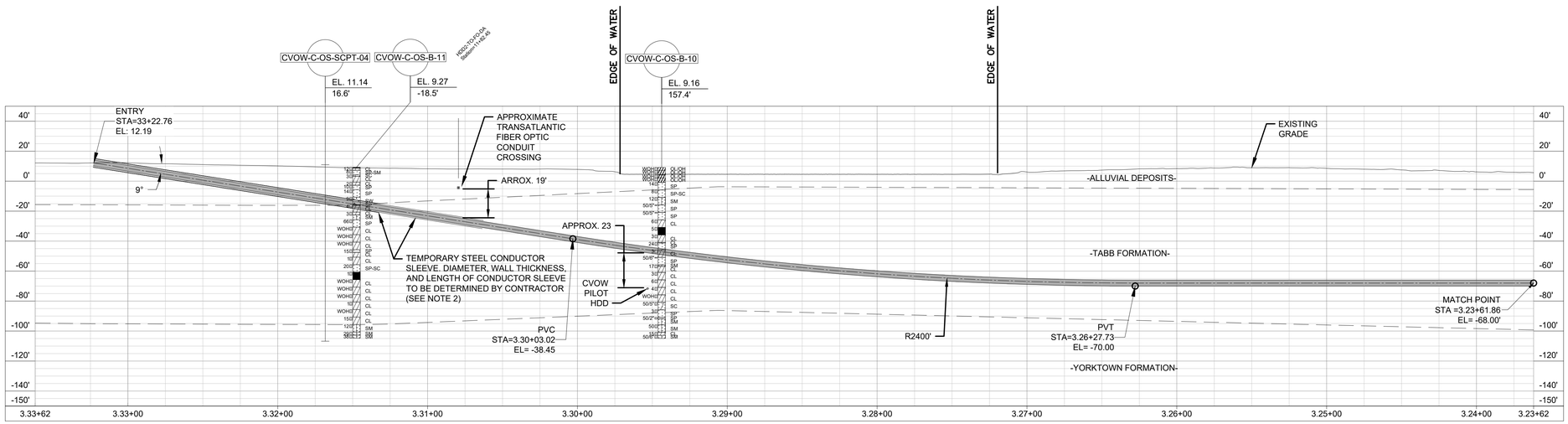
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 2 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 2 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-510 THROUGH UG-EX-P4-513.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 2 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	6 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
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Drawing No.
UG-EX-P4-205

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:22 PM
GARDNER, ZACHARY

No	Date	By	Description	Project Number	B/M
		Checked/Appr.			
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157	H&A

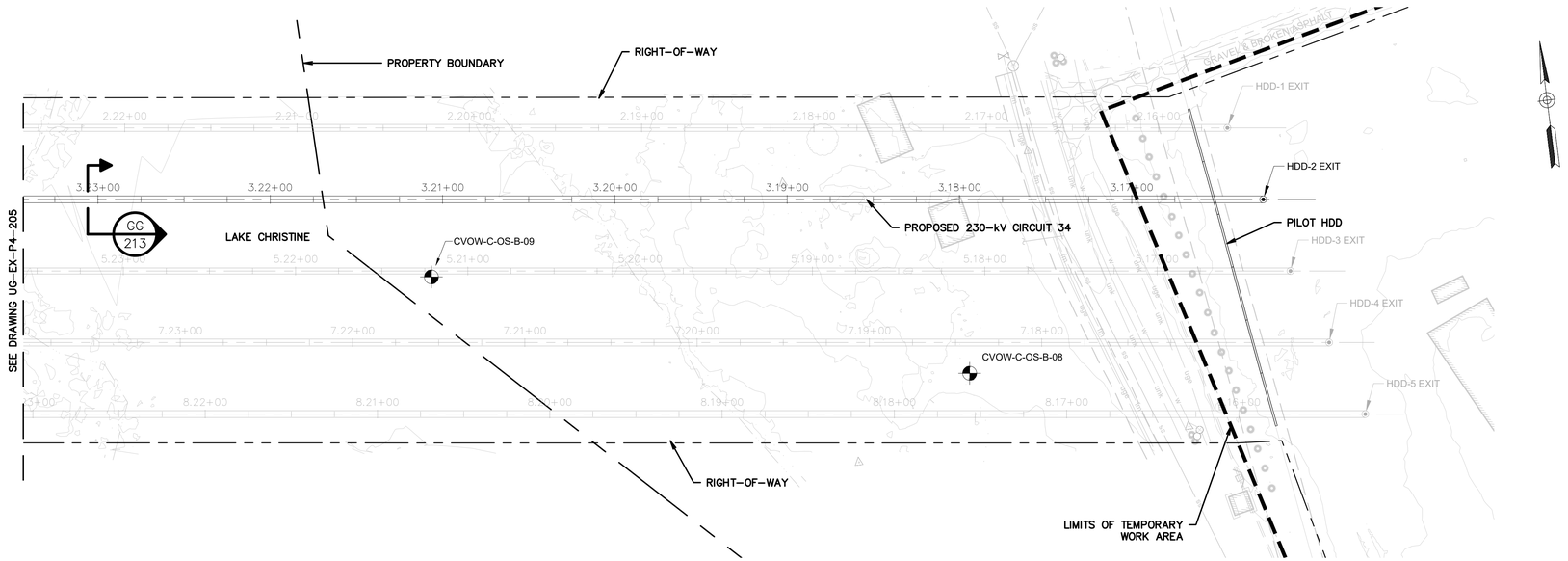
Revisions

GARDNER, ZACHARY

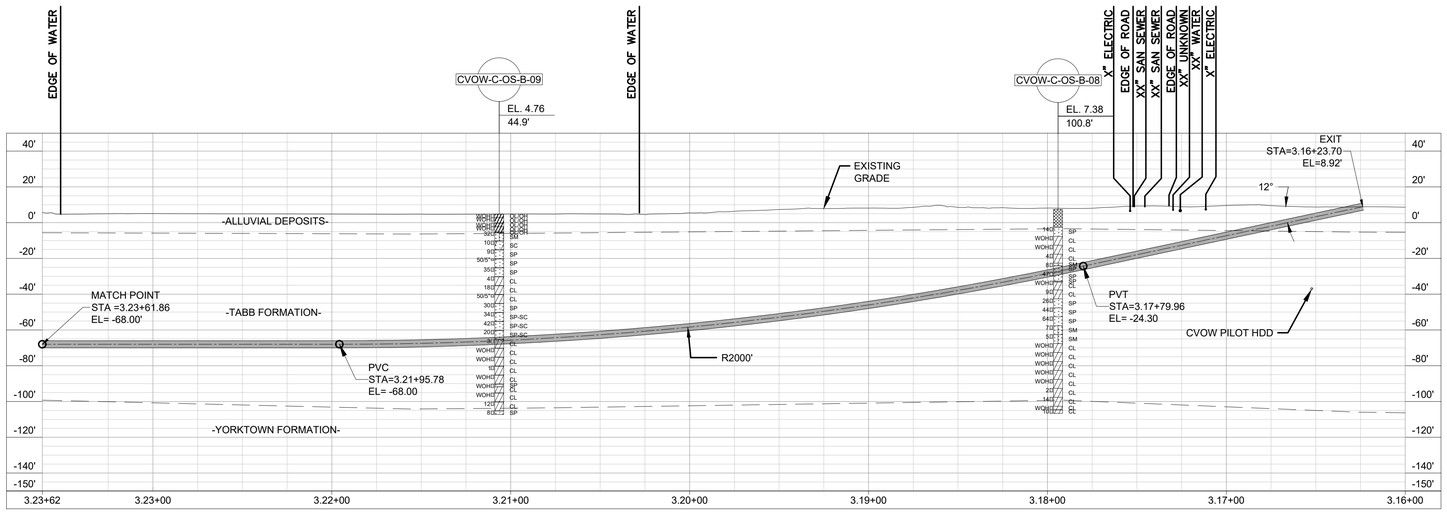
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 2 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 2 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-510 THROUGH UG-EX-P4-513.

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 2 PLAN AND PROFILE (STA. 19+00 TO 27+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	7 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM

Drawing No. UG-EX-P4-206

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 B/M H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

Revisions

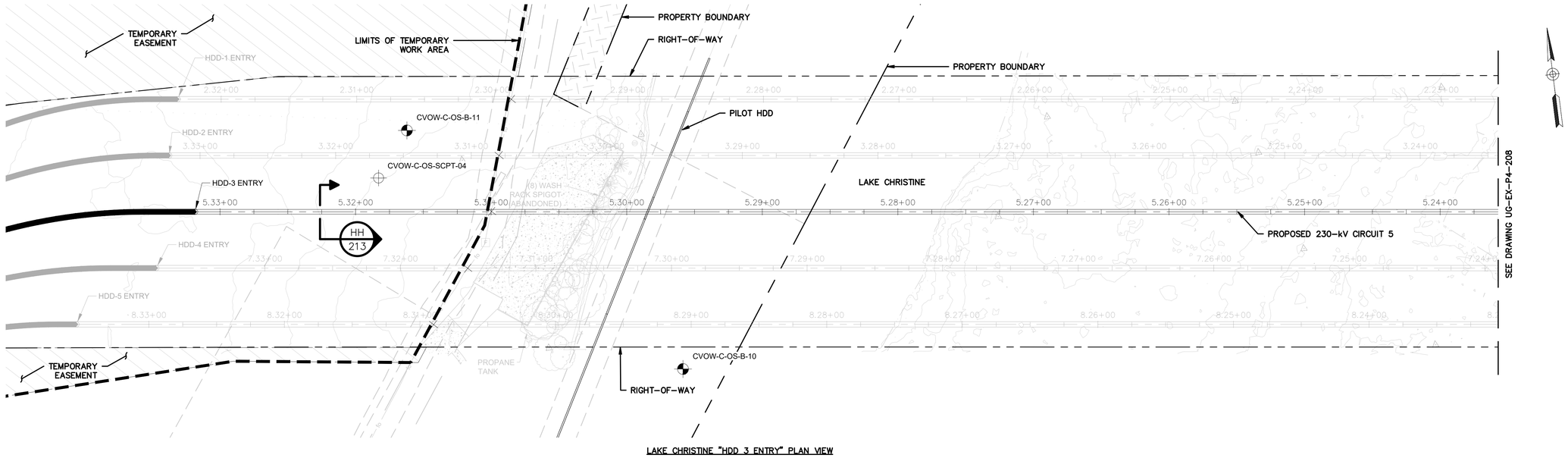
GARDNER, ZACHARY

Typical Drawing Information

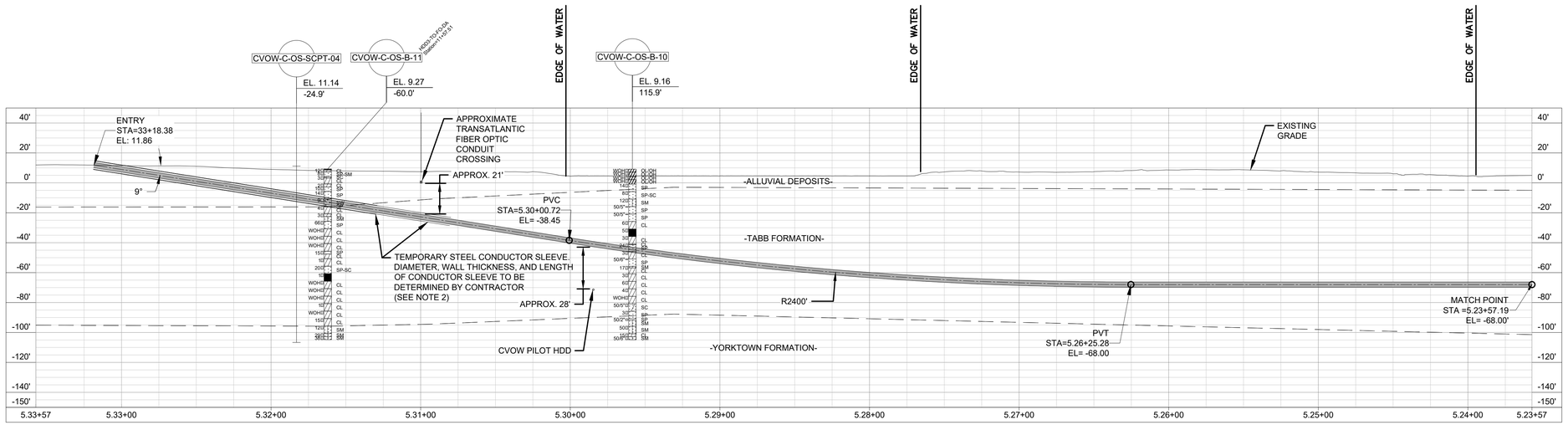
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 3 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 3 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-519 THROUGH UG-EX-P4-522.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

No.	Date	By	Description	Project Number
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 B/M H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A JG-KP-ZC

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier) (Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 3 PLAN AND PROFILE (STA. 08+00 TO 19+00)

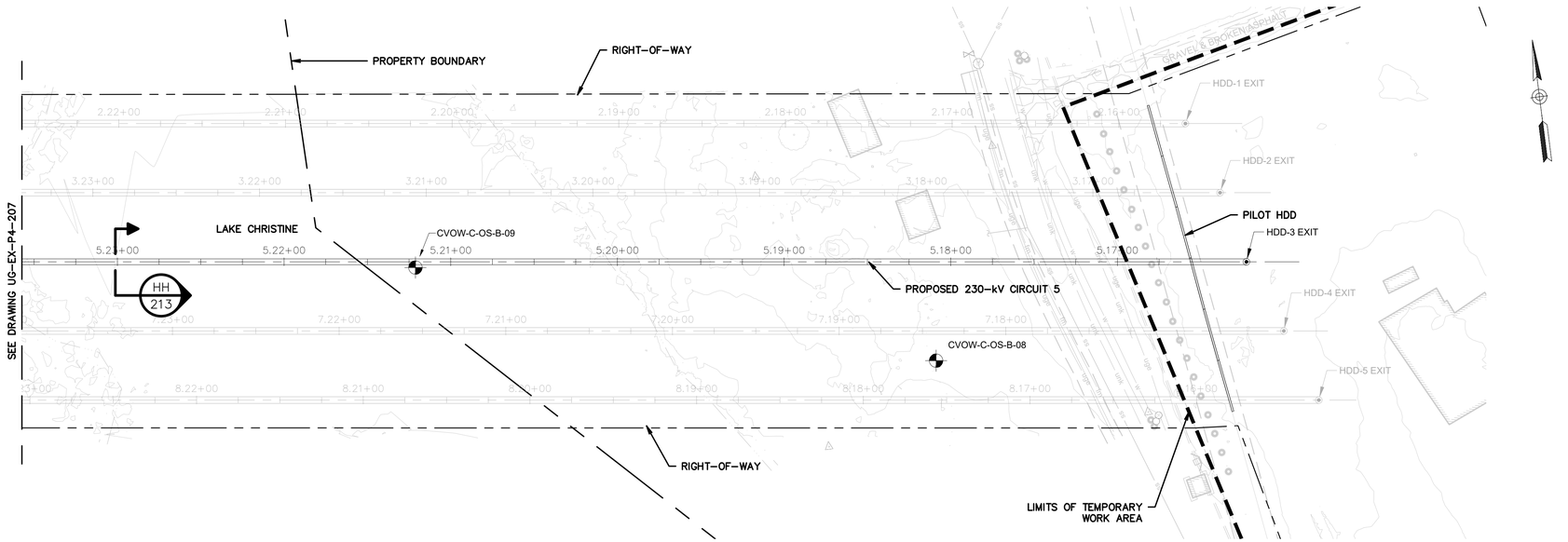
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	8 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM

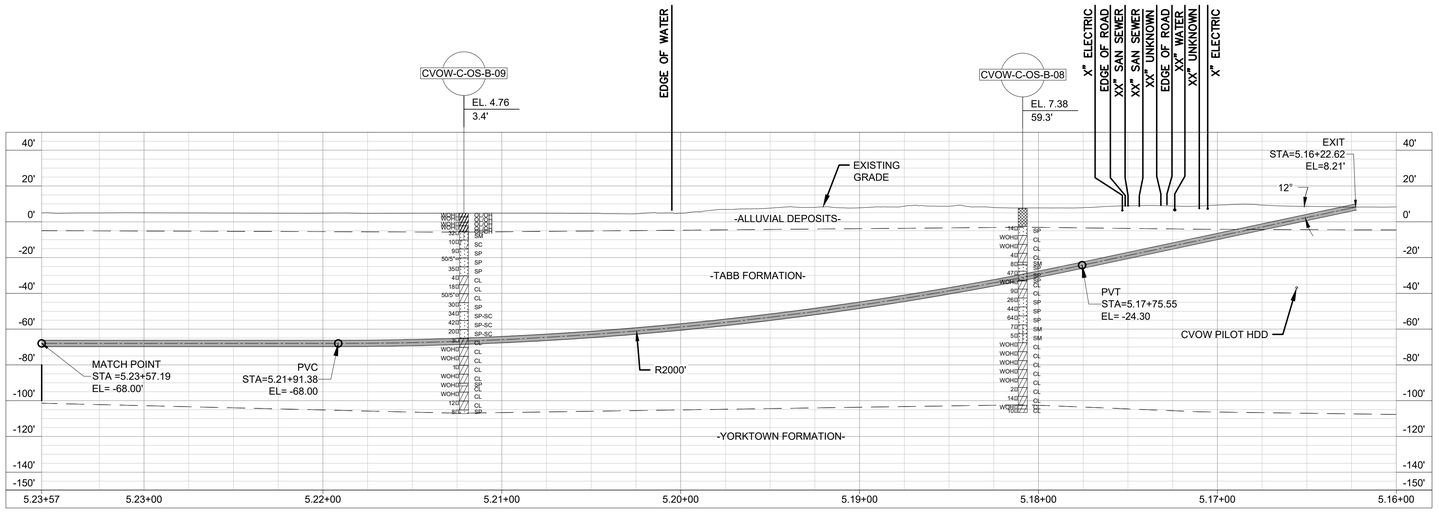
Drawing No.
UG-EX-P4-207

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 3 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 3 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-519 THROUGH UG-EX-P4-522.

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JCKP-ZC	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JCKP-ZC	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD3 PLAN AND PROFILE (STA. 19+00 TO 27+50)

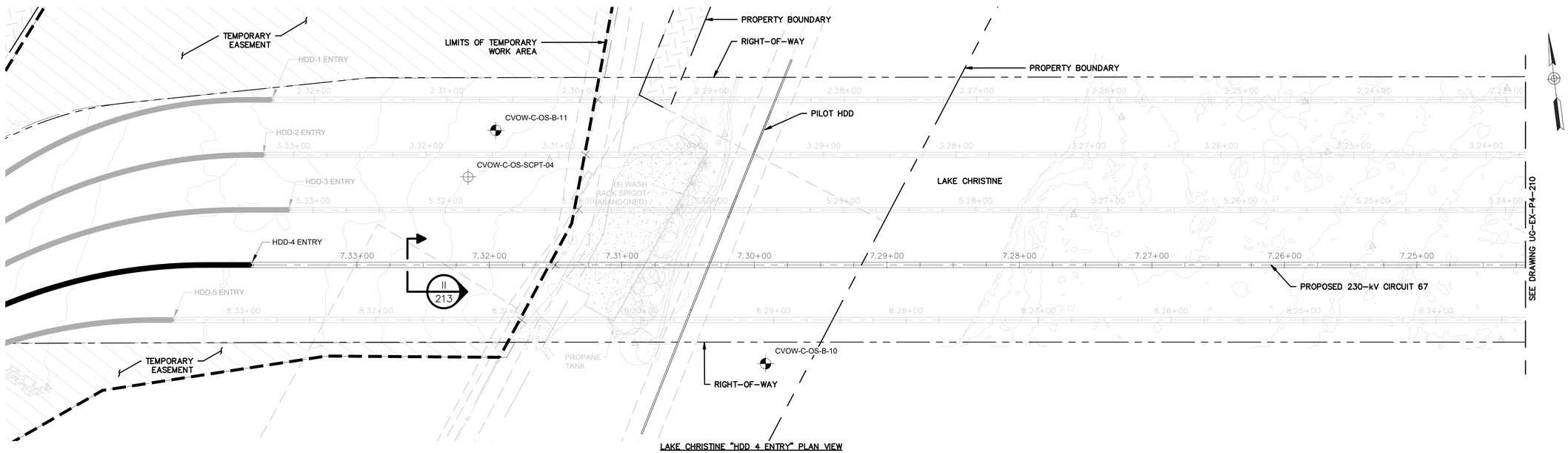
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	9 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM

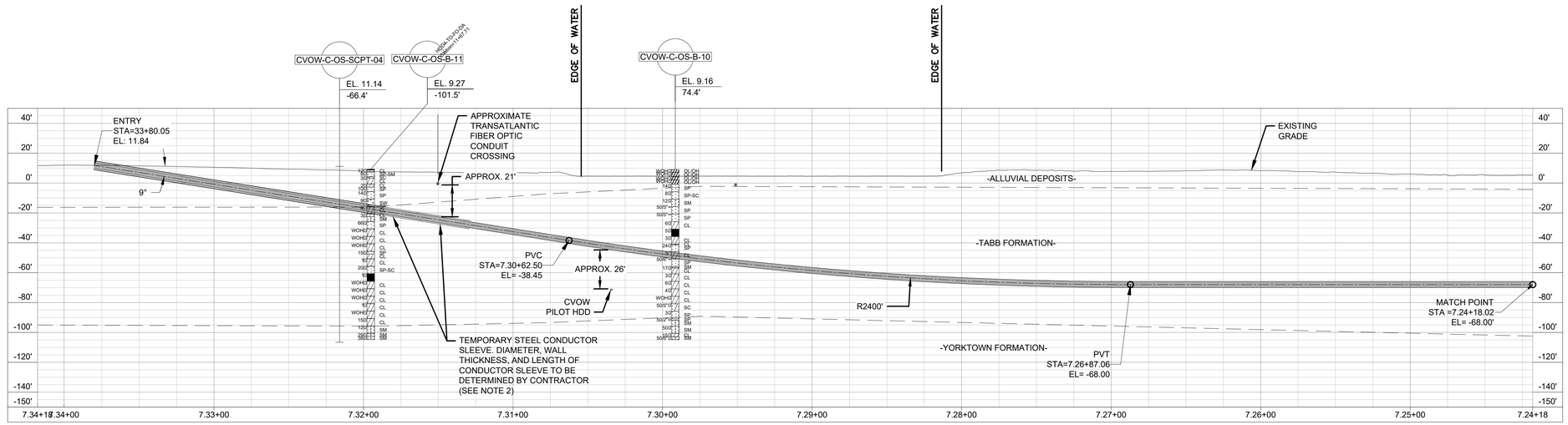
Drawing No. UG-EX-P4-208

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:23 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 4 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 4 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-523 THROUGH UG-EX-P4-526.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	10 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

Drawing No.
UG-EX-P4-209

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	AH CL	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A
		JG-KP-ZC		
		JG-KP-ZC		

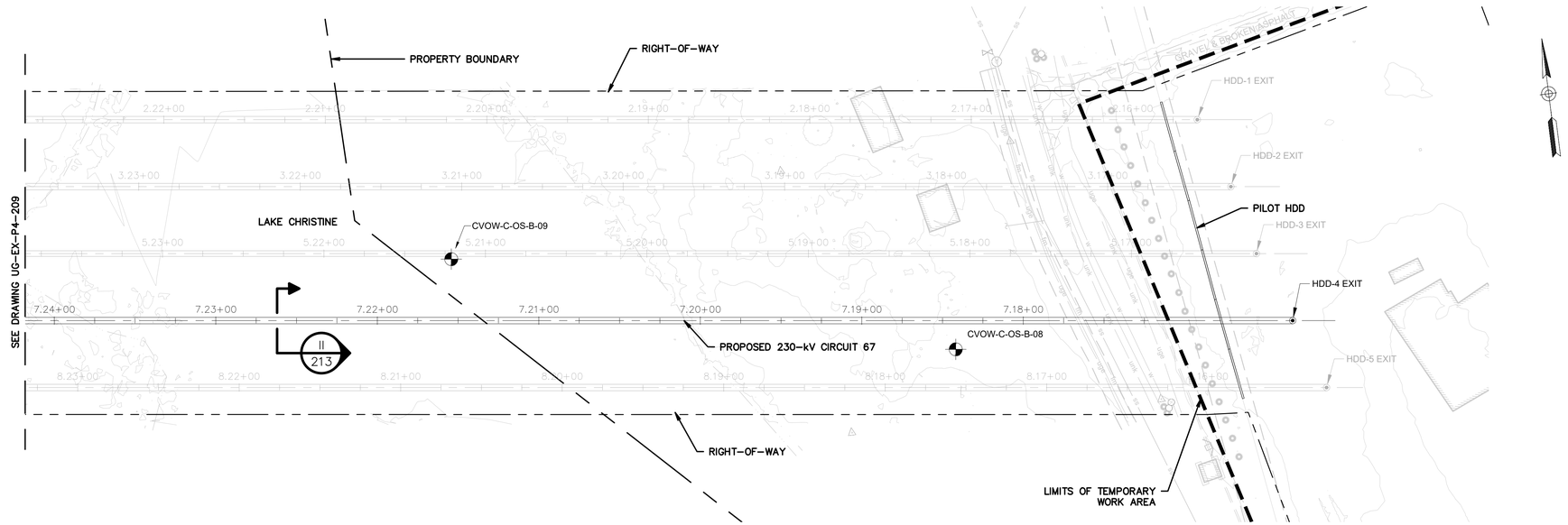
Revisions

GARDNER, ZACHARY

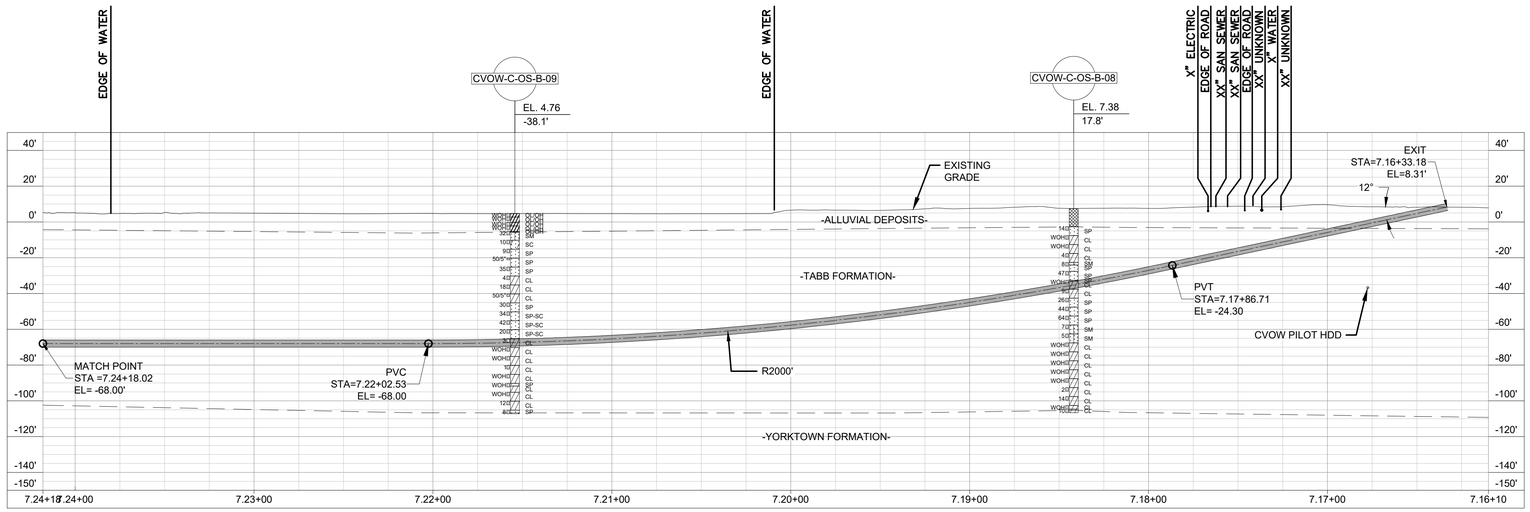
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 4 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-523 THROUGH UG-EX-P4-526.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET: 0 40' 80'

VERTICAL SCALE IN FEET: 0 40' 80'

No.	Date	By	Description	Project Number
	Checked/Appr.			
A	03/25/22	JCvKP-ZC	ISSUED FOR 60% REVIEW	0200157
	AH	CL		B/M
B	07/15/22	JCvKP-ZC	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

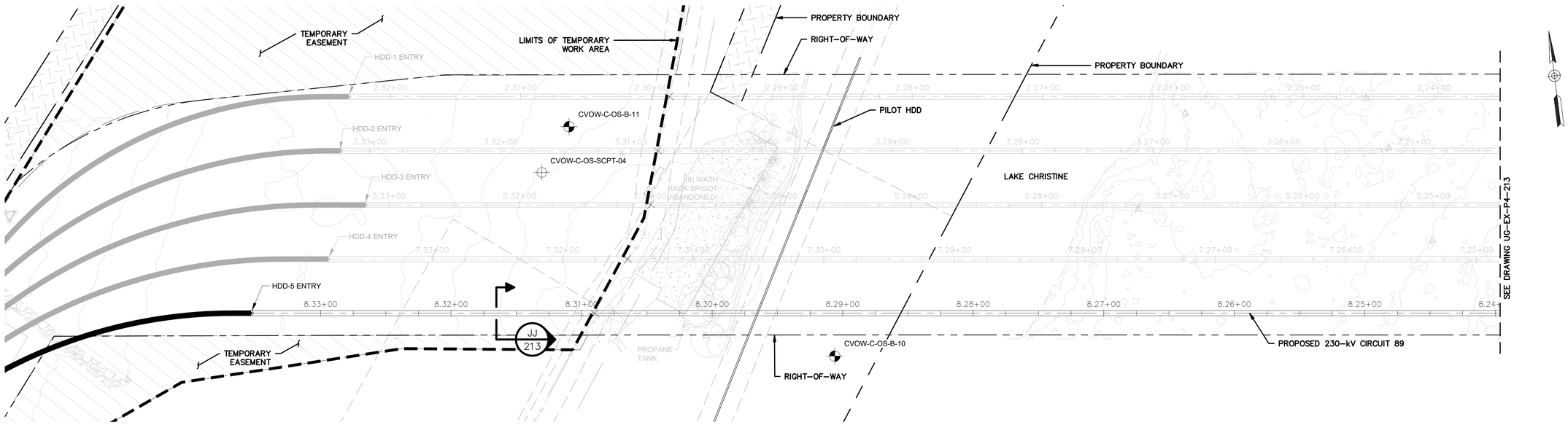
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	11 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

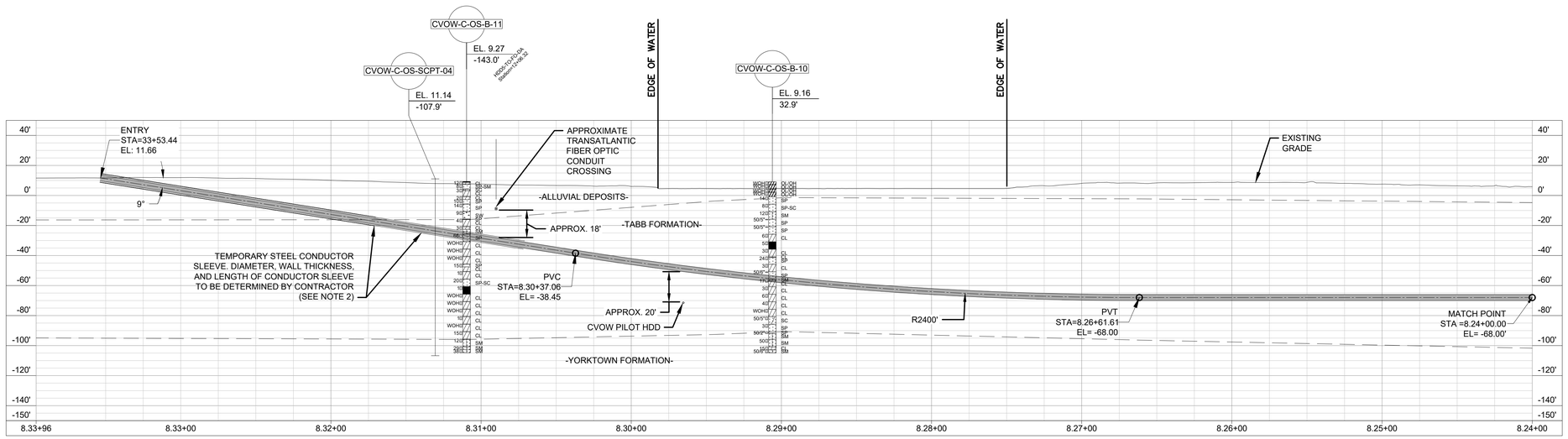
Drawing No. UG-EX-P4-210

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 5 ENTRY" PLAN VIEW



LAKE CHRISTINE "HDD 5 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-532 THROUGH UG-EX-P4-535.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE TEMPORARY STEEL SURFACE CASING PIPE AND THE HDPE CASING PIPE. THE FLOWABLE FILL SHALL BE OF SIMILAR STRENGTH AND THERMAL PROPERTIES AS THE NATIVE SUBSURFACE CONDITIONS AROUND THE TEMPORARY STEEL SURFACE CASING PIPE.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD 5 PLAN AND PROFILE (STA. 08+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	12 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
Drawing No. UG-EX-P4-211

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	CL	ISSUED FOR BID	0200157	H&A
		JG,KP,ZG			

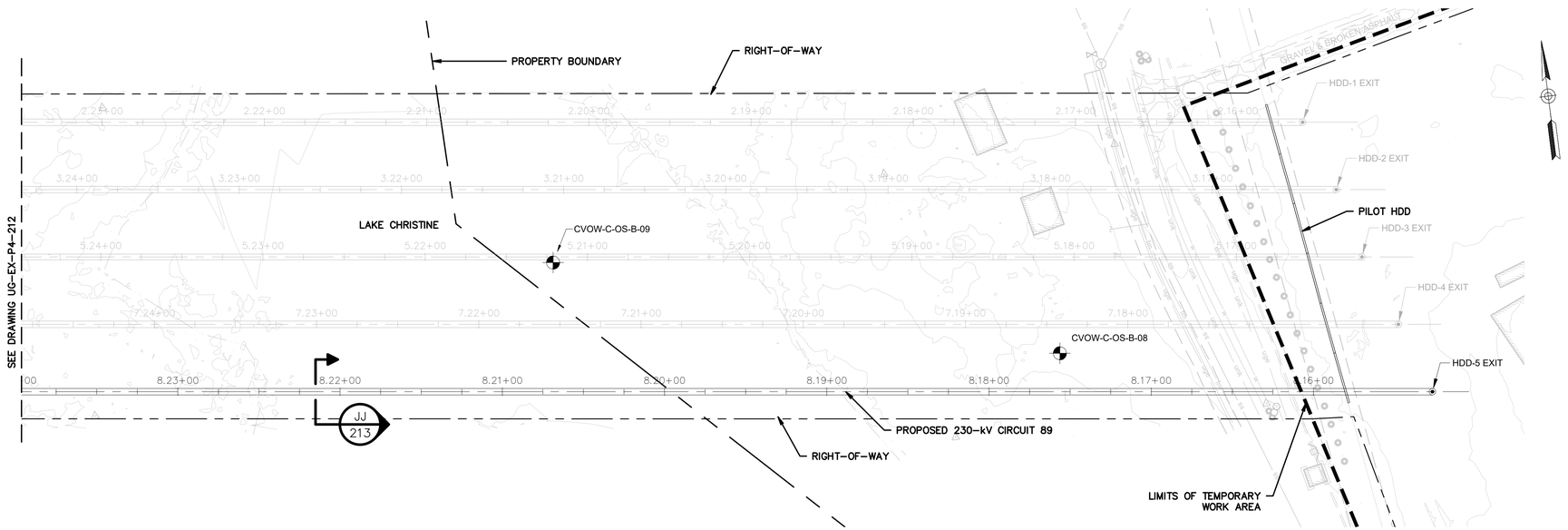
Revisions

GARDNER, ZACHARY

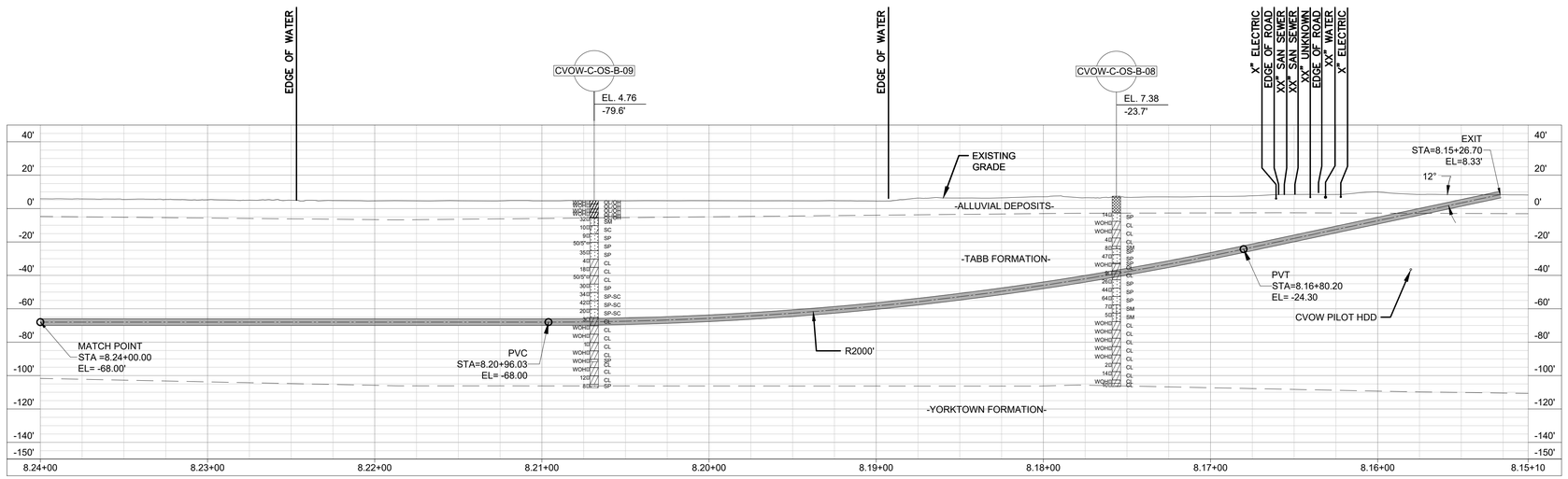
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LAKE CHRISTINE "HDD 5 EXIT" PLAN VIEW



LAKE CHRISTINE "HDD 5 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P4-532 THROUGH UG-EX-P4-535.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With CARE

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 4
HDD 5 PLAN AND PROFILE (STA. 19+00 TO 28+50)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	13 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM

Drawing No. UG-EX-P4-212

UG-EX-P4-202-212.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

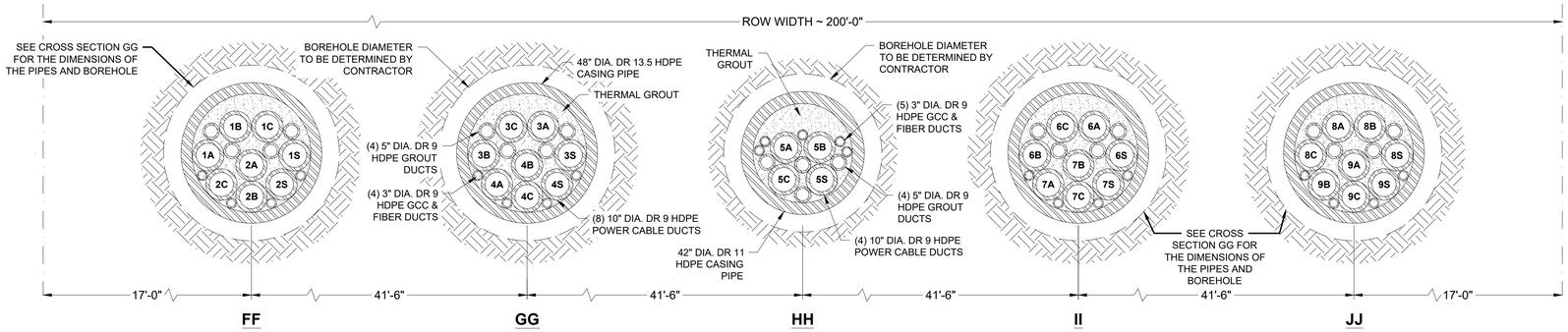
No.	Date	By	Description	Project Number
	Checked/Appr.		Revisions	
A	03/25/22	JC/KP-ZC	ISSUED FOR 60% REVIEW	0200157 B/M
	AH	CL		H&A
B	07/15/22	JC/KP-ZC	ISSUED FOR BID	0200157 B/M
	AH	CL		H&A

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



230-kV HDD INSTALLATION
CROSS-SECTION

CONDUIT CONFIGURATION FOR ONSHORE HDD INSTALLATIONS
NOT TO SCALE

NOTES:

1. TEMPORARY STEEL SURFACE CASING PIPE IS NOT SHOWN AS A PART OF THE CROSS SECTIONS. CONTRACTOR SHALL DETERMINE THE SIZE AND LENGTH OF THE TEMPORARY STEEL SURFACE CASING PIPE BASED ON THEIR MEANS AND METHODS AND UNINSTALL THEM UPON COMPLETION OF THE PROJECT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 4
HDD SECTIONS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/21/22	0200157	14 OF 14
Approvals	CL (H&A)	06/21/22	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P4-213.DWG
PLOTTED: 6/27/2022 2:24 PM
Drawing No. UG–EX–P4–213

UG–EX–P4–213.DWG
PLOTTED: 6/27/2022 2:24 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157 H&A
	AH	CL		
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157 H&A
	AH	CL		

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022

COASTAL VIRGINIA OFFSHORE WIND
230–kV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5 – TRENCHLESS DESIGN
PROJECT #0200157
VIRGINIA BEACH, VIRGINIA

NOT TO SCALE



ISSUED FOR BID
NOT FOR CONSTRUCTION

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
COVER SHEET

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	1 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:28 PM

Drawing No.
UG–EX–P5–200

UG–EX–P–200.DWG
PLOTTED: 6/27/2022 2:28 PM
GARDNER, ZACHARY

No.	Description	By	A.	03/25/2022	JGKP,ZG	B	07/15/2022	JGKP,ZG
			AH	CL.		AH	CL.	
	Project Number	B/M	0200157	H&A		0200157	H&A	
	Checked/Appr.		ISSUED FOR 60% REVIEW			ISSUED FOR BID		

Revisions

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

GARDNER, ZACHARY
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0200157\CAD

USACE-NLW
RCVD 7/15/2022

GENERAL NOTES:

1. SUBCONTRACTOR SHALL REFER TO THE NOTES ON SHEET XX OF THE DRAWING PACKAGE.
2. GENERAL EXISTING CONDITIONS REFERENCE BASEMAP ENTITLED "DOMINION ENERGY PROPOSED CVOW ROUTE PRELIMINARY STUDY MAP", REVISION 6, PREPARED BY DRAPER ADEN ASSOCIATES DATED 26 AUGUST 2021, RECEIVED BY BURNS & MCDONNELL.
3. PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAY INFORMATION REFERENCE BASEMAP ENTITLED "EASEMENT PLAT OF CAMP PENDLETON STATE MILITARY RESERVE GPIN: 2416853142000", PREPARED BY DRAPER ADEN ASSOCIATES DATED 07 SEPTEMBER 2021, RECEIVED BY BURNS & MCDONNELL.
4. WETLAND DELINEATIONS REFERENCE ELECTRONIC FILE ENTITLED "WETLANDS.DWG", PREPARED BY BURNS & MCDONNELL DATED 02 FEBRUARY 2022, RECEIVED BY BURNS & MCDONNELL.
5. EXISTING TOPOGRAPHY REFERENCES ELECTRONIC FILE ENTITLED "EXISTING GROUND SURFACE.DWG", PREPARED BY BURNS & MCDONNELL DATED 31 JANUARY 2022, RECEIVED BY BURNS & MCDONNELL.
6. EXISTING BATHYMETRY REFERENCES ELECTRONIC FILE ENTITLED "5827-00-DAM NECK.DWG", PREPARED BY WATERWAY SURVEY & ENGINEERING, LTD. DATED 25 AUGUST 2021, RECEIVED BY WATERWAY SURVEY & ENGINEERING, LTD.
7. EXISTING SUBMARINE CABLE UTILITY REFERENCES::
   - 7.1. DUNANT CABLE REFERENCES ELECTRONIC FILE ENTITLED "SUBMARINECABLES_DUNANT_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
   - 7.2. MAREA AND BRUSA REFERENCES THE FOLLOWING ELECTRONIC FILES ENTITLED:
     - 7.2.1. "SUBMARINECABLES_MAREA_BRUSA_20200319.SHP", BY RAMBOLL, DATED 19 MARCH 2020.
     - 7.2.2. "MAREA_VA_ASBUILT_MAREA_S01_NU002", BY FUGRO OSAE, DATED 23 FEBRUARY 2018.
8. BASEMAPPING SURVEYS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND THE NORTH AMERICAN DATUM OF 1983 (NAD83) VIRGINIA STATE PLANE, SOUTH ZONE, US FOOT.
9. PLACEHOLDER FOR UTILITY NOTE(S) FROM BURNS & MCDONNELL NOTES SHEET
10. LIMITS OF THE WORK ARE INDICATED ON THE DRAWINGS. CONFINE ALL SITE ACTIVITIES WITHIN THE WORK AREAS INDICATED. ADDITIONAL CONSTRUCTION AREAS REQUIRED TO COMPLETE THE WORK, BUT NOT WITHIN THE LIMITS INDICATED, SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. A GEOTECHNICAL DATA REPORT HAS BEEN PREPARED FOR THIS PROJECT TITLED "GEOTECHNICAL DATA REPORT, COASTAL VIRGINIA OFFSHORE WIND – COMMERICAL PROJECT, (CVOW-C) 230 KV XLPE, VIRGINIA BEACH, VIRGINIA", PREPARED BY HALEY & ALDRICH, INC., DATED XX XXXX 2022.
12. PRIOR TO STARTING CONSTRUCTION, INCLUDING MOBILIZATION, CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS HAVE BEEN ACTIVATED. THE FOLLOWING PERMITS ARE REQUIRED FOR THIS PROJECT:
    - 12.1. USACE PERMITS
    - 12.2. CITY OF ____
    - 12.3. COUNTY OF ____
    - 12.4. DEWATERING PERMITS
    - 12.5. OTHERS TO BE DETERMINED____
8. OTHER FACILITIES MAY EXIST. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, BOTH VERTICAL AND HORIZONTAL, OF ALL UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY COMPANIES. CONTRACTOR SHALL CONTACT VIRGINIA 811 (VA811). THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXISTENCE OF OTHER UTILITIES; THEIR EXACT LOCATION AND TO AVOID DAMAGE THERE TO. THE OWNER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
9. PLACEHOLDER FOR UXO CLEARANCE
10. CONTRACTOR TO MAINTAIN SAFE DISTANCE REQUIREMENTS FOR ALL THE ABOVE GROUND POWER DISTRIBUTION AND TRANSMISSION WIRES AND STRUCTURES.
11. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES, PAVEMENT, FENCING, LANDSCAPING AND SIDEWALKS. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE ROADS AND NEARBY PUBLIC AND PRIVATE PROPERTY FROM ANY SITE CONSTRUCTION/EQUIPMENT DAMAGE CAUSED BY THE CONTRACTOR'S EQUIPMENT. ALL DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. REMOVE AND STORE ANY FENCING OR OTHER ITEMS NEEDED TO BE TEMPORARILY REMOVED TO PERFORM THE WORK AND RETURN TO THE ORIGINAL CONDITION AT THE COMPLETION OF ALL WORK. PERMANENT FENCING REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE ORIGINAL LOCATION AND CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL PREPARE THE WORK AREAS AND WORKING SURFACES IN ACCORDANCE WITH THE SOIL AND EROSION CONTROL DRAWINGS AND THE STORMWATER POLLUTION PREVENTION PLAN FOR THE PROJECT.
13. CONTRACTOR SHALL CLEAR VEGETATION AND TREES WITHIN THE LIMITS OF WORK AS DIRECTED BY THE OWNER.
14. THE CONTRACTOR IS RESPONSIBLE FOR BUILDING TEMPORARY WORK AREAS, PIPE ASSEMBLY AREAS OR OTHER SUPPORTIVE STRUCTURES FOR DRILLING PURPOSES, IF NECESSARY. SUCH STRUCTURES SHALL BE REMOVED BY THE CONTRACTOR AT THE COMPLETION OF THE WORK, UNLESS DIRECTED OTHERWISE BY THE OWNER. SITE RESTORATION IS THE CONTRACTOR'S RESPONSIBILITY IN ACCORDANCE WITH PROJECT PERMITS, LANDOWNER CONDITIONS AND RESTORATION REQUIREMENTS.
15. ALL TEMPORARY CONSTRUCTION UTILITY CONNECTIONS SHALL BE APPROVED AND PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
16. UTILITIES, IF ANY, THAT ARE NOT TO BE DEMOLISHED AND ARE EXPOSED DURING EXCAVATION SHALL BE SUPPORTED, BRACED OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
17. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS DESIGNATED FOR REMOVAL FROM THE PROJECT SITE, UNLESS DIRECTED OTHERWISE BY THE OWNER.
18. THE CONTRACTOR SHALL PERFORM THE WORK IN SUCH A MANNER THAT THE SAFETY OF THE WORKERS IS ASSURED. THIS SHALL INCLUDE PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
19. PLACE ALL SAFETY DEVICES, CONSTRUCTION ROAD SIGNING, AND CONSTRUCTION SIGNING PRIOR TO ANY SITE MOBILIZATION, CONSTRUCTION, EXCAVATION AND DRILLING. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FLAG PERSONS FOR MOBILIZATION OF TRUCKS, EQUIPMENT AND PERSONNEL, AS NEEDED. PROPERLY SECURE WORK AREAS AT THE END OF EACH WORKDAY.

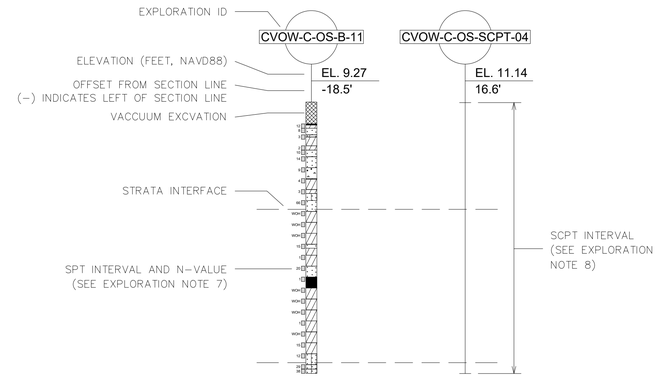
DIRECT PIPE NOTES:

1. PLACEHOLDER – TBD

EXPLORATION NOTES:

1. NINE (9) NEAR SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY AQUIFER DRILLING AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
2. THIRTY (30) ON SHORE STANDARD PENETRATION TEST EXPLORATIONS WERE PERFORMED BY PARRATT-WOLFF, INC. AND LOGGED BY A HALEY & ALDRICH, INC. REPRESENTATIVE.
3. SIX (6) SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATIONS WERE PERFORMED BY CONETEC.
4. LOGS OF SUBSURFACE EXPLORATIONS DEPICT SOIL AND SEDIMENT CONDITIONS ONLY AT THE LOCATIONS SPECIFIED ON THE DATES INDICATED. SUBSURFACE CONDITIONS MAY VARY AT OTHER LOCATIONS AND AT OTHER TIMES.
5. THE STRATIFICATION LINES DESIGNATING THE INTERFACE BETWEEN SOIL AND/OR SEDIMENT TYPES ON SOIL PROFILES ARE BASED UPON INTERPOLATION BETWEEN BORINGS SHOWN ON THE PROFILE AND OTHER AVAILABLE SURFACE INFORMATION. THE INTERFACE LINES ARE INTENDED TO SHOW THE GENERAL SEQUENCE STRATA AND MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS.
6. THE OFFSET DISTANCES INDICATED ON THE EXPLORATION STICKS ARE MEASURED FROM THE PLAN LOCATION OF THE PROFILE ALIGNMENT, PERPENDICULAR TO THE ALIGNMENT.
7. THE STANDARD PENETRATION RESISTANCE, "N", IS DEFINED AS THE NUMBER OF BLOWS OF A 140-LB HAMMER FALLING A VERTICAL DISTANCE OF 30 INCHES REQUIRED TO DRIVE A 2-INCH O.D. 1-3/8-INCH I.D. SPLIT-SPOON SAMPLER 12 INCHES.
8. SCPT EXPLORATIONS SHOWN ON PROFILES REPRESENT LOCATION AND FINAL DEPTH OF THE TEST PERFORMED. CONE RESISTANCE AND OTHER TEST DATA NOT SHOWN FOR SIMPLICITY. REFER TO GENERAL NOTE 11 FOR GEOTECHNICAL DATA REPORT REFERENCES.

PROFILE EXPLORATION STICK AND SOIL LEGEND:



GW		WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
GP		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
GM		SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
GC		CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
SW		WELL GRADED SANDS, GRAVELLY SANDS
SP		POORLY GRADED SANDS, GRAVELLY SANDS
SM		SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
SC		CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
OL		ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH		INORGANIC SILTY, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT		PEAT AND OTHER HIGHLY ORGANIC SOILS
BR		BEDROCK
NR		NO RECOVERY

ABBREVIATIONS:

OS	ON SHORE
NS	NEAR SHORE
WOH	WEIGHT OF HAMMER
STA	STATION
EL	ELEVATION
R	RADIUS
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY

LEGEND:

CVOW-C-OS-B-##	DESIGNATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST EXPLORATION PERFORMED (SEE EXPLORATION NOTE 1 AND 2)
CVOW-C-OS-SCPT-##	DESIGNATION AND APPROXIMATE LOCATION OF SEISMIC CONE PENETROMETER TEST (SCPT) EXPLORATION PERFORMED (SEE NOTE 3)

PLACEHOLDER FOR LEGEND ITEMS FROM BURNS & MCDONNELL BASEMAPPING

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HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
GENERAL NOTES AND LEGEND

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	03/25/22	0200157	2 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
			B/M No.	Revisions

Cad File Name UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:28 PM

Drawing No.
UG-EX-P5-201

UG-EX-P-201.DWG
PLOTTED: 6/27/2022 2:28 PM
GARDNER, ZACHARY

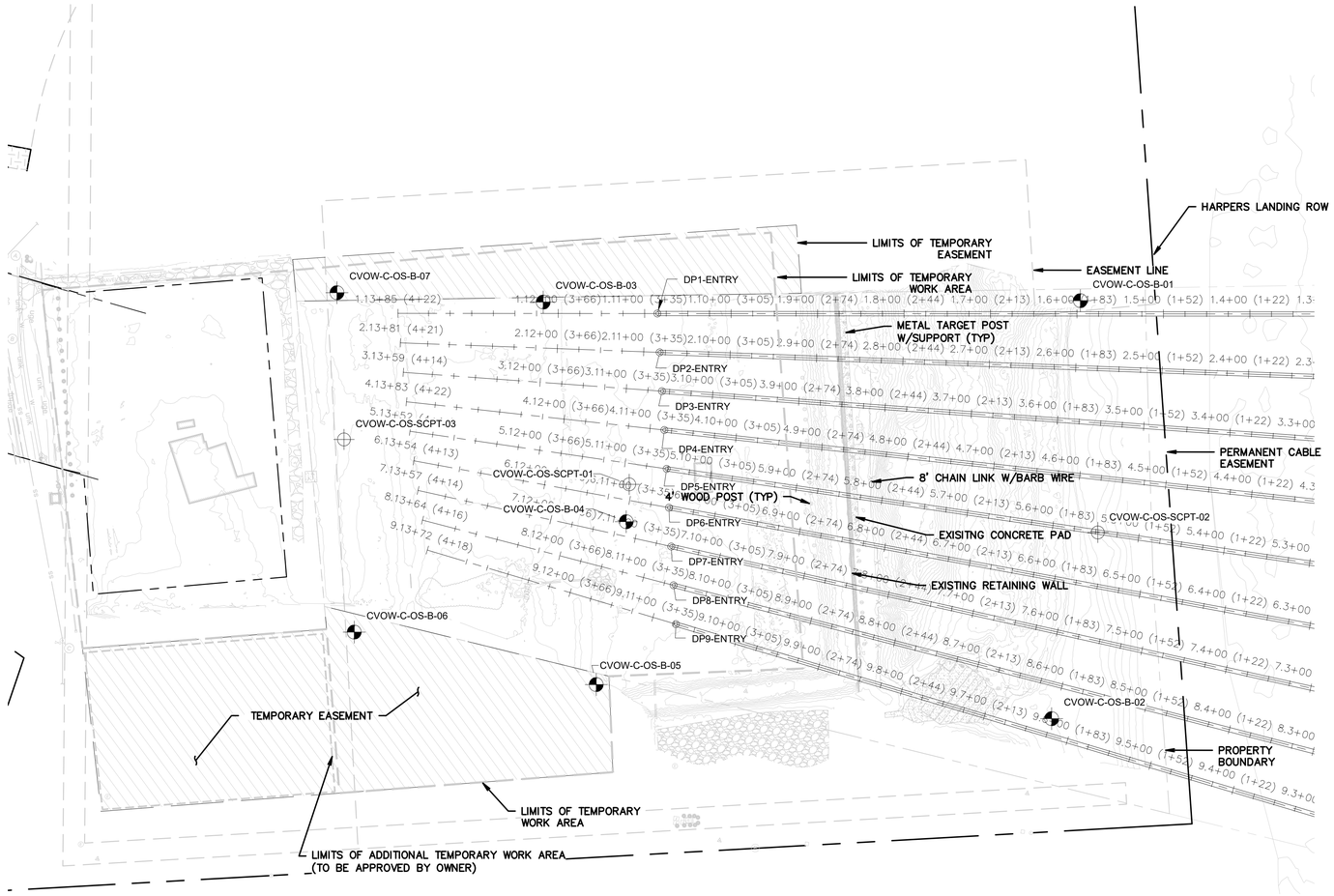
No.	Description	Date	By	Checked/Appr.	Project Number
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL	0200157 H&A
B	ISSUED FOR BID	07/15/22	AH	CL	0200157 H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 1 ENTRY TEMPORARY WORK AREA" PLAN VIEW

No	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL	ISSUED FOR BID	0200157 H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures		Steel Detail & Assembly
					(Pier)	(Spread)	

NOTES:

1. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN THE OWNER-PROVIDED EASEMENT.

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
LANDFALL ENTRY WORK AREA

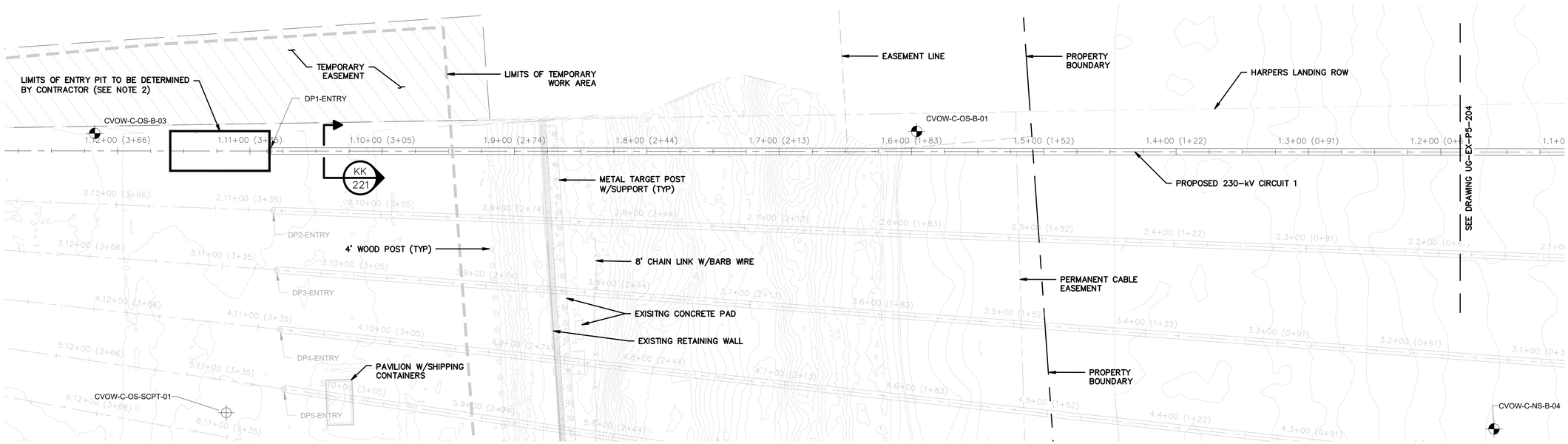
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	3 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM

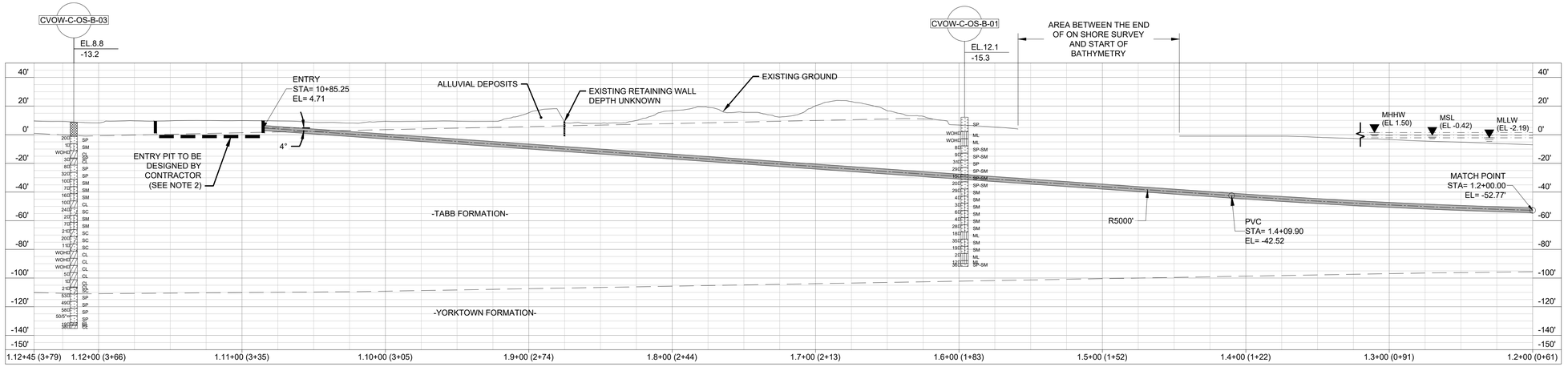
Drawing No.
UG-EX-P5-202

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 1 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 1 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-001 AND UG-EX-P5-002.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN THE OWNER-PROVIDED EASEMENT.

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NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 1 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	4 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No. UG-EX-P5-203

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY

No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	JGKP-ZG	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP-ZG	AH CL.	ISSUED FOR BID	0200157	H&A

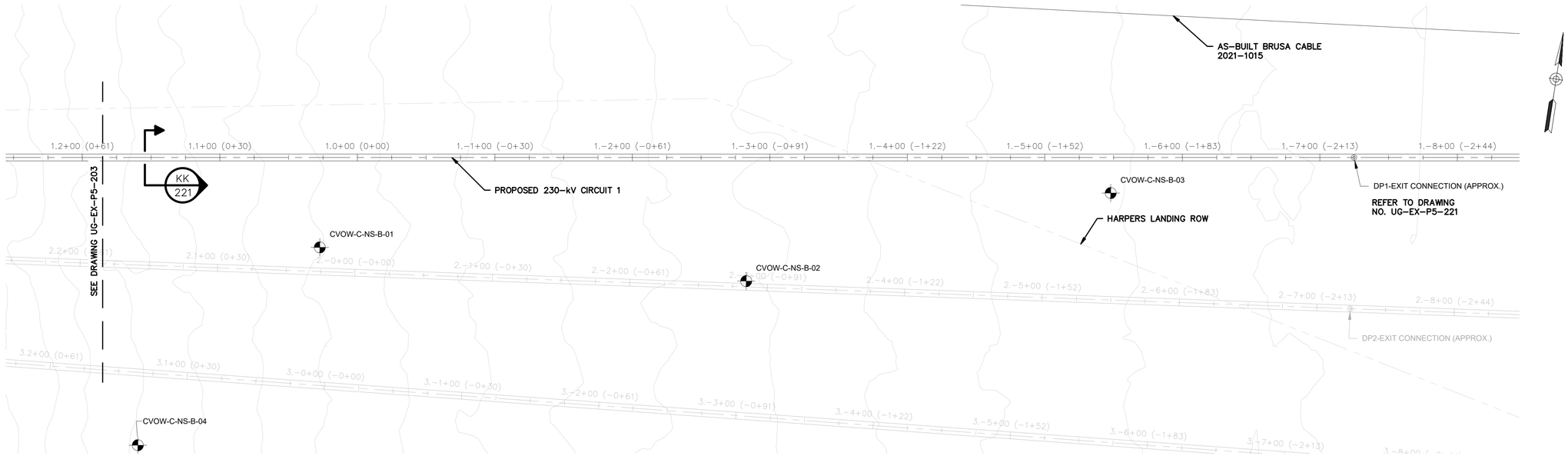
Revisions

GARDNER, ZACHARY

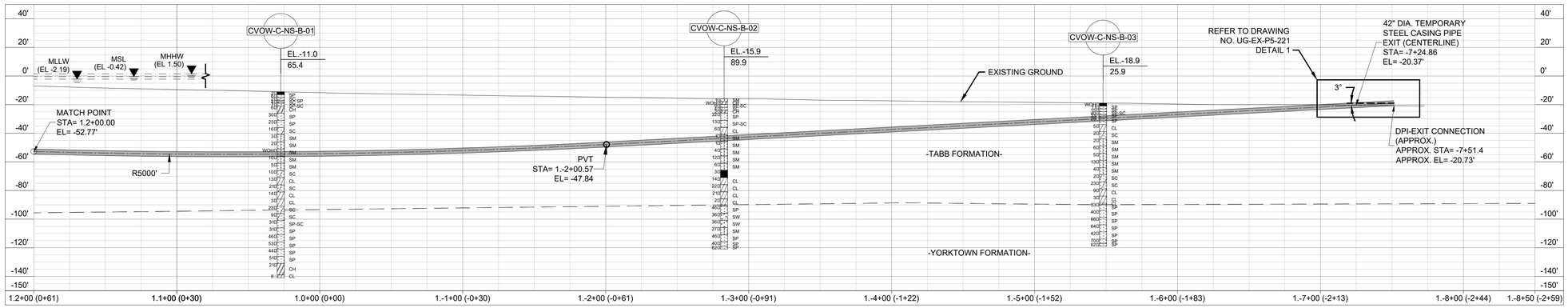
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 1 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 1 EXIT" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-001 AND UG-EX-P5-002.

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 1 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	5 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM

Drawing No.
UG-EX-P5-204

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:29 PM
GARDNER, ZACHARY

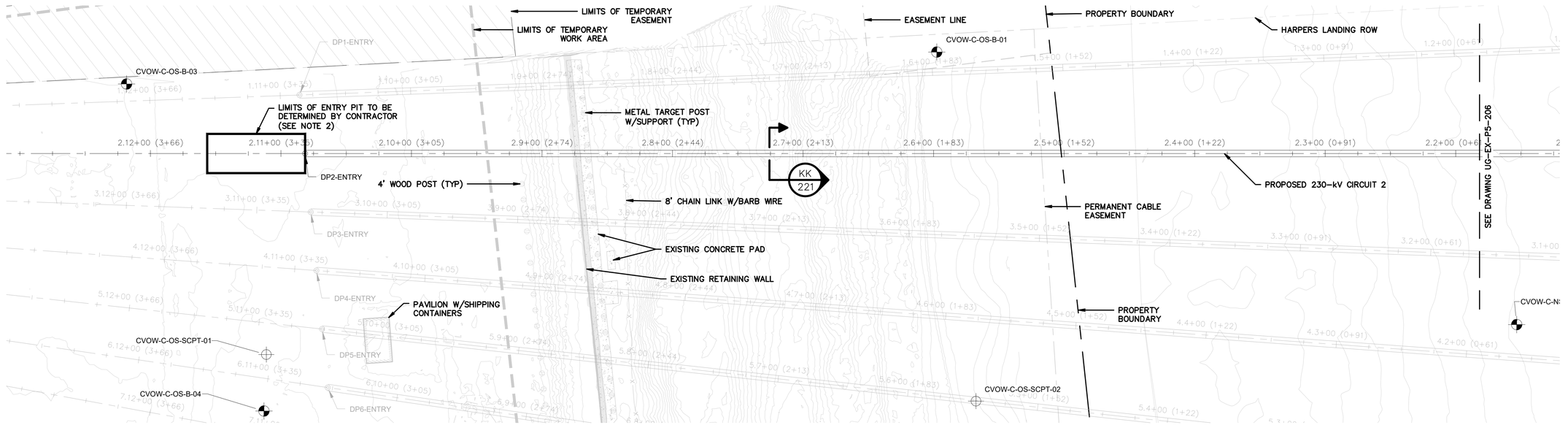
No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	JG,KP,ZG	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	AH CL	ISSUED FOR BID	0200157	H&A

Revisions

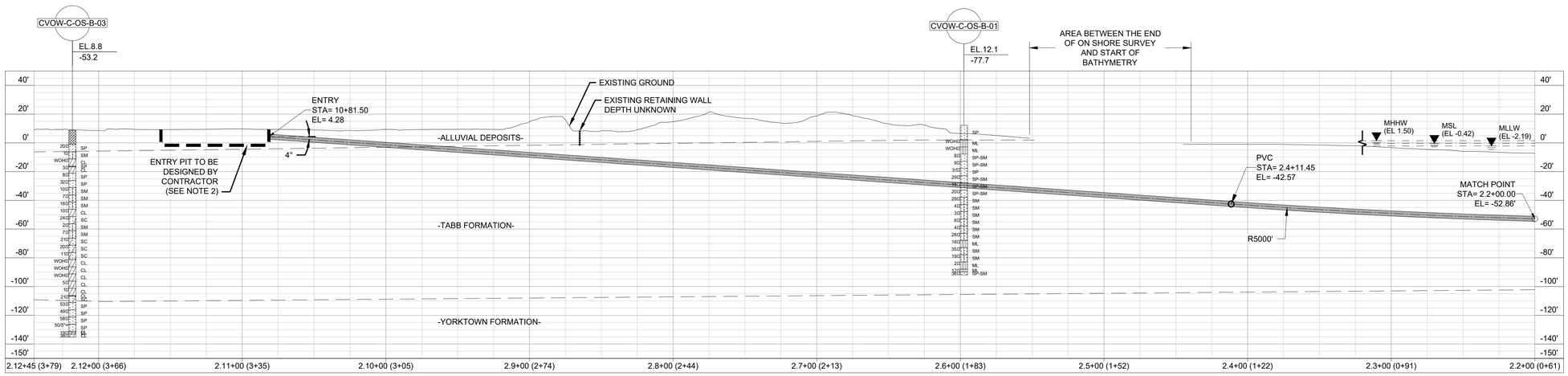
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 2 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 2 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-003 AND UG-EX-P5-004.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 2 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	6 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM

Drawing No. UG-EX-P5-205

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	B/M
A	03/25/22	JG/KP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG/KP-ZG	ISSUED FOR BID	0200157	H&A

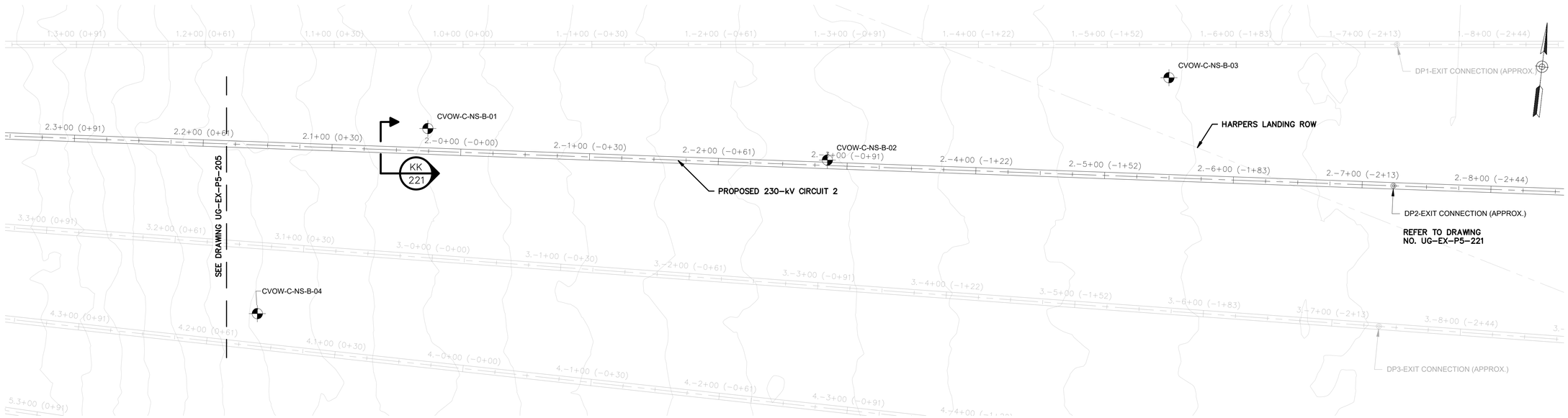
Revisions

GARDNER, ZACHARY

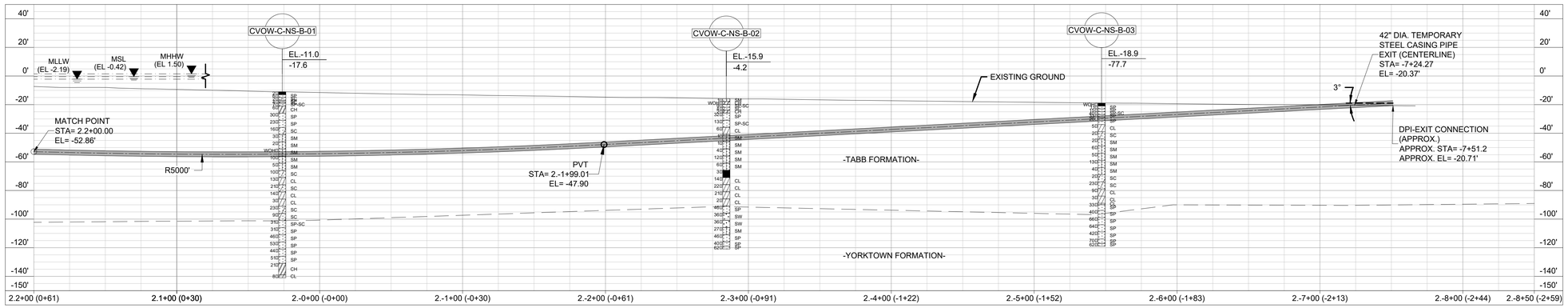
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 2 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 2 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-003 AND UG-EX-P5-004.

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0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 2 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	7 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM

Drawing No. UG-EX-P5-206

No.	Date	By	Description	Project Number	B/M
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B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157	H&A

Revisions

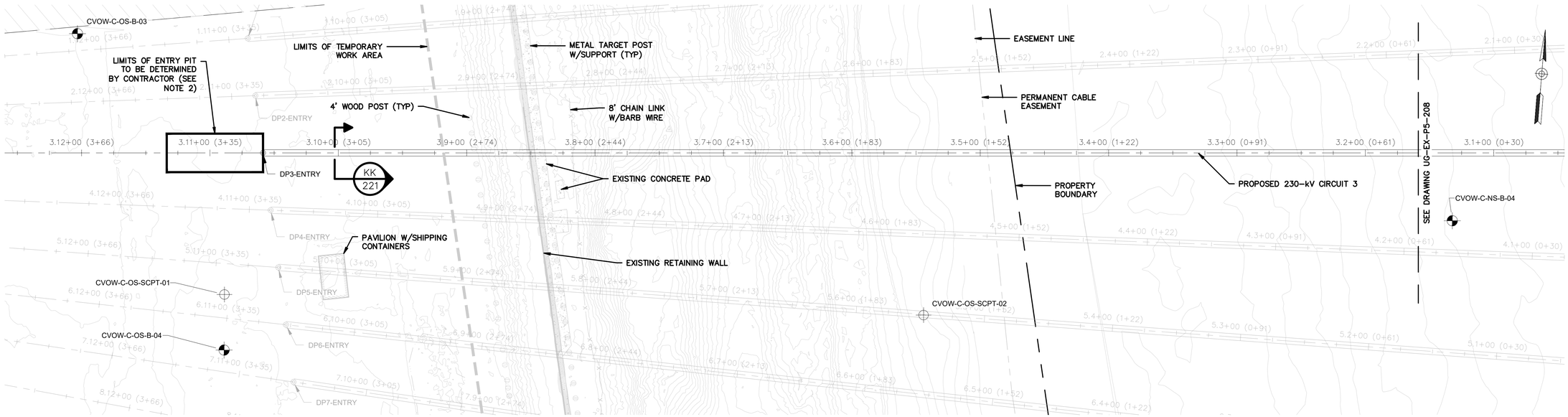
GARDNER, ZACHARY

Typical Drawing Information

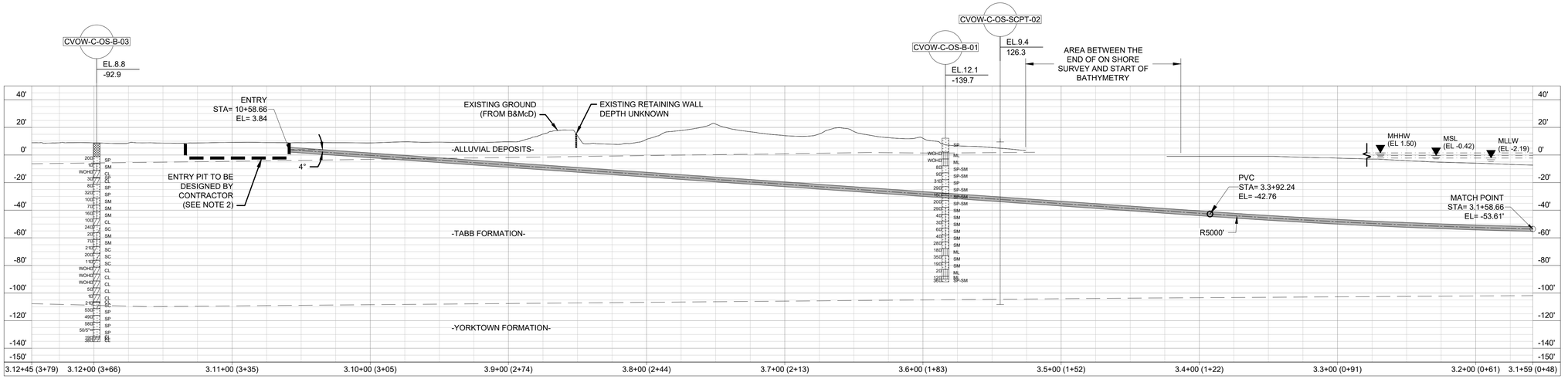
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:30 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 3 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 3 ENTRY" PROFILE VIEW

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-005 AND UG-EX-P5-006.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 3 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	8 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM

Drawing No.
UG-EX-P5-207

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM
GARDNER, ZACHARY

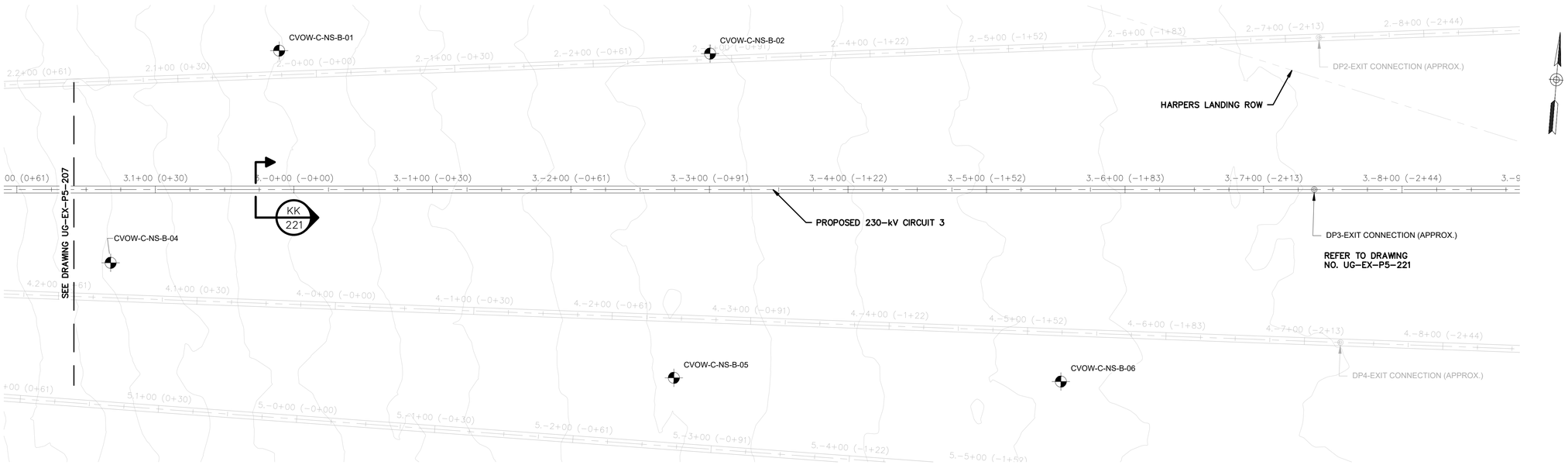
No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	JG,KP,ZG	AH CL	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	AH CL	ISSUED FOR BID	0200157	H&A

Revisions

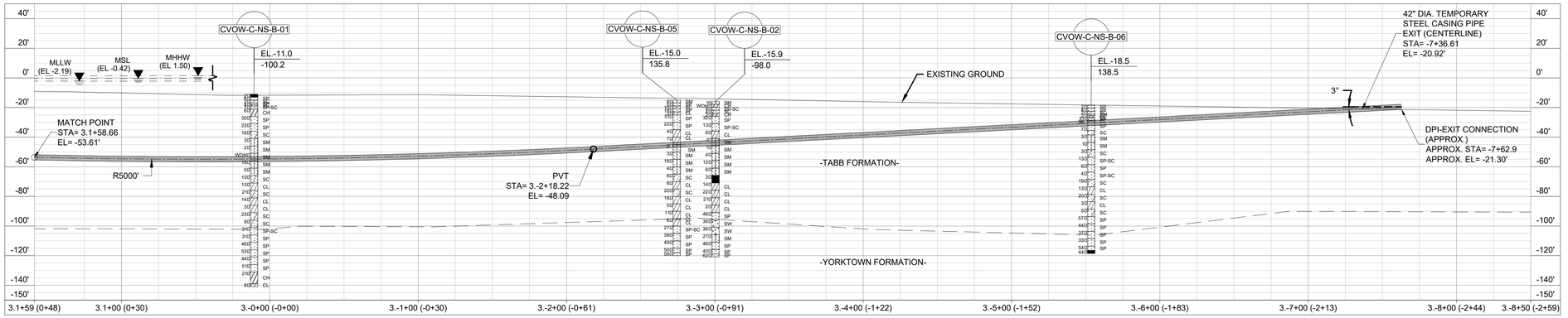
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 3 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 3 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-005 AND UG-EX-P5-006.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 3 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	9 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM
Drawing No. UG-EX-P5-208

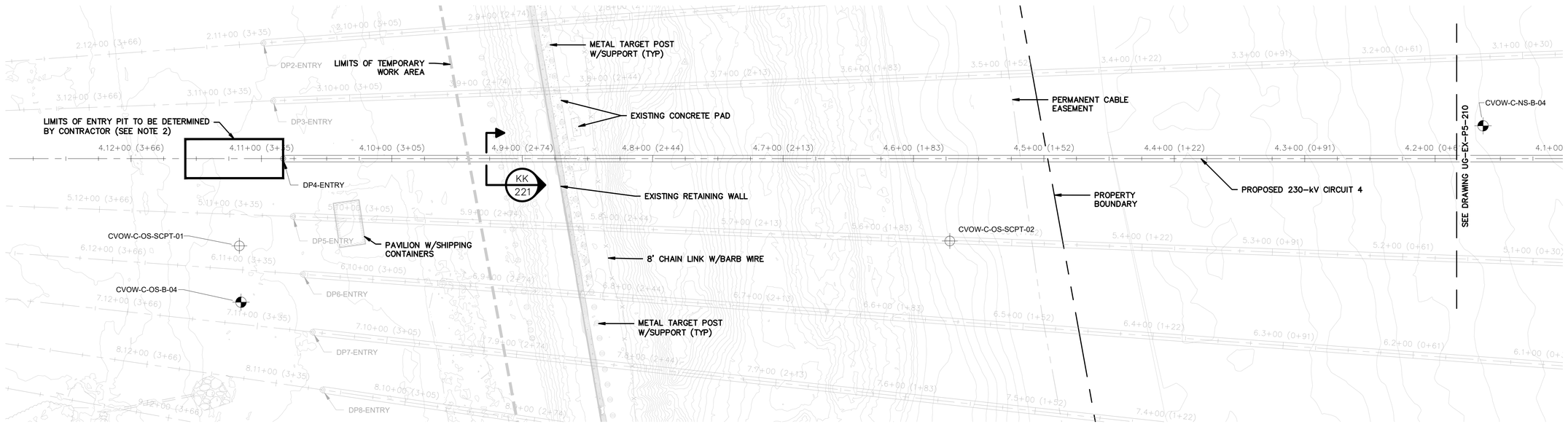
UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:31 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
	Checked/Appr.		Revisions	B/M
A	03/25/22	JG/KP-ZG	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JG/KP-ZG	ISSUED FOR BID	0200157
	AH	CL		H&A

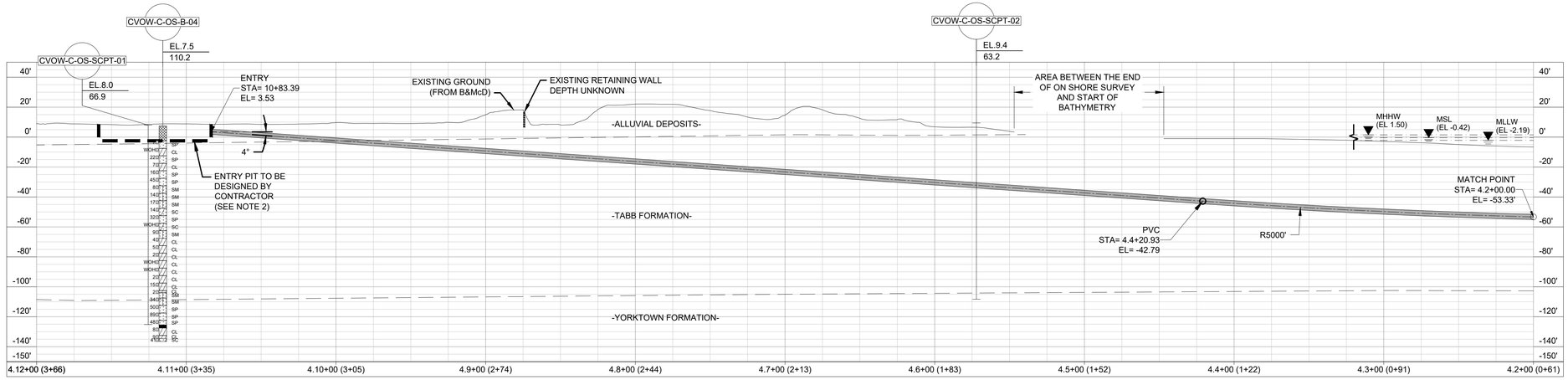
GARDNER, ZACHARY

Typical Drawing Information	Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 4 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 4 ENTRY" PROFILE VIEW

NOTES:

1.
2. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-007 AND UG-EX-P5-008.
3. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 4 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	10 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM

Drawing No. UG-EX-P5-209

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157	H&A

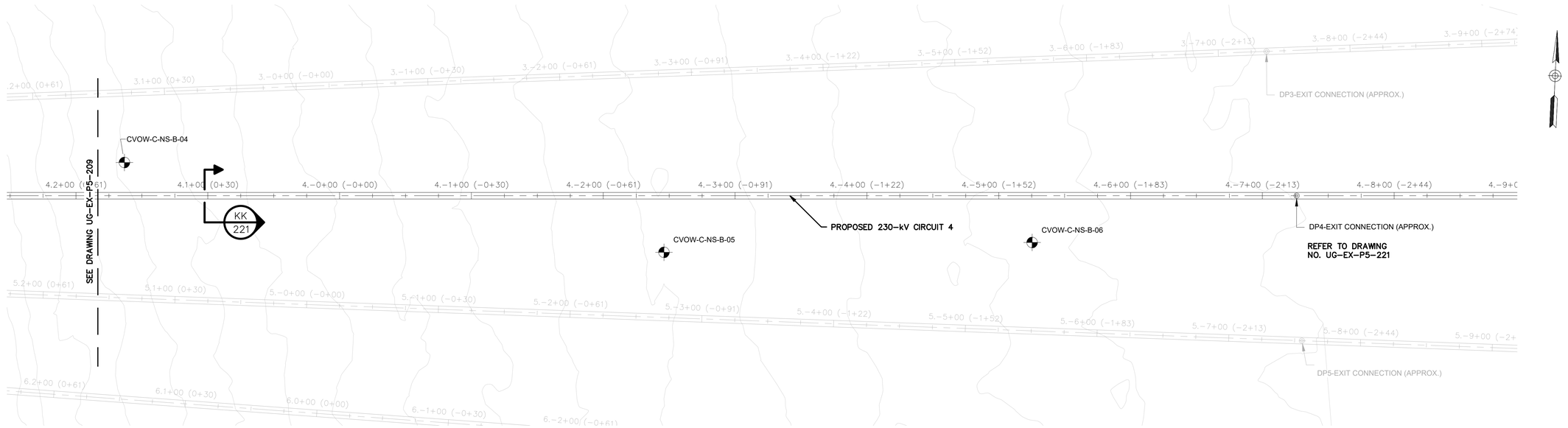
Revisions

GARDNER, ZACHARY

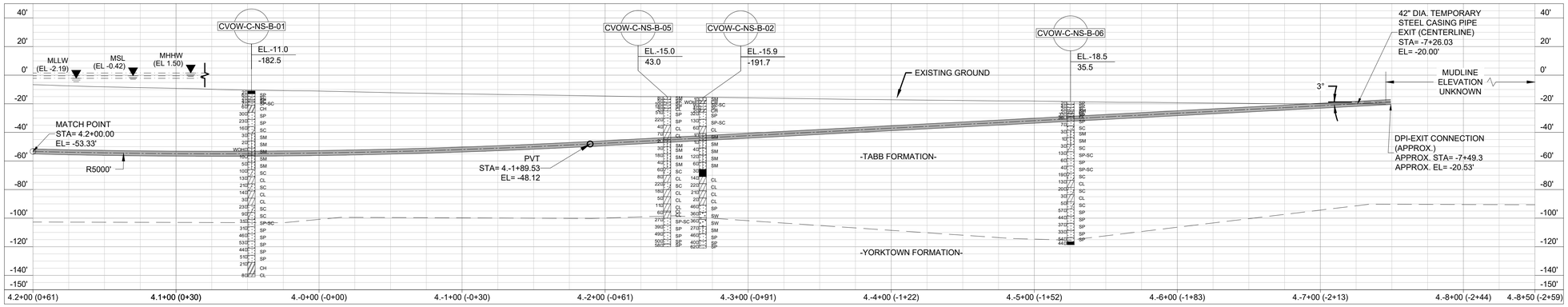
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 4 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 4 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-007 AND UG-EX-P5-008.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 4 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	11 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM

Drawing No. UG-EX-P5-210

No.	Date	By	Description	Project Number	B/M
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157	H&A

Revisions

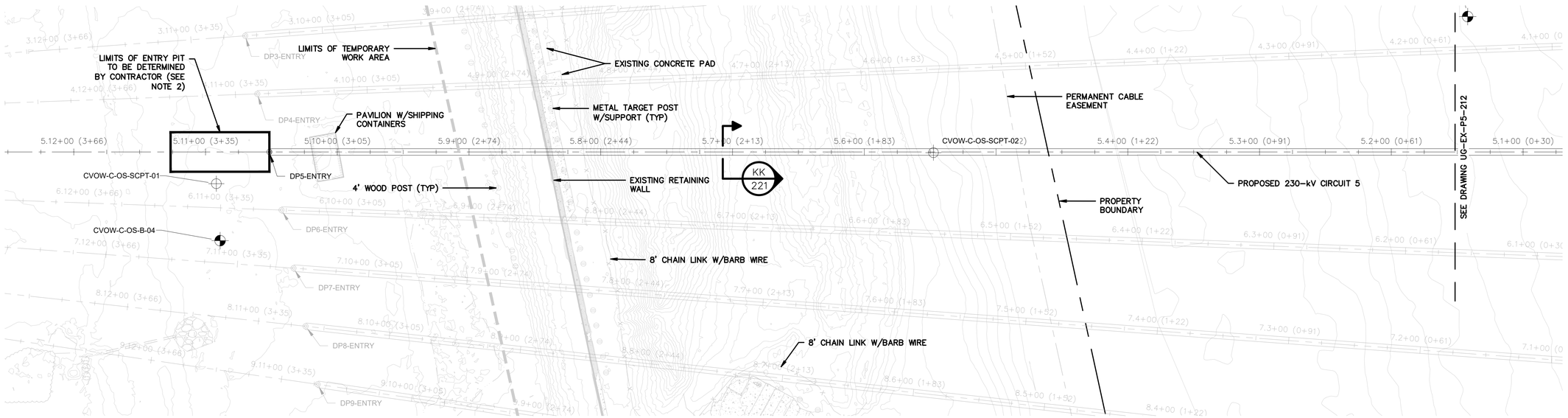
GARDNER, ZACHARY

Typical Drawing Information

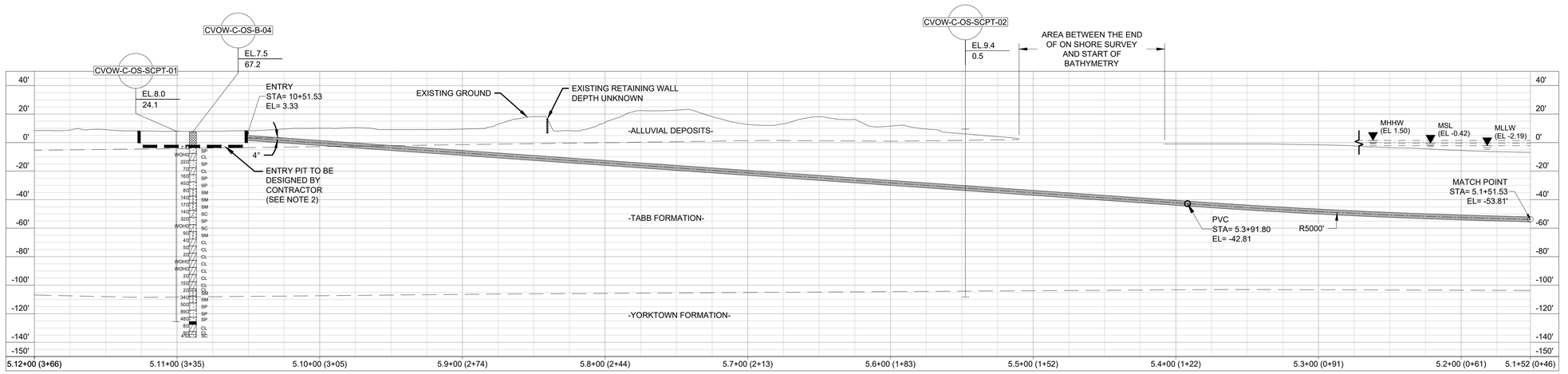
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 5 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 5 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-009 AND UG-EX-P5-010.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 5 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	12 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM

Drawing No. UG-EX-P5-211

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:32 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	Checked/Appr.
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157	CL.
B	07/15/22	AH	ISSUED FOR BID	0200157	CL.

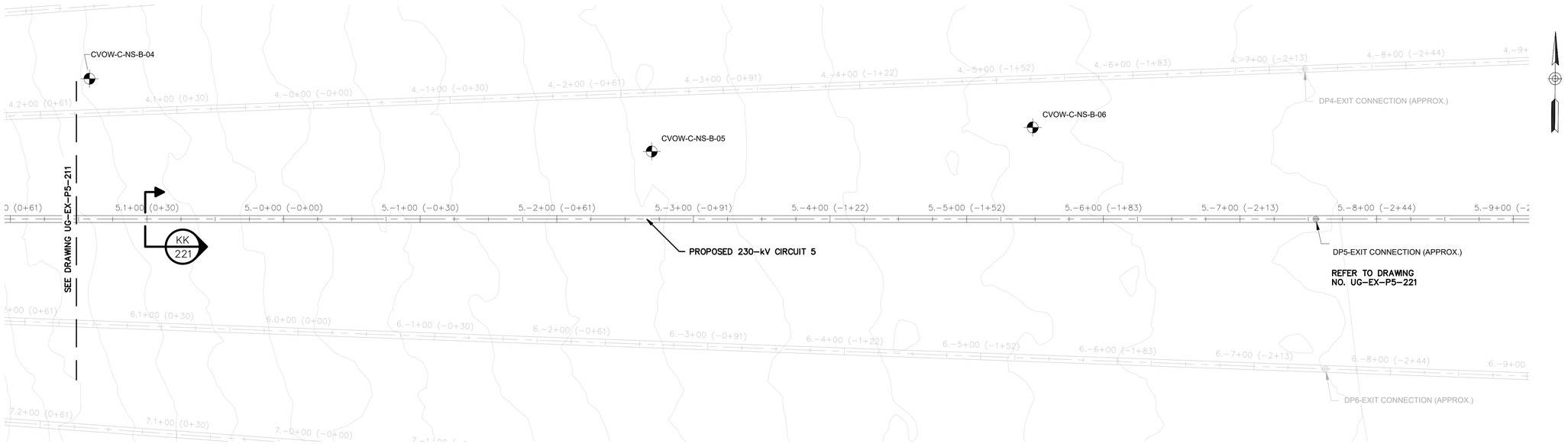
Revisions

GARDNER, ZACHARY

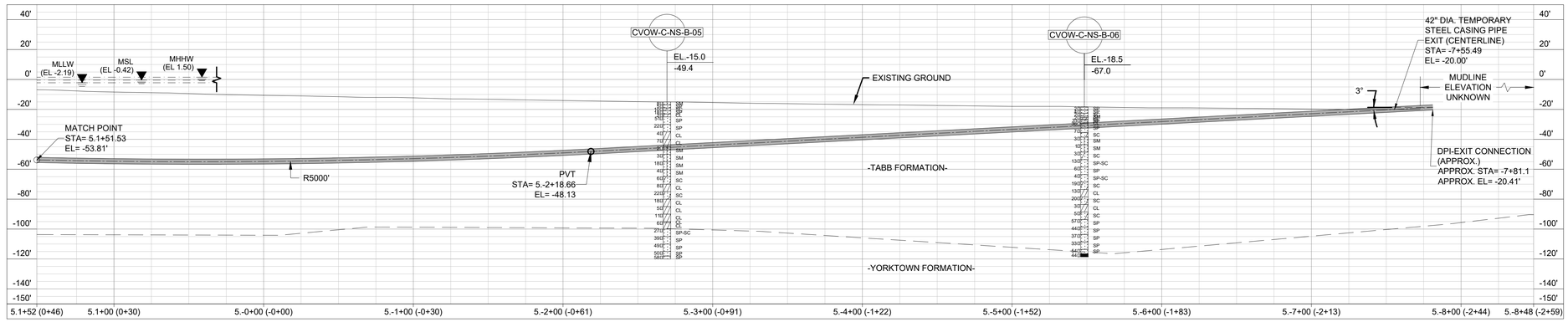
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 5 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 5 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-009 AND UG-EX-P5-010.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 5 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	13 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM
Drawing No. UG-EX-P5-212

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	B/M
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	AH CL.	ISSUED FOR BID	0200157	H&A
		JG/KP-ZC			

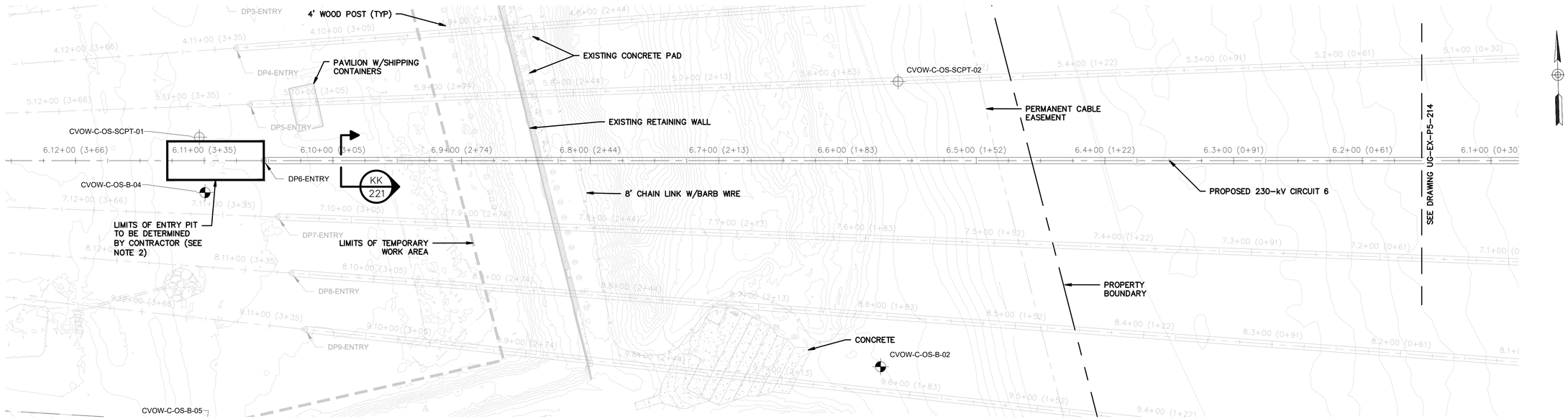
Revisions

GARDNER, ZACHARY

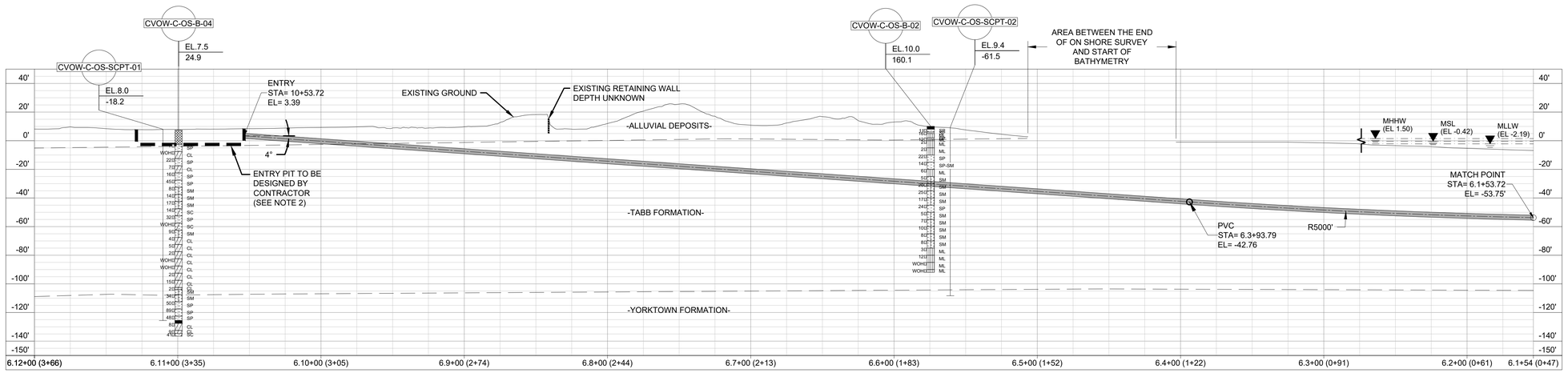
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 6 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 6 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-011 AND UG-EX-P5-012.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 6 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	14 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM

Drawing No. UG-EX-P5-213

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:33 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number	
A	03/25/22	JG,KP,ZG	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	ISSUED FOR BID	0200157	H&A

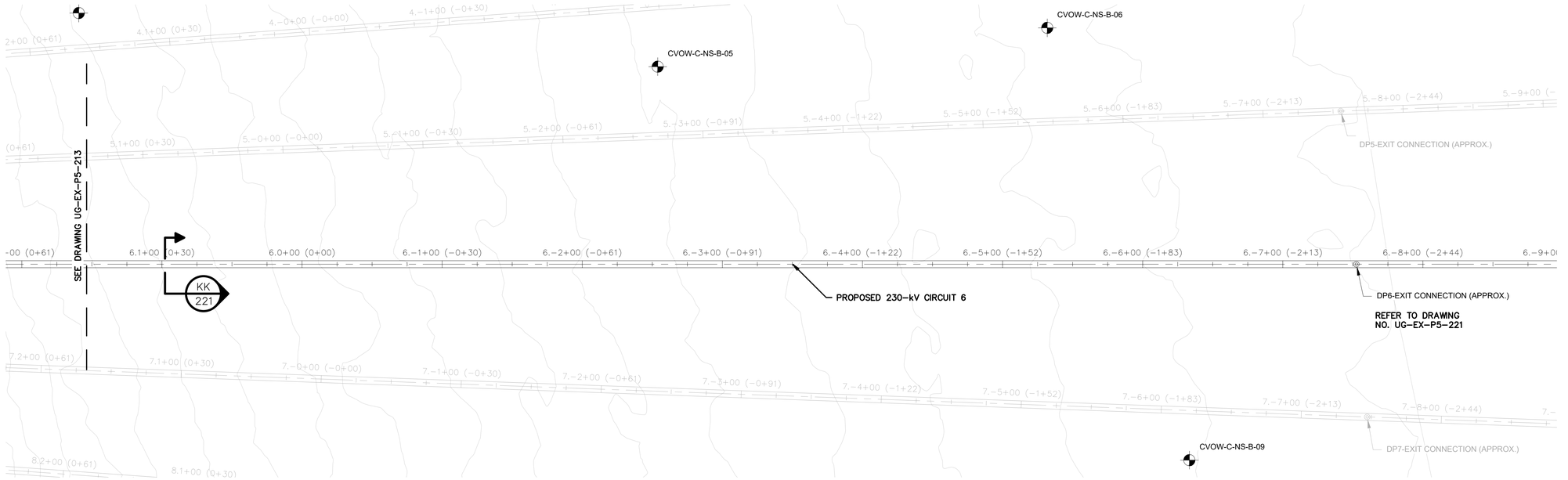
Revisions

GARDNER, ZACHARY

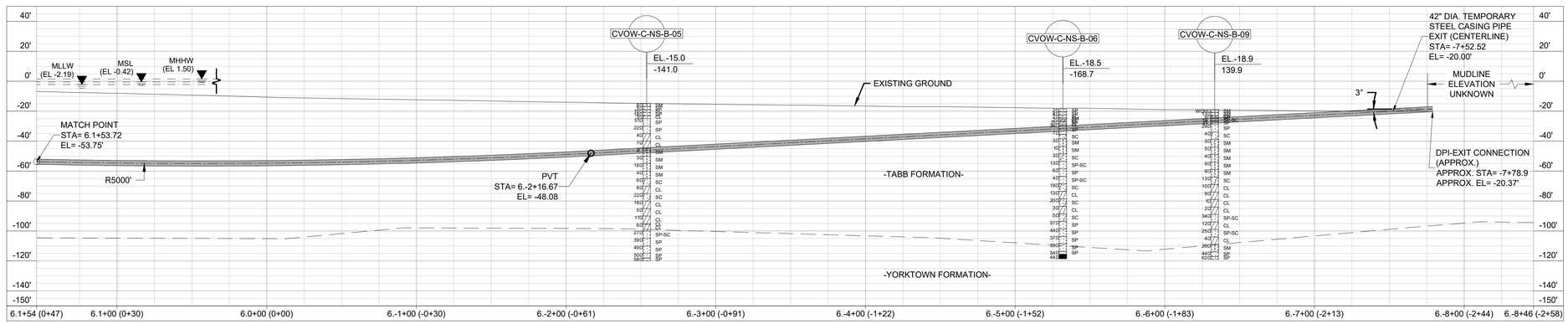
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 6 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 6 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-011 AND UG-EX-P5-012.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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No.	Date	By	Description	Project Number
			Revisions	B/M
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH	ISSUED FOR BID	0200157 H&A
	Checked/Appr.			JG/KP/ZG

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 6 PLAN AND PROFILE (STA. 19+00 TO 28+00)

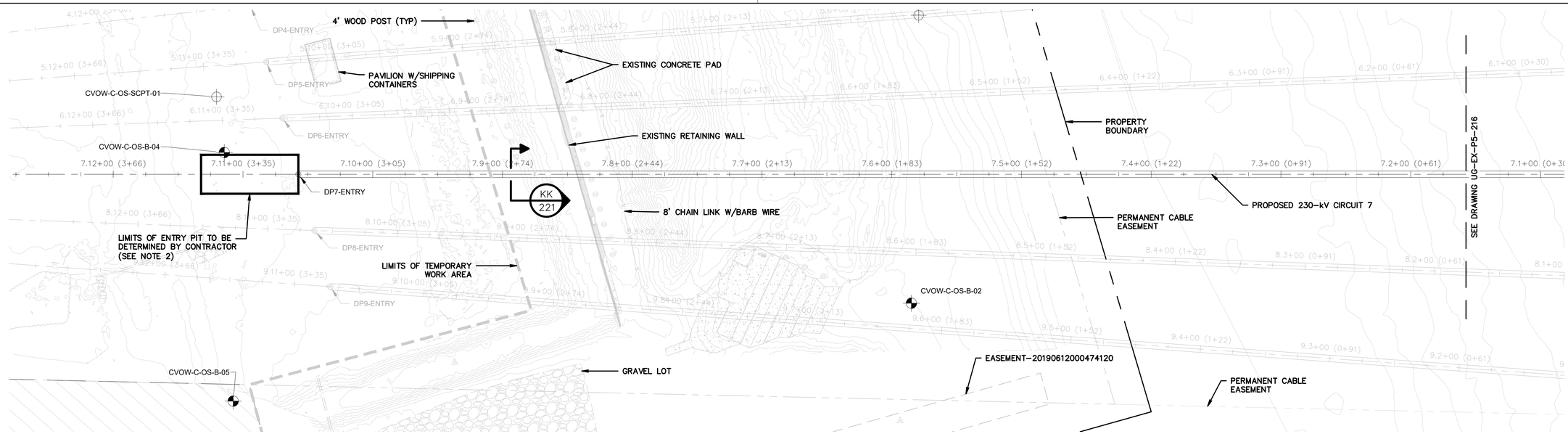
	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	15 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM

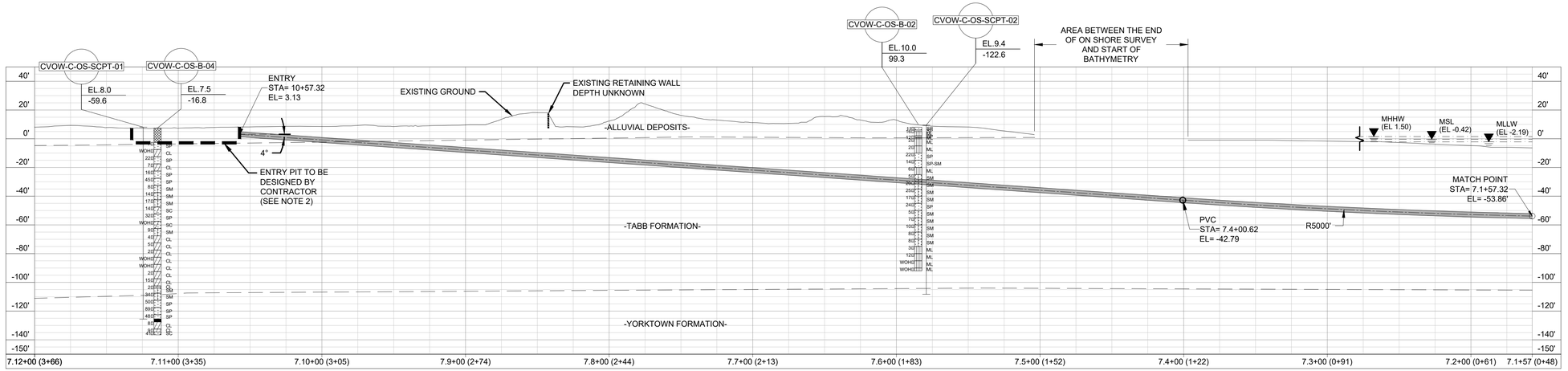
Drawing No.
UG-EX-P5-214

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 7 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 7 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-013 AND UG-EX-P5-014.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND 230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5

DIRECT PIPE 7 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	16 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM

Drawing No. UG-EX-P5-215

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH CL.	ISSUED FOR 60% REVIEW	0200157 H&A
B	07/15/22	AH CL.	ISSUED FOR BID	0200157 H&A
		JG-KP-ZG		

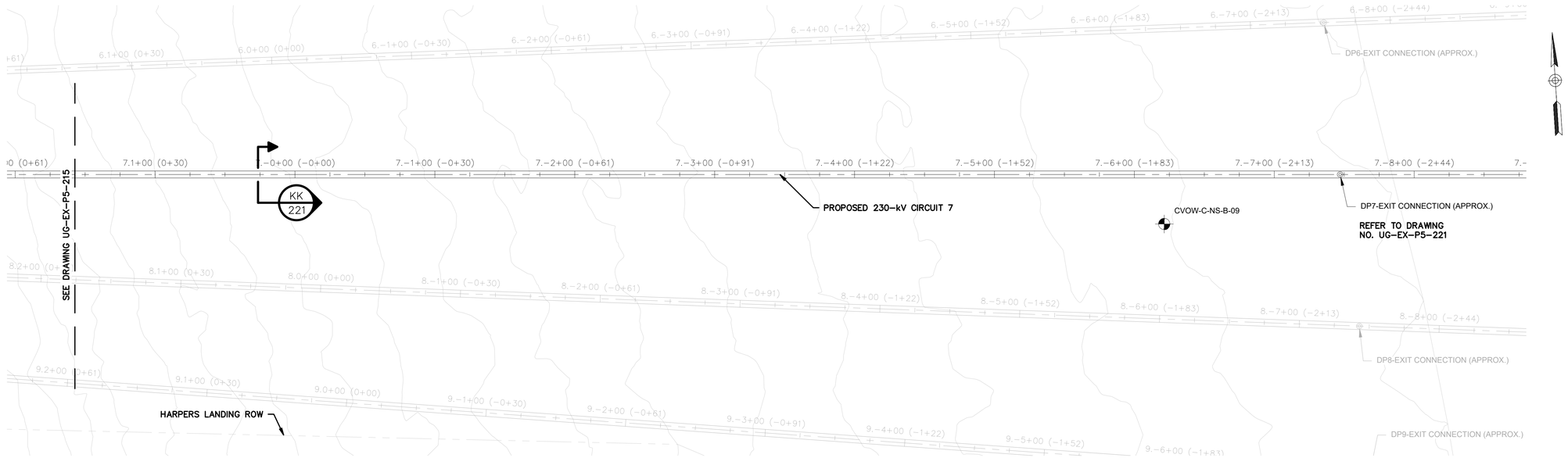
Revisions

GARDNER, ZACHARY

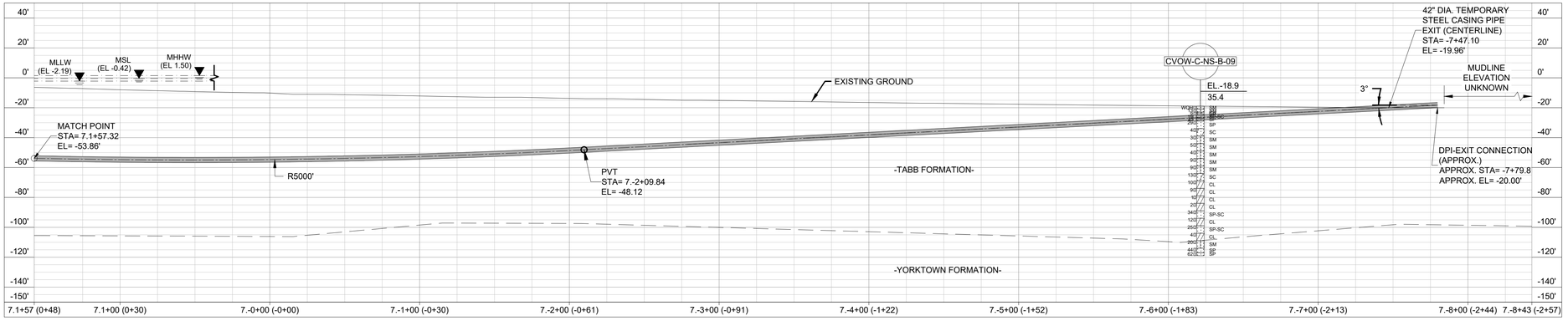
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 7 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 7 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-013 AND UG-EX-P5-014.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 7 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	17 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM

Drawing No. UG-EX-P5-216

No.	Date	By	Description	Project Number
A	03/25/22	JGKP-ZG	ISSUED FOR 60% REVIEW	0200157 H&A B/M
B	07/15/22	JGKP-ZG	ISSUED FOR BID	0200157 H&A

Revisions

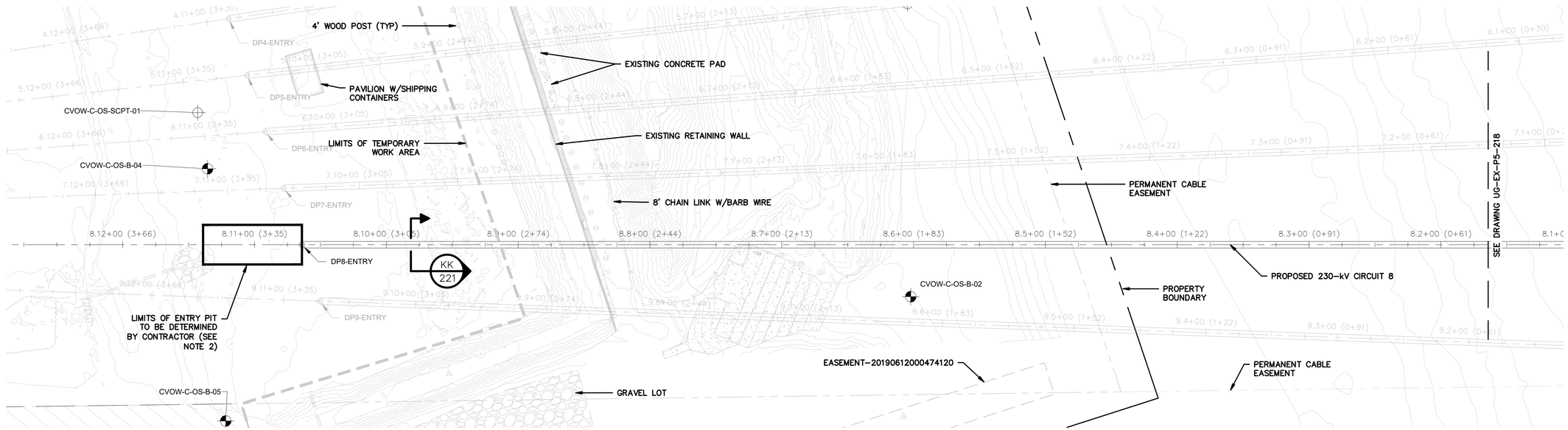
GARDNER, ZACHARY

Typical Drawing Information

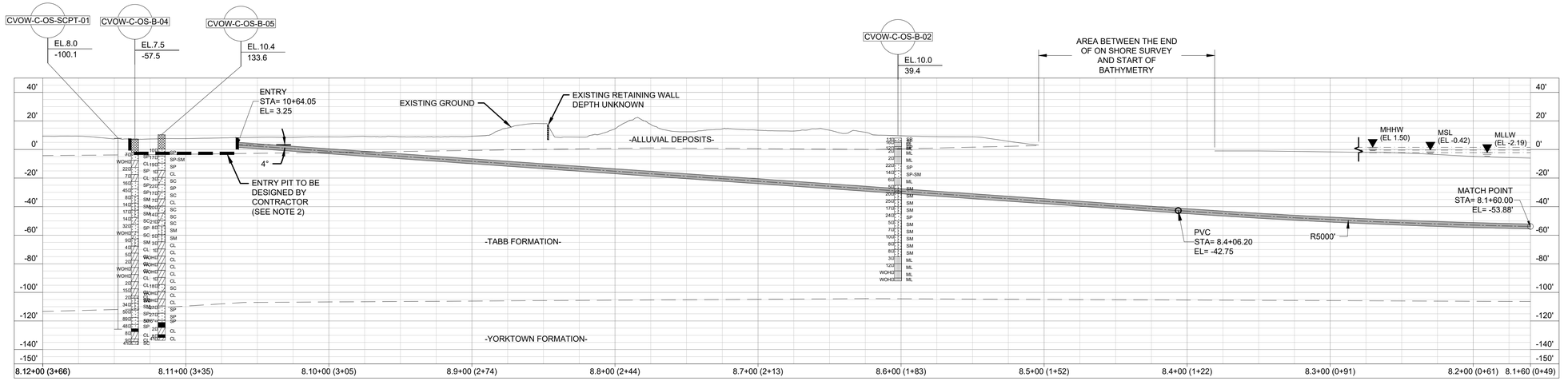
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:34 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 8 ENTRY" PLAN VIEW



LANDFALL "DIRECT PIPE® 8 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-015 AND UG-EX-P5-016.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	18 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM

Drawing No.
UG-EX-P5-217

No.	Description	Date	By	Checked/Appr.	Project Number
A	ISSUED FOR 60% REVIEW	03/25/22	AH	CL	0200157 H&A B/M
B	ISSUED FOR BID	07/15/22	AH	CL	0200157 H&A JG,KP,ZG

Revisions

GARDNER, ZACHARY

Typical Drawing Information

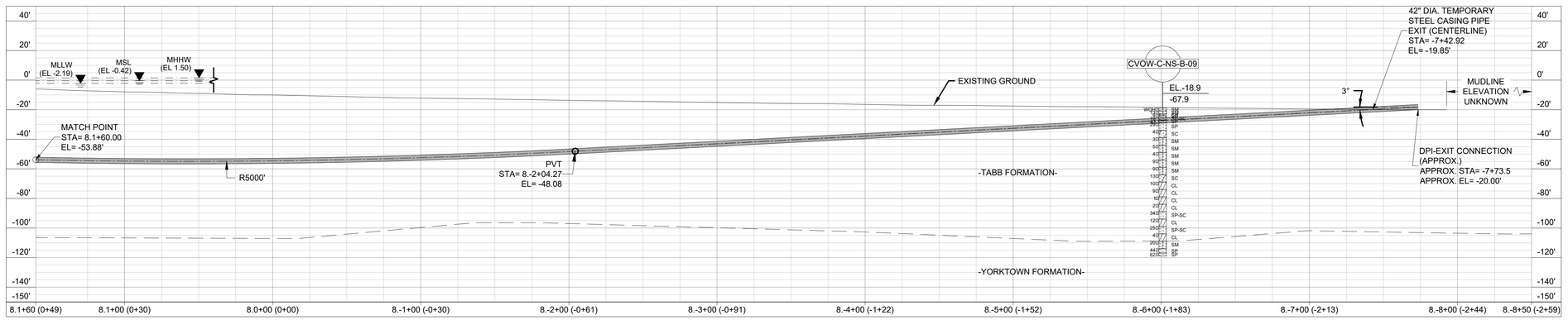
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 8 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 8 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-015 AND UG-EX-P5-016.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

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BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE 8 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	19 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM
Drawing No. UG-EX-P5-218

No.	Date	By	Description	Project Number
	Checked/Appr.			B/M
A	03/25/22	JGKP-ZC	ISSUED FOR 60% REVIEW	0200157
	AH	CL		H&A
B	07/15/22	JGKP-ZC	ISSUED FOR BID	0200157
	AH	CL		H&A

Revisions

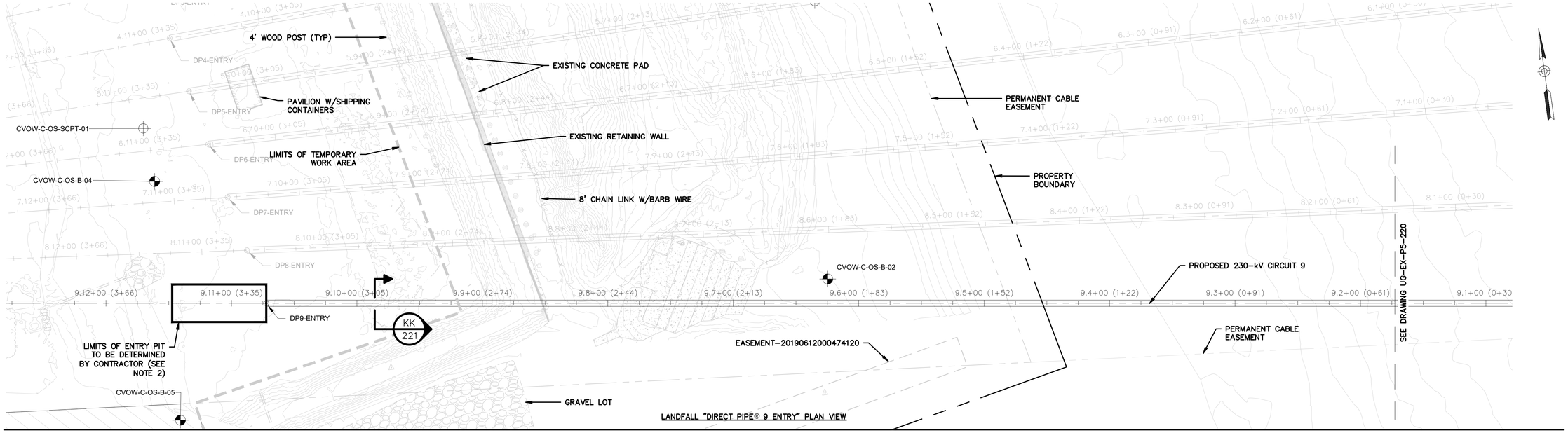
GARDNER, ZACHARY

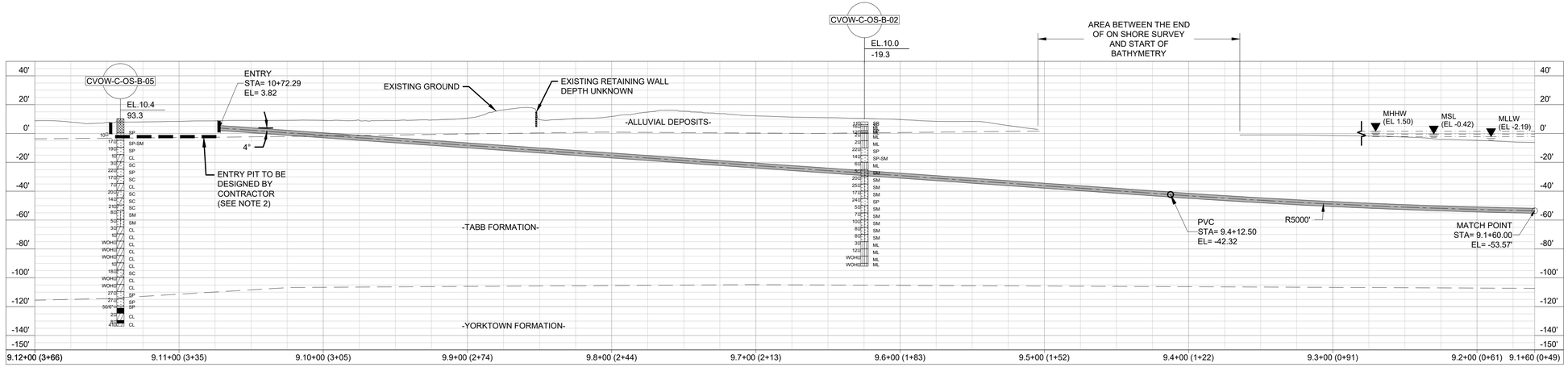
Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	Foundation Cells for Other Typical Structures (Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:35 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022





LANDFALL "DIRECT PIPE® 9 ENTRY" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-017 AND UG-EX-P5-018.
2. CONTRACTOR TO CONFIRM ENTRY PIT LIMITS ARE WITHIN OWNER-PROVIDED EASEMENT.

ISSUED FOR BID
NOT FOR CONSTRUCTION

0 40' 80'
HORIZONTAL SCALE IN FEET

0 40' 80'
VERTICAL SCALE IN FEET

HALEY ALDRICH

va811.com Dig With Care

BURNS McDONNELL

Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 9 PLAN AND PROFILE (STA. 09+00 TO 19+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	20 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM

Drawing No. UG-EX-P5-219

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M H&A
B	07/15/22	CL	ISSUED FOR BID	0200157 H&A
		JG/KP-ZC		

Revisions

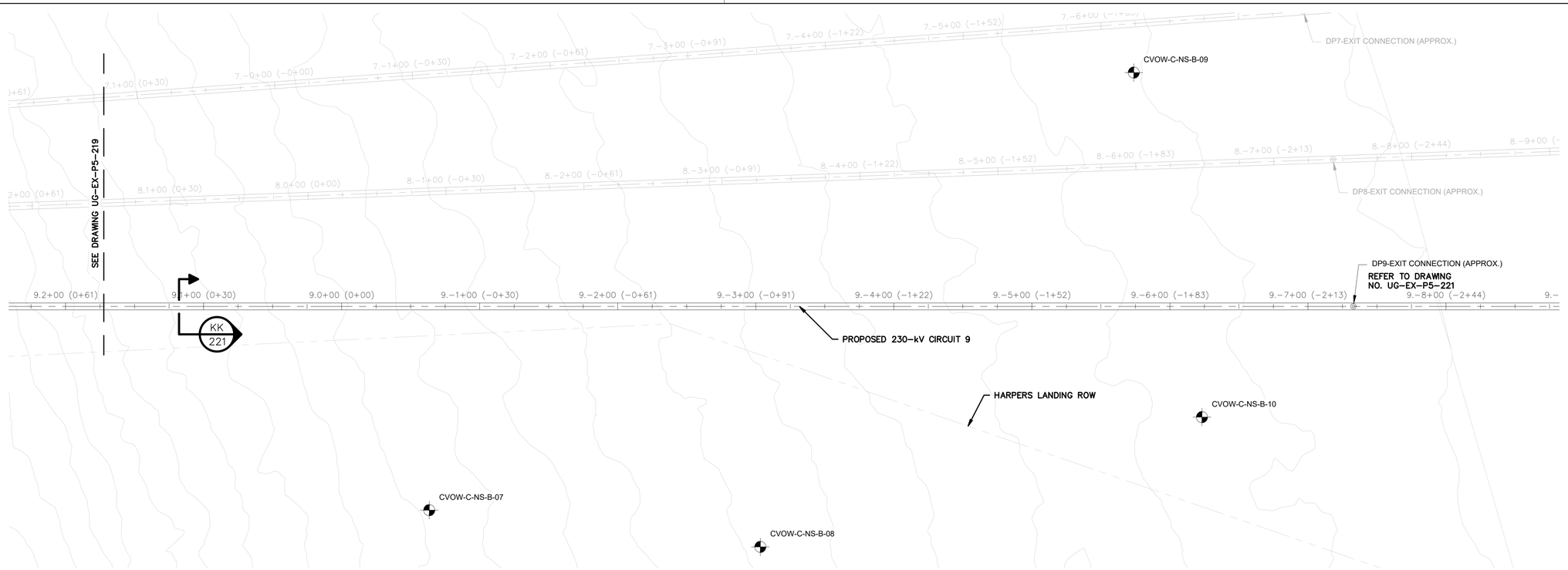
GARDNER, ZACHARY

Typical Drawing Information

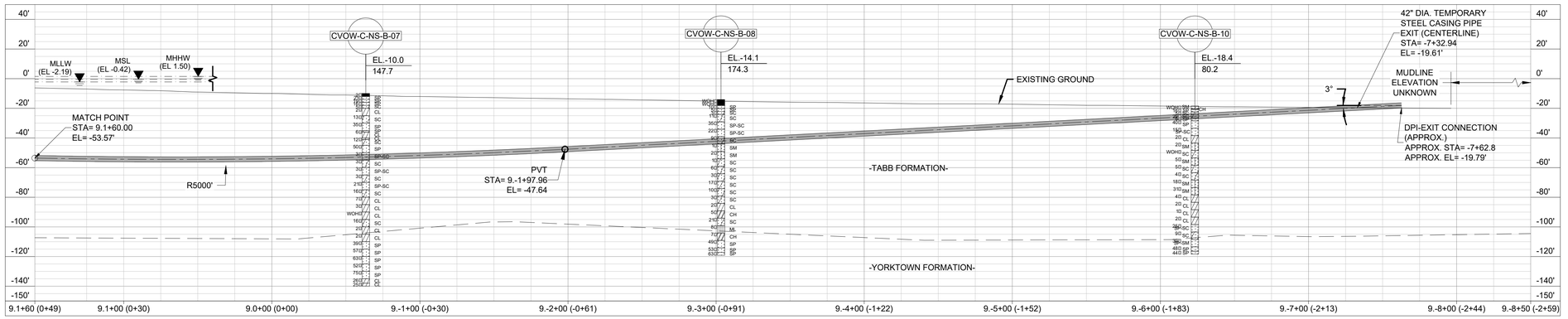
Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM
GARDNER, ZACHARY

USACE-NLW
RCVD 7/15/2022



LANDFALL "DIRECT PIPE® 9 EXIT" PLAN VIEW



LANDFALL "DIRECT PIPE® 9 EXIT" PROFILE VIEW

NOTES:

1. FOR DUCT BANK PLAN AND PROFILES, SEE DRAWINGS UG-EX-P5-017 AND UG-EX-P5-018.

ISSUED FOR BID
NOT FOR CONSTRUCTION

HORIZONTAL SCALE IN FEET 0 40' 80'
VERTICAL SCALE IN FEET 0 40' 80'

HALEY ALDRICH
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Dominion Energy

COASTAL VIRGINIA OFFSHORE WIND
230-KV ONSHORE UNDERGROUND TRANSMISSION PHASE 5
DIRECT PIPE 9 PLAN AND PROFILE (STA. 19+00 TO 28+00)

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	21 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM
Drawing No. UG-EX-P5-220

UG-EX-P5-201-218.DWG
PLOTTED: 6/27/2022 2:36 PM
GARDNER, ZACHARY

No.	Date	By	Description	Project Number
A	03/25/22	AH	ISSUED FOR 60% REVIEW	0200157 B/M
B	07/15/22	CL	ISSUED FOR BID	0200157 H&A

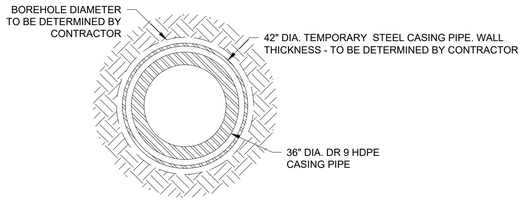
Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly

USACE-NLW
RCVD 7/15/2022

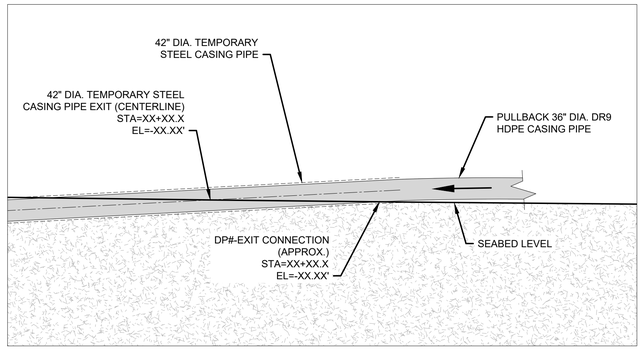


KK

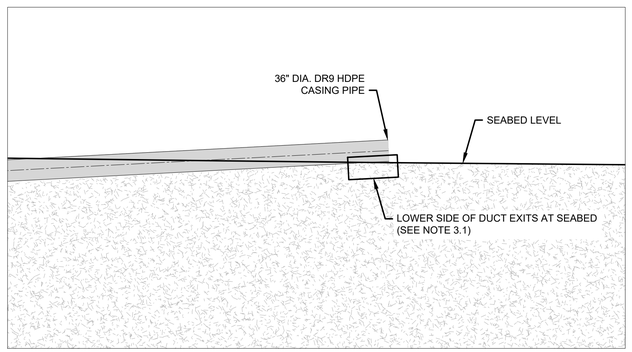
CONDUIT CONFIGURATION FOR LANDFALL DIRECT PIPE® INSTALLATIONS
NOT TO SCALE

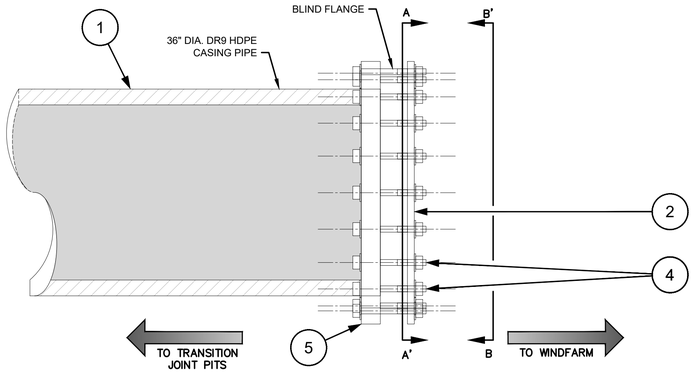
DETAIL 1 – CONSTRUCTION SEQUENCE:

1. PULLBACK 36" DIA. DR9 HDPE CASING PIPE
2. ONCE 36" HDPE IS INSTALLED, LEAVE HDPE TAIL LONG AN REMOVE 42" STEEL CASING.



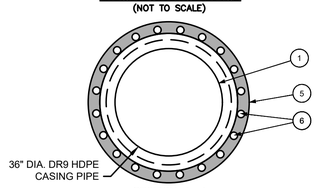
3. CONTRACTOR TO CUT 36" CASING IN THE FIELD TO MEET THE FOLLOWING CRITERIA:
   3.1 LOWER SIDE OF DUCT EXITS AT SEABED LEVEL WITHIN +0.5M AND –0.1M.
4. INSTALL BLIND FLANGE (SEE BLIND FLANGE DETAIL, THIS SHEET).



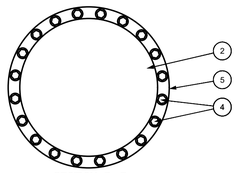


BLIND FLANGE DETAIL (SIDE VIEW)
NOT TO SCALE

TYPICAL SEALING FLANGE
(NOT TO SCALE)



SECTION A–A



SECTION B–B

KEY
1. HDPE DUCT
2. HDPE BLIND FLANGE
3. SEALING RUBBER OR SIMILAR
4. SCREWS
5. STEEL MOBILE FLANGE (BACKING RING) NECESSARY FOR LANDING BELLMOUTH AND SEALING FLANGE INSTALLATION
6. HOLES

NOTE:

1. THE FLANGE SCHEMATICS PROVIDED ON THIS SHEET ARE FOR PLANNING PURPOSES ONLY AND ARE BASED ON INFORMATION PROVIDED BY PRYSMIAN ON 16 MAY 2022. PRYSMIAN WILL DESIGN AND DETAIL THE REQUIRED FLANGE AND BELLMOUTH COMPONENTS AT A LATER DATE. CONTRACTOR SHALL PROCURE THE FLANGE AND BELLMOUTH COMPONENTS AS DESIGNED BY PRYSMIAN. CONTRACTOR SHALL SUBMIT THE FABRICATOR'S SHOP DRAWINGS FOR THE FLANGE AND BELLMOUTH COMPONENTS TO PRYSMIAN FOR THEIR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

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Dominion Energy®

COASTAL VIRGINIA OFFSHORE WIND
230–KV ONSHORE UNDERGROUND TRANSMISSION
PHASE 5
DIRECT PIPE® SECTION AND DETAILS

	Name	Date	Project No.	Sheet No.
Designed by:	AH (H&A)	06/07/22	0200157	22 OF 22
Approvals	–	–	Scale	
Approvals	–	–	NOTED	
		B/M No.	Revisions	

Cad File Name UG-EX-P5-221.DWG
PLOTTED: 6/27/2022 2:36 PM
Drawing No. UG–EX–P5–221

UG-EX-P5-221.DWG
PLOTTED: 6/27/2022 2:36 PM
GARDNER, ZACHARY

No.	Date	By	Checked/Appr.	Description	Project Number	B/M
A	03/25/22	JG,KP,ZG	AH CL.	ISSUED FOR 60% REVIEW	0200157	H&A
B	07/15/22	JG,KP,ZG	AH CL.	ISSUED FOR BID	0200157	H&A

Revisions

GARDNER, ZACHARY

Typical Drawing Information

Library Location	Cell Name	B/M Assembly	Pipe Stand Foundation Cells (Pier)	Pipe Stand Foundation Cells (Spread)	Foundation Cells for Other Typical Structures (Pier)	(Spread)	Steel Detail & Assembly