

GENERAL NOTES:

1. EXISTING TOPOGRAPHY AND SITE PLAN INFORMATION SHOWN HEREON IS BASED ON EXISTING SITE PLAN MAPPING AND LIMITED FIELD SURVEYS PERFORMED BY CKS ENGINEERS, INC.
2. ELEVATIONS SHOWN THROUGHOUT THESE PLANS ARE BASED ON VERTICAL DATUM NAVD 88 AND HORIZONTAL DATUM NAD 83.
3. LOCATIONS OF EXISTING PIPING, UTILITIES, AND APPURTENANCES SHOWN THROUGHOUT THESE PLANS WERE OBTAINED FROM EXISTING PLANS AND LIMITED FIELD EXPLORATION. THEY ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS PRIOR TO COMMENCING WORK.
4. VFD = VERIFY FIELD DIMENSIONS.  
VMD = VERIFY MANUFACTURER'S DIMENSIONS.

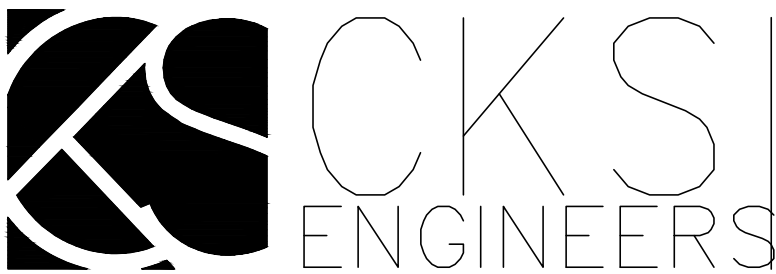
STREAMBANK RESTORATION PLAN  
FOR  
ANCHOR RUN  
BUCKS COUNTY, PENNSYLVANIA

FEBRUARY 2023

PREPARED FOR:

WRIGHTSTOWN TOWNSHIP  
2203 SECOND STREET PIKE  
WRIGHTSTOWN, PENNSYLVANIA, 18940

PREPARED BY:



4259 W. Swamp Road, Suite  
410  
Doylestown, PA 18902  
www.cksenengineers.com  
215.340.0600

ACT 50

CONTACTED XX SERIAL NUMBER XX

THE CONTRACTOR SHALL CONTACT ALL UTILITIES OR PRIVATE CONCERNS IN COMPLIANCE WITH THE REQUIREMENTS OF P.L. 852, No. 287, DECEMBER 10, 1974 AS AMENDED ON APRIL 28, 2018 BY ACT No. 50, 72 HOURS PRIOR TO ANY EXCAVATION BY CALLING 800-242-1776 AND/OR TELEPHONE NUMBERS LISTED BELOW. UTILITIES OR PRIVATE CONCERNS TO BE CONTACTED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:



NOTICE

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXACT LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND FACILITIES AND STRUCTURES BEFORE THE START OF CONSTRUCTION ON THIS PROJECT. THIS NOTICE APPLIES TO INFORMATION SHOWN ON THIS PLAN AND ANY ASSOCIATED PLANS FOR THIS PROJECT INCLUDING PLANS OF SAME PREPARED BY OTHERS, E.G. UTILITY COMPANY PLANS.

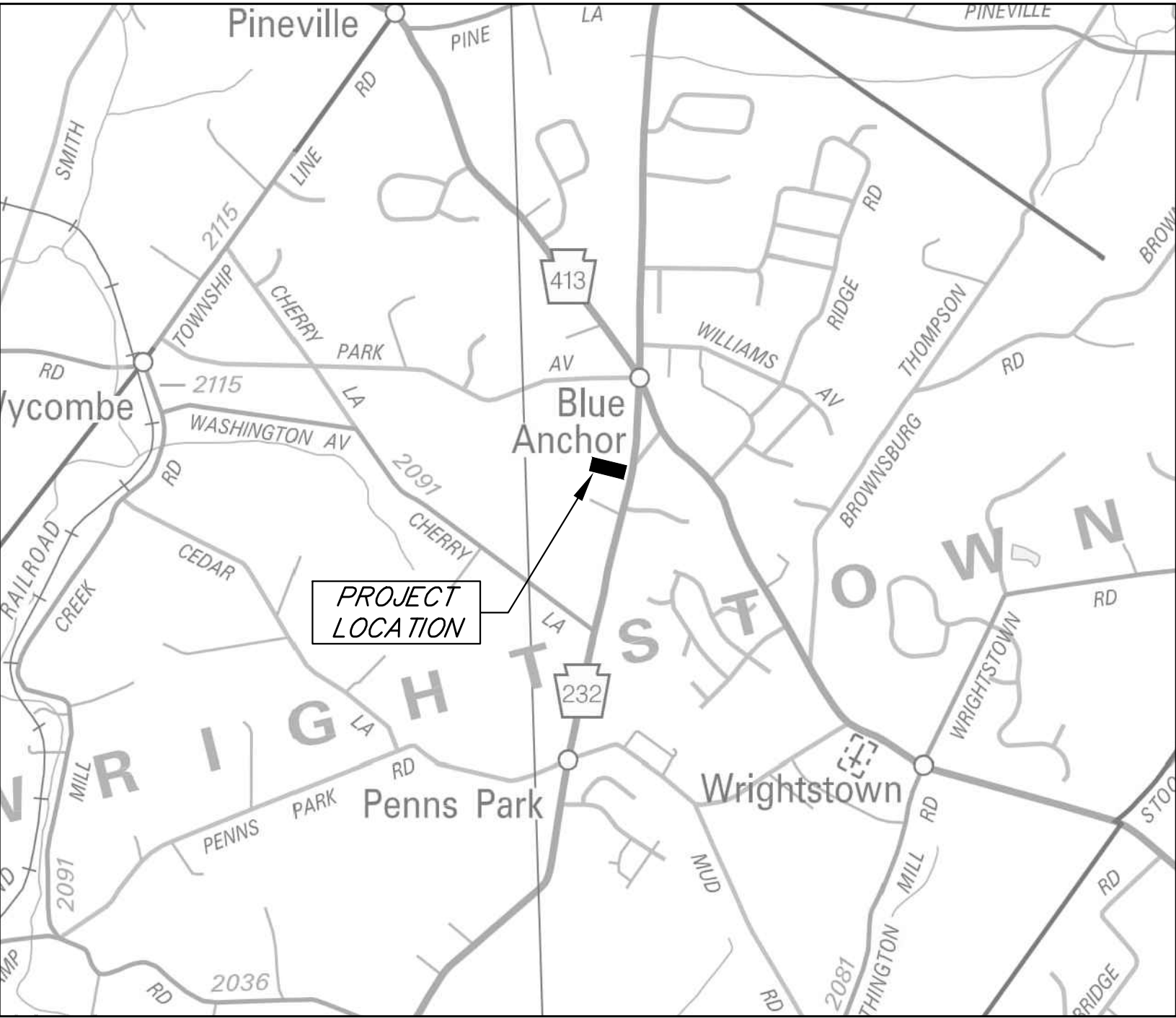
COMPANY: EAST COAST PROPANE  
ADDRESS: 12 BEAVER ST  
HULMEVILLE, PA 19047  
CONTACT: GEORGE LUMB  
EMAIL: george@eastcoastpropane.com  
PHONE: 267-560-5488

COMPANY: PECO AN EXELON COMPANY C/O USIC  
ADDRESS: 450 S HENDERSON ROAD SUITE B  
KING OF PRUSSIA, PA 19406  
CONTACT: NIKKIA SIMPKINS  
EMAIL: nikiasimpkins@usicic.com  
PHONE: 484-681-5720

COMPANY: COMCAST  
ADDRESS: 114 RIDGE RD  
SELLERSVILLE, PA 18960  
CONTACT: JOHN GEOPHART  
PHONE: 215-285-8762

COMPANY: WRIGHTSTOWN TOWNSHIP  
ADDRESS: 12203 SECOND STREET PIKE  
WRIGHTSTOWN, PA 18940  
CONTACT: STEPHEN KRASS  
EMAIL: stevek@wrightstownpa.org  
PHONE: 215-598-3313 EXT. 301

COMPANY: VERIZON BUSINESS FORMERLY MCI  
ADDRESS: 7000 WESTON PKWY  
CARY, NC 27513  
CONTACT: VICTOR WOOD  
EMAIL: victor.s.wood@verizon.com  
PHONE: 919-414-2782



LOCATION MAP  
SCALE: 1" = 2,000'

DRAWING INDEX

DRAWING TITLE

SHEET NO.

TITLE SHEET	1 OF 11
EXISTING CONDITIONS/DEMOLITION PLAN	2 OF 11
EXISTING STREAM PROFILE	3 OF 11
STREAMBANK RESTORATION PLAN	4 OF 11
EROSION AND SEDIMENT CONTROL PLAN	5 OF 11
LANDSCAPE PLAN	6 OF 11
SEEDING PLAN	7 OF 11
STREAM SECTIONS	8 OF 11
STREAM SECTIONS	9 OF 11
DETAILS	10 OF 11
EROSION AND SEDIMENT CONTROL DETAILS AND NOTES	11 OF 11



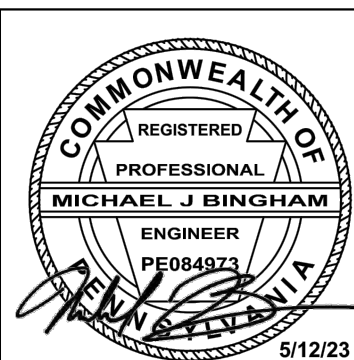
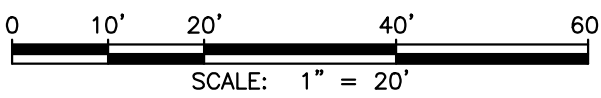
LEGEND


- LEGAL RIGHT-OF-WAY LINE  
PROPERTY LINE  
EXISTING CONTOUR  
EXISTING SPOT ELEVATION  
EXISTING CONCRETE CURB  
EXISTING GUIDERAIL  
EXISTING TREE/SHRUB  
EDGE OF EXISTING WOODED AREA, INCLUDING BRUSH, VINES, TREES, ETC.  
DOUBLE YELLOW LINE  
SINGLE WHITE LINE  
100 YR FLOODPLAIN LIMIT (ZONE A)  
FEATURES TO BE DEMOLISHED

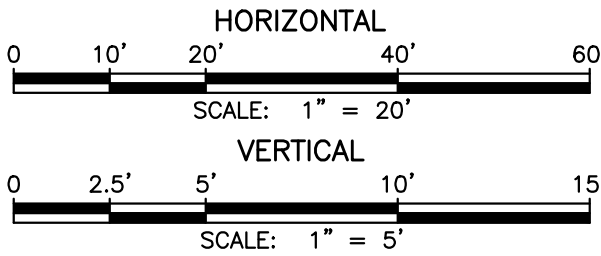
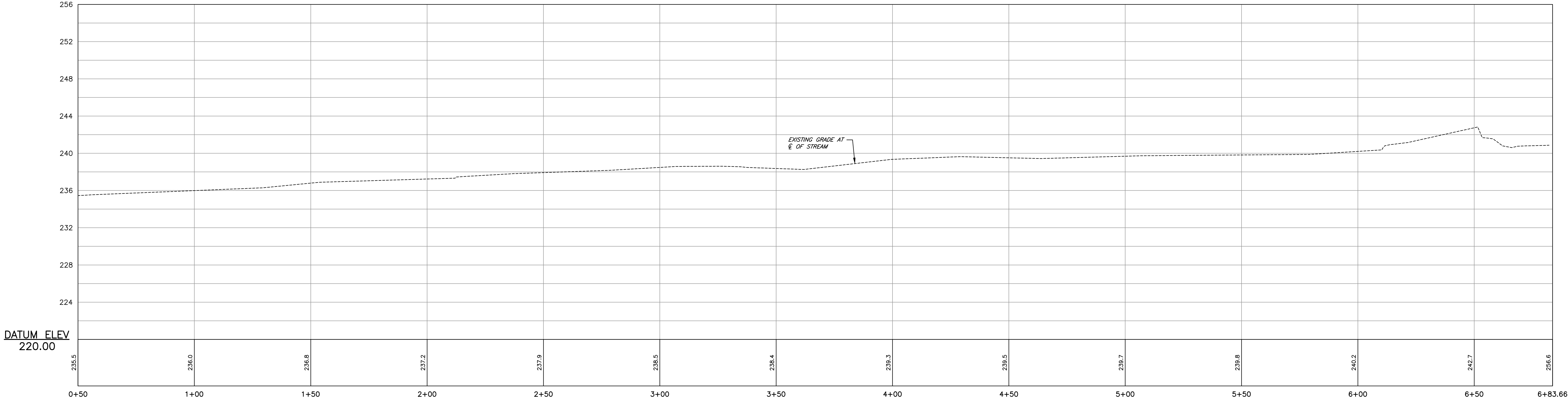


SOILS

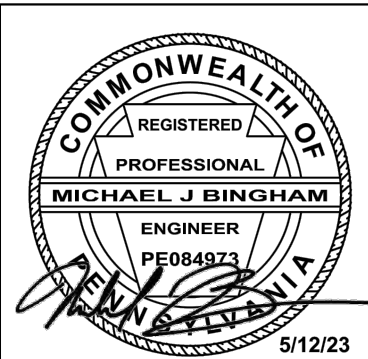
- Bo - BOWMANVILLE-KNAUERS SILT LOAMS  
PeC - PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES  
RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES



 CKS ENGINEERS AN ARRO CONSULTING COMPANY 4259 W. Swamp Road Suite 410 Doylestown, PA 18902 www.cksenigneers.com 215.340.0600	1 Rev. No.	3/28/23 Date	ADD STREAM CHANNEL LABEL Description		
	EXISTING CONDITIONS/DEMOLITION PLAN				
	STREAMBANK RESTORATION PLAN FOR ANCHOR RUN				
	Wrightstown Township, Bucks County, Pennsylvania				
Date: 2/2023	Scale: 1" = 20'	Drawn By: SAM	Plan No. 10500-62	Sheet No. 2 OF 11	



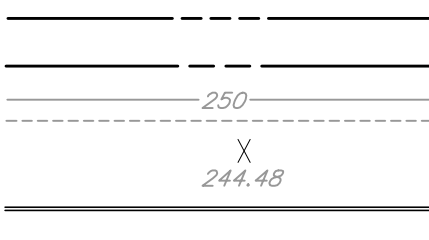
\\NAS01A\ANALYSIS-TECHNICAL\ACTIVE PROJECTS\LOS ANGELES\WRIGHTSTOWN TOWNSHIP\STREAM RESTORATION - 10500-62\500\ANCHOR\TUGBOY-02-2011\SMALL IMPROVEMENTS.DWG



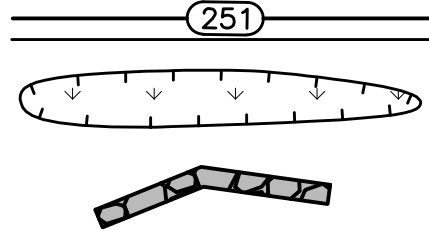
Rev. No.	Date	Description
EXISTING STREAM PROFILE		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date: 2/2023	Scale: AS SHOWN	Drawn By: SAM
Checked By: ---		Plan No. 10500-62
		Sheet No. 3 OF 11



LEGEND



LEGAL RIGHT-OF-WAY LINE  
PROPERTY LINE  
EXISTING CONTOUR  
EXISTING SPOT ELEVATION  
EXISTING CONCRETE CURB  
EXISTING GUIDERAIL  
EXISTING TREE/SHRUB  
EDGE OF EXISTING WOODED AREA, INCLUDING  
BRUSH, VINES, TREES, ETC.  
DOUBLE YELLOW LINE  
SINGLE WHITE LINE  
100 YR FLOODPLAIN LIMIT (ZONE A)

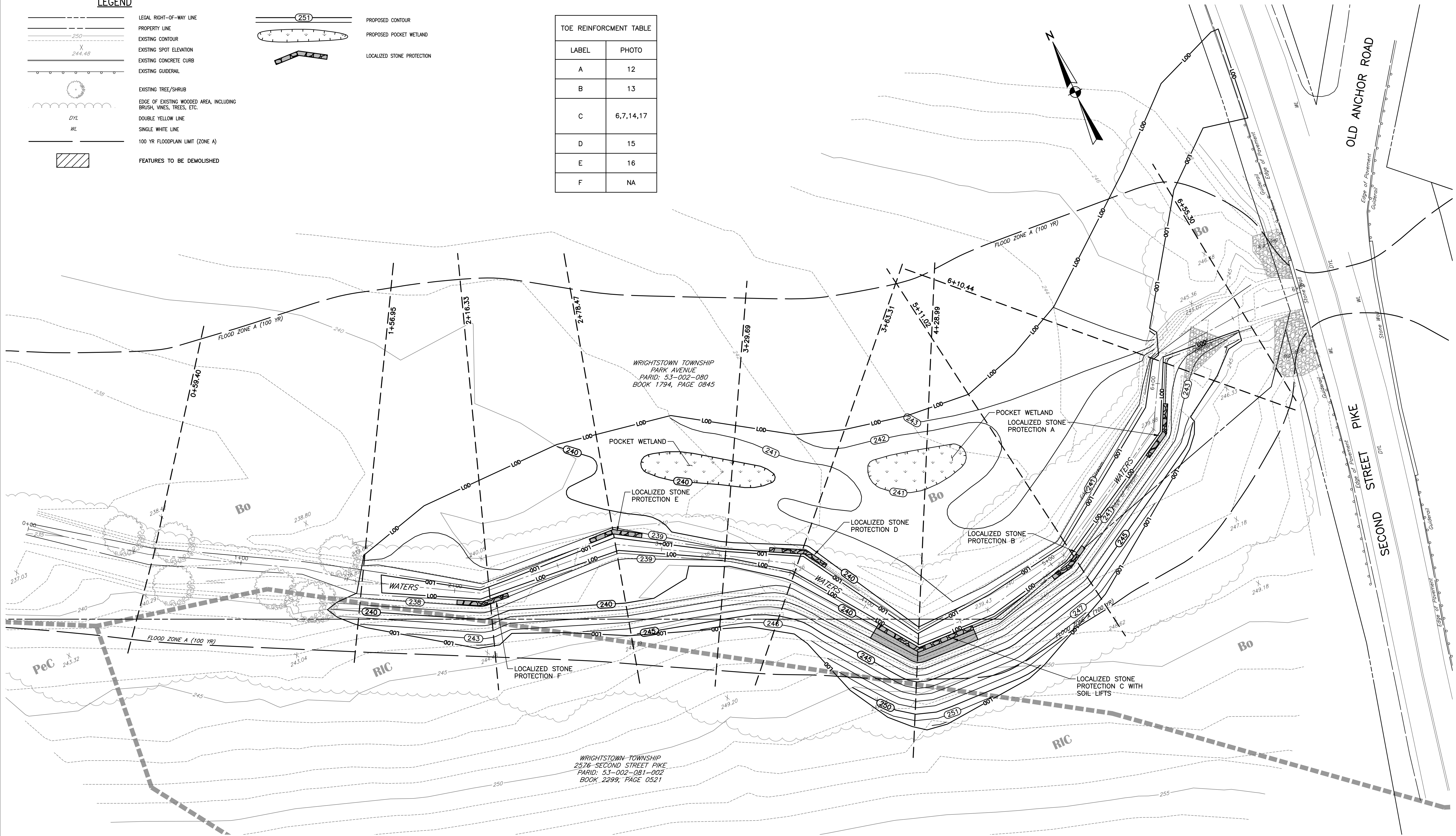


PROPOSED CONTOUR  
PROPOSED POCKET WETLAND  
LOCALIZED STONE PROTECTION

TOE REINFORCEMENT TABLE	
LABEL	PHOTO
A	12
B	13
C	6,7,14,17
D	15
E	16
F	NA

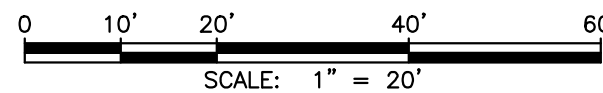


FEATURES TO BE DEMOLISHED

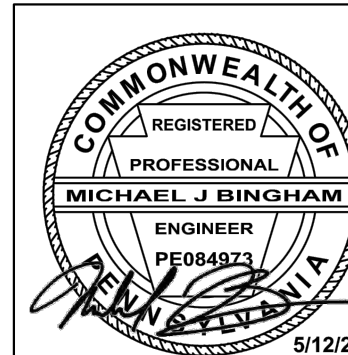


SOILS

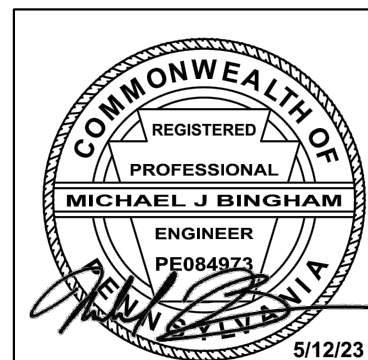
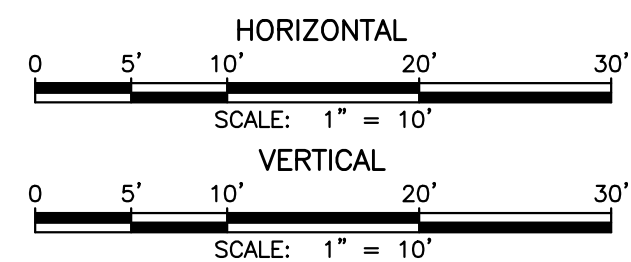
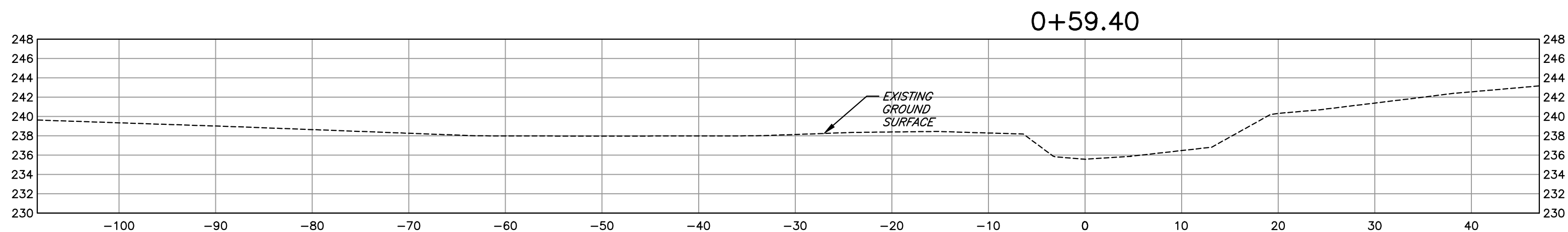
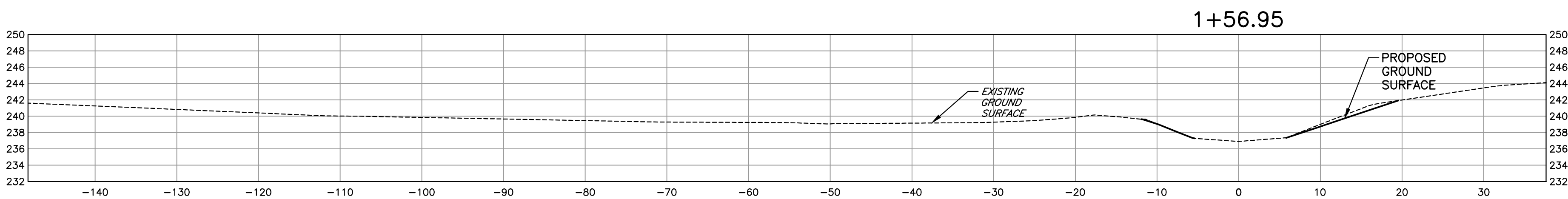
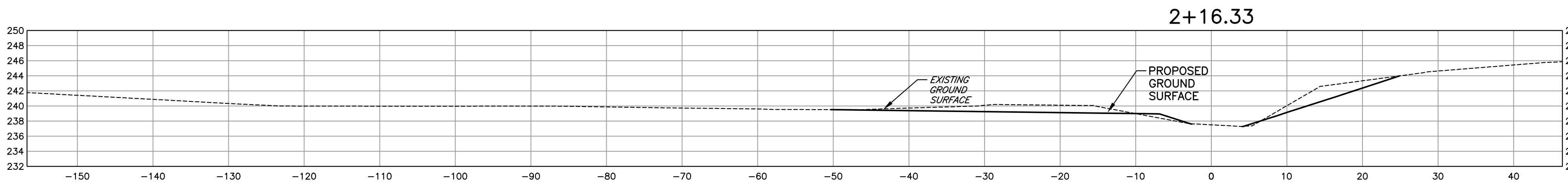
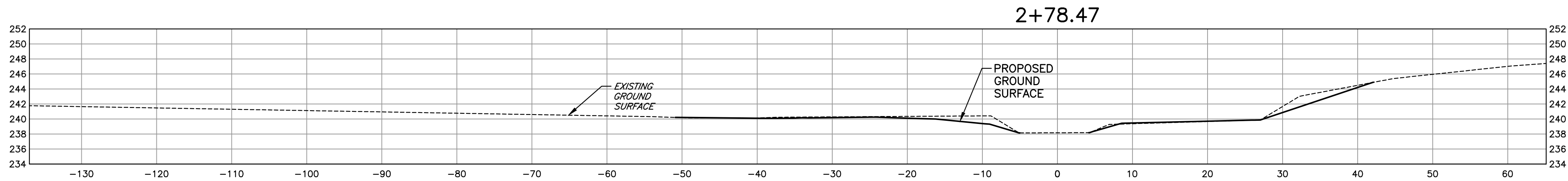
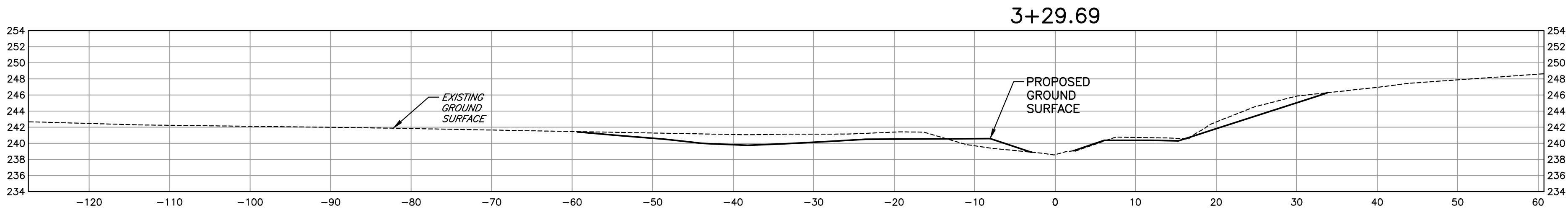
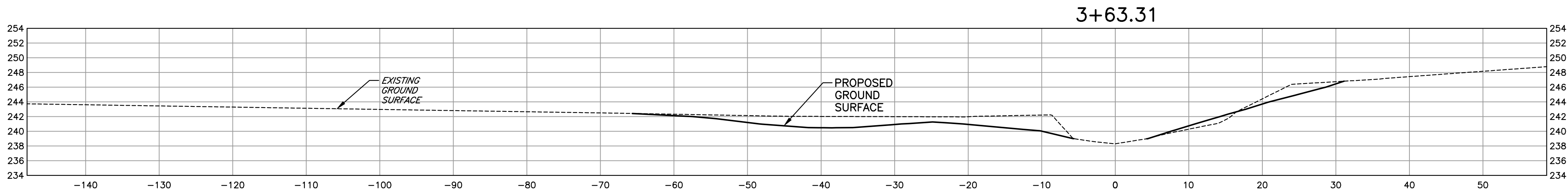
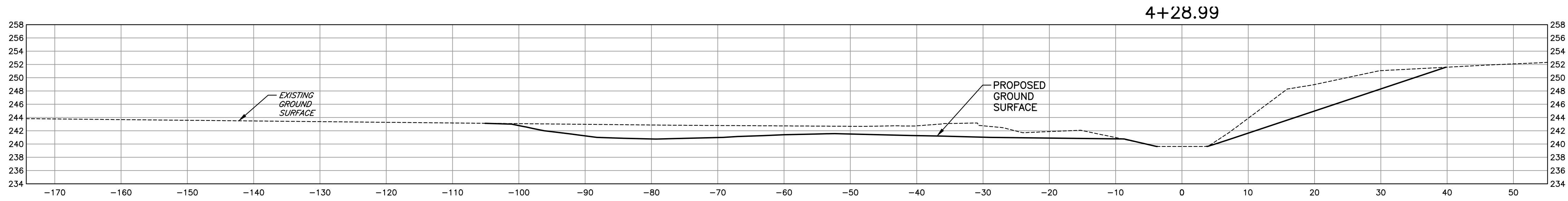
Bo - BOWMANVILLE-KNAUERS SILT LOAMS  
PeC - PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES  
RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES




SCALE: 1" = 20'

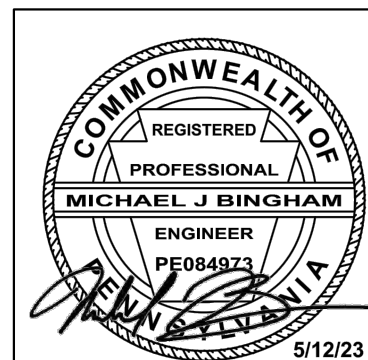
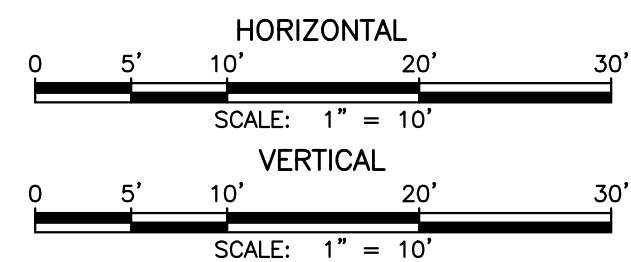
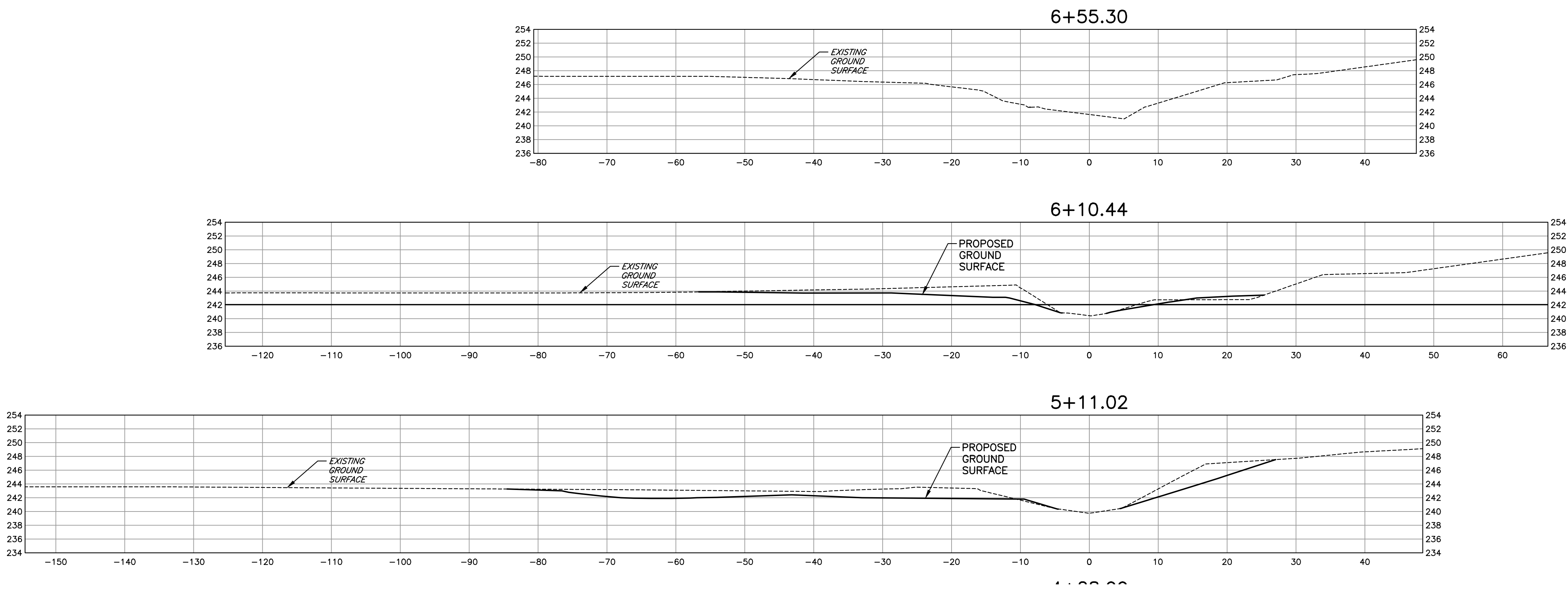


Rev. No.	Date	Description
STREAMBANK RESTORATION PLAN		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Plan No.
2/2023	1" = 20'	10500-62
Checked By:	Drawn By:	Sheet No.
---	SAM	4 OF 11



 CKS ENGINEERS AN ARRO CONSULTING COMPANY 4259 W. Swamp Road Suite 410 Doylestown, PA 18902 www.cksengineers.com 215.340.0600	Rev. No.		Date		Description			
	STREAM SECTIONS							
	STREAMBANK RESTORATION PLAN FOR ANCHOR RUN							
	Wrightstown Township,		Bucks County,		Pennsylvania			
	Date:	Scale:	Drawn By:		Plan No.	Sheet No.		
2/2023	AS SHOWN	SAM		10500-62	5 OF 11			
Checked By:		---						

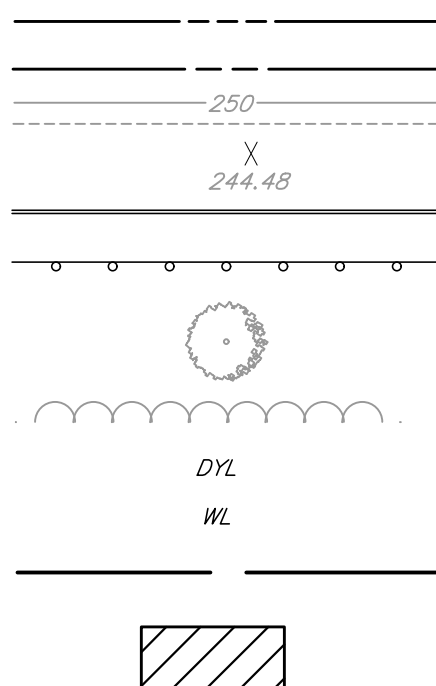
\\NAS01\ENR\ENR-TECHNICAL\PROJECTS\LOS ANGELES\WRIGHTSTOWN TOWNSHIP STREAM RESTORATION - 10500-62\5000\DRAWING\10500-62-011 STREAM IMPROVEMENT.DWG



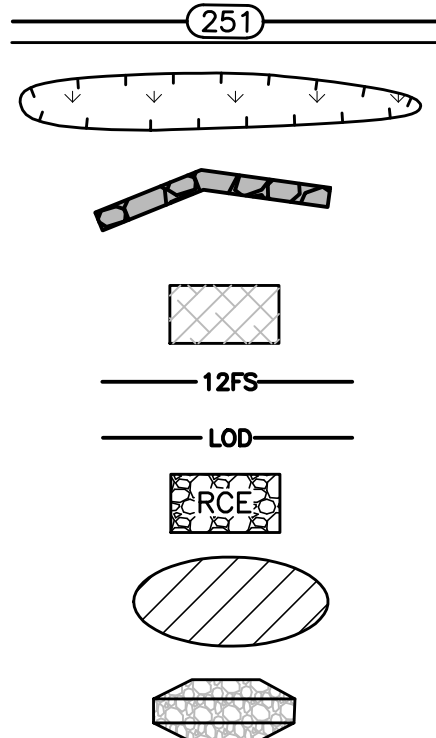
Rev. No.	Date	Description
STREAM SECTIONS		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Drawn By:
2/2023	AS SHOWN	SAM
Checked By:		Plan No.
---		10500-62
		Sheet No.
		6 OF 11



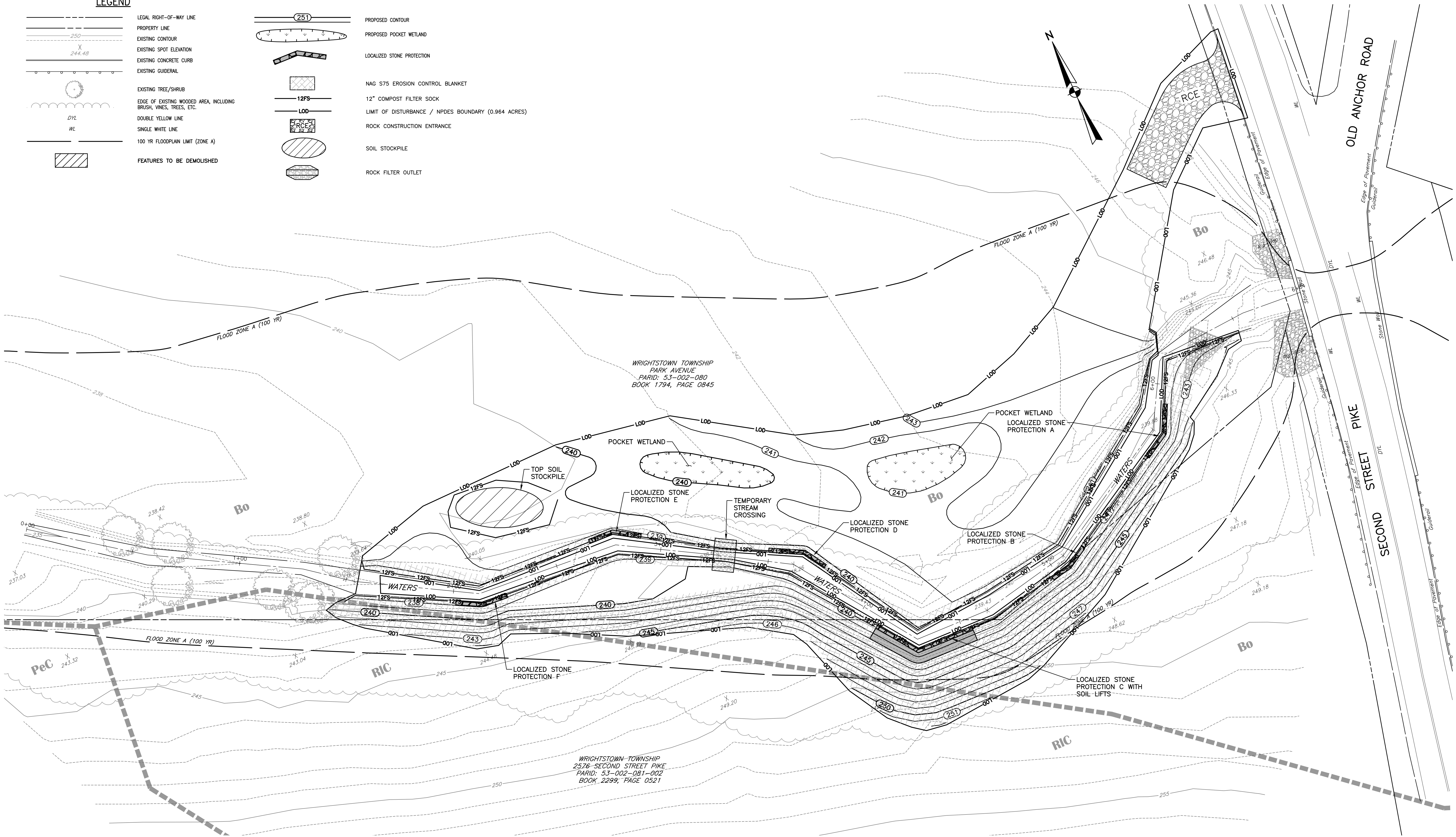
LEGEND



LEGAL RIGHT-OF-WAY LINE  
PROPERTY LINE  
EXISTING CONTOUR  
EXISTING SPOT ELEVATION  
EXISTING CONCRETE CURB  
EXISTING GUIDERAIL  
EXISTING TREE/SHRUB  
EDGE OF EXISTING WOODED AREA, INCLUDING  
BRUSH, VINES, TREES, ETC.  
DOUBLE YELLOW LINE  
SINGLE WHITE LINE  
100 YR FLOODPLAIN LIMIT (ZONE A)  
FEATURES TO BE DEMOLISHED

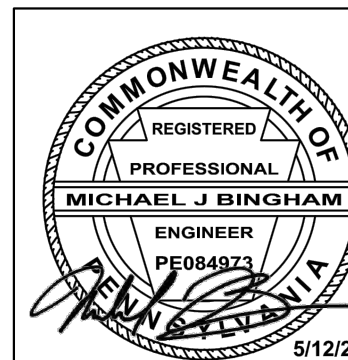
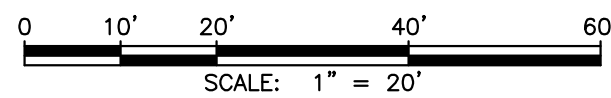


PROPOSED CONTOUR  
PROPOSED POCKET WETLAND  
LOCALIZED STONE PROTECTION  
NAG S75 EROSION CONTROL BLANKET  
12\"/>



SOILS

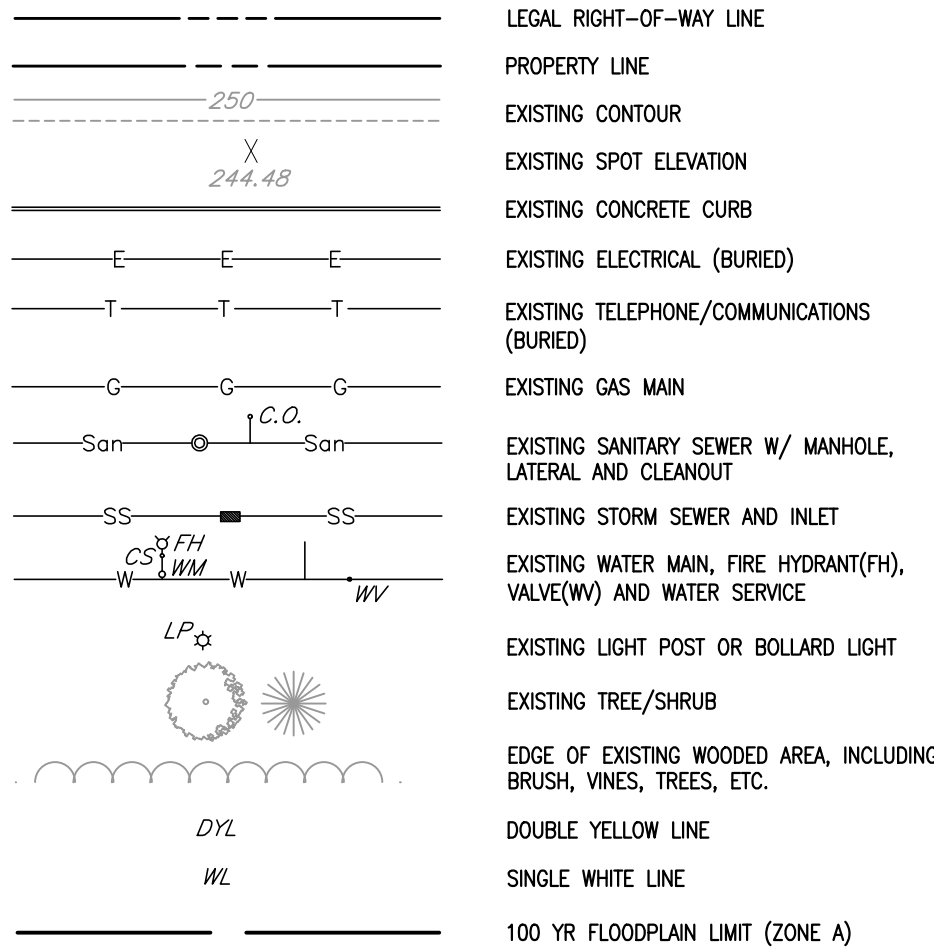
Bo - BOWMANVILLE-KNAUERS SILT LOAMS  
PeC - PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES  
RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES



Rev. No.	Date	Description
EROSION AND SEDIMENT CONTROL PLAN		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Plan No.
2/2023	1" = 20'	10500-62
Drawn By:	Checked By:	Sheet No.
SAM	---	7 OF 11



LEGEND



PLANT SCHEDULE					
SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME	ZONE	SIZE
	11	RIVER BIRCH	BETULA NIGRA	ZONE 1, ZONE 2	2-3"
	9	BLACK GUM	NYSSA SYLVATICA	ZONE 1	2-3"
	14	IRONWOOD	CARPINUS CAROLINIANA	ZONE 1, ZONE 2	2-3"
	13	BLACKHAW	VIBURNUM PRUNIFOLIUM	ZONE 2	1-2"
	36	ARROWWOOD	VIBURNUM DENTATUM	ZONE 2	1-2"
	26	SANDBAR WILLOW	SALIX EXIGUA SSP. INTERIOR	ZONE 1	1-2"
	18	SILKY DOGWOOD	CORNUS AMOMUM	ZONE 1	1-2"

ZONE 1

TREES ARE LARGE AND WOODY, PROVIDE SHADE, WOOD DEBRIS, AND SOIL STABILITY

- RIVER BIRCH
- BLACK GUM
- IRONWOOD
- ARROWWOOD
- SANDBAR WILLOW
- SILKY DOGWOOD

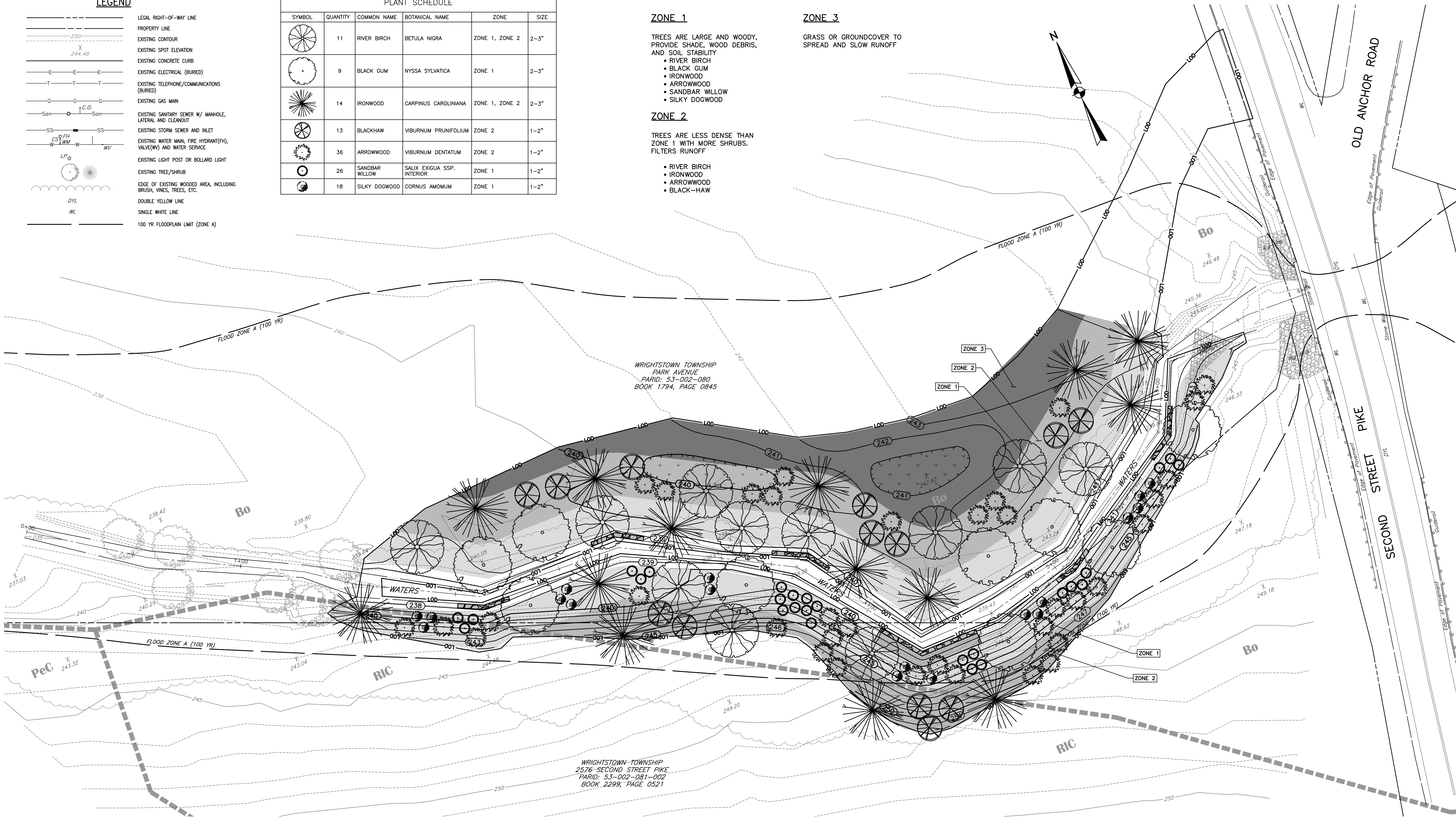
ZONE 2

TREES ARE LESS DENSE THAN ZONE 1 WITH MORE SHRUBS. FILTERS RUNOFF

- RIVER BIRCH
- IRONWOOD
- ARROWWOOD
- BLACK-HAW

ZONE 3

GRASS OR GROUNDCOVER TO SPREAD AND SLOW RUNOFF



PLANTING SOIL (TOPSOIL)

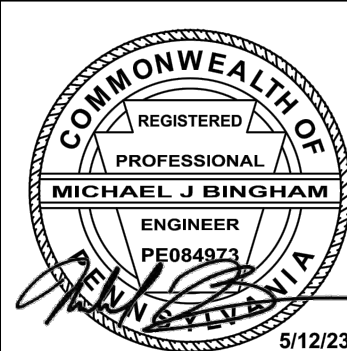
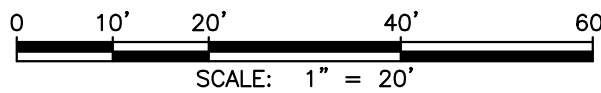
- USE A MINIMUM OF 12" OF TOPSOIL IN MARSH AREAS OF THE WETLAND. IF NATURAL TOPSOIL FROM THE SITE IS TO BE USED IT MUST HAVE AT LEAST 8 PERCENT ORGANIC CARBON CONTENT (BY WEIGHT) IN THE A-HORIZON FOR SANDY SOILS AND 12% FOR OTHER SOIL TYPES.
- IF PLANTING SOIL IS BEING IMPORTED IT SHOULD BE MADE UP OF EQUIVALENT PROPORTIONS OF ORGANIC AND MINERAL MATERIALS.
- LIME SHOULD NOT BE ADDED TO PLANTING SOIL UNLESS ABSOLUTELY NECESSARY AS IT MAY ENCOURAGE THE PROPAGATION OF INVASIVE SPECIES.
- THE FINAL ELEVATIONS AND HYDROLOGY OF THE WETLAND ZONES SHOULD BE EVALUATED PRIOR TO PLANTING TO DETERMINE IF GRADING OR PLANTING CHANGES ARE REQUIRED.

VEGETATION

- ALL WETLAND PLANT STOCK SHALL EXHIBIT LIVE BUDS OR SHOOTS. ALL PLANT STOCK SHALL BE TURGID, FIRM, AND RESILIENT. INTERNODES OF RHIZOMES MAY BE FLEXIBLE AND NOT NECESSARILY RIGID. SOFT OR MUSHY STOCK SHALL BE REJECTED. THE STOCK SHALL BE FREE OF DELETERIOUS INSECT INFESTATION, DISEASE AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT THAT COULD ADVERSELY AFFECT THE SURVIVAL OR PERFORMANCE OF THE PLANTS.
- ALL STOCK SHALL BE FREE FROM INVASIVE OR NUISANCE PLANTS OR SEEDS SUCH AS THOSE LISTED IN APPENDIX B.
- DURING ALL PHASES OF THE WORK, INCLUDING TRANSPORT AND ONSITE HANDLING, THE PLANT MATERIALS SHALL BE CAREFULLY HANDLED AND PACKED TO PREVENT INJURIES AND DESICCATION. DURING TRANSIT AND ONSITE HANDLING, THE PLANT MATERIAL SHALL BE KEPT FROM FREEZING AND SHALL BE KEPT COVERED, MOIST, COOL, OUT OF WEATHER, AND OUT OF THE WIND AND SUN. PLANTS SHALL BE WATERED TO MAINTAIN MOIST SOIL AND/OR PLANT CONDITIONS UNTIL ACCEPTED.
- PLANTS NOT MEETING THESE SPECIFICATIONS OR DAMAGED DURING HANDLING, LOADING, AND UNLOADING WILL BE REJECTED.

SOILS

- Bo - BOWMANSVILLE-KNAUERS SILT LOAMS  
PeC - PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES  
RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES



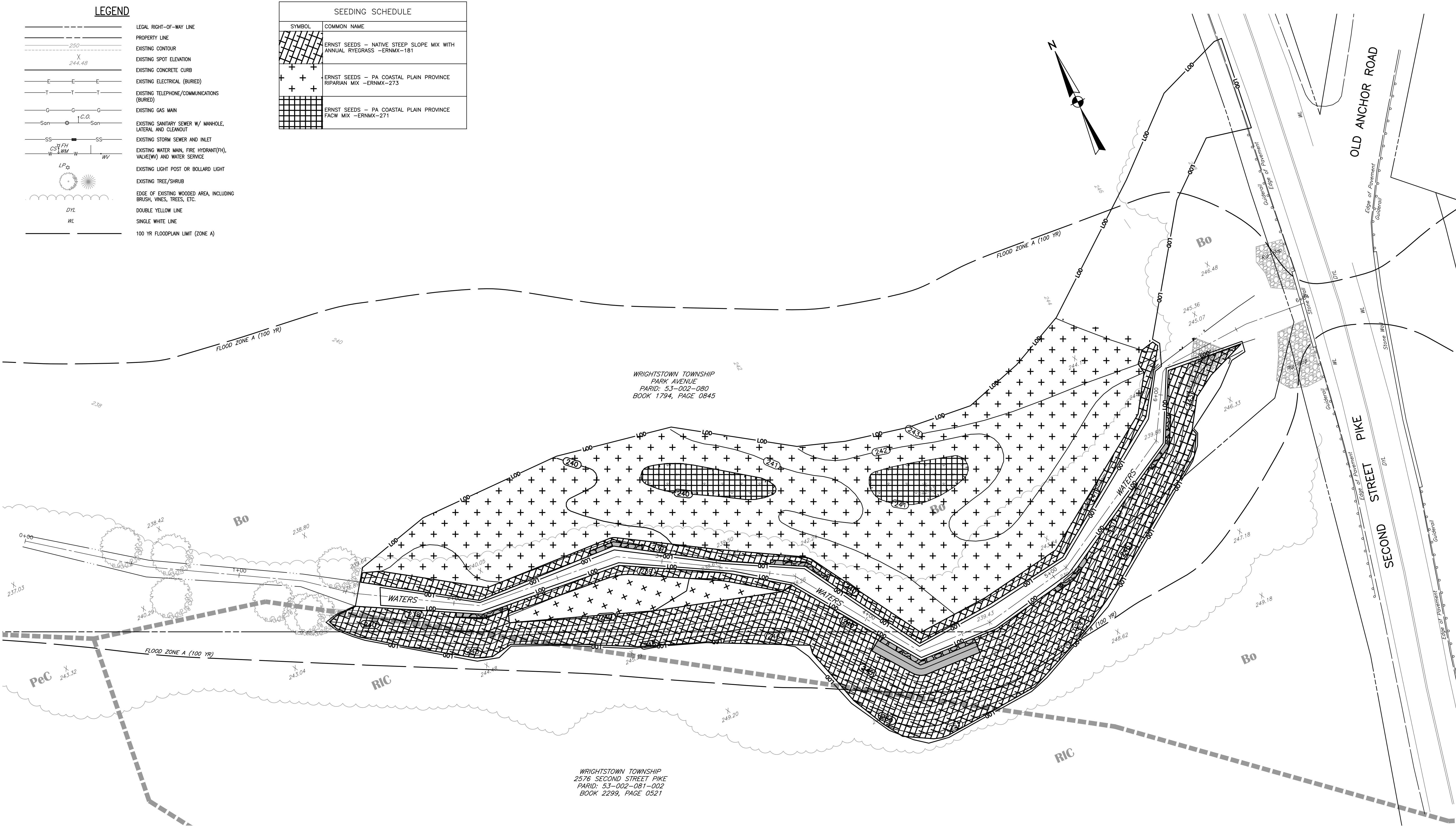
Rev. No.	Date	Description
LANDSCAPE PLAN		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Drawn By: SAM
2/2023	1" = 20'	Checked By: ---
10500-62		8 OF 11



LEGEND

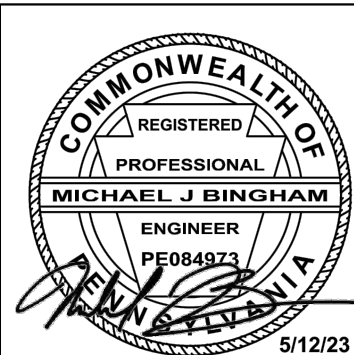
	LEGAL RIGHT-OF-WAY LINE
	PROPERTY LINE
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING CONCRETE CURB
	EXISTING ELECTRICAL (BURIED)
	EXISTING TELEPHONE/COMMUNICATIONS (BURIED)
	EXISTING GAS MAIN
	EXISTING SANITARY SEWER W/ MANHOLE, LATERAL AND CLEANOUT
	EXISTING STORM SEWER AND INLET
	EXISTING WATER MAIN, FIRE HYDRANT(FH), VALVE(WV) AND WATER SERVICE
	EXISTING LIGHT POST OR BOLLARD LIGHT
	EXISTING TREE/SHRUB
	EDGE OF EXISTING WOODED AREA, INCLUDING BRUSH, VINES, TREES, ETC.
	DOUBLE YELLOW LINE
	SINGLE WHITE LINE
	100 YR FLOODPLAIN LIMIT (ZONE A)

SEEDING SCHEDULE	
SYMBOL	COMMON NAME
	ERNST SEEDS -- NATIVE STEEP SLOPE MIX WITH ANNUAL RYEGRASS --ERNMX-181
	ERNST SEEDS -- PA COASTAL PLAIN PROVINCE RIPARIAN MIX --ERNMX-273
	ERNST SEEDS -- PA COASTAL PLAIN PROVINCE FACW MIX --ERNMX-271



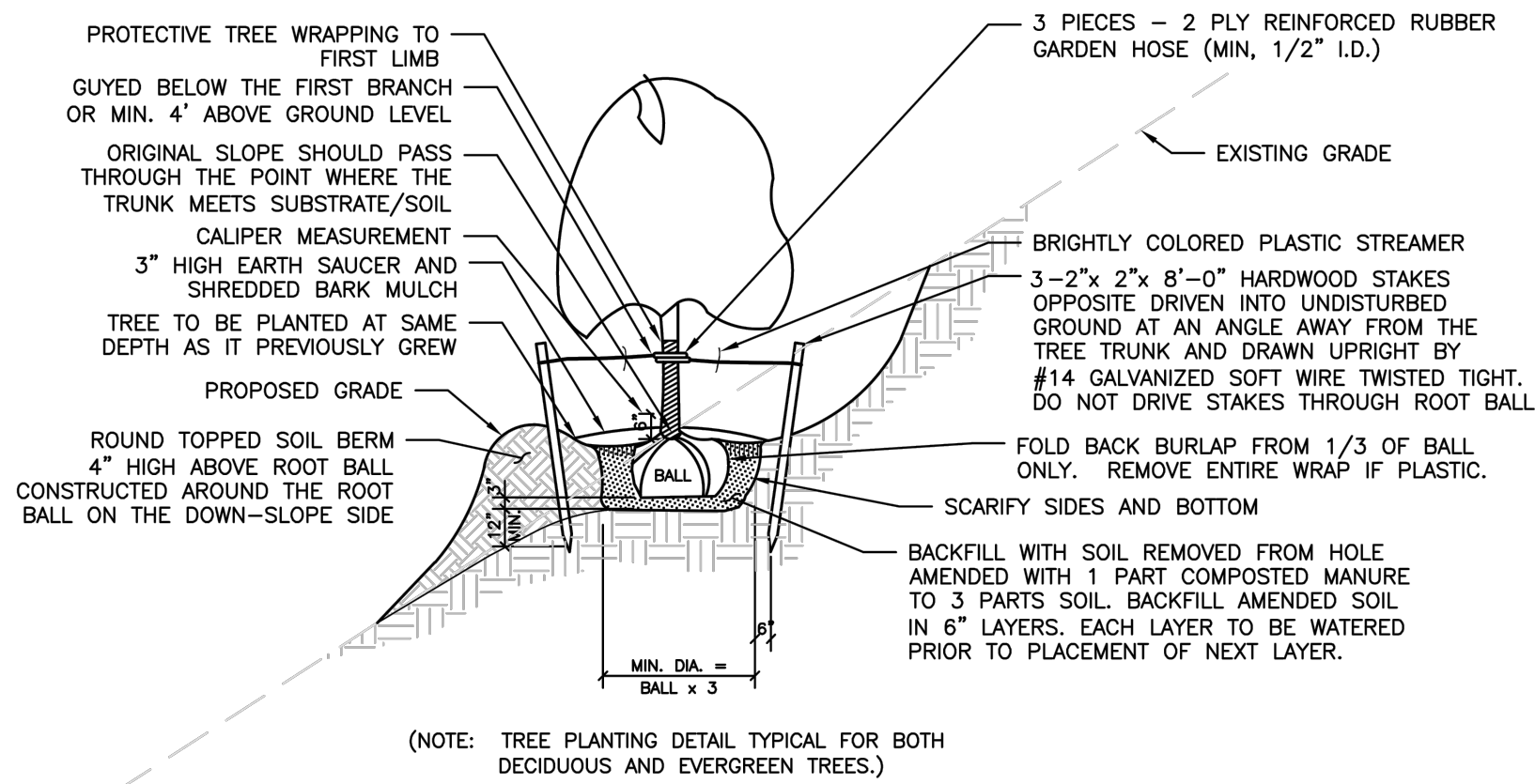
SOILS

- Bo - BOWMANVILLE-KNAUERS SILT LOAMS  
PeC - PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES  
RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES



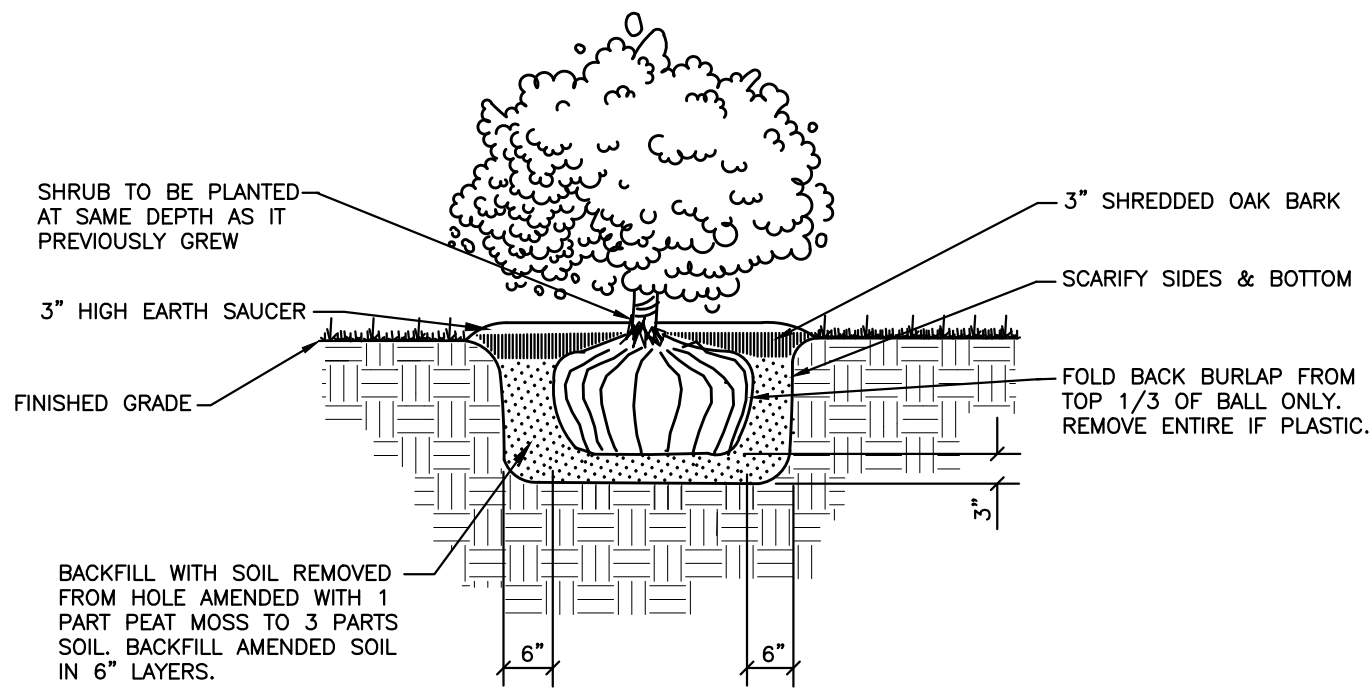
Rev. No.	Date	Description
SEEDING PLAN		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Plan No.
2/2023	1" = 20'	10500-62
Checked By:	Drawn By:	Sheet No.
---	SAM	9 OF 11

\\NAS01\LAN\MASTER-TECHNICAL\ACTIVE PROJECTS\0405\ANCHOR\TODOS\B2-1001.DWG 10000-0405\ANCHOR\TODOS\B2-1001.DWG TOWNSHIP STREAM RESTORATION - 10000-0405\ANCHOR\TODOS\B2-1001.DWG



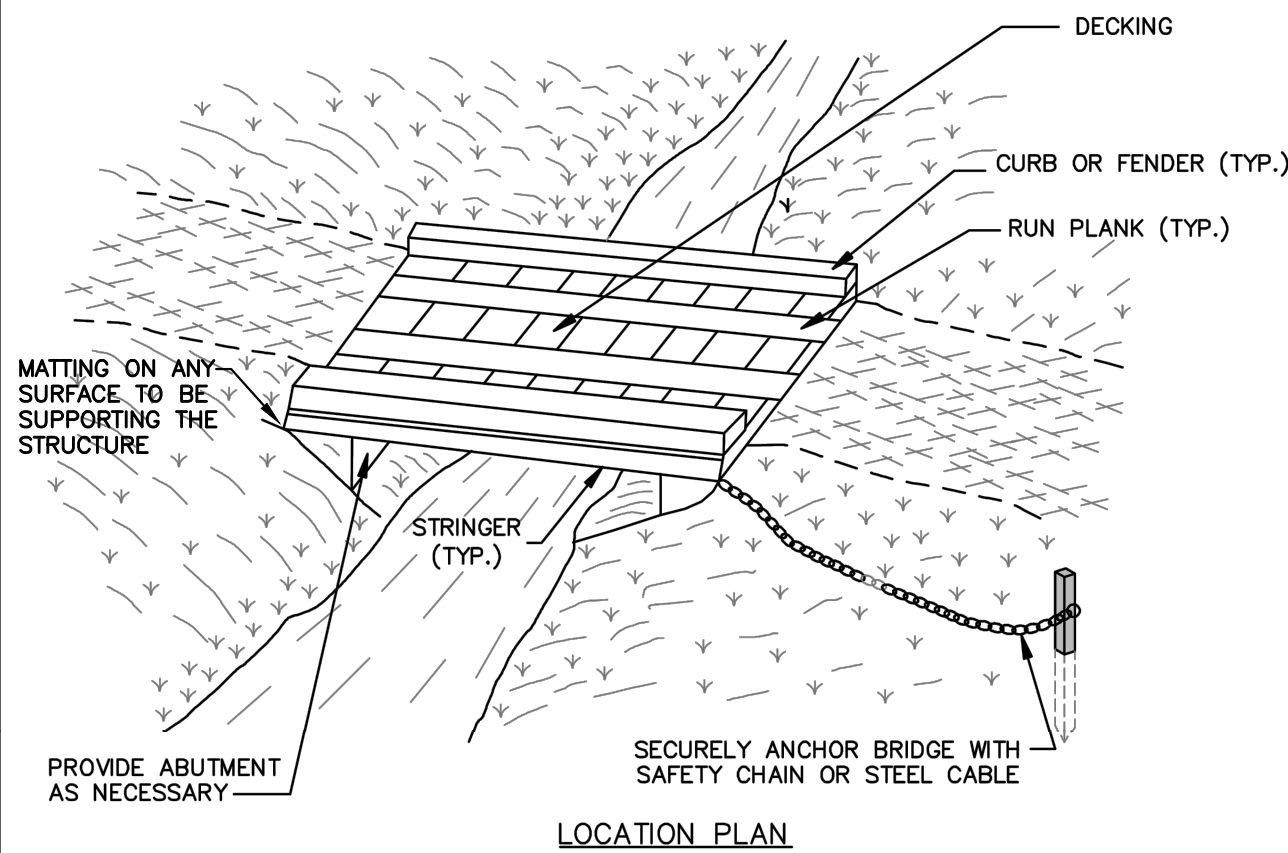
TREE PLANTING  
ON STEEP SLOPES DETAIL

NO SCALE



B & B SHRUB PLANTING DETAIL

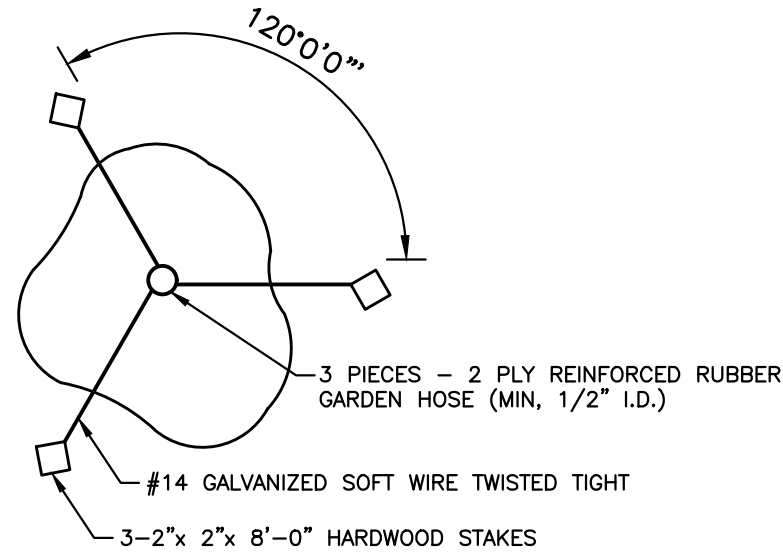
NO SCALE



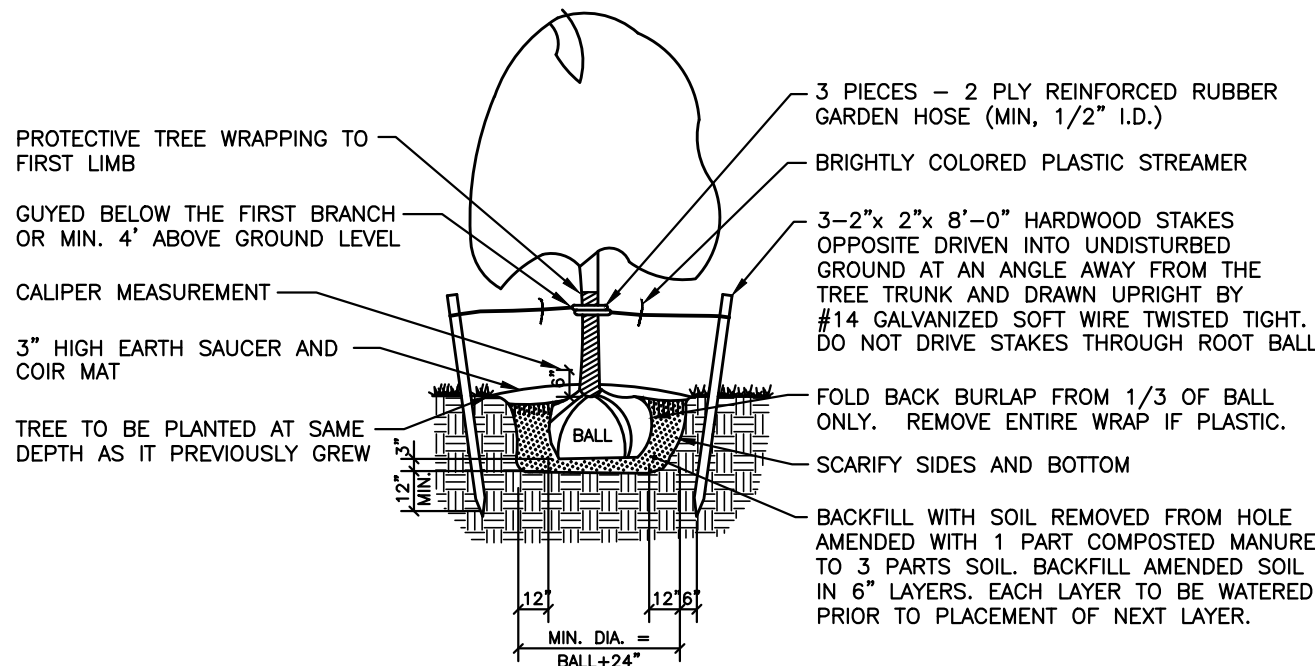
NOTE:  
TIME OF YEAR RESTRICTIONS DO NOT APPLY TO THE CONSTRUCTION OR REMOVAL OF A TEMPORARY ACCESS BRIDGE UNLESS THERE IS DISTURBANCE TO THE STREAM CHANNEL.

TEMPORARY STREAM CROSSING DETAIL

NO SCALE



PLAN VIEW

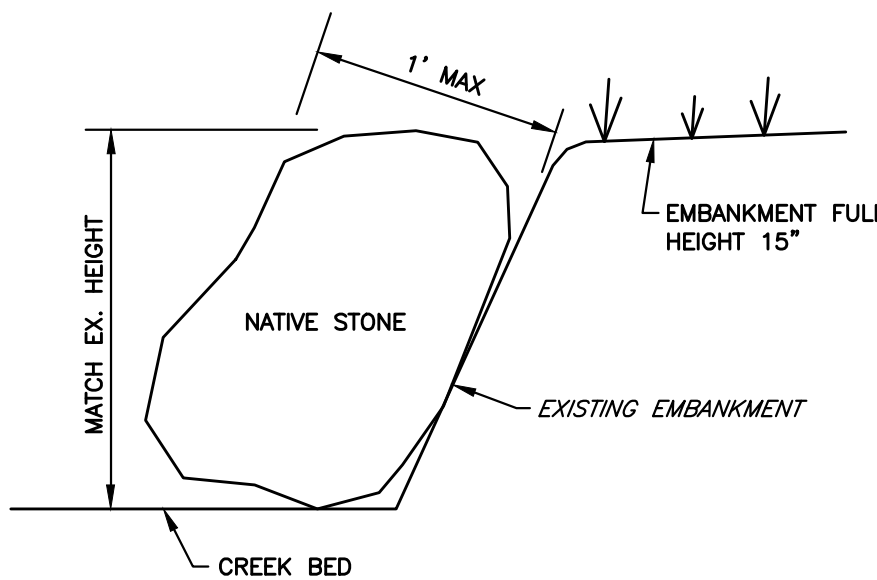


(NOTE: TREE PLANTING DETAIL TYPICAL FOR BOTH DECIDUOUS AND EVERGREEN TREES.)

SECTION VIEW

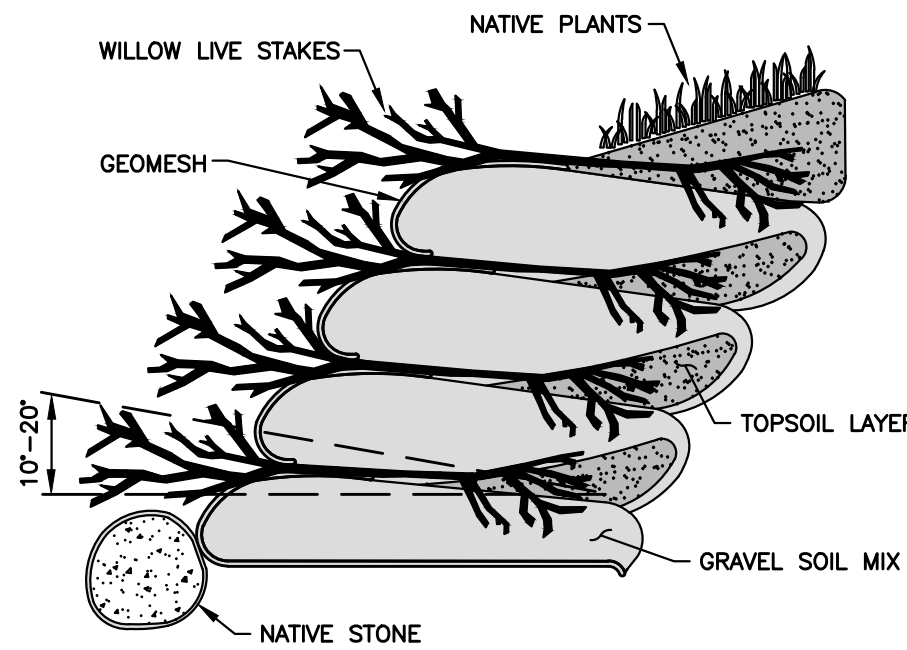
TREE PLANTING DETAIL

NO SCALE



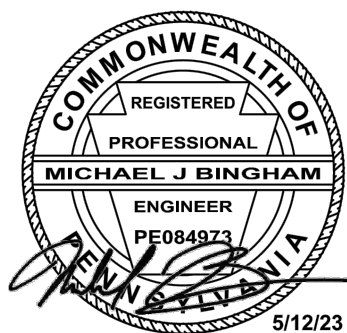
TYPICAL EMBANKMENT PROTECTION DETAIL

NO SCALE



VEGETATIVE SOIL LIFT DETAIL

NO SCALE



Rev. No.	Date	Description
DETAILS		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Drawn By: SAM
2/2023	AS SHOWN	Checked By: ---
10500-62		10 OF 11



EROSION & SEDIMENTATION CONTROL NARRATIVE

A. GENERAL STATEMENT OF THE PROJECT

THE LIMIT OF DISTURBANCE ASSOCIATED WITH THE PROJECT IS XX ACRES.

B. FEATURES OF THE PROJECT

1. THE LOCATIONS OF AFFECTED PROPERTY LINES, AND THE OTHER SIGNIFICANT PHYSICAL FEATURES HAVE BEEN SHOWN ON THE ATTACHED PLANS.

C. NOTES FOR SEQUENCE OF CONSTRUCTION

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE A SUBSEQUENT STAGE IS INITIATED. CLEANING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
2. 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 BUCKS COUNTY CONSERVATION DISTRICT.
3. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 280.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIALS OR WASTES AT THE SITE.
4. BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO CHAPTER 102 REGULATIONS.
5. ANTICIPATED START OF CONSTRUCTION – XX.
6. EACH STEP IN THE CONSTRUCTION SEQUENCE SHALL BE COMPLETED BEFORE INITIATION OF THE NEXT STEP.
7. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
8. FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES 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 CLEAN STREAMS LAW OF PENNSYLVANIA. 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.

D. CONSTRUCTION SEQUENCE

1. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED WITH THOSE ACTIVITIES, THE LAND OWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARED, AND A REPRESENTATIVE OF THE BUCKS COUNTY CONSERVATION DISTRICT TO AN ONSITE PRE-CONSTRUCTION MEETING.
2. AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED WITH THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES.
3. THE CONTRACTOR MUST MAINTAIN A SURPLUS OF FILTER SOCK [TO BE PLACED ON IMPERVIOUS SURFACES], SILT FENCE [TO BE PLACED ON NON-IMPERVIOUS SURFACES], STRAW BALES & STAKES, ORANGE CONSTRUCTION SAFETY FENCING, AND R-3 & AASHTO NO. 57 STONE [ROCK FILTER OUTLET] AT THE STABILIZED ROCK CONSTRUCTION ENTRANCE / STAGING AREA / EQUIPMENT CLEANING AREA.
4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE MUST BE COMPLETED BEFORE THE FOLLOWING STAGE IS INITIATED.
5. INSTALL THE STABILIZED ROCK CONSTRUCTION ENTRANCE / STAGING AREA / EQUIPMENT CLEANING AREA AS PER THE PLAN DETAILS. DESIGNATE THE AFOREMENTIONED AREA AS SUCH WITH SIGNAGE. REPAIR AND PATCH ALL DISTURBED IMPERVIOUS AREAS IMMEDIATELY. SEED AND STABILIZE ALL DISTURBED ALL NON-IMPERVIOUS AREAS IMMEDIATELY TO ACHIEVE A 70% UNIFORM VEGETATIVE COVER.
6. INSTALL ALL FILTER SOCK AND/OR SILT FENCE AS PER THE PLOT PLAN. ALL IMPERVIOUS SURFACES IMPACTED BY THE PROJECT SHALL MAINTAIN FILTER SOCK ON THE DOWN-SLOPE SIDE THE LIMIT OF DISTURBANCE. ALL NON-IMPERVIOUS SURFACES IMPACTED BY THE PROJECT SHALL MAINTAIN SILT FENCE ON THE DOWN-SLOPE SIDE THE LIMIT OF DISTURBANCE. REPAIR AND PATCH ALL DISTURBED IMPERVIOUS AREAS IMMEDIATELY. SEED AND STABILIZE ALL DISTURBED ALL NON-IMPERVIOUS AREAS IMMEDIATELY TO ACHIEVE A 70% UNIFORM VEGETATIVE COVER. WHERE GRADING OPERATIONS REQUIRE, PORTIONS OF SILT SOCK SHALL BE TEMPORARILY REMOVED TO ALLOW FOR GRADING OPERATIONS. DISTURBED AREAS SHALL BE IMMEDIATELY STABILIZED AND SILT SOCK RE-INSTALLED AS PER THE PLOT PLAN. ANY TEMPORARILY REMOVED SILT SOCK MUST BE REPLACED AT THE END OF EACH WORKDAY.
7. PRIOR TO THE START OF EACH WORKDAY, THE CONTRACTOR MUST REVIEW THE PREVIOUS DAY(S) ACTIVITIES TO ENSURE THAT ALL AREAS REMAIN STABILIZED. IF THE CONTRACTOR ENCOUNTERS AN AREA THAT IS NOT STABILIZED, THE CONTRACTOR IS PROHIBITED FROM STARTING ADDITIONAL WORK UNTIL THAT AREA HAS BEEN RE-STABILIZED.
8. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST REMAIN IN PLACE UNTIL THE BUCKS COUNTY CONSERVATION DISTRICT CONFIRMS THEY CAN BE REMOVED.

E. TEMPORARY CONTROL MEASURES

1. COMPOST FILTER SOCK
  - a. ALL MATERIAL TO MEET COMPOST FILTER SOCK SPECIFICATIONS.
  - b. COMPOST FILTER SOCK TO MEET APPLICATION REQUIREMENTS.

F. PERMANENT CONTROL MEASURES

1. PERMANENT GRASS OR LEGUME COVER
  - a. ALL DISTURBED AREAS, THAT ARE NOT TO BE PAVED OR STONED, SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION. THE GRASS OR LEGUME SHALL AS NEARLY AS POSSIBLE MATCH THE GROUND COVER THAT EXISTED PRIOR TO CONSTRUCTION. SEED SHALL BE SELECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

G. MULCH

1. ALL AREAS EXPOSED SHALL RECEIVE A LAYER OF COIR MULCH.
  - a. COIR MULCH SHALL BE APPLIED TO SEEDING AREAS TO HELP ESTABLISH A PERMANENT GRASS COVER AND TO PREVENT EROSION.
  - b. IT SHALL BE APPLIED AT A RATE OF APPROXIMATELY 3 TONS PER ACRE. COIR MULCH SHALL BE ANCHORED TO PREVENT BLOWING AWAY. ANCHOR WITH WOOD CELLULOSE FIBER @ 750 LBS/ACRE. OTHER MEANS OF MULCHING MAY BE USED IN CONFORMANCE WITH COUNTY CONSERVATION DISTRICT STANDARDS.
  - c. COIR MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS SHALL BE USED ON ALL SLOPES GREATER THAN 3:1.

H. STABILIZATION NOTES

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
2. UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR AT ANY STAGE OR PHASE OF AN ACTIVITY, THE CONTRACTOR SHALL STABILIZE IMMEDIATELY THE DISTURBED AREAS TO PROTECT FROM ACCELERATED EROSION. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS, WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE REDISTURBED WITHIN ONE YEAR, MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.
3. DIVERSION CHANNELS, SEDIMENTATION BASINS, SEDIMENT TRAPS, AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.
4. HAY OR STRAW MULCH MUST BE APPLIED AT RATES OF AT LEAST 3.0 TONS PER ACRE.
5. UNTIL THE SITE HAS ACHIEVED FINAL STABILIZATION, THE CONTRACTOR SHALL PROPERLY IMPLEMENT, OPERATE, AND MAINTAIN ALL THE BEST MANAGEMENT PRACTICES. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROL 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, MUST BE PERFORMED IMMEDIATELY.
6. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 70% UNIFORM 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 OR OTHER MOVEMENTS.
7. STABILIZE WITH EROSION CONTROL NETTING OR EROSION CONTROL BLANKETS ON ALL SLOPES GREATER THAN 3:1.

I. MAINTENANCE

1. ALL SEDIMENT AND EROSION CONTROL FACILITIES SHALL BE CHECKED FOR DAMAGE WEEKLY AND AFTER EACH STORM. ALL PREVENTIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIRS, REPLACEMENT, REGARDING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY.
2. ANY PERMANENT SEEDED AREAS THAT BECOME ERODED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS RESEWN, AND MULCH REAPPLIED OR, AT THE DIRECTION OF THE OWNER, SOD MAY BE INSTALLED.
3. A STOCKPILE OF ROCK MATERIAL (AASHTO #1 AND #57) WILL BE STORED ON SITE FOR THE PURPOSE OF MAINTAINING BMP'S.

J. GENERAL NOTES

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.
2. THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
4. THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOILS AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.
5. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER AN UNDISTURBED AREA.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
7. EROSION AND SEDIMENT BMP'S MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMP'S.
8. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMP'S MUST BE STABILIZED IMMEDIATELY.
9. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.
10. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.
11. DISTURBED AREAS THAT ARE AT A FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
12. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% VEGETATIVE 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.
13. AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED, ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGED RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.
14. UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMP'S MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMP'S AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMP'S FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMP'S, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
15. SEDIMENT REMOVED FROM BMP'S SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.
16. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 280.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

K. SOILS / RECEIVING STREAM / GEOLOGY

- SOILS**  
THE USDA-SCS (UNITED STATES DEPARTMENT OF AGRICULTURE – UNITED STATES SOIL CONSERVATION SERVICE) WEB SOIL SURVEY (HTTP://WEBSOILSURVEY.NRCS.USDA.GOV) DEFINES THE PROJECT SITE SOILS AS FOLLOWS:
- Bo – BOWMANVILLE-KNAUERS SILT LOAMS
  - Pnc – PENN CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
  - Ric – REAVILLE CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES
- RECEIVING STREAM**  
THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PADEP) ONLINE EMAP DEFINES THE PROJECT SITE RECEIVING STREAM AS FOLLOWS:
- RECEIVING STREAM – MILL CREEK
  - DESIGNATED USE: WARM WATER FISHES
- GEOLOGY**  
THE SINKHOLES AND KARST RELATED FEATURES OF BUCKS COUNTY, PENNSYLVANIA: LAMBERTVILLE 7.5 MINUTE QUADRANGLE (1990), AS PREPARED BY KOCHANDY, W.E. FOR THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES, BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY, OPEN REPORT 90-01, DEFINES THE PROJECT SITE GEOLOGY AS FOLLOWS:
- (Jtrb) BRUNSWICK FORMATION
    - ENGINEERING CHARACTERISTICS OF THE ROCKS OF PENNSYLVANIA, BY AR GEYER AND J.P. WILSHUSEN (1982) DEFINE THE BRUNSWICK FORMATION AS TYPICALLY CONSISTING OF REDDISH-BROWN SHALE, MUDSTONE, AND SILTSTONE, WITH BEDS OF GREEN SHALE AND BROWN SHALE NEAR ITS BASE. THE ROCK IS TOUGH, RED ARGILLITE INTERBEDDED IN SOME PLACES WITH DARK-GRAY ARGILLITE. NEAR DABASE INTRUSIVES, IT HAS BEEN ALTERED TO A HARD, DARK-COLORED HORNFELS. BEDDING IS MODERATELY WELL DEVELOPED, THIN, AND FLATLY.

APPLICATION	SPECIES	APPLICATION RATE/CONTENT	LIMING RATE +	% PURE LIVE SEED	FERTILIZER	SEEDING DATES
TEMPORARY	ANNUAL RYE	48 LBS./AC	2000 LBS./AC	98%	6-6-5+8 @ 1000 LBS./AC	NOT AFTER OCT. 15
PERMANENT	TIMOTHY	18 %	4 TONS	98%	SEE NOTE 1 BELOW	BETWEEN JUNE 1 AND OCT 15
	ORCHARD GRASS	46 %		98%		
	REDTOP	18 %		98%		
	KENTUCKY BLUEGRASS	18 %		98%		

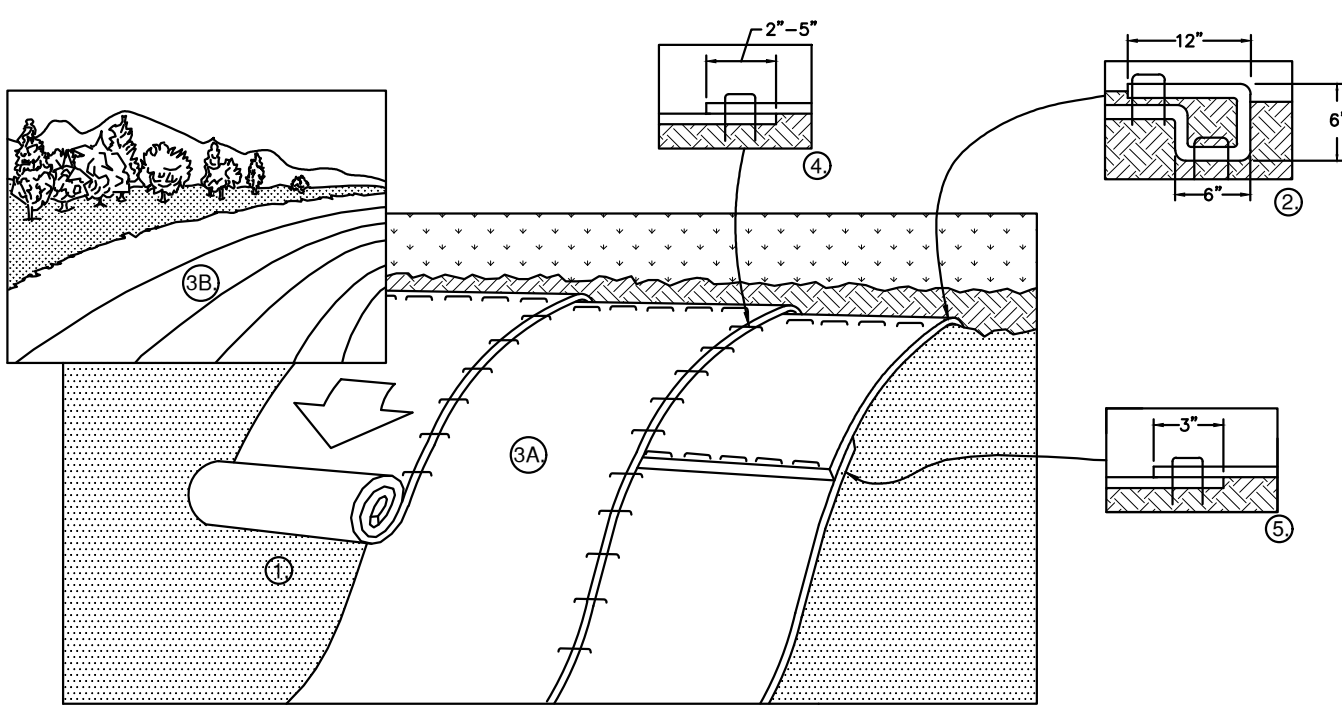
- + AGRICULTURAL-GRADE LIMESTONE      \* COMMERCIAL GRADE FERTILIZER
1. FERTILIZER SHALL BE AS FOLLOWS
    - 10-20-20 ANALYSIS COMMERCIAL FERTILIZER @ 678 LBS./AC AND
    - 38-0-0 UREA FORM FERTILIZER @ 242 LBS./AC OR
    - 32-0-0 TO 38-0-0 SULFUR COATED UREA FERTILIZER @ 286-242LBS./AC OR
    - 1-0-0 IBDU FERTILIZER @ 295 LBS./AC

2. SPECIFICATION ITEMS OBTAINED USING PADOT PUBLICATION NO. 408 AND THE PENN STATE AGRONOMY GUIDE (1991, 1992).
3. ALL SEEDED AREAS SHALL BE MULCHED WITH HAY OR STRAW. SEE MULCH NOTES, SECTION H ABOVE.

SEEDING SCHEDULE

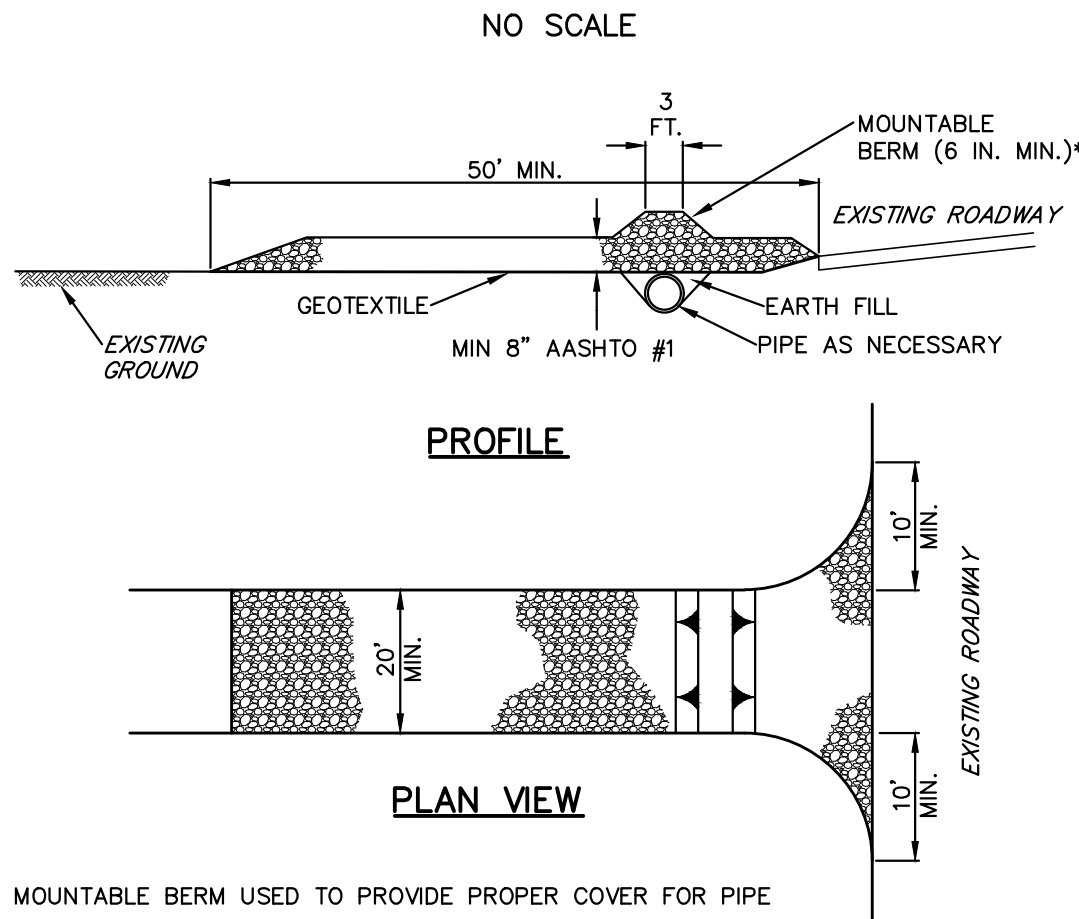
L. OPERATION AND MAINTENANCE PLAN

1. WRIGHTSTOWN TOWNSHIP STREAM RESTORATION
  - a. ALL REQUIRED MAINTENANCE SHALL BE PERFORMED BY AND AT THE OWNER'S EXPENSE.
  - b. MAINTENANCE IS NECESSARY EVERY QUARTER TO ENSURE PROPER FUNCTIONALITY OF THE STREAM.
  - c. ANY STRUCTURE THAT IS EXPECTED TO RECEIVE AND/OR TRAP DEBRIS AND SEDIMENT SHALL BE THOROUGHLY INSPECTED FOR EXCESSIVE DEBRIS AND CLOGGING. INSPECTIONS SHALL BE CONDUCTED AT MINIMUM FOUR (4) TIMERS PER YEAR OR IMMEDIATELY FOLLOWING ANY STORM CREATING GREATER THAN ONE (1) INCH OF WATER.
  - d. VEHICLES SHALL NOT BE PARKED OR DRIVEN ON THE STREAMBED AND CARE SHALL BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWER IF APPLICABLE.
  - e. SEDIMENT REMOVED FROM THE SITE SHALL BE DISPOSED OF PROPERLY, AND ANY AREAS THAT WERE DISTURBED SHALL BE STABILIZED AND REVEGETATED IMMEDIATELY.
  - f. CARE SHALL BE TAKEN TO PREVENT COMPACTION OF IN SITU SOILS TO PROMOTE HEALTHY VEGETATION GROWTH AND TO ENCOURAGE INFILTRATION.
  - g. INSPECT THE STREAM AND FLOODPLAIN AFTER RUNOFF EVENTS AND MAKE SURE THE STREAM RETURNS TO AVERAGE WATER LEVELS WITHIN 72 HOURS.
  - h. ALSO INSPECT FOR DAMAGE TO EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY.
  - i. UPKEEP OF VEGETATION INCLUDING MOWING AND/OR TRIMMING SHALL BE PERFORMED AS NECESSARY TO SUSTAIN THE SYSTEM. ALL DETRITUS SHALL BE REMOVED FROM THE BASIN.
    - 1) FERTILIZERS AND PESTICIDES SHALL NOT BE USED IN MAINTAINING THE VEGETATION.
    - 2) ALL VEGETATED AREAS SHALL BE INSPECTED EVERY YEAR FOR ANY EROSION.
    - 3) ALL VEGETATED AREAS SHALL BE INSPECTED EVERY YEAR FIR UNWANTED GROWTH OF EXOTIC AND/OR INVASIVE SPECIES.
    - 4) VEGETATIVE COVER SHALL BE MAINTAINED AT A MINIMUM OF NINETY-FIVE (95) PERCENT. VEGETATION SHALL BE REESTABLISHED IF VEGETATIVE COVER HAS BEEN REDUCED BY TEN (10) PERCENT.
  - j. AN INSPECTION CHECKLIST SHALL BE INCLUDED IN THE MAINTENANCE AND SHALL BE COMPLETED AT A MINIMUM OF ONCE EVERY YEAR.
2. ADDITIONAL NOTES
  - a. REGULAR INSPECTION OF THE STREAM SHALL OCCUR TO ASSURE PROPER IMPLEMENTATION OF BMP'S. OPERATION AND MAINTENANCE PLANS SHALL BE INSPECTED BY A QUALIFIED PERSON, WHICH MAY INCLUDE THE LANDOWNER OR THE OWNER'S DESIGNEE (INCLUDING THE MUNICIPALITY FOR DEDICATED AND OWNED FACILITIES).



- NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
  2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/ STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
  3. ROLL THE BLANKETS (A) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
  4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
  5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.

EMBANKMENT PROTECTION



\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

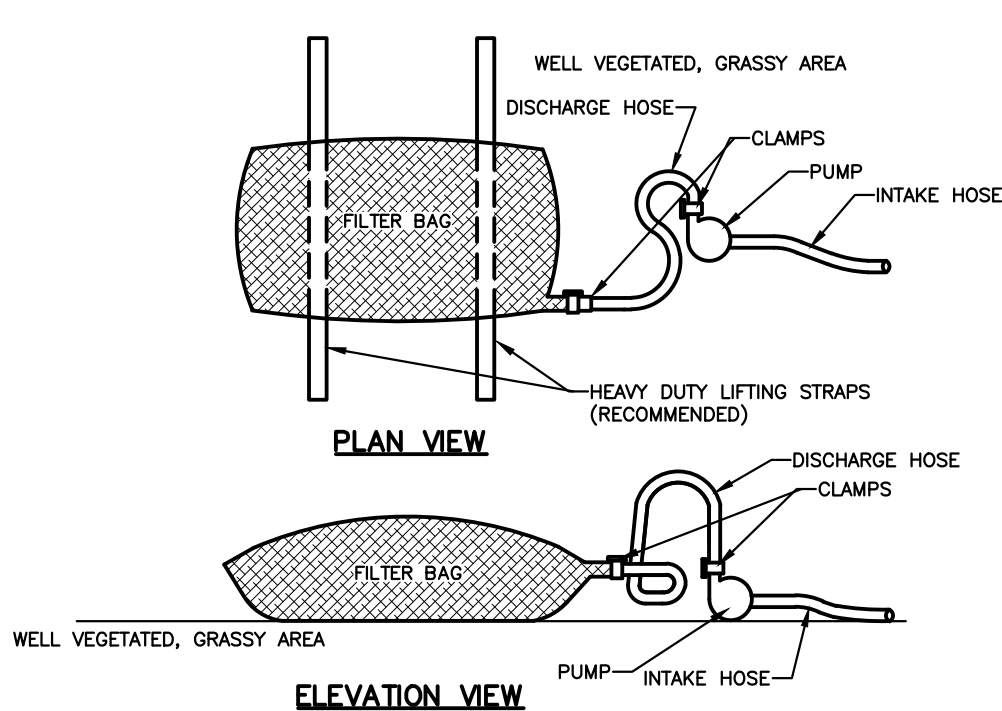
NOTES:

- 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.
- 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.

ROCK CONSTRUCTION ENTRANCE

NO SCALE



NOTES:

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:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4684	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
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.

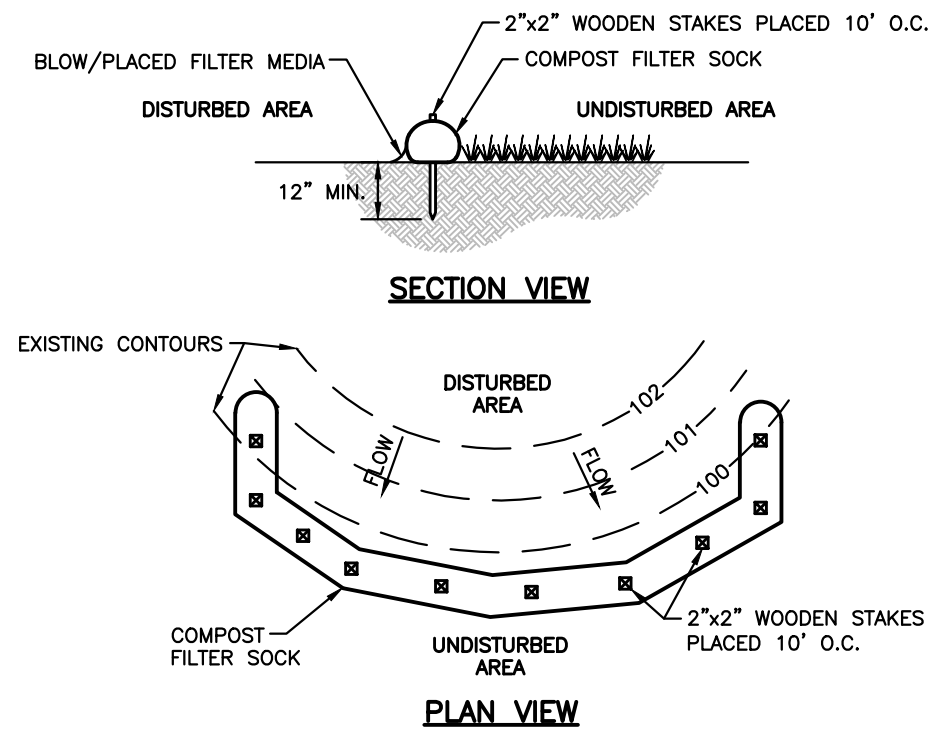
THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATED AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

PUMPED WATER FILTER BAGS SHALL BE SURROUNDED BY A RING OF COMPOST FILTER SOCK.

PUMPED WATER FILTER BAG DETAIL

NO SCALE



NOTES:

1. 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 SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. 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.
6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. 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.

COMPOST FILTER SOCK DETAIL

NO SCALE

Rev. No.	Date	Description
EROSION AND SEDIMENT CONTROL DETAILS AND NOTES		
STREAMBANK RESTORATION PLAN FOR ANCHOR RUN		
Wrightstown Township, Bucks County, Pennsylvania		
Date:	Scale:	Drawn By: SAM
2/2023	AS SHOWN	Checked By: ---
10500-62		11 OF 11

