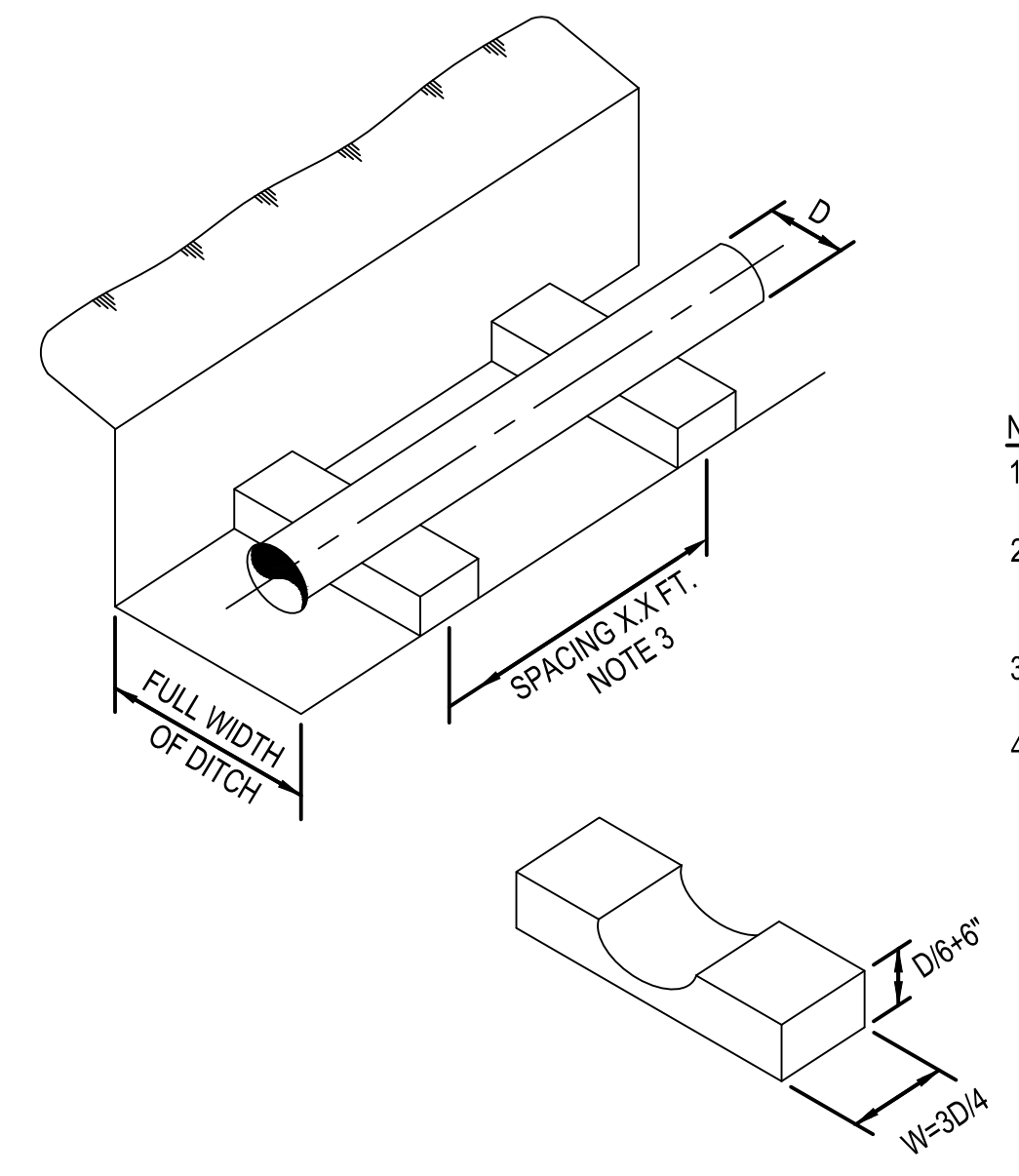


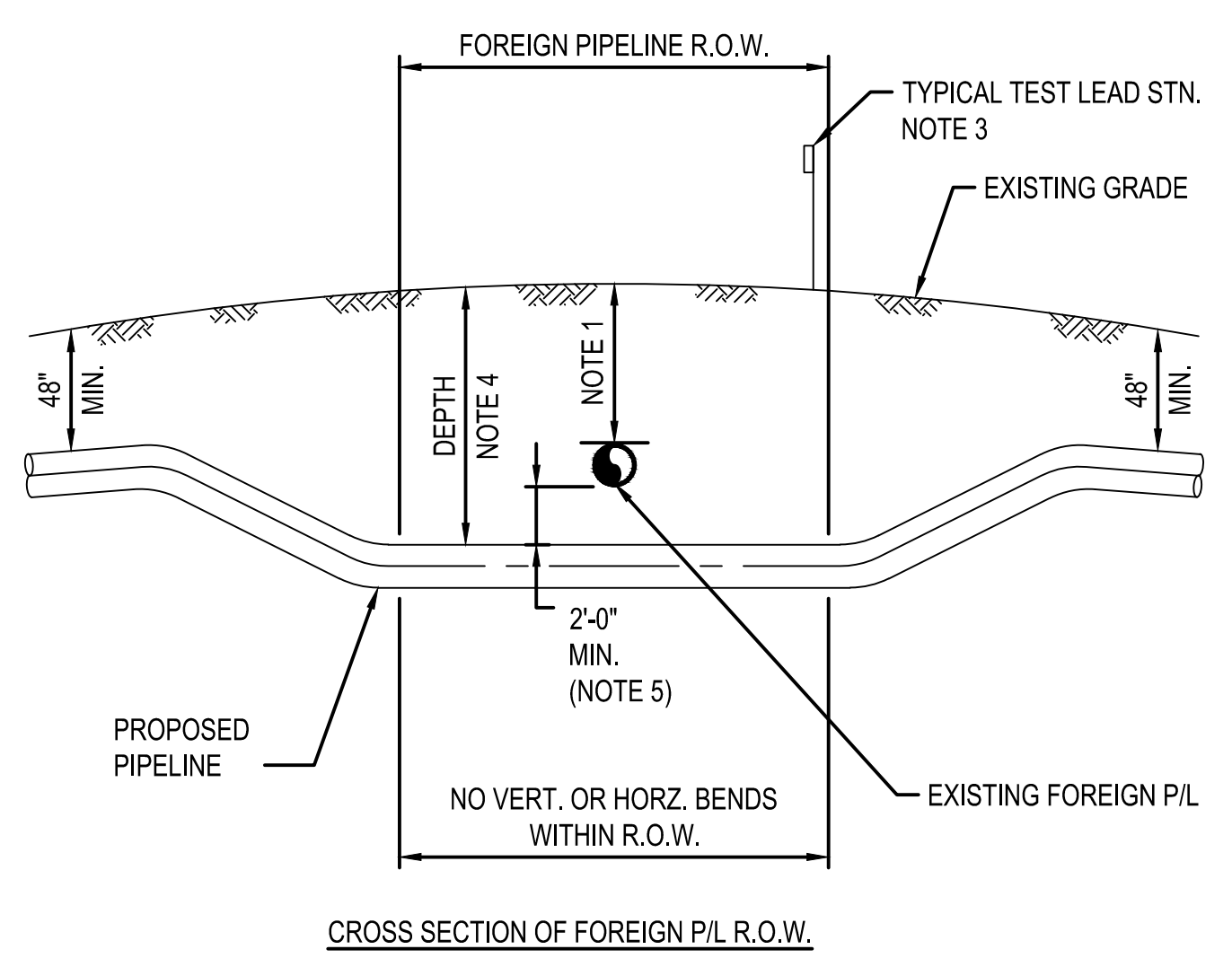
- NOTES:**
1. GEOTEXTILE PIPELINE WEIGHT TO BE 5000 POUNDS FOR 24" PIPE AND 660 POUNDS FOR 8" PIPE.
 2. GEOTEXTILE PIPELINE WEIGHT TO BE SPACED EVERY 18' FOR 24" PIPE AND 40' FOR 8" PIPE.
 3. GEOTEXTILE PIPELINE WEIGHT TO BE FILLED WITH SAND OR GRAVEL.
 4. GEOTEXTILE PIPELINE WEIGHT VENDORS TO BE PIPESAK OR ECOBAG OR APPROVED BY OWNER.

GEOTEXTILE PIPELINE WEIGHT
SCALE: N.T.S.



- NOTES:**
1. ALL MATERIALS SHALL BE SUPPLIED BY CONTRACTOR.
 2. WIDTH SHALL BE INCREASED PROPORTIONAL TO SPACING INCREASE IF REQUIRED.
 3. SPACING TO BE 21' FOR 24" PIPE AND 33' AND 8" PIPE.
 4. PIPELINE SUPPORT PILLOWS SHALL BE USED WHEN ROCK IS ENCOUNTERED AT BOTTOM OF TRENCH.

TYPICAL PIPELINE SUPPORT PILLOWS
SCALE: N.T.S.



- NOTES:**
1. FOREIGN PIPELINE LOCATIONS & DEPTHS TO BE DETERMINED BY ELECTRONIC MEANS IN ADVANCE OF PIPELINE CONSTRUCTION AND CONFIRMED BY CAREFULLY EXPOSING BY HAND DIGGING. WHERE WITHIN 24" IN ANY DIRECTION FROM THE PIPELINE.
 2. OWNER OF FOREIGN PIPELINE(S) SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF EXCAVATION OF CROSSING.
 3. TEST LEAD STATION TO BE INSTALLED WHERE PRACTICAL AT THE NEAREST FENCE, HEDGE ROW OR FIELD EDGE, AND WHERE READILY ACCESSIBLE. INSTALL COMPANY-SUPPLIED PERMANENT REFERENCE CELL AND EXTEND CELL LEAD TO TEST LEAD STATION.
 4. DEPTH OF PIPELINE INCLUDING 2'-0" MIN. CLEARANCE SHALL BE MAINTAINED FOR ALL FULL ANGULAR WIDTH OF FOREIGN PIPELINE R.O.W.
 5. PROPOSED PIPELINE MAY ONLY CROSS ABOVE THE FOREIGN PIPELINE(S) WHERE REQUESTED BY OR APPROVED BY FOREIGN OWNER IN WRITING.

CROSSING FOREIGN PIPELINE
SCALE: N.T.S.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENG/ARCH STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

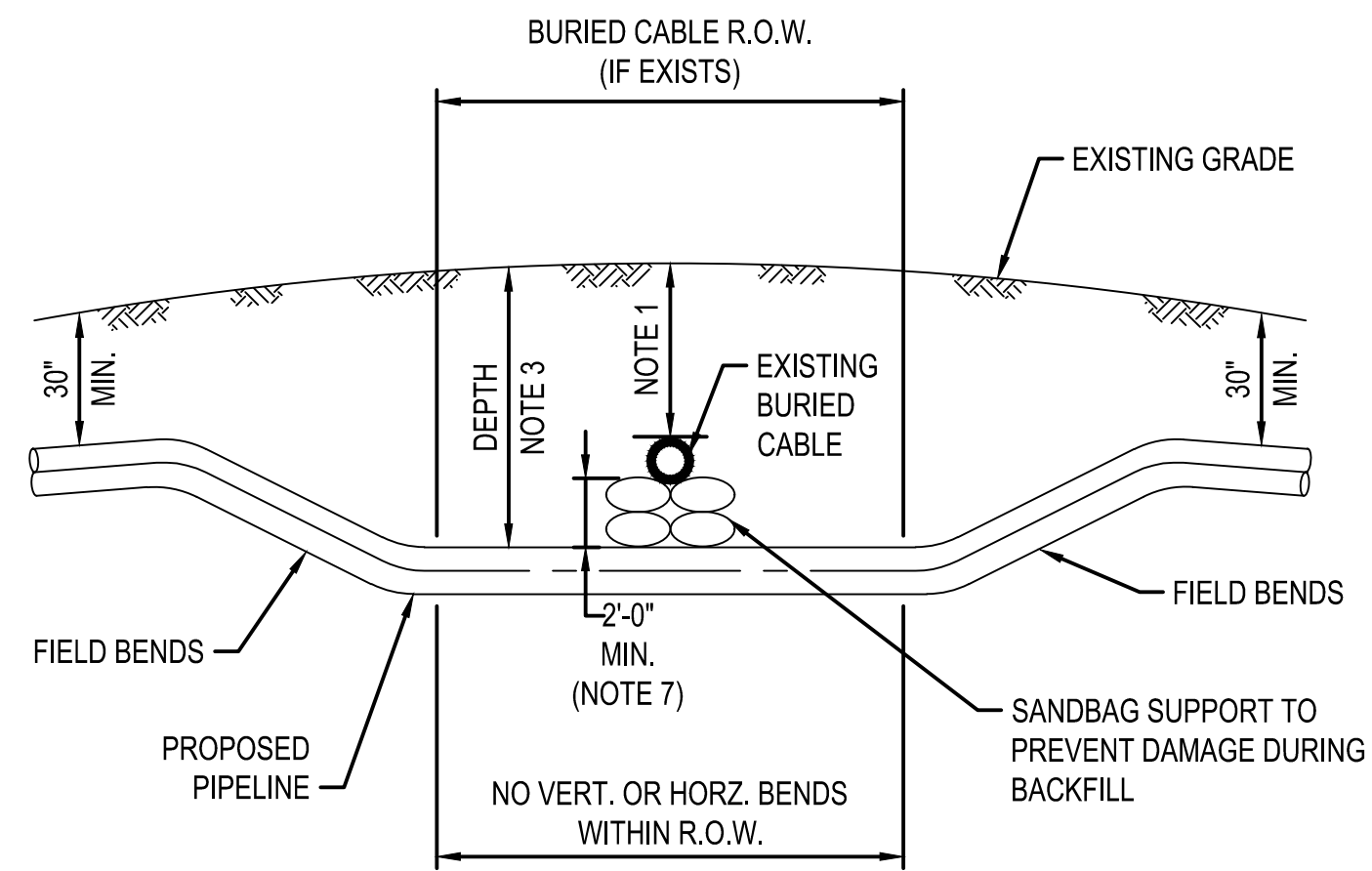
NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	-	-	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	-	-	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	-	-	PRINCIPAL ENGINEER
						DRAWING BY JXV	-	-	
						STATION ID -	02/12/2020	AMP	
						CHECKER INITIALS CEB			



**UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 1
BOONE COUNTY, KY**
ERLANGER, KY

SHEET(S) 1 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER PNG -C-043-0001089	REVISION 0
C/ERLANGER/UL60	

COPYRIGHT 2019



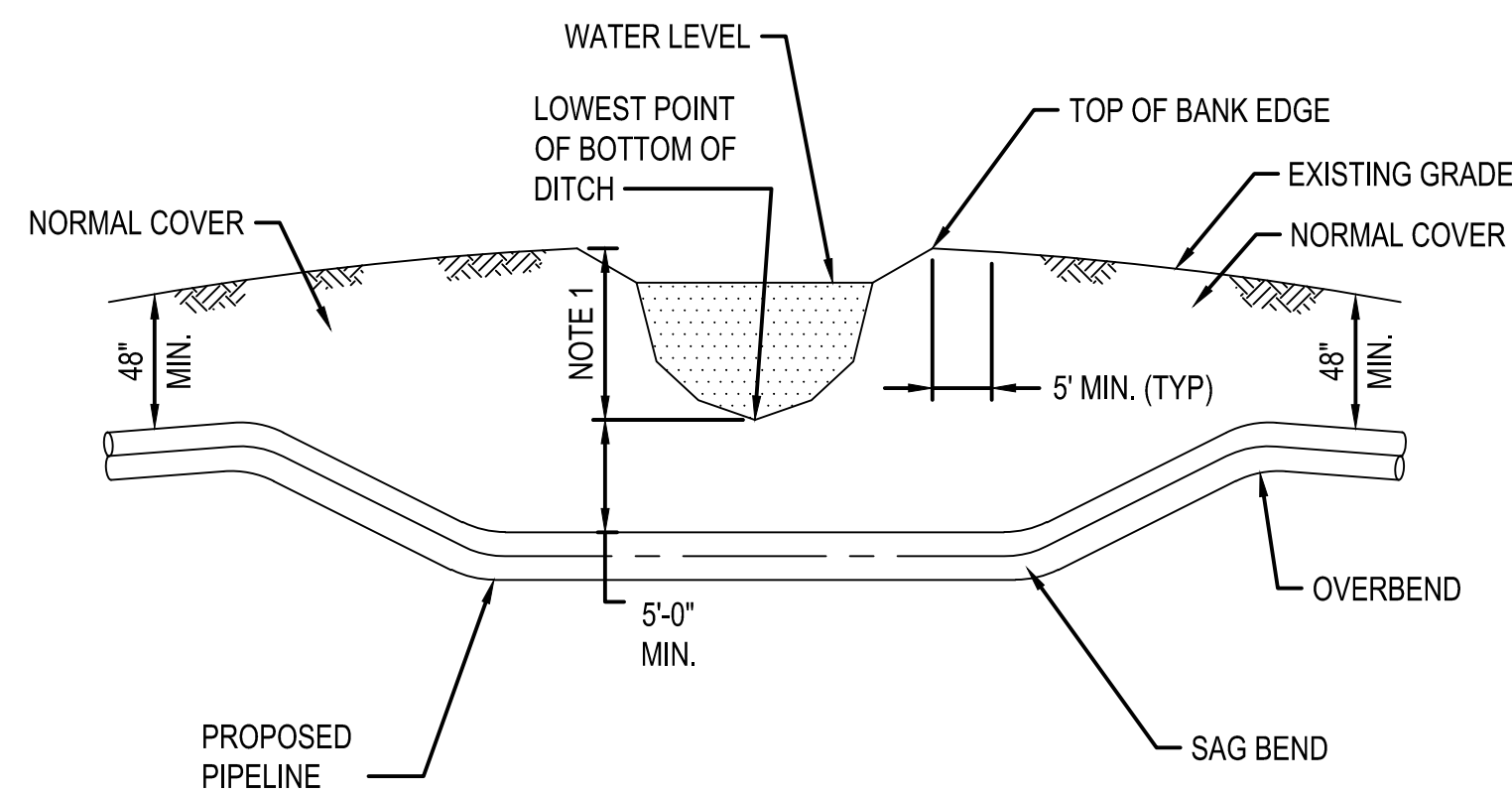
CROSS SECTION OF BURIED CABLE R.O.W.

SCALE: N.T.S.

PIPE LOCATION	DEPTH OF COVER (A)
NORMAL	4'-0"
STREAM/WETLAND CROSSING	5'-0"
WETLAND CROSSING	4'-0"
ROAD CROSSING	5'-0"
RAILROAD CROSSING	10'-0"

PIPELINE DEPTH OF COVER

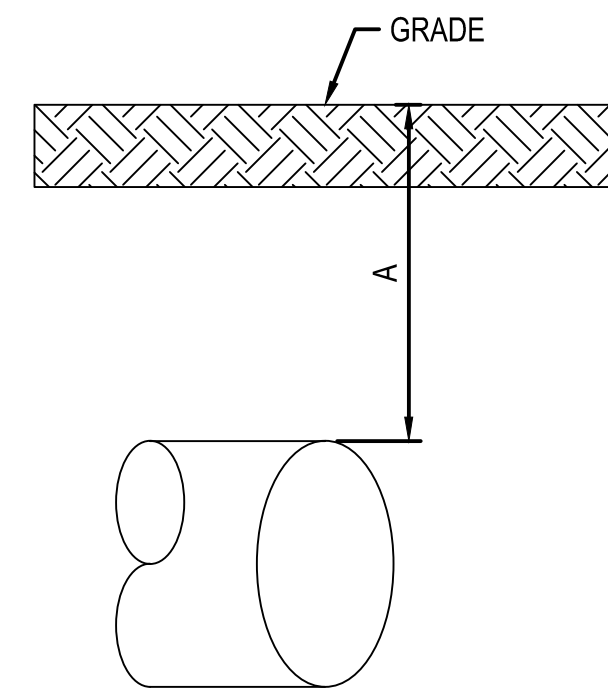
SCALE: N.T.S.



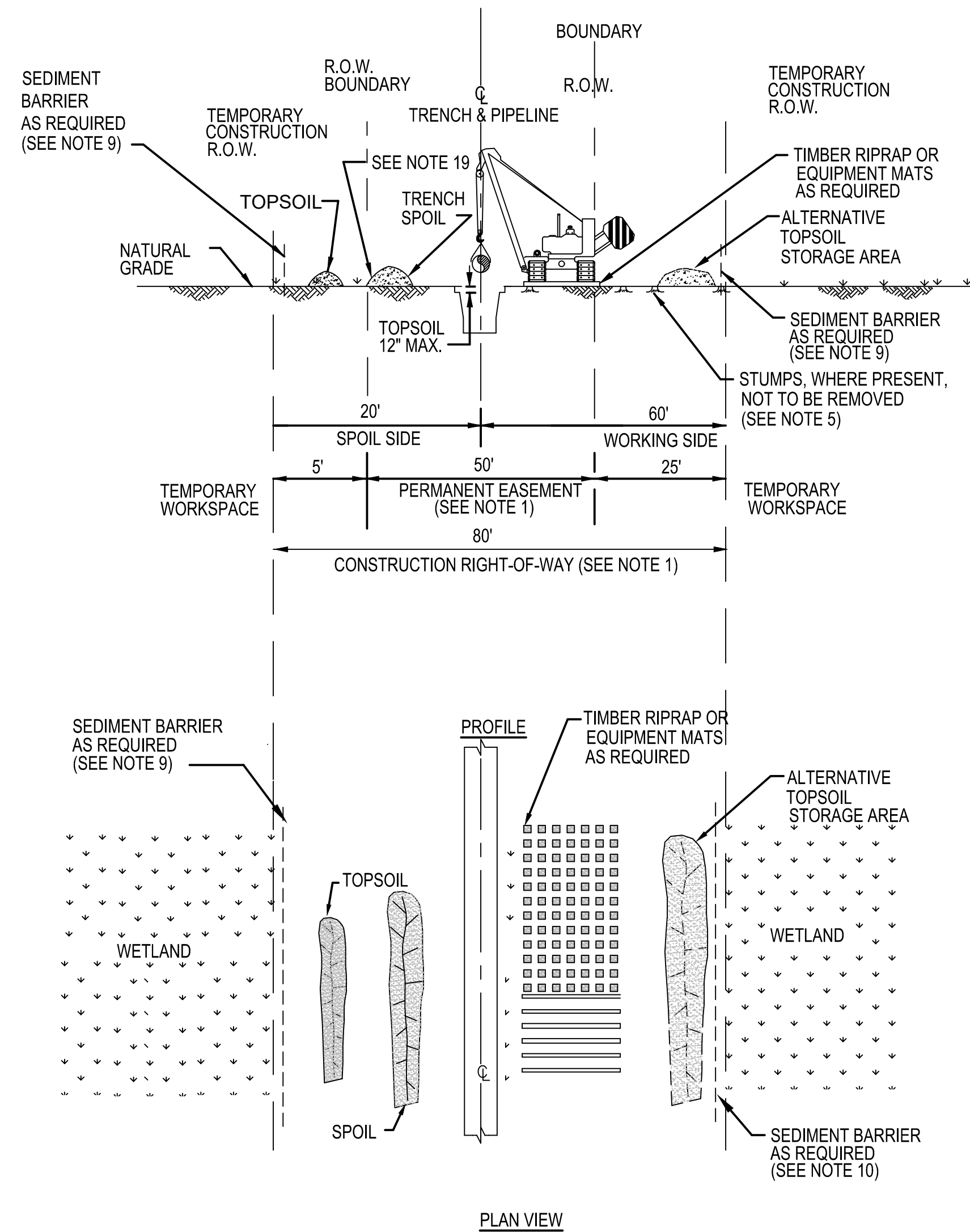
TYPICAL OPEN CUT STREAM CROSSING

SCALE: N.T.S.

- NOTES:**
- BURIED CABLE LOCATIONS & PIPE DEPTHS TO BE DETERMINED BY ELECTRONIC MEANS IN ADVANCE OF PIPELINE CONSTRUCTION AND CONFIRMED BY CAREFULLY EXPOSING BY HAND DIGGING. WHEN WITHIN 24" IN ANY DIRECTION FROM THE PIPELINE.
 - OWNER OF BURIED CABLE(S) SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF EXCAVATION OF CROSSING.
 - DEPTH OF PIPELINE INCLUDING 2'-0" MIN. CLEARANCE SHALL BE MAINTAINED FOR THE FULL ANGULAR WIDTH OF BURIED CABLE R.O.W.
 - PROPOSED PIPELINE MAY ONLY CROSS ABOVE BURIED CABLE(S) WHERE APPROVED IN WRITING BY BURIED CABLE OWNER.
 - CONTRACTOR TO SUPPORT EXPOSED CABLE WITH WOOD PLANK OR STRUCTURAL STEEL DURING CONSTRUCTION.
 - CONTRACTOR TO UTILIZE CAUTION WITH PLACEMENT OF BACKFILL TO MINIMIZE POSSIBLE DAMAGE TO THE CABLE.



- NOTE:**
- PIPELINE WEIGHTS OR ANCHORS TO BE INSTALLED PER PLANS OR AS DIRECTED BY COMPANY.



TYPICAL WETLAND CROSSING

SCALE: N.T.S.

- NOTE:**
- CONSTRUCTION RIGHT-OF-WAY WILL TYPICALLY BE 80 FEET WIDE CONSISTING OF 50 FEET OF PERMANENT EASEMENT AND UP TO 30 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 RIPRAP 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.
 - WETLAND AREAS SHALL HAVE SILT FENCING AND ONE LAYER OF FILTER SOCK INSTALLED NO CLOSER THAN 25 FEET FROM POINT OF WETLAND DELINEATION.
 - 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.
 - 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.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339			REGIONAL ENGINEER
						ACCOUNT NUMBER V8191			MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1			PRINCIPAL ENGINEER
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB	02/12/2020	AMP	

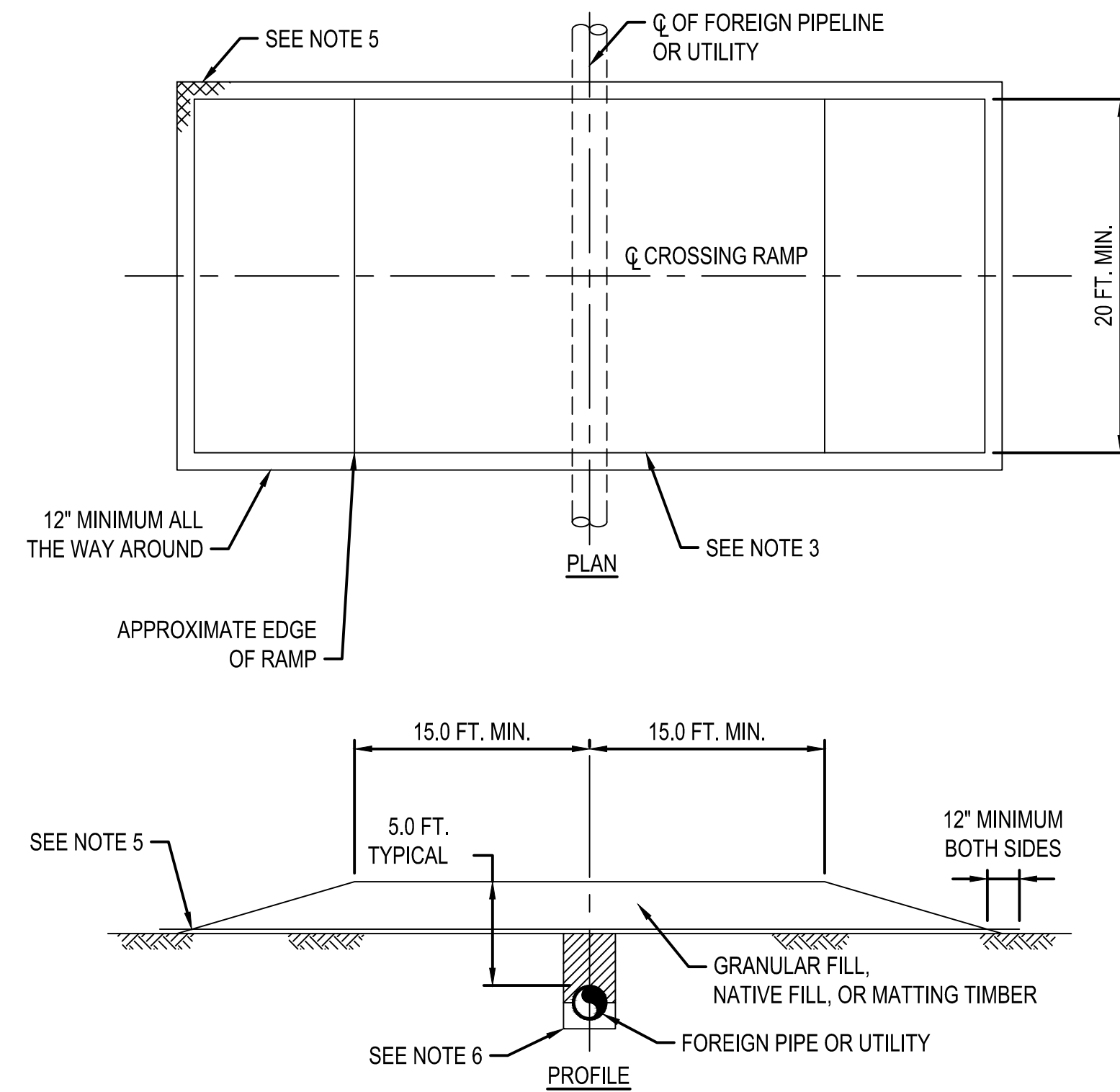


**UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 2
BOONE COUNTY, KY**
ERLANGER, KY

SHEET(S) 2 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER	
PNG -C-043-0001090	REVISION 0
C/ERLANGER/UL60	

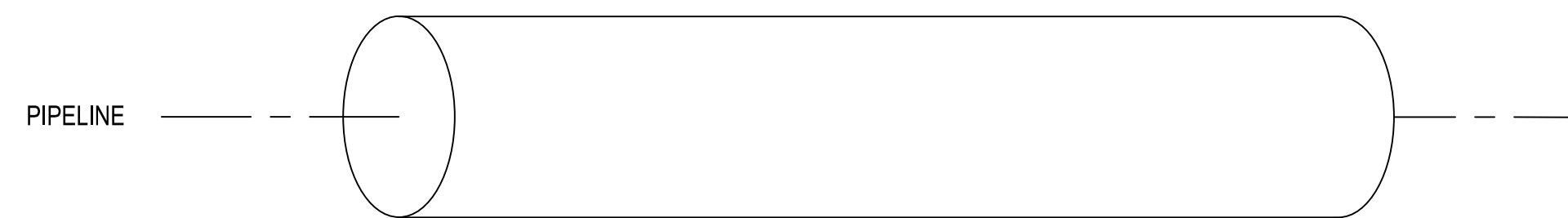
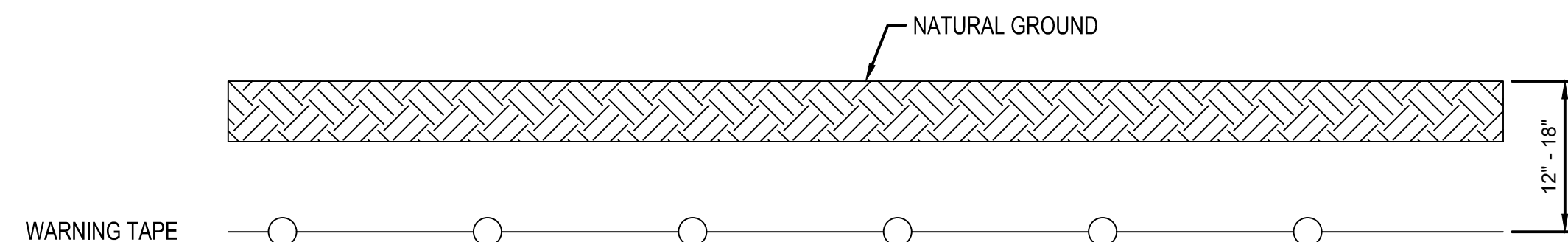
NOTES:

1. CONTRACTOR TO NOTIFY EXISTING PIPELINE/UTILITY COMPANY PRIOR TO INSTALLATION OF CROSSING RAMP.
2. LENGTH OF RAMP TO VARY IN ACCORDANCE WITH CROSSING ANGLE. MINIMUM CROSSING ANGLE TO BE 45 DEGREES.
3. VEHICLES OR EQUIPMENT USING CROSSINGS SHALL PROCEED SLOWLY AND WITH CAUTION TO MINIMIZE IMPACT LOADING AND REDUCTION ON DEPTH OF COVER OVER PIPE/UTILITY.
4. ON COMPLETION OF CONSTRUCTION, CONTRACTOR TO REMOVE COMPLETE RAMP AND RESTORE AREA TO THE SATISFACTION OF THE EXISTING PIPELINE/UTILITY COMPANY AND THE COMPANY'S INSPECTOR.
5. GEOTEXTILE FABRIC (AND GEOTEXTILE GRID WHERE REQUIRED) SHALL BE INSTALLED TO PROTECT NATIVE TOP SOIL AS DIRECTED BY COMPANY'S INSPECTOR WHEN IMPORTED GRANULAR FILL OR NATIVE SUBSOIL FILL MATERIAL IS UTILIZED. IMPORTED GRANULAR FILL MATERIAL OR NATIVE SUBSOIL FILL MATERIAL TO BE REMOVED AND DISPOSED OF AS DIRECTED BY COMPANY'S REPRESENTATIVE.
6. IN ROCK TERRAIN THE CONTRACTOR SHALL, UNDER THE EXISTING PIPELINE COMPANY'S SUPERVISION, EXPOSE THE TOP HALF OF THE PIPE AND BACKFILL WITH COMPACTED SAND OR APPROVED SOIL.



TEMPORARY RAMP CROSSING

SCALE: N.T.S.



**UNDERGROUND WARNING TAPE
INSTALLATION DETAIL**

SCALE: N.T.S.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER/ARCHITECT STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339			REGIONAL ENGINEER
						ACCOUNT NUMBER V8191			MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1			PRINCIPAL ENGINEER
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB	02/12/2020	AMP	



COPYRIGHT 2019

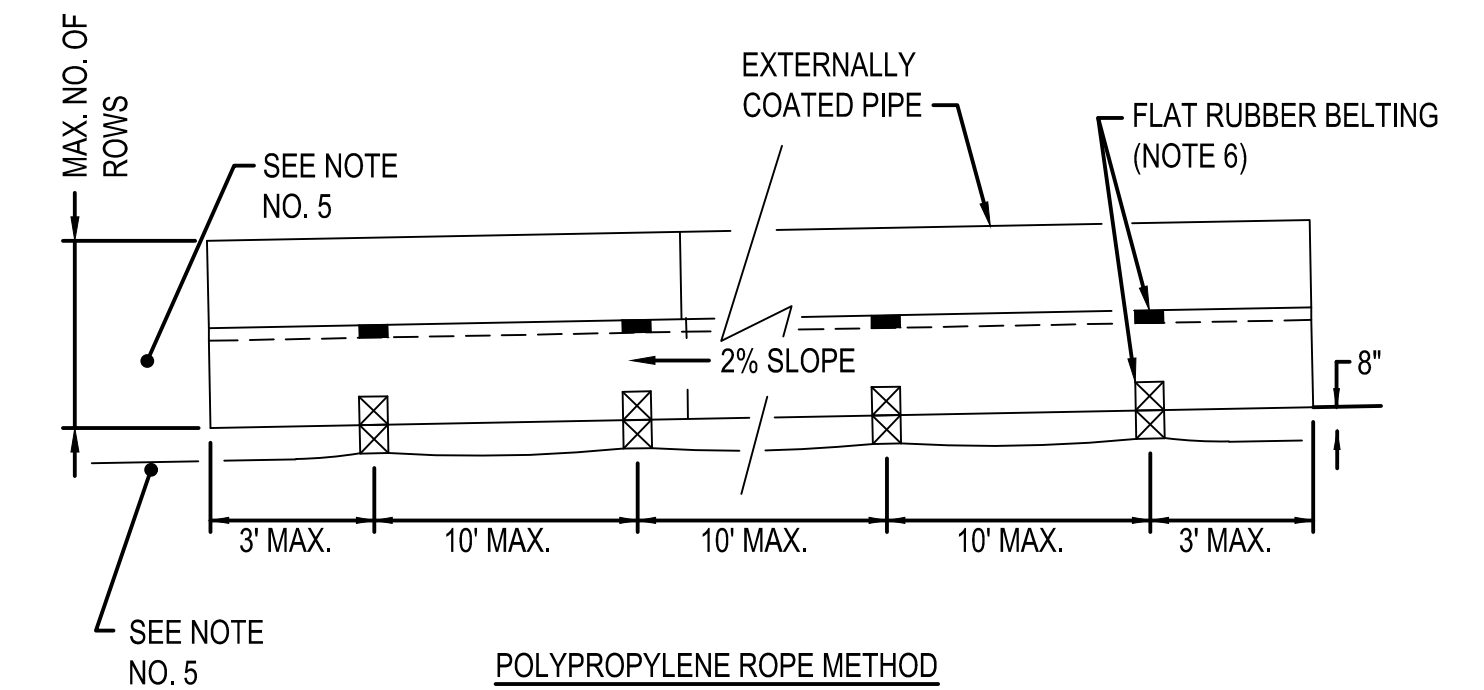
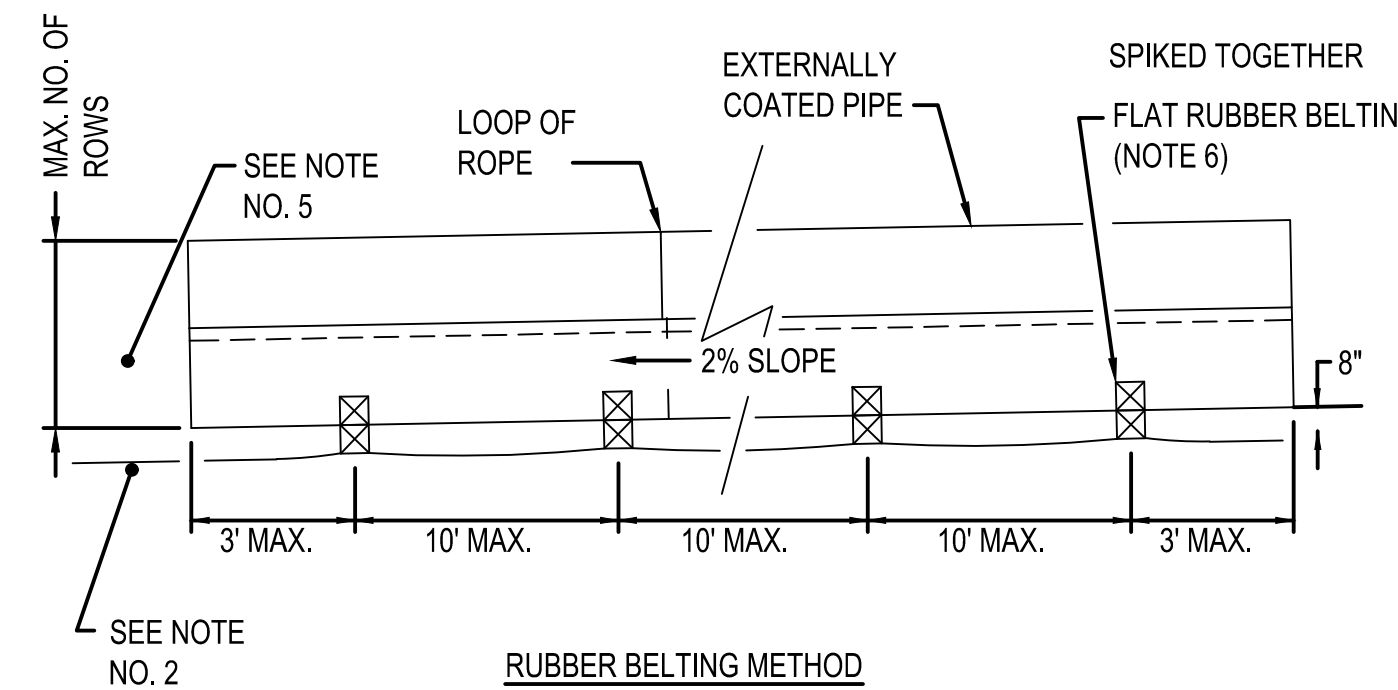
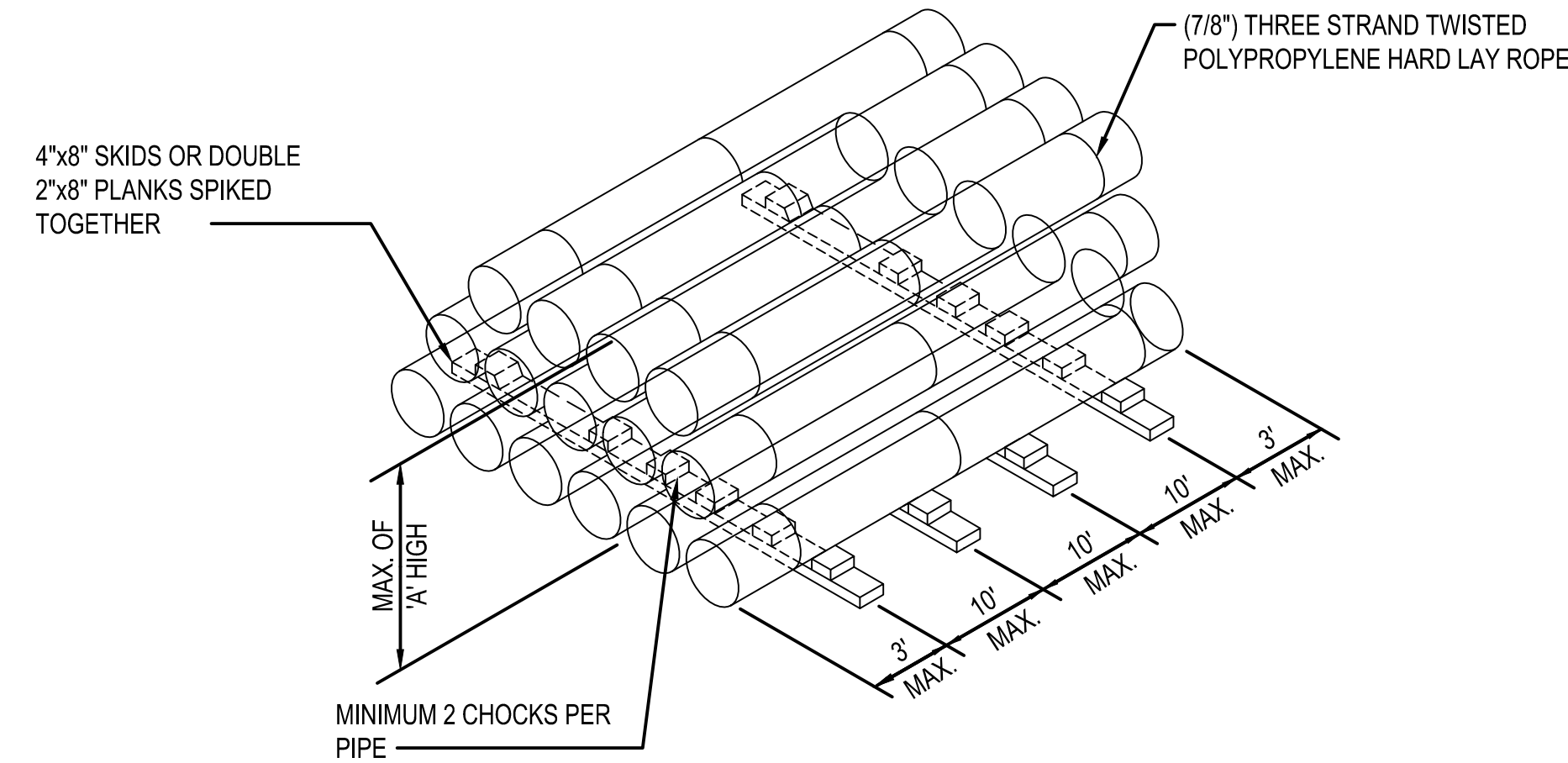
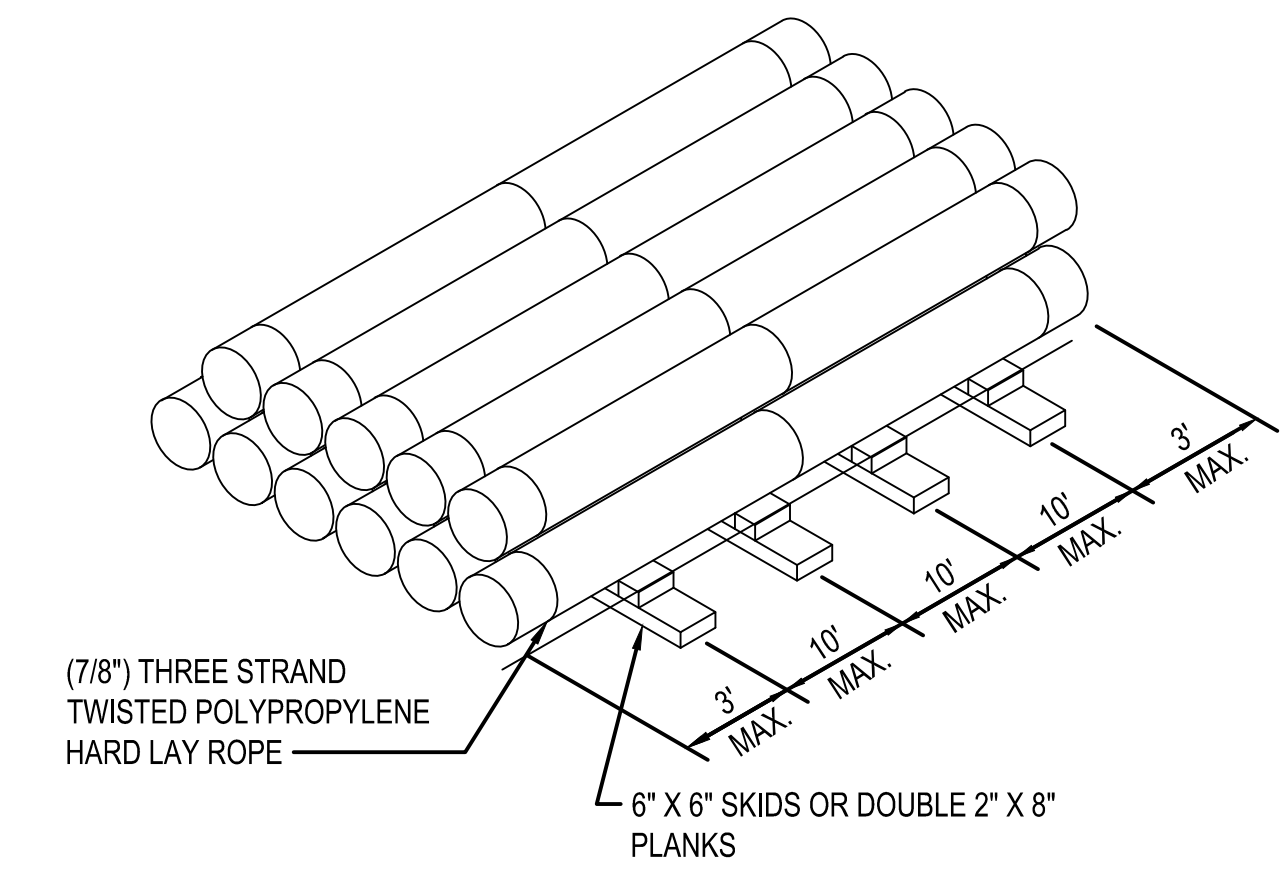
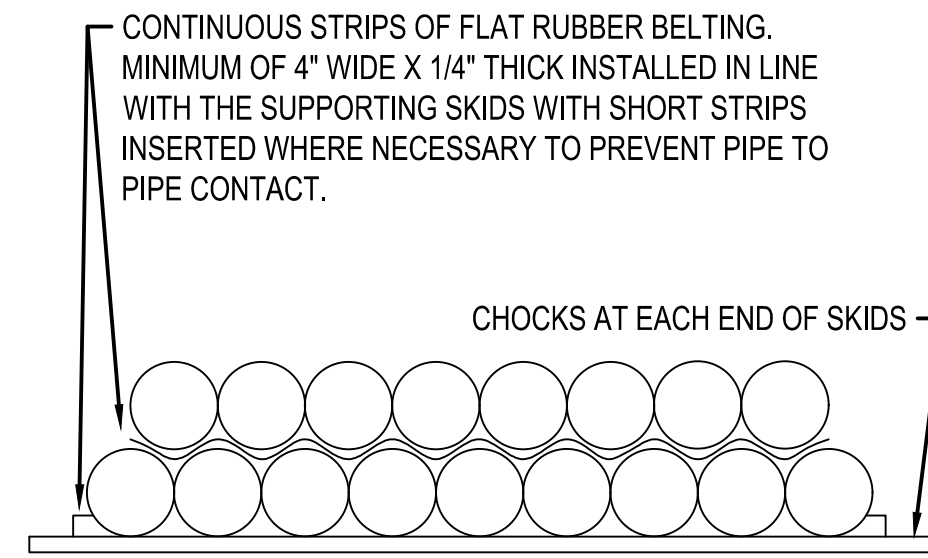
**UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 3
BOONE COUNTY, KY**

ERLANGER, KY

SHEET(S) 3 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER PNG -C-043-0001091	REVISION 0
C/ERLANGER/UL60	

SIZE	'A' (NO. OF ROWS)	CIRCUMFERENCE OF FINISHED LOOPS	SIZE	'A' (NO. OF ROWS)	CIRCUMFERENCE OF FINISHED LOOPS
4"	12	16"	18"	5	60"
6"	10	24"	20"	4	66"
8"	8	30"	24"	4	72"
10"	6	37"	32"	4	80"
12"	6	43"	36"	4	92"
16"	5	54"	42"	4	98"

* PIPE GREATER THAN 20" WILL BE 4 ROWS.



CIRCUMFERENCE OF LOOPS									
THE CIRCUMFERENCE OF LOOPS (MINIMUM) SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE									
PIPE O.D.	30"	24"	20"	16"	12"	10"	8"	6"	4"
CIRCUMFERENCE OF FINISHED LOOPS	98"	80"	66"	54"	43"	37"	30"	34"	34"

NOTES:

- ALL PIPE THAT IS SURPLUS AFTER A CONSTRUCTION PROJECT MUST BE PERMANENTLY STOCKPILED.
- THE USE OF ALTERNATE METHODS FOR STOCKPIILING PIPE AND/OR THE USE OF ALTERNATE MATERIALS FOR PREVENTING PIPE TO PIPE CONTACT SHALL REQUIRE THE APPROVAL OF THE COMPANY REPRESENTATIVE.
- NUMBER OF ROWS TO BE SPECIFIED BY COMPANY.
- ALL MATERIALS SHALL BE FURNISHED BY CONTRACTOR.
- EARTH AND BERMS WILL BE ACCEPTABLE ALTERNATIVES AS APPROVED BY COMPANY REPRESENTATIVE.

ROPE INSTALLATION

ROPE SPACING SHOULD BE A MAXIMUM OF 6.0 FEET FROM THE PIPE ENDS AND A MAXIMUM OF 6.0 FEET FROM GIRTH WELDS. THE INTERVALS BETWEEN RINGS SHOULD BE BETWEEN 10.0 FEET AND 25.0 FEET WITH A MINIMUM OF FOUR LOOPS SPACED OVER A STANDARD DOUBLE JOINT LENGTH (80 FEET). THE INTERVALS MUST BE ADJUSTED TO INSURE THERE IS NO PIPE TO PIPE CONTACT. ROPE ENDS SHALL BE FUSED WITH A BLOW TORCH PRIOR TO SLIPPING THE LOOP OVER THE PIPE.

NOTES:

- THE USE OF THE RUBBER BELTING METHOD OR THE POLYPROPYLENE ROPE METHOD TO PREVENT PIPE TO PIPE CONTACT IN THE STOCKPILE SHALL BE AS DIRECTED BY THE COMPANY.
- SITE TO BE GRADED TO 2% SLOPE AND PADDED WITH 8" OF PIT RUN GRAVEL.
- SKIDS TO BE CAREFULLY LEVELED TO MAINTAIN 2% SLOPE. PIPES TO MAINTAIN CLOSE CONTACT THROUGHOUT ENTIRE LENGTH TO PREVENT SPLITTING AND ROLLING OF THE STOCKPILE.
- LONGITUDINAL WELDS TO BE ARRANGED AT TOP OF PIPE TO ALIGN WITH SPACES BETWEEN NESTED PIPES.
- PIPE 4.5" TO 6.625" TO BE STOCKPILED A MAXIMUM OF 4 ROWS HIGH. PIPE 8.625" TO 18" TO BE STOCKPILED A MAXIMUM OF 3 ROWS HIGH. PIPE LARGER THAN 18" TO BE STOCKPILED A MAXIMUM OF 2 ROWS HIGH.
- THE BOTTOM ROW OF PIPE SHALL REST ON SKIDS PROTECTED BY A CONTINUOUS STRIP OF FLAT RUBBER BELTING.
- ALL MATERIAL TO BE SUPPLIED BY CONTRACTOR.

ROPE INSTALLATION:

ROPE SPACING SHOULD BE A MAXIMUM OF 6' FROM THE PIPE ENDS AND A MAXIMUM OF 6' FROM GIRTH WELDS. THE INTERVAL BETWEEN RINGS SHOULD BE BETWEEN 10' AND 25' WITH A MINIMUM OF FOUR LOOPS SPACED OVER A STANDARD DOUBLE JOINT LENGTH (40 FEET). THE INTERVALS MUST BE ADJUSTED TO INSURE THERE IS NO PIPE TO PIPE CONTACT. ROPE ENDS SHALL BE FUSED WITH A BLOW TORCH PRIOR TO SLIPPING THE LOOP OVER THE PIPE.

TYPICAL TEMPORARY PIPE STOCKPILE

SCALE: N.T.S.

TYPICAL PERMANENT PIPE STOCKPILE

SCALE: N.T.S.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENG/ARCH STAMP

PIEDMONT 'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	-	-	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	-	-	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	-	-	PRINCIPAL ENGINEER
						DRAWING BY JXV	02/12/2020	AMP	
						STATION ID -			
						CHECKER INITIALS CEB			

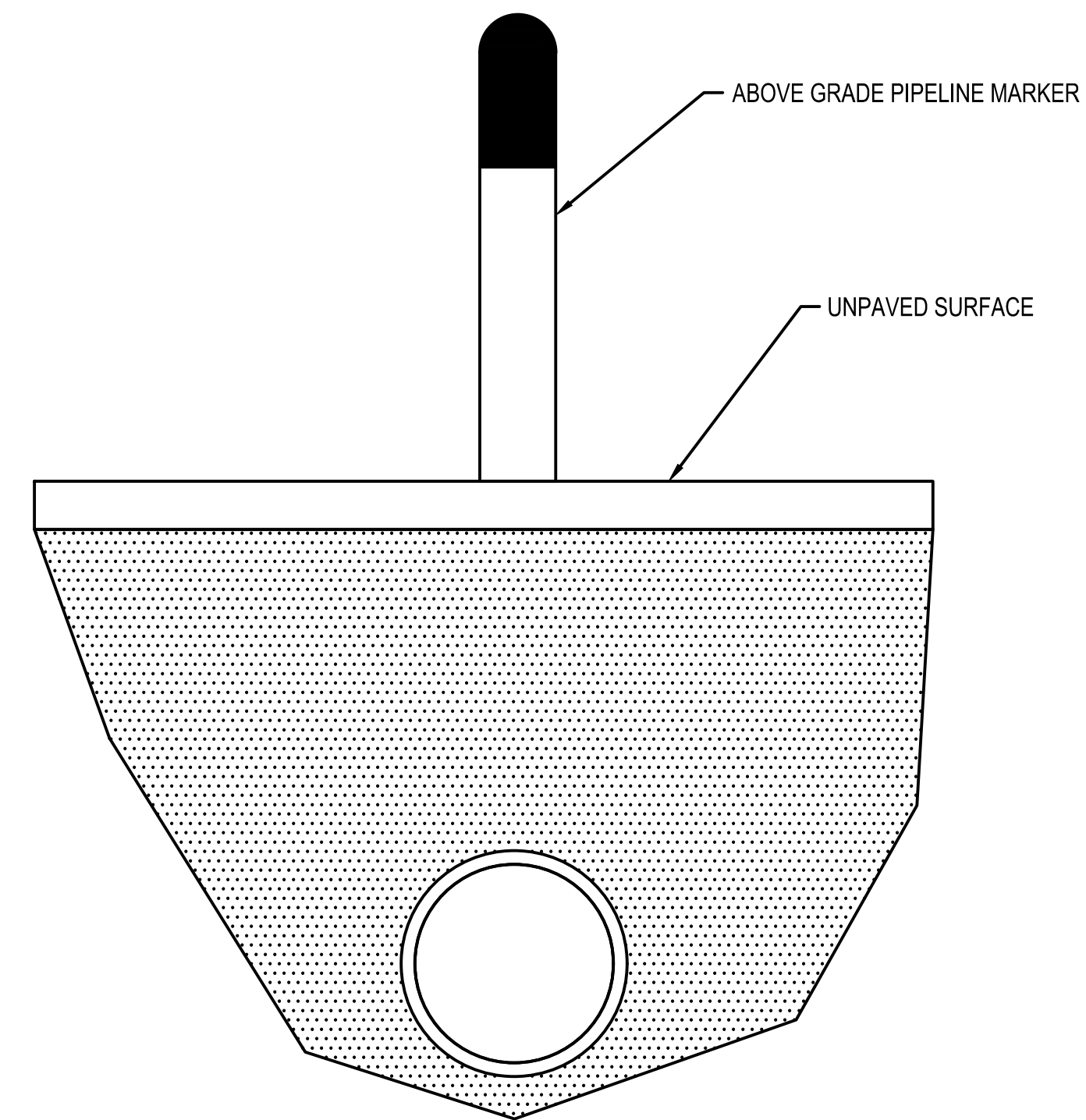


COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 4
BOONE COUNTY, KY**

ERLANGER, KY

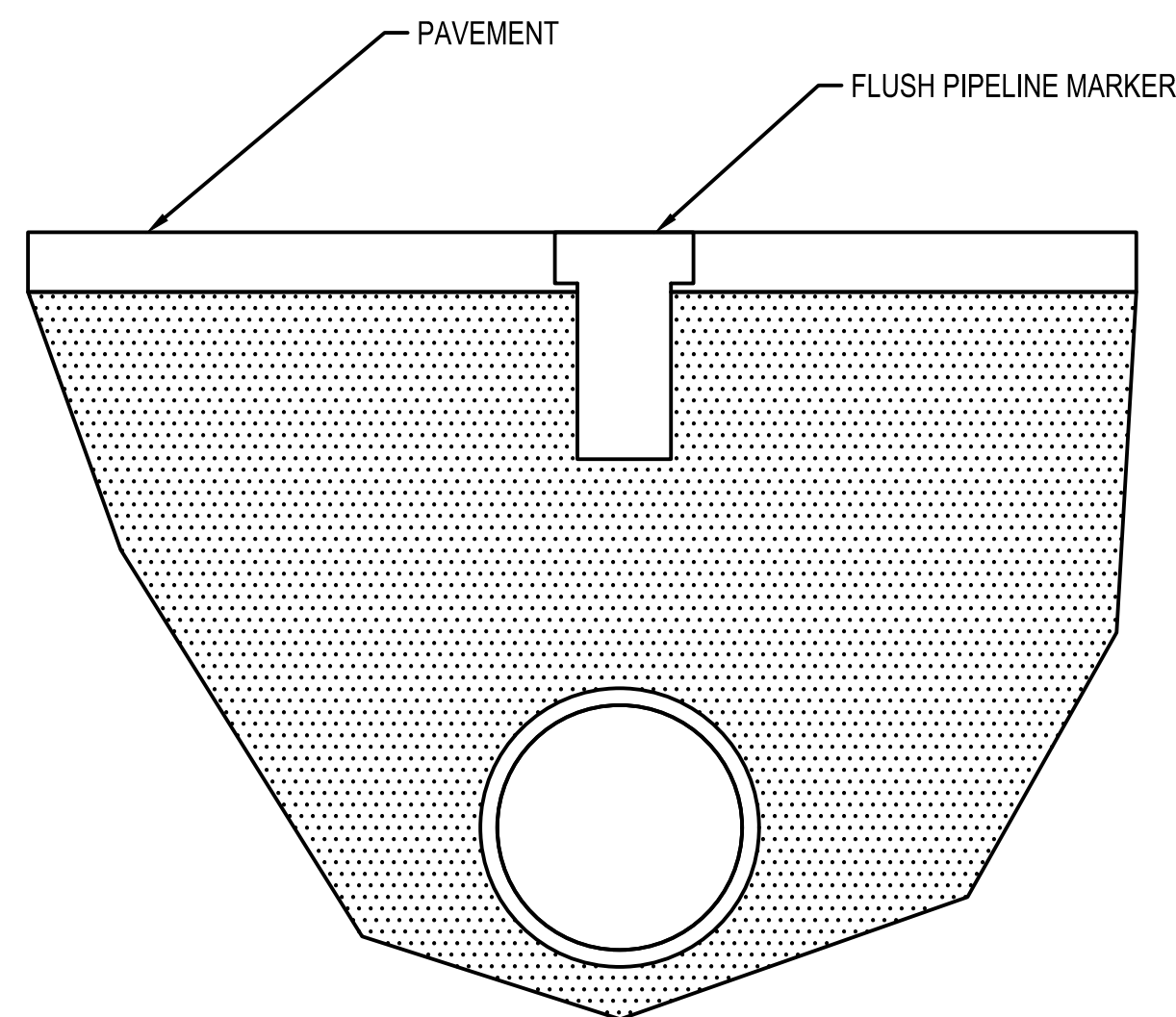
SHEET(S) 4 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER	REVISION
PNG -C-043-0001092	0
C/ERLANGER/UL60	



NOTE:
1. ABOVE GRADE PIPELINE MARKERS TO BE INSTALLED IN GRASS OR UNPAVED AREAS WHEN PIPELINE MARKER IS REQUIRED.

ABOVE GRADE PIPELINE MARKER

SCALE: N.T.S.



NOTE:
1. FLUSH PIPELINE MARKERS TO BE INSTALLED IN PAVEMENT WHEN PIPELINE MARKER IS REQUIRED.

FLUSH PIPELINE MARKER

SCALE: N.T.S.

NOTES:

- PIPELINE MARKERS SHALL BE PLACED AT:
 - IN LINE-OF-SIGHT INTERVALS AND TURNING POINTS
 - ALL PUBLIC ROAD CROSSINGS
 - ALL RAILROAD CROSSINGS
 - RIVER, STREAM, CREEK, DITCH AND CANAL CROSSINGS
 - UTILITY CROSSINGS (PER DUKE DISCRETION)
 - SWAMPS OR WETLANDS (ENTRY AND EXIT)
 - ROAD MEDIANS
 - ABOVE GROUND FACILITIES SUCH AS VALVE SETTINGS, BORDER STATIONS, REGULATOR STATIONS, AND PIPELINE INTERCONNECTS
 - UNDERGROUND VALVES
 - HDD ENTRY AND EXIT POINTS
- PIPELINE MARKERS SHALL BE PLACES DIRECTLY ON TOP OR WITHIN 24 INCHES OF THE PIPELINE.
- SET MARKERS AS SOON AS PRACTICAL AFTER THE INSTALLATION OF THE PIPELINE. MAKE EVERY EFFORT TO PROVIDE MARKERS BEFORE VEGETATION IS RE-ESTABLISHED AFTER CONSTRUCTION.

PIPELINE MARKER LOCATIONS

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENG/ARCH STAMP

PIEDMONT 'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	-	-	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	-	-	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	-	-	PRINCIPAL ENGINEER
						DRAWING BY JXV	-	-	
						STATION ID -	02/12/2020	AMP	
						CHECKER INITIALS CEB			

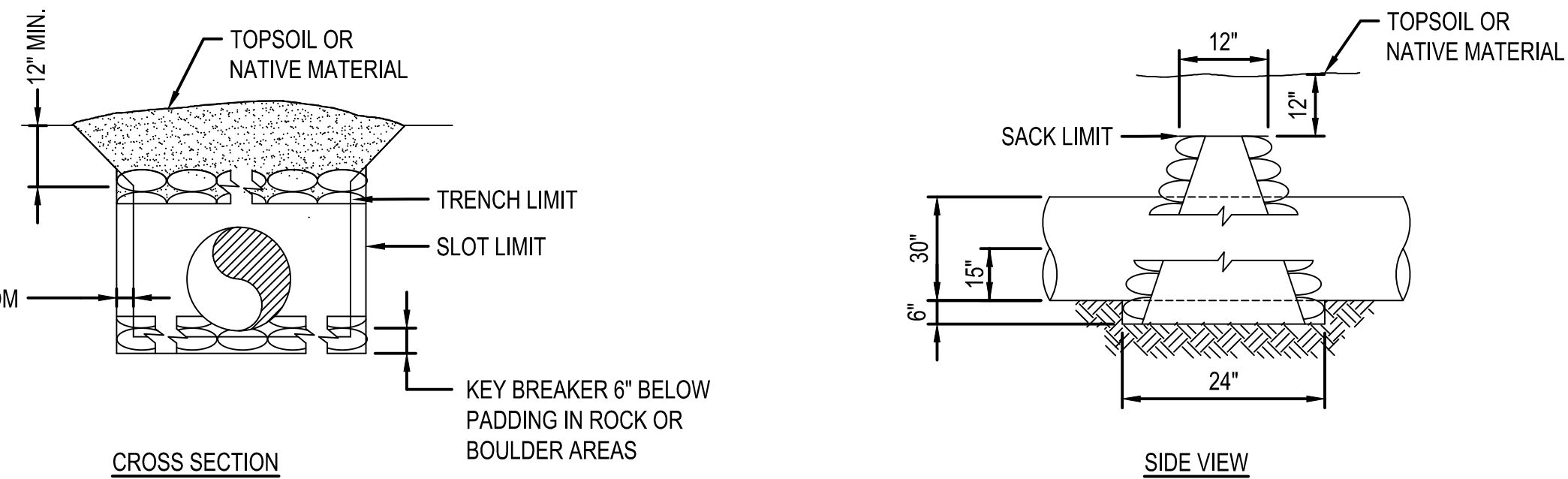
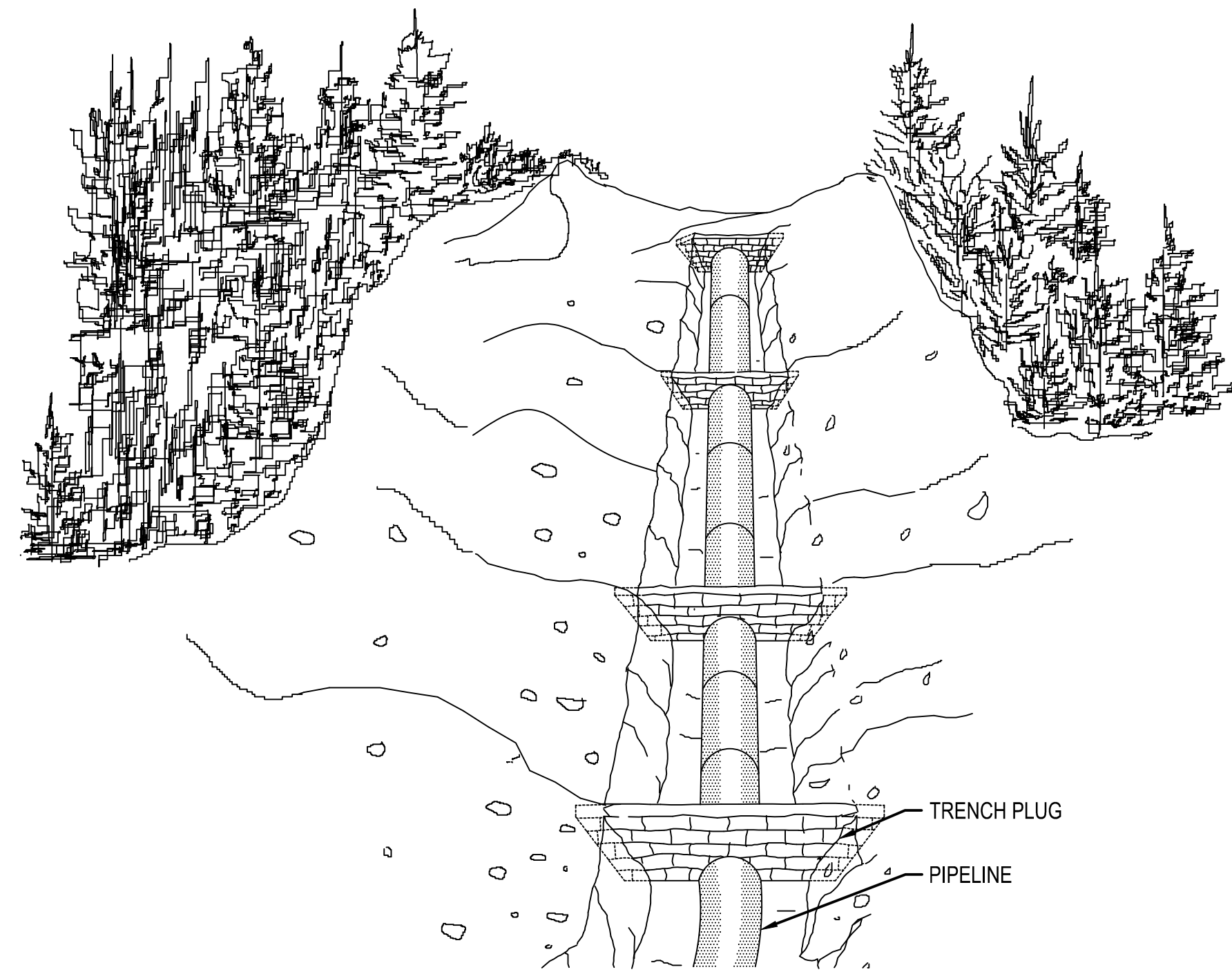


COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 5
BOONE COUNTY, KY**

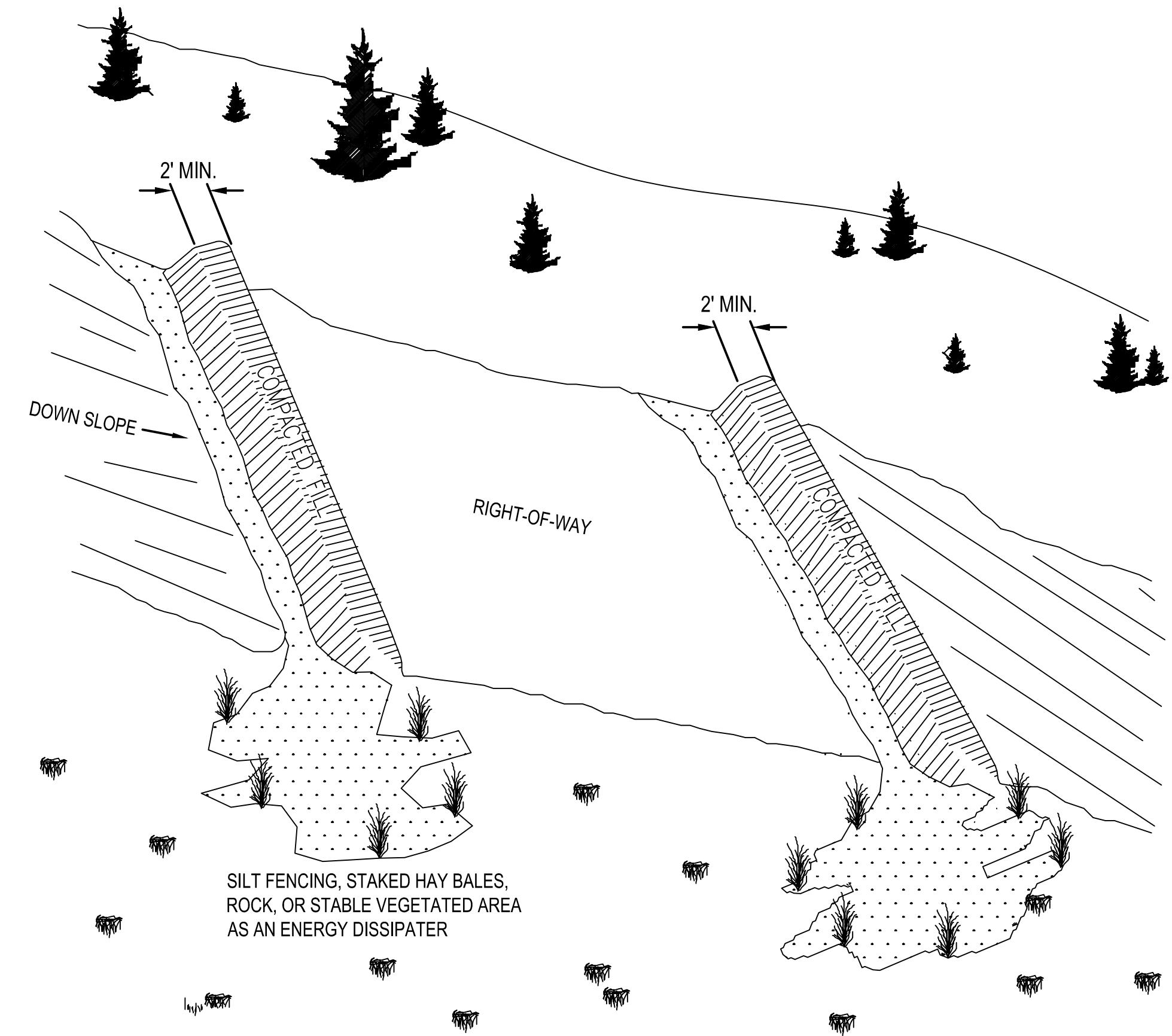
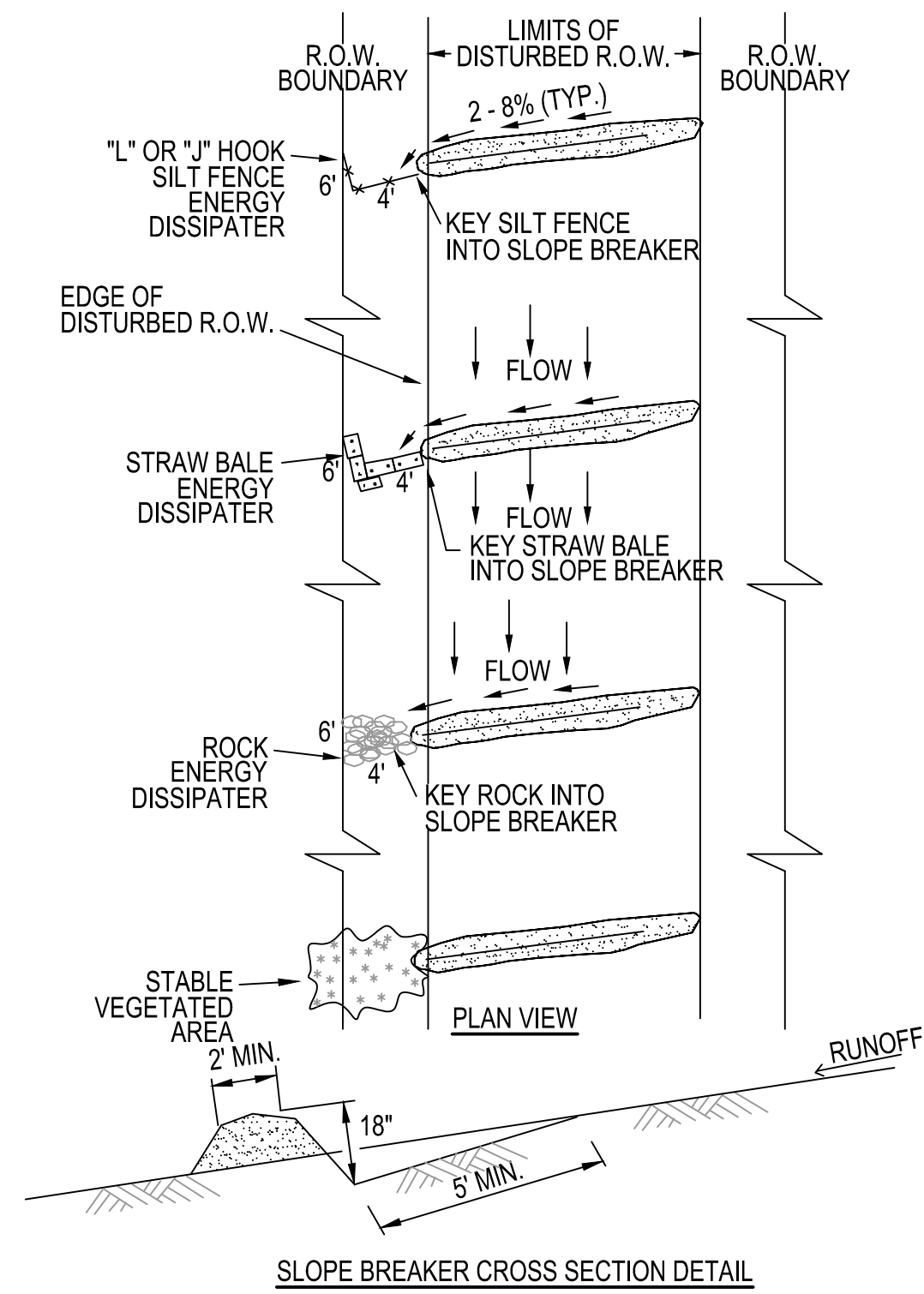
ERLANGER, KY

SHEET(S) 5 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER	
PNG -C-043-0001093	REVISION 0
C/ERLANGER/UL60	



TYPICAL TRENCH PLUG

SCALE: N.T.S.



TYPICAL SLOPE BREAKER

SCALE: N.T.S.

NOTES:

- 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 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.
- ALL MATERIALS SHALL BE SUPPLIED BY CONTRACTOR.

NOTES:

- 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.
- SLOPE BREAKERS SHALL BE ORIENTED AS SHOWN OR OTHER PATTERN AS DIRECTED BY THE COMPANY'S REPRESENTATIVE TO DIRECT THE WATER OFF THE RIGHT-OF-WAY.
- SLOPE BREAKERS SHALL BE CONSTRUCTED AT 2-8% GRADIENT ACROSS THE SLOPE.
- 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.
- THE OUTLET OF THE SLOPE BREAKER MUST FREELY DISCHARGE ALL RUNOFF OFF THE DISTURBED RIGHT-OF-WAY INTO A STABLE, WELL VEGETATED AREA OR INTO AN ENERGY DISSIPATER.
- 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 BE LOWER THAN SLOPE BREAKER END.
 - SILT FENCE, STRAW BALE OR ROCK DISSIPATERS SHOULD BE KEYED INTO THE END OF THE SLOPE BREAKER.
 - PROVIDE ENOUGH AREA INSIDE "L" TO CAPTURE AND HOLD SEDIMENT.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENG/ARCH STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339			REGIONAL ENGINEER
						ACCOUNT NUMBER V8191			MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1			PRINCIPAL ENGINEER
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB	04/17/2020	AMP	

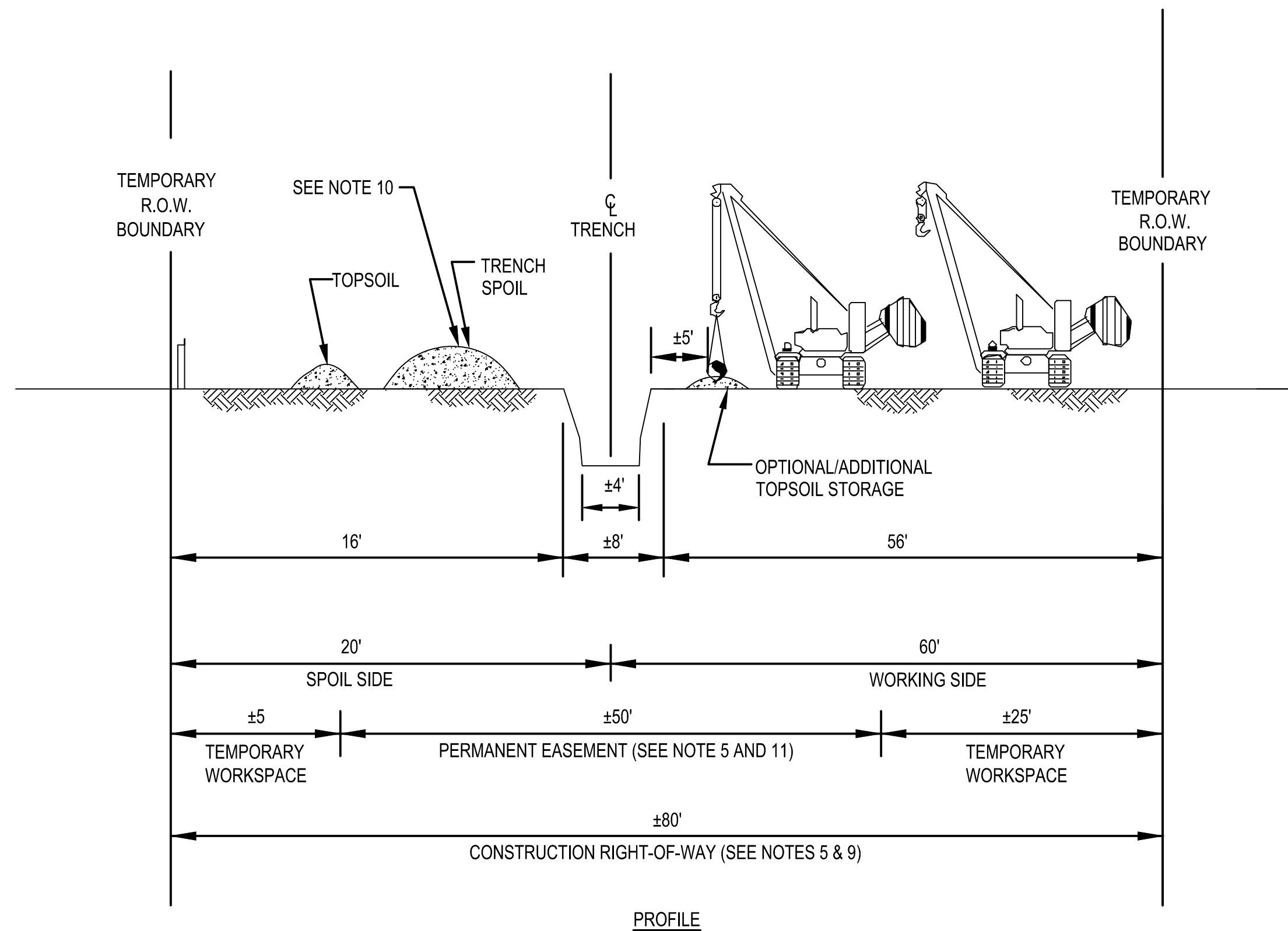


COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 6
BOONE COUNTY, KY**

ERLANGER, KY

SHEET(S) 6 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER	
PNG -C-043-0001094	REVISION 0
C/ERLANGER/UL60	



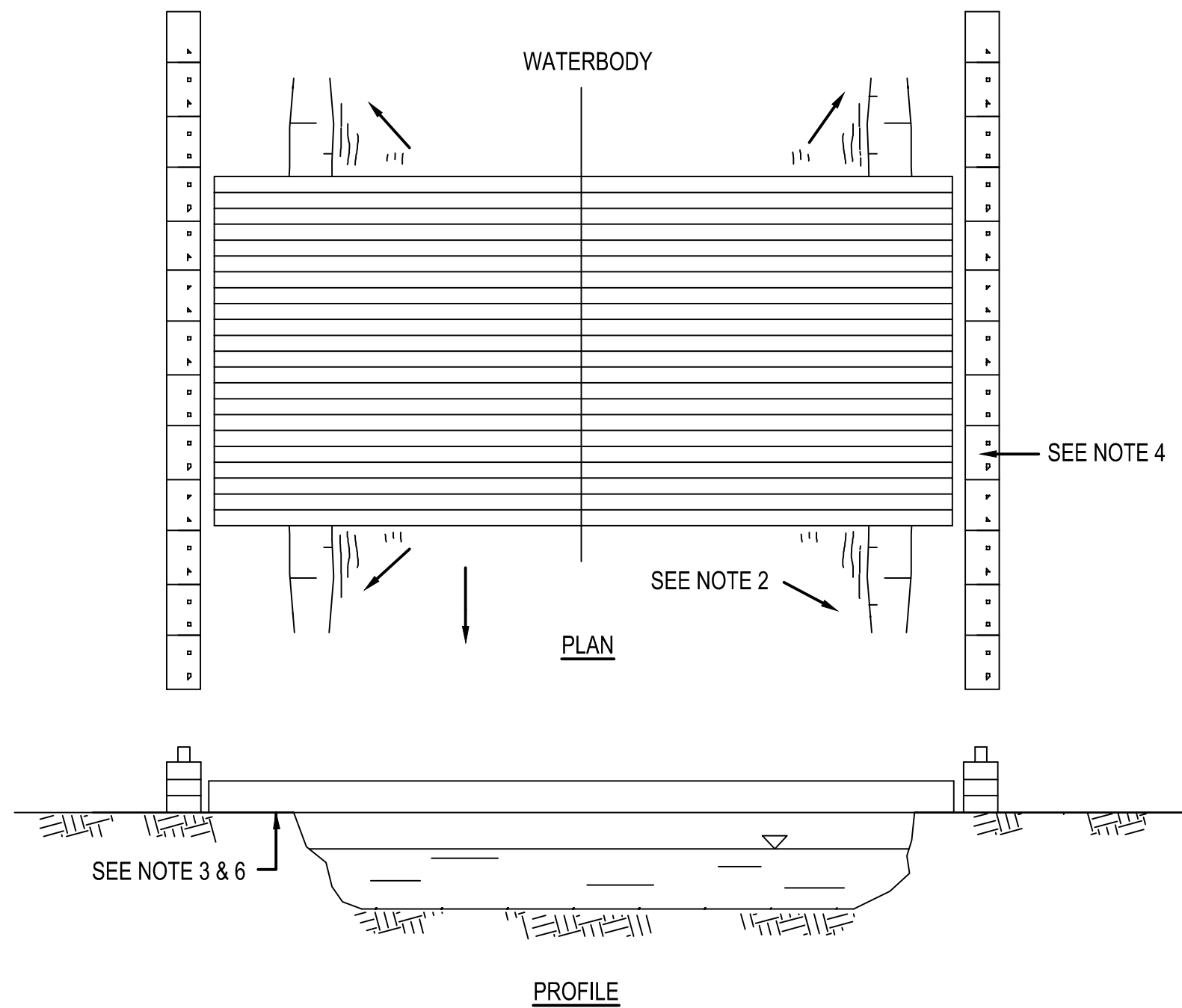
PROFILE

NOTES:

- UTILIZE THE "TRENCH ONLY" TOPSOIL SALVAGE METHOD AT LOCATIONS SUCH AS RIPARIAN AREAS OR UNMANAGED WOODLAND, WHERE IDENTIFIED ON THE CONSTRUCTION DRAWINGS, OR AS DIRECTED BY THE COMPANY'S REPRESENTATIVE.
- THE TRENCH ONLY METHOD IS NOT TO BE USED ON AGRICULTURAL LAND EXCEPT AS DIRECTED BY THE COMPANY INSPECTOR (PER LANDOWNER REQUEST).
- FOR TRENCH ONLY STRIPPING, THE STRIPPED AREA SHALL BE WIDE ENOUGH TO ACCOMMODATE TRENCHING EQUIPMENT
- CONSTRUCTION RIGHT-OF-WAY WILL TYPICALLY BE 80 FEET WIDE CONSISTING OF 50 FEET OF PERMANENT EASEMENT AND 30 FEET OF TEMPORARY WORKSPACE. EXTRA TEMPORARY WORK SPACE WILL BE NECESSARY AT MAJOR ROAD, RAIL AND RIVER CROSSINGS AND OTHER SPECIAL CIRCUMSTANCES, AS REQUIRED. CERTAIN SITUATIONS MAY REQUIRE A NARROWER WIDTH.
- STOCKPILE TOPSOIL AS SHOWN OR IN ANY CONFIGURATION APPROVED BY THE COMPANY'S INSPECTOR. KEEP TOPSOIL CLEAN OF ALL CONSTRUCTION DEBRIS
- LEAVE GAPS IN TOPSOIL AND SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT PUSH TOPSOIL INTO CREEKS OR WETLANDS. DO NOT USE TOPSOIL FOR PADDING.
- AVOID SCALPING VEGETATED GROUND SURFACE WHEN BACKFILLING SPOIL AND TOPSOIL PILES.
- SAME LAYOUT APPLIES WHERE CONSTRUCTION R.O.W. DOES NOT ABUT EXISTING R.O.W.
- TEMPORARILY SUSPEND TOPSOIL HANDLING OPERATIONS DURING INORDINATELY WINDY CONDITIONS UNTIL MITIGATIVE MEASURES TO MINIMIZE WIND EROSION CAN BE IMPLEMENTED.
- TOPSOIL AND TRENCH SPOIL RELATIVE POSITIONS CAN, AS DIRECTED BY THE COMPANY'S INSPECTOR, BE REVERSED.

TYPICAL 80' WORKSPACE TOPSOIL SEPARATION

SCALE: N.T.S.



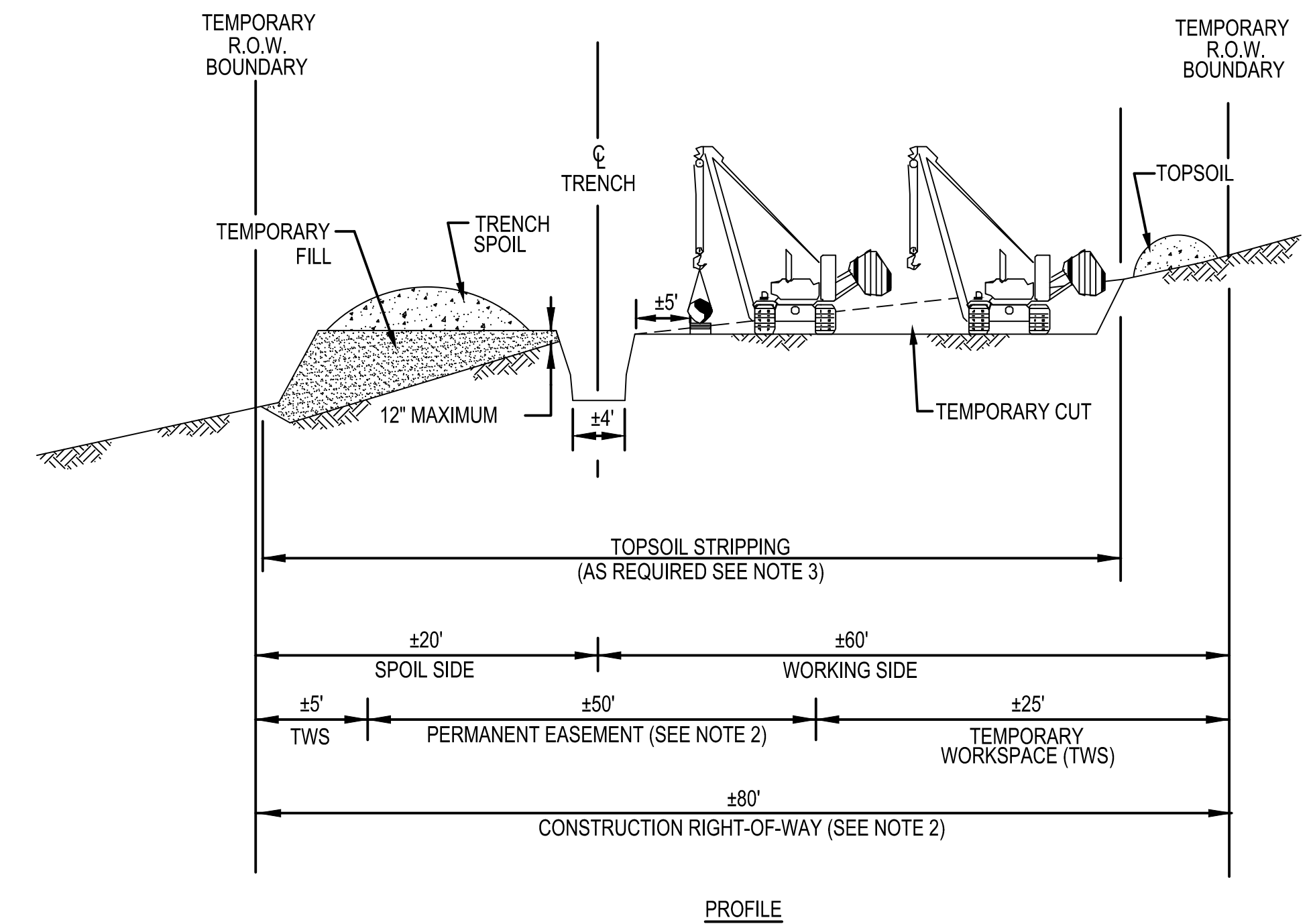
PROFILE

NOTES:

- 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.
- IF REQUIRED, 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 INCLUDING REMOVAL OF DIRT FROM DECK DURING OPERATION.
- 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, 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 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 TIMBER MAT WATERBODY BRIDGE

SCALE: N.T.S.



PROFILE

NOTES:

- SIDE HILL CONSTRUCTION CUT AND FILL SHALL BE ALLOWED WHENEVER, IN THE OPINION OF THE CONTRACTOR, STEEP SIDE HILL CONSTRUCTION IS WARRANTED FOR PERSONNEL AND/OR EQUIPMENT SAFETY CONSIDERATIONS.
- CONSTRUCTION RIGHT-OF-WAY WILL TYPICALLY BE 80 FEET WIDE CONSISTING OF 50 FEET OF PERMANENT EASEMENT AND 30 FEET OF TEMPORARY WORKSPACE. EXTRA TEMPORARY WORK SPACE WILL BE NECESSARY AT MAJOR ROAD, RAIL AND RIVER CROSSINGS AND OTHER SPECIAL CIRCUMSTANCES, AS REQUIRED. CERTAIN SITUATIONS MAY REQUIRE A NARROWER WIDTH.
- THIS DRAWING REFLECTS "TRENCH, SPOIL, AND WORKING SIDE" TOPSOIL STRIPPING PROCEDURE AS NEEDED FOR HILL SIDE LEVELING. SALVAGE TOPSOIL OVER TRENCH UNDER THE SPOIL PILE AND FROM TEMPORARY CUT AND FILL AREAS AT LOCATIONS IDENTIFIED OF THE CONSTRUCTION ALIGNMENT SHEETS OR AS DIRECTED BY THE COMPANY'S REPRESENTATIVE.
- STOCKPILE TOPSOIL AS SHOWN OR IN ANY CONFIGURATION APPROVED BY THE COMPANY'S REPRESENTATIVE. KEEP TOPSOIL CLEAN OF ALL CONSTRUCTION DEBRIS.
- LEAVE GAPS IN TOPSOIL AND SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT PUSH TOPSOIL INTO CREEKS OR WETLANDS. DO NOT USE TOPSOIL FOR PADDING. AVOID SCALPING VEGETATED GROUND SURFACE WHEN BACKFILLING TOPSOIL PILE.

TYPICAL SIDE HILL CONSTRUCTION

SCALE: N.T.S.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENG/ARCH STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

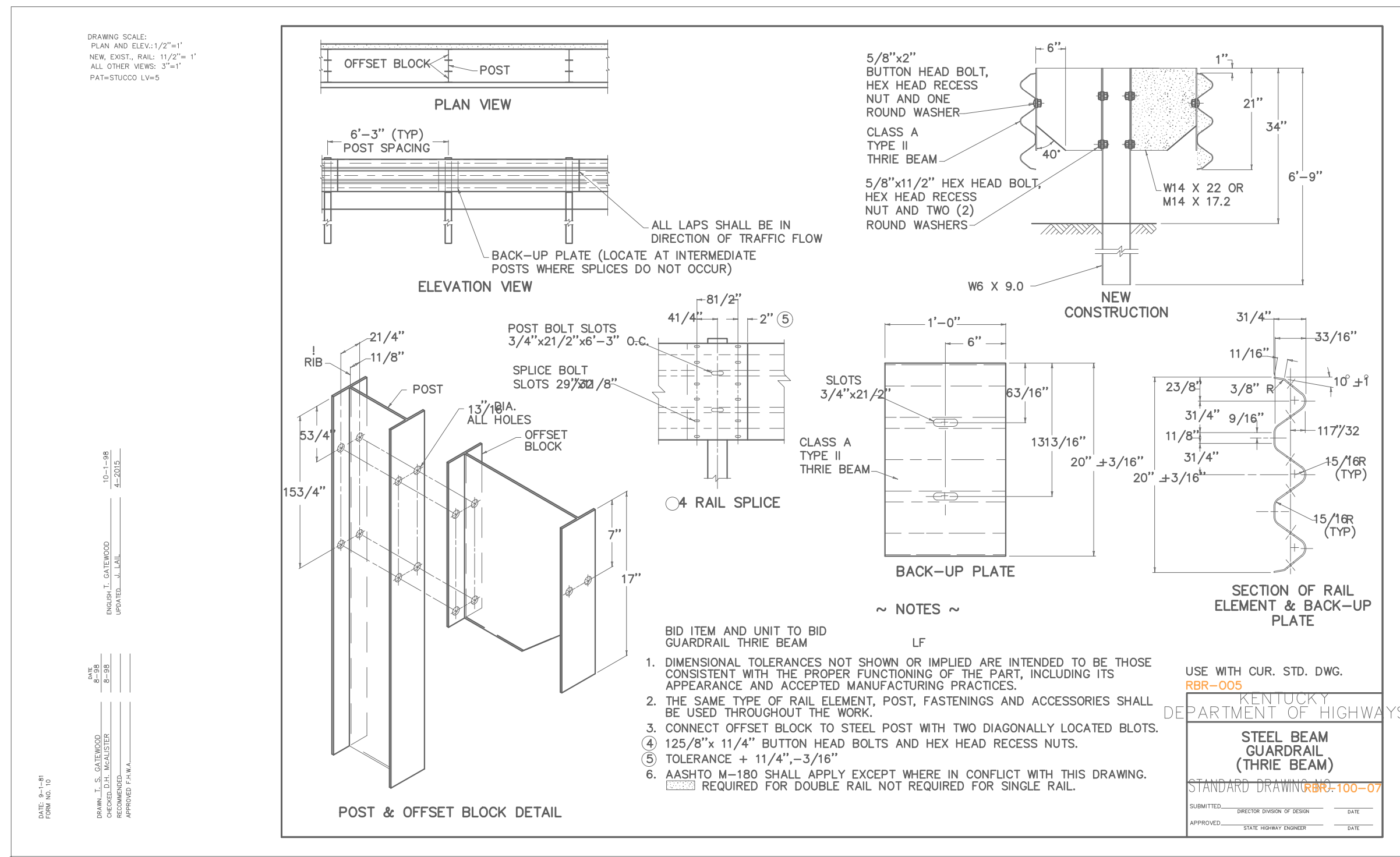
NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339			REGIONAL ENGINEER
						ACCOUNT NUMBER V8191			MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1			PRINCIPAL ENGINEER
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB	02/12/2020	AMP	



UL60 PIPELINE - PHASE 1
CONSTRUCTION DETAILS 7
BOONE COUNTY, KY

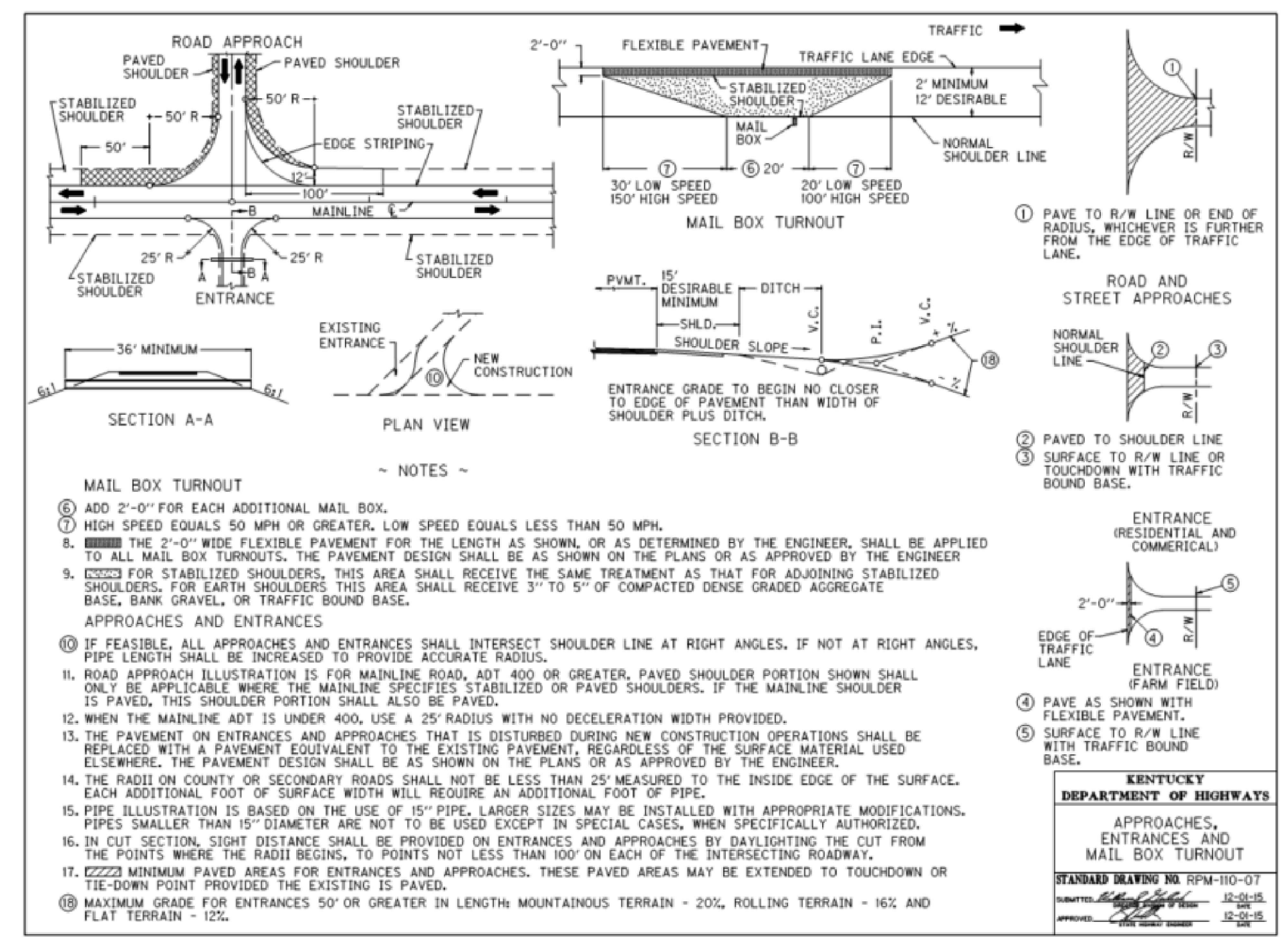
ERLANGER, KY

SHEET(S) 7 OF 7	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER	
PNG -C-043-0001095	
REVISION 0	
C/ERLANGER/UL60	



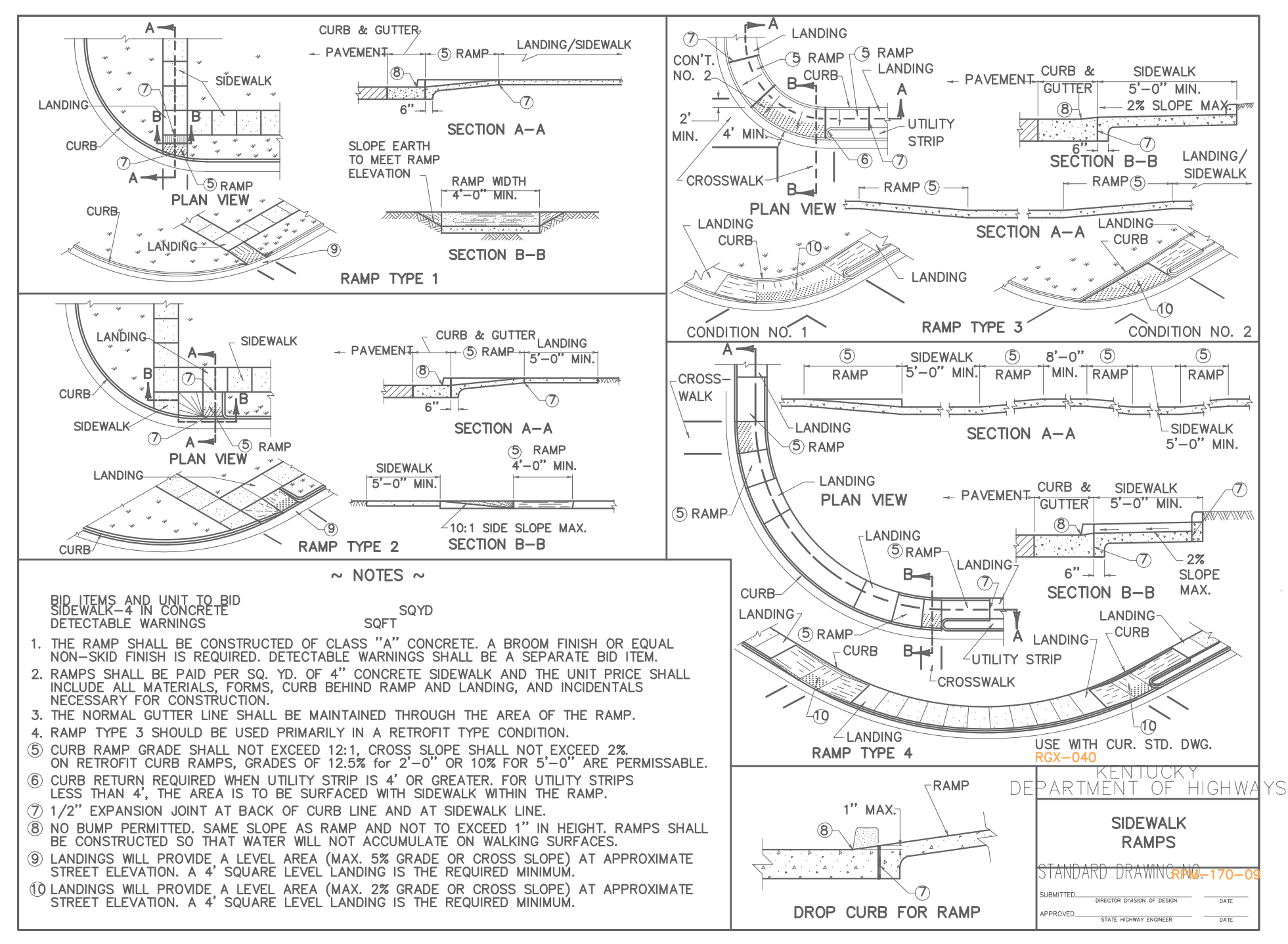
STEEL BEAM GUARDRAIL (THREE BEAM)

1



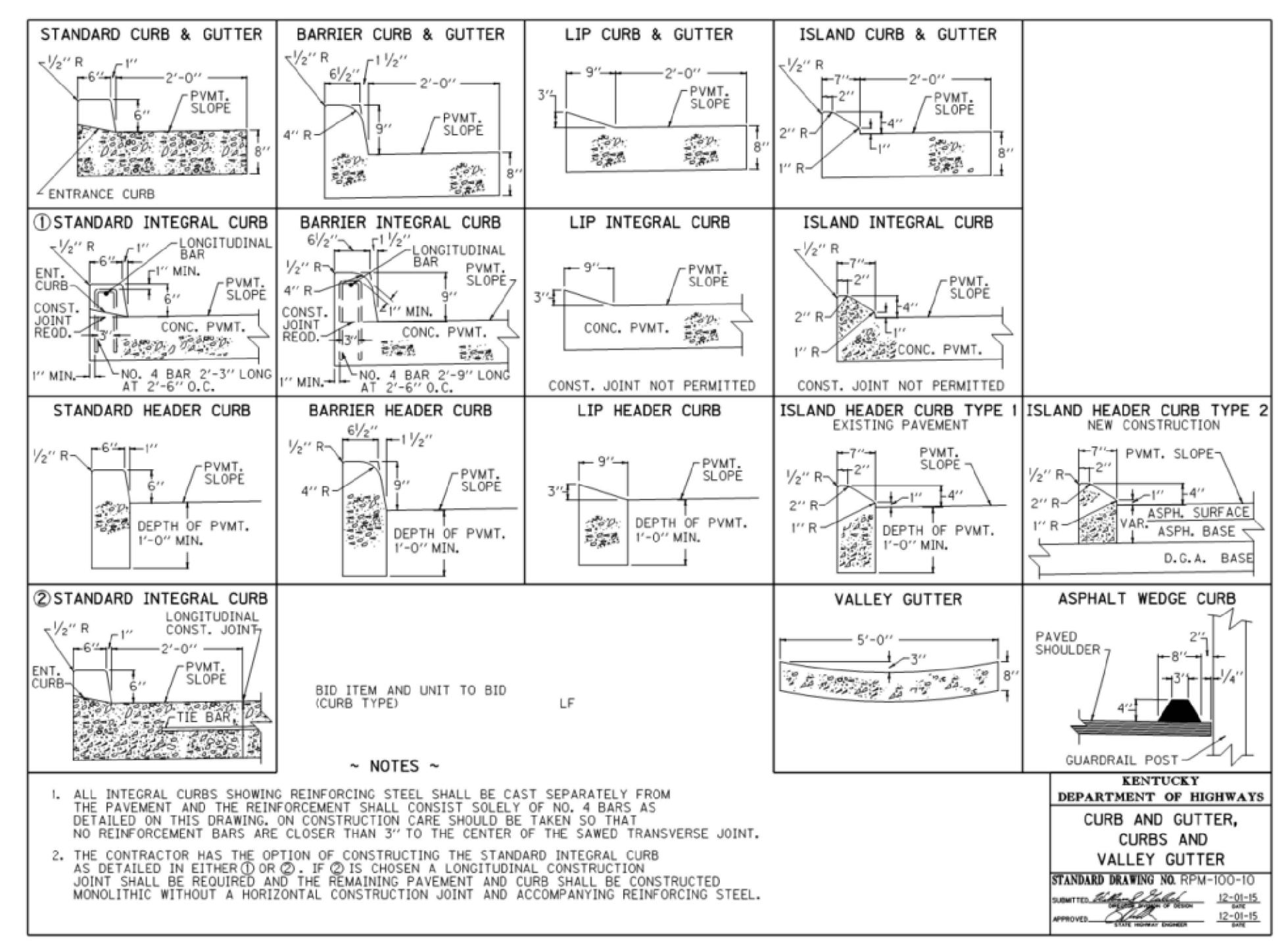
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT

2



SIDEWALK RAMPS

3



CURB AND GUTTER, CURBS AND VALLEY GUTTER DETAIL

4

BURNS & MCDONNELL STATE LICENSE #43		PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001										REF. DWG(S)	PNG-G-043-0001022		
AMANDA M. PALM 04/17/2020 KENTUCKY SEAL 33142		NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS	SHEET(S)	1 OF 1	DWG SCALE	NONE
PROFESSIONAL ENGINEER/ARCHITECT STAMP		0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	DATE	-	REGIONAL ENGINEER	DWG DATE	12/06/2019	SUPERSEDED	-
								ACCOUNT NUMBER V8191	DATE	-	MGR TECH REC & STD	DRAWING NUMBER		REVISION	
								PROJECT NUMBER G7UL02PH1	DATE	-	PRINCIPAL ENGINEER	PNG -C-043-0001096		0	
								DRAWING BY JXV	DATE	02/12/2020	INITIALS AMP	C/ERLANGER/UL60			
								STATION ID -	DATE	02/12/2020	INITIALS AMP				
								CHECKER INITIALS CEB	DATE	02/12/2020	INITIALS AMP				

**UL60 PIPELINE - PHASE 1
ACCESS DRIVE DETAILS
BOONE COUNTY, KY**
ERLANGER, KY



INSTALLATION:

1. AASHTO #1 (1.5-3.5 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.
2. 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).
3. 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 STRENGTH	200 lbs.
MINIMUM PUNCTURE STRENGTH	80 psi.
MINIMUM TEAR STRENGTH	50 lbs.
MINIMUM BURST STRENGTH	320 psi.
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS < 0.6 mm
PERMEABILITY	1X10 ⁻³ cm/sec
4. IF NEEDED, A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OUT ONTO PAVED SURFACES.
5. IF NEEDED, A WATER BAR SHALL BE CONSTRUCTED TO PREVENT SURFACE WATER FROM FLOWING ALONG THE LENGTH OF THE ENTRANCE UT ONTO PAVED SURFACE.

MAINTENANCE:

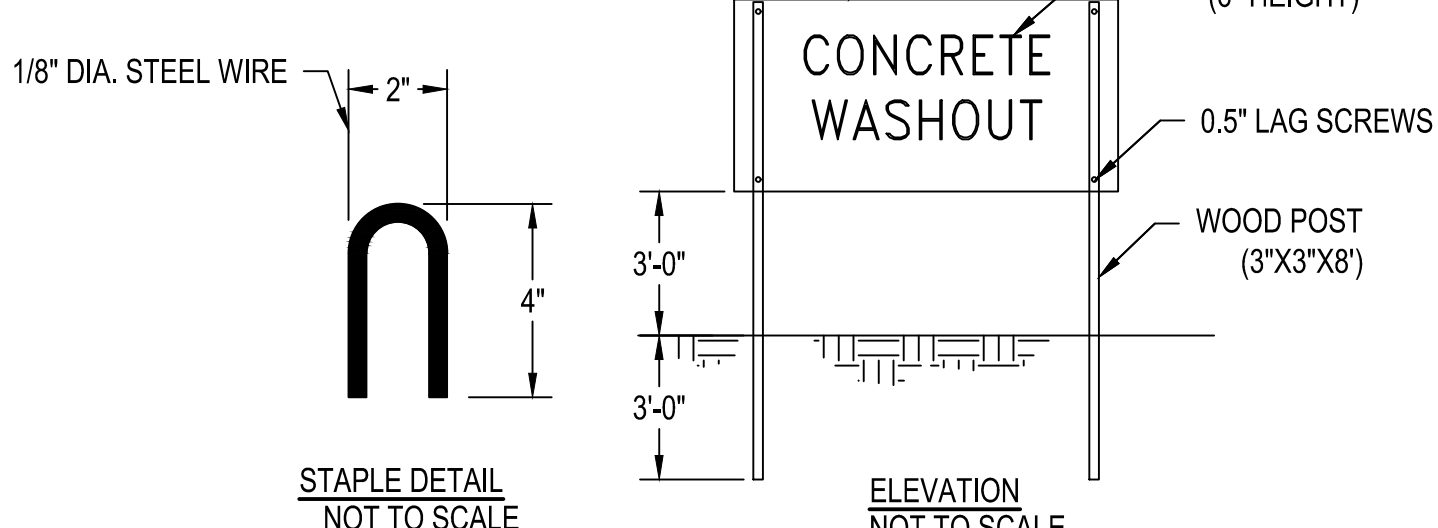
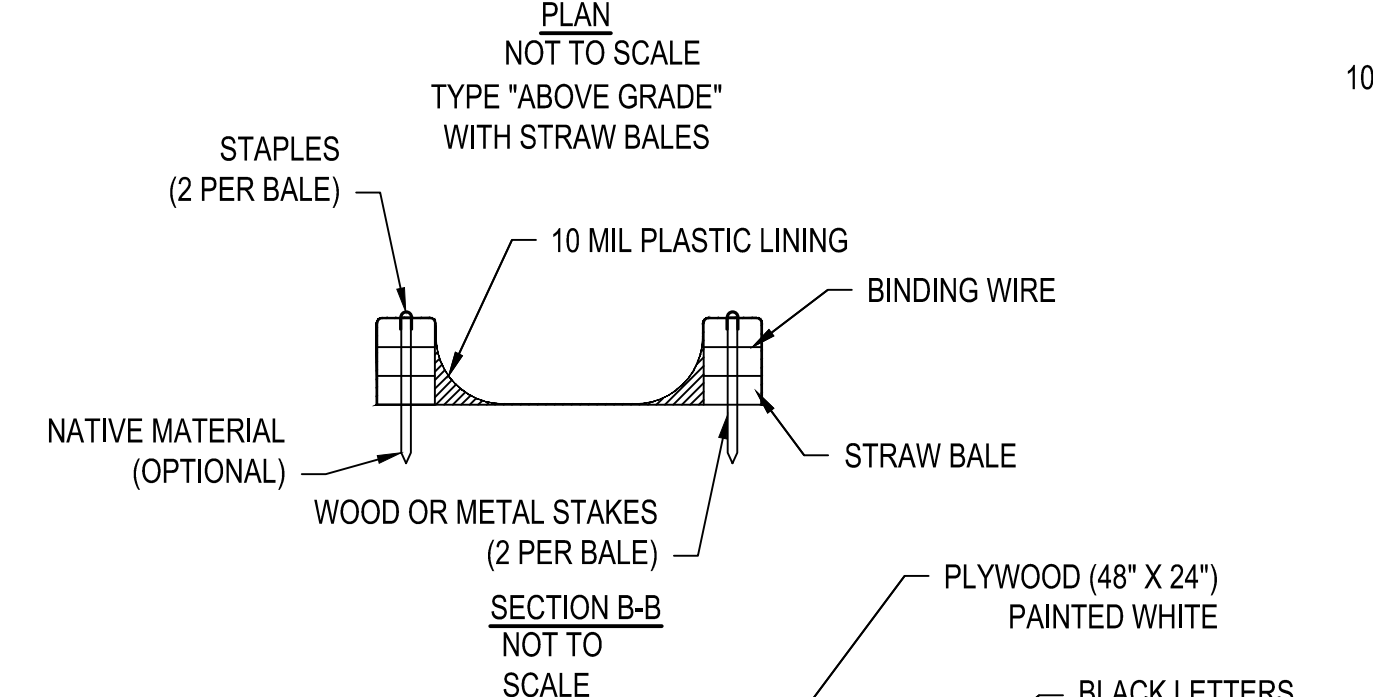
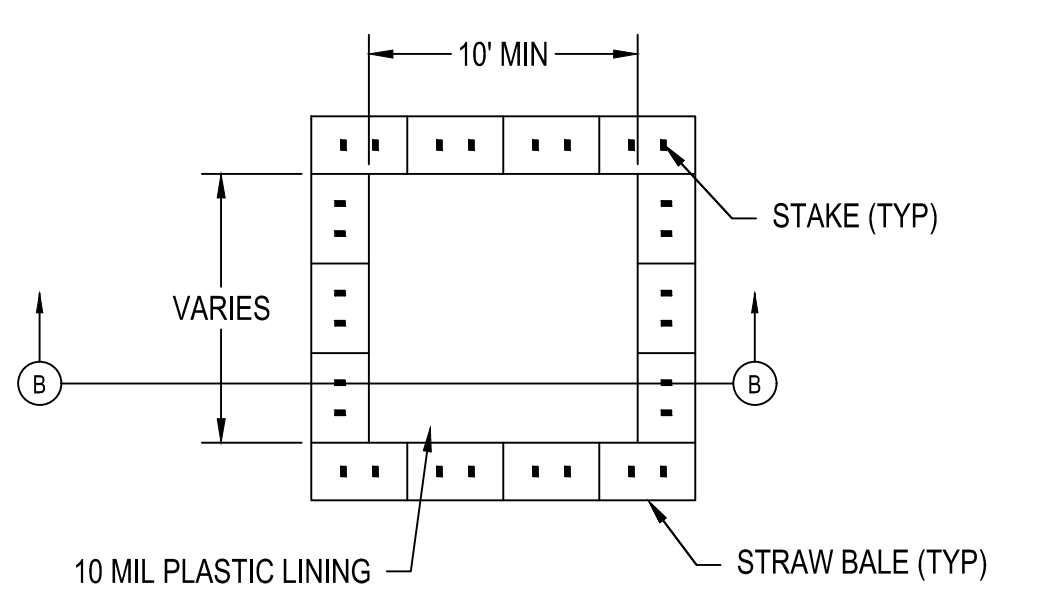
1. TOP DRESS WITH ADDITIONAL STONE AS SITE CONDITIONS DEMAND.
2. REMOVE MUD TRACKED ONTO PUBLIC STREETS IMMEDIATELY VIA SCRAPING OR SWEEPING.
3. ENSURE THE ENDS OF A TEMPORARY CULVERT PIPE (IF UTILIZED) ARE NOT BLOCKED AND THAT THE PIPE IS FREE OF DEBRIS THROUGHOUT.

REMOVAL:

1. THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.
2. PULL OUT ALL CONSTRUCTION ENTRANCE MATERIAL AND PROPERLY DISPOSE OF OFF-SITE. STONE CAN BE BLENDED INTO THE SURROUNDING LANDSCAPE AS SITE CONDITIONS ALLOW.
3. RE-GRADE THE AREA AS NECESSARY AND ESTABLISH VEGETATION ON ANY RESULTING DISTURBED AREAS.

NOTES:

1. CONCRETE WASHOUT WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WASHOUT CONVEYANCE.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED ADJACENT TO THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. WASHOUT PIT MUST BE INSPECTED FREQUENTLY TO ENSURE LINER IS INTACT.
4. 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.

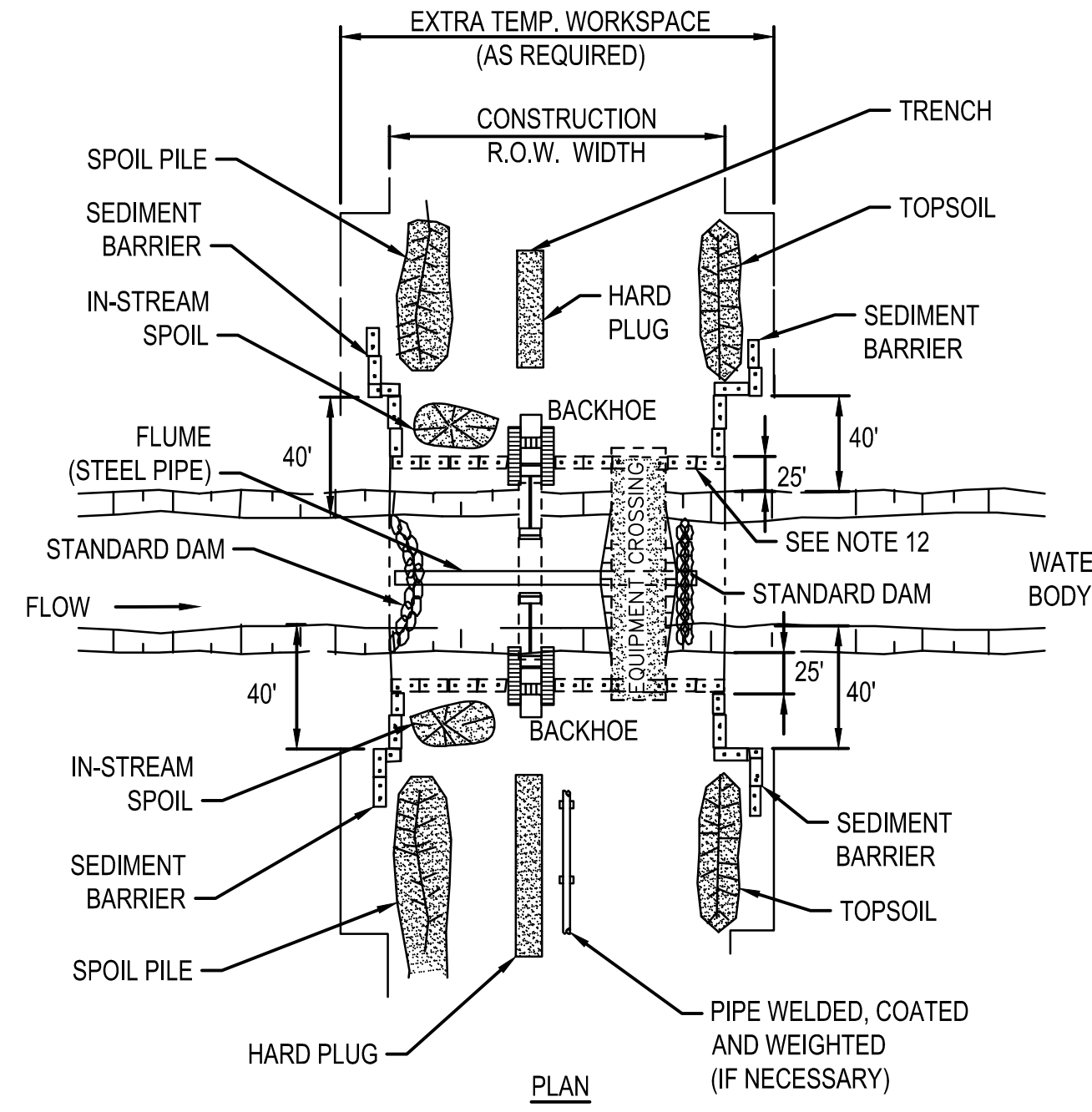


CONCRETE WASHOUT AREAS
SCALE: N.T.S.

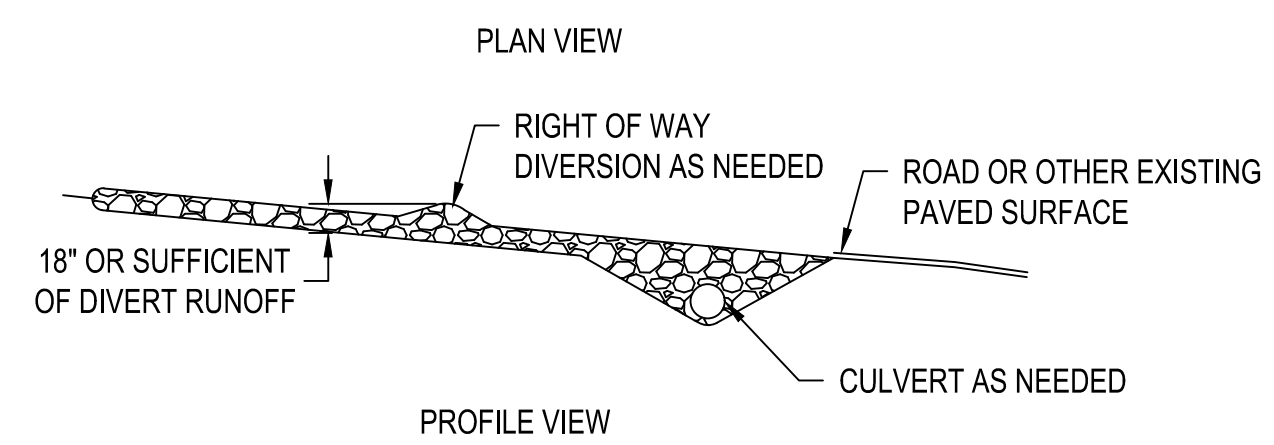
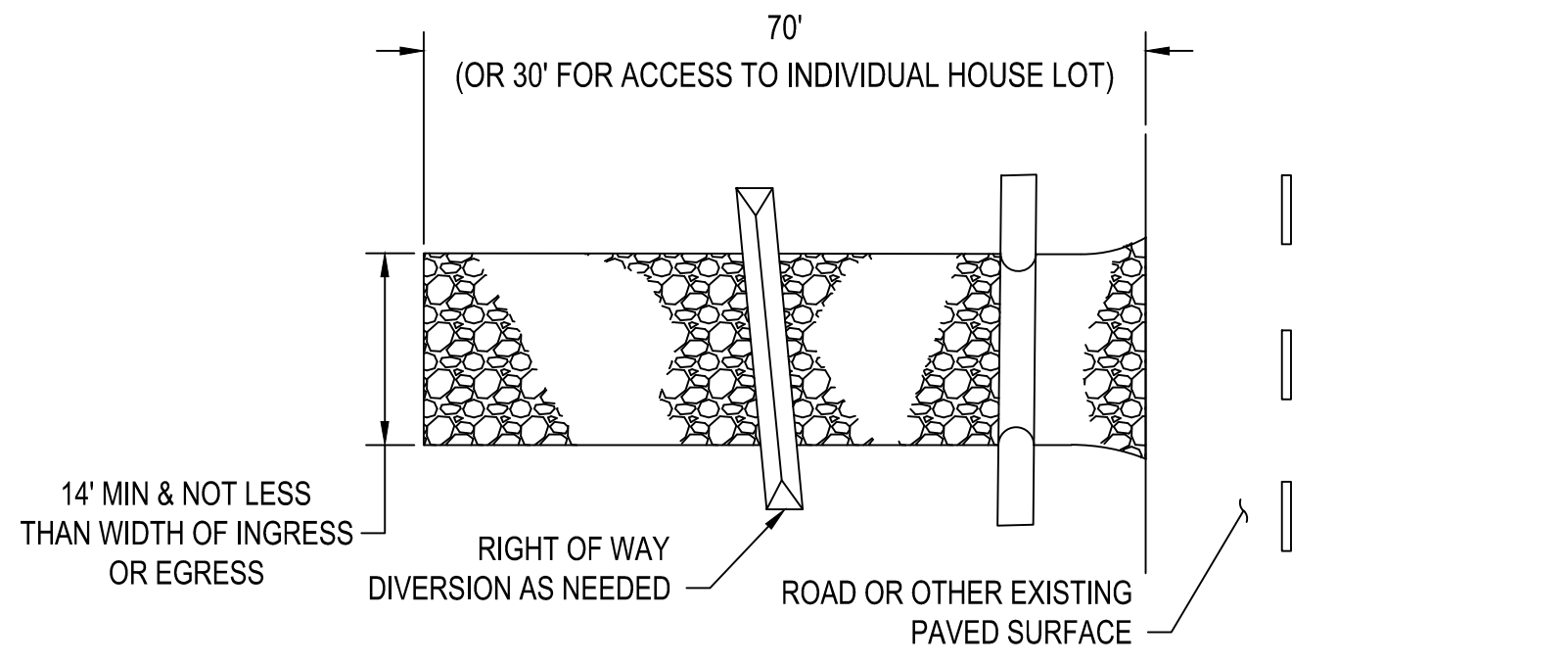
NOTES:

1. METHOD APPLIES TO WATERBODIES WHERE DOWNSTREAM SILTATION MUST BE AVOIDED. FLUMES ARE GENERALLY NOT RECOMMENDED FOR USE ON WATERBODIES WITH A BROAD UNCONFINED CHANNEL, PERMEABLE SUBSTRATE, EXCESSIVE DISCHARGE, OR WHERE A SIGNIFICANT AMOUNT OF BED OR BANK ALTERATION IS REQUIRED TO INSTALL FLUMES OR DAMS.
2. SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE.
3. COMPLETE ALL WATERCOURSE ACTIVITIES AS EXPEDITIOUSLY AS POSSIBLE.
4. NO REFUELING OF MOBILE EQUIPMENT WITHIN 100 FEET OF WATERBODY. REFUEL STATIONARY EQUIPMENT AS PER SPCC PLAN.
5. INSTALL TEMPORARY EQUIPMENT CROSSING.
6. IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA.
7. IN-STREAM SPOIL TO BE STORED ON BANKS A MINIMUM OF 10 FEET FROM TOP OF THE BANK.
8. LEAVE HARD PLUGS AT THE STREAM BANK EDGE UNTIL JUST PRIOR TO PIPE INSTALLATION.
9. SIZE FLUME TO HANDLE 150% ANTICIPATED FLOWS. INSTALL FLUME IN WATERCOURSE AND MAINTAIN CORRECT ALIGNMENT UNTIL REMOVED.
10. CONSTRUCT UPSTREAM DAM FOLLOWED BY DOWNSTREAM DAM. INSTALL A FLANGE ON UPSTREAM END OF FLUME AND SEAL TO SUBSTRATE WITH SANDBAGS AND POLYETHYLENE LINER WHERE NECESSARY TO ENSURE A WATER TIGHT BARRIER. "KEY" DAMS INTO BANKS OR CONSTRUCT SECONDARY DAM, IF NECESSARY.

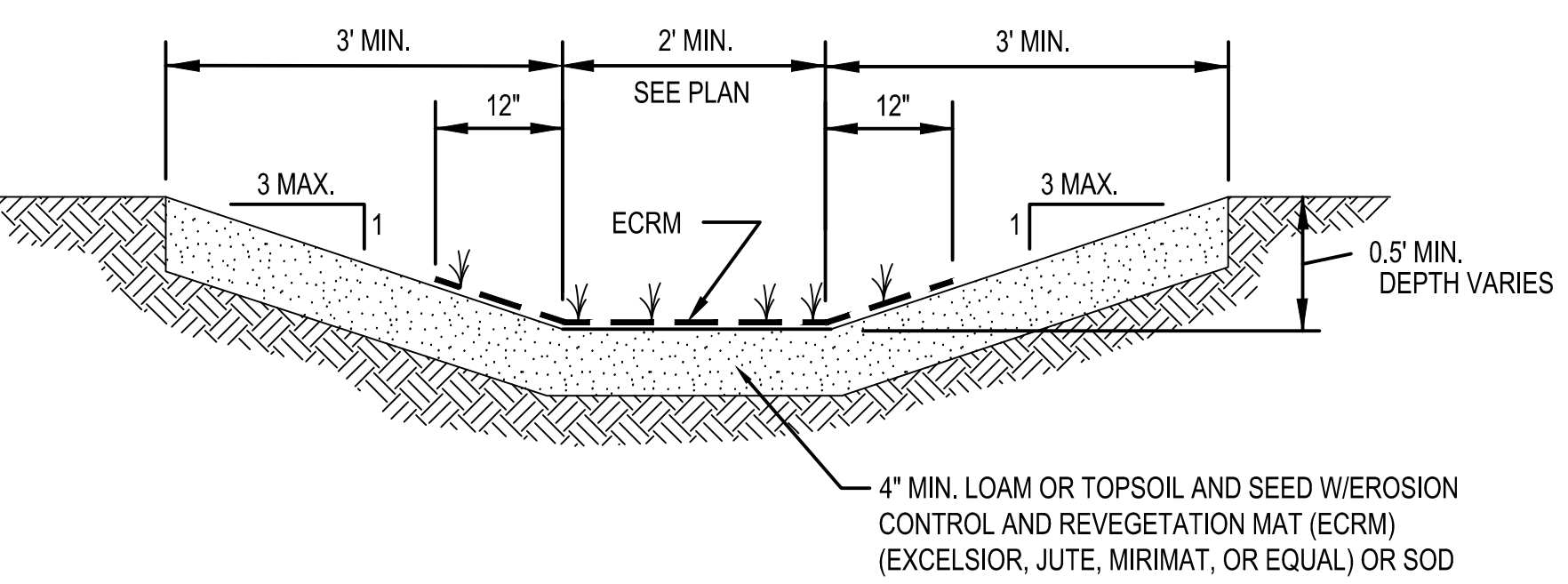
11. PUMP STREAM CHANNEL BETWEEN DAMS, IF NECESSARY. DISCHARGE WATER THROUGH A DEWATERING STRUCTURE AND ONTO A STABLE WELL VEGETATED AREA TO PREVENT EROSION AND SEDIMENTATION. NO HEAVILY SILT-LADEN WATER MAY BE DISCHARGED IN THE STREAM.
12. CONSTRUCT SEDIMENT BARRIERS (FILTER SOCK AND/ OR SILT FENCE) TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING BACK INTO WATERCOURSE. CONSTRUCTED SEDIMENT BARRIERS SHALL EXTEND ALONG THE SIDES OF THE STOCKPILES AND THE ENDS OF DAMS. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY.
13. COMPLETE PREFABRICATION OF IN-STREAM PIPE SECTION AND WEIGHT PIPE AS NECESSARY PRIOR TO COMMENCEMENT OF IN-STREAM ACTIVITY.
14. TRENCH THROUGH WATERCOURSE. INSTALL TEMPORARY (SOFT) PLUGS, IF NECESSARY, TO CONTROL WATER FLOW AND TRENCH SLOUGHING.
15. MAINTAIN STREAM FLOW, IF PRESENT, THROUGH FLUME THROUGHOUT CROSSING CONSTRUCTION.
16. LOWER-IN PIPE, INSTALL TRENCH PLUG AND BACKFILL IMMEDIATELY.
17. BACKFILL WITH NATIVE MATERIAL.
18. RESTORE WATERCOURSE CHANNEL TO APPROXIMATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
19. RESTORE STREAM BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE, AS REQUIRED.



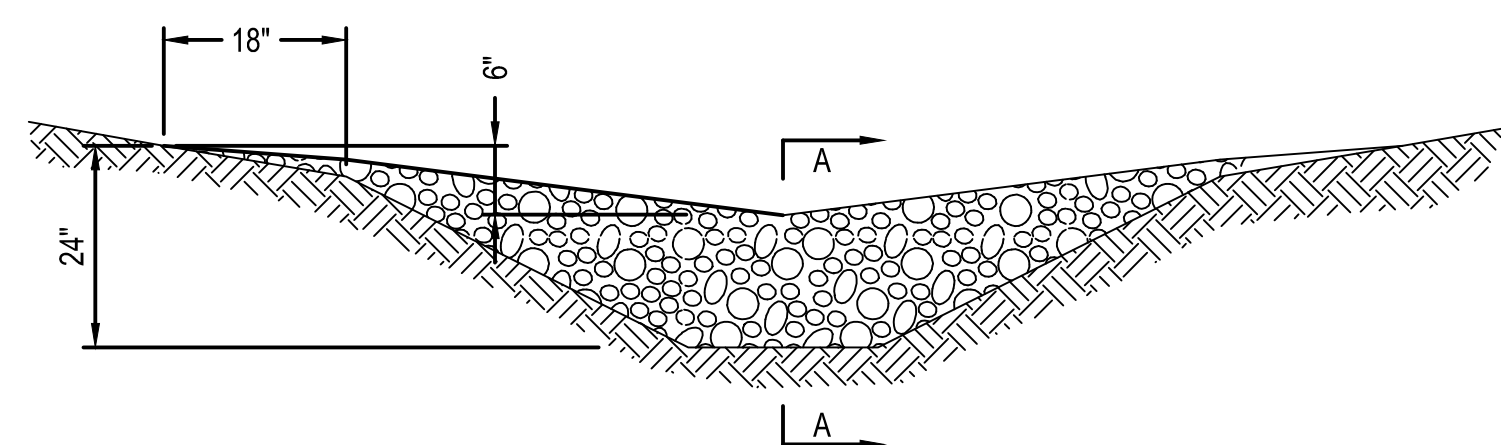
OPEN CUT DRY FLUME
SCALE: N.T.S.



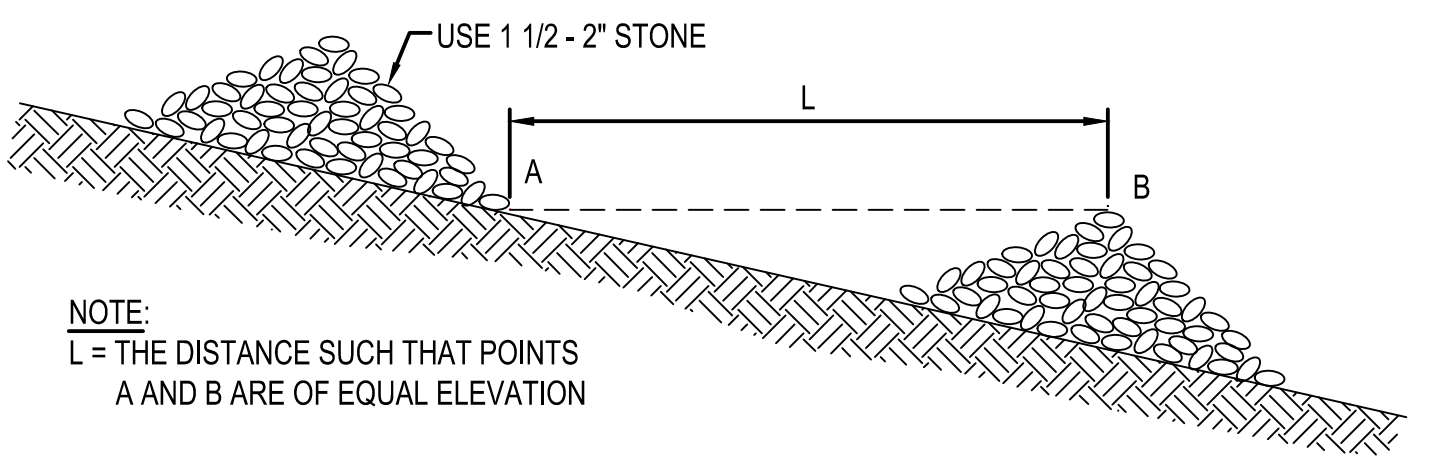
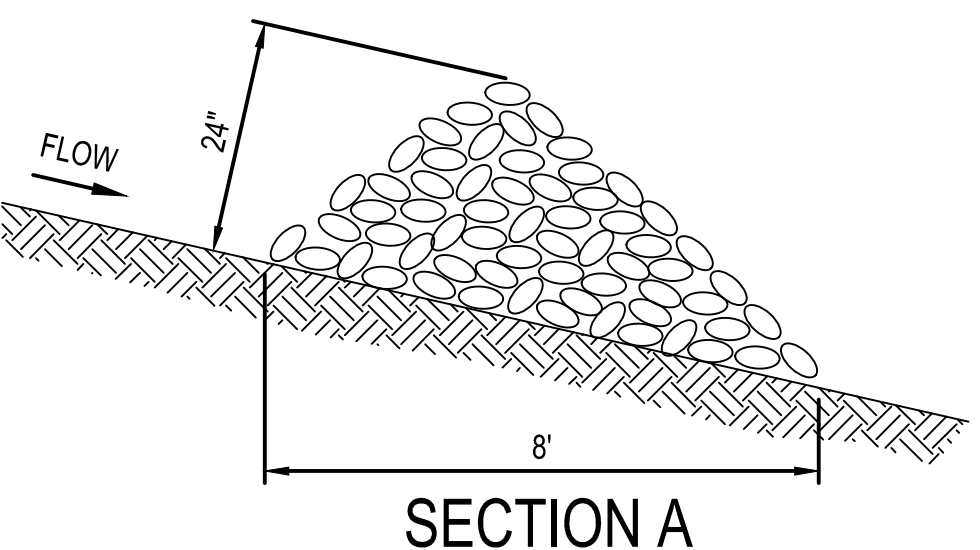
STABILIZING CONSTRUCTION ENTRANCE
SCALE: N.T.S.



SWALE CROSS SECTION
SCALE: N.T.S.



VIEW LOOKING UPSTREAM



ROCK DITCH CHECK
SCALE: N.T.S.

BURNS & MCDONNELL STATE LICENSE #43

AMANDA M. PALM 04/17/2020 KENTUCKY SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	PRINCIPAL ENGINEER
						DRAWING BY JXV	
						STATION ID -	
						CHECKER INITIALS CEB	

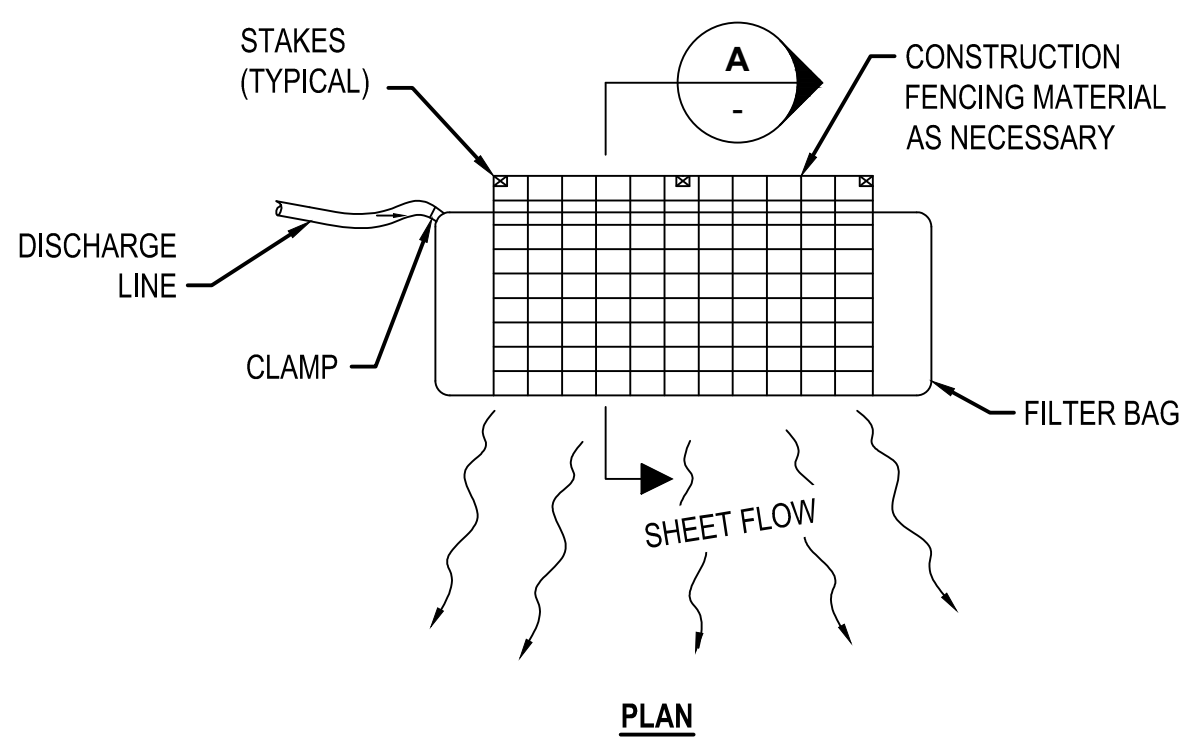
DATE 02/12/2020 INITIALS AMP

DUKE ENERGY | Piedmont Natural Gas

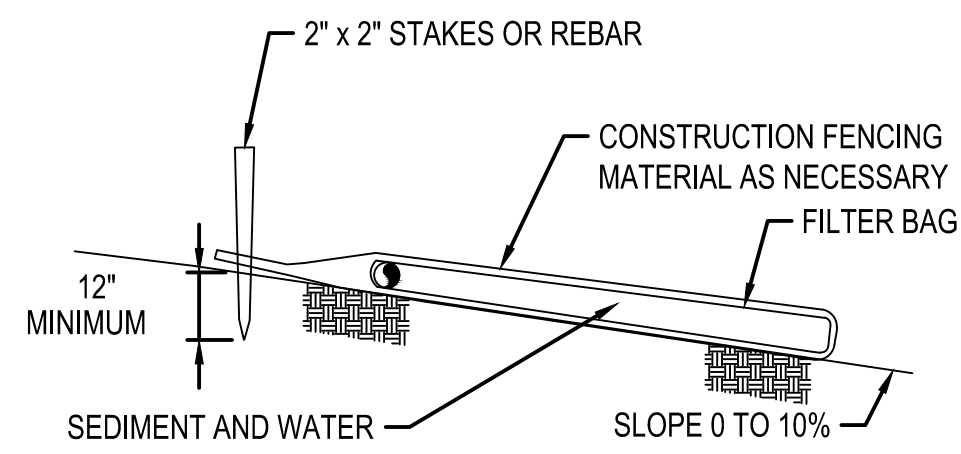
COPYRIGHT 2019

UL60 PIPELINE - PHASE 1
EROSION & SEDIMENT CONTROL DETAILS 1
BOONE COUNTY, KY
ERLANGER, KY

SHEET(S) 1 OF 3 DWG SCALE -
DWG DATE 04/18/2019 SUPERSEDED
DRAWING NUMBER PNG -C-043-0001099 REVISION 0
C/ERLANGER/UL60



PLAN

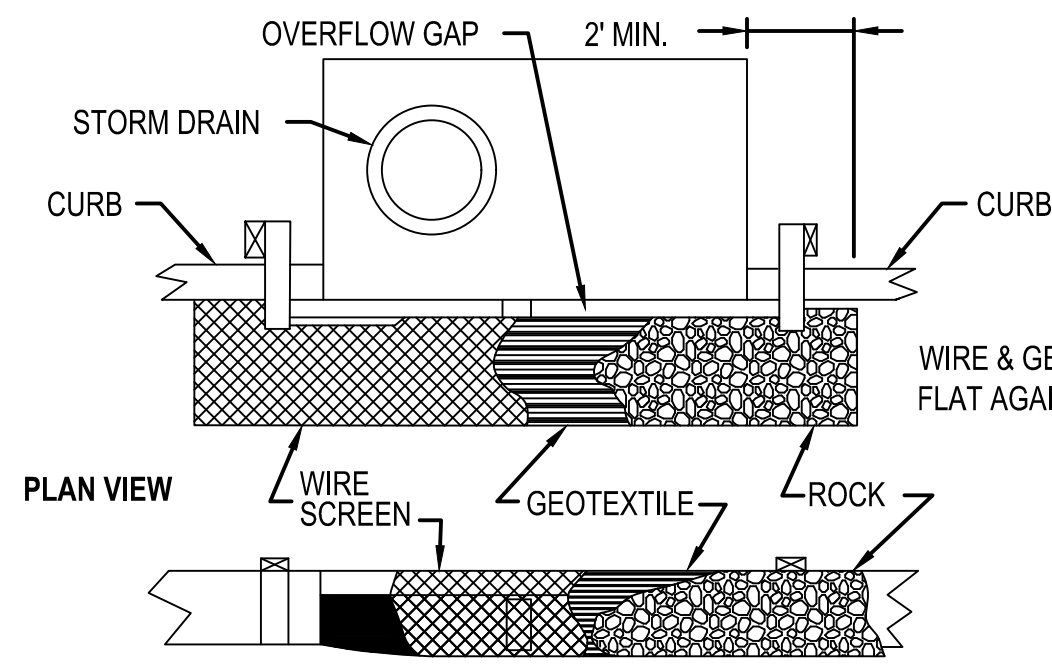
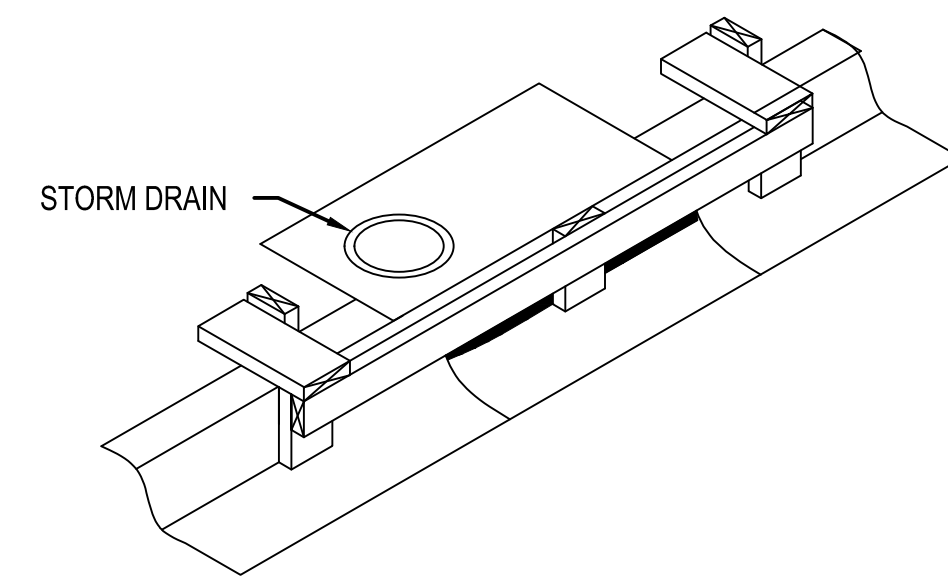


SECTION "A-A"

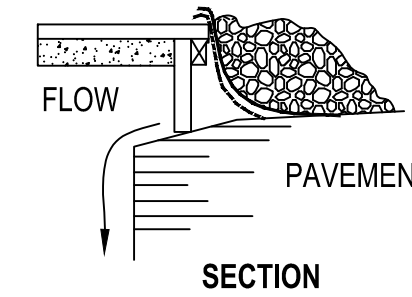
TYPICAL GEOTEXTILE FILTER BAG FOR DEWATERING
SCALE:N.T.S.

NOTES:

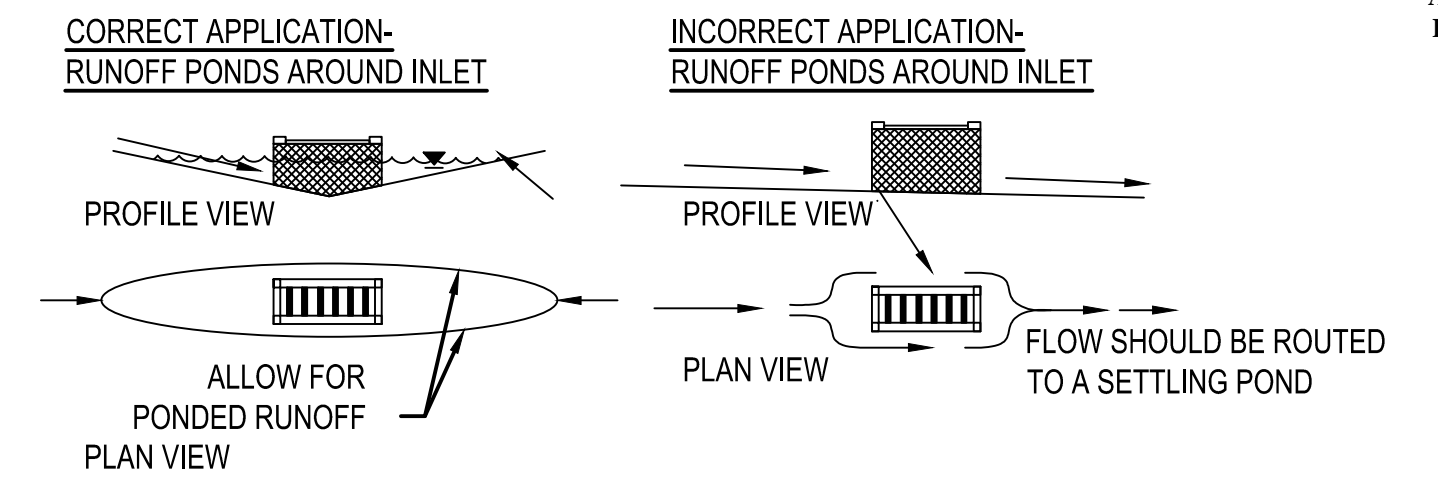
1. INSTALL A DEWATERING GEOTEXTILE FILTER BAG AS DIRECTED BY THE COMPANY'S INSPECTOR TO PREVENT THE FLOW OF HEAVILY SILT LADEN WATER INTO WATERBODIES OR WETLANDS.
2. DISCHARGE SITE SHALL BE WELL VEGETATED AND THE TOPOGRAPHY OF THE SITE SUCH THAT WATER WILL FLOW AWAY FROM ANY WORK AREAS. THE AREA DOWN 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 GALLONS PER MINUTE.
5. 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.



ELEVATION



SECTION



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

INSTALLATION:

1. REMOVE THE GRATE FROM THE CATCH BASIN.
2. INSERT THE FILTRATION SACK INTO OPENING OF CATCH BASIN. SOME PRODUCTS REQUIRE THE FILTRATION SACK BE SLIPPED OVER THE CATCH BASIN GRATE FIRST.
3. 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.

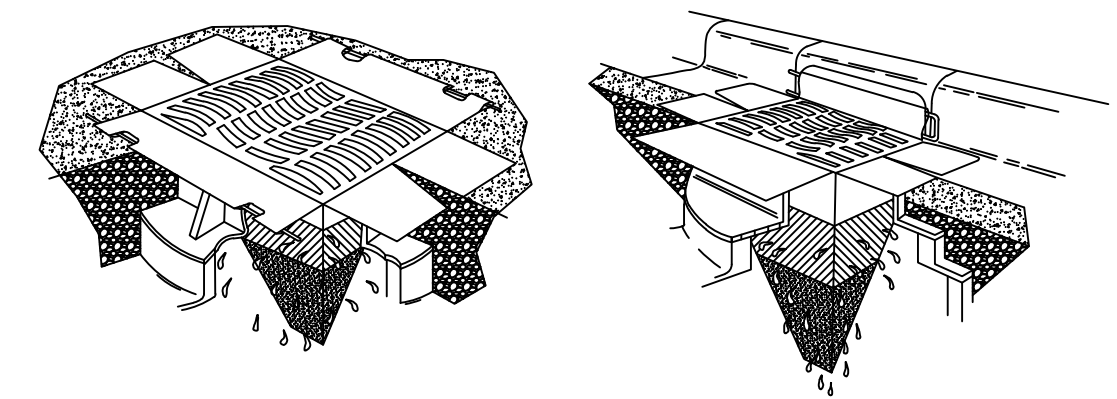
MAINTENANCE:

1. 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.
2. 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.
3. THE FILTRATION SACK MUST BE REPLACED IF IT IS TORN, OTHERWISE THE SAME SACK CAN BE USED MULTIPLE TIMES.

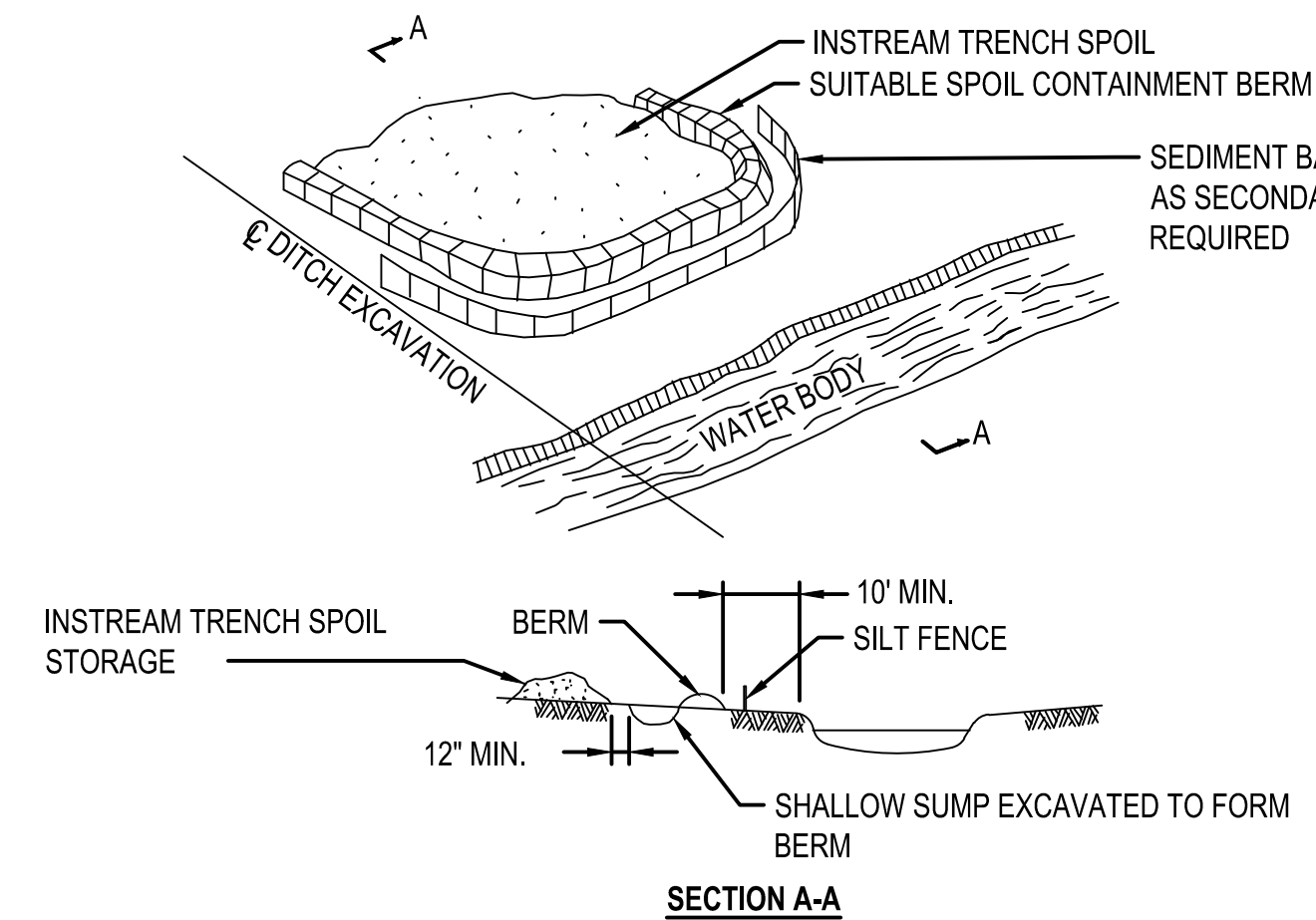
REMOVAL:

1. PULL OUT ALL INLET PROTECTION MATERIAL AND PROPERLY DISPOSE OF OFF-SITE.
2. 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 DRAIN INLET PROTECTION PRACTICES. BE SURE TO IMPLEMENT FILTRATION SACKS THAT ARE APPROPRIATE FOR EITHER CURB INLETS OR FOR YARD DRAIN INLETS. MANUFACTURER'S SPECIFICATIONS FOR THE PRODUCT OF CHOICE SHOULD BE FOLLOWED.



CURB INLET PROTECTION
SCALE:N.T.S.

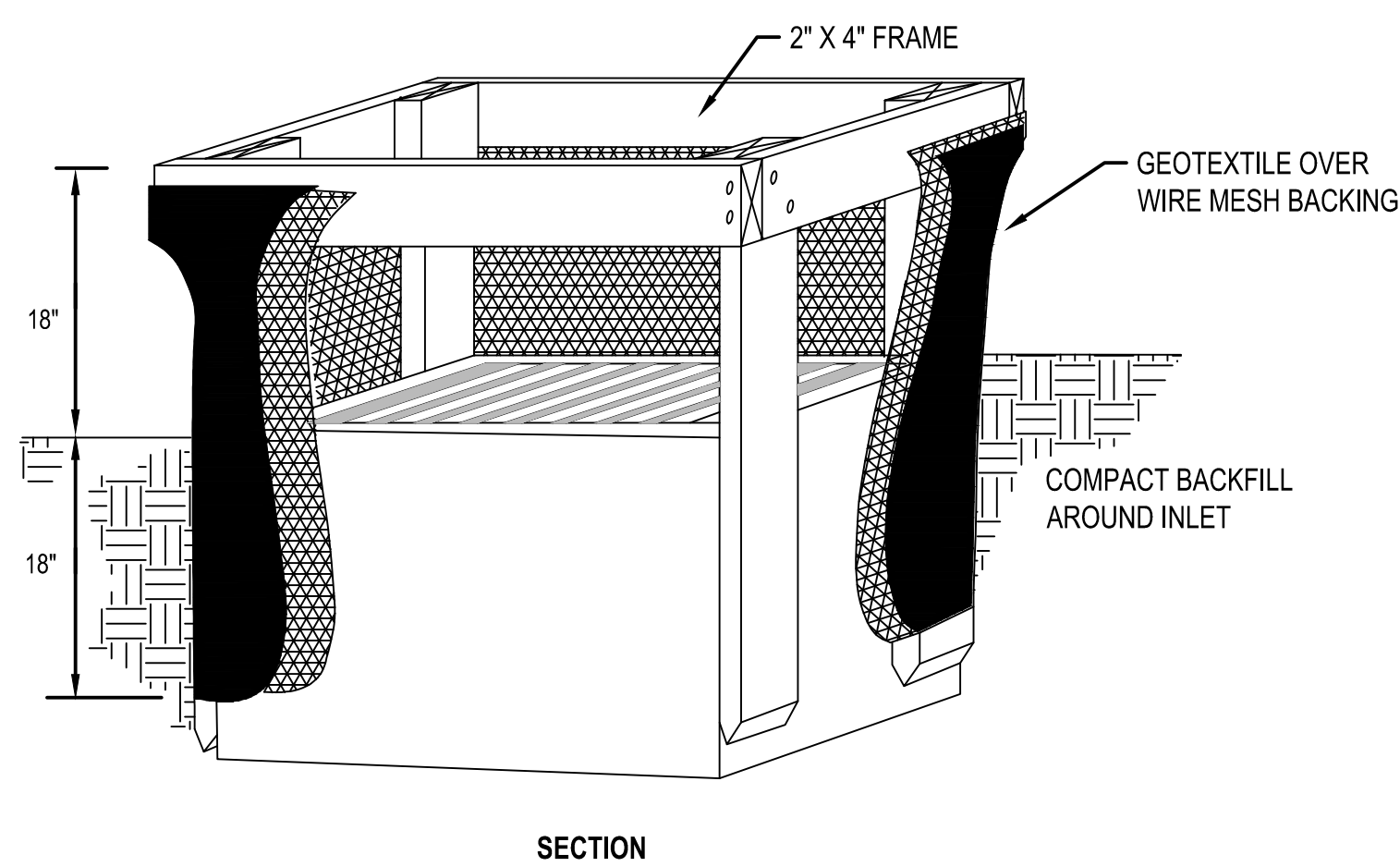


SECTION A-A

NOTES:

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 BARRIERS IF REQUIRED.
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 PERIOD.
3. CARE SHOULD BE TAKEN THAT THE SPOIL PILE DOES NOT OVERTOP THE CONTAINMENT BERM.
4. THE CONTAINMENT BERM SHOULD BE DISMANTLED AND THE SITE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF THE WATER CROSSING.
5. 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 CONTAINMENT LOCATION.

TYPICAL TEMPORARY SOIL CONTAINMENT BERM FOR WATERBODY TRENCH SPOILS
SCALE:N.T.S.



SECTION

INSTALLATION:

1. CONSTRUCT PRIOR TO UPSLOPE LAND DISTURBANCE.
2. 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.
3. THE WIRE MESH AND GEOTEXTILE SHALL BE TIGHTLY STRETCHED AND FASTENED TO THE FRAME.
4. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
5. 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:

1. 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.
2. REPLACE AND PROPERLY DISPOSE OF DAMAGED SILT FENCE MATERIAL.
3. AREA WHERE SURFACE FLOW HAS CUT UNDER THE SILT FENCE MATERIAL WITHIN THE TRENCH SHALL BE RE-COMPACTED WITH APPROPRIATE MATERIAL (I.E. HIGH CLAY CONTENT)

REMOVAL:

1. PULL OUT ALL SILT FENCE MATERIAL AND STAKES AND PROPERLY DISPOSE OF OFF-SITE.
2. 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
SCALE:N.T.S.

BURNS & MCDONNELL STATE LICENSE #43		PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001										REF. DWG(S) PNG-G-043-0001022	
AMANDA M. PALM 04/17/2020 KENTUCKY SEAL 33142		NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION		APPROVALS		SHEET(S) 2 OF 3	DWG SCALE NONE
PROFESSIONAL ENG/ARCH STAMP		0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE	5339	DATE	INITIALS	DWG DATE 04/18/2019	SUPERSEDED
								ACCOUNT NUMBER	V8191	DATE	INITIALS	DRAWING NUMBER	
								PROJECT NUMBER	G7UL02PH1	DATE	INITIALS	PNG -C-043-0001100	
								DRAWING BY	JXV	DATE	INITIALS	REVISION	
								STATION ID	-	DATE	INITIALS	0	
								CHECKER INITIALS	CEB	02/12/2020	AMP	C/ERLANGER/UL60	



UL60 PIPELINE - PHASE 1
EROSION & SEDIMENT CONTROL DETAILS 2
BOONE COUNTY, KY
ERLANGER, KY

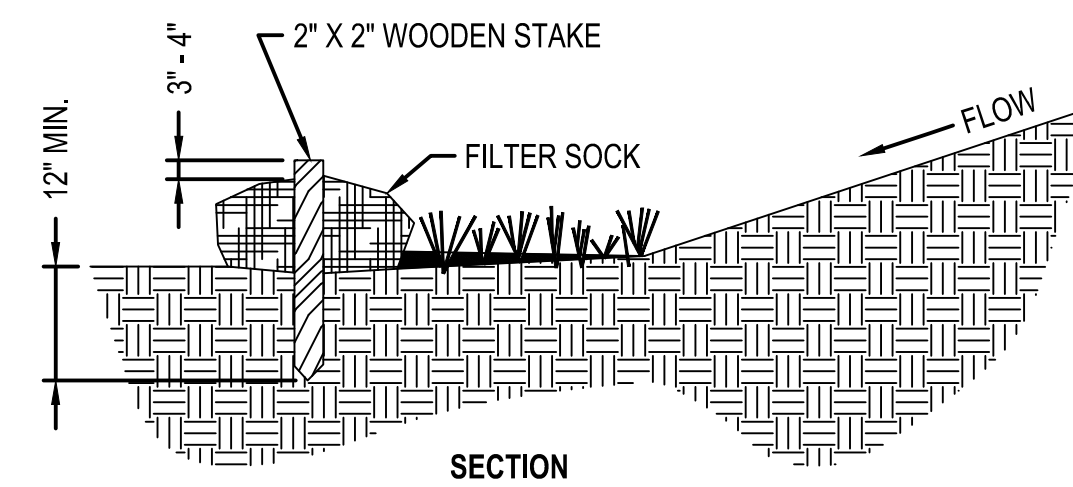
COPYRIGHT 2019

SILT FENCE

- INSTALLATION:**
1. CONSTRUCT PRIOR TO UPSLOPE LAND DISTURBANCE.
 2. PLACE CONTINUOUS LENGTHS OF SILT FENCE ALONG A CONSISTENT CONTOUR SO AS TO PREVENT THE CONCENTRATION OF RUNOFF AT LOW POINTS IN THE FENCE.
 3. 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.
 4. 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 BULLDOZER.
 5. 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 THE GROUND.
 6. STAKES (MIN. 32-INCH LENGTH, 2"x2" HARDWOOD OF GOOD QUALITY) MUST BE PALCED ON THE DOWNSLOPE SIDE OF THE SILT FENCE MATERIAL.
 7. SILT FENCE MATERIAL MUST BE PULLED TIGHT BETWEEN CONSECUTIVE STAKES TO ENSURE THE FENCE DOES NOT SAG.
 8. 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 THE GROUND.

- MAINTENANCE:**
1. 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.
 2. REPLACE AND PROPERLY DISPOSE OF DAMAGED SILT FENCE MATERIAL.
 3. AREAS WHERE SURFACE FLOW HAS CUT UNDER THE SILT FENCE MATERIAL WITHIN THE TRENCH SHALL BE RE-COMPACTED WITH APPROPRIATE MATERIAL (I.E. HIGH CLAY CONTENT).

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



SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	10% - 20%	125	250	300	350
10% - 20%	50:1 - 10:1	100	125	200	250
2% - 10%	10:1 - 5:1	75	100	150	200
20% - 33%	5:1 - 2:1	50	75	100	
>50%	>2:1	25	50	75	

NOTES:

1. 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".
2. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

INSTALLATION:

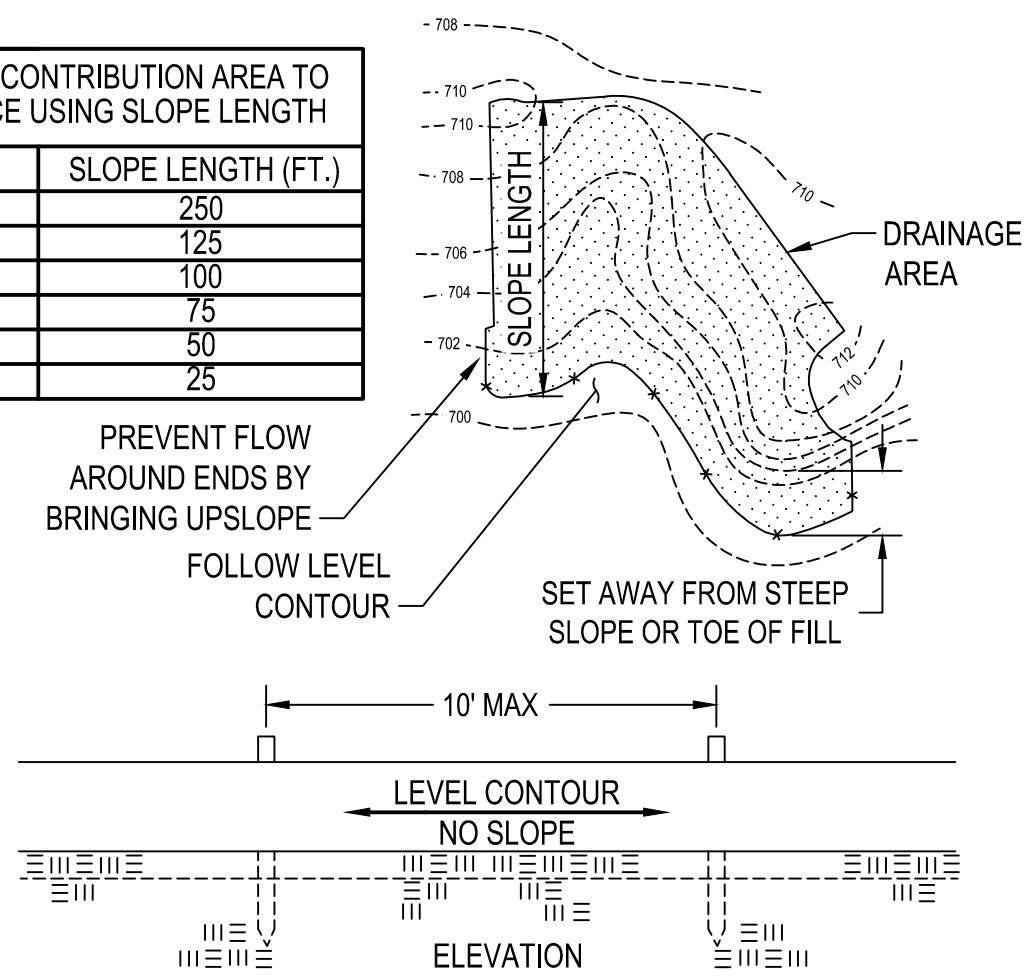
1. FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
2. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE 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.

MAINTENANCE:

1. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
2. REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
3. 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.

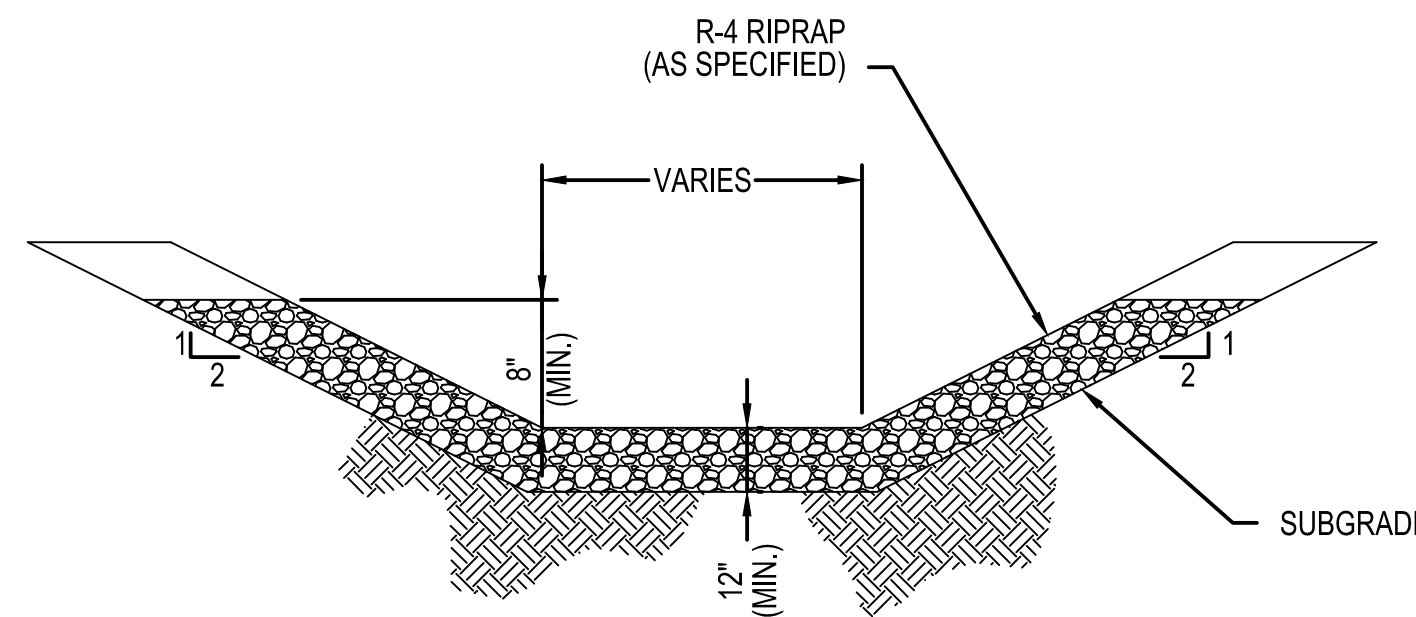
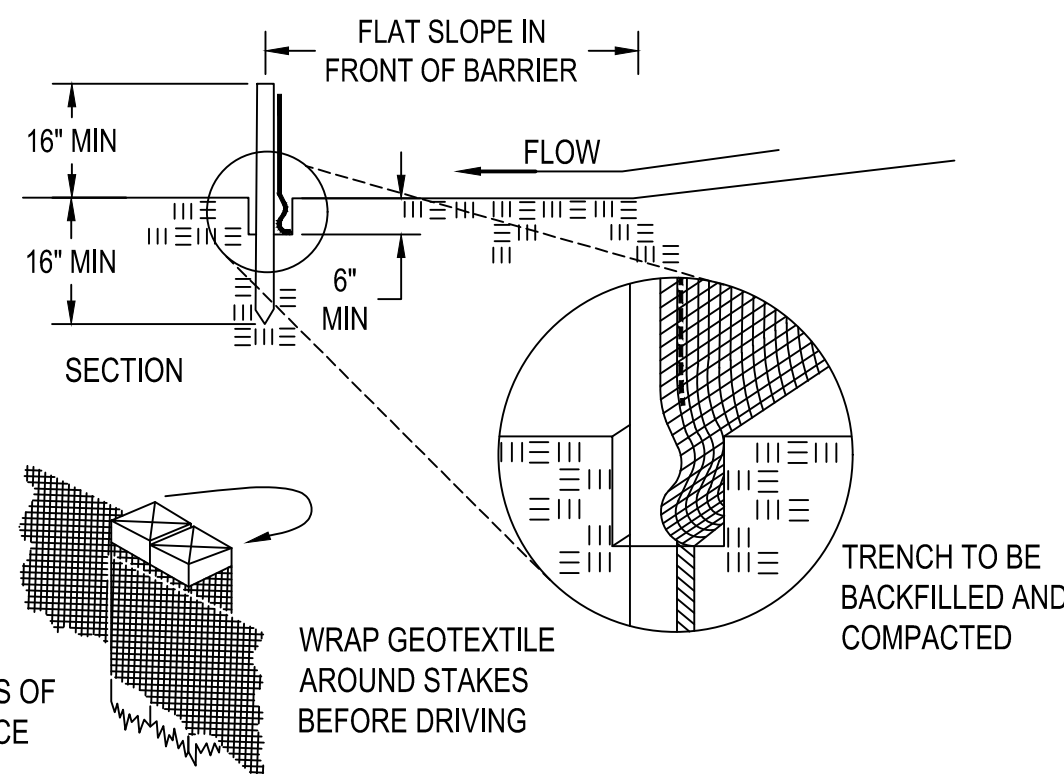
MAXIMUM CONTRIBUTION AREA TO SILT FENCE USING SLOPE LENGTH

SLOPE	SLOPE LENGTH (FT.)
0% - 2%	250
3% - 10%	125
11% - 20%	100
21% - 33%	75
34% - 50%	50
>50%	25



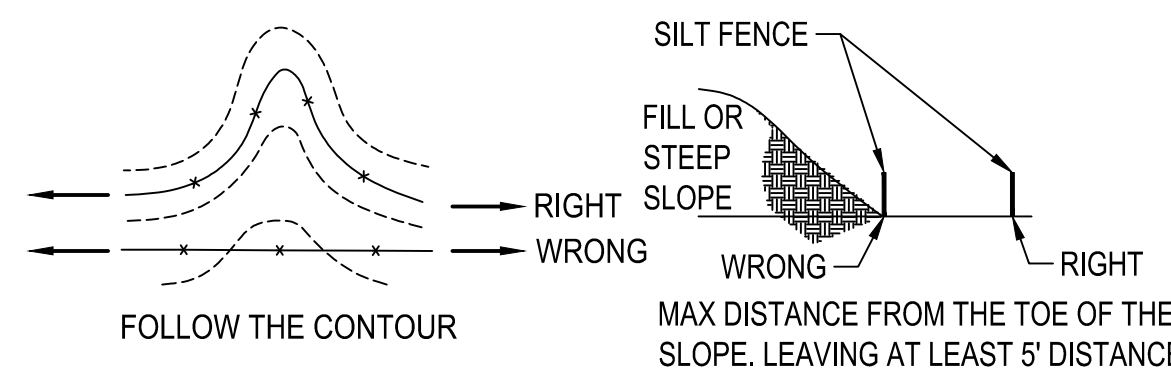
FILTER SOCK

SCALE: N.T.S.



RIPRAPPED CHANNEL

SCALE: N.T.S.



SILT FENCE

SCALE: N.T.S.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENG/ARCH STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339			REGIONAL ENGINEER
						ACCOUNT NUMBER V8191			MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1			PRINCIPAL ENGINEER
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB	02/12/2020	AMP	

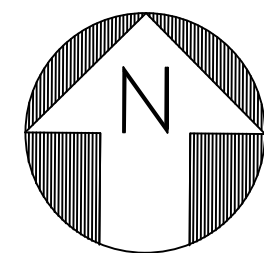


COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
EROSION & SEDIMENT CONTROL DETAILS 3
BOONE COUNTY, KY**

ERLANGER, KY

SHEET(S) 3 OF 3	DWG SCALE NONE
DWG DATE 04/18/2019	SUPERSEDED
DRAWING NUMBER	
PNG -C-043-0001101	REVISION 0
C/ERLANGER/UL60	



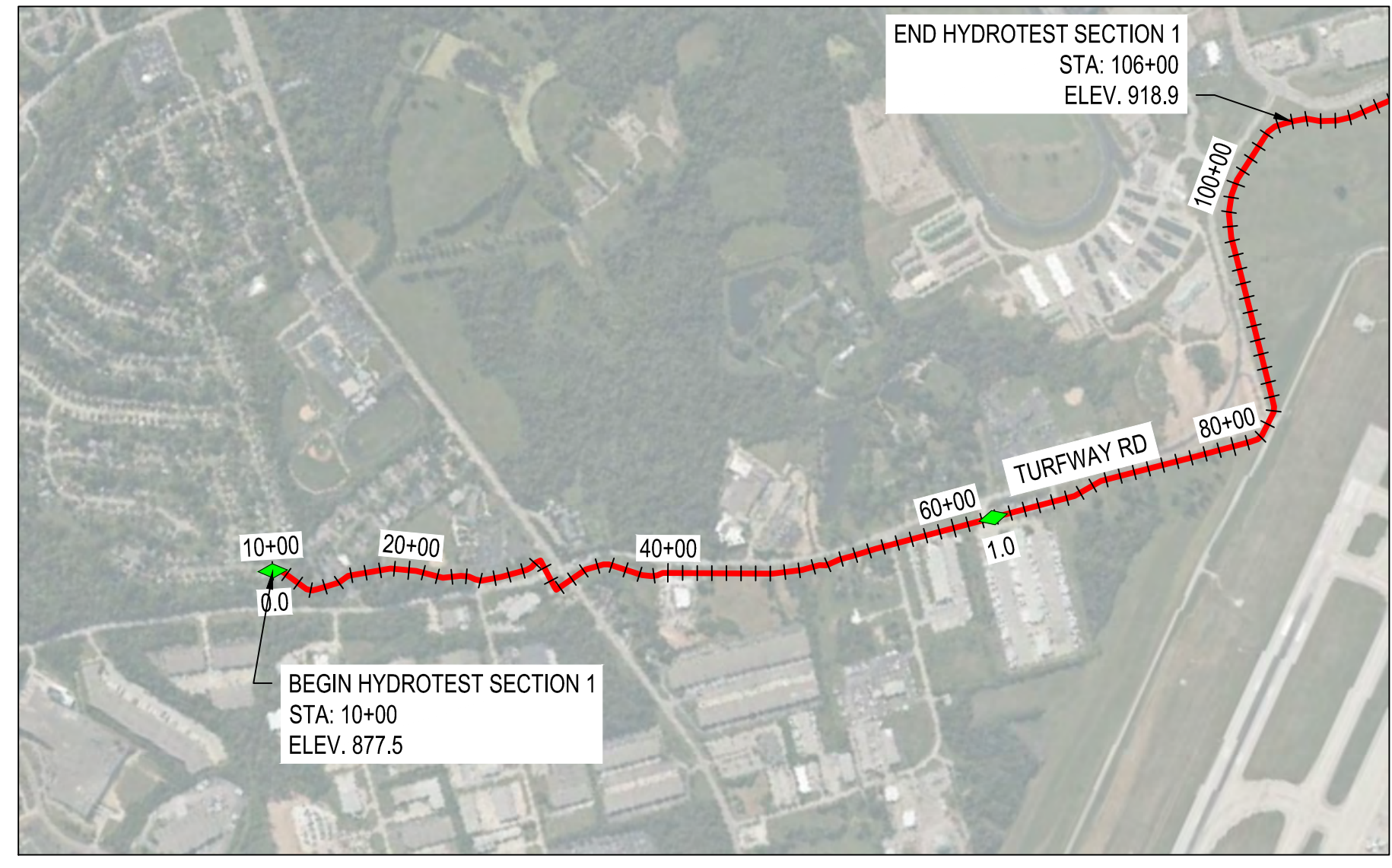
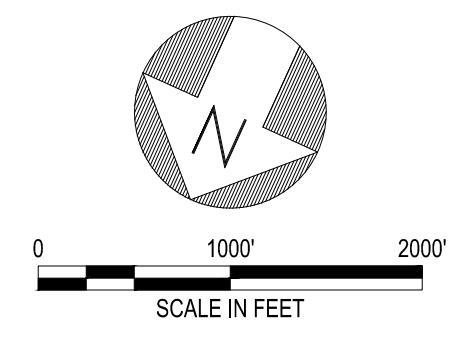
0 70' 140'
SCALE IN FEET



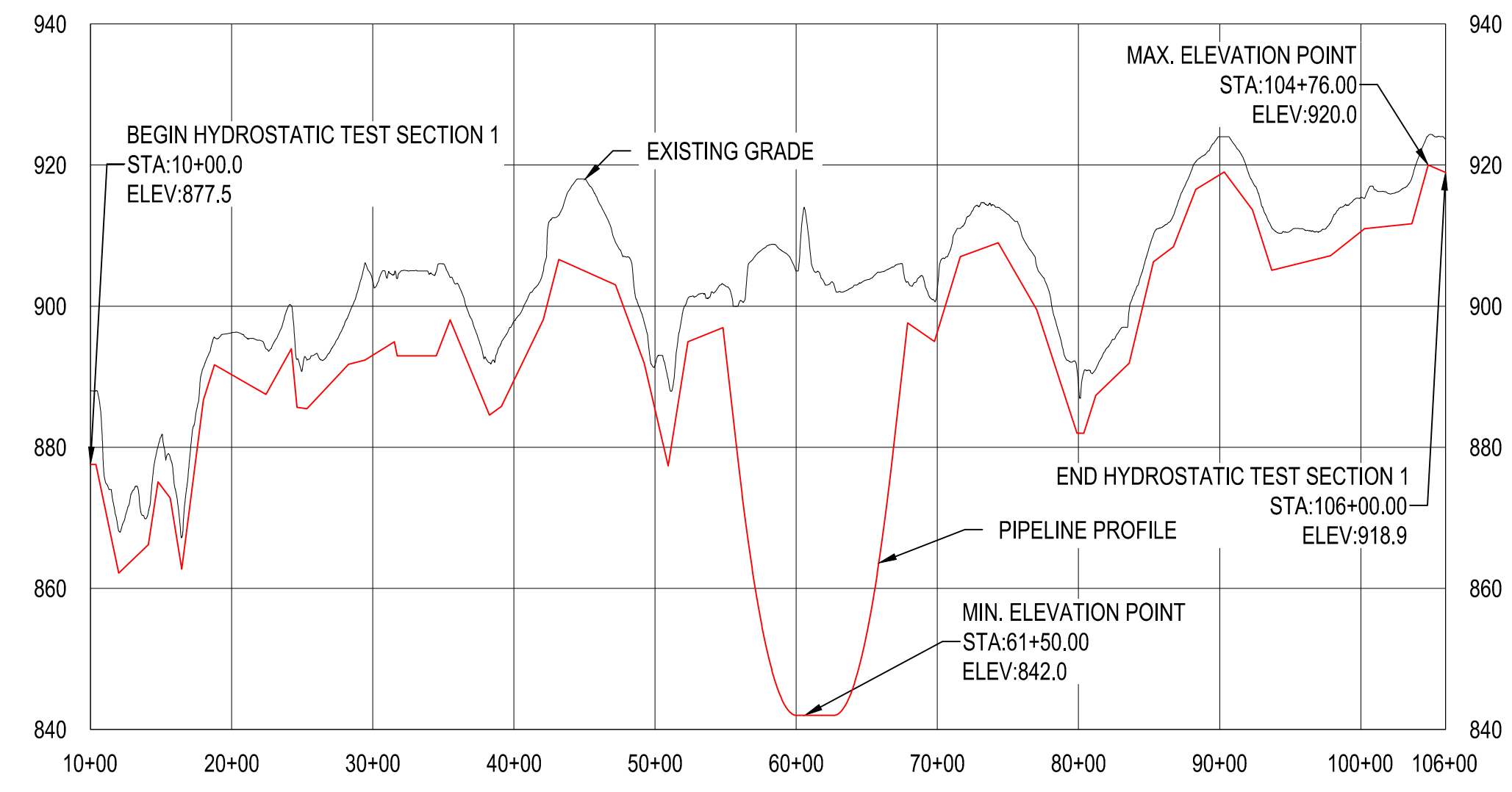
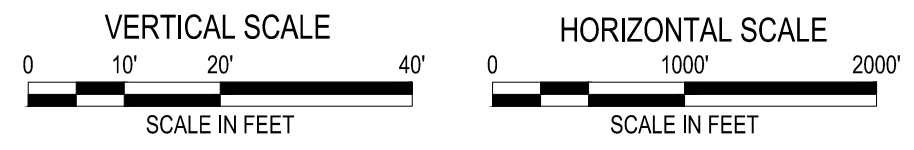
BURNS & MCDONNELL STATE LICENSE #43		PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE * TO ENSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO. MANAGEMENT (RIM) POLICY 1001										REF. DWG(S) PNG-C-043-0001055	
AMANDA M. PALM 04/17/2020 KENTUCKY SEAL 33142		NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS	REGIONAL ENGINEER	REF. DWG(S) PNG-C-043-0001056
PROFESSIONAL ENGINEER STAMP		0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	-	-		MGR TECH REC & STD	REF. DWG(S) PNG-C-043-0001057
								ACCOUNT NUMBER V8191	-	-			SHEET(S) 1 OF 1
								PROJECT NUMBER G7UL02PH1	-	-			DWG SCALE 1" = 70'
								DRAWING BY JXV	-	-			DWG DATE 10/11/2019
								STATION ID -	-	-			SUPERSEDED -
								CHECKER INITIALS CEB	02/12/2020	AMP			DRAWING NUMBER PNG -C-043-0001104
													REVISION 0
													C/ERLANGER/UL60



UL60 PIPELINE - PHASE 1
AIRPORT LAYDOWN YARD ACCESS PLAN
BOONE COUNTY, KY
ERLANGER, KY



HYDROTEST SECTION 1



HYDROTEST SECTION 1 INFORMATION:
COMPONENTS WERE TESTED WITH TEST V8191-V8351-20201009-1 FOR 8.13 HOURS WITH WATER TO A MINIMUM PRESSURE OF 1549.7 PSI TO A MAXIMUM PRESSURE OF 1552.8 PSI.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT STAMP

PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY
PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE * TO INSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO. MANAGEMENT (RIM) POLICY 1001

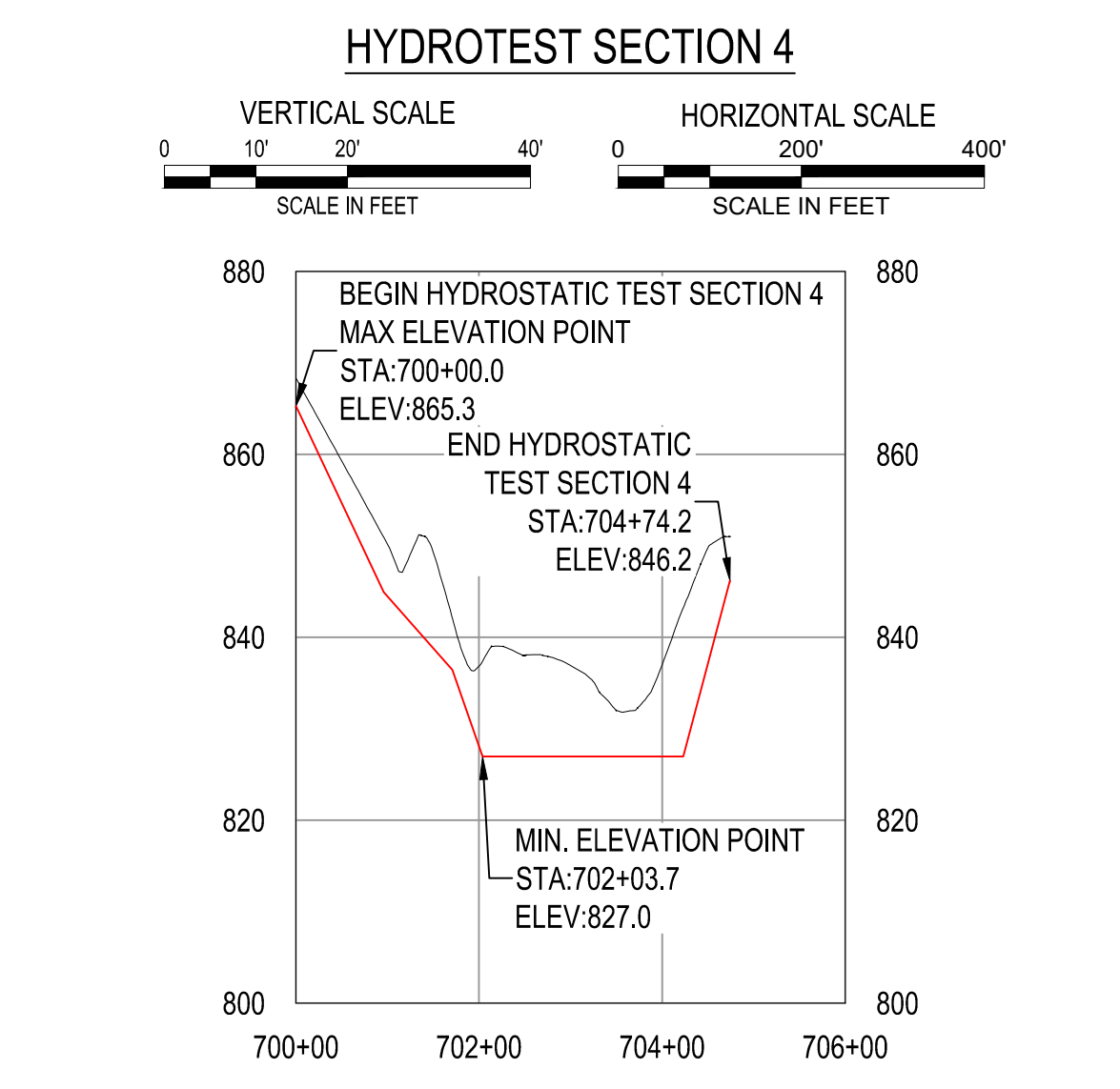
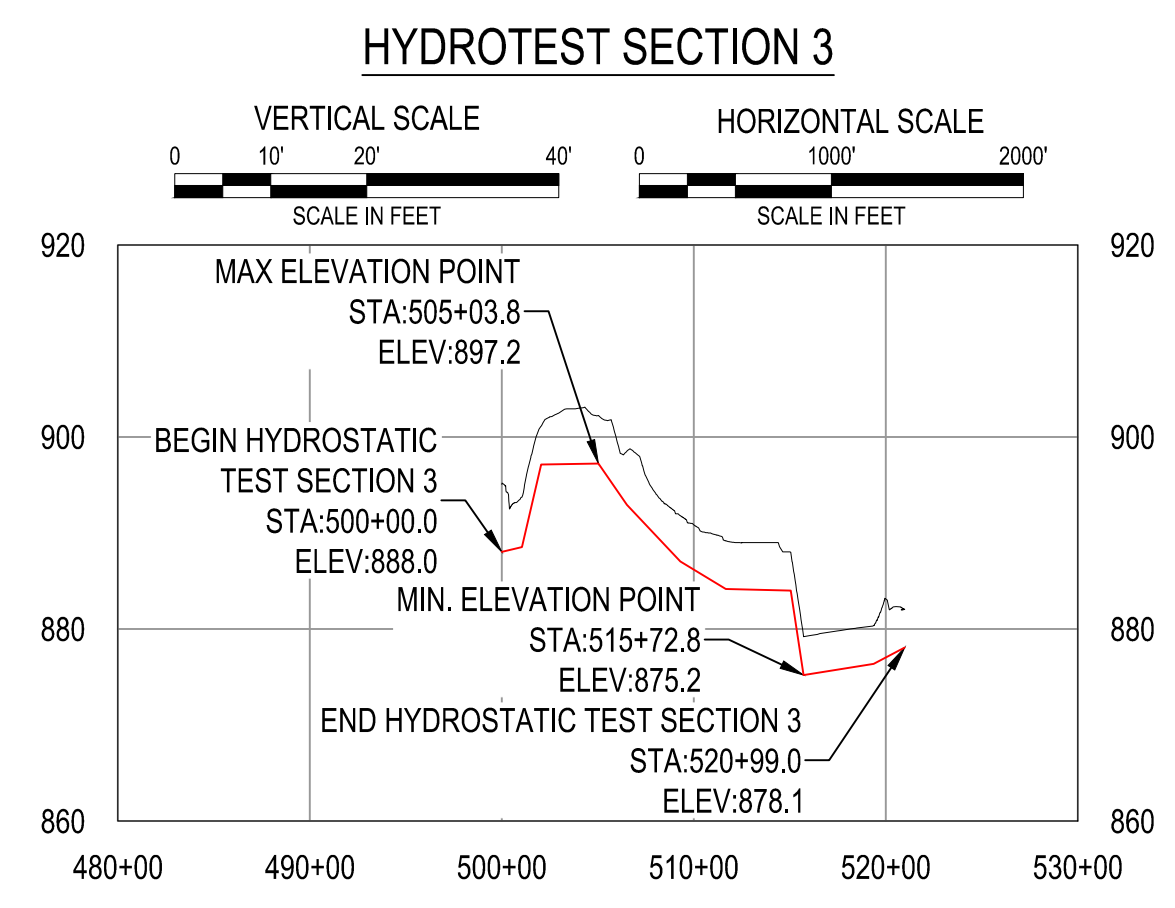
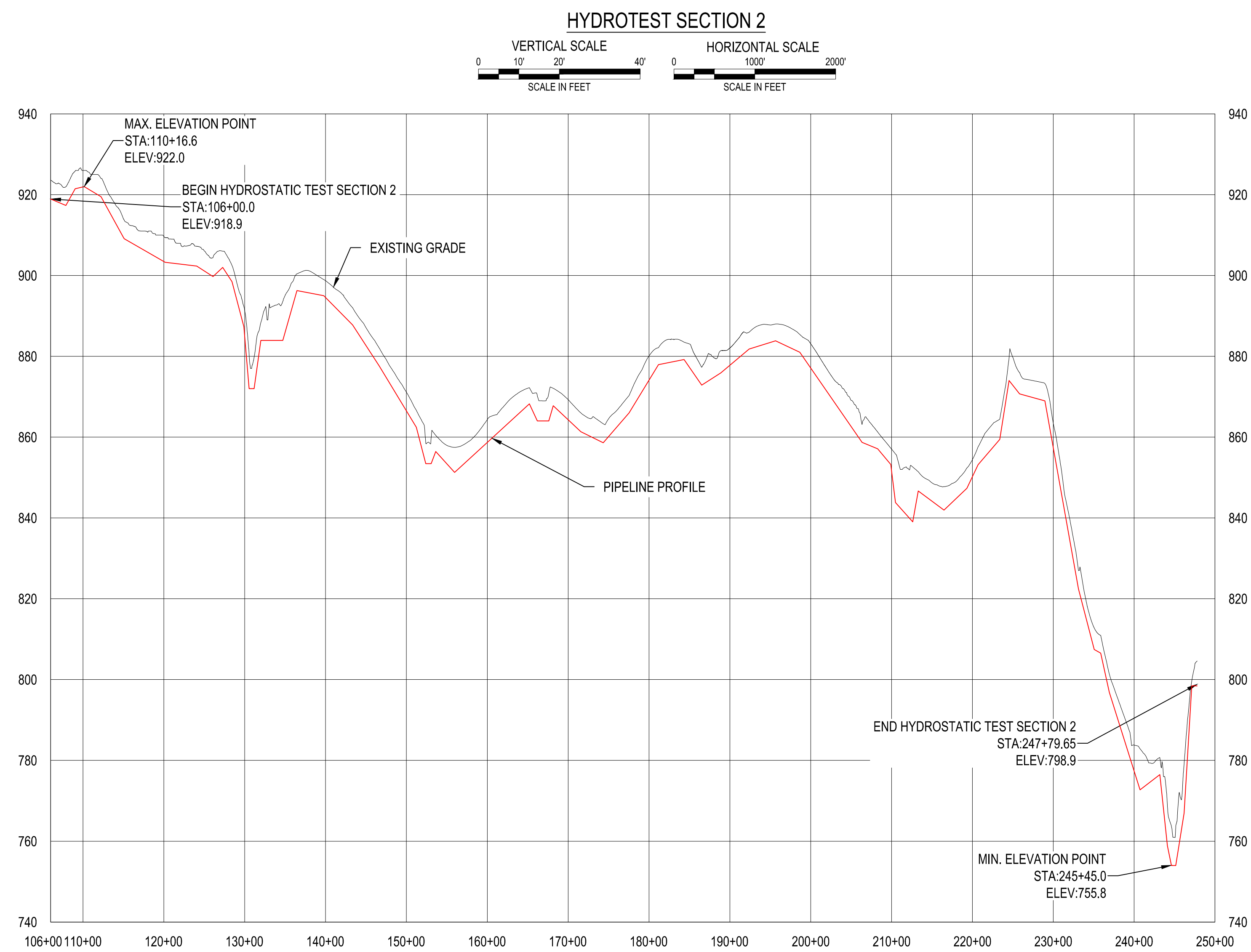
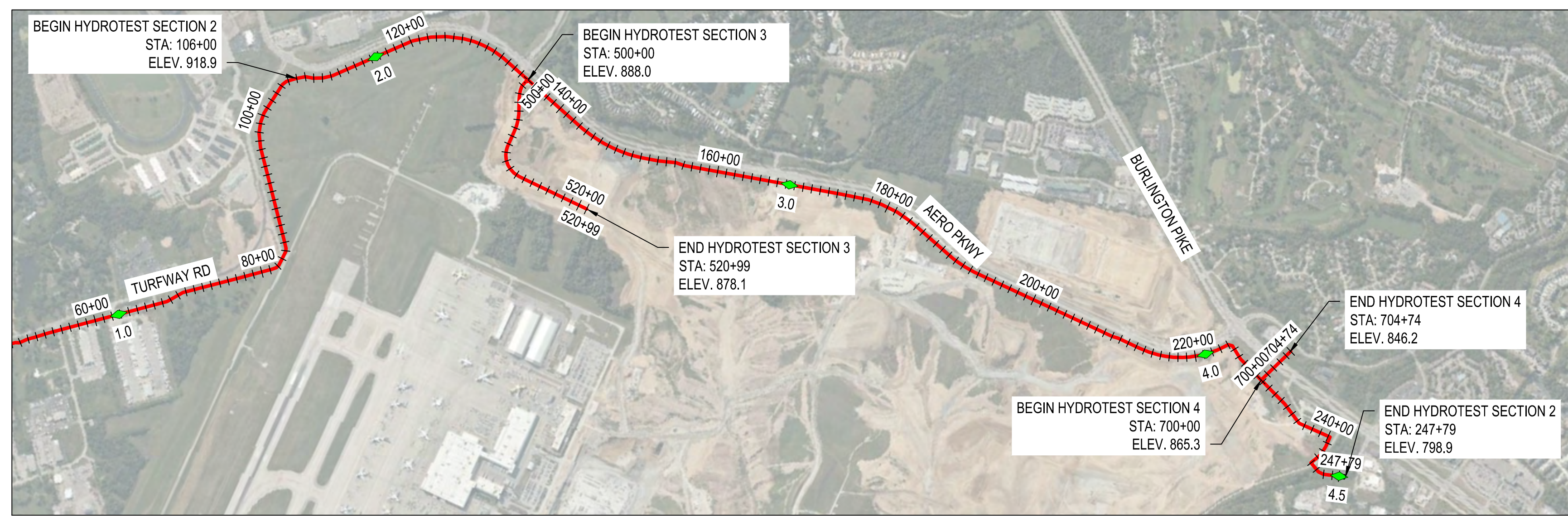
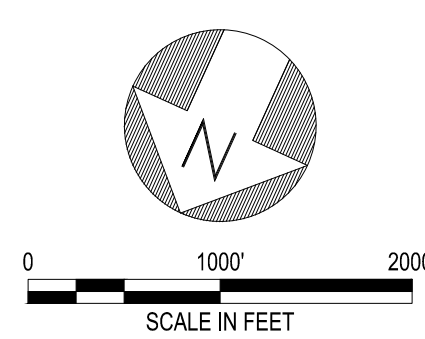
REF. DWG(S) PNG-G-043-0001022
PNG-C-043-0001110

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPD	AREA CODE 5339	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	PRINCIPAL ENGINEER
						DRAWING BY AKT	
						STATION ID -	
						CHECKER INITIALS CEB	



UL60 PIPELINE - PHASE 1
HYDROSTATIC TEST PLAN
BOONE COUNTY, KY
ERLANGER, KY

SHEET(S) 1 OF 2	DWG SCALE AS NOTED
DWG DATE 04/02/2019	SUPERSEDED
DRAWING NUMBER PNG -C-043-0001109	REVISION 0



HYDROTEST SECTION 2 INFORMATION:
COMPONENTS UP TO THE MLV WERE TESTED WITH TEST V8191-20201017-1 FOR 8.03 HOURS WITH WATER TO A MINIMUM PRESSURE OF 1550.2 PSI TO A MAXIMUM PRESSURE OF 1551.5 PSI. COMPONENTS AFTER THE MLV WERE TESTED WITH TEST V8351-20201026-1 FOR 8 HOURS WITH WATER FROM A MINIMUM PRESSURE OF 1544.9 PSI TO A MAXIMUM PRESSURE OF 1549.5 PSI.

HYDROTEST SECTION 3 INFORMATION:
COMPONENTS UP TO THE INSULATOR WERE TESTED WITH TEST V8191-20201001-1 FOR 10.67 HOURS WITH WATER TO A MINIMUM PRESSURE OF 1543.9 PSI TO A MAXIMUM PRESSURE OF 1556.9 PSI. COMPONENTS AFTER THE INSULATOR WERE TESTED WITH TEST V8351-20200902 FOR 8.25 HOURS WITH WATER FROM A MINIMUM PRESSURE OF 1544.9 PSI TO A MAXIMUM PRESSURE OF 1572.3 PSI.

HYDROTEST SECTION 4 INFORMATION:
COMPONENTS WERE TESTED WITH TEST V8191-20200924-1 FOR 8 HOURS WITH WATER TO A MINIMUM PRESSURE OF 1540 PSI TO A MAXIMUM PRESSURE OF 1570 PSI.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * DRAWING IS CURRENT ONLY THROUGH THE LATEST REVISED DATE * TO INSURE THERE IS NO RISK OF INAPPROPRIATE DISCLOSURE ALL PREVIOUS PAPER COPIES OF THIS DRAWING MUST BE DESTROYED IN ACCORDANCE WITH RECORDS & INFO. MANAGEMENT (RIM) POLICY 1001

REF. DWG(S) PNG-G-043-0001022
PNG-C-043-0001109

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339 ACCOUNT NUMBER V8191 PROJECT NUMBER G7UL02PH1 DRAWING BY AKT STATION ID - CHECKER INITIALS CEB	DATE - INITIALS - DATE - INITIALS - DATE 04/17/2020 INITIALS AMP

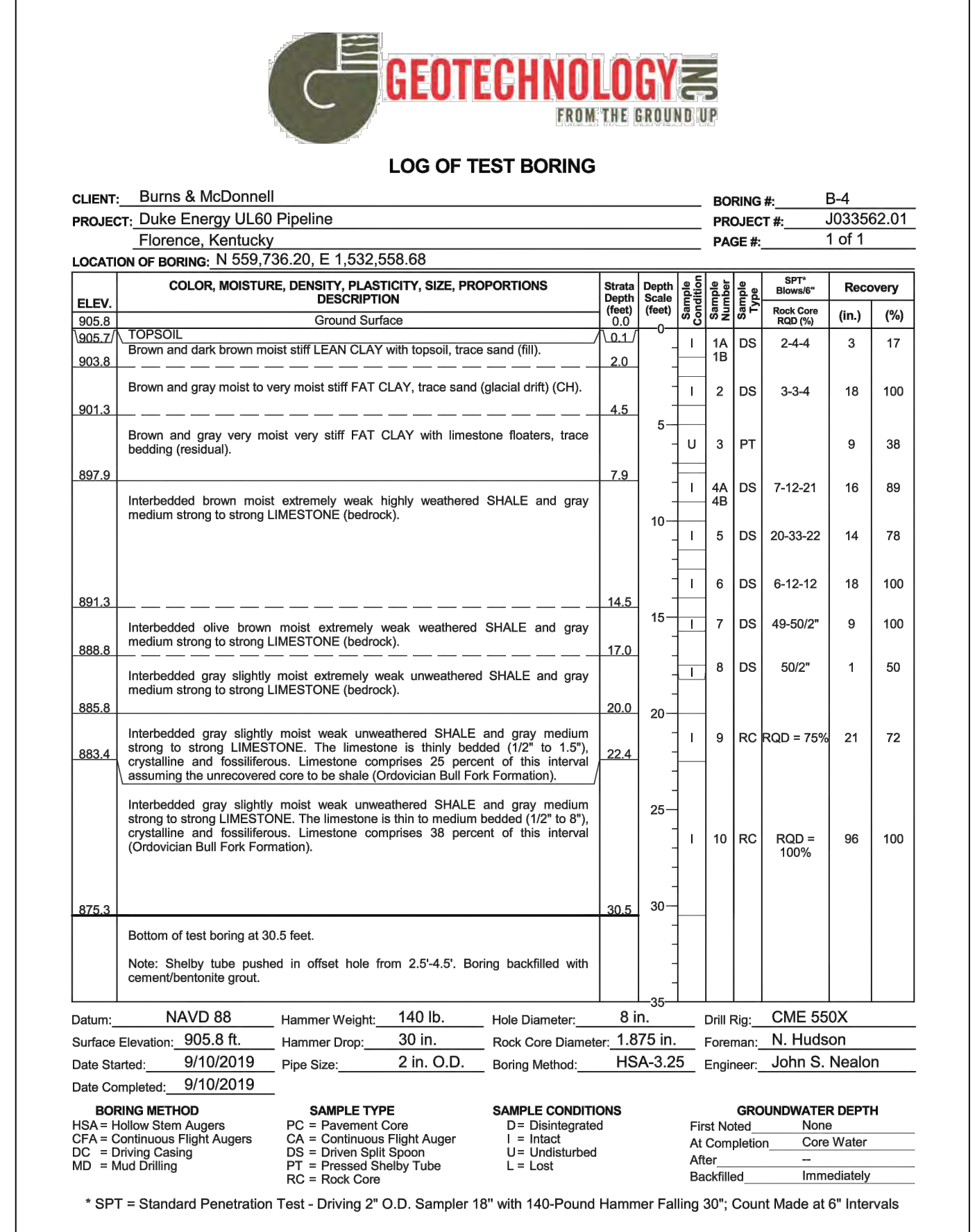
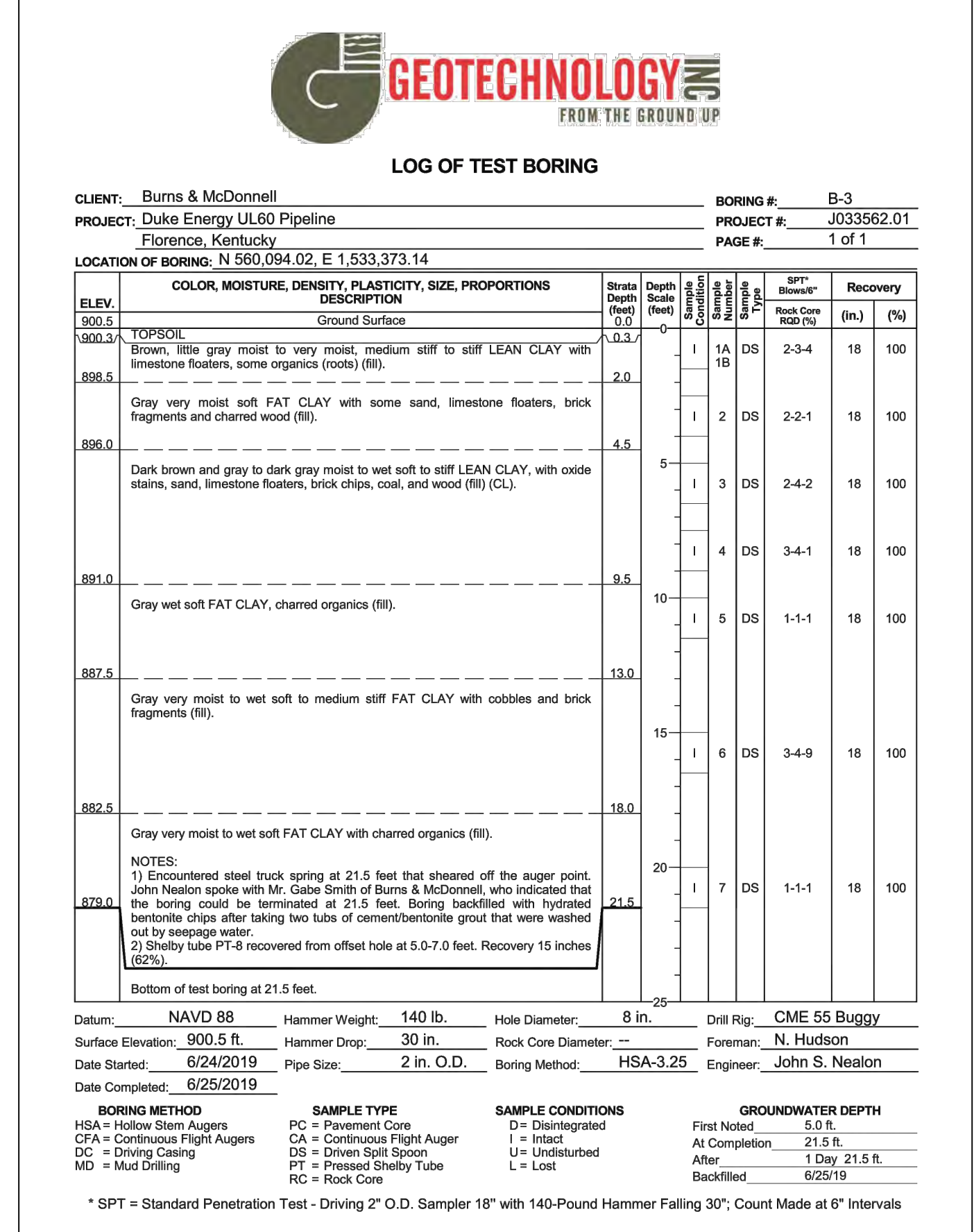
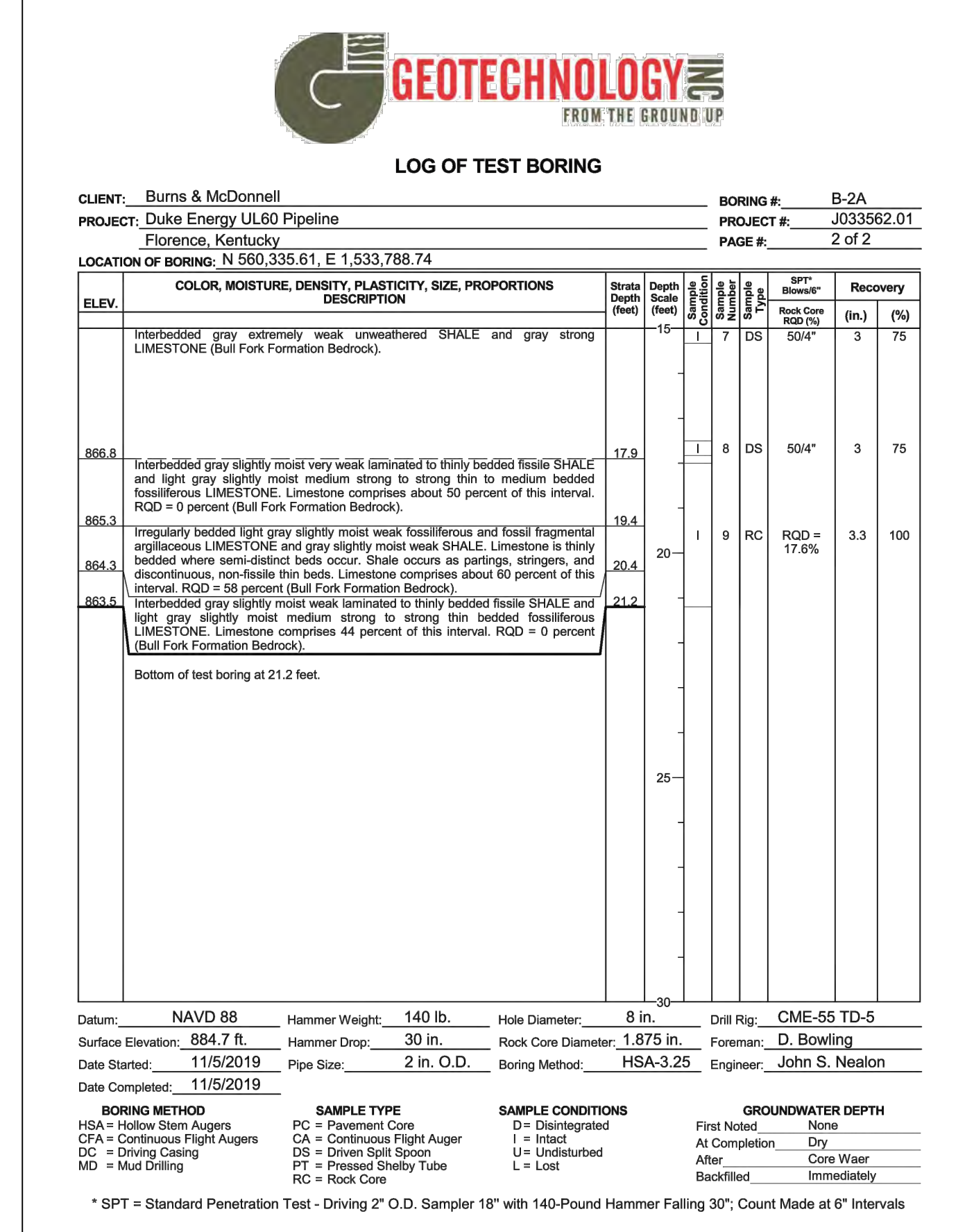
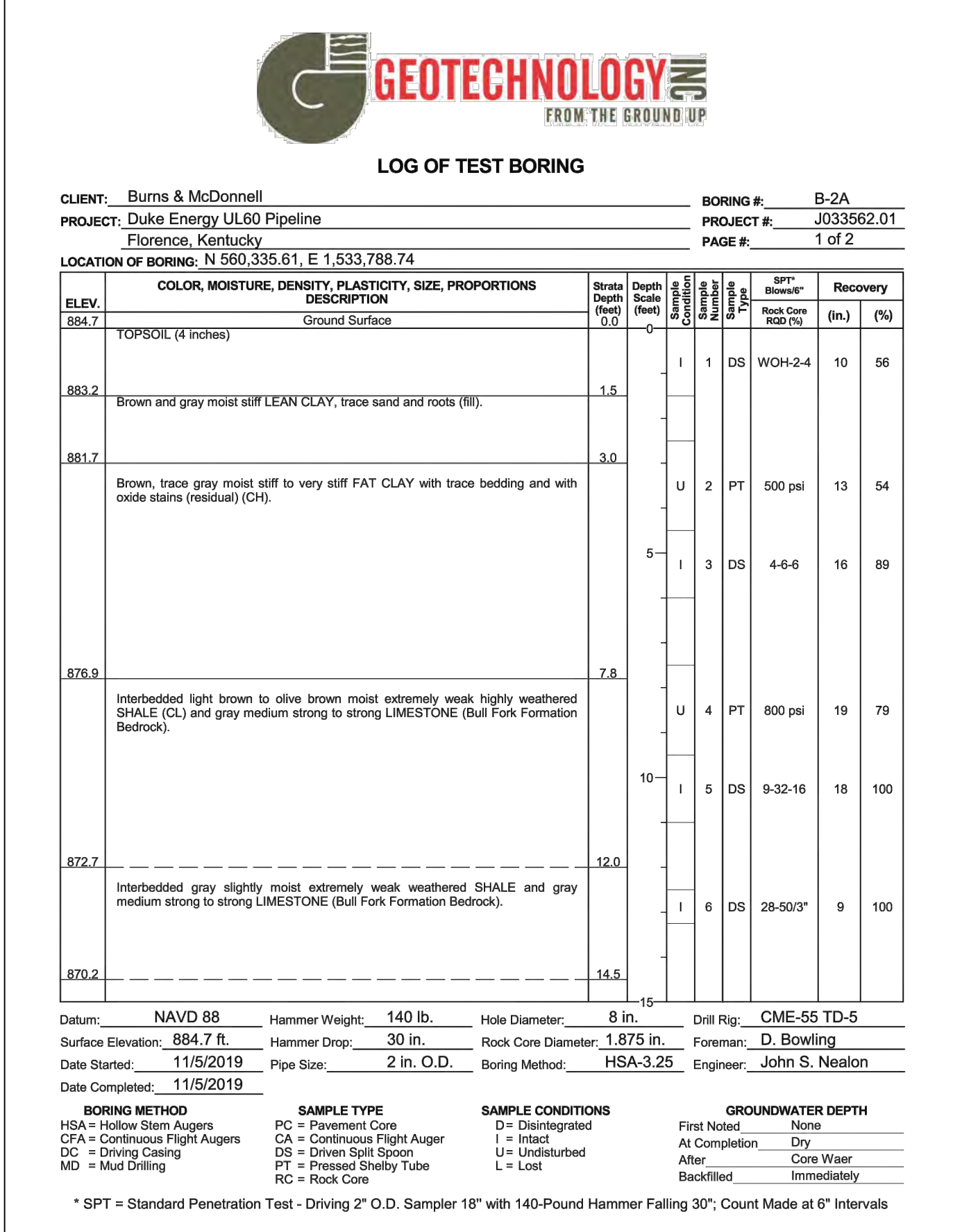
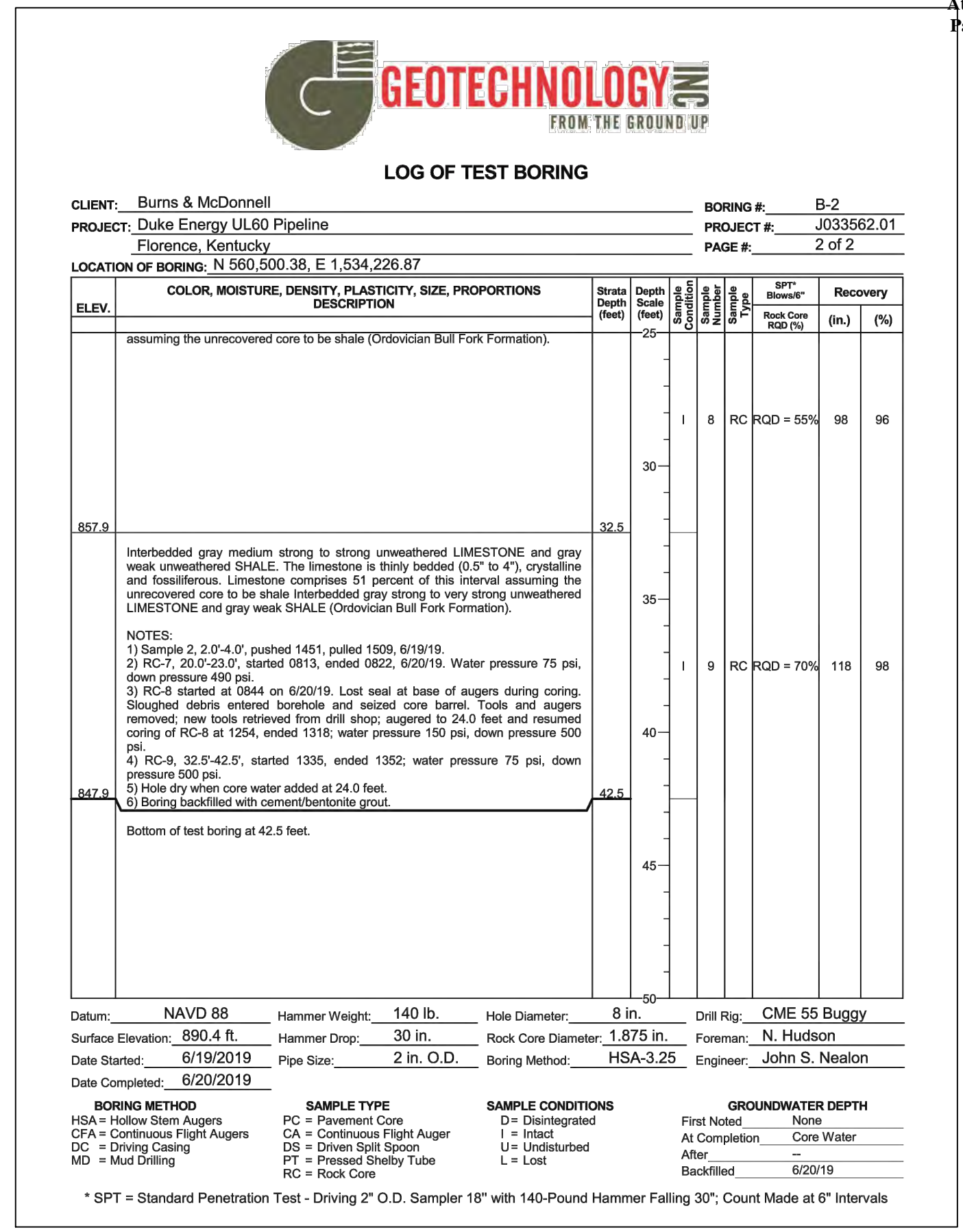
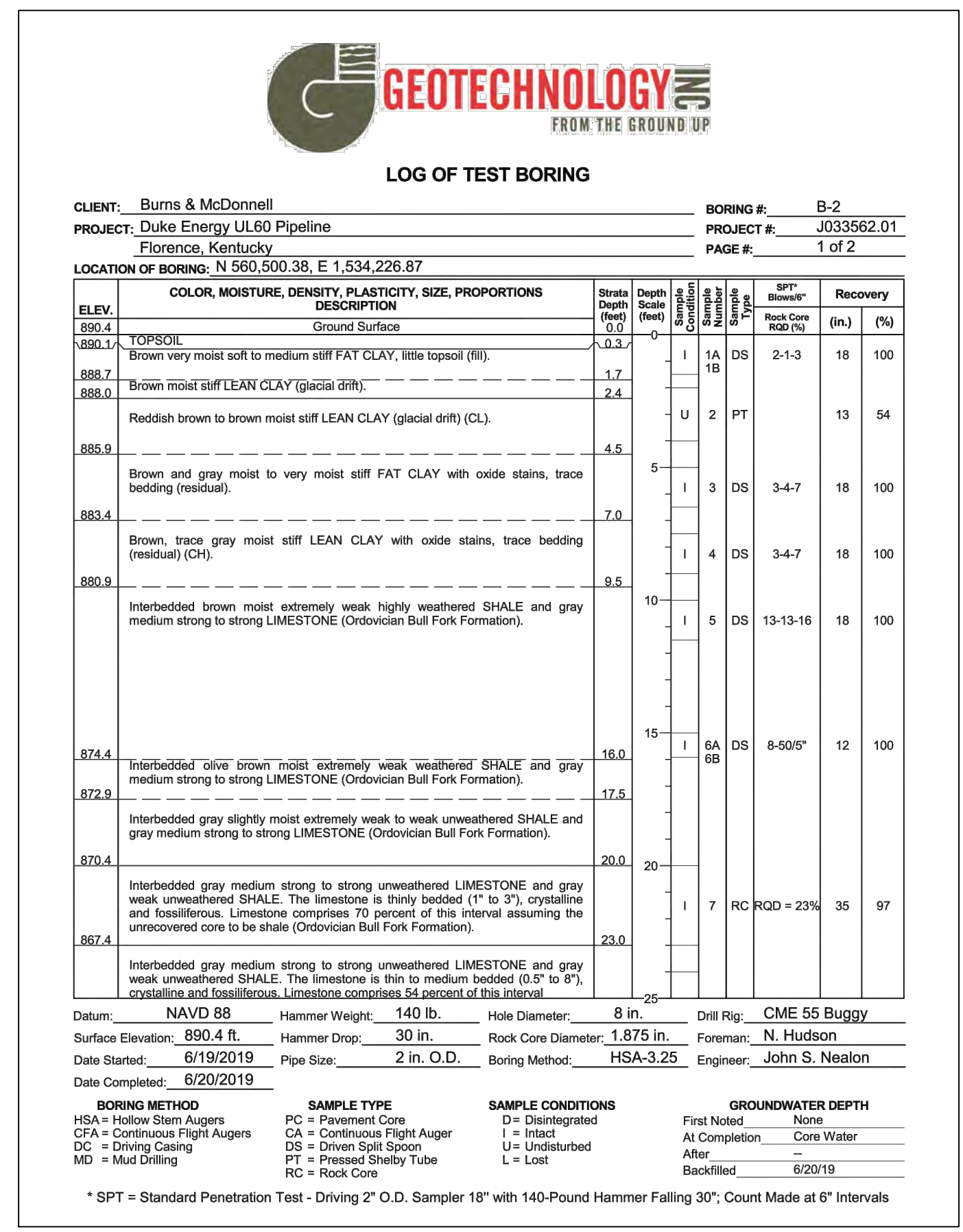
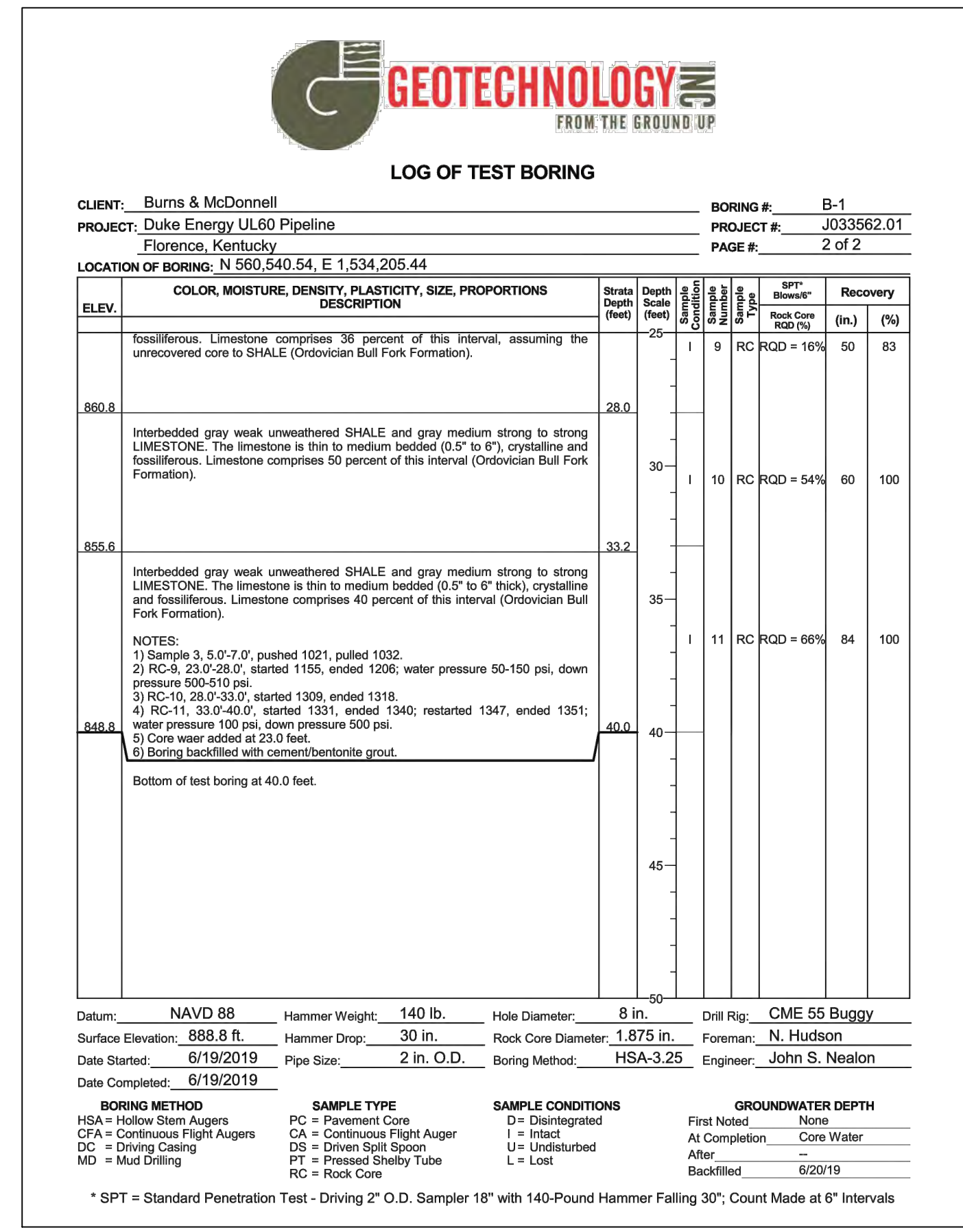
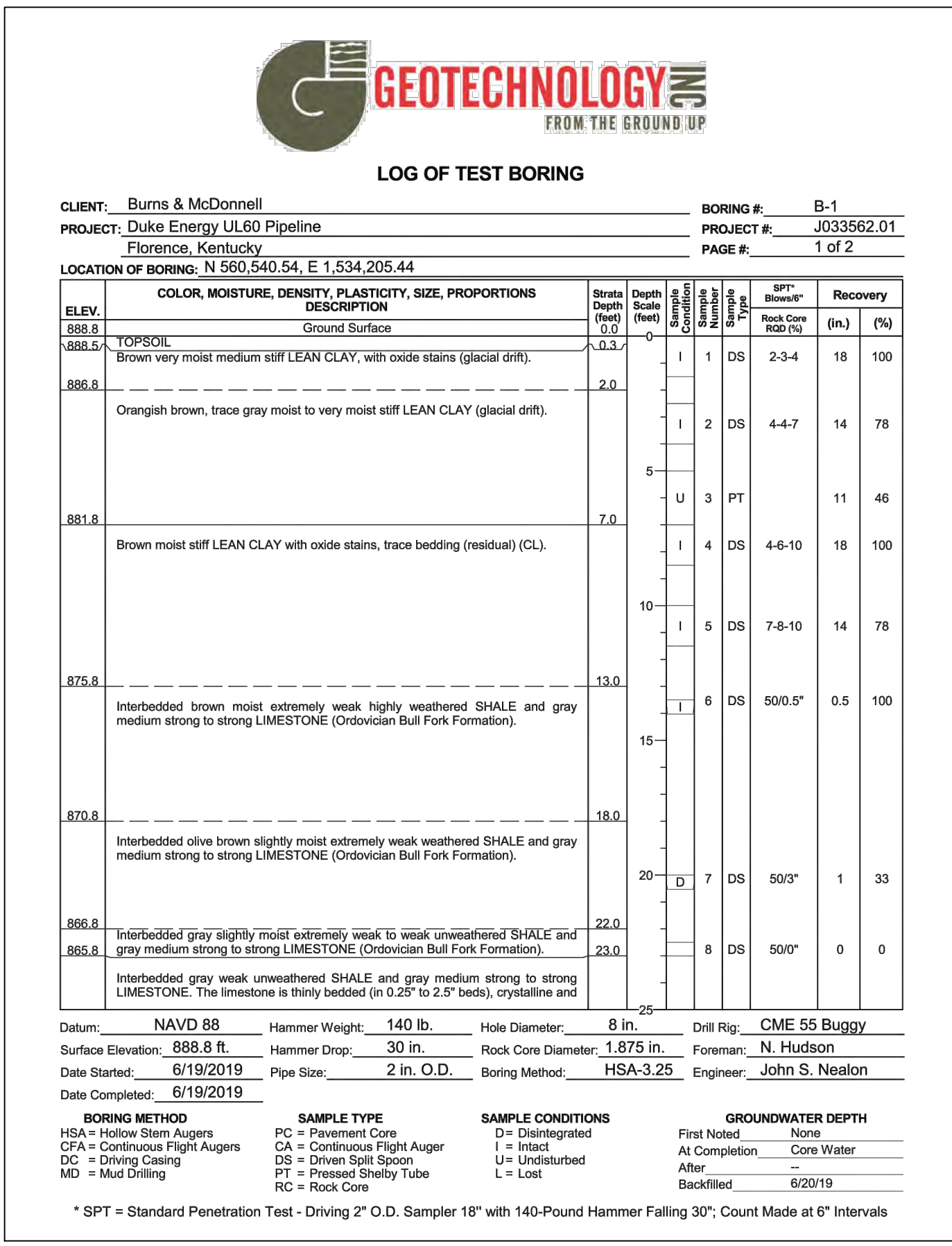
DUKE ENERGY | Piedmont Natural Gas

COPYRIGHT 2019

UL60 PIPELINE - PHASE 1 HYDROSTATIC TEST PLAN BOONE COUNTY, KY

ERLANGER, KY

SHEET(S) 2 OF 2	DWG SCALE AS NOTED
DWG DATE 03/03/2020	SUPERSEDED
DRAWING NUMBER PNG -C-043-0001110	REVISION 0



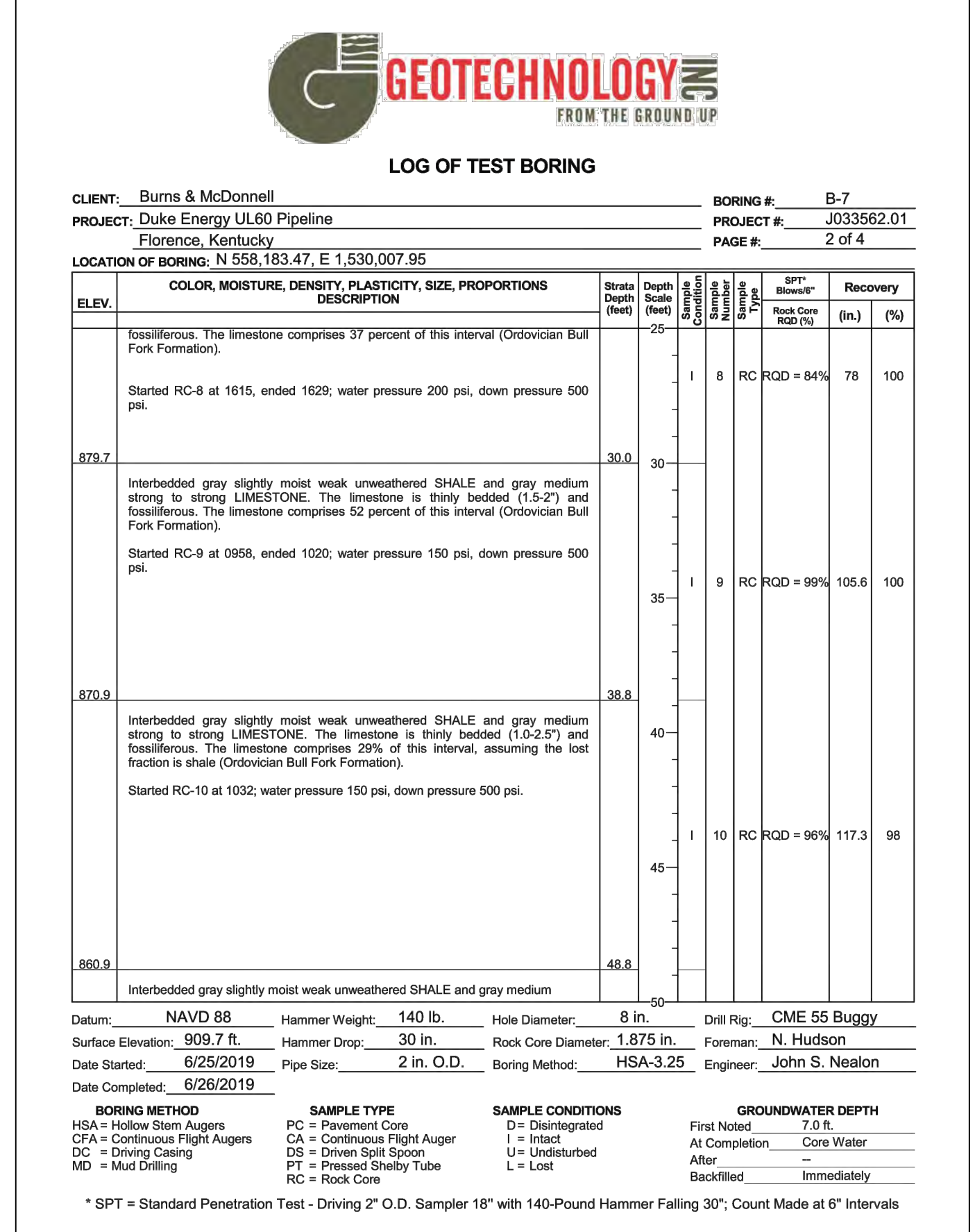
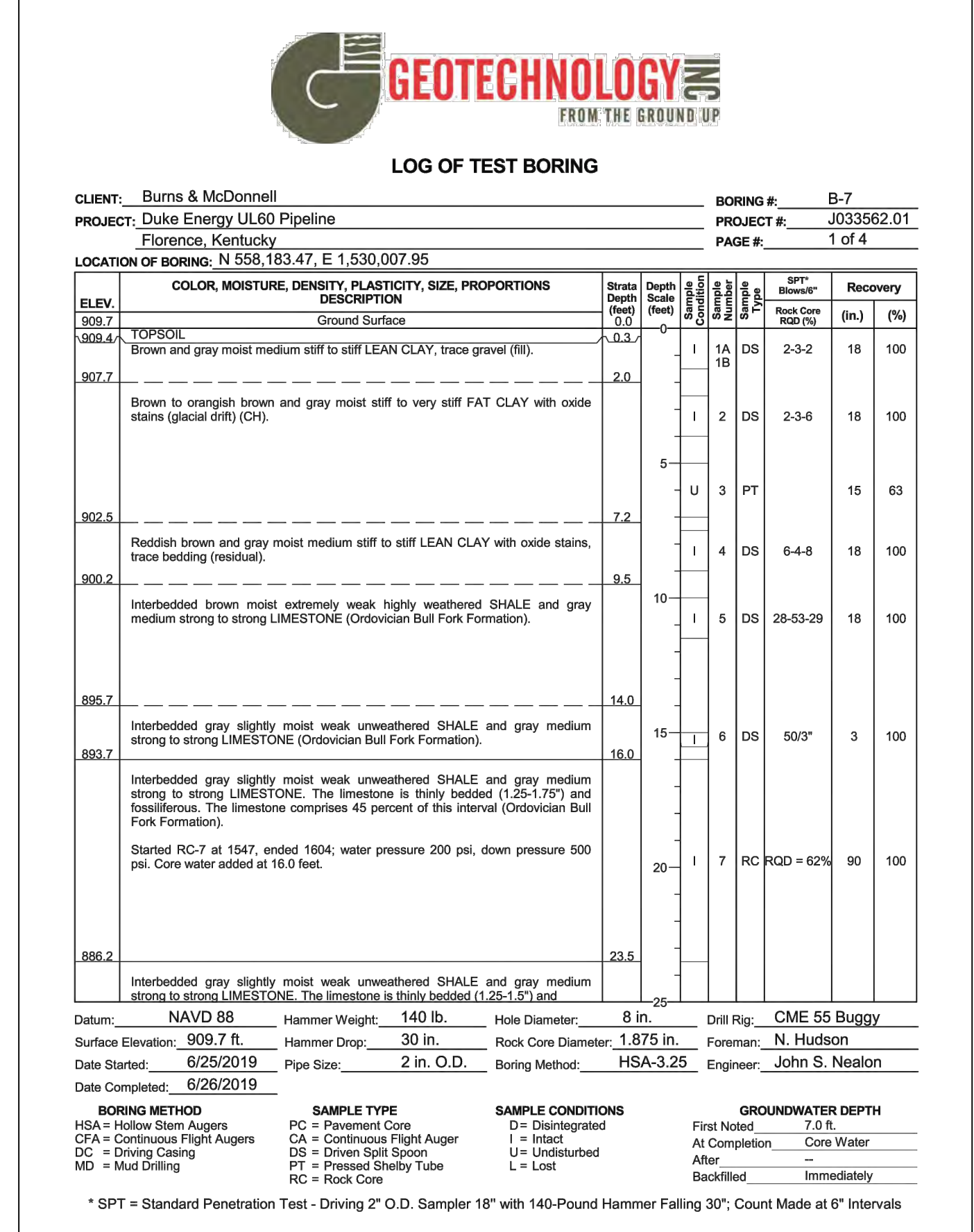
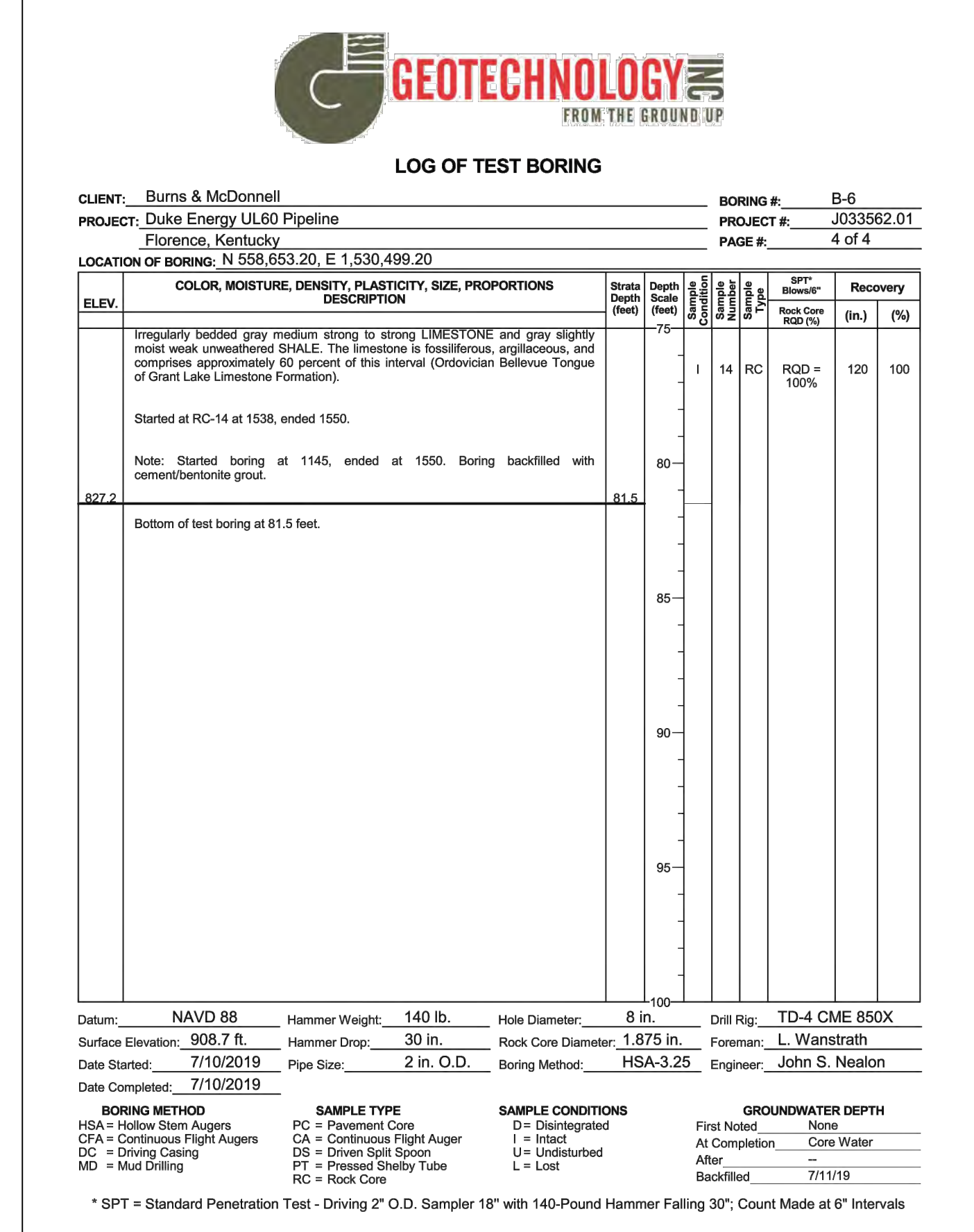
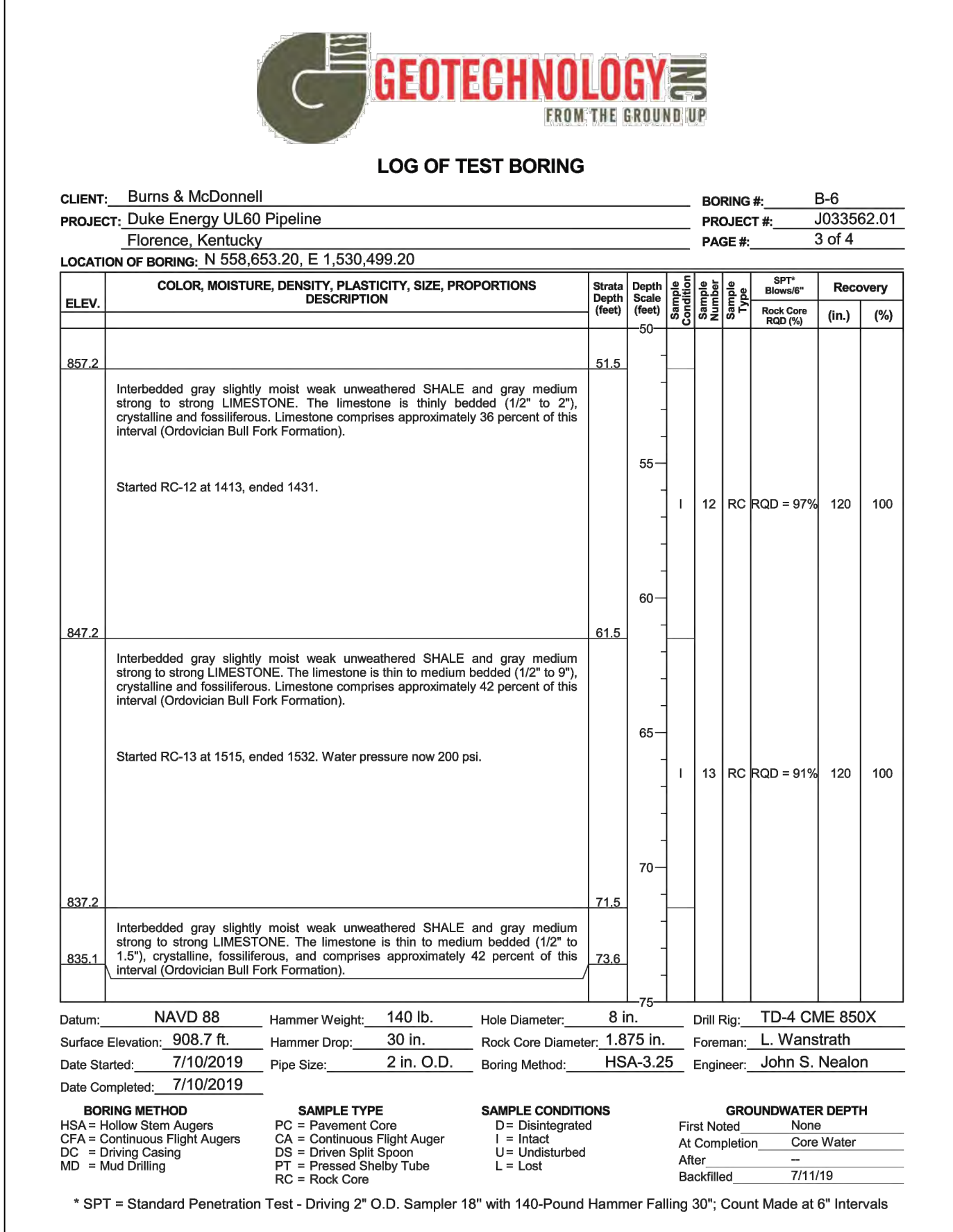
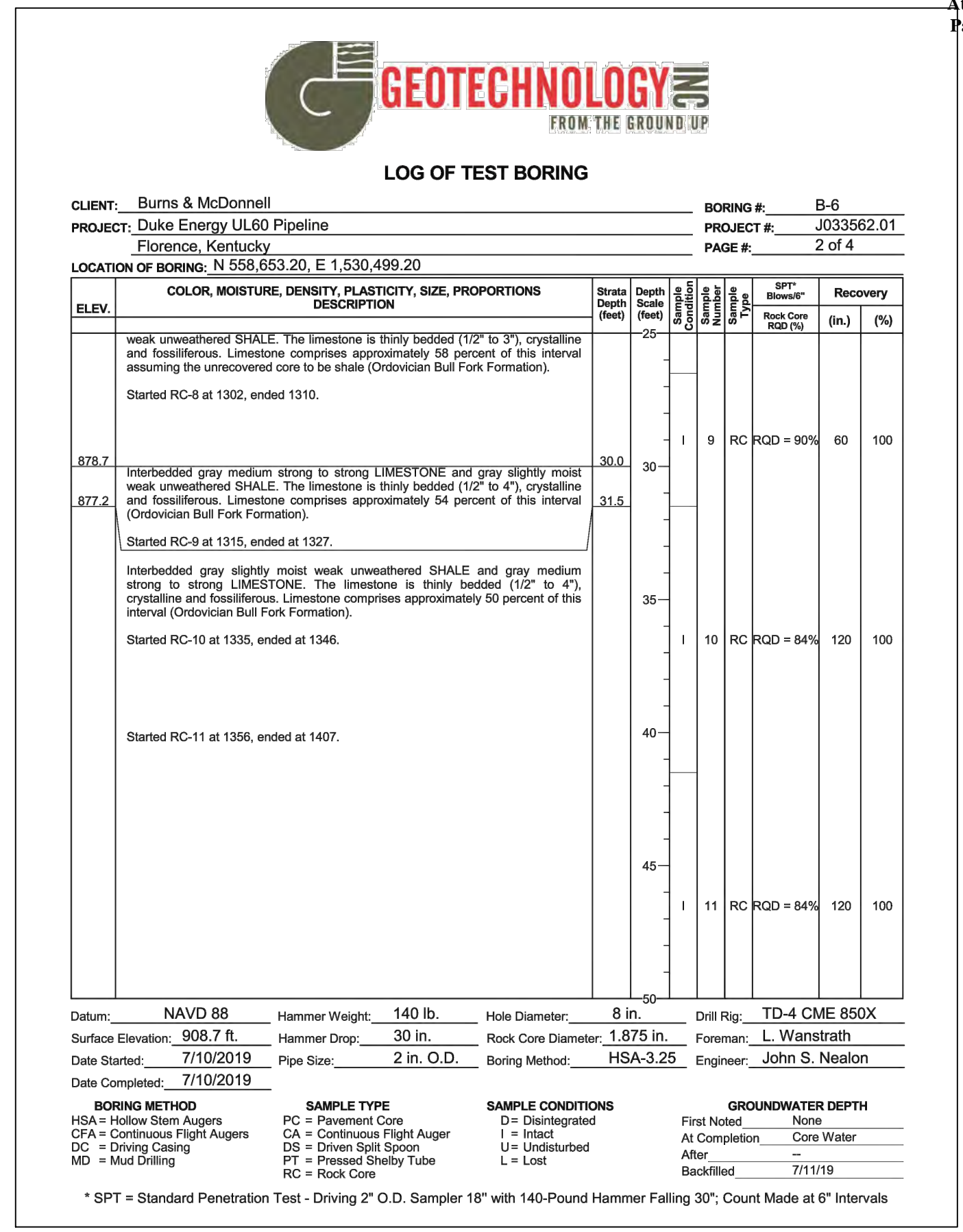
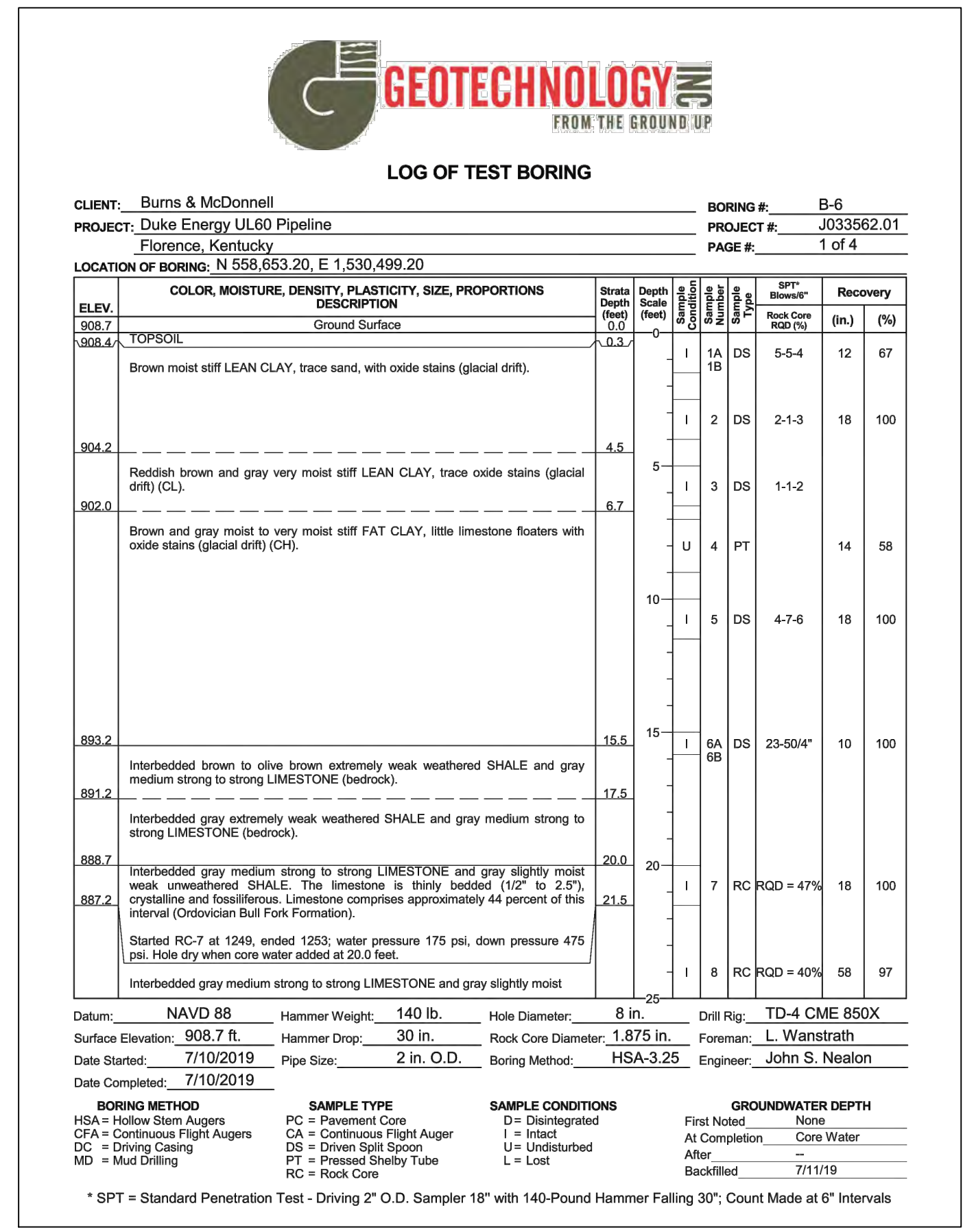
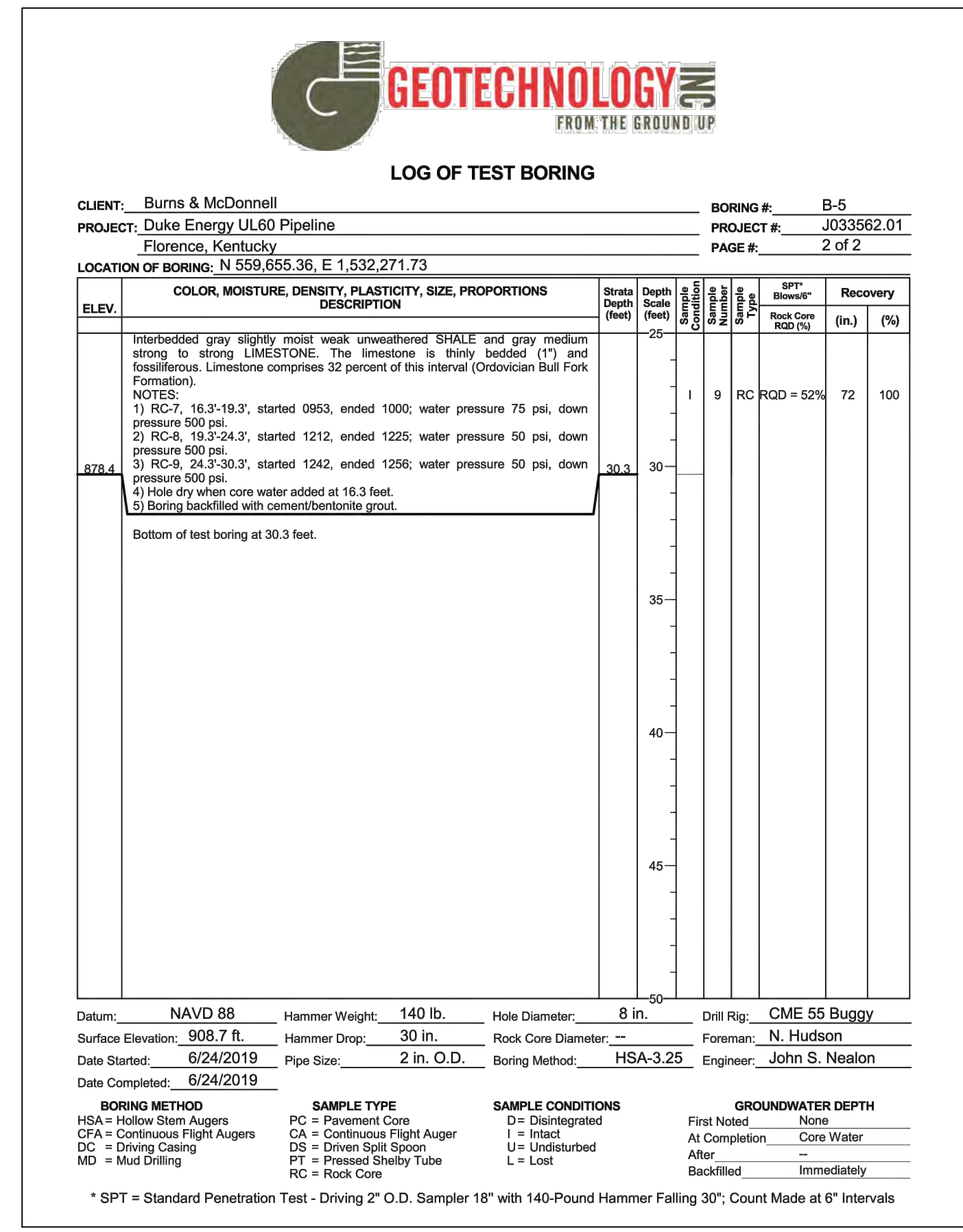
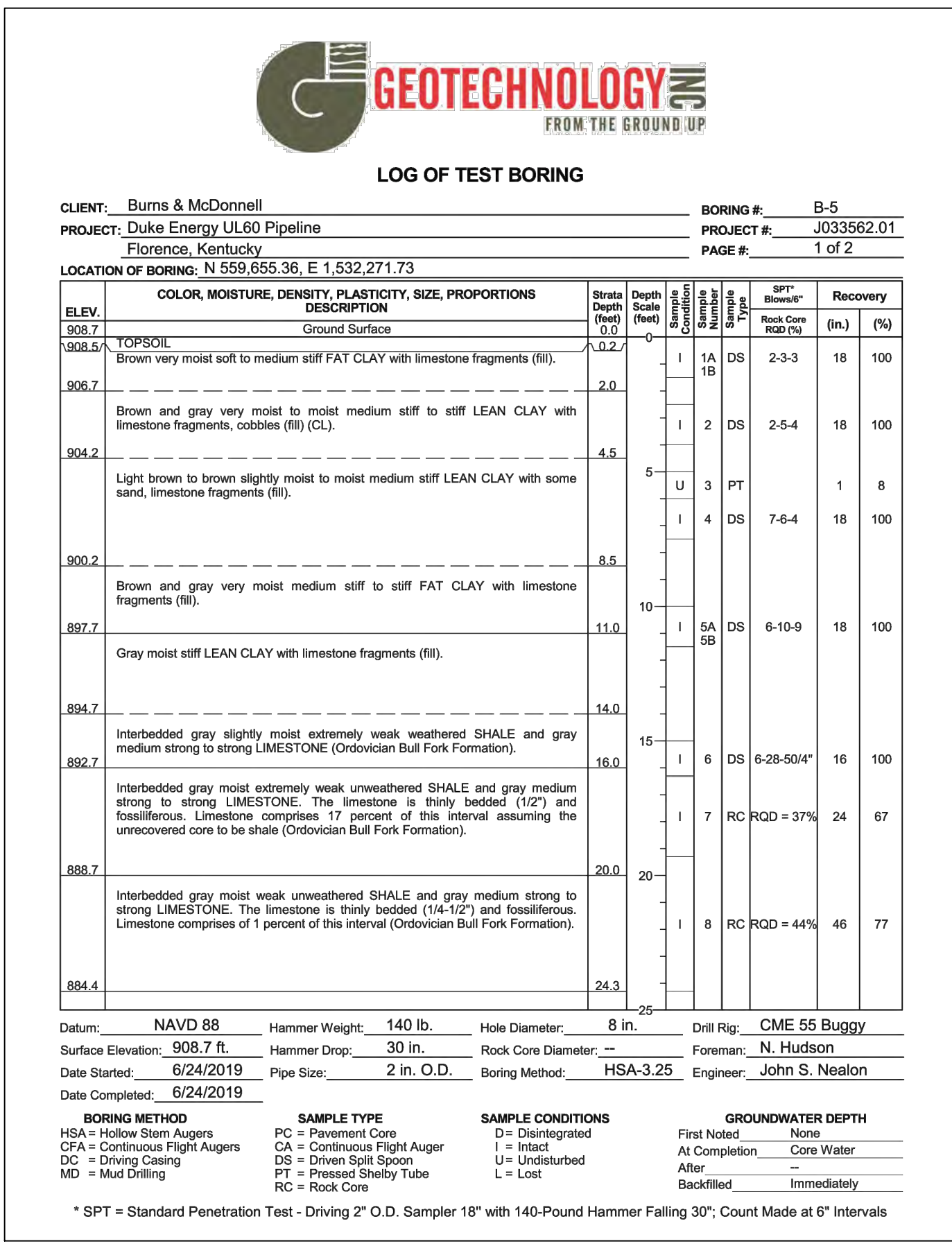
BURNS & MCDONNELL STATE LICENSE #43
 PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY
 REF. DWG(S) PNG-G-043-001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339			
						ACCOUNT NUMBER V8191			
						PROJECT NUMBER G7UL02PH1			
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB			

DUKE ENERGY | Piedmont Natural Gas
 MGR TECH REC & STD
 REGIONAL ENGINEER
 PRINCIPAL ENGINEER
 COPYRIGHT 2019

UL60 PIPELINE - PHASE 1
 GEOTECH BORE LOG 1
 BOONE COUNTY, KY
 ERLANGER, KY

SHEET(S) 1 OF 3
 DWG SCALE NONE
 DWG DATE 01/06/2020
 SUPERSEDED
 DRAWING NUMBER
 PNG -B-043-0001001
 REVISION 0
 CIERLANGER/UL60



BURNS & MCDONNELL STATE LICENSE #43
 PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY
 PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001
 REF. DWG(S) PNG-G-043-001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339 ACCOUNT NUMBER V8191 PROJECT NUMBER G7UL02PH1 DRAWING BY JXV STATION ID - CHECKER INITIALS CEB	DATE 02/12/2020 INITIALS AMP REGIONAL ENGINEER MGR TECH REC & STD PRINCIPAL ENGINEER

UL60 PIPELINE - PHASE 1
 GEOTECH BORE LOG 2
 BOONE COUNTY, KY
 ERLANGER, KY

DUKE ENERGY | Piedmont Natural Gas

COPYRIGHT 2019

SHEET(S) 2 OF 3	DWG SCALE NONE
DWG DATE 01/06/2020	SUPERSEDED
DRAWING NUMBER PNG -B-043-0001002	
REVISION 0	

CI/ERLANGER/UL60



LOG OF TEST BORING

CLIENT: Burns & McDonnell BORING #: B-7
PROJECT: Duke Energy UL60 Pipeline PROJECT #: J033562.01
Florence, Kentucky PAGE #: 3 of 4

LOCATION OF BORING: N 558,183.47, E 1,530,007.95

Table with columns: ELEV., COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION, Strata Depth (feet), Depth Scale (feet), Sample Number, Sample Type, SPT Blows* Rock Core RSD (%), Recovery (in.), (%)

Datum: NAVD 88 Hammer Weight: 140 lb. Hole Diameter: 8 in. Drill Rig: CME 55 Buggy
Surface Elevation: 909.7 ft. Hammer Drop: 30 in. Rock Core Diameter: 1.875 in. Foreman: N. Hudson
Date Started: 6/25/2019 Pipe Size: 2 in. O.D. Boring Method: HSA-3.25 Engineer: John S. Nealon
Date Completed: 6/26/2019

BORING METHOD: HSA = Hollow Stem Augers, CFA = Continuous Flight Augers, DC = Driving Casing, MD = Mud Drilling
SAMPLE TYPE: PC = Pavement Core, CA = Continuous Flight Auger, DS = Driven Split Spoon, PT = Pressed Shelby Tube, RC = Rock Core
SAMPLE CONDITIONS: D = Disintegrated, I = Intact, U = Undisturbed, L = Lost
GROUNDWATER DEPTH: First Noted = 7.0 ft., At Completion = Core Water, After = , Backfilled = Immediately

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals



LOG OF TEST BORING

CLIENT: Burns & McDonnell BORING #: B-7
PROJECT: Duke Energy UL60 Pipeline PROJECT #: J033562.01
Florence, Kentucky PAGE #: 4 of 4

LOCATION OF BORING: N 558,183.47, E 1,530,007.95

Table with columns: ELEV., COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION, Strata Depth (feet), Depth Scale (feet), Sample Number, Sample Type, SPT Blows* Rock Core RSD (%), Recovery (in.), (%)

Datum: NAVD 88 Hammer Weight: 140 lb. Hole Diameter: 8 in. Drill Rig: CME 55 Buggy
Surface Elevation: 909.7 ft. Hammer Drop: 30 in. Rock Core Diameter: 1.875 in. Foreman: N. Hudson
Date Started: 6/25/2019 Pipe Size: 2 in. O.D. Boring Method: HSA-3.25 Engineer: John S. Nealon
Date Completed: 6/26/2019

BORING METHOD: HSA = Hollow Stem Augers, CFA = Continuous Flight Augers, DC = Driving Casing, MD = Mud Drilling
SAMPLE TYPE: PC = Pavement Core, CA = Continuous Flight Auger, DS = Driven Split Spoon, PT = Pressed Shelby Tube, RC = Rock Core
SAMPLE CONDITIONS: D = Disintegrated, I = Intact, U = Undisturbed, L = Lost
GROUNDWATER DEPTH: First Noted = 7.0 ft., At Completion = Core Water, After = , Backfilled = Immediately

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals



LOG OF TEST BORING

CLIENT: Burns & McDonnell BORING #: B-8
PROJECT: Duke Energy UL60 Pipeline PROJECT #: J033562.01
Florence, Kentucky PAGE #: 1 of 4

LOCATION OF BORING: N 557,760.31, E 1,529,476.35

Table with columns: ELEV., COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION, Strata Depth (feet), Depth Scale (feet), Sample Number, Sample Type, SPT Blows* Rock Core RSD (%), Recovery (in.), (%)

Datum: NAVD 88 Hammer Weight: 140 lb. Hole Diameter: 8 in. Drill Rig: CME 55 Buggy
Surface Elevation: 907.6 ft. Hammer Drop: 30 in. Rock Core Diameter: 1.875 in. Foreman: N. Hudson
Date Started: 6/26/2019 Pipe Size: 2 in. O.D. Boring Method: HSA-3.25 Engineer: John S. Nealon
Date Completed: 7/10/2019

BORING METHOD: HSA = Hollow Stem Augers, CFA = Continuous Flight Augers, DC = Driving Casing, MD = Mud Drilling
SAMPLE TYPE: PC = Pavement Core, CA = Continuous Flight Auger, DS = Driven Split Spoon, PT = Pressed Shelby Tube, RC = Rock Core
SAMPLE CONDITIONS: D = Disintegrated, I = Intact, U = Undisturbed, L = Lost
GROUNDWATER DEPTH: First Noted = None, At Completion = Core Water, After = , Backfilled = 6/27/19, 7/10/19

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals



LOG OF TEST BORING

CLIENT: Burns & McDonnell BORING #: B-8
PROJECT: Duke Energy UL60 Pipeline PROJECT #: J033562.01
Florence, Kentucky PAGE #: 2 of 4

LOCATION OF BORING: N 557,760.31, E 1,529,476.35

Table with columns: ELEV., COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION, Strata Depth (feet), Depth Scale (feet), Sample Number, Sample Type, SPT Blows* Rock Core RSD (%), Recovery (in.), (%)

Datum: NAVD 88 Hammer Weight: 140 lb. Hole Diameter: 8 in. Drill Rig: CME 55 Buggy
Surface Elevation: 907.6 ft. Hammer Drop: 30 in. Rock Core Diameter: 1.875 in. Foreman: N. Hudson
Date Started: 6/26/2019 Pipe Size: 2 in. O.D. Boring Method: HSA-3.25 Engineer: John S. Nealon
Date Completed: 7/10/2019

BORING METHOD: HSA = Hollow Stem Augers, CFA = Continuous Flight Augers, DC = Driving Casing, MD = Mud Drilling
SAMPLE TYPE: PC = Pavement Core, CA = Continuous Flight Auger, DS = Driven Split Spoon, PT = Pressed Shelby Tube, RC = Rock Core
SAMPLE CONDITIONS: D = Disintegrated, I = Intact, U = Undisturbed, L = Lost
GROUNDWATER DEPTH: First Noted = None, At Completion = Core Water, After = , Backfilled = 6/27/19, 7/10/19

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals



LOG OF TEST BORING

CLIENT: Burns & McDonnell BORING #: B-8
PROJECT: Duke Energy UL60 Pipeline PROJECT #: J033562.01
Florence, Kentucky PAGE #: 3 of 4

LOCATION OF BORING: N 557,760.31, E 1,529,476.35

Table with columns: ELEV., COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION, Strata Depth (feet), Depth Scale (feet), Sample Number, Sample Type, SPT Blows* Rock Core RSD (%), Recovery (in.), (%)

Datum: NAVD 88 Hammer Weight: 140 lb. Hole Diameter: 8 in. Drill Rig: CME 55 Buggy
Surface Elevation: 907.6 ft. Hammer Drop: 30 in. Rock Core Diameter: 1.875 in. Foreman: N. Hudson
Date Started: 6/26/2019 Pipe Size: 2 in. O.D. Boring Method: HSA-3.25 Engineer: John S. Nealon
Date Completed: 7/10/2019

BORING METHOD: HSA = Hollow Stem Augers, CFA = Continuous Flight Augers, DC = Driving Casing, MD = Mud Drilling
SAMPLE TYPE: PC = Pavement Core, CA = Continuous Flight Auger, DS = Driven Split Spoon, PT = Pressed Shelby Tube, RC = Rock Core
SAMPLE CONDITIONS: D = Disintegrated, I = Intact, U = Undisturbed, L = Lost
GROUNDWATER DEPTH: First Noted = None, At Completion = Core Water, After = , Backfilled = 6/27/19, 7/10/19

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals



LOG OF TEST BORING

CLIENT: Burns & McDonnell BORING #: B-8
PROJECT: Duke Energy UL60 Pipeline PROJECT #: J033562.01
Florence, Kentucky PAGE #: 4 of 4

LOCATION OF BORING: N 557,760.31, E 1,529,476.35

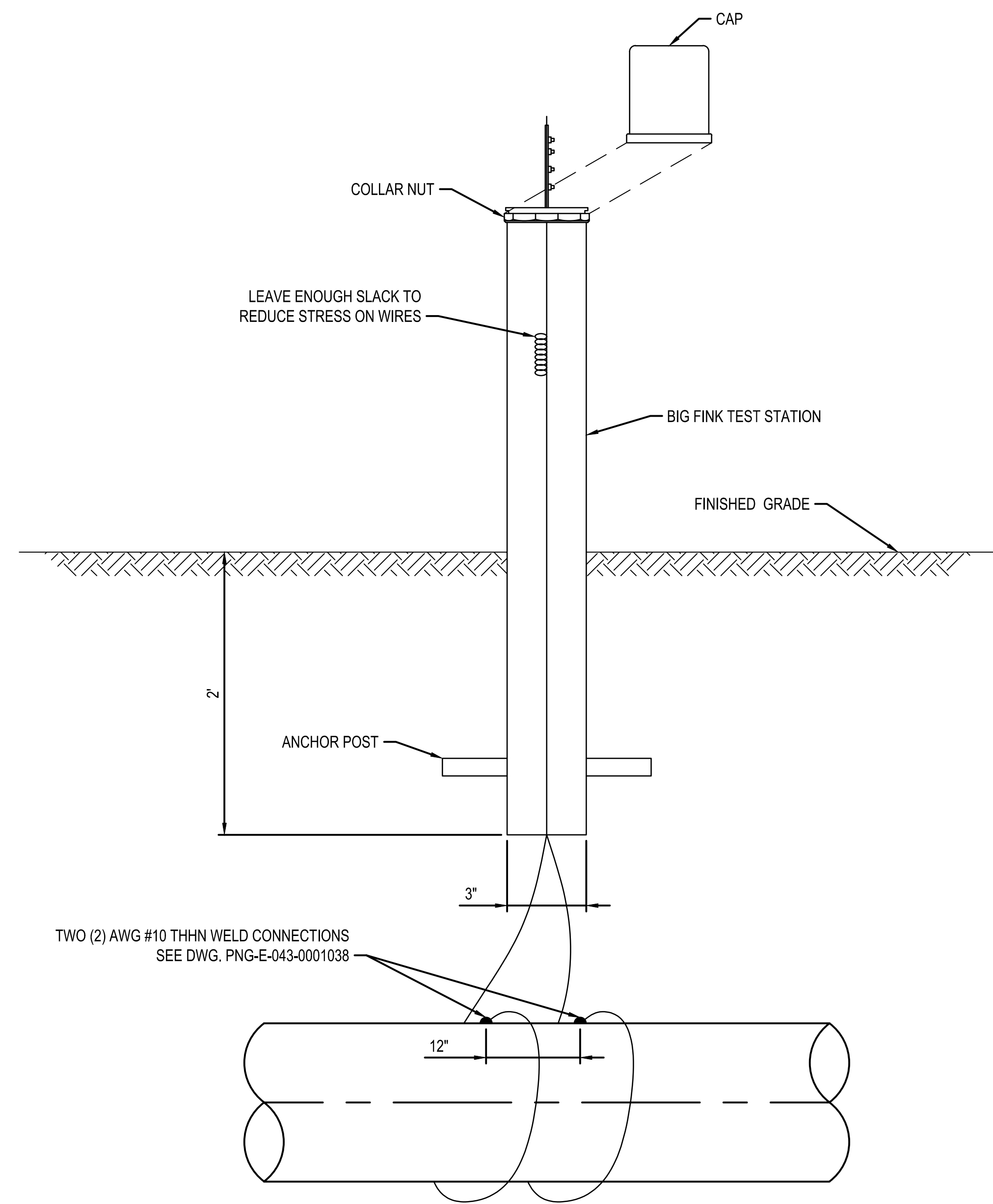
Table with columns: ELEV., COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS DESCRIPTION, Strata Depth (feet), Depth Scale (feet), Sample Number, Sample Type, SPT Blows* Rock Core RSD (%), Recovery (in.), (%)

Datum: NAVD 88 Hammer Weight: 140 lb. Hole Diameter: 8 in. Drill Rig: CME 55 Buggy
Surface Elevation: 907.6 ft. Hammer Drop: 30 in. Rock Core Diameter: 1.875 in. Foreman: N. Hudson
Date Started: 6/26/2019 Pipe Size: 2 in. O.D. Boring Method: HSA-3.25 Engineer: John S. Nealon
Date Completed: 7/10/2019

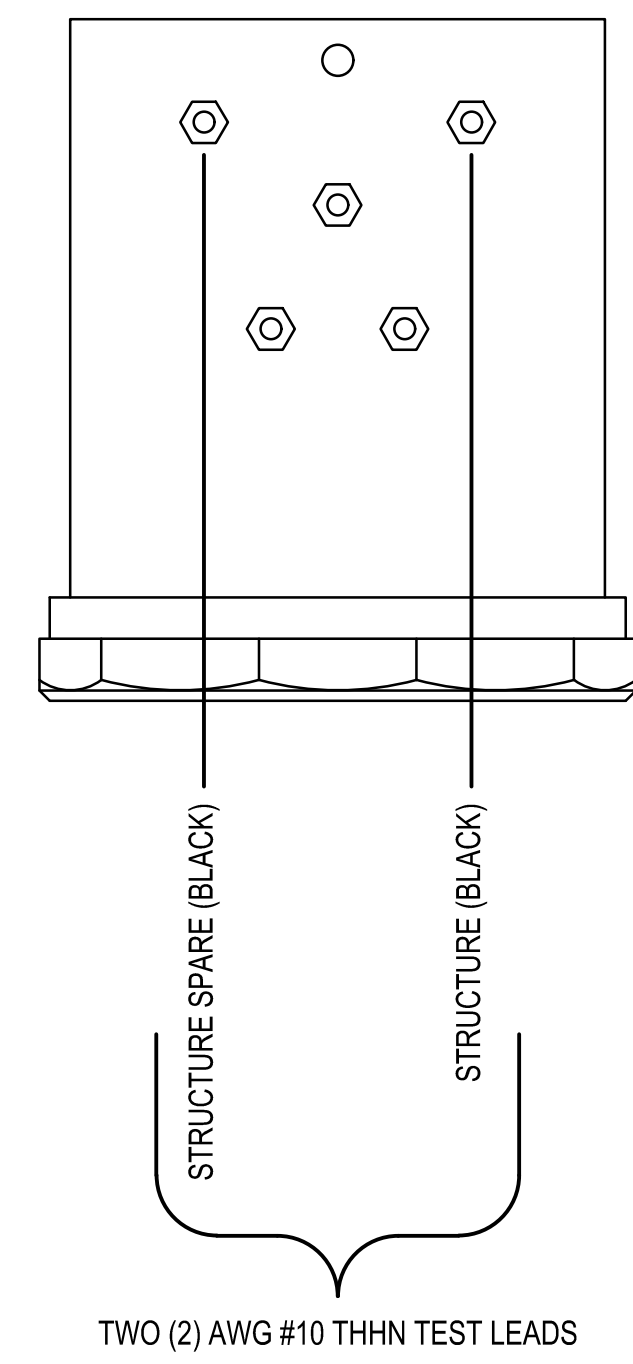
BORING METHOD: HSA = Hollow Stem Augers, CFA = Continuous Flight Augers, DC = Driving Casing, MD = Mud Drilling
SAMPLE TYPE: PC = Pavement Core, CA = Continuous Flight Auger, DS = Driven Split Spoon, PT = Pressed Shelby Tube, RC = Rock Core
SAMPLE CONDITIONS: D = Disintegrated, I = Intact, U = Undisturbed, L = Lost
GROUNDWATER DEPTH: First Noted = None, At Completion = Core Water, After = , Backfilled = 6/27/19, 7/10/19

* SPT = Standard Penetration Test - Driving 2" O.D. Sampler 18" with 140-Pound Hammer Falling 30"; Count Made at 6" Intervals

Project information including: BURNS & MCDONNELL STATE LICENSE #43, AMANDA M. PALM 04/17/2020 KENTUCKY SEAL 33142, PROFESSIONAL ENG/ARCH STAMP, PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY, PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001, REF. DWG(S) PNG-G-043-0001022, SHEET(S) 3 OF 3, DWG SCALE NONE, DWG DATE 01/06/2020, SUPERSEDED, DRAWING NUMBER PNG -B-043-0001003, REVISION 0, C/ERLANGER/UL60, UL60 PIPELINE - PHASE 1 GEOTECH BORE LOG 3 BOONE COUNTY, KY, ERLANGER, KY, DUKE ENERGY, Piedmont Natural Gas, COPYRIGHT 2019



TWO WIRE TEST STATION
DETAIL 1
SCALE: NOT TO SCALE



TEST STATION HEAD
DETAIL 1A
SCALE: NOT TO SCALE

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142
PROFESSIONAL ENGINEER/ARCH STAMP

PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY
PIEDMONT 'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

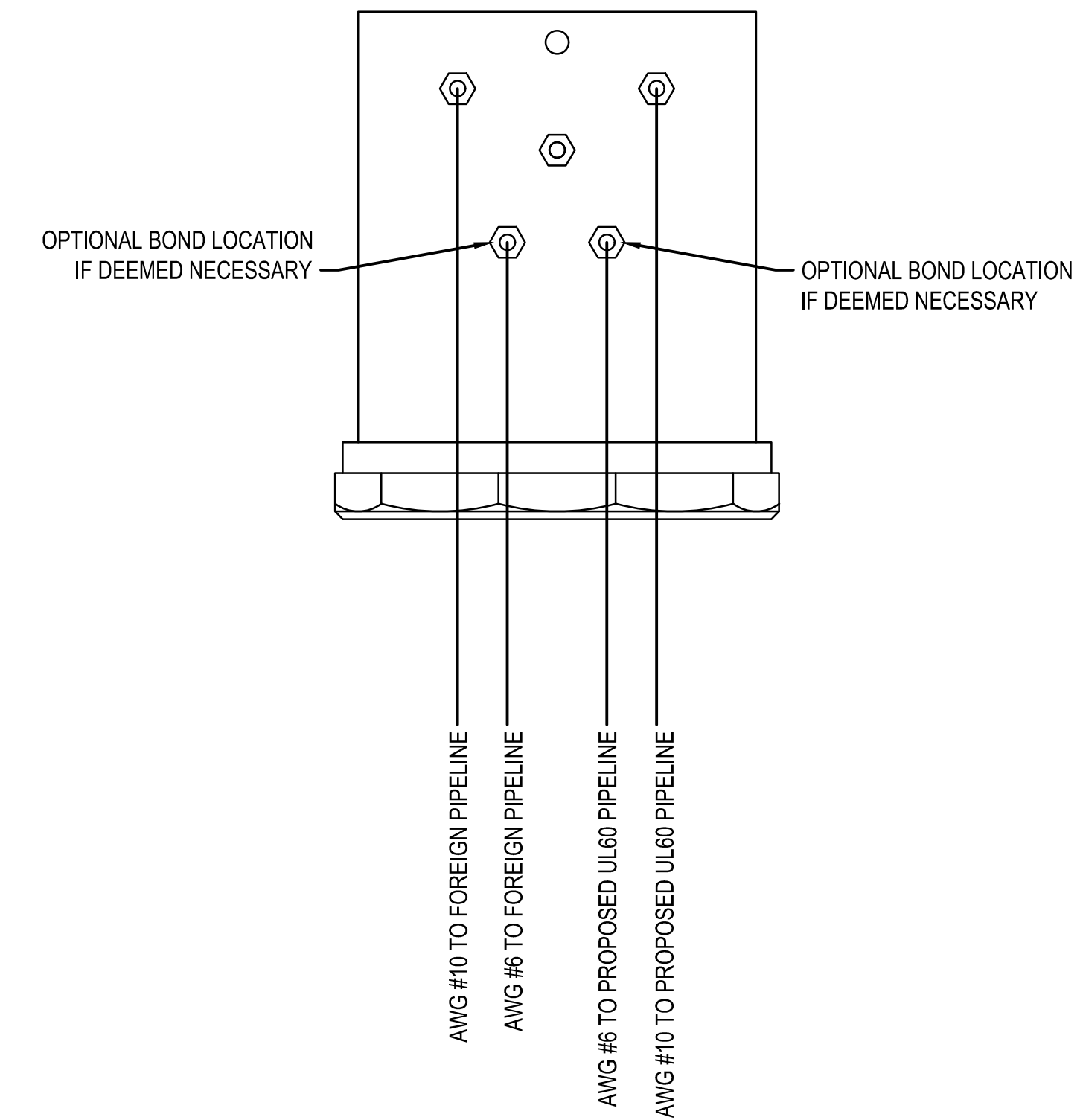
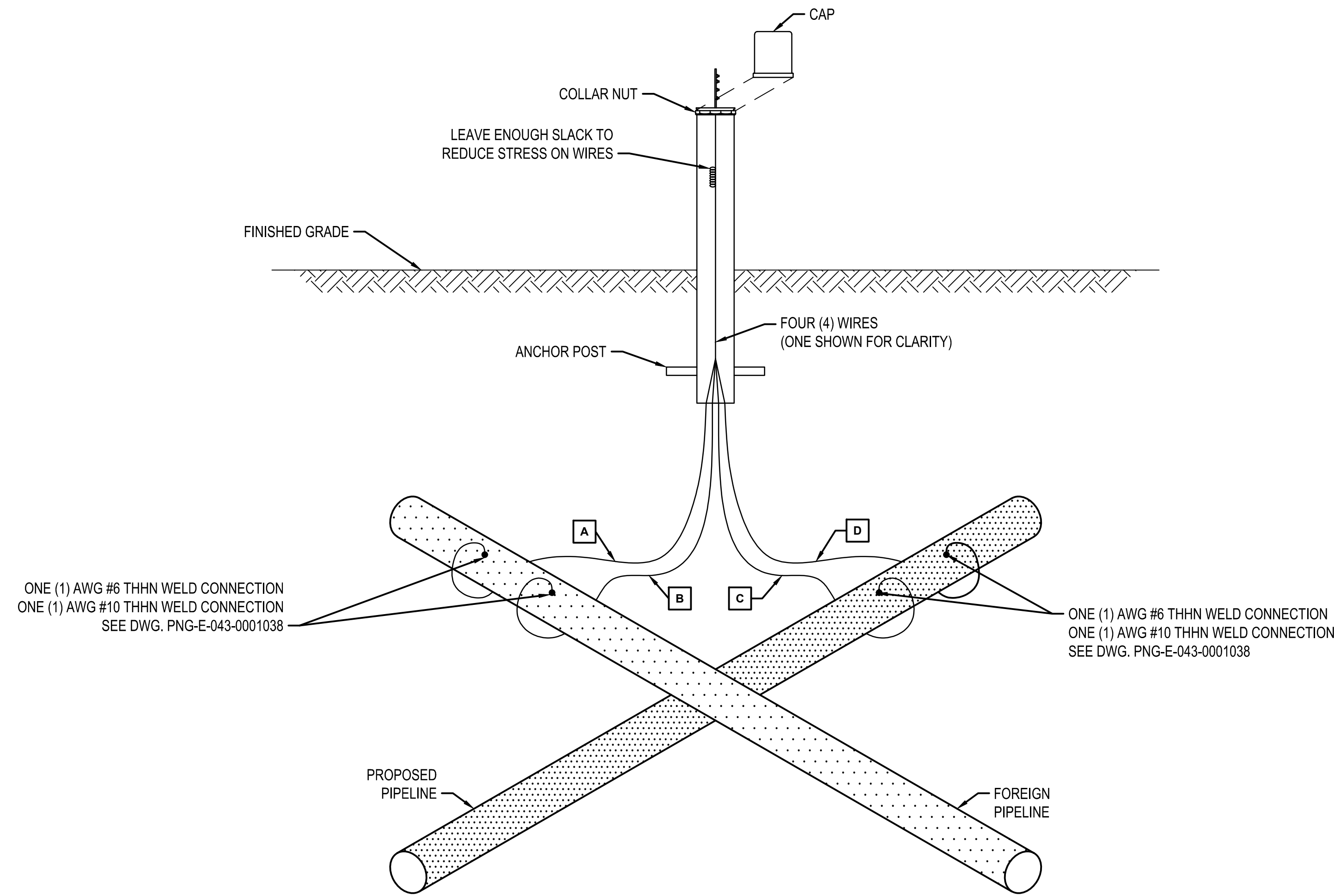
REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	PRINCIPAL ENGINEER
						DRAWING BY JXV	
						STATION ID -	
						CHECKER INITIALS CEB	

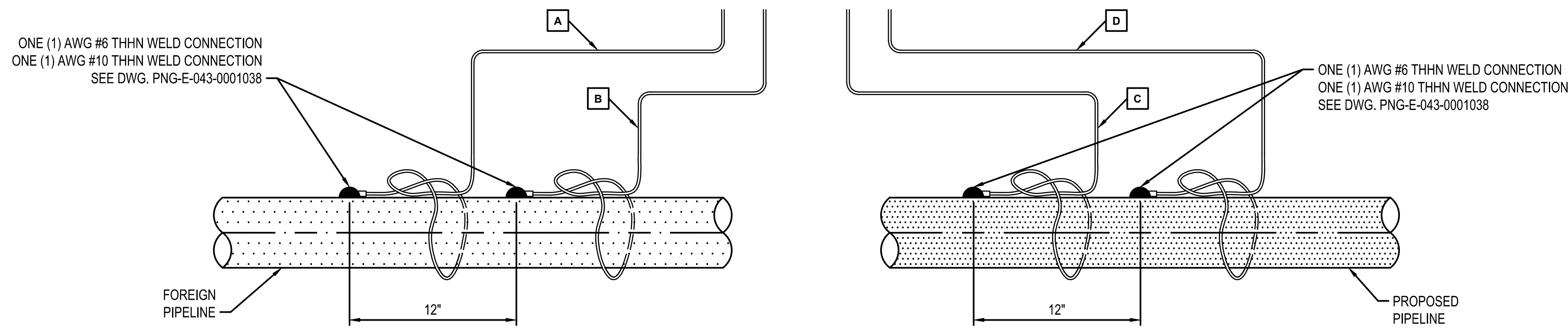


UL60 PIPELINE - PHASE 1
TWO WIRE TEST STATION
BOONE COUNTY, KY
ERLANGER, KY

SHEET(S) 1 OF 8	DWG SCALE NONE
DWG DATE 01/09/2020	SUPERSEDED
DRAWING NUMBER	REVISION
PNG -E-043-0001033	0
C/ERLANGER/UL60	



**TEST STATION HEAD
DETAIL 2A**
SCALE: NOT TO SCALE



**FOUR WIRE TEST STATION
DETAIL 2**
SCALE: NOT TO SCALE

NOTES:

1. INSPECT CABLE INSULATION PRIOR TO INSTALLATION.
2. EXOTHERMIC WELD CONNECTIONS SHOULD BE MADE AS CLOSE TO THE CROSSING LOCATION AS POSSIBLE.
3. TEST CABLES TO ENSURE PROPER FUNCTION.
4. LABEL CABLES ACCORDINGLY.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

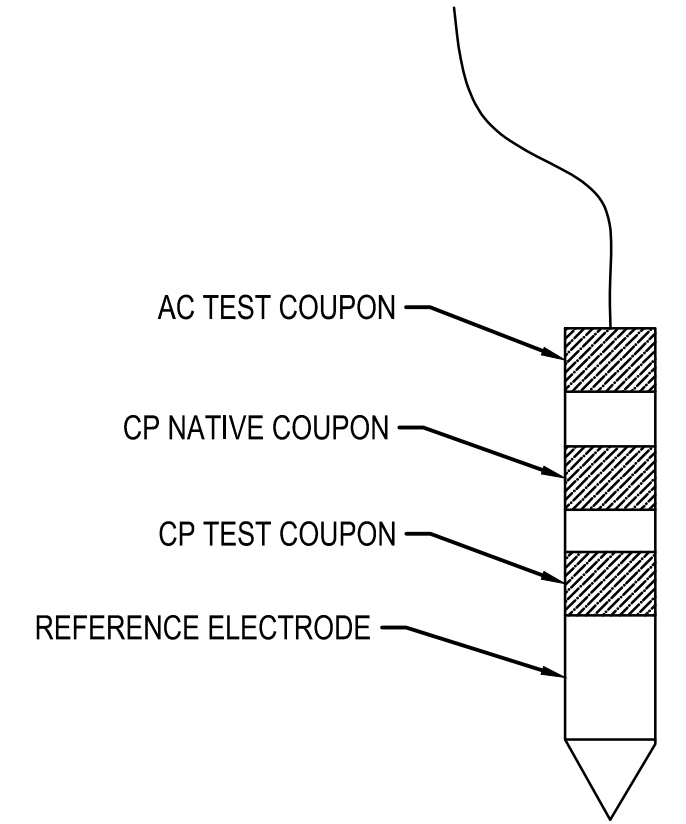
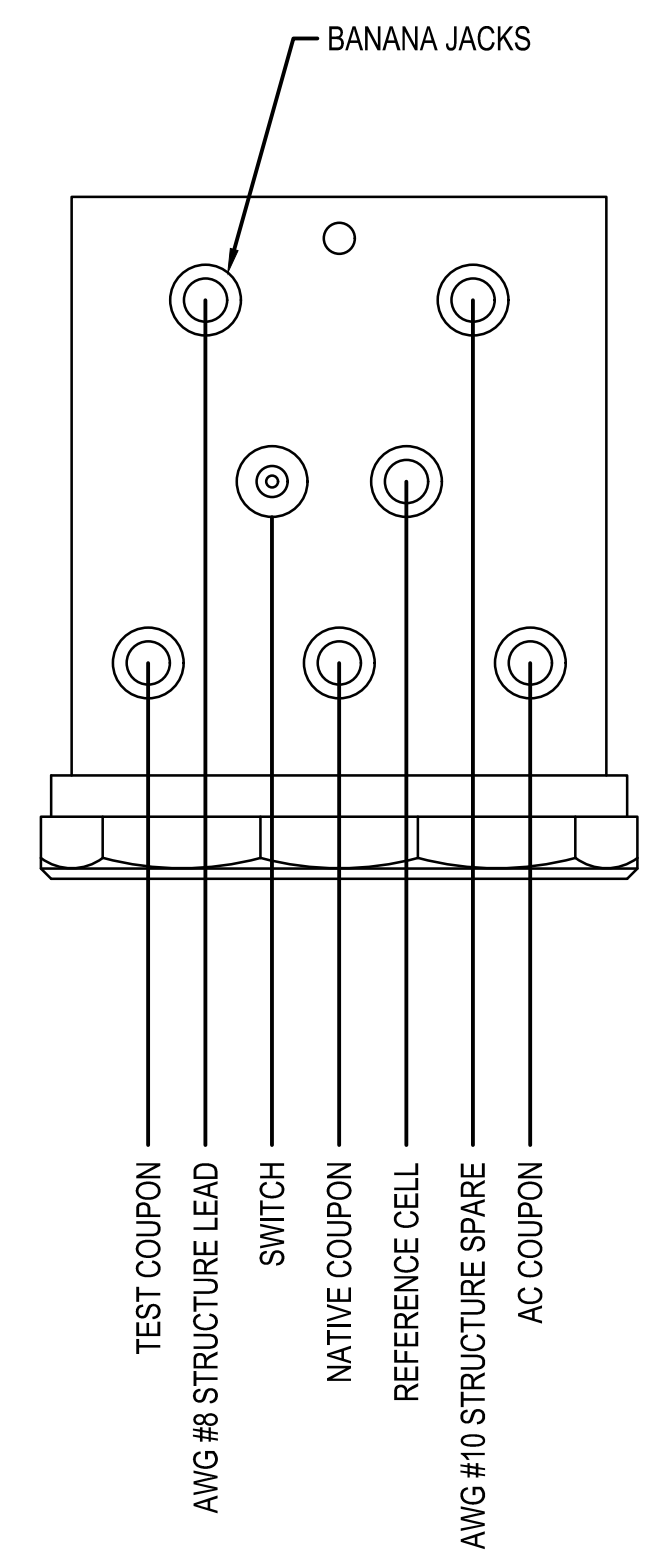
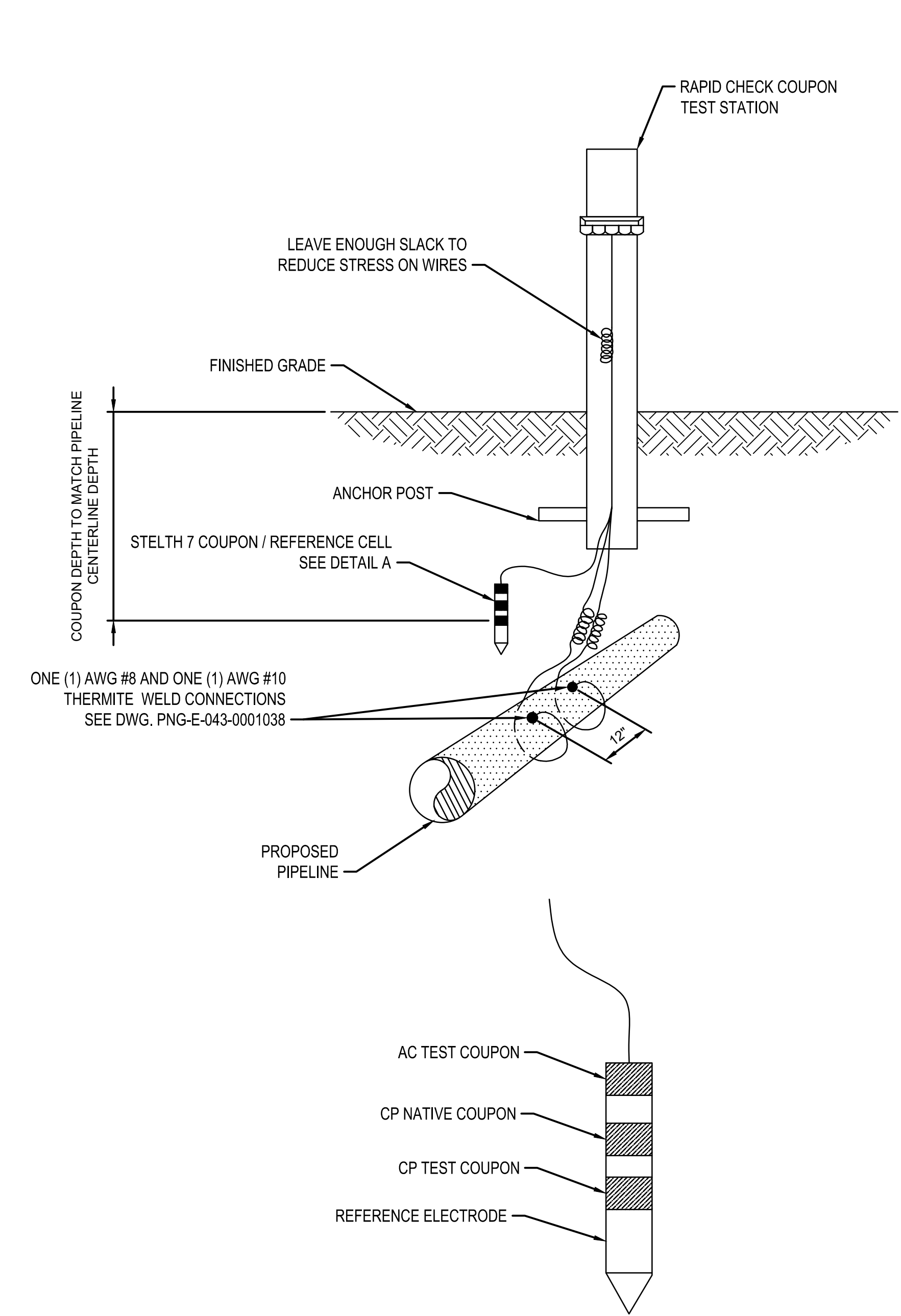
NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	-	-	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	-	-	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	-	-	PRINCIPAL ENGINEER
						DRAWING BY JXV	02/12/2020	AMP	
						STATION ID -			
						CHECKER INITIALS CEB			



COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
FOUR WIRE TEST STATION
BOONE COUNTY, KY**
ERLANGER, KY

SHEET(S) 2 OF 8	DWG SCALE NONE
DWG DATE 01/09/2020	SUPERSEDED
DRAWING NUMBER PNG -E-043-0001034	REVISION 0
C/ERLANGER/UL60	



- NOTES:**
1. INSTALL AND TERMINATE COUPON TEST STATION ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
 2. COUPON TO BE INSTALLED ON OPPOSITE SIDE OF PIPE FROM COPPER AC GROUNDING CABLES.
 3. WET SOIL AT COUPON INSTALLATION LOCATION WITH WATER PRIOR TO BACKFILL.
 4. BACKFILL COUPON WITH NATIVE SOIL.
 5. INSTALL COUPON AT PIPE DEPTH.
 6. INSTALL COUPON WITHIN 12" OF PIPE.

**AC COUPON TEST STATION
DETAIL 3**
SCALE: NOT TO SCALE

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142
PROFESSIONAL ENGINEER/ARCH STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	INITIALS -
						ACCOUNT NUMBER V8191	INITIALS -
						PROJECT NUMBER G7UL02PH1	INITIALS -
						DRAWING BY JXV	INITIALS -
						STATION ID -	INITIALS -
						CHECKER INITIALS CEB	INITIALS AMP

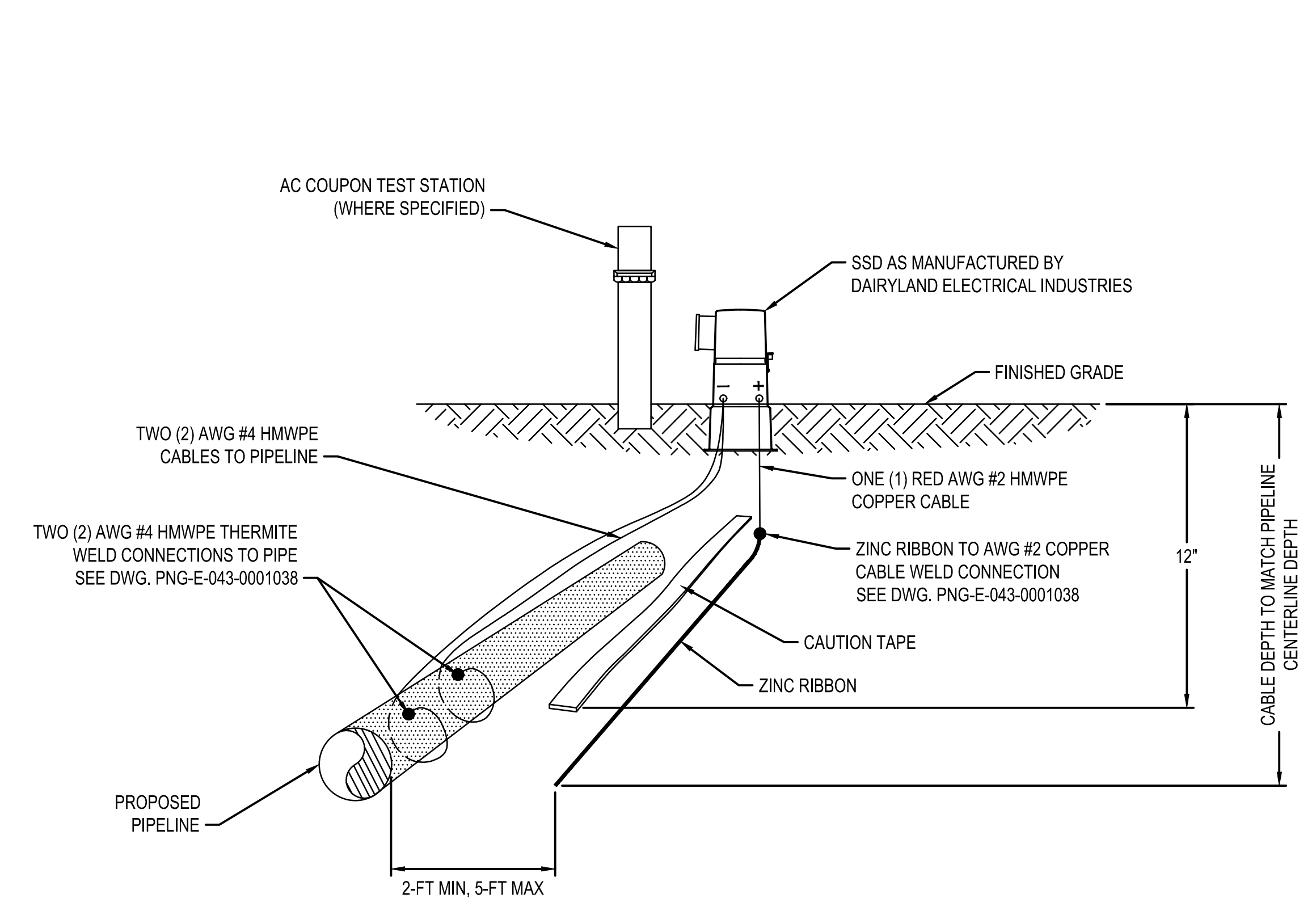
APPROVALS

REGIONAL ENGINEER	MGR TECH REC & STD
PRINCIPAL ENGINEER	

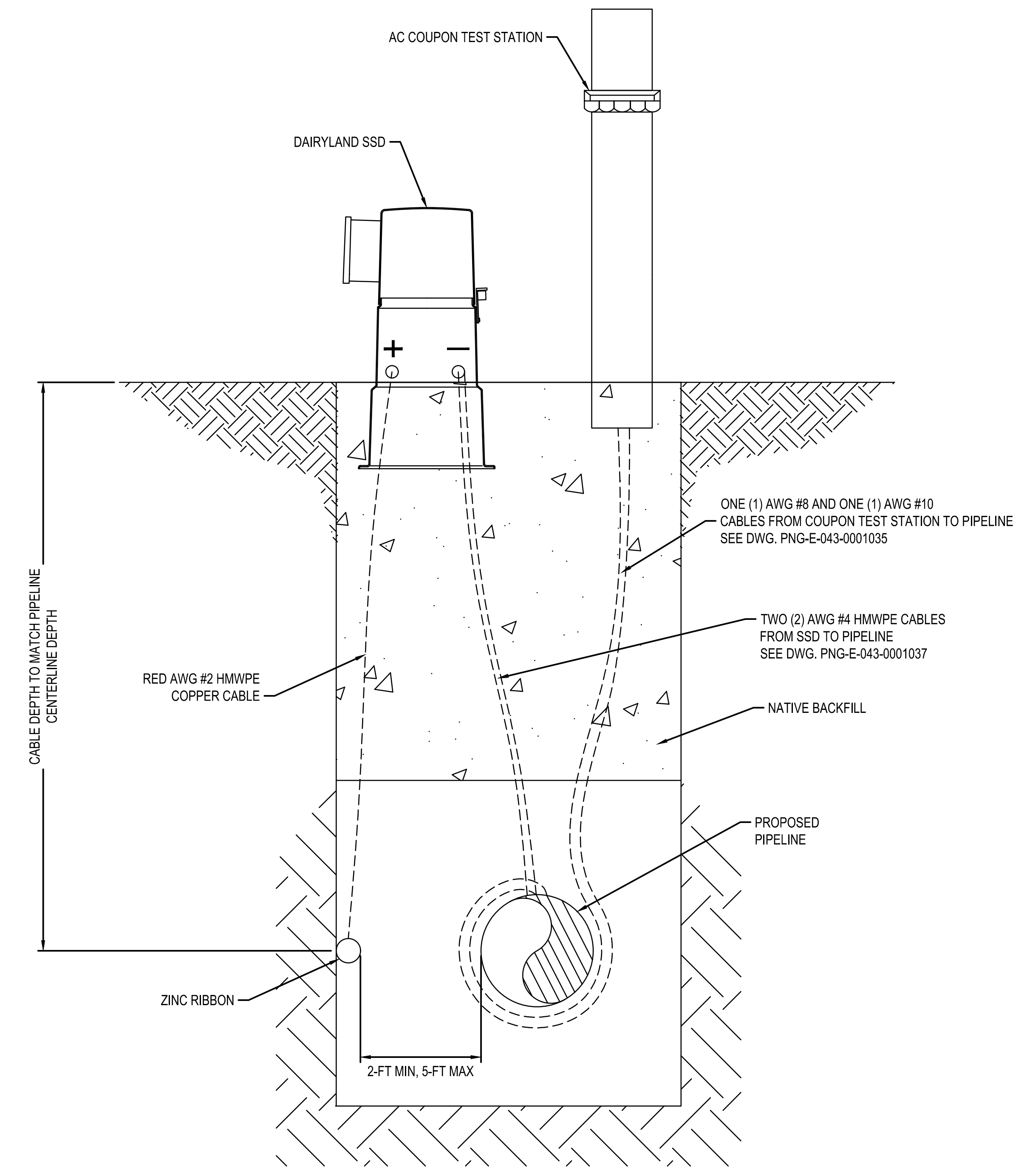
COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
AC COUPON TEST STATION
BOONE COUNTY, KY**
ERLANGER, KY

SHEET(S) 3 OF 8	DWG SCALE NONE
DWG DATE 01/09/2020	SUPERSEDED
DRAWING NUMBER	REVISION
PNG -E-043-0001035	0
C/ERLANGER/UL60	

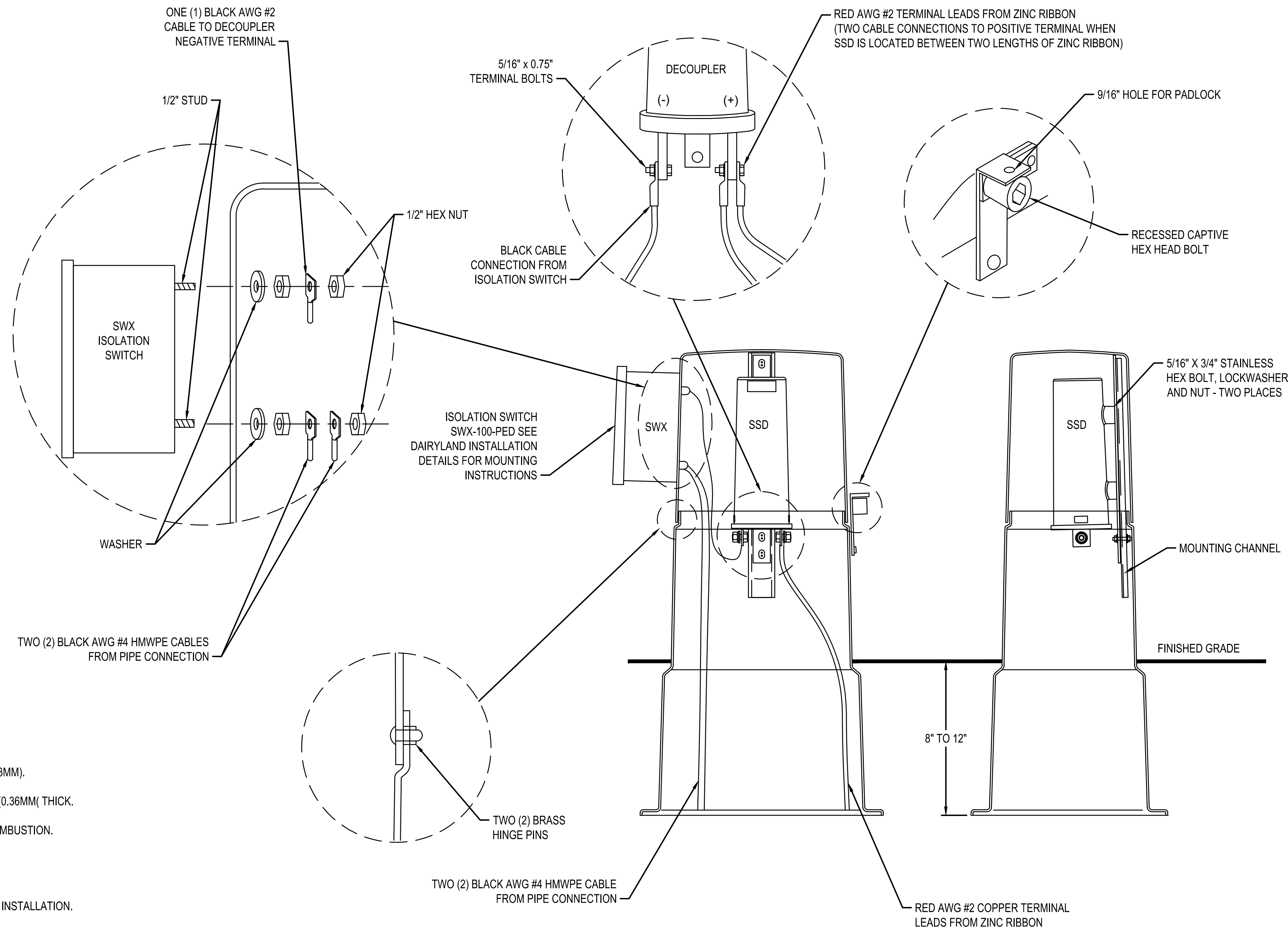


- INSTALLATION NOTES:**
1. GROUNDING CABLE MUST NOT COME IN CONTACT WITH PIPELINE.
 2. INSPECT CABLE INSULATION PRIOR TO INSTALLATION.
 3. TEST CABLES TO ENSURE PROPER FUNCTION.
 4. GROUNDING CABLE TO BE INSTALLED A MINIMUM OF 3' BELOW GRADE.
 5. INSTALL GROUNDING CABLE BETWEEN POWERLINE AND PIPELINE.
 6. COUPON TO BE INSTALLED ON OPPOSITE SIDE OF PIPE FROM AC GROUNDING CABLE.
 7. INSTALL CAUTION TAPE ABOVE GROUNDING CABLE WITH 12" DEPTH OF COVER (DOC).
 8. ALL PIPE CONNECTIONS TO BE WRAPPED AROUND PIPE AND TIES WITH HALF-HITCH KNOT.



**PARALLEL AC GROUNDING CABLE
DETAIL 4**
SCALE: NOT TO SCALE

BURNS & MCDONNELL STATE LICENSE #43 PROPRIETARY & CONFIDENTIAL ALL RIGHTS RESERVED * DO NOT SCALE THIS DRAWING * USE DIMENSIONS ONLY PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001										REF. DWG(S) PNG-G-043-0001022	
AMANDA M. PALM 04/17/2020 KENTUCKY SEAL 33142 NO. DATE REVISION(S) DESCRIPTION BY CHK APPD DESCRIPTION APPROVALS REGIONAL ENGINEER 0 02/10/2021 ISSUED FOR AS-BUILT JXV CEB EPM AREA CODE 5339 DATE - INITIALS - REGIONAL ENGINEER ACCOUNT NUMBER V8191 DATE - INITIALS - MGR TECH REC & STD PROJECT NUMBER G7UL02PH1 DATE - INITIALS - PRINCIPAL ENGINEER DRAWING BY JXV DATE 02/12/2020 INITIALS AMP STATION ID - CHECKER INITIALS CEB										SHEET(S) 4 OF 8 DWG SCALE NONE DWG DATE 01/09/2020 SUPERSEDED DRAWING NUMBER PNG -E-043-0001036 REVISION 0 C/ERLANGER/UL60	
UL60 PIPELINE - PHASE 1 AC GROUNDING CABLE BOONE COUNTY, KY ERLANGER, KY COPYRIGHT 2019										DUKE ENERGY Piedmont Natural Gas	



GENERAL NOTES:

1. NOMINAL FIBERGLASS THICKNESS 3/16" (4.8MM).
2. EXTERIOR UV STABILIZED GELCOAT 14MIL (0.36MM) THICK.
3. FIRE RETARDANT: DOES NOT SUPPORT COMBUSTION.
4. STAINLESS STEEL HARDWARE.

INSTALLATION NOTES:

1. INSPECT ALL CABLE INSULATION PRIOR TO INSTALLATION.
2. BACKFILL AROUND WIRES TO WITHIN 18" OF FINISHED GRADE.
3. TAMP A 2'X2' AREA AND PLACE THE PEDESTAL OVER THE WIRES.
4. BACKFILL CAREFULLY AROUND THE PEDESTAL TO KEEP LEVEL.
5. REMOVE THE TOP PORTION OF PEDESTAL TO INSTALL SSD.
6. FILL THE INSIDE OF PEDESTAL WITH 12" OF NATIVE SOIL.
7. USE THE SUPPLIED HARDWARE TO MOUNT SSD AS SHOWN.
8. TYPICAL BURIAL DEPTH 8" TO 12".
9. ISOLATION SWITCH TO BE MOUNTED ON OUTSIDE OF FIBERGLASS PEDESTAL OPPOSITE SIDE OF 9/16" HOLE FOR PADLOCK.
10. LABEL THE RUNNING DIRECTION OF EACH AC GROUNDING CABLE BROUGHT ABOVE GRADE.

**SOLID STATE DECOUPLER
DETAIL 5**
SCALE: NOT TO SCALE

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

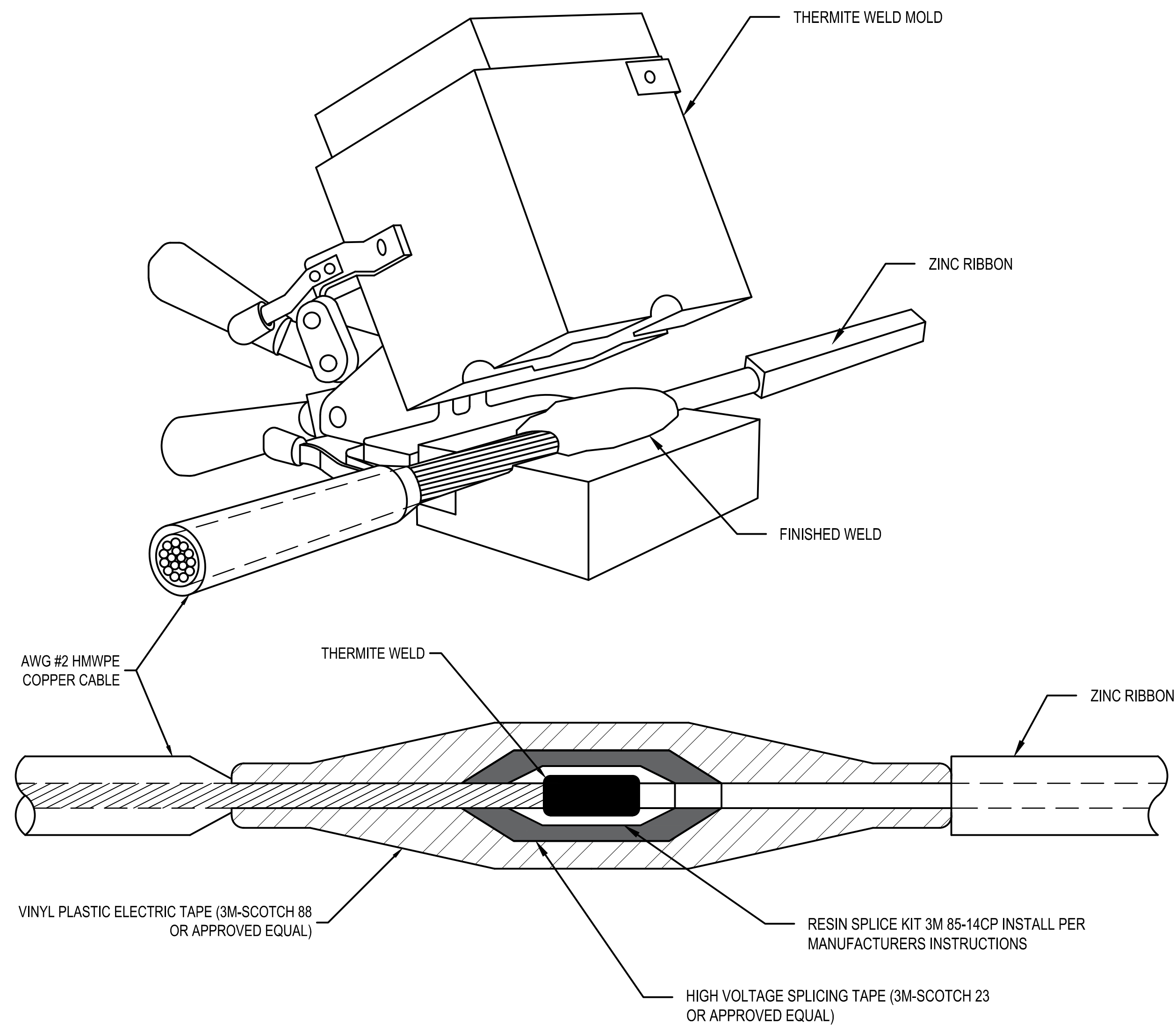
NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	-	-	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	-	-	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	-	-	PRINCIPAL ENGINEER
						DRAWING BY JXV	02/12/2020	AMP	
						STATION ID -			
						CHECKER INITIALS CEB			



**UL60 PIPELINE - PHASE 1
SOLID STATE DECOUPLER
BOONE COUNTY, KY**
ERLANGER, KY

SHEET(S) 5 OF 8	DWG SCALE NONE
DWG DATE 01/09/2020	SUPERSEDED
DRAWING NUMBER PNG -E-043-0001037	REVISION 0
C/ERLANGER/UL60	

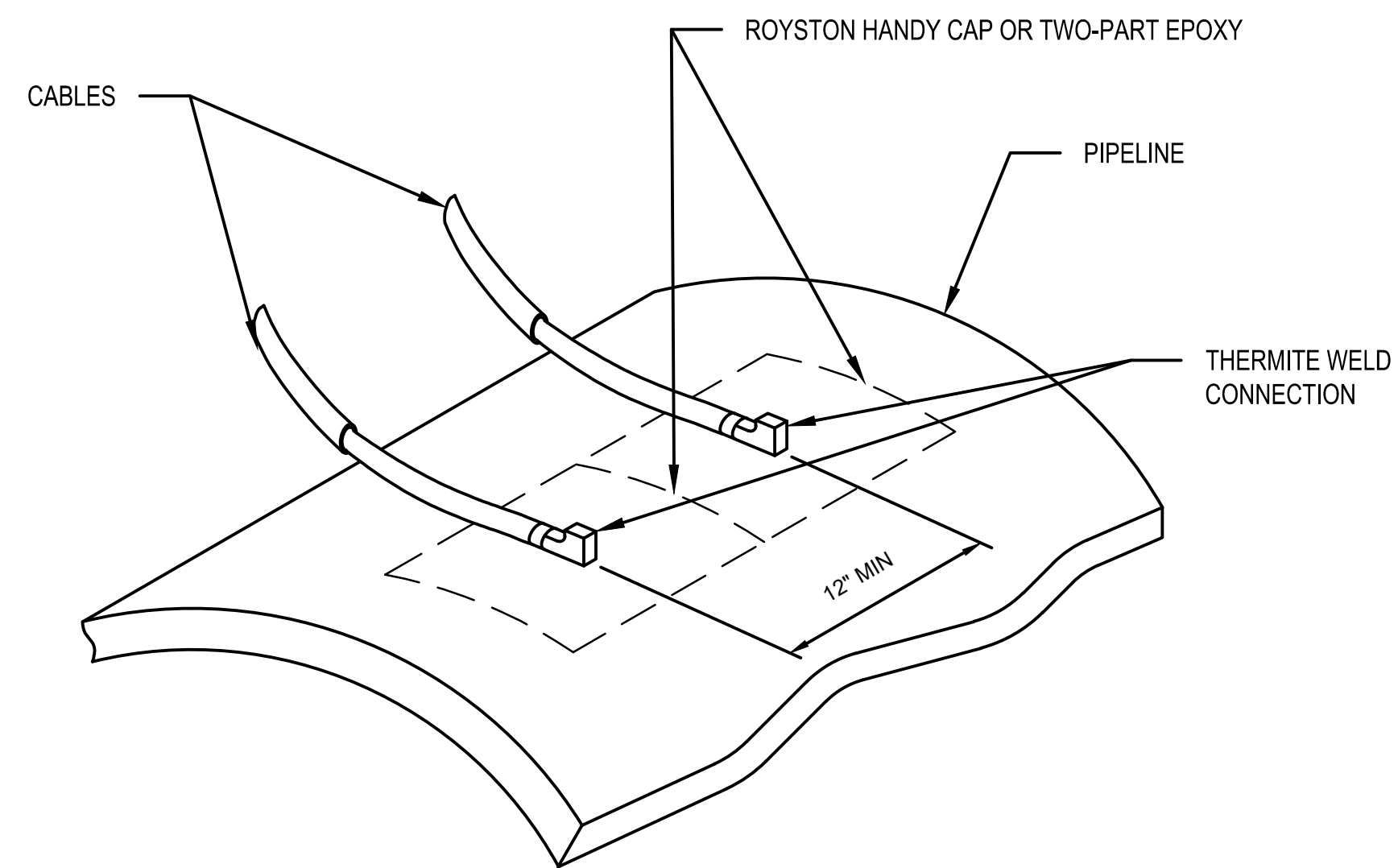
ZINC RIBBON TO AWG #2 COPPER CABLE WELD CONNECTION



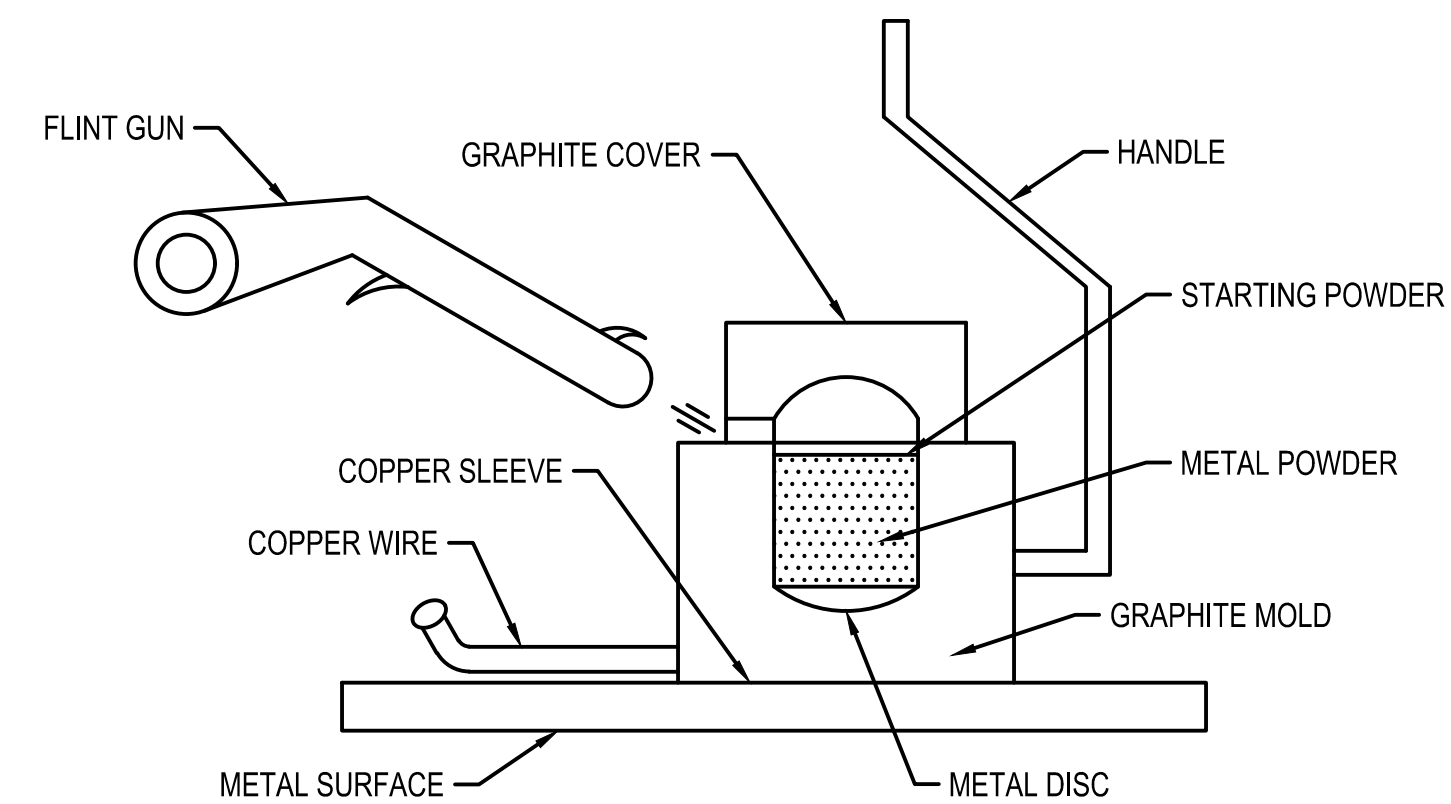
EXOTHERMIC WELDING

DETAIL 6
SCALE: NOT TO SCALE

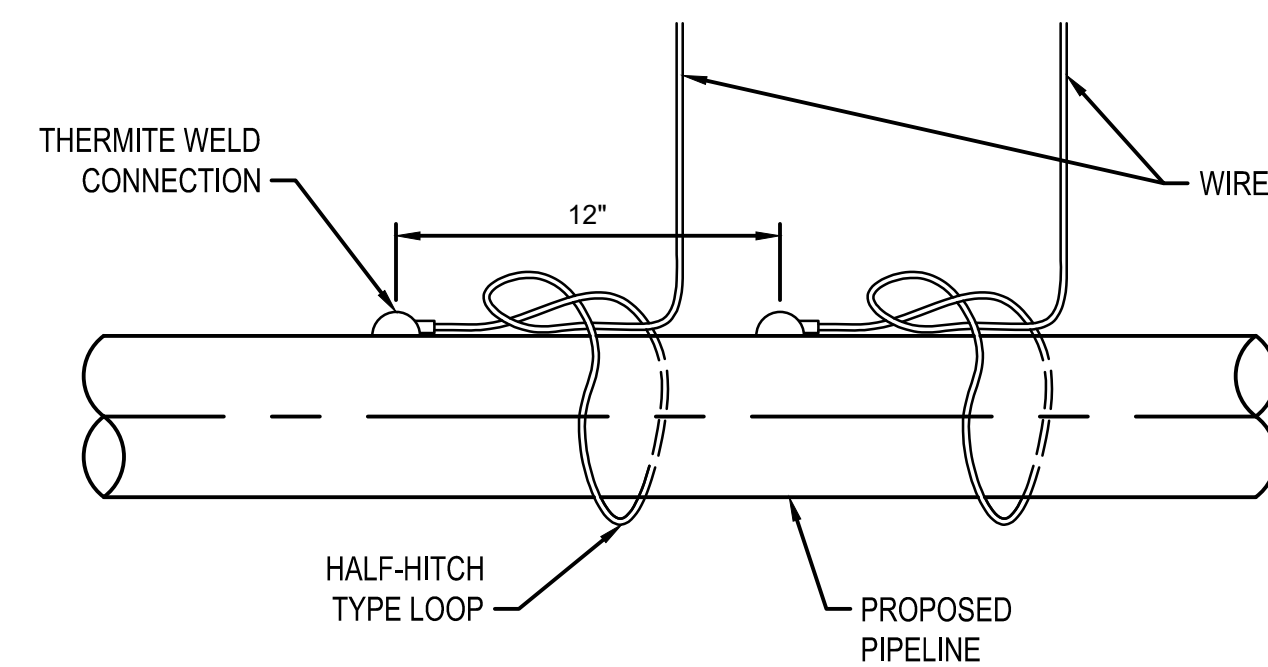
HORIZONTAL PIPELINE CONNECTIONS



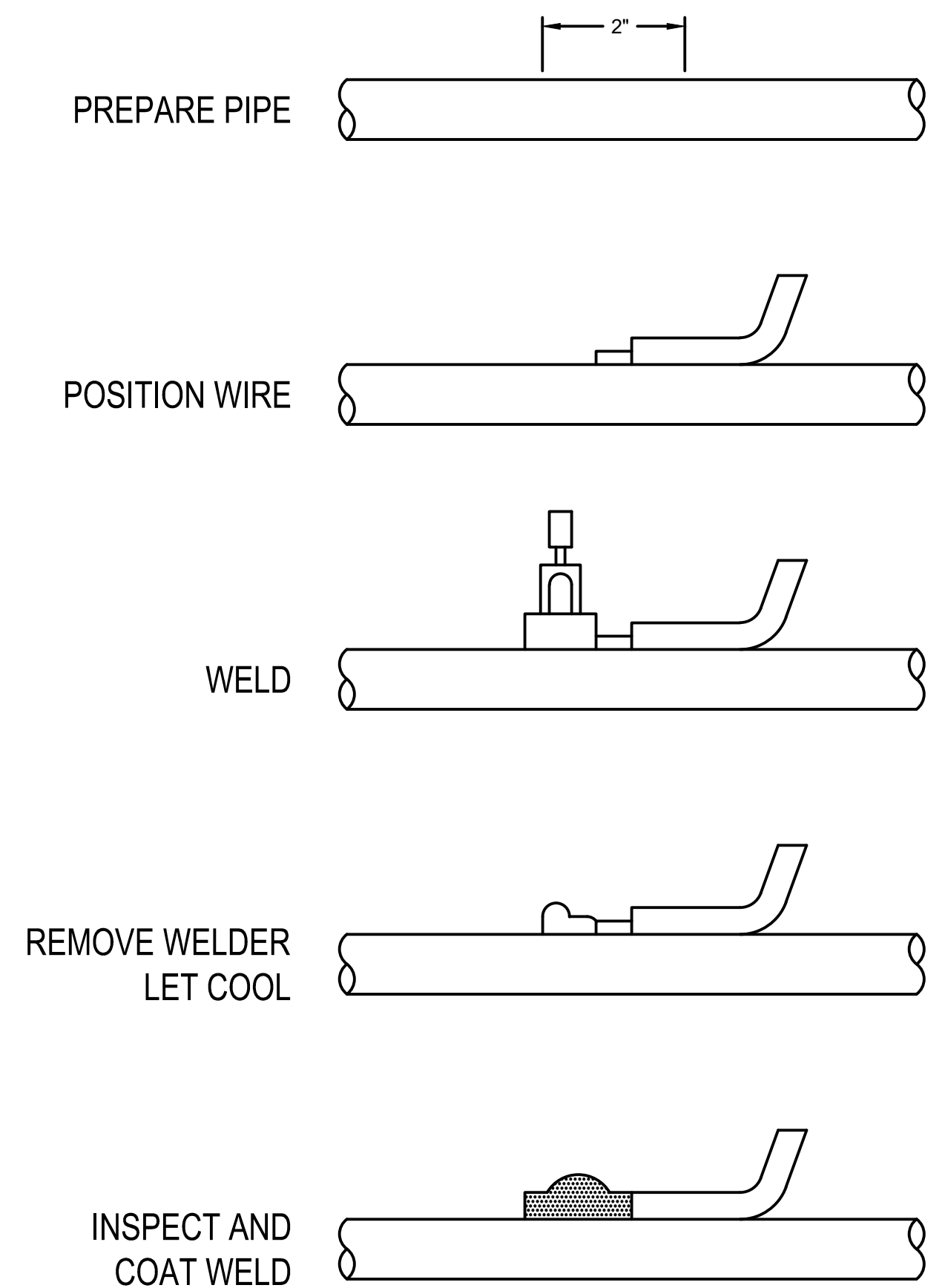
WELDER DETAIL



TEST WIRE ROUTING DETAIL



WELDING STEPS



STEPS FOR PREPARING PIPE

1. REMOVE A 2" SQUARE SECTION OF COATING, FILE SURFACE TO BRIGHT METAL AND DRY.
2. PIPE MUST BE TESTED FOR WALL LAMINATIONS PRIOR TO WELDING. ULTRASONIC WALL THICKNESS MEASUREMENTS MUST BE TAKEN AT THE LOCATION OF ALL WELDS, TO VERIFY ADEQUATE WALL THICKNESS.
3. WRAP TEST WIRE AROUND THE PIPE OR LEAVE ENOUGH SLACK ON THE WIRE TO REDUCE STRAIN ON WELD. NEVER WRAP CASING WIRE AROUND PIPELINE.
4. STRIP INSULATION FROM WIRE, SLIP ON COPPER SLEEVE (#8 WIRE AND SMALLER) AND CRIMP. PLACE WIRE AGAINST METAL SURFACE.
5. PLACE PREPARED WELDER OVER WIRE AND HOLD FIRMLY WHILE MAKING CONNECTION. APPLY SPARK TO SIDE OF WELDER WITH FLINT GUN.
6. REMOVE MOLD AND LET COOL.
7. AFTER WELD HAS COOLED, HIT WELD SEVERAL TIMES WITH HAMMER TO ENSURE WELD IS INTACT.
8. PROTECT WELDMENT AS REQUIRED.

STEPS FOR PREPARING WELDER

1. PLACE METAL DISC IN BOTTOM OF GRAPHITE MOLD.
2. OPEN CARTRIDGE AND POUR CHARGE IN MOLD USE MAXIMUM 15 GRAM CHARGE.
3. SQUEEZE BASE OF CARTRIDGE AND REMOVE STARTING POWDER.
4. CLOSE COVER AND PLACE WELDER OVER WIRE.

REF. DWG(S) PNG-G-043-0001022

SHEET(S) 6 OF 8 DWG SCALE NONE

DWG DATE 01/09/2020 SUPERSEDED

DRAWING NUMBER PNG -E-043-0001038 REVISION 0

CIERLANGER/UL60

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER ARCHITECT STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339	REGIONAL ENGINEER
						ACCOUNT NUMBER V8191	MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1	PRINCIPAL ENGINEER
						DRAWING BY JXV	
						STATION ID -	
						CHECKER INITIALS CEB	
						DATE 02/12/2020	
						INITIALS AMP	



COPYRIGHT 2019

UL60 PIPELINE - PHASE 1
WELDING DETAILS
BOONE COUNTY, KY
ERLANGER, KY

AC MITIGATION INSTALLATIONS

ZONE	SITE	STA.	FEATURE(S)	LOCATION	ZINC RIBBION LENGTH (FT)	AWG #4 WELDS	AWG #8 WELDS	AWG #10 WELDS	NOTES
1	1	17+94	SSD	West of Queens Ct, North of baseball fields	1150	2			
	2	28+77	SSD & AC Coupon Test Station	East of intersection of Donaldson Hwy and Turfway Rd		2	1	1	Point of Inflection
2	3	67+22	SSD & AC Coupon Test Station	South of Averitt trucking facility	1450	2	1	1	West end of HDD
	4	81+42	SSD	North of Turfway Rd, east of airport		2			90° bend in road
3	5	102+01	SSD	North of intersection of Turfway Rd and Aero Pkwy	2000	2			
	6	122+09	SSD & AC Coupon Test Station	Field north of Aero Pkwy		2	1	1	
4	7	159+01	SSD	North of Aero Pkwy, East of electrical substation	-	2			
	8	173+98	SSD & AC Coupon Test Station	North of Aero Pkwy, South of electrical substation	1550	2	1	1	
	9	188+97	SSD	North of Aero Pkwy, West of electrical substation	1550	2			
5	10	218+83	SSD & AC Coupon Test Station	North of intersection of Aero Pkwy and Burlington Pike	-	2	1	1	
	11	222+79	SSD	Intersection of Aero Pkwy and Burlington Pike	450	2			HVAC line crossing
	12	236+20	SSD	North of Creek Rd	1350	2			Edge of private driveway
6	13	704+51	AC Coupon Test Station	8" Lateral South of Burlington Pike	-		1	1	West of AC substation

CATHODIC PROTECTION TEST STATIONS

STA.	FEATURE(S)	LOCATION	AWG #6 WELDS	AWG #10 WELDS	NOTES
10+41	2-Wire Test Station	West side of Peach Tree Ln	-	2	
15+68	2-Wire Test Station	West side of Queens Ct	-	2	
30+88	2-Wire Test Station	North of intersection of Donaldson Hwy and Turfway Rd	-	2	Point of Inflection
33+19	4-Wire Test Station	West side of intersection of Donaldson Hwy	2	2	Connection to existing 8" Gas Line at (33+07)
33+38	4-Wire Test Station	West side of intersection of Donaldson Hwy	2	2	Connection to existing 10" Gas Line at (33+27)
53+57	2-Wire Test Station	East side of OHara Rd	-	2	
82+54	2-Wire Test Station	West of Turfway Rd just south of access road	-	2	90° bend in road
166+49	2-Wire Test Station	North of intersection of Aero Pkwy and Zig-Zag Rd	-	2	West fence line
242+86	2-Wire Test Station	West side of Limaburg Creek Dr	-	2	
510+90	2-Wire Test Station	8" Lateral	-	2	8" steel lateral to Wendell Ford Station
703+51	4-Wire Test Station	South side of Burlington Pike	2	2	Connection to existing 8" Gas Line at (703+53)

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER/ARCH STAMP

PIEDMONT'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	DATE	INITIALS	APPROVALS
0	02/10/2021	ISSUED FOR CONSTRUCTION	JXV	CEB	EPM	AREA CODE 5339			REGIONAL ENGINEER
						ACCOUNT NUMBER V8191			MGR TECH REC & STD
						PROJECT NUMBER G7UL02PH1			PRINCIPAL ENGINEER
						DRAWING BY JXV			
						STATION ID -			
						CHECKER INITIALS CEB	02/12/2020	AMP	



COPYRIGHT 2019

**UL60 PIPELINE - PHASE 1
EQUIPMENT SCHEDULES
BOONE COUNTY, KY**

ERLANGER, KY

SHEET(S) 7 OF 8 DWG SCALE NONE

DWG DATE 01/09/2020 SUPERSEDED

DRAWING NUMBER PNG -E-043-0001039 REVISION 0

ERLANGER/UL60

DUKE UL60 24" PIPELINE: CATHODIC PROTECTION & AC MITIGATION BILL OF MATERIALS

ITEM NO	EST QTY	UOM	AS-BUILT QTY	DESCRIPTION	MAXIMO PART X	NOTES	MODEL NO	MATERIAL SOURCE
CAD WELDS & CONNECTIONS								
1	4	PKG	4	CA-15 WELD METAL (20/PACK)	NON-STOCK	WELD METAL, CABLE TO PIPE CONNECTIONS	CA-15	ERICO
2	1	PKG	1	CA-32 WELD METAL (20/PACK)	NON-STOCK	WELD METAL, AWG #2 TO ZINC RIBBON CONNECTIONS	CA-32	ERICO
3	1	EA	1	CASST-1V, AWG #2 STRANDED CABLE WELDER	NON-STOCK	AWG #2 CABLE TO ZINC RIBBON CONNECTION	CASST-1V	ERICO
4	1	EA	1	CAHAA-1L, AWG #4 STRANDED CABLE WELDER	NON-STOCK	AWG #4 CABLE TO PIPE CONNECTION	CAHAA-1L	ERICO
5	1	EA	1	CAHAA-1H, AWG #6 STRANDED CABLE WELDER	NON-STOCK	AWG #6 CABLE TO PIPE CONNECTION	CAHAA-1H	ERICO
6	10	EA	10	CAB-133-1L, ADAPTER SLEEVE FOR AWG #8, FOR USE IN AWG #4 WELDER	NON-STOCK	AWG #8 CABLE TO PIPE CONNECTION	CAB-133-1L	ERICO
7	30	EA	30	CAB-133-1H, ADAPTER SLEEVE FOR AWG #10, FOR USE IN AWG #6 WELDER	NON-STOCK	AWG #10 CABLE TO PIPE CONNECTION	CAB-133-1H	ERICO
8	1	EA	1	FLINT IGNITOR FOR THERMITE WELDING, T320	NON-STOCK	CADWELD IGNITOR	T320	ERICO
9	70	EA	70	ROYSTON HANDY CAP	1552880	CABLE TO PIPE WELD PROTECTION		ROYSTON
10	15	EA	15	SPLICE KIT, 85-14CP	NON-STOCK	AWG#2 TO ZINC RIBBON WELD PROTECTION	85-14CP	3M
11	2	EA	2	SUPER 88 TAPE, 66FT ROLL	NON-STOCK	AWG#2 TO ZINC RIBBON WELD PROTECTION		3M
12	2	EA	2	SCOTCH 23 HIGH VOLTAGE TAPE	NON-STOCK	AWG#2 TO ZINC RIBBON WELD PROTECTION		3M
13	4	PKG	4	COMPRESSION RING TERMINAL, AWG #2 WITH 1/2" HOLE, YAD2CM12E12 (5/PACK)	NON-STOCK	AWG #2 TO SSD CONNECTION	YAD2CM12E12	BRUNDY
14	6	PKG	6	COMPRESSION RING TERMINAL, AWG #4 WITH 1/2" HOLE, YAD4CM12E12 (5/PACK)	NON-STOCK	PIPE TO SSD CONNECTION	YAD4CM12E12	BRUNDY
WIRE								
15	900	FT	900	BLACK AWG #10, THHN COATED SOLID COPPER WIRE	NON-STOCK	TEST STATION TO PIPE CONNECTION		GENERIC
16	200	FT	200	BLACK AWG #8, THHN COATED STRANDED COPPER WIRE	NON-STOCK	TEST STATION TO PIPE CONNECTION		GENERIC
17	100	FT	100	BLACK AWG #6, THHN COATED STRANDED COPPER WIRE	NON-STOCK	TEST STATION TO PIPE CONNECTION		GENERIC
18	700	FT	700	BLACK AWG #4, HMWPE COATED STRANDED COPPER WIRE	NON-STOCK	SSD TO PIPE CONNECTION		GENERIC
19	400	FT	400	RED AWG #2, HMWPE COATED STRANDED COPPER WIRE	NON-STOCK	ZINC RIBBON TO SSD CONNECTION		GENERIC
TEST STATIONS & JUNCTION BOXES								
20	11	EA	11	BIG FINK 5 TERMINAL TEST STATION WITH 3" DIA. SUPPORT POST, 6' HEIGHT, YELLOW POST, YELLOW TEST HEAD	1555422	CP TEST STATION	300-B5C-Y/Y	COTT
21	6	EA	6	RAPID CHECK AC COUPON TEST STATION, YELLOW	NON-STOCK	AC COUPON TEST STATION		FARWEST
22	6	EA	6	BORIN STELTH 7 ELECTRODE WITH 20FT AWG #14 LEAD WIRE	NON-STOCK	AC/DC COUPON	STELTH 7	BORIN
AC GROUNDING / DECOUPLERS								
23	12	EA	12	SSD-2/2-5.0-100-R	NON-STOCK	SOLID STATE DECOUPLER (SSD)	SSD-2/2-5.0-100-R	DAIRYLAND
24	12	EA	12	MECHANICAL ISOLATION SWITCHES, SWX-100-PED	NON-STOCK	SSD EXTERNAL DISCONNECT SWITCH	SWX-100-PED	DAIRYLAND
25	12	EA	12	MTL LEAD KIT FOR ISOLATION SWITCH, MTL-2/0-12-A	NON-STOCK	SSD TO SWITCH CONNECTION	MTL-2/0-12-A	DAIRYLAND
26	12	EA	12	36" FIBERGLASS PEDESTAL FOR SSD MOUNTING, MTP-36	NON-STOCK	SSD PEDESTAL	MTP-36	DAIRYLAND
27	9500	FT	9500	ZINC RIBBON, STANDARD 1/2" x 9/16": (1) 450-FT, (1) 1150-FT, (1) 1350-FT, (1) 1450-FT, (2) 1550-FT, (1) 2000-FT	NON-STOCK	AC GROUNDING CABLE		PLATTLINE
28	9500	FT	9500	CAUTION TAPE, YELLOW, 6" WIDE	1552996	CAUTION TAPE		GENERIC

NOTE: CONTRACTOR SHALL PROVIDE AND INSTALL 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. 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 WIRING IS DEPENDENT ON DISTANCE FROM INSTALLATION.

BURNS & MCDONNELL
STATE LICENSE #43

AMANDA M. PALM
04/17/2020
KENTUCKY
SEAL 33142

PROFESSIONAL ENGINEER STAMP

PIEDMONT 'S NATURAL GAS FACILITY DRAWINGS ARE CONSIDERED CONFIDENTIAL (OM-1095) * 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) POLICY 1001

REF. DWG(S) PNG-G-043-0001022

NO.	DATE	REVISION(S) DESCRIPTION	BY	CHK	APPD	DESCRIPTION	APPROVALS
0	02/10/2021	ISSUED FOR AS-BUILT	JXV	CEB	EPM	AREA CODE 5339 ACCOUNT NUMBER V8191 PROJECT NUMBER G7UL02PH1 DRAWING BY JXV STATION ID - CHECKER INITIALS CEB	DATE - INITIALS - DATE - INITIALS - DATE 02/12/2020 INITIALS AMP

UL60 PIPELINE - PHASE 1
CP & AC MITIGATION BILL OF MATERIALS
BOONE COUNTY, KY
ERLANGER, KY

COPYRIGHT 2019

SHEET(S) 8 OF 8	DWG SCALE NONE
DWG DATE 01/09/2020	SUPERSEDED
DRAWING NUMBER	
PNG -E-043-0001040	
REVISION	
0	

CIERLANGER/UL60