f: 614-222-1337



February 24, 2021

Ms. Tanowa M. Troupe Ohio Power Siting Board PUCO Docketing Division 180 East Broad Street, 11th Floor Columbus, OH 43215-3716

Re: Case No. 20-1411-GA-BTX, In the Matter of the Application of Duke Energy Ohio, Inc., for a Certificate of Environmental Compatibility and Public Need for the Construction of the Bethel-Batavia Pipeline

Dear Ms. Troupe:

Duke Energy Ohio, Inc., is filing, herewith, 60% engineering drawings, in the above-referenced case.

Please contact me if you have any questions.

Sincerely,

Emily A. Olive, CP Paralegal

Appendix 6 – Engineering Drawings

Preferred Route



AGE	DRAWING NUMBER	DRAWING INDEX SHEET DESCRIPTION	RE
1	PNG-G-XXX-0001000	COVERSHEET	- 0
2	PNG-G-XXXX-0001001	SIGN-OFF SHEET	0
3	PNG-G-XXX-0001002	GENERAL NOTES SHEET 1	0
4	PNG-G-XXX-0001003	LEGEND, SYMBOLS, & ABBREVIATIONS	0
5	PNG-G-XXX-0001004	PIPELINE BILL OF MATERIAL	- 0
6	PNG-C-XXX-0000001	ACCESS ROUTE OVERVIEW MAP	- 0
7	PNG-C-XXX-0000002	ACCESS ROUTE 1	- 0
			1 0
B	PNG-C-XXX-0000003	ACCESS ROUTE 2	
9	PNG-C-XXX-0001001	ALIGNMENT SHEET	0
10	PNG-C-XXX-0001002	ALIGNMENT SHEET	- 0
11	PNG-C-XXX-0001003	ALIGNMENT SHEET	- 0
12	PNG-C-XXX-0001004	ALIGNMENT SHEET	- (
13	PNG-C-XXX-0001005	ALIGNMENT SHEET	(
14	PNG-C-XXX-0001006	ALIGNMENT SHEET	(
.15	PNG-C-XXX-0001007	ALIGNMENT SHEET	0
16	PNG-C-XXX-0001008	ALIGNMENT SHEET	0
17	PNG-C-XXX-0001009	ALIGNMENT SHEET	.0
18	PNG-C-XXX-0001010	ALIGNMENT SHEET	.0
19	PMG-C-XXX-0001011	ALIGNMENT SHEET	
20	PNG-C-XXX-0001012	ALIGNMENT SHEET	100
21	PNG-C-XXX-0001013	ALIGNMENT SHEET	0
22	FNG-C-XXX-0001014	ALIGNMENT SHEET	3.
23	PNG-C-XXX-0001015	ALIGNMENT SHEET	- 0
24	PNG-C-XXX-0001015	ALIGNMENT SHEET	10
25	PNG-C-XXX-0001017	ALIGNMENT SHEET	- 0
26	PNG-C-XXX-0001018	ALIGNMENT SHEET	1 7
27	PNG-C-XXX-0001019	AUGNMENT SHEET	-
28	PNG-C-XXXX-0001020	ALIGNMENT SHEET	1 6
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29	PNS-C-XXXX-0X01021	ALIGNMENT SHEET	- 5
30	PNG-C-XXX-0001022	ALIGNMENT SHEET	
31	PNG-C-XXX-0001023	ALIGNMENT SHEET	
32	PNG-C-XXX-0001024	ALIGNMENT SHEET	- 0
33	PNC-C-XXX-0001025	ALIGNMENT SHEET	
34	PNG-C-XXX-0001026	ALIGNMENT SHEET	- 0
35	PNG-G-XXX-0001027	ALIGNMENT SHEET	
36	PNG-C-XXX-0001028	ALIGNMENT SHEET	
37	PNG-C-XXX-0001029	ALIGNMENT SHEET	- (
38	PNG-C-XXX-0001030	ALIGNMENT SHEET	
38	PNG-C-XXX-0001031	ALIGNMENT SHEET	
40	PNG-C-XXX-0001032	ALIGNMENT SHEET	
41	PNG-C-XXX-0001033	ALIGNMENT SHEET	- 0
42	PNG-C-XXX-0001034	ALIGNMENT SHEET	
43	PNG-C-XXX-0001035	ALIGNMENT SHEET	
44	PNG-C-XXX-0001036	ALIGNMENT SHEET	1 0
45	PNG-C-XXX-0001037	ALIGNMENT SHEET	1 6
46	PNG-C-XXX-0001038	ALIGNMENT SHEET	1 0
47	PNG-C-XXX-0001039	ALIGNMENT SHEET	10
48	PNG-G-XXX-0001039	ALIGNMENT SHEET	
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49	PNS-C-XXX-0001041	ALIGNMENT SHEET	
50	PNG-G-XXX-0001042	ALIGNMENT SHEET	. (
51	PNG-G-XXXX-0001043	ALIGNMENT SHEET	. (
52	PNG-C-XXX-0001044	ALIGNMENT SHEET	
53	PNG-C-XXX-0001045	ALIGNMENT SHEET	. (
54	PNG-C-XXX-0001046	ALIGNMENT SHEET	- (
55	PNG-C-XXX-0001047	ALIGNMENT SHEET	
56	PNG-C-XXX-0001048	ALIGNMENT SHEET	
57	PNG-C-XXX-0001049	ALIGNMENT SHEET	. (
58	PNG-C-XXX-0001050	ALIGNMENT SHEET	
59	PNG-C-XXX-0001051	ALIGNMENT SHEET	
60	PNG-C-XXX-0001052	ALIGNMENT SHEET	
61	PNG-C-XXX-0001053	ALIGNMENT SHEET	
62	PNG-C-XXXX-0001654	ALIGNMENT SHEET	- 0
63	PNG-C-XXX-0001055	ALIGNMENT SHEET	1 1
64	PNG-C-XXX-0001058	ALIGNMENT SHEET	0
65	PNG-C-XXX-0001057	ALIGNMENT SHEET	0
66	PNG-C-XXX-0001058	ALIGNMENT SHEET	- 0
67	PNG-C-XXX-0001059	ALIGNMENT SHEET	1 2
11/	PNG-C-XXX-0001060	ALIGNMENT SHEET	- 1

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70	PNG-C-XXX-0001062	ALIGNMENT SHEET	С
71	PNG-C-XXX-0001063	ALIGNMENT SHEET	С
72	PNG-C-XXX-0001064	ALIGNMENT SHEET	С
73	PNG-C-XXX-0001065	ALIGNMENT SHEET	С
74	PNG-C-XXX-0001066	ALIGNMENT SHEET	С
75	PNG-C-XXX-0001067	ALIGNMENT SHEET	С
76	PNG-C-XXX-0001068	ALIGNMENT SHEET	C
77	PNG-C-XXX-0001069	ALIGNMENT SHEET	c
78	PNG-C-XXX-0001070	ALIGNMENT SHEET	С
79	PNG-C-XXX-0001071	ALIGNMENT SHEET	С
80	PNG-C-XXX-0001072	ALIGNMENT SHEET	С
81	PNG-C-XXX-0001073	ALIGNMENT SHEET	С
82	PNG-C-XXX-0001074	ALIGNMENT SHEET	С
83	PNG-C-XXX-0001075	ALIGNMENT SHEET	В
84	PNG-C-XXX-0001076	ALIGNMENT SHEET	В
85	PNG-C-XXX-0001077	ALIGNMENT SHEET	В
86	PNG-C-XXX-0001078	ALIGNMENT SHEET	В
87	PNG-C-XXX-0001079	ALIGNMENT SHEET	В
88	PNG-C-XXX-0001101	CROSSING DETAIL 01	A
89	PNG-C-XXX-0001102	CROSSING DETAIL 02	A
90	PNG-C-XXX-0001103	CROSSING DETAIL 03	A
91	PNG-C-XXX-0001104	CROSSING DETAIL 04	A
92	PNG-C-XXX-0001105	CROSSING DETAIL 05	A
93	PNG-C-XXX-0001106	CROSSING DETAIL 06	A
94	PNG-C-XXX-0001107	CROSSING DETAIL 07	A
95	PNG-C-XXX-0001108	CROSSING DETAIL 08	A
96	PNG-C-XXX-0001109	CROSSING DETAIL 09	A
97	PNG-C-XXX-0001110	CROSSING DETAIL 10	Ä
98	PNG-C-XXX-0001111	CROSSING DETAIL 11	A
99	PNG-C-XXX-0001112	CROSSING DETAIL 12	A
100	PNG-C-XXX-0001113	CROSSING DETAIL 13	A
101	PNG-C-XXX-0001114	CROSSING DETAIL 14	A
102	PNG-C-XXX-0001115	CROSSING DETAIL 15	A
103	PNG-C-XXX-0001116	CROSSING DETAIL 16	A
104	PNG-C-XXX-0001117	CROSSING DETAIL 17	T A
105	PNG-C-XXX-0001118	CROSSING DETAIL 18	T A
106	PNG-C-XXX-0001200	LITTLE MIAMI RIVER HOD ALIGNMENT SHEET	T A
107	PNG-B-XXX00001001	GEOTECH BORE LOG 1	Â
108	PNG-B-XXX00001002	GEOTECH BORE LOG 2	A
109	PNG-C-XXX-0001500	EROSION SEDIMENT CONTROL DETAILS 1	В
110	PNG-C-XXX-0001501	EROSION SEDIMENT CONTROL DETAILS 2	В
111	PNG-C-XXX-0001502	EROSION SEDIMENT CONTROL DETAILS 3	В
112	PNG-C-XXX-0001503	EROSION SEDIMENT CONTROL DETAILS 4	В
113	PNG-C-XXX-0001504	EROSION SEDIMENT CONTROL DETAILS 5	В
114	PNG-C-XXX-0001505	EROSION SEDIMENT CONTROL DETAILS 6	В
115	PNG-C-XXX-0001506	EROSION SEDIMENT CONTROL DETAILS 7	B B
116	PNG-C-XXX-0001XX1	BETHEL LAUNCHER STATION SITE PLAN	B B
117	PNG-C-XXX-0007XX1	MLV-201 STATION SITE PLAN - PREF ROUTE	B B
118	PNG-C-XXX-0003XX1	MLV-301 STATION SITE PLAN - PREF ROUTE	B B
119	PNG-C-XXX-0003XX1	MLV-301 STATION SITE PLAN - PREF ROUTE MLV-401 STATION SITE PLAN - PREF ROUTE	B B
120	PNG-C-XXX-0005XX1	BATAVIA DELIVERY STATION SITE PLAN - PREF ROUTE	B
120		SHIPTING DELIFERT STRIPTING SHE FORT-FREE ROUTE	

C367 12" PIPELINE

*PROPRIETARY & COMPDENTIAL YALL RIGHTS RESERVED 'DO NOT SCALE THIS DRAWING 'USE DIMENSIONS ONLY

DUKE ENERGY & PREDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL 'DRAWING IS CURRENT ONLY THROUGH THE LATEST REWISED CATE "TO ENSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE, ALL PREVIOUS PAPER CORPES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM)

BURNS & MCDONNELL ENGINEERING COMPANY, INC. STATE LICENSE # COA. 01557			DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE	CONFIDENTIAL *DRAW	NG IS	CUR				L'ALL RIGHTS RESERVED 'DO DENSURE THERE IS NO RISK O	
Q .	NO.	DATE	REVISION(S) DESCRIPTION	in	CHR	APP	DESCRIPTIO	N .	- 1 -	APPROVAL5	
3	A 11	1-06-2020	ISSUED FOR 30% REVIEW	AKT	JME	CN	S AREA CODE		DATE	97	REGIONAL
	B 12	2 18 2020	REVISED 30% DESIGN	AKT	AM	CN	S ACCOUNT NUMBER	SS0tWA	-		PROMETER
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C367 PIPELINE COVER SHEET CLERMONT COUNTY, OH KELLOGG, OH

SHEET(S) 1 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

PNG -G-XXX-0001000 C

DESIGN	REVIEW OF	CONDITION OF COA	SION ENGINEERING TING WHEN DELIVERE		TEST CONN. P	ER STD. 7.7.1		PERMIT(S) REC	UIRED		PRESSURE TEST			EST WATER DISCHARGE REQUIRMENTS	COUNTY OF	ITEM NO.	SHEET NO.
Sec. 5-172	DISTRUCTION JOB	APPR BY_	THE THILL DELIVERE		D. PROPOSED D. INSTALLED			1.8		STRENGTH TESTING B	ABOVE 60 PSIG REQUIR EFORE PLACING INTO	REGULA	TORY COMPLIA	R ALL DISCHARGE, CONTACT GAS OPERATION NOCE TO ARRANGE FOR DISCHARGE PERMIT, SAMPLING	-		
SPONSOR	DATE	COATING TYPE	GOOD FAIR							SERVICE, PRESSURE (SHOULD BE FORWARD	HARTS AND FORMS ED TO GAS ENGINEERIN			ED FOR ALL DISCHARGES TO SURFACE WATERS. V FOR OFFSITE DISCHARGE REQUIREMENTS AND LOCAL.			
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Sand San San		VISUAL JEEP		cc	ONTINUITY OF COU						T PRESSURE RANGE:						
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REVIEWED BY	MIDERS REVIEWED	CONTRACTOR		_							INSTALLED PIPE	& FITTING		HYDROSTATIC TEST PROJECT CONTACTS	1		
DATE		RECORDED BY					SCOTT COL				MAOP VERIFIC C367			CONSTRUCTION			
	AT HAVE BEEN	DATE STARTED	DATE PLACED IN SERVICE				(W) 513-287	2988			TO BE FILLED IN BY MA	AOP ENGINEER		MANAGERNAME (C) XXX-XXX-XXXX			
ABANDONED	AND REMOVED	DATE COMPLETED	PERMIT NO				(C) 513-417- ENGINEERIN			SIZE	THICKNESS	GRADE	% SYMS	CONTRACTOR CONSTRUCTION MANAGEMENT SUPERVISORNAME (C) XXX-XXX-XXXX			
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#	#	CONTRACTOR		-										(C&M) MANAGERNAME (C) XXX-XXX-XXXX			
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BURNS & MCDONNELL ENGINEERING COMPANY, I	NC.	DUKE ENERGY & PIEDMONT I	NATURAL GAS DRAWINGS A	RE CONFIDENTIAL	*DRAWING IS CURRENT	PROPE ONLY THROUGH THE LA	RIETARY & CONFIG ATEST REVISED D	SENTIAL VALL RIGH ATE "TO ENSURE T	TS RESERVED "DO NOT HERE IS NO RISK OF INV	SCALE THIS DRAWING 'USE DI PPROPRIATE DISCLOSURE, A	MENSIONS ONLY L PREVIOUS PAPER COPIES O	F THIS DRAWING MUST BE DES	TROYED IN ACCO	RDANCE WITH RECORDS & INFO MANAGEMENT (RIM)	-		
STATE LICENSE # COA. 015	NO. DATE		S) DESCRIPTION	-	BY CHK APPD	DESCRIPTION			APPROVAL5				Qr-3.0-133		SHEETISS 2 D	F 5 DWG SCALE	AS NOTED
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	C 02-19-2021 60	& DESIGN FOR OPSB			AKT AMP CNS PF	ROJECT NUMBER /	AW1982 P	HE MITTAL		MGR TECH REC & STD	RGY Piedmon	at Sas	CLED	SIGN OFF SHEET		DRAWING NUMBER	ACCA REVISION
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PROFESSIONAL ENGARCH ST	AMP				СН	ECKER INITIALS A	P .			ENOMEER	COPTRIGHT 2020			RELEGIG, UTI	GAELLOGG/C367		

GENERAL NOTES:

- INSTALLER SHALL FURNISH ALL MATERIALS NOT PROVIDED BY THE COMPANY (UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS), INCLUDING EQUIPMENT, TRANSPORTATION, SERVICES, AND PERFORM ALL NECESSARY WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREINAFTER.
- IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO VERIFY ALL DIMENSIONS GIVEN ON THE DRAWINGS. ANY ITEM IN QUESTION SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER IN WRITING VIA RFI PROCESS PRIOR TO PROCEEDING WITH THE WORK.
- INSTALLER SHALL BE RESPONSIBLE FOR PROTECTION OF ALL SURROUNDING AREAS. CONTRACTOR SHALL NOT LINNECESSARILY DISTURB EXISTING CONDITIONS WITHIN CONSTRUCTION LIMITS, DISCRETION SHALL BE PER COMPANY REPRESENTATIVE.
- PROPOSED ELEVATIONS AND DIMENSIONS INDICATE TOP OF PIPE, UNLESS OTHERWISE NOTED, UNLESS SPECIFICALLY NOTED, DEPTHS OF EXISTING FACILITIES ARE ESTIMATED ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING DEPTH AND LOCATION OF ALL FACILITIES PRIOR TO COMMENCING WORK
- ALL BELOW GROUND WELDS SHALL BE COATED PER APPLICABLE COATING SPECIFICATION WITH DENSO 7200 PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS OR AS APPROVED OTHERWISE, SURFACE PREPARATION AND BLASTING SHALL ADHERE TO PERTINENT DESIGN AND CONSTRUCTION STANDARDS AND COATING MATERIAL SPECIFICATIONS.
- PIPE BACKFILL SHALL BE IN ACCORDANCE WITH PERTINENT DUKE BACKFILL SPECIFICATIONS.
- PRESSURE TESTING SHALL MEET THE REQUIREMENTS OF DUKE'S PRESSURE TESTING STANDARD, PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS,
- ALL DISTANCES SHOWN ARE GRID DISTANCES BASED ON OHIO STATE PLANE COORDINATE SOUTH ZONE (3402) NAD 83.
- ANY CHANGES TO THE DESIGN SHOWN ON DRAWINGS SHALL BE APPROVED BY COMPANY REPRESENTATIVE IN WRITING VIA RFI PROCESS.

CONSTRUCTION NOTES:

BURNS & MOTONNET

- EXISTING OVERHEAD AND BELOWGROUND FACILITIES MAY BE IN THE WORK AREA VICINITY, INSTALLER IS RESPONSIBLE FOR HAVING SUCH FACILITIES LOCATED AND IS RESPONSIBLE FOR MAINTENANCE AND PRESERVATION OF THESE FACILITIES.
- PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS. INSTALLER IS REQUIRED. TO CALL 811 FOR UTILITY LOCATES A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF WORK, NO EXTRA COMPENSATION WILL BE ALLOWED FOR DELAYS FROM ANY WORK PROVIDED BY OTHER UTILITIES.
- IF EXISTING UTILITIES OF ANY TYPE ARE ENCOUNTERED IN THE FIELD AND DEEMED TO BE IN CONFLICT WITH INSTALLATION OF FACILITIES, INSTALLER SHALL NOTIFY THE PROJECT MANAGER IN WRITING VIA RFI PROCESS IMMEDIATELY SO THE CONFLICT MAY BE RESOLVED.
- WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, INSTALLER SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR PRIVATE DRAINS OR SEWERS, RESTORATION OF THESE FACILITIES IS TO BE PERFORMED ONCE CONSTRUCTION IS COMPLETE AND ARE CONSIDERED INCIDENTAL COSTS OF THE PROJECT.
- ALL DRAWING MEASUREMENTS ARE TO BE TAKEN FROM EXISTING GRADE. FINAL GRADE SHALL BE MATCHED TO SURROUNDING GRADE AS PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS.
- INSTALLER IS TO REMAIN WITHIN CONSTRUCTION WORKING LIMITS, ACCESS TO AREAS OUTSIDE WORKING LIMITS MUST BE COORDINATED WITH THE OWNER OR DUKE ENERGY PROJECT MANAGER,
- ALL EXCESS EXCAVATION, CONSTRUCTION DEMOLITION DEBRIS AND UNSUITABLE MATERIALS THAT DO NOT CONTAIN ASBESTOS OR OTHER POTENTIAL HAZARDOUS MATERIALS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED.
- STANDARD SPECIFICATIONS REFERENCED ON THIS SHEET AND CONSTRUCTION PLANS ARE CONSIDERED AS PART OF THE CONTRACT DOCUMENTS. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED. BUT ARE CONSIDERED TO BE A PART OF THIS CONTRACT.
- BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AND APPROVED BY DUKE OR COMPANY REPRESENTATIVE, FINAL PAYMENT SHALL BE MADE AFTER ALL OF THE INSTALLER'S WORK HAS BEEN ACCEPTED AND APPROVED AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- DURING CONSTRUCTION, ALL LOOSE MATERIAL THAT ARE DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC, SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, SHALL BE REMOVED AT THE END OF EACH
- ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE EXTENDED TO OUTLET INTO AN EXISTING DRAINAGE WAY, A RECORD OF ALL FIFLD TILE FOR ONSITE DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE INSTALLER AND TURNED OVER TO THE PROJECT MANAGER UPON COMPLETION OF THE PROJECT.
- INSTALLER IS REQUIRED TO MAINTAIN A SET OF ISSUED FOR CONSTRUCTION DRAWINGS AND ALL PERMITS AT THE JOB SITE. ANY MODIFICATIONS OR ALTERATIONS TO THE PLANS OR SPECIFICATIONS SHALL BE APPROVED BY THE
- INSTALLER IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS/HER WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, INSTALLER IS. RESPONSIBLE FOR THE CONSTRUCTION METHODS AND TECHNIQUES, SEQUENCES, TIME OF PERFORMANCE, AND ALL SAFETY PRECAUTIONS.

- 14. MINIMUM DEPTH OF BURIAL SHALL BE PER PERTINENT DESIGN AND CONSTRUCTION
- 15. ALL PIPELINES BEING CROSSED ARE TO BE PROTECTED WITH A MINIMUM OF (3) 4 FEET X 18 FEET WOODEN MATS.
- 16. CONTRACTOR TO PROTECT SIDEWALKS AND BIKE PATHS FROM VEHICLE TRAFFIC UTILIZING STEEL PLATING. TIMBER MATTING OR SIMILAR. EXISTING SIDEWALK. UMINOUS SHOULDER, CURB/GUTTER AND/OR ROADWAY PAVEMENT DISTURBED OR DAMAGED DUE TO THE PERMITTED WORK SHALL BE REPLACED IN KIND UP TO THE LIMITS AS DETERMINED AND DIRECTED BY THE CITY REPRESENTATIVE IN WHICH DAMAGE WAS DONE.
- 17. PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS, FOR OPEN DITCH EXCAVATION, A MINIMUM OF TWO FEET OF SEPARATION SHALL BE MAINTAINED BETWEEN ALL CROSSING STRUCTURES, SEPARATION BETWEEN CROSSING STRUCTURES AND PIPELINES THAT ARE INSTALLED VIA DIRECTIONAL DRILLING METHODS IS AT THE DISCRETION OF ENGINEERING.
- 18. DURING BACKFILLING, A SIX INCH CROWN SHALL BE PLACED ON ALL DISTURBED REAS, COMPACTION REQUIREMENTS SHALL BE PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS.
- 19. BOLTS FOR FLANGES TO BE TORQUED PER PERTINENT DESIGN AND CONSTRUCTION
- 20. MAINLINE GIRTH WELDS SHALL BE 100% X-RAYED PER PERTINENT WELDING PROCEDURES, ALL OTHER WELDS SHALL BE NON DESTRUCTIVELY TESTED PER PERTINENT WELDING PROCEDURES.
- CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL) SHALL BE USED UNDER ROADS AND ADJACENT TO ROADS AND SHALL CONFORM TO FOC-ST-3000 BACKFILL AND RESTORATION, OR AS OTHERWISE DIRECTED BY COMPANY.
- 22. CONTRACTOR MAY PROPOSE CONVENIENCE BORES, ANY CHANGES IN INSTALLATION METHOD FROM THAT SHOWN ON THE DRAWINGS SHALL BE APPROVED IN ADVANCE

SURVEY INVESTIGATION NOTES:

BEARINGS AND COORDINATES ARE RELATIVE TO NAD83 OHIO STATE PLANE, SOUTH ZONE (3402), US. FOOT. VERTICAL DATUM IS NAVD88.

GEOTECHNICAL DATA

THE GEOTECHNICAL INFORMATION PROVIDED IN THE DRAWINGS IS A GENERAL SUMMARY, REFER TO THE APPLICABLE GEOTECHNICAL REPORT IN THE CONTRACT DOCUMENTS FOR MORE DETAILED INFORMATION.

CATHODIC PROTECTION & AC MITIGATION NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NON-STOCK CP AC MATERIALS AND ALL MISCELLANEOUS PARTS TO COMPLETE PROJECT PER CONTRACT DRAWINGS, CONTRACT SPECIFICATIONS, ELECTRICAL CODES, STATE AND LOCAL CODES AND STANDARDS, AND LOCAL ELECTRICAL DISTRIBUTION COMPANY REQUIREMENTS. CONTRACTOR SHALL ALSO INSTALL ALL OWNER PROVIDED CP AND AC MATERIALS AND FOLIPMENT, PARTS INCLUDE BUT ARE NOT LIMITED TO, WIRING AND MOUNTING MATERIALS, METER SOCKET, DISCONNECT EQUIPMENT, ENCLOSURES, TRANSIENT VOLTAGE SURGE SUPPRESSORS, AC MAIN BUSS TERMINATION, CIRCUIT BREAKERS, AND OTHER ELECTRICAL EQUIPMENT REQUIRED, ACTUAL LENGTH OF WIRING IS DEPENDENT ON DISTANCE FROM INSTALLATION.

DESIGN NOTES:

- FIELD BENDING (COLD BENDING) SHALL BE PERFORMED IN ACCORDANCE WITH FOC-ST-2050 BENDING STEEL PIPE. FOR 12" PIPE, FIELD BEND SHALL BE LIMITED TO 29 DEGREES OR LESS PER 40' STICK OF PIPE, CUT SEGMENTABLE FITTINGS REQUIRED FOR ALL ANGLES ABOVE 29 DEGREES.
- 2. MINIMUM ROPING RADIUS FOR 12" PIPE: 800' BASED ON 3-JOINT RADIUS
- 3. UNLESS NOTED OTHERWISE MINIMUM DESIGN CLEARANCE BETWEEN PIPELINE AND FOREIGN STRUCTURES IS 2' (24"), FIELD ADJUSTMENT MAY BE REQUIRED TO LESS THAN DESIGNED CLEARANCE, BUT IN NO CIRCUMSTANCES WILL CLEARANCE BE LESS THAN 1'
- 4. CONTRACTOR SHALL ADHERE TO DUKE OHIO HDD GUIDELINES AS APPLIES TO HDD DRILLING WASTES AND PROTECTION OF WATER RESOURCES, SEE TRENCHLESS GUIDANCE DOCUMENTS, DUKE ENERGY NATURAL GAS BUSINESS UNIT, DATED APRIL

RESTORATION:

- RESTORATION SHALL BE CONTROLLED BY APPLICABLE PERMITS AND AS DIRECTED BY COMPANY'S INSPECTOR.
- RESTORATION LIMITS AND DETAILS PROVIDED IN THE DRAWINGS SHALL BE SUBJECT TO FIELD MODIFICATIONS TO MEET VARYING CONDITIONS,
- 3. ADDITIONAL RESTORATION REQUIREMENTS AND QUALIFICATIONS SHALL BE AS DESCRIBED IN THE BID DOCUMENTS.
- MATERIAL REQUIREMENTS SHALL MEET ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, WHERE CONFLICT EXISTS BETWEEN THESE DRAWINGS, ODOT SPECIFICATIONS, LOCAL REQUIREMENTS, OR OTHER BID DOCUMENTS REQUIREMENTS, CLARIFICATION SHALL BE SOUGHT IN ADVANCE FROM THE PROJECT MANAGER IN

ENVIRONMENTAL NOTES

- INSTALLER IS TO CONSTRUCT ALL SOIL EROSION AND SEDIMENT CONTROL
 MEASURES AT THE COMMENCEMENT OF THE PROJECT, PROVIDE MAINTENANCE AND ASSURE EFFECTIVENESS THROUGHOUT THE DURATION OF THE PROJECT.
- 2. CARE SHALL BE TAKEN TO MINIMIZE DOWNSTREAM SILTATION, RAW BANKS MAY BE SEEDED AND MULCHED TO PREVENT EROSION.
- ALL SPOILS INCLUDING ORGANIC SOILS, VEGETATION AND DEBRIS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN SUCH A MANNER AS TO NOT ERODE INTO ANY BODY OF WATER OR WETLAND UNLESS APPROVED OTHERWISE BY DUKE ENVIRONMENTAL INSPECTOR.
- 4. EROSION AND SEDIMENT CONTROLS SHALL BE PLACED WHERE NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE WORK AREA
- INLET FILTERS ARE REQUIRED AT ALL SEWER INLETS, GRATES AND MANHOLES FOR SEDIMENT CONTROL
- TOPSOIL STOCKPILES SHALL BE LOCATED TO AVOID EROSION OF SAID STOCKPILE ONTO OFFSITE AREAS.
- ALL ENVIRONMENTAL MEASURES SHALL BE PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS,
- 8. NO ASPHALT SLURRY OR CUTTING MAY ENTER STORM DRAINS, MATERIALS MUST BE ACUUMED OR OTHERWISE REMOVED FROM THE SITE AND PROPERLY DISPOS
- DUKE ENERGY SHALL CONTACT ODNR AND USFWS WITHIN 24 HOURS IF STATE OR FEDERAL THREATENED OR ENDANGERED SPECIES ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES. CONSTRUCTION ACTIVITIES THAT COULD ADVERSELY IMPACT THE IDENTIFIED PLANTS OR ANIMALS SHALL BE IMMEDIATELY HALTED UNTIL AN APPROPRIATE COURSE OF ACTION HAS BEEN AGREED UPON BY DUKE ENERGY AND THE APPROPRIATE REGULATORY AGENCIES.
- 10. THE CONSTRUCTION CONTRACTOR SHALL COMPLY WITH FUGITIVE DUST RULES BY THE USE OF WATER SPRAY OR OTHER APPROPRIATE DUST SUPPRESSAN MEASURES WHENEVER NECESSARY.
- THE CONSTRUCTION CONTRACTOR SHALL NOT CROSS STREAMS BY FORDING FOR CONSTRUCTION ACCESS AND SHALL INSTEAD EMPLOY TIMBER MATTING OR OTHER METHODS THAT AVOID OR MINIMIZE STREAM BED DISTURBANCES.
- 12. THE CONSTRUCTION CONTRACTOR SHALL REMOVE ALL TEMPORARY GRAVEL AND OTHER CONSTRUCTION STAGING AREA AND ACCESS ROAD MATERIALS AFTER COMPLETION OF CONSTRUCTION ACTIVITIES, AS WEATHER PERMITS, UNLESS OTHERWISE DIRECTED BY THE LANDOWNER OR DUKE ENERGY, IMPACTED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS IN COMPLIANCE WITH THE OHIO EPA GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS OBTAINED FOR THE PROJECT AND THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CREATED FOR THE PROJECT.
- 13. CONTRACTOR SHALL TEMPORARILY STABILIZE ANY DISTURBED AREAS LEFT UNATTENDED FOR 14 DAYS OR MORE, OR AS OTHERWISE DIRECTED IN THE PROJECT
- 14. CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES UNTIL UPSLOPE STABILIZATION HAS DEVELOPED AS DIRECTED IN THE PROJECT SWPPP.
- 15. ALL SEDIMENT RELEASES BEYOND THE SITE PERIMETER CONTROLS AND SPILLS REGARDI ESS OF AMOUNT OR LOCATION ARE TO BE IMMEDIATELY REPORTED TO DUKE ENERGY ENVIRONMENTAL FIELD PROFESSIONAL. IF THE DUKE ENERGY ENVIRONMENTAL FIELD PROFESSIONAL CANNOT BE REACHED. THE DUKE ENERGY SPILL HOTLINE IS TO BE CALLED AT 1-800-527-3853.

DEWATERING:

- 1. ALL DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE SWPPP.
- 2. CONTROL GRAZING AROUND EXCAVATIONS TO PREVENT SURFACE WATER FROM FLOWING INTO EXCAVATION AREAS.
- DRAIN OR PUMF AS REQUIRED TO MAINTAIN, INCLUDING DAYS NOT NORMALLY WORKED, ALL EXCAVATIONS FREE OF WATER OR MUD FROM ANY SOURCE, AND DISCHARGE TO APPROVED DRAINS OR CHANNELS, COMMENCE WHEN WATER FIRST APPEARS AND CONTINUE AS REQUIRED TO KEEP EXCAVATION FREE OF STANDING WATER DURING ENTIRE TIME EXCAVATION IS OPEN.
- 4. USE PUMPS OF ADEQUATE CAPACITY TO ENSURE RAPID DRAINAGE OF AREA, AND CONSTRUCTION AND USE DRAINAGE CHANNELS TO SUBDRAINS WITH SUMPS AS REQUIRED BY QUANTITY OF INFLOW
- 5. WHEN WATER IS FOUND IN THE EXCAVATION DUE TO CONTRACTOR NEGLIGENCE. REMOVE UNSUITABLE EXCESSIVELY WET SUBGRADE MATERIALS AND REPLACE WITH APPROVED COMPACTED EMBANKMENT MATERIAL AS DIRECTED BY OWNER AND AT NO ADDITIONAL COST TO OWNER.
- RIVER/STREAM CROSSINGS EXIST AS INDICATED ALONG THIS PROJECT, REQUIRING EXCAVATION BELOW POTENTIAL STREAM OR RIVER PHREATIC LEVELS. DEWATERING METHODS SHALL INCORPORATE MEANS TO ACCOUNT FOR RISING OR VARYING WATER LEVELS ASSOCIATED WITH THESE BODIES OF WATER AND THEIR INTERCONNECTED WATERWAYS, WHETHER SURFACE OR SUBSURFACE, TO PREVENT THREATENING THE INTEGRITY OF THE EXCAVATION, EXISTING FACILITIES. AND WORK UNDER CONSTRUCTION.
- MAINTAIN AREADRAINAGE DURING CONSTRUCTION.
- 8. COMPLETE CHANNEL PROTECTION EXPEDITIOUSLY FOLLOWING EXCAVATION.

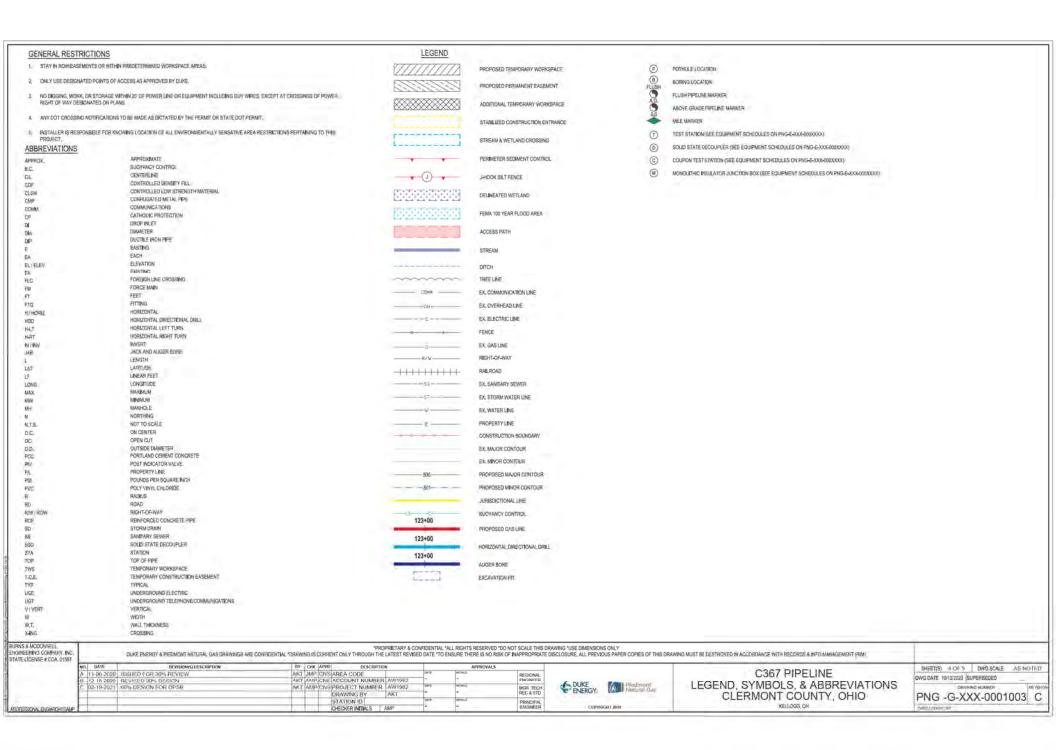
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C367 PIPELINE **GENERAL NOTES SHEET 1** CLERMONT COUNTY, OHIO KELLOGG OH

SHEET(S) B OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

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						BILL OF MATERIAL	
GROUP	MARK	QTY (FT OR EA)	SIZE	LINE	ITEM NUMBER	DESCRIPTION	AS BUILT QTY
PIPE	1	78,920	12"	C367 PREFERRED ROUTE	1551302	PIPE, 12" NPS X 0.375 W.T., DBL RANDOM LG, BEVELED ENDS, ELECTRIC RESISTANCE WELD, FBE, STL, API 5L PSL-2, GR X52, NO JOINTERS	
PIPE	2			C367 PREFERRED ROUTE	1551284	PIPE, 12" NPS X 0.375 W.T., DBL RANDOM LG, BEVELED ENDS, ELECTRIC RESISTANCE WELD, FBE/PC, STL, API 5L PSL-2, GR X52, NO JOINTERS	
SEGMENTABLE	10	39	12"	C367 PREFERRED ROUTE	1551324	ELBOW, PIPE, 12" NPS X 0.375 W.T., BW, 90 DEG, 3D RADIUS, STL, MSS SP-75, GR Y52, FULLY SEGMENTABLE, PAINTED PREFERRED, BARE ACCEPTABLE., MACHINE BEVEL ENDS PER ASME B31.8 APPENDIX 1, FIGI -4	
ELBOWS	11	14	12"	C367 PREFERRED ROUTE	1551320	ELBOW PIPE, 12" NPS X 0.375 W.T., BW, 45 DEG, 3D RADIUS, STL, MSS SP-75, GR Y52, FULLY SEGMENTABLE, PAINTED PREFERRED, BARE ACCEPTABLE., MACHINE BEVEL ENDS PER ASME B31.8 APPENDIX 1, FIGI -4	
	20	65	12"	C367 PREFERRED ROUTE	1593272	COATING, ABRASION RESISTANT OVERCOAT, 10" X 30', CANUSA SCAR-GUARD, JOINT COATING	
SCARGUARD	21	25	12"	C367 PREFERRED ROUTE	1598071	COATING, ABRASION RESISTANT OVERCOAT, 10" X 50' ROLL, CANUSA SCAR-GUARD	
	22	5	12"	C367 PREFERRED ROUTE	1575278	TOOL, ARO, CANUSA SCAR-GUARD, PERFORATION TOOL	

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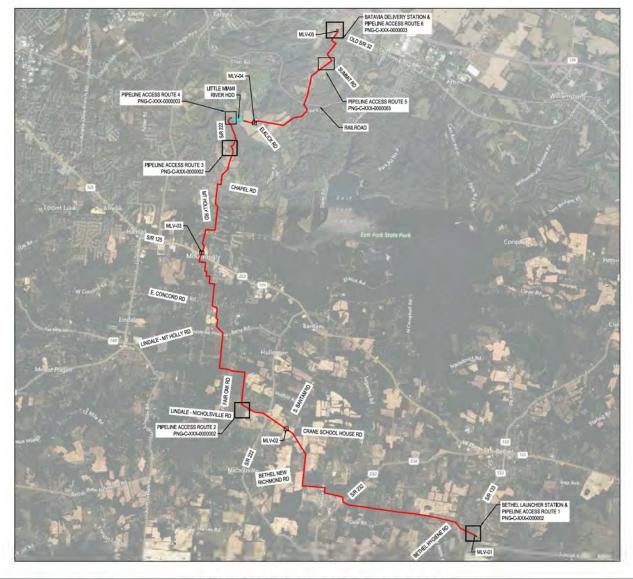
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A 11-16-2020 ISSUED FOR 30% REVIEW
B 12-16-2020 REVISED 30% DESIGN
C 02-19-2021 60% DESIGN FOR OPSB AKT JMP CNS ARPD DESCRIPTION
AKT JMP CNS AREA CODE
AKT JMP CNS ACCOUNT NUMBER AW1982
AKT JMP CNS PROJECT NUMBER AW1982
DEAWING BY AKT
STATION ID
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DUKE ENERGY. Predmont Natural Gas

C367 PIPELINE PIPELINE BILL OF MATERIAL CLERMONT COUNTY, OHIO

SHEET(S) 5 OF 5 DWG SCALE NONE DWG DATE 10/12/2020 SUPERSEDED PNG -G-XXX-0001004 C





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C367 PIPELINE
ACCESS ROUTE OVERVIEW MAP
CLERMONT COUNTY, OHIO

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BETHEL LAUNCHER STATION & PIPELINE ACCESS PLAN 1



PIPELINE ACCESS PLAN 2



PIPELINE ACCESS PLAN 3

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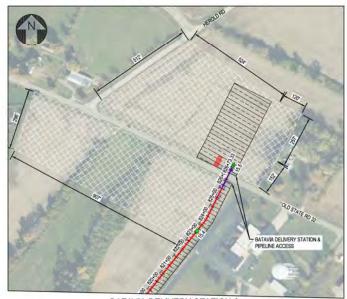
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PIPELINE ACCESS PLAN 4



PIPELINE ACCESS PLAN 5



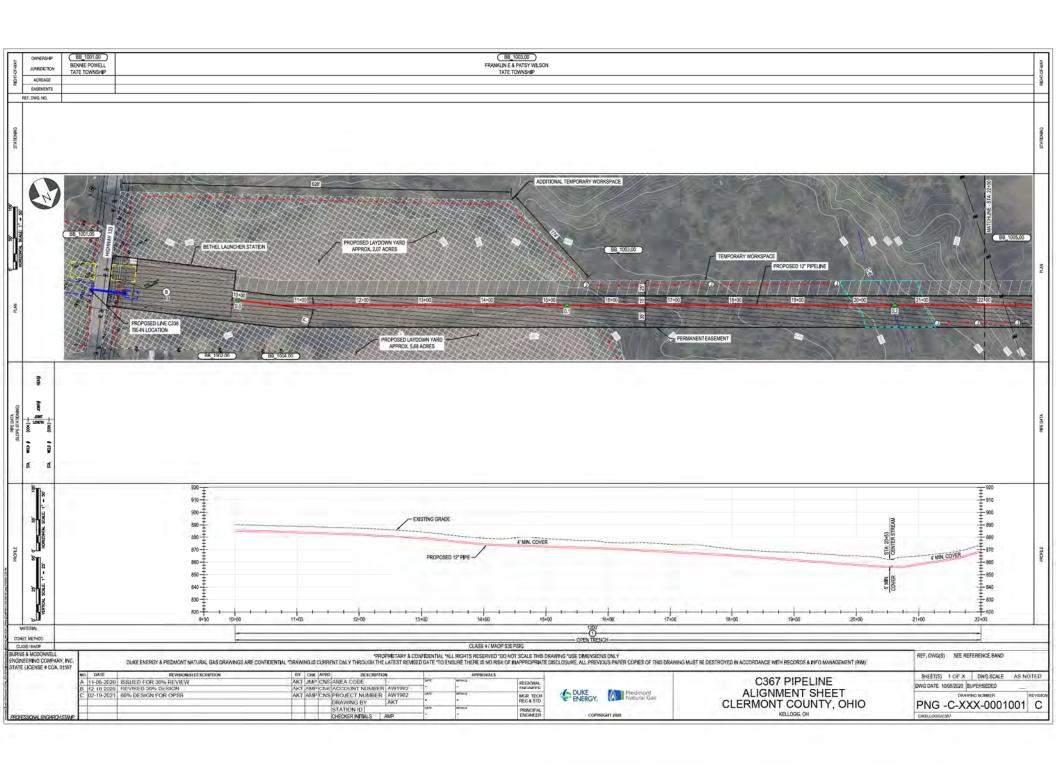
BATAVIA DELIVERY STATION & PIPELINE ACCESS PLAN 6

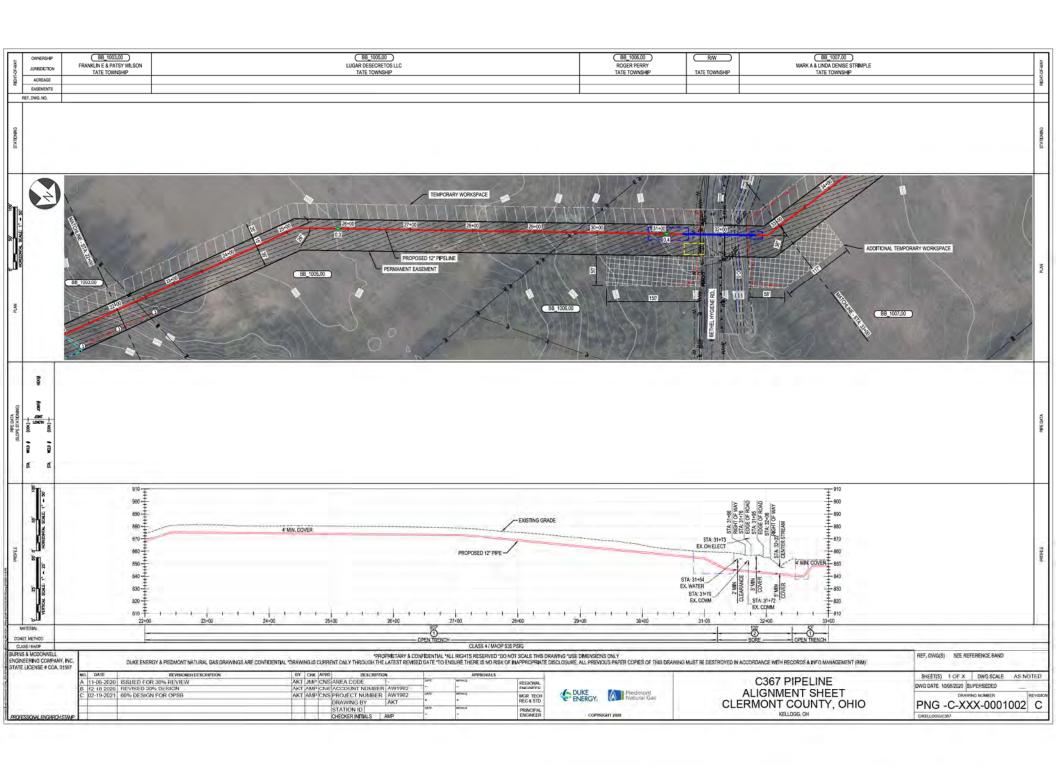
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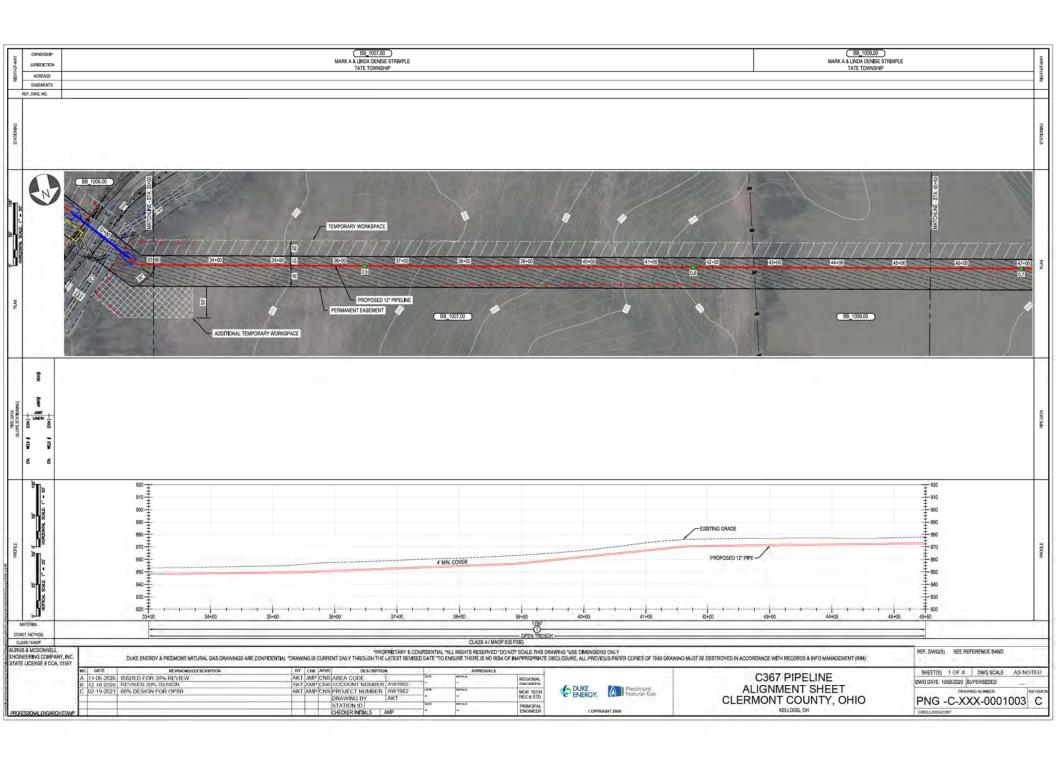


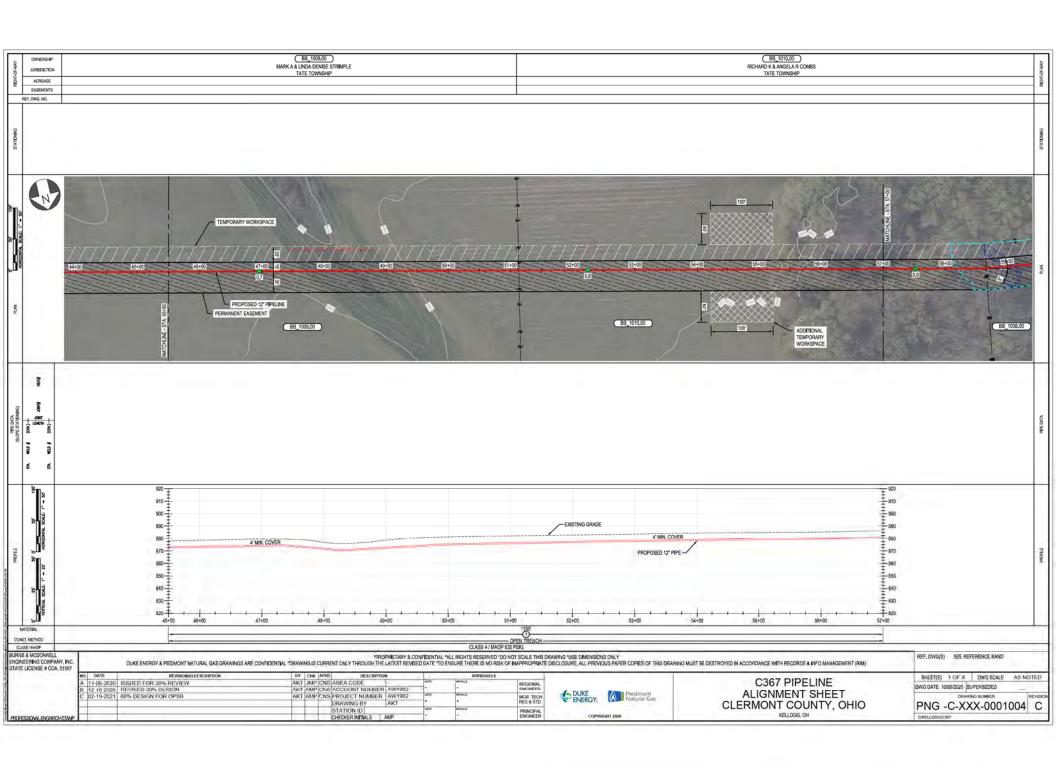
C367 PIPELINE ACCESS ROUTE 2 CLERMONT COUNTY, OHIO

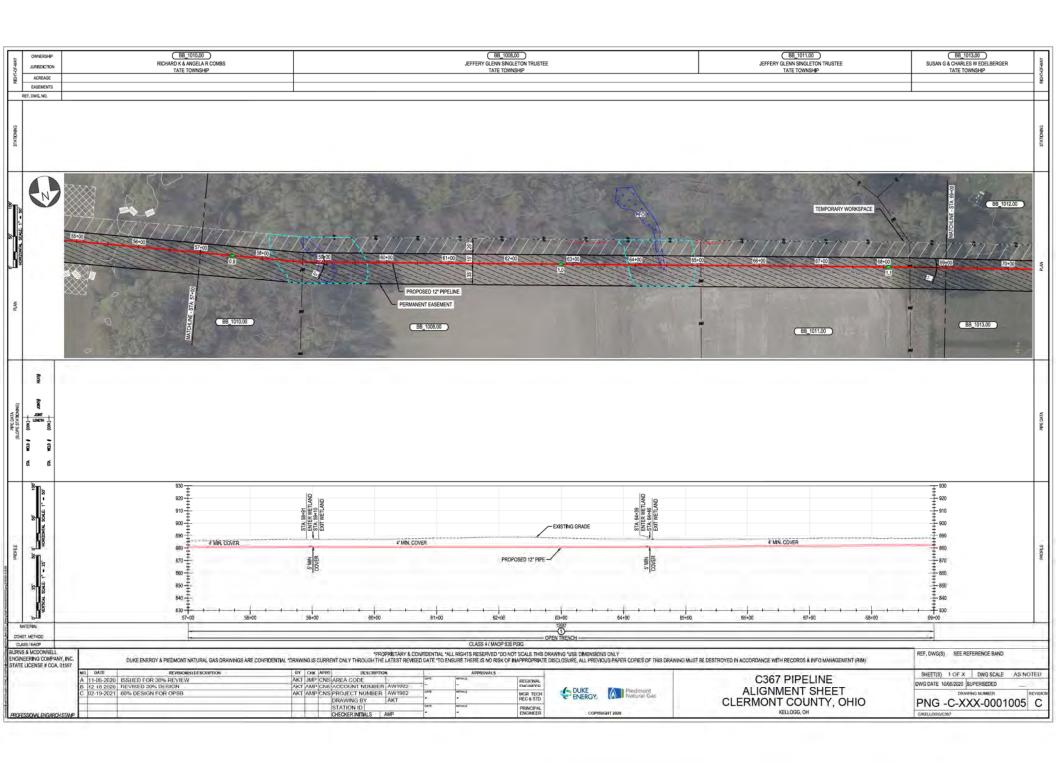
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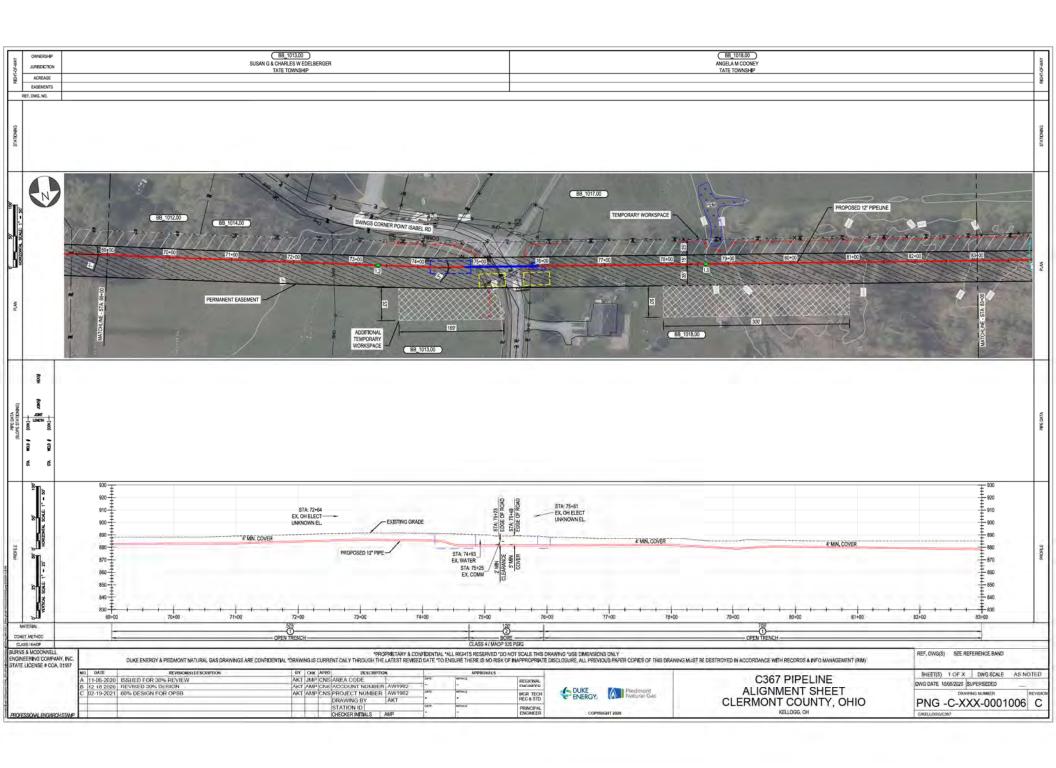


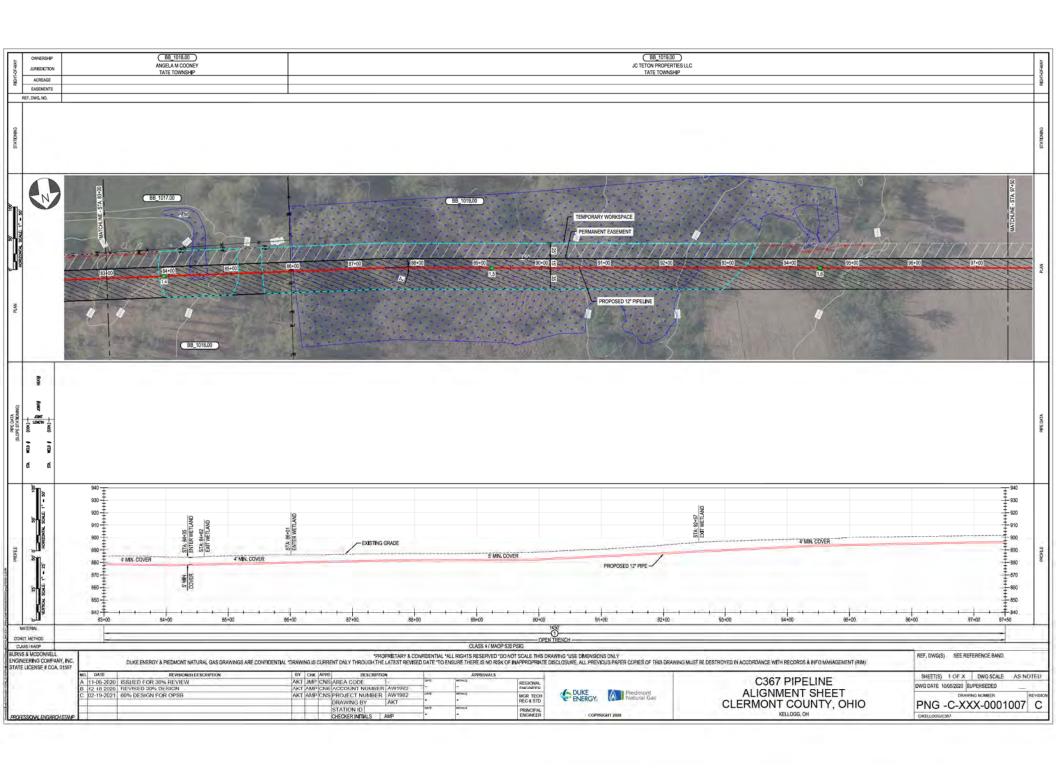


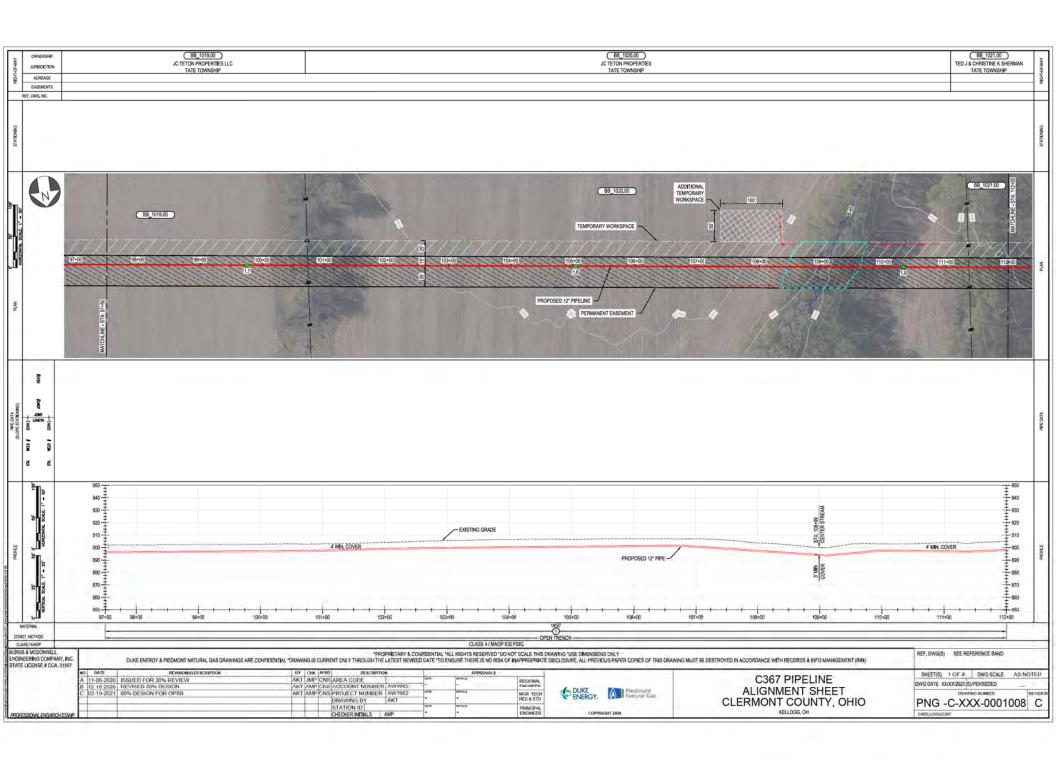




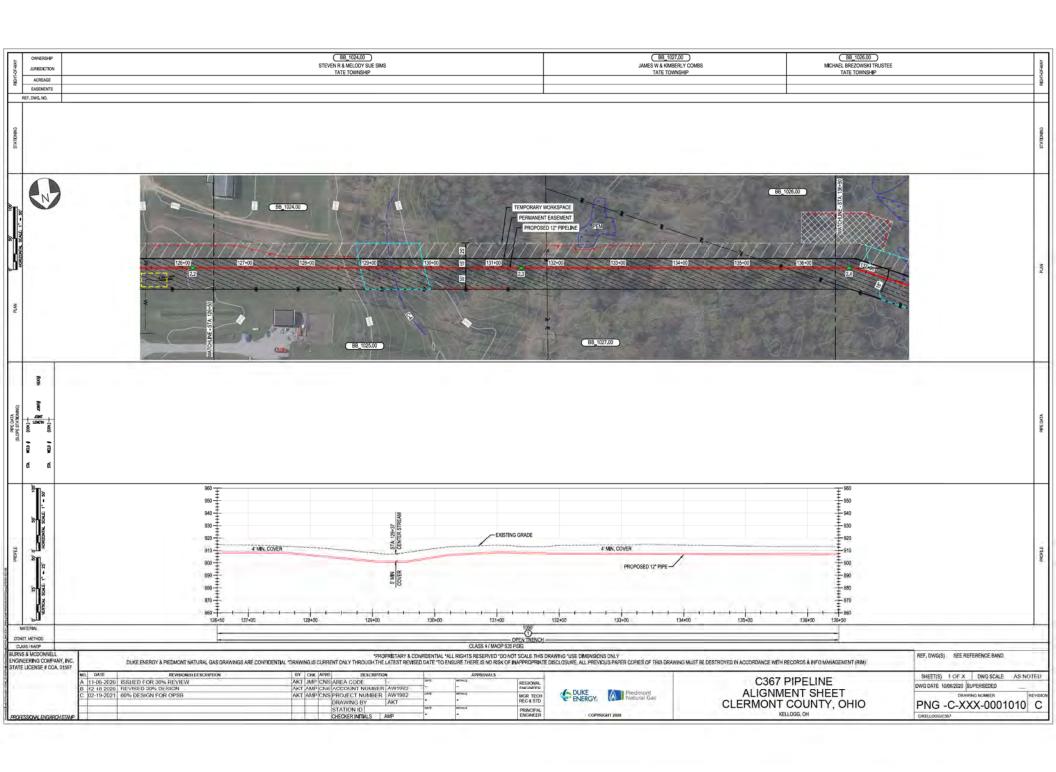


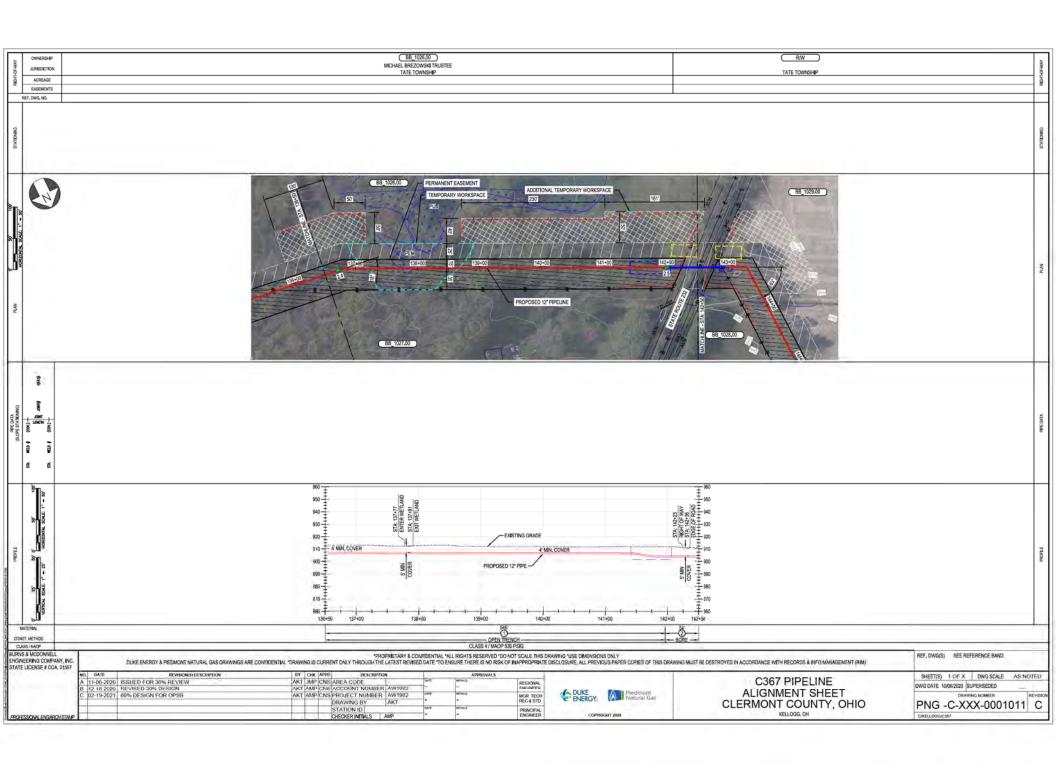


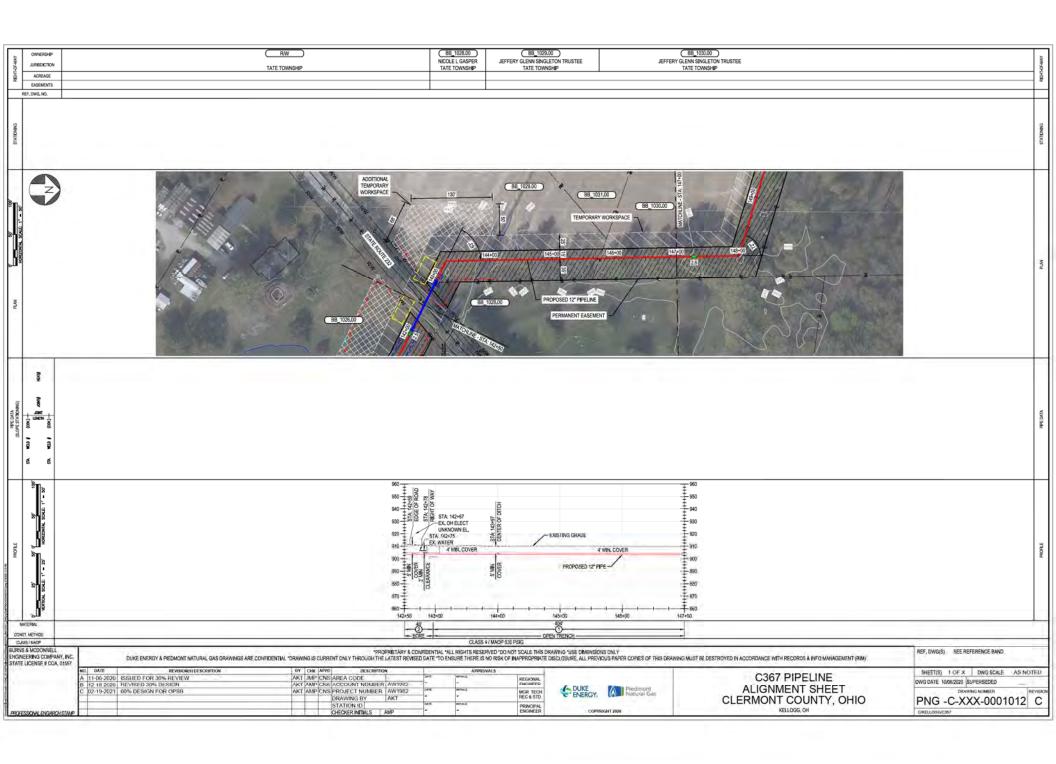


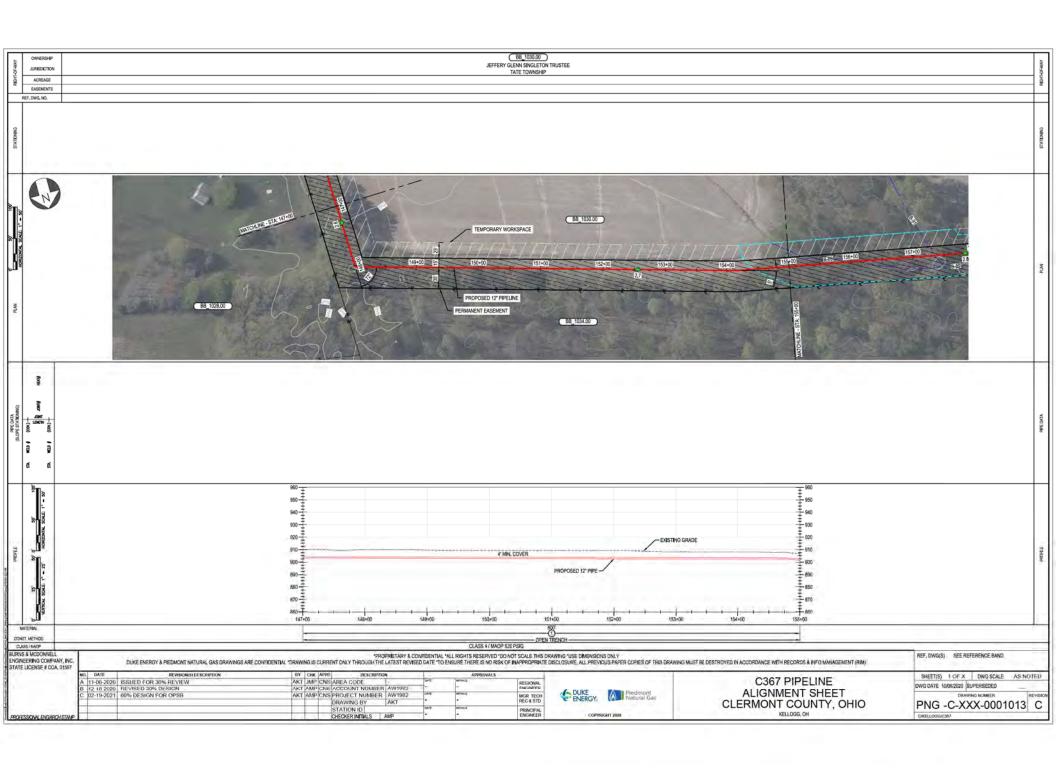


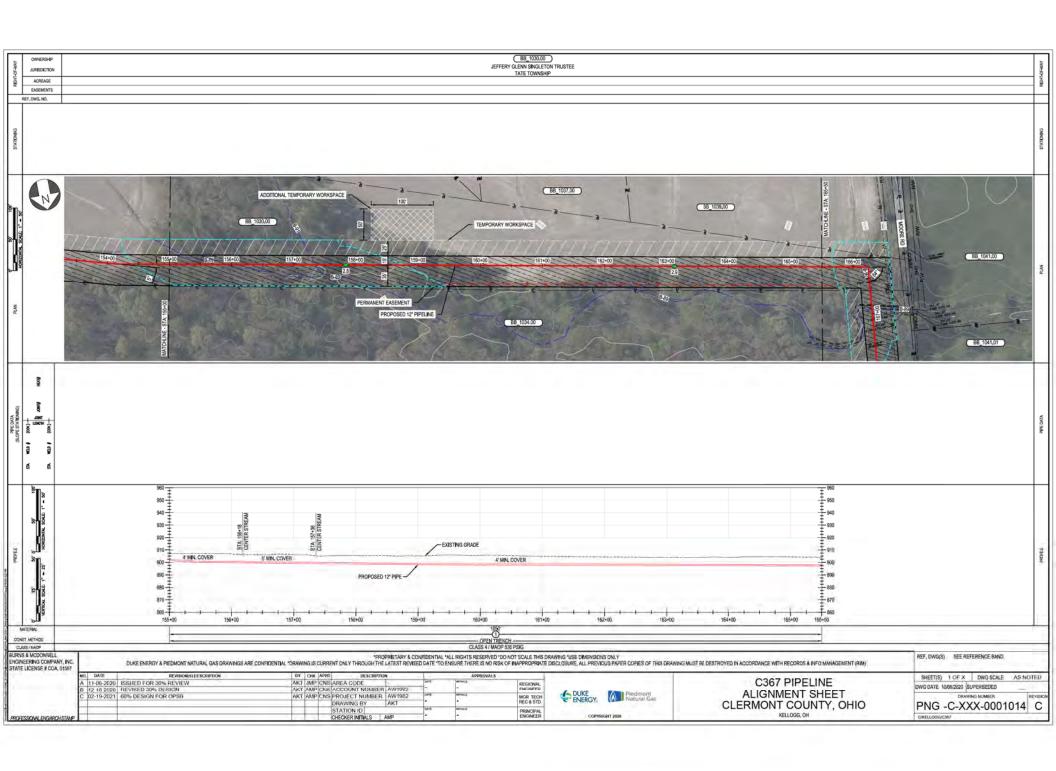


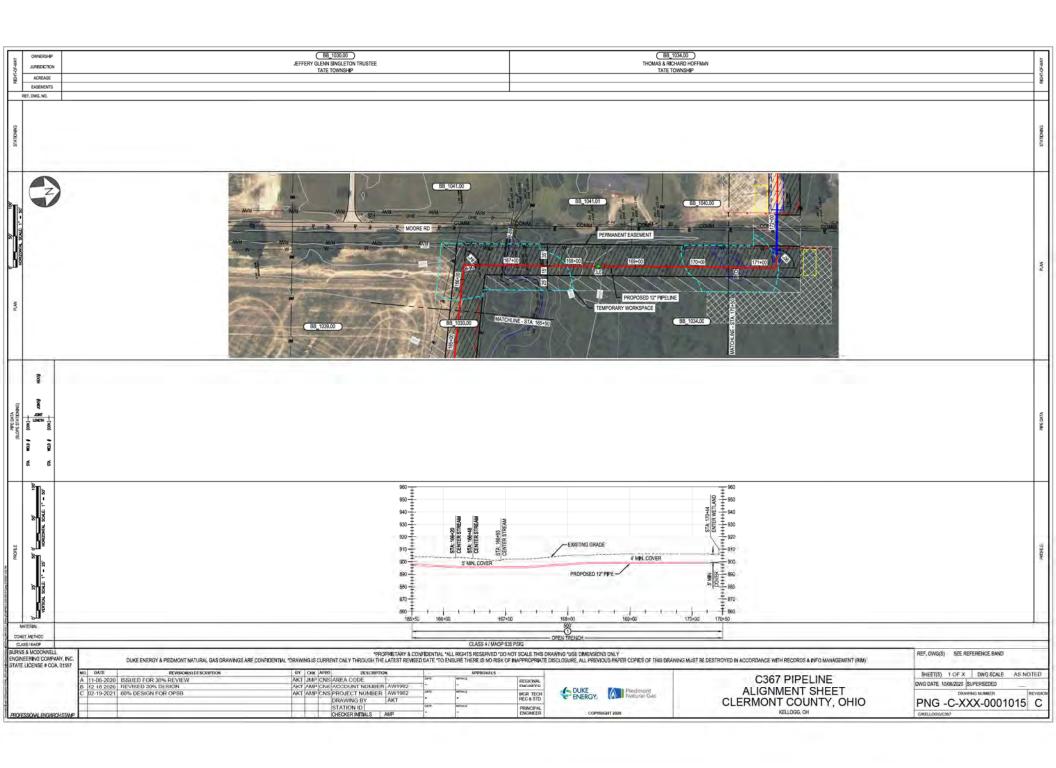


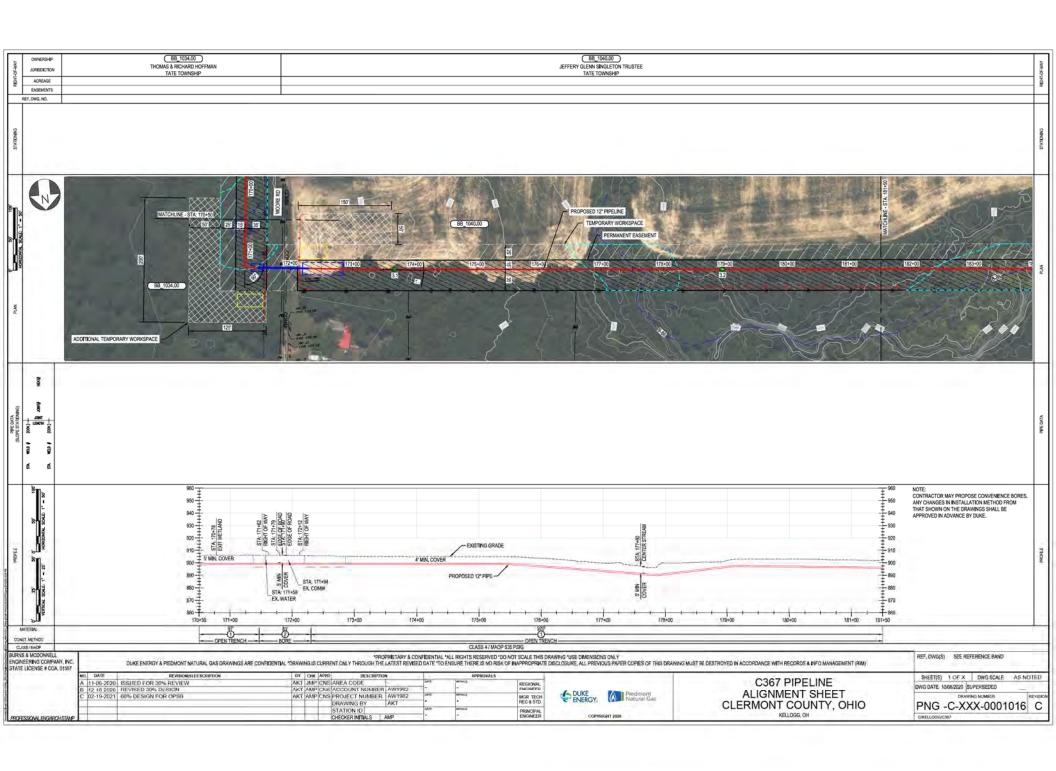


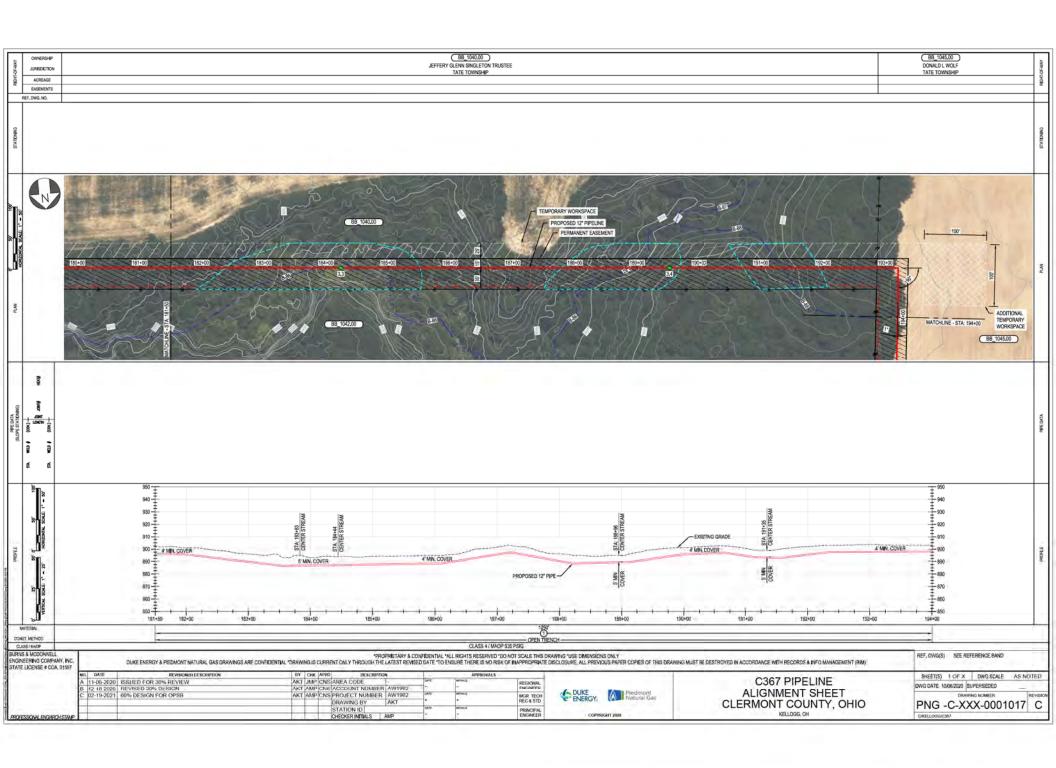


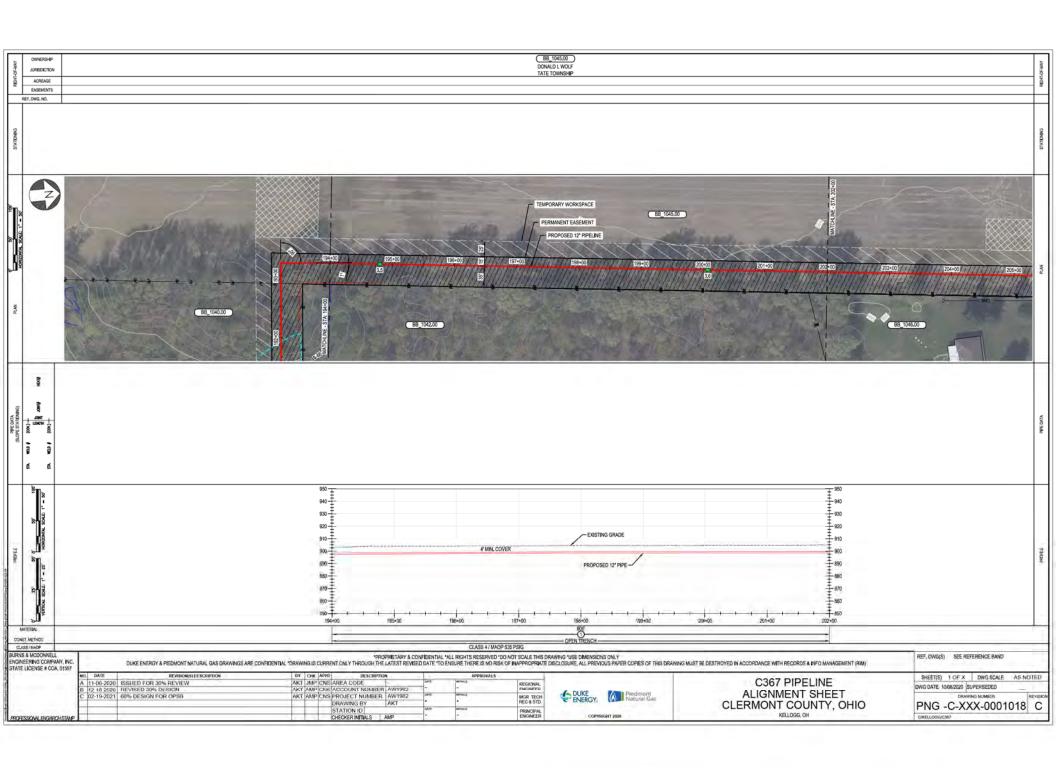


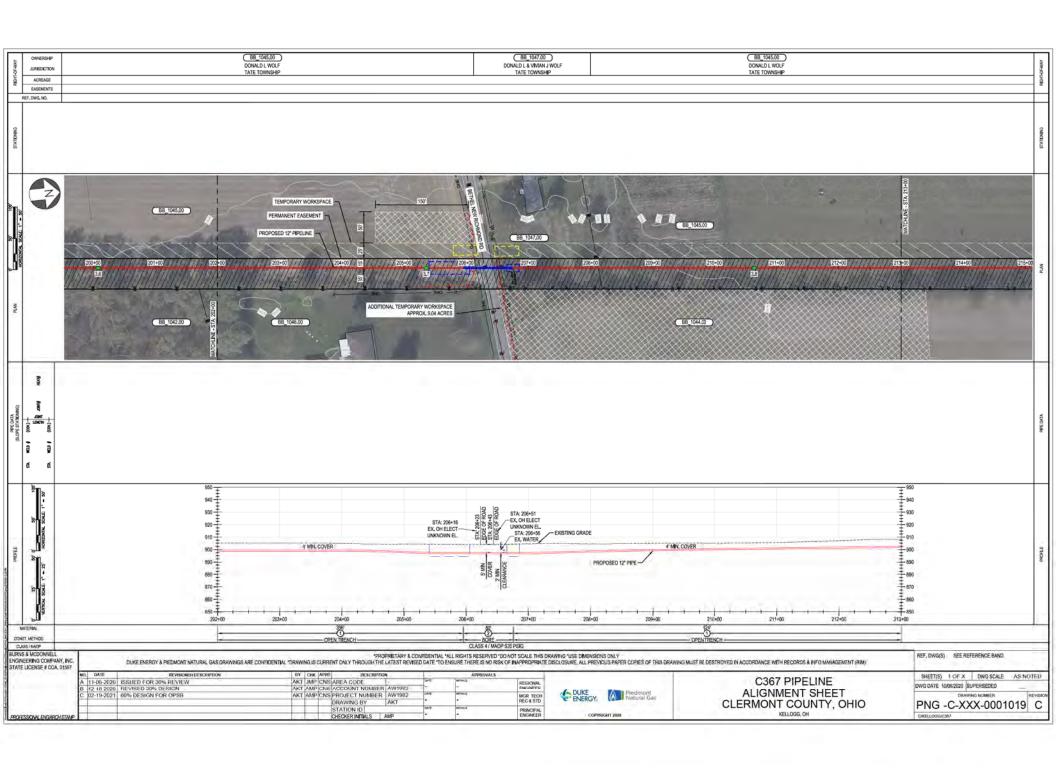


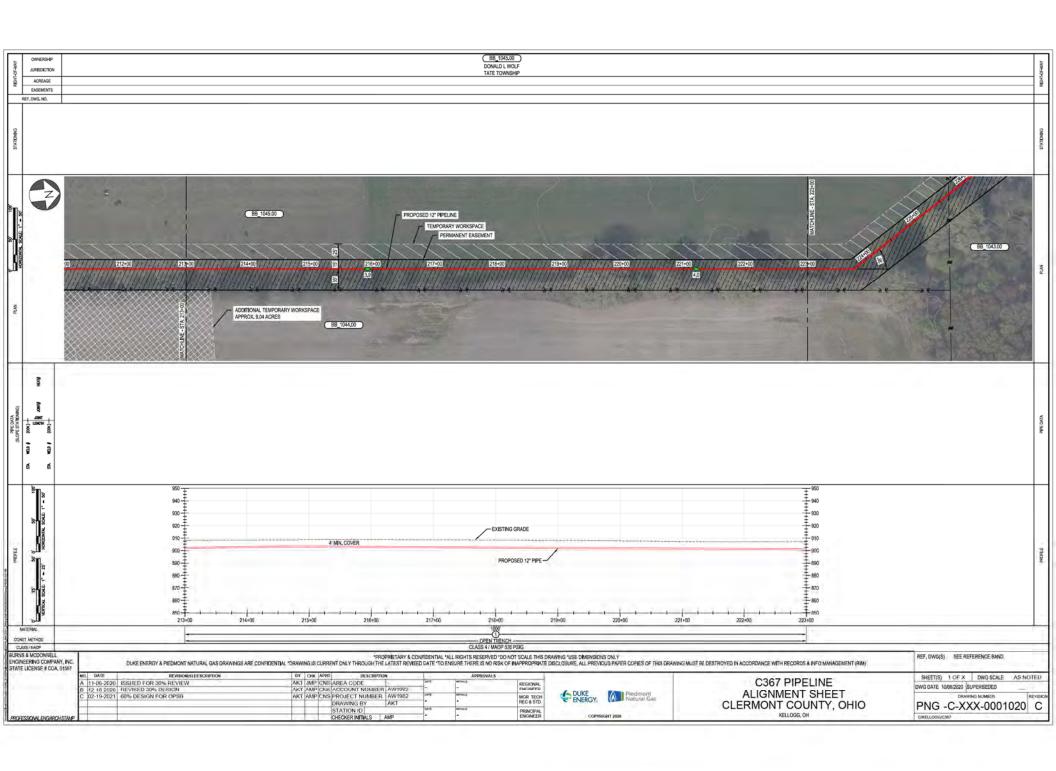


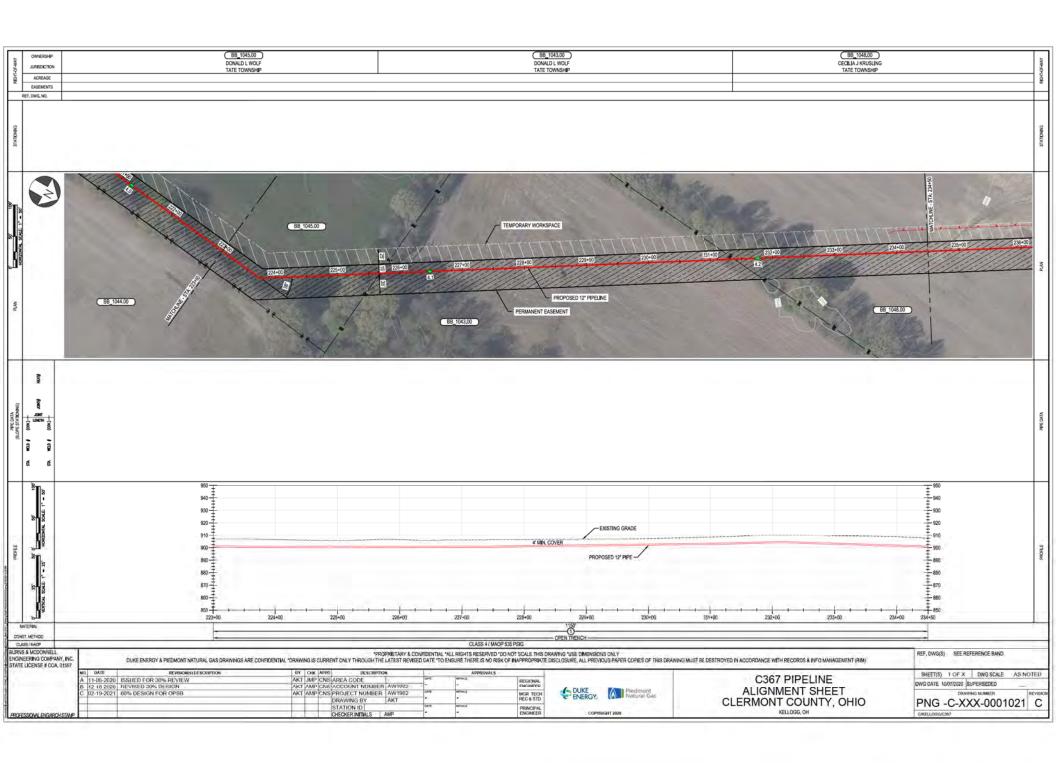




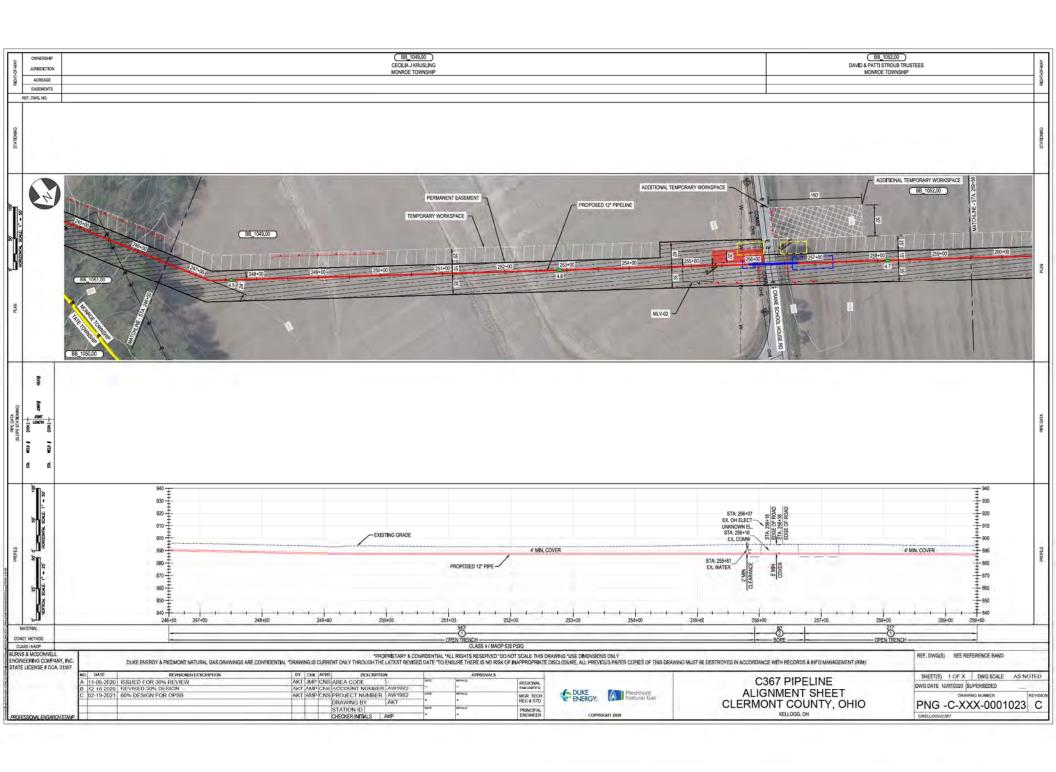


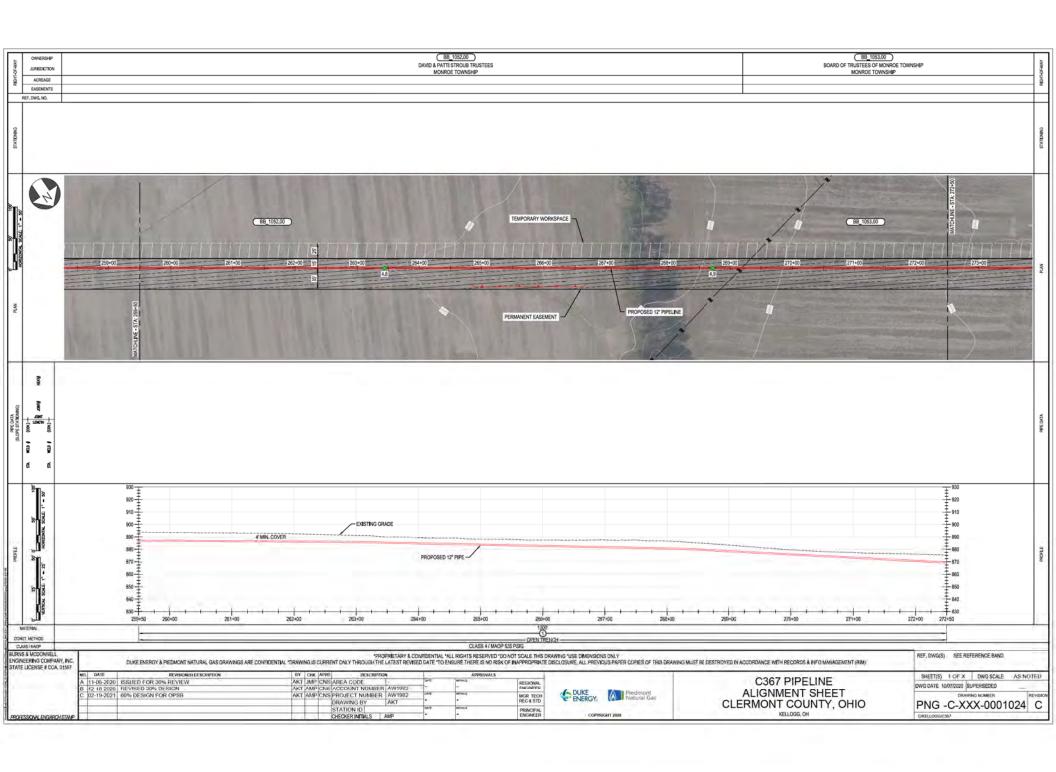


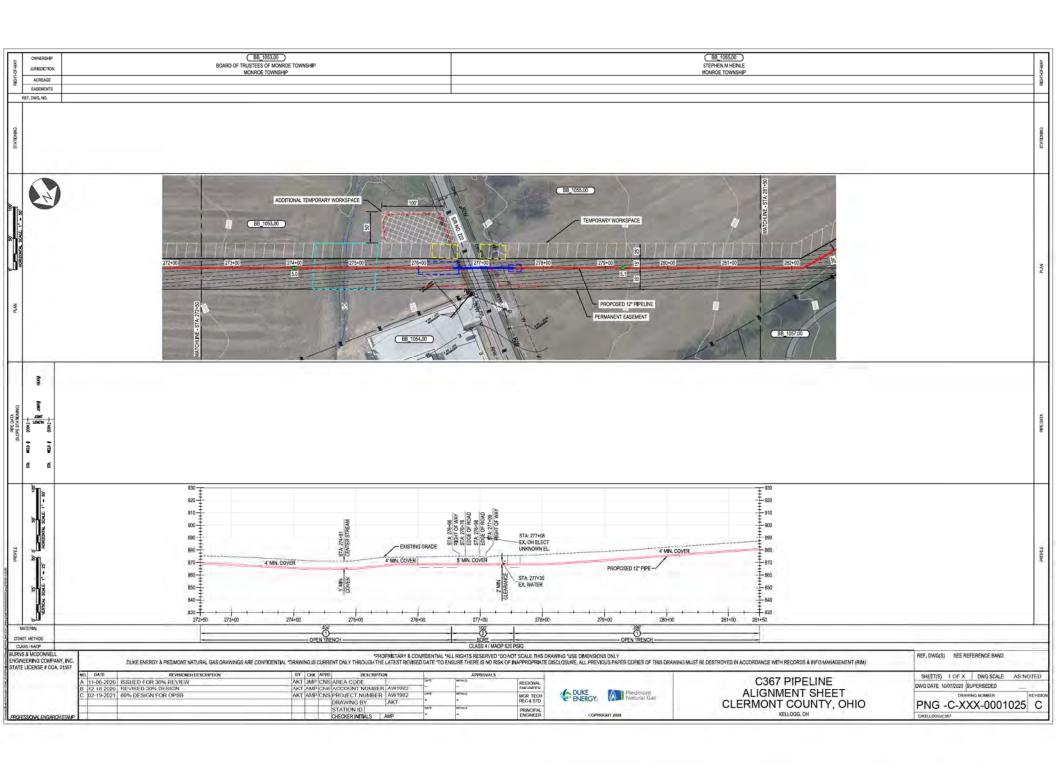


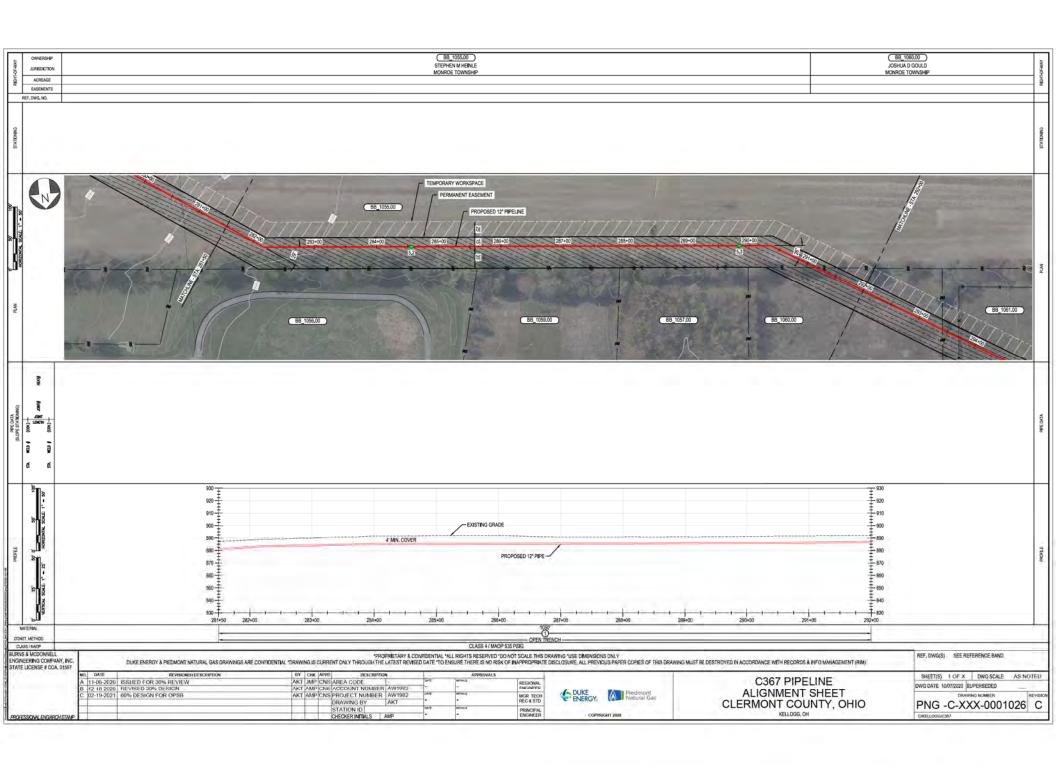


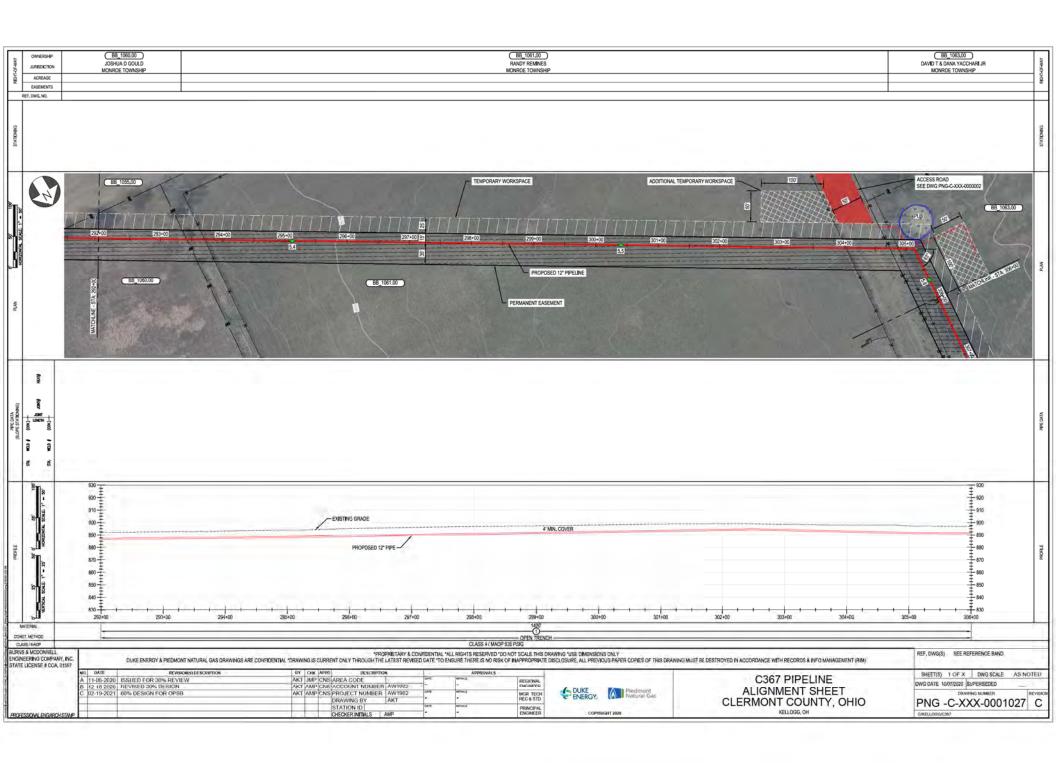


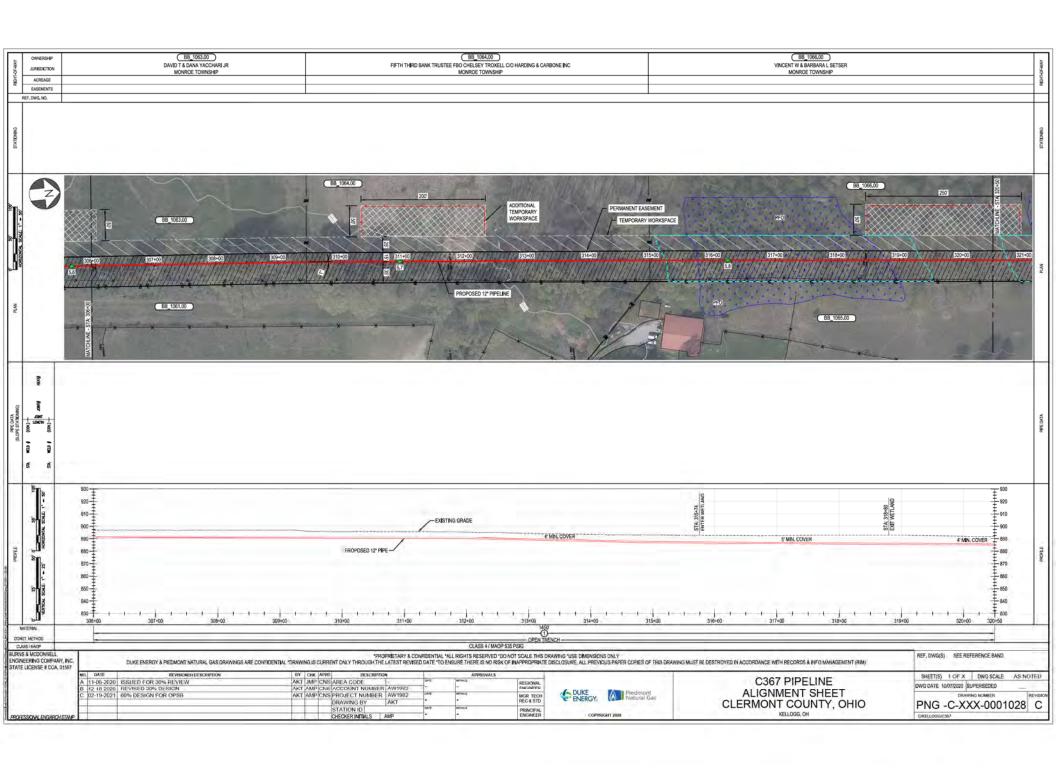


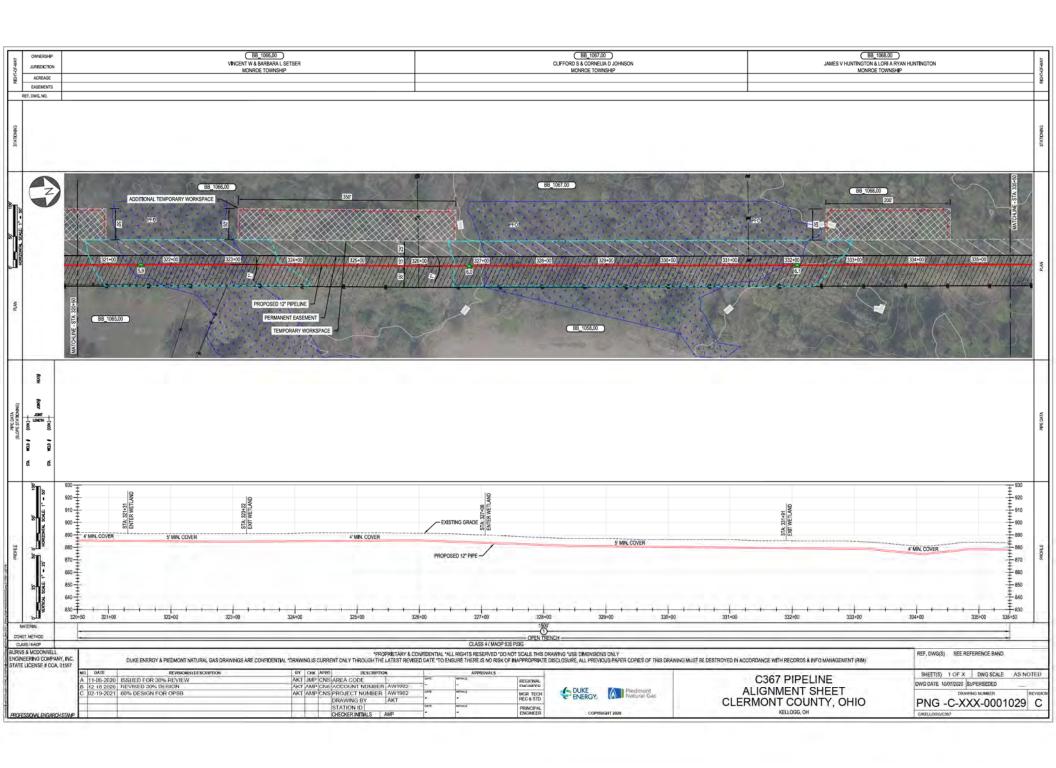


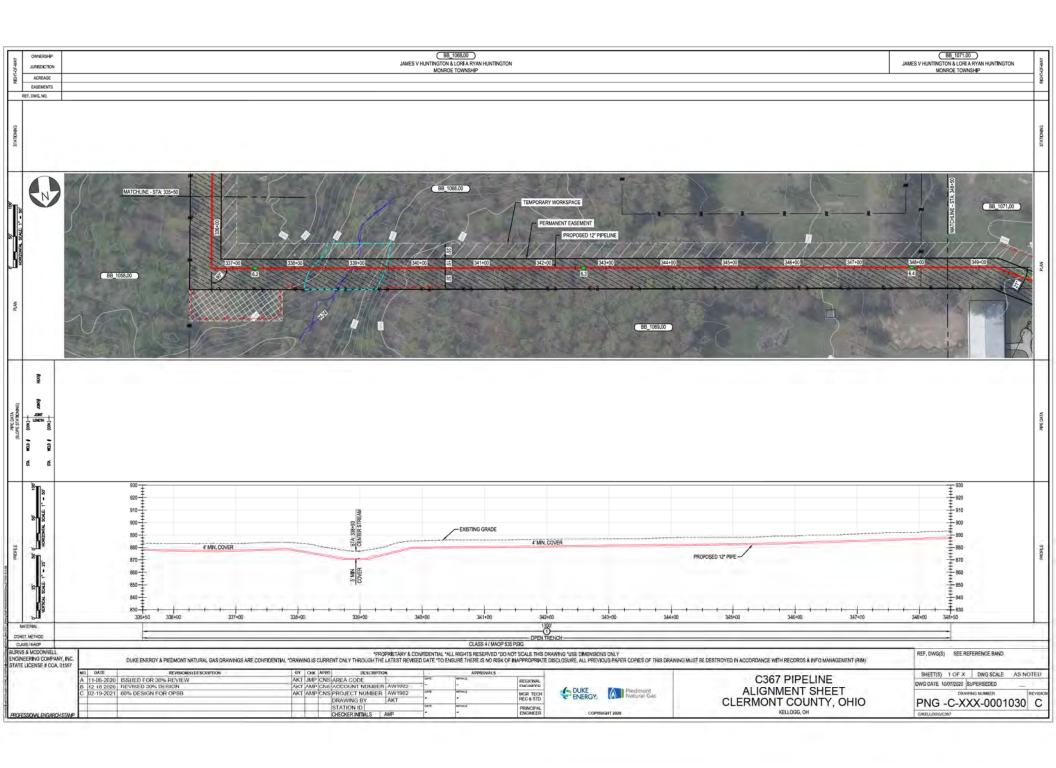


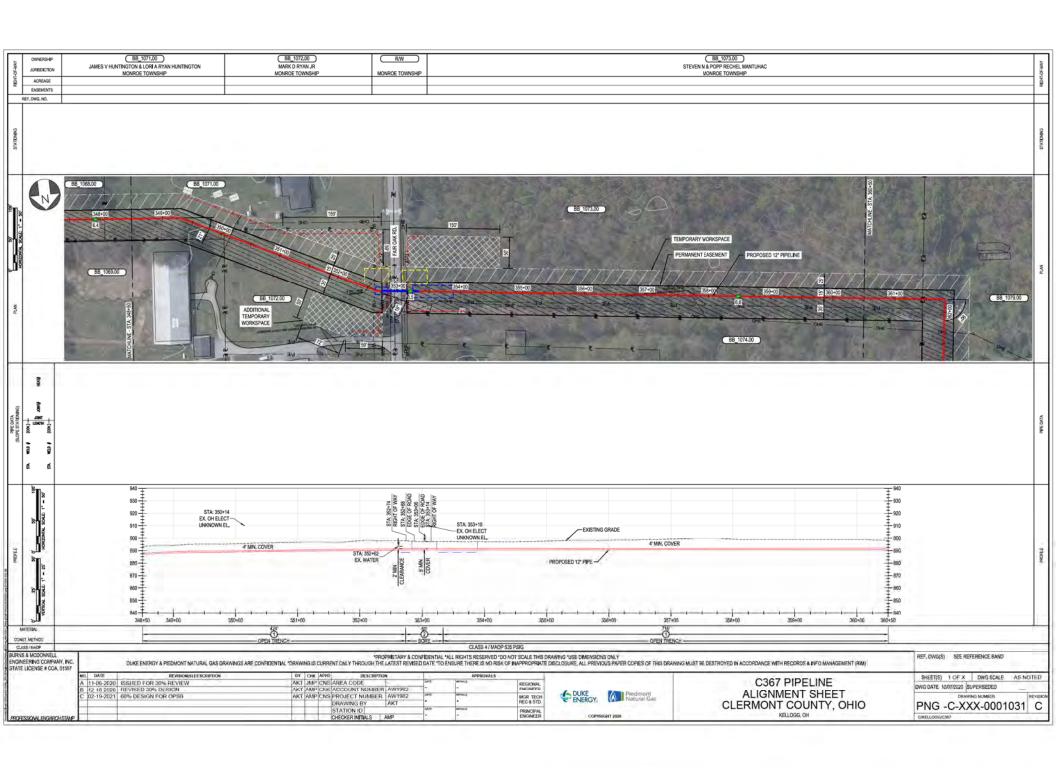


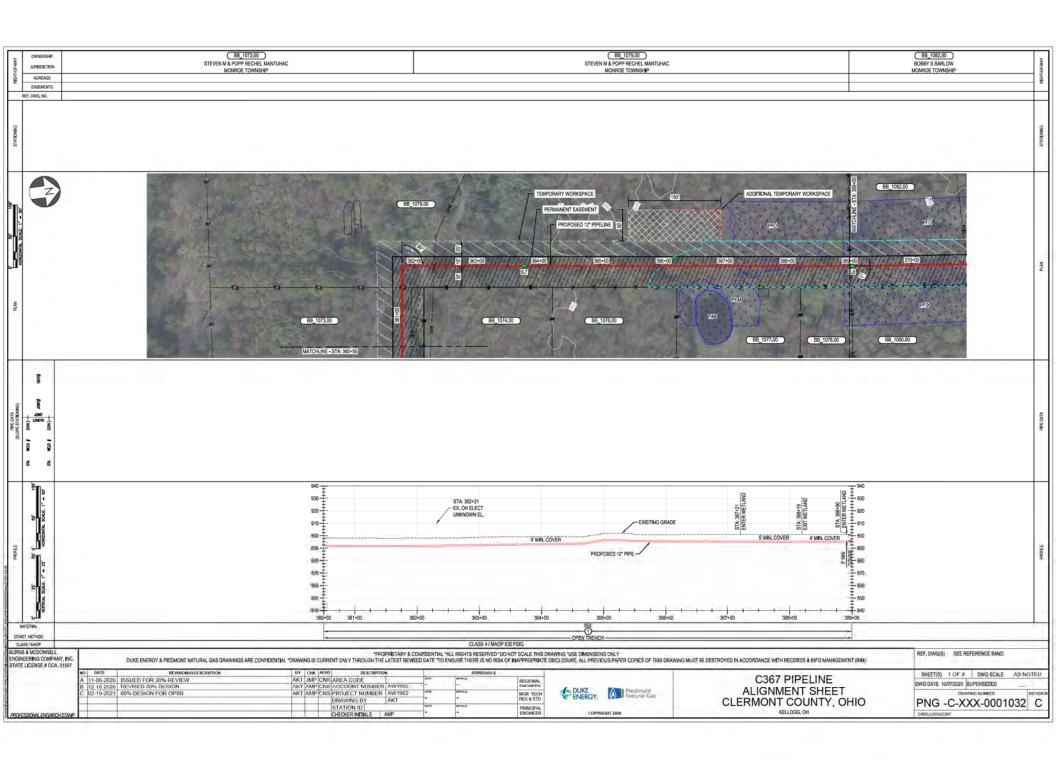


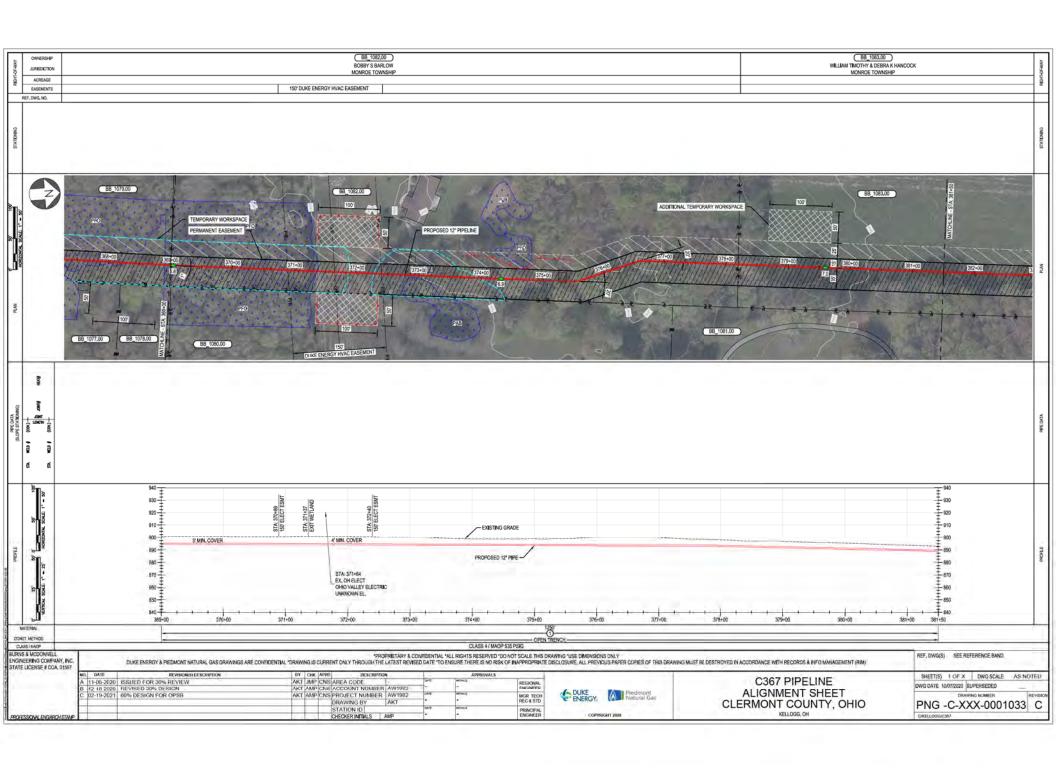


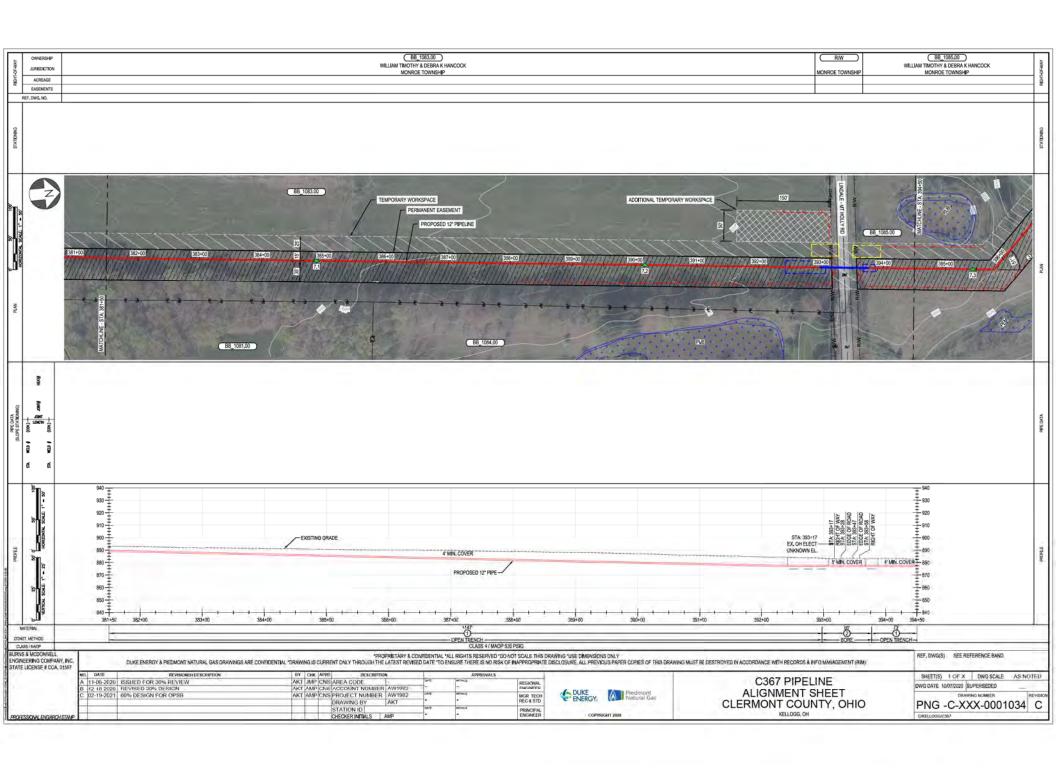


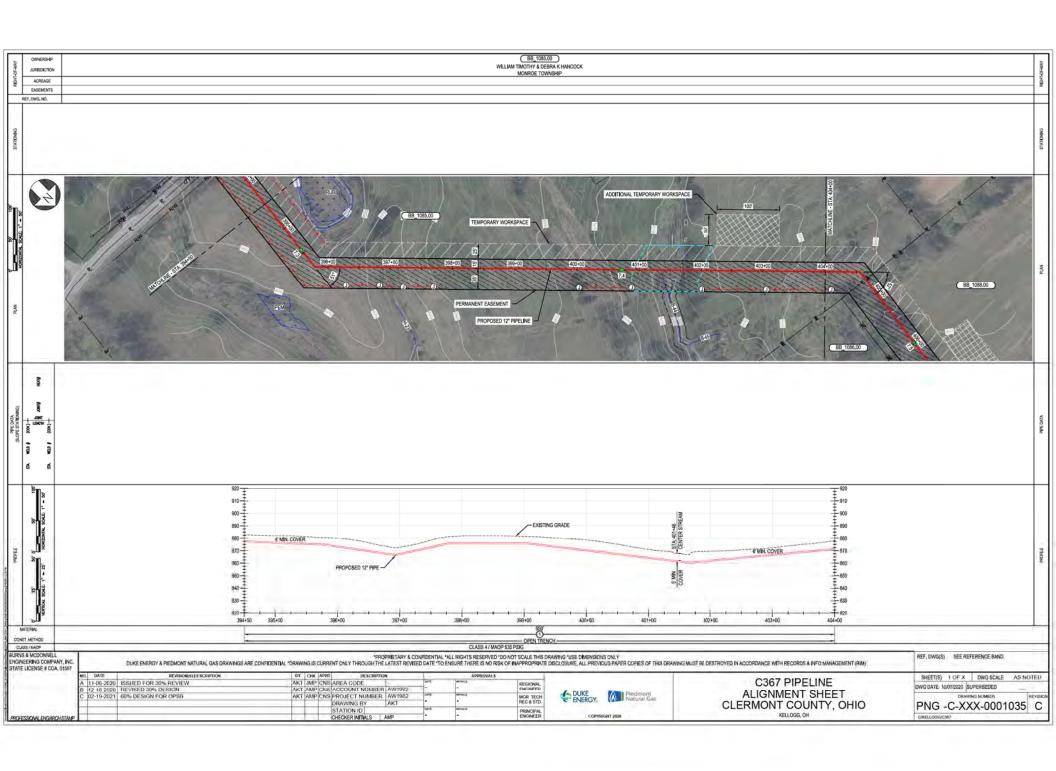


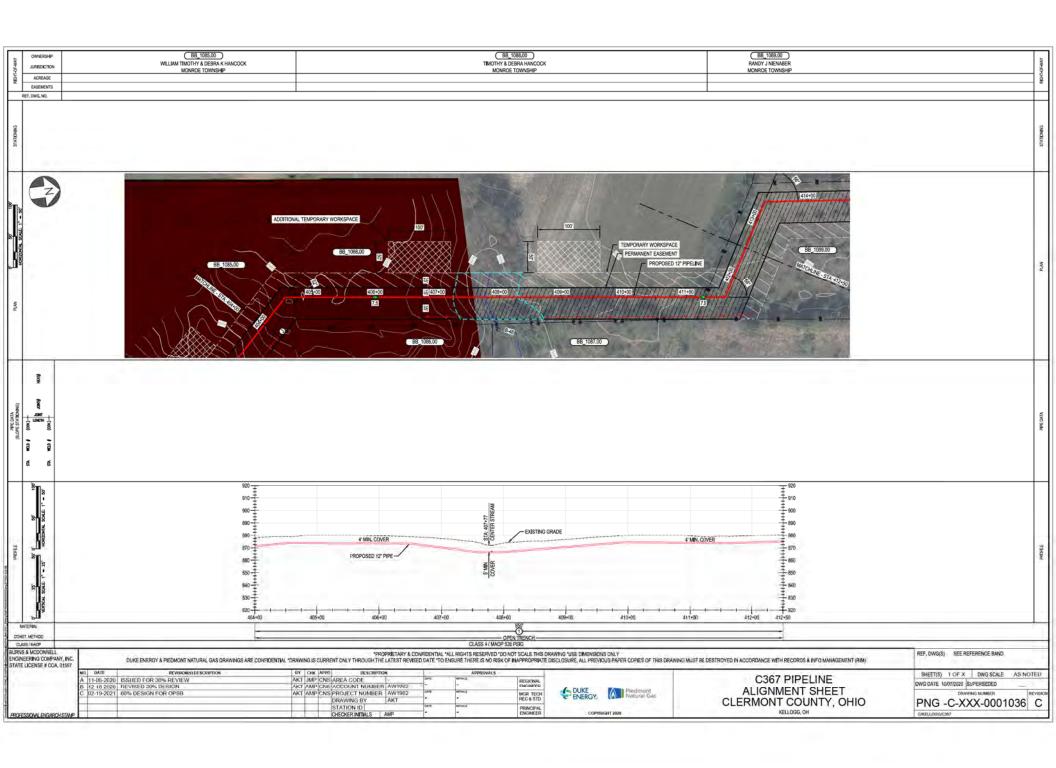


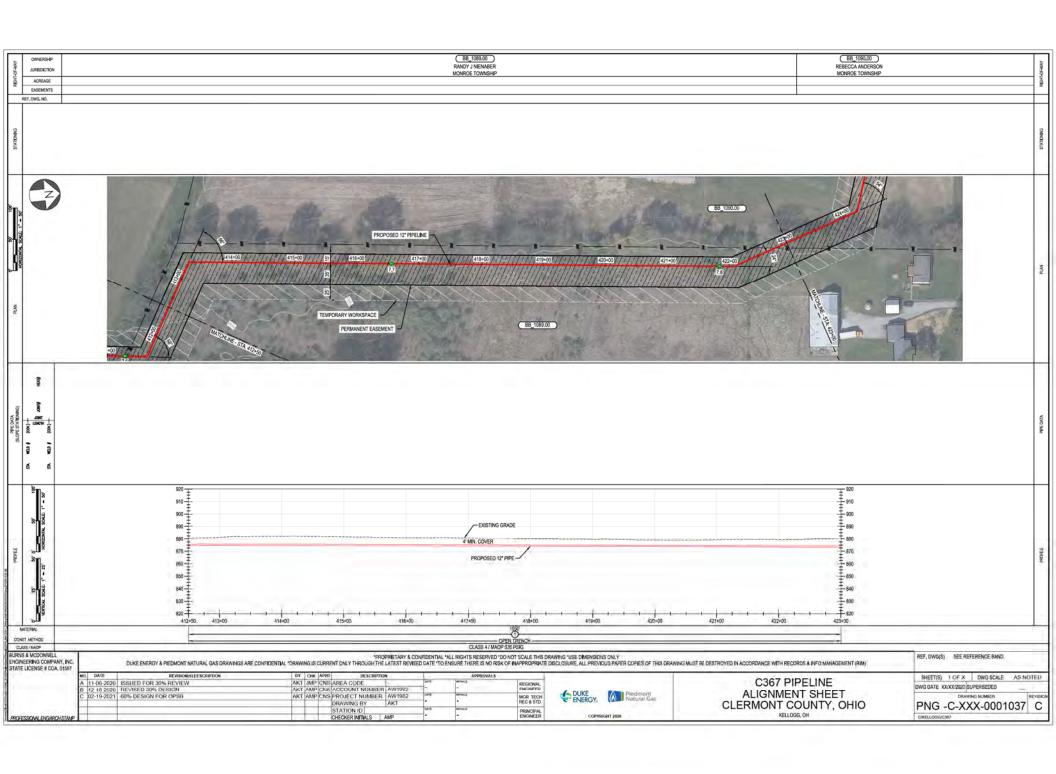


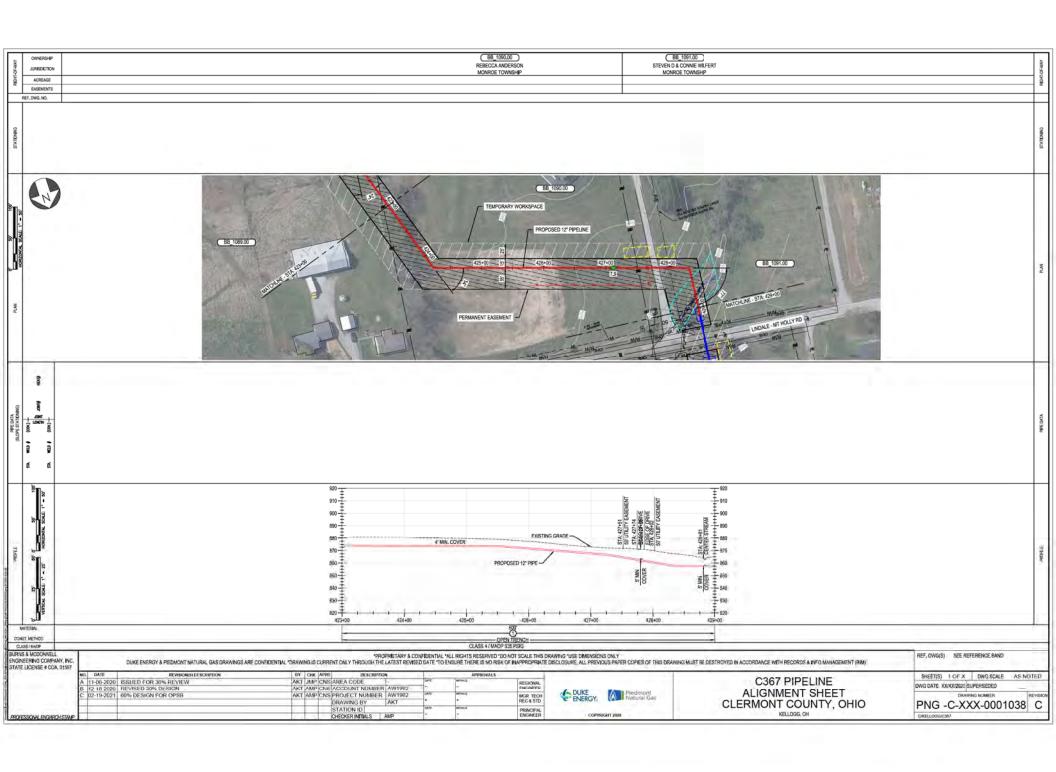


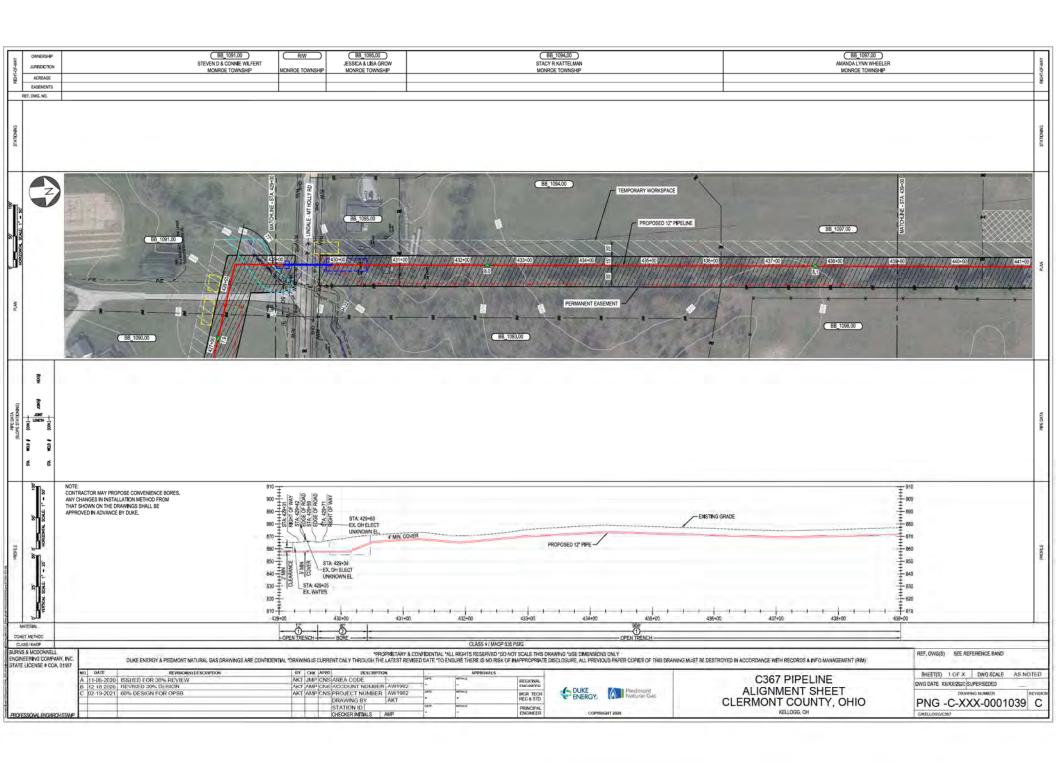


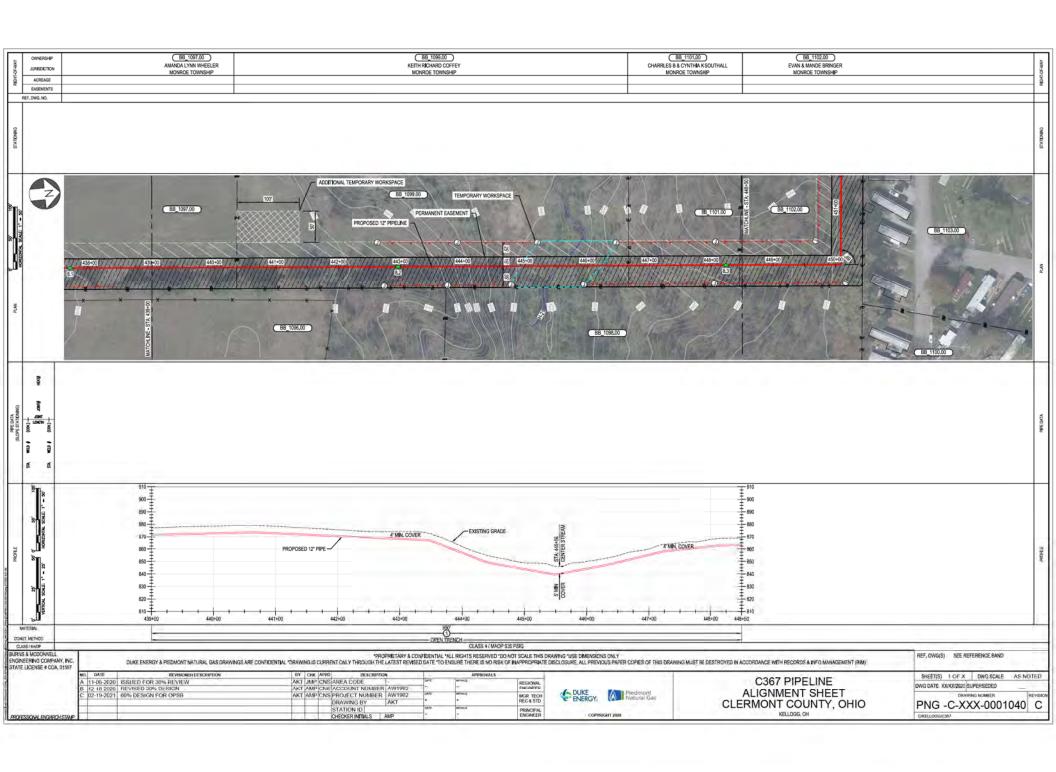


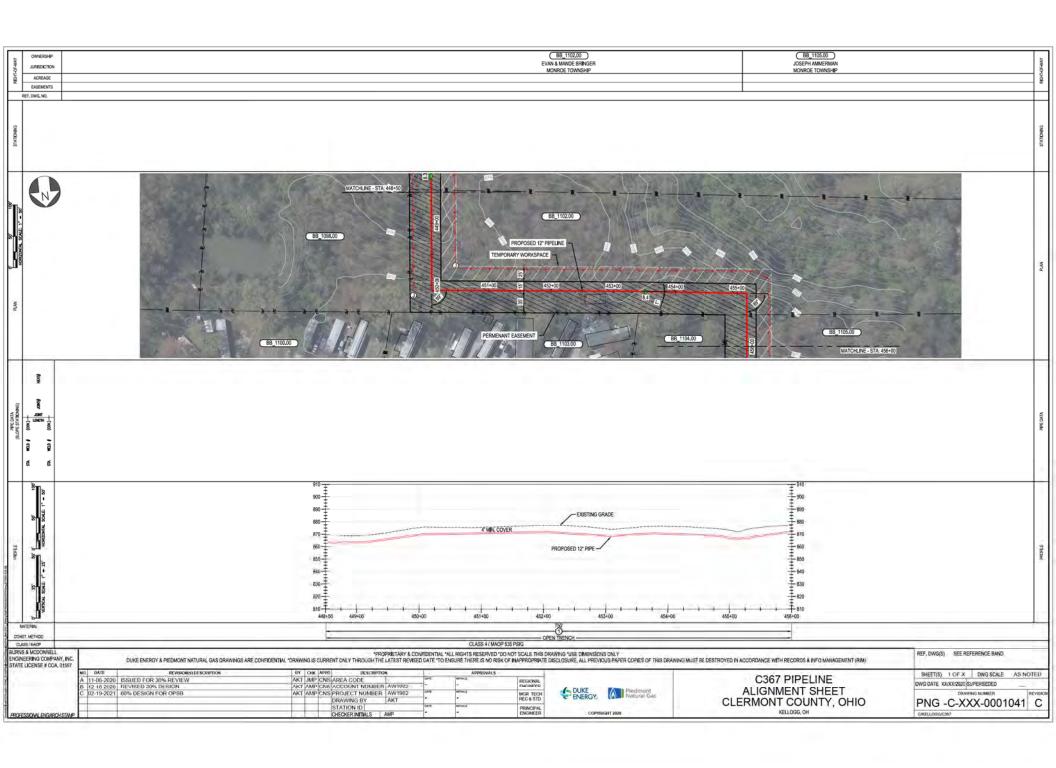


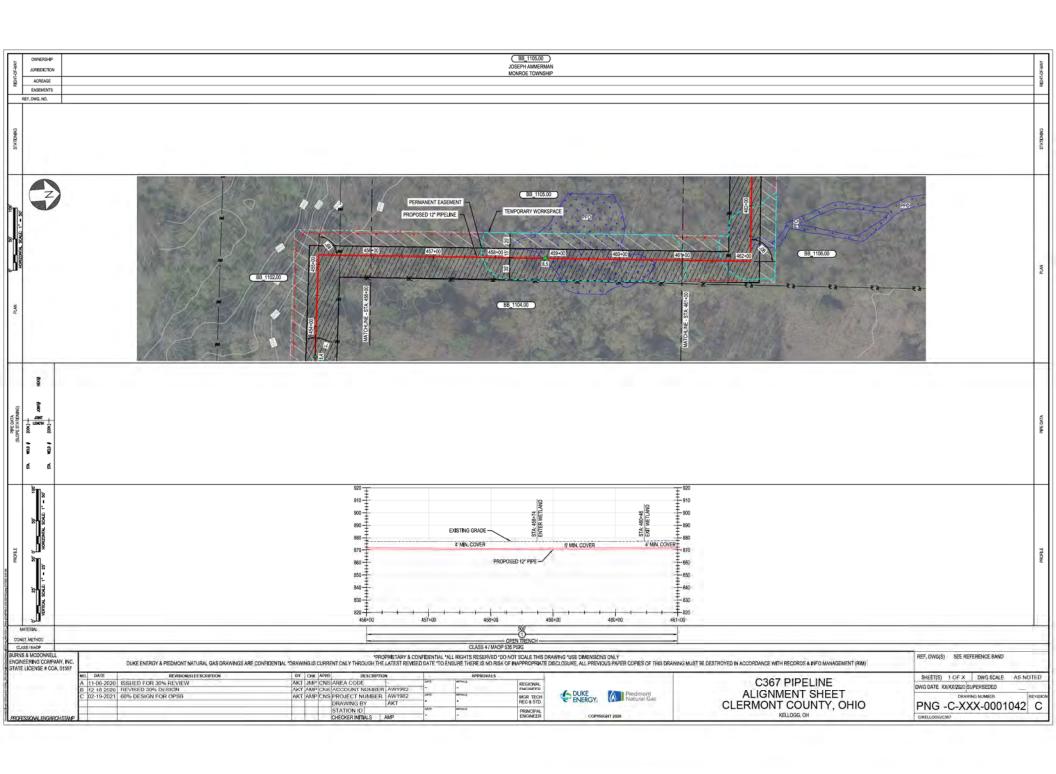






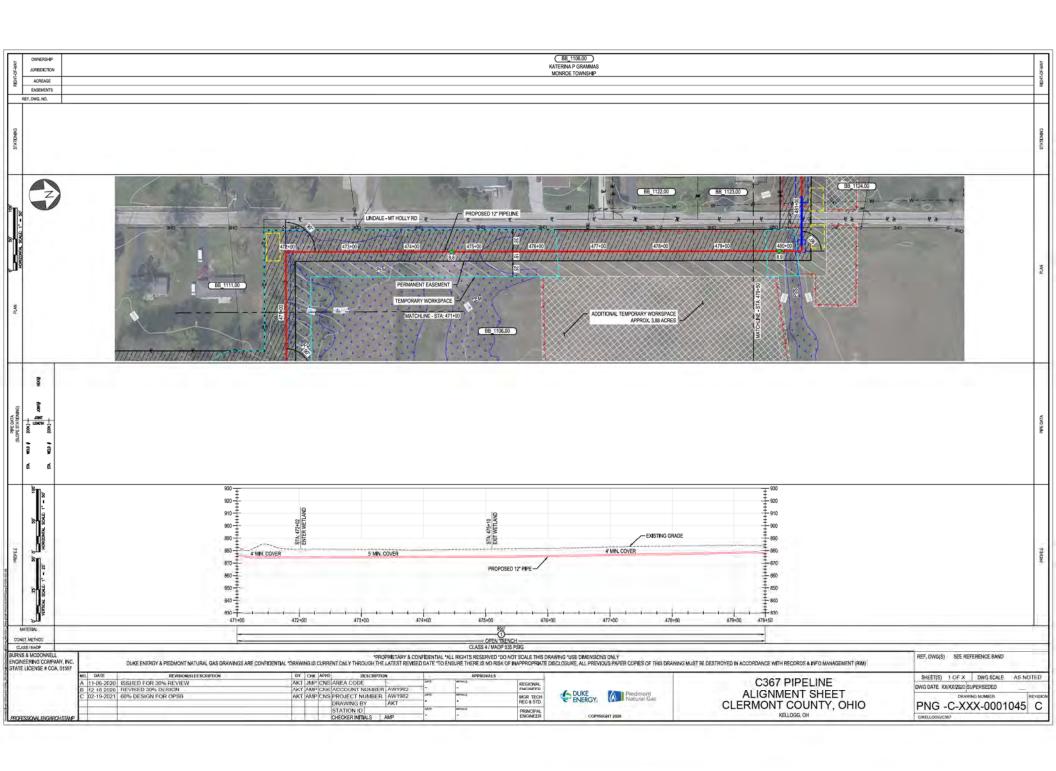


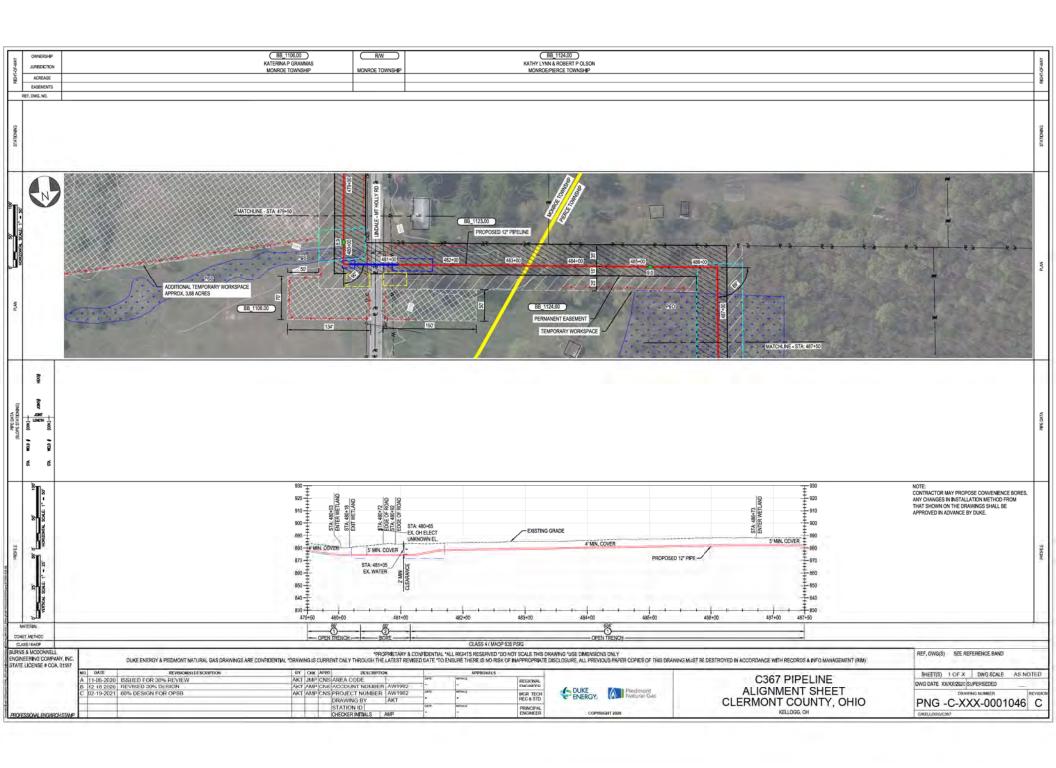


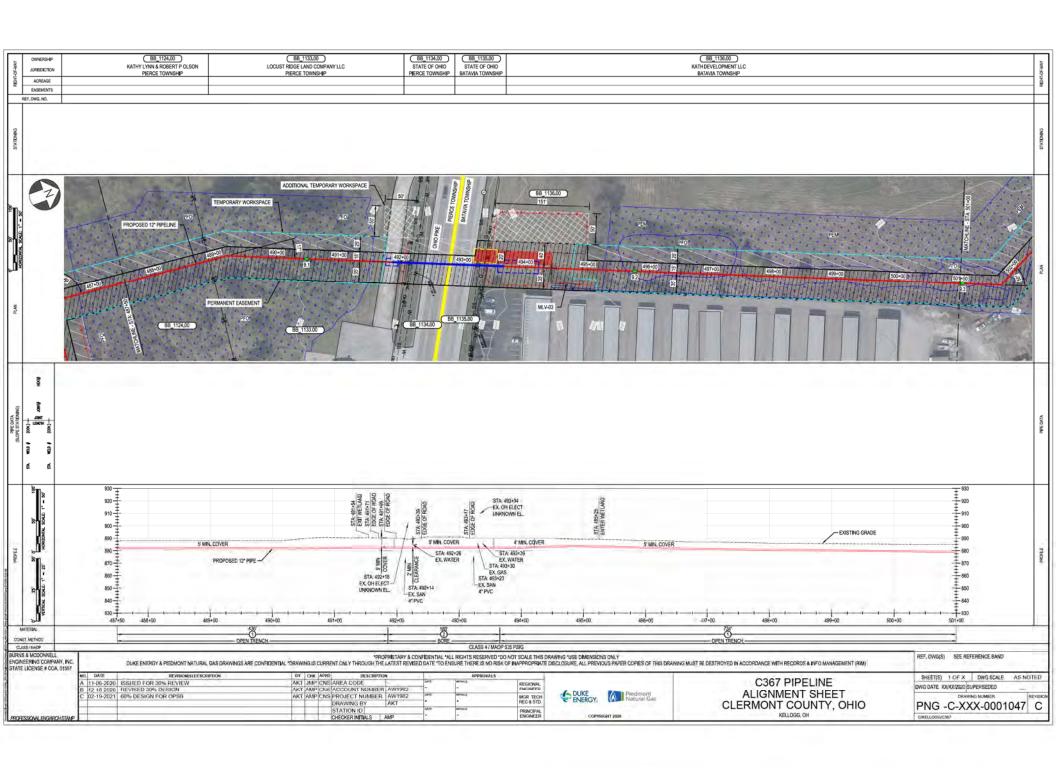


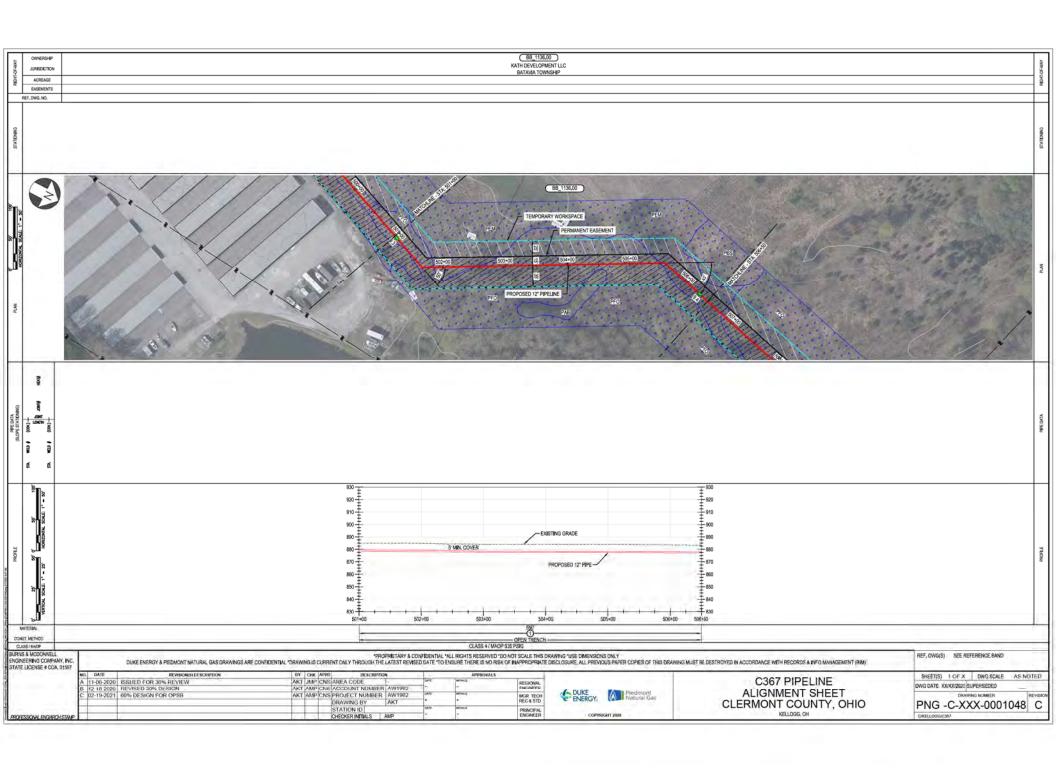


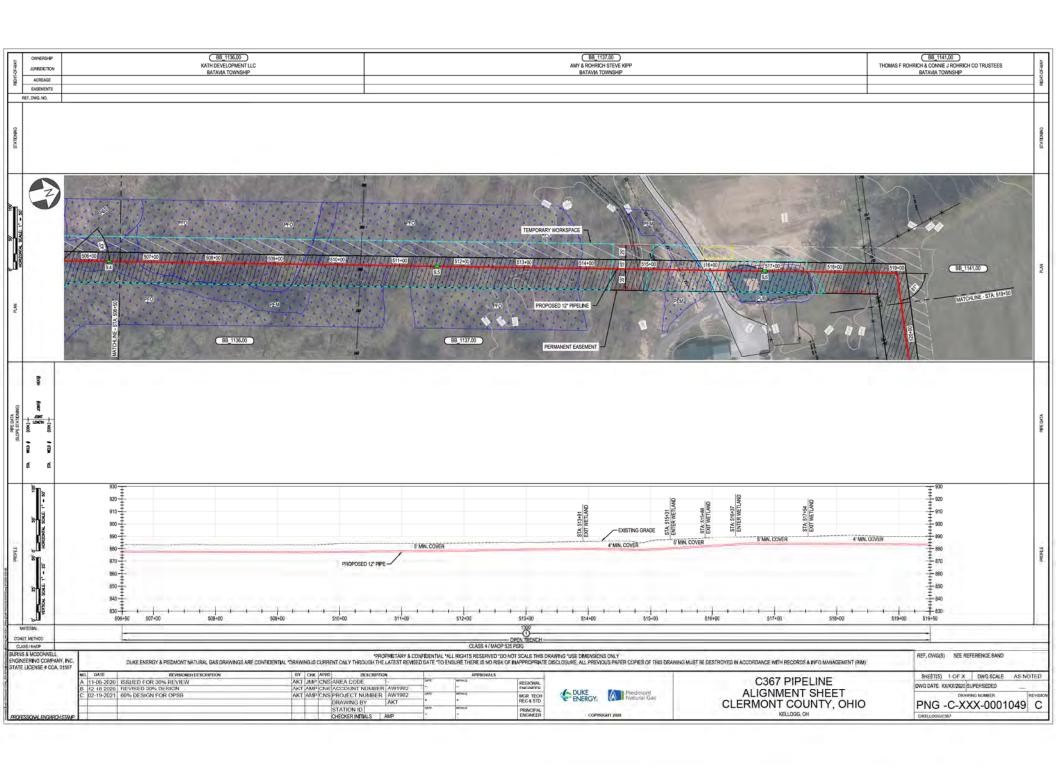


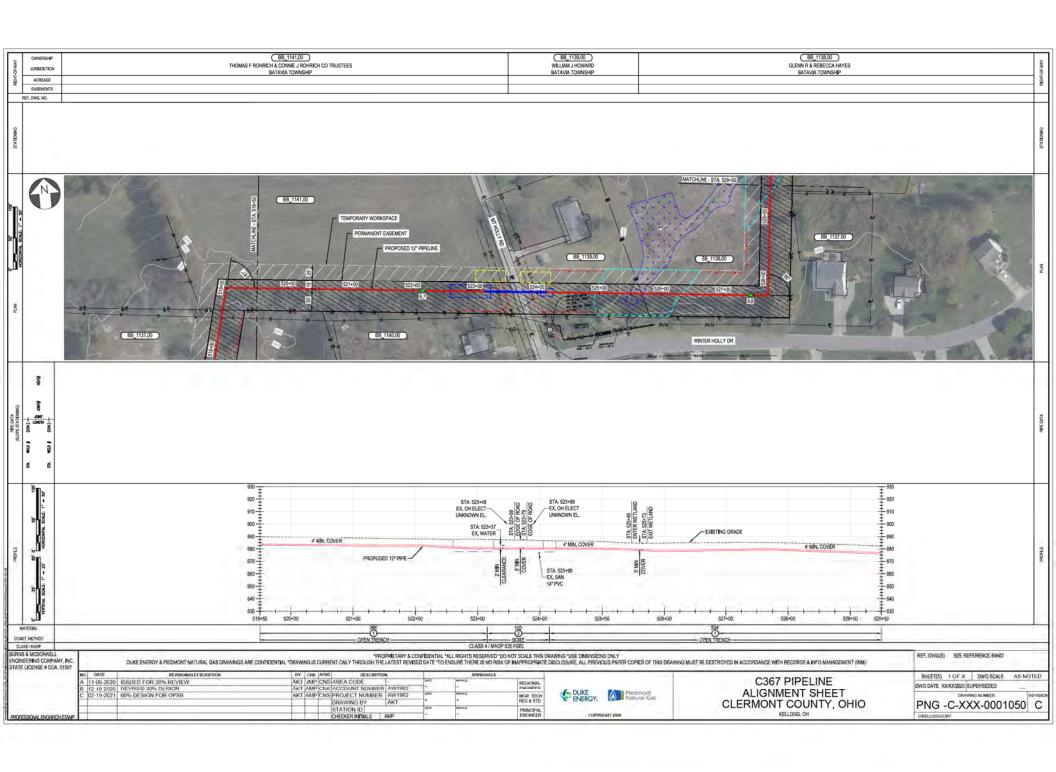


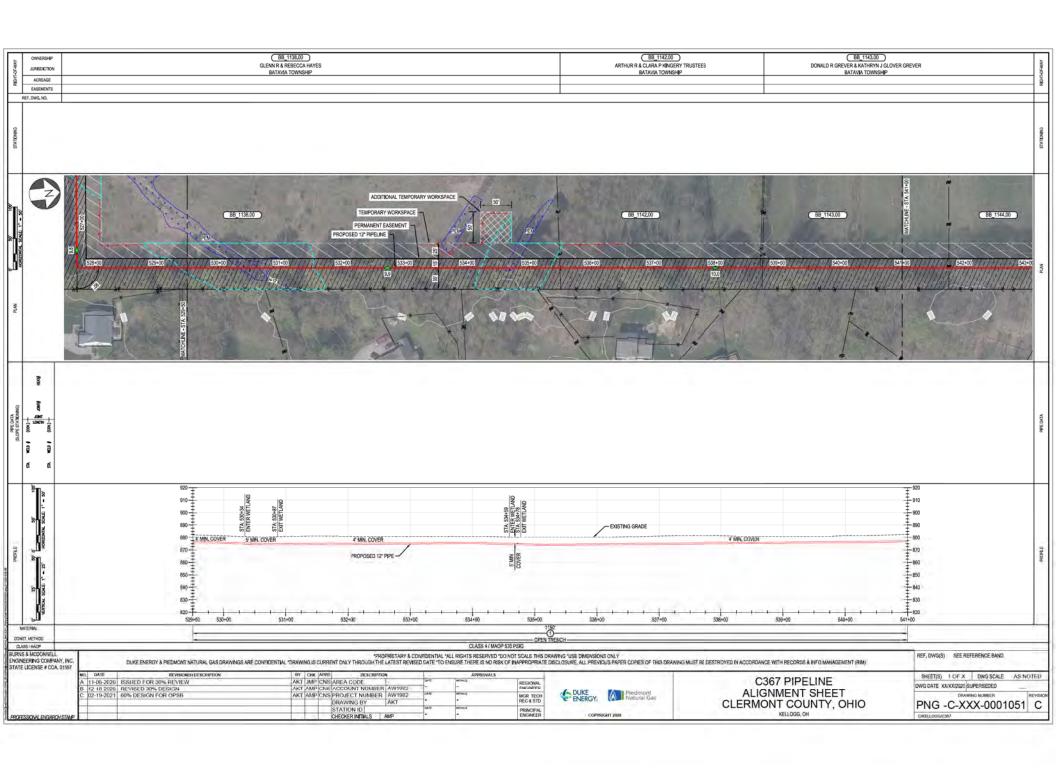


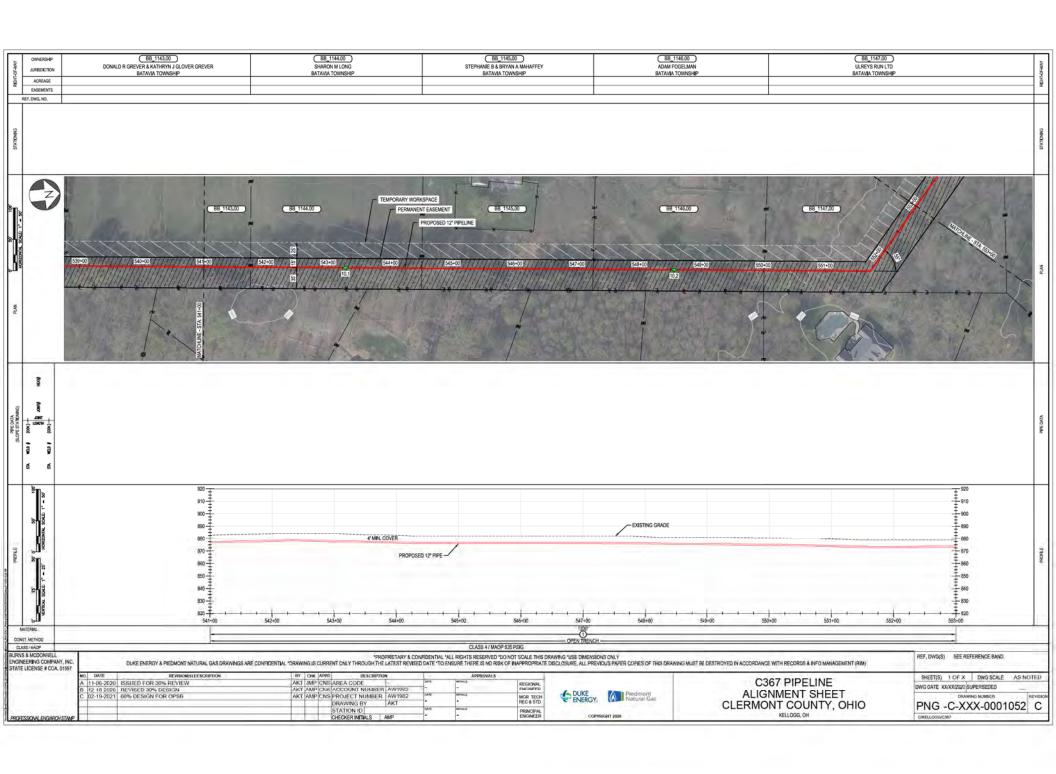


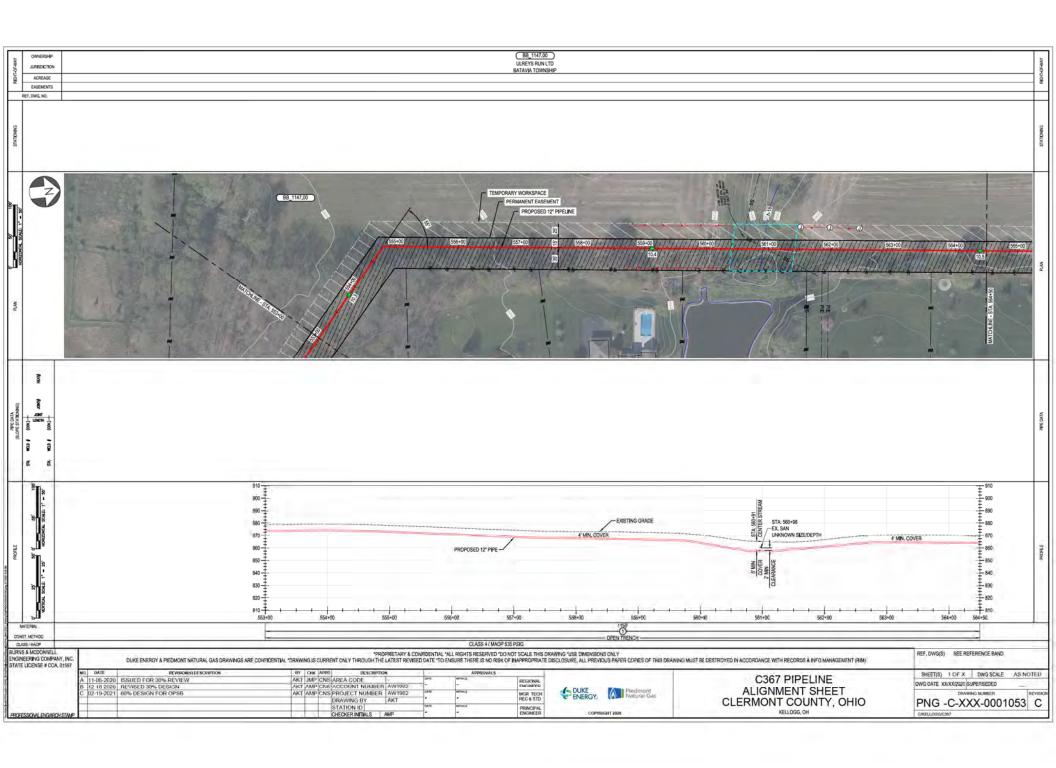


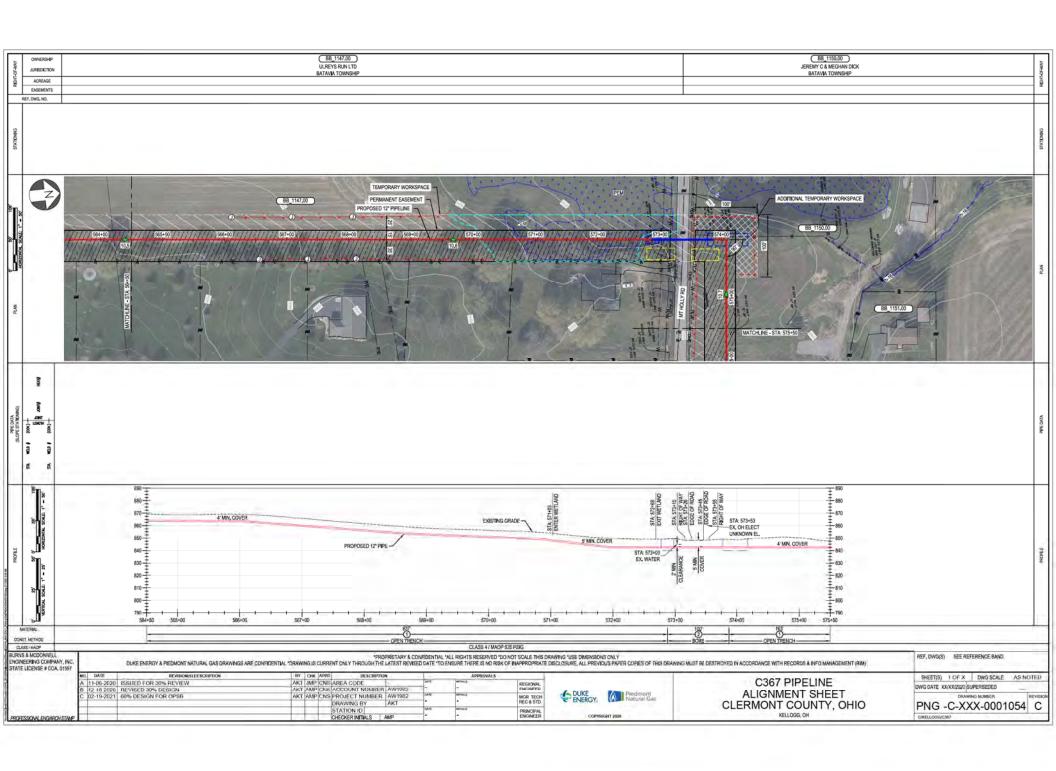


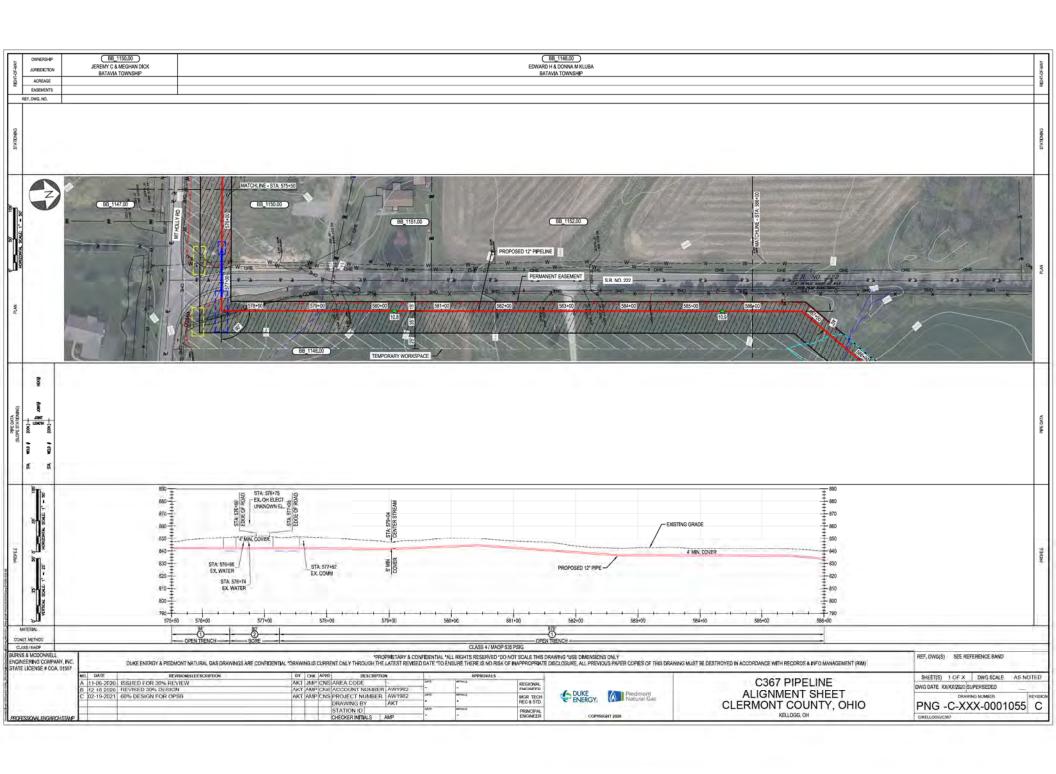


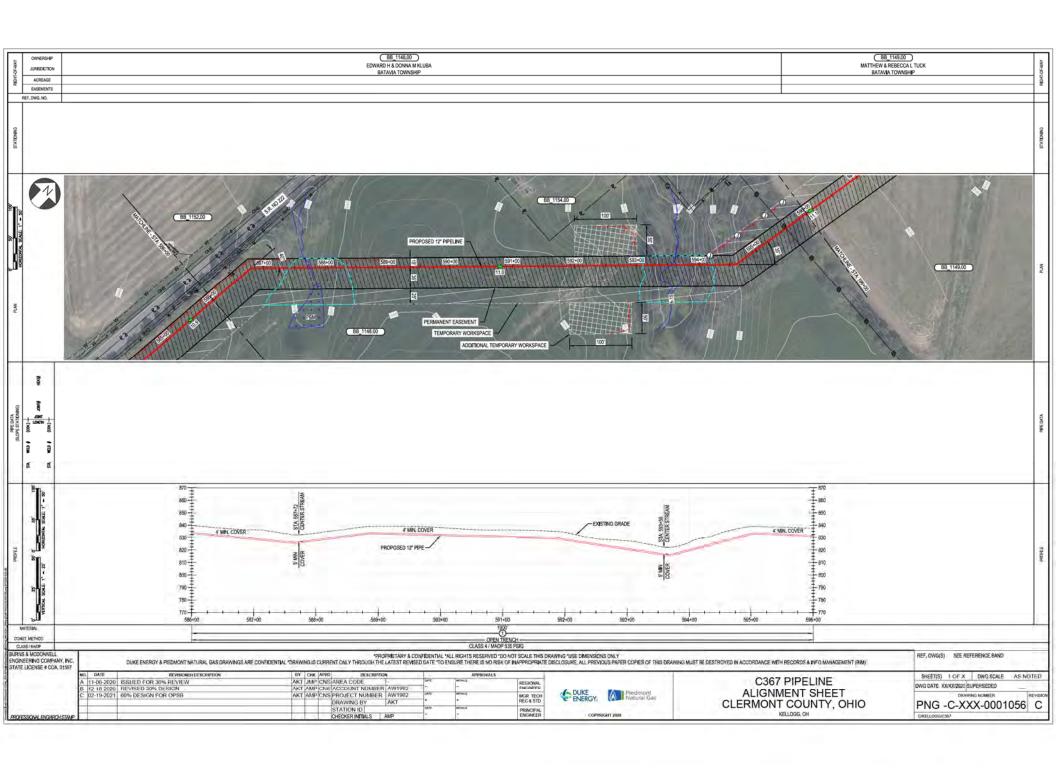


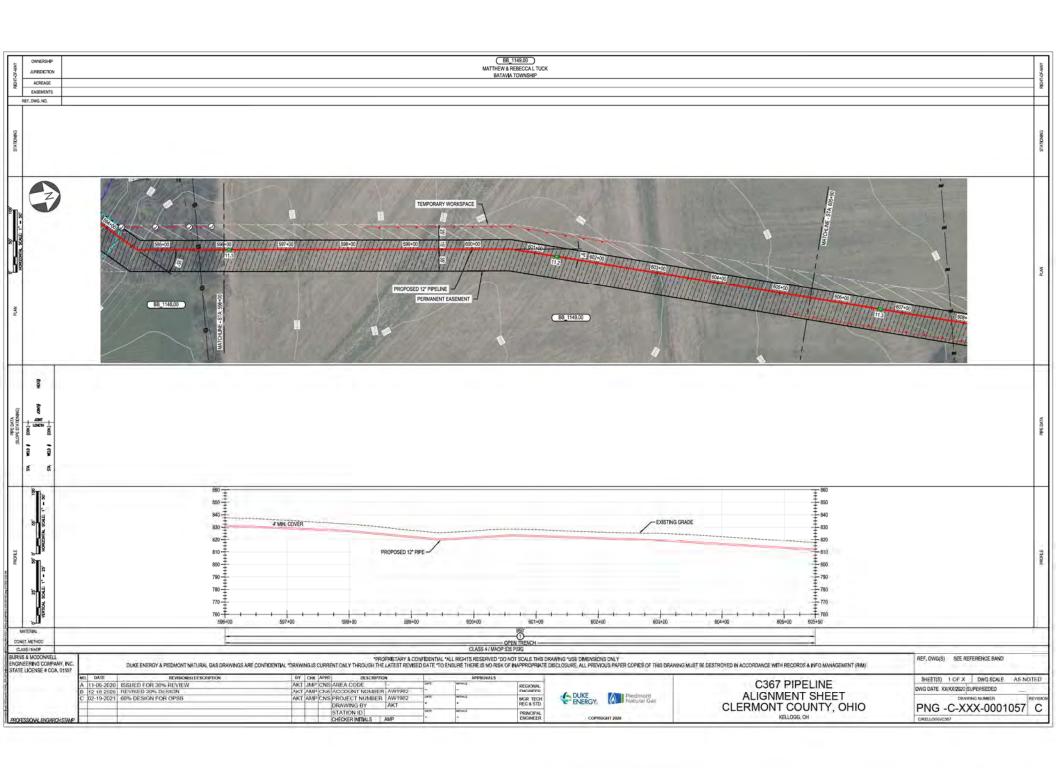


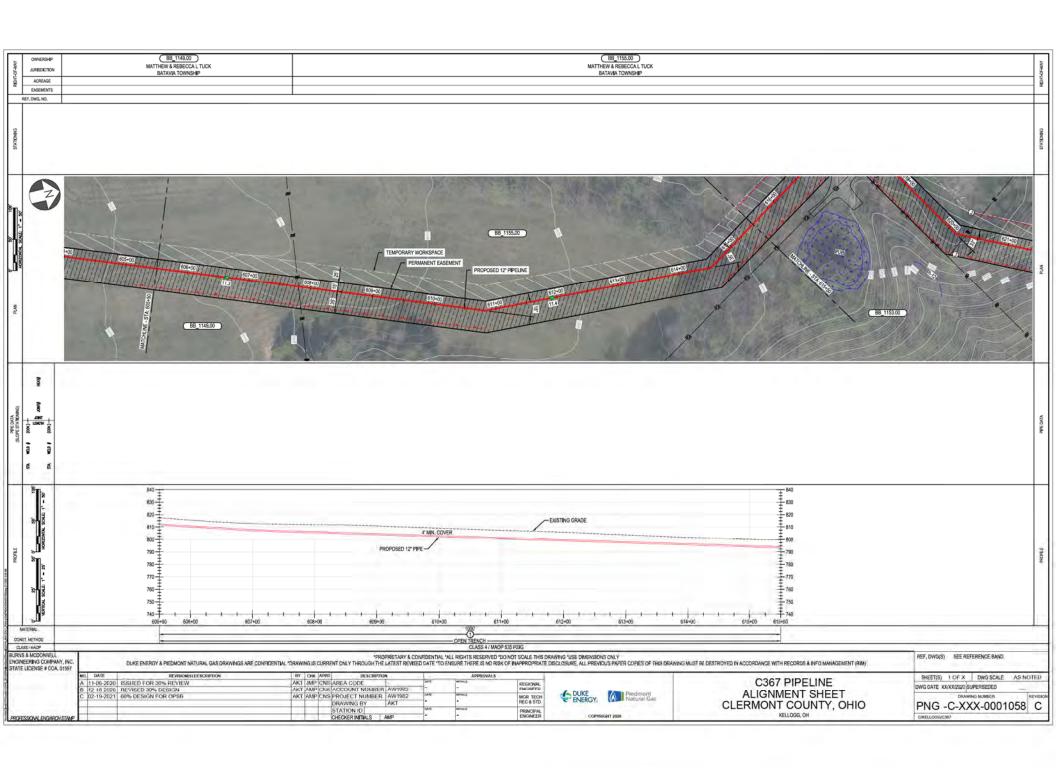


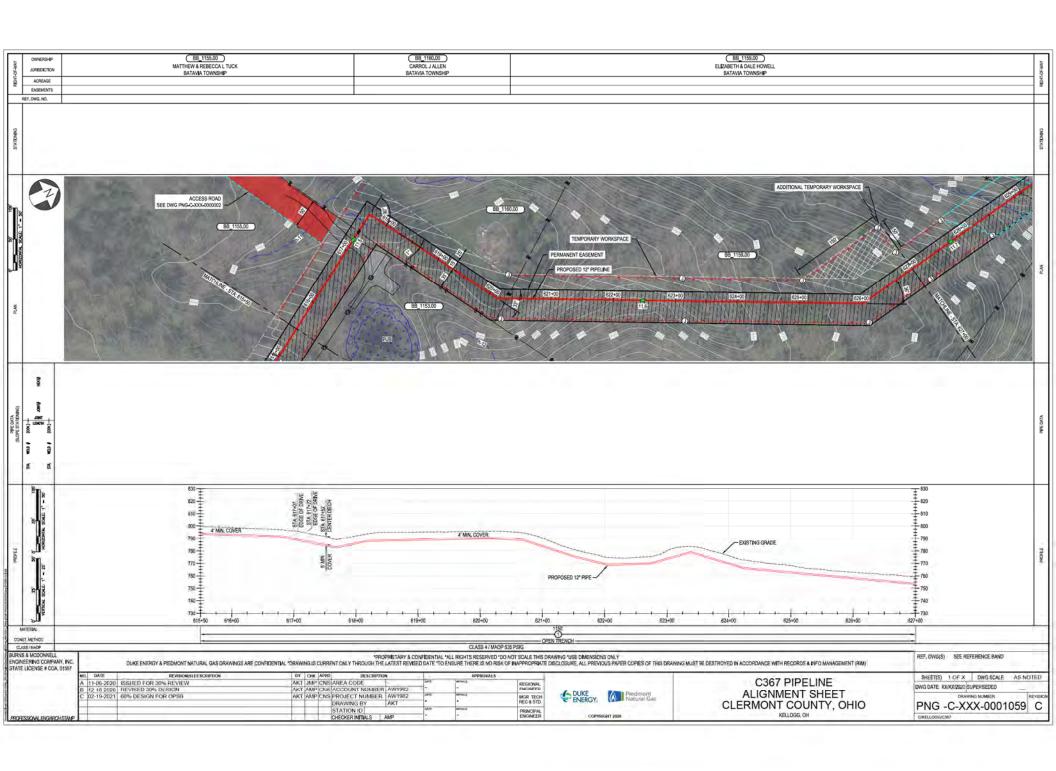


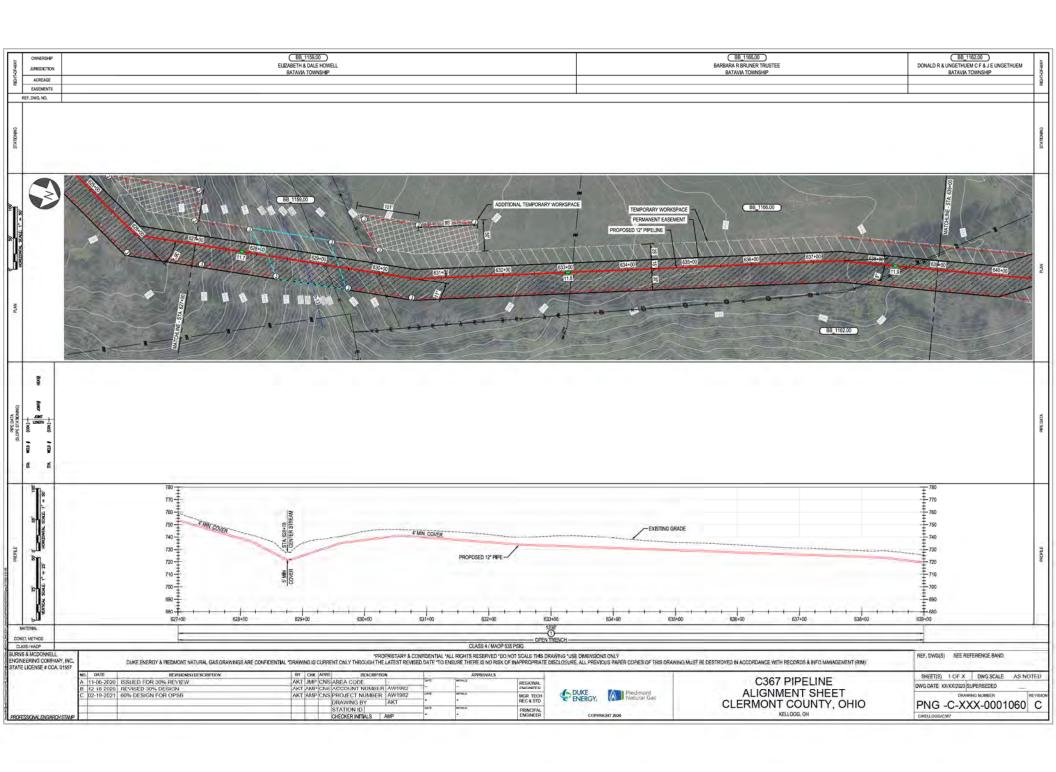




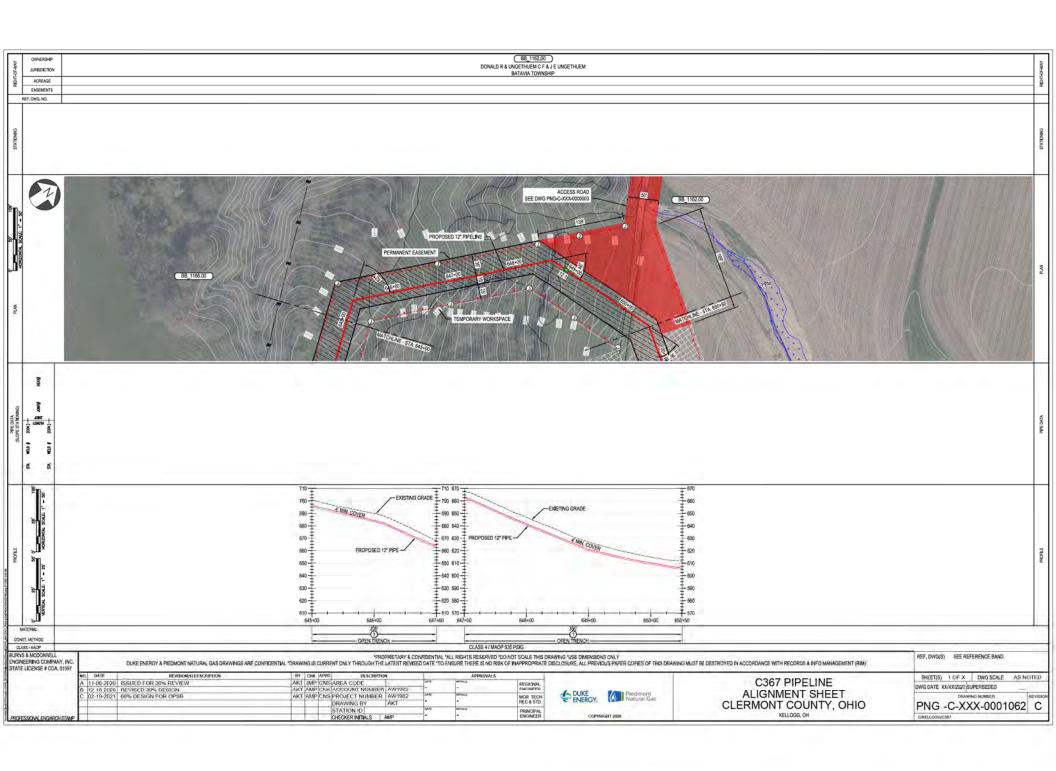


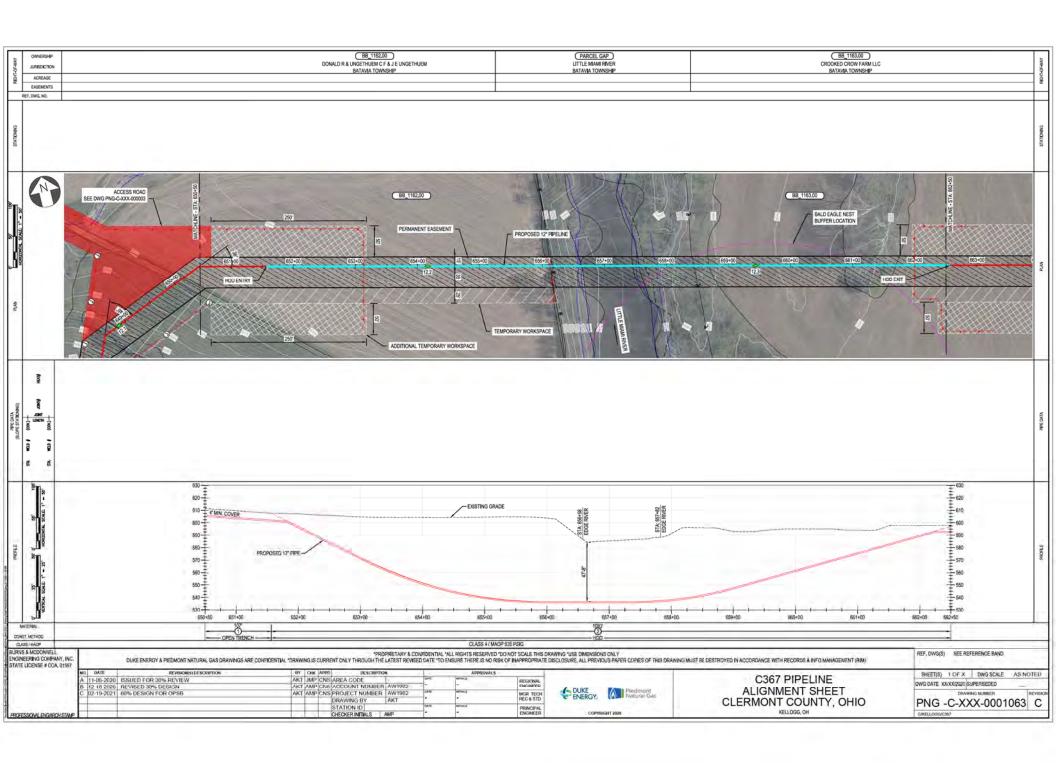


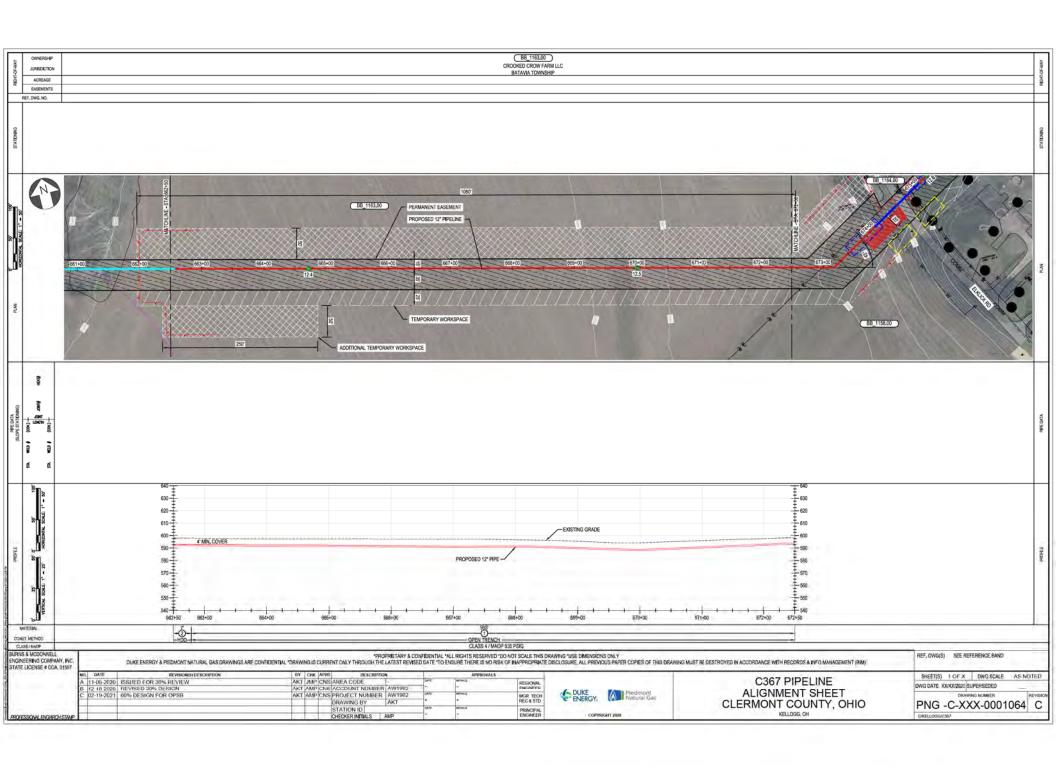


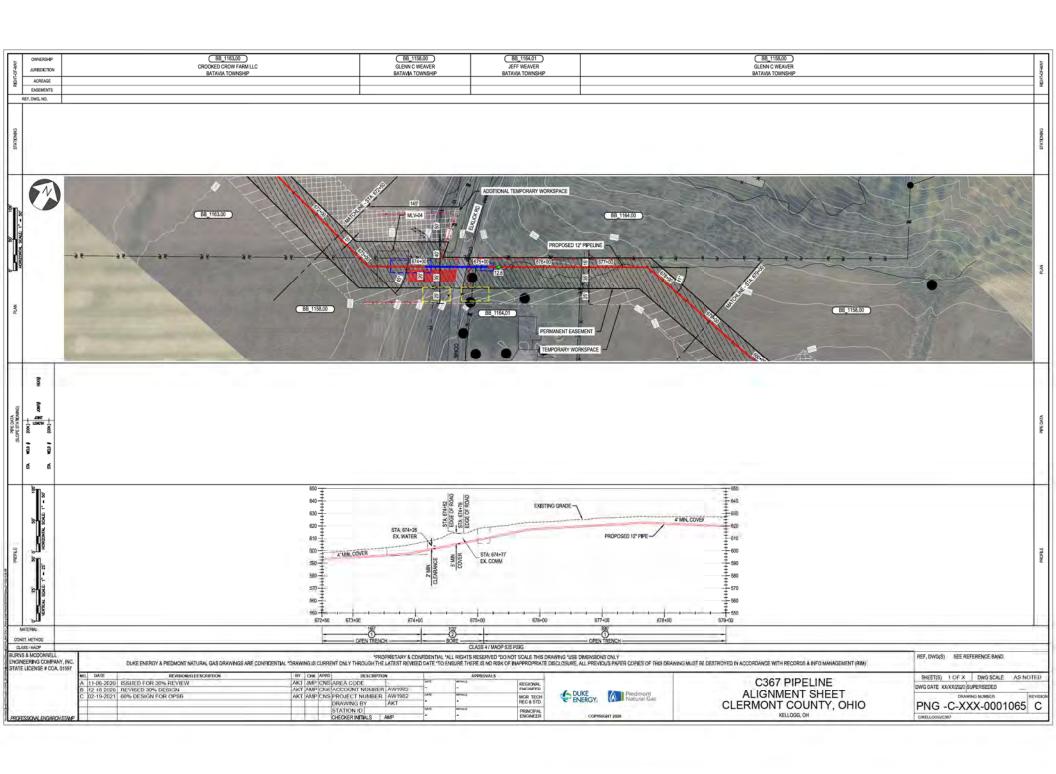


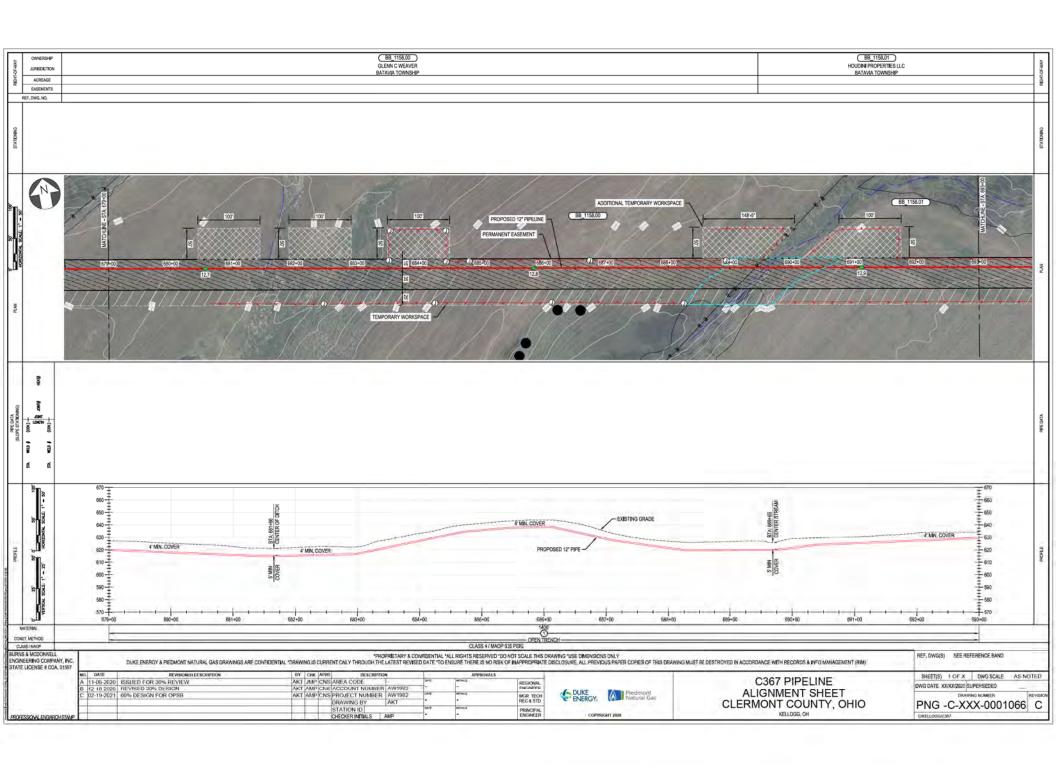


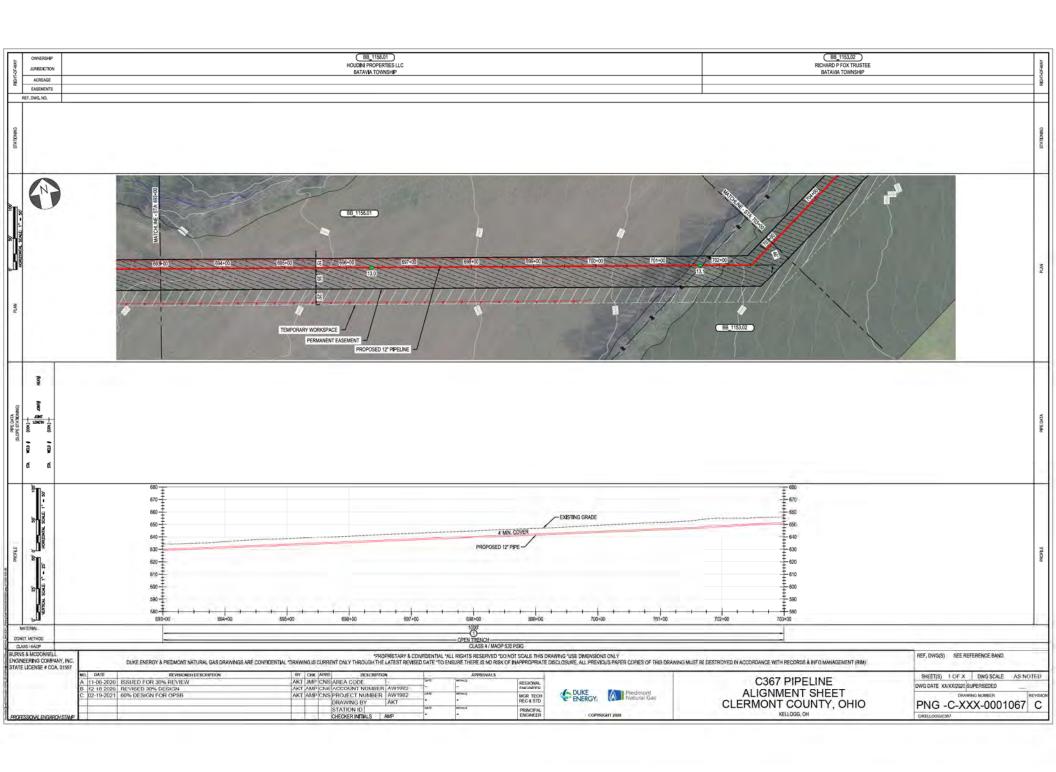


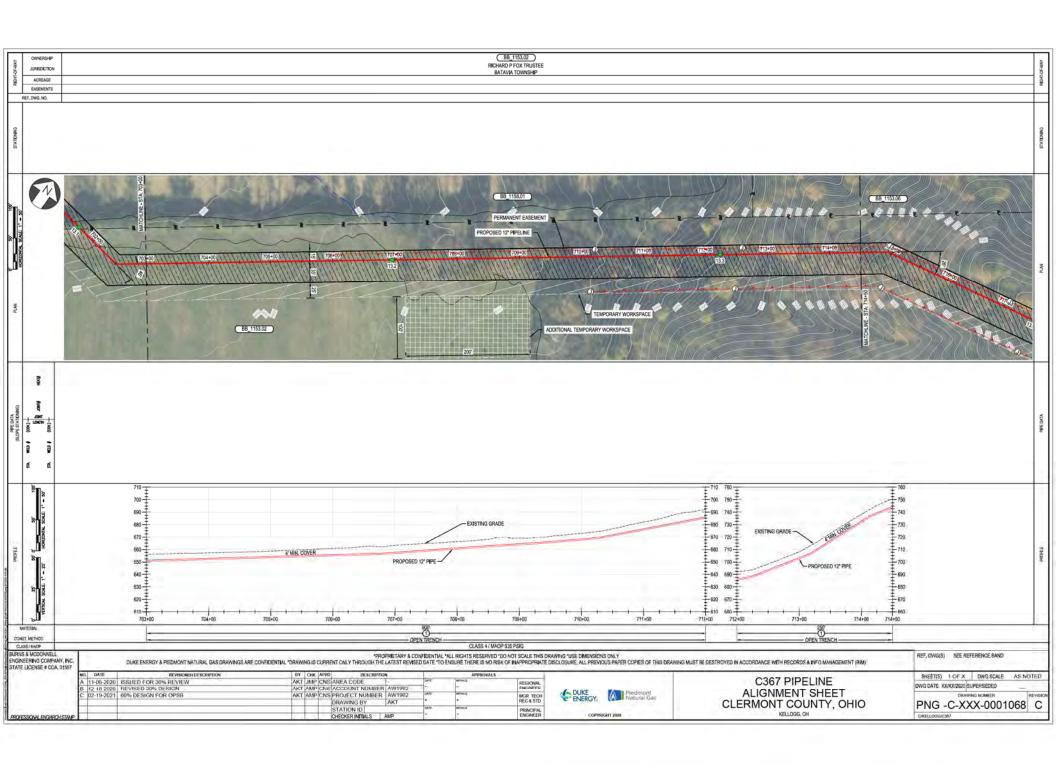


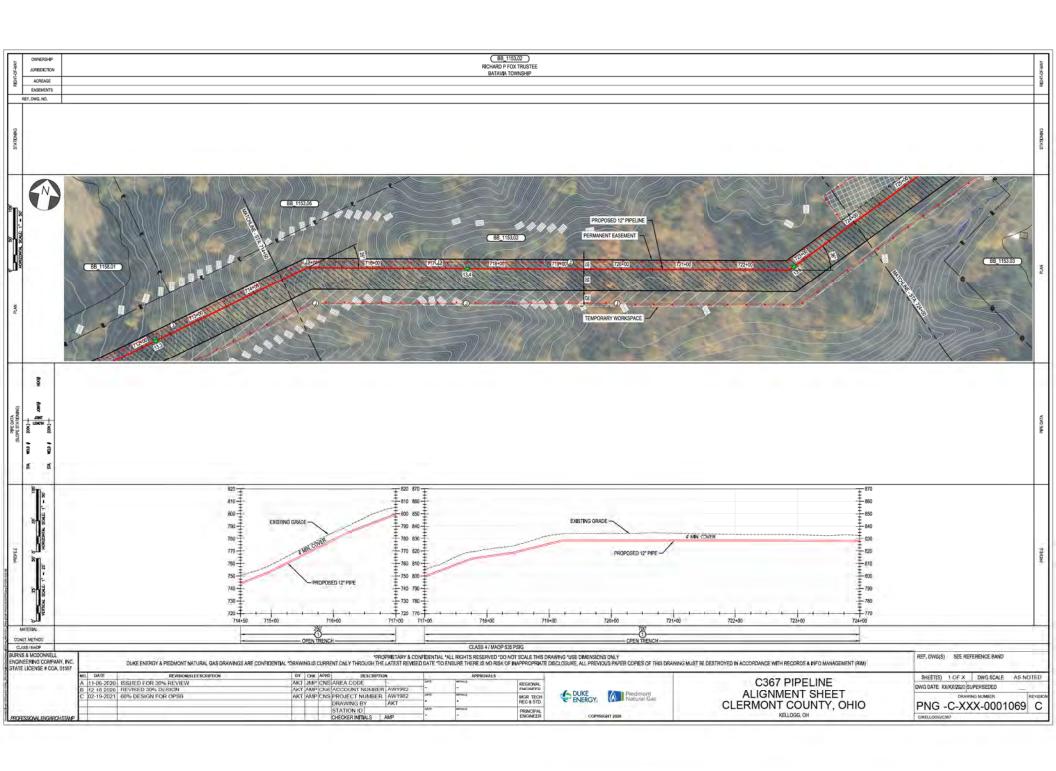


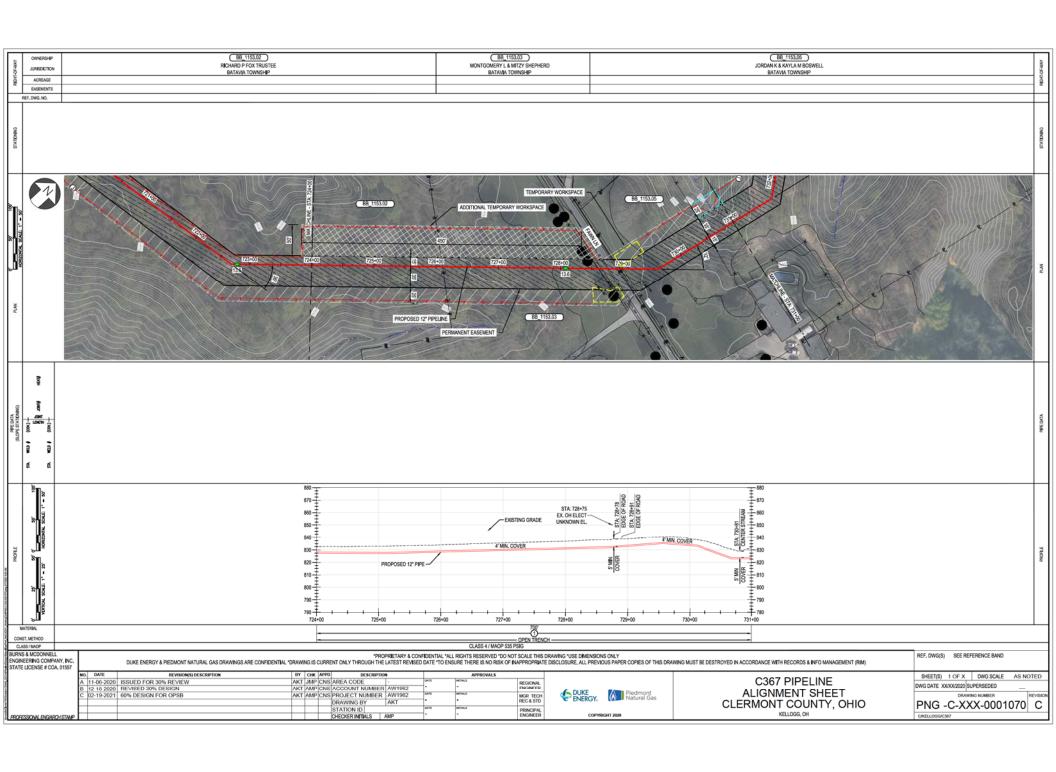


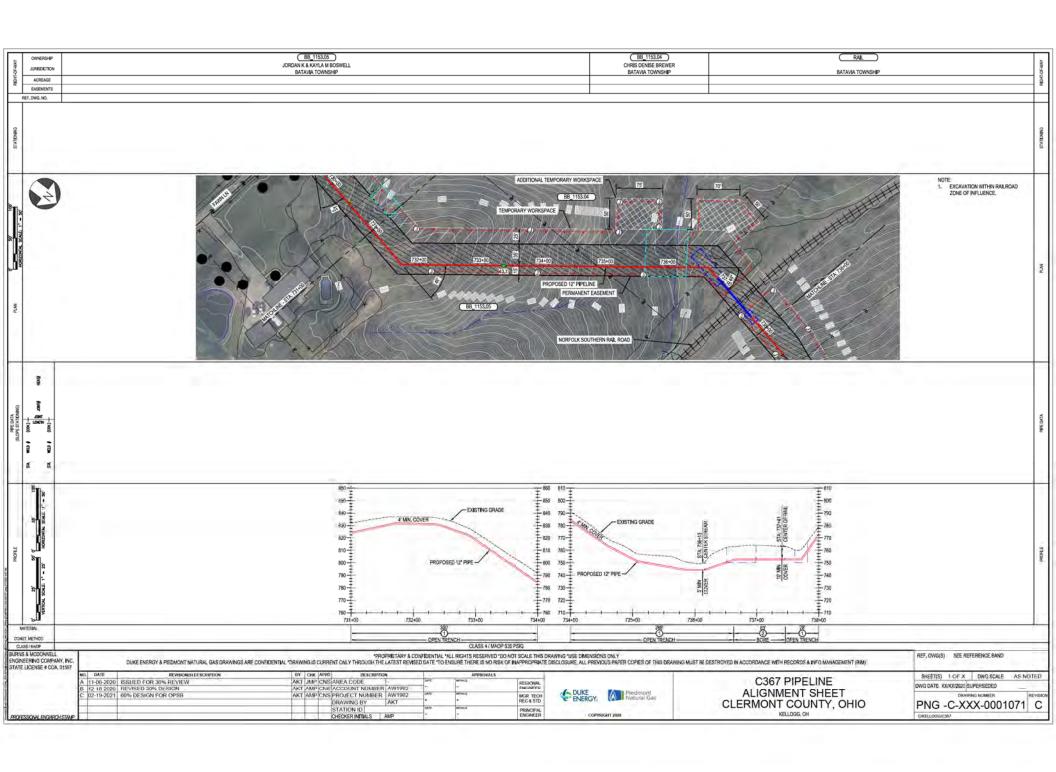


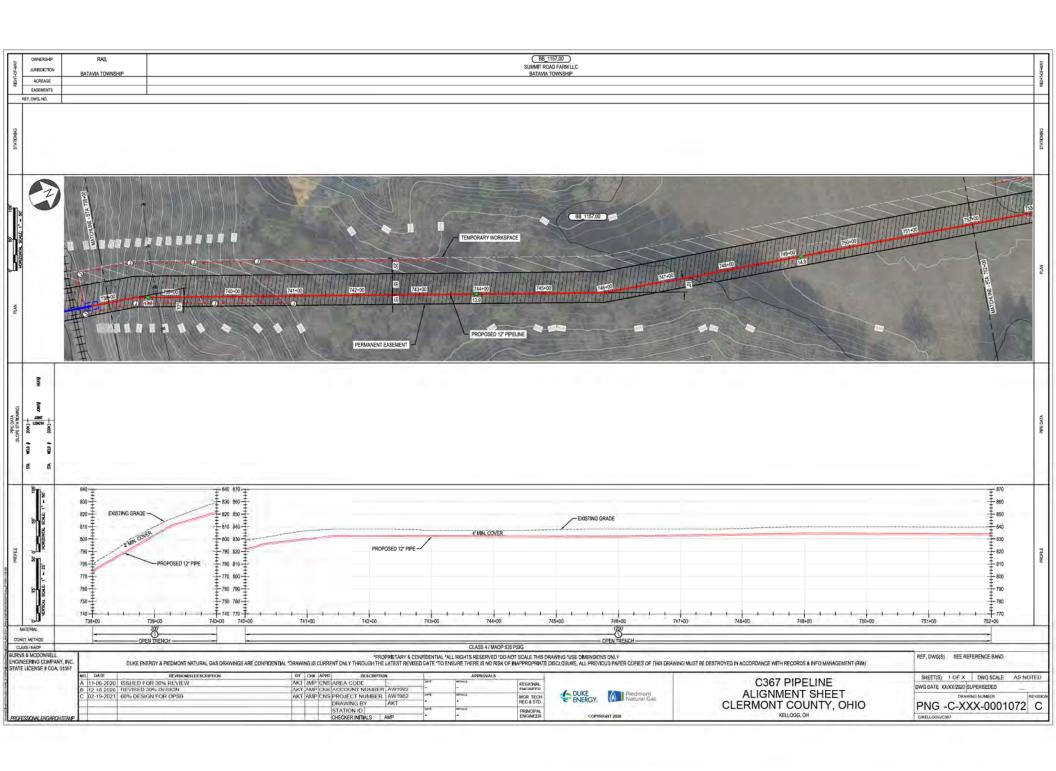


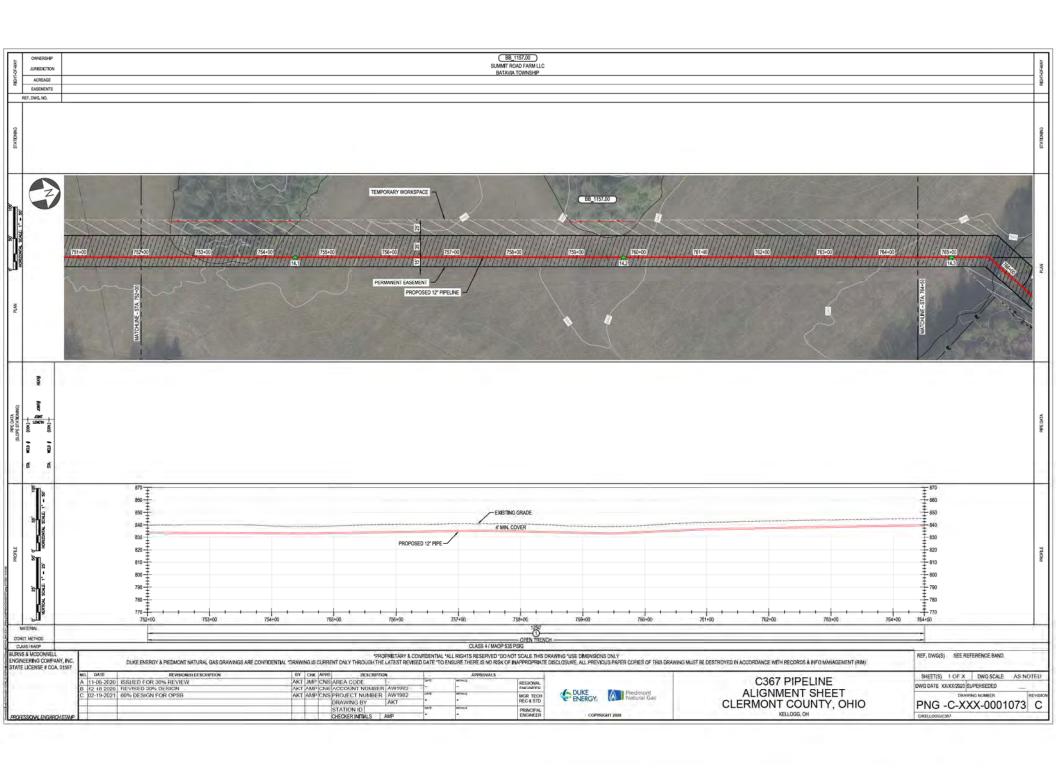


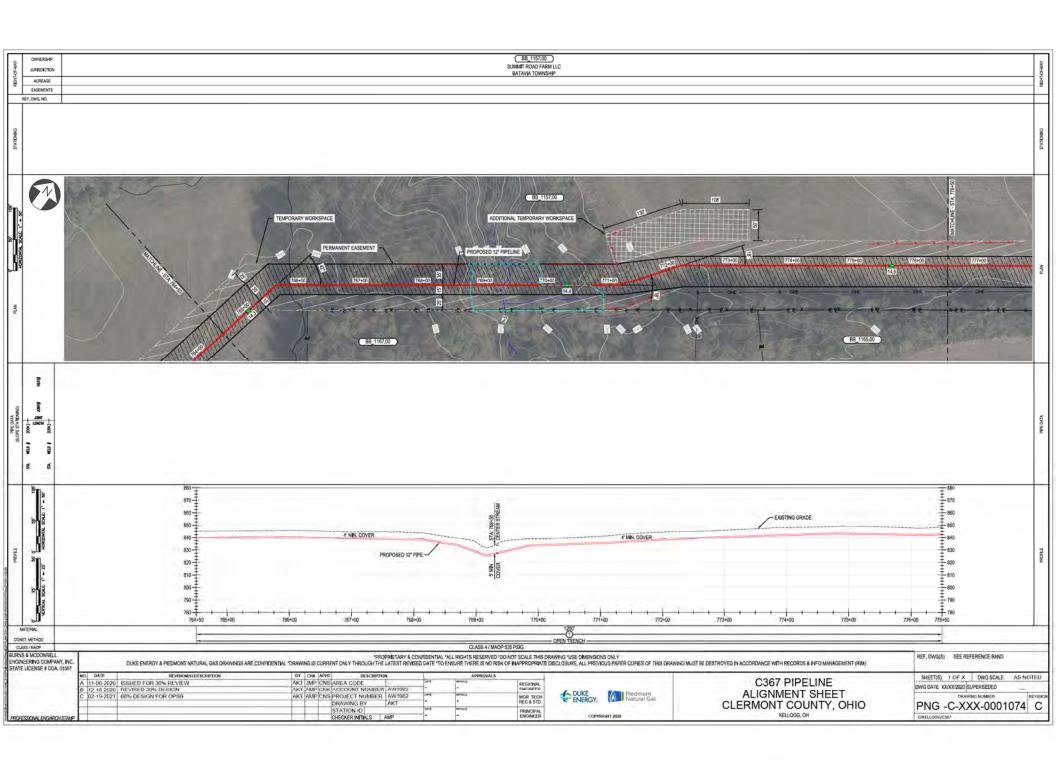


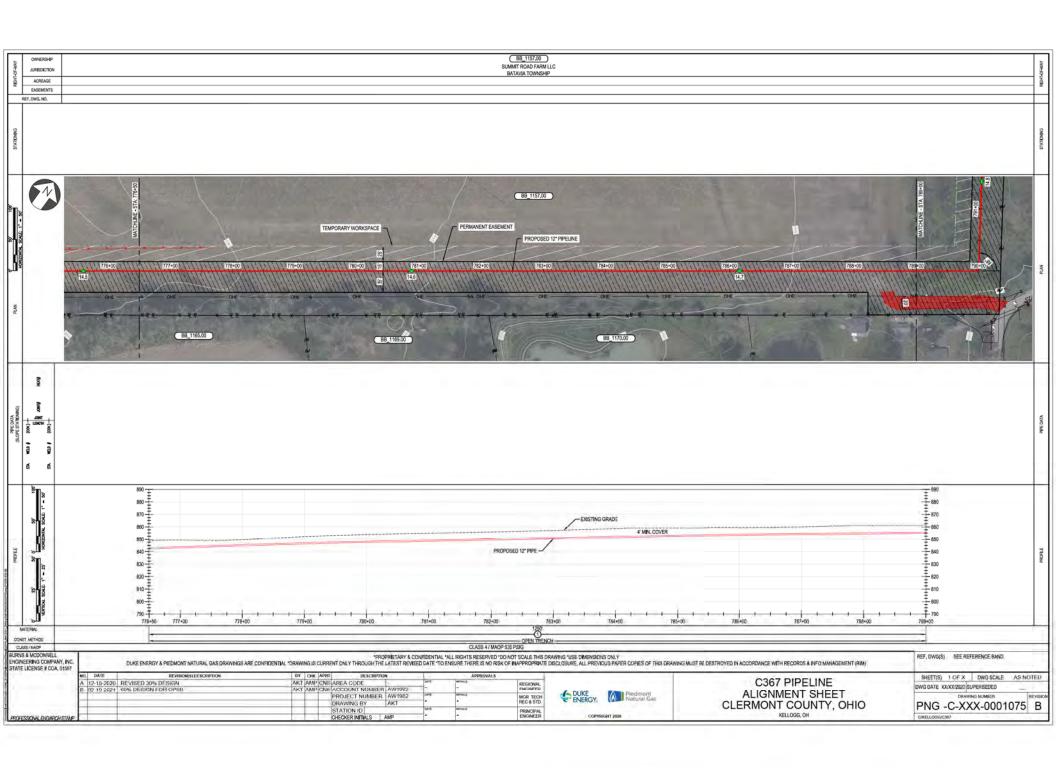




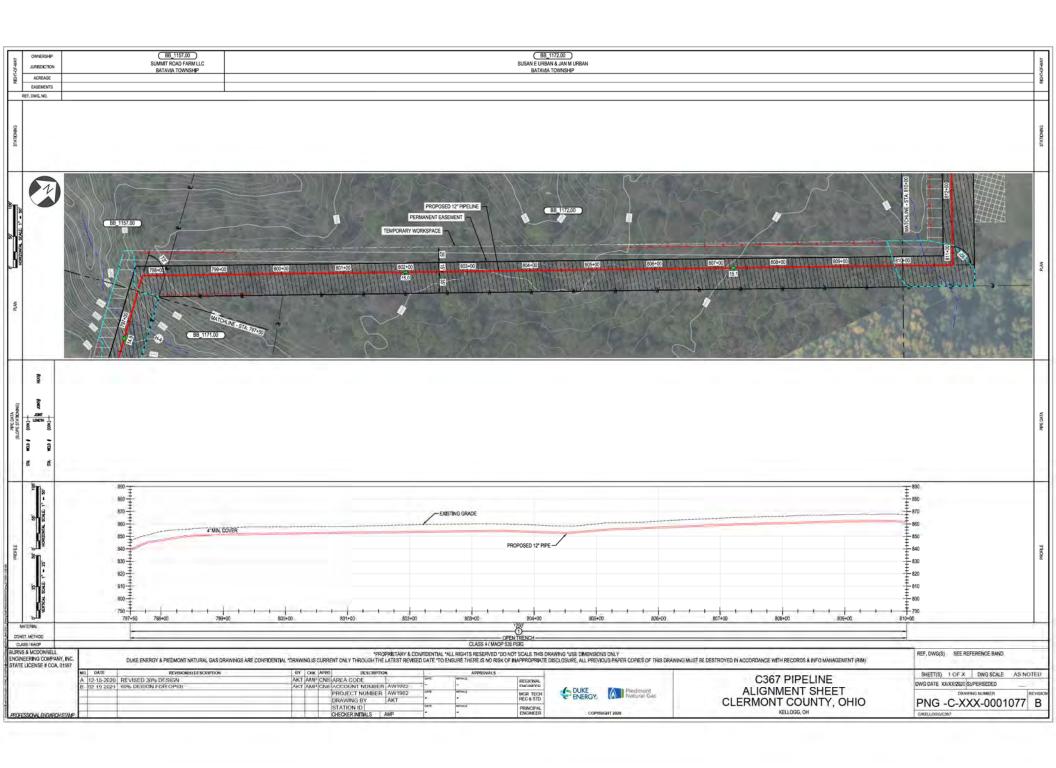




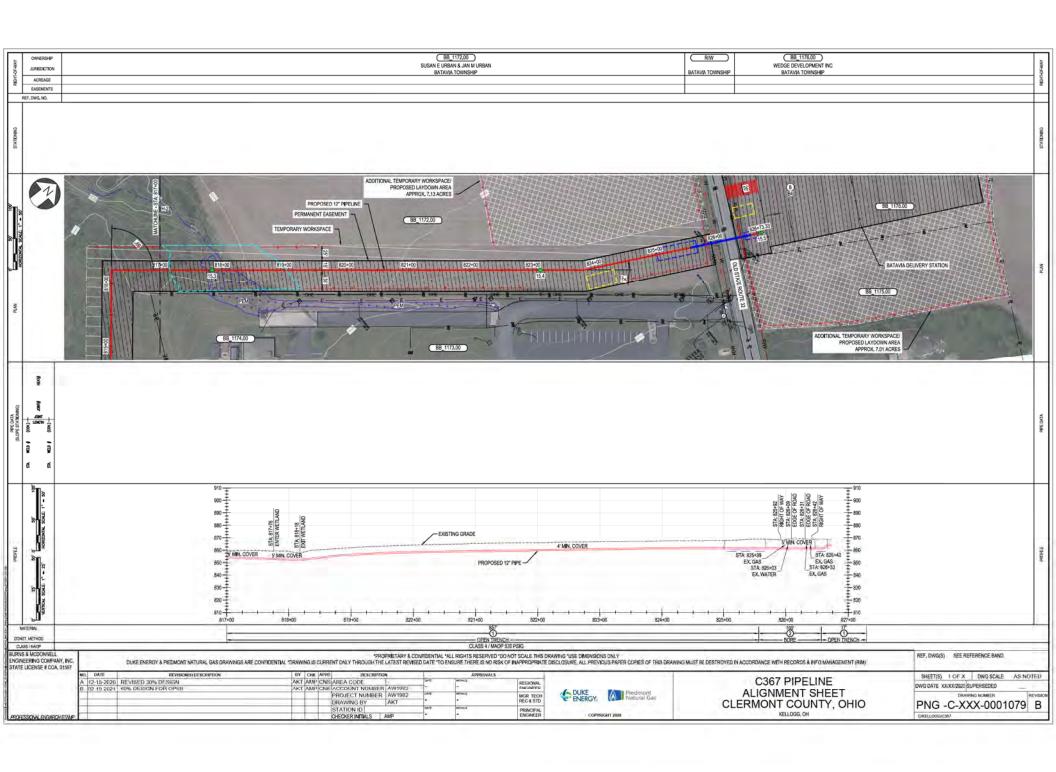


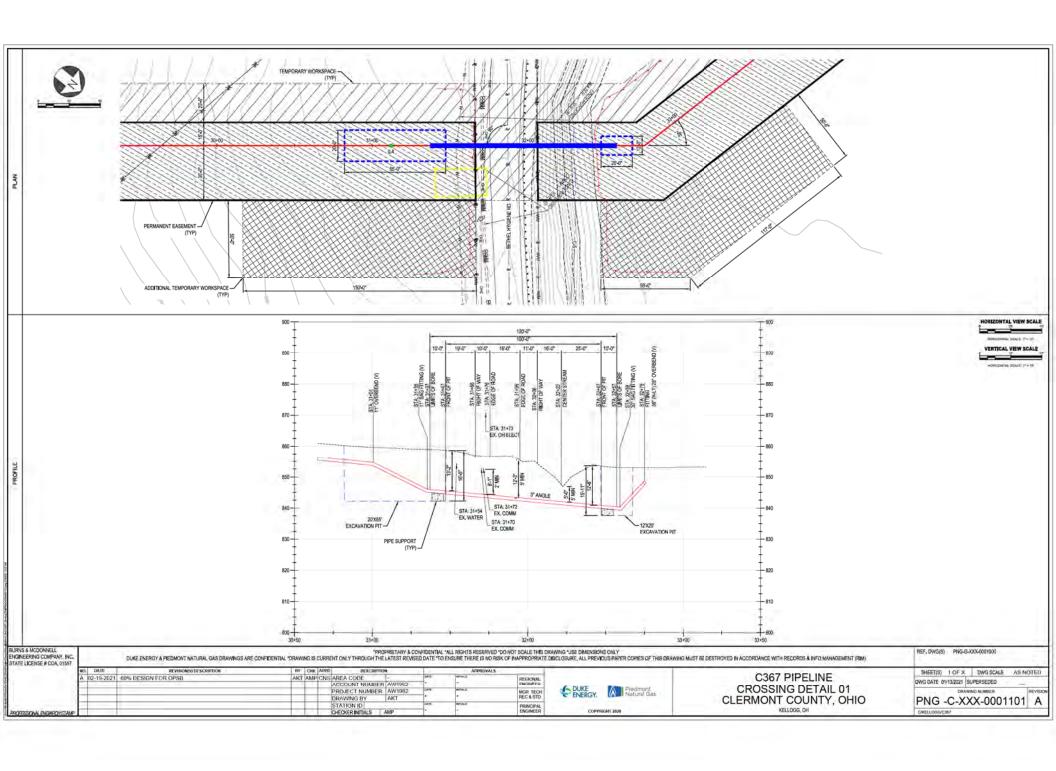


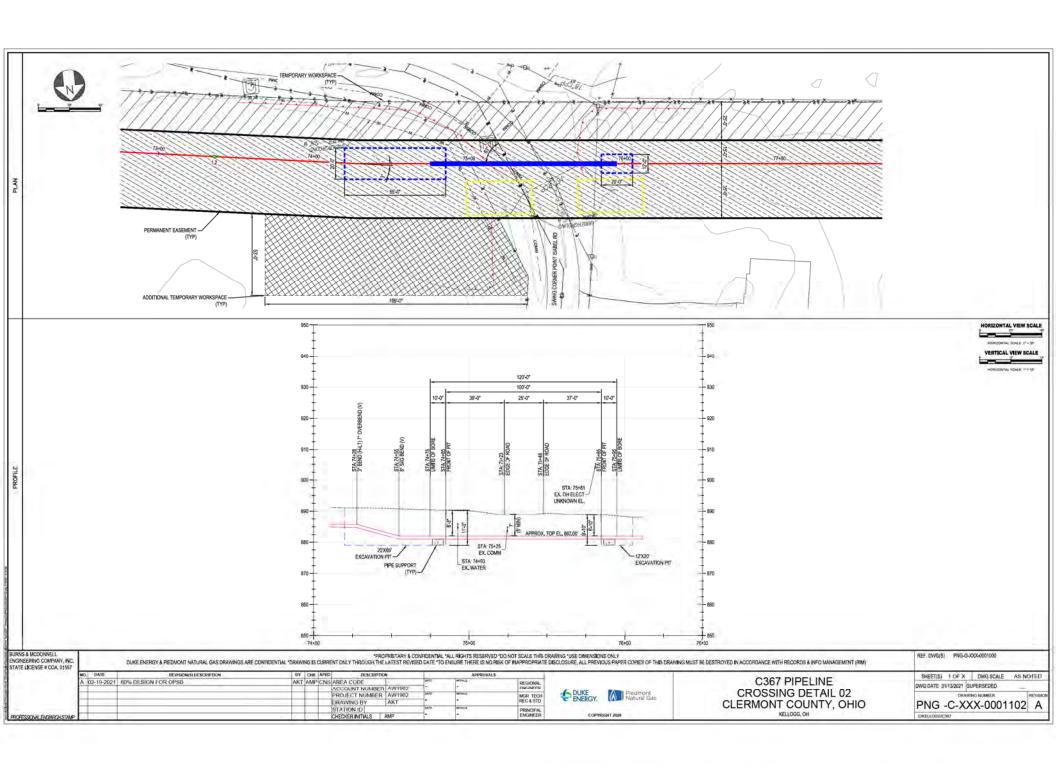


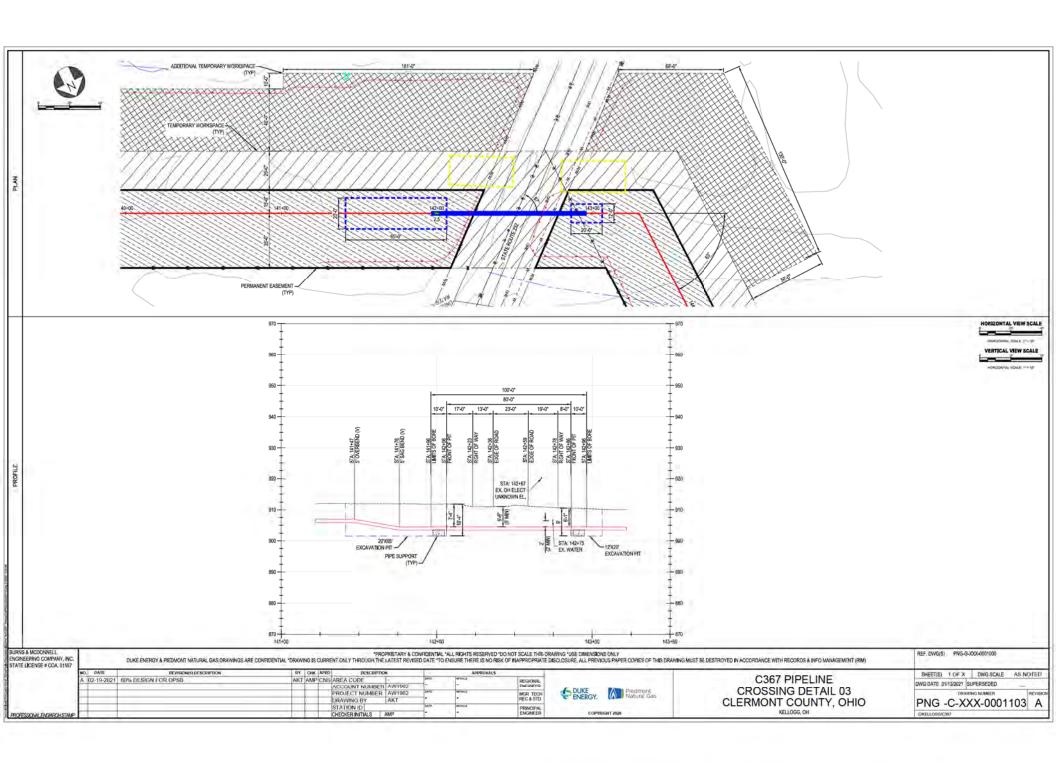


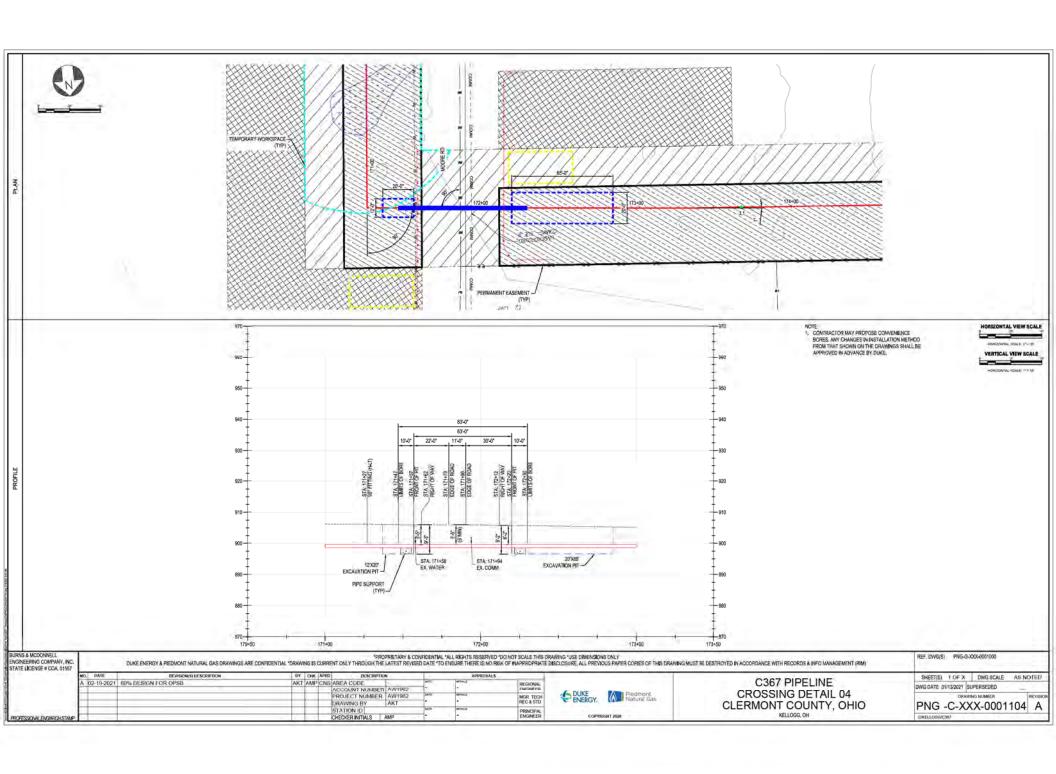


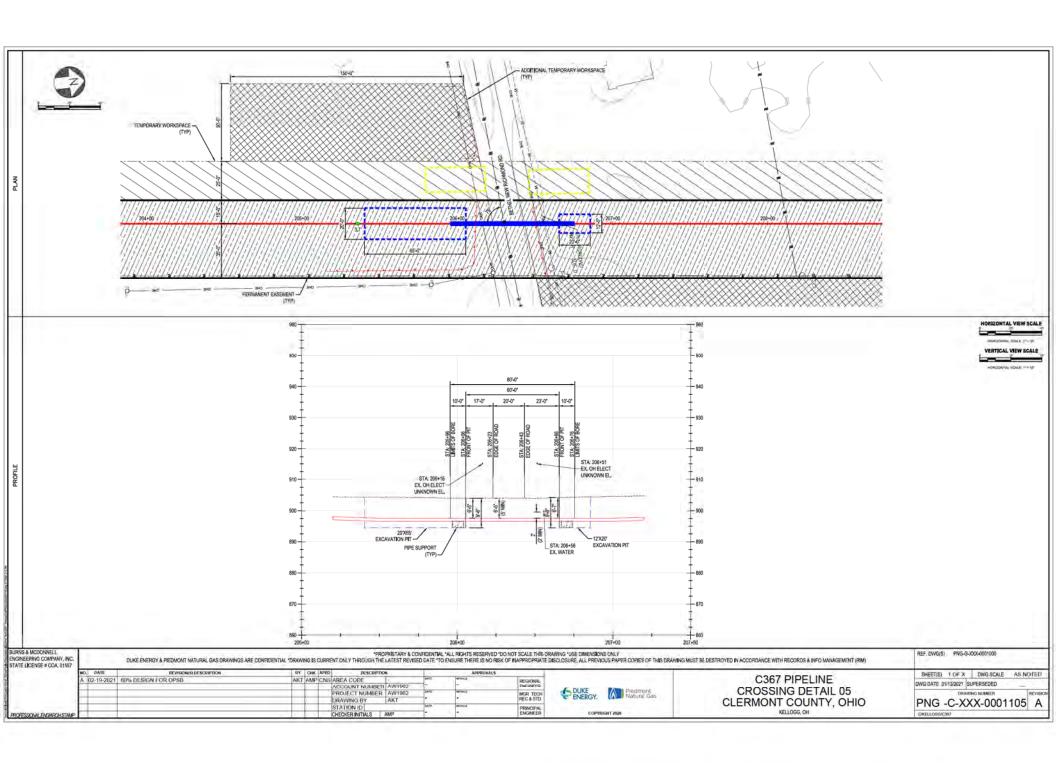


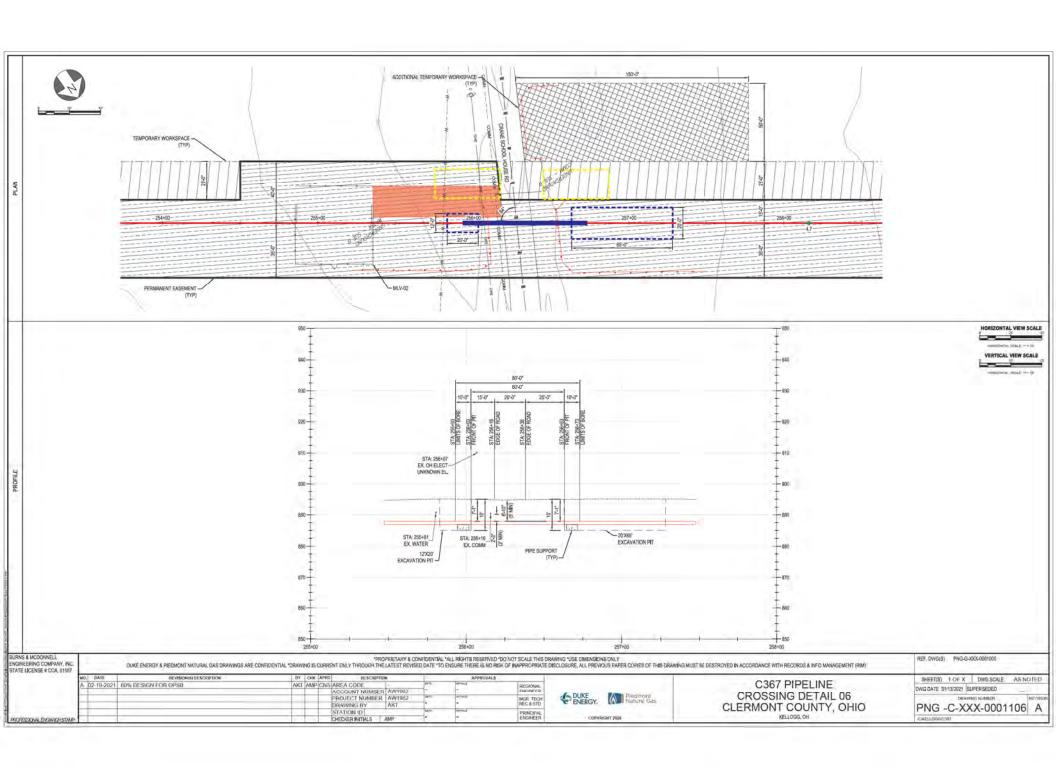


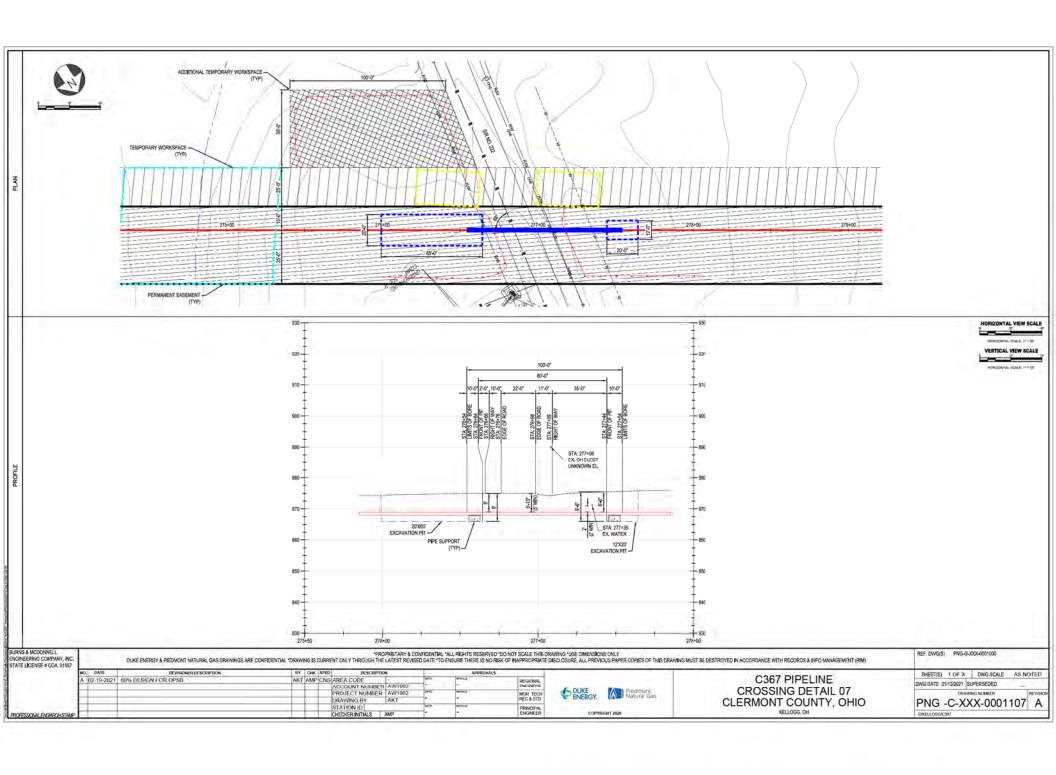


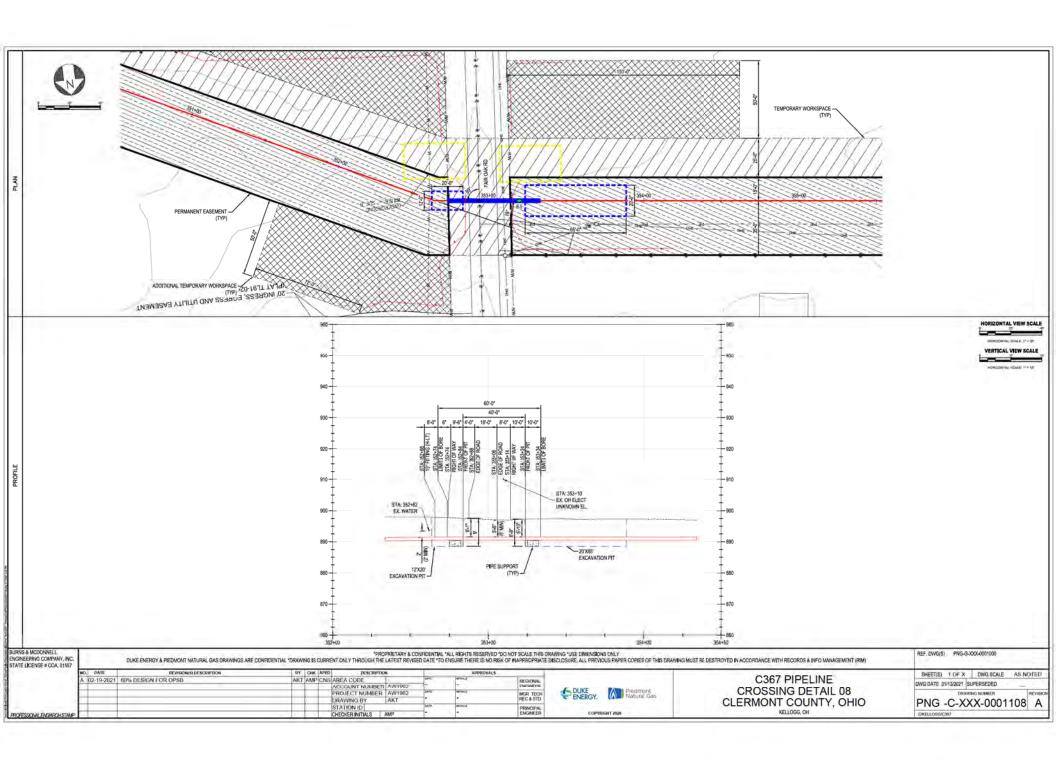


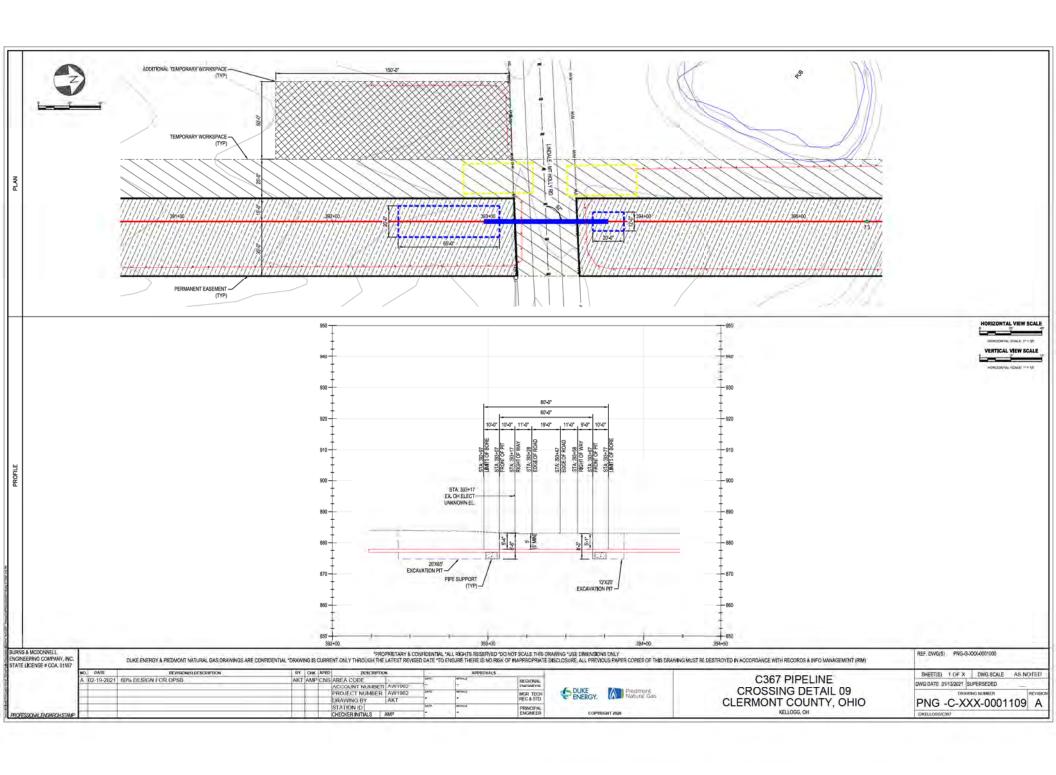


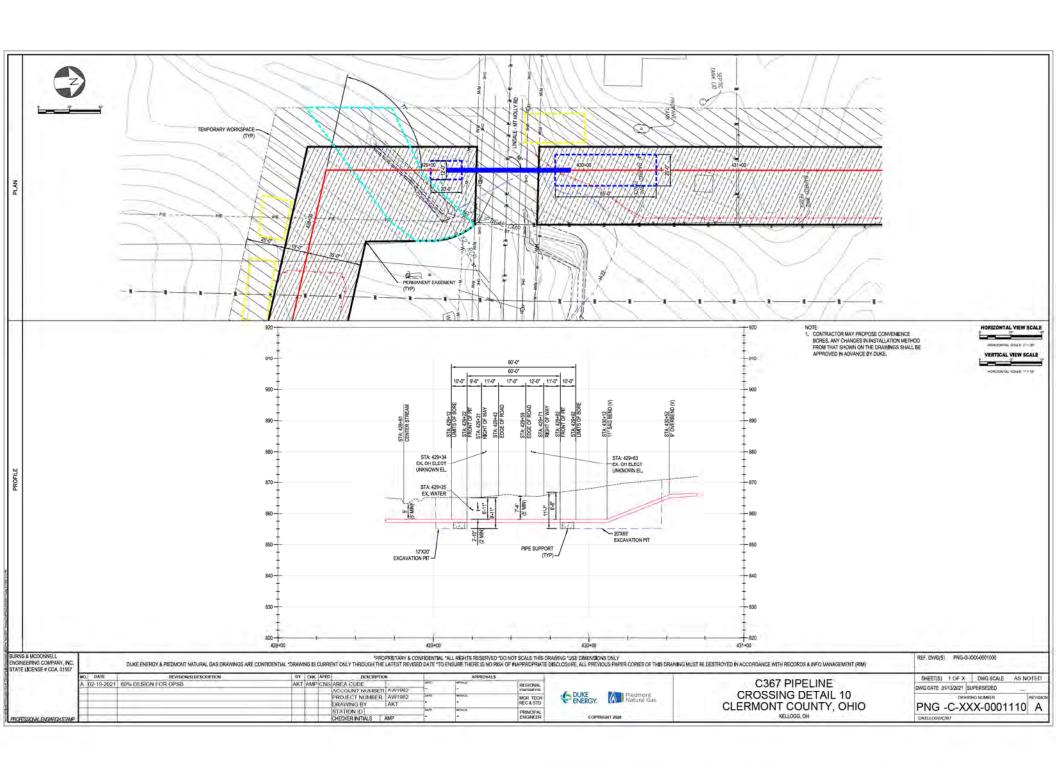


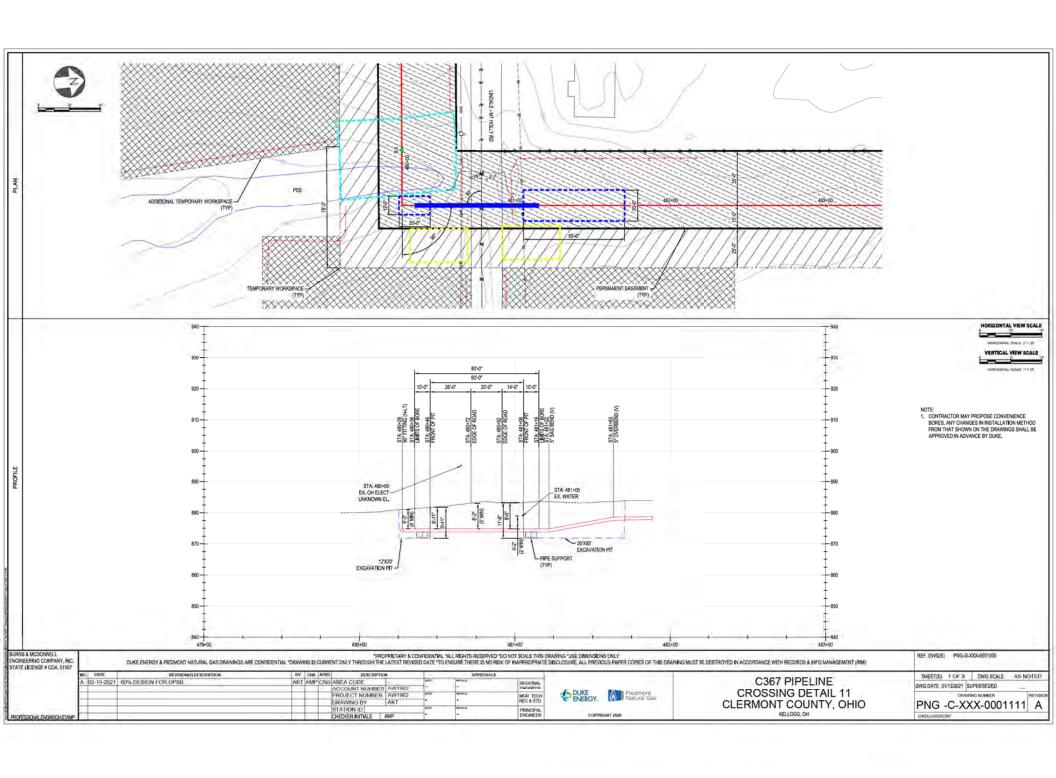


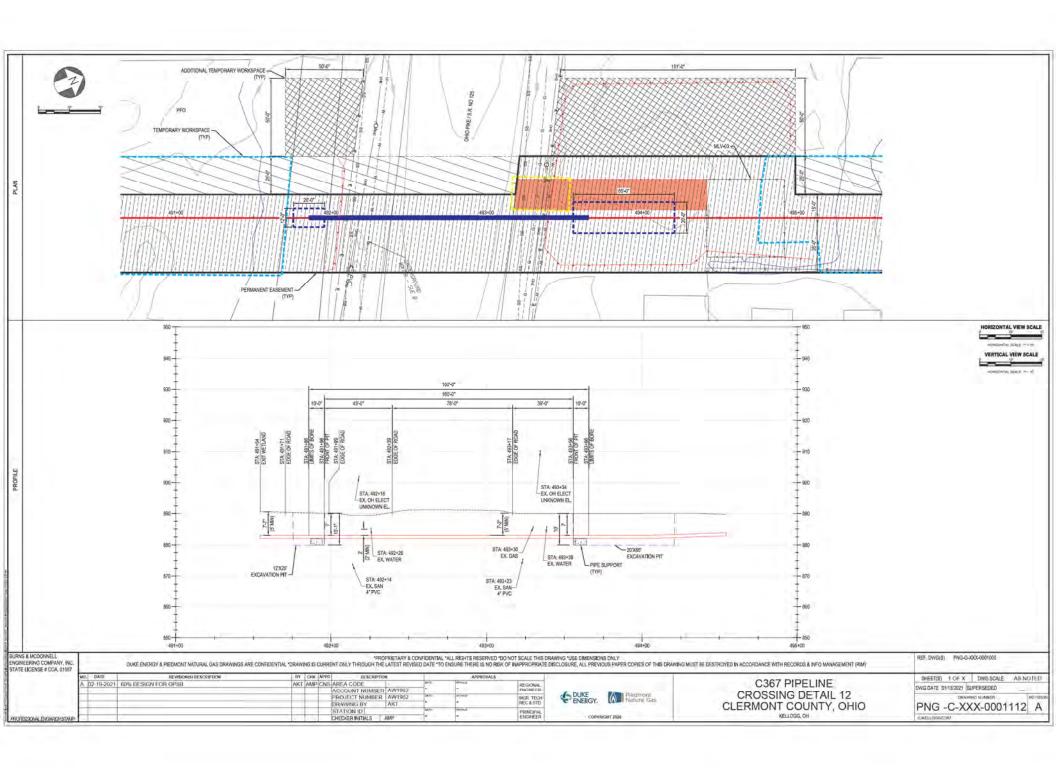


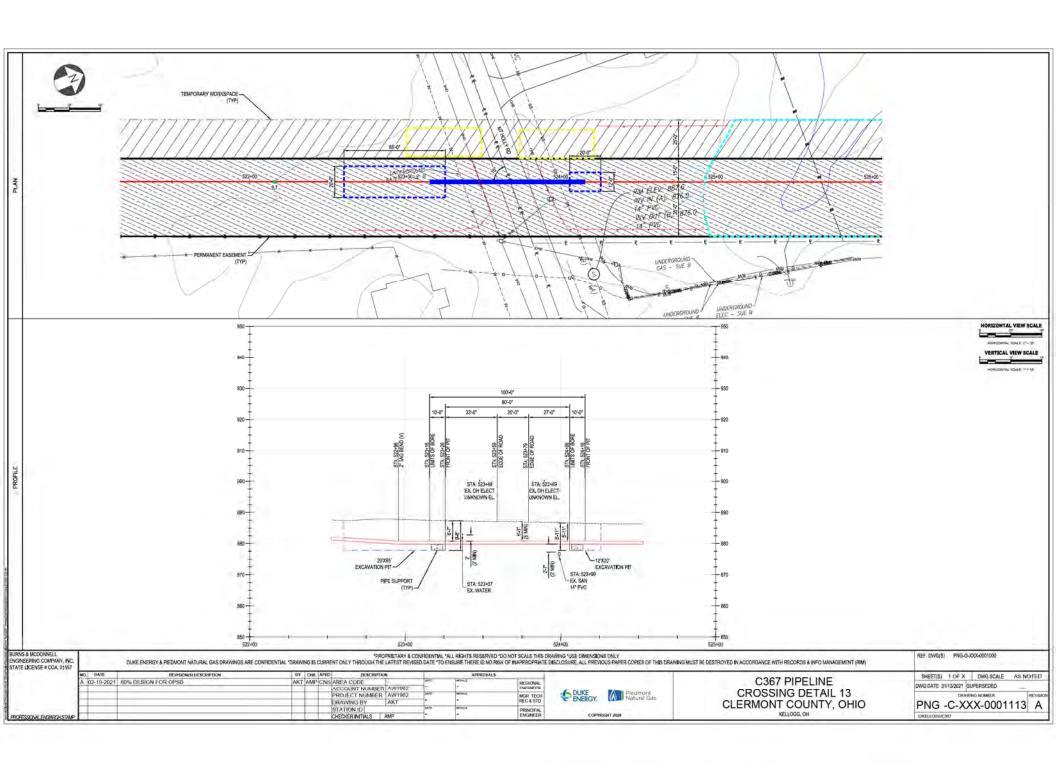


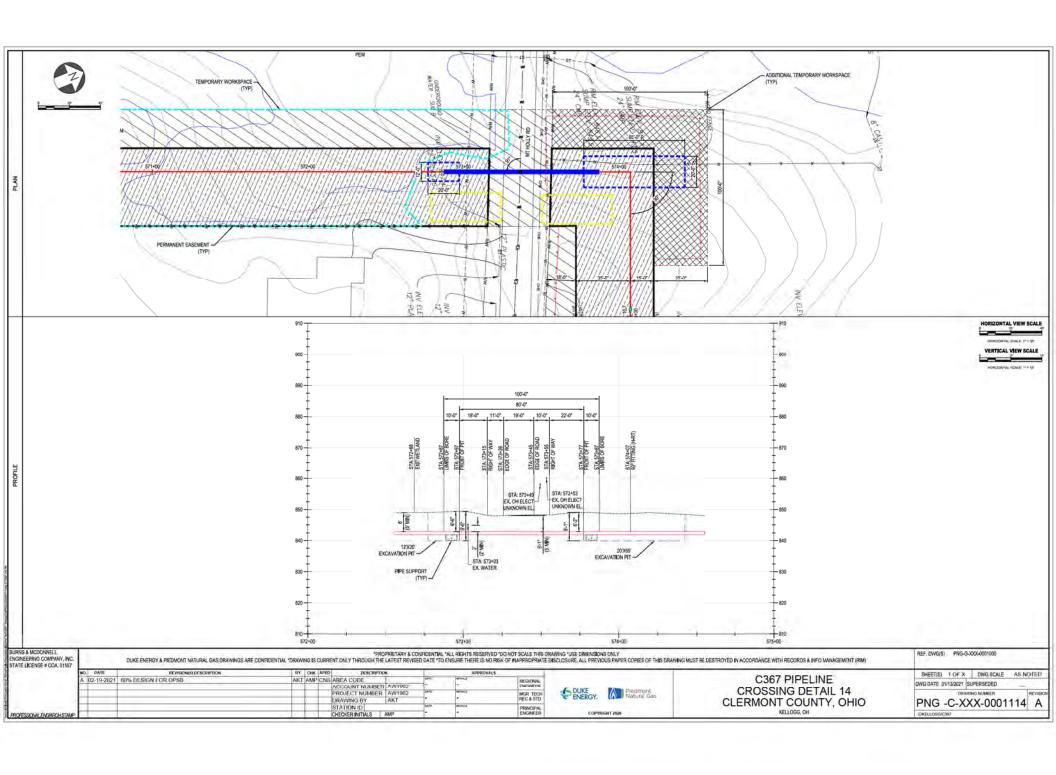


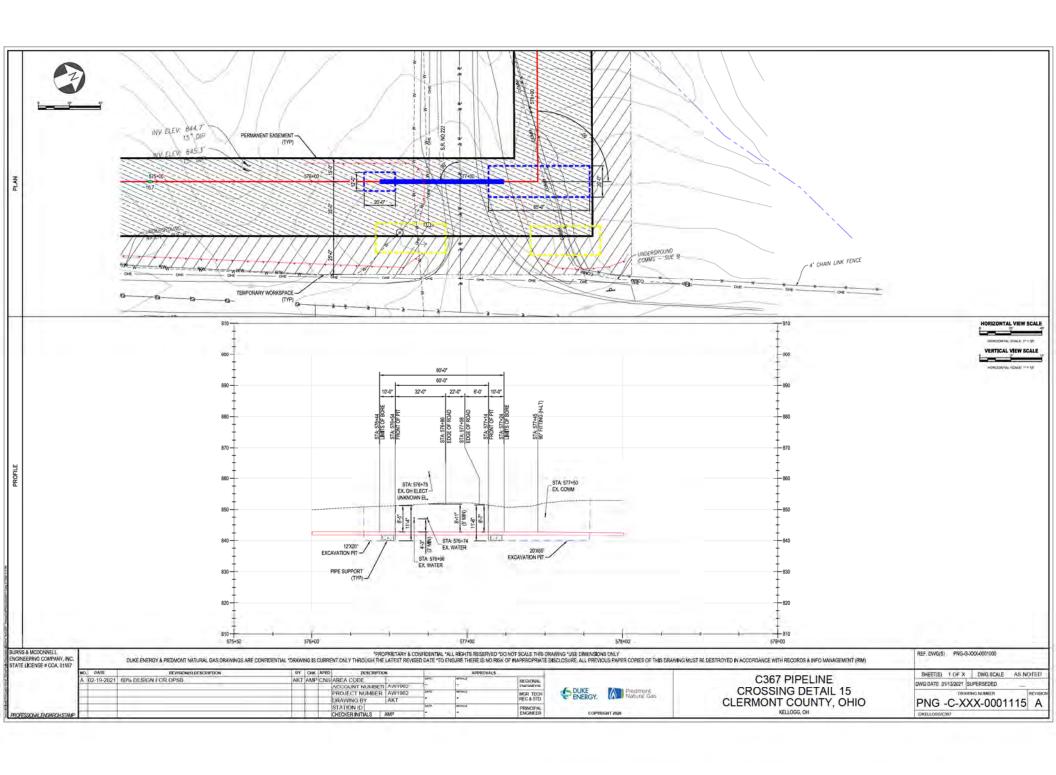


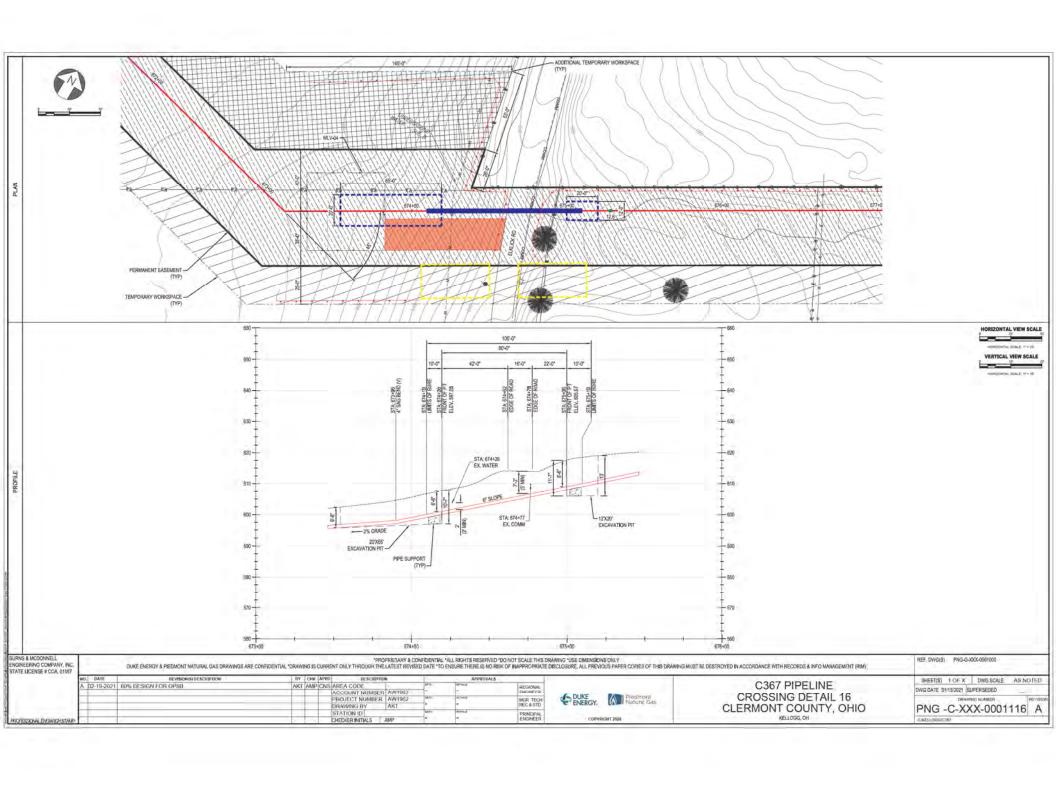


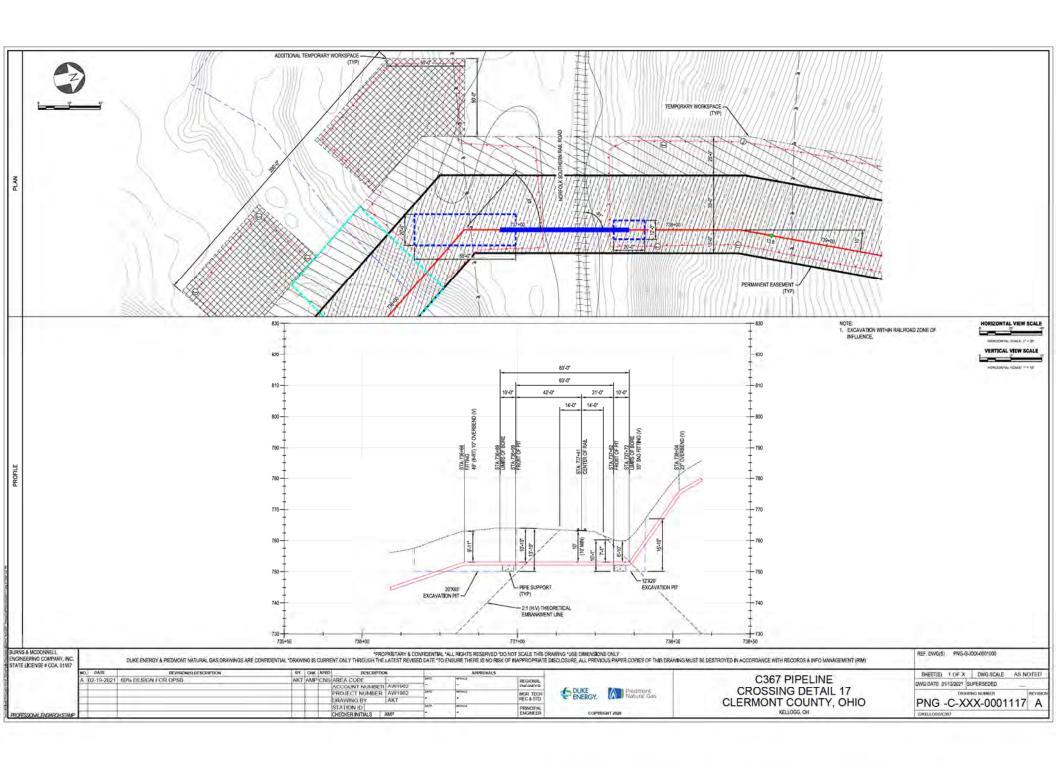


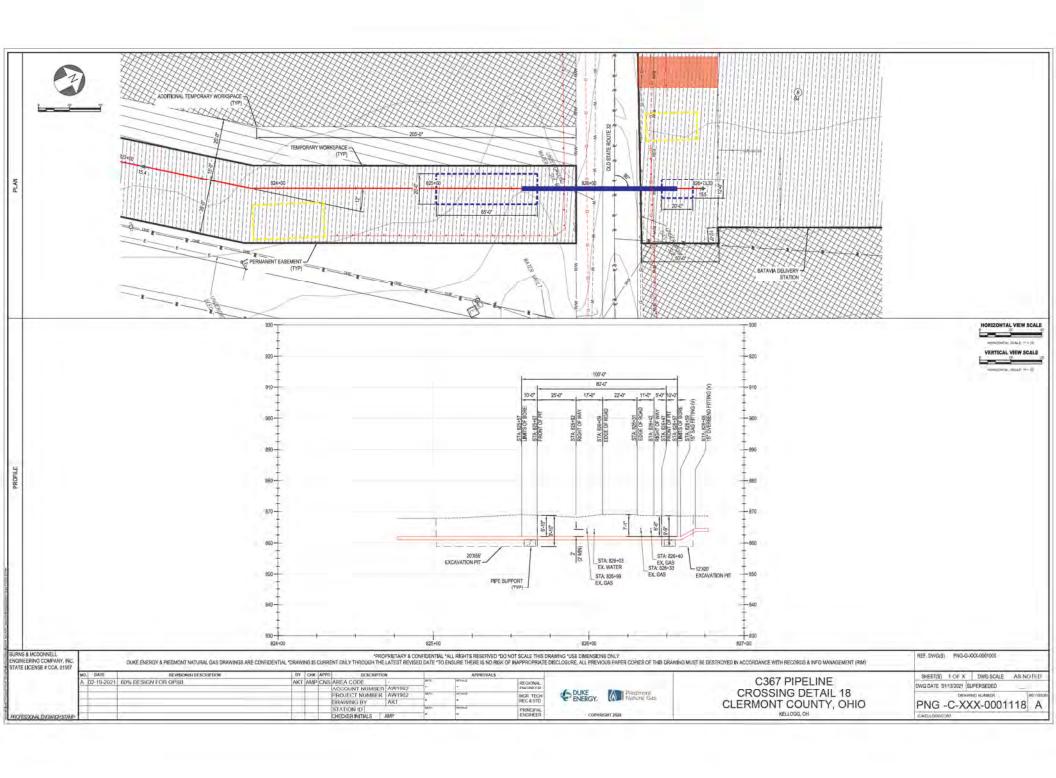


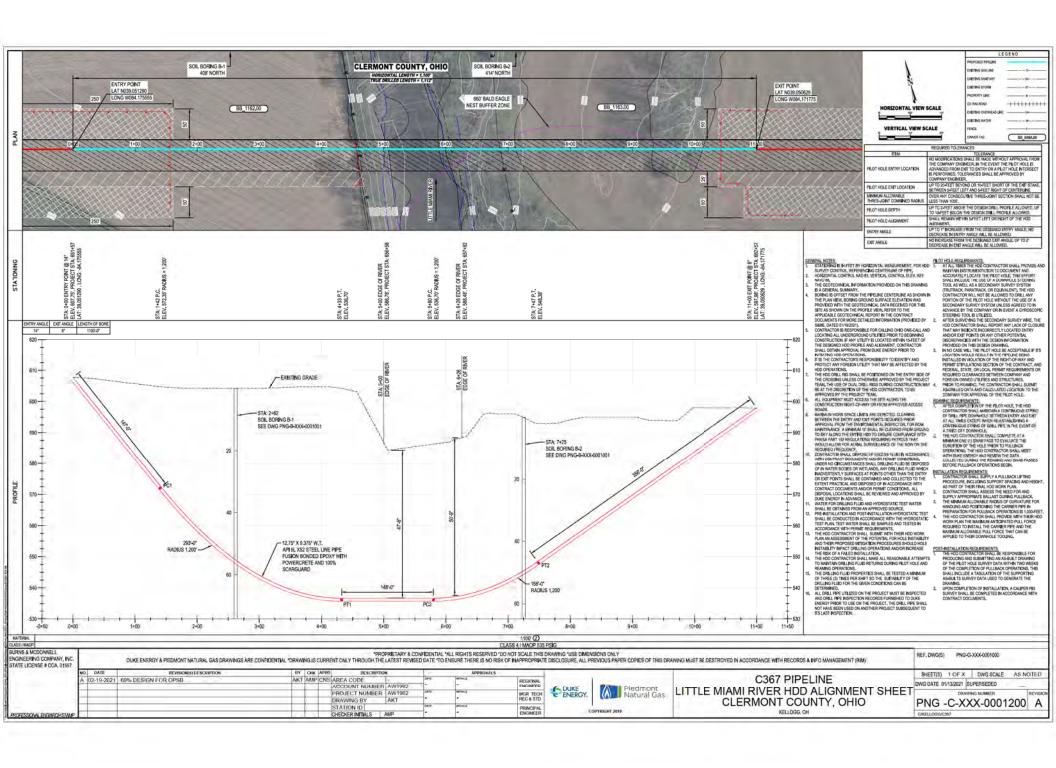


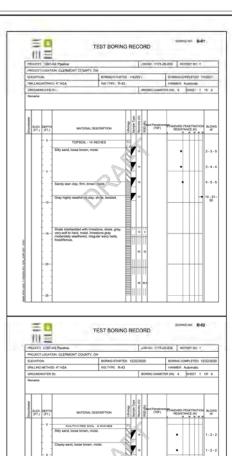


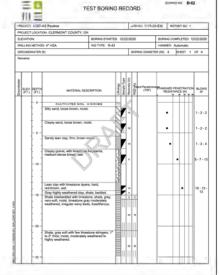


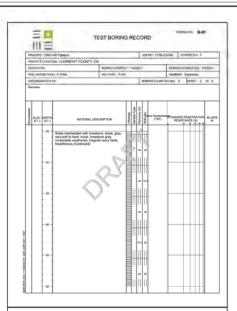








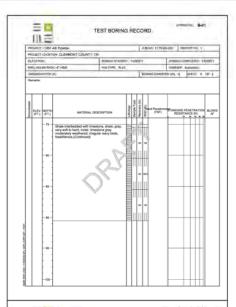




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PS	OJECT	LOCATI	ON CLERMONT COUNTY, OF									
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OF	ILLUNG:	метно	D: 4"HSA	RIGTYPE: R-I	13				HAMME	E AA	omatic	
Q#	OUNCY	VATER	70			\Box	BORI	NG DIAMET	ER (N): 4	58	EET 2	OF 4
Re	marks											
Goundwater	ELEV. (FT.)	DEPTH (FT.)	MATERIAL DES	ORIPTION	Ultrology	Sample Type Recovery (in)	(NF 00)	nd Penetron (TSF)	FIANDAI RES		ETRATIO E (N)	
		28-	Shale, gray soft nith for times to 3" thick, most, moderately highly weathered. (Continued)	Aone stringers, 1 th weathered to	(Mismi)							
		ж-		28					H	l		
		-36-)"		-	15					-
		40	Shale interbedded with limest hard, irregular and wavy beds moist.	, fossiliterous,			9		L	L	Щ	
			Shale interbedded with limest hard, irregular and wavy beds moist.	one, shale gray, , fossiliterous,			v					
		-45	Shale interbedded with limest hard, irregular and wavy beds moist.	one, shale gray, fossiliferous,		\parallel				t		
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			CR CLERKONT COUNTY, DI				4	~	NO. 3-19-2	Tanta in	-
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	marks	2711-0					1.	_		ope v pou	100
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Doundwar	BLEV. (FT.)	DEPTH (FT.)	MATERIAL DES	CRIPTION	Uthology	Sample Ty	Gentrely	100000	nd Panetron (TSF)	TANDARD PENETRATE RESISTANCE (N)	٠,
		- 50 -	Shale interbedded with timesti	one, shale, gray,	Ł	Ŀ	e			\square	-
			very-soft to hard, moist, limes moderately weathered, irregul fossiliferous./Continued)	tone gray ar wavy beds,	E	M		W			Ш
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EL	EVATIC	N:		BORING START	ED:	22	220	120		BORR	va 00	MPLE	neo: t	2/22/26
DE	BLUNG	метно	O: 4"HSA	RIGTYPE RA	13					HAMB	er /	Nytom	atio	
Q/	OUNC	VATER	(FI)				Ŀ	ю	ING DIAMETE	(PR)	4	5461	T 3	OF 4
*	marks:													
Groundwater	BLEV. (FT.)	DEPTH (FT.)	MATERIAL DES	CRIPTION	Ultrology	Sample Type	(u) Canonay	(M200H)	ed Penetrone (TSF)	TANO R	APD P	ENET NICE		BLO
		50	Shale interbedded with timests hard, irregular and wavy beds, moist.(Continues)	ne, shale gray, fossilferous,		i	î	ij		F	7	Ŧ		
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	:	70	Shale interbedded with limesto Thans, irregular and wavy beds.	one, shale gray,	ı	u	I	u		H	+	+	Н	
			moist. Limestone, gray, medium-hard moderately weathered, vuggy.	I to hard.	惟									
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			ON: CLERMONT COUNTY, OH										
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		AKTER (NO TIPE: N	143	-	Т	on	NG DIAMETE	HAMMES TROPO A		est 4	or a
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Poundwater	BLEV.	DEPTH (FT.)	MATERIAL DES	CAPTION	Ulbology	Sample Type	Recovery (in)	100 gk)	nd Penetrone (TSF)	TANON RES	D PEN		BLC A
ľ		- 75 -	Limestone, gray, medium hard moderately weathered, vuggy.	i to hard, (Continued)	NH :-	ř	9		,		F		
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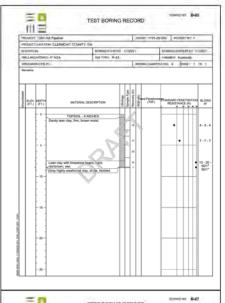
AKT AMP CNS AREA CODE A 02-19-2021 60% DESIGN FOR OPS8 ACCOUNT NUMBER AW1982
PROJECT NUMBER AW1982
DRAWING BY AKT MGR TECH REC & STD STATION ID PRINCIPAL ENGINEER CHECKER INITIALS | AMP FROFESSONN, EVGAROHSTAMP

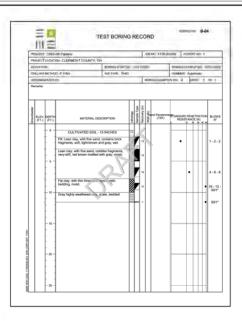


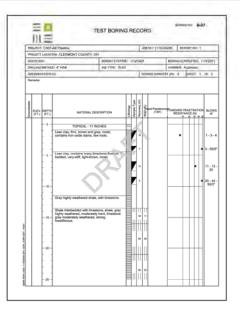


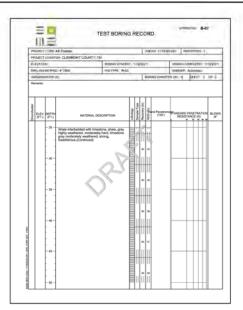
C367 PIPELINE **GEOTECH BORE LOG 1** CLERMONT COUNTY, OH KELLOGG, OH

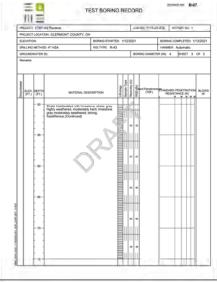
SHEET(S) X OF X DWG SCALE AS NOTED DWG DATE U1/20/2021 SUPERSEDED DRAWING NUMBER PNG -B-XXX-0001001 A











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	NO.	DATE	REVISION(S) DESCRIPTION	BY	CH	K A	PPD	DESCRIPTION		100	APPROVALS	
9	Α	02-19-2021	60% DESIGN FOR OPSB	AKT	Aħ	AP C	NS	AREA CODE		916	MINT	PECSENAL
11						7		ACCOUNT NUMBER	AW1982	71	-	ENGINEER
9					П			PROJECT NUMBER	AW1982	DATE	MINS	MGR TECH
N .					г			DRAWING BY	AKT	1		REC & STD
1					Г			STATION ID		DATE.	MTHS	PRINCIPAL
PROFESSIONAL ENGINEOUS TAMP								CHECKER INITIALS A	MP		-	ENGINEER



C367 PIPELINE GEOTECH BORE LOG 2 CLERMONT COUNTY, OH SHEET(8) X OF X DWG SCALE AS NOTED DWG DATE OY/20/2021 (SUPERASDED)

PROPRIED DRAWNON MARKER POG - B-XXXX-0001002 A

INSELLOGOICUM?

INSTALLATION:

- AASHTO #2 (1,5-2,5 INCH) STONE OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT A MINIMUM 6-INCH THICKNESS FOR LIGHT DUTY USE OR AT LEAST 10-INCH THICKNESS FOR HEAVY-DUTY USE.
- THE ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS (30-FT MINIMUM ON A SINGLE RESIDENTIAL LOT; 70-FT MINIMUM ELSEWHERE).
- A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:
- MINIMUM TENSILE STRENG
- IF NEEDED, A PIPE OR CULIVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OUT ONTO PAVED SURFACES.
- IF NEEDED, A WATER BAR SHALL BE CONSTRUCTED TO PREVENT SURFACE WATER FROM FLOWING ALONG THE LENGTH OF THE ENTRANCE UT ONTO PAVED SURFACE.

14' MIN & NOT LESS

THAN WIDTH OF INGRESS-

OR EGRESS

- TOP DRESS WITH ADDITIONAL STONE AS SITE CONDITIONS DEMAND.
- REMOVE MUD TRACKED ONTO PUBLIC STREETS IMMEDIATELY VIA SCRAPING OR SWEEPING.
- ENSURE THE ENDS OF A TEMPORARY CULVERT PIPE (IF UTILIZED) ARE NOT BLOCKED AND THAT THE PIPE IS FREE OF DEBRIS THROUGHOUT.

ROAD OR OTHER EXISTING

RIGHT OF WAY

DIVERSION AS NEEDED

PLAN VIEW

PROFILE VIEW

STABILIZING CONSTRUCTION ENTRANCE

PAVED SURFACE

(OR 30' FOR ACCESS TO INDIVIDUAL HOUSE LOT)

RIGHT OF WAY

SHERRICH STORY

DIVERSION AS NEEDED

18" OR SUFFICIENT OF DIVERT RUNOFF

- THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE,
- PULL OUT ALL CONSTRUCTION ENTRANCE MATERIAL AND PROPERLY DISPOSE OF OFF-SITE. STONE CAN BE BLENDED INTO THE SURROUNDING LANDSCAPE AS SITE CONDITIONS

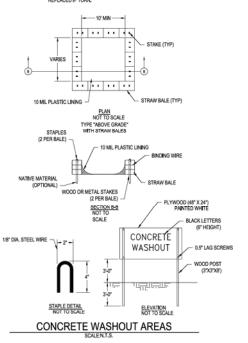
ROAD OR OTHER EXISTING

PAVED SURFACE

RE-GRADE THE AREA AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

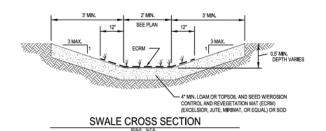
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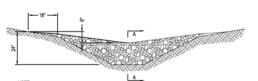
- CONCRETE WASHOUT WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WASHOUT CONVEYANCE.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED ADJACENT TO THE TEMPORARY CONCRETE WASHOUT FACILITY.
- WASHOUT PIT MUST BE INSPECTED FREQUENTLY TO ENSURE LINER IS INTACT.
- ONCE 75% OF ORIGINAL PIT VOLUME IS FILLED OR LINER IS TORN, MATERIAL MUST BE REMOVED AND PROPERLY DISPOSED OF ONCE HARDENED, LINER SHALL BE REPLACED IF TORN.



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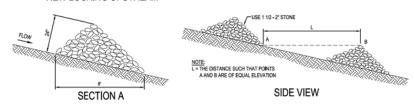
DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE" TO ENSURE THERE IS NO RISK OF MADRICIPATION OF MADRICIPATION OF THE OFFICIAL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT IRRINI





NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE DAM.

VIEW LOCKING UPSTREAM



ROCK DITCH CHECK



PROFESSONAL ENGARCHISTAM

REVISION(S) DESCRIPTION DESCRIPTION 12-18-2020 REVISED 30% DESIGN AKT AMP CNS AREA CODE
AKT AMP CNS ACCOUNT NUMBER AW108. REGIONAL 02 19 2021 60% DESIGN FOR OPSE PROJECT NUMBER AW1982 MGR TECH REC & STD AKT DRAWING BY

CHECKER INTIALS

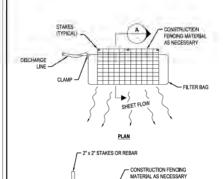
DUKE Pledmont Natural Gal

C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 1** CLERMONT COUNTY, OHIO

SHEET(S) 3-OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

KELLOGG, OH

PNG -C-XXX-0001500 B



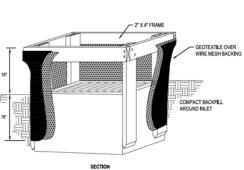
- 1. INSTALL A DEWATERING GEOTEXTILE FILTER BAG AS DIRECTED BY THE COMPANY'S INSPECTOR TO PREVENT THE FLOW OF HEAVILY SILT LADEN WATER INTO WATERBODIES OR WETLANDS.
- DISCHARGE SITE SHALL BE WELL VEGETATED AND THE TOPOGRAPHY OF THE SITE SLICH THAT WATER WILL FLOW AWAY FROM ANY WORK AREAS. THE AREA DOWN SLOPE FROM THE DEWATERING SITE MUST BE REASONABLY PLANE OR STABILIZED BY VEGETATION OR OTHER MEANS TO ALLOW THE FILTERED WATER TO CONTINUE AS SHEET FLOW
- 3. TO ATTACH THE DISCHARGE HOSE, CUT A CORNER OF THE BAG, INSERT DISCHARGE HOSE, AND SECURE THE HOSE TO THE BAG.
- 4. A SINGLE FILTER BAG SHOULD NOT BE USED FOR FLOWS GREATER THAN 600
- REPLACE FILTER BAG BEFORE IT IS COMPLETELY FILLED WITH SEDIMENT. MONITOR DISCHARGE TO AVOID OVER PRESSURING DUE TO PLUGGING, WHICH MAY RESULT IN RUPTURE.
- 6. DISPOSE OF USED FILTER BAG AND SEDIMENT AT A SITE APPROVED BY THE COMPANY'S INSPECTOR.



SLOPE 0 TO 1

- FILTER BAG

TYPICAL GEOTEXTILE FILTER BAG FOR DEWATERING



INSTALLATION:

- CONSTRUCT PRIOR TO UPSLOPE LAND DISTURBANCE.
- CONSTRUCT WOODEN FRAME FROM 2"X4" LUMBER, DRIVE POSTS 1" INTO THE GROUND AT EACH CORNER DIRECTLY AGAINST THE CONCRETE BOX AND ASSEMBLE THE TOP FRAME WITH AN OVERLAP JOINT SHOWN BELOW, THE TOP FRAME SHALL BE SET AT AN ELEVATION THAT DOES NOT CAUSE PONDED WATER TO BACKUP INTO UNWANTED AREAS.
- THE WIRE MESH AND GEOTEXTILE SHALL BE TIGHTLY STRETCHED AND FASTENED TO THE FRAME.
- THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
- BACKFILL SHALL BE PLACED IN THE 18" TRENCH AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE ELEVATION OF THE TOP OF THE GRATE IS REACHED.

MAINTENANCE:

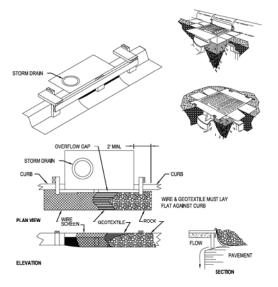
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE PRACTICE. THE REMOVED SEDIMENT MUST BE STABILIZED AND SHOULD NOT BE PLACED WHERE IT COULD EVENTUALLY BE CONVEYED BACK TO THE INLET VIA SURFACE RUNOFF.
- REPLACE AND PROPERLY DISPOSE OF DAMAGED SILT FENCE MATERIAL
- AREA WHERE SURFACE FLOW HAS CUT UNDER THE SILT FENCE MATERIAL WITHIN THE TRENCH SHALL BE RE-COMPACTED WITH APPROPRIATE MATERIAL (LE. HIGH CLAY CONTENT)

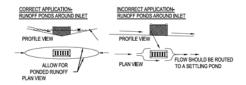
REMOVAL

- 1. PULL OUT ALL SILT FENCE MATERIAL AND STAKES AND PROPERLY DISPOSE OF OFF-SITE.
- RE-GRADE AREA SEDIMENT HAS ACCUMULATED AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

ALTERNATIVE MANUFACTURED YARD DRAIN INLET PROTECTION PRODUCTS ARE AVAILABLE AND CAN BE USED, SUBJECT TO PRIOR APPROVED BY THE COMMUNITY ENGINEER.

DROP INLET PROTECTION





INLET PROTECTION FOR CURB DRAINS & YARD DRAINS SITUATED ON A SLOPE:

INSTALLATION:

REMOVE THE GRATE FROM THE CATCH BASIN.

- INSERT THE FILTRATION SACK INTO OPENING OF CATCH BASIN. SOME PRODUCTS REQUIRE THE FILTRATION SACK BE SLIPPED OVER THE CATCH BASIN GRATE FIRST.
- REINSERT GRATE INTO CATCH BASIN WHILE ENSURING ALL NECESSARY SUPPORT STRAPS TO PROVIDE SUPPORT AND ENSURE THE FILTRATION SACK DOES NOT FALL INTO CATCH BASIN AS IT FILLS WITH SEDIMENT.

MAINTENANCE:

- THE FILTRATION SACK MUST BE EMPTIED WHEN IT IS 1/3RD FULL OF SEDIMENT AND DEBRIS. SACKS ARE TYPICAL MANUFACTURED WITH LIFTING STRAPS AND DUMPING STRAPS.
- TO EMPTY THE SACK, REMOVE THE GRADE, LIFT THE SACK OUT OF THE CATCH BASIN VIA THE LIFTING STRAPS AND HAUL IT TO AN APPROPRIATE AREA. TURN IT INSIDE OUT WITH THE DUMPING STRAPS PROVIDED.
- THE FILTRATION SACK MUST BE REPLACED IF IT IS TORN, OTHERWISE THE SAME SACK CAN BE USED MULTIPLE TIMES.
- THE CONTRACTOR IS REQUIRED TO HAVE STAGED REDUNDANT CONTROLS ONSITE IN THE EVENT

INSPECTION

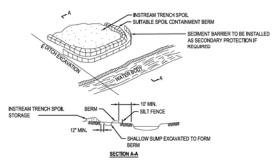
INLET PROTECTION MEASURES MUST BE INSPECTED AT LEAST 12-HOURS PRIOR TO RAIN EVENTS, IN ADDITION TO THE WEEKLY AND POST-RAIN EVENT INSPECTIONS, NON-FUNCTIONAL DEVICES

REMOVAL

- 1. PULL OUT ALL INLET PROTECTION MATERIAL AND PROPERLY DISPOSE OF OFF-SITE,
- RE-GRADE AREA WHERE ACCUMULATED SEDIMENT HAS BEEN PLACED AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

THE FOLLOWING DIAGRAMS PROVIDE A GENERAL IDEA OF HOW TO INSTALL AND MAINTAIN A VARIETY OF MANUFACTURED STORM DRAW INLET PROTECTION PRACTICES, BE GURE TO IMPLEMENT FILITATION SACIST THAT ARE APPROPRIATE FOR EITHER CURB INLETS OR FOR YARD DRAWIN ILLETS. MANUFACTURER'S SPECIFICATIONS FOR THE PRODUCT OF CHOICE SHOULD BE FOLLOWED.

CURB INLET PROTECTION



- SEDIMENT BARRIER TO BE INSTALLED 1. SOIL CONTAINMENT BERMS ARE TO BE USED WHERE INSTREAM TRENCH SPOIL COULD REENTER THE WATERCOURSE DIRECTLY OR INDIRECTLY AND WITH SIMULTANEOUS UTILIZATION OF SEDIMENT
 - 2. MATERIAL USED FOR THE CONTAINMENT BERM SHOULD BE A MINIMUM OF 10 FT. FROM THE WATERS EDGE. IT SHOULD BE KEPT TO A HEIGHT WHICH REMAINS STABLE DURING THE CONSTRUCTION
 - 3. CARE SHOULD BE TAKEN THAT THE SPOIL PILE DOES NOT OVERTOP THE CONTAINMENT BERM.
 - THE CONTAINMENT BERM SHOULD BE DISMANTLED AND THE SITE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF THE WATER CROSSING.
 - WHERE POSSIBLE, RIPARIAN VEGETATION SHALL BE LEFT IN PLACE.
 - 6. STAGED MOVEMENT OF INSTREAM SPOIL MAY BE REQUIRED IF QUANTITIES ARE EXCESSIVE.
 - 7. CARE AND ATTENTION MUST BE TAKEN TO ENSURE SPOIL CONTAINMENT BERMS ARE MAINTAINED.
 - 8. FULL CONSIDERATION FOR OVERALL SLOPE STABILITY IS REQUIRED WHEN SELECTING A SPOIL

TYPICAL TEMPORARY SOIL CONTAINMENT BERM FOR WATERBODY TRENCH SPOILS

BURNS & MCDONNELL ENGINEERING COMPANY, INC. STATE LICENSE # COA. 01557	1	DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE	CONFIDENTIAL *DRAN	WING IS CU						RAWING 'USE DIMENSIONS CINLY DISCLOSURE, ALL PREVIOUS PAPER COPIES OF TH	IS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM)
	NO. DATE	REVISION(S) DESCRIPTION	in	CHK A	PPD DESCRIPT	ION		APPROVALS			
3	A 12-18-2020	REVISED 30% DESIGN	AK	T AMP C	NS AREA CODE		DAVE	end.	REGIONAL		C367 PIPELINE
9	B- 02 19 2021	60% DESIGN FOR OPSB	AK	T AMP C	NS ACCOUNT NUMBE	R AW1083		-	ENCHIED	C matter	
13					PROJECT NUMBER	R AW1982	DAFE	INCOME.	MGR TECH	DUKE Pledmont Natural Gas	EROSION SEDIMENT CONTROL DET
10				-	DRAWING BY	AKT			REC & STD	ENERGT (Walter day	CLERMONT COUNTY, OHIO
19					STATION ID		DATE.	SMITHLE	PRINCIPAL		
PROFESSIONAL ENGARCHSTAMP				1 1	CHECKER INITIALS	AMP	-	-	ENGINEER	COPYRIGHT 2020	KELLOGG, OH



C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 2** CLERMONT COUNTY, OHIO KELLOGG OH

DWG DATE 10/12/2020 SUPERSEDED

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SHEET(S) 3 OF 5 DWG SCALE AS NOTED

INSTALLATION:

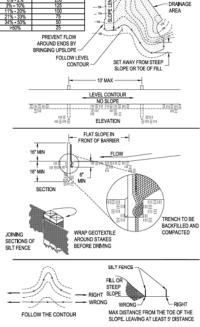
- CONSTRUCT PRIOR TO UPSLOPE LAND DISTURBANCE.
 PLACE CONTINUOUS LENGTHS OF SILT FENCE ALONG A CONSISTENT CONTOUR SO AS TO PREVENT THE CONCENTRATION OF RUNOFF AT LOW POINTS IN THE FENCE.
- TO PREVENT FLOW AROUND ENDS, EXTEND EACH OF A CONTINUOUS LENGTH OF SILT FENCE UPSLOPE (90° TO THE CONTOUR) SO THE ENDS ARE AT A HIGHER ELEVATION OR 20-FEET IN HORIZONTAL DISTANCE, WHICHEVER IS ACHIEVED FIRST.
- AT A MINIMUM, THE BOTTOM 8-INCHES OF THE SILT FENCE MATERIAL MUST BE PLACED IN A TRENCH (MINIMUM 6-INCH DEPTH) THAT IS CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE. THE TRENCH SHALL NOT BE CONSTRUCTED WITH THE TILT BLADE OF A
- THE TRENCH MUST BE BACKFILLED WITH SOIL AND PROPERLY COMPACTED, WHEN AGGRESSIVELY PULLED UPWARD BETWEEN TWO CONSECUTIVE STAKES, THE MATERIAL SHOULD NOT PULL OUT OF STAKES (MIN. 32-INCH LENGTH, 2"X2" HARDWOOD OF GOOD QUALITY) MUST BE PALCED ON THE
- DOWNSLOPE SIDE OF THE SILT FENCE MATERIAL.
 SILT FENCE MATERIAL MUST BE PULLED TIGHT BETWEEN CONSECUTIVE STAKES TO ENSURE THE
- FENCE DOES NOT SAG.
- WHEN IT IS NECESSARY TO JOIN TWO SEPARATE LENGTHS OF SILT FENCE TO FORM A CONTINUOUS RUN, THE END OF TWO SEPARATE LENGTHS MUST BE JOINED TOGETHER BY FIRST OVERLAPPING THEM AND THEN TWISTING THEM TOGETHER AT LEAST 180° PRIOR TO DRIVING THE STAKES INTO GRADES IN EXCESS OF 10% REQUIRE SILT FENCE TO BE "LHOOKED" AS DESCRIBED IN THE SWPPE

MAINTENANCE

- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3RD THE HEIGHT OF THE SILT FENCE. THE REMOVED SEDIMENT MUST BE STABILIZED AND SHOULD NOT BE PLACED WHERE IT COULD EVENTUALLY BE CONVEYED BACK TO THE SILT FENCE VIA SURFACE RUNOFF. REPLACE AND PROPERLY DISPOSE OF DAMAGED SILT FENCE MATERIAL.
- ADEAS WHERE SURFACE BLOW HAS CUT UNDER THE SET FENCE MATERIAL WITHIN THE TRENCH SHALL BE RE-COMPACTED WITH APPROPRIATE MATERIAL (I.E. HIGH CLAY CONTENT).

PULL OUT ALL SILT FENCE MATERIAL AND STAKES AND PROPERLY DISPOSE OF OFF-SITE,

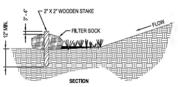
RE-GRADE AREA WHERE SEDIMENT HAS ACCUMULATED AS NECESSARY AND ESTABLISH VEGETATION IN ANY RESULTING DISTURBED AREAS.



MAXIMUM CONTRIBUTION AREA TO SILT FENCE USING SLOPE LENGTH

SLOPE LENGTH /FT.

SILT FENCE



- 1. ALL FILTER SOCK MUST BE 12-INCH COMPOST FILTER SOCK OR THE ENGINEERED EQUIVALENT.
- 2. MATERIALS COMPOST USED FOR FILTER SOCKS SHALL BE WEED. PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF A PARTICLES RANGING FROM 3/8" TO 2".
- 3. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPF 38" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

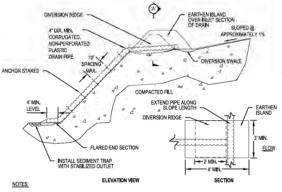
INSTALLATION:

- FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA, ON SLOPES APPROACHING 2-1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE
- 2. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE. SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
- 3. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS

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- 1. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A
- REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
- WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
- 4. REMOVAL FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH AS WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

FILTER SOCK



- 1. THE SLOPE DRAIN SHALL BE CONSTRUCTED/LENGTHENED WITH THE CONSTRUCTION OF THE FILL SLOPE. AS A RESULT, INLET ELEVATIONS WILL VARY ACCORDING TO GRADE ELEVATIONS AT THE TIME OF CONSTRUCTION.
- 2. INSPECT SLOPE DRAIN AND SUPPORTING DIVERSIONS AFTER EVERY RAINFALL EVENT AND MAKE NECESSARY REPAIRS FOR PROPER OPERATION OF THE SYSTEM.
- 3. UPON PROJECT COMPLETION, REMOVE THE SLOPE DRAIN AND PROPERLY STABILIZE ALL

TEMPORARY SLOPE DRAIN

BURNS & MCTONNELL STATE LICENSE # COA, 01557

PROFESSONAL ENGARCHISTAM

REVISION(S) DESCRIPTION DESCRIPTION 12-18-2020 REVISED 30% DESIGN AKT AMP CNS AREA CODE AKT AMP CNS ACCOUNT NUMBER AW198 FEGICANI. 02 19 2021 60% DESIGN FOR OPSE PROJECT NUMBER AW1982 MGR TECH REC & STD AKT DRAWING BY CHECKER INITIALS

DUKE Pledmont Natural Gas

KELLOGG OH

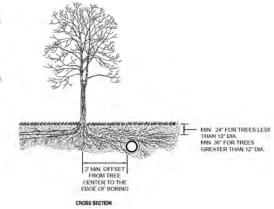
C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 3** CLERMONT COUNTY, OHIO

SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

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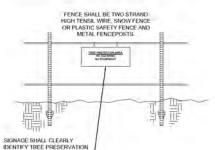
- 1. AREAS WHERE NATURAL VEGETATION IS TO BE PRESERVED, INCLUDING
- 2. ACCEPTABLE FENCE MATERIALS INCLUDE PLASTIC FENCE OR SNOW FENCE ANCHORED TO METAL FENCE POSTS.
- 3. SIGNAGE SHALL CLEARLY IDENTIFY THE PROTECTION AREA AND STATE THAT NO CLEARING OR EQUIPMENT IS ALLOWED WITHIN IT.
- 4. FENCE SHALL REMAIN AROUND PROTECTION AREAS UNTIL AFTER FINAL GRADING HAS BEEN COMPLETED
- 5. FENCE SHALL BE PLACED AS SHOWN ON PLANS AND BEYOND THE DRIP LINE OR CANOPY OF TREES TO BE PROTECTED.
- 6. IF ANY CLEARING IS DONE AROUND SPECIMEN TREES IT SHALL BE DONE BY CUTTING AT GROUND LEVEL WITH HAND TOOLS AND SHALL NOT BE GRUBBED OR PULLED OUT.







TREE PRESERVATION AREA DURING BORING



AREA. NO CLEARING AND NO

CROSS SECTION

TREE PRESERVATION AREA

TRENCHING SPOIL LIVE ROOTS SEVERED ROOTS CROSS SECTION 1. SPOIL TO BE LOCATED OUTSIDE THE DRIPLINE

TREE PRESERVATION AREA BEFORE TRENCHING

BURNS & MCCONNELL ENGINEERING COMPANY, INC STATE LICENSE # COA, 01557

PROFESSONAL ENGARCHISTAM

EQUIPMENT

BY OR APP PEASON
ART AMP CNS AREA CODE
ART A REVISION(S) DESCRIPTION 12-18-2020 REVISED 30%-DESIGN PECKYNAL 02 19 2021 60% DESIGN FOR OPSB MGR TECH REC & STD

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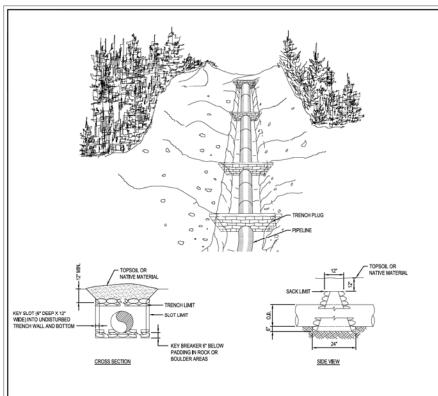


C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 4** CLERMONT COUNTY, OHIO

SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

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KELLOGG, OH



BURNS & MCCONNELL

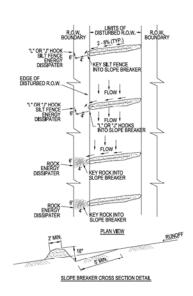
- 1. TRENCH PLUGS SHALL BE INSTALLED:
- ON SLOPES ALONG THE TRENCH LINE WHERE THE NATURAL DRAWAGE PATTERN, PROFILE, AND TYPE OF BACKFILL MATERIAL MAY RESULT IN LOSS OF BACKFILL MATERIAL OR ALTERATION OF THE NATURAL PATTERN;

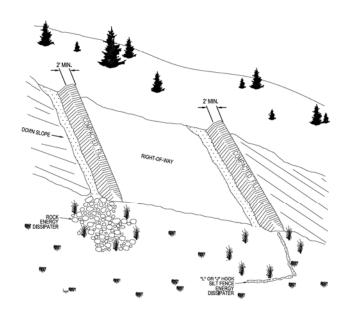
 AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS;

- WHERE NEEDED TO AVOID DRAINING A WETLAND;
 ON UPLAND SLOPES, AT THE SAME SPACING AS SLOPE BREAKERS AND UP SLOPE OF SLOPE BREAKERS;
- IN CULTIVATED LAND AND RESIDENTIAL AREAS WHERE PERMANENT SLOPE BREAKERS ARE NOT TYPICALLY INSTALLED, AT THE SAME SPACING AS IF PERMANENT SLOPE BREAKERS WERE REQUIRED
- PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH DUKE CONSTRUCTION STANDARDS AND AS DIRECTED
 BY COMPANY'S INSPECTOR. SACK BREAKS SHALL UTILIZE OPEN WEAVE HEMP OR JUTE SACKS FILLED WITH MINIMUM OF 55LBS OF SUBSOIL SAND OR A MIXTURE OF 1 PART CEMENT TO 6 PARTS SAND OR SUBSOIL AS DETERMINED BY COMPANY'S INSPECTOR
- POLYURETHANE FOAM BREAKERS MAY BE USED IN-LEIU-OF SACK BREAKERS, WHEN APPROVED BY COMPANY'S REPRESENTATIVE.
- PLUG SPACING AND CONFIGURATION MAY BE CHANGED AS DIRECTED BY COMPANY, DEPTH OF DITCH MAY VARY WITH SITE CONDITIONS.

TYPICAL TRENCH PLUG

4. ALL MATERIALS SHALL BE SUPPLIED BY CONTRACTOR.





- 1. SLOPE BREAKERS SHALL BE CONSTRUCTED OF COMPACTED NATIVE SOIL AND INSTALLED AT LOCATIONS AS REQUIRED BY DUKE CONSTRUCTION STANDARDS OR AS DIRECTED BY THE COMPANY'S REPRESENTATIVE.
- 2. SLOPE BREAKERS SHALL BE ORIENTED AS SHOWN OR OTHER PATTERN AS DIRECTED BY THE COMPANY'S REPRESENTATIVE TO DIRECT
- 3. SLOPE BREAKERS SHALL BE CONSTRUCTED AT 2-8% GRADIENT ACROSS THE SLOPE.
- 4. THE SLOPE BREAKERS SHALL BE 18" DEEP (AS MEASURED FROM THE TROUGH TO THE TOP OF THE SLOPE BREAKER), THE THROUGH WILL BE A MINIMUM OF 5' WIDE ACROSS THE WIDTH OF THE RIGHT-OF-WAY.
- 5. THE OUTLET OF THE SLOPE BREAKER MUST FREELY DISCHARGE ALL RUNOFF OFF THE DISTURBED RIGHT-OF-WAY INTO AN ENERGY
- WHERE SLOPE BREAKERS EXTEND BEYOND THE EDGE OF THE CONSTRUCTION RIGHT-OF-WAY TO DIRECT RUNOFF INTO STABLE, WELL VEGETATED AREAS, THESE LOCATIONS MUST BE APPROVED BY THE COMPANY'S REPRESENTATIVE.

FLOW ENERGY DISSIPATER NOTES:

- THE OUTLET SHALL CONTAIN AN ENERGY DISSIPATER IF THE COMPANY'S INSPECTOR DETERMINES EXISTING VEGETATION IS NOT SUFFICIENTLY STABLE TO PREVENT EROSION. THE ENERGY DISSIPATER SHALL BE CONSTRUCTED AS FOLLOWS: OLITEALL END OF DISSIPATER SHOULD BELOWER THAN SLOPE BREAKER END.
- SULT FIXE END OF DISSIPATERS SHOULD BE KEYED INTO THE END OF THE SLOPE BREAKER.
 PROVIDE ENOUGH AREA INSIDE "L" TO CAPTURE AND HOLD SEDIMENT.

TYPICAL SLOPE BREAKER

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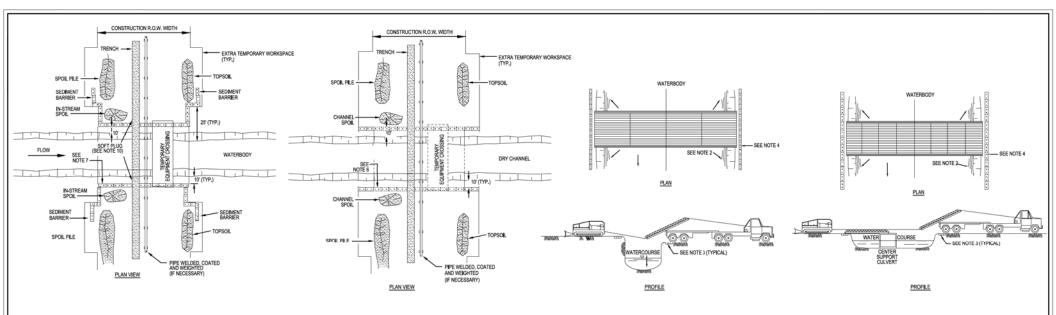




C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 5** CLERMONT COUNTY, OHIO KELLOGG, OH

SHEET(S) B OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

PNG -C-XXX-0001504 B



- METHOD APPLIES TO WATERBODIES THAT ARE NOT STATE-DESIGNATED FISHERIES WHERE FLUME CROSSINGS ARE NOT REQUIRED.
- IF TOPOGRAPHY PERMITS TEMPORARY EQUIPMENT BRIDGE INSTALLATION. THE CONTRACTOR SHALL TRENCH, STRING, WELD, COAT, WEIGHT (IF NECESSARY), LOWER IN AND BACKFILL UTILIZING THE MAIN LINE CREW TRAVELING OVER THE BRIDGE.
- IF TOPOGRAPHY PROHIBITS INSTALLATION OF A TEMPORARY EQUIPMENT BRIDGE, CONTRACTOR SHALL TRENCH UP TO BOTH SIDES OF CROSSING: STRING, WELD, COAT AND WEIGHT (IF NECESSARY) USING THE MAINLINE CREW. IN STREAM EXCAVATION, LOWER IN, AND BACKFILL WILL UTILIZES A CLAM OR HOES WORKING FROM THE BANKS.
- SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE, NO IN-STREAM WORK BETWEEN APRIL 15 AND
- COMPLETE ALL IN-STREAM ACTIVITIES WITHIN 24 HOURS IF FEASIBLE.
- NO REFUELING OF MOBILE EQUIPMENT WITHIN 100 FEET OF WATERBODY. REFUEL STATIONARY EQUIPMENT AS
- INSTALLATION OF TEMPORARY EQUIPMENT CROSSING IS REQUIRED AT ALL STATE-DESIGNATED FISHERIES AND STREAM CROSSINGS. IF A TEMPORARY EQUIPMENT CROSSING IS INSTALLED, IT MUST BE BUILT IN ACCORDANCE WITH SECTION PERMITS.
- IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA.
- CONSTRUCT SEDIMENT BARRIERS ALONG THE SIDES OF STOCKPILES AND ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY.
- IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL A MINIMUM OF 10 FEET FROM THE WATERS EDGE AND WITHIN THE CONSTRUCTION R.O.W. UNLESS DEPICTED OTHERWISE IN SITE SPECIFIC CROSSING PLANS. TEMPORARY WORKSPACE MUST BE A MINIMUM OF 25' FROM THE WATERS EDGE.
- TRENCH THROUGH WATERCOURSE USING MAINLINE EXCAVATION EQUIPMENT WHERE PRACTICAL INSTALL SOFT PLUGS AT THE EDGE OF STREAM BANKS UNTIL JUST PRIOR TO PIPE INSTALLATION TO CONTROL WATER FLOW & TRENCH SLOUGHING.
- MAINTAIN STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
- BACKFILL WITH NATIVE MATERIAL

BURNS A MOTOWNEY

- RESTORE WATERBODY CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE,
- RESTORE STREAM BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE AS REQUIRED. ALL DIMENSIONS INDICATED SHALL BE DETERMINED BY ACTUAL CONSTRUCTION CONDITIONS.

TYPICAL FLOWING WATERBODY CROSSING OPEN CUT TRENCHED

- METHOD APPLIES TO CROSSINGS WHERE NO FLOWING WATER IS PRESENT AT THE TIME OF CROSSING.
- CONTRACTOR MAY "MAINLINE THROUGH" THE CROSSING OR UP TO BOTH SIDES OF THE CROSSING: STRING, WELD, COAT, AND WEIGHT (IF NECESSARY), USING THE MAINLINE CREW WITH THE PIPE SKIDDED OVER THE CROSSING.
- NO REFUELING OF MOBILE EQUIPMENT WITHIN 100 FEET OF DRY CHANNEL, REFUEL STATIONARY FOUIPMENT AS PER THE SPCC PLAN.
- INSTALLATION OF TEMPORARY EQUIPMENT CROSSING IS REQUIRED AT ALL STREAM CROSSINGS EQUIPMENT CROSSING MUST BE BUILT IN ACCORDANCE WITH THE TYPICAL PORTABLE WATERBODY BRIDGE DETAIL.
- IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA. STOCKPILE TOPSOIL AND SPOIL SEPARATELY, TOPSOIL AND SPOIL WILL NOT BE STOCKPILED IN THE CROSSING CHANNEL AND WILL BE PLACED A MINIMUM OF 10 FEET FROM CROSSING BANKS WITHIN THE CONSTRUCTION
- CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. FOLLOWING CLEARING AND GRADING AND MAINTAIN UNTIL CONSTRUCTION OF THE CROSSING. EROSION CONTROL MEASURES SHALL BE REINSTALLED IMMEDIATELY FOLLOWING BACKFILLING OF TRENCH AND STABILIZATION OF BANKS, BARRIERS MAY BE TEMPORABLY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY
- IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL A MINIMUM OF 10 FEET FROM HIGH BANK AND WITHIN THE CONSTRUCTION R.O.W. UNLESS DEPICTED OTHERWISE IN SITE SPECIFIC CROSSING PLANS.
- BACKFILL WITH NATIVE MATERIAL
- RESTORE CROSSING CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE,
- RESTORE CROSSING BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE AS REQUIRED
- ALL DIMENSIONS INDICATED SHALL BE DETERMINED BY ACTUAL CONSTRUCTION CONDITIONS.

- THIS TYPE OF BRIDGE IS GENERALLY USED ON NARROW, DEEP CROSSINGS
- BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY. UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE ADEQUATE FREEBOARD. AS REQUIRED, ENSURE THAT FILL MATERIAL USED DOES NOT SPILL
- CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY, BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY
- THE END OF EACH WORK DAY, SILT FENCE, OR SANDBAGS MAY BE USED INTERCHANGEABLY. REMOVE PORTABLE BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE. THE STRUCTURE IS TO BE REMOVED IF THERE IS MORE THAN ONE MONTH DETWEEN FINAL GRADING AND SEEDING, AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. IS AVAILABLE.
- DISPOSE OF ANY ROCK AS DIRECTED BY THE COMPANY REPRESENTATIVE.
- RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS.

TYPICAL PORTABLE

WATERBODY BRIDGE

- THIS TYPE OF BRIDGE IS GENERALLY USED FOR CROSSINGS THAT ARE TOO WIDE FOR A SINGLE BRIDGE SECTION AND RELATIVELY SHALLOW.
- BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY.
- UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE ADEQUATE FREEBOARD.
- AS REQUIRED, ENSURE THAT FILL MATERIAL, IF USED, DOES NOT SPILL INTO WATERCOURSE, CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W, TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY, BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE
- FND OF FACH WORK DAY, SILT FENCE OR SANDRAGS MAY BE LISED INTERCHANGEARLY. REMOVE PORTABLE BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE THE STRUCTURE IS TO BE REMOVED IF THERE IS MORE THAN ONE MONTH BETWEEN FINAL GRADING AND SEEDING, AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. IS AVAILABLE.
- DISPOSE OF ANY ROCK AS DIRECTED BY COMPANY REPRESENTATIVE.
- RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS,

TYPICAL PORTABLE WATERBODY BRIDGE WITH CULVERT SUPPORT

TYPICAL NON-FLOWING WATERBODY CROSSING OPEN CUT TRENCHING

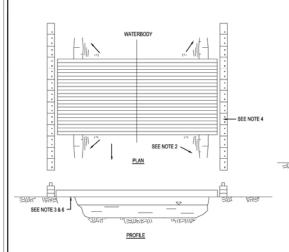
PROPRIETARY & CONFIDENTIAL YALL RIGHTS RESERVED 'DO NOT SCALE THIS DRAWING 'USE DIMENSIONS ONLY NGINEERING COMPANY, INC DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE "TO ENQUIRE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT IRRIN STATE LICENSE # COA, 01557 REVISION(5) DESCRIPTION DESCRIPTION AKT AMP CNS AREA CODE 12-18-2020 REVISED 30% DESIGN REGIONAL 02 19 2021 60% DESIGN FOR OPSE PROJECT NUMBER AW1982 MGR TECH REC & STD AKT DRAWING BY CHECKER INITIALS



C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 6** CLERMONT COUNTY, OHIO KELLOGG OH

SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

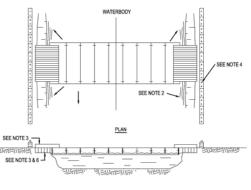
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- . THIS TYPE OF BRIDGE IS GENERALLY USED ON NARROW CROSSINGS, LESS THAN 20 FEET WIDE WITH APPROPRIATE BANK CONFIGURATION. MULTIPLE MATS MAY BE LAYERED FOR HEAVIER EQUIPMENT CROSSINGS.
- BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY, BRIDGE SHOULD BE TEMPORARILY REMOVED IF HIGH WATER RENDERS IT UNSAFE TO USE.
- F REQUIRED, UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SNIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE ADOLITE FREEDOAD, AS REQUIRED, FOUNDER THAT FILL MATERIAL, IF USED DOES NOT SPILL INTO WATERCOURSE INCLUDING REMOVAL OF DIRT FROM DECK DURING OPERATION.
- CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SLT LIADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY. BARRIERS MAY BE TEMPOPARELY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH MORK DAY. SILT FENCE, HAY BALES OR SANDBAGS MAY BE USED INTERCHANGRAILY.
- REMOVE BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE. THE STRUCTURE IS TO BE REMOVED IF THERE IS MORE THAN ONE MONTH BETIVED IN NAL GRADING AND SEEDING, AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. IS AVAILABLE.
- 6. DISPOSE OF ANY ROCK AS DIRECTED BY COMPANY REPRESENTATIVE.
- 7. RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION

TYPICAL TIMBER MAT WATERBODY BRIDGE

SCALE: N.T.

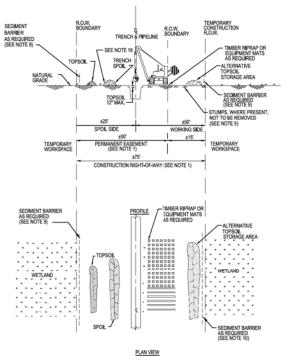


PROFILE

- 1. THIS TYPE OF BRIDGE IS GENERALLY USED ON WIDE, DEEP CROSSINGS.
- 2. BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY.
- UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE, ENSURE ADEQUATE FREEBOARD, AS REQUIRED, ENSURE THAT FILL MATERIAL. IF USED, DOES NOT SPILL INTO WATERCOURSE.
- 4. CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERGODY, BARRIERS MAY SE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST SE REPLACED BY THE END OF EACH WORK DAY, SILT FENCE, HAY BALE SOR SANDBAGS MAY SE USED INTERCHANGEABLY.
- REMOVE FLOATING BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE. THE STRUCTURE IS TO BE REMOVED ET THERE IS MORE THAN ONE MONTH BETWEEN FINAL GRADING AND SEEDING AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. B. AVAILABLE.
- 6. DISPOSE OF ANY ROCK AS DIRECTED BY COMPANY REPRESENTATIVE.
- RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS.

TYPICAL FLEXI-FLOAT WATERBODY BRIDGE

SCALE: N.T.S.

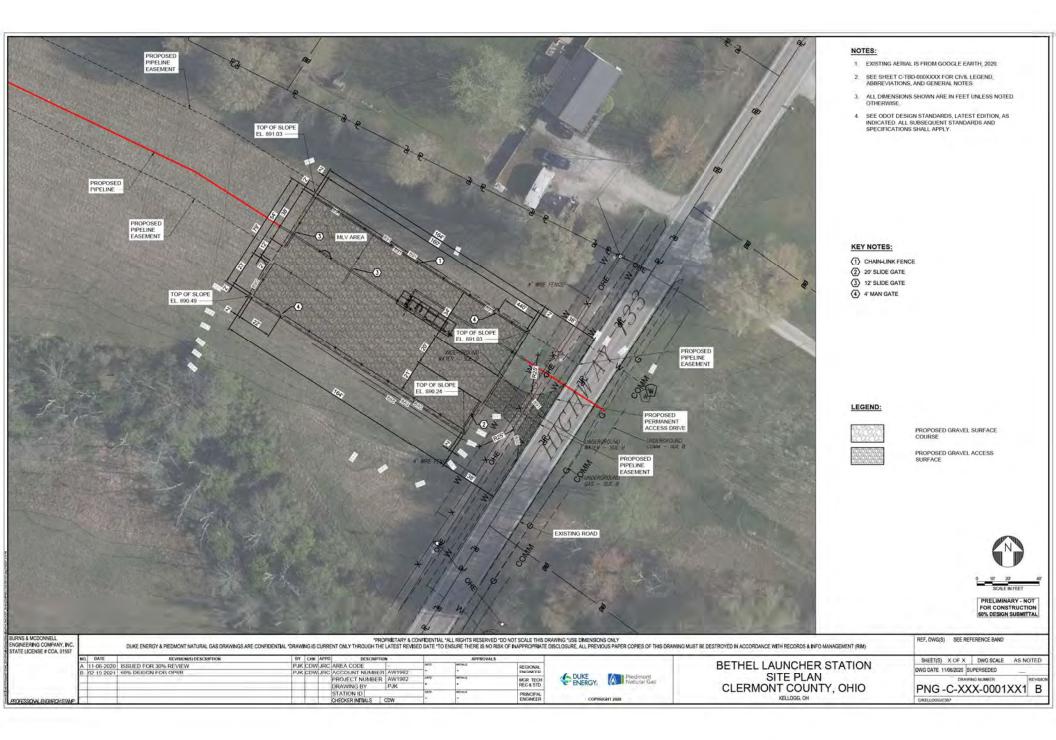


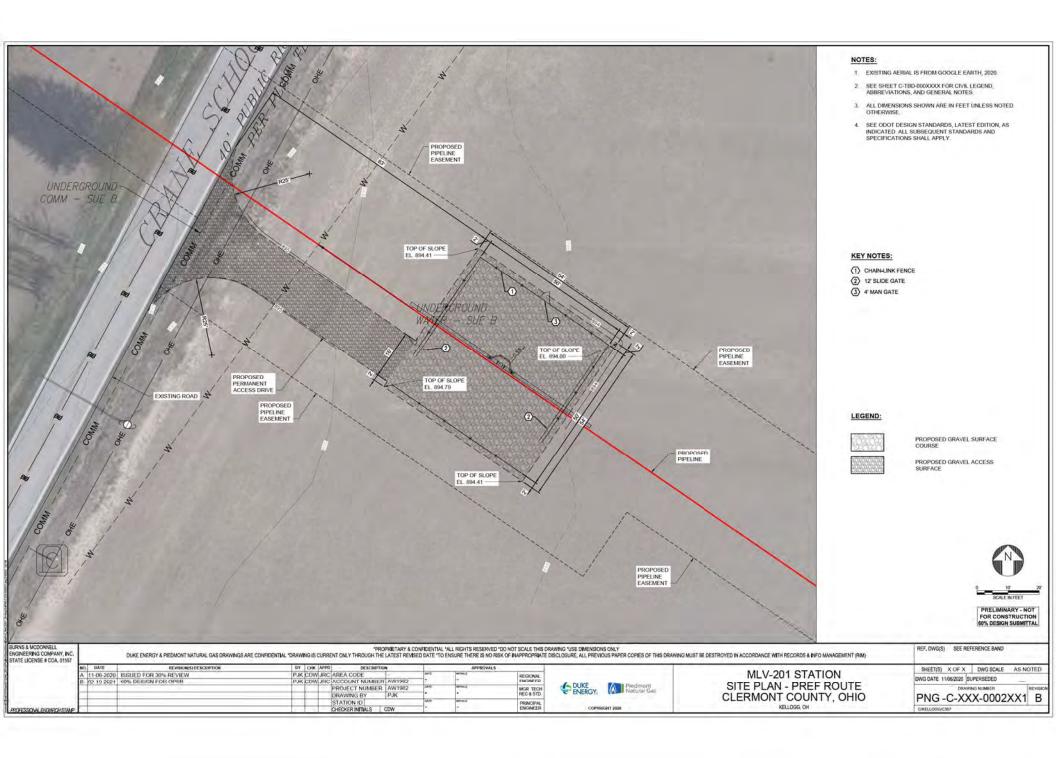
- CONSTRUCTION RIGHT-OF-WAY WILL TYPICALLY BE 75 FEET WIDE CONSISTING OF 50 FEET OF PERMANENT EASEMENT AND UP TO 25 FEET OF TEMPORARY WORKSPACE.
- THE SAME LAYOUT APPLIES WHETHER CONSTRUCTION R.O.W. DOES OR DOES NOT ABUT A EXPERIEN R.O.W.
- LOCATE ANY EXTRA TEMPORARY WORK SPACE AREAS AT LEAST 25 FEET FROM EDGE OF WETLAND AND WITHIN THE APPLICABLE FULL WIDTH CONSTRUCTION R.O.W.
- CLEARING OF VEGETATION AND TREES IS PROHIBITED BETWEEN TEMPORARY EXTRA WORK SPACE AND THE EDGE OF THE WETLAND
- CUT VEGETATION AND TREES OFF AT GROUND LEVEL, LEAVING EXISTING ROOT SYSTEMS IN PLACE WHEREVER PRACTICABLE, AND REMOVE CUTTINGS FROM THE WETLAND FOR DISPOSAL.
- LIMIT CONSTRUCTION EQUIPMENT TO ONE PASS THROUGH WETLANDS TO THE EXTENT PRACTICABLE.
- NO REFUELING OF EQUIPMENT WITHIN 100 FEET OF WETLAND EXCEPT IN ACCORDANCE WITH THE SPCC PLAN.
- IF SATURATED AT TIME OF CONSTRUCTION, REDUCE SOIL COMPACTION BY UTILIZING WIDE-TRACK OR BALLOON TIRE CONSTRUCTION EQUIPMENT OR NORMAL EQUIPMENT OPERATED ON TIMBER RIPPAP OR EQUIPMENT MATS.
- AVOID ADJACENT WETLANDS. INSTALL SEDIMENT BARRIERS IMMEDIATELY AFTER INITIAL GROUND DISTURBANCE AND AT THE EDGE OF THE CONSTRUCTION R.O.W. ALONG THE WETLAND AS DIRECTED BY THE COMPANYS INSPECTOR.
- THIS DRAWING REFLECTS "TRENCH ONLY" TOPSOIL STRIPPING PROCEDURE FOR AREAS WHERE STANDING WATER OR SATURATED SOIL ARE NOT PRESENT.
- SALVAGE UP TO 12' OF TOPSOIL OVER TRENCH AT LOCATIONS IDENTIFIED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE COMPANY'S INSPECTOR. MAINTAIN SEPARATION BETWEEN TOPSOIL AND TRENCH SPOIL.
- LEAVE GAPS IN TOPSOIL AND SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT USE TOPSOIL FOR PADDING. AVOID SCALPING VEGETATED GROUND SURFACE WHEN BACKFILLING SPOIL PILE.
- IN UNSATURATED CONDITIONS, SPOIL MAY BE USED TO STABILIZE THE WORKING SIDE.
- IF SATURATED AT TIME OF CONSTRUCTION, LEAVE HARD PLUGS AT THE EDGE OF WETLAND UNTIL JUST PRIOR TO TRENCHING.
- TRENCH THROUGH WETLANDS.
- LOWER IN PIPE, INSTALL TRENCH BREAKERS AT WETLAND EDGES AS DIRECTED BY THE COMPANY'S INSPECTOR TO PREVENT DRAINAGE, BACKFILL UPON COMPLETION OF CONSTRUCTION.
- REMOVE ALL TIMBER, RIPRAP OR EQUIPMENT MATS FROM WETLANDS UPON COMPLETION OF CONSTRUCTION.
- RESTORE GRADE TO NEAR PRE-CONSTRUCTION TOPOGRAPHY AND REPLACE TOPSOIL, WHERE SALVAGED, WITHOUT A CROWN OVER THE TRENCH.
- 19. IF STANDING WATER IS NOT PRESENT, SEED AS SPECIFIED.
- TOPSOIL AND TRENCH SPOIL RELATIVE POSITIONS CAN, AS DIRECTED BY THE COMPANY'S INSPECTOR, BE REVERSED.

TYPICAL WETLAND CROSSING

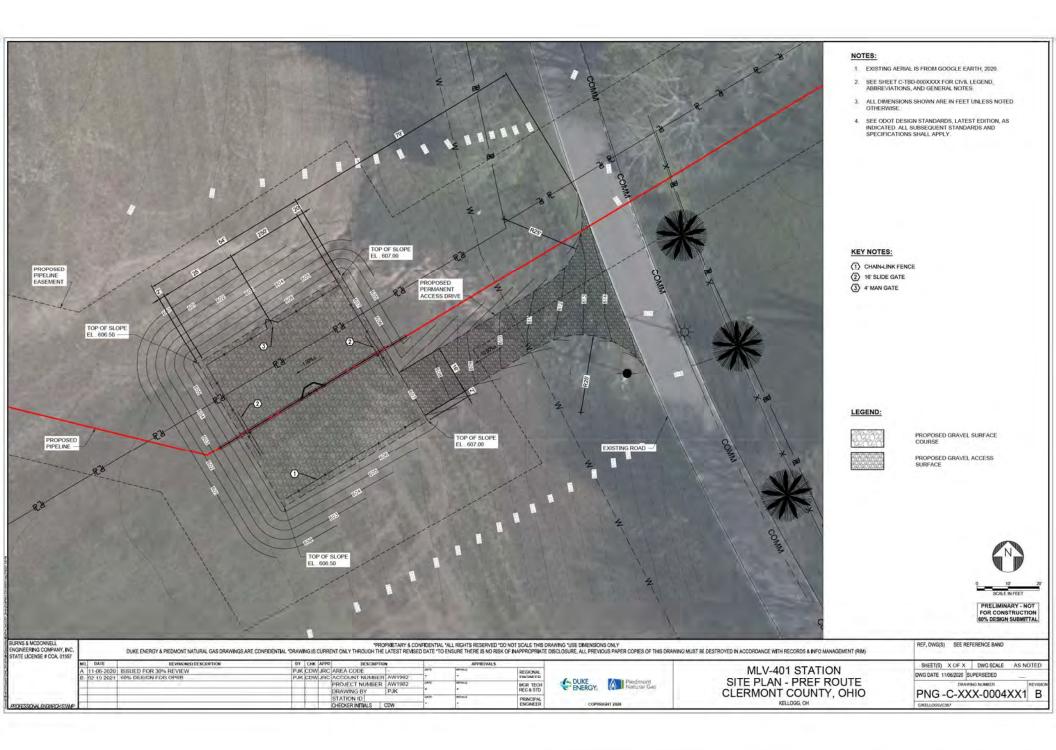
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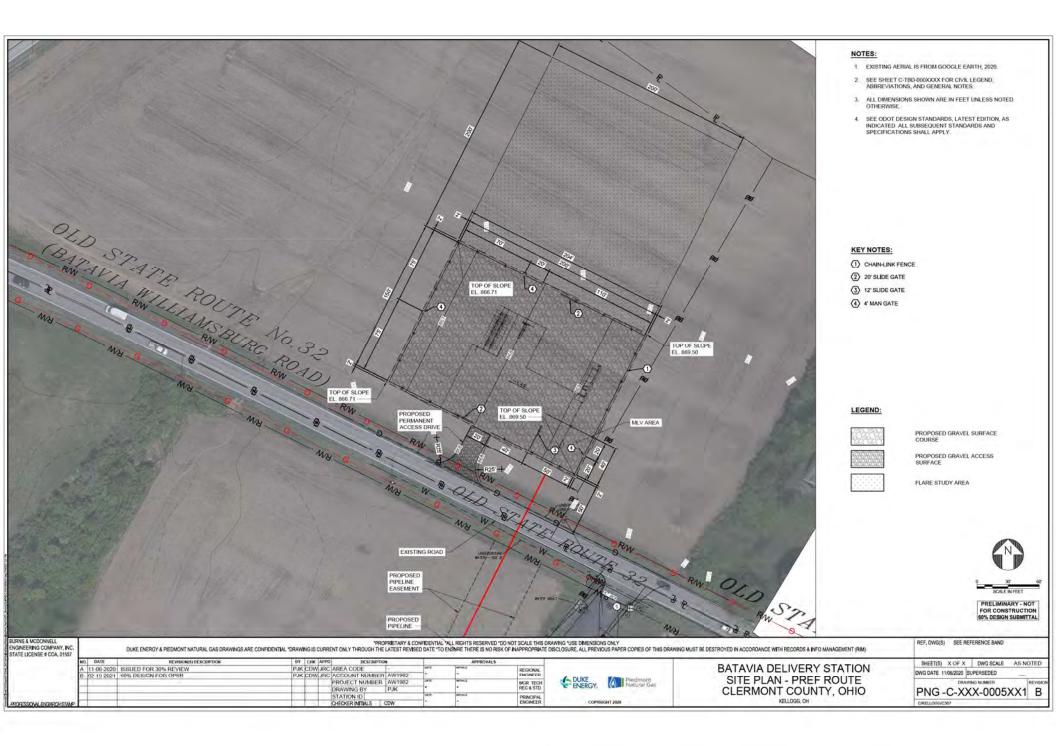
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Appendix 6 – Engineering Drawings

Alternate Route



PAGE #	DRAWING NUMBER	DRAWING INDEX SHEET DESCRIPTION	R
1	PNG-G-567-0002000	COVER SHEET	- 1
2	PNG-G-367-0002001	SIGN-OFF SHEET	
3	PNG-G-367-0002002	GENERAL NOTES SHEET 1	
4	PNG-G-367-0002003	LEGEND, SYMBOLS, & ABBREVIATIONS	
5	PNG-G-367-0002004	PIPELINE BILL OF MATERIAL	
6	PNG-C-067-0002010	ACCESS ROUTE OVERVIEW MAP	_
7	PNG-C-367-0002011	ACCESS ROUTE 1	_
8	PNG-C-367-0002012	ACCESS ROUTE 2	
9	PNG-C-367-0002030	ALIGNMENT SHEET	_
10	PNG-C-367-0002031	ALIGNMENT SHEET	
11	PNG-C-367-0002032	ALIGNMENT SHEET	_
12	PNG-C-367-0002032	ALIGNMENT SHEET	
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13	PNG-C-367-0002034	ALIGNMENT SHEET	
14	PNG-C-367-0002035	ALIGNMENT SHEET	
15	PNG-C-367-0002036	ALIGNMENT SHEET	
16	PNG-C-367-0002037	ALIGNMENT SHEET	
17	PNG-C-367-0002038	ALIGNMENT SHEET	
18	PNG-C-367-0002039	ALIGNMENT SHEET	
19	PNG-C-367-0002040	ALIGNMENT SHEET	
20	PNG-C-367-0002041	ALIGNMENT SHEET	
21	PNG-C-367-0002042	ALIGNMENT SHEET	
72	PNG-C-367-0002043	AUGNMENT SHEET	
23	PNG-C-367-0002044	ALIGNMENT SHEET	
24	PNG-C-387-0002045	ALIGNMENT SHEET	
25	PNG-C-367-0002046	ALIGNMENT SHEET	
26	PNG-C-367-0002047	ALIGNMENT SHEET	
27	PNG-C-367-0002048	ALIGNMENT SHEET	
28	PNG-C-367-0002049	ALIGNMENT SHEET	
29	PNG-C-367-0002050	ALIGNMENT SHEET	
30	PNG-C-367-0002051	ALIGNMENT SHEET	
31	PNG-C-367-0002052	ALIGNMENT SHEET	
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33	PNG-C-367-0002054	ALIGNMENT SHEET	
34	PNG-C-367-0002055	AUGNMENT SHEET	_
35	PNG-C-367-0002056	ALIGNMENT SHEET	
36	PNG-C-387-0002057	AUGNMENT SHEET	
37	PNG-C-387-0002058	ALIGNMENT SHEET	
38	PNG-C-367-0002059	ALIGNMENT SHEET	
39	PNG-C-367-0002060	ALIGNMENT SHEET	
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41	PNG-C-367-0002062	ALIGNMENT SHEET	
42	PNG-C-367-0002063	AUGNMENT SHEET	_
43	PNG-C-367-0002064	AUGNMENT SHEET	
44	PNG-C-367-0002065	ALIGNMENT SHEET	_
45	PNG-C-367-0002066	ALIGNMENT SHEET	_
46	PNG-C-367-0002067	ALIGNMENT SHEET	_
47	PNG-C-367-0002068	ALIGNMENT SHEET	-
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49	PNG-C-367-0002070	ALIGNMENT SHEET	
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64	PNG-C-367-0002085	ALIGNMENT SHEET	C
65	PNG-C-367-0002086	AUGNMENT SHEET	C
66	PNG-C-367-0002101	CROSSING DETAIL 01	Ä
67	PNG-C-367-0002102	CROSSING DETAIL 02	Ä
68	PNG-C-367-0002103	CROSSING DETAIL 03	Ä
69	PNG-C-367-0002104	CROSSING DETAIL 04	Ä
70	PNG-C-367-0002105	CROSSING DETAIL 05	Â
71	PNG-C-367-0002105	CROSSING DETAIL 06	Â
72	PNG-C-367-0002107	CROSSING DETAIL 07	Â
73	PNG-C-367-0002107	CROSSING DETAIL 07	Â
74	PNG-C-367-0002109	CROSSING DETAIL 09	Â
75	PNG-C-367-0002110	CROSSING DETAIL 10	A
76	PNG-C-367-0002111	CROSSING DETAIL 11	A
77	PNG-C-367-0002112	CROSSING DETAIL 12	A
78	PNG-C-367-0002113	CROSSING DETAIL 13	A
79	PNG-C-367-0002114	CROSSING DETAIL 14	A
80	PNG-C-367-0002115	CROSSING DETAIL 15	A
81	PNG-C-367-0002200	APPLE ROAD HOD ALIGNMENT SHEET	A
82	PNG-B-367-0002001	GEOTECH BORE LOG 1	A
83	PNG-B-367-0002002	GEOTECH BORE LOG 2	A
84	PNG-C-367-0002500	EROSION SEDIMENT CONTROL DETAILS 1	В
85	PNG-C-367-0002501	EROSION SEDIMENT CONTROL DETAILS 2	В
86	PNG-C-367-0002502	EROSION SEDIMENT CONTROL DETAILS 3	В
87	PNG-C-367-0002503	EROSION SEDIMENT CONTROL DETAILS 4	В
88	PNG-C-367-0002504	EROSION SEDIMENT CONTROL DETAILS 5	В
89	PNG-C-367-0002505	EROSION SEDIMENT CONTROL DETAILS 6	В
90	PNG-C-367-0002506	EROSION SEDIMENT CONTROL DETAILS 7	В
91	PNG-C-XXX-0001XX1	BETHEL LAUNCHER STATION SITE PLAN	В
92	PNG-C-XXX-0002XX2	MLV-201 STATION SITE PLAN - ALT ROUTE	В
93	PNG-C-XXX-0003XX2	MLV-301 STATION SITE PLAN - ALT ROUTE	В
94	PNG-C-XXX-0005XX2	BATAVIA DELIVERY STATION SITE PLAN - ALT ROUTE	В
95	PNG-C-XXX-0005XX3	BATAVIA DELIVERY STATION ACCESS ROAD PLAN - ALT ROUTE	A

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BY CHE APPO DESCRIPTION
SFS JAMP CINS AREA CODE
SFS JAMP CINS PROJECT NUMBER AW1982
SFS JAMP CINS PROJECT NUMBER AW1982
DIRAWING BY
SFS STATION ID
CHECKER INTIALS JAMP 0. DATE REVISION(S) DESCRIPTION
11-05-2020 ISSUED FOR 30% REVIEW FEGICINAL PROPERTY. 12 18 2020 REVISED 30% DESIGN 02-19-2021 60% DESIGN FOR OPSB MGR TECH REC & STD PRINCIPAL ENGINEER PROFESSONAL ENGARORISTAM





C367 PIPELINE COVER SHEET CLERMONT COUNTY, OH KELLOGG, OH

SHEET(S) 1 OF 5 DWG SCALE DWG DATE 11/02/2020 SUPERSEDED

PNG -G-367-0002000 C

COMPLETED O	N REVIEW OF		SION ENGINEERING TING WHEN DELIVERED TO		ST CONN. PER	STD. 7.7.1		PERMIT(S) REC	QUIRED		PRESSURE TEST			EST WATER DISCHARGE REQUIRMENTS	COUNTY OF	ITEM NO.	SHEET N
	CONSTRUCTION JOB	APPR BY	THE WHEN DELIVERED IS	NO. INSTA				1.8		STRENGTH TESTING B	ABOVE 60 PSIG REQUIR EFORE PLACING INTO	REGU	ATORY COMPLI	R ALL DISCHARGE, CONTACT GAS OPERATION ANCE TO ARRANGE FOR DISCHARGE PERMIT, SAMPLING	-		
PONSOR	DATE	COATING TYPE	GOOD FAIR F	NO. TEST	ED OK					SERVICE, PRESSURE I SHOULD BE FORWARD	HARTS AND FORMS ED TO GAS ENGINEERIN	NG. CONT.	ACT LOCAL POTY	ED FÖR ALL DISCHARGES TO SURFACE WATERS. W FOR OFFSITE DISCHARGE REQUIREMENTS AND LOCAL.			
ELD CHANGE REC	QUEST RED. YES NO		INSULATION CHECKED	A LO II HOLD	ATOR) EPARATIONS II	NSTALLED 🗍				TEST PER PROCEDUR	FOC-PR-2040	WATE	R DISTRICT, HYD DARD 10.3.	ROSTATIC TEST WATER DISCHARGE SHALL BE PER GAS			
		VISUAL JEEP		CONTINUI	TY OF COUPLIN						T PRESSURE RANGE:						
RANSMISSION DES DOUMENT REQUIR		TYPE PATCH MATER	IAL	CHECKED CASING C	HECKED FOR S	_				MIN 1500 HOURS 8	SIG TO MAX 1600						
SYSTEMS OPER	RATION SUPERVISOR	SUPER	VISOR BLOCK	T	incommer or o			PROJECT CON	TACTS	SIGNATURE	MEDIUM_WATER	<u> </u>					
	IUMBERS REVIEWED	SUPERVISOR OR CONTRACTOR								2.385.705.					-		
REVIEWED BY		RECORDED BY					CONSTRUCT				MAOP VERIFIC			HYDROSTATIC TEST PROJECT CONTACTS			
DATE		DATE	DATE PLACED				(W) 513-287				TO BE FILLED IN BY M	AOP ENGINEER		CONSTRUCTION MANAGERNAME (C) XXX-XXX-XXXX			
VALVES T ABANDONE	D AND REMOVED	STARTED	IN SERVICE				(C) 513-310-			SIZE	WALL	GRADE	% SYMS	CONTRACTOR CONSTRUCTION MANAGEMENT			
		COMPLETED	PERMIT NO				ENGINEERIN SPONSOR:	4G		12*	THICKNESS 0.375°	X52	17.5%	SUPERVISORNAME (C) XXX-XXXX-XXXX			
#	_ #	TRACEABILITY SERVICES TESTS	OF PLASTIC MAIN AND D UPON COMPLEATION				BRAD S	EITER	KEVIN KUISTI	- 12	0.010	7504	11.00	PROJECT MANAGER BRAD SEITER (C) 859-466-6690			
		_					(W) 513-2	87-4415	W) 513-287-4407			-	-	CORROSION ENGINEERNAME (C) XXX-XXX-XXXX			
#	#	COMPLETION CONTRACTOR					(C) 859-4	66-6690	(C) 614-406-4686					CONSTRUCTION & MAINTENANCE (C&M) MANAGERNAME (C) XXX-XXX-XXXX			
#	#												1	Constitution — State Polymer And Constitution			
		VERIFICATION					LED ON JOB										
	-	INSPECTOR		SIZE	KIND	WALL THICKNESS	EST. PIPE LENGTH	ACTUAL PIPE LENGTI	ACTUAL FITTING 8 VALVE LENGTH		ASS 4 1000 PSIG. OP						
	WOII	PROJECT	ACTIVITY	12*	ERW	0.375*	75,151 FT				G OF VALVE, FLANGE O						
BANDONMENT									6	DESIGN MAOP OF THE	AT ALL MATERIAL INSTA LINE, AND THAT THE M	LLED IS RATED HIGHER IATERIAL WAS INSTALL	THAN THE ED AS DESIGNED	x			
ENEW SERVICE M									2	UNLESS NOTED ON M	TERIAL LIST						
ENEW SERVICE C ELOCATE METER		1:			-	TOTAL	75,151 FT			MAOP ENGINEER SIGN	ATURE	D	ATE.	4			
		IG TO THE OFFICE OF PIPE ON 192 243 PARAGRAPH F)		NS					-	1				5.			
	100	TO BE FILLED OUT BY DE	SIGN ENGINEER														
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IPE SIZE IPE WALL THK IPE GRADE VIPE GR	0.375" X52 17.5% 100% 100% 100% 100% 100% 100% 100%	ACED WELDS SHOULD EQU DUKE ENERGY & PIEDMONT	NATURAL GAS DRAWINGS ARE O	DNFDENTIAL 'DRAWM'S STEEL STEEL STEEL STEEL	MP CNS AREA	YTHROUGH THE L DESCRIPTION GODE BUNT NUMBER ECT NUMBER JING BY	ATEST REVISED D	DEVITM. "ALL RICHARD AND AND AND AND AND AND AND AND AND AN	ITS RESERVED "DO NOT HERE IS NO RISK OF IN APPROVALS	SCALE THIS DRAWING TUSE DI APPROPRIATE DISCLOSURE, A TECHNICAL TECHNICAL THE CASTON THE CASTON THE CASTON THE CASTON	L PREVIOUS PAPER COPIES (RDANCE WITH RECORDS & INFO MANAGEMENT (RIM) C367 PIPELINE BIGN OFF SHEET MONT COUNTY, OHIO	DWG DATE 11/02/2	F 5 DWG SCAI 201 SUPERSEDED DOWNWORD NAMED -367-000	I-T-

GENERAL NOTES:

- INSTALLER SHALL FURNISH ALL MATERIALS NOT PROVIDED BY THE COMPANY (UNLESS OTHERWISE NOTED ON DRAWINGS OR SPECIFICATIONS). INCLUDING EQUIPMENT, TRANSPORTATION, SERVICES, AND PERFORM ALL NECESSARY WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREINAFTER.
- IT SHALL BE THE RESPONSIBILITY OF THE INSTALLER TO VERIFY ALL DIMENSIONS GIVEN ON THE DRAWINGS. ANY ITEM IN QUESTION SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER IN WRITING VIA REI PROCESS PRIOR TO PROCEEDING WITH THE WORK.
- INSTALLER SHALL BE RESPONSIBLE FOR PROTECTION OF ALL SURROUNDING AREAS. CONTRACTOR SHALL NOT LINNECESSARILY DISTURB EXISTING CONDITIONS WITHIN CONSTRUCTION LIMITS, DISCRETION SHALL BE PER COMPANY REPRESENTATIVE.
- PROPOSED ELEVATIONS AND DIMENSIONS INDICATE TOP OF PIPE, UNLESS OTHERWISE NOTED, UNLESS SPECIFICALLY NOTED, DEPTHS OF EXISTING FACILITIES ARE ESTIMATED ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING DEPTH AND LOCATION OF ALL FACILITIES PRIOR TO COMMENCING WORK
- ALL BELOW GROUND WELDS SHALL BE COATED PER APPLICABLE COATING SPECIFICATION WITH DENSO 7200 PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS OR AS APPROVED OTHERWISE, SURFACE PREPARATION AND BLASTING SHALL ADHERE TO PERTINENT DESIGN AND CONSTRUCTION STANDARDS AND COATING MATERIAL SPECIFICATIONS.
- PIPE BACKFILL SHALL BE IN ACCORDANCE WITH PERTINENT DUKE BACKFILL SPECIFICATIONS.
- PRESSURE TESTING SHALL MEET THE REQUIREMENTS OF DUKE'S PRESSURE TESTING STANDARD, PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS,
- ALL DISTANCES SHOWN ARE GRID DISTANCES BASED ON OHIO STATE PLANE COORDINATE SOUTH ZONE (3402) NAD 83.
- ANY CHANGES TO THE DESIGN SHOWN ON DRAWINGS SHALL BE APPROVED BY COMPANY REPRESENTATIVE IN WRITING VIA RFI PROCESS.

CONSTRUCTION NOTES:

- EXISTING OVERHEAD AND BELOWGROUND FACILITIES MAY BE IN THE WORK AREA VICINITY, INSTALLER IS RESPONSIBLE FOR HAVING SUCH FACILITIES LOCATED AND IS RESPONSIBLE FOR MAINTENANCE AND PRESERVATION OF THESE FACILITIES.
- PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS. INSTALLER IS REQUIRED. TO CALL 811 FOR UTILITY LOCATES A MINIMUM OF 72 HOURS PRIOR TO COMMENCEMENT OF WORK, NO EXTRA COMPENSATION WILL BE ALLOWED FOR DELAYS FROM ANY WORK PROVIDED BY OTHER UTILITIES.
- IF EXISTING UTILITIES OF ANY TYPE ARE ENCOUNTERED IN THE FIELD AND DEEMED TO BE IN CONFLICT WITH INSTALLATION OF FACILITIES, INSTALLER SHALL NOTIFY THE PROJECT MANAGER IN WRITING VIA RFI PROCESS IMMEDIATELY SO THE CONFLICT MAY BE RESOLVED.
- WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, INSTALLER SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR PRIVATE DRAINS OR SEWERS, RESTORATION OF THESE FACILITIES IS TO BE PERFORMED ONCE. CONSTRUCTION IS COMPLETE AND ARE CONSIDERED INCIDENTAL COSTS OF THE PROJECT.
- ALL DRAWING MEASUREMENTS ARE TO BE TAKEN FROM EXISTING GRADE. FINAL GRADE SHALL BE MATCHED TO SURROUNDING GRADE AS PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS.
- INSTALLER IS TO REMAIN WITHIN CONSTRUCTION WORKING LIMITS, ACCESS TO AREAS OUTSIDE WORKING LIMITS MUST BE COORDINATED WITH THE OWNER OR DUKE ENERGY PROJECT MANAGER,
- ALL EXCESS EXCAVATION, CONSTRUCTION DEMOLITION DEBRIS AND UNSUITABLE MATERIALS THAT DO NOT CONTAIN ASBESTOS OR OTHER POTENTIAL HAZARDOUS MATERIALS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED.
- STANDARD SPECIFICATIONS REFERENCED ON THIS SHEET AND CONSTRUCTION PLANS ARE CONSIDERED AS PART OF THE CONTRACT DOCUMENTS. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED. BUT ARE CONSIDERED TO BE A PART OF THIS CONTRACT.
- BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AND APPROVED BY DUKE OR COMPANY REPRESENTATIVE, FINAL PAYMENT SHALL BE MADE AFTER ALL OF THE INSTALLER'S WORK HAS BEEN ACCEPTED AND APPROVED AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- DURING CONSTRUCTION, ALL LOOSE MATERIAL THAT ARE DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC, SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, SHALL BE REMOVED AT THE END OF EACH
- ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE EXTENDED TO OUTLET INTO AN EXISTING DRAINAGE WAY, A RECORD OF ALL FIELD TILE FOR ONSITE DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE INSTALLER AND TURNED OVER TO THE PROJECT MANAGER UPON COMPLETION OF THE PROJECT.
- INSTALLER IS REQUIRED TO MAINTAIN A SET OF ISSUED FOR CONSTRUCTION DRAWINGS AND ALL PERMITS AT THE JOB SITE. ANY MODIFICATIONS OR ALTERATIONS TO THE PLANS OR SPECIFICATIONS SHALL BE APPROVED BY THE
- INSTALLER IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS/HER WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, INSTALLER IS. RESPONSIBLE FOR THE CONSTRUCTION METHODS AND TECHNIQUES, SEQUENCES, TIME OF PERFORMANCE, AND ALL SAFETY PRECAUTIONS.

- 14. MINIMUM DEPTH OF BURIAL SHALL BE PER PERTINENT DESIGN AND CONSTRUCTION
- 15. ALL PIPELINES BEING CROSSED ARE TO BE PROTECTED WITH A MINIMUM OF (3) 4 FEET X 18 FEET WOODEN MATS.
- 16. CONTRACTOR TO PROTECT SIDEWALKS AND BIKE PATHS FROM VEHICLE TRAFFIC UTILIZING STEEL PLATING. TIMBER MATTING OR SIMILAR. EXISTING SIDEWALK. UMINOUS SHOULDER, CURB/GUTTER AND/OR ROADWAY PAVEMENT DISTURBED OR DAMAGED DUE TO THE PERMITTED WORK SHALL BE REPLACED IN KIND UP TO THE LIMITS AS DETERMINED AND DIRECTED BY THE CITY REPRESENTATIVE IN WHICH DAMAGE WAS DONE.
- PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS. FOR OPEN DITCH EXCAVATION, A MINIMUM OF TWO FEET OF SEPARATION SHALL BE MAINTAINED BETWEEN ALL CROSSING STRUCTURES, SEPARATION BETWEEN CROSSING STRUCTURES AND PIPELINES THAT ARE INSTALLED VIA DIRECTIONAL DRILLING METHODS IS AT THE DISCRETION OF ENGINEERING. 18. DURING BACKFILLING, A SIX INCH CROWN SHALL BE PLACED ON ALL DISTURBED
- REAS, COMPACTION REQUIREMENTS SHALL BE PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS.
- 19. BOLTS FOR FLANGES TO BE TORQUED PER PERTINENT DESIGN AND CONSTRUCTION
- 20. MAINLINE GIRTH WELDS SHALL BE 100% X-RAYED PER PERTINENT WELDING PROCEDURES, ALL OTHER WELDS SHALL BE NON DESTRUCTIVELY TESTED PER PERTINENT WELDING PROCEDURES.
- CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL) SHALL BE USED UNDER ROADS AND ADJACENT TO ROADS AND SHALL CONFORM TO FOC-ST-3000 BACKFILL AND RESTORATION, OR AS OTHERWISE DIRECTED BY COMPANY.
- 22. CONTRACTOR MAY PROPOSE CONVENIENCE BORES, ANY CHANGES IN INSTALLATION METHOD FROM THAT SHOWN ON THE DRAWINGS SHALL BE APPROVED IN ADVANCE

SURVEY INVESTIGATION NOTES:

BEARINGS AND COORDINATES ARE RELATIVE TO NAD83 OHIO STATE PLANE, SOUTH ZONE (3402), US. FOOT. VERTICAL DATUM IS NAVD88.

GEOTECHNICAL DATA

THE GEOTECHNICAL INFORMATION PROVIDED IN THE DRAWINGS IS A GENERAL SUMMARY, REFER TO THE APPLICABLE GEOTECHNICAL REPORT IN THE CONTRACT DOCUMENTS FOR MORE DETAILED INFORMATION.

CATHODIC PROTECTION & AC MITIGATION NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NON-STOCK CP AC MATERIALS AND ALL MISCELLANEOUS PARTS TO COMPLETE PROJECT PER CONTRACT DRAWINGS, CONTRACT SPECIFICATIONS, ELECTRICAL CODES, STATE AND LOCAL CODES AND STANDARDS, AND LOCAL ELECTRICAL DISTRIBUTION COMPANY REQUIREMENTS. CONTRACTOR SHALL ALSO INSTALL ALL OWNER PROVIDED CP AND AC MATERIALS AND FOLIPMENT, PARTS INCLUDE BUT ARE NOT LIMITED TO, WIRING AND MOUNTING MATERIALS, METER SOCKET, DISCONNECT EQUIPMENT, ENCLOSURES, TRANSIENT VOLTAGE SURGE SUPPRESSORS, AC MAIN BUSS TERMINATION, CIRCUIT BREAKERS, AND OTHER ELECTRICAL EQUIPMENT REQUIRED, ACTUAL LENGTH OF WIRING IS DEPENDENT ON DISTANCE FROM INSTALLATION.

DESIGN NOTES:

- FIELD BENDING (COLD BENDING) SHALL BE PERFORMED IN ACCORDANCE WITH FOC-ST-2050 BENDING STEEL PIPE. FOR 12" PIPE, FIELD BEND SHALL BE LIMITED TO 29 DEGREES OR LESS PER 40' STICK OF PIPE, CUT SEGMENTABLE FITTINGS REQUIRED FOR ALL ANGLES ABOVE 29 DEGREES.
- 2. MINIMUM ROPING RADIUS FOR 12" PIPE: 800' BASED ON 3-JOINT RADIUS
- 3. UNLESS NOTED OTHERWISE MINIMUM DESIGN CLEARANCE BETWEEN PIPELINE AND FOREIGN STRUCTURES IS 2' (24"), FIELD ADJUSTMENT MAY BE REQUIRED TO LESS THAN DESIGNED CLEARANCE, BUT IN NO CIRCUMSTANCES WILL CLEARANCE BE LESS THAN 1'
- 4. CONTRACTOR SHALL ADHERE TO DUKE OHIO HDD GUIDELINES AS APPLIES TO HDD DRILLING WASTES AND PROTECTION OF WATER RESOURCES, SEE TRENCHLESS GUIDANCE DOCUMENTS, DUKE ENERGY NATURAL GAS BUSINESS UNIT, DATED APRIL

RESTORATION:

- RESTORATION SHALL BE CONTROLLED BY APPLICABLE PERMITS AND AS DIRECTED BY COMPANY'S INSPECTOR.
- RESTORATION LIMITS AND DETAILS PROVIDED IN THE DRAWINGS SHALL BE SUBJECT TO FIELD MODIFICATIONS TO MEET VARYING CONDITIONS,
- 3. ADDITIONAL RESTORATION REQUIREMENTS AND QUALIFICATIONS SHALL BE AS DESCRIBED IN THE BID DOCUMENTS.
- MATERIAL REQUIREMENTS SHALL MEET ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, WHERE CONFLICT EXISTS BETWEEN THESE DRAWINGS, ODOT SPECIFICATIONS, LOCAL REQUIREMENTS, OR OTHER BID DOCUMENTS REQUIREMENTS, CLARIFICATION SHALL BE SOUGHT IN ADVANCE FROM THE PROJECT MANAGER IN

ENVIRONMENTAL NOTES

- 1. INSTALLER IS TO CONSTRUCT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AT THE COMMENCEMENT OF THE PROJECT, PROVIDE MAINTENANCE AND ASSURE EFFECTIVENESS THROUGHOUT THE DURATION OF THE PROJECT.
- CARE SHALL BE TAKEN TO MINIMIZE DOWNSTREAM SILTATION, RAW BANKS MAY BE SEEDED AND MULCHED TO PREVENT EROSION.
- ALL SPOILS INCLUDING ORGANIC SOILS, VEGETATION AND DEBRIS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF IN SUCH A MANNER AS TO NOT ERODE INTO ANY BODY OF WATER OR WETLAND UNLESS APPROVED OTHERWISE BY DUKE ENVIRONMENTAL INSPECTOR.
- 4. EROSION AND SEDIMENT CONTROLS SHALL BE PLACED WHERE NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE WORK AREA
- INLET FILTERS ARE REQUIRED AT ALL SEWER INLETS, GRATES AND MANHOLES FOR SEDIMENT CONTROL
- TOPSOIL STOCKPILES SHALL BE LOCATED TO AVOID EROSION OF SAID STOCKPILE ONTO OFFSITE AREAS.
- ALL ENVIRONMENTAL MEASURES SHALL BE PER PERTINENT DESIGN AND CONSTRUCTION STANDARDS,
- 8 NO ASPHALT SILIRRY OR CUTTING MAY ENTER STORM DRAINS, MATERIALS MUST BE ACUUMED OR OTHERWISE REMOVED FROM THE SITE AND PROPERLY DISPO
- DUKE ENERGY SHALL CONTACT OPSB STAFF, ODNR, AND USFWS WITHIN 24 HOURS IF STATE OR FEDERAL THREATENED OR ENDANGERED SPECIES ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES. CONSTRUCTION ACTIVITIES THAT COULD ADVERSELY IMPACT THE IDENTIFIED PLANTS OR ANIMALS SHALL BE IMMEDIATELY HALTED UNTIL AN APPROPRIATE COURSE OF ACTION HAS BEEN AGREED UPON BY DUKE ENERGY AND THE APPROPRIATE REGULATORY AGENCIES.
- 10. THE CONSTRUCTION CONTRACTOR SHALL COMPLY WITH FUGITIVE DUST RULES BY THE USE OF WATER SPRAY OR OTHER APPROPRIATE DUST SUPPRESSAN MEASURES WHENEVER NECESSARY.
- THE CONSTRUCTION CONTRACTOR SHALL MOT CROSS STREAMS BY EXPRING EXP CONSTRUCTION ACCESS AND SHALL INSTEAD EMPLOY TIMBER MATTING OR OTHER METHODS THAT AVOID OR MINIMIZE STREAM BED DISTURBANCES.
- 12. THE CONSTRUCTION CONTRACTOR SHALL REMOVE ALL TEMPORARY GRAVEL AND OTHER CONSTRUCTION STAGING AREA AND ACCESS ROAD MATERIALS AFTER COMPLETION OF CONSTRUCTION ACTIVITIES, AS WEATHER PERMITS, UNLESS OTHERWISE DIRECTED BY THE LANDOWNER OR DUKE ENERGY, IMPACTED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS IN COMPLIANCE WITH THE OHIO EPA GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS OBTAINED FOR THE PROJECT AND THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CREATED FOR THE PROJECT.
- 13. CONTRACTOR SHALL TEMPORARILY STABILIZE ANY DISTURBED AREAS LEFT UNATTENDED FOR 14 DAYS OR MORE, OR AS OTHERWISE DIRECTED IN THE PROJECT
- 14. CONTRACTOR SHALL MAINTAIN EROSION CONTROL MEASURES UNTIL UPSLOPE STABILIZATION HAS DEVELOPED AS DIRECTED IN THE PROJECT SWPPP.
- 15. ALL SEDIMENT RELEASES BEYOND THE SITE PERIMETER CONTROLS AND SPILLS REGARDI ESS OF AMOUNT OR LOCATION ARE TO BE IMMEDIATELY REPORTED TO DUKE ENERGY ENVIRONMENTAL FIELD PROFESSIONAL. IF THE DUKE ENERGY ENVIRONMENTAL FIELD PROFESSIONAL CANNOT BE REACHED. THE DUKE ENERGY SPILL HOTLINE IS TO BE CALLED AT 1-800-527-3853.

DEWATERING:

- ALL DEWATERING SHALL BE PERFORMED IN ACCORDANCE WITH THE SWPPP.
- 2. CONTROL GRACING AROUND EXCAVATIONS TO PREVENT SURFACE WATER FROM FLOWING INTO EXCAVATION AREAS.
- DRAIN OR PUMF AS REQUIRED TO MAINTAIN, INCLUDING DAYS NOT NORMALLY WORKED, ALL EXCAVATIONS FREE OF WATER OR MILD FROM ANY SOURCE, AND DISCHARGE TO APPROVED DRAINS OR CHANNELS, COMMENCE WHEN WATER FIRST APPEARS AND CONTINUE AS REQUIRED TO KEEP EXCAVATION FREE OF STANDING WATER DURING ENTIRE TIME EXCAVATION IS OPEN.
- 4. USE PUMPS OF ADEQUATE CAPACITY TO ENSURE RAPID DRAINAGE OF AREA. AND CONSTRUCTION AND USE DRAINAGE CHANNELS TO SUBDRAINS WITH SUMPS AS REQUIRED BY QUANTITY OF INFLOW.
- 5. WHEN WATER IS FOUND IN THE EXCAVATION DUE TO CONTRACTOR NEGLIGENCE. REMOVE UNSUITABLE EXCESSIVELY WET SUBGRADE MATERIALS AND REPLACE WITH APPROVED COMPACTED EMBANKMENT MATERIAL AS DIRECTED BY OWNER AND AT NO ADDITIONAL COST TO OWNER.
- RIVER/STREAM CROSSINGS EXIST AS INDICATED ALONG THIS PROJECT, REQUIRING EXCAVATION BELOW POTENTIAL STREAM OR RIVER PHREATIC LEVELS. DEWATERING METHODS SHALL INCORPORATE MEANS TO ACCOUNT FOR RISING OR VARYING WATER LEVELS ASSOCIATED WITH THESE RODIES OF WATER AND THEIR INTERCONNECTED WATERWAYS, WHETHER SURFACE OR SUBSURFACE, TO PREVENT THREATENING THE INTEGRITY OF THE EXCAVATION, EXISTING FACILITIES, AND WORK UNDER CONSTRUCTION.
- MAINTAIN AREADRAINAGE DURING CONSTRUCTION.
- 8. COMPLETE CHANNEL PROTECTION EXPEDITIOUSLY FOLLOWING EXCAVATION.

BURNS & MOTONNET PROPRIETARY & CONFIDENTIAL YALL RIGHTS RESERVED DO NOT SCALE THIS DRAWING USE DIMENSIONS ONLY NGINEERING COMPANY, INC DUKE ENERGY & PERMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWINGS IS CURRENT DILY THROUGH THE LATEST REVISED DATE "TO PISQUIRE THERE IS NO RISK OF INAPPROPRIATE DISCUSSIVE ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT IRRIN STATE LICENSE # COA, 0155 REVISION(S) DESCRIPTION DESCRIPTION SES JMP CNS AREA CODE ISSUED FOR 30% REVIEW REGIONAL JMP CNS ACCOUNT NUMBER AW1082 REVISED 30% DESIGN 02-19-2021 60% DESIGN FOR OPSB SFS JMP CNS PROJECT NUMBER AW1982 MGR TECH REC & STD SFS DRAWING BY PROFESSIONAL ENGAROH STAM CHECKER INITIALS

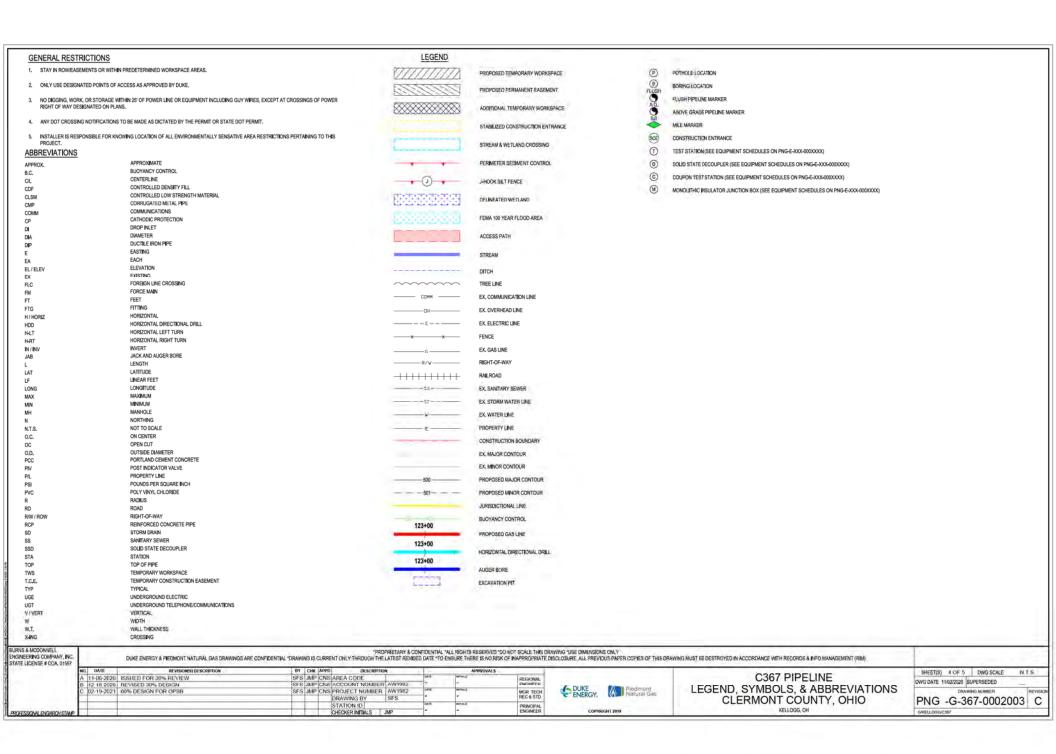


C367 PIPELINE **GENERAL NOTES SHEET 1** CLERMONT COUNTY, OHIO KELLOGG OH

DWG DATE 11/02/2020 SUPERSEDED PNG -G-367-0002002 C

N.T.S.

SHEET(S) 3 OF 5 DWG SCALE



						BILL OF MATERIAL	
GROUP	MARK	QTY (FT OR EA)	SIZE	LINE	ITEM NUMBER	DESCRIPTION	AS BUILT QTY
PIPE	d)	70,520	12"	C367 ALTERNATE ROUTE	1551302	PIPE, 12" NPS X 0.375 W.T., DBL RANDOM LG, BEVELED ENDS, ELECTRIC RESISTANCE WELD, FBE, STL, API 5L PSL-2, GR X52, NO JOINTERS	
FREE	2	3,920	12"	C367 ALTERNATE ROUTE	1551284	PIPE, 12" NPS X 0.375 W.T., DBL RANDOM LG, BEVELED ENDS, ELECTRIC RESISTANCE WELD, FBE/PC, STL, API 5L PSL-2, GR X52, NO JOINTERS	
SEGMENTABLE	10	25	12"	C367 ALTERNATE ROUTE	1551324	ELBOW, PIPE. 12" MPS X 0.375 W.T., BW, 90 DEG, 3D RADIUS, STL, MSS SP-75, GR Y52, FULLY SEGMENTABLE, PAINTED PREFERRED, BARE ACCEPTABLE., MACHINE BEVEL ENDS PER ASME BS18 APPENDIX I, FIG 1-4	
ELBOWS	11	17	12"	C367 ALTERNATE ROUTE	1551320	ELBOW PIPE. 12" MPS X 0.375 W.T., BW, 45 DEG, 3D RADIUS, STL, MSS SP.75, GR YSZ, FULLY SEGMENTABLE, PAINTED PREFERRED, BARE ACCEPTABLE., MACHINE BEVEL ENDS PER ASME B31.8 APPENDIX I, FIG.14	
	20	70	12"	C367 ALTERNATE ROUTE	1593272	COATING, ABRASION RESISTANT OVERCOAT, 10" X 30", CANUSA SCAR-GUARD, JOINT COATING	
SCARGUARD	21	42	12"	C367 ALTERNATE ROUTE	1598071	COATING, ABRASION RESISTANT OVERCOAT, 10" X 50" ROLL, CANUSA SCAR-GUARD	
	21	5	12"	C367 ALTERNATE ROUTE	1575278	TOOL, ARO, CANUSA SCAR-GUARD, PERFORATION TOOL	

BURNS & MCCONNELL ENGINEERING COMPANY, INC. STATE LICENSE # COA. 01557

MG DATE REVISIONS DESCRIPTION
A 11-06-2020 ISSUED FOR 30% REVIEW
B 12-10-2020 REVISED 30% DESIGN
C 02-19-2021 60% DESIGN FOR OPSB BY ON APPO DESCRIPTION
SES JAMP CINS AREA CODE
SES JAMP CINS ACCOUNT NUMBER AW1992
SES JAMP CINS PROJECT NUMBER AW1992
DEAWING BY SES
STATION ID
CHECKER INITIALS JAMP REGIONAL PACHAPER MGR TECH REC & STD PRINCIPAL ENGINEER PROFESSIONAL ENGARCH STAMP

DUKE Natural Gas

"PROPRIETARY & CONFIDENTIAL "ALL RIGHTS RESERVED "CO NOT SCALE THIS DRAWING "USE DIMENSIONS ONLY
DUKE ENERGY & PREMIONIT NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWING IS CURRENT ONLY THROUGH THE LATEST REDUSED DATE "TO ENSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE. ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM.)

C367 PIPELINE PIPELINE BILL OF MATERIAL CLERMONT COUNTY, OHIO

DWG DATE 11/02/2020 SUPERSEDED DRAWING NUMBER PNG -G-367-0002004 C

SHEET(S) 5 OF 5 DWG SCALE N.T.S.





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APPROVALS

APPROVALS

APPROVALS

APPROVALS

C367 PIPELINE

DUKE Piedmont Natural Gas

C367 PIPELINE ACCESS ROUTE OVERVIEW MAP CLERMONT COUNTY, OHIO SHEET(S) 1 OF X DWG SCALE NONE
DWG DATE 10/21/2020 SUPERSEDED
DRAWING NUMBER REV

REF. DWG(S) PNG-G-367-0002000

PNG -C-367-0002010 C



LAUNCHER STATION & PIPELINE ACCESS PLAN 1



PIPELINE ACCESS PLAN 2



PIPELINE ACCESS PLAN 3

BURNS & MCDONNELL ENGINEERING COMPANY, INC. STATE LICENSE # COA, 01557		DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE	CONFIDENTIAL "DRAWING						RAWING "USE DIMENSIONS ONLY DISCLOSURE, ALL PREVIOUS PAPER COPIES OF THIS DRAWING	MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM)
	NO. DATE	REVISION(S) DESCRIPTION	my or	K APPO DESCRIP	DOM	- 1	APPROVALS			
3	A 11-06-2020	ISSUED FOR 30% REVIEW	SFS JM	IP CNS AREA CODE	1	DWIT	office)	RECHONAL		C367 PIPELINE
8	B 12 18 2020	REVISED 30% DESIGN	SFS JA	IP CNS ACCOUNT NUMBE	SSOUNA R		-	INCHER	A NIVE Water Standard	
A.	C 02-19-2021	60% DESIGN FOR OPSB	SFS JM	IP CNS PROJECT NUMBER	R AW1982	DATE	INTERNAL PROPERTY.	MGR TECH	ENERGY. Piedmont Natural Gas	ACCESS ROUTE 1
4				DRAWING BY	SFS			RECASID	C ENERGY.	CLERMONT COUNTY, OHIO
9				STATION ID		DATE	METHALE	PRINCIPAL	and the second second	
PROFESSIONAL ENGARCH STAMP	1.0	7		CHECKER INITIALS	JMP	-	-	ENGINEER	COPYRIGHT 2020	KELLOGG, OH



SHEET(S) LOF X DWG SCALE AS-NOTED DWG DATE 10/23/2020 SUPERSEDED PNG -C-367-0002011 C

REF. DWG(S) PNG-G-367-0002000



BATAVIA DELIVERY STATION & PIPELINE ACCESS PLAN 4

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DUKE ENERGY & PEDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL TORAWING IS CURRENT ONLY THROUGH THE LATEST REVISED GATE "TO ENSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE, ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM) ENGINEERING COMPANY, INC. STATE LICENSE # COA. 01557 NO. DATE REVISION(S) DESCRIPTION

À 11-06-2020 ISSUED FOR 30% REVIEW

5 12-10-2021 REVISED 30% DEGICN

C 02-19-2021 00% DESIGN FOR OPSB BY OW MAPO BESCRIPTION

SFS JMP CNSIADEA CODE

SFS JMP CNSIADEAUNT NUMBER AW1982

SFS JMP CNS PROJECT NUMBER AW1982

DRAWING BY SFS

STATION ID

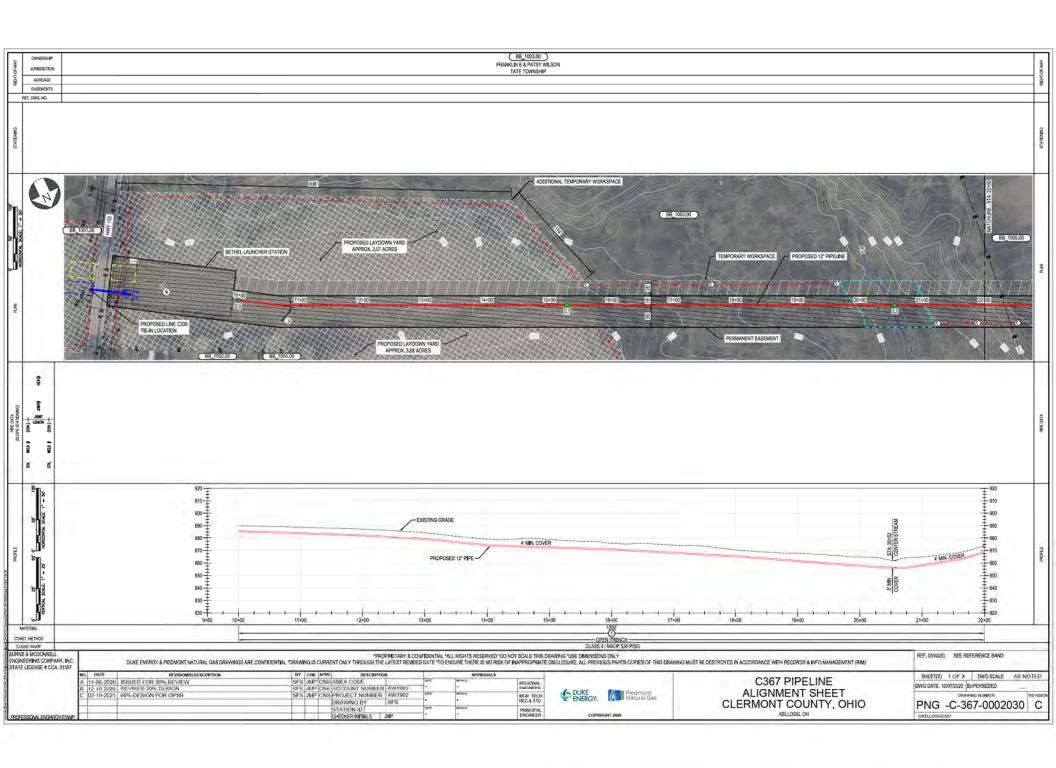
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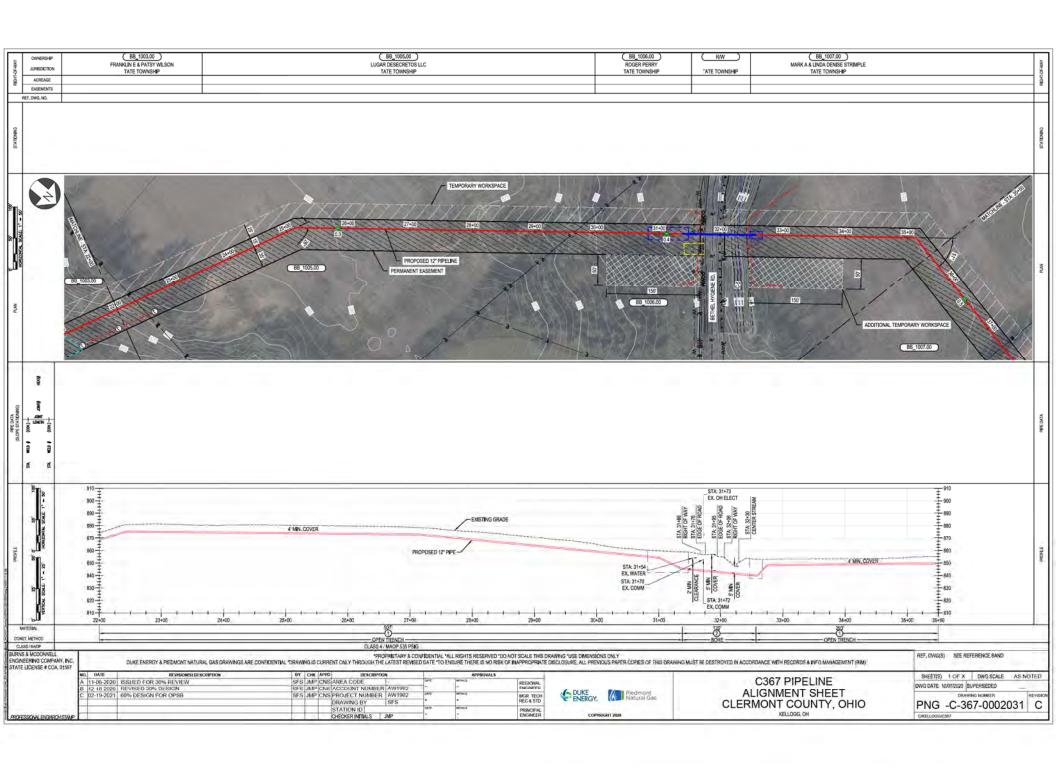


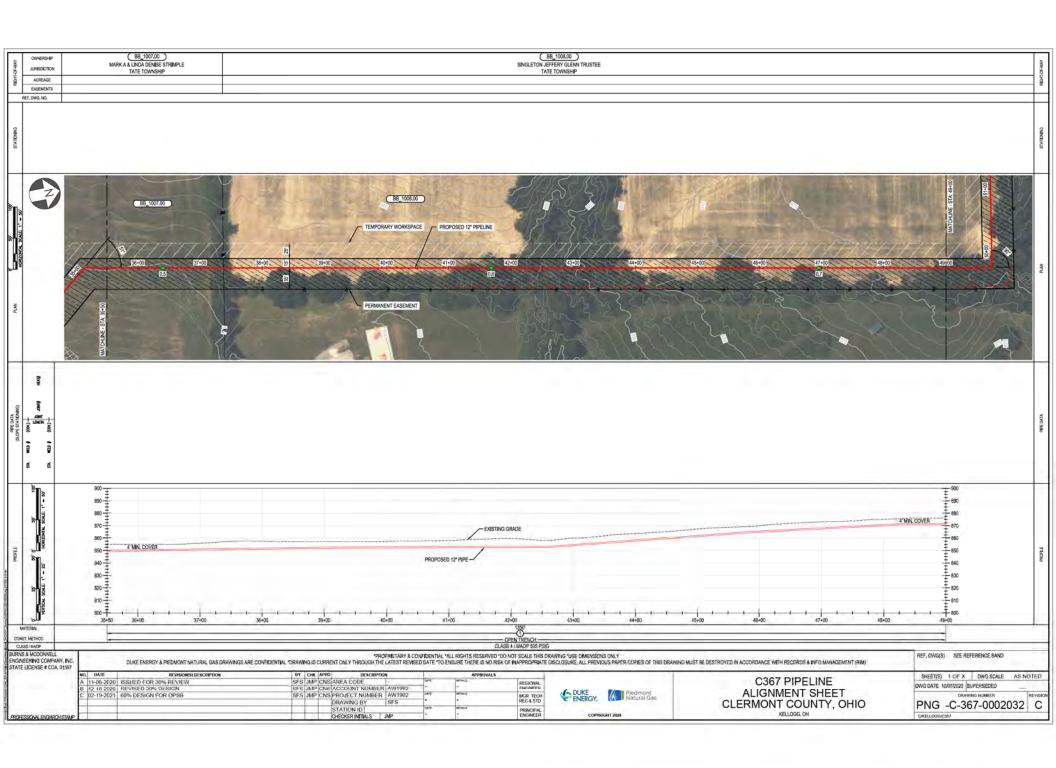
C367 PIPELINE ACCESS ROUTE 2 CLERMONT COUNTY, OHIO

SHEET(S) LOF X DWG SCALE AS-NOTED DWG DATE 10/23/2020 SUPERSEDED PNG -C-367-0002012 C

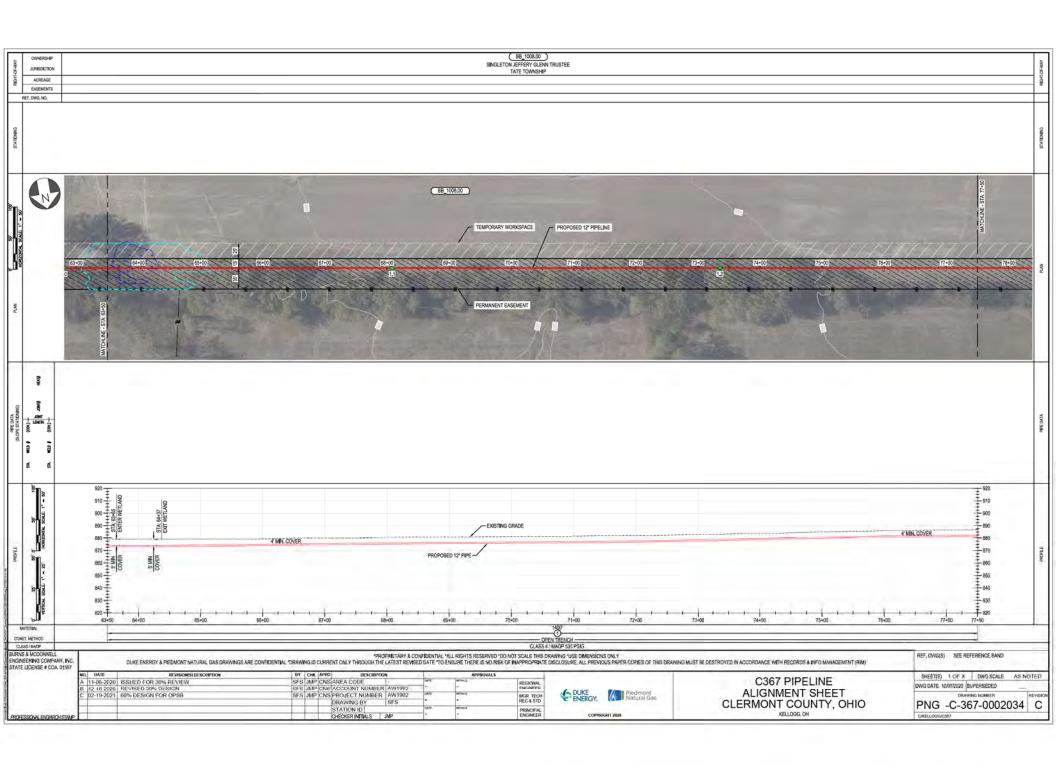
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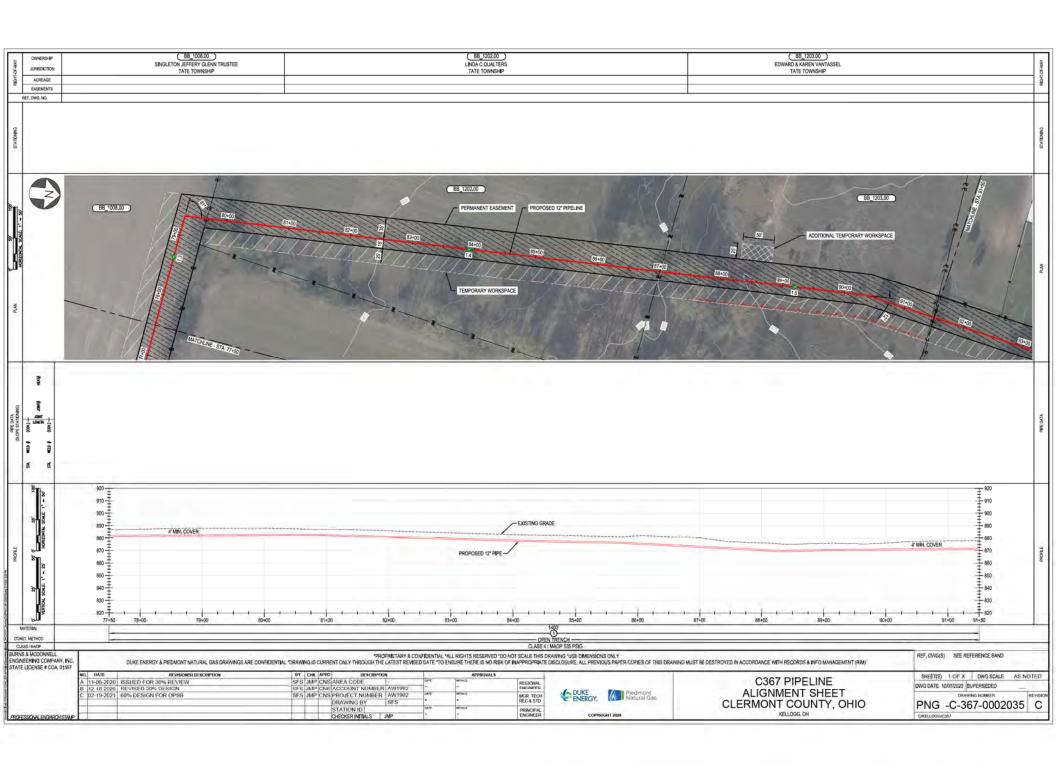


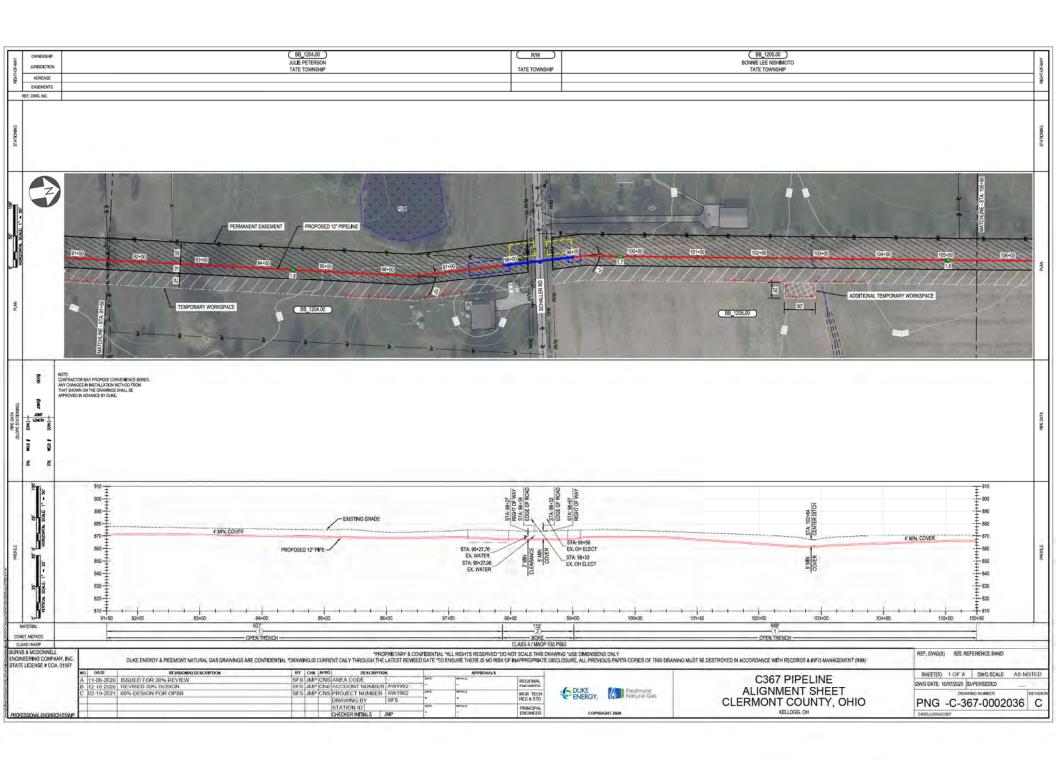


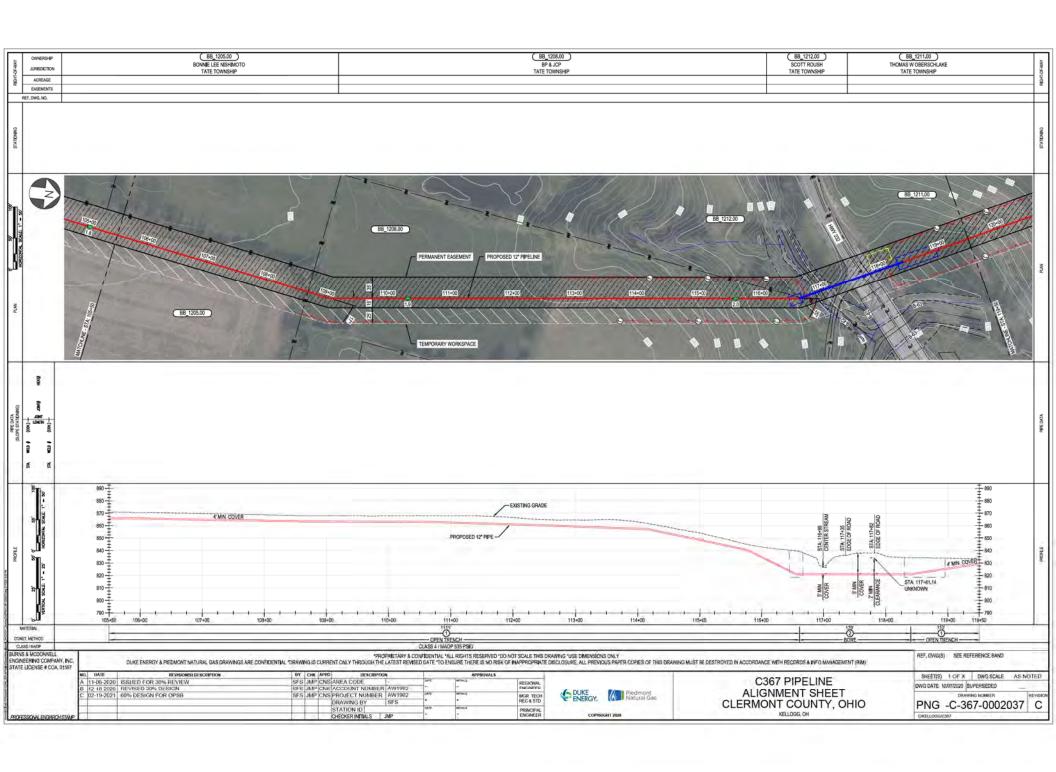


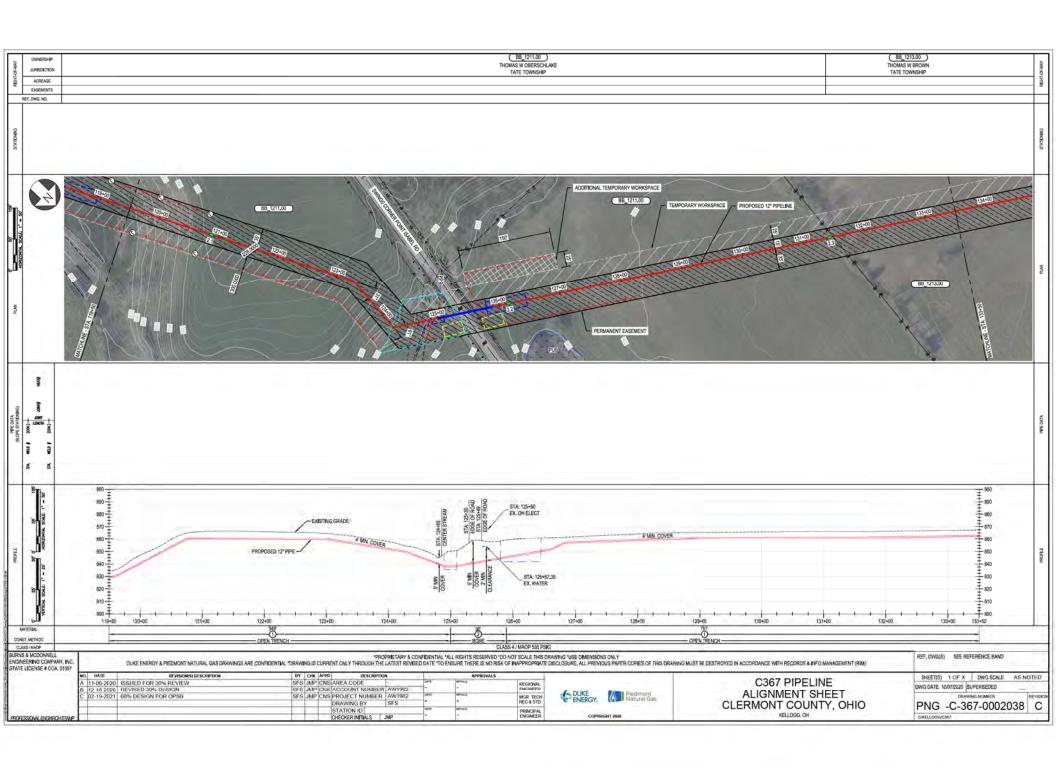




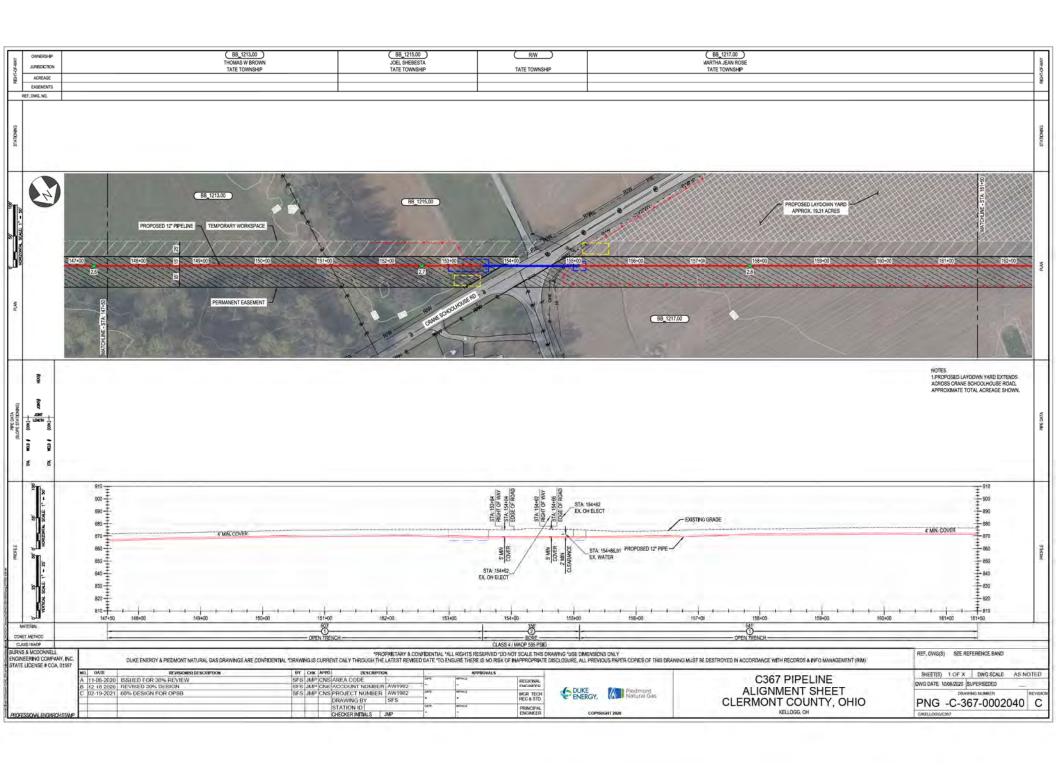


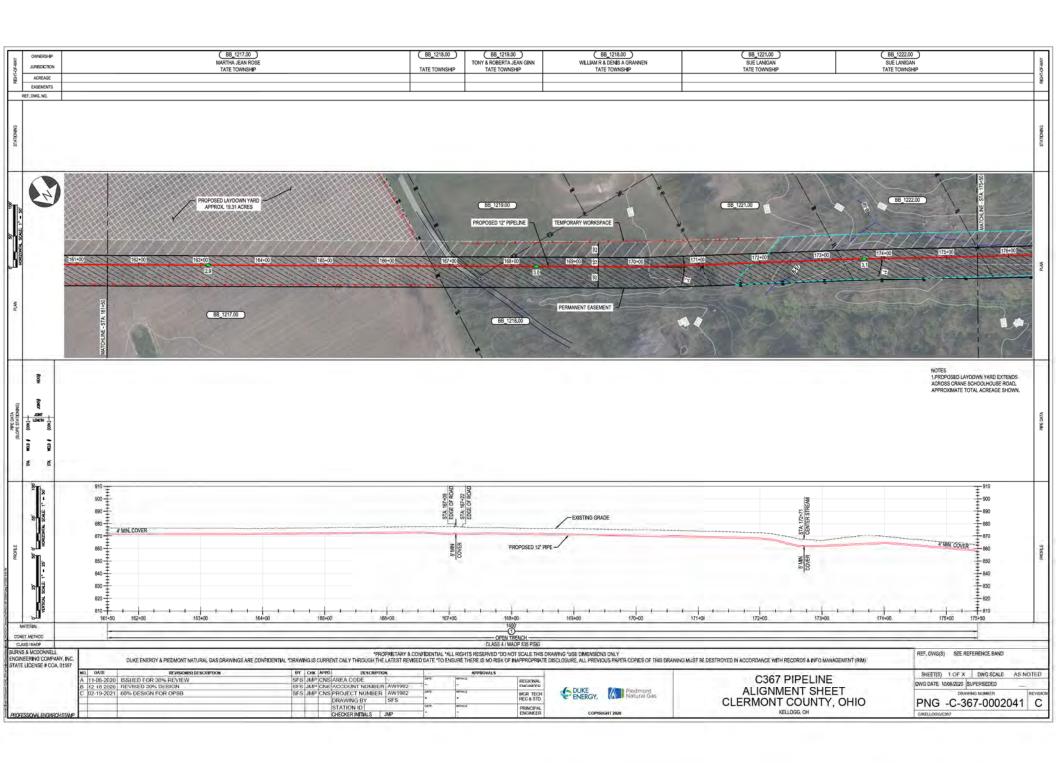


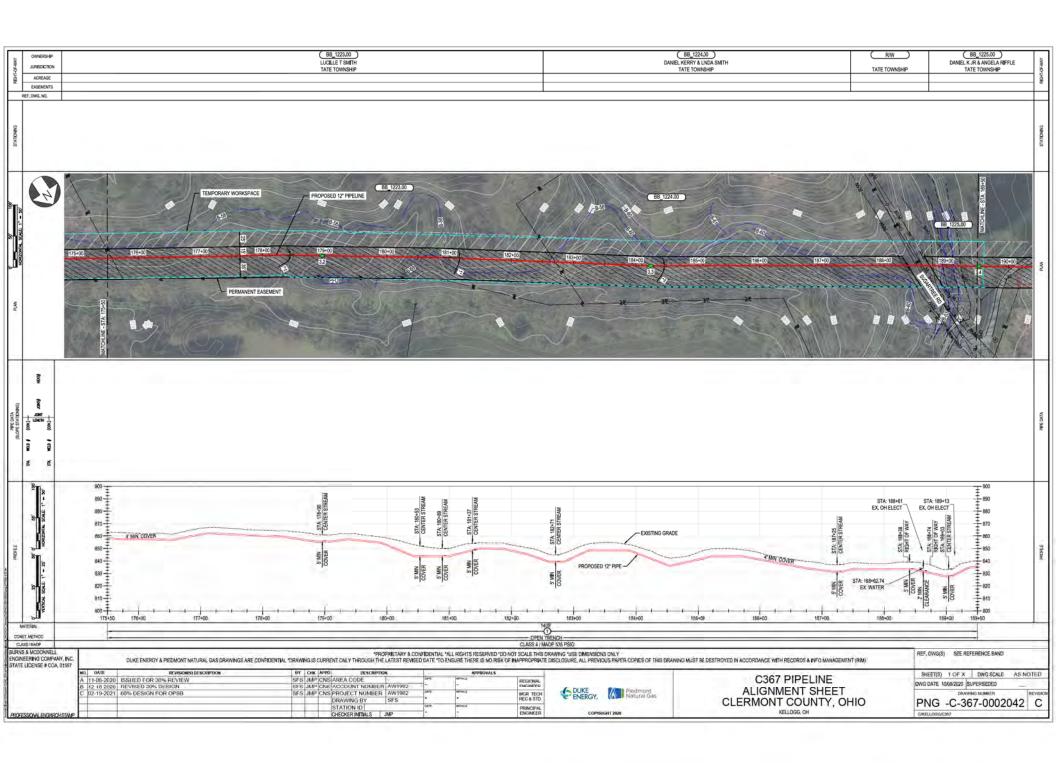


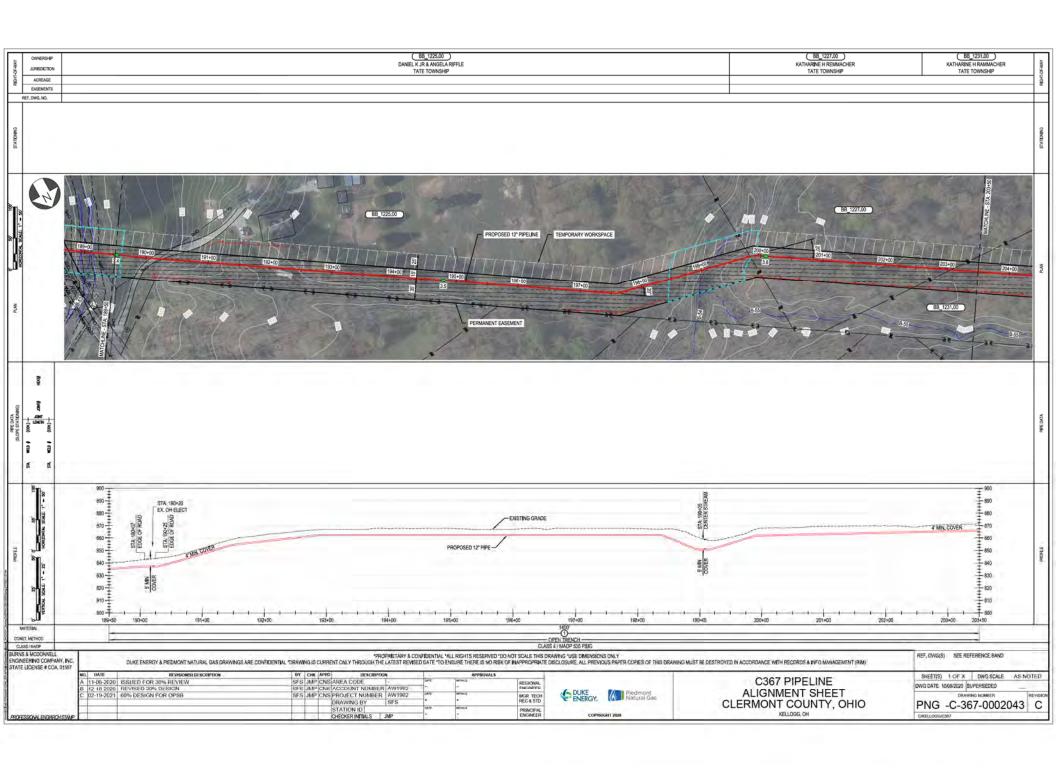


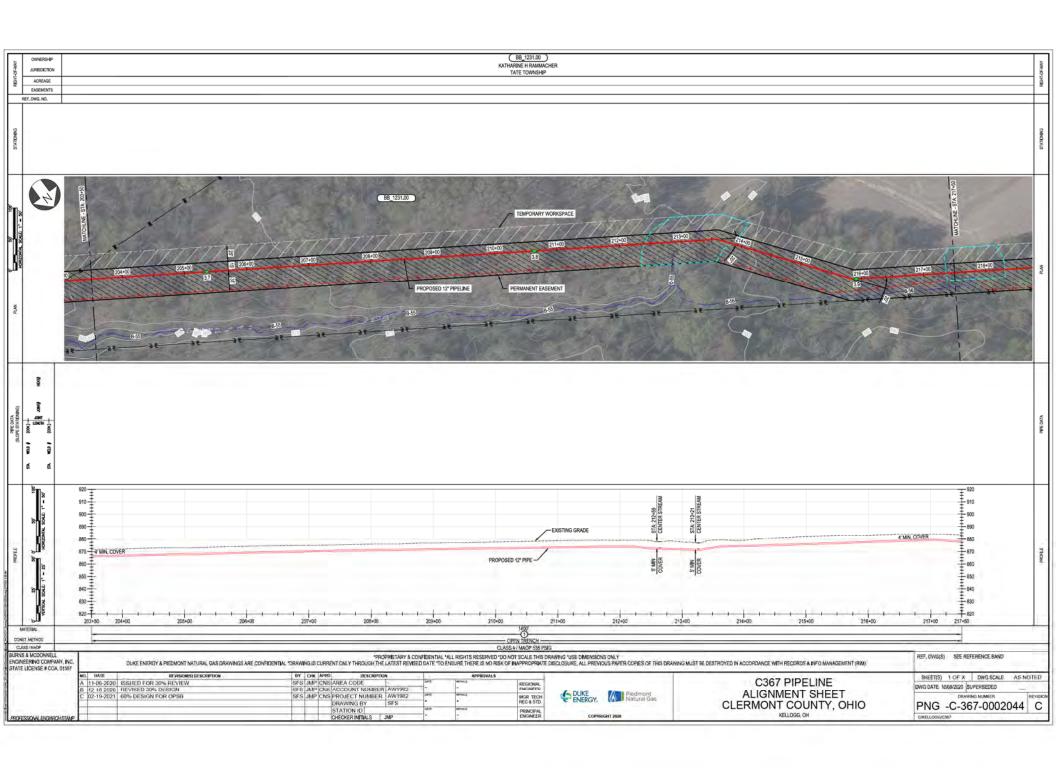


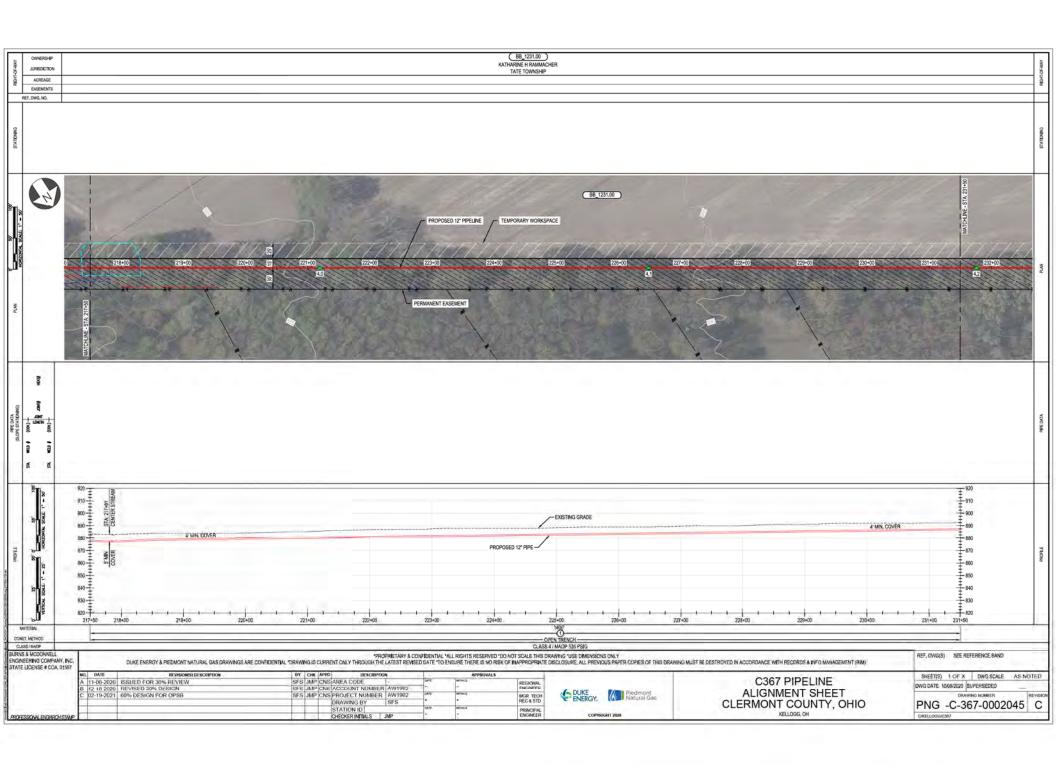


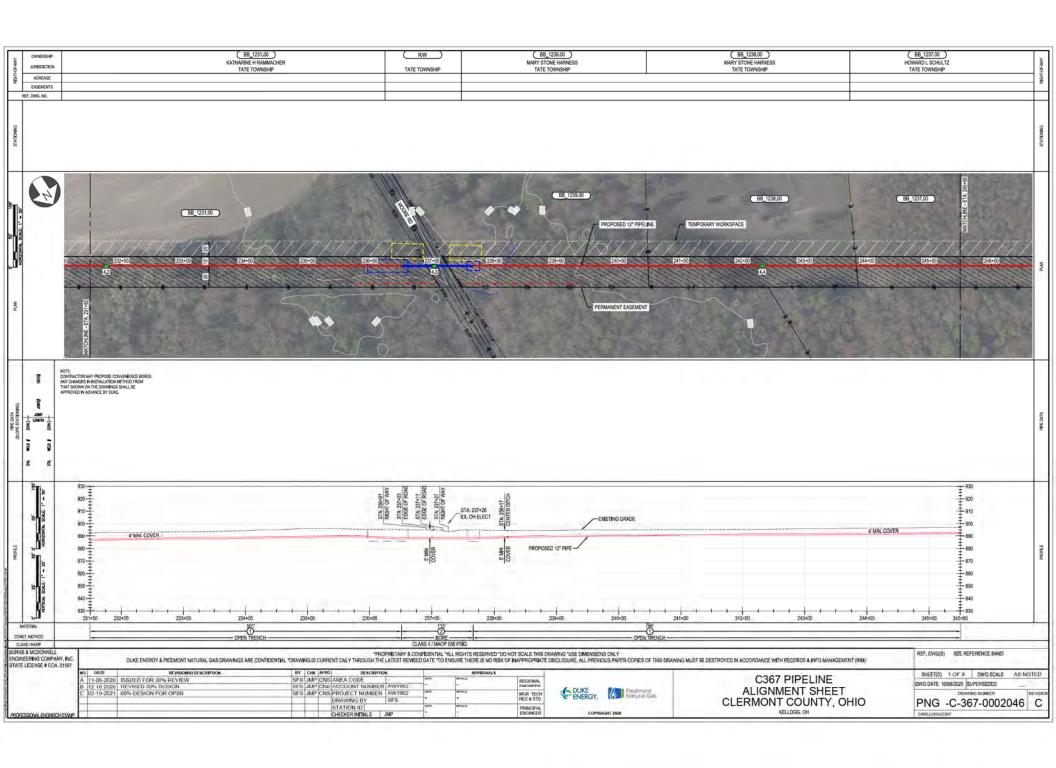


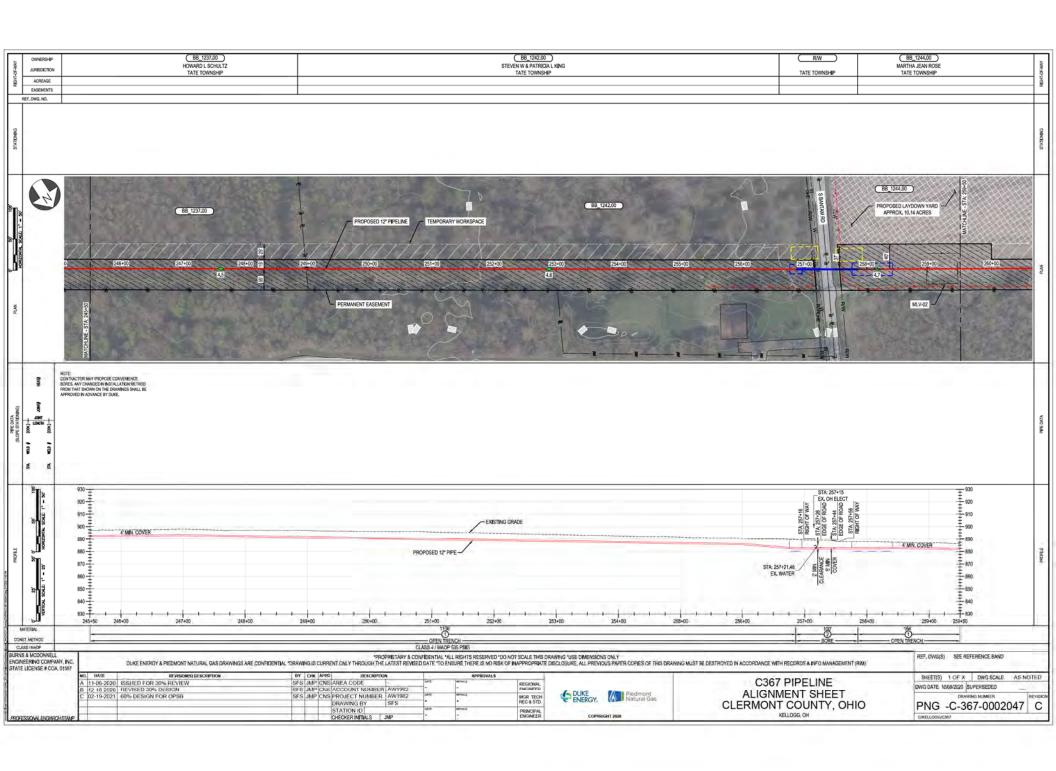


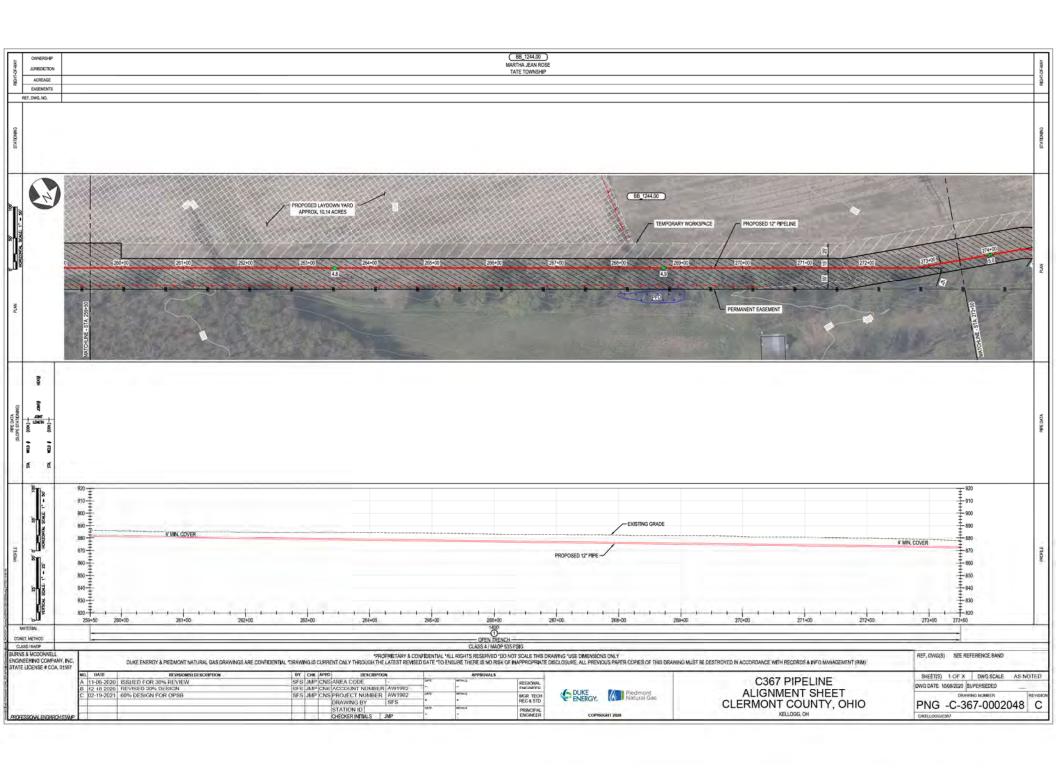


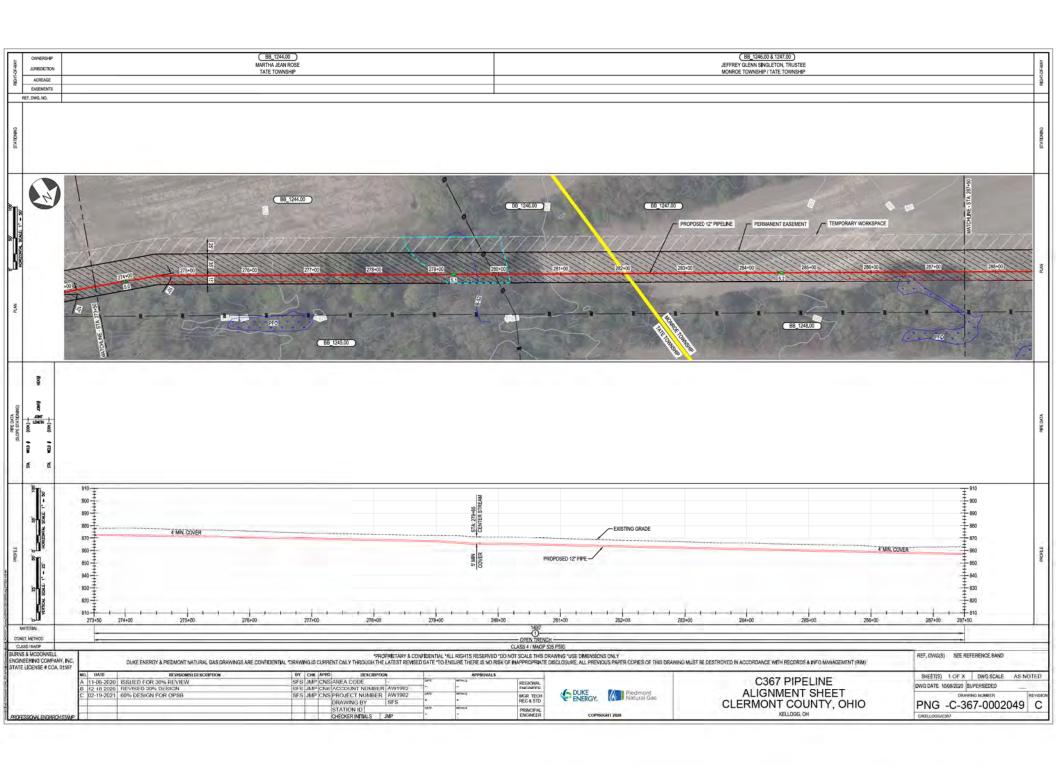


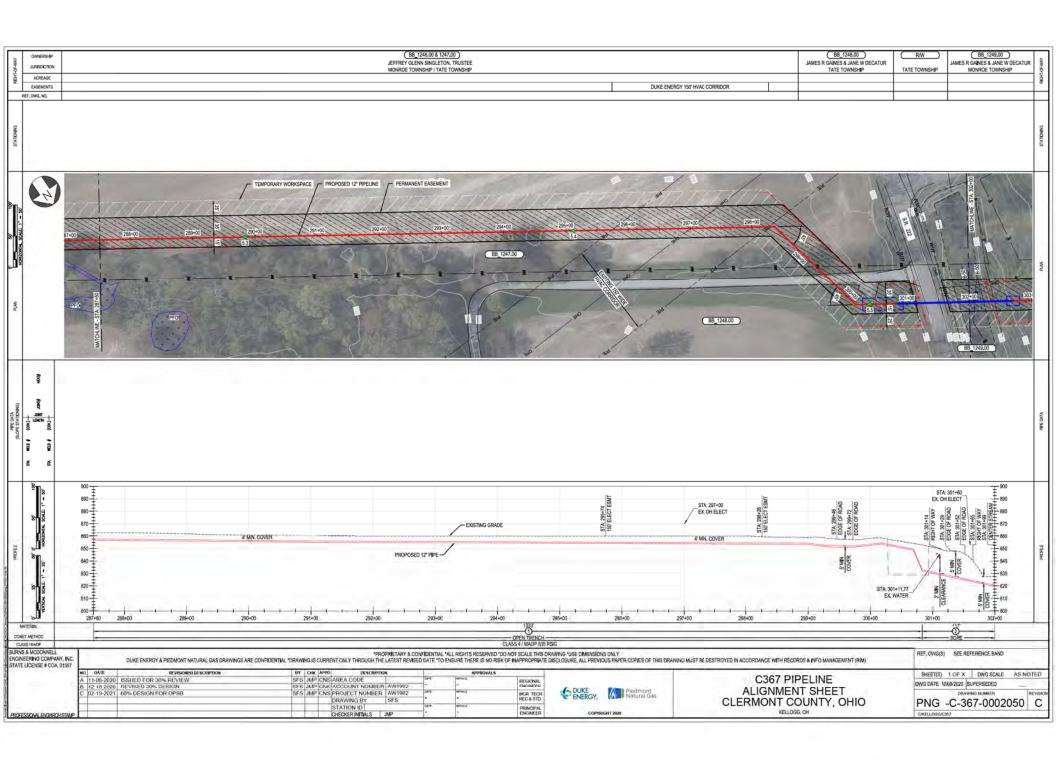


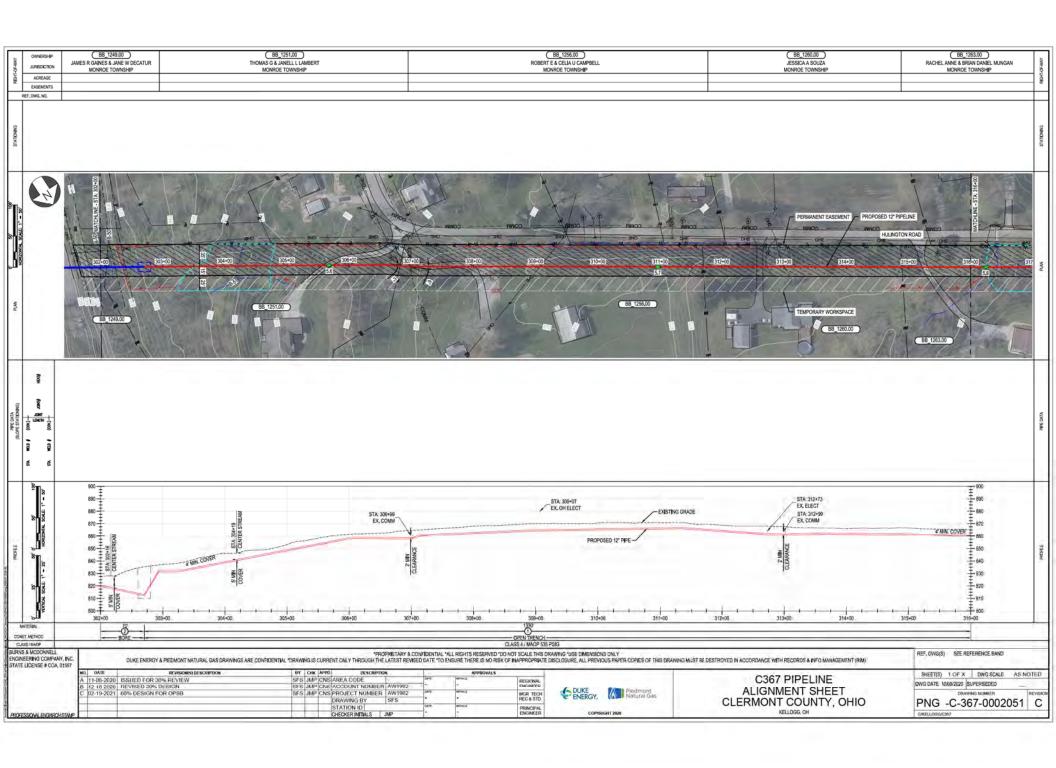


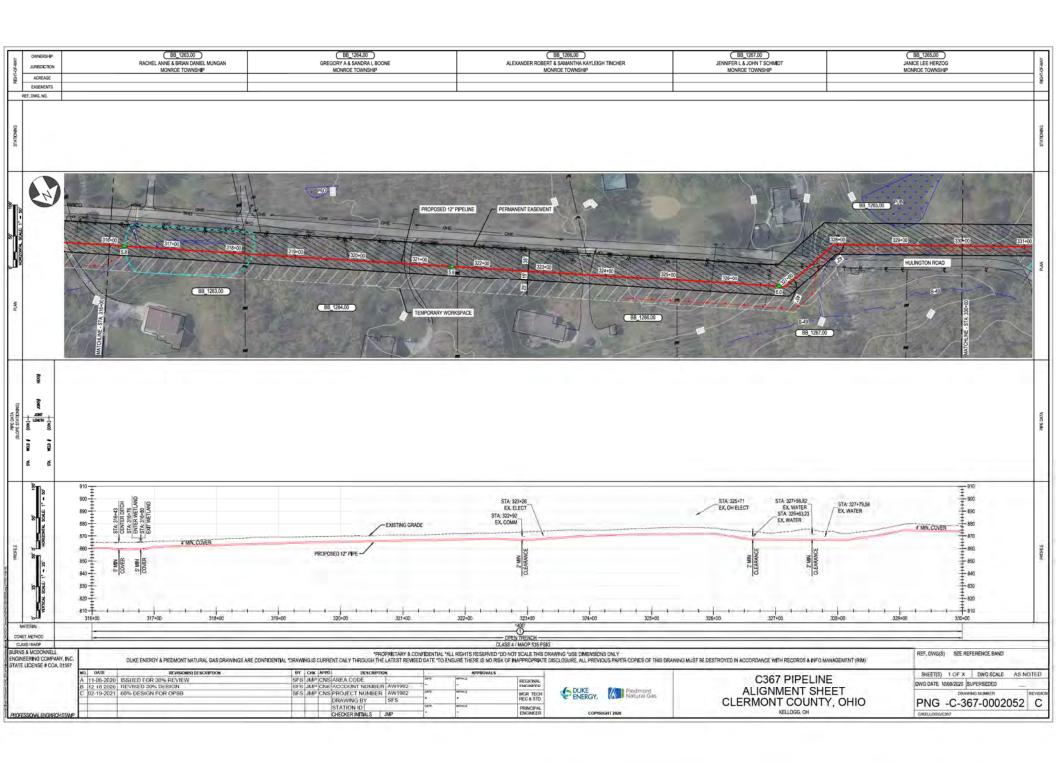


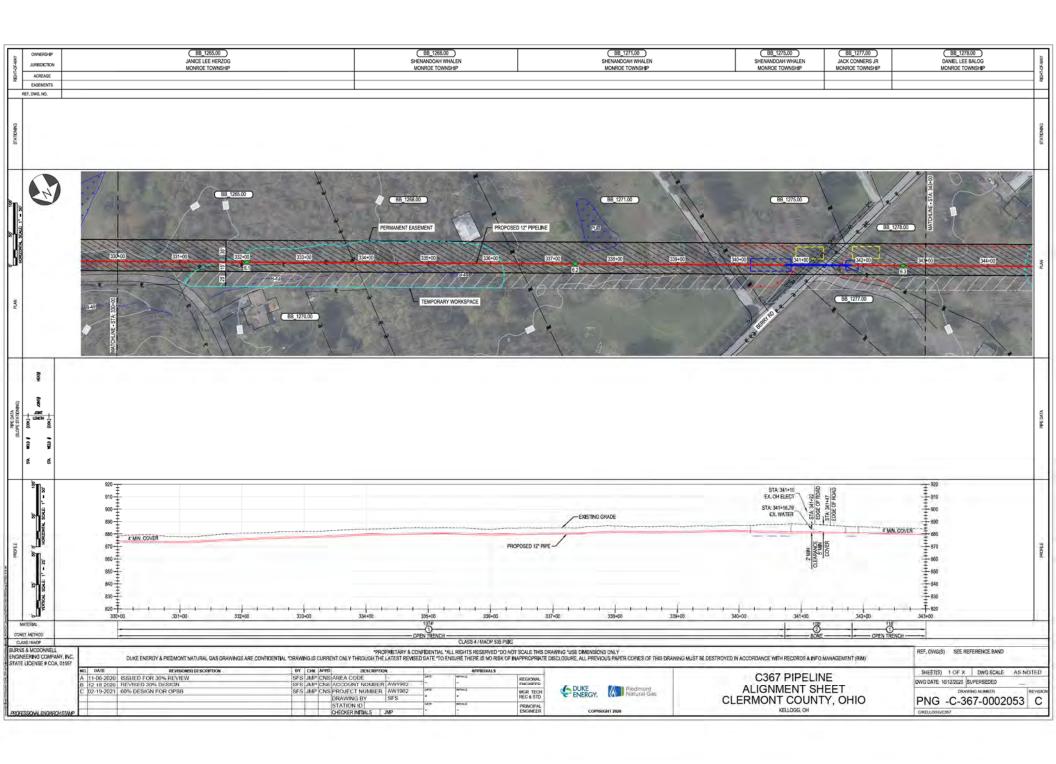


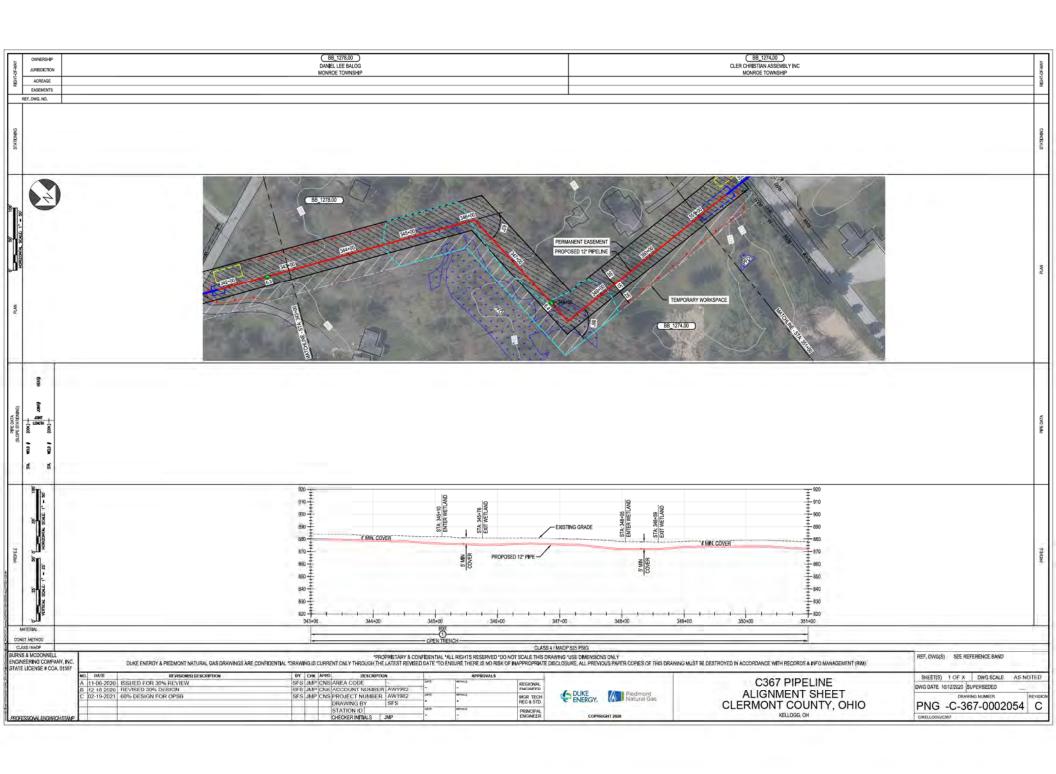


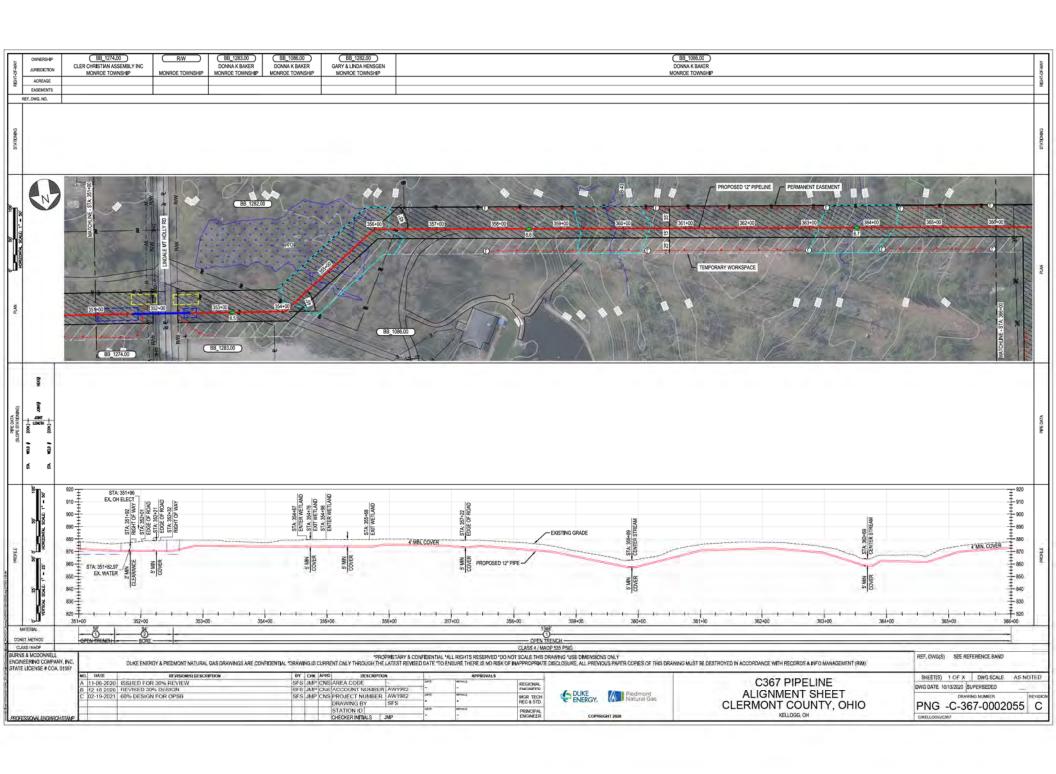




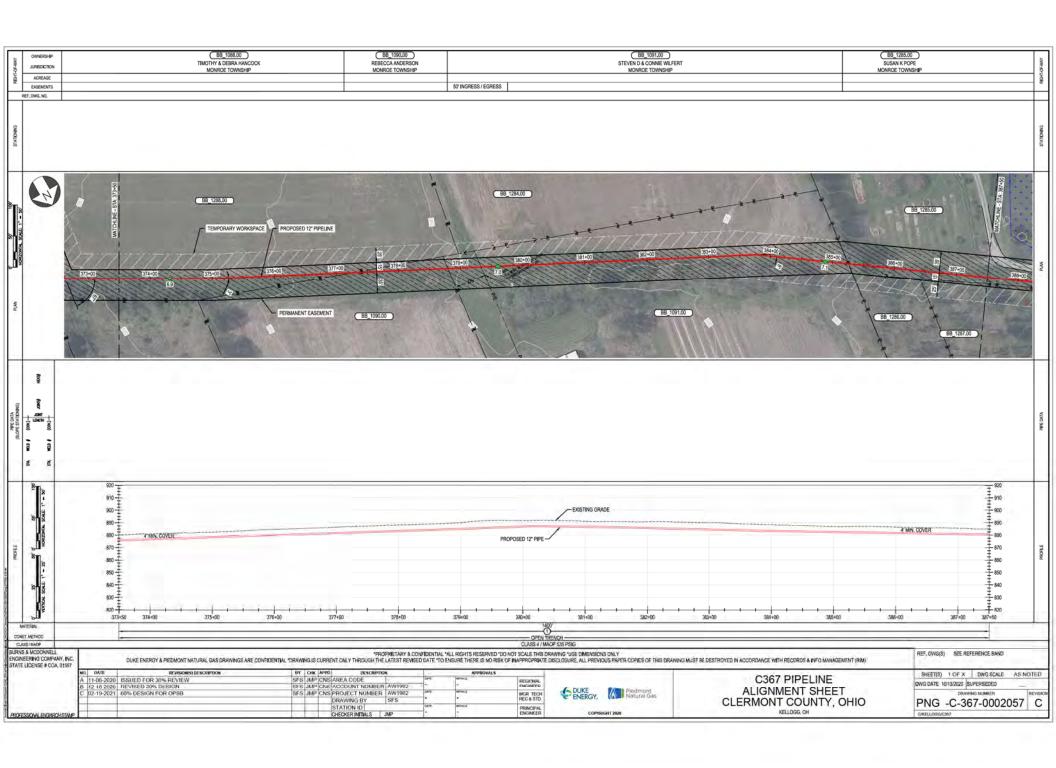


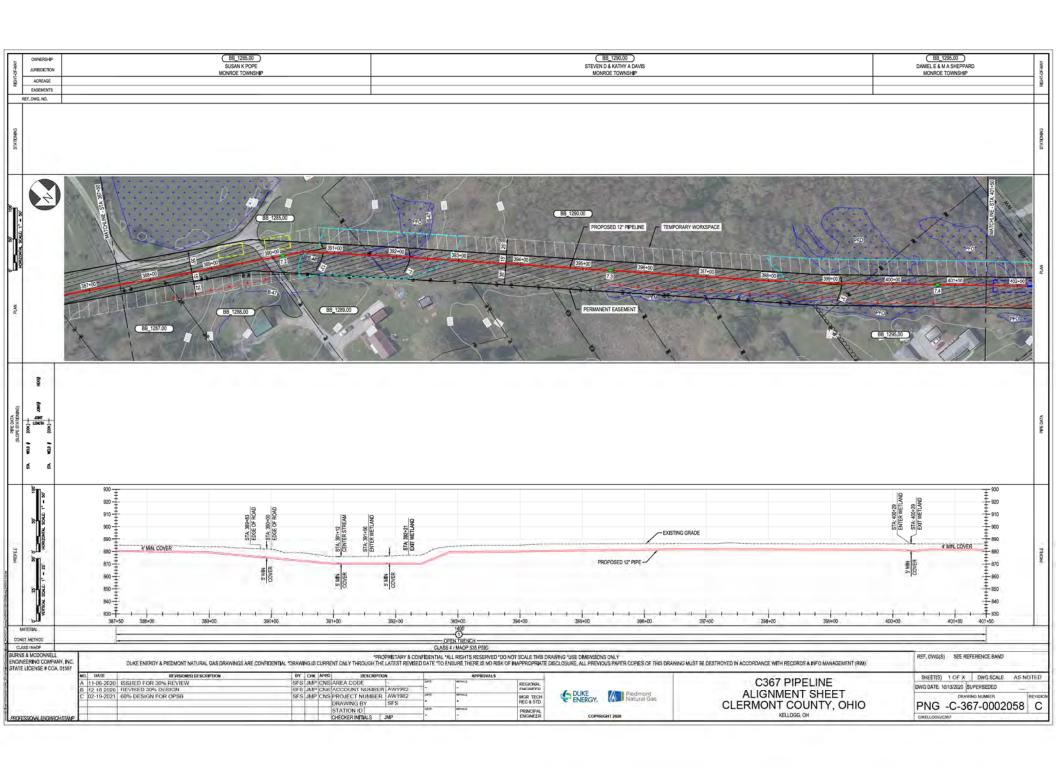


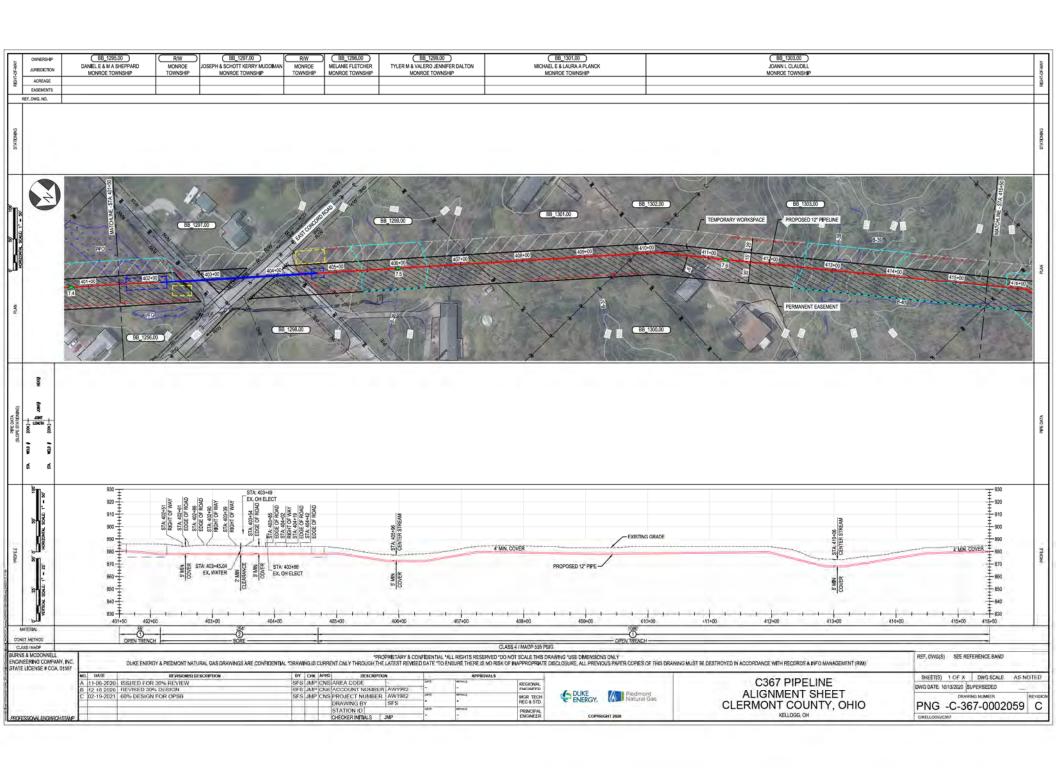


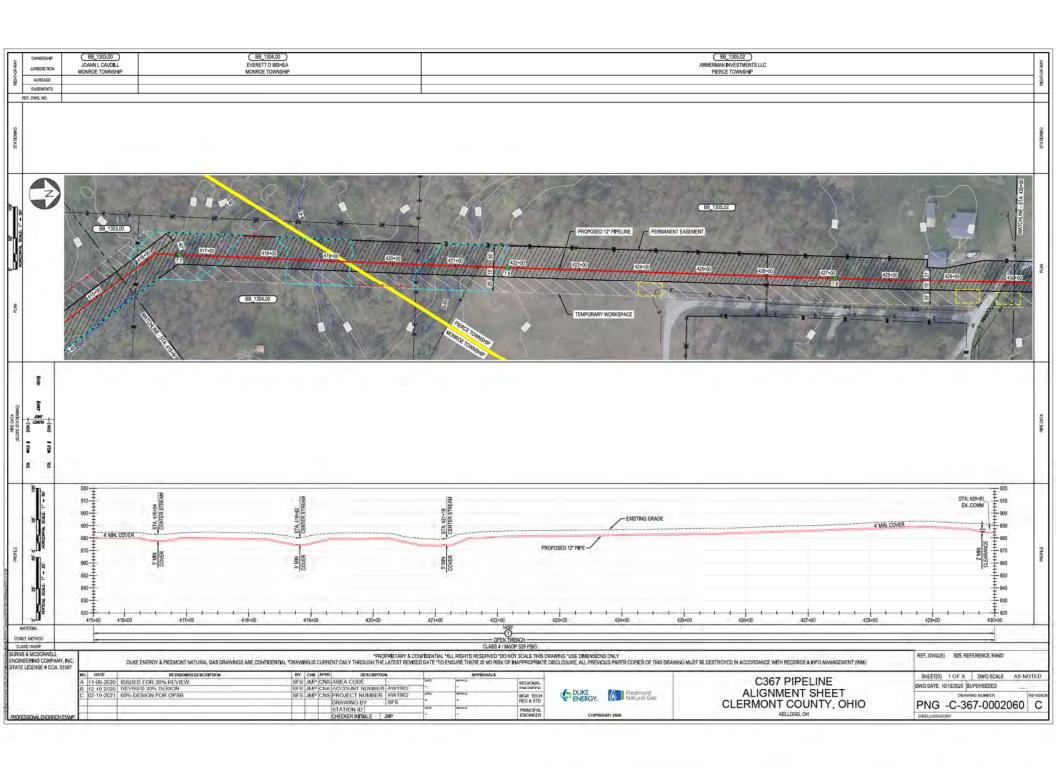


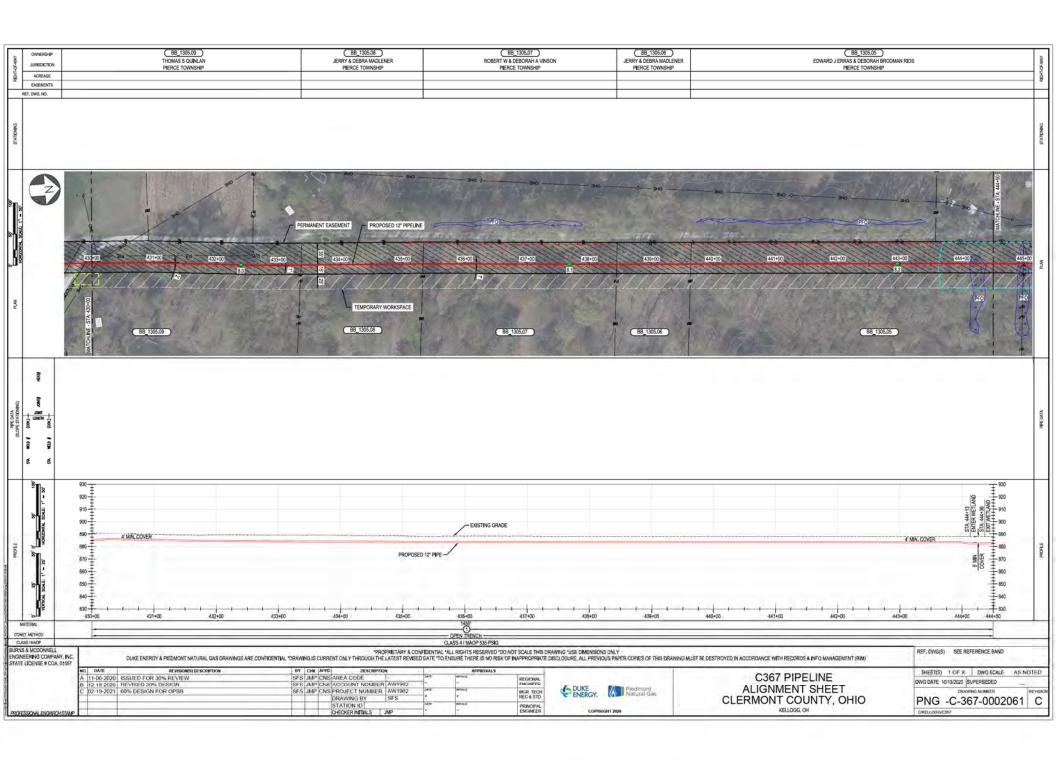


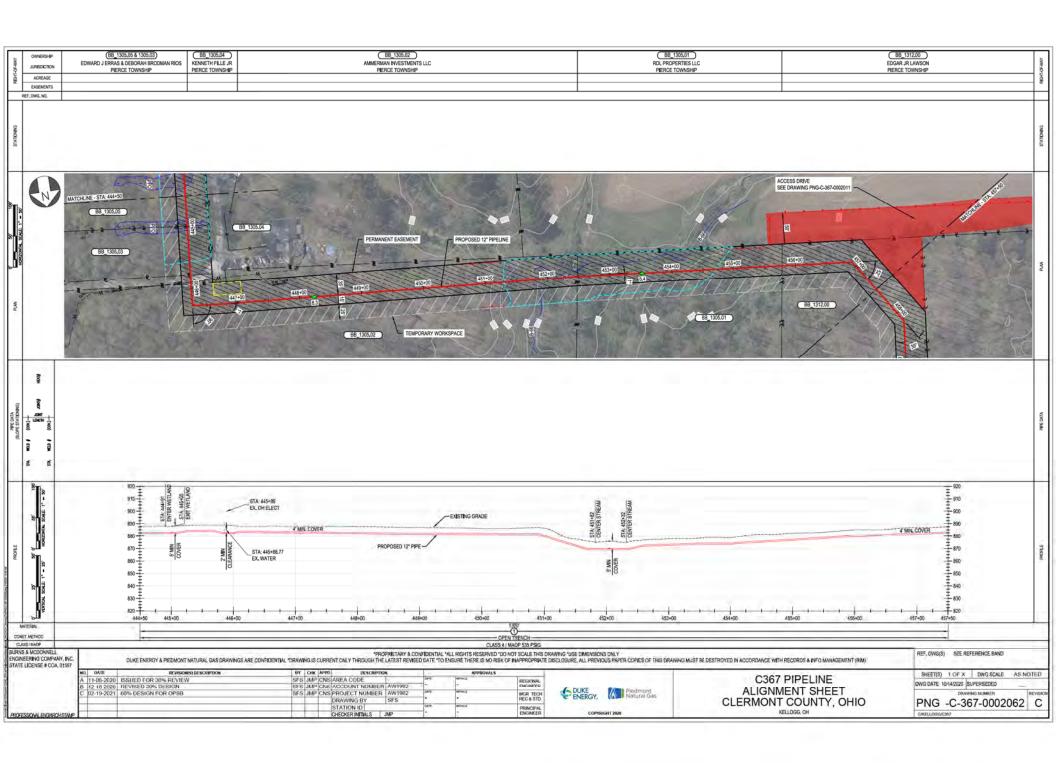


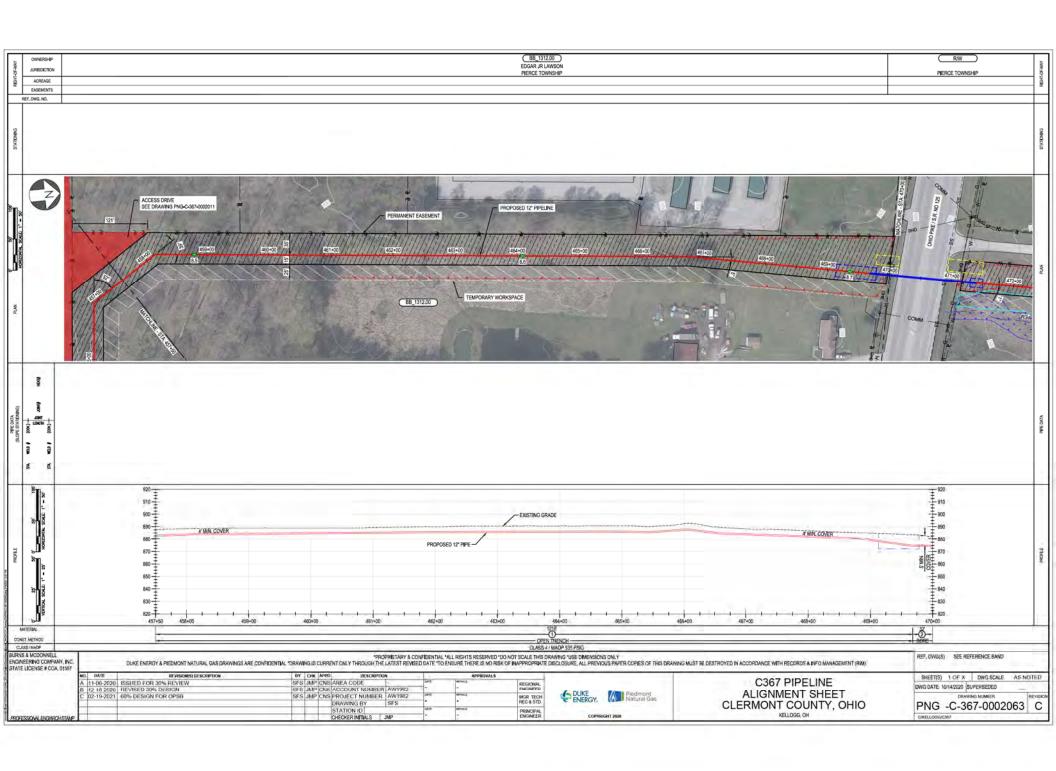


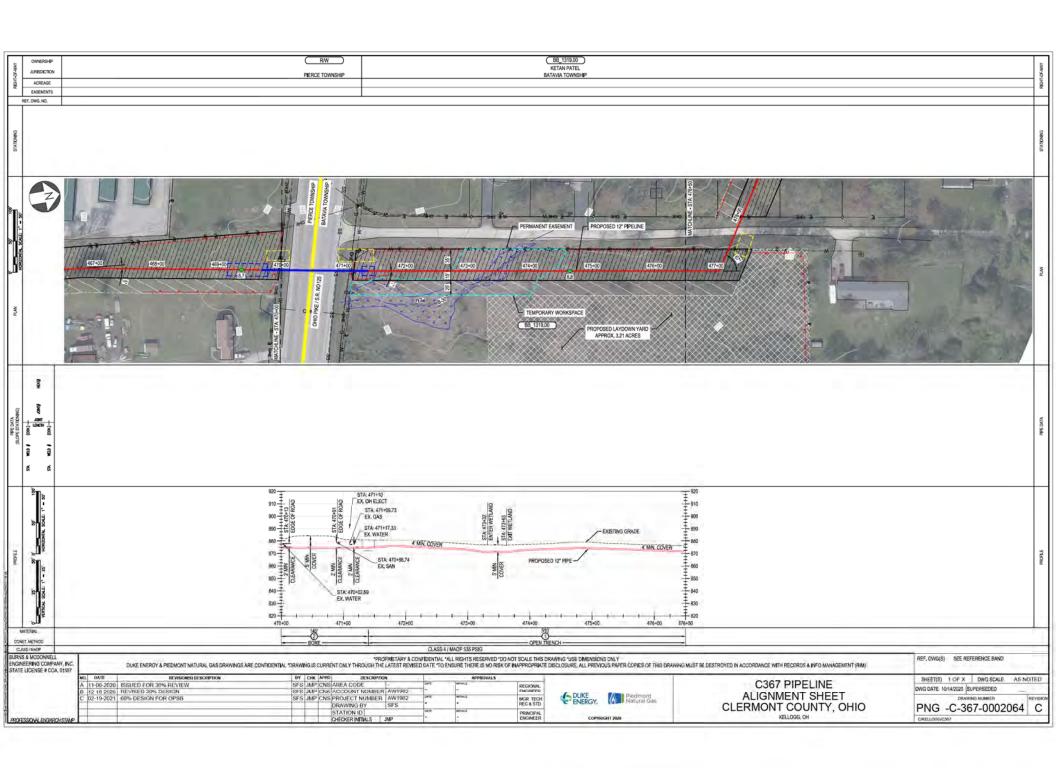


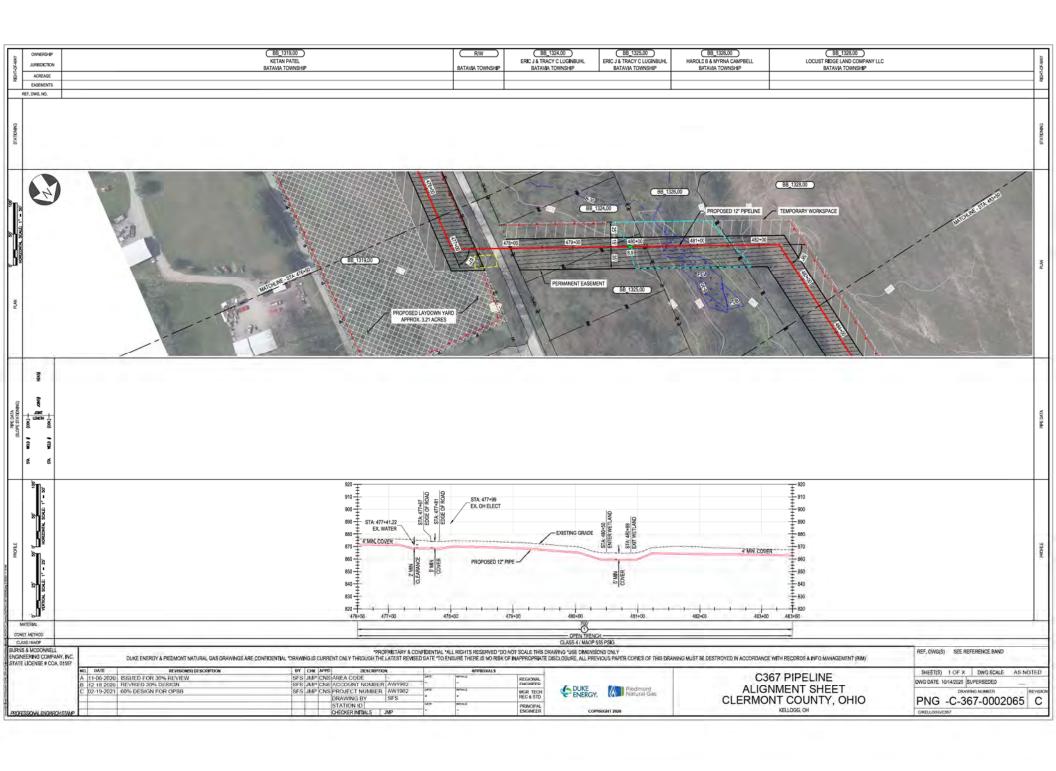


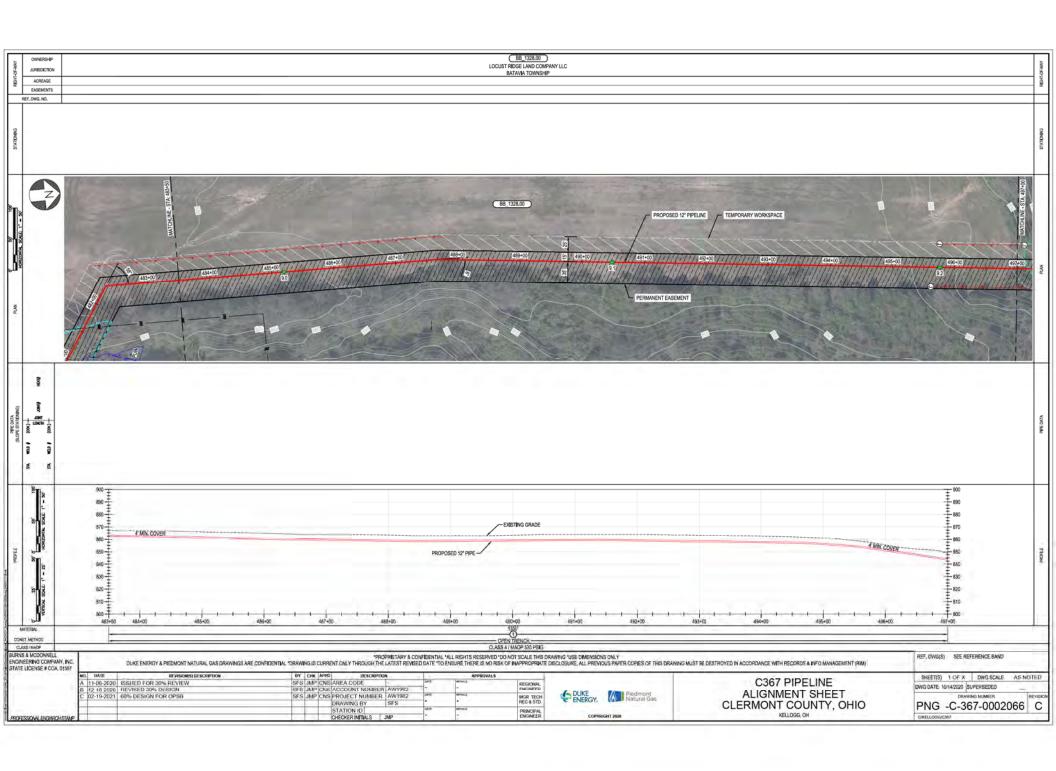


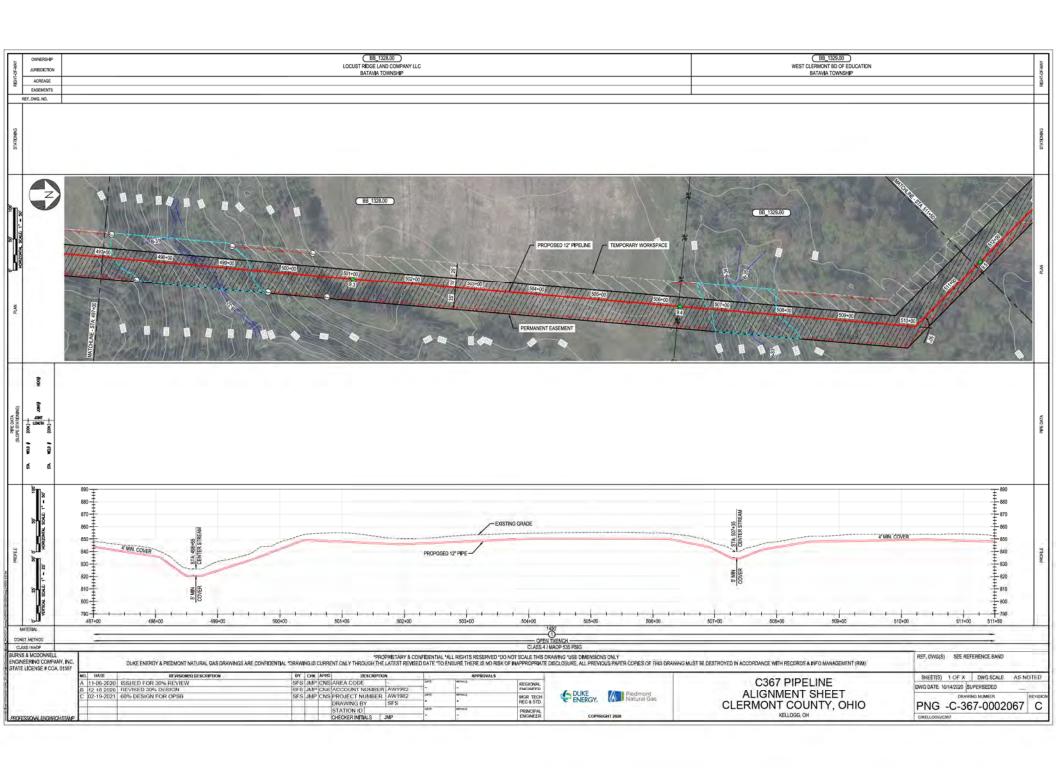


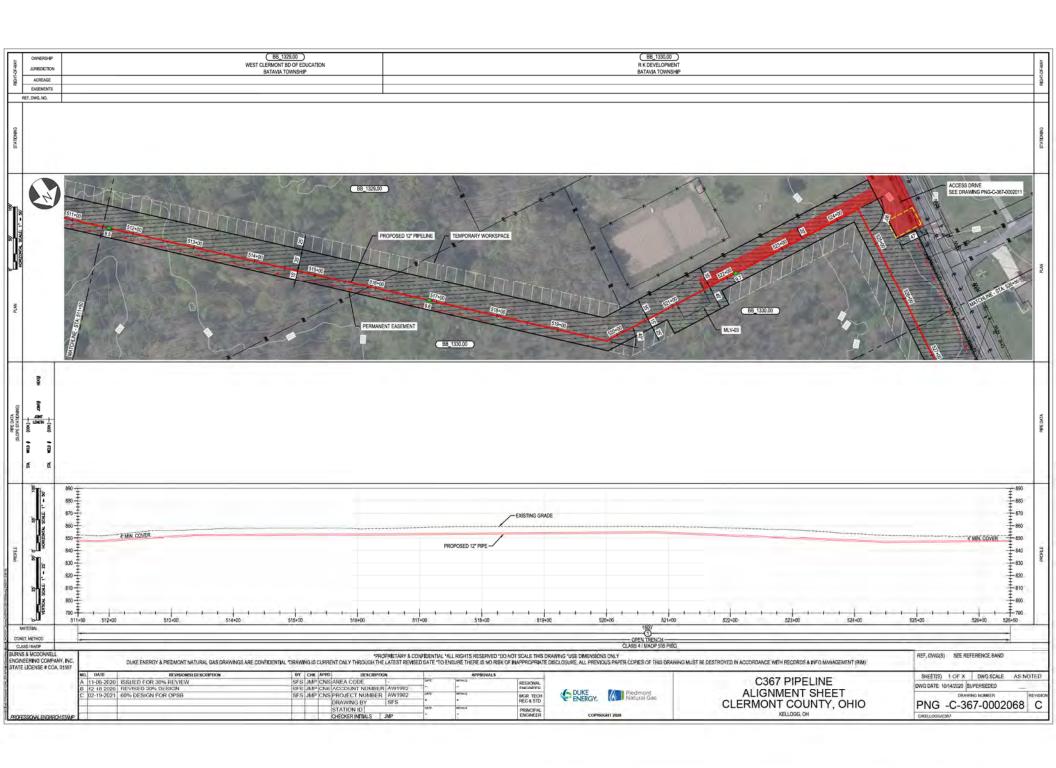




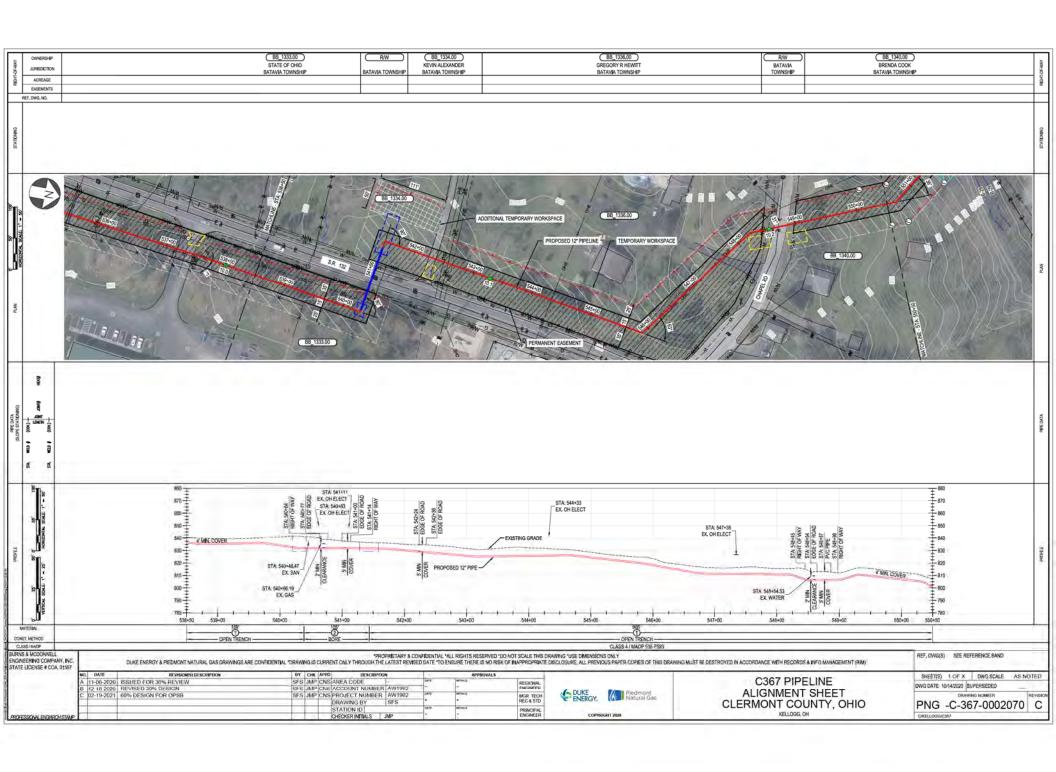


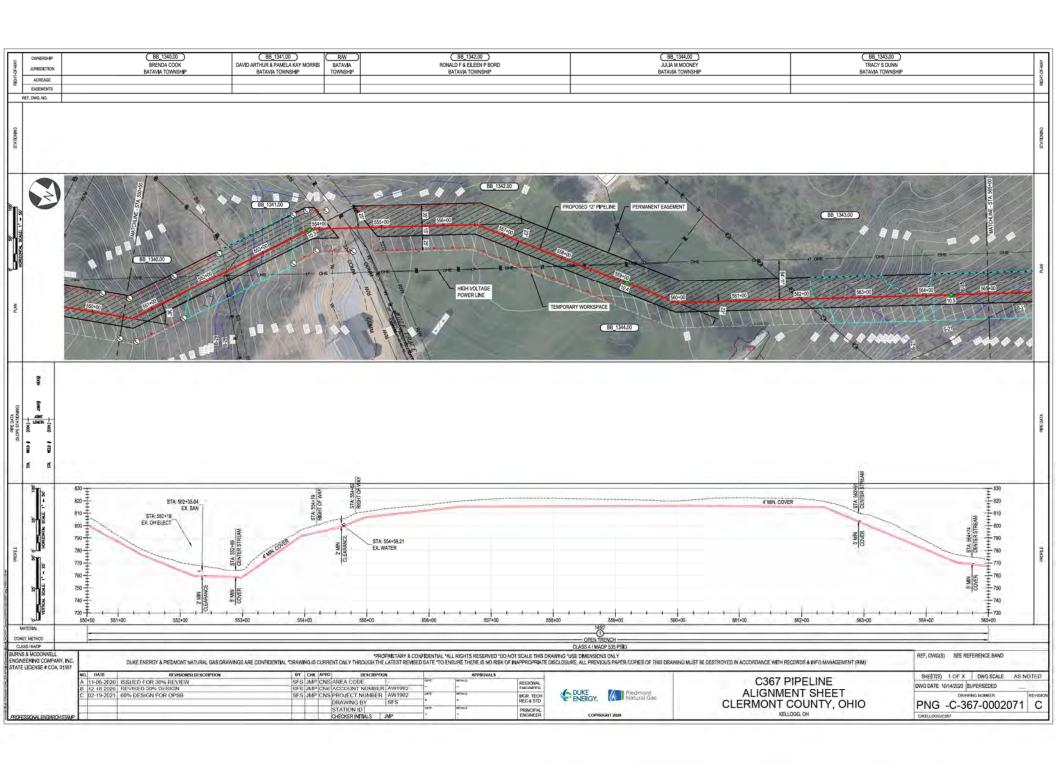


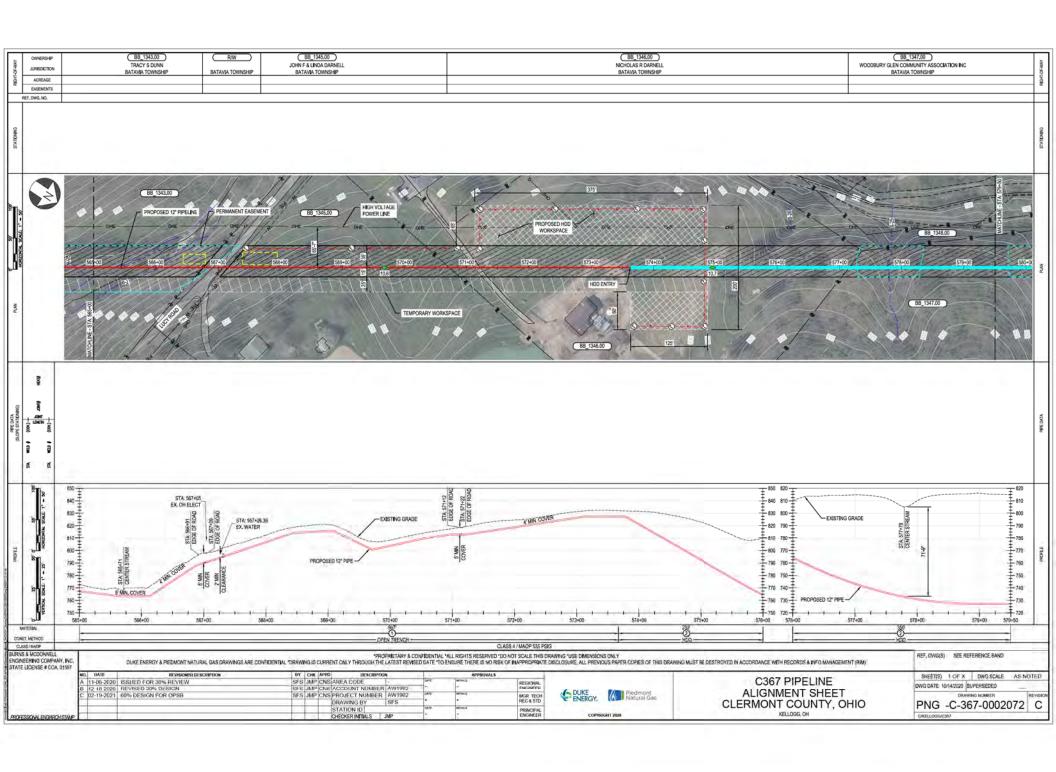


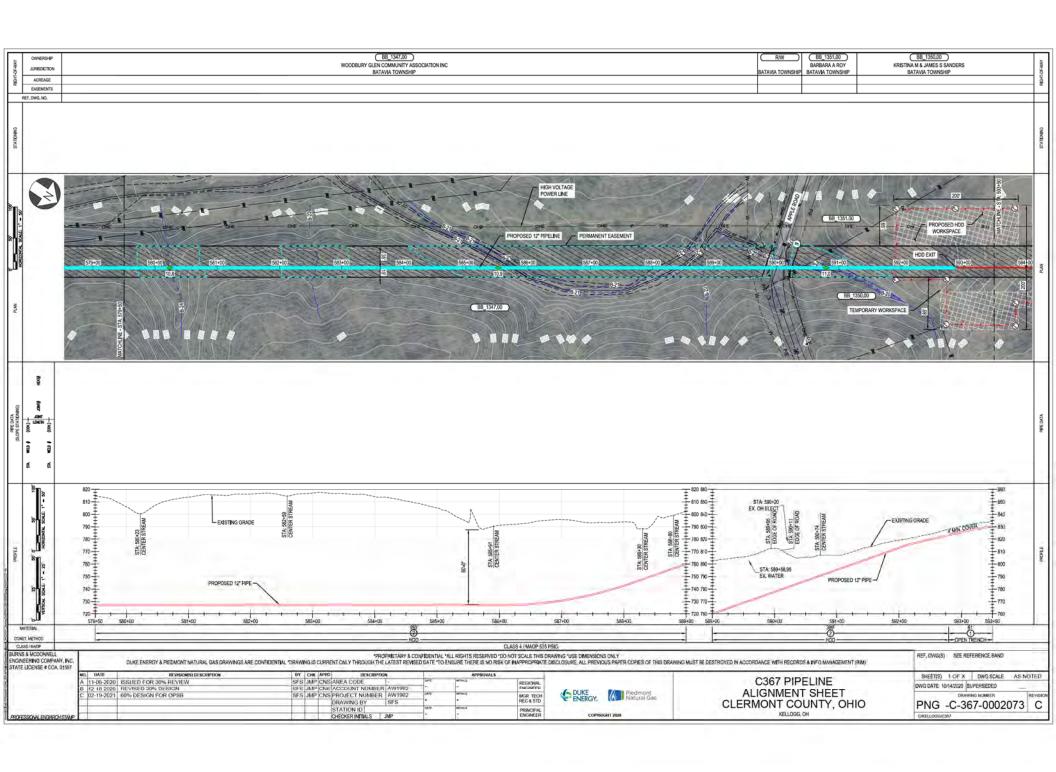


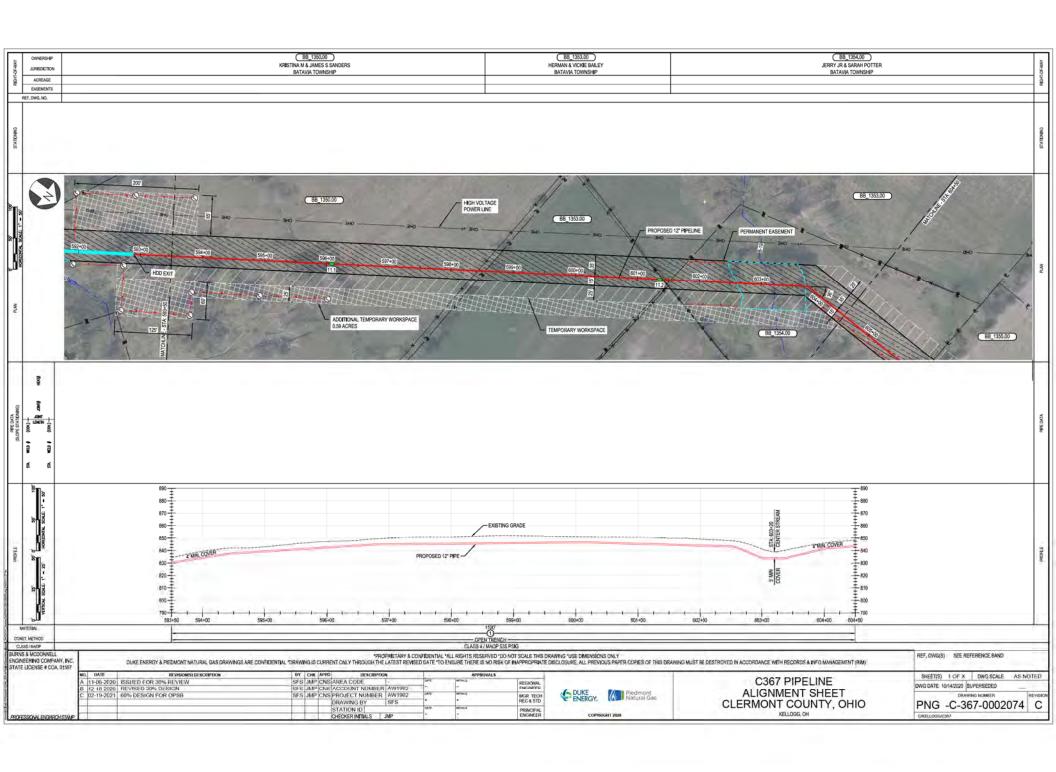


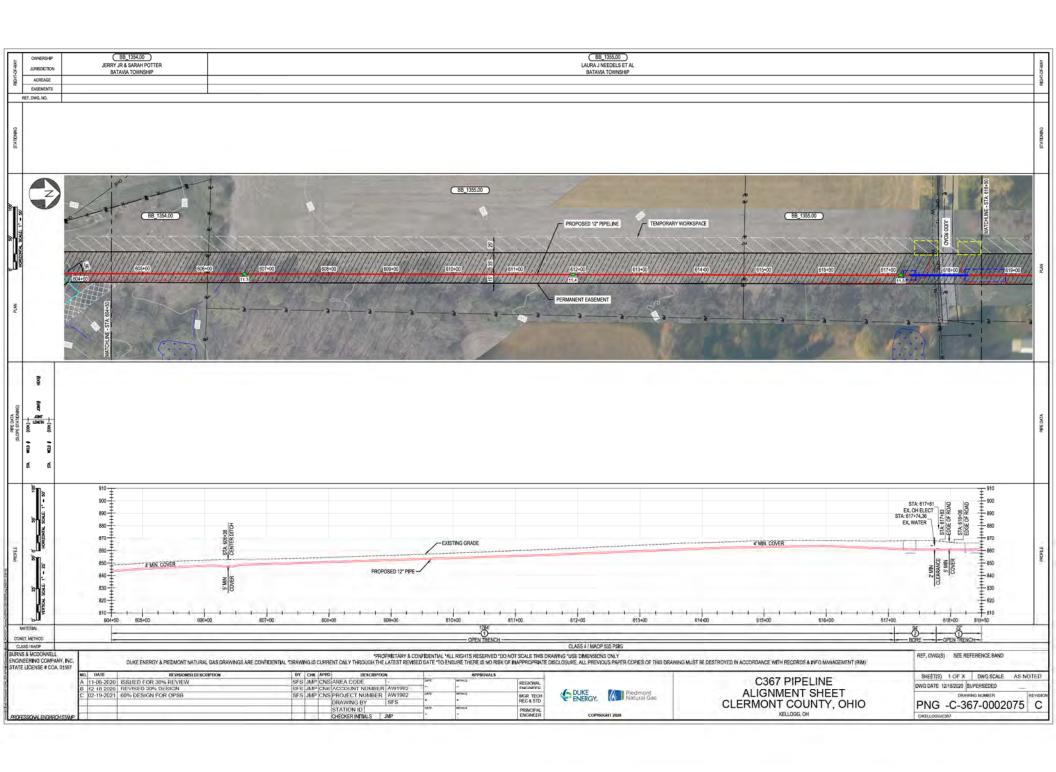


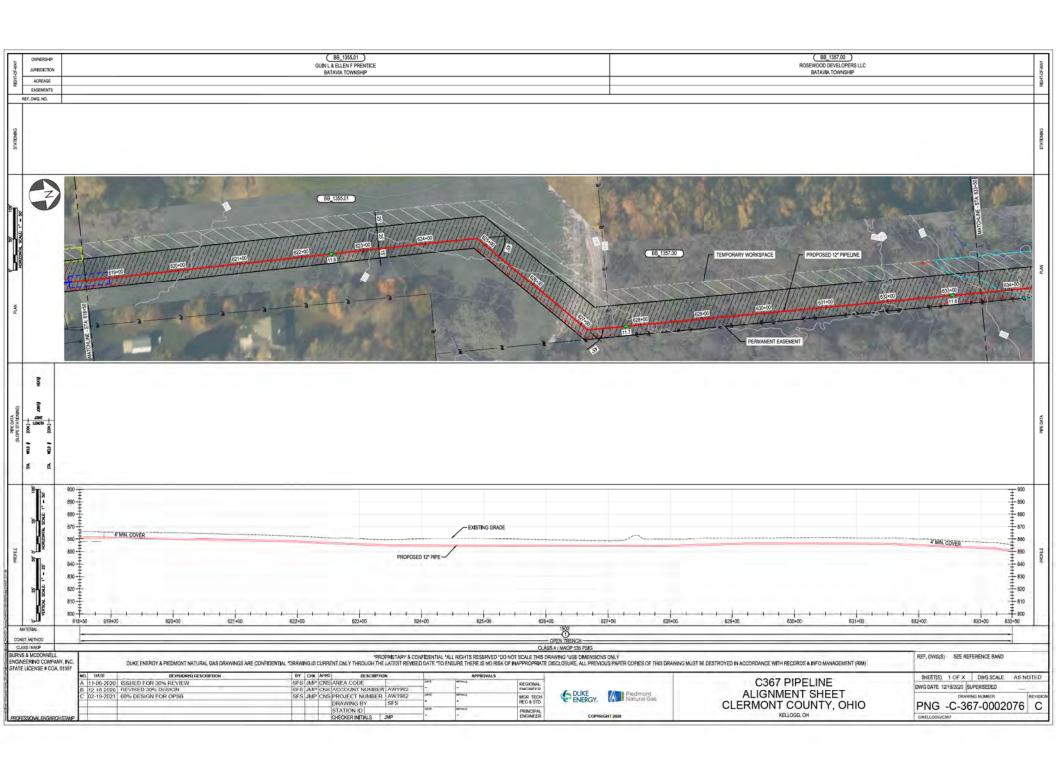


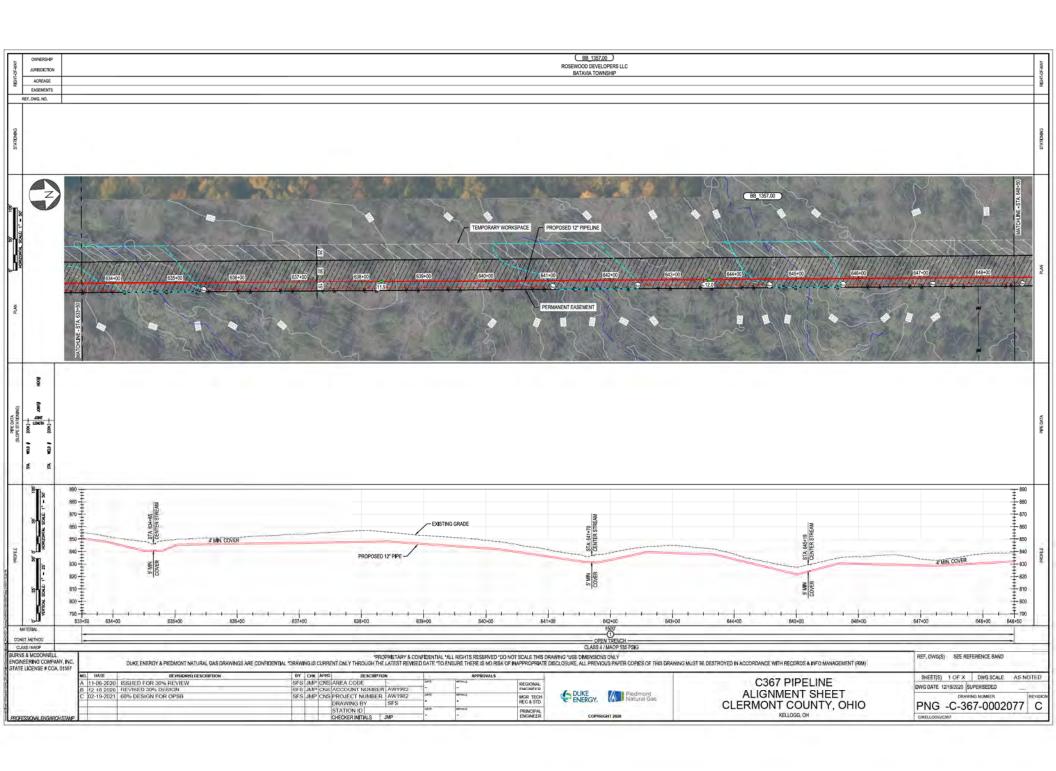


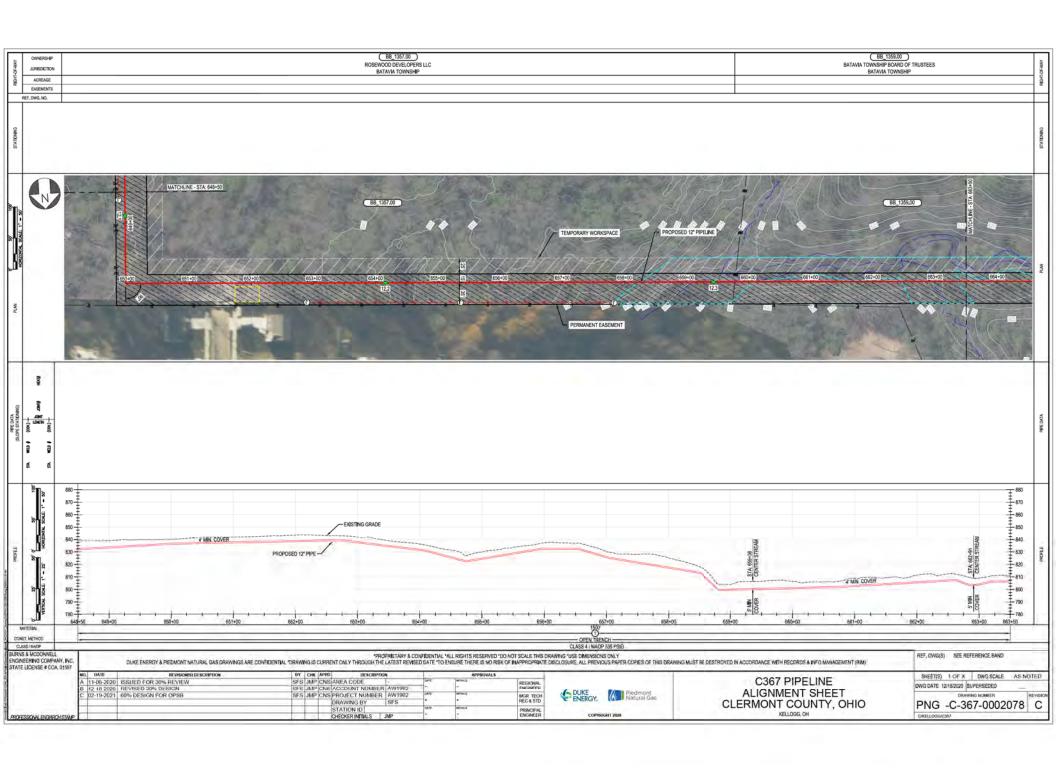


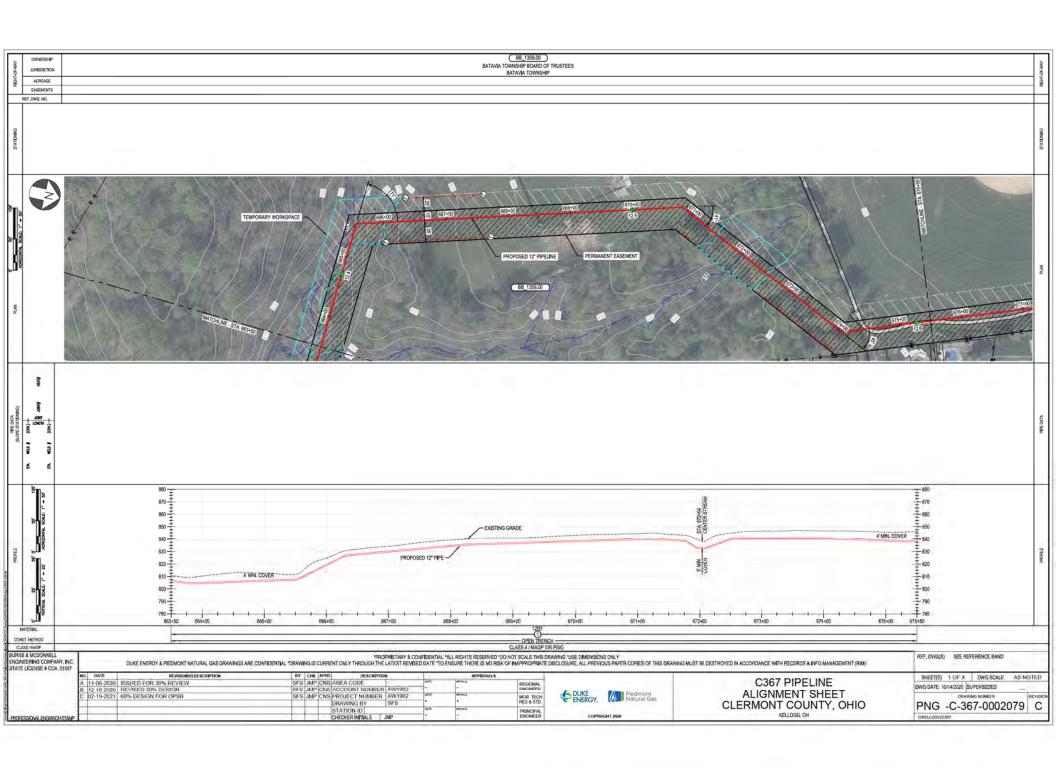


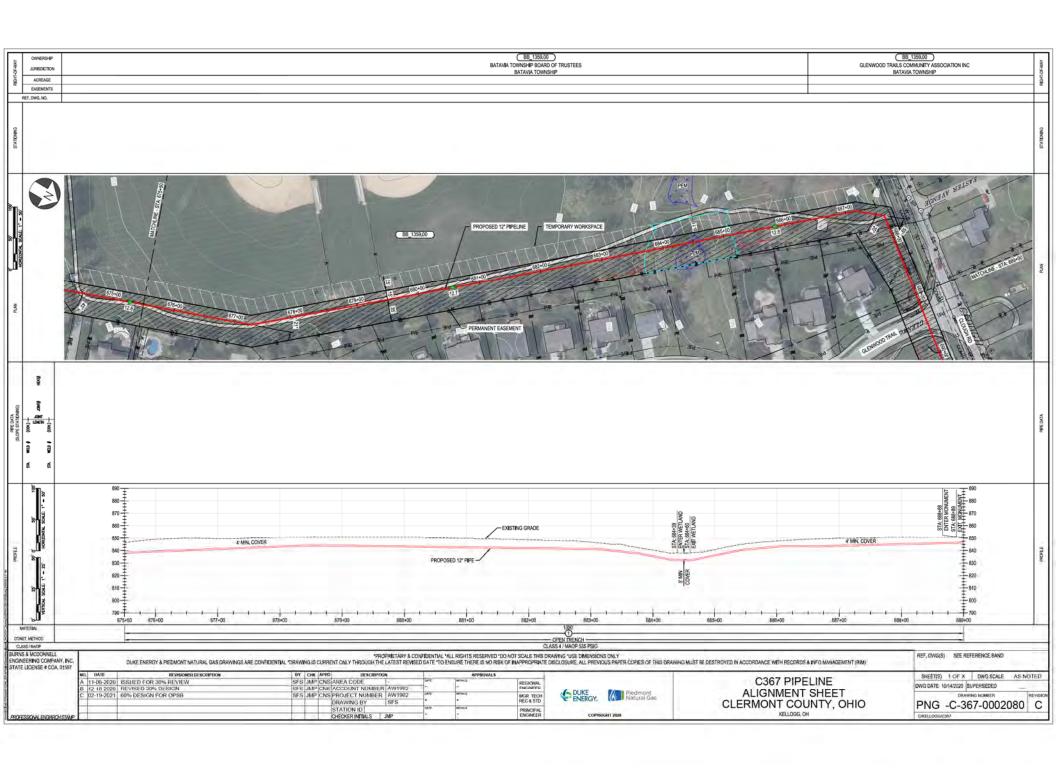


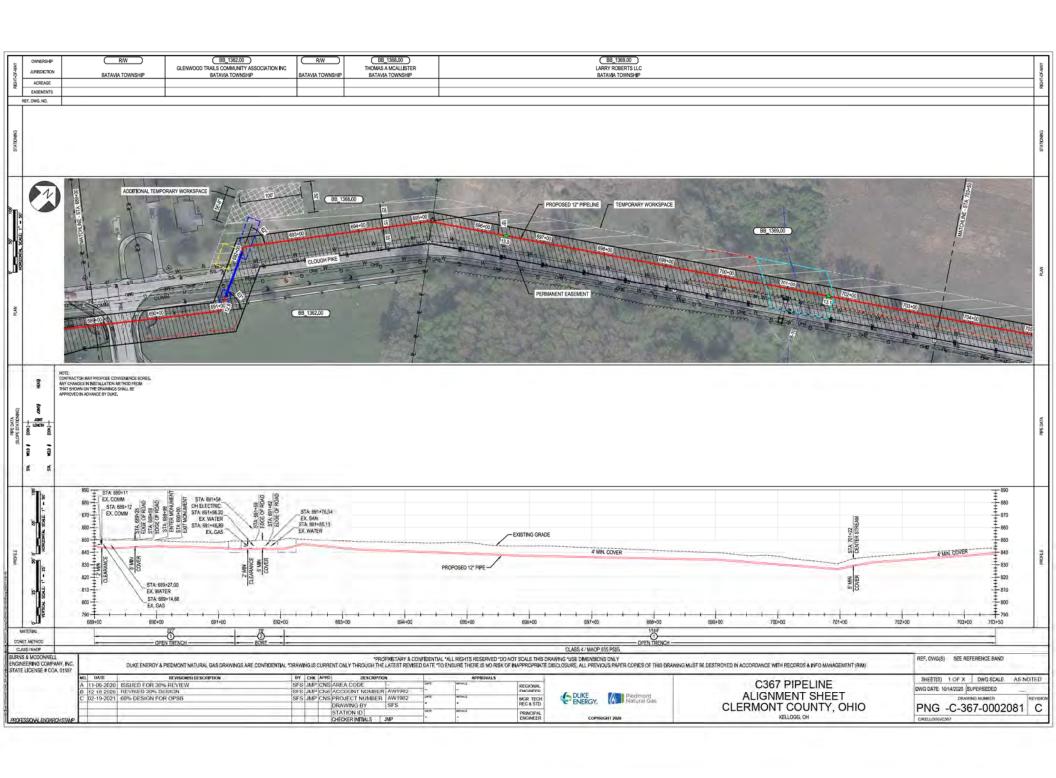


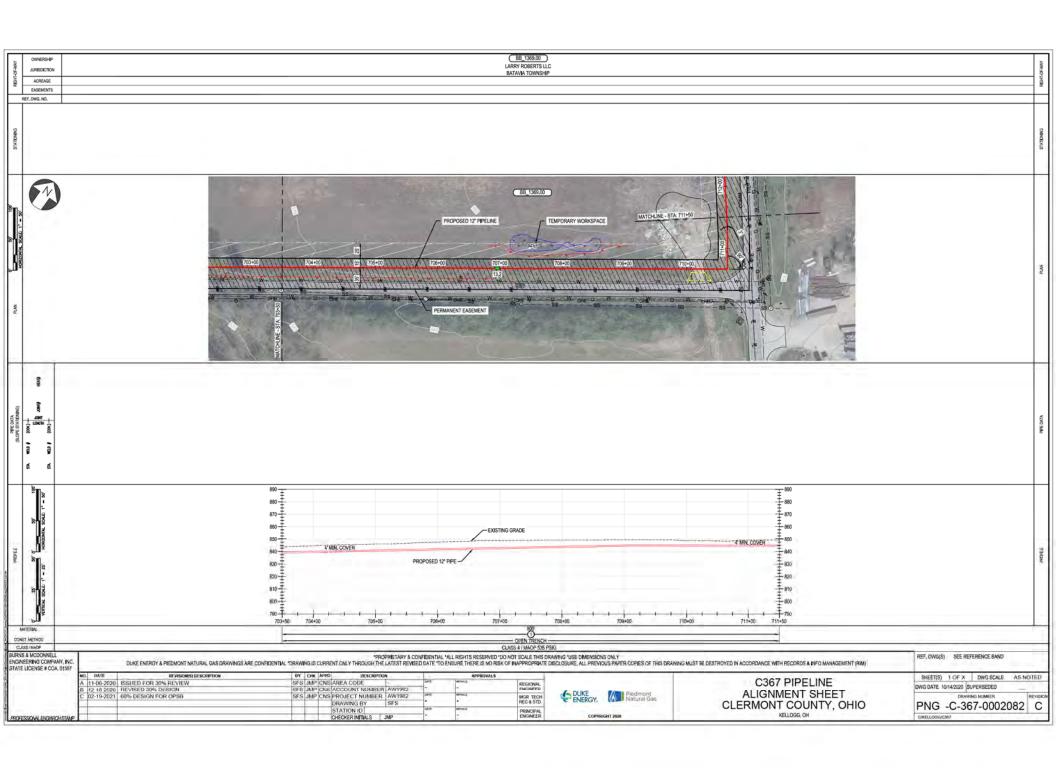


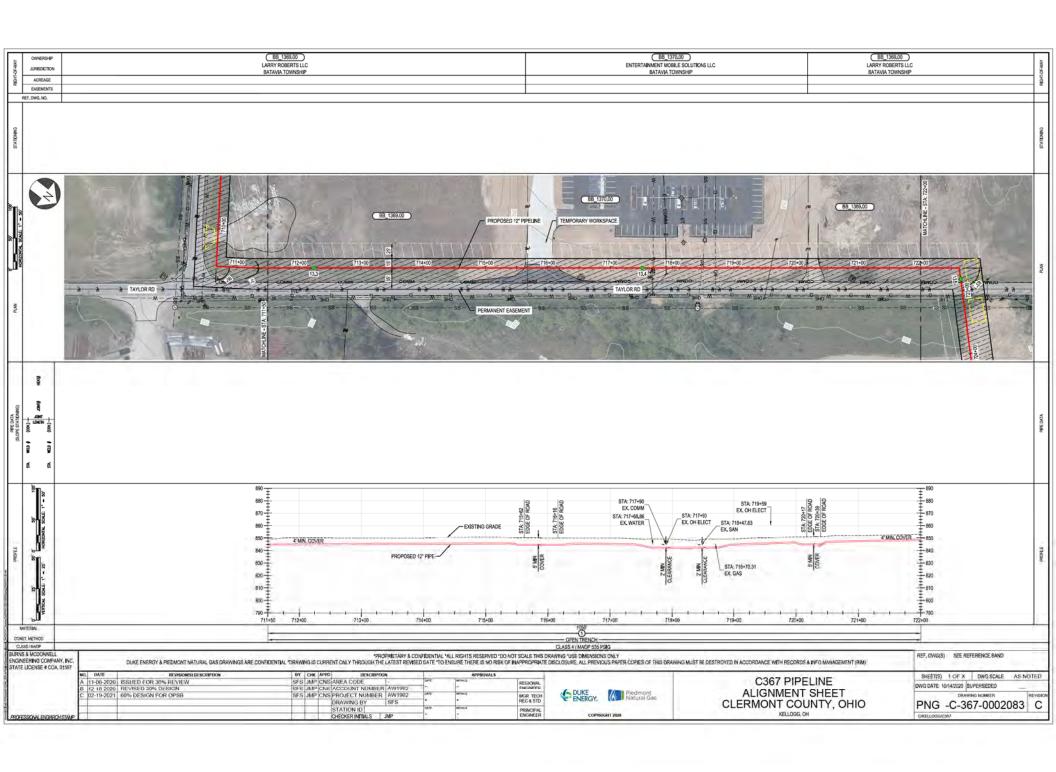


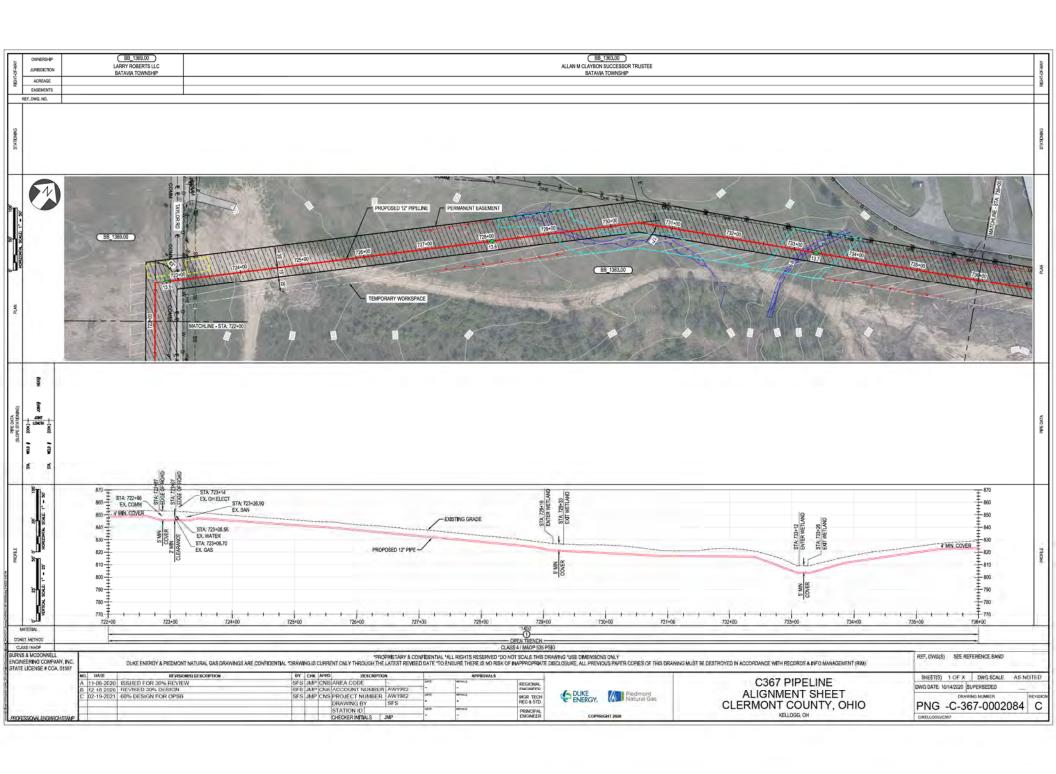


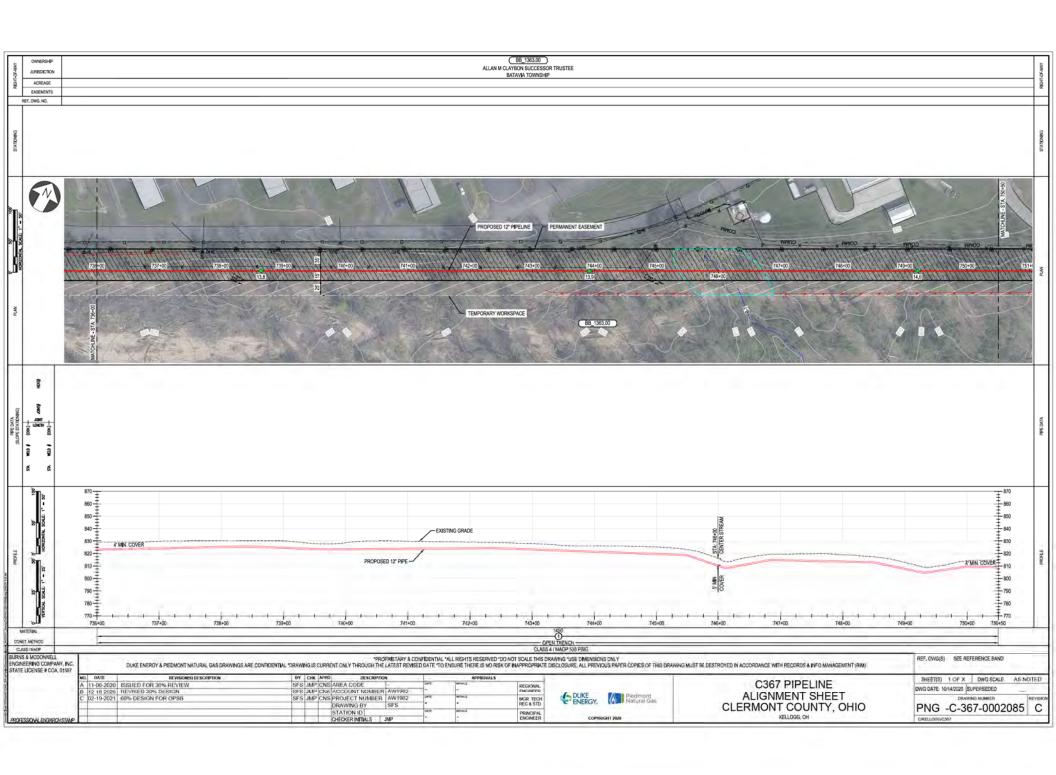


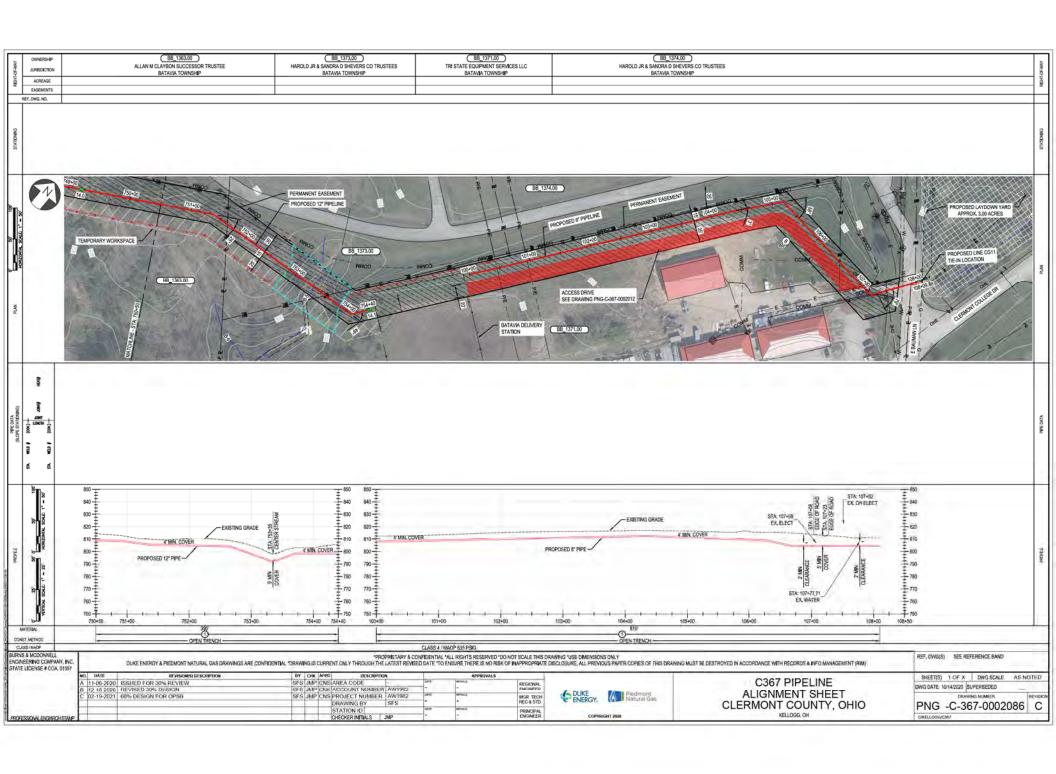


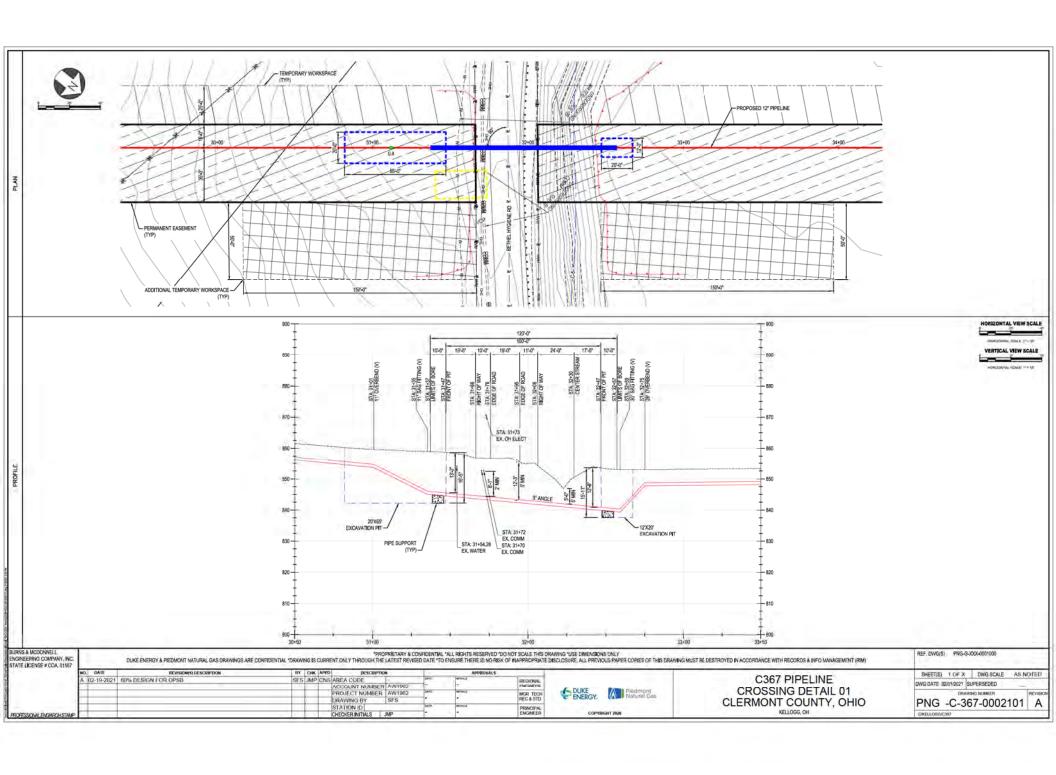


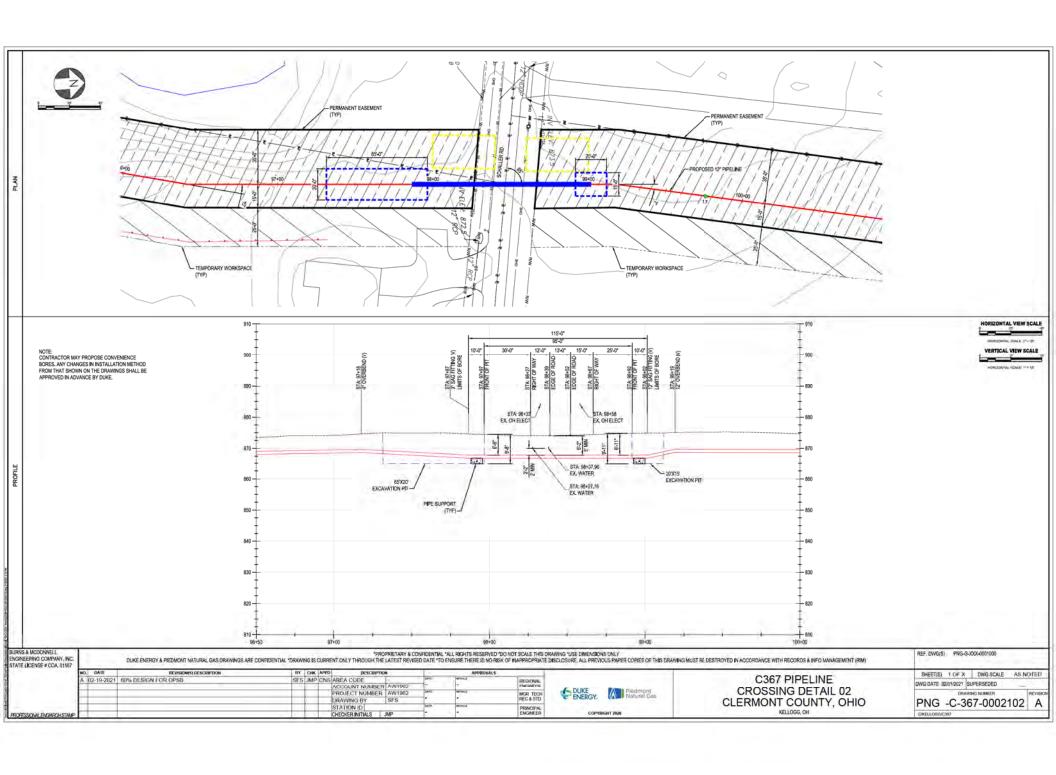


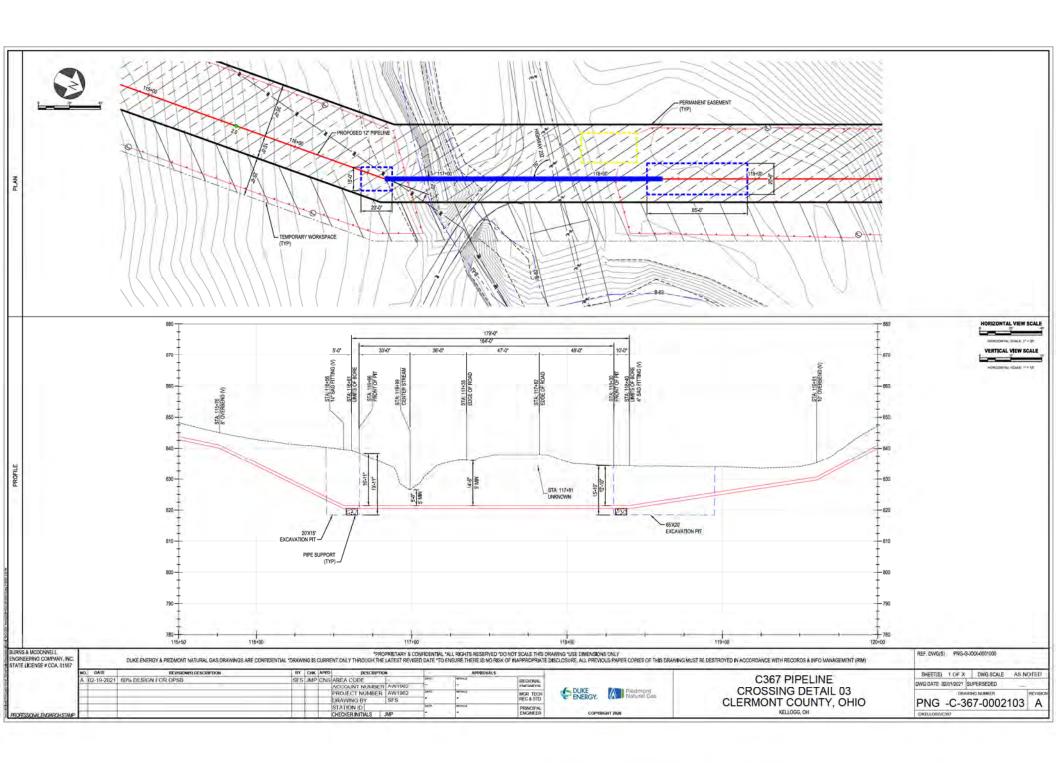


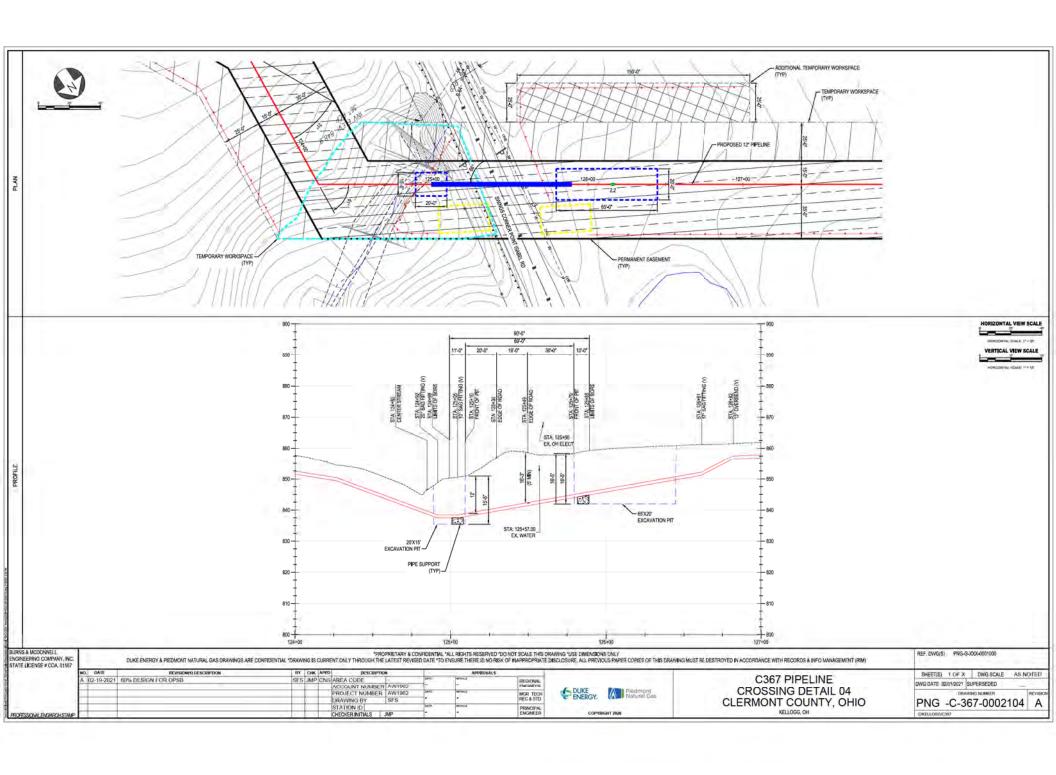


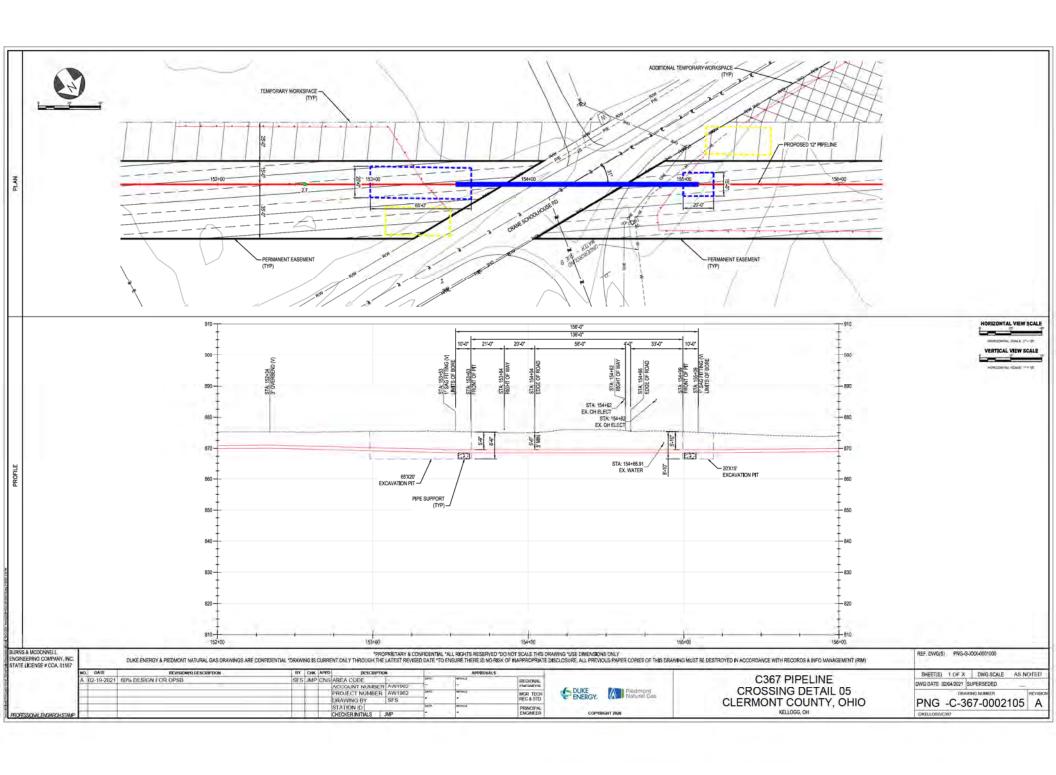


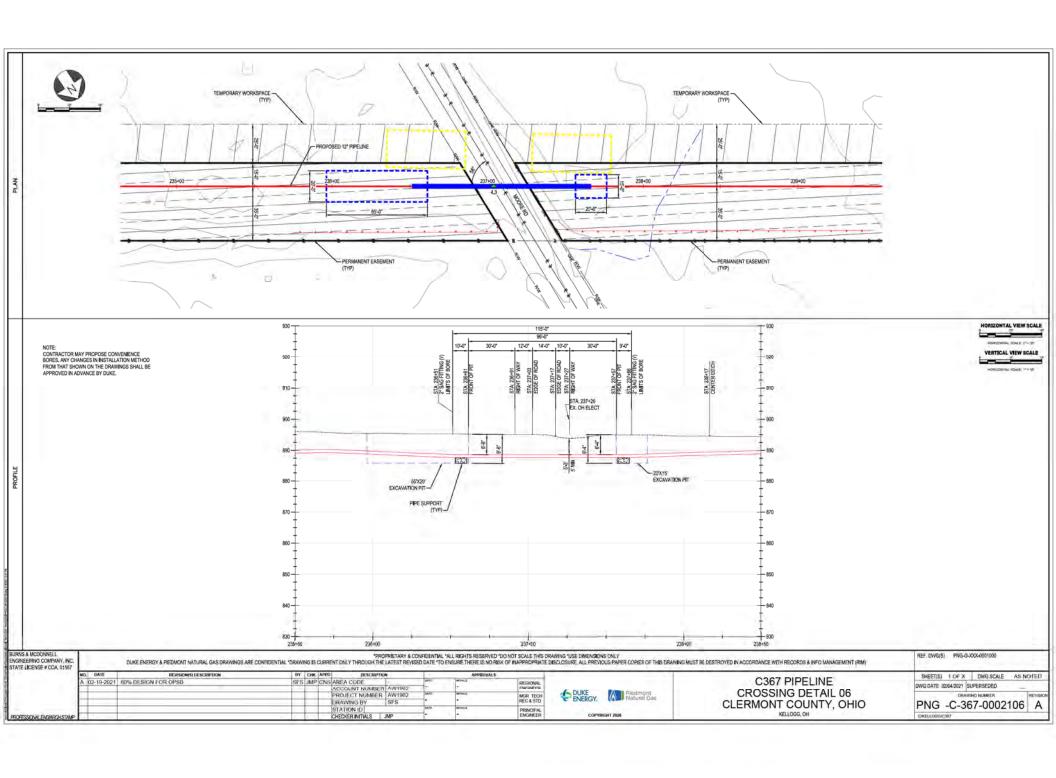


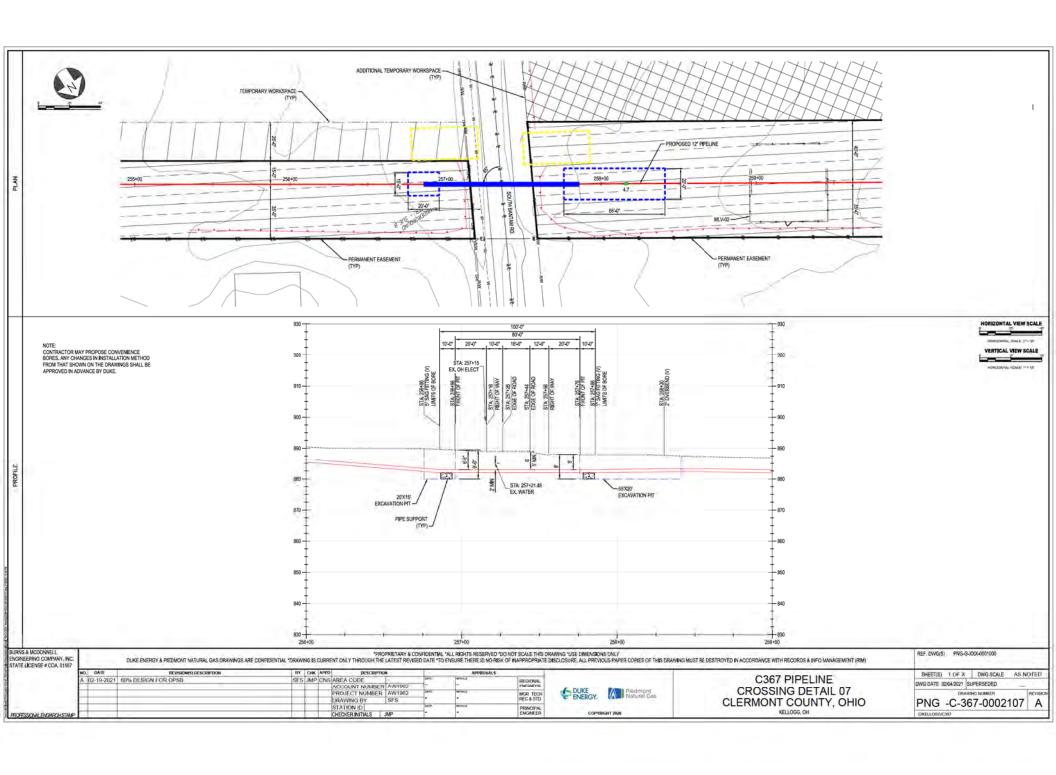


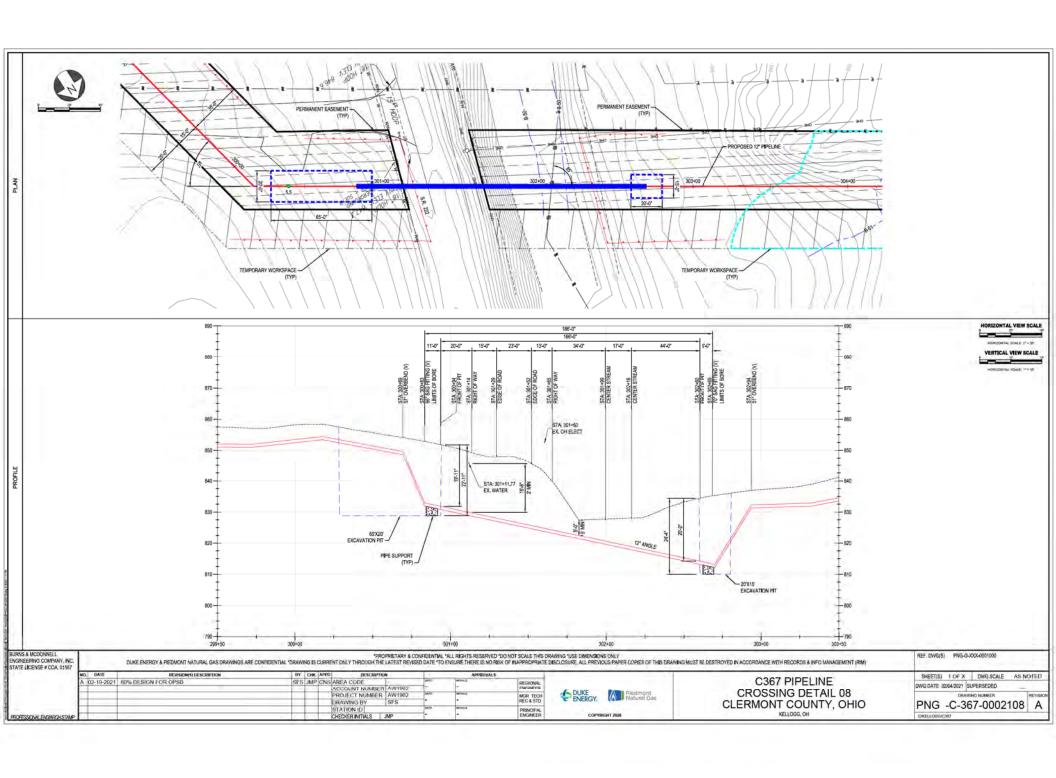


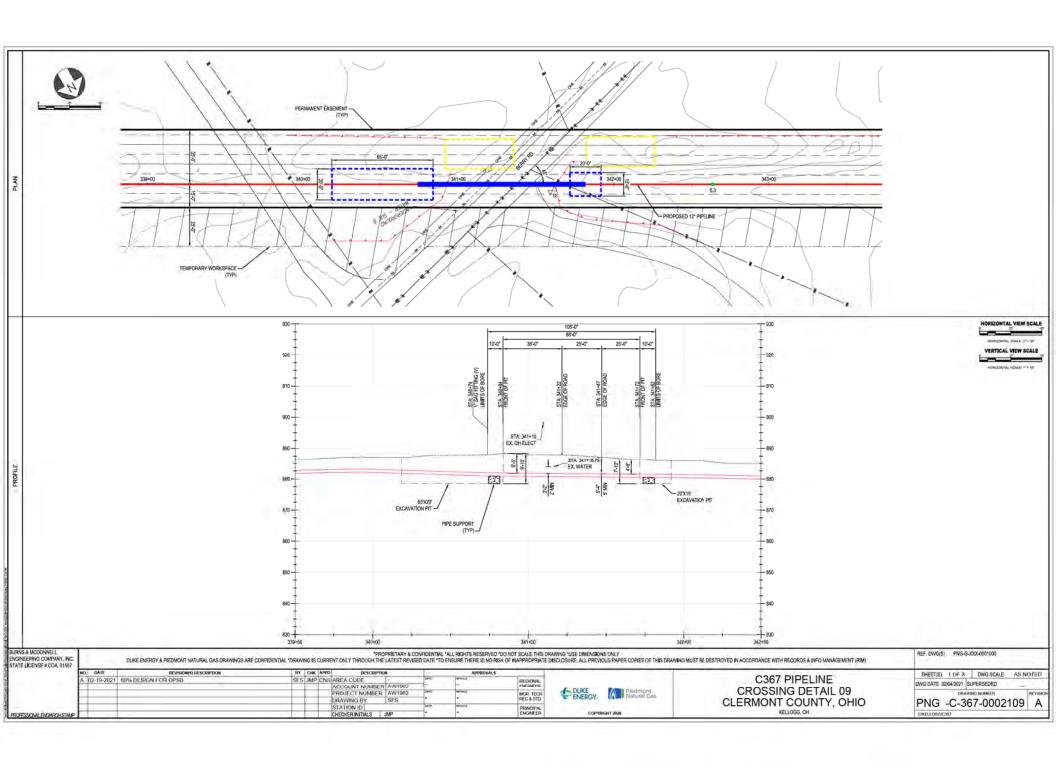


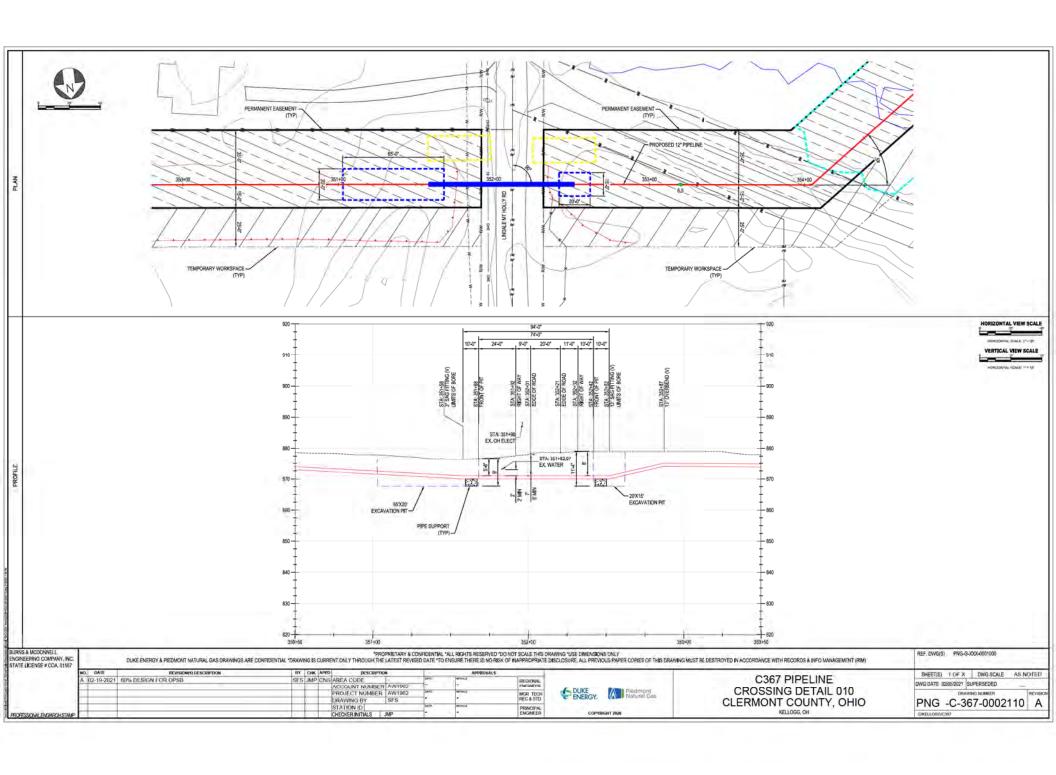


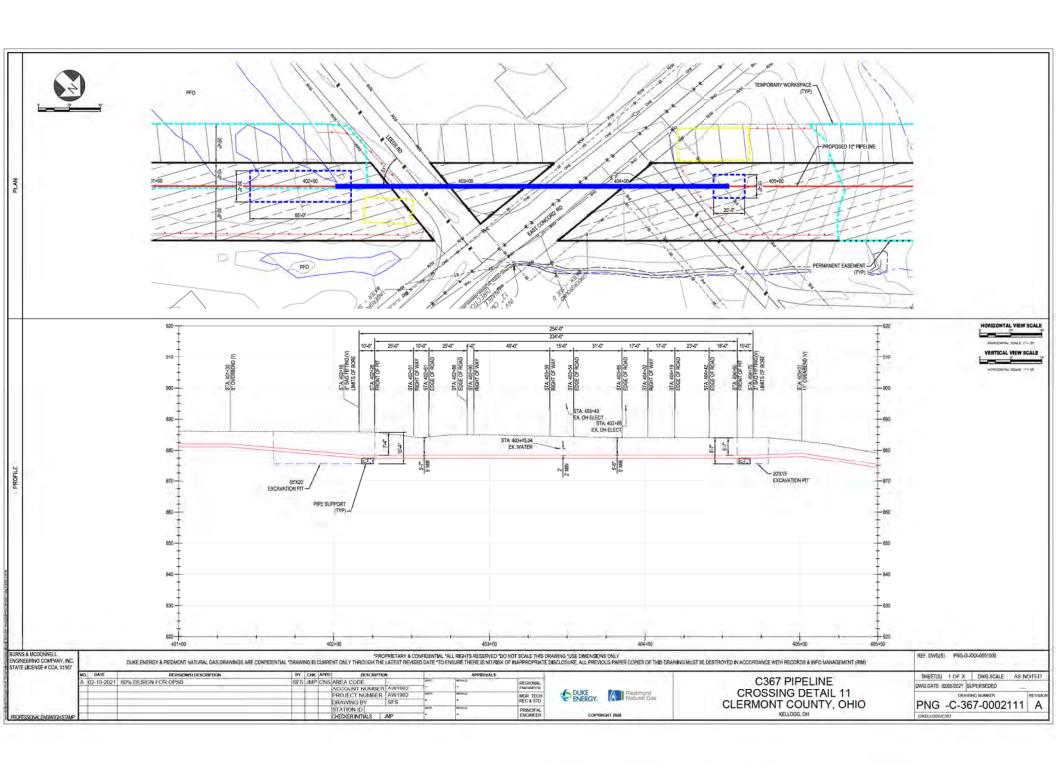


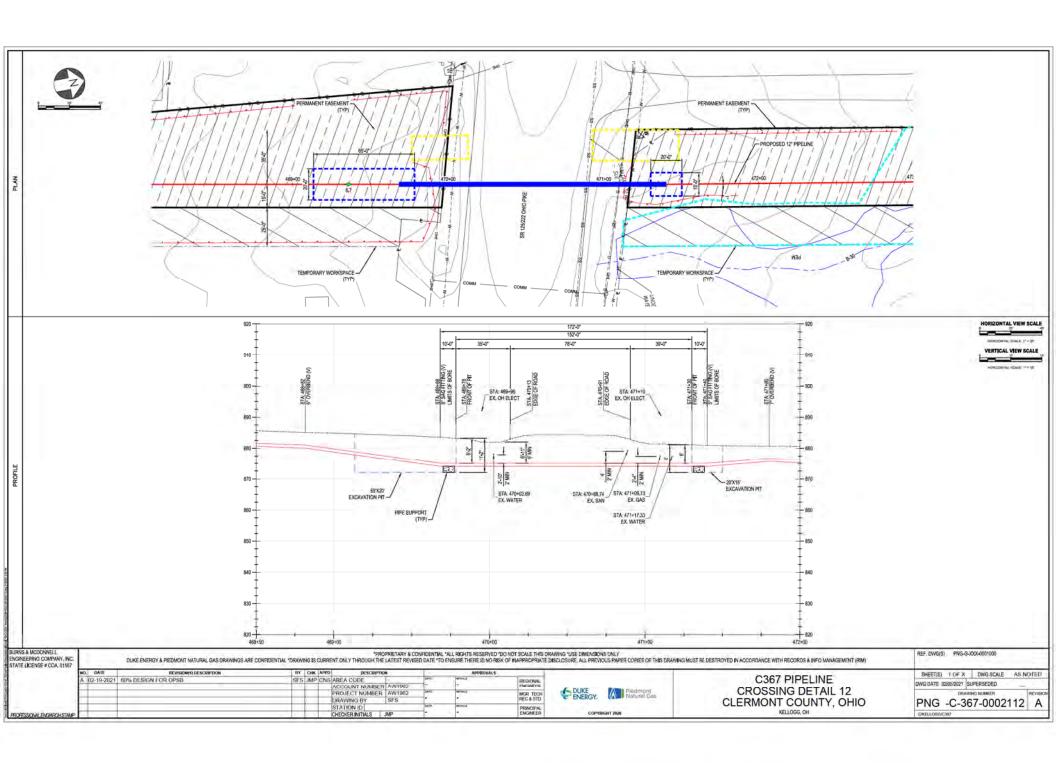


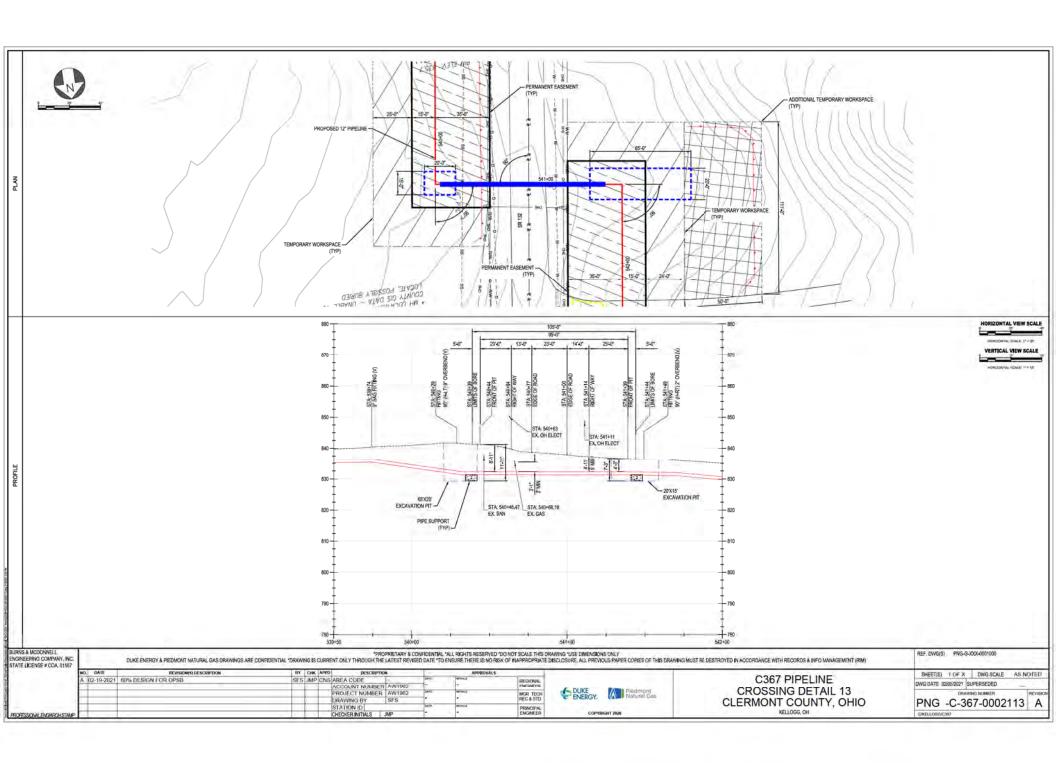


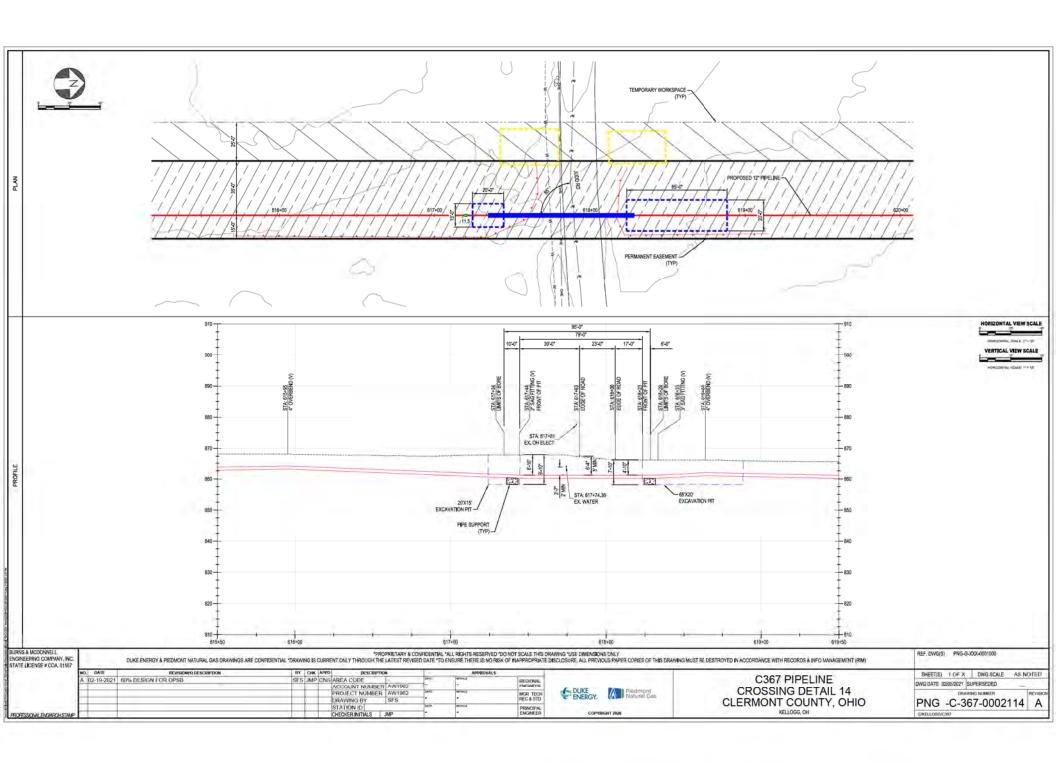


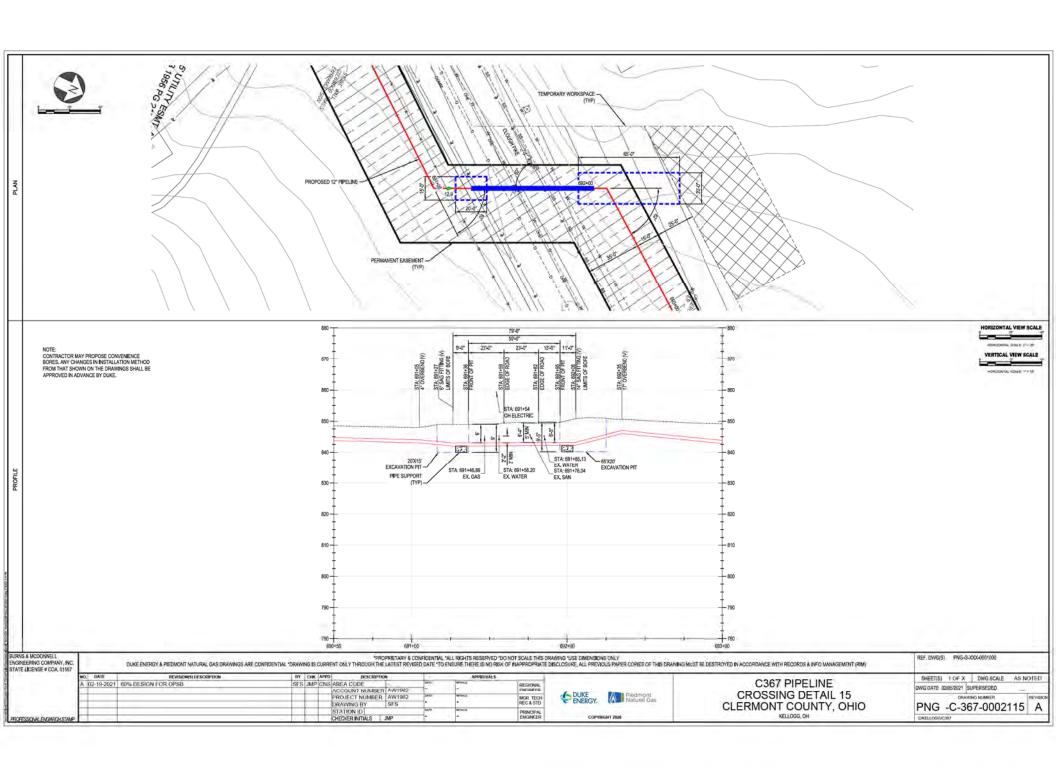


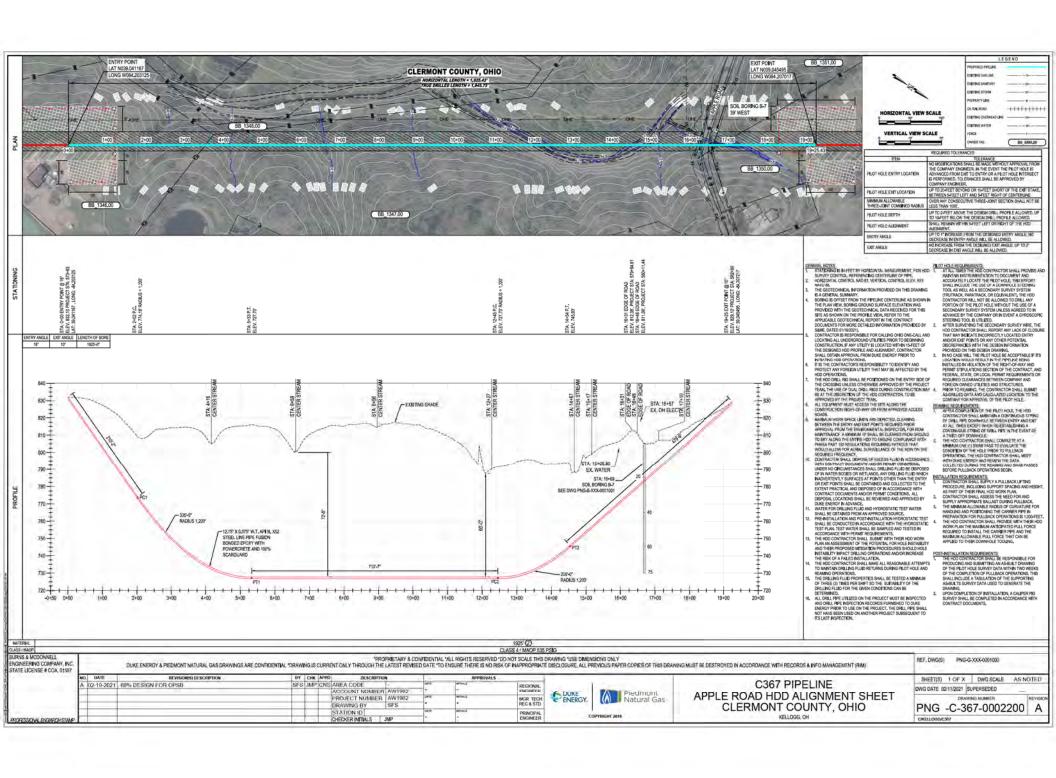


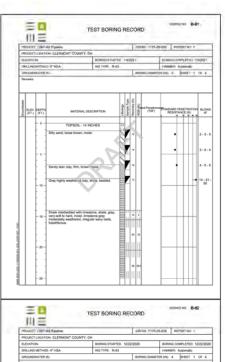




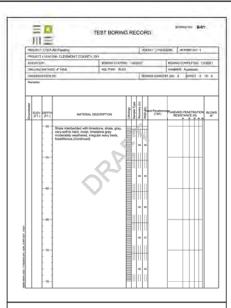




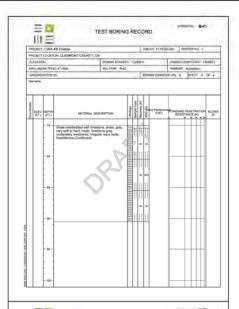




≣	ST BORING RECORD		100m) 100 B-62		= P	6	TEST BORING RE	CORD	00000	HO. 6-63
with character and the	olia h	75-05-01E	WERTSHIRT NO. 1	15	PROFEST CARD	All Figuritie		JON NO. 1176	40-60% HERE	DIT NO. 1
JECT LOCATION: CLERMONT COUNTY, OH				7	PROJECT LOCAT	TON: CLERMONT COUNTY,	ОН			
(TON:	BORING STARTED: 12/22/2020	808	ING COMPLETED: 12/22/2020		LEVATION		BORING STARTED: 120	22/2020	BORING COM	PLETED: 12
NO METHOD: 4" HSA	RIG TYPE: R-43	HAS	MER: Automatic		PRILLING METHO	00: 4° HSA	RIGTYPE: R-43		HAMMER: Au	Aomatic
NOWATER (R):	BORING DI	METER (N)	4 SHEET 1 OF 4	(GROUNDWATER	(FO)		BORING DIAME	TER (N): 4	SHEET 2
LEV SEPTIM MATERIAL, DOES OF THE PROPERTY OF T	7 J J K		0AND PENETRATION B_0MS SESSIONEZ NO	Personal	# 10 DEPTH 10 DEPTH	MATERIAL Continues and the face in the Ten to the Ten t	SPA	13		NETRATION VCE (N)
Use of the control of	e, shahe, gray, moderataly foosifienous.			1881 200 400 100 100 100 180811 000	-45	Shale interbedded with tim- hard, irregular and wavy be molet. Shale interbedded with tim- hard, irregular and wavy be molet.	eds, fossiliferous,	40 37 		



n	-8/4	CMI-	All Frigation				Т	10	en their	HOTE	457	10007	er t	
Pf	HOUSECT	LOCATI	ON CLERMONT COUNTY, OH											
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			D: 4"HSA	RIG TYPE R-4)	_	_	_		HAMM				_
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Goundwater	BLEV. (FT.)	DEPTH (FT.)	MATERIAL DES	CRIPTION	Ultrology	Sample Type	(u) favorage	(MPCO)	end Planetrom (TSF)	TAND R	APD P		MATION NO	81.
		50	Shale interbodded with timests hard, imagular and wavy beds, moist, (Continued)	ne, shale gray. fossiliferous,		i	î	ij		F	7	Ŧ	H	
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	:	70	Shale interbedded with limesto hand, irregular and wavy beds, moist. Limestone, gray, medium-hand	fossiliferous,	Ė	H				Г	T	Ť	П	
			moderately weathered, vuggy.					2						
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			ON: CLERMONT COUNTY, OH			_	_	_					
_	EVATIO			BORING STAF		2/2	2/20	50		_		LETED: 12	123/26
		METHOR (D: 4° HSA	RIG TYPE: R	143	-	т.	-	NG DIAMETE	HAMME		HEET 4	OF 4
	marks		*				-			or project		-	
Poundwater	BLEV.	DEPTH (FT.)	MATERIAL DES	DEPTION	Ulbology	Sample Type	Recovery (in)	(NFOO)	nd Penetrone (TSF)	TANDA RES	ISTAN	ETRATION OE (N)	BLC A
ľ		-75 -	Limestone, gray, medium hard moderately weathered, vuggy	to hard, (Continued)	NH H	ř	í				Ŧ		
		- 80 -				'n	*	n 		L		Ш	
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FROFESSONN, EVGAROHSTAMP

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SFS JMP CNS AREA CODE A 02-19-2021 60% DESIGN FOR OPSB ACCOUNT NUMBER AW1982
PROJECT NUMBER AW1982
DRAWING BY SFS MGR TECH REC & STD STATION ID PRINCIPAL ENGINEER

CHECKER INITIALS JMP

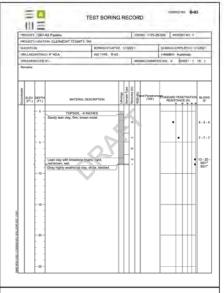
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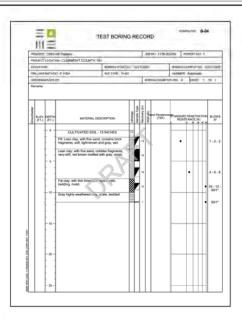
TEST BORING RECORD

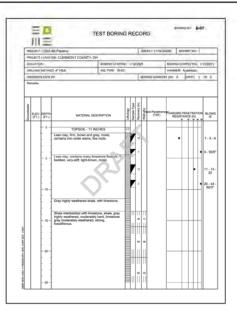


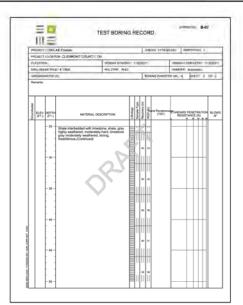
C367 PIPELINE **GEOTECH BORE LOG 1** CLERMONT COUNTY, OH KELLOGG, OH

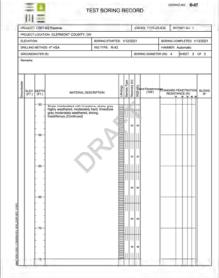
SHEET(S) X OF X DWG SCALE AS NOTED DWG DATE 01/20/2021 SUPERSEDED DRAWING NUMBER PNG -B-367-0002001 A











BURNS & MCDONNELL

ENGINEERING COMPANY, INC. STATE LICENSE # COA, 01557

PROFESSIONAL EVIGIARCH STAMP

"PROPRIETIANY & CONFIDENTIAL, VAL. RIGHTS RESERVED "DO NOT SCALE THIS DRAWING "USE DIMENSIONS ONLY DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL, "DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE "TO ENSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE. ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM)



C367 PIPELINE GEOTECH BORE LOG 2 CLERMONT COUNTY, OH SHEETS) X OF X DWG SQALE AS NOTED ONG DATE GV202020 LIGHTRESHEET PNG -B-367-0002002 A ORELLOGOCIO?

INSTALLATION:

- AASHTO #2 (1,5-2,5 INCH) STONE OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT A MINIMUM 6-INCH THICKNESS FOR LIGHT DUTY USE OR AT LEAST 10-INCH THICKNESS FOR HEAVY-DUTY USE.
- THE ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS (30-FT MINIMUM ON A SINGLE RESIDENTIAL LOT; 70-FT MINIMUM ELSEWHERE).
- A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:
- MINIMUM TENSILE STRENG
- IF NEEDED, A PIPE OR CULIVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OUT ONTO PAVED SURFACES.
- IF NEEDED, A WATER BAR SHALL BE CONSTRUCTED TO PREVENT SURFACE WATER FROM FLOWING ALONG THE LENGTH OF THE ENTRANCE UT ONTO PAVED SURFACE.

14' MIN & NOT LESS

THAN WIDTH OF INGRESS-

OR EGRESS

- TOP DRESS WITH ADDITIONAL STONE AS SITE CONDITIONS DEMAND.
- REMOVE MUD TRACKED ONTO PUBLIC STREETS IMMEDIATELY VIA SCRAPING OR SWEEPING.
- ENSURE THE ENDS OF A TEMPORARY CULVERT PIPE (IF UTILIZED) ARE NOT BLOCKED AND THAT THE PIPE IS FREE OF DEBRIS THROUGHOUT.

ROAD OR OTHER EXISTING

RIGHT OF WAY

DIVERSION AS NEEDED

PLAN VIEW

PROFILE VIEW

STABILIZING CONSTRUCTION ENTRANCE

PAVED SURFACE

(OR 30' FOR ACCESS TO INDIVIDUAL HOUSE LOT)

RIGHT OF WAY

SHERRICH STORY

DIVERSION AS NEEDED

18" OR SUFFICIENT OF DIVERT RUNOFF

- THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE,
- PULL OUT ALL CONSTRUCTION ENTRANCE MATERIAL AND PROPERLY DISPOSE OF OFF-SITE. STONE CAN BE BLENDED INTO THE SURROUNDING LANDSCAPE AS SITE CONDITIONS

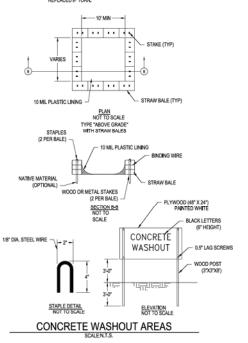
- ROAD OR OTHER EXISTING

PAVED SURFACE

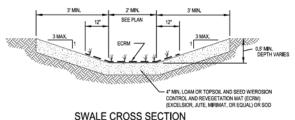
RE-GRADE THE AREA AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

NOTES:

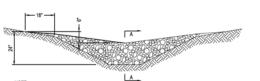
- CONCRETE WASHOUT WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WASHOUT CONVEYANCE.
- THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED ADJACENT TO THE TEMPORARY CONCRETE WASHOUT FACILITY.
- WASHOUT PIT MUST BE INSPECTED FREQUENTLY TO ENSURE LINER IS INTACT.
- ONCE 75% OF ORIGINAL PIT VOLUME IS FILLED OR LINER IS TORN, MATERIAL MUST BE REMOVED AND PROPERLY DISPOSED OF ONCE HARDENED, LINER SHALL BE REPLACED IF TORN.



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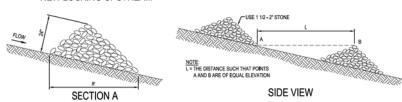


SWALE CROSS SECTION



NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE DAM.

VIEW LOCKING UPSTREAM



ROCK DITCH CHECK



PROFESSONAL ENGARCHISTAM

DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE" TO ENSURE THERE IS NO RISK OF MADRICIPATION DESCRIPTION OF THE DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT IRRINI SFS JMP CNS AREA CODE SFS JMP CNS ACCOUNT NUMBER AW108. 12-18-2020 REVISED 30% DESIGN PECKNAL 02 19 2021 60% DESIGN FOR OPSE PROJECT NUMBER AW1982 MGR TECH REC & STD SFS DRAWING BY

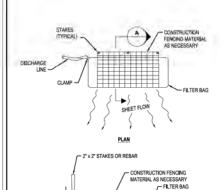
CHECKER INITIALS



C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 1** CLERMONT COUNTY, OHIO KELLOGG, OH

SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED PNG -C-367-0002500 B

REF. DWG(S): PNG-G-387-0002001



- 1. INSTALL A DEWATERING GEOTEXTILE FILTER BAG AS DIRECTED BY THE COMPANY'S INSPECTOR TO PREVENT THE FLOW OF HEAVILY SILT LADEN WATER INTO WATERBODIES OR WETLANDS.
- DISCHARGE SITE SHALL BE WELL VEGETATED AND THE TOPOGRAPHY OF THE SITE SLICH THAT WATER WILL FLOW AWAY FROM ANY WORK AREAS. THE AREA DOWN SLOPE FROM THE DEWATERING SITE MUST BE REASONABLY PLANE OR STABILIZED BY VEGETATION OR OTHER MEANS TO ALLOW THE FILTERED WATER TO CONTINUE AS SHEET FLOW
- 3. TO ATTACH THE DISCHARGE HOSE, CUT A CORNER OF THE BAG, INSERT DISCHARGE HOSE, AND SECURE THE HOSE TO THE BAG.
- 4. A SINGLE FILTER BAG SHOULD NOT BE USED FOR FLOWS GREATER THAN 600
- REPLACE FILTER BAG BEFORE IT IS COMPLETELY FILLED WITH SEDIMENT. MONITOR DISCHARGE TO AVOID OVER PRESSURING DUE TO PLUGGING, WHICH MAY RESULT IN RUPTURE.
- 6. DISPOSE OF USED FILTER BAG AND SEDIMENT AT A SITE APPROVED BY THE COMPANY'S INSPECTOR.



SECTION

PROFESSONAL ENGARCH STAM

SLOPE 0 TO 1

TYPICAL GEOTEXTILE FILTER BAG FOR DEWATERING

- 2" X 4" FRAME



GEOTEXTILE OVER

COMPACT BACKFILL

AROUND INLET

WIRE MESH BACKING



- CONSTRUCT PRIOR TO UPSLOPE LAND DISTURBANCE.
- CONSTRUCT WOODEN FRAME FROM 2"X4" LUMBER, DRIVE POSTS 1" INTO THE GROUND AT EACH CORNER DIRECTLY AGAINST THE CONCRETE BOX AND ASSEMBLE THE TOP FRAME WITH AN OVERLAP JOINT SHOWN BELOW, THE TOP FRAME SHALL BE SET AT AN ELEVATION THAT DOES NOT CAUSE PONDED WATER TO BACKUP INTO UNWANTED AREAS.
- THE WIRE MESH AND GEOTEXTILE SHALL BE TIGHTLY STRETCHED AND FASTENED TO THE FRAME.
- THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
- BACKFILL SHALL BE PLACED IN THE 18" TRENCH AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE ELEVATION OF THE TOP OF THE GRATE IS REACHED.

MAINTENANCE:

- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE PRACTICE. THE REMOVED SEDIMENT MUST BE STABILIZED AND SHOULD NOT BE PLACED WHERE IT COULD EVENTUALLY BE CONVEYED BACK TO THE INLET VIA SURFACE RUNOFF.
- REPLACE AND PROPERLY DISPOSE OF DAMAGED SILT FENCE MATERIAL

CHECKER INITIALS

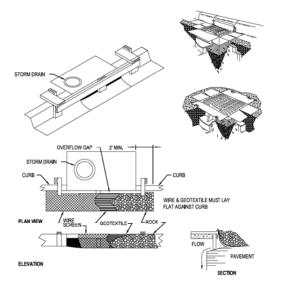
AREA WHERE SURFACE FLOW HAS CUT UNDER THE SILT FENCE MATERIAL WITHIN THE TRENCH SHALL BE RE-COMPACTED WITH APPROPRIATE MATERIAL (LE. HIGH CLAY CONTENT)

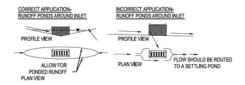
REMOVAL

- 1. PULL OUT ALL SILT FENCE MATERIAL AND STAKES AND PROPERLY DISPOSE OF OFF-SITE.
- RE-GRADE AREA SEDIMENT HAS ACCUMULATED AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

ALTERNATIVE MANUFACTURED YARD DRAIN INLET PROTECTION PRODUCTS ARE AVAILABLE AND CAN BE USED, SUBJECT TO PRIOR APPROVED BY THE COMMUNITY ENGINEER.

DROP INLET PROTECTION





INLET PROTECTION FOR CURB DRAINS & YARD DRAINS SITUATED ON A SLOPE:

INSTALLATION:

- REMOVE THE GRATE FROM THE CATCH BASIN.
- INSERT THE FILTRATION SACK INTO OPENING OF CATCH BASIN. SOME PRODUCTS REQUIRE THE FILTRATION SACK BE SLIPPED OVER THE CATCH BASIN GRATE FIRST.
- REINSERT GRATE INTO CATCH BASIN WHILE ENSURING ALL NECESSARY SUPPORT STRAPS TO PROVIDE SUPPORT AND ENSURE THE FILTRATION SACK DOES NOT FALL INTO CATCH BASIN AS IT FILLS WITH SEDIMENT.

MAINTENANCE:

- THE FILTRATION SACK MUST BE EMPTIED WHEN IT IS 1/3RD FULL OF SEDIMENT AND DEBRIS. SACKS ARE TYPICAL MANUFACTURED WITH LIFTING STRAPS AND DUMPING STRAPS.
- TO EMPTY THE SACK, REMOVE THE GRADE, LIFT THE SACK OUT OF THE CATCH BASIN VIA THE LIFTING STRAPS AND HAUL IT TO AN APPROPRIATE AREA. TURN IT INSIDE OUT WITH THE DUMPING STRAPS PROVIDED.
- THE FILTRATION SACK MUST BE REPLACED IF IT IS TORN, OTHERWISE THE SAME SACK CAN BE USED MULTIPLE TIMES.
- THE CONTRACTOR IS REQUIRED TO HAVE STAGED REDUNDANT CONTROLS ONSITE IN THE EVENT

INSPECTION

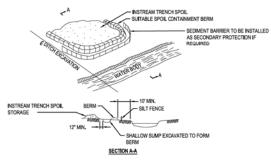
INLET PROTECTION MEASURES MUST BE INSPECTED AT LEAST 12-HOURS PRIOR TO RAIN EVENTS, IN ADDITION TO THE WEEKLY AND POST-RAIN EVENT INSPECTIONS, NON-FUNCTIONAL DEVICES

REMOVAL

- 1. PULL OUT ALL INLET PROTECTION MATERIAL AND PROPERLY DISPOSE OF OFF-SITE.
- RE-GRADE AREA WHERE ACCUMULATED SEDIMENT HAS BEEN PLACED AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

THE FOLLOWING DIAGRAMS PROVIDE A GENERAL IDEA OF HOW TO INSTALL AND MAINTAIN A VARIETY OF MANUFACTURED STORM DRAW INLET PROTECTION PRACTICES, BE GURE TO IMPLEMENT FILITATION SACIST THAT ARE APPROPRIATE FOR EITHER CURB INLETS OR FOR YARD DRAWIN ILLETS. MANUFACTURER'S SPECIFICATIONS FOR THE PRODUCT OF CHOICE SHOULD BE FOLLOWED.

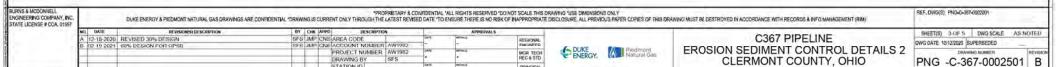
CURB INLET PROTECTION



- SEDIMENT BARRIER TO BE INSTALLED 1. SOIL CONTAINMENT BERMS ARE TO BE USED WHERE INSTREAM TRENCH SPOIL COULD REENTER THE WATERCOURSE DIRECTLY OR INDIRECTLY AND WITH SIMULTANEOUS UTILIZATION OF SEDIMENT
 - 2. MATERIAL USED FOR THE CONTAINMENT BERM SHOULD BE A MINIMUM OF 10 FT. FROM THE WATERS EDGE. IT SHOULD BE KEPT TO A HEIGHT WHICH REMAINS STABLE DURING THE CONSTRUCTION
 - 3. CARE SHOULD BE TAKEN THAT THE SPOIL PILE DOES NOT OVERTOP THE CONTAINMENT BERM.
 - THE CONTAINMENT BERM SHOULD BE DISMANTLED AND THE SITE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF THE WATER CROSSING.
 - WHERE POSSIBLE, RIPARIAN VEGETATION SHALL BE LEFT IN PLACE.
 - 6. STAGED MOVEMENT OF INSTREAM SPOIL MAY BE REQUIRED IF QUANTITIES ARE EXCESSIVE.
 - 7. CARE AND ATTENTION MUST BE TAKEN TO ENSURE SPOIL CONTAINMENT BERMS ARE MAINTAINED.
 - 8. FULL CONSIDERATION FOR OVERALL SLOPE STABILITY IS REQUIRED WHEN SELECTING A SPOIL

TYPICAL TEMPORARY SOIL CONTAINMENT BERM FOR WATERBODY TRENCH SPOILS

KELLOGG OH



INSTALLATION:

- CONSTRUCT PRIOR TO UPSLOPE LAND DISTURBANCE.
 PLACE CONTINUOUS LENGTHS OF SILT FENCE ALONG A CONSISTENT CONTOUR SO AS TO PREVENT THE CONCENTRATION OF RUNOFF AT LOW POINTS IN THE FENCE.
- TO PREVENT FLOW AROUND ENDS, EXTEND EACH OF A CONTINUOUS LENGTH OF SILT FENCE UPSLOPE (90° TO THE CONTOUR) SO THE ENDS ARE AT A HIGHER ELEVATION OR 20-FEET IN HORIZONTAL DISTANCE, WHICHEVER IS ACHIEVED FIRST.
- AT A MINIMUM, THE BOTTOM 8-INCHES OF THE SILT FENCE MATERIAL MUST BE PLACED IN A TRENCH (MINIMUM 6-INCH DEPTH) THAT IS CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE. THE TRENCH SHALL NOT BE CONSTRUCTED WITH THE TILT BLADE OF A
- THE TRENCH MUST BE BACKFILLED WITH SOIL AND PROPERLY COMPACTED, WHEN AGGRESSIVELY PULLED UPWARD BETWEEN TWO CONSECUTIVE STAKES, THE MATERIAL SHOULD NOT PULL OUT OF
- STAKES (MIN. 32-INCH LENGTH, 2"X2" HARDWOOD OF GOOD QUALITY) MUST BE PALCED ON THE DOWNSLOPE SIDE OF THE SILT FENCE MATERIAL.
 SILT FENCE MATERIAL MUST BE PULLED TIGHT BETWEEN CONSECUTIVE STAKES TO ENSURE THE
- FENCE DOES NOT SAG.
- WHEN IT IS NECESSARY TO JOIN TWO SEPARATE LENGTHS OF SILT FENCE TO FORM A CONTINUOUS RUN, THE END OF TWO SEPARATE LENGTHS MUST BE JOINED TOGETHER BY FIRST OVERLAPPING THEM AND THEN TWISTING THEM TOGETHER AT LEAST 180° PRIOR TO DRIVING THE STAKES INTO
- GRADES IN EXCESS OF 10% REQUIRE SILT FENCE TO BE "LHOOKED" AS DESCRIBED IN THE SWPPE

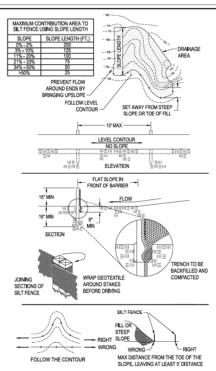
MAINTENANCE

- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3RD THE HEIGHT OF THE SILT FENCE. THE REMOVED SEDIMENT MUST BE STABILIZED AND SHOULD NOT BE PLACED WHERE IT COULD EVENTUALLY BE CONVEYED BACK TO THE SILT FENCE VIA SURFACE RUNOFF.
- REPLACE AND PROPERLY DISPOSE OF DAMAGED SILT FENCE MATERIAL. ADEAS WHERE SURFACE BLOW HAS CUT UNDER THE SET FENCE MATERIAL WITHIN THE TRENCH
- SHALL BE RE-COMPACTED WITH APPROPRIATE MATERIAL (I.E. HIGH CLAY CONTENT).

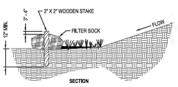
RURNS & MCCONNELL

PULL OUT ALL SILT FENCE MATERIAL AND STAKES AND PROPERLY DISPOSE OF OFF-SITE, RE-GRADE AREA WHERE SEDIMENT HAS ACCUMULATED AS NECESSARY AND ESTABLISH

VEGETATION IN ANY RESULTING DISTURBED AREAS.



SILT FENCE



- 1. ALL FILTER SOCK MUST BE 12-INCH COMPOST FILTER SOCK OR THE ENGINEERED EQUIVALENT.
- 2. MATERIALS COMPOST USED FOR FILTER SOCKS SHALL BE WEED. PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF A PARTICLES RANGING FROM 3/8" TO 2".
- 3. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPF 38" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

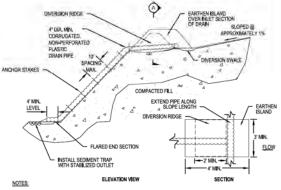
INSTALLATION:

- FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA, ON SLOPES APPROACHING 2-1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE
- 2. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE. SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
- 3. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS

PROPRIETARY & CONFIDENTIAL VALL RIGHTS RESERVED 'DO NOT SCALE THIS DRAWING 'USE DIMENSIONS ONLY

- 1. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A
- REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
- WHERE THE FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
- 4. REMOVAL FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH AS WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS.

FILTER SOCK



- 1. THE SLOPE DRAIN SHALL BE CONSTRUCTED/LENGTHENED WITH THE CONSTRUCTION OF THE FILL SLOPE. AS A RESULT, INLET ELEVATIONS WILL VARY ACCORDING TO GRADE ELEVATIONS AT THE TIME OF CONSTRUCTION.
- 2. INSPECT SLOPE DRAIN AND SUPPORTING DIVERSIONS AFTER EVERY RAINFALL EVENT AND MAKE NECESSARY REPAIRS FOR PROPER OPERATION OF THE SYSTEM.
- 3. UPON PROJECT COMPLETION, REMOVE THE SLOPE DRAIN AND PROPERLY STABILIZE ALL

TEMPORARY SLOPE DRAIN

DUIKE ENERGY & PEDMONT NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DUTE." TO ENGURE THERE BY NO RISK OF INAPPROPRIATE DISCUSSINE, ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT IRRIN STATE LICENSE # COA, 0155 REVISION(S) DESCRIPTION THY CHK APPD DESCRIPTION 12-18-2020 REVISED 30% DESIGN SFS JMP CNS AREA CODE SFS JMP CNS ACCOUNT NUMBER AW108. FEGICALIE 02 19 2021 60% DESIGN FOR OPSE PROJECT NUMBER AW1982 MGR TECH REC & STD SFS DRAWING BY PROFESSONAL ENGARCHISTAM CHECKER INITIALS

DUKE Pledmont Natural Gas

C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 3** CLERMONT COUNTY, OHIO KELLOGG OH

SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

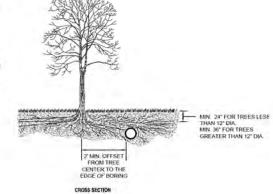
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PNG -C-367-0002502 B



1. AREAS WHERE NATURAL VEGETATION IS TO BE PRESERVED, INCLUDING TREES, SHALL BE FENCED PRIOR TO BEGINNING CLEARING OPERATIONS.

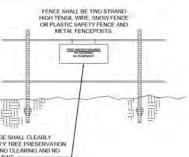
- 2. ACCEPTABLE FENCE MATERIALS INCLUDE PLASTIC FENCE OR SNOW FENCE ANCHORED TO METAL FENCE POSTS.
- 3. SIGNAGE SHALL CLEARLY IDENTIFY THE PROTECTION AREA AND STATE THAT NO CLEARING OR EQUIPMENT IS ALLOWED WITHIN IT.
- 4. FENCE SHALL REMAIN AROUND PROTECTION AREAS UNTIL AFTER FINAL GRADING HAS BEEN COMPLETED
- 5. FENCE SHALL BE PLACED AS SHOWN ON PLANS AND BEYOND THE DRIP LINE OR CANOPY OF TREES TO BE PROTECTED.
- 6. IF ANY CLEARING IS DONE AROUND SPECIMEN TREES IT SHALL BE DONE BY CUTTING AT GROUND LEVEL WITH HAND TOOLS AND SHALL NOT BE GRUBBED OR PULLED OUT.







TREE PRESERVATION AREA DURING BORING



SIGNAGE SHALL CLEARLY IDENTIFY TREE PRESERVATION AREA. NO CLEARING AND NO EQUIPMENT

CROSS SECTION

BURNS & MCCONNELL

TREE PRESERVATION AREA

TRENCHING SPOIL LIVE ROOTS SEVERED ROOTS CROSS SECTION 1. SPOIL TO BE LOCATED OUTSIDE THE DRIPLINE

TREE PRESERVATION AREA BEFORE TRENCHING

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SFS JMP CNS AREA CODE
SFS JMP CNS ACCOUNT NUMBER AW1982
PROJECT NUMBER AW1982
PROJECT NUMBER AW1982
SFS REVISION(S) DESCRIPTION 12-18-2020 REVISED 30% DESIGN 02 19 2021 60% DESIGN FOR OPSE PROFESSONAL ENGARCHISTAM CHECKER INITIALS



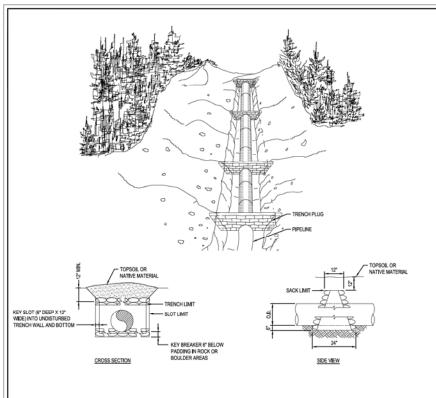
PROPERTY

MGR TECH REC & STD

C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 4** CLERMONT COUNTY, OHIO KELLOGG, OH

REF. DWG(S): PNG-G-367-0002001 SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

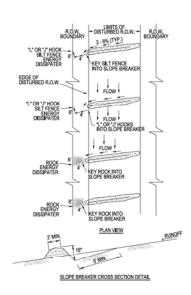
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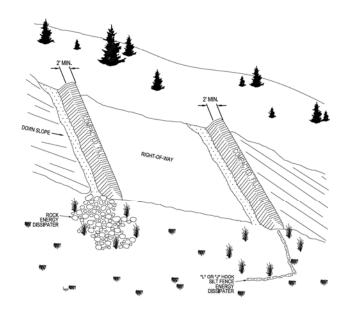


- 1. TRENCH PLUGS SHALL BE INSTALLED:
- ON SLOPES ALONG THE TRENCH LINE WHERE THE NATURAL DRAINAGE PATTERN, PROFILE, AND TYPE OF BACKFILL MATERIAL MAY RESULT IN LOSS OF BACKFILL MATERIAL OR ALTERATION OF THE NATURAL PATTERN;

 AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS;

- WHERE NEEDED TO AVOID DRAINING A WETLAND;
 ON UPLAND SLOPES, AT THE SAME SPACING AS SLOPE BREAKERS AND UP SLOPE OF SLOPE BREAKERS;
- IN CULTIVATED LAND AND RESIDENTIAL AREAS WHERE PERMANENT SLOPE BREAKERS ARE NOT TYPICALLY INSTALLED, AT THE SAME SPACING AS IF PERMANENT SLOPE BREAKERS WERE REQUIRED
- PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH DUKE CONSTRUCTION STANDARDS AND AS DIRECTED.
 BY COMPANY'S INSPECTOR, SACK BREAKS SHALL UTILES OPEN NEAVE HEMP OR JULYE SACKS FILLED WITH MINIMUM OF SSLBS OF SUBSIDL, SAND OR A MINITURE OF 1 PART CEMENT TO 6 PARTS SAND OR SUBSIDL AS DETERMINED BY COMPANY'S INSPECTOR
- POLYURETHANE FOAM BREAKERS MAY BE USED IN-LEIU-OF SACK BREAKERS, WHEN APPROVED BY COMPANY'S REPRESENTATIVE.
- PLUG SPACING AND CONFIGURATION MAY BE CHANGED AS DIRECTED BY COMPANY, DEPTH OF DITCH MAY VARY WITH SITE CONDITIONS.
- 4. ALL MATERIALS SHALL BE SUPPLIED BY CONTRACTOR.





- 1. SLOPE BREAKERS SHALL BE CONSTRUCTED OF COMPACTED NATIVE SOIL AND INSTALLED AT LOCATIONS AS REQUIRED BY DUKE CONSTRUCTION STANDARDS OR AS DIRECTED BY THE COMPANY'S REPRESENTATIVE.
- 2. SLOPE BREAKERS SHALL BE ORIENTED AS SHOWN OR OTHER PATTERN AS DIRECTED BY THE COMPANY'S REPRESENTATIVE TO DIRECT
- 3. SLOPE BREAKERS SHALL BE CONSTRUCTED AT 2-8% GRADIENT ACROSS THE SLOPE.
- 4. THE SLOPE BREAKERS SHALL BE 18" DEEP (AS MEASURED FROM THE TROUGH TO THE TOP OF THE SLOPE BREAKER), THE THROUGH WILL BE A MINIMUM OF 5' WIDE ACROSS THE WIDTH OF THE RIGHT-OF-WAY.
- 5. THE OUTLET OF THE SLOPE BREAKER MUST FREELY DISCHARGE ALL RUNOFF OFF THE DISTURBED RIGHT-OF-WAY INTO AN ENERGY
- WHERE SLOPE BREAKERS EXTEND BEYOND THE EDGE OF THE CONSTRUCTION RIGHT-OF-WAY TO DIRECT RUNOFF INTO STABLE, WELL VEGETATED AREAS, THESE LOCATIONS MUST BE APPROVED BY THE COMPANY'S REPRESENTATIVE.

FLOW ENERGY DISSIPATER NOTES:

- THE OUTLET SHALL CONTAIN AN ENERGY DISSIPATER IF THE COMPANY'S INSPECTOR DETERMINES EXISTING VEGETATION IS NOT SUFFICIENTLY STABLE TO PREVENT EROSION. THE ENERGY DISSIPATER SHALL BE CONSTRUCTED AS FOLLOWS:
- OUTFALL END OF DISSIPATER SHOULD BELOWER THAN SLOPE BREAKER END. SULT FIXE END OF DISSIPATERS SHOULD BE KEYED INTO THE END OF THE SLOPE BREAKER.
 PROVIDE ENOUGH AREA INSIDE "L" TO CAPTURE AND HOLD SEDIMENT.

TYPICAL TRENCH PLUG

TYPICAL SLOPE BREAKER

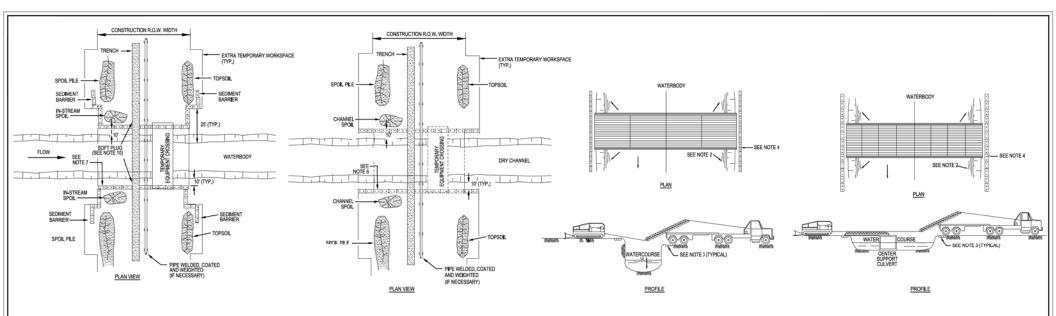
BURNS & MCDONNELL ENGINEERING COMPANY, INC. STATE LICENSE # COA, 01557		DUKE ENERGY & PIEDMONT NATURAL GAS DRAWINGS ARE	CONFIDENTIAL *DRAWIN	G IS CUR						VAWING "USE DIMENSIONS ONLY DISCLOSURE, ALL PREVIOUS PAPER COPIES OF TH	IS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT (RIM)
	NO. DATE	REVISION(S) DESCRIPTION	BY	CHK APP	DESCRIPTION	ON		APPRIOVAL 5			
		REVISED 30% DESIGN	SES		S AREA CODE	AW1092	OMIT	enc.1	FEGICINAL		C367 PIPELINE
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C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 5** CLERMONT COUNTY, OHIO KELLOGG, OH

REF, DWG(S): PNG-G-387-0002001 SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

PNG -C-367-0002504 B



- METHOD APPLIES TO WATERBODIES THAT ARE NOT STATE-DESIGNATED FISHERIES WHERE FLUME CROSSINGS ARE NOT REQUIRED.
- IF TOPOGRAPHY PERMITS TEMPORARY EQUIPMENT BRIDGE INSTALLATION. THE CONTRACTOR SHALL TRENCH, STRING, WELD, COAT, WEIGHT (IF NECESSARY), LOWER IN AND BACKFILL UTILIZING THE MAIN LINE CREW TRAVELING OVER THE BRIDGE.
- IF TOPOGRAPHY PROHIBITS INSTALLATION OF A TEMPORARY EQUIPMENT BRIDGE, CONTRACTOR SHALL TRENCH UP TO BOTH SIDES OF CROSSING: STRING, WELD, COAT AND WEIGHT (IF NECESSARY) USING THE MAINLINE CREW. IN STREAM EXCAVATION, LOWER IN, AND BACKFILL WILL UTILIZES A CLAM OR HOES WORKING FROM THE BANKS.
- SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE, NO IN-STREAM WORK BETWEEN APRIL 15 AND
- COMPLETE ALL IN-STREAM ACTIVITIES WITHIN 24 HOURS IF FEASIBLE.
- NO REFUELING OF MOBILE EQUIPMENT WITHIN 100 FEET OF WATERBODY. REFUEL STATIONARY EQUIPMENT AS
- INSTALLATION OF TEMPORARY EQUIPMENT CROSSING IS REQUIRED AT ALL STATE-DESIGNATED FISHERIES AND STREAM CROSSINGS. IF A TEMPORARY EQUIPMENT CROSSING IS INSTALLED, IT MUST BE BUILT IN
- ACCORDANCE WITH SECTION PERMITS. IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA.
- CONSTRUCT SEDIMENT BARRIERS ALONG THE SIDES OF STOCKPILES AND ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY.
- IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL A MINIMUM OF 10 FEET FROM THE WATERS EDGE AND WITHIN THE CONSTRUCTION R.O.W. UNLESS DEPICTED OTHERWISE IN SITE SPECIFIC CROSSING PLANS. TEMPORARY WORKSPACE MUST BE A MINIMUM OF 25' FROM THE WATERS EDGE.
- TRENCH THROUGH WATERCOURSE USING MAINLINE EXCAVATION EQUIPMENT WHERE PRACTICAL INSTALL SOFT PLUGS AT THE EDGE OF STREAM BANKS UNTIL JUST PRIOR TO PIPE INSTALLATION TO CONTROL
- WATER FLOW & TRENCH SLOUGHING.
- MAINTAIN STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
- BACKFILL WITH NATIVE MATERIAL

BURNS A MOTOWNEY

- RESTORE WATERBODY CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE,
- RESTORE STREAM BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE AS REQUIRED. ALL DIMENSIONS INDICATED SHALL BE DETERMINED BY ACTUAL CONSTRUCTION CONDITIONS.

TYPICAL FLOWING WATERBODY CROSSING OPEN CUT TRENCHED

- METHOD APPLIES TO CROSSINGS WHERE NO FLOWING WATER IS PRESENT AT THE TIME OF CROSSING.
- CONTRACTOR MAY "MAINLINE THROUGH" THE CROSSING OR UP TO BOTH SIDES OF THE CROSSING: STRING, WELD, COAT, AND WEIGHT (IF NECESSARY), USING THE MAINLINE CREW WITH THE PIPE SKIDDED OVER THE CROSSING.
- NO REFUELING OF MOBILE EQUIPMENT WITHIN 100 FEET OF DRY CHANNEL, REFUEL STATIONARY FOUIPMENT AS PER THE SPCC PLAN.
- INSTALLATION OF TEMPORARY EQUIPMENT CROSSING IS REQUIRED AT ALL STREAM CROSSINGS EQUIPMENT CROSSING MUST BE BUILT IN ACCORDANCE WITH THE TYPICAL PORTABLE WATERBODY BRIDGE DETAIL.
- IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA. STOCKPILE TOPSOIL AND SPOIL SEPARATELY, TOPSOIL AND SPOIL WILL NOT BE STOCKPILED IN THE CROSSING CHANNEL AND WILL BE PLACED A MINIMUM OF 10 FEET FROM CROSSING BANKS WITHIN THE CONSTRUCTION
- CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. FOLLOWING CLEARING AND GRADING AND MAINTAIN UNTIL CONSTRUCTION OF THE CROSSING. EROSION CONTROL MEASURES SHALL BE REINSTALLED IMMEDIATELY FOLLOWING BACKFILLING OF TRENCH AND STABILIZATION OF BANKS, BARRIERS MAY BE TEMPORABLY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY
- IN-STREAM SPOIL TO BE STORED OUT OF THE STREAM CHANNEL A MINIMUM OF 10 FEET FROM HIGH BANK AND WITHIN THE CONSTRUCTION R.O.W. UNLESS DEPICTED OTHERWISE IN SITE SPECIFIC CROSSING PLANS.
- BACKFILL WITH NATIVE MATERIAL
- RESTORE CROSSING CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE,
- RESTORE CROSSING BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE AS REQUIRED ALL DIMENSIONS INDICATED SHALL BE DETERMINED BY ACTUAL CONSTRUCTION CONDITIONS.

- THIS TYPE OF BRIDGE IS GENERALLY USED ON NARROW, DEEP CROSSINGS
- BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY. UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE ADEQUATE FREEBOARD. AS REQUIRED, ENSURE THAT FILL MATERIAL USED DOES NOT SPILL
- CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY, BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY
- THE END OF EACH WORK DAY, SILT FENCE, OR SANDBAGS MAY BE USED INTERCHANGEABLY. REMOVE PORTABLE BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE. THE STRUCTURE IS TO BE REMOVED IF THERE IS MORE THAN ONE MONTH DETWEEN FINAL GRADING AND SEEDING, AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. IS AVAILABLE.
- DISPOSE OF ANY ROCK AS DIRECTED BY THE COMPANY REPRESENTATIVE.
- RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS.

- THIS TYPE OF BRIDGE IS GENERALLY USED FOR CROSSINGS THAT ARE TOO WIDE FOR A SINGLE BRIDGE SECTION AND RELATIVELY SHALLOW.
- BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY. UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE ADEQUATE FREEBOARD.
- AS REQUIRED, ENSURE THAT FILL MATERIAL, IF USED, DOES NOT SPILL INTO WATERCOURSE, CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W, TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERBODY, BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE
- FND OF FACH WORK DAY, SILT FENCE OR SANDRAGS MAY BE LISED INTERCHANGEARLY. REMOVE PORTABLE BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE THE STRUCTURE IS TO BE REMOVED IF THERE IS MORE THAN ONE MONTH BETWEEN FINAL GRADING AND SEEDING, AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. IS AVAILABLE.
- DISPOSE OF ANY ROCK AS DIRECTED BY COMPANY REPRESENTATIVE.
- RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS,

TYPICAL NON-FLOWING WATERBODY CROSSING OPEN CUT TRENCHING

TYPICAL PORTABLE WATERBODY BRIDGE

TYPICAL PORTABLE WATERBODY BRIDGE WITH CULVERT SUPPORT

PROPRIETARY & CONFIDENTIAL VALL RIGHTS RESERVED DO NOT SCALE THIS DRAWING USE DIMENSIONS ONLY NGINEERING COMPANY, INC DUKE ENERGY A PERMICH NATURAL GAS DRAWINGS ARE CONFIDENTIAL "DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE "TO ENSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO MANAGEMENT IRRIN STATE LICENSE # COA, 01557 REVISION(S) DESCRIPTION THY CHK APPD DESCRIPTION 12-18-2020 REVISED 30% DESIGN SES JMP CNS ADEA CODE REGIONAL 02 19 2021 60% DESIGN FOR OPSI PROJECT NUMBER AW1982 MGR TECH REC & STD SFS DRAWING BY PROFESSIONAL ENGARCHISTAN CHECKER INTIALS

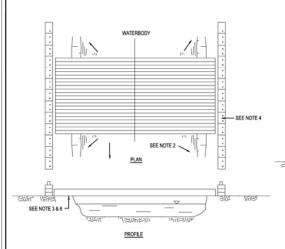


C367 PIPELINE **EROSION SEDIMENT CONTROL DETAILS 6** CLERMONT COUNTY, OHIO KELLOGG OH

SHEET(S) 3 OF 5 DWG SCALE AS NOTED DWG DATE 10/12/2020 SUPERSEDED

REF, DWG(S): PNG-G-387-0002001

PNG -C-367-0002505 B

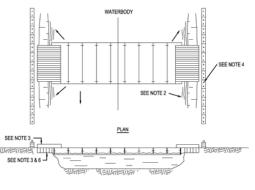


- THIS TYPE OF BRIDGE IS GENERALLY USED ON NARROW CROSSINGS, LESS THAN 20 FEET WIDE WITH APPROPRIATE BANK CONFIGURATION. MULTIPLE MATS MAY BE LAYERED FOR HEAVIER EQUIPMENT CROSSINGS.
- BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY, BRIDGE SHOULD BE TEMPORARILY REMOVED IF HIGH WATER RENDERS IT UNSAFE TO USE.
- F REQUIRED, UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SNUSS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE. ENSURE AGOUNTE FREEDOMA, AS REQUIRED, FOUNDER THAT FILL MATERIAL, IF USED DOES NOT SPILL INTO WATERCOURSE INCLUDING REMOVAL OF DIRT FROM DECK DURING OPERATION.
- CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SLT LUCEN WATER AND SPOL. FROM PLOWING BACK INTO WATERSODY, BARRIERS MAY BE TEMPOPARKY PREMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY. SILT FENCE, HAY BALES OR SANDBAGS MAY BE USED INTERCHANGEABLY.
- REMOVE BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE. THE STRUCTURE IS TO BE REMOVED IF THERE IS MORE THAN ONE MONTH BETWEEN INALL GRADING AND SEEDING, AND ALTERNATIVE ACCESS TO THE CONSTRUCTION R.O.W. IS AVAILABLE.
- 6. DISPOSE OF ANY ROCK AS DIRECTED BY COMPANY REPRESENTATIVE.
- 7. RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION

TYPICAL TIMBER MAT WATERBODY BRIDGE

SCALE: N.T.

PROFESSONAL ENGARCHISTAM



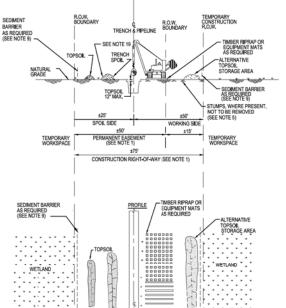
PROFILE

- 1. THIS TYPE OF BRIDGE IS GENERALLY USED ON WIDE, DEEP CROSSINGS.
- 2. BRIDGE IS ANCHORED AND/OR TIED OFF TO ANCHOR BLOCKS FOR STABILITY.
- UTILIZE APPROACH FILLS OF CLEAN GRANULAR MATERIAL, SWAMP MATS, SKIDS OR OTHER SUITABLE MATERIALS TO AVOID CUTTING THE BANKS WHEREVER FEASIBLE, ENSURE ADEQUATE FREEDOARD, AS REQUIRED, ENSURE THAT FILL MATERIAL IF USED, DOES NOT SPILL INTO WATERCOURSE.
- 4. CONSTRUCT SEDIMENT BARRIERS ACROSS THE ENTIRE CONSTRUCTION R.O.W. TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERGODY, BARRIERS MAY SE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST SE REPLACED BY THE END OF EACH WORK DAY, SILT FENCE, HAY BALE SOR SANDBAGS MAY SE USED INTERCHANGEABLY.
- REMOVE FLOATING BRIDGES AS SOON AS POSSIBLE AFTER PERMANENT SEEDING UNLESS OTHERWISE DIRECTED BY COMPANY REPRESENTATIVE. THE STRUCTURE IS TO BE REMOVED F THERE IS MORE THAN ONE MONTH BETWEEN FINAL GRADING AND SEEDING AND ALTERNATIVE ACCESS TO THE CONSTRUCTION BY AND A STANDARD AND ALTERNATIVE ACCESS TO THE CONSTRUCTION BY AND A STANDARD - 6. DISPOSE OF ANY ROCK AS DIRECTED BY COMPANY REPRESENTATIVE.
- RESTORE AND STABILIZE BED AND BANKS TO APPROXIMATE PRE-CONSTRUCTION CONDITIONS.

TYPICAL FLEXI-FLOAT WATERBODY BRIDGE

SCALE: N.T.S.

CHECKER INITIALS



PLAN VIEW

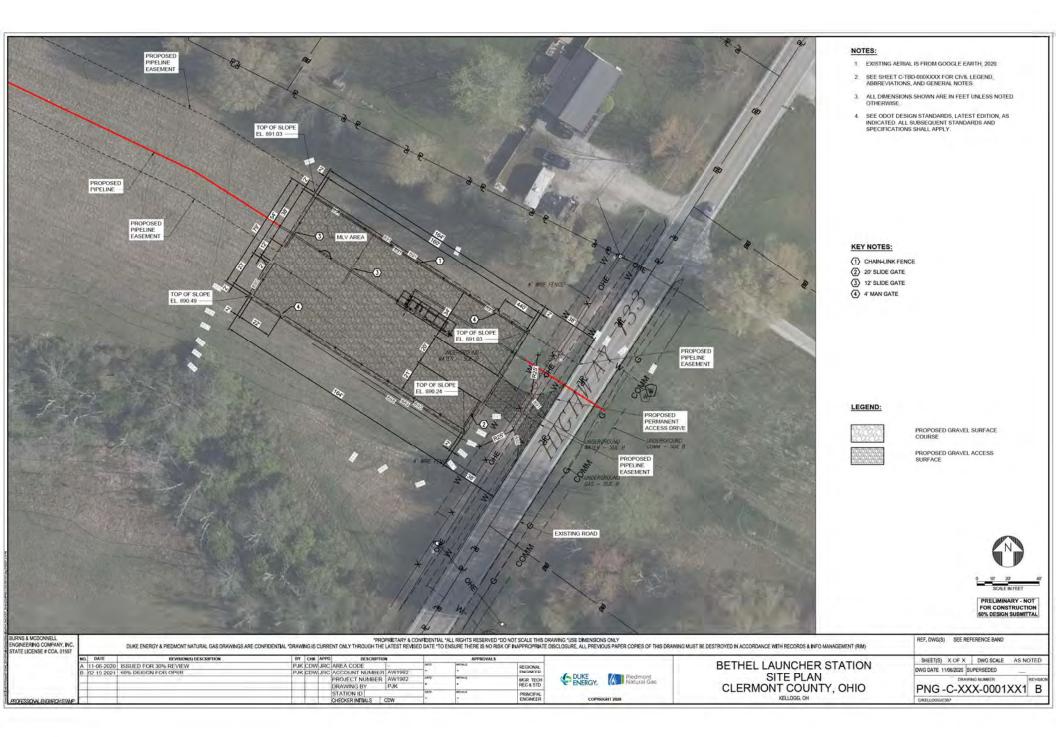
- CONSTRUCTION RIGHT-OF-WAY WILL TYPICALLY BE 75 FEET WIDE CONSISTING OF 50 FEET OF PERMANENT EASEMENT AND UP TO 25 FEET OF TEMPORARY WORKSPACE.
- THE SAME LAYOUT APPLIES WHETHER CONSTRUCTION R.O.W. DOES OR DOES NOT ABUT A FOREIGN R.O.W.
- LOCATE ANY EXTRA TEMPORARY WORK SPACE AREAS AT LEAST 25 FEET FROM EDGE OF WETLAND AND WITHIN THE APPLICABLE FULL WIDTH CONSTRUCTION R.O.W.
- CLEARING OF VEGETATION AND TREES IS PROHIBITED BETWEEN TEMPORARY EXTRA WORK SPACE AND THE EDGE OF THE WETLAND
- CUT VEGETATION AND TREES OFF AT GROUND LEVEL, LEAVING EXISTING ROOT SYSTEMS IN PLACE WHEREVER PRACTICABLE, AND REMOVE CUTTINGS FROM THE WETLAND FOR DISPOSAL.
- LIMIT CONSTRUCTION EQUIPMENT TO ONE PASS THROUGH WETLANDS TO THE EXTENT PRACTICABLE,
- NO REFUELING OF EQUIPMENT WITHIN 100 FEET OF WETLAND EXCEPT IN ACCORDANCE WITH THE SPCC PLAN.
- IF SATURATED AT TIME OF CONSTRUCTION, REDUCE SOIL COMPACTION BY UTILIZING WIDE-TRACK OR BALLOON TIRE. CONSTRUCTION EQUIPMENT OR NORMAL EQUIPMENT OPERATED ON TIMBER RIPPAP OR EQUIPMENT MATS.
- AVOID ADJACENT WETLANDS. INSTALL SEDIMENT BARRIERS IMMEDIATELY AFTER INITIAL, GROUND DISTURBANCE AND AT THE EDGE OF THE CONSTRUCTION R.O.W. ALONG THE WETLAND AS DIRECTED BY THE COMPANY'S INSPECTOR.
- THIS DRAWING REFLECTS "TRENCH ONLY" TOPSOIL STRIPPING PROCEDURE FOR AREAS WHERE STANDING WATER OR SATURATED SOIL ARE NOT PRESENT.
- SALVAGE UP TO 12" OF TOPSOIL OVER TRENCH AT LOCATIONS IDENTIFIED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE COMPANY'S INSPECTOR. MAINTAIN SEPARATION BETWEEN TOPSOIL AND TRENCH SPOIL.
- LEAVE GAPS IN TOPSOIL AND SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT USE TOPSOIL FOR PADDING. AVOID SCALPING VEGETATED GROUND SURFACE WHEN BACKFILLING SPOIL PILE.
- IN UNSATURATED CONDITIONS, SPOIL MAY BE USED TO STABILIZE THE WORKING SIDE.
- IF SATURATED AT TIME OF CONSTRUCTION, LEAVE HARD PLUGS AT THE EDGE OF WETLAND UNTIL JUST PRIOR TO TRENCHING.
- 15. TRENCH THROUGH WETLANDS.
- LOWER IN PIPE, INSTALL TRENCH BREAKERS AT WETLAND EDGES AS DIRECTED BY THE COMPANY'S INSPECTOR TO PREVENT DRAINAGE, BACKFILL UPON COMPLETION OF CONSTRUCTION.
- REMOVE ALL TIMBER, RIPRAP OR EQUIPMENT MATS FROM WETLANDS UPON COMPLETION OF CONSTRUCTION.
- RESTORE GRADE TO NEAR PRE-CONSTRUCTION TOPOGRAPHY AND REPLACE TOPSOIL, WHERE SALVAGED, WITHOUT A CROWN OVER THE TRENCH.
- 19. IF STANDING WATER IS NOT PRESENT, SEED AS SPECIFIED.
- TOPSOIL AND TRENCH SPOIL RELATIVE POSITIONS CAN, AS DIRECTED BY THE COMPANY'S INSPECTOR, BE REVERSED.

TYPICAL WETLAND CROSSING

SEDIMENT BARRIER

SCALE: NT

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- 1. EXISTING AERIAL IS FROM GOOGLE EARTH, 2020.
- SEE SHEET C-TBD-000XXXX FOR CIVIL LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
- ALL DIMENSIONS SHOWN ARE IN FEET UNLESS NOTED OTHERWISE.
- SEE ODOT DESIGN STANDARDS, LATEST EDITION, AS INDICATED. ALL SUBSEQUENT STANDARDS AND SPECIFICATIONS SHALL APPLY.

KEY NOTES:

- (1) CHAIN-LINK FENCE
- 2 12 SLIDE GATE
- 3 4 MAN GATE

LEGEND:



PROPOSED GRAVEL SURFACE COURSE



PROPOSED GRAVEL ACCESS SURFACE



PRELIMINARY - NOT FOR CONSTRUCTION 60% DESIGN SUBMITTAL

MLV-301 STATION

SITE PLAN - ALT ROUTE CLERMONT COUNTY, OHIO

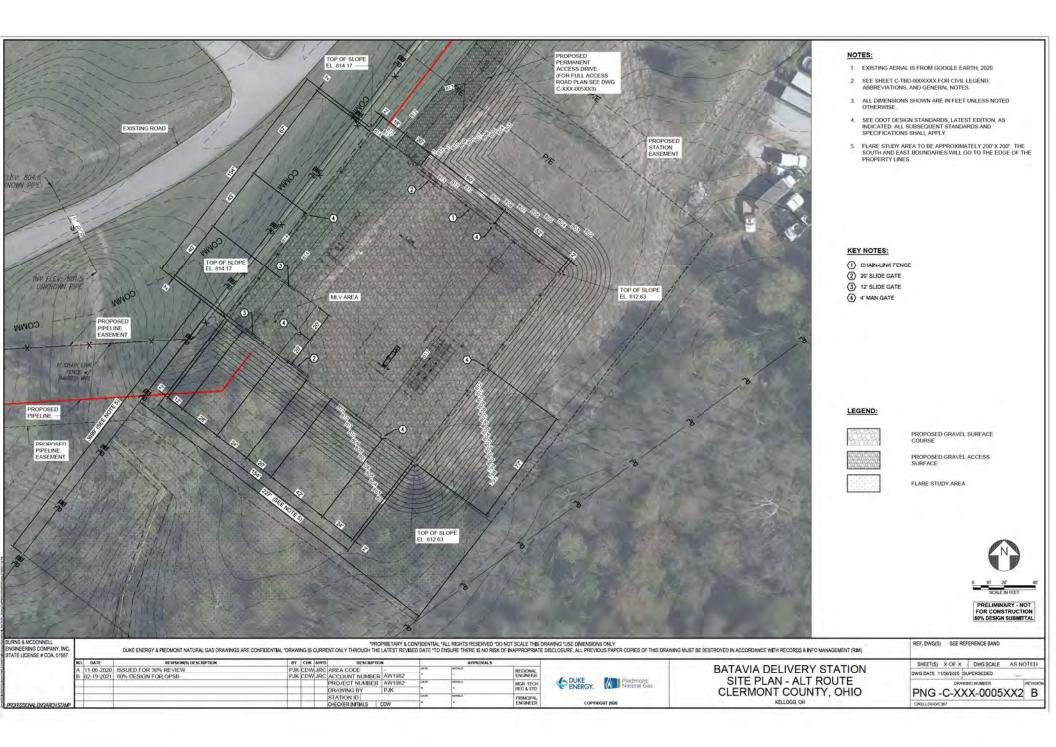
SHEET(S) X OF X DWG SCALE AS NOTED DWG DATE 11/06/2020 SUPERSEDED

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- 1. EXISTING AERIAL IS FROM GOOGLE EARTH, 2020.
- 2. SEE SHEET C-TBD-000XXXX FOR CIVIL LEGEND. ABBREVIATIONS, AND GENERAL NOTES.
- ALL DIMENSIONS SHOWN ARE IN FEET UNLESS NOTED OTHERWISE.
- SEE ODOT DESIGN STANDARDS, LATEST EDITION, AS INDICATED. ALL SUBSEQUENT STANDARDS AND SPECIFICATIONS SHALL APPLY.

KEY NOTES:

(1) CHAIN-LINK FENCE

2 20' SLIDE GATE

(3) NOT USED ON THIS DWG

4 MAN GATE

LEGEND:

PROPOSED GRAVEL SURFACE COURSE

PROPOSED GRAVEL ACCESS



PRELIMINARY - NOT FOR CONSTRUCTION 60% DESIGN SUBMITTAL

-	
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BURNS & MCDONNELL ENGINEERING COMPANY, IN STATE LICENSE # COA, 0155 PJK DDW JRC AREA CODE
ACCOUNT NUMBER AW1982
PROJECT NUMBER AW1982
PROJECT NUMBER AW1982
PROJECT NUMBER JW1982 02-19-2021 60% DESIGN FOR OPSB MGR TECH REC & STD DRAWING BY STATION ID PROFESSIONAL ENGRAPORISTAME



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SHEET(S) X OF X DWG SCALE AS NOTED DWG DATE 11/00/2020 SUPERSEDED PNG-C-XXX-0005XX3 A

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