



February 9, 2018

Berks County Conservation District  
Attn: Mr. Dean Druckenmiller  
1238 County Welfare Road, Suite 200  
Leesport, PA 19533

**Re: Natural Gas Combined Cycle Minor Modification  
Electric Transmission Line and Storm Outfalls Rehabilitation  
NPDES Permit #: PAC060046  
BCCD Project ID #: ESP-00731  
Dawood Project No. 216040.01**

Enclosed, please find revised documents for the above-referenced project updated per comments received from the DEP Chapter 105 permitting review. These documents have been revised to adjust the location of construction fence and supply additional information regarding the areas with equipment and grubbing restrictions. In addition, work associated with outfall 1 has been removed from the project as it is not required and additional notes concerning construction monitoring and waste management have been added.

There have been no changes to silt sock locations or the limit of disturbance.

In addition to the revised plans, a check is enclosed in the amount of \$200.00 payable to the Berks County Conservation District to cover the minor modification fee.

The following is a summary of all plan changes:

1. ESCP A1 (Page 398)– Sequence of BMP Installation has been updated to specify hand clearing areas per DEP Chapter 105 review comments. Outfall 1 has been removed from location map.
2. ESCP B100 (Page 399)– Key has been added for annotations concerning construction fence locations. Outfall 1 has been removed from the map.
3. ESCP B101 (Page 400)– Additional area has been added where no equipment or grubbing is allowed. Outfall 1 work area has been removed. No change in silt sock or limit of disturbance.
4. ESCP B102 (Page 401)– Additional area has been added where no equipment or grubbing is allowed. Annotation has been added regarding construction fence placement.
5. ESCP B103 (Page 402)– Additional area has been added where no equipment or grubbing is allowed. Annotation has been added regarding construction fence placement.
6. ESCP B105 (Page 404)– Additional area has been added where no equipment or grubbing is allowed.

7. ESCP B107 (Page 407)– Additional area has been added where no equipment or grubbing is allowed. Annotation has been added regarding construction fence placement.
8. ESCP B109 (Page 409)– Additional area has been added where no equipment or grubbing is allowed.
9. ESCP B110 (Page 410)– Additional area has been added where no equipment or grubbing is allowed. Annotation has been added regarding construction fence placement.
10. ESCP B113 (Page 413)– Additional area has been added where no equipment or grubbing is allowed. Annotation has been added regarding construction fence placement.
11. ESCP C4 (Page 424)– Additional notes added regarding construction monitoring and waste management on the former armorcast site have been added to plan based on DEP Chapter 105 Review.

We greatly appreciate your cooperation in coordinating the NPDES permitting process for this project. If you have any questions regarding this submission, please do not hesitate to contact me at (724) 746-0730 ext. 1306 or by email to [jpisula@dawood.cc](mailto:jpisula@dawood.cc).



GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
14. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING BUT NOT LIMITED TO CLEAN OUT, REPAIR, REPLACEMENT, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
15. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
16. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEEPED INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
17. ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
18. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES --- 6 TO 12 INCHES ON COMPACTED SOILS --- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
19. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
20. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
21. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
22. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
23. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
24. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
25. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
26. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
27. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
28. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
29. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE REGIONAL DEP OFFICE FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
30. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
31. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE REGIONAL DEP OFFICE TO SCHEDULE A FINAL INSPECTION.
32. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

SEQUENCE OF BMP INSTALLATION

1. STAKE LIMITS OF DISTURBANCE (LOD) FOR THE CONSTRUCTION. ALL EXISTING UTILITIES SHALL BE MARKED IN THE FIELD PRIOR TO CONSTRUCTION.
2. INSTALL ROCK CONSTRUCTION ENTRANCES ADJACENT TO LINCOLN ROAD AND BOONTOWN ROAD AS SHOWN ON THE PLANS AND PLAN DETAILS.
3. INSTALLATION OF ACCESS ROADS WILL BE AVOIDED; HOWEVER WHERE ACCESS ROADS ARE NECESSARY THE FOLLOWING PROVISIONS WILL BE TAKEN:
  - a. BEGIN TREE CLEARING FOR ACCESS ROAD, PERIMETER CONTROL MUST BE IN PLACE PRIOR TO PULLING STUMPS.
  - b. INSTALL COMPOST FILTER SOCKS ADJACENT TO THE ACCESS ROAD IN LOCATIONS SHOWN ON THE PLANS.
  - c. CLEAR AND GRUB AREAS AS NEEDED FOR THE TEMPORARY ACCESS ROADS. REMOVE TOPSOIL AND STOCKPILE WITHIN THE LOD. TEMPORARILY STABILIZE TOPSOIL STOCKPILES. INSTALL PERIMETER CONTROLS ADJACENT TO THE STOCKPILES.
  - d. CONSTRUCT TEMPORARY ACCESS ROADS. STOCKPILE SUBSOIL WITHIN THE LIMITS OF DISTURBANCE AND STABILIZE. INSTALL PERIMETER CONTROLS ADJACENT TO THE STOCKPILES.
4. BEGIN TREE CLEARING FOR UNDERGROUND TRANSMISSION LINE ROUTE, PERIMETER CONTROL MUST BE IN PLACE PRIOR TO PULLING STUMPS.
  - a. TREE CLEARING WITHIN EXCLUSION FENCING AND WITHIN 50' OF STREAM TOP-OF-BANK MUST BE DONE BY HAND.
5. CLEAR AND GRUB AREAS OUTSIDE OF EXCLUSION FENCING AND RESTRICTED AREAS AS NEEDED FOR THE UNDERGROUND TRANSMISSION LINE ROUTE.
  - a. LIMIT EARTH DISTURBANCE ACTIVITIES TO SECTION OF LINE READY TO BE INSTALLED.
6. COMMENCE EARTH-MOVING ACTIVITIES FOR THE UNDERGROUND LINE INSTALLATION. INSTALL LINE AS SHOWN ON THE PLANS.
  - a. INSTALL UNDERGROUND LINE USING OPEN CUT METHOD UNLESS SPECIFIED OTHERWISE.
  - b. EXCAVATE TRANSMISSION LINE TRENCH, TRENCH SHALL BE EXCAVATED TO A WIDTH OF APPROXIMATELY 2' AND A MINIMUM COVER OF 1'8" SHALL BE PROVIDED ABOVE CONDUIT AT ALL LOCATIONS AS SHOWN ON THE PLANS IN APPENDIX I.
  - c. THE PROPOSED LOD WILL BE USED AS THE WORK AREA FOR TRENCH EXCAVATION, EQUIPMENT MOVEMENT AND STORAGE OF SOIL STOCKPILES AS NEEDED. EQUIPMENT, SOIL STOCKPILES AND OTHER MATERIALS ARE TO REMAIN UPSLOPE OF BMPs DURING CONSTRUCTION ACTIVITIES.
  - d. TEMPORARY E&S CONTROLS FOR STREAM CROSSINGS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS PER ASSOCIATED DETAIL SHEETS.
  - e. TRANSMISSION LINE CONDUIT ENCASED IN THERMALLY APPROVED CONCRETE SHALL BE INSTALLED PER DETAILS.
  - f. THE TRENCH SHALL BE BACKFILLED WITH SUITABLE EXCAVATED MATERIAL.
  - g. EXPOSED AND UNWORKED SOILS SHALL BE TEMPORARILY STABILIZED BY APPLICATION OF EFFECTIVE BMPs THAT PROTECT THE SOIL FROM EROSION FORCES OF RAINDROPS, FLOWING WATER AND WIND. ALL DISTURBED AREAS WHERE CONSTRUCTION IS COMPLETE SHALL IMMEDIATELY HAVE TOPSOIL RESTORED, REPLACED, OR AMENDED, SEEDDED, MULCHED, OR OTHERWISE PERMANENTLY STABILIZED AND PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION AND UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL IMMEDIATELY BE SEEDDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES. FOR DISTURBED AREAS WITH SLOPES OF 3:1 OR GREATER, THE AREA WILL BE VERTICALLY TRACKED AND EROSION CONTROL FABRIC SHALL BE INSTALLED AFTER SEED, MULCH AND SOIL SUPPLEMENTS HAVE BEEN APPLIED. THE TEMPORARY/PERMANENT SEEDING AND MULCH TABLE ON THE DETAIL SHEETS CONSIST OF THE TYPE OF SEED AND APPLICATION RATE THAT SHALL BE APPLIED.
  - h. CONSTRUCTION ACCESS RESTORATION SHALL BE EQUAL OR BETTER THAN THE PRE-CONSTRUCTION CONDITION AND GRADES THAT WERE ALTERED DURING CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL GRADES AND MATCH EXISTING DRAINAGE PATTERNS.
  - i. UTILIZE EROSION CONTROL BLANKETS/NETTED MULCHES ON SLOPES 3H:1V OR STEEPER AND IN AREAS WITHIN 100 FEET OF SURFACE WATER.
7. BEGIN TREE CLEARING ALONG THE AERIAL TRANSMISSION LINE ROUTE AND SUBSTATION, PERIMETER CONTROL MUST BE IN PLACE PRIOR TO PULLING STUMPS.
  - a. TREE CLEARING WITHIN EXCLUSION FENCING AND WITHIN 50' OF STREAM TOP-OF-BANK MUST BE DONE BY HAND.
8. CLEAR AND GRUB AREAS OUTSIDE OF EXCLUSION FENCING AND RESTRICTED AREAS AS NEEDED FOR THE AERIAL TRANSMISSION LINE ROUTE AND SUBSTATION. REMOVE SUBSTATION SITE TOPSOIL AND STOCKPILE WITHIN THE LIMITS OF DISTURBANCE. TEMPORARILY STABILIZE STOCKPILE.
  - a. INSTALL PERIMETER CONTROLS ADJACENT TO THE STOCKPILES.
  - b. LIMIT EARTH DISTURBANCE ACTIVITIES TO SECTION OF LINE READY TO BE INSTALLED.
9. COMMENCE EARTH-MOVING ACTIVITIES FOR THE SUBSTATION PAD INSTALLATION. GRADE TO ELEVATIONS AS SHOWN ON THE PLAN.
10. PAVE CUL-DE-SAC AS SHOWN ON PLANS. INSTALL STONE ON DRIVEWAY AND SUBSTATION PAD AS SHOWN ON PLANS.
11. CONSTRUCT RAIN GARDEN PER PLAN DETAILS.
12. SPREAD TOPSOIL IN AREAS WHERE SUBGRADE ELEVATIONS HAVE BEEN ACHIEVED. SEED AND MULCH ALL AREAS WHICH ARE AT FINAL GRADE.
13. INSTALL PROPOSED POLES FOR AERIAL PORTION OF THE ELECTRIC TRANSMISSION LINE.
  - a. DRILL HOLES AND POUR CONCRETE FOR FOUNDATIONS USING STANDARD INDUSTRY PRACTICES.
  - b. EXCESS MATERIAL SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS
  - c. ERECT POLES AND TRANSMISSION WIRE USING STANDARD INDUSTRY PRACTICES.
  - d. STABILIZE SITE AND RESTORE TO MEADOW CONDITION.
  - e. CONSTRUCTION ACCESS RESTORATION SHALL BE EQUAL OR BETTER THAN THE PRE-CONSTRUCTION CONDITION AND GRADES THAT WERE ALTERED DURING CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL GRADES AND MATCH EXISTING DRAINAGE PATTERNS.
  - f. UTILIZE EROSION CONTROL BLANKETS/NETTED MULCHES ON SLOPES 3H:1V OR STEEPER AND IN AREAS WITHIN 100 FEET OF SURFACE WATER.
14. ONCE DISTURBED AREAS HAVE ACHIEVED PERMANENT STABILIZATION THE TEMPORARY BMPs ARE TO BE REMOVED. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING OR OTHER MOVEMENTS. IMMEDIATELY STABILIZE AREAS DISTURBED WHILE REMOVING TEMPORARY BMPs.

GENERAL CONSTRUCTION NOTES:

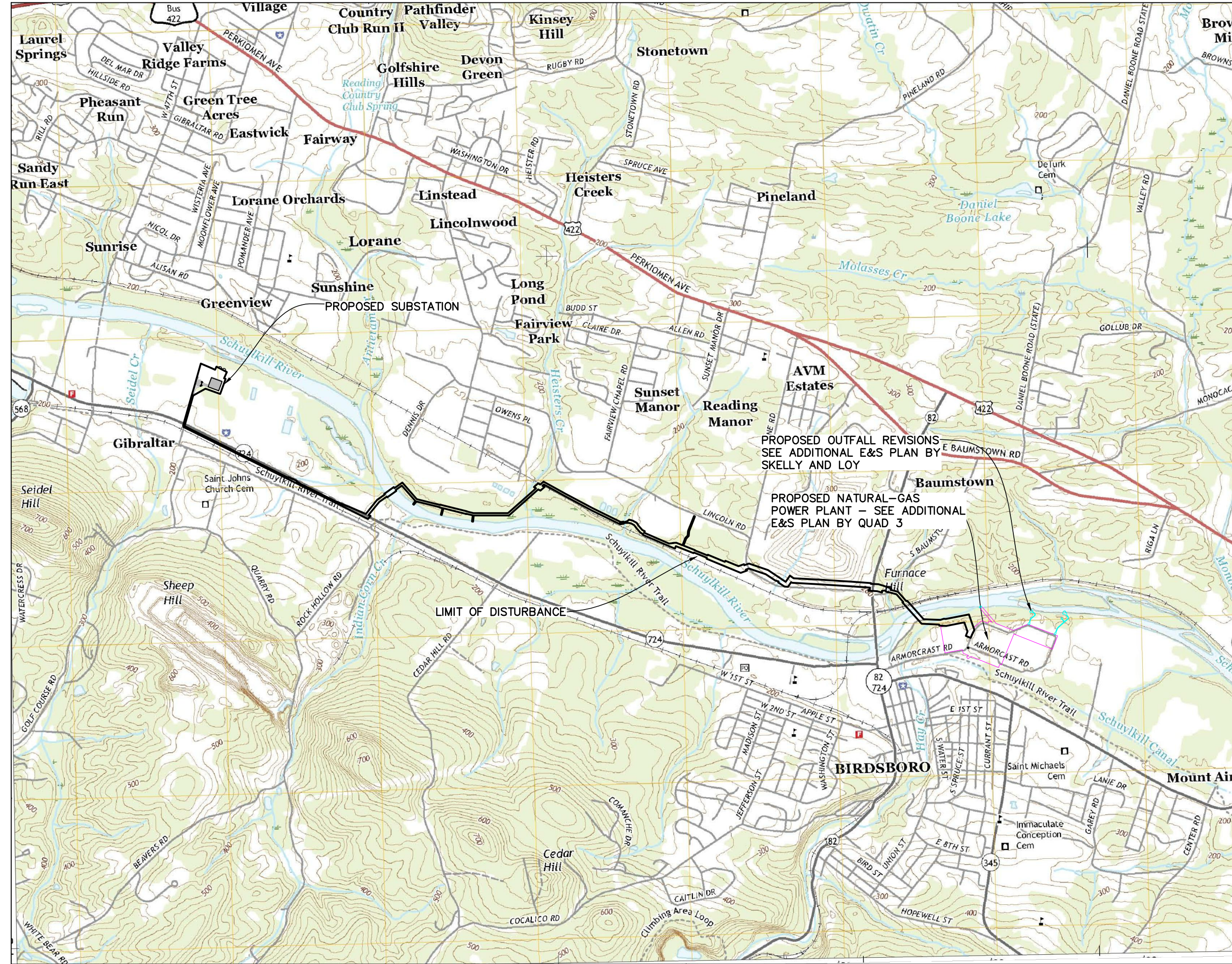
1. THIS PLAN IS FOR EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY.
2. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.
3. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING THE APPLICABLE FEDERAL STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.
4. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
5. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.
6. CONTRACTOR TO UTILIZE LAYDOWN AREA AT 7001 BEN FRANKLIN HIGHWAY, BIRDSBORO PA. NO EARTH DISTURBANCE PROPOSED AT LAYDOWN YARD LOCATION.

SITE CLEANUP & RECYCLE PROGRAM

1. GARBAGE, FUELS, OR ANY SUBSTANCE HARMFUL TO HUMAN, AQUATIC, OR FISH LIFE, SHALL BE PREVENTED FROM ENTERING SPRINGS, STREAMS, PONDS, LAKES, WETLANDS, OR ANY OTHER WATER COURSE OR WATER BODY.
2. OILS, FUELS, LUBRICANTS, AND COOLANTS SHALL BE PLACED IN SUITABLE CONTAINERS AND DISPOSED PROPERLY.
3. ALL TRASH AND GARBAGE SHALL BE COLLECTED AND DISPOSED PROPERLY.
4. ALL SEDIMENT REMOVED FROM SEDIMENT CAPTURING DEVICES SHALL BE REDISTRIBUTED OVER THE GRADED AREA OF THE PROJECT AND SEEDDED AND MULCHED IN ACCORDANCE WITH THE PLAN AND DETAILS.
5. ALL SEDIMENT MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

MAINTENANCE PROGRAM

1. E&S CONTROLS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT DURING THE ACTIVE CONSTRUCTION PHASE OF THE PROJECT.
2. EARTH DISTURBANCE AREAS SHALL BE REPAIRED WHERE SIGNS OF ACCELERATED EROSION ARE DETECTED.
3. SEEDING AND MULCHING SHALL BE REPEATED IN THOSE AREAS THAT APPEAR TO BE FAILING OR HAVE FAILED.
4. ROCK FILTERS SHALL BE INSTALLED WHERE COMPOST FILTER SOCKS ARE OVERTOPPED. EROSION CONTROL BLANKETS SHALL BE APPLIED TO CONSTRUCTED/DISTURBED SLOPES TO REPAIR EROSION.
5. A LOG SHOWING DATES THAT E&S BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION. INSPECTIONS SHALL BE LOGGED ONTO DEP FORM 3150-FM-BWEW0083 DATED 2/2012 AND KEPT ON SITE AT ALL TIMES.

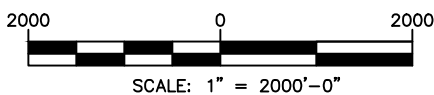


QUADRANGLE MAP NAMES: BIRDSBORO, PA

LINE INFORMATION

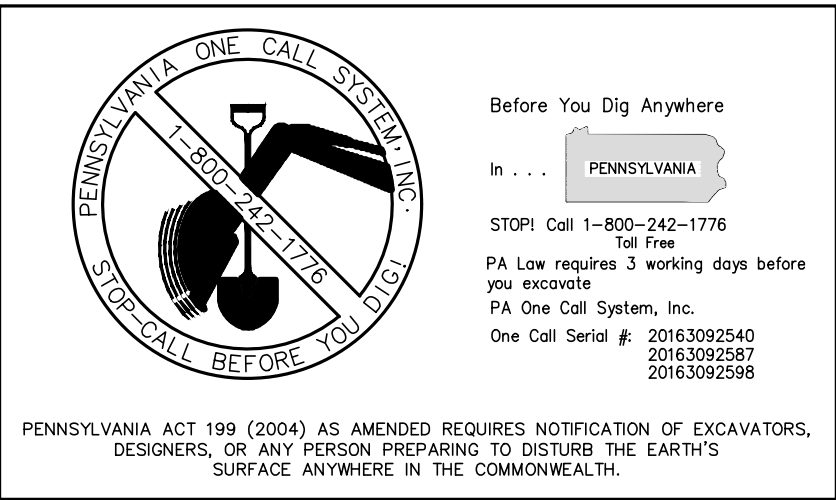
NAME	TOTAL LENGTH	DISTURBED AREA
BIRDSBORO TRANSMISSION LINE	3.9 MILES	39.18 ACRES

LOCATION MAP



PENNSYLVANIA FISH & BOAT COMMISSION REQUIREMENTS:

1. EARTH DISTURBANCE FOR THIS PROJECT THAT OCCURS NORTH OF THE NORFOLK-SOUTHERN RAIL LINE, IN FULL CANOPY FOREST AT THE COMMENCEMENT OF THE PROJECT, OR MORE THAN 1000 FEET FROM THE SCHUYLKILL RIVER OR ITS TRIBUTARY STREAMS SHOULD BE CONSIDERED TO NOT BE POTENTIAL NESTING HABITAT FOR THE EASTERN REDBELLY TURTLE, AND NO FURTHER AVOIDANCE MEASURES IN THESE AREAS FOR THIS SPECIES ARE NECESSARY.
2. EARTH DISTURBANCE AREAS NOT EXEMPT AS DESCRIBED IN #1 SHOULD RECEIVE THE PROPOSED AVOIDANCE MEASURES OUTLINED BELOW:
  - 2.1. PROJECT ACTIVITIES MAY BE CONDUCTED DURING THE INACTIVE PERIOD OF THE REDBELLY TURTLE (OCTOBER 15-APRIL 15) WITHOUT ADDITIONAL AVOIDANCE MEASURES.
  - 2.2. PROJECT ACTIVITIES THAT WILL OCCUR DURING THE ACTIVE PERIOD OF THE REDBELLY TURTLE, (APRIL 16-OCTOBER 14) SHOULD RECEIVE A SILT FENCE BARRIER PLACED AT THE EDGE OF THE PROPOSED AREA OF DISTURBANCE, IN BETWEEN THE BARRIER AND THE WORK AREA, TO PREVENT TURTLES FROM ACCESSING ACTIVE WORK ZONES. THIS FENCE SHOULD BE INSTALLED DURING THE INACTIVE PERIOD OF THE REDBELLY TURTLE (OCTOBER 15-APRIL 15) SO THAT ACTIVE TURTLES OR THEIR NESTS DO NOT GET TRAPPED IN THE WORK ZONE.
  - 2.3. AREAS THAT NEED TO BE FENCED OR DISTURBED DURING THE ACTIVE PERIOD OF THE EASTERN REDBELLY TURTLE SHOULD BE INSPECTED BY A QUALIFIED EASTERN REDBELLY TURTLE BIOLOGIST PRIOR TO EARTH DISTURBANCE AND FENCED UPON COMPLETION OF THE PRE-CONSTRUCTION CLEARANCE.
3. ANY TURTLE FOUND ON SITE SHOULD BE RELOCATED TO THE NEAREST AQUATIC HABITAT. ADDITIONALLY, THE PFBC MUST BE CONTACTED WITHIN 48 HOURS OF THE FIND.



DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508



DOCUMENT PREPARED BY:

NO.	DATE	REVISIONS	DESCRIPTION
1	2.9.2017	REVISE	BCCD COMMENT LETTER 2.7.2017
2	3.30.2017	REVISE	BCCD COMMENT LETTER 3.29.2017
3	4.27.2017	REVISE	BASED ON UPDATED ALIGNMENT
4	7.5.2017	REVISE	FOR NPDES MINOR MODIFICATION
5	2.6.2018	REVISE	FOR CHAPTER 105 COMMENTS

EROSION AND SEDIMENT CONTROL PLAN  
NATURAL GAS COMBINE CYCLE  
BIRDSBORO TRANSMISSION LINE  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY  
PENNSYLVANIA

DRAWING TITLE

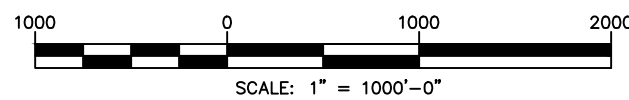
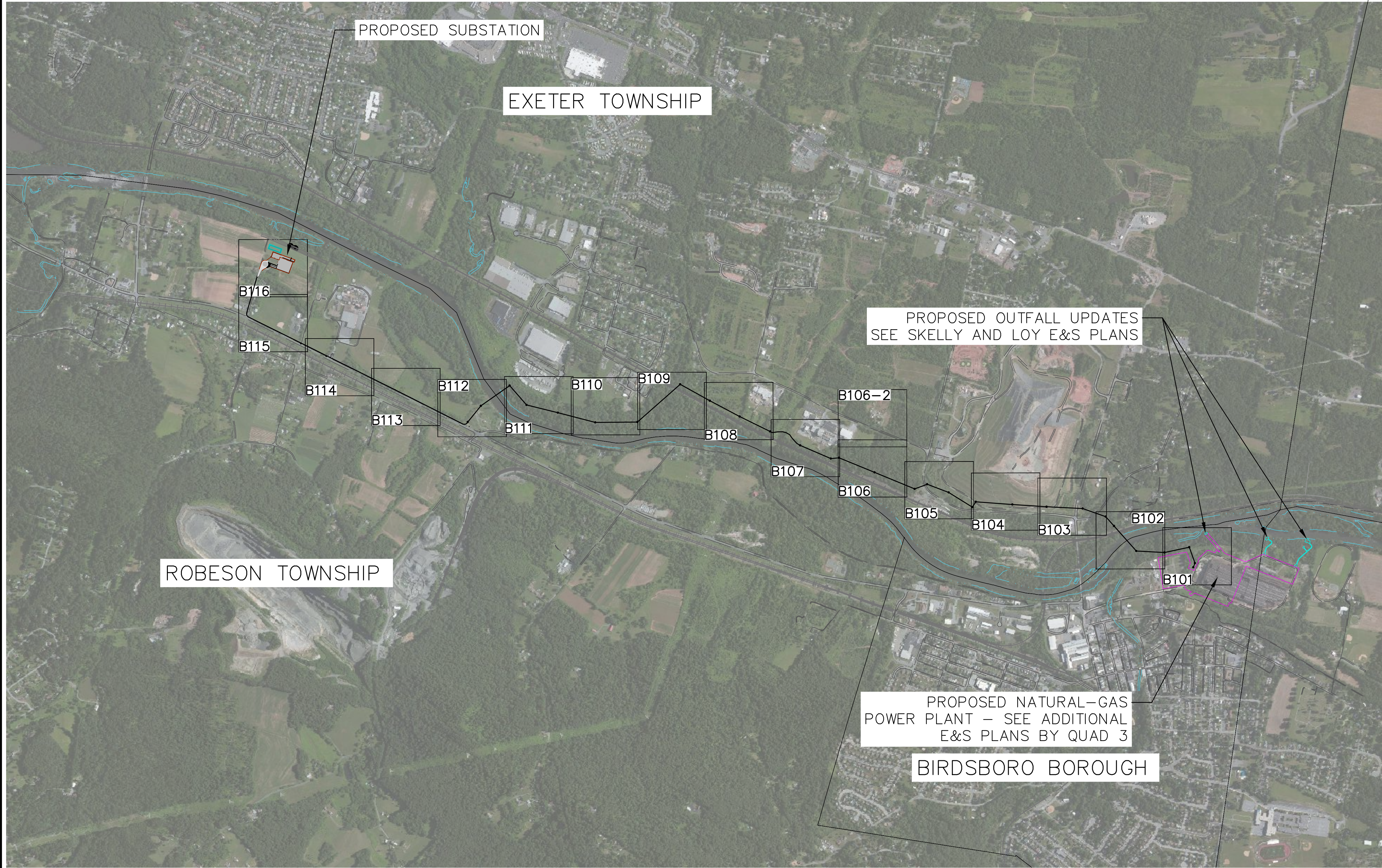
LOCATION MAP  
AND NOTES

DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-T101
SCALE	AS SHOWN
DRAWN BY	JRS
CHECKED BY	JTP
SHEET NO	

A1



O:\2016\005\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01.dwg  
2/26/2018 11:06 AM



ANNOTATION NOTE KEY TABLE	
KEY NUMBER	REASON CONSTRUCTION FENCE CAN'T BE INSTALLED 50' FROM STREAM TOP-OF-BANK
1	INSTALLATION AT 50' FROM SCHUYLKILL RIVER'S NORTHERN TOP-OF-BANK WOULD PLACE FENCING IN A RAILWAY RIGHT-OF-WAY
2	INSTALLATION OF CONSTRUCTION FENCE IS PROPOSED AT THE WESTERN EDGE OF SOUTH BAUMSTOWN ROAD SINCE PRESERVING TREE STUMPS EAST OF THE ROAD WILL NOT PROVIDE ANY BANK STABILIZATION BENEFIT TO THE TRIBUTARY.
3	CONSTRUCTION FENCE IS NOT PROPOSED IN THIS AREA BECAUSE IT WOULD REQUIRE REMOVING IT FOR CONSTRUCTION EQUIPMENT ACCESS DURING INSTALLATION OF THE UNDERGROUND SEGMENT OF THE TRANSMISSION LINE.
4	CONSTRUCTION FENCE IS NOT PROPOSED IN THIS AREA BECAUSE IT WOULD REQUIRE REMOVING IT FOR INSTALLATION OF THE PROPOSED RCE.

STATE PLANE GRID  
PA SOUTH NAD 83

**LEGEND:**

- Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- PROPOSED 12" SILT SOCK
- PROPOSED 18" SILT SOCK
- PROPOSED 24" SILT SOCK
- PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

**NOTES:**

- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
- ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
- UPON STABILIZATION, REMOVE ALL PERIMETER SILT SOCKS AND ALL OTHER EROSION CONTROL MEASURES.
- ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
- PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
- ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
- NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.

DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

DOCUMENT PREPARED BY:

DAWOOD  
2000 GLENVIEW DRIVE  
BIRDSBORO, PA 19308  
PH: 610.432.8893  
F: 717.752.8996

REVISIONS		DESCRIPTION	
NO.	DATE	REVISION	DATE
1	2.9.2017	REVISE BCCD COMMENT LETTER 2.7.2017	2.7.2017
2	4.27.2017	REVISE BASED ON UPDATED ALIGNMENT	
3	7.5.2017	REVISE FOR NPDES MINOR MODIFICATION	
4	2.6.2018	REVISE FOR CHAPTER 105 COMMENTS	

EROSION AND SEDIMENT CONTROL PLAN  
NATURAL GAS COMBINE CYCLE  
BIRDSBORO TRANSMISSION LINE  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY  
PENNSYLVANIA

DRAWING TITLE  
EROSION & SEDIMENT CONTROL PLAN KEY MAP

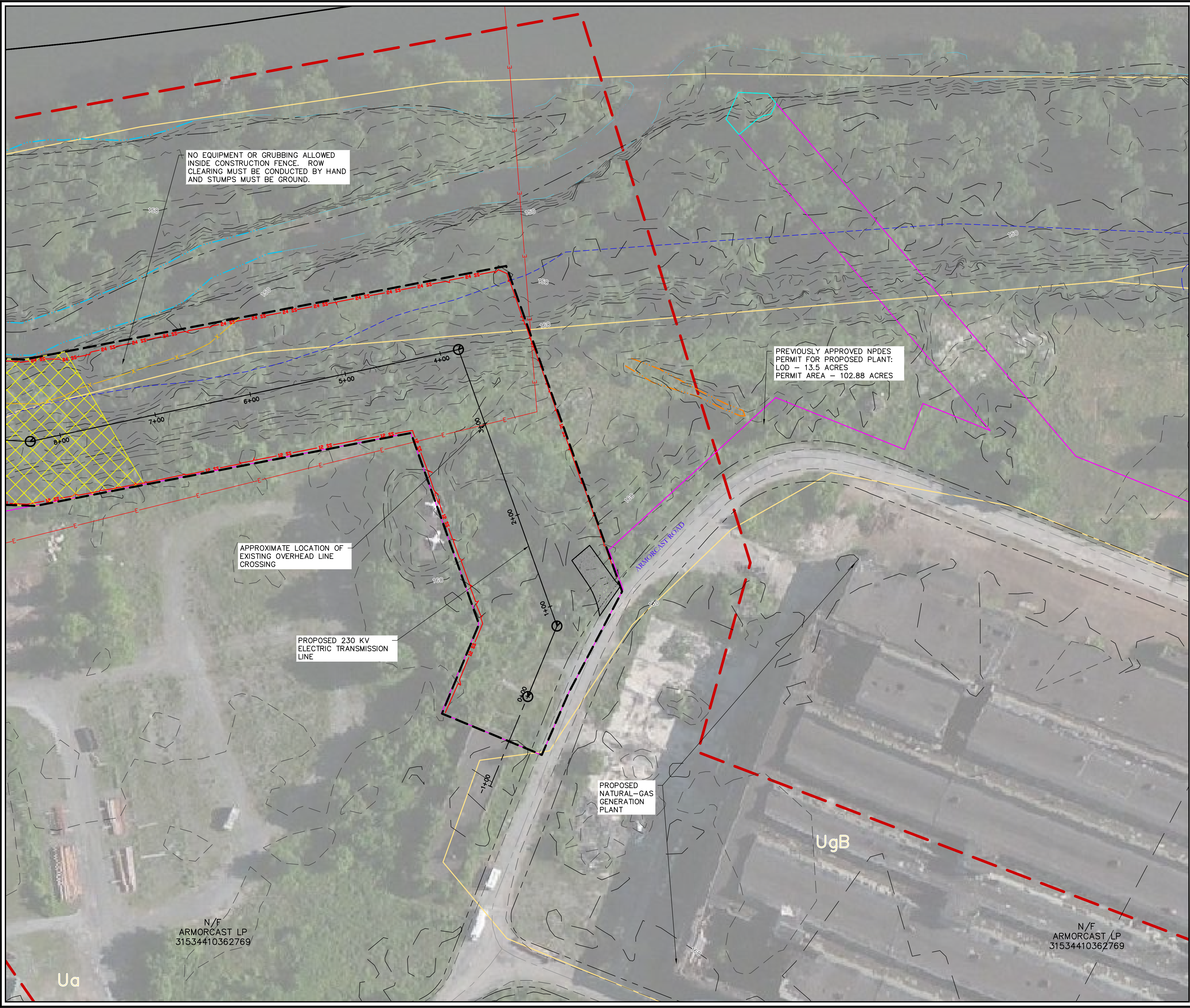
SEAL

DATE JANUARY 12, 2017  
JOB NO. 216040.01  
FILE NAME LDP-FL-ES01  
SCALE AS SHOWN  
DRAWN BY TRS  
CHECKED BY JTP  
SHEET NO

B100



O:\2016\095\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01  
2/26/2018 11:06 AM

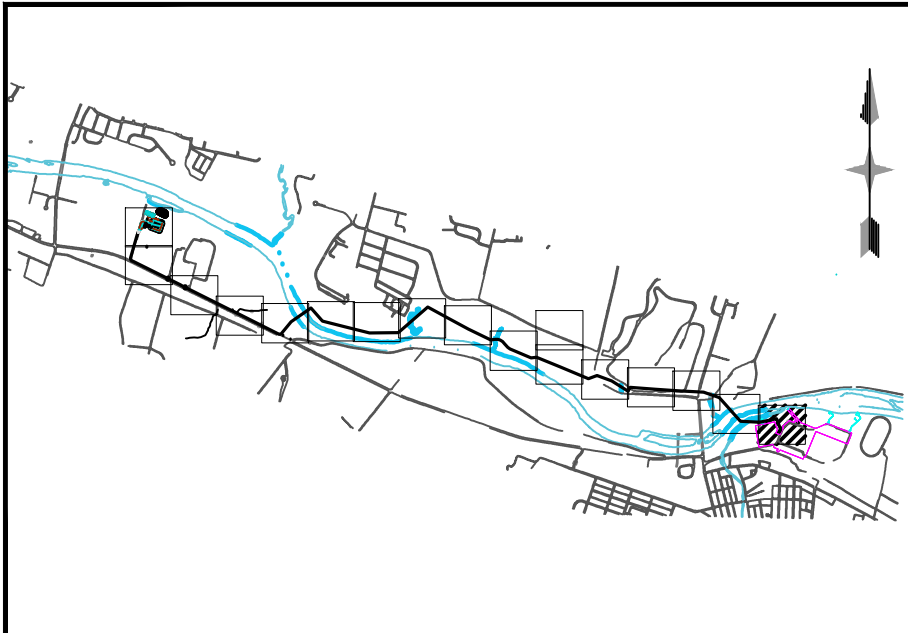


STATE PLANE GRID  
PA SOUTH NAD 83

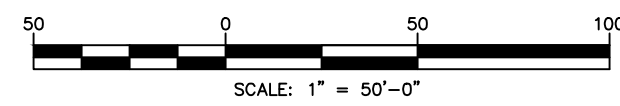
**LEGEND:**

- 1180 Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- 12 SS PROPOSED 12" SILT SOCK
- 18 SS PROPOSED 18" SILT SOCK
- 24 SS PROPOSED 24" SILT SOCK
- 32 SS PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

- NOTES:
- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
  - ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
  - UPON STABILIZATION, REMOVE ALL PERIMETER SILTSOXX AND ALL OTHER EROSION CONTROL MEASURES.
  - ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
  - PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
  - ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
  - NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.



**SHEET KEY PLAN**  
1" = 5,000'



SEAL

DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

**DAWOOD**  
2500 N. 17TH STREET  
PHILADELPHIA, PA 19122-2944  
TEL: 856.432.8893  
F: 717.732.8956

DOCUMENT PREPARED BY:

NO.	DATE	DESCRIPTION
1	2.9.2017	REVISE BCCD COMMENT LETTER 2.7.2017
2	4.27.2017	REVISE BASED ON UPDATED ALIGNMENT
3	7.5.2017	REVISE FOR NPDES MINOR MODIFICATION
4	2.6.2018	REVISE FOR CHAPTER 105 COMMENTS

**EROSION AND SEDIMENT CONTROL PLAN**  
**NATURAL GAS COMBINE CYCLE**  
**BIRDSBORO TRANSMISSION LINE**  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY PENNSYLVANIA

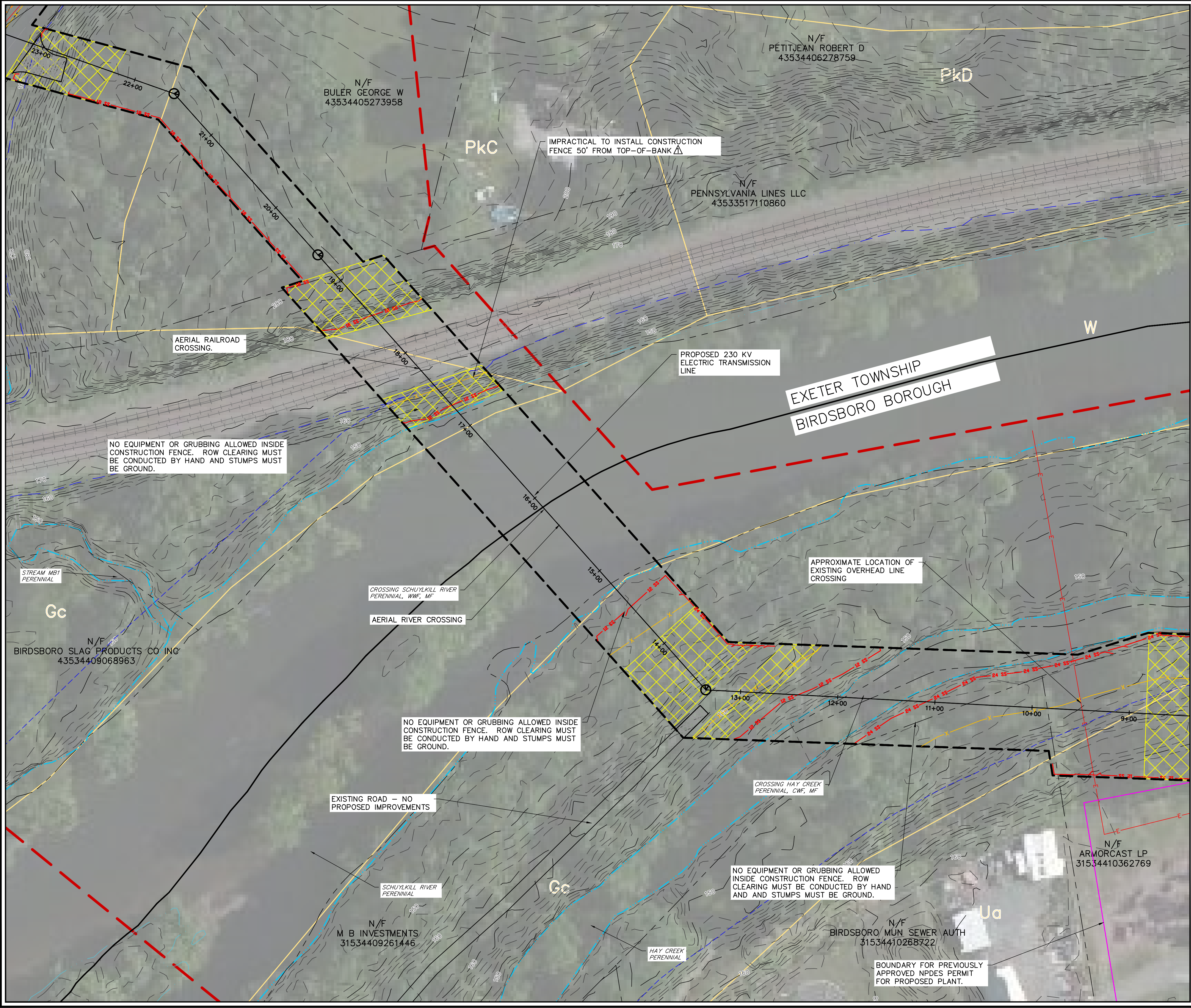
DRAWING TITLE

**EROSION & SEDIMENT CONTROL PLAN**

DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-ES01
SCALE	AS SHOWN
DRAWN BY	TRS
CHECKED BY	JTP
SHEET NO	B101



C:\2016\095\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01.dwg  
2/26/2018 11:05 AM



**LEGEND:**

- 1180 Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- PROPOSED 12" SILT SOCK
- PROPOSED 18" SILT SOCK
- PROPOSED 24" SILT SOCK
- PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

- NOTES:**
- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
  - ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
  - UPON STABILIZATION, REMOVE ALL PERIMETER SILTSOXX AND ALL OTHER EROSION CONTROL MEASURES.
  - ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
  - PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
  - ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
  - NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.



**SHEET KEY PLAN**  
1" = 5,000'

50 0 50 100  
SCALE: 1" = 50'-0"

DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

**DAWOOD**  
2500 GLENVIEW DRIVE  
BIRDSBORO, PA 19508  
PH: 610.452.8893  
F: 717.752.8896

DOCUMENT PREPARED BY:

NO.	DATE	DESCRIPTION
1	2.9.2017	REVISE BCCD COMMENT LETTER 2.7.2017
2	4.27.2017	REVISE BASED ON UPDATED ALIGNMENT
3	7.5.2017	REVISE FOR NPDES MINOR MODIFICATION
4	12.4.2017	REVISE FOR NPDES MINOR MODIFICATION
5	2.6.2018	REVISE FOR CHAPTER 105 COMMENTS

**EROSION AND SEDIMENT CONTROL PLAN  
NATURAL GAS COMBINE CYCLE  
BIRDSBORO TRANSMISSION LINE  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY PENNSYLVANIA**

DRAWING TITLE

**EROSION & SEDIMENT CONTROL PLAN**

DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-ES01
SCALE	AS SHOWN
DRAWN BY	TRS
CHECKED BY	JTP
SHEET NO	B102



O:\2016\095\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01  
2/20/2018 12:13 PM

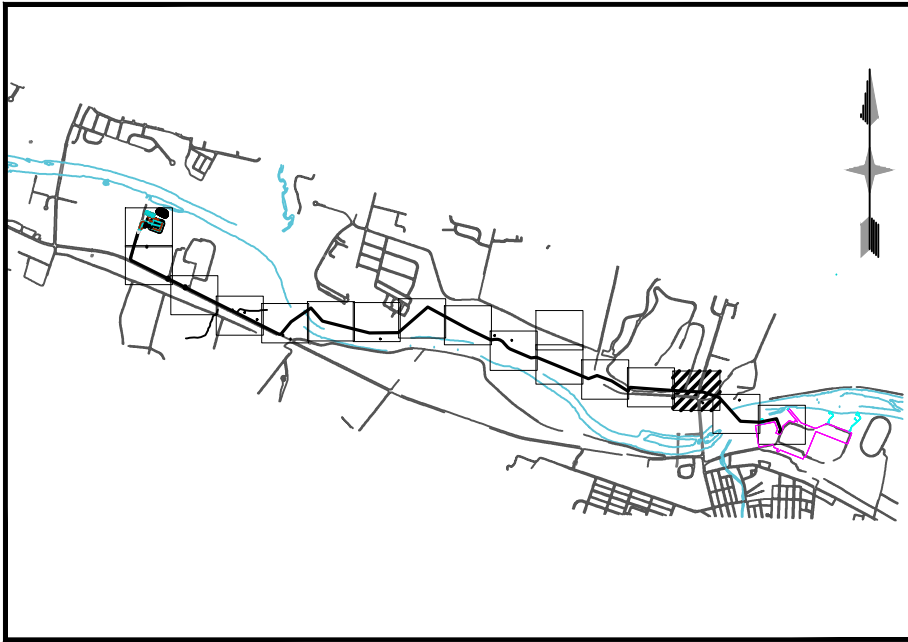


STATE PLANE GRID  
PA SOUTH NAD 83

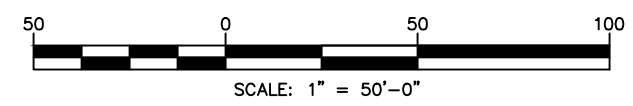
**LEGEND:**

- 1180 Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- PROPOSED 12" SILT SOCK
- PROPOSED 18" SILT SOCK
- PROPOSED 24" SILT SOCK
- PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

- NOTES:
- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
  - ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
  - UPON STABILIZATION, REMOVE ALL PERIMETER SILTSOXX AND ALL OTHER EROSION CONTROL MEASURES.
  - ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
  - PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
  - ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
  - NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.



**SHEET KEY PLAN**  
1" = 5,000'



DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

**DAWOOD**  
2500 LEXINGTON AVENUE  
SUITE 100  
PHILADELPHIA, PA 19104  
TEL: 215.582.8883  
F: 215.582.8896

DOCUMENT PREPARED BY:

NO.	DATE	DESCRIPTION
1	2.9.2017	REVISE BCCD COMMENT LETTER 2.7.2017
2	4.27.2017	REVISE BASED ON UPDATED ALIGNMENT
3	7.5.2017	REVISE FOR NPDES MINOR MODIFICATION
4	12.4.2017	REVISE FOR NPDES MINOR MODIFICATION
5	2.6.2018	REVISE FOR CHAPTER 105 COMMENTS

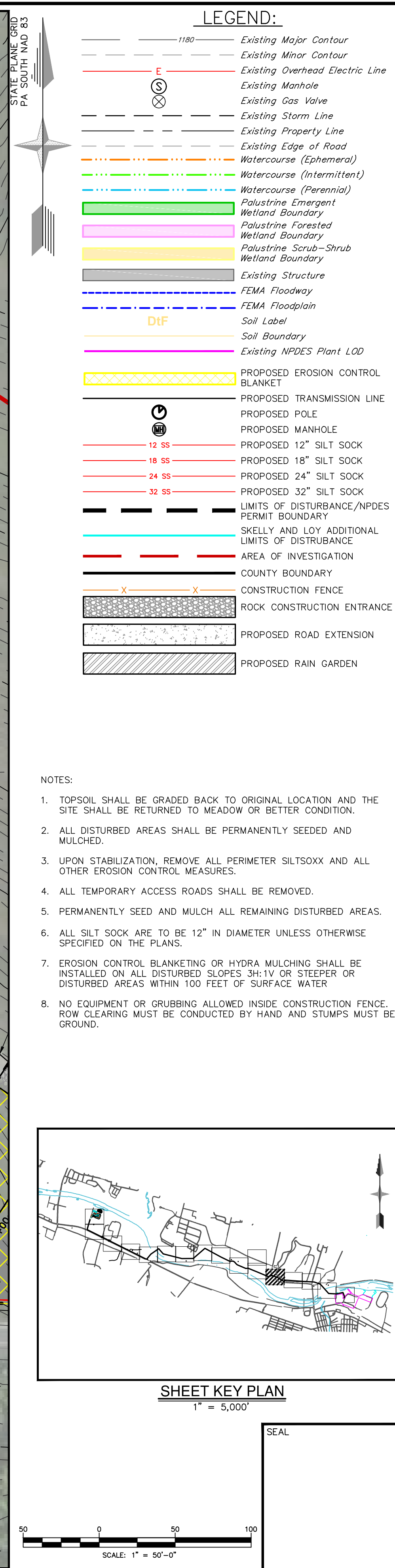
**EROSION AND SEDIMENT CONTROL PLAN**  
**NATURAL GAS COMBINE CYCLE**  
**BIRDSBORO TRANSMISSION LINE**  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY  
PENNSYLVANIA

DRAWING TITLE

**EROSION & SEDIMENT CONTROL PLAN**

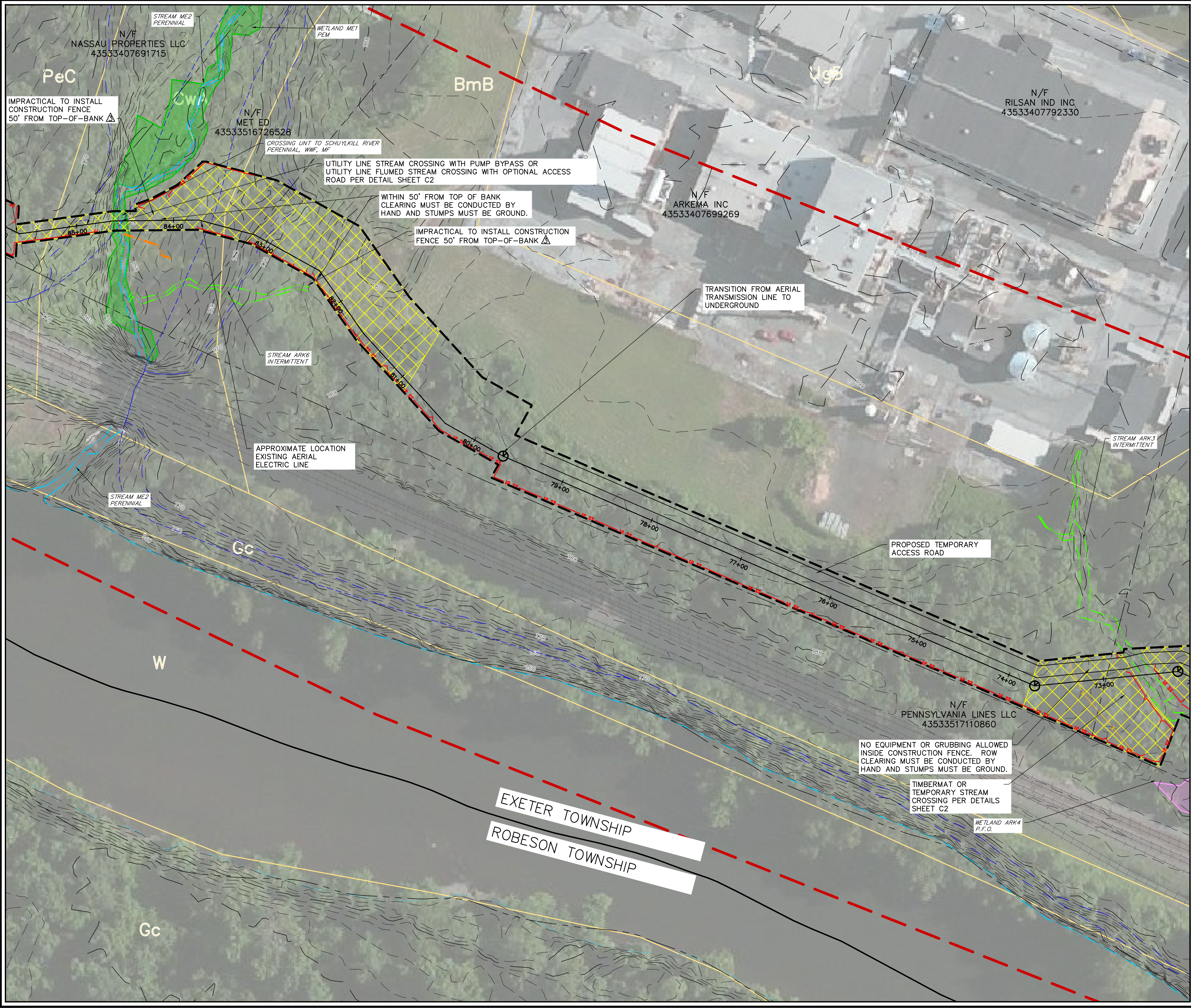
DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-ES01
SCALE	AS SHOWN
DRAWN BY	TRS
CHECKED BY	JTP
SHEET NO	B103





EROSION AND SEDIMENT CONTROL PLAN NATURAL GAS COMBINE CYCLE BIRDSBORO TRANSMISSION LINE TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO BERKS COUNTY  PENNSYLVANIA					
DRAWING TITLE					
EROSION & SEDIMENT CONTROL PLAN					
DATE	JANUARY 12, 2017				
JOB NO.	216040.01				
FILE NAME	LDP-FL-ES01				
SCALE	AS SHOWN				
DRAWN BY	TRS				
CHECKED BY	JTP				
SHEET NO	B105				

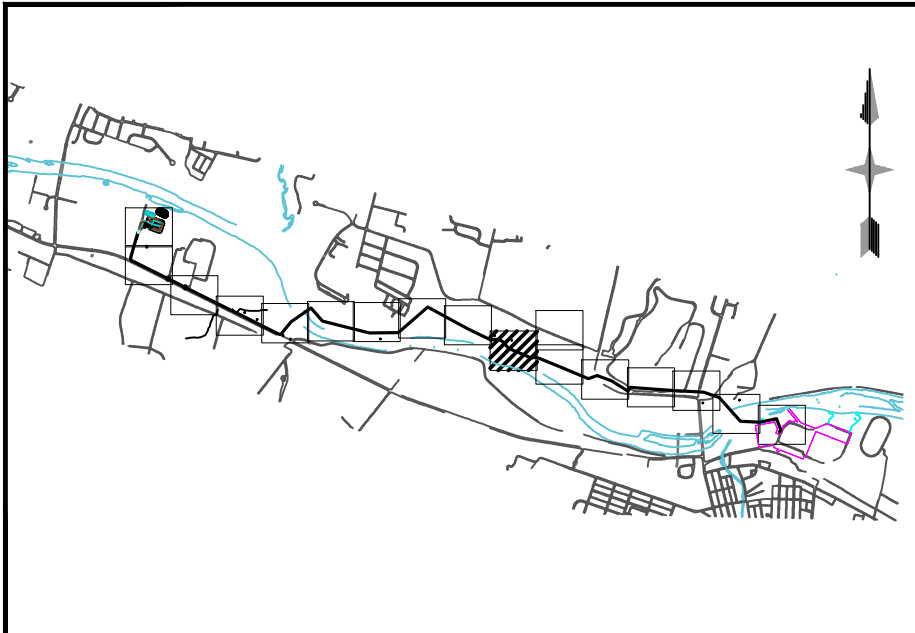




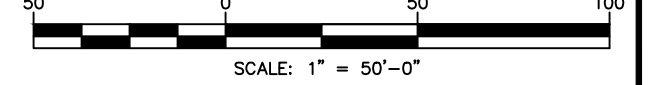
**LEGEND:**

- 1180 Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- PROPOSED 12" SILT SOCK
- PROPOSED 18" SILT SOCK
- PROPOSED 24" SILT SOCK
- PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

- NOTES:**
- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
  - ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
  - UPON STABILIZATION, REMOVE ALL PERIMETER SILTSOXX AND ALL OTHER EROSION CONTROL MEASURES.
  - ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
  - PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
  - ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
  - NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.



**SHEET KEY PLAN**  
1" = 5,000'



DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

**DAWOOD**  
2500 N. 17TH STREET  
PHILADELPHIA, PA 19104  
TEL: 856.452.8893  
F: 717.752.8996

REVISIONS	
NO.	DESCRIPTION
1	REVISE BCCD COMMENT LETTER 2.7.2017
2	REVISE BASED ON UPDATED ALIGNMENT
3	REVISE FOR NPDES MINOR MODIFICATION
4	REVISE FOR CHAPTER 105 COMMENTS

**EROSION AND SEDIMENT CONTROL PLAN**  
**NATURAL GAS COMBINE CYCLE**  
**BIRDSBORO TRANSMISSION LINE**  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY PENNSYLVANIA

DRAWING TITLE

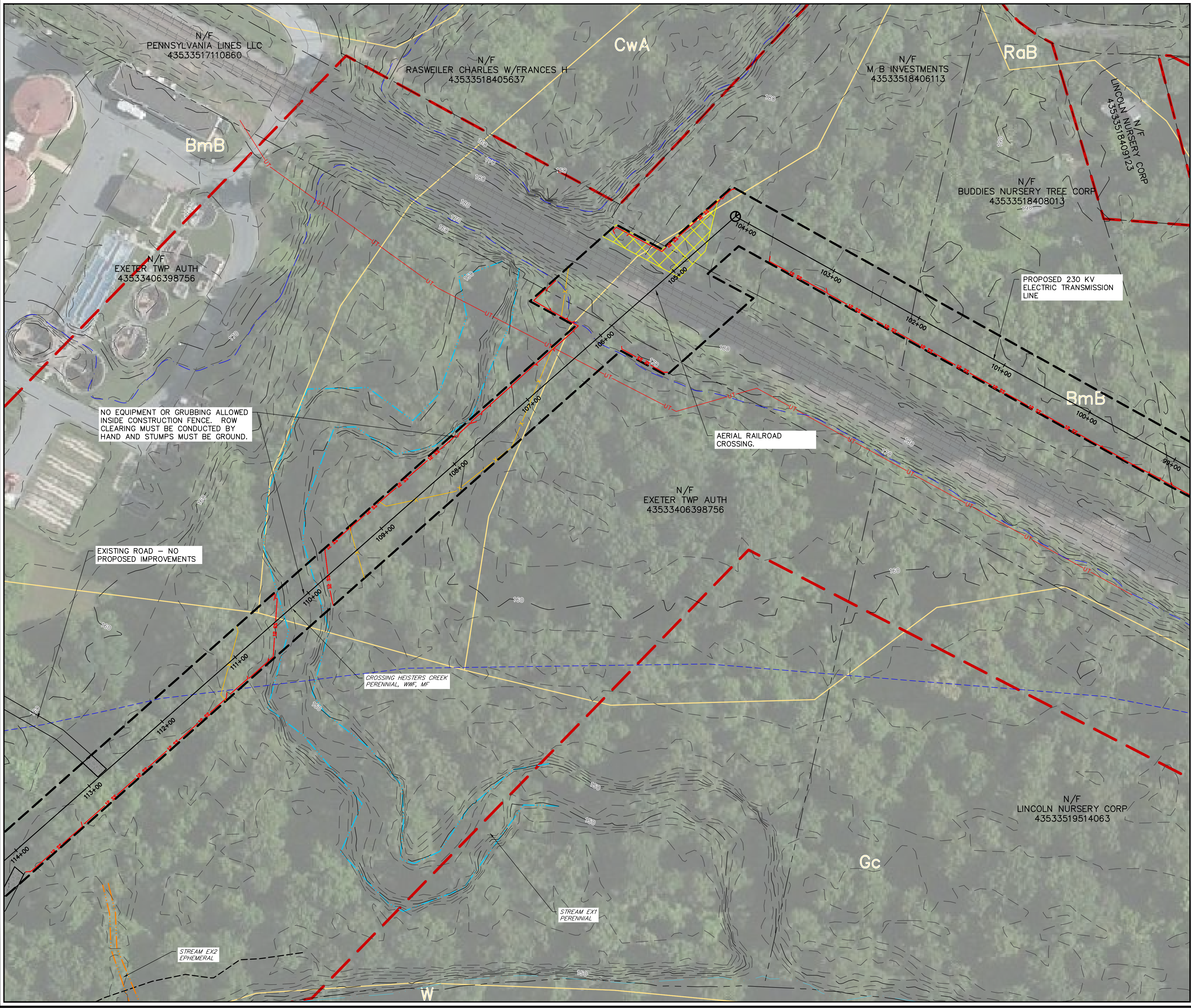
**EROSION & SEDIMENT CONTROL PLAN**

DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-ES01
SCALE	AS SHOWN
DRAWN BY	TRS
CHECKED BY	JTP
SHEET NO	

**B107**



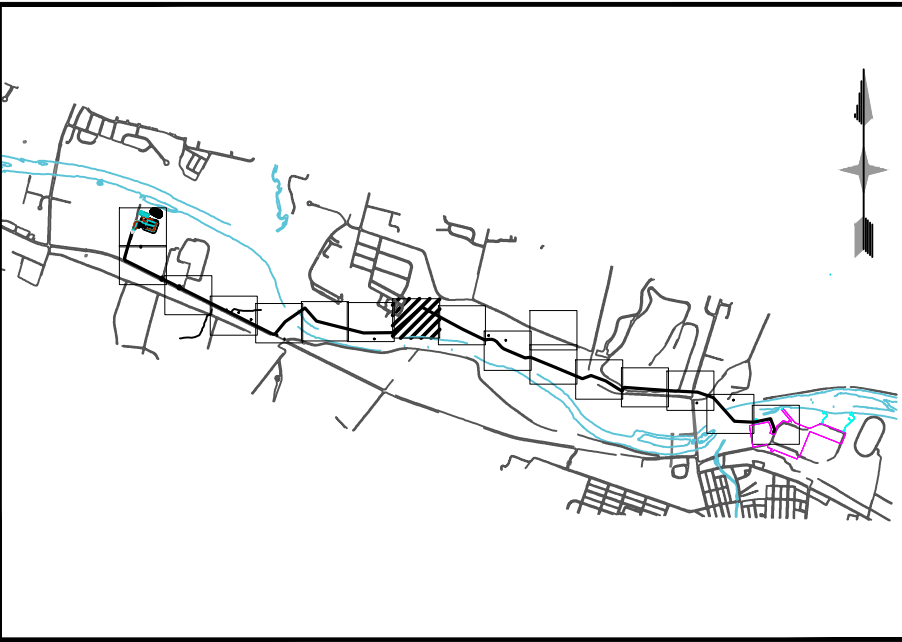
O:\2016\095\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01.dwg 11/09/2018 11:09 AM



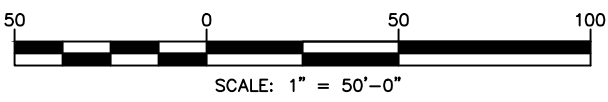
**LEGEND:**

- 1180 Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- PROPOSED 12" SILT SOCK
- PROPOSED 18" SILT SOCK
- PROPOSED 24" SILT SOCK
- PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

- NOTES:
- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
  - ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
  - UPON STABILIZATION, REMOVE ALL PERIMETER SILT SOCKS AND ALL OTHER EROSION CONTROL MEASURES.
  - ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
  - PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
  - ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
  - NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.



**SHEET KEY PLAN**  
1" = 5,000'



DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

DOCUMENT PREPARED BY:

**DAWOOD**  
2500 EAVENING DRIVE  
BIRDSBORO, PA 19008  
PH: 610.452.8888  
F: 610.452.8896

REVISIONS	
NO.	DESCRIPTION
1	REVISE BCCD COMMENT LETTER 2.7.2017
2	REVISE BASED ON UPDATED ALIGNMENT
3	REVISE FOR NPDES MINOR MODIFICATION
4	REVISE FOR CHAPTER 105 COMMENTS

**EROSION AND SEDIMENT CONTROL PLAN**  
**NATURAL GAS COMBINE CYCLE**  
**BIRDSBORO TRANSMISSION LINE**  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY PENNSYLVANIA

DRAWING TITLE

**EROSION & SEDIMENT CONTROL PLAN**

DATE JANUARY 12, 2017  
JOB NO. 216040.01  
FILE NAME LDP-FL-ES01  
SCALE AS SHOWN  
DRAWN BY TRS  
CHECKED BY JTP  
SHEET NO

**B109**



O:\2016\095\216040-01\LD FINAL ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01  
2/20/2018 11:09 AM



**LEGEND:**

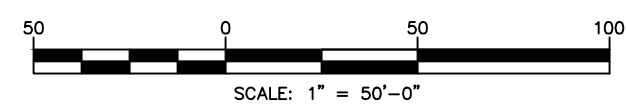
- 1180 Existing Major Contour
- Existing Minor Contour
- Existing Overhead Electric Line
- Existing Manhole
- Existing Gas Valve
- Existing Storm Line
- Existing Property Line
- Existing Edge of Road
- Watercourse (Ephemeral)
- Watercourse (Intermittent)
- Watercourse (Perennial)
- Palustrine Emergent Wetland Boundary
- Palustrine Forested Wetland Boundary
- Palustrine Scrub-Shrub Wetland Boundary
- Existing Structure
- FEMA Floodway
- FEMA Floodplain
- Soil Label
- Soil Boundary
- Existing NPDES Plant LOD
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED TRANSMISSION LINE
- PROPOSED POLE
- PROPOSED MANHOLE
- PROPOSED 12" SILT SOCK
- PROPOSED 18" SILT SOCK
- PROPOSED 24" SILT SOCK
- PROPOSED 32" SILT SOCK
- LIMITS OF DISTURBANCE/NPDES PERMIT BOUNDARY
- SKELLY AND LOY ADDITIONAL LIMITS OF DISTURBANCE
- AREA OF INVESTIGATION
- COUNTY BOUNDARY
- CONSTRUCTION FENCE
- ROCK CONSTRUCTION ENTRANCE
- PROPOSED ROAD EXTENSION
- PROPOSED RAIN GARDEN

- NOTES:**
- TOPSOIL SHALL BE GRADED BACK TO ORIGINAL LOCATION AND THE SITE SHALL BE RETURNED TO MEADOW OR BETTER CONDITION.
  - ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED.
  - UPON STABILIZATION, REMOVE ALL PERIMETER SILT SOCKS AND ALL OTHER EROSION CONTROL MEASURES.
  - ALL TEMPORARY ACCESS ROADS SHALL BE REMOVED.
  - PERMANENTLY SEED AND MULCH ALL REMAINING DISTURBED AREAS.
  - ALL SILT SOCK ARE TO BE 12" IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  - EROSION CONTROL BLANKETING OR HYDRA MULCHING SHALL BE INSTALLED ON ALL DISTURBED SLOPES 3H:1V OR STEEPER OR DISTURBED AREAS WITHIN 100 FEET OF SURFACE WATER.
  - NO EQUIPMENT OR GRUBBING ALLOWED INSIDE CONSTRUCTION FENCE. ROW CLEARING MUST BE CONDUCTED BY HAND AND STUMPS MUST BE GROUND.



**SHEET KEY PLAN**

1" = 5,000'



DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

DOCUMENT PREPARED BY:

**DAWOOD**  
2500 LEXINGTON AVENUE  
SUITE 100  
PHILADELPHIA, PA 19104  
TEL: 856.432.8893  
F: 77.752.8996

REVISIONS	
NO.	DESCRIPTION
1	REVISE BCCD COMMENT LETTER 2.7.2017
2	REVISE BASED ON UPDATED ALIGNMENT
3	REVISE FOR NPDES MINOR MODIFICATION
4	REVISE FOR CHAPTER 105 COMMENTS

**EROSION AND SEDIMENT CONTROL PLAN**  
**NATURAL GAS COMBINE CYCLE**  
**BIRDSBORO TRANSMISSION LINE**  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY PENNSYLVANIA

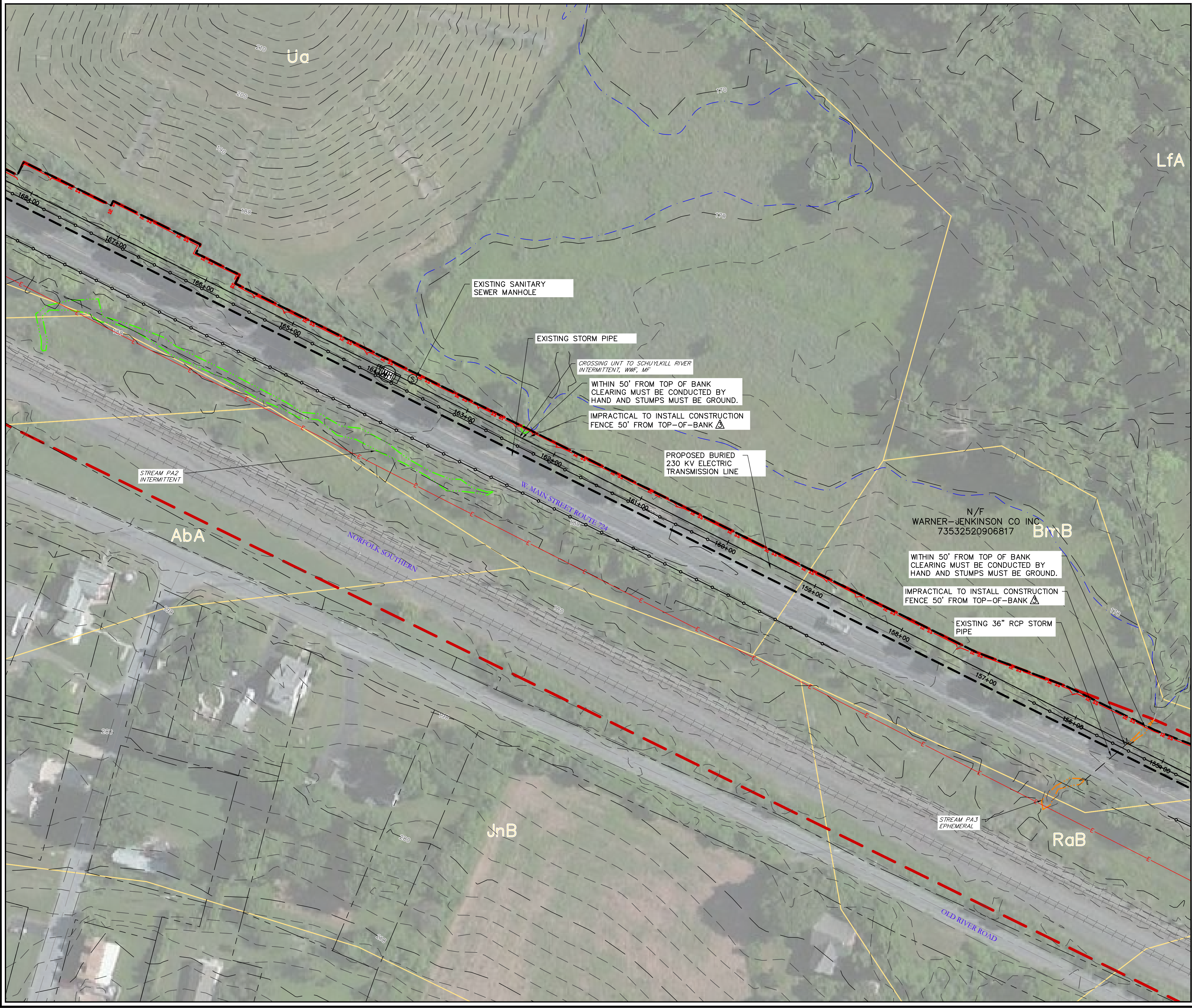
DRAWING TITLE

**EROSION & SEDIMENT CONTROL PLAN**

DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-ES01
SCALE	AS SHOWN
DRAWN BY	TRS
CHECKED BY	JTP
SHEET NO	B110



O:\2016\095\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-ES01.dwg 1/11/2018 11:10 AM



DAWOOD

DOCUMENT PREPARED FOR:

DOCUMENT PREPARED BY:

NO.	DATE	DESCRIPTION
1	2.9.2017	REVISE BCCD COMMENT LETTER 2.7.2017
2	4.27.2017	REVISE BASED ON UPDATED ALIGNMENT
3	7.5.2017	REVISE FOR NPDES MINOR MODIFICATION
4	2.6.2018	REVISE FOR CHAPTER 05 COMMENTS

EROSION AND SEDIMENT CONTROL PLAN  
NATURAL GAS COMBINE CYCLE  
BIRDSBORO TRANSMISSION LINE  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY  
PENNSYLVANIA

DRAWING TITLE

EROSION & SEDIMENT CONTROL PLAN

DATE JANUARY 12, 2017  
JOB NO. 216040.01  
FILE NAME LDP-FL-ES01  
SCALE AS SHOWN  
DRAWN BY TRS  
CHECKED BY JTP  
SHEET NO

B113

SEAL

SHEET KEY PLAN  
1" = 5,000'

SCALE: 1" = 50'-0"



O:\2016\095\216040-01\LD\FINAL\ALIGNMENT DRAWINGS\REVISED REDUCED LOD\21604001-LDP-FL-DT01.dwg  
2/26/2018 11:15 AM

SOILS NARRATIVE:

SOILS BY THEIR VERY NATURE TEND TO VARY FROM AREA TO AREA AND THEREFORE ARE PROJECT SPECIFIC. THE DESKTOP STUDY PREFORMED AS PART OF THIS REPORT AND SUMMARIZED BELOW IS ONLY IDENTIFIED TO PROVIDE THE CONTRACTOR WITH BASIC BACKGROUND INFORMATION ABOUT THE SOILS THAT MIGHT BE ENCOUNTERED. EACH AND EVERY SOIL CONDITION MUST BE EVALUATED AND OBSERVED IN THE FIELD FOR LIMITATIONS. SOILS LISTED BELOW ARE SHOWN TO BE PRESENT WITHIN THE LIMIT OF DISTURBANCE. EXTRA PRECAUTIONS SHALL BE TAKEN WHEN A SOIL IS INDICATED TO HAVE A LIMITATION.

THE FOLLOWING SOILS ARE PRESENT WITHIN THE LIMIT OF DISTURBANCE:

- AbA- ABBOTTSTOWN SILT LOAM, 0 TO 3 PERCENT SLOPES.
- BmB- BIRDSBORO SILT LOAM, 3 TO 8 PERCENT SLOPES.
- CwA- CROTON SILT LOAM, 0 TO 3 PERCENT SLOPES
- Gc- GIBALTAR SILT LOAM
- LfA- LAMINGTON SILT LOAM, 0 TO 3 PERCENT SLOPES
- PeB- PENN CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES
- PeC- PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
- PkC- PENN-KLINESVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
- RkD- PENN-KLINESVILLE CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES
- RaB- RARITAN SILT LOAM, 3 TO 8 PERCENT SLOPES
- Ua- UDORTHENTS

SOIL LIMITATIONS:

- CUTBANKS CAVE
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON, PENN CHANNERY, PENN-KLINESVILLE, RARITAN, & UDORTHENTS SOILS
- CORROSIVE TO CONCRETE
  - PENN CHANNERY & PENN-KLINESVILLE SOILS
- CORROSIVE TO CONCRETE AND STEEL
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON, RARITAN, & UDORTHENTS SOILS
- DROUGHTY
  - PENN CHANNERY, PENN-KLINESVILLE & UDORTHENTS SOILS
- EASILY ERODIBLE
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON & UDORTHENTS SOILS
- HIGH WATER TABLE
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON & RARITAN SOILS
- POTENTIALLY HYDRIC
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON, PENN CHANNERY, PENN-KLINESVILLE & RARITAN SOILS
- LOW STRENGTH
  - ABBOTTSTOWN, CROTON, GIBALTAR, PENN CHANNERY, PENN-KLINESVILLE & UDORTHENTS SOILS
- SLOW PERCOLATION
  - ABBOTTSTOWN, CROTON, GIBALTAR, LAMINTON, RARITAN, & UDORTHENTS SOILS
- PIPING
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON, PENN CHANNERY, PENN-KLINESVILLE & RARITAN SOILS
- POOR TOPSOIL
  - ABBOTTSTOWN, BIRDSBORO, CROTON, LAMINTON, PENN CHANNERY, PENN-KLINESVILLE, RARITAN, & UDORTHENTS SOILS
- FROST ACTION
  - ABBOTTSTOWN, BIRDSBORO, CROTON, GIBALTAR, LAMINTON, PENN CHANNERY, PENN-KLINESVILLE, RARITAN, & UDORTHENTS SOILS
- PONDING
  - CROTON & LAMINTON SOILS
- WETNESS
  - ABBOTTSTOWN, BIRDSBORO, CROTON, LAMINTON & RARITAN SOILS

SOIL RESOLUTIONS:

- CUTBANKS CAVE
  - CUT SLOPES SHOULD BE NO GREATER THAN 2:1 AND FILL SLOPES SHOULD BE 3:1 IN THESE SOIL AREAS OR OTHERWISE STABILIZED WITH SLOPE LINING.
- CORROSIVE TO CONCRETE
  - USE HDPE PIPE IN THESE SOIL AREAS.
- CORROSIVE TO CONCRETE AND STEEL
  - USE HDPE PIPE IN THESE SOIL AREAS.
- DROUGHTY
  - VEGETATIVE SPECIES TOLERANT OF DRY CONDITIONS SHALL BE USED. WATERING OF SEED MAY BE REQUIRED.
- EASILY ERODIBLE
  - ALL AREAS OF CONCENTRATED FLOW ARE TO BE LINED AND IMMEDIATELY STABILIZED WITH MULCH OR EROSION CONTROL BLANKETS.
- HIGH WATER TABLE
  - INSTALL PIPING TO DISCHARGE ANY WATER ENCOUNTERED TO BEYOND THE TOE OF SLOPE IN THESE SOIL AREAS.
- POTENTIALLY HYDRIC
  - ALL WETLANDS HAVE BEEN LOCATED WITHIN THE PROJECT LIMITS OF THE WELL SITE. SEE WETLAND MAPPING FOR WETLAND LOCATIONS.
- LOW STRENGTH
  - THE USE OF GEO-TEXTILES OR SOIL ADDITIVES SHOULD BE UTILIZED IN THESE SOIL AREAS TO IMPROVE SOIL STRENGTH IN THESE SOIL AREAS
- PIPING
  - SUITABLE CONSTRUCTION MATERIAL WILL BE USED FOR THE BERMS, SUCH AS CLAY CORES, TO FIGHT THIS LIMITATION IN THESE SOIL AREAS
- POOR TOPSOIL
  - IMPORTING OF OFFSITE TOPSOIL OR THE USE OF SOIL ADDITIVES ARE NEEDED TO IMPROVE SOIL QUALITY IN THESE SOIL AREAS
- FROST ACTION
  - TRENCH ARE TO BE BACKFILLED WITH SUITABLE FILL AND TO BE PLACED AT A SUITABLE DEPTH. STRUCTURES SHALL BE DESIGNED TO ACCOUNT FOR FROST ACTION. BASIN EMBANKMENTS TO USE MODIFIED OR IMPORTED SOIL AS NEEDED TO MEET SPECIFICATIONS
- PONDING
  - INSTALL PIPING TO DISCHARGE ANY WATER ENCOUNTERED TO BEYOND THE TOE OF SLOPE IN THESE SOIL AREAS.
- WETNESS
  - IMPORTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS SHALL BE USED. PROPER DRAINAGE SYSTEMS MAY BE REQUIRED.

OPERATION AND MAINTENANCE SCHEDULE:

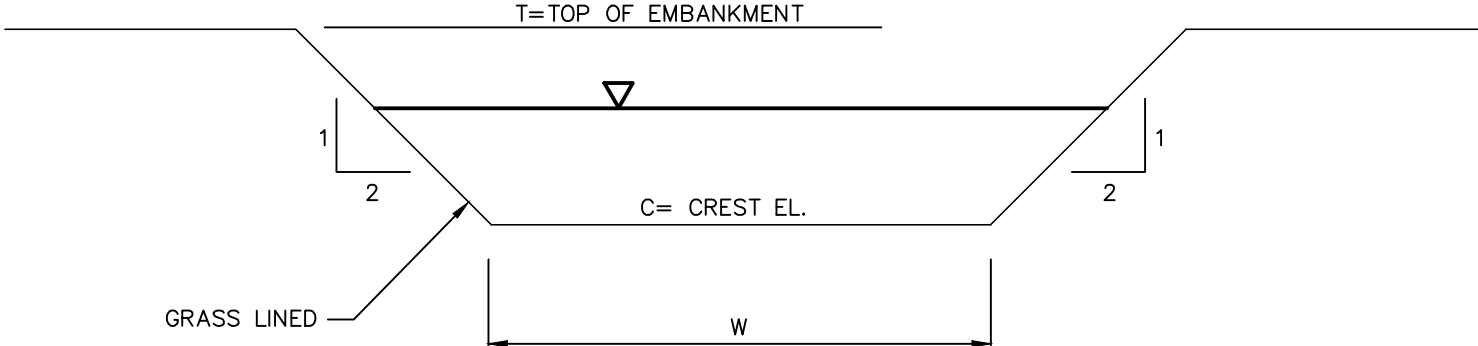
- THE OPERATOR SHALL MAINTAIN AND BE RESPONSIBLE FOR ALL STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES (I.E. RAIN GARDENS, SWALES AND LEVEL SPREADERS) THAT ARE PROPOSED ON THE PLANS.
- THE OPERATOR SHALL CONDUCT A VISUAL INSPECTION OF ALL STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES AT LEAST ONCE EVERY THREE MONTHS AND IMMEDIATELY AFTER STORM EVENTS. SUCH VISUAL EXAMINATION SHALL AT LEAST INVOLVE AN EXAMINATION OF THE STORMWATER COLLECTION, CONVEYANCE AND BMP FACILITIES FOR DEBRIS DEPOSITION (SUCH DEBRIS MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, AGGREGATE MATERIAL, LEAVES, GRASS CLIPPINGS, SOIL AND TRASH), AND AN EXAMINATION OF THE STORMWATER BMP FACILITIES FOR SOIL AND STRUCTURAL SETTLEMENT, DEPRESSIONS, SINKHOLES, SEEPS, STRUCTURAL CRACKING, ANIMAL BURROWS, EXCESSIVE VEGETATION, CLOGGING, EROSION AND FOUNDATION MOVEMENT.
- THE OPERATOR SHALL REMOVE ANY ACCUMULATION OF DEBRIS AND REPAIR ANY DAMAGE TO THE STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES. REPAIRS SHALL BE MADE USING MATERIAL THAT MEETS OR EXCEEDS THE SPECIFICATIONS PROVIDED ON THE PLANS.
- THE OPERATOR IS REQUIRED TO MAINTAIN A RECORD OF ALL INSPECTIONS, REPAIRS AND MAINTENANCE ACTIVITIES ASSOCIATED WITH THE STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES AT THIS PROJECT SITE.
- RAIN GARDEN SHOULD DEWATER WITHIN 72 HOURS AFTER A RAIN EVENT. CLOGGED AREAS OF INFILTRATION SHALL BE EXCAVATED AND REPLACED. EXCAVATED MATERIAL SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.

RAIN GARDENS:

- MULCH AND INSTALL EROSION PROTECTION AT SURFACE FLOW ENTRANCES WHERE NECESSARY.
- WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED.
- DETritUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING SEASON.
- MULCH SHOULD BE RE-SPREAD WHEN EROSION IS EVIDENT AND BE REPLISHED AS NEEDED. ONCE EVERY 2-3 YEARS THE ENTIRE AREA MAY REQUIRED MULCH REPLACEMENT.
- BIORETENTION AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION, VEGETATIVE CONDITIONS, ETC.
- DURING PERIODS OF EXTENDED DROUGHT, BIORETENTION AREAS MAY REQUIRE WATERING.
- TREES AND SHRUBS, IF APPLICABLE, SHOULD BE INSPECTED TWICE PER YEAR TO EVALUATE HEALTH.
- WEEDING WILL BE NEEDED THE FIRST COUPLE OF YEARS. REMOVE BY HAND ONLY THOSE PLANTS THAT ARE POSITIVELY IDENTIFIED AS WEEDS. IN THE THIRD YEAR AND BEYOND, THE NATIVE GRASSES, SEDGES, RUSHES, AND WILDFLOWERS WILL BEGIN TO MATURE AND WILL OUT-COMPETE THE WEEDS. WEEDING ISOLATED PATCHES MIGHT STILL BE NEEDED ON OCCASION AND INVASIVE SPECIES SHOULD ALWAYS BE REMOVED.

RAIN GARDEN SEQUENCE OF CONSTRUCTION:

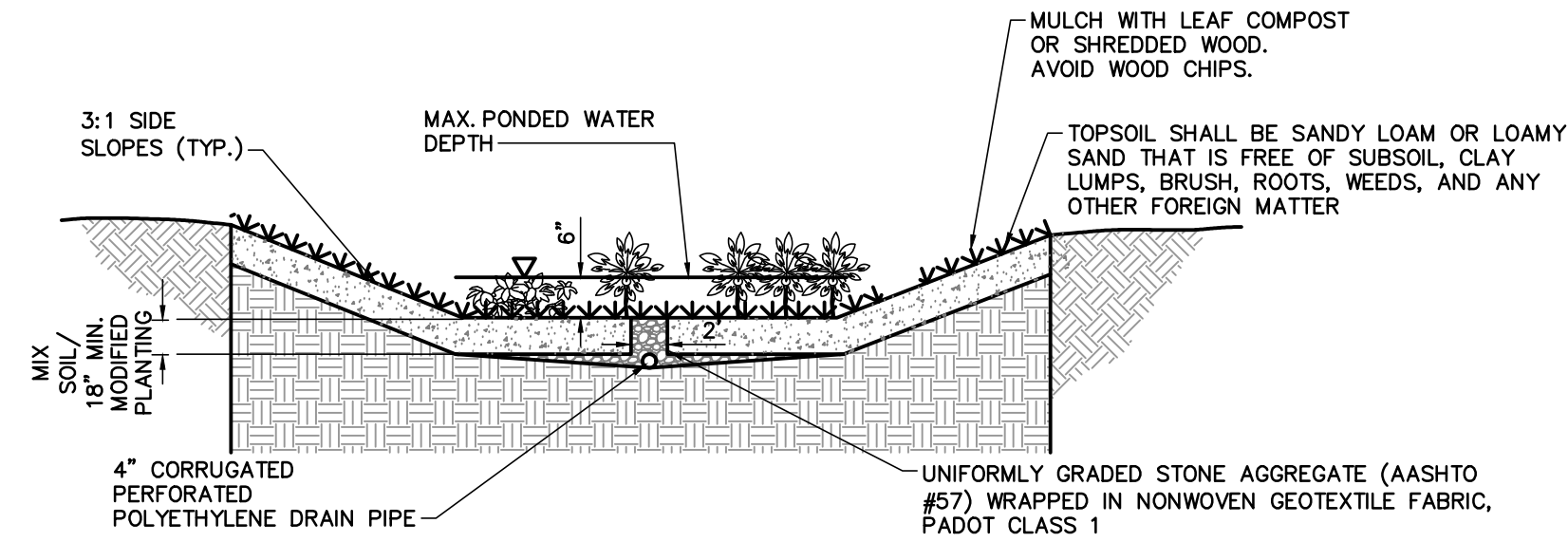
- INSTALL PERIMETER CONTROLS IN THE AREA OF THE RAIN GARDEN.
- LIGHTLY SCARIFY THE SOIL IN THE AREA OF THE RAIN GARDEN.
- FILL CAN BE USED TO CONSTRUCT THE BERM. SOIL SHOULD BE ADDED IN 8-INCH LIFTS. SPREAD TOPSOIL ON BERM.
- INSTALL RAIN GARDEN OUTLET AS SHOWN ON THE PLANS AND DETAILS.
- PROTECT THE PONDING AREA FROM COMPACTION FROM EARTHMOVING AND OTHER HEAVY EQUIPMENT.
- TAMP DOWN THE OUTSIDE AND TOP OF THE BMP STRUCTURE LIGHTLY, SIDES SHOULD BE SMOOTH. CREST AND BERM BOTTOM SHOULD BE LEVEL.
- PLACE 18" OF SOIL MIX.
- PLANT RAIN GARDEN AS DESCRIBED IN THE PLANTING PLAN. SEED AND MULCH DISTURBED AREAS WITH COMPOST TO STABILIZE THE SOIL WHILE PLANTS BECOME ESTABLISHED.
- RAIN GARDEN SHALL REMAIN PROTECTED FROM SEDIMENTATION UNTIL THE DRAINAGE AREA TO THE RAIN GARDEN IS COMPLETELY STABILIZED.



FACILITY NUMBER	(C) EMERGENCY SPILLWAY CREST ELEV. (FT.)	(W) WIDTH (FT.)	(L) BREADTH (FT.)	(T) TOP OF EMBANKMENT (FT.)
RAIN GARDEN	174.5	10	25	175

GRASS LINED FACILITY SPILLWAY SECTION

NOT TO SCALE



RAIN GARDEN / BIORETENTION

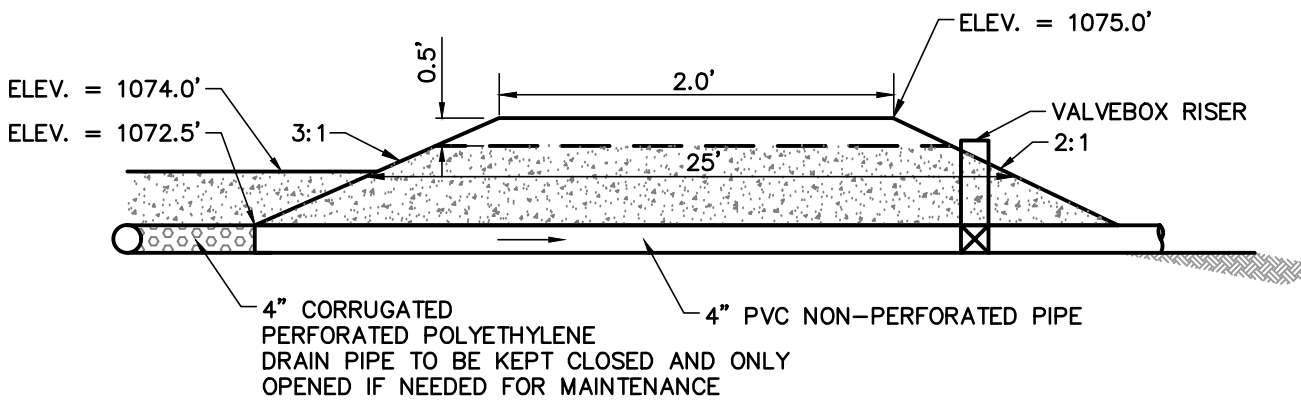
NOT TO SCALE

NOTE:

- SOIL MIX SHALL BE A COMBINATION OF 70-80% TOPSOIL AND 20-30% COMPOST OR PEAT.

RAIN GARDEN MIX -- ERNMX-180		
% MIX	BOTANICAL NAME	COMMON NAME
20.00%	Panicum rigidulum	Redtop Panic Grass
20.00%	Schizachyrium scoparium	Little Bluestem
10.00%	Elymus virginicus	Virginia Wild Rye
5.00%	Carex vulpinoidea	Fox Sedge
5.00%	Chasmanthium latifolium	River Oats
5.00%	Echinacea purpurea	Purple Coneflower
5.00%	Liatris spicata	Marsh Bloxing Star
5.00%	Rudbeckia hirta	Black 'eyed Susan
3.00%	Monarda fistulosa	Wild Bergamot
3.00%	Pestemon digitalis	Tall White Beard Tongue
2.00%	Andropogon gerardii	Big Bluestem
2.00%	Asclepias incarnata	Swamp Milkweed
2.00%	Aster novae-angliae	New England Aster
2.00%	Baptisia australis	Blue False Indigo
2.00%	Geum laciniatum	Rough Avena
2.00%	Senna hebecarpa	Wild Senna
2.00%	Tradescantia ohienalis	Ohio Spiderwort
2.00%	Verbena hastata	Blue Vervain
2.00%	Zizia aurea	Golden Alexanders
1.00%	Agrostis perennans	Autumn Bentgrass
100.00%	SEEDING RATE: 15LB. PER ACRE OR 1/3 - 1/2 LB. PER 1,000 SQ. FT.	

SEEDING MIXES ABOVE SHALL BE USED OR APPROVED EQUAL



SPILLWAY CROSS-SECTION

NOT TO SCALE

MIX NO.	SPECIES	SEED RATE
1	ANNUAL RYEGRASS	10
3	BIRDSFOOT TREFOIL	6
3	TALL FESCUE	30

TABLE 11.4 EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL

LANDSCAPE RESTORATION SEED MIX

SEEDING MIXES ABOVE SHALL BE USED OR APPROVED EQUAL

PURE LIVE SEED IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATION DIVIDED BY 100.

CONSTRUCTION MONITORING AND WASTE MANAGEMENT -- FORMER ARMORCAST SITE

SEE THE 'CONSTRUCTION MONITORING AND WASTE MANAGEMENT PLAN" (DAWOOD FEBRUARY 2018). ANY DEVIATION FROM THIS REPORT MUST BE APPROVED IN WRITING BY BCCD AND PADEP.

MATERIAL HANDLING PROCEDURES

· A HEALTH AND SAFETY PLAN SHALL BE DEVELOPED TO GOVERN CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE OUTFALLS.

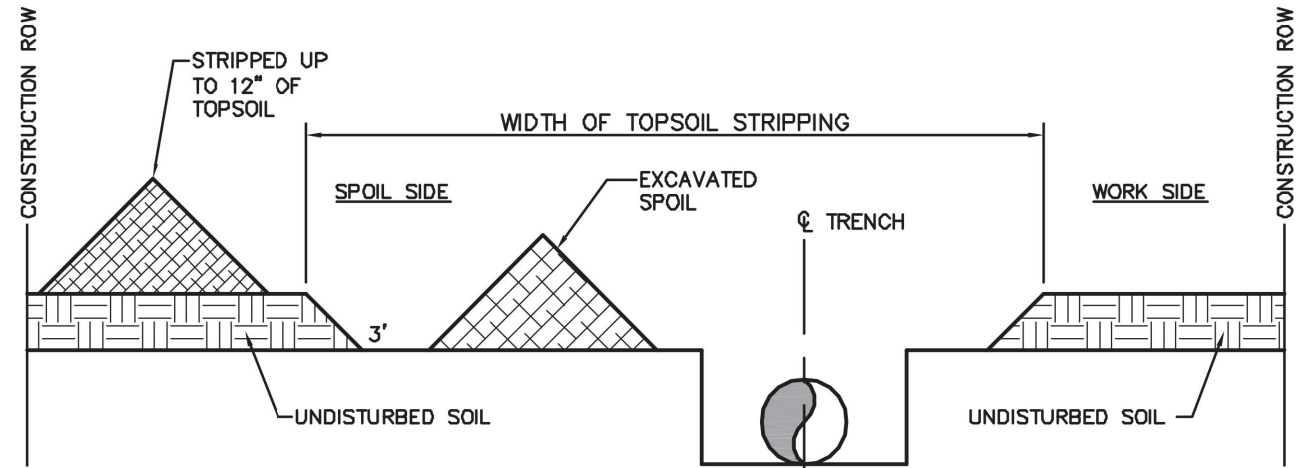
· AN ENVIRONMENTAL OBSERVER WILL BE PRESENT AT THE WORK AREA TO VISUALLY SCREEN MATERIAL FOR EVIDENCE OF OILS OR STAINING AND WASTE DEBRIS. LARGE DEBRIS SHALL BE SEGREGATED AND STOCKPILED SEPARATELY FOR DISPOSAL. AN ORGANIC VAPOR METER SHALL BE EMPLOYED TO SCREEN SOILS AS THEY ARE REMOVED. REMOVED MATERIAL SHALL BE SCREENED TO MONITOR FOR AND PREVENT UNFORESEEN CONDITIONS FROM CAUSING THE SPREAD OF CONTAMINATION.

· THE STOCKPILE AREA SHALL BE LINED WITH PLASTIC WITHIN A BERMED AREA AND COVERED TO PREVENT RUNOFF DURING PRECIPITATION EVENTS. APPROPRIATE E&S CONTROLS SHALL ALSO BE EMPLOYED. SOIL MATERIALS SHALL BE TESTED FOR CHARACTERIZATION AND EITHER REUSED ON THE BIRDSBORO POWER LLC SITE (AFTER TESTING DETERMINES THAT THE MATERIAL MEETS THE SITE CLEAN-UP STANDARDS) OR DISPOSED OF IN ACCORDANCE WITH APPLICABLE DEPARTMENT POLICIES. ALL WASTE AND CONSTRUCTION DEBRIS SHALL BE SEGREGATED FROM THE SOIL MATERIAL AND SHALL BE DISPOSED OFFSITE.

· SOIL MATERIAL TO BE REUSED ON-SITE SHALL BE TESTED FOR VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS, METALS, AND PCBs IN ACCORDANCE WITH PROTOCOLS PRESENTED IN PADEP'S 'MANAGEMENT OF FILL POLICY" (DOCUMENT NUMBER 258-2182-773). SOIL MATERIALS DESTINED FOR OFF-SITE DISPOSAL SHALL BE TESTED FOR RCRA WASTE CHARACTERISTICS AND ANY ADDITIONAL CRITERIA REQUIRED BY THE SELECTED DISPOSAL FACILITY AND BY PA DEP. NO SITE REMEDIATION ACTIVITIES BEYOND THOSE PERFORMED WITHIN THE CONTEXT OF THIS PLAN ARE PROPOSED AS PART OF THE BIRDSBORO PIPELINE PROJECT.

NOTES:

- ALLOW FOR A 3' SEPARATION BETWEEN THE TOPSOIL PILE AND THE TRENCH SPOIL.
- RETURN TRENCH SPOIL TO TRENCH AND COMPACT. FEATHER OUT EXCESS SPOIL OVER STRIPPED AREA LEAVING A LOW ROACH CENTERED OVER THE TRENCH. ALLEVIATE COMPACTION OF SUBSOILS OVER THE STRIPPED AREA.
- RETURN TOPSOIL EVENLY OVER THE STRIPPED AREA AFTER THE TRENCH HAS SUFFICIENTLY SETTLED OR HAS BEEN COMPACTED.
- ALLEVIATE COMPACTION OF TOPSOIL OVER ENTIRE RIGHT-OF-WAY.
- SEGREGATED TOPSOIL MAY NOT BE USED FOR PADDING THE PIPE.
- TOP SOIL & SPOIL PILE SHALL BE PLACED UPSLOPE.



DITCH PLUS SPOIL SIDE SEGREGATION

NOT TO SCALE

EROSION AND SEDIMENT CONTROL PLAN  
NATURAL GAS COMBINE CYCLE  
BIRDSBORO TRANSMISSION LINE  
TOWNSHIP OF ROBESON, EXETER AND BIRDSBORO  
BERKS COUNTY  
PENNSYLVANIA

DRAWING TITLE

DETAILS AND  
NOTES

DATE	JANUARY 12, 2017
JOB NO.	216040.01
FILE NAME	LDP-FL-DT01
SCALE	AS SHOWN
DRAWN BY	GLA
CHECKED BY	TRS
SHEET NO	

C4

DOCUMENT PREPARED FOR:

BIRDSBORO POWER, LLC  
P.O. BOX 314  
BIRDSBORO, PA 19508

DOCUMENT PREPARED BY:

DAWOOD  
200 N. 17TH STREET  
BIRDSBORO, PA 19508  
TEL: 610-432-3893  
F: 717-732-8996