



LOCATION MAP
1"=2000'

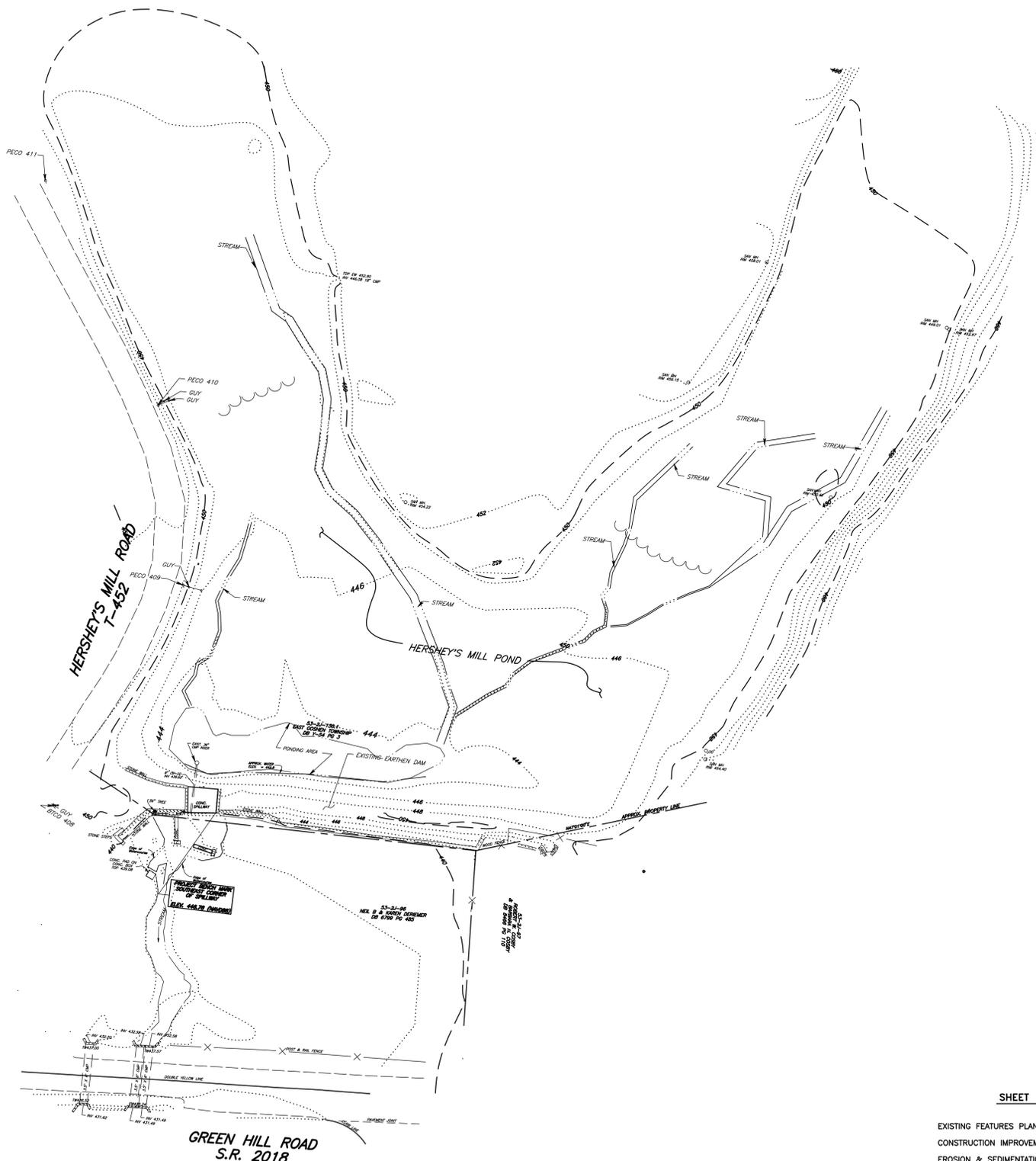
DAM OPERATION AND MAINTENANCE

I. OPERATION PLAN:

1. BACKGROUND DATA:
 - EARTHEN EMBANKMENT, 10 FOOT WIDE AT TOP OF EMBANKMENT.
 - DAM HEIGHT IS 12 FEET.
 - TOP OF DAM ELEVATION IS 450.50.
 - THE AVAILABLE FREEBOARD ABOVE THE 100 YEAR STORM EVENT ELEVATION IS 0.53 FEET.
 - THE DAM IS CLASSIFIED AS A C-2 NON HAZARD DAM.
 - THE OVERFLOW SPILLWAY IS A REINFORCED CONCRETE SPILLWAY.
 - A GATE VALVE LOCATED IN AN EIGHT INCH DIAMETER RISER IS IN PLACE TO OPEN A VALVE TO DEWATER THE POND VIA A 24" DIAMETER PIPE.
 - THE NORMAL PONDING ELEVATION IS 446.78.
2. OUTLET DEVICES:
 - PRINCIPLE SPILLWAY IS A 22 FT. WIDE CONCRETE SPILLWAY.
 - OVERFLOW SPILLWAY FOR STORM EVENTS IS A 58 FT. WIDE CONCRETE SPILLWAY.
 - DEWATERING PIPE IS A 24" CORRUGATED METAL PIPE.

II. MAINTENANCE PLAN:

1. AREAS OF REQUIRED MAINTENANCE:
 - A. EMBANKMENT
 - 1) VEGETATION CONTROL
 - 2) RODENT CONTROL
 - 3) MINOR EARTHWORK AND EROSION REPAIR
 - 4) EROSION PROTECTION
 - B. SPILLWAY
 - 1) MINOR EARTHWORK AND EROSION REPAIR
 - 2) CONCRETE REPAIR
 - 3) REPAIR ANY AREAS OF SPILLWAY UNDERMINING
 - C. OUTLET
 - 1) EROSION REPAIR
 - 2) REMOVAL OF ANY SEDIMENT ACCUMULATION
 - 3) RIP RAP REPLACEMENT
2. MAINTENANCE SCHEDULE:
 - A. THE DAM, SPILLWAY AND OUTLET STRUCTURE MUST BE INSPECTED TWICE A YEAR (SPRING AND FALL), AND AFTER ANY SIGNIFICANT STORM EVENT.
 - B. AN INSPECTION REPORT MUST BE GENERATED AND SUBMITTED TO THE TOWNSHIP MANAGER TO KEEP IN THE RECORDS. ANY REPAIRS NOTED MUST BE DOCUMENTED WHEN COMPLETED.



GENERAL NOTES:

1. TOPOGRAPHIC FEATURES PLOTTED FROM FIELD SURVEY 2-20-12 BY EDWARD B. WALSH AND ASSOCIATES, INC. (EBWA)
2. REFERENCE EXISTING CONDITIONS PLAN DATED 3-28-08 BY YERKES ASSOCIATES, INC. WEST CHESTER, PA.
3. PROJECT BENCH MARK (ELEVATION 446.78) FOR EBWA SURVEY AND YERKES PLAN IS THE SOUTHEAST CORNER OF THE CONCRETE SPILLWAY. DATUM IS NAVD88
4. THE PROPOSED PROJECT INCLUDES THE IMPROVEMENTS AS SHOWN TO CONSTRUCT AN OVERFLOW SPILLWAY AND TO INCREASE THE HEIGHT OF THE EXISTING EMBANKMENT.
5. THE EXISTING TREES ON THE EMBANKMENT MUST BE REMOVED.
6. A TEMPORARY CONSTRUCTION EASEMENT IS REQUIRED FROM THE OWNER OF TAX PARCEL 97 TO ALLOW THE CONSTRUCTION OF THE EMBANKMENT.
7. THE PROPERTY OWNER MUST ADHERE TO THE OPERATION AND MAINTENANCE PLAN AS PROVIDED ON THIS SHEET.
8. DURING CONSTRUCTION A GEOTECHNICAL ENGINEER MUST EVALUATE THE STRUCTURAL STABILITY OF THE EXISTING LEFT SPILLWAY WALL TO ENSURE ITS FOUNDATION/PLACEMENT REMAINS STABLE.

LEGEND	
--- 430 ---	EXISTING INDEX CONTOUR
-----	EXISTING INTERIOR CONTOUR
---	EXISTING FENCE
---	EDGE OF WATER
---	EXISTING EDGE OF PAVEMENT

ENGINEERS CERTIFICATION

I, ADAM BROWER, DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA. C.S.A. SEC. 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS AND REPORTS HAS BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE, IS TRUE AND CORRECT, AND IS IN CONFORMANCE WITH CHAPTER 105 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

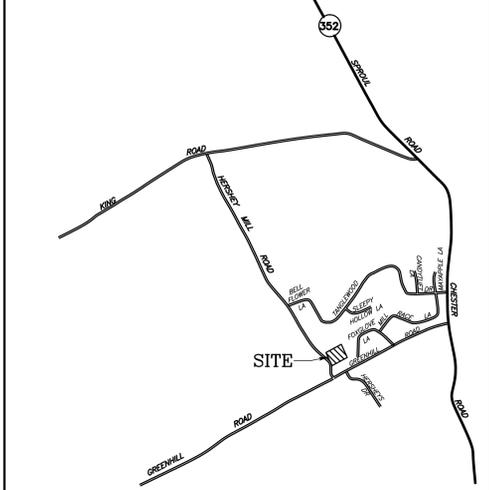
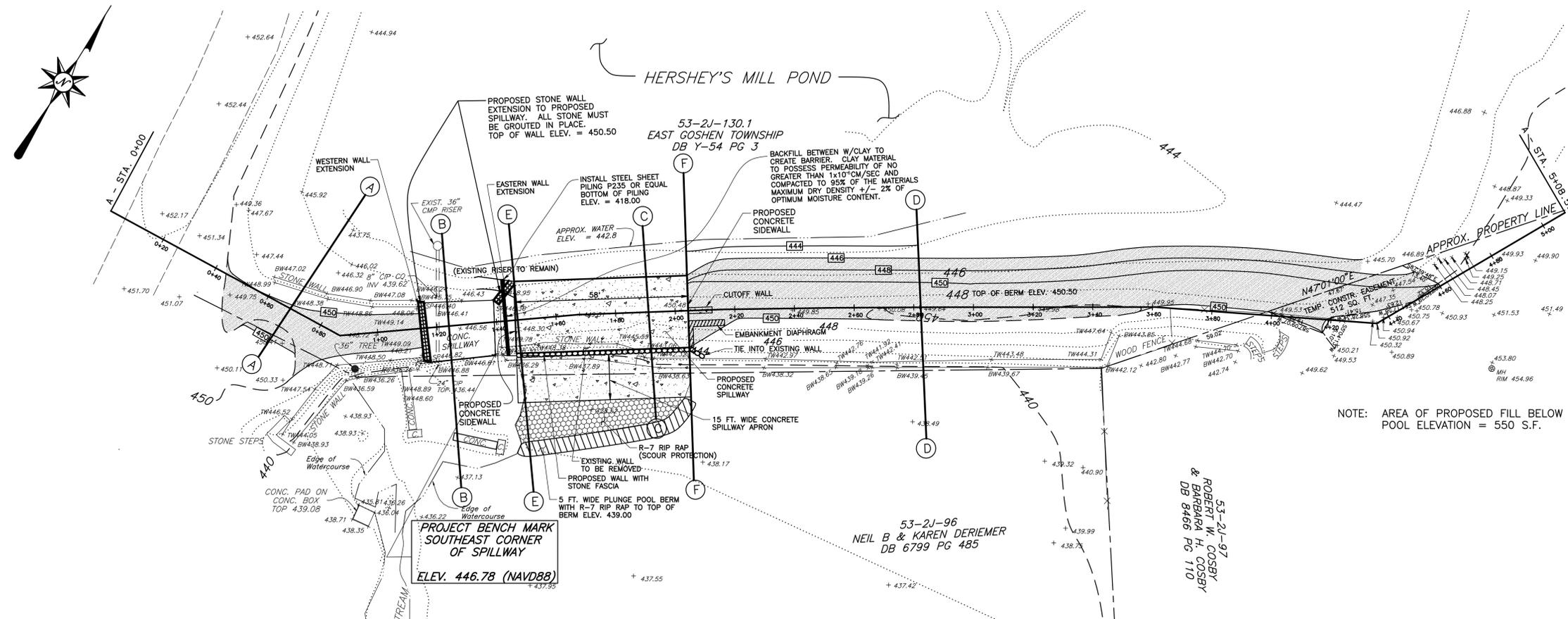
SHEET INDEX

EXISTING FEATURES PLAN	1 OF 6
CONSTRUCTION IMPROVEMENT PLAN	2 OF 6
EROSION & SEDIMENTATION CONTROL PLAN	3 OF 6
CONSTRUCTION DETAILS	4 OF 6
CROSS SECTIONS	5 & 6 OF 6



EXISTING FEATURES PLAN

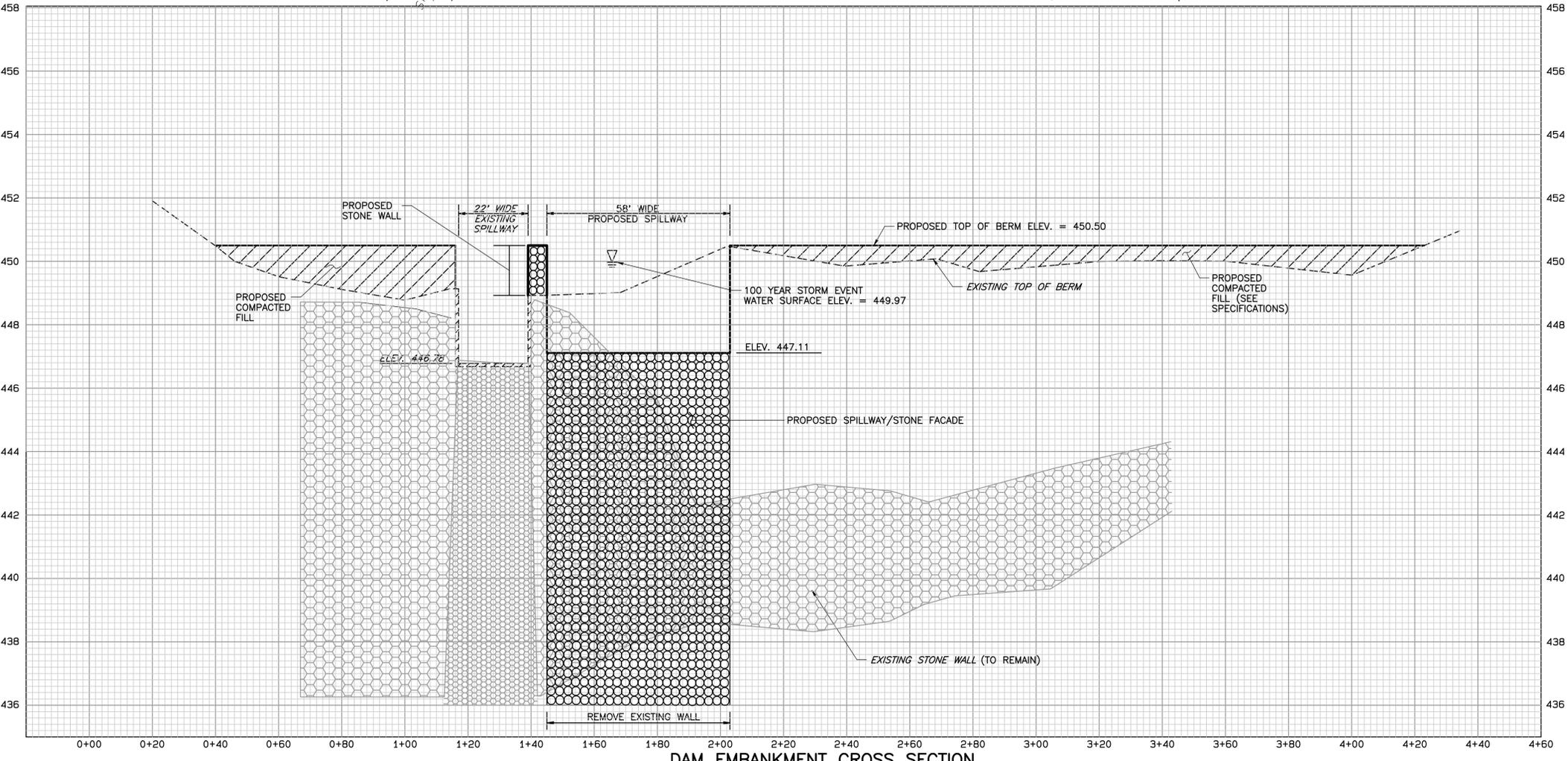
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3	12-30-13	REVISE WALL DETAILS PER DEP
2	11-6-13	REVISED PER COMMENTS IN DEP REVIEW LETTER DATED 9-18-13
1	7-1-13	REVISED PER COMMENTS IN DEP REVIEW LETTER DATED 3-22-13
RESTORATION PLAN FOR HERSHEY'S MILL DAM		
EAST GOSHEN TOWNSHIP		CHESTER COUNTY, PA.
Edward B. Walsh & Associates, Inc.		Project- 3550
CIVIL ENGINEERS & SURVEYORS		Date- 4-10-12
125 Down Forge Road Easton, Pennsylvania 19341 Phone (610) 903-0060 Fax (610) 903-0080		Scale- 1" = 50'
		Drawn- R.F.N.
		Checked- A.J.B.
Plotted: 7/22/2014		Ver- 000
File: F:\JB\3550\3550-B1.pro		Sheet- 1 OF 6



LOCATION MAP
1"=2000'

LEGEND

- 430 — EXISTING INDEX CONTOUR
- EXISTING INTERIOR CONTOUR
- X- EXISTING FENCE
- EDGE OF WATER
- - - - EXISTING EDGE OF PAVEMENT
- PROPOSED CONTOUR
- ▨ PROPOSED BERM EXTENSION/FILL



DAM EMBANKMENT CROSS SECTION

SCALE: H 1"=20'
V 1"=2'

CONSTRUCTION IMPROVEMENT PLAN

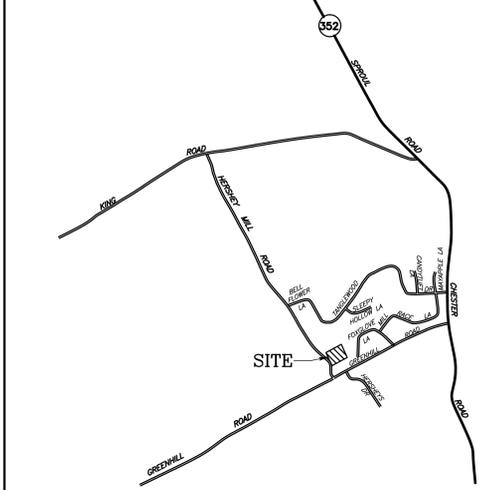
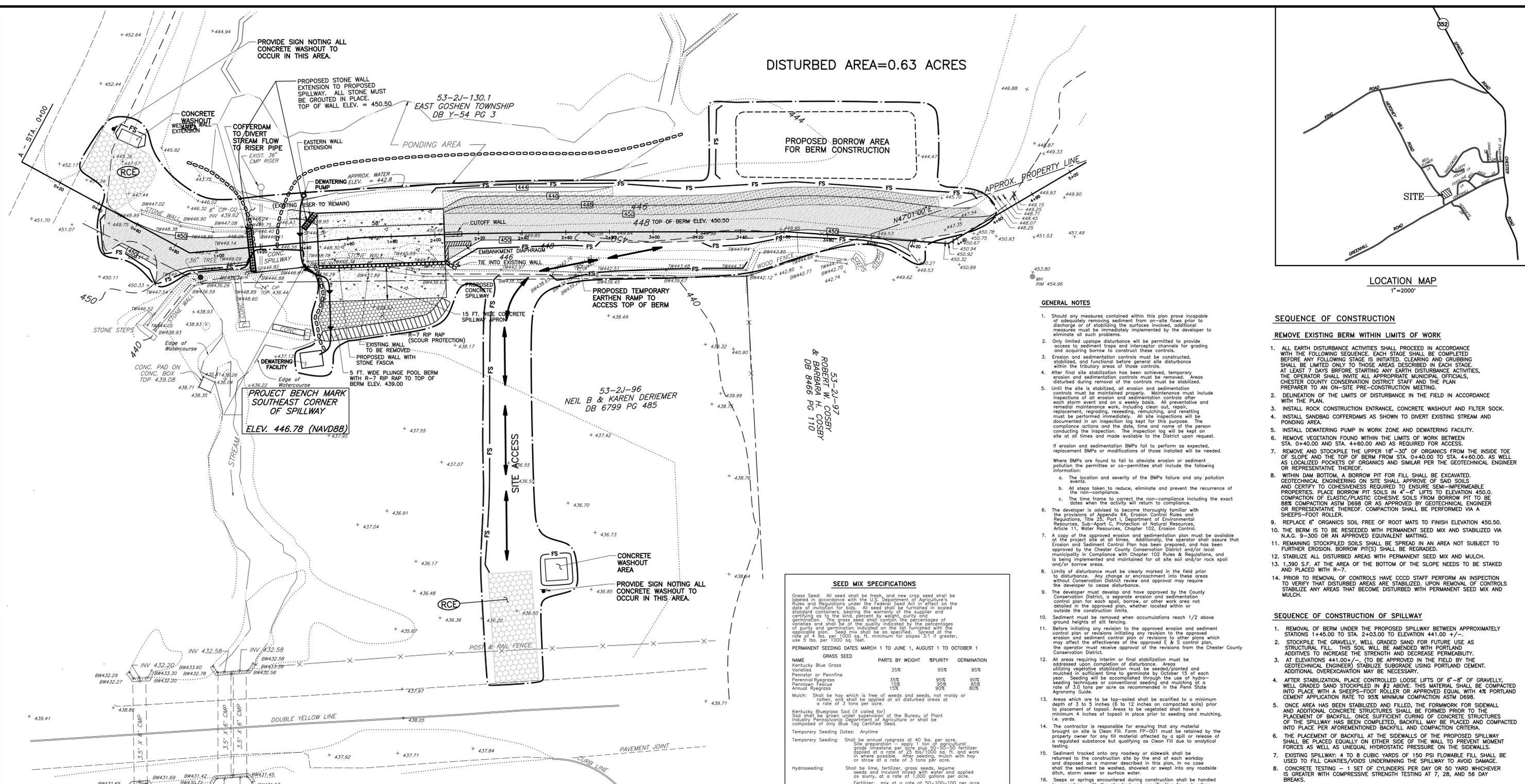
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1	REV. 12-12-12	TEMP. CONSTR. EASEMENT ADDED

RESTORATION PLAN
FOR
HERSHEY'S MILL DAM

EAST GOSHEN TOWNSHIP CHESTER COUNTY, PA.
Edward B. Walsh & Associates, Inc.
CIVIL ENGINEERS & SURVEYORS
125 DOWLIN FORGE ROAD
EASTON, PENNSYLVANIA 17931
Phone (610) 903-0060
Fax (610) 903-0080



Project- 3550
Date- 4-10-12
Scale- 1"= 20'
Drawn- SLM
Checked- A.J.B.
Sheet- 2 OF 6
Plotted: 7/22/2014
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Ver.- 000



DISTURBED AREA=0.63 ACRES

GENERAL NOTES

- Should any measures contained within this plan prove incapable of adequately removing sediment from on-site flows prior to discharge or of stabilizing the surfaces involved, additional measures must be immediately implemented by the developer to eliminate all such problems.
 - Only limited upstate disturbance will be permitted to provide access to sediment traps and interceptor channels for grading and acquiring borrow to construct these controls.
 - Erosion and sedimentation controls must be constructed, stabilized, and functional before general site disturbance within the tributary areas of those controls.
 - After final site stabilization has been achieved, temporary erosion and sedimentation controls must be removed. Areas disturbed during removal of the controls must be stabilized.
 - Until the site is stabilized, all erosion and sedimentation controls must be maintained properly. Maintenance must include inspections of all erosion and sedimentation controls after each storm event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, re-mulching, and resetting must be performed immediately. All site inspections will be documented in an inspection log kept for this purpose. The compliance actions and the date, time and name of the person conducting the inspection. The inspection log will be kept on site at all times and made available to the District upon request.
- If erosion and sedimentation BMPs fail to perform as expected, replacement BMPs or modifications of those installed will be needed.
- Where BMPs are found to fail to alleviate erosion or sedimentation, the permittee or co-permittee shall include the following information:
- The location and severity of the BMPs failure and any pollution events.
 - All steps taken to reduce, eliminate and prevent the recurrence of the non-compliance.
 - The time frame to correct the non-compliance including the exact dates when the facility will return to compliance.
 - The developer is advised to become thoroughly familiar with the provisions of Appendix 64, Erosion Control Rules and Regulations, Title 25, Part I, Department of Environmental Resources, Sub-Appar C, Protection of Natural Resources, Article 11, Water Resources, Chapter 102, Erosion Control.
- A copy of the approved erosion and sedimentation plan must be available at the project site at all times. Additionally, the operator shall assure that Erosion and Sediment Control Plan has been prepared, and has been approved by the Chester County Conservation District and/or local municipality in compliance with Chapter 102 Rules & Regulations, and is being implemented and maintained for all site soil and/or rock spill and/or borrow areas.
 - Limits of disturbance must be clearly marked in the field prior to disturbance. Any change or encroachment into these areas without Conservation District review and approval may require the developer to cease disturbance.
 - The developer must develop and have approved by the County Conservation District, a separate erosion and sedimentation control plan for each spill, borrow, or other work area not detailed in the approved plan, whether located within or outside the construction limits.
 - Sediment must be removed when accumulations reach 1/2 above ground heights of silt fencing.
 - Before initiating any revision to the approved erosion and sediment control plan or 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 Chester County Conservation District.
 - All areas requiring interim or final stabilization must be addressed upon completion of disturbance. Areas utilizing vegetative stabilization must be seeded/planted and mulched in sufficient time to germinate by October 15 of each year. Seeding will be accomplished through the use of hydro-seeding techniques or conventional seeding and mulching at a rate of 3.0 tons per acre as recommended in the Penn State Agronomy Guide.
 - Areas which are to be top-soiled 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, i.e. yards.
 - The contractor is responsible for ensuring that any material brought on site is Clean Fill. Form FS-201 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.
 - Sediment tracked onto any roadway or sidewalk shall be returned to the construction site by the end of each workday and disposed of in a 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.
 - Seeps or springs encountered during construction shall be handled in accordance with the standard and specification for subsurface drain or other approved methods.
 - Stockpile heights must not exceed 35 feet. Stockpile slopes must be 2:1 or flatter.

SEQUENCE OF CONSTRUCTION

REMOVE EXISTING BERM WITHIN LIMITS OF WORK

- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL APPROPRIATE MUNICIPAL OFFICIALS, CHESTER COUNTY CONSERVATION DISTRICT STAFF AND THE PLAN PREPARER TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- DELINEATION OF THE LIMITS OF DISTURBANCE IN THE FIELD IN ACCORDANCE WITH THE PLAN.
- INSTALL ROCK CONSTRUCTION ENTRANCE, CONCRETE WASHOUT AND FILTER SOCK.
- INSTALL SANDBAG COFFERDAMS AS SHOWN TO DIVERT EXISTING STREAM AND PONDING AREA.
- INSTALL DEWATERING PUMP IN WORK ZONE AND DEWATERING FACILITY.
- REMOVE VEGETATION FOUND WITHIN THE LIMITS OF WORK BETWEEN STA. 0+40.00 AND STA. 4+60.00 AND AS REQUIRED FOR ACCESS.
- REMOVE AND STOCKPILE THE UPPER 18" - 30" OF ORGANICS FROM THE INSIDE TOE OF SLOPE AND THE TOP OF BERM FROM STA. 0+40.00 TO STA. 4+60.00. AS WELL AS LOCALIZED POCKETS OF ORGANICS AND SIMILAR PER THE GEOTECHNICAL ENGINEER OR REPRESENTATIVE THEREOF. COMPACTION SHALL BE PERFORMED VIA A SHEEPS-FOOT ROLLER.
- WITHIN DAM BOTTOM, A BORROW PIT FOR FILL SHALL BE EXCAVATED. GEOTECHNICAL ENGINEERING ON SITE SHALL APPROVE OF SAID SOILS AND CERTIFY TO COHESIVENESS REQUIRED TO ENSURE SEMI-IMPERMEABLE PROPERTIES. PLACE BORROW PIT SOILS IN 4" LIFTS TO ELEVATION 450.0. COMPACTION OF ELASTIC/PLASTIC COMPACTION SOILS FROM BORROW PIT TO BE 85% COMPACTION ASTM D698 OR AS APPROVED BY GEOTECHNICAL ENGINEER OR REPRESENTATIVE THEREOF. COMPACTION SHALL BE PERFORMED VIA A SHEEPS-FOOT ROLLER.
- REPLACE 6" ORGANICS SOIL FREE OF ROOT MATS TO FINISH ELEVATION 450.50.
- THE BERM IS TO BE RESEEDED WITH PERMANENT SEED MIX AND STABILIZED VIA N.S. 8-300 OR AN APPROVED EQUIVALENT MATING.
- REMAINING STOCKPILED SOILS SHALL BE SPREAD IN AN AREA NOT SUBJECT TO FURTHER EROSION. BORROW PIT(S) SHALL BE REGRADED.
- STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEED MIX AND MULCH.
- 1,390 S.F. AT THE AREA OF THE BOTTOM OF THE SLOPE NEEDS TO BE STAKED AND PLACED WITH R-7.
- PRIOR TO REMOVAL OF CONTROLS HAVE GOOD STAFF PERFORM AN INSPECTION TO VERIFY THAT DISTURBED AREAS ARE STABILIZED UPON REMOVAL OF CONTROLS. STABILIZE ANY AREAS THAT BECAME DISTURBED WITH PERMANENT SEED MIX AND MULCH.

SEQUENCE OF CONSTRUCTION OF SPILLWAY

- REMOVAL OF BERM UNDER THE PROPOSED SPILLWAY BETWEEN APPROXIMATELY STATIONS 1+45.00 TO STA. 2+03.00 TO ELEVATION 441.00 +/-.
- STOCKPILE THE GRAVELLY, WELL GRADED SAND FOR FUTURE USE AS STRUCTURAL FILL. THIS SOIL WILL BE AMENDED WITH PORTLAND ADDITIVES TO INCREASE THE STRENGTH AND DECREASE PERMEABILITY.
- AT ELEVATIONS 441.00 +/-, (TO BE APPROVED IN THE FIELD BY THE GEOTECHNICAL ENGINEER) STABILIZE SUBGRADE USING PORTLAND CEMENT. ADDITIONAL OVEREXCAVATION MAY BE NECESSARY.
- AFTER STABILIZATION, PLACE CONTROLLED LOOSE LIFTS OF 6"-8" OF GRAVELLY, WELL GRADED SAND STOCKPILED IN #2 ABOVE. THIS MATERIAL SHALL BE COMPACTED INTO PLACE WITH A SHEEPS-FOOT ROLLER OR APPROVED EQUAL WITH 4% PORTLAND CEMENT APPLICATION RATE TO 95% MINIMUM COMPACTION ASTM D698.
- ONCE AREA HAS BEEN STABILIZED AND FILLED, THE FORMWORK FOR SIDEWALL AND ADDITIONAL CONCRETE STRUCTURES SHALL BE FORMED PRIOR TO THE PLACEMENT OF BACKFILL. ONCE SUFFICIENT CURING OF CONCRETE STRUCTURES OF THE SPILLWAY HAS BEEN COMPLETED, BACKFILL MAY BE PLACED AND COMPACTED INTO PLACE PER FOREMENTIONED BACKFILL AND COMPACTION CRITERIA.
- THE PLACEMENT OF BACKFILL AT THE SIDEWALLS OF THE PROPOSED SPILLWAY SHALL BE PLACED EQUALLY ON EITHER SIDE OF THE WALL TO PREVENT MOMENT FORCES AS WELL AS UNEQUAL HYDROSTATIC PRESSURE ON THE SIDEWALLS.
- EXISTING SPILLWAY: 4 TO 8 CUBIC YARDS OF 150 PSI FLOWABLE FILL SHALL BE USED TO FILL CAVITIES/VOIDS UNDERMINING THE SPILLWAY TO AVOID DAMAGE.
- CONCRETE TESTING - 1 SET OF CYLINDERS PER DAY OR 50 YARD WHICHEVER IS GREATER WITH COMPRESSIVE STRENGTH TESTING AT 7, 28, AND 56 DAY BREAKS.

SEED MIX SPECIFICATIONS

Grass Seed: All seed shall be fresh, and new crop seed shall be obtained in accordance with the Department of Agriculture's Rules and Regulations under the Federal Seed Act in effect on the date of invitation for bids. All seed shall be furnished in sealed standard containers, bearing the warranty of the supplier and certifying as to the kind, percent by weight, purity and germination. The grass seed shall contain the percentages of varieties and shall be of the quality indicated by the percentages of purity and germination indicated on the list furnished with the applicable plan. Seed mix shall be as specified. Sifted at the rate of 4 lbs. per 1000 sq. ft. minimum for slopes 3:1 if greater, use 2 lbs. per 1000 sq. feet.

PERMANENT SEEDING DATES MARCH 1 TO JUNE 1, AUGUST 1 TO OCTOBER 1

NAME	KENTUCKY BLUE GRASS	PARTS BY WEIGHT	PURITY	GERMINATION
Perennial Ryegrass	35%	95%	85%	
Penninn Fescue	15%	90%	80%	
Annual Ryegrass	15%	90%	80%	

Mulch: Shall be hay which is free of weeds and seeds, not moldy or rotten, and shall be applied at oil disturbed areas at a rate of 3 tons per acre.

Kentucky Bluegrass Sod (if called for)
Sod shall be grown under supervision of the Bureau of Plant Industry Pennsylvania Department of Agriculture or shall be composed of any Blue Top Certified Seed.

Temporary Seeding Dates: Anytime
Temporary Seeding: Shall be annual ryegrass at 40 lbs. per acre. Site preparation - apply 1 ton of agricultural grade limestone per acre plus 50-50-20 fertilizer applied at a rate of 25 lbs/1000 sq. ft. and work in where possible. After seeding, mulch with hay or straw at a rate of 3 tons per acre.

Hydroseeding: Shall be lime, fertilizer, grass seeds, legume seeds and inoculant mixed with water and applied as slurry, at a rate of 1,000 gallons per acre. Fertilizer: mix at a rate of 50-100-100 per acre. Inoculant: use 5 times rate recommended on the package when seeding with a hydroseeder.

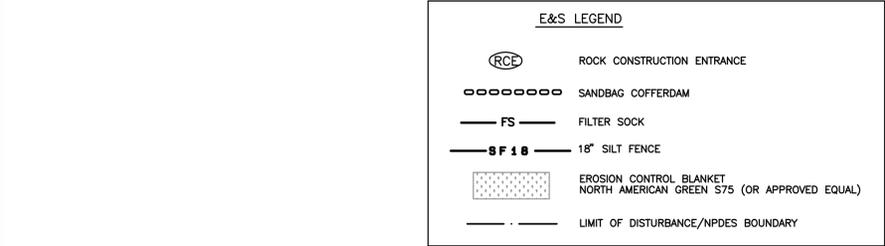
PERMANENT SEEDING: For permanent seeding, soil supplements shall be applied to areas to be seeded as follows: 10-20-20 fertilizer shall be applied to 25 LBS/1000 Sq. Ft. pulverized dolomite limestone at 90 LBS/1000 Sq. Ft.

SEEDING AND MULCH NOTES

- Any undisturbed area on which activity has ceased must be seeded and mulched immediately. During non-germinating periods, mulch must be applied at the recommended rates. Disturbed areas which are not at finished grade and which will be redistributed within 1 year may be seeded and mulched with a quick growing temporary seeding mixture and mulch. Disturbed areas which are either at finished grade or will not be redistributed within 1 year must be seeded and mulched with a permanent seed mixture and mulch immediately.
- Diversions, channels, sedimentation basins, sediment trap must be stabilized immediately with erosion control blanket. Stockpiles must be seeded and mulched immediately.
- Hay or straw mulch must be applied at rates of at least 3.0 tons per acre.
- Graded areas are to be temporarily seeded and mulched immediately following earth moving procedures. Seed shall be annual ryegrass applied at the rate of 3 lbs. per 1000 sq. ft.
- Establish permanent seeding as soon as possible after final grading is complete. Permanent seeding shall be 15% Perennial Ryegrass, 35% Perennial Ryegrass, 30% Kentucky Bluegrass and 15% annual Ryegrass applied at the rate of 4 lbs. per 1000 sq. ft.
- Soils testing should be performed with recommendations provided for appropriate seed mixes and rates based on the soils at the site.

TOPSOIL PLACEMENT NOTES

Areas which are to top-soiled 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, i.e. yards.



EROSION & SEDIMENTATION GENERAL NOTES

- North American Green S 75 Blanket shall be installed on all disturbed areas 33% and greater.
- The operator shall remove from the site, recycle, or dispose of all building material and wastes in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 at sec. 271.1 et seq., and 287.1 et seq. The contractor shall not bury, dump, or discharge any building material wastes at the site.
- The Chester County Conservation District shall inspect the site prior to the removal of any erosion and sedimentation controls.
- All pumping of sediment laden water or potentially sediment laden water shall be through a sediment control BMP, such as a pumped water filter bog discharging over non-disturbed areas.
- An area shall be considered to have achieved final stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

GREEN HILL ROAD
S.R. 2018

EROSION & SEDIMENTATION CONTROL PLAN

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RESTORATION PLAN FOR HERSHEY'S MILL DAM

EAST GOSHEN TOWNSHIP CHESTER COUNTY, PA.

Edward B. Walsh & Associates, Inc. Project- 3550
CIVIL ENGINEERS & SURVEYORS Date- 4-10-12

125 DOWNS FORGE ROAD, HERSHEY, PA 17033-9934 Scale- 1" = 20'
Phone (610) 903-0060 Drawn- SLM
Fax (610) 903-0080 Checked- A.J.B.
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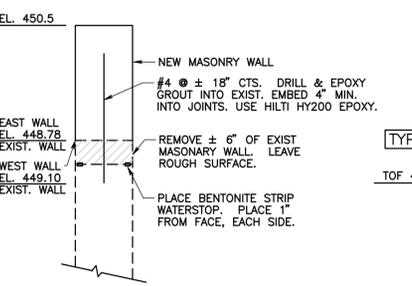
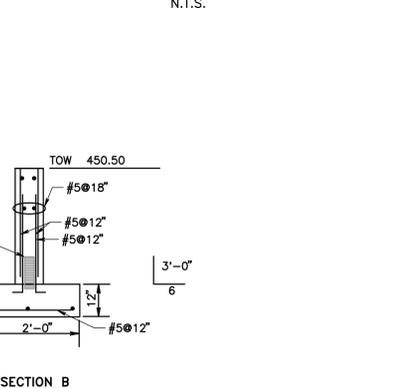
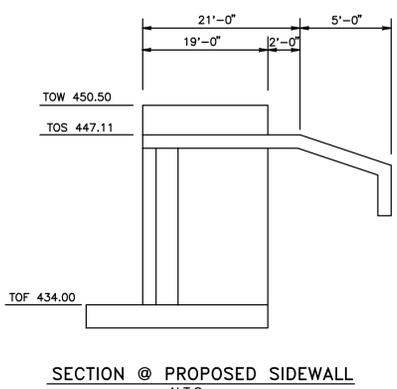
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GENERAL STRUCTURAL NOTES

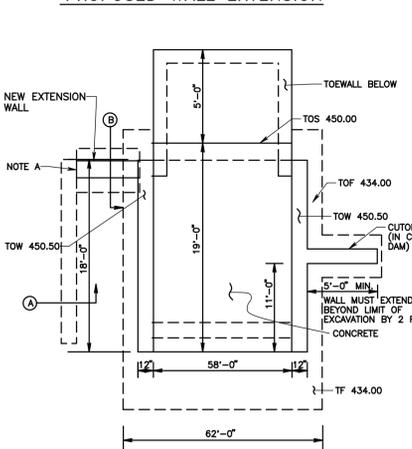
GENERAL
 ALLOWABLE SOIL BEARING PRESSURE 2000 PSF.
 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCY IMMEDIATELY.
 ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE NOTED.
 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SITE SAFETY. PERSONAL INJURY OR DAMAGE TO PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK, WHETHER ADJACENT TO OR AT THE SITE.

FOUNDATIONS
 ALL FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF DEBRIS, STANDING WATER AND LOOSE SOIL AND SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.
 IN STRUCTURE AREA AND SLABS ON GRADE, FILL SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698).
 ALL POURED-IN-PLACE FOUNDATION CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. ALL FLOOR SLABS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
 ALL EXTERIOR SLABS AND EXTERIOR FOUNDATIONS SUBJECT TO FREEZING SHALL BE AIR-ENTRAINED.
 DEFORMED BAR REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185-85.
 UNLESS NOTED OTHERWISE ON DRAWINGS, CONCRETE REINFORCEMENT SHALL BE PLACED SUCH THAT THE FOLLOWING MINIMUM CONCRETE COVERAGE IS PROVIDED:
 FOOTINGS 4"
 SLABS 1 1/2"
 BEAMS/WALLS 1 1/2"

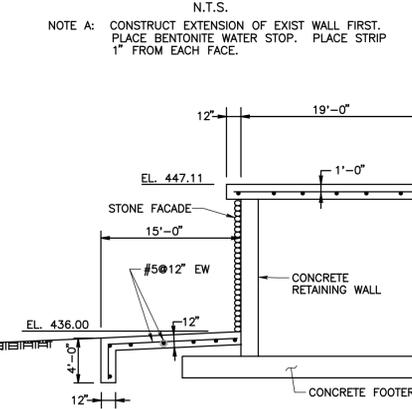
ALL REINFORCEMENT BARS SHALL BE FABRICATED IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (1989) AND SHALL BE CLEAN AND FREE OF GREASE, SCALING RUST OR OTHER BOND-INHIBITING SUBSTANCES.
 HORIZONTAL BARS IN FOOTINGS, FOUNDATION WALLS AND GRADE BEAMS TO RUN CONTINUOUS UNLESS OTHERWISE NOTED. LAP 30 BAR DIAMETERS OR 2'-0" MINIMUM AT ALL CORNERS.
 A 3/4" x 3/4" CHAMFER SHALL BE PROVIDED AT THE EDGE OF ALL FINISHED WALLS, BEAMS AND COLUMNS.



PROPOSED WALL EXTENSION

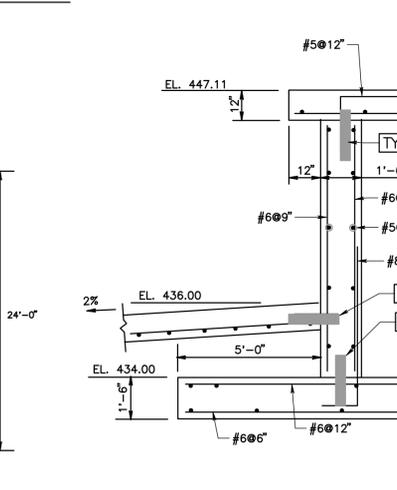


PROPOSED SPILLWAY SECTION

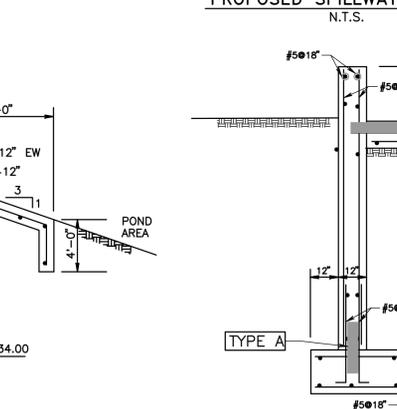


SECTION THRU PROPOSED SPILLWAY

SPILLWAY CONSTRUCTION DETAILS AND SPECIFICATIONS

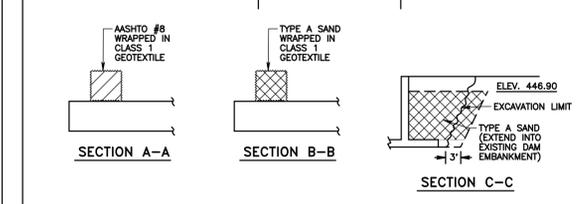
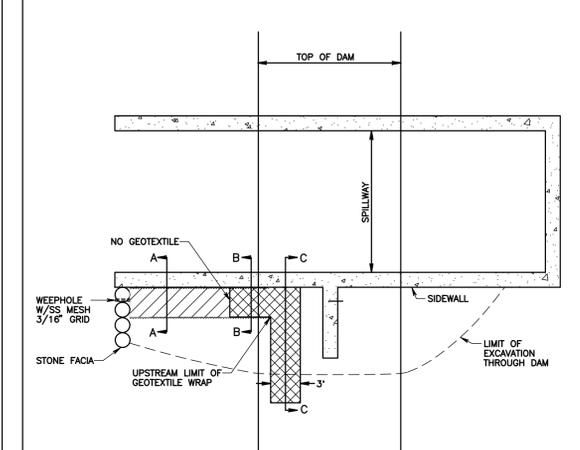


PROPOSED SPILLWAY SECTION



PROPOSED SPILLWAY SIDEWALL

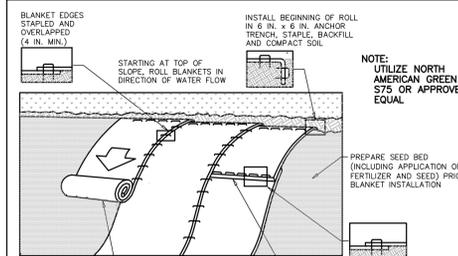
EMBANKMENT DIAPHRAGM FOR INTRUSIVE SPILLWAY CONSTRUCTION
 NOT TO SCALE



SECTION A-A, SECTION B-B, SECTION C-C

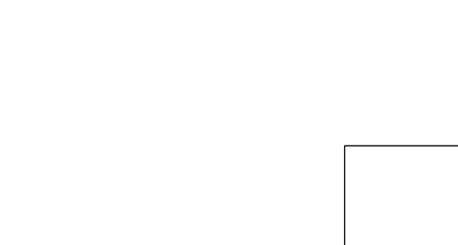
WATERSTOPS:

TYPE A: 9" RIBBED WITH CENTER BULB USE TYPE A AT ALL EXPANSION JOINTS IN WALL. USE SPECIAL CONNECTORS AT ALL CORNERS AND INTERSECTIONS.



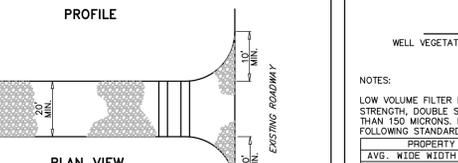
STANDARD CONSTRUCTION DETAIL #11-1 EROSION CONTROL BLANKET INSTALLATION

THE BLANKET SHOULD OVERLAP BLANKET ENDS 6 IN. MIN. WITH THE UPSLOPE BLANKET. OVERLAP THE DOWNSLOPE BLANKET (SHINGLE STYLE), STAPLE SECURELY.
 IT MUST MAINTAIN GOOD SOIL CONTACT.
 SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
 SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
 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.
 THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN A CALENDAR DAYS.



STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE

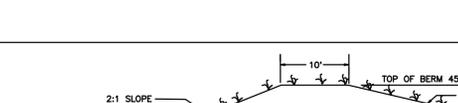
NOTE: REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
 RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
 MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE 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.
 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 THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.



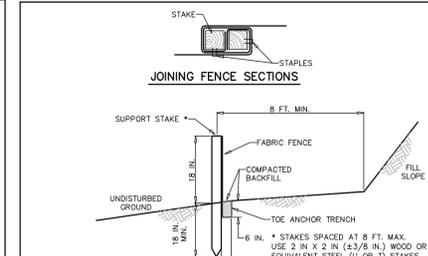
STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOTE: ALL TOPSOIL AND VEGETATION MUST BE REMOVED PRIOR TO INSTALLING FILL MATERIAL.
 FILL MATERIAL/COMPACTION NOTES: ALL EARTH FILL SHALL BE FREE FROM BRUSH, ROOTS AND OTHER ORGANIC MATERIAL SUBJECT TO DECOMPOSITION. THE FILL MATERIAL IN ALL EARTH DAMS AND EMBANKMENTS SHALL BE COMPACTED TO AT LEAST NINETY FIVE PERCENT (95%) OF THE MAXIMUM DENSITY OBTAINED FROM COMPACTION TESTS PERFORMED BY THE APPROPRIATE METHOD IN ASTM D698 AND TO THE SATISFACTION OF THE TOWNSHIP.
 THE EMBANKMENT SHALL BE CONSTRUCTED WITH A COMPACTED, RELATIVELY IMPERVIOUS (UNIFIED SOIL CLASSIFICATION CL-MR OR CL) THAT CAN BE FOUND INSIDE THE POND AREA. THE FILL MUST BE COMPACTED IN 6" LIFTS WITH A VIBRATORY, SHEEPS FOOT ROLLER.
 TO PROVIDE A 10 FOOT WIDE BERM THE TOP WILL EXTEND INTO THE EXISTING POND AREA. PRIOR TO INSTALLATION OF FILL ALL EXISTING MATERIAL THAT IS NOT ACCEPTABLE FOR COMPACTION AS NOTED BY THE GEOTECHNICAL ENGINEER MUST BE REMOVED.

POND EMBANKMENT CROSS SECTION

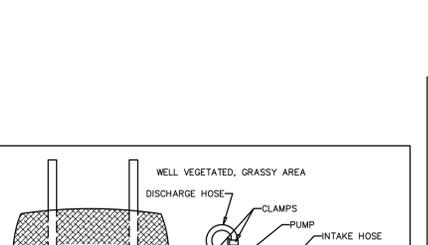


POND EMBANKMENT CROSS SECTION



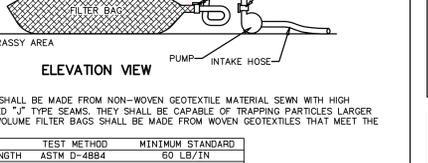
STANDARD CONSTRUCTION DETAIL #4-7 STANDARD SILT FENCE (18" HIGH)

NOTES:
 FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.
 FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.
 SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
 SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.
 ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).
 FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.



STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

NOTES:
 SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
 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.
 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.
 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.
 PHOTOGRAPHERABLE 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.



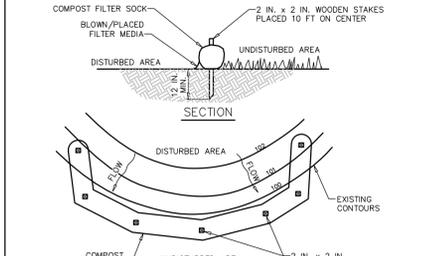
STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG

NOTE: LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGHER STRENGTH DOUBLE STITCHED 1" 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:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4893	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4395	70% AOS % RETAINED
AOS % RETAINED	ASTM D-4751	80 SIEVE

 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.

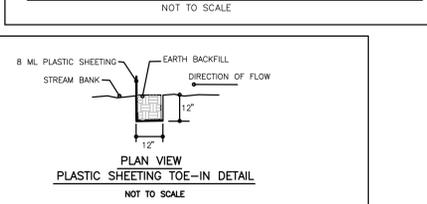
STANDARD CONSTRUCTION DETAIL #3-16 PUMPED WATER FILTER BAG



STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK

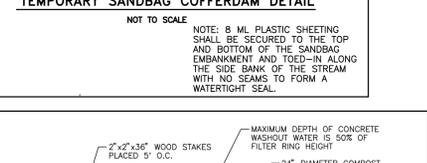
NOTE: BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS.
 PHOTOGRAPHERABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1 COMPOST FILTER SOCK



TEMPORARY SANDBAG COFFERDAM DETAIL

NOTE: 8 MIL PLASTIC SHEETING SHALL BE SECURED TO THE TOP AND BOTTOM OF THE SANDBAG EMBANKMENT AND TOED-IN ALONG THE SIDE BANK OF THE STREAM WITH NO SEAMS TO FORM A WATERTIGHT SEAL.



CONCRETE WASHOUT AREA DETAIL

NOTE: 1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
 2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
 24" DIAMETER COMPOST FILTER SOCK. 4" MIN. OVERLAP ON UPSLOPE SIDE OF FILTER RING.
 24" DIAMETER COMPOST FILTER SOCK. 4" MIN. OVERLAP ON UPSLOPE SIDE OF FILTER RING.
 INSTALL A 20 MIL PVC GEOMEMBRANE IN THE WASHOUT AREA PRIOR TO INSTALLING THE FILTER SOCKS.

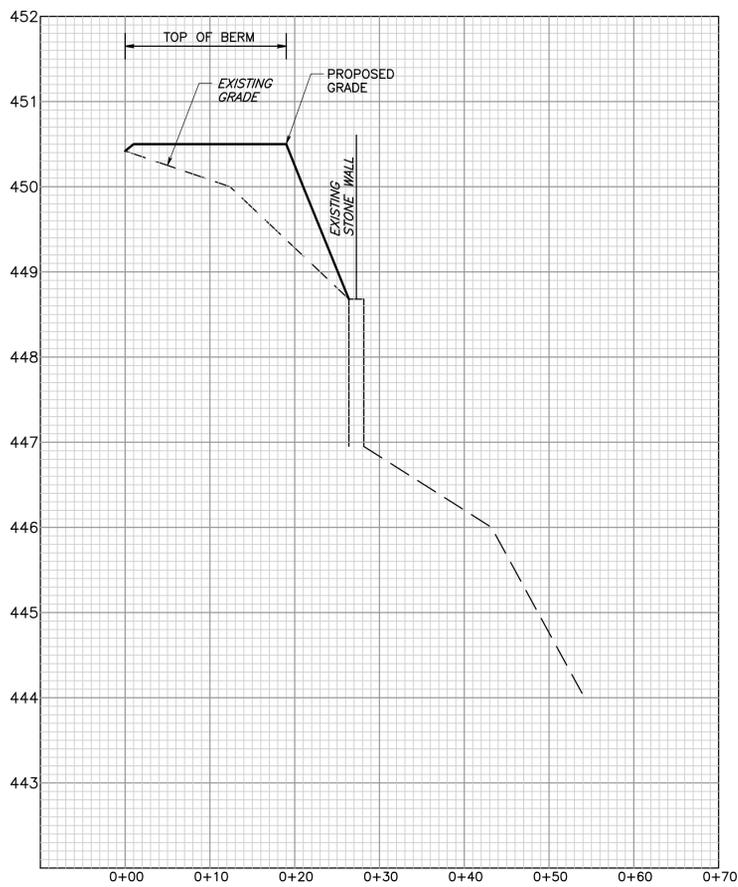
CONCRETE WASHOUT AREA DETAIL

DETAIL SHEET

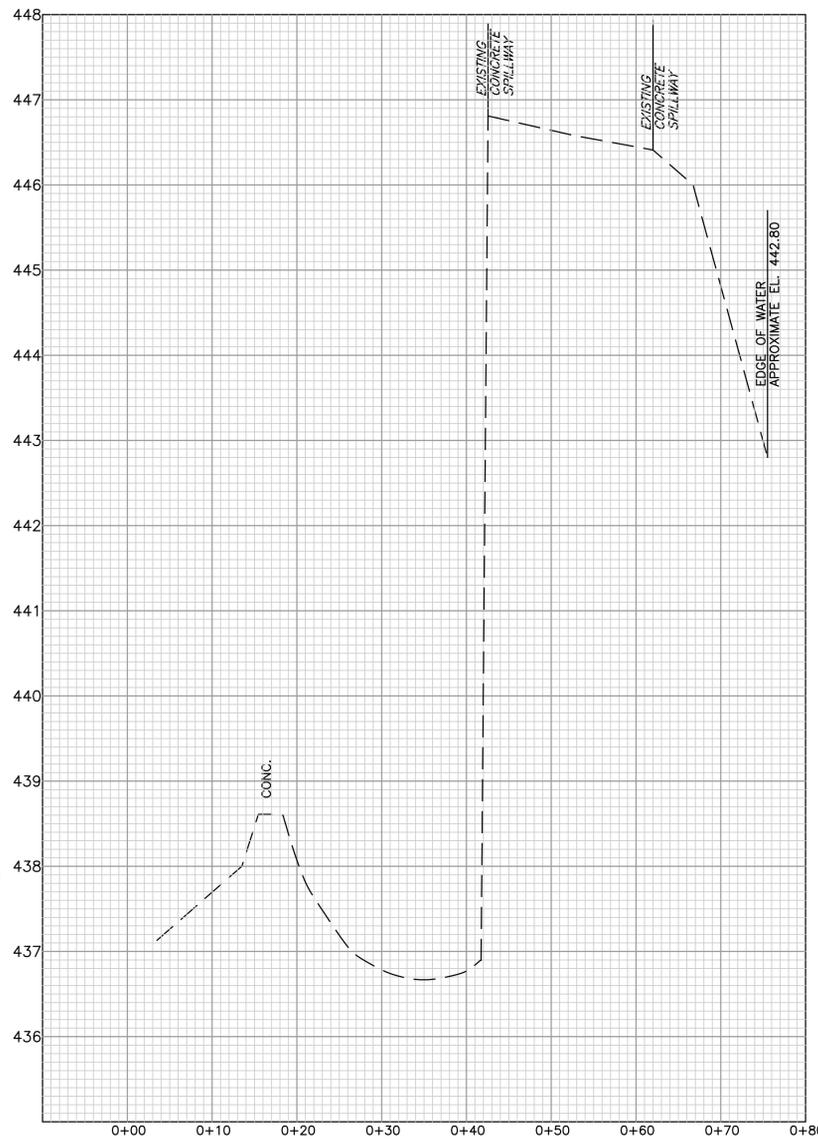
4	6-11-14	REVISE WALL DETAILS PER DEP
3	12-30-13	REVISE WALL DETAILS PER DEP
2	11-6-13	REVISED PER COMMENTS IN DEP REVIEW LETTER DATED 9-18-13
1	7-1-13	REVISED PER COMMENTS IN DEP REVIEW LETTER DATED 3-22-13

RESTORATION PLAN FOR HERSHEY'S MILL DAM

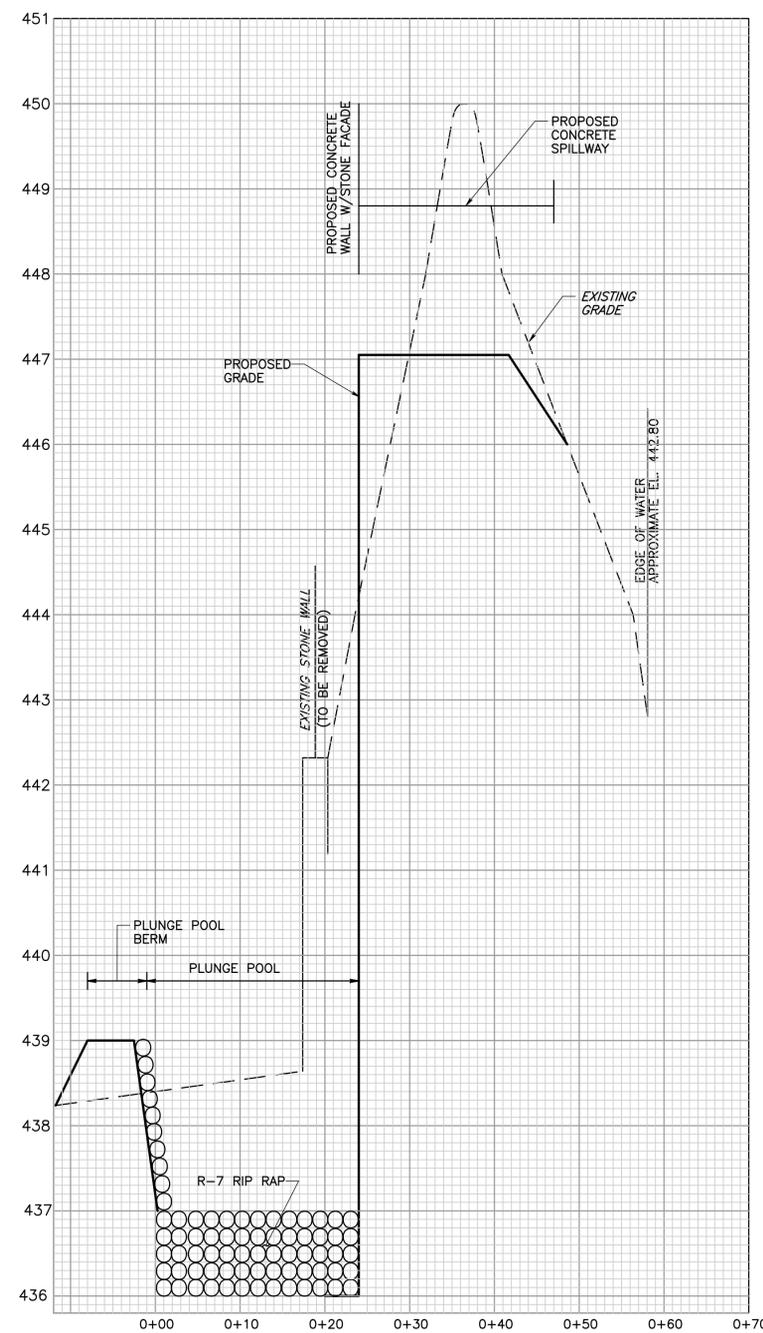
EAST GOSHEN TOWNSHIP CHESTER COUNTY, PA.
 Edward B. Walsh & Associates, Inc. Project- 3550
 CIVIL ENGINEERS & SURVEYORS Date- 4-10-12
 125 DOWNS FORGE ROAD Scale- 1" = 20'
 Easton, Pennsylvania 19341 Drawn- SLM
 Phone (610) 903-0060 Checked- A.J.B.
 Fax (610) 903-0080 Sheet- 4 OF 6
 Plotted: 7/22/2014 P:\E:\R\3550\3550-81.prc Ver.- 000



CROSS SECTION A-A
 SCALE: H. 1"=10'
 V. 1"=1'



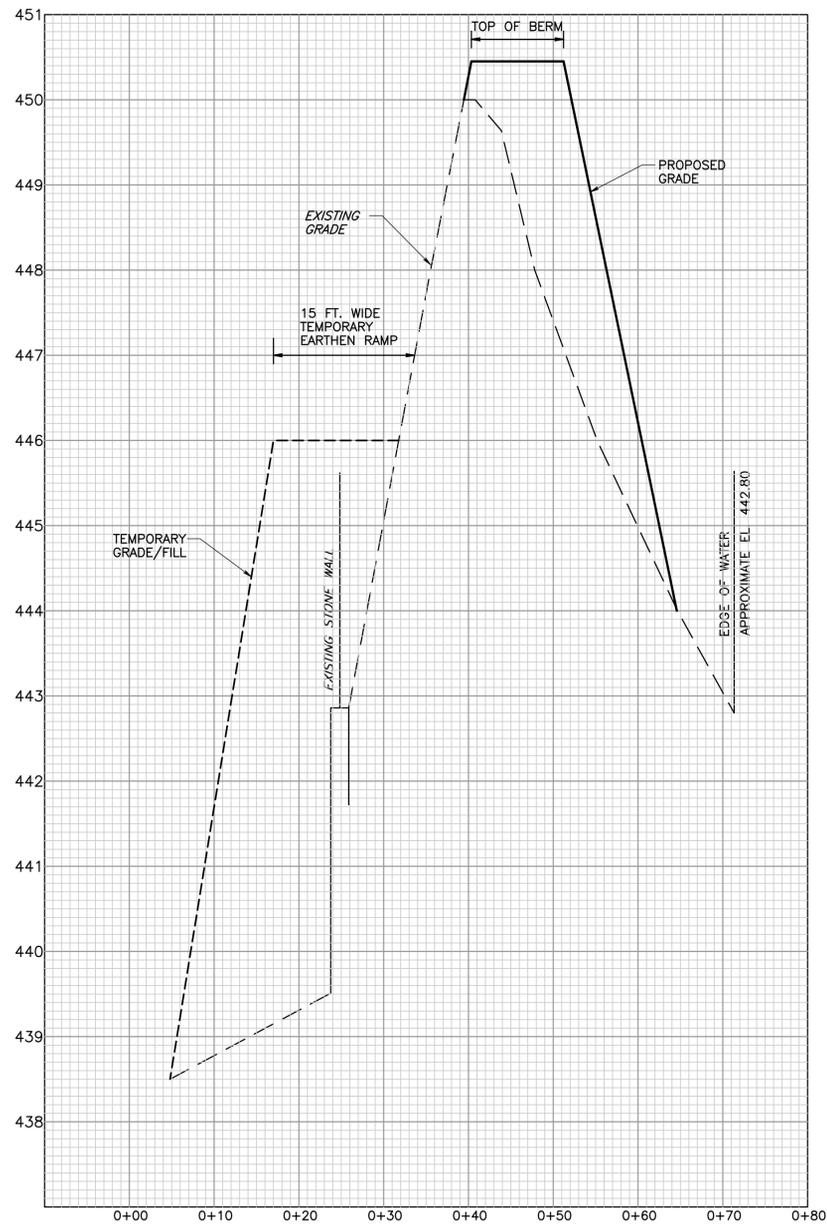
CROSS SECTION B-B
 SCALE: H. 1"=10'
 V. 1"=1'



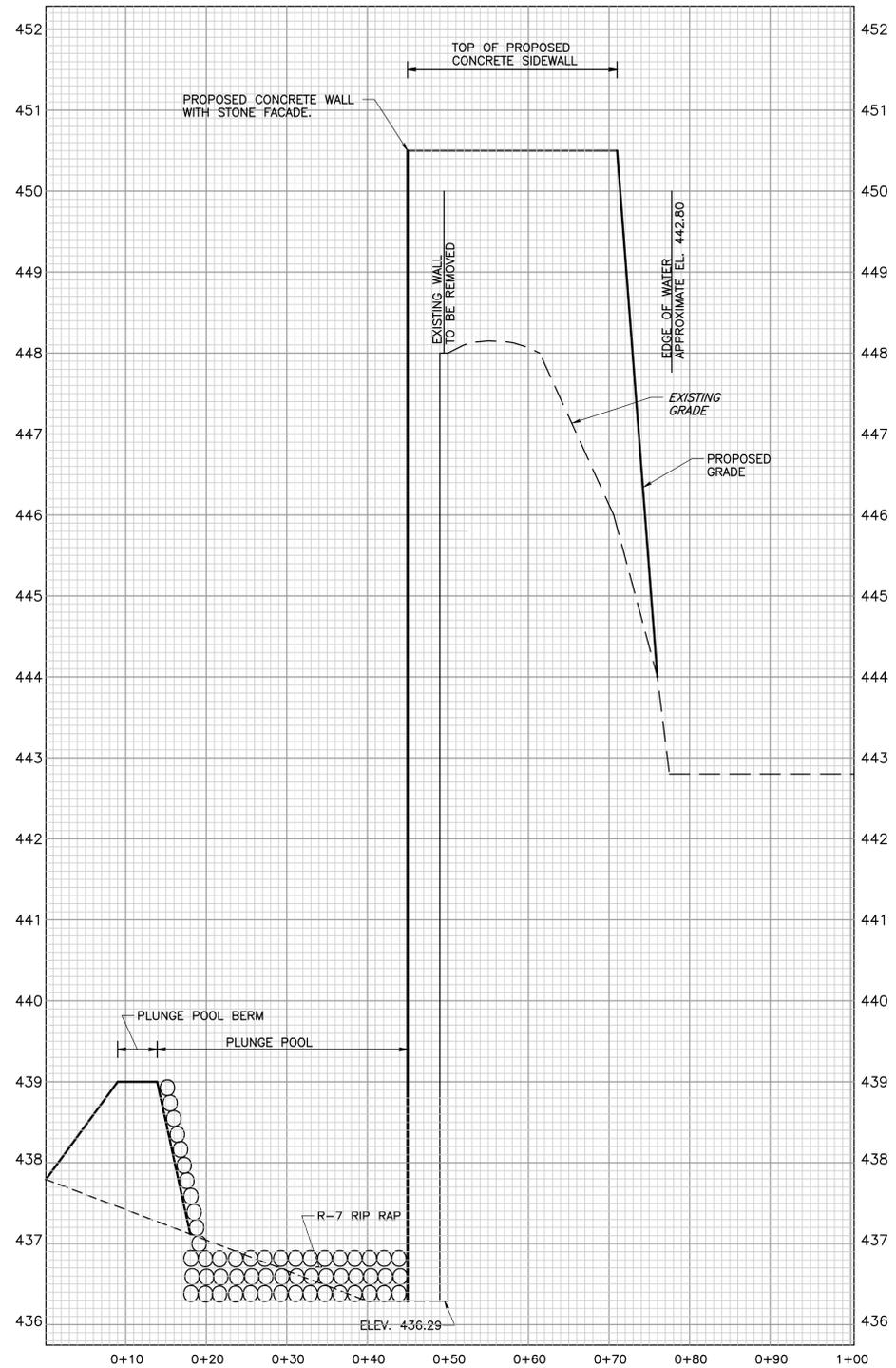
CROSS SECTION C-C
 SCALE: H. 1"=10'
 V. 1"=1'

CROSS SECTIONS

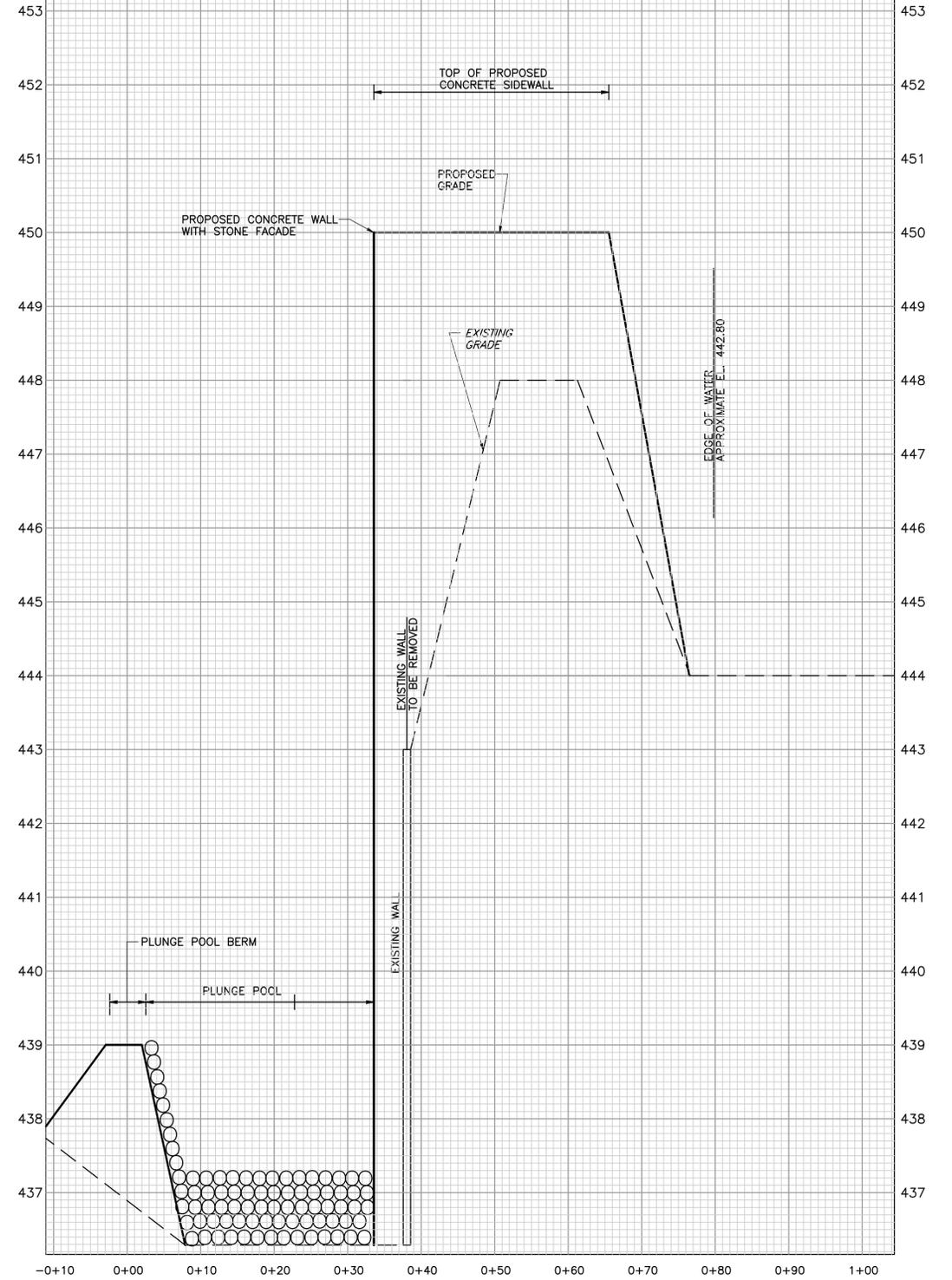
12-30-13	REVISE WALL DETAILS PER DEP
7-1-13	REVISED PER COMMENTS IN DEP REVIEW LETTER DATED 3-22-13
RESTORATION PLAN FOR HERSHEY'S MILL DAM EAST GOSHEN TOWNSHIP CHESTER COUNTY, PA.	
Edward B. Walsh & Associates, Inc. CIVIL ENGINEERS & SURVEYORS	Project- 3550 Date- 4-10-12 Scale- H. 1"=10' V. 1"=1' Drawn- R.F.N. Checked- A.J.B. Sheet- 5 OF 6
125 Downin Forge Road Easton, Pennsylvania 19341 Phone (610) 903-0060 Fax (610) 903-0080	
Plotted: 7/22/2014	File: F:\JB\3550\3550-B1.pro Ver.- 000



CROSS SECTION D-D
SCALE: H. 1"=10'
V. 1"=1'



CROSS SECTION E-E
SCALE: H. 1"=10'
V. 1"=1'



CROSS SECTION F-F
SCALE: H. 1"=10'
V. 1"=1'

CROSS SECTIONS

12-30-13	REVISE WALL DETAILS PER DEP
7-1-13	REVISED PER COMMENTS IN DEP REVIEW LETTER DATED 3-22-13
RESTORATION PLAN FOR HERSHEY'S MILL DAM	
EAST GOSHEN TOWNSHIP	CHESTER COUNTY, PA.
Edward B. Walsh & Associates, Inc. CIVIL ENGINEERS & SURVEYORS	Project- 3550 Date- 4-10-12
125 Down Forge Road Eaton, Pennsylvania 19341 Phone (610) 903-0060 Fax (610) 903-0080	Scale- H. 1"=10' V. 1"=1' Drawn- R.F.N. Checked- A.J.B. Sheet- 6 OF 6
Plotted: 7/22/2014	File: F:\JB\3550\3550-B1.pro Ver.- 000