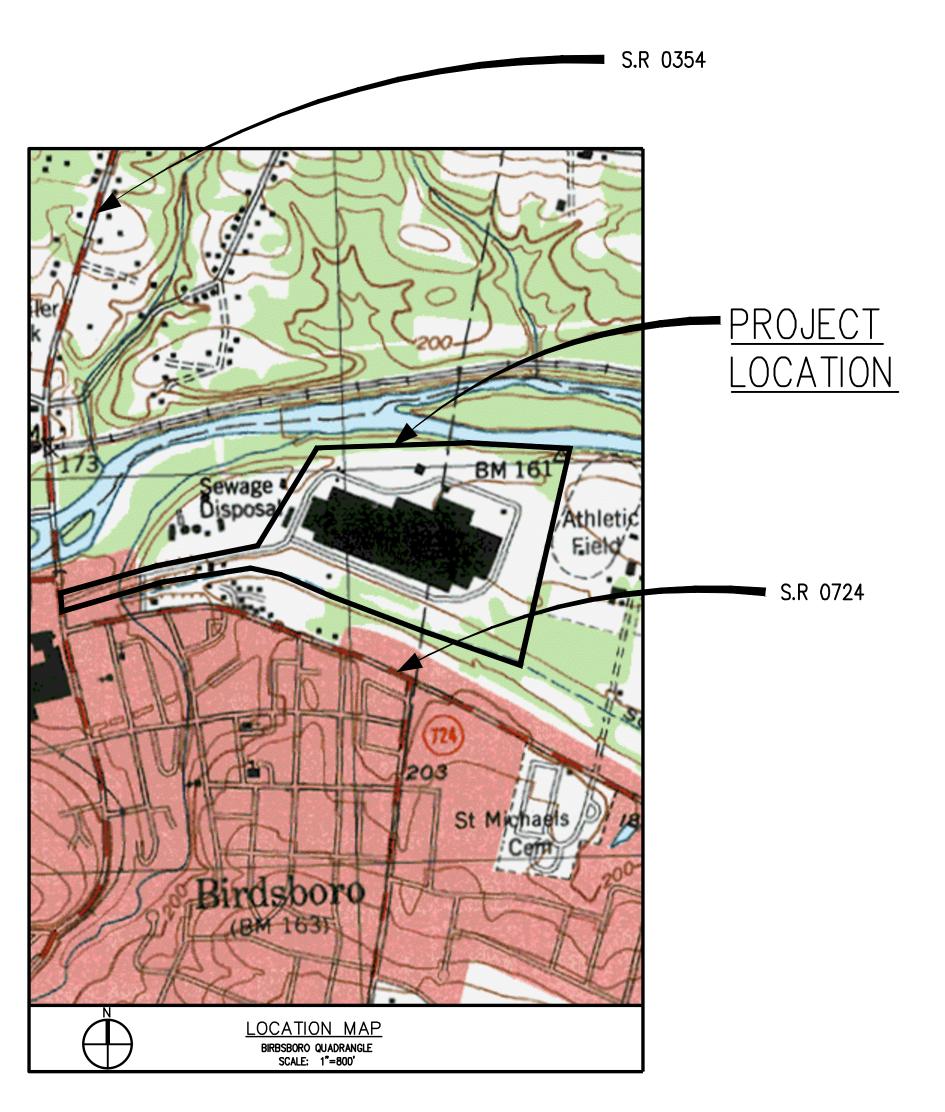
FINAL EROSION AND SEDIMENT CONTROL PLANS FOR

NATURAL GAS COMBINE CYCLE BIRDSBORO BOROUGH, BERKS COUNTY, PA

OWNER:

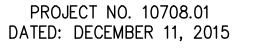
BIRDSBORO POWER PA LLC
72 GLENMAURA NATIONAL BOULEVARD
MOOSIC, PA 18507



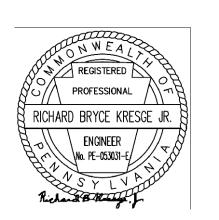
SITE ADDRESS:
1 ARMORCAST DRIVE
BIRDSBORO, PA 19508



Sheet List Table							
Sheet Number	Sheet Title						
CS	COVER SHEET						
CLS-1	CIVIL ENGINEERING NOTES						
C-100	SENSITIVE NATURAL RESOURCE PLAN						
C-101	SITE PLAN						
C-600	EROSION AND SEDIMENT CONTROL PLAN						
C-601	EROSION AND SEDIMENT CONTROL NOTES						
C-602	EROSION AND SEDIMENT CONTROL DETAILS						
C-603	EROSION AND SEDIMENT CONTROL DETAILS						



phone 570 829.4200 fax 570 829.3732 web www.quad3.com





CIVIL LEGEND, SYMBOLS AND NOTES

SOILS LEGEND

BIRDSBORO SILT LOAM, 3 TO 8 PERCENT SLOPES

BOWMANSVILLE-KNAUERS SILT LOAMS

- GIBRALTAR SILT LOAM

- LAMINGTON SILT LOAM, 0 TO 3 PERCENT SLOPES

- RARITAN SILT LOAM, 3 TO 8 PERCENT SLOPES

UqB - urban land, 0 to 8 percent slopes

UXB - URBAN LAND-PENN COMPLEX, 0 TO 8 PERCENT SLOPES

RESPONSES TO PA ONE CALL

CALL BEFORE YOU DIG! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR

CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

POCS SERIAL NUMBER 20150470504 1-800-242-1776

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL POCS SERIAL NUMBER PA 1 20150470505 1-800-242-1776

CALL BEFORE YOU DIG!

SERIAL NUMBER 20150470504 & 20150470505 AT THE FOLLOWING LOCATION:

COUNTY: MUNICIPALITY: BIRBSBORO BOROUGH ARMORCAST ROAD

NEAREST INTERSECTION: NORTH FURNACE STREET AND ARMORCAST ROAD SECOND INTERSECTION: NORTH FURNACE STREET AND EAST MAIN STREET LOCATION INFORMATION: THE PROJECT INVOLVES CONSTRUCTION OF NATURAL GAS COMBINE CYCLE PLANT APPROXIMATELY ON 90 ACRES

HAS BEEN RESPONDED TO THROUGH PENNSYLVANIA ONE CALL SYSTEM BY THESE FACILITY OPERATORS IN THE FOLLOWING MANNER:

UTILITY RESPONSE

UGI UTILITIES INC

PA ONE CALL REQUIRED PRIOR TO EXCAVATION. GAS SERVICE LINES MIGHT BE PRESENT, CONTACT: MARY GALCZYNSKI

OPERATIONS UGI UTILITIES INC (610) 736-5609

WINDSTREAM COMMUNICATION MAPPING RECEIVED, SOME OVERHEAD POWER LINES PRESENT CONTACT:

LAKISHA JOHNSON DAMAGE PREVENTION ENGINEER (570) 748-4433

(PLEASE CALL 1-800-222-6470 TO HEAR ANY VOICE MESSAGE)

ORDINANCE

AN ORDINANCE OF THE BOROUGH OF BIRDSBORO ARTICLE XIII "M-MIXED USE/EMPLOYMENTS CENTER, BERKS COUNTY, PENNSYLVANIA,

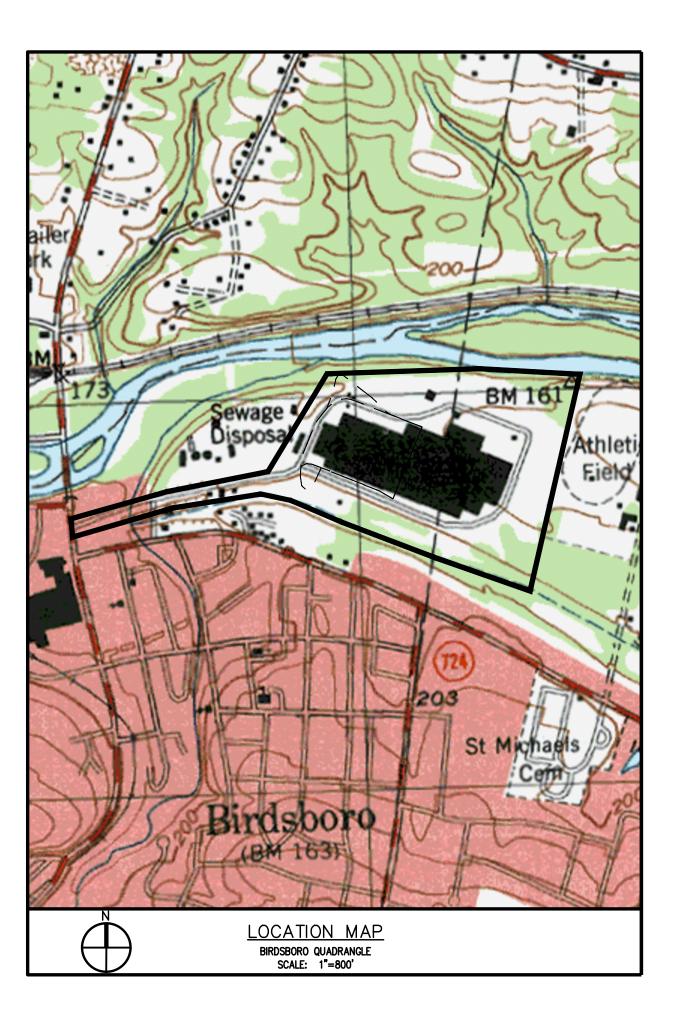
SECTION 1303 AREA AND HEIGHT REGULATIONS.

THE FOLLOWING REGULATIONS SHALL BE MET UNLESS OTHERWISE REQUIRED BY THIS ORDINANCE:

MAXIMUM PERMITTED

50 FEET BUILDING HEIGHT BUILDING COVERAGE **60 PERCENT**

	MINIMUM REQUIREMENTS	<u>PROVIDED</u>
LOT SIZE	5 ACRES	101.5 ACR
LOT WIDTH	250 FEET	1650 FEET
FRONT YARD SETBACK	50 FEET	50 FEET
IMPROVEMENT SETBACK	25 FEET	50 FEET
REAR YARD SETBACK	25 FEET	25 FEET
SIDE YARD SETBACK	25 FEET	25 FEET

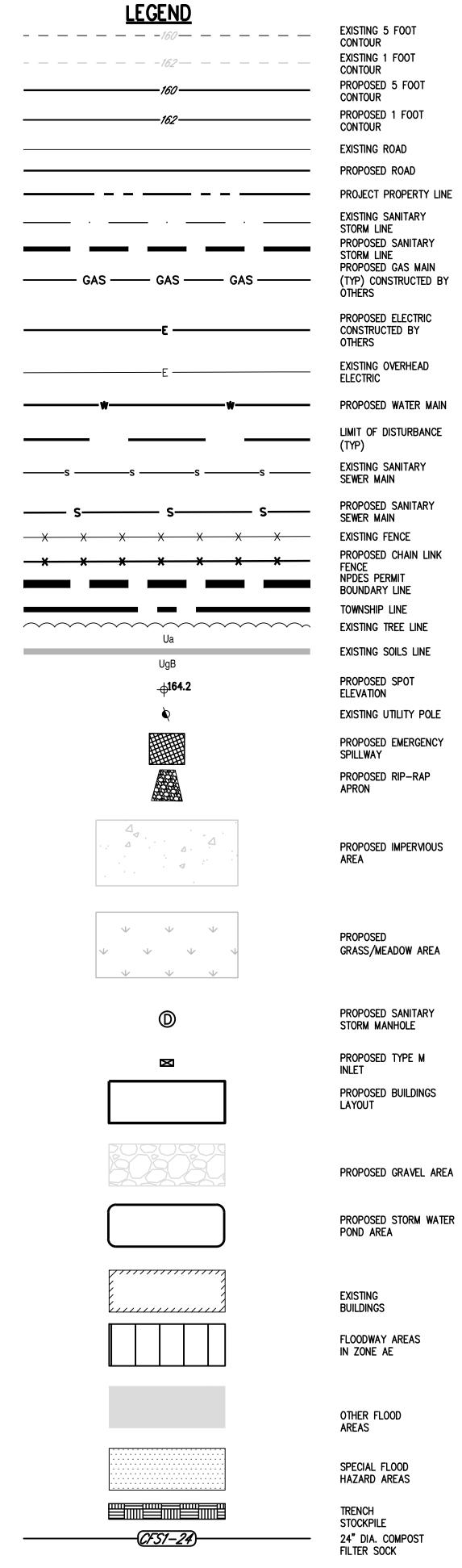


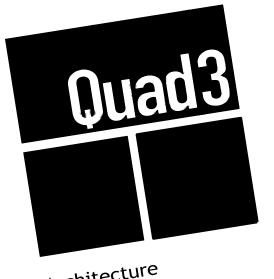
SURVEY NOTES

- 1. PROJECT SITE IS LOCATED IN ZONING DISTRICT TYPE M-MIXED USE/EMPLOYMENT CENTER.
- 2. EXISTING PARCEL LOTS WERE GENERATED FROM BERKS COUNTY GIS MAPPING AND WERE NOT SURVEYED BY QUAD THREE
- PROPERTY BOUNDARY WAS GENERATED FROM A DEED BOOK 2967 PAGES 773-781.
- 4. PLANIMETRIC FEATURES SHOWN HEREIN ARE BASED ON PENNSYLVANIA SPATIAL DATA ACCESS IMAGERY.
- 5. CONTOURS SHOWN HEREIN HAVE BEEN EXTRAPOLATED FROM LIDAR MAPPING PROVIDED BY PENNSYLVANIA SPATIAL DATA ACCESS. DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

GENERAL NOTES

- 1. ALL UTILITY INSTALLATIONS SHALL BE IN ACCORDANCE WITH PENNSYLVANIA ACT 38.
- 2. CONTRACTOR SHALL CONTACT THE PENNSYLVANIA ONE-CALL NUMBER AT 1-800-242-1776 THREE WORKING DAYS PRIOR TO THE START OF WORK TO HAVE ALL UTILITIES MARKED IN THE WORK AREA.
- 3. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITIES OF HIS WORK SCHEDULE PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL HAVE EACH UTILITY OWNER VERIFY AND MARK THE LOCATIONS OF THEIR RESPECTIVE MAIN AND SERVICE LINES IN THE FIELD BEFORE THE START OF WORK.
- 4. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO MAINTAIN EXISTING UTILITY SERVICE. IN THE EVENT THAT THE CONTRACTOR DAMAGES AN EXISTING UTILITY LINE OR LATERAL, HE SHALL NOTIFY THE UTILITY OWNER IMMEDIATELY. ALL REPAIRS SHALL BE DIRECTED BY THE UTILITY OWNER AND SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- 5. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLAN ARE BASED UPON THE BEST AVAILABLE INFORMATION. NEITHER THE OWNER NOR QUAD THREE GROUP, INC. GUARANTEES THE ACCURACY OF THE LOCATIONS OF THE EXISTING SUBSURFACE UTILITY LINES AND STRUCTURES SHOWN ON THE PLAN, NOR DOES THE OWNER OR QUAD THREE GROUP, INC. GUARANTEE THAT ALL SUBSURFACE UTILITY LINES AND STRUCTURES ARE
- 6. DRAWING REFERENCES ARE FOR CONVENIENCE ONLY AND DO NOT LIMIT THE APPLICATION OF THE DRAWING OR DETAIL.
- 7. THE CONTRACTOR SHALL SAFEGUARD THE OWNER'S PROPERTY AND ADJACENT PROPERTIES DURING CONSTRUCTION AND SHALL REPLACE ANY DAMAGED PORTION OF THE OWNER'S PROPERTY AND ADJACENT PROPERTIES TO THE ORIGINAL CONDITION.
- 8. CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR, AT HIS OWN EXPENSE, ANY DAMAGE CAUSED BY HIS CONSTRUCTION.
- 9. IN THE EVENT OF DAMAGE TO ANY OPERATING FACILITIES THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND/OR OWNER AND BE PREPARED TO WORK OVERTIME, IF DEEMED NECESSARY, TO COMPLETE RESTORATION TO THE SATISFACTION OF THE OWNER WITH NO ADDITIONAL COSTS TO THE OWNER.
- 10. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL BUILDING CODE REGULATIONS. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL SAFETY REQUIREMENTS OF ALL GOVERNING AUTHORITIES.
- 11. CONTRACTOR SHALL PERFORM ALL EXCAVATIONS, TRENCHING AND SHORING IN ACCORDANCE WITH O.S.H.A. SAFETY & HEALTH REGULATIONS, PART 1926, SUBPART P.
- 12. THE CONTRACTOR SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF ALL TRENCH EXCAVATIONS AT ALL TIMES.
- 13. WHEN THE DEPTH OF TRENCH EXCEEDS 5 FT., A TRENCH BOX OR SHORING SHALL BE REQUIRED. IF MAXIMUM TRENCH DEPTH EXCEEDS 20 FT., A SHORING DESIGN AS PER O.S.H.A. REGULATIONS SHALL BE USED.
- 14. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADEQUATELY SUPPORT ALL UTILITY POLES IN THE AREA OF THE TRENCH EXCAVATION PRIOR TO EXCAVATION.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES ASSOCIATED WITH THE BARRICADING AND/OR CLOSING AND RE-OPENING OF ANY AND ALL EXCAVATIONS DURING "DOWN-TIME" AS REQUIRED BY THE ON-SITE INSPECTORS (PADEP, ENGINEER, OWNER, ETC.).
- 16. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REMOVE AND REPLACE EXISTING GUIDE RAIL, LAWNS, SIGNS, SIDEWALKS, CURBS, BOLLARDS, PAVEMENT, PAVEMENT MARKINGS, ETC. AS NEEDED FOR THE COMPLETION OF HIS WORK.
- 17. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR EXPLORATORY WORK AND/OR TEST BORES.
- 18. THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS (ELEVATIONS, LOCATIONS, ETC.) BEFORE COMMENCING WORK. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF A CONFLICT EXISTS.
- 19. CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY REMOVE AND DISPOSE OFF-SITE ALL PIPE, CONDUIT, CONCRETE, STEEL STRUCTURE(S), EXCESS EARTHEN MATERIAL AND ANY OTHER DEMOLISHED MATERIALS COVERED UNDER THE CONTRACT.
- 20. WATER, SANITARY, AND OTHER UTILITIES WILL BE DETERMINED IN FUTURE DURING CONSTRUCTION.
- 21. THE BOROUGH SHALL HAVE THE RIGHT, BUT NOT THE DUTY, TO REPAIR OR MAINTAIN ANY DRAINAGE FACILITIES SHOWN WITHIN THE EASEMENTS PROVIDED ON THE PROPERTY.
- 22. THE CONTRACTOR SHALL COMPLY WITH ALL BOROUGH AND PENNDOT 408 MANUAL STANDARDS DURING CONSTRUCTION.
- 23. THE CONTRACTOR SHALL COMPLY WITH OUTDOOR LIGHTING (§509) GLARE CONTROL REQUIREMENTS AND FIXTURES SHALL BE AIMED STRAIGHT DOWN AND MEET IESNA FULL-CUTOFF CRITERIA.





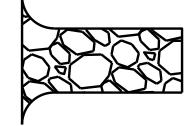
Architecture Engineering Environmental Services

37 North Washington St. Wilkes-Barre, PA 18701

0

PLAN CYCLI

AND I



CONSTRUCTION ENTRANCE

phone 570.829.4200 fax 570.829.0302 www.quad3.com

LLC BLM LOPMENT COMBINE COMBINE , W Q $\mathbf{\Omega}$

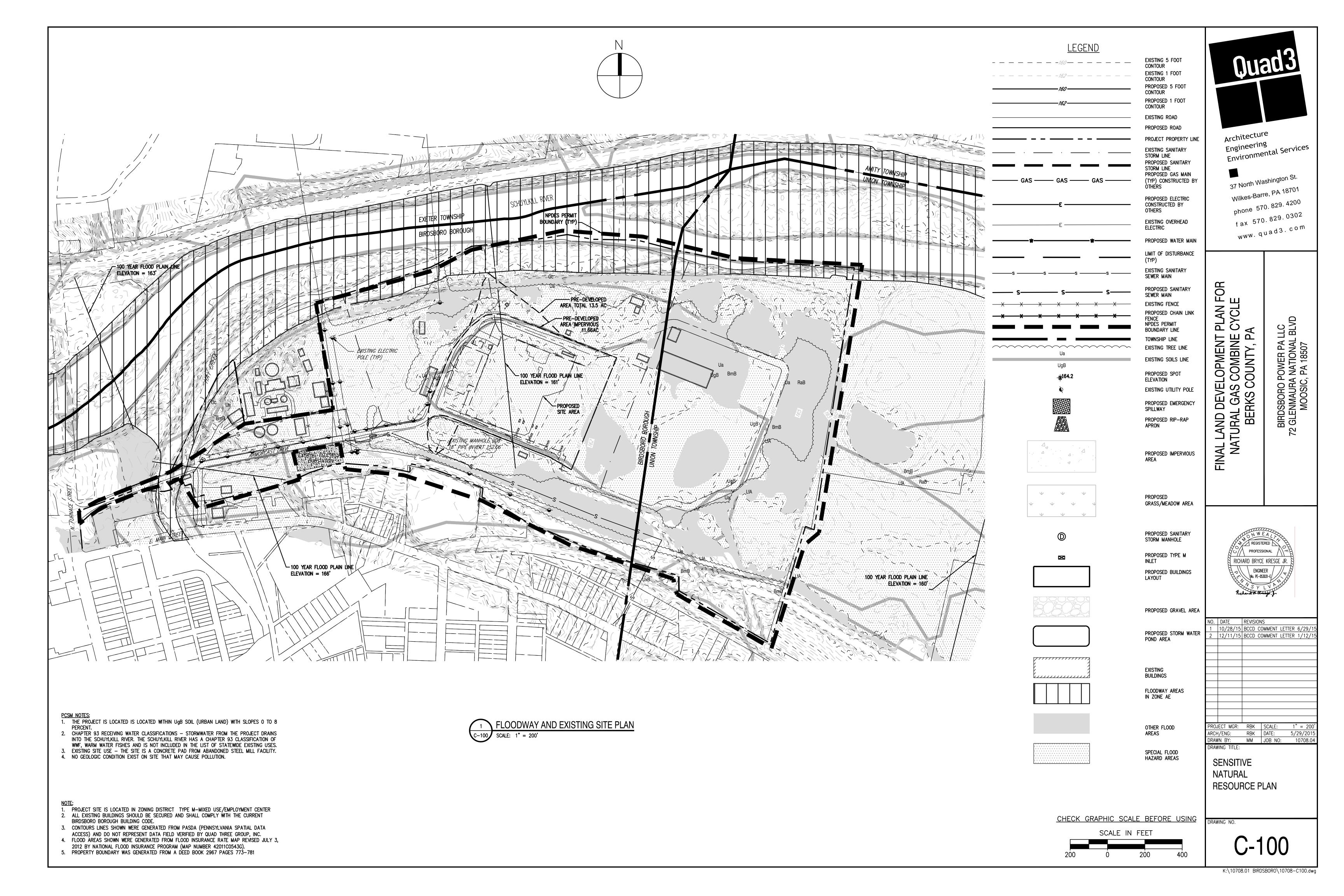
> REGISTERED A PROFESSIONAL RICHARD BRYCE KRESGE JR. ENGINEER

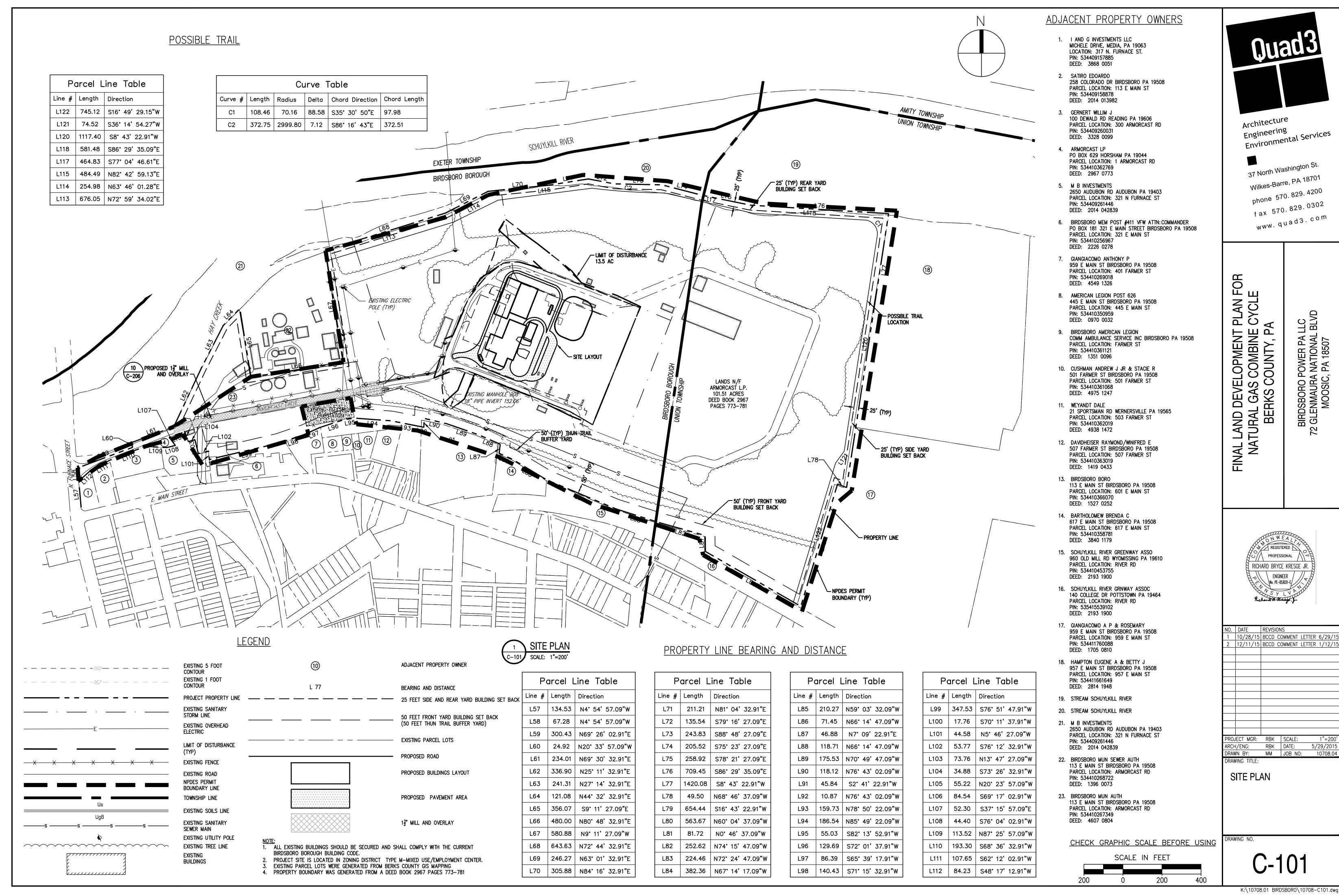
NO.	DATE	REVISI	ΟN	IS				
1	10/28/15	BCCD	C	DMMENT	LETTE	R	6/2	29/
2	12/11/15	BCCD	C	DMMENT	LETTE	R	1/1	12/
PROJ	ECT MGR:	RBK		SCALE:				NON
ARCH	I/ENG:	RBK		DATE:		5/	29/	201
DRAW	/N BY:	ММ		JOB NO):	1	070	0.80
DRAW	ING TITLE:							

CIVIL ENGINEERING NOTES

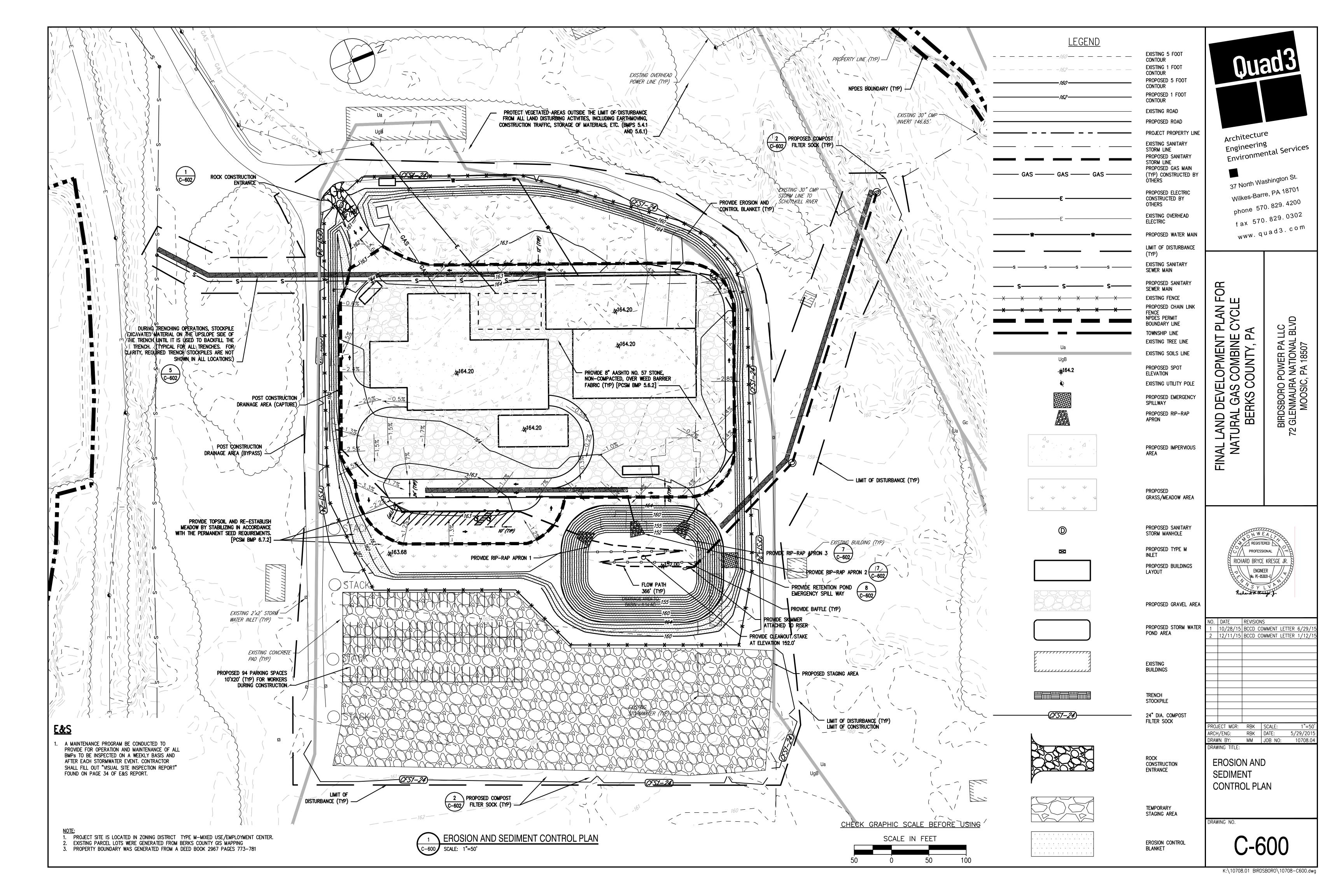
DRAWING NO.

K:\10708.01 BIRDSBORO\10708-CLS1.dwg





5/29/20 MM JOB NO: 10708.04



SOIL MAP UNIT DESCRIPTIONS

SOIL TYPES WITHIN THE LIMIT OF DISTURBANCE INCLUDE:

UqB - URBAN LAND PENN COMPLEX, 0 TO 8 PERCENT SLOPES

URBAN LAND CONSISTS OF AREAS WHERE 75 PERCENT OR MORE OF THE SURFACE IS COVERED BY ROADS, STREETS, PARKING LOTS, HOUSES, SHOPPING CENTERS FACTORIES, AND OTHER STRUCTURES. ON URBAN LAND THE SOILS ARE SO OBSCURED OR ALTERED THAT THEY COULD NOT BE IDENTIFIED.

TYPICALLY, THE SURFACE LAYER OF THE PENN SOIL IS DARK REDDISH BROWN, FRIABLE SILT LOAM ABOUT 9 INCHES THICK. THE SUBSOIL IS ABOUT 21 INCHES THICK. IT IS REDDISH BROWN, FIRM SILT LOAM TO DEPTH OF 14 INCHES; DUSKY RED, FIRM SILT LOAM TO A DEPTH OF 24 INCHES; AND DUSKY RED, FIRM CHANNERY SILT LOAM TO A DEPTH OF 30 INCHES. FRACTURED, DUSKY RED SILTSTONE BEDROCK IS AT A DEPTH OF ABOUT 38 INCHES.

PERMEABILITY OF THE PENN SOIL IS MODERATE OR MODERATELY RAPID. AVAILABLE WATER CAPACITY IS LOW OR MODERATE. SURFACE RUNOFF IS SLOW OR MEDIUM. IN UNLIMITED AREAS THIS SOIL IS EXTREMELY ACID TO STRONG ACID IN THE UPPER PART OF THE SOLUM, DEPTH TO BEDROCK RESTRICTS ROOT PENETRATION.

SOIL USE LIMITATIONS

UgB - URBAN LAND

VERY LIMITED FOR LAWNS AND LANDSCAPING DUE TO:

- ACIDIC DEPTH TO BEDROCK 38 INCHES
- LARGE STONES CONTENT
- LOW EXCHANGE CAPACITY

NOT RATED FOR LAWNS AND LANDSCAPING

RESOLUTIONS TO SOIL USE LIMITATIONS

DROUGHTY - IRRIGATE AS NECESSARY TO ESTABLISH VEGETATIVE STABILIZATION.

SLOPE - GRADE THE SITE AS INDICATED TO ESTABLISH MANAGEABLE SLOPES. LARGE STONES CONTENT - REMOVE AND DISPOSE LARGE STONES WHEN ENCOUNTERED WHEN THEIR LOW EXCHANGE CAPACITY - PROVIDE SUITABLE TOPSOIL AND SOIL AMENDMENTS.

GRAVEL CONTENT - WHEN ENCOUNTERED IN AREAS TO BE VEGETATED, REMOVE AND DISPOSE EXCESS GRAVEL, OR COVER WITH THE SPECIFIED THICKNESS OF TOPSOIL. DEPTH TO SATURATED ZONE - UTILIZE DEWATERING FACILITIES TO REMOVE SUBSURFACE WATER ENCOUNTERED DURING EXCAVATION AND TRENCHING OPERATIONS. BENEATH PAVED SURFACES AND ALONG FOUNDATIONS, PROVIDE SUBSURFACE DRAINAGE FACILITIES.

DUSTY - KEEP EXPOSED AREAS MOISTENED TO MINIMIZE DUST DEPTH TO THICK AND THIN CEMENTED PAN - USE APPROPRIATE EXCAVATION EQUIPMENT TO REMOVE CEMENTED PANS WHEN ENCOUNTERED. FROST ACTION - PROVIDE SUBSURFACE DRAINAGE FACILITIES BENEATH PAVEMENTS AND ALONG

FOUNDATIONS. DEPTH TO BEDROCK - USE APPROPRIATE EXCAVATION METHODS WHEN BEDROCK IS ENCOUNTERED.

HYDRIC RATING BY MAP UNIT

MAP UNIT RATING*

BmB Во Gc RaB LfA 2.4 2,3 UgB UxB

*RATING INDICATES THE PERCENTAGE OF MAP UNITS THAT MEETS THE CRITERIA FOR HYDRIC SOILS

SOIL ON SITE:

- BIRDSBORO SILT LOAM, 3 TO 8 PERCENT SLOPES

- ROWMANSVILLE-KNAUERS SILT LOAMS

- GIBRALTAR SILT LOAM

- LAMINGTON SILT LOAM, 0 TO 3 PERCENT SLOPES

- RARITAN SILT LOAM, 3 TO 8 PERCENT SLOPES

UDORTHENTS

- URBAN LAND, 0 TO 8 PERCENT SLOPES

- URBAN LAND-PENN COMPLEX, 0 TO 8 PERCENT SLOPES

CHAPTER 93 RECEIVING WATER CLASSIFICATIONS

STORMWATER FROM THE PROJECT DRAINS INTO THE SCHUYLKILL RIVER. THE SCHUYLKILL RIVER HAS A CHAPTER 93 CLASSIFICATION OF WWF, WARM WATER FISHES AND IS NOT INCLUDED IN THE LIST OF STATEWIDE EXISTING USES.

THERMAL IMPACTS

THERMAL IMPACTS TO SURFACE WATERS WILL BE MITIGATED THROUGH DETENTION POND AND THROUGH CAPTURE AND RE-USE OF RUNOFF WATER. THERMAL IMPACTS WILL BE FURTHER MITIGATED THROUGH DISCHARGE OF RE-USED WATER PRIOR TO DISCHARGE TO THE SCHUYLKILL RIVER.

MAINTENANCE PROGRAM

- THE OPERATOR SHALL MAINTAIN ALL TEMPORARY BMPS, INCLUDING SEDIMENT BARRIERS, COLLECTORS, AND FILTERING DEVICES UNTIL EACH RESPECTIVE SITE IS STABILIZED. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK. INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGARDING, RESEEDING, REMULCHING, AND RENETTING SHALL BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED. REPLACEMENT BMPS. OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED BY THE OPERATOR IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS. FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED.
- BMPS SHALL BE CLEANED OF SEDIMENT BY THE OPERATOR WHEN IT ACCUMULATES TO ONE-HALF THE STRUCTURE HEIGHT, UNLESS OTHERWISE NOTED.
- ANY BMPS DISTURBED DURING DAILY CONSTRUCTION OPERATIONS SHALL BE REPLACED OR RECONSTRUCTED BY THE OPERATOR AT THE END OF EACH WORKDAY. 5. AT THE END OF EACH WORKDAY, ALL SEDIMENT DEPOSITED ON ANY IMPERVIOUS SURFACE SHALL BE REMOVED BY THE
- OPERATOR AND PLACED IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES. WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED. WASHING OF PAVEMENT OR OTHER IMPERVIOUS SURFACES WITH WATER IS NOT PERMITTED. THE OPERATOR SHALL MONITOR AND MAINTAIN SEEDED AND MULCHED AREAS ON A DAILY BASIS UNTIL PROPER STABILIZATION
- AS INTENDED IS ACHIEVED. ALL BMPS SHALL REMAIN IN PLACE UNTIL THEIR CONTRIBUTING AREAS ARE PERMANENTLY STABILIZED.
- THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT POLLUTION CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE BERKS CONSERVATION DISTRICT, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.

SEEDING SPECIFICATION

A. MULCH ANCHORING

- ANCHOR MULCH IMMEDIATELLY FOLLOWING PLACEMENT OF HAY OR STRAW MULCH USING ONE OF THE FOLLOWING METHODS:
- MULCH NETTINGS STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS OVER HAY OR STRAW MULCH. USE BIODEGRADABLE NETTING IN AREAS TO BE MOWED.
- LIQUID MULCH BINDERS APPLICATIONS SHALL BE HEAVIER AT EDGES, VALLEYS, AND CRESTS OF BANKS. REMAINDER OF AREA SHALL BE UNIFORM IN APPEARANCE. USE THE FOLLOWING:
- a. EMULSIFIED ASPHALT (SS-1, CSS-1, CMS-2, MS-2, RS-1, CRS-1, AND CRS-2). APPLY AT 0.04 GALLONS PER SQUARE YARD OR 194 GALLONS PER ACRE ON FLAT SLOPES OR SLOPES LESS THAN 8 FEET HIGH. ON SLOPES 8 FEET OR MORE HIGH, USE 0.075 GALLONS PER SQUARE YARD OR 363 GALLONS PER ACRE.
- b. EMULSIFIED ASPHALT -RAPID CURING (RC3020, RC-250, OR RC-900) MEDIUM CURING (MC-250 OR MC-800). APPLY 0.04 GALLONS PER SQUARE YARD OR 194 GALLONS PER ACRE ON FLAT AREAS AND ON SLOPES LESS THAN 8 FEET HIGH. ON SLOPES MORE THAN 8 FEET HIGH, USE 0.075 GALLONS PER SQUARE YARD OR 363 GALLONS PER ACRE.
- c. SYNTHETIC OR ORGANIC BINDERS BINDERS SUCH AS CURASOL, DCA-70, PETRO-SET, AND TERRA-TACK MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
- NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

B. TEMPORARY SEED REQUIREMENTS

- 1. SEEDBED PREPARATION:
- a. APPLY LIME AND FERTILIZER AT RATES RECOMMENDED IN THE TOPSOIL ANALYSIS. LIME SHALL NOT BE APPLIED AT RATES LESS THAN 1 TON PER ACRE. APPLY FERTILIZER AT A RATE OF 500 LBS./ACRE USING 10-10-10 OR EQUAL OR AS RECOMMENDED IN TOPSOIL ANALYSES.
- b. WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
- c. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACT, THE AREA SHALL BE RETILLED AS
- 2. SEEDING: a. APPLY ANNUAL RYE GRASS AT A RATE OF 40 POUNDS PER ACRE OR 0.9 POUNDS PER 1,000 SQUARE FEET.
- b. APPLY SEED WITH MECHANICAL SEEDER. OPTIMUM SEEDING DEPTH IS ONE INCH (EXCEPT SANDY SOILS, 2 INCHES).
- c. Where Feasible. Except where either a cultipaker type seeder or hydroseeder is used. The seedbed shall be FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG. SEEDING OPERATIONS SHALL PROCEED ALONG THE FINISHED CONTOURS.

- g. MULCH MATERIALS SHALL BE UNROTTED SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 3 TONS PER ACRE. MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- b. FIBER MULCH: BIODEGRADEABLE, DYED WOOD, CELLULOSE-FIBER MULCH, NON-TOXIC, FREE OF PLANT GROWTH OR
- GERMINATION INHIBITORS, WITH MAXIMUM MOISTURE CONTENT OF 15% AND A PH RANGE OF 4.5 TO 6.5. c. Spread uniformly by hand or mechanically so that approximately 85 percent to 95 percent of the soil
- SURFACE WILL BE COVERED.
- d. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS SHALL BE DONE BY ONE OF THE TWO METHODS PREVIOUSLY REFERENCED.

C. PERMANENT SEED REQUIREMENTS

- 1. SEEDBED PREPARATION:
- a. APPLY LIME AND FERTILIZER AT RATES RECOMMENDED IN THE TOPSOIL ANALYSIS. LIME SHALL NOT BE APPLIED AT RATES LESS THAN 6 TONS PER ACRE. APPLY FERTILIZER AT A RATE OF 1000 LBS./ACRE USING 10-10-10 OR EQUAL OR AS RECOMMENDED IN TOPSOIL ANALYSES.
- b. Work lime and fertilizer into soil as nearly as practical to a depth of 4 inches with a disc. Springtooth HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHALL BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
- c. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACT, THE AREA SHALL BE RETILLED AS ABOVE. 2. SEEDING:
- a. SEEDING MIX: SEED SHALL CONFORM TO PENNDOT PUBLICATION 408, SECTION 804.2(B), FORMULA "W SEEDMIX TALL FESCUE - 70%
- BIDSFOOT TREFOIL MIXTURE 20%
- REDTOP 10% b. SEED SHALL BE DISTRIBUTED WITH A MECHANICAL SEEDER AT THE RATE OF TEN AND ONE-HALF (10.5) POUNDS PER 1000 S.Y. OR FIFTY-ONE (51) POUNDS PER ACRE.
- c. Where Feasible, except where either a cultipaker type seeder or hydroseeder is used. The seedbed shall be FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER OR A LIGHT DRAG. SEEDING OPERATIONS SHALL BE ON THE CONTOUR.

3. MULCHING:

- a. MULCH MATERIALS SHALL BE UNROTTED SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 3 TONS PER ACRE. MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN. b. FIBER MULCH: BIODEGRADEABLE. DYED WOOD. CELLULOSE-FIBER MULCH. NON-TOXIC. FREE OF PLANT GROWTH OR
- GERMINATION INHIBITORS, WITH MAXIMUM MOISTURE CONTENT OF 15% AND A pH RANGE OF 4.5 TO 6.5.
- c. SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85 PERCENT TO 95 PERCENT OF THE SOIL SURFACE WILL BE COVERED.
- d. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS SHALL BE DONE BY ONE OF TWO METHODS PREVIOUSLY REFERENCED.

4. TOPSOIL PLACEMENT THICKNESS

- a. SLOPES GREATER THAN OR EQUAL TO 3H: 1V 2 INCHES.
- b. SLOPES LESS THAN 3H:1V 6 INCHES.
- NOTE: IN NO CASE SHOULD AN AREA EXCEED 15,000 SQUARE FEET, WHICH TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IN NOT ACCEPTABLE.

EROSION AND SEDIMENT CONTROL NOTES

- A COPY OF THE APPROVED DRAWINGS (STAMPED SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- 1. BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN. THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE LUZERNE
- 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 CONSTRUCTION SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED
- AND ARE FUNCTIONING AS DESCRIBED IN THIS DOCUMENT. 3. 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. 4. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(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 DRAWNGS. STOCKPILE HEIGHTS SHALL
- NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER. 5. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. THE OPERATOR SHALL IMPLEMENT APPROPRIATE BMPS TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND
- NOTIFY THE BERKS COUNTY CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF DEP. 6. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- 7. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN. OVER UNDISTURBED VEGETATED AREAS. DISCHARGE POINTS SHOULD BE ESTABLISHED TO PROVIDE FOR MAXIMUM DISTANCE TO ACTIVE WATERWAYS.
- 8. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD SPECIFICATION FOR SUBSURFACE DRAINS OR OTHER APPROVED METHOD. 9. UNTIL THE SITE IS STABILIZED, ALL E&S BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST
- INCLUDE INSPECTIONS OF ALL E&S BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING. RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 10. 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.
- 11. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED IN THE MANNER DESCRIBED ON THE PLAN
- 12. 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 SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- 13. ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED ON THE UPSLOPE SIDE OF THE TRENCH.
- 14. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS. 15. 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 PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION 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.

MATERIAL NOTES

- ALL CONSTRUCTION WASTES, INCLUDING DEMOLISHED BUILDING MATERIALS MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE CHAPTER 260. §\$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. 2. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL
- CONSERVATION DISTRICT OR DEP FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED. 3. 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. 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. 4. 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. 5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- 6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
- 7. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT EXCEEDING 9 INCHES IN THICKNESS.

PROTECTION OF INIFLTRATION BMP'S

- 1. 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, THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN PREPARER, AND A REPRESENTATIVE FROM THE BERKS COUNTY
- CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING. 2. 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.
- PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE BERKS COUNTY CONSERVATION DISTRICT OR BY DEP PRIOR TO IMPLEMENTATION. 4. THE LIMITS OF DISTURBANCE (LOD), STREAMS AND WETLANDS SHALL BE MARKED PRIOR TO

3. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE

- DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.). 5. 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 BERKS COUNTY CONSERVATION DISTRICT OR THE DEPARTMENT.
- 6. PER NEW NPDES REQUIREMENTS, 'UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
- 7. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY E&S BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS MUST BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS SHOULD BE DONE ONLY DURING THE GERMINATING SEASON. THE BERKS COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF PRIMARY E&S BMPS AND
- MAY REQUIRE A SITE INSPECTION. 8. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE BERKS COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
- 9. PER NEW NPDES REQUIREMENTS. WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOTICE OF TERMINATION (NOT) IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PREFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS."

STABILIZATION NOTES

- 1. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR
- 2. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 4 INCHES PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL SLOPES 3H:1V OR
- STEEPER SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL. 3. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES EXCEED 4 DAYS, THE SITE
- SHALL BE IMMEDIATELY SEEDED, MULCHED OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES. STRAW MUICH MUST BE APPLIED AT RATES OF AT LEAST 3.0 TONS PER ACRE. STRAW MUICH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
- EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER. WITHIN 50 FEET OF A SURFACE WATER AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS.
- 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.
- 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.

MULCHING SPECIFICATIONS

- MULCHING SHALL BE PROVIDED AS REQUIRED IN AREAS DIFFICULT TO VEGETATE, AND DURING OFF-SEASON OPERATIONS. MULCHING METHODS AND MATERIALS SHALL CONFORM TO THE
- a. MULCH MATERIALS SHALL BE UNROTTED SALT HAY, HAY OR SMALL GRAIN STRAW APPLIED AT THE RATE OF 3 TONS PER ACRE, MULCH BLOWER SHALL NOT GRIND OR CHOP THE MATERIAL. WOODCHIPS, FREE OF INSECTS AND DISEASE ARE PERMITTED AT A RATE OF 4-6 TONS PER ACRE.
- b. MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% TO 95% OF THE SOIL SURFACE WILL BE COVERED. c. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS,
- DEPENDING UPON THE SIZE OF THE SLOPE. i. PEG AND TWINE - DRIVE 8" TO 10" PEGS TO WITHIN 2" TO 3" OF THE SOIL SURFACE EVERY 4' IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE THE MULCH TO THE SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS OR SQUARE PATTERN, AND SECURE THE TWINE
- AROUND EACH BEG WITH TWO OR MORE ROUND TURNS. ii. MULCH NETTING - STAPLE PAPER, JUTE. COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. iii. MULCH MATERIALS AND BINDERS SHALL BE ROLLED IN PLACE BY TRACKED VEHICLE OR
- OTHER SUITABLE EQUIPMENT. d. APPLICATIONS SHOULD BE HEAVIER AT EDGES WERE WIND CATCHES THE MULCH. IN VALLEYS AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE. e. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 LBS PER ACRE, OR PER MANUFACTURER RECOMMENDATION, MAY BE APPLIED BY A HYDROSEEDER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL. f. OTHER:
- i. WHERE EXCESSIVE SOIL EROSION, TRACKING OR FLOWING OF SEDIMENT IS EVIDENT OR ANTICIPATED, A MINIMUM OF 4" OF CRUSHED STONE SHALL BE PLACED WITHIN THE AFFECTED AREA AND MAINTAINED UNTIL PERMANENT STABILIZATION IS PROVIDED. ADDITIONAL STONE SHALL BE PLACED AS REQUIRED UNTIL STABILIZATION IS ACHIEVED. CRUSHED STONE SHALL CONFORM TO AASHTO DESIGNATION M43. SIZE NO. 2 (2-1/2" TO 1-1/2").

- PERMITTEES REQUESTING A RENEWAL OF COVERAGE UNDER GENERAL PERMIT MUST SUBMIT TO THE LUZERNE CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI. AT LEAST 90
- DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER INDIVIDUAL PERMIT MUST SUBMIT TO THE LUZERNE CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI. AT LEAST
- 180 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE. . ALL EARTHMOVING CONTRACTORS MUST BE ADDED AS CO-PERMITTEES TO THE NPDES PERMIT.
- SITE INSPECTIONS AND MONITORING REPORTS THE PERMITTEE AND CO—PERMITTEE(S) SHALL COMPLY WITH ALL OF THE MONITORING AND REPORTING REQUIREMENTS, AS OUTLINED IN PART A 2 OF THE NPDES PERMIT. THE PERMITTEE AND CO-PERMITTEE(S) SHALL ENSURE THAT SITE INSPECTIONS ARE CONDUCTED AT LEAST WEEKLY AND AFTER EACH MEASUREABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL. A WRITTEN REPORT SHALL BE KEPT FOR EACH INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF PART A.2.A. THE DEP "VISUAL INSPECTION CHECKLIST" SHOULD BE COMPLETED FOR EACH INSPECTION AND SHOULD BE AVAILABLE ON-SITE FOR INSPECTION BY DEP OR COUNTY
- AFTER ALL EARTHMOVING ACTIVITY HAS CEASED AND THE ENTIRE PERMITTED AREA IS PERMANENTLY STABILIZED. THE PERMITTEE MUST SUBMIT A NOTICE OF TERMINATION TO BERKS CONSERVATION DISTRICT TO CLOSE OUT THE PERMIT. ALLOWING THE NPDES PERMIT TO EXPIRE IS DETERMINED TO BE A VIOLATION OF THE NPDES PERMIT.

CONSTRUCTION SEQUENCES

NOTE: CRITICAL STAGES OF PCSM BMP INSTALLATION ARE IDENTIFIED IN <u>UNDERLINED</u> PRINT IN THE SEQUENCE OF INDIVIDUAL BMP INSTALLATION. CRITICAL STAGES ARE THOSE STAGES DURING WHICH A LICENSED

CONSERVATION DISTRICT PERSONNEL

PLACE ROCK CONSTRUCTION ENTRANCE. 2. CONSTRUCT TEMPORARY STABILIZED GAVEL ACCESS AND STAGING/STORAGE AREA FOR USE DURING

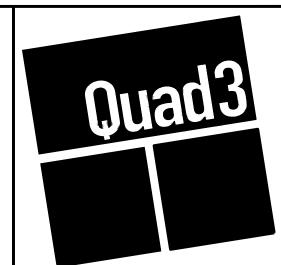
PROFESSIONAL OR HIS DESIGNEE MUST BE PRESENT TO OBSERVE AND INSPECT CONSTRUCTION.

- CONSTRUCTION OF THE SEDIMENT BASIN. PLACE PERIMETER BMPS BELOW SEDIMENT BASIN.
- CONSTRUCT RIPRAP APRONS 1, 2 AND 3,
- PLACE SEDIMENT BASIN BARREL PIPE, CONCRETE CRADLE, CUT-OFF TRENCH, AND ANTI-SEEP COLLARS. CONSTRUCT SEDIMENT BASIN EMBANKMENT.
- INSTALL 30" SLCPP WITH A WATERTIGHT CONNECTION TO RESERVOIR. CAP END UNTIL STORMWATER CONTROL MANHOLES B AND C ARE PLACED.
- NOTIFY DESIGN ENGINEER OR HIS DESIGNEE PRIOR TO BACKFILLING AND ALLOW HIM TO INSPECT THE INSTALLATION.

PLACE DETENTION BASIN SKIMMER, LANDING DEVICE, AND BAFFLES.

- PLACE REMAINDER OF PERIMETER BMPS AROUND REMAINDER OF THE SITE. BEGINNING AT THE ROCK CONSTRUCTION ENTRANCE, CONDUCT GRADING OPERATIONS TO FINAL CONTOUR OF ALL AREAS. IMMEDIATELY ESTABLISH TEMPORARY AND/OR PERMANENT STABILIZATION AS APPLICABLE. VEGETATION ON ALL SLOPES 3:1 OR STEEPER SHALL BE SUPPLEMENTED WITH DEGRADABLE EROSION
- CONTROL BLANKET. PLACE SUBBASE MATERIAL IN ROADWAYS AS CONSTRUCTION PROCEEDS.
- CONSTRUCT BUILDING IMPROVEMENTS, TANKS, AND UTILITIES IN GRADED AREAS. 10. CONSTRUCT AND STABILIZE STORMWATER CONVEYANCE FACILITIES AND RETENTION POND. 11. GRADE TO FINAL CONTOUR REMAINING AREAS OF THE SITE AND ESTABLISH TEMPORARY AND/OR
- PERMANENT STABILIZATION AS APPLICABLE. VEGETATION ON ALL SLOPES 3:1 OR STEEPER SHALL BE SUPPLEMENTED WITH DEGRADABLE EROSION CONTROL BLANKET. 12. CONSTRUCT REMAINING BUILDING IMPROVEMENTS, TANKS, AND UTILITIES.
- 13. CONSTRUCT REMAINING STORMWATER CONVEYANCE FACILITIES AND RETENTION POND. 14. UPON STABILIZATION OF THE ENTIRE SITE, REMOVE AND STABILIZE REMAINING PERIMETER BMPS.

1. IN NO CASE SHOULD AN AREA EXCEED 15,000 SQUARE FEET. WHICH TO BE STABILIZED BY VEGETATION. REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IN NOT ACCEPTABLE.



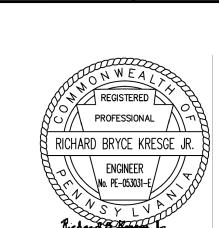
Architecture Engineering

37 North Washington St.

 \mathbf{O}

INAL NA

A S S LOPMENT COMBINE COMBINE VER TION 185(OWE NATION PA 18 SBORO P ENMAURA MOOSIC, ' S O A S D DEV AL GA ERKS \Box AN UR



DATE REVISIONS 10/28/15 BCCD COMMENT LETTER 6/29/ 12/11/15 BCCD COMMENT LETTER 1/12 PROJECT MGR: RBK | SCALE: RBK DATE: 5/29/201 ARCH/ENG:

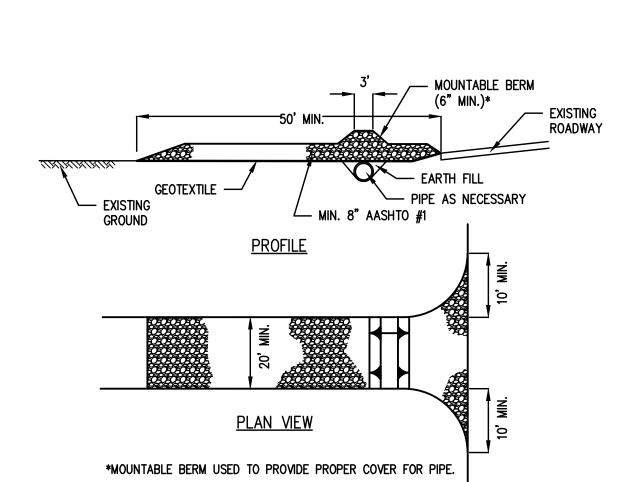
DRAWN BY: MM JOB NO: 10708.04

SEDIMENT CONTROL NOTES

EROSION AND

RAWING NO.

K:\10708.01 BIRDSBORO\10708-C601.dwg



- **ROCK CONSTRUCTION ENTRANCE NOTES:**
- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
- RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
- 3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.
- 4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50-FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING OF THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



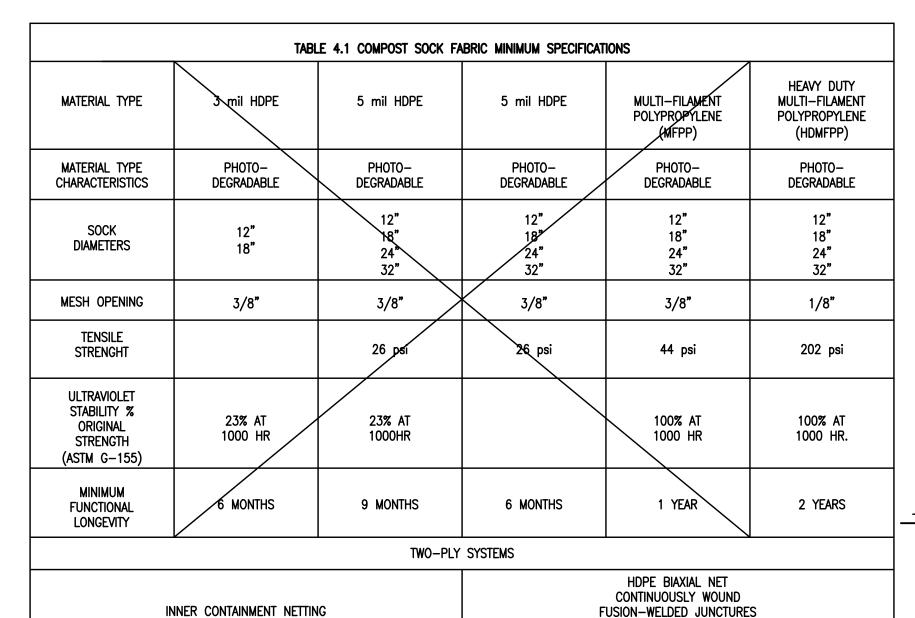


TABLE	4.2	COMPOST	STANDARDS
		••••	· · · · · · · · · · · · · · · · · · ·

SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS

3/4" X 3/4" MAX. APERTURE SIZE

COMPOSITE POLYPROPYLENE FABRIC

(WOVEN LAYER AND NON-WOVEN FLEECE

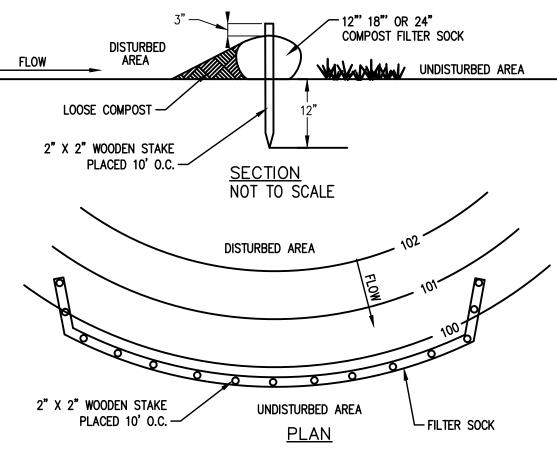
MECHANICALLY FUSED VIA NEEDLE PUNCH)

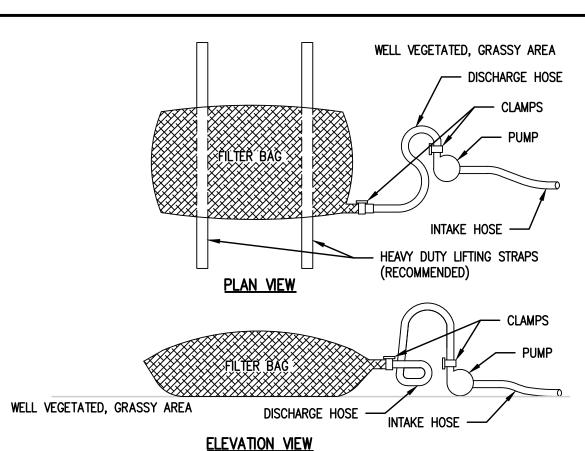
3/16" MAX. APERTURE SIZE

ORGANIC MATTER CONTENT ORGANIC PORTION	80% — 100% (DRY WEIGHT BASIS) FIBROUS AND ELONGGATED
pH	5.5 - 8.0
MOISTURE CONTENT	35% - 55%
PARTICLE SIZE	98% PASS THROUGH 1" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 ds/m (mmhos/cm) MAXIMUM

COMPOST FILTER SOCK NOTES:

- SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2.
- 2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
- 3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- 5. COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

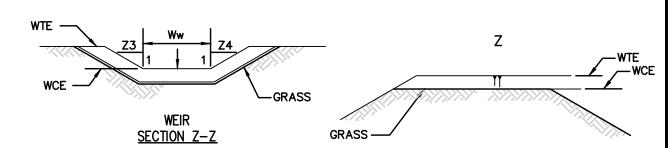




NOTES:

- A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
- BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY, BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
- NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE
- THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
- THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
- FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.
- LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:





EMBANKMENT SECTION ALONG EMERGENCY SPILLWAY

			WEIR			LINING
POND NO.	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	
1	3	3	164.0	163.0	20	GRASS

RETENTION POND EMERGENCY SPILLWAY DETAIL

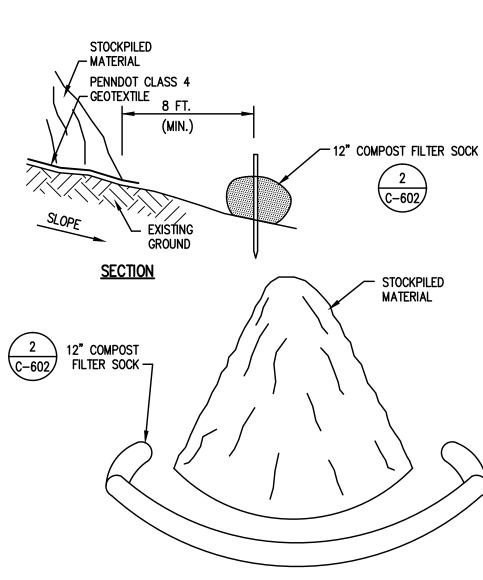
SCALE: NOT TO SCALE

BLANKET EDGES STAPLED INSTALL BEGINNING OF ROLL IN 6 AND OVERLAPPED IN. x 6 IN. ANCHOR TRENCH, (4 IN. MIN.) STAPLE, BACKFILL AND COMPACT STARTING AT TOP OF SLOPE, ROLL BLANKETS IN DIRECTION OF PREPARE SEED BED (INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED) PRIOR TO BLANKET INSTALLATION THE BLANKET SHOULD NOT OVERLAP BLANKET ENDS 6 IN. MIN. WITH THE REFER TO MANUF BE STRETCHED; IT MUST UPSLOPE BLANKED OVERLYING THE RECOMMENDED STAPLING MAINTAIN GOOD SOIL DOWNSLOPE BLANKET (SHINGLE STYLE). PATTERN FOR STEEPNESS CONTACT AND LENGTH OF SLOPE BEING BLANKETED

EROSION CONTROL BLANKET NOTES:

- SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCRDING TO THE RATES IN THE PLAN DRAWNGS PRIOR TO INSTALLING THE BLANKET.
- 2. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
- 3. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
- 4. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
- 5. BLANKET SHALL MEET OR EXCEED THE SPECIFICATIONS OF S75 EROSION CONTROL BLANKET AN MANUFACTURED BY NORTH AMERICAN GREEN. STAPLE THE BLANKET IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS USING STAPLE PATTERN D.
- BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.
- APPLY EROSION CONTROL BLANKET TO ALL SLOPES 3 HORIZONTAL TO 1 VERTICAL (3:1) OR



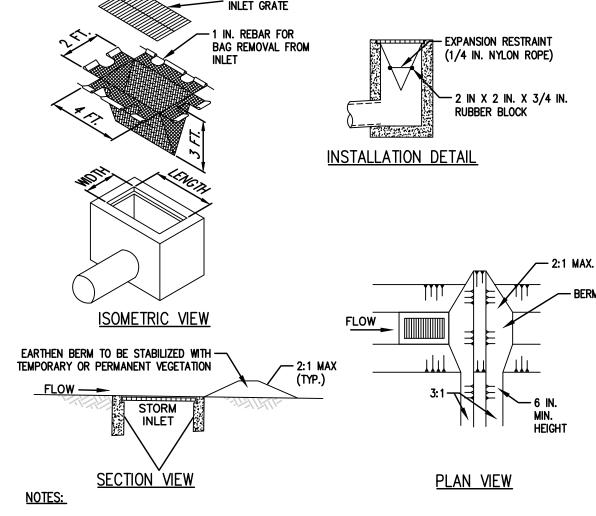


OUTER FILTRATION MESH

NOTES:

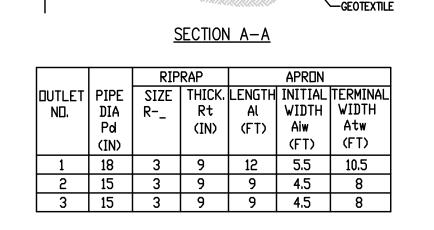
- 1. STOCKPILES THAT WILL REMAIN FOR 20 DAYS OR LONGER SHALL BE SEEDED AND MULCHED IMMEDIATELY IN ACCORDANCE WITH THE TEMPORARY SEEDING REQUIREMENTS.
- 2. STOCKPILES THAT WILL REMAIN FOR LESS THAN 20 DAYS SHALL BE COVERED WITH TARPS. TARPS SHALL BE SECURED IN PLACE TO PREVENT DISPLACEMENT BY WIND.
- 3. STOCKPILE HEIGHTS SHALL NOT EXCEED 35. STOCKPILE SIDESLOPES SHALL BE 2:1 OR LESS.





- MAXIMUM DRAINAGE AREA = 1/2 ACRE.
- 2. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.
- ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.
- 4. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
- INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
- 6. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.





PLAN VIEW

- 0.00% GRADE --

ORIGINAL GROUND-

- 1. ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
- ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.





37 North Washington St. Wilkes-Barre, PA 18701 phone 570.829.4200 fax 570.829.0302 www.quad3.com

PLAN CYCL 11 18 LOPMENT COMBINE COMBINE

 $\mathbf{\alpha}$

D DEV AL GA ERKS

X

AN UR

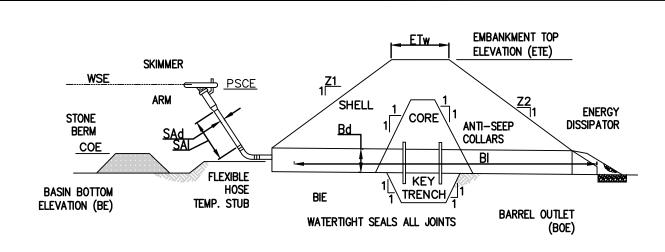
 $\mathbf{\Omega}$

OWER PA L NATIONAL PA 18507 SBORO PO INMAURA I MOOSIC, ' S C

REGISTERED A **PROFESSIONAL** RICHARD BRYCE KRESGE JR ENGINEER

NO.	DATE	REVISI	ΟN	IS			
1	10/28/15	BCCD	C	DMMENT	LETTE	R 6	/29/1
2	12/11/15	BCCD	C	DMMENT	LETTE	R 1	/12/1
PROJ	ECT MGR:	RBK		SCALE:			NONE
ARCH	I/ENG:	RBK		DATE:	į	5/29)/2015
DRAW	/N BY:	ММ		JOB NO):	10	708.04
DRAW	VING TITLE:						

EROSION AND SEDIMENT **CONTROL DETAILS**



			TEMP RISER EMBANKMENT					CLEAN	воттом
BASIN N□.	Z1 (FT)	Z2 (FT)	EXT. ELEV TRE (FT)	TOP TOP I V ELEV WIDTH TR E ETE ETW DI	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)	DUT ELEV COE (FT)	ELEV BE (FT)	
1	2	3	N/A	164	8	2	4	153.6	151.6

		SKIMME	२	CD					
	DIA SAd (IN)	LENGT H SAI (FT)	MAT'L	DIA Bd (IN)	INLET ELEV BIE (FT)	MAT'L	LENGT H Bl (FT)	OUTLET ELEV BOE (FT)	
[4	5	PVC	30	153.60	HDPE	190	151.68	

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S

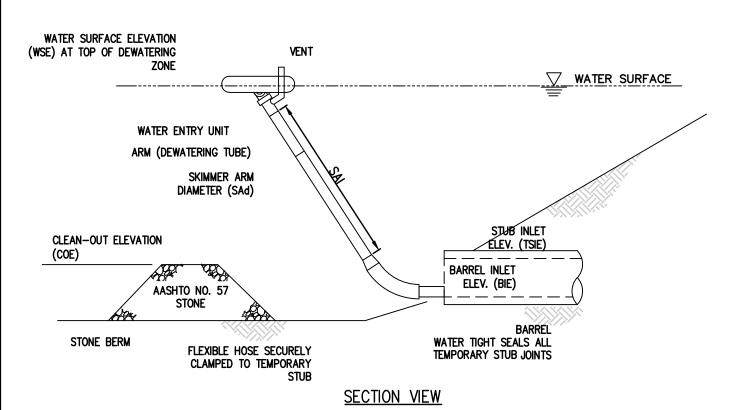
AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.





	WATER		SKIMMER									
	SURFAC		RIF]	ICE		ARM		FLE	XIBLE H	IDSE		
BASIN ND.	ELEV. WSE (FT)	DIA		HEAD (FT)	DIA. SAd (IN)	LENGT H SAL (FT)	MAT'L	DIA. (IN)	LENGT H (IN)	MAT'L		
1	154.2	4.5	j	N/A	4	5	PVC	4	5	HDPE		
TEMF	PORARY S	STUB	BAF	RREL								
INSIDE DIA (IN)	INVERT ELEV TSIE (FT)	MAT'L	EL	LET LEV BIE FT)								

ALL ORIFICES ON PERMANENT RISER BELOW TEMPORARY RISER EXTENSION SHALL HAVE WATER-TIGHT TEMPORARY SEALS PROVIDED. TEMPORARY STUB INVERT ELEVATION SHALL BE SET AT OR BELOW SEDIMENT CLEAN-OUT ELEVATION.

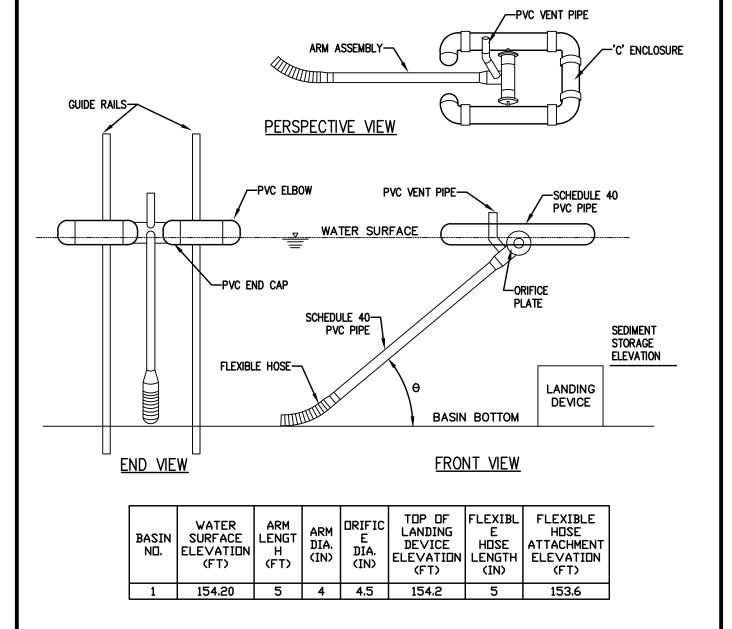
A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

30 153.6 HDPE 153.6

ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE STONE BERM. SEE STANDARD CONSTRUCTION DETAIL #7-3 FOR CONFIGURATION OF STONE BERM.

SKIMMER ATTACHED TO PERNAMENT RISER DETAIL



<u>Notes:</u>

ORIFICE DIAMETER MUST BE EQUAL TO OR LESS THAN ARM DIAMETER

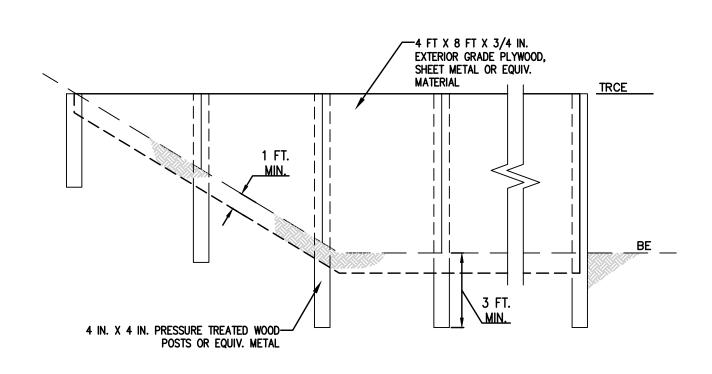
A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION. ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.

A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS (STANDARD CONSTRUCTION DETAIL # 7-3).





BASIN LENGT HEIGHT CREST	
NO Bol Bah TF	ELEV. BOTTOM ELEV ELEV BE (FT)
1 556 6.2 1	50 152

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

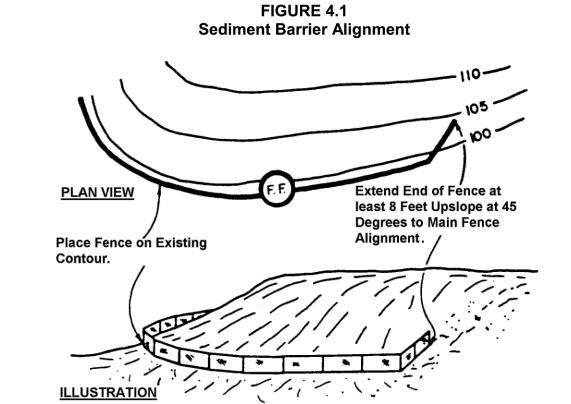
DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.





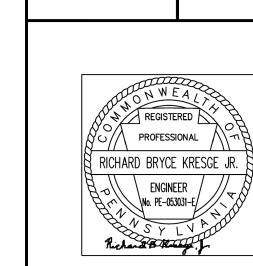
PA DEP



Sediment barriers should be installed on existing level grade in order to be effective. Barriers which cross contours divert runoff to a low point where failure usually occurs. The ends of sediment barriers should be turned upslope at 45 degrees to the main barrier alignment for a distance sufficient to elevate the bottom of the barrier ends to the elevation of the top of the barrier at the lowest point. This is to prevent runoff from flowing around the barrier rather than through it. For most locations, a distance of 8 feet will suffice, as shown in Figure 4.1. In locations where the topography is such that the barrier would have to extend for a long distance, a compacted berm tying into the ends of the barrier may be substituted for the upslope extension.

TABLE 11.1
Cubic Yards of Tonsoil Required for Application to Various Donths

Cubic Yards of Topsoil Required for Application to Various Depths									
Depth (in)	Per 1,000 Square Feet	Per Acre							
1	3.1	134							
2	6.2	268							
3	9.3	403							
4	12.4	537							
5	15.5	672							
6	18.6	806							
7	21.7	940							
8	24.8	1,074							
Adapted from VA DSWC									



Architecture

Engineering

PLAN CYCLI

COMBINE COUNTY, PA

D DEVELO AL GAS C SERKS CC

M

AND I

S S

 $\mathbf{\Omega}$

Environmental Services

37 North Washington St.

Wilkes-Barre, PA 18701

phone 570.829.4200

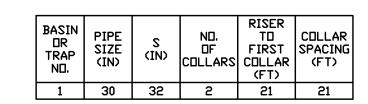
fax 570.829.0302

www.quad3.com

NO.	DATE	REVISIONS							
1	10/28/15	BCCD	C	DMMENT	LETTER	6/29/1			
2	12/11/15	BCCD	C	DMMENT	LETTER	1/12/1			
	_								
PROJECT MGR:		RBK		SCALE:	·	NONE			
ARCH	H/ENG:	RBK		DATE:	5/	/29/2015			
DRAW	N BY:	ММ		JOB NO):	10708.04			

EROSION AND SEDIMENT CONTROL DETAILS

O.D. CONTINUOUS WELD, BOTH SIDES (MODIFY TO ELIMINATE OVERLAP 1/2 IN. x 2 IN. SLOTTED HOLES FOR 3/8 IN. DIAMETER BOLTS 16 GAGE SHEET METAL 2 2/3" x 1/2" CORRUGATIONS **END VIEW ELEVATION**



NOTES:

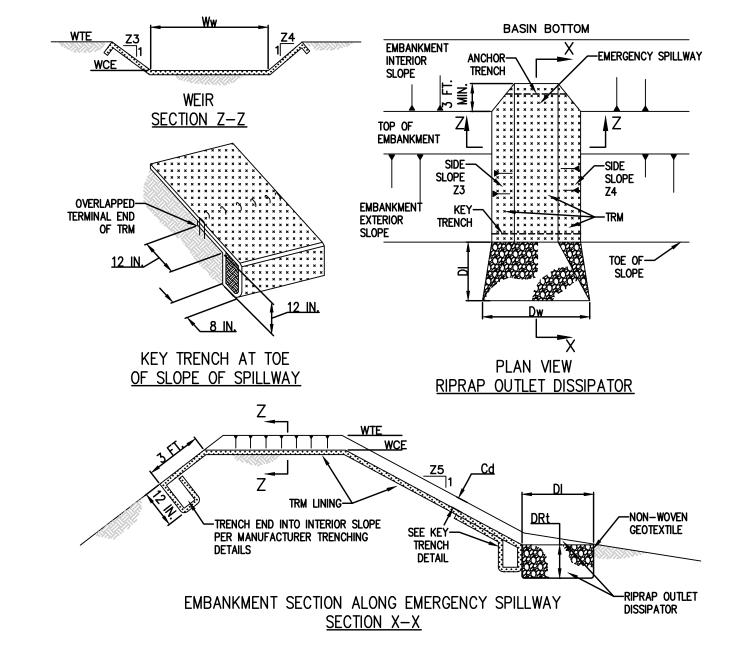
COLLAR SHALL BE OF SAME GAGE AND WITH SAME COATING AS PIPE WITH WHICH IT IS USED.

INSTALL WITH CORRUGATIONS VERTICAL.

MINIMUM DISTANCE TO PIPE JOINT SHALL BE 2 FEET.

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND CONNECTING BAND SHALL BE CAULKED WITH ASPHALT MASTIC AT TIME OF INSTALLATION. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.



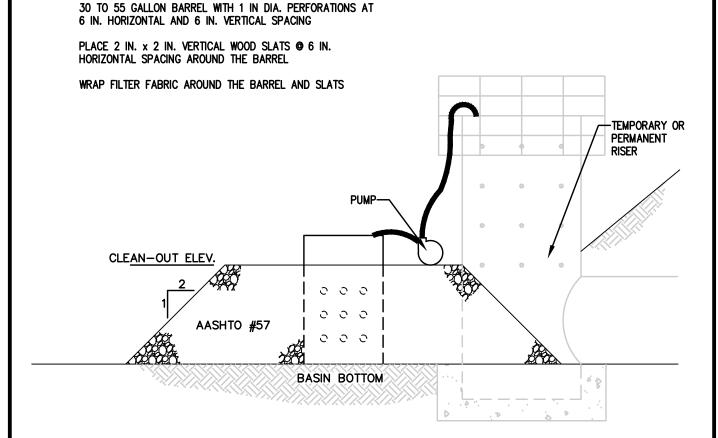


	WEIR				LINING		CHANNEL		DISSIPATOR				
IN J.	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	LENGT H DI (FT)	WIDTH Dw (FT)	RIPRAP SIZE (R)	RIPRAP THICK. DRt (IN)
	3	3	164.0	163.0	20	NAG S75	E	3	0.5	N/A	N/A	N/A	N/A

NOTES:

HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING. DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY. RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR. THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.





DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP. PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL BE CLEANED FROM THE INSIDE OF THE BARREL.

DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY SHUT DOWN AND NOT RESTARTED UNTIL THE

DEWATERING FACILITY DETAIL