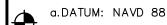
MINOR LAND DEVELOPMENT PLAN 180 NEW BRITAIN BLVD NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA

GENERAL NOTES

BENCHMARK: TOP OF CONCRETE MONUMENTON THE SOUTEHRN PROPERTY LINE, WEST OF THE BASIN



b.ELEV.: 343.00'

- BASIS OF BEARINGS IS PENNSYLVANIA STATE PLANE COORDINATE SYSTEM, PA SOUTH ZONE, NAD 83-2011
- UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND WERE DETERMINED FROM VISIBLE LOCATION, PA ONE CALL UTILITY RESPONSES AND/OR BEST AVAILABLE PLAN INFORMATION. PA ONE CALL NOTIFICATION SERIAL NUMBER IS 20212372948, DATED AUGUST 25, 2021. (RETTEW CANNOT GUARANTEE THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES. AN EXACT LOCATION CAN ONLY BE OBTAINED BY SUBSURFACE EXPLORATION, WHICH IS NOT A PART OF THIS CONTRACT PERFORMANCE)
- NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN AN AREA OF AN EASEMENT THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE
- THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITIES AT LEAST 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION. ALL UTILITIES HAVE BEEN IDENTIFIED BASED ON THE BEST AVAILABLE INFORMATION AND LISTED ON THESE PLANS IN ACCORDANCE WITH ACT 187 REQUIREMENTS THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF EXISTING UTILITIES AND ALL EFFORTS SHALL BE UNDERTAKEN TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE TO UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. RESTORATION OF ALL EXISTING SURFACE IMPROVEMENTS DAMAGED OR ALTERED DURING CONSTRUCTION, INCLUDING LANDSCAPING, SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR. (RETTEW CANNOT GUARANTEE THE EXACT LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES. AN EXACT LOCATION CAN ONLY BE OBTAINED BY SUBSURFACE EXPLORATION. WHICH IS NOT A PART OF THIS CONTRACT
- THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING THE SAFE FLOW OF TRAFFIC DURING CONSTRUCTION WITHIN THE SITE AND THE EXISTING ROAD RIGHT-OF-WAY WHILE ENTERING AND LEAVING THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS
- ALL STORM SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND TO THE STANDARDS OF THE
- THERE SHALL BE NO CHANGES OR DEVIATION FROM THESE PLANS UNLESS APPROVED BY THE TOWNSHIP ENGINEER. SUCH PLAN CHANGES, SHOULD THEY BECOME NECESSARY, ARE SUBJECT TO MUNICIPAL ORDINANCES.
-). THE CONTRACTOR SHALL INSPECT EXISTING SITE/PROJECT AREA CONDITIONS AND VERIFY ALL DIMENSIONS, QUANTITIES AND MATERIALS PRIOR TO THE START OF CONSTRUCTION.
- STORMWATER FACILITIES, INCLUDING BASINS, SWALES, STORM PIPING, AND APPURTENANCES SHALL BE MAINTAINED IN GOOD WORKING CONDITION BY THE DEVELOPER OR THE SUCCESSIVE LAND OWNER. NEW BRITAIN TOWNSHIP SHALL HAVE THE RIGHT TO INSPECT THE FACILITIES AT ANY TIME; REQUIRE THE OWNER TO TAKE CORRECTIVE MEASURES AND ASSIGN THE OWNER REASONABLE TIME PERIODS FOR ANY NECESSARY ACTION;
- . THE DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING ALL PAVEMENT MARKINGS, STREET SIGNS, TRAFFIC DIRECTIONAL AND CONTROL SIGNS SHOWN ON THIS PLAN IN ACCORDANCE WITH APPLICABLE STATE OR MUNICIPAL REGULATIONS AND SPECIFICATIONS. ALL SIGNAGE SHALL BE CONSISTENT WITH EXISTING SIGNAGE WITHIN NEW BRITAIN TOWNSHIP.
- 3. NEW BRITAIN TOWNSHIP SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OR MAINTENANCE OF ANY AREA NOT DEDICATED FOR THE PUBLIC
- 4. ANY FURTHER EXPANSION OF THE SITE WOULD REQUIRE THE FILING OF A REVISED LAND DEVELOPMENT PLAN.
- 5. CONSTRUCTION OVERSIGHT OF THE INSTALLATION OF THE STORMWATER MANAGEMENT FACILITYN IS REQUIRED BY A QUALIFIED PROFESSIONAL
- S. AFTER CONSTRUCTION, THE OWNER SHALL MONITOR THE SITE FOR POTENTIAL SINKHOLE ACTIVITY. IN THE EVENT THAT A SINKHOLE OCCURS, THE OWNER SHALL IMMEDIATELY CONTACT THE TOWNSHIP AND ARRANGE FOR A QUALIFIED PROFESSIONAL GEOLOGIST REGISTERED IN THE COMMONWEALTH PENNSYLVANIA TO MAKE THE APPROPRIATE REMEDIATION.
- 7. A "SITE EVALUATION FOR STORMWATER INFILTRATION" REPORT DATED 01/07/2022, WAS PREPARED BY RETTEW ASSOCIATES.
- THE STORMWATER MANAGEMENT AGREEMENT RECORDED AS PART OF THIS PLAN, FURTHER INDICATES THE REQUIRED RESPONSIBILITIES OF OWNERSHIP AND MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES.
- 9. THE DEVELOPER SHALL BE RESPONSIBLE FOR COMPLETING A RECORD SURVEY OF ALL STORMWATER MANAGEMENT FACILITIES INCLUDED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE RECORD SURVEY AND EXPLANATION OF ANY DISCREPANCIES WITH THE DESIGN PLANS SHALL BE SUBMITTED TO THE TOWNSHIP OR ITS DESIGNEE FOR FINAL APPROVAL.
- O. THIS PLAN WAS DESIGNED UNDER THE NEW BRITAIN TOWNSHIP ZONING ORDINANCE OF 1995, THE NEW BRITAIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE OF 2002 AND THE NEW BRITAIN TOWNSHIP STORMWATER MANAGEMENT ORDINANCE, ADOPTED MAY 7, 2014, ORDINANCE NO. 2011-04-01.
- 21. ANY/ALL SIGNAGE WILL ULTIMATELY NEED TO BE APPROVED BY THE NEW BRITAIN TOWNSHIP ZONING OFFICER.
- 22. DEVELOPER SHALL CONTACT THE INSPECTING ENGINEER TO COORDINATE THE CONSTRUCTION OBSERVATION SCHEDULE AND RELATED DETAILS. 23. THE APPLICANT MUST SCHEDULE CONSTRUCTION INSPECTIONS FOR ALL STORMWATER MANAGEMENT FACILITIES WITH THE TOWNSHIP INCLUDING THE PROPOSED REMOVAL OF IMPERVIOUS SURFACES FULL DEPTH.
- 4. AT THE COMPLETION OF THE PROJECT, AND AS PREREQUISITE FOR THE RELEASE OF THE FINANCIAL SECURITY, THE APPLICANT SHALL PROVIDE CERTIFICATION OF COMPLETION FROM AN ENGINEER, LANDSCAPE ARCHITECT, SURVEYOR OR OTHER QUALIFIED PERSON VERIFYING THAT ALL PERMANENT SWM FACILITIES HAVE BEEN CONSTRUCTED ACCORDING TO THE PLANS AND SPECIFICATIONS AND APPROVED REVISIONS THERETO.
- 25. UPON RECEIPT OF THE CERTIFICATE OF COMPLETION, AND PRIOR TO RELEASE OF THE REMAINING FINANCIAL SECURITY THE TOWNSHIP SHALL CONDUCT A FINAL INSPECTION TO CERTIFY COMPLIANCE WITH THIS ORDINANCE.
- 26. A WETLANDS INVESTIGATION WAS COMPLETED ON 9/14/2021, NO STREAMS OR WETLANDS WERE PRESENT ON SITE.

CONSTRUCTION NOTES

HE FOLLOWING NOTES PERTAIN TO ALL PROPOSED CONSTRUCTION METHODS, MATERIALS, STRUCTURES AND FACILITIES WITHIN NEW BRITAIN TOWNSHIP. THESE CONSTRUCTION NOTES, IN A SIMILAR FORMAT, MUST BE PROVIDED ON THE RECORD PLAN. THE APPLICANT SHOULD MODIFY THE CONSTRUCTION NOTES OR PROVIDE ADDITIONAL NOTES, AS NECESSARY, WHEN THE DESIGN METHODS AND STANDARDS ARE NOT SPECIFICALLY STATED. IN NEW BRITAIN TOWNSHIP'S ZONING OR SUBDIVISION AND LAND DEVELOPMENT ORDINANCES, THE FOLLOWING SHALL APPLY TO ALL CONSTRUCTION ACTIVITIES.

- I. ALL CONSTRUCTION METHODS AND MATERIALS MUST COMPLY WITH THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408,
- 2. ALL PROPOSED STRUCTURES AND FACILITIES MUST BE CONSTRUCTED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 72, "ROAD CONSTRUCTION STANDARDS", LATEST REVISION. ALL PROPOSED STREETS, ACCESS DRIVES, DRIVEWAYS AND UTILITIES SHALL COMPLY WITH THE PENNSYLVANIA CODE, TITLE 67, CHAPTER 441, "ACCESS TO AND OCCUPANCY OF HIGHWAYS BY DRIVEWAYS AND LOCAL ROADS", AND CHAPTER 459, "OCCUPANCY OF HIGHWAYS BY UTILITIES",
- 4. ALL PROPOSED STRUCTURES AND FACILITIES MUST COMPLY WITH THE AMERICANS WITH DISABILITY ACT, "ACCESSIBILITY GUIDELINES FOR BUILDINGS

AUTHORITY, SEWER AUTHORITY, BUCKS COUNTY HEALTH DEPARTMENT, PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROETCTION AND NEW

- ALL PROPOSED WATER AND SEWER FACILITIES MUST COMPLLY WITH THE STANDARDS AND POLICIESOF THE APPLICABLE WATER AUTHORITY, SEWER
- BRITIAN TOWNSHIP. . ALL CONTRACTOS SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION ACTIVITIES ARE PERFORMED IN ACCORDANCE WITH THE STANDARDS
- AND POLICIES OF THE BUCKS COUNTY CONSERVATION DISTRICT. . ALL CONSTRACTORS SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION ACTIVITIES ARE PERFORMED IN ACCORDANCE WITH THE STANDARDS
- AND POLICIES OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
- 3. ALL CONTRACTS SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL UTILITIES AND COMPLYING WITH THE PENNSYLVANIA ACT 38 AND ACT
- 9. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
- 10. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF P.L. 852, No. 287, 12/10/72, AS AMENDED 12/12/86, P.L. 1574, No. 172. CONTRACTOR MUST NOTIFY PA-1 CALL SYSTEM, INC. 3 DAYS PRIOR TO CONSTRUCTION. 1. CONTRACTOR SHALL NOT ENCROACH ONTO ABUTTING PROPERTIES UNLESS A TEMPORARY CONSTRUCTION EASEMENT HAS BEEN GRANTED BY ADJOINING PROPERTY OWNER. CONTRCTOR SHALL HAVE PROPERTY LINES CLEARLY MARKED IN AREAS WHERE GRADING WILL ENCROACH WITHIN 5

FEET OF THE PROPERTY LINE AND SHALL CONSTRUCT SUCH BARRIERS WHICH ARE NECESSARY TO PREVENT ENCORACHMENT ONTO ADJACENT

2. NO EXCAVATION OR FILL SHALL BE MADE WITH A FACE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.

CERTIFICATIONS

CERTIFICATION OF SURVEY ACCURACY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NEW BRITAIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

CERTIFICATION OF PLAN ACCURACY

I HEREBY CERTIFY THAT. TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NEW BRITAIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

STORM WATER MANAGEMENT PLAN CERTIFICATION

I HEREBY CERTIFY THAT. TO THE BEST OF MY KNOWLEDGE, THE STORM DRAINAGE FACILITIES SHOWN AND DESCRIBED HEREON ARE DESIGNED IN CONFORMANCE WITH THE NEW BRITAIN TOWNSHIP STORM WATER MANAGEMENT ORDINANCE.

WETLAND DELINEATION CERTIFICATION

SCIENTIST, DO HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE WETLAND RELATED INFORMATION CONTAINED ON THIS PLAN IS TRUE AND CORRECT AND HAS BEEN DELINEATED IN ACCORDANCE WITH ACCEPTED WETLAND DELINEATION PRACTICES BASED ON THE 2087 WETLAND DELINEATION MANUAL AND IS IN CONFORMANCE WITH CHAPTER 105 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF

(NAME) CERTIFIED PROFESSIONAL WETLAND SCIENTIST

<u>CORPORATION</u>

COMMONWEALTH OF PENNSYLVANIA

ENVIRONMENTAL RESOURCES.

ON THIS, THE ____ DAY OF _____, 20_ BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED ______, BEING A MEMBER OF 180 NEW BRITAIN BLVD MANAGER, LLC, THE MANAGER OF 180 NEW BRITAIN BLVD ASSOCIATES, LLC, A PENNSYLVANIA LIMITED LIABILITY COMPANY, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT THE CORPORATION IS THE

LIMITED LIABILITY COMPANY IS THE FEE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT HE/SHE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF THE LIMITED LIABILITY COMPANY, THAT THE PLAN IS THE ACT AND DEED OF THE LIMITED LIABILITY COMPANY, THAT THE LIMITED LIABILITY COMPANY DESIRES THE SAME TO BE RECORDED, AND ON BEHALF OF THE LIMITED LIABILITY COMPANY FURTHER ACKNOWLEDGES THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO THE PUBLIC USE.

I HEREBY CERTIFY THAT THE STORM WATER MANAGEMENT FACILITIES TO BE PERMANENT FIXTURES THAT

THIS PLAN WAS APPROVED BY THE NEW BRITAIN BOARD OF SUPERVISORS THIS ____ DAY OF _____, 20__.

CANNOT BE ALTERED OR REMOVED UNLESS A REVISED PLAN IS APPROVED BY NEW BRITAIN TOWNSHIP.

NEW BRITAIN TOWNSHIP'S BOARD OF SUPERVISORS FINAL PLAN APPROVAL CERTIFICATE

RECORDED IN THE OFFICE FOR RECORDING OF DEEDS, IN AND FOR BUCKS COUNTY,

PENNSYLVANIA, IN SUBDIVISION PLAN BOOK _____, VOLUME ____, PAGE _____, WITNESS MY HAND AND SEAL OF OFFICE THIS _____ DAY OF

(TITLE) (SIGNATURE)

(NOTARY PUBLIC)

STORM WATER MANAGEMENT FACILITIES CERTIFICATION

EQUITABLE OWNER/DEVELOPER

180 NEW BRITAIN BLVD ASSOCIATES, LLC GABE CLARK, PARTNER ONE TOWER BRIDGE 100 FRONT STREET, SUITE 560

WEST CONSHOHOCKEN, PA 19428

SOURCE OF TITLE

PARCEL ID 26-001-100 D.B. 677, PG. 2147 P.B. 256, PG. 28

SITE DATA

GROSS TRACT AREA 8.51 ACRES EXISTING USE K3 WAREHOUSE/OFFICE EXISTING LOTS K18 FLEX SPACE PROPOSED USE SANITARY SEWER PUBLIC (EXISTING) PUBLIC (EXISTING)

SITE CAPACITY CALCULATIONS

	AREA (SF)	AREA (AC)
GROSS SITE AREA DETERMINED BY ACTUAL ON-SITE SURVEY	370,695	8.51
EXISTING STREETS UNLTIMATE RIGHTS-OF-WAY	11,546	0.27
EXISTING UTILITY UNLTIMATE RIGHTS-OF-WAY OR EASEMENT	52,241	1.20
EXISTING PRESERVATION EASEMENTS	0	0
LAND NOT CONTIGUOUS	0	0
LAND SHOWN ON PREVIOUS SUBDIVISION RESERVED FOR OPEN SPACE, PROTECTION, ECT	0	0
LAND IN A DIFFERENT ZONING DISTRICT FROM PRIMARY USE	0	0
BASE SITE AREA	306,908	7.04

ZONING DATA 10 - INDUSTRIAL OFFICE

	<u>REQUIRED</u>	<u>EXISTING</u>	PROPOSED
MINIMUM LOT AREA	3 AC.	8.40 AC.	8.40 AC.
MINIMUM LOT WIDTH	200 FT.	>200 FT.	>200 FT.
MINIMUM LOT DEPTH	200 FT.	>200 FT.	>200 FT.
MINIMUM FRONT YARD SETBACK (FROM STREET RIGHT-OF-WAY)	50 FT.	50 FT.	50 FT.
MINIMUM SIDE YARD SETBACK (EACH SIDE)	25 FT. (EACH SIDE)	25 FT.	25 FT.
MINIMUM REAR YARD SETBACK	50 FT.	50 FT.	50 FT.
MAXIMUM IMPERVIOUS COVERAGE	65%	47%	54%
MAXIMUM BUILDING COVERAGE	50%	28%	28%
MAXIMUM BUILDING HEIGHT	35 FT.	<35 FT.	<35 FT.

PARKING COMPUTATIONS

PARKING REQUIREMENTS

<u>REQUIRED</u> <u>PROPOSED</u> 1 SPACE PER 275 S.F. 101,700 S.F.

370 SPACES* 84 SPACES * CALCULATIONS BASED ON 101,700 S.F. OF FLOOR SPACE ** VARIANCE REQUIRED

ZONING - VARIANCE

7.5 MIN. QUADRANGLE MAP: DOYLESTOWN, PA

. SECTION 27-2901-K-18 - OFF STREET PARKING REQUIREMENTS - TO PERMIT REDUCTION OF REQUIRED OFF STREET PARKING. 137 SPACES. APPROVED: PUBLIC HEARING ON DECEMBER 16, 2021; SEE CONDITIONS ON

LOCATION MAP

LIST OF DRAWINGS ALL SHEETS TO BE RECORDED

1 OF 13. COVER SHEET 2 OF 13. EXISTING CONDITIONS/DEMOLITION PLAN 3 OF 13. LAYOUT PLAN 4 OF 13. GRADING & UTILITY PLAN 5 OF 13. LANDSCAPE AND LIGHTING PLAN 6 OF 13. ACCESS DRIVEWAY & STORM PROFILES

7 OF 13. SITE/UTILITY DETAILS 8 OF 13. SITE/UTILITY DETAILS 9 OF 13. EROSION & SEDIMENT CONTROL PLAN

10 OF 13. EROSION & SEDIMENT CONTROL NOTES 11 OF 13. EROSION & SEDIMENT CONTROL DETAILS 12 OF 13. PCSM PLAN

13 OF 13. PCSM NOTES & DETAILS

 Ξ 0

01/11/22 SHEET NO. ___1__ OF ___13_ DWG. NO. 111902028

NEW BRITAIN TOWNSHIP ENGINEER REVIEW CERTIFICATION

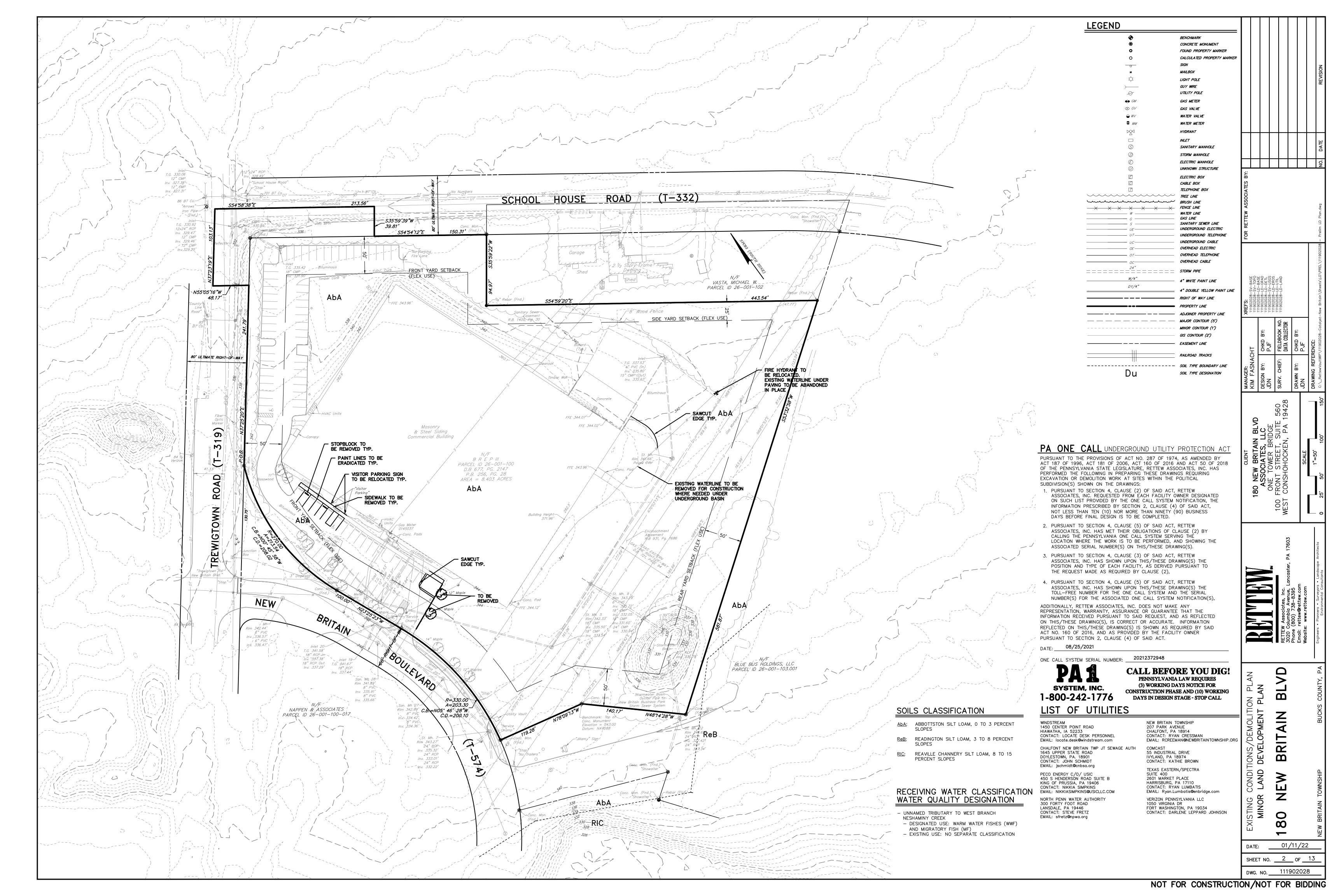
REVIEWED BY THE NEW BRITAIN TOWNSHIP ENGINEER.

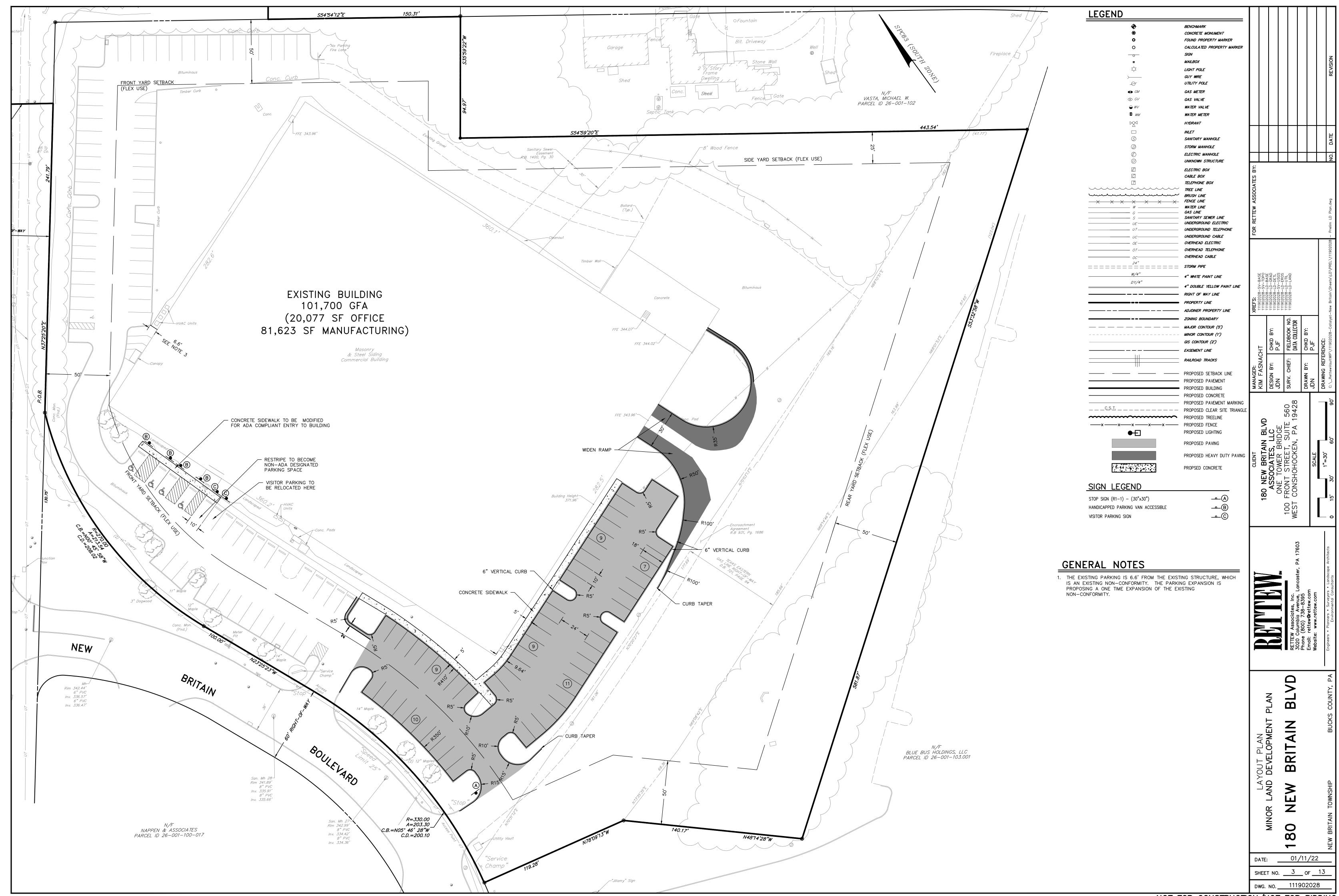
OWNSHIP ENGINEER

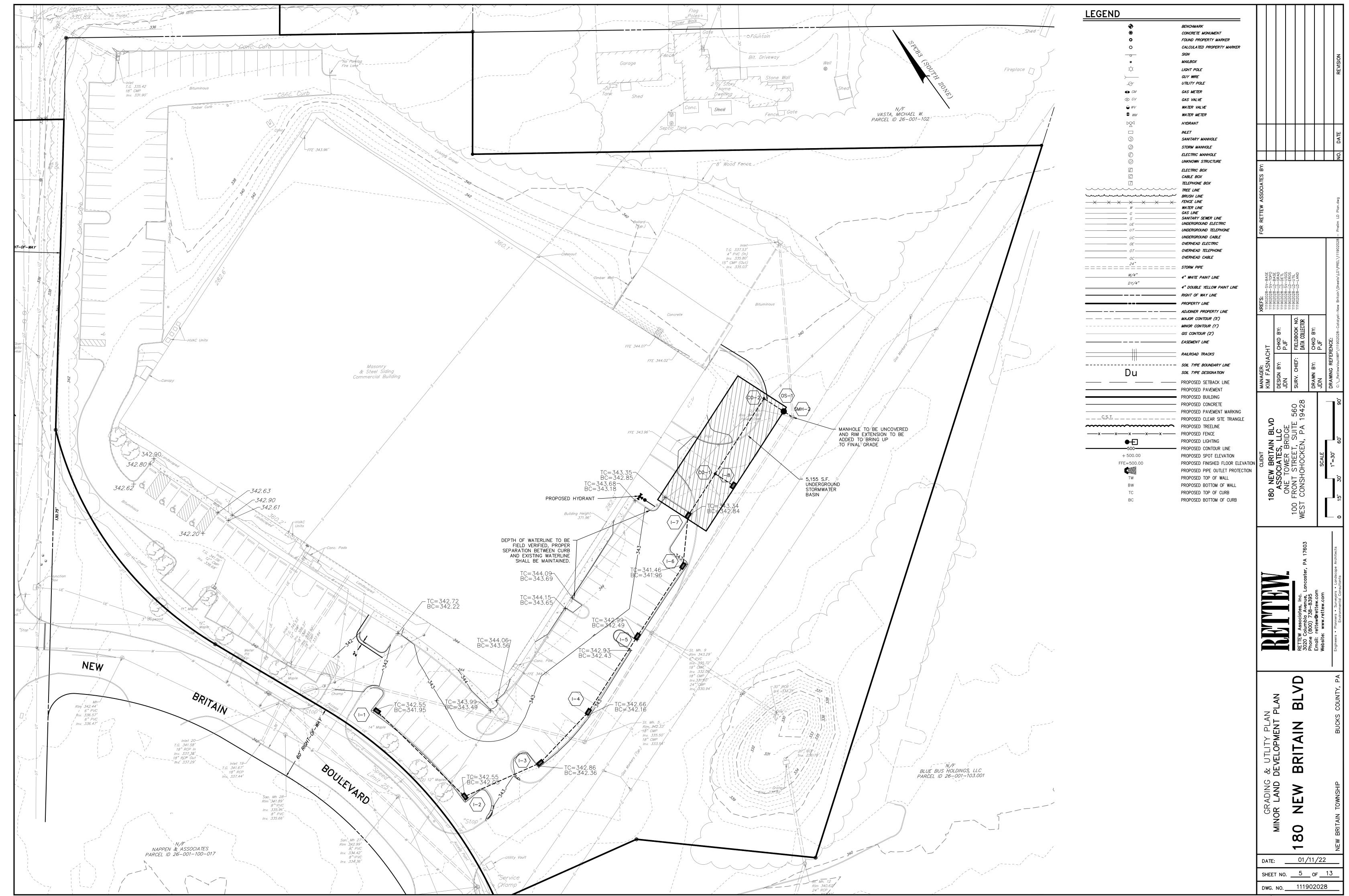
RECORDER

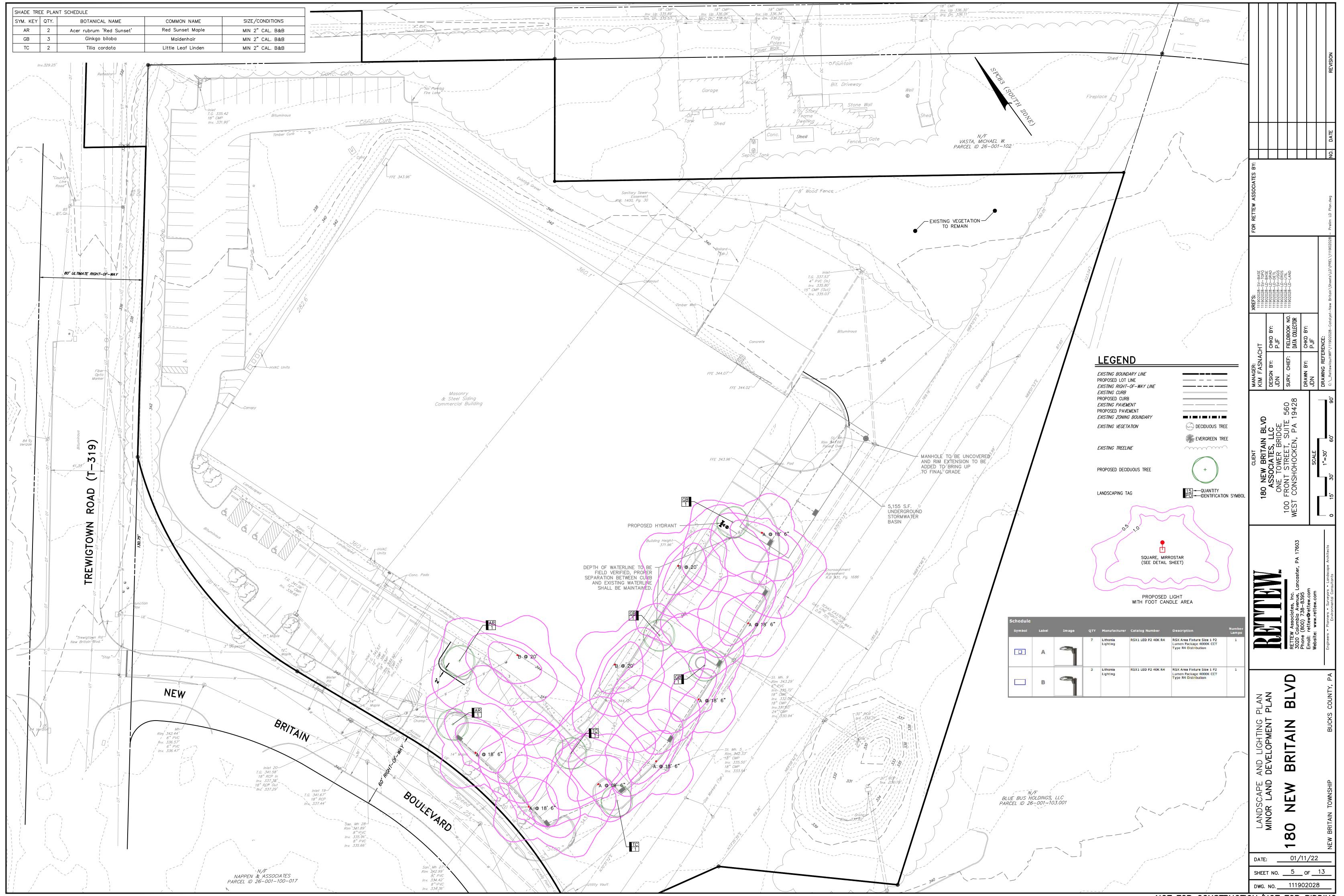
RECORDER OF DEEDS CERTIFICATE

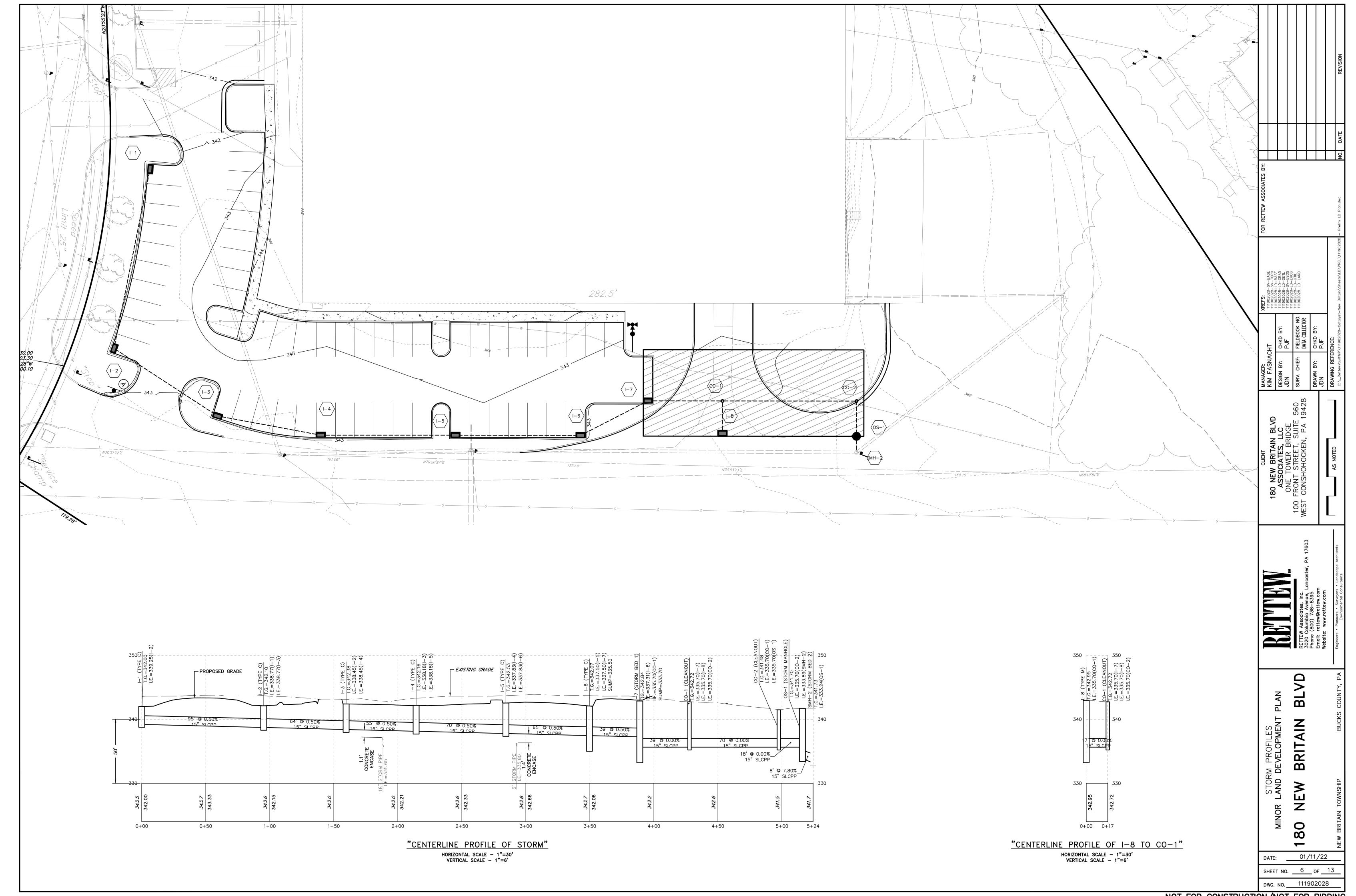
NOT FOR CONSTRUCTION/NOT FOR BIDDING

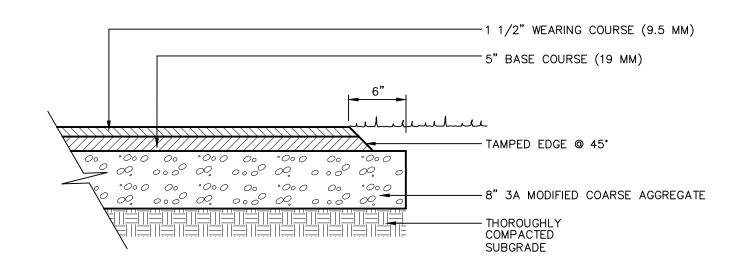




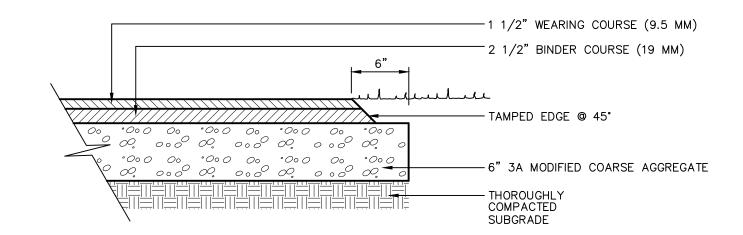




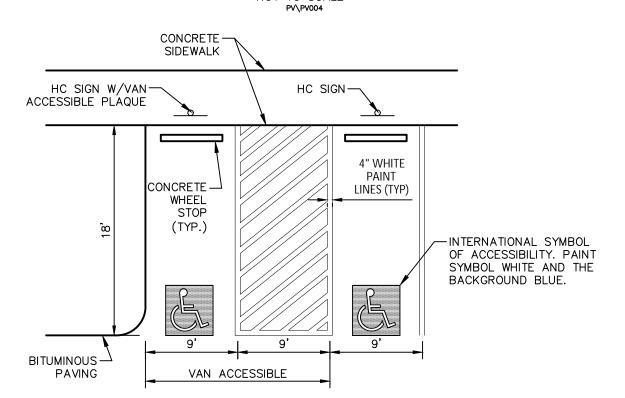




BITUMINOUS HEAVY DUTY PAVING SECTION



BITUMINOUS LIGHT DUTY PAVING SECTION



<u>PLAN</u>



12" x 18"

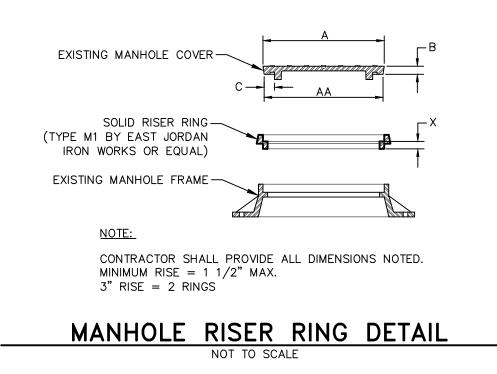


NOTE:
RESERVED PARKING SIGNS SHALL BE
INSTALLED PER THE SPECIFICATIONS
FOUND IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. SIGN TYPE USED SHALL BE R7-8 12"x18" AS SHOWN. THE SIGN SHALL BE ABOVE GRADE WITH THE BOTTOM OF THE SIGN A MINIMUM OF 5'-0" ABOVE GRADE(*). THE HANDICAP PARKING SPACES SHÌAĹL BE FURTHER IDENTIFIED BY HAVING AT LEAST THE PERIMETERS OF THE SPACES PAINTED BLUE.

*WHEN THE SIGN IS LOCATED ADJACENT TO AND PERPENDICULAR TO SIDEWALK THE BOTTOM OF THE SIGN SHALL BE A MINIMUM OF 7'-0" ABOVE GRADE.

SIGNAGE

HANDICAP PARKING FACILITIES FOR STRAIGHT PARKING NOT TO SCALE CU-015

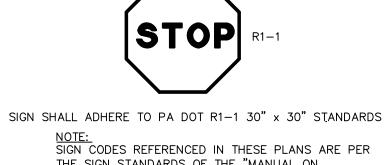


OPENING FOR STEEL PINS; STEEL PINS— SHALL BE #5 RE—BAR 12" LONG DRIVEN INTO BÏTUMINOUS PAVEMENT FLUSH TO TOP OF CONCRETE 14" 15" 14" 15" 14" WHEEL STOP SHALL BE PLACED 2' FROM END OF PARKING SPACE & CENTERED CONCRETE WHEEL STOP DETAIL

NOT TO SCALE

FINISHED -GRADE -3/4" RADIUS __BITUMINOUS PAVING (SEE DETAIL) 2" DEEP, 3/16" WIDE SAWCUT CONTRACTION JOINT CONCRETE 6" REVEAL VERTICAL CURB DETAIL

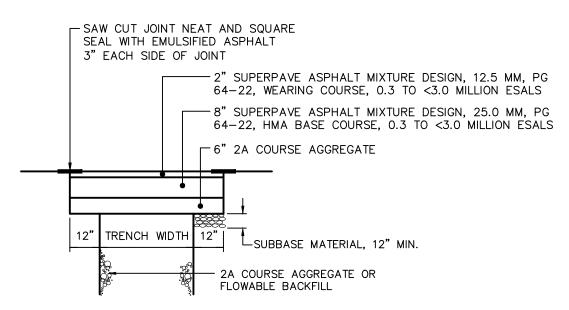
CURB LINE



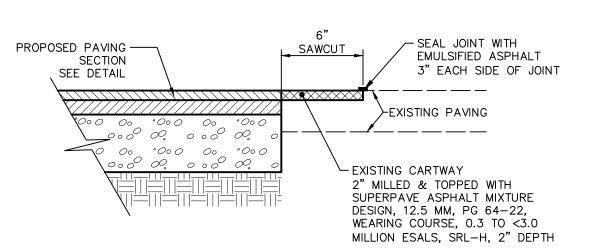
1/4" RADIUS —

SIGN CODES REFERENCED IN THESE PLANS ARE PER THE SIGN STANDARDS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

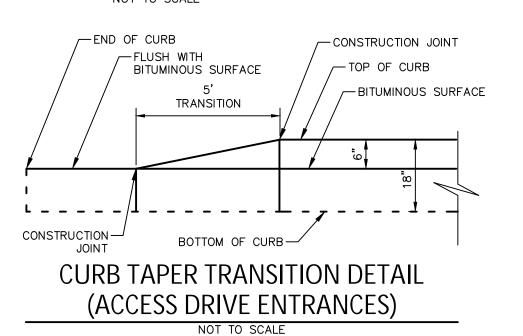
STOP SIGN - R1-1 NOT TO SCALE

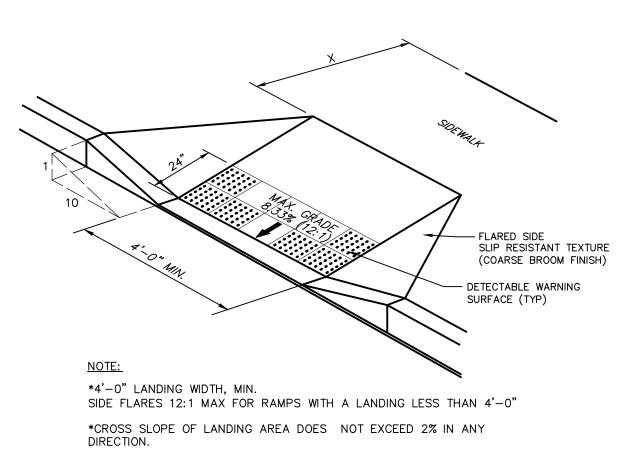


TOWNSHIP PAVEMENT RESTORATION

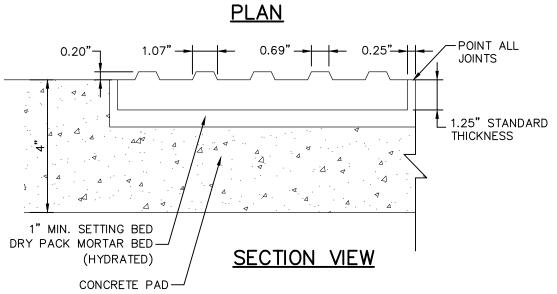


PAVING SAWCUT



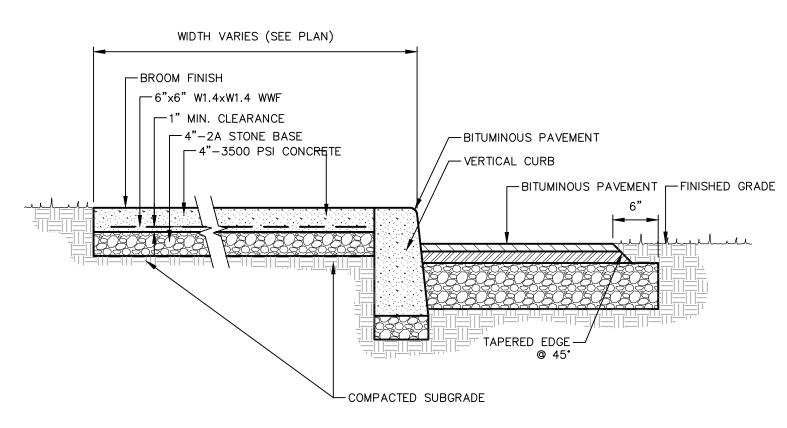


TYPE 1 CURB RAMP



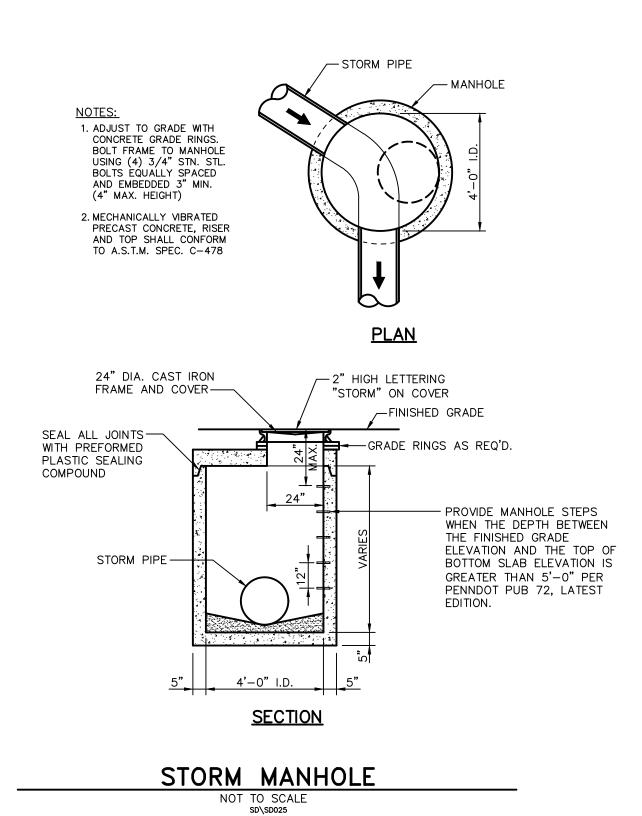
DETECTABLE WARNING SURFACE

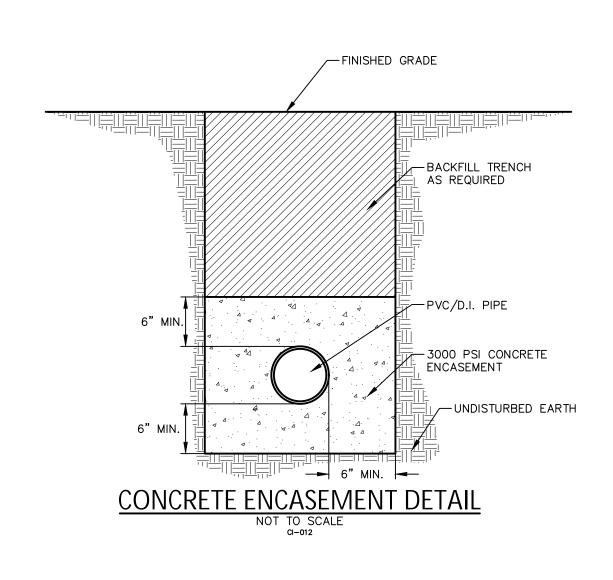
NOT TO SCALE

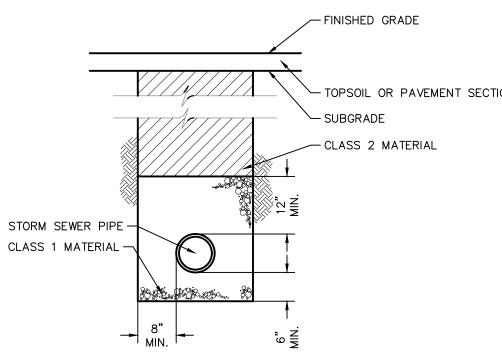


CONCRETE WALK / VERTICAL CURB / **BITUMINOUS PAVING SECTION**

四 TILITY DETAILS DEVELOPMENT RITAIN \mathbf{m} 0 01/11/22 SHEET NO. ____7__ OF ___13__ DWG. NO. 111902028







CLASSIFICATION OF MATERIALS

1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS.

BOLT FRAME TO MANHOLE USING (4) 3/4" STN. STL. BOLTS EQUALLY SPACED AND EMBEDDED 3" MIN. (4" MAX. HEIGHT)

2. MECHANICALLY VIBRATED PRECAST CONCRETE, RISER AND TOP SHALL CONFORM TO A.S.T.M. SPEC. C-478

24" DIA. CAST IRON

STORM PIPE-

SEAL ALL JOINTS-

WITH PREFORMED PLASTIC SEALING COMPOUND

FRAME AND COVER-

CLASS 1 - THIS MATERIAL SHALL CONSIST OF 2A COARSE AGGREGATE OR 2 RC CRUSHED AGGREGATE FREE OF SLAG, EXCEPT IN WET OR UNSTABLE AREAS WHERE THE BEDDING MAY BE NO. 8 OR NO. 57 COARSE AGGREGATE. ALL MATERIALS SHALL CONFORM TO PennDOT PUBLICATION 408, SECTION 703.3.

CLASS 2 - THIS MATERIAL SHALL CONSIST OF EXCAVATED MATERIAL FREE FROM CINDERS, ASHES, REFUSE, VEGETABLE OR ORGANIC MATERIAL, BOULDERS, ROCKS NO LARGER THAN FOUR (4) INCHES IN DIMENSION, STONE OR OTHER MATERIAL WHICH IN THE OPINION OF THE

TYPICAL STORM SEWER - TRENCH BACKFILL NOT TO SCALE

STORM PIPE

<u>PLAN</u>

-2" HIGH LETTERING

SECTION

STORM MANHOLE

NOT TO SCALE SD\SD025

"STORM" ON COVER

FINISHED GRADE

-GRADE RINGS AS REQ'D.

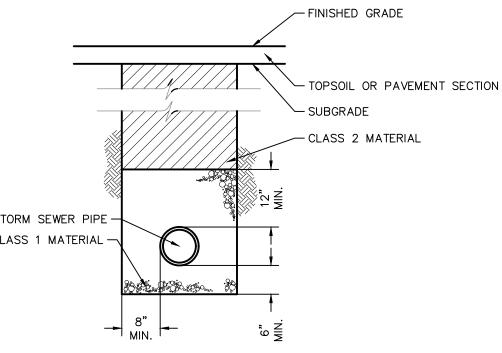
PROVIDE MANHOLE STEPS WHEN THE DEPTH BETWEEN THE FINISHED GRADE

ELEVATION AND THE TOP OF

BOTTOM SLAB ELEVATION IS

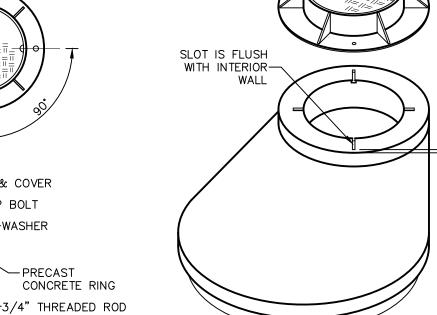
GREATER THAN 5'-0" PER PENNDOT PUB 72, LATEST

— MANHOLE



HOLES IN BASE FLANGE OF FRAME

FRAME & COVER



STANDARD

MANHOLE-

NOTES:

A.S.T.M. SPEC. C-478.

(MINIMUM 0.10 FT FALL)

MANHOLE CASTING.

ANCHOR BOLTS.

BY SPECIFICATIONS.

EXTERIOR WALLS.

1. PRECAST CONCRETE MANHOLE SHALL CONFORM TO

2. MANHOLE SHALL HAVE BITUMASTIC COATING ON

3. MAINTAIN UNIFORM GRADE THROUGH MANHOLE.

5. CONTRACTOR MAY USE PRECAST CHANNELS.

6. SEAL GRADE RINGS WITH TWO ROWS OF BUTYL

4. ALL OPENINGS AROUND PIPES SHALL BE FINISHED WITH NON-SHRINK GROUT AND KOR-N-SEAL SERIES CONNECTORS OPENINGS SHALL BE CAST AT TIME OF

RUBBER SEALING COMPOUND ON OPPOSITE SIDES OF

7. SEAL JOINTS BETWEEN MANHOLE SECTIONS WITH TWO

BELOW FINISHED GRADE UNLESS REQUIRED OTHERWISE

MANHOLE NOTES NOT TO SCALE

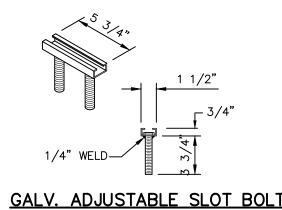
RINGS OF BUTYL RUBBER SEALING COMPOUND.

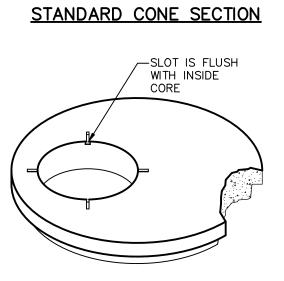
8. BACKFILL MANHOLES WITH NO. 57 STONE TO 6"

9. CONCRETE FILL SHALL BE 3000 PSI, TYPE II.

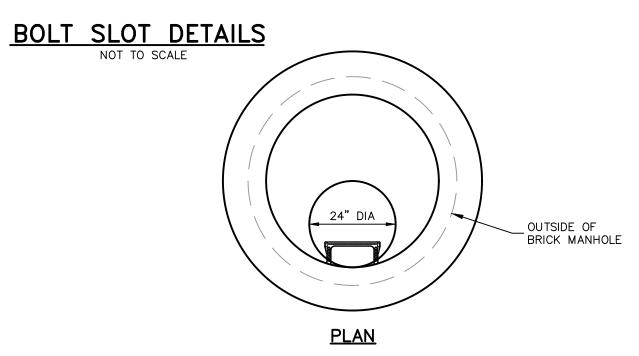
CONNECTION DETAIL

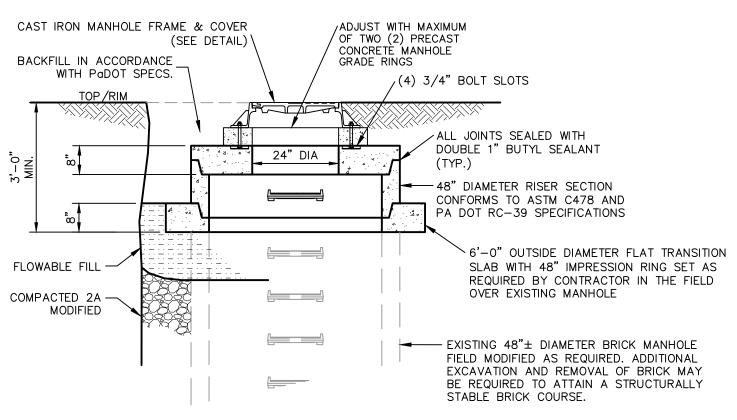
-PRECAST





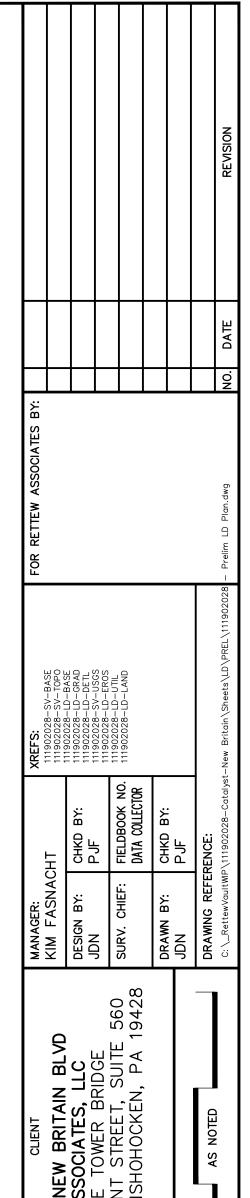
STANDARD FLAT SLAB SECTION

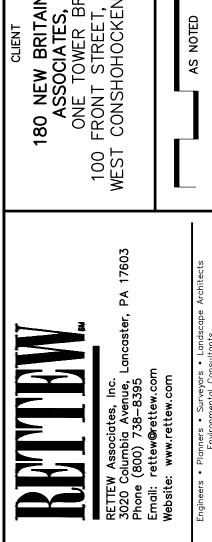




<u>SECTION</u> EXISTING MANHOLE GRADE ADJUSTMENT DETAIL

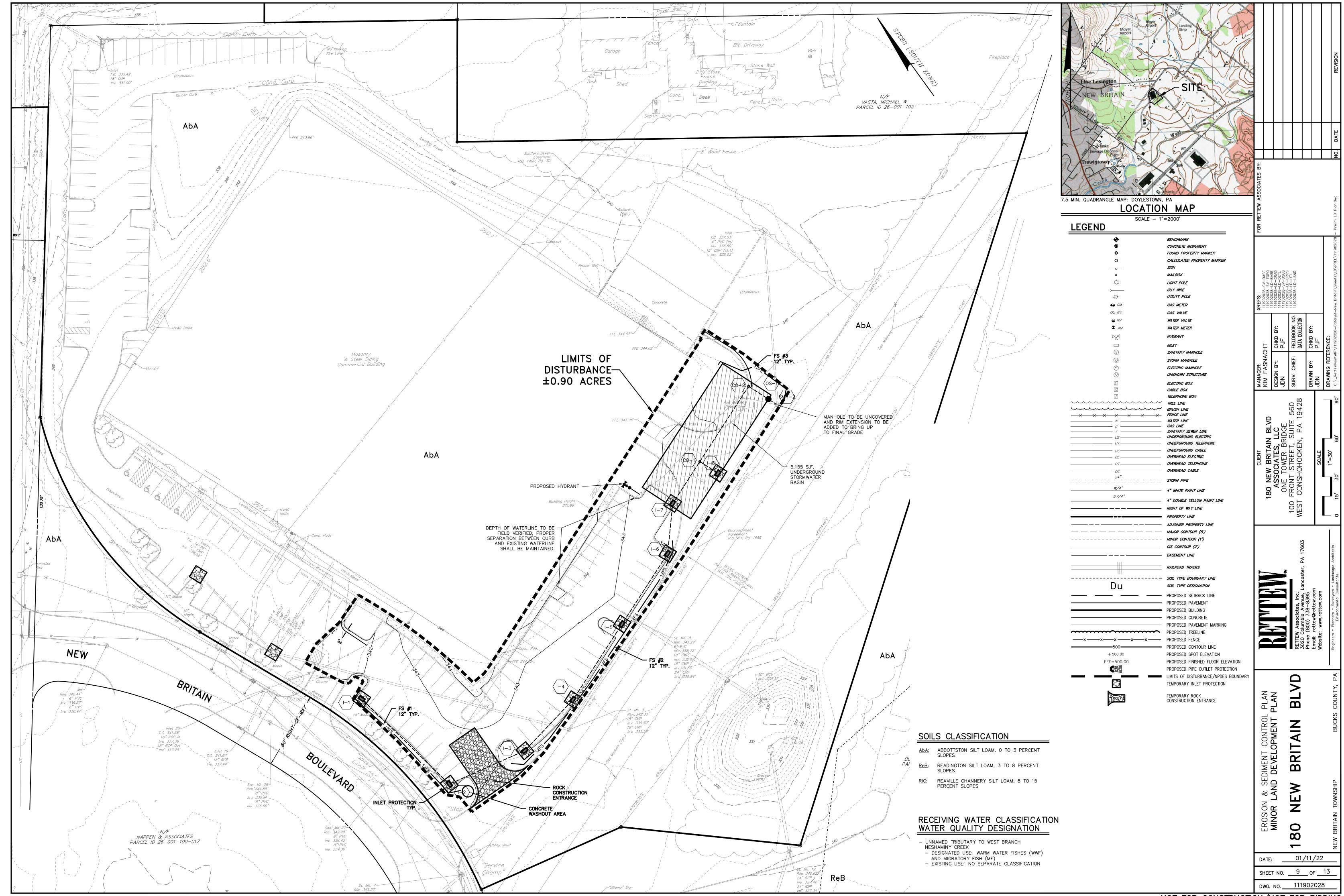
NOT TO SCALE





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EROSION AND SEDIMENT CONTROL (ESC) NOTES

- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHAL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- 2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION O THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- 3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- . ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO
- 5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- 7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT
- 10. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE. 11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- 12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN 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
- 13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG
- DISCHARGING OVER NON-DISTURBED AREAS. 14. VEHICLES AND EQUIPMENT MAY NEITHER ENTER DIRECTLY NOR EXIT DIRECTLY ONTO ANY ROADS.
- 15. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO LANCASTER COUNTY CONSERVATION DISTRICT COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 16. 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.
- 17. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY 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
- 18. ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES. 19. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES
- 6 TO 12 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO E VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- 20. 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.
- 21. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN
- 22. 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
- 23. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- 24. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- 25. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- 26. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDEL AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- 27. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE 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.
- 28. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIS ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- 29. E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- 30. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPs.
- 31 AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED. TEMPORARY FROSION AND SEDIMENT BMPs MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPs. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPs SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- 32. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- 33. FAILURE TO CORRECTLY INSTALL E&S BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
- 34. IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE LANCASTER COUNTY CONSERVATION DISTRICT AND THE NEW BRITAIN TOWNSHIP GEOTECHNICAL CONSULTANT WILL BE MADE AWARE OF
- 35. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- 36. 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 O ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
- 37. AT STREAM CROSSINGS, 50' BUFFER AREAS SHOULD BE MAINTAINED. ON BUFFERS, CLEARING, SOD DISTURBANCES, EXCAVATION, AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIP SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF
- 38. ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE PRIOR TO ANY
- 39. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- 40. 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.

- 41. 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.
- 42. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM 8"LAYERED LIFTS AT 95% DENSITY.

MAINTENANCE EROSION AND SEDIMENT CONTROL

- 1. ALL EROSION AND SEDIMENT CONTROL FACILITIES MUST BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ALL FACILITIES THAT ARE DAMAGED, CLOGGED, OR CAN NO LONGER PERFORM AS DESIGNED, SHALL BE REPLACED. REFER TO DETAILS ON THE PLANS FOR SPECIFIC MAINTENANCE METHODS FOR EACH SEDIMENT-TRAPPING DEVICE.
- 2. ALL SEDIMENT REMOVED FROM SEDIMENT TRAPPING DEVICES SHALL BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE EROSION OR SEDIMENTATION AND SHALL BE PLACED IN AN
- . ANY PERMANENT SEEDED AREAS THAT BECOME ERODED OR DISTURBED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS RESOWN, AND THE MULCH REAPPLIED, OR, AT THE DISCRETION OF THE OWNER, SOD MAY BE INSTALLED.
- 4. THE NPDES PERMIT HOLDER SHALL BE RESPONSIBLE FOR MAINTENANCE OF EROSION AND SEDIMENT CONTROLS UNTIL THE SITE IS STABILIZED. PERMANENT STABILIZATION IS DEFINED, AS "A UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED," OR THE DISTURBED AREA IS COVERED WITH AN ACCEPTABLE BMP, WHICH PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION. UNTIL SUCH TIME AS THIS STANDARD IS ACHIEVED INTERIM STARILIZATION MEASURES AND TEMPORARY FROSION AND SEDIMENT CONTROL BMPs THAT ARE USED TO TREAT PROJECT RUNOFF MAY NOT BE REMOVED.

RECYCLING AND DISPOSAL

PROCEDURES, WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE, WILL BE UNDERTAKEN IN ACCORDANCE WITH DEPARTMENT REGULATIONS. INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS CONCRETE WASH WATER SANITARY WASTES FTC THAT COULD ADVERSELY IMPACT WATER QUALITY. THE CONTRACTOR SHALL PLAN AND IMPLEMENT MEASURES FOR HOUSEKEEPING MATERIALS MANAGEMENT, AND LITTER CONTROL DURING CONSTRUCTION. WHEREVER POSSIBLE RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL. CONSTRUCTION WASTES SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL

CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE

- 1. IF THE SITE WILL HAVE EXCESS FILL THAT WILL NEED TO BE EXPORTED TO AN OFF SITE LOCATION, THE RESPONSIBILITY OF CLEAN FILL DETERMINATION AND ENVIRONMENTAL DUE DILIGENCE RESTS ON THE APPLICANT. IF ALL CUT AND FILL MATERIALS WILL BE USED ON THE SITE, A CLEAN FILL DETERMINATION IS NOT REQUIRED BY THE OPERATOR UNLESS THERE IS A BELIEF THAT A SPILL OR RELEASE OF A REGULATED SUBSTANCE OCCURRED ON THE SITE.
- 2. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH PA DEP'S POLICY "MANAGEMENT OF FILL" DOCUMENT NUMBER 258-2182-773.
- . CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON—WATER SOLUBLE, NON—DECOMPOSABLE INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT (NOT INCLUDING MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE), AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS
- 4. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING BUT NO LIMITED TO, VISUAL PROPERTY INSPECTIONS, FLECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTA QUESTIONAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTIONS AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BÉEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE.
- 5. FILL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH PA DEP'S MUNICIPAL OR RESIDENTAIL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.

SOIL CONDITIONS

THE SOIL SURVEY OF LANCASTER COUNTY INDICATES THAT THE SOILS WITHIN THE PROJECT AREA ARE COMPRISED OF THE FOLLOWING: AbA - ABBOTTSTON SILT LOAM, 0 TO 3% SLOPES

ReB - READINGTON SILT LOAM, 3 TO 8% SLOPES RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15% SLOPES

THE FOLLOWING ADDRESSES POTENTIAL SOILS USE LIMITATIONS AND PROPOSED RESOLUTIONS:

 CUTBANKS CAVE: 1.A. LIMITED SOILS: BEDINGTON AND DUFFIELD

- 1.B. RESOLUTIONS: THE SITE IMPROVEMENTS WILL REQUIRE BULK EXCAVATION. ADEQUATE SHORING IS TO BE USED FOR DEEP EXCAVATION AND TRENCH WORK.
- 2. CORROSIVE TO CONCRETE/STEEL: 2.A. LIMITED SOILS: BEDINGTON AND DUFFIELD
- 2.B. RESOLUTIONS: ALL PROPOSED PIPING WILL BE PLASTIC-BASED MATERIAL.
- EASILY ERODIBLE
- 3.A. LIMITED SOILS: BEDINGTON AND DUFFIELD
- AN EROSIVE FORCE AND USE LAND ACCORDING TO ITS CAPABILITY.
- 4. HYDRIC/HYDRIC INCLUSIONS 4.A. LIMITED SOILS: BEDINGTON AND DUFFIELD 4.B. RESOLUTIONS: NO DISTURBANCE TO HYDRIC SOILS IS PROPOSED. A WETLAND STUDY WAS PERFORMED

3.B. RESOLUTIONS: CONTROL RUNOFF THROUGH IMPLEMENTATION OF E&SC BMPs BEFORE IT DEVELOPS INTO

- AND NO WETLANDS ARE PRESENT WITHIN THE PROJECT BOUNDARY. 5. LOW STRENGTH/LANSLIDE PRONE
- 5.A. LIMITED SOILS: DUFFIELD 5.B. RESOLUTIONS: SOIL AMENDMENTS AND PROPER COMPACTION TECHNIQUES MAY BE NECESSARY DURING CONSTRUCTION. DO NOT COMPACT SOILS WHEN SATURATED..
- 6.A. LIMITED SOILS: BEDINGTON AND DUFFIELD
- 6.B. RESOLUTIONS: SOIL COMPACTION SHOULD BE LIMITED AS MUCH AS POSSIBLE IN THE PROPOSED INFILTRATION PCSM BMPs.
- 7.A. LIMITED SOILS: DUFFIELD
- 7.B. RESOLUTIONS: TRENCH BACKFILL SHALL BE PROPERLY COMPACTED WHEN CONSTRUCTING THE UNDERGROUND UTILITY LINES.
- 8. POOR SOURCE OF TOPSOIL 8.A. LIMITED SOILS: BEDINGTON AND DUFFIELD
- 8.B. RESOLUTIONS: PRESENCE OF GRAVEL OR ROCK FRAGMENTS IN THE TOPSOIL MAY MAKE VEGETATION ESTABLISHMENT DIFFICULT. PROPER PREPARATION (RAKING, LIME, AND FERTILIZER APPLICATION, ETC.) OF THE TOPSOIL WILL AID IN VEGETATION ESTABLISHMÈNT.

9.A. LIMITED SOILS: BEDINGTON

- 9.B. RESOLUTIONS: FROZEN FILL MATERIAL MUST NOT BE USED IN CONSTRUCTION. PLACE ASIDE AND ALLOW TO THAW AND DRY OUT PRIOR TO USE. DO NOT PLACE FILL ON FROZEN GROUND. ONLY EXCAVATE DURING FREEZING TEMPERATURES WHEN FILL CAN BE IMMEDIATELY PLACED AND COMPACTED.
- 10. SHRINK/SWELL LIMITED SOILS: DUFFIELD
- 10.A. RESOLUTIONS: DO NOT COMPACT FILL MATERIAL THAT IS SATURATED BEYOND OPTIMUM MOISTURE CONTENT. INCORPORATION OF LIME AS A DRYING AGENT MAY BE NECESSARY.
- 11.A. LIMITED SOILS: DUFFIELD
- 11.B. RESOLUTIONS: SHOULD A SINKHOLE BE UNCOVERED OR DEVELOP, NOTIFY THE ENGINEER AND UTILIZE THE SINKHOLE REMEDIATION DETAIL ON THE PLANS.
- 12.A. LIMITED SOILS: DUFFIELD
- 12.B. RESOLUTIONS: USE WET TOLERANT VEGETATION WITHIN THESE AREAS. INCORPORATION OF SAND INTO THE TOPSOIL MAY BE NECESSARY TO AID IN DRAINAGE. IT IS RECOMMENDED THAT A QUALIFIED GEOTECHNICAL ENGINEER BE PRESENT ON SITE DURING ALL PHASES OF CONSTRUCTION TO EVALUATE, MAKE RECOMMENDATIONS, AND PROVIDE SOLUTIONS FOR ALL SOIL USE

LIMITATIONS, CONSTRUCTION TECHNIQUES, AND OTHER SOILS AND GEOLOGICAL-RELATED ITEMS.

CONSTRUCTION SEQUENCE

- 1. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. THE SEQUENCE OF EARTHMOVING ACTIVITIES SHALL BE APPROXIMATED AS FOLLOWS.
- 2. CHANGES OR ALTERATIONS TO THIS CONSTRUCTION SEQUENCE DUE TO FIELD CONDITIONS, CONSTRUCTION SCHEDULING, SEASONAL CONDITIONS OR OTHER INFLUENCES MUST BE APPROVED BY THE CONSERVATION DISTRICT.
- 3. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION.
- 4. 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.
- 5. AT LEAST (7) DAYS PRIOR TO BEGINNING PROPOSED CONSTRUCTION, THOSE INDIVIDUALS RESPONSIBLE FOR THE IMPLEMENTATION OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN (AND ASSOCIATED PERMITS) SHALL ARRANGE FOR A PRE-CONSTRUCTION MEETING WITH THE OWNER AND HIS CONTRACTOR/EXCAVATOR, NEW BRITAIN TOWNSHIP, RETTEW ASSOCIATES INC. (PLAN PREPARER), AND THE BUCKS COUNTY CONSERVATION DISTRICT.
- 6. PRIOR TO BEGINNING ANY PROPOSED CONSTRUCTION, AND IN ACCORDANCE WITH ALL APPLICABLE PENNSYLVANIA STATE LAW AND REQUIREMENTS, PA 1-CALL SHALL BE CONTACTED AT 1-800-242-1776 WITH A REQUEST FOR CONSTRUCTION.
- 7. THE PROPOSED LIMITS OF DISTURBANCE SHALL BE FIELD DELINEATED AS PART OF THE GRADE STAKING PROCESS. LIMITS OF DISTURBANCE SHALL BE DEFINED BY THE LIMITS OF PROPOSED GRADING AND AS INDICATED ON THE PLANS. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE AREAS WITHIN THE LIMITS OF DISTURBANCE.
- 8. ALL ITEMS NEEDING INSPECTION SHALL BE COORDINATED BY THE OWNER AND/OR CONTRACTOR. ALL REQUESTS FOR REQUIRED INSPECTIONS BY THE CONTRACTOR ARE TO BE DEEMED AS APPROVED REQUESTS ON BEHALF OF THE OWNER.
- 9. INSTALL THE ROCK CONSTRUCTION ENTRANCE. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE DETAIL PROVIDED ON THE PLAN AND SHALL BE UTILIZED BY ALL CONSTRUCTION TRAFFIC ENTERING AND LEAVING THE SITE.
- 10. INSTALL PERIMETER FILTER SOCKS AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH THE DETAILS. FILTER SOCKS SHALL BE INSTALLED PARALLEL TO THE CONTOURS OR CONSTRUCTED AT LEVEL ALIGNMENTS. ANY SOCK SECTION THAT HAS BEEN UNDERMINED OR TOPPED MUST
- 11. STRIP TOPSOIL ACROSS REMAINDER OF THE SITE. THE TOPSOIL SHALL BE STOCKPILED AT A LOCATION WITHIN THE LIMITS OF DISTURBANCE AT THE CONTRACTOR'S DISCRETION UPON APPROVAL OF THE COUNTY CONSERVATION DISTRICT. PROVIDE FILTER SOCKS DOWNSLOPE OF EACH STOCKPILE TO CONTAIN SEDIMENT AT THE STOCKPILE LOCATION. THE STOCKPILE SHALL BE SEEDED WITH A TEMPORARY SEED MIXTURE AND MULCHED IF IT WILL REMAIN IN PLACE FOR
- 12. ROUGH GRADE SITE, MOVING CUT FROM ONE SIDE OF THE SITE TO FILL AREAS OF THE SITE THAT ARE UPSLOPE OF PERIMETER CONTROLS. GRADE ENTRANCE AND PARKING AREAS IN SUCH A WAY AS TO ALLOW FOR INSTALLATION OF THE STORM DRAINAGE SYSTEM TO BE INSTALLED. FOR UNDERGROUND STORMWATER BASIN. IMMEDIATELY STABILIZE AREAS TRIBUTARY TO UNDER GROUND INFILTRATION BASIN UPON REACHING FINAL GRADE. INSTALL INLET FILTER BAGS AND COMPOST FILTER SOCK AROUND INLETS TRIBUTARY TO THE UNDERGROUND STORMWATER BASIN.
- 13. AS THE SITE IS BROUGHT TO FINAL GRADE, STABILIZE THESE AREAS IMMEDIATELY
- 14. INSTALL WATER UTILITIES AND ROOF DRAINS. ALL TRENCH SPOIL SHALL BE CONTAINED IN DUMP TRUCKS DURING INSTALLATION OPERATIONS. THERE IS TO BE NO TRENCH SPOIL PLACED WITHIN STREET RIGHT-OF-WAYS.
- 15. CONSTRUCT UNDERGROUND INFILTRATION BASIN. CARE SHOULD BE TAKEN TO PREVENT COMPACTION OF BED BOTTOM (SEE PCSM PLAN FOR ADDITIONAL INFORMATION). INSTALL INLET FILTER BAGS AND COMPOST FILTER SOCK AROUND INLETS AND CATCH BASINS.
- 16. UPON COMPLETION OF UNDERGROUND INFILTRATION BASIN AND TRUCK SHIPPING/RECEIVING AREA INSTALL SUBBASE STONE CONSTRUCTION.
- 17. UPON COMPLETION OF INSTALLATION OF STORM DRAINAGE SYSTEM TO UNDER GROUND INFILTRATION BASIN, INSTALL INLET FILTER BAGS AND COMPOST FILTER SOCK AROUND INLETS. ONCE THE TRIBUTARY DRAINAGE AREA TO UNDER GROUND INFILTRATION BASIN IS STABILIZED, CONSTRUCT INFILTRATION BASIN 1, INCLUDING OUTFALL PIPING, OUTLET STRUCTURE,
- 18. INSTALL CURBS, WALKS, AND PAVEMENT ON SITE.

IMMEDIATELY BE REPLACED OR REPAIRED.

- 19. INSTALL LANDSCAPE RESTORATION AREA AND PA NATIVE LANDSCAPING (TREES AND SHRUBS).
- 20. AS SOON AS A PORTION OF THE SITE REACHES FINAL GRADE, APPLY TOPSOIL, AMENDMENTS, SEED, AND MULCH OR EROSION CONTROL MATTING.
- 21. UPON CONCLUSION OF SITE IMPROVEMENT CONSTRUCTION ACTIVITIES, REMOVE ROCK CONSTRUCTION ENTRANCE AND FINISH CONSTRUCTING NORTH ENTRANCE.
- 22. ANY AREAS THAT HAVE BECOME ERODED SHALL BE REGRADED. RESEEDED. REMULCHED. AND RENETTED (WHERE REQUIRED) BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT ALL AREAS OF THE SITE ARE STABILIZED IN ACCORDANCE WITH CHAPTER 102 REGULATIONS.
- 23. ONCE COMPLETE STABILIZATION HAS BEEN ACHIEVED (UNIFORM 70% VEGETATIVE COVER), THE CONTRACTOR MAY BEGIN REMOVING TEMPORARY CONTROL FACILITIES. ANY REMAINING TEMPORARY EROSION AND SEDIMENT CONTROLS, SUCH AS FILTER SOCK, SILT FENCE, AND/OR ROCK FILTERS SHALL BE REMOVED AT THIS TIME. ANY DISTURBANCE CREATED DURING THIS PROCEDURE SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING.

SEEDING SPECIFICATIONS

Birdsfoot trefoi

Birdsfoot trefoil

Orchard grass , or

Smooth bromegrass , plus

		TABLE 11. 4 Recommended Seed M	ixtures				
	Mixture		-	Seeding Rate -Pure Live Seed 1			
	Number	Species	Most Sites	Adverse Sites			
		Spring oats (spring), or	64	96			
		Annual ryegrass (spring or fall), or	10	15			
	1 2	Winter wheat (fall), or	90	120			
		Winter rye (fall)	56	112			
		Tall fescue, or	60	7 5			
		Fine fescue, or	35	40			
	2 3	Kentucky bluegrass, plus	25	30			
		Redtop⁴, or	3	3			
		Perennial ryegrass	15	20			
		Birdsfoot trefoil, plus	6	10			
	3	Tall fescue	30	35			
		Birdsfoot trefoil, plus	6	10			
	4	Reed canarygrass	10	15			
		Crownvetch, plus	10	15			
	58	Tall fescue, or	20	25			
		Perennial ryegrass	20	25			
		Crownvetch, plus	10	15			
	6 5, 8	Annual ryegrass	20	25			
		Birdsfoot trefoil, plus	6	10			
	7 ⁸	Crownvetch, plus	10	15			
		Tall fescue	20	30			
		Flatpea, plus	20	30			
	8	Tall fescue, or	20	30			
		Perennial ryegrass	20	25			
		Serecia lespedeza, plus	10	20			
	9 ⁶	Tall fescue, plus	20	25			
		Redtop⁴	3	3			
		Tall fescue, plus	40	60			
	10	Fine fescue	10	15			
		Deertongue, plus	15	20			
	11	Birdsfoot trefoil	6	10			
		Switchgrass, or	15	20			
	12 7	Big Bluestem, plus	15	20			

PENN STATE, "EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND"

1. PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATIONS DIVIDED BY 100. FOR EXAMPLE, TO SECURE THE ACTUAL PLANTING RATE FOR SWITCHGRASS, DIVIDE 12 POUNDS PLS SHOWN ON THE SEED TAG. THUS, IF THE PLS CONTENT OF A GIVEN SEED LOT IS 35%, DIVIDE 12 PLS BY 0.35 TO OBTAIN 34.3 POUNDS OF SEED REQUIRED TO PLANT ONE ACRE. ALL MIXTURES IN THIS TABLE ARE SHOWN IN TERMS OF PLS.

2. IF HIGH-QUALITY SEED IS USED, FOR MOST SITES SEED SPRING OATS AT A RATE OF 2 BUSHELS PER ACRE, WINTER WHEAT AT 1.5 BUSHELS PER ACRE, AND WINTER RYE AT 1 BUSHEL PER ACRE. IF GERMINATION IS BELOW 90%, INCREASE THESE SUGGESTED SEEDING RATES BY 0.5 BUSHEL PER ACRE. 3. THIS MIXTURE IS SUITABLE FOR FREQUENT MOWING. DO NOT CUT SHORTER THAN 4 INCHES. 4. KEEP SEEDING RATE TO THAT RECOMMENDED IN TABLE. THESE SPECIES HAVE MANY SEEDS PER POIND AND ARE VERY COMPETITIVE. TO SEED SMALL QUANTITIES OF SMALL SEEDS SUCH AS WEEPING

LOVEGRASS AND REDTOP, DILUTE WITH DRY SAWDUST, SAND, RICE HULLS, BUCKWHEAT HULLS, ETC.

5. USE FOR HIGHWAY SLOPES AND SIMILAR SITES WHERE THE DESIRED SPECIES AFTER ESTABLISHED IS CROWN VETCH 6. USE ONLY IN EXTREME SOUTHEASTERN OR EXTREME SOUTHWESTERN PENNSYLVANIA. SERECIA LESPEDEZA IS NOT WELL ADAPTED TO MOST OF PA. 7. DO NOT MOW SHORTER THAN 9 TO 10 INCHES. 8. SEED MIXTURES CONTAINING CROWN VETCH SHOULD NOT BE USED IN AREAS ADJACENT TO WETLANDS

OR STREAM CHANNELS DUE TO THE INVASIVE NATURE OF THE SPECIES.

TABLE 11.5

	Nurse	Seed Mixture
Site Condition	Crop	(Select one mixture)
Slopes and Banks (not mowed)	•	,
Well-drained	1 plus	3, 5, 8 , or12 ¹
Variable drainage	1 plus	3 or7
Slopes and Banks (mowed)		
Well-drained `	1 plus	2 or10
Slopes and Banks (grazed/hay)		
Well-drained	1 plus	2, 3, or13
Gullies and Eroded Areas	1 plus	3, 5, 7, or12 ¹
Erosion Control Facilities (B M Ps)		
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or4
Drainage ditches		
Shallow, less than 3 feet deep	1 plus	2, 3, or4
Deep, not mowed	1 plus	5 or 7
Pond banks, dikes, levees, dams, diversion channels,		
And occasional water flow areas		
Mowed areas	1 plus	2 or3
Non-mowed areas	1 plus	5 or7
For hay or silage on diversion channels and	-	
Occasional water flow areas	1 plus	3 or13
Highways 2		
Non-mowed areas		
Pure crownvetch ³	1	5 or6
Well-drained	plus	5, 7, 8, 9, or10
Variable drained	1	3 or7
Poorly drained	plus	3 or4
Areas mowed several times per year	1	2, 3, or10
Utility Right-of-way		
Well-drained	1 plus	5, 8, or12 ¹
Variable drained	1 plus	3 or 7
Well-drained areas for grazing/hay	1 plus	2, 3, or13
Effluent Disposal Areas	1 plus	3 or4
Sanitary Landfills	1 plus	3, 5, 7 , 11 ¹ , or12 ¹
Surface mines		
Spoils, mine wastes, fly ash, slag, settling basin		0.4.5.7.0.0.44.1.401
Residues and other severely disturbed areas	1 plus	3, 4, 5, 7 , 8 , 9, 11 ¹ , or12 ¹
(lime to soil test)		0.40
Severely disturbed areas for grazing/hay	1 plus	3 or13

PENN STATE, "EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND" 1. FOR SEED MIXTURES 11 AND 12, ONLY USE SPRING OATS OR WEEPING LOVEGRASS (INCLUDED IN MIX) AS NURSE

2. CONTACT THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION DISTRICT ROADSIDE SPECIALIST FOR

3. SEED MIXTURES CONTAINING CROWN VETCH SHOULD NOT BE USED IN AREAS ADJACENT TO WETLANDS OR

SPECIFIC SUGGESTIONS ON TREATMENT TECHNIQUES AND MANAGEMENT PRACTICES.

STREAM CHANNELS DUE TO THE INVASIVE OF THIS SPECIES. DEP Recommended Temporary Seed Mixtures to be utilized

	DEI Trecommended Temporary Co	ea mixtares to be	atilizea	
Mixture		Seeding Rate - Pure Live Seed 1		
Number	Species	Most Sites	Adverse Sites	
Spring oats (spring), or Annual ryegrass (spring or fall), o Winter wheat (fall), or Winter rye (fall)		64 10 90 56	96 15 120 112	
3	Birdsfoot trefoil, plus Tall fescue	6	10	

	MULCH APPLICATION RATES						
	F	APPLICATION RAT	E (MIN.)				
MULCH TYPE	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES			
STRAW	3 TONS	140 LBS.	1,240 LBS.	EITHER WHEAT OR OAT STRAW, FREE OF WEEDS, NOT CHOPPED OR FINELY BROKEN			
НАҮ	3 TONS	140 LBS.	1,240 LBS.	TIMOTHY, MIXED CLOVER AND TIMOTHY OR OTHER NATIVE FORAGE GRASSES			
WOOD CHIPS	4 - 6 TONS	185 - 275 LBS.	1,650 - 2,500 LBS.	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES			
HYDROMULCH	1 TON	47 LBS.	415 LBS.	SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%			

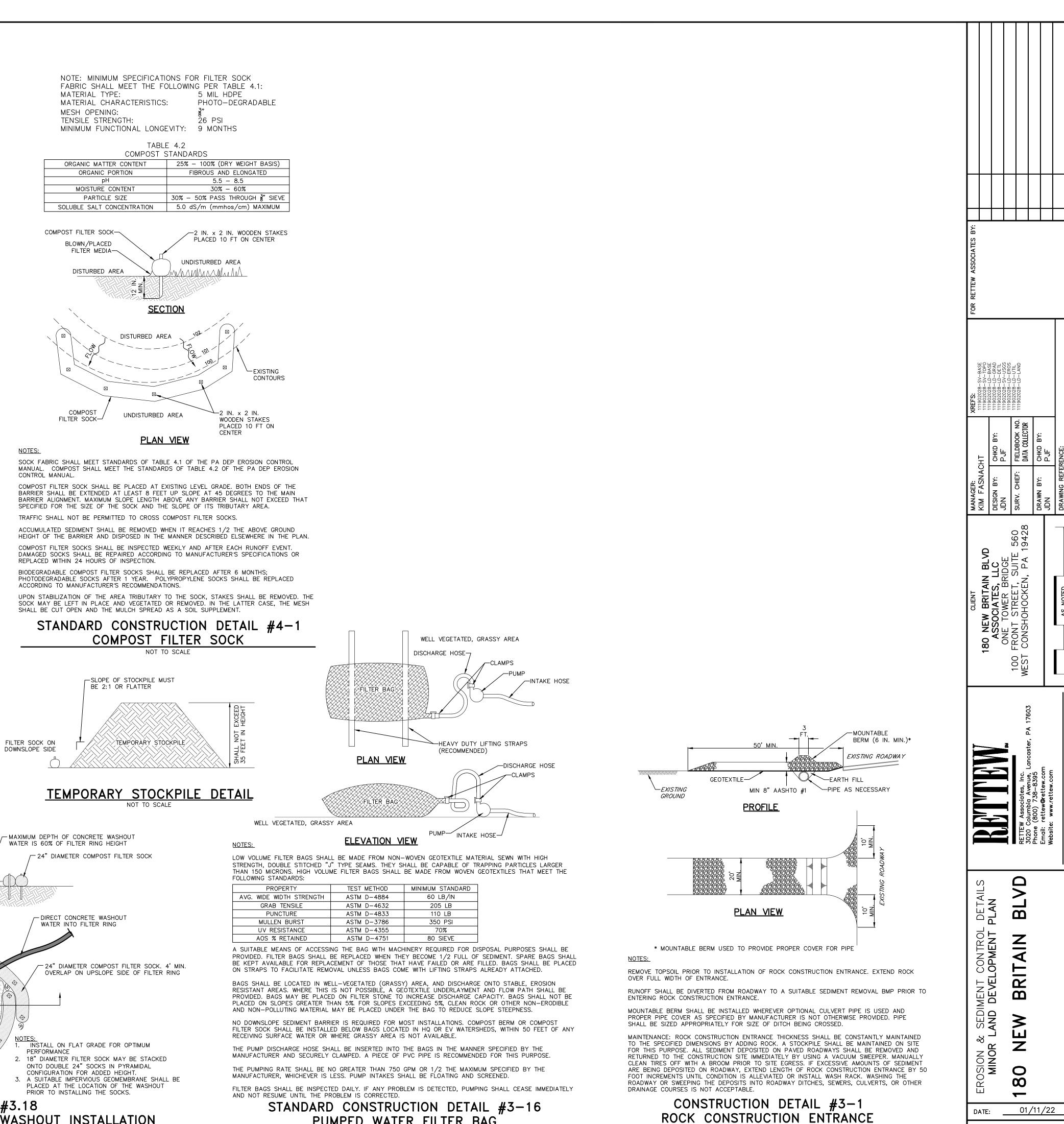
SOIL AMENDMENT APPLICATION RATE EQUIVALENTS					
	PERMANEN	IT SEEDING AP	PLICATION RAT	E	
SOIL AMENDMENT	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES	
AGRICULTURAL LIME	6 TONS	240 LBS.	2,480 LBS.	OR AS PER SOIL TEST, MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS	
10-20-20 FERTILIZER	1,000 LBS.	25 LBS.	210 LBS.	OR AS PER SOIL TEST, MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS	
	TEMPORAR	Y SEEDING AP	PLICATION RAT	E	
SOIL AMENDMENT	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES	
AGRICULTURAL LIME	1 TON	40 LBS.	410 LBS.	TYPICALLY NOT REQUIRED FOR TOP SOIL	
10-10-10 FERTILIZER	500 LBS.	12.5 LBS.	100 LBS.	TYPICALLY NOT REQUIRED FOR TOP SOIL	
NOTE: A COMPOST BL	ANKET WHICH ME	ETS THE STAND	ARDS OF CHAPT	ER 11 OF THE PADEP E & S	

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01/11/22 DATF: SHEET NO. ____10__ of ___13_ 111902028 DWG. NO. __

MANUAL MAY BE SUBSTITUTED FOR THE SOIL AMENDMENTS SHOWN IN THE TABLE ABOVE. NOT FOR CONSTRUCTION/NOT FOR BIDDING



FILTER BAG INLET PROTECTION - TYPE M INLET

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR

SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN

BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR

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

EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW

DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE

THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING

FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER

LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF

CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD

-INLET GRATE

ISOMETRIC VIEW

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

EARTHEN BERM TO BE STABILIZED WITH-

TEMPORARY OR PERMANENT VEGETATION

REMAIN PERMANENTLY.

* NOTE: ALL TYPE M INLETS FOR THIS

PROJECT ARE 2'x6'

IN. REBAR FOR

BAG REMOVAL FROM

EXPANSION RESTRAINT

RUBBER BLOCK

PLAN VIEW

INSTALLATION DETAIL

1/4 IN. NYLON ROPE)

-2 IN X 2 IN. X 3/4 IN.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

FIGURE #3.18 CONSTRUCTION DETAIL #4-16

TYPICAL COMPOST SOCK WASHOUT INSTALLATION

─ 2"X2"X36" WOODEN STAKES PLACED 5' O.C.

2"X2"X36" WOODEN

STAKES PLACED 5' O.C.

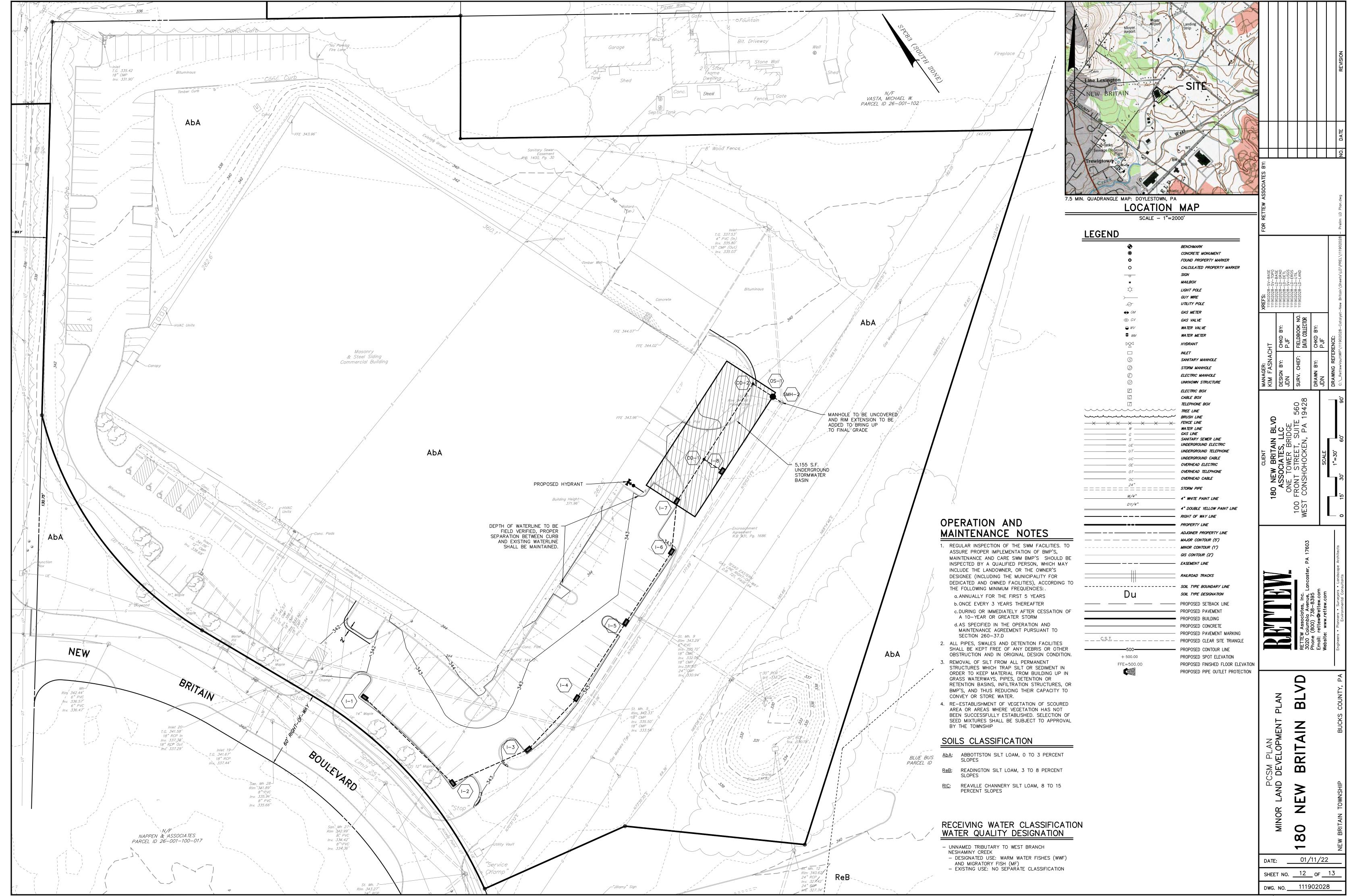
SECTION

PUMPED WATER FILTER BAG

NOT FOR CONSTRUCTION/NOT FOR BIDDING

SHEET NO. ___11__ OF __13_

DWG. NO. 111902028



POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) NOTES

PCSM REQUIREMENTS

PCSM REPORTING AND RECORDKEEPING: THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT

LICENSED PROFESSIONAL OVERSIGHT OF CRITICAL STAGES: LICENSED PROFESSIONAL OR A DESIGNEE SHALL BE PRESENT ONSITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN. THE CRITICAL STAGES MAY INCLUDE THE INSTALLATION OF STRUCTURALLY ENGINEERED BMPs, OR OTHER BMPs AS DEEMED APPROPRIATE BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS: "I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. \$4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT TH PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN. THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION. THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE. THE DEPARTMENT OR CONSERVATION DISTRICT WILL CONDUCT A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION WITHIN 30 DAYS.

THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM

FOR ANY PROPERTY CONTAINING A PCSM BMP. THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY T PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUBSEQUENT GRANTEES. AND PROVIDE PROOF OF FILING WITH THE NOTICE OF TERMINATION UNDER §102.7(B)(5) (RELATING TO PERMIT TERMINATION). THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPs OR TO PERFORM

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.

LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

THE OWNER SHALL CONDUCT A VISUAL INSPECTION OF ALL STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES AT LEAST ONCE EVERY THREE MONTHS AND IMMEDIATELY AFTER STORM EVENTS. SUCH VISUAL EXAMINATION SHALL AT LEAST INVOLVE AN EXAMINATION OF THE STORMWATER COLLECTION AND CONVEYANCE FOR DEBRIS DEPOSITION (SUCH DEBRIS MAY INCLUDE, BUT SHALL NOT BE LIMITED TO AGGREGATE MATERIAL, LEAVES, GRASS CLIPPINGS, SOIL AND TRASH), AND AN EXAMINATION OF THE STORMWATER BMP FACILITY FOR SOIL AND STRUCTURAL SETTLEMENT, DEPRESSIONS, SINKHOLES, SEEPS, STRUCTURAL CRACKING, ANIMAL BURROWS, EXCESSIVE VEGETATION, CLOGGING, EROSION AND FOUNDATION MOVEMENT

THE OWNER SHALL REMOVE ANY ACCUMULATION OF DEBRIS AND REPAIR ANY DAMAGE TO THE STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES. REPAIRS SHALL BE MADE USING MATERIAL THAT MEETS OR EXCEEDS THE

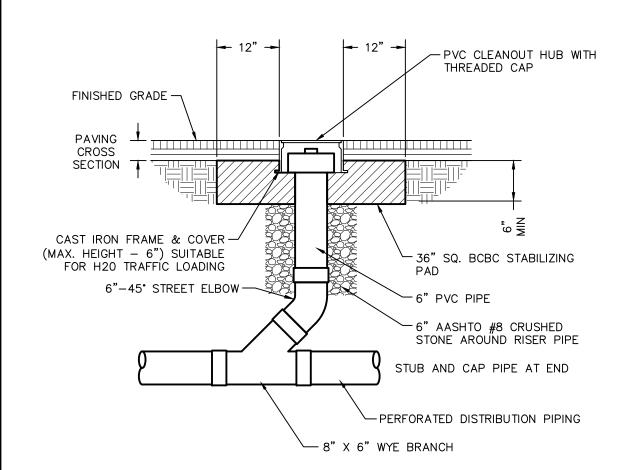
IN ACCORDANCE WITH THE NPDES PERMIT THE OWNER IS REQUIRED TO MAINTAIN A RECORD OF ALL INSPECTIONS REPAIRS AND MAINTENANCE ACTIVITIES ASSOCIATED WITH THE STORMWATER MANAGEMENT AND PERMANENT BMP FACILITIES AT THIS PROJECT SITE. THE OWNER SHALL IMMEDIATELY NOTIFY THE MUNICIPALITY AND THE CONSERVATION DISTRICT PRIOR TO INITIATING ANY MAJOR REPAIR ACTIVITIES (SUCH AS REPAIRS THAT MAY BE REQUIRED AS A RESULT OF SETTLEMENT. SINKHOLES. SEEPS, STRUCTURAL CRACKING OR FOUNDATION MOVEMENT). THE OWNER SHALL ALSO COMPLY WITH ANY OTHER MAINTENANCE NOTES THAT MAY BE ON THESE PLANS.

THE TOWNSHIP AND THE SITE ENGINEER SHALL BE NOTIFIED IN THE EVENT SINKHOLES OR OTHER UNSUITABLE SUB-SURFACE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION. IN ADDITION, THE SERVICES OF A REGISTERED GEOLOGIST SHOULD BE OBTAINED TO ASSIST IN RECOMMENDING CONSTRUCTION TECHNIQUES AND PERMANENT FACILITIES NECESSARY TO AVOID FURTHER SINKHOLE CREATION, REPAIR ANY EXISTING SINKHOLES, AND MAKE RECOMMENDATION ON ANY ENCOUNTERED UNSUITABLE SUB-SURFACE CONDITIONS.

100 FRONT STREET, SUITE 560

WEST CONSHOHOCKEN, PA 19428

D. OWNER/PERMITEE/RESPONSIBLE PARTY: 180 NEW BRITAIN BLVD ASSOCIATES, LLC ONE TOWER BRIDGE



PIPING CLEANOUT DETAIL (PAVED AREAS)

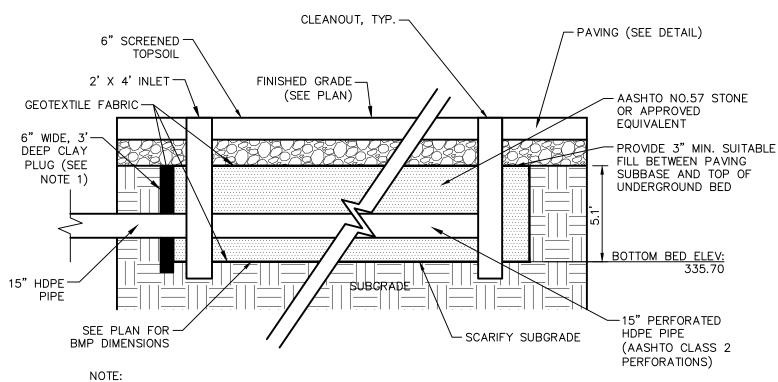
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OPERATION AND MAINTENANCE NOTES:

1. THE UNDERGROUND BED AREA SHALL BE INSPECTED ANNUALLY AND DURING OR IMMEDIATELY AFTER THE CESSATION OF A TEN-YEAR STORM OR GREATER.

ALL CATCH BASINS SHALL BE INSPECTED AND CLEANED AT LEAST 2 TIMES PER YEAR. 3. THE OVERLYING VEGETATION SHALL BE MAINTAINED IN GOOD CONDITIONS AND ANY BARE SPOTS

REVEGETATED AS SOON AS POSSIBLE. 4. A MINIMUM DEPTH OF 24 INCHES BETWEEN THE BOTTOM OF THE BMP FACILITY AND THE LIMITING ZONE SHALL BE PROVIDED. IF ROCK IS ENCOUNTERED, AN ADDITIONAL 24 INCHES SHALL BE EXCAVATED.



1. PROVIDE 6" WIDE CLAY PLUG ALONG FRONT AND SIDE OF BASIN AS SHOWN ON GRADING PLAN

UNDERGROUND INFILTRATION BMP DETAIL

NOT TO SCALE

SOIL CONDITIONS

THE SOIL SURVEY OF LANCASTER COUNTY INDICATES THAT THE SOILS WITHIN THE PROJECT AREA ARE COMPRISED OF THE FOLLOWING: AbA - ABBOTTSTON SILT LOAM, 0 TO 3% SLOPES

ReB - READINGTON SILT LOAM, 3 TO 8% SLOPES RIC - REAVILLE CHANNERY SILT LOAM, 8 TO 15% SLOPES

THE FOLLOWING ADDRESSES POTENTIAL SOILS USE LIMITATIONS AND PROPOSED RESOLUTIONS:

1. CUTBANKS CAVE: 1.A. LIMITED SOILS: BEDINGTON AND DUFFIELD

1.B. RESOLUTIONS: THE SITE IMPROVEMENTS WILL REQUIRE BULK EXCAVATION. ADEQUATE SHORING IS TO BE USED FOR DEEP EXCAVATION AND TRENCH WORK.

. CORROSIVE TO CONCRETE/STEEL: 2.A. LIMITED SOILS: BEDINGTON AND DUFFIELD

2.B. RESOLUTIONS: ALL PROPOSED PIPING WILL BE PLASTIC-BASED MATERIAL.

3. EASILY ERODIBLE 3.A. LIMITED SOILS: BEDINGTON AND DUFFIELD

3.B. RESOLUTIONS: CONTROL RUNOFF THROUGH IMPLEMENTATION OF E&SC BMPs BEFORE IT DEVELOPS INTO AN EROSIVE FORCE AND USE LAND ACCORDING TO ITS CAPABILITY.

4. HYDRIC/HYDRIC INCLUSIONS

4.A. LIMITED SOILS: BEDINGTON AND DUFFIELD 4.B. RESOLUTIONS: NO DISTURBANCE TO HYDRIC SOILS IS PROPOSED. A WETLAND STUDY WAS PERFORMED AND NO WETLANDS ARE PRESENT WITHIN THE PROJECT BOUNDARY.

LOW STRENGTH/LANSLIDE PRONE

5.A. LIMITED SOILS: DUFFIELD 5.B. RESOLUTIONS: SOIL AMENDMENTS AND PROPER COMPACTION TECHNIQUES MAY BE NECESSARY DURING

CONSTRUCTION. DO NOT COMPACT SOILS WHEN SATURATED..

6.A. LIMITED SOILS: BEDINGTON AND DUFFIELD 6.B. RESOLUTIONS: SOIL COMPACTION SHOULD BE LIMITED AS MUCH AS POSSIBLE IN THE PROPOSED

INFILTRATION PCSM BMPs.

7.A. LIMITED SOILS: DUFFIELD

7.B. RESOLUTIONS: TRENCH BACKFILL SHALL BE PROPERLY COMPACTED WHEN CONSTRUCTING THE

UNDERGROUND UTILITY LINES. 8. POOR SOURCE OF TOPSOIL 8.A. LIMITED SOILS: BEDINGTON AND DUFFIELD

8.B. RESOLUTIONS: PRESENCE OF GRAVEL OR ROCK FRAGMENTS IN THE TOPSOIL MAY MAKE VEGETATION ESTABLISHMENT DIFFICULT. PROPER PREPARATION (RAKING, LIME, AND FERTILIZER APPLICATION, ETC.) OF THE TOPSOIL WILL AID IN VEGETATION ESTABLISHMENT.

9. FROST ACTION 9.A. LIMITED SOILS: BEDINGTON

9.B. RESOLUTIONS: FROZEN FILL MATERIAL MUST NOT BE USED IN CONSTRUCTION. PLACE ASIDE AND ALLOW TO THAW AND DRY OUT PRIOR TO USE. DO NOT PLACE FILL ON FROZEN GROUND. ONLY EXCAVATE DURING FREEZING TEMPERATURES WHEN FILL CAN BE IMMEDIATELY PLACED AND COMPACTED.

10. SHRINK/SWELL

LIMITED SOILS: DUFFIELD 10.A. RESOLUTIONS: DO NOT COMPACT FILL MATERIAL THAT IS SATURATED BEYOND OPTIMUM MOISTURE CONTENT. INCORPORATION OF LIME AS A DRYING AGENT MAY BE NECESSARY

11. POTENTIAL SINKHOLE 11.A. LIMITED SOILS: DUFFIELD

11.B. RESOLUTIONS: SHOULD A SINKHOLE BE UNCOVERED OR DEVELOP, NOTIFY THE ENGINEER AND UTILIZE THE SINKHOLE REMEDIATION DETAIL ON THE PLANS.

12.A. LIMITED SOILS: DUFFIELD

12.B. RESOLUTIONS: USE WET TOLERANT VEGETATION WITHIN THESE AREAS. INCORPORATION OF SAND INTO THE TOPSOIL MAY BE NECESSARY TO AID IN DRAINAGE.

IT IS RECOMMENDED THAT A QUALIFIED GEOTECHNICAL ENGINEER BE PRESENT ON SITE DURING ALL PHASES OF CONSTRUCTION TO EVALUATE, MAKE RECOMMENDATIONS, AND PROVIDE SOLUTIONS FOR ALL SOIL USE LIMITATIONS, CONSTRUCTION TECHNIQUES, AND OTHER SOILS AND GEOLOGICAL-RELATED ITEMS.

SEDIMENT REMOVAL/DISPOSAL NOTE

ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.

CRITICAL STAGES OF CONSTRUCTION

THE FOLLOWING IDENTIFIES THE CRITICAL STAGES OF PCSM BMP CONSTRUCTION FOR WHICH A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ON SITE:

SUBSURFACE INFILTRATION BED STAKEOUT AND SITE PREPARATION

EXCAVATION AND BOTTOM PREPARATION INSTALLATION OF CATCH BASINS, PIPING, STONE, GEOTEXTILE, CLEANOUTS, DRAIN BASINS, AND STILLING

4. PLACEMENT OF STONE BASE COURSE OVER TOP OF BED.

THE CONTRACTOR SHALL SCHEDULE WITH THE LICENSED PROFESSIONAL AND OWNER A TIME FOR INSPECTION DURING CONSTRUCTION OF THESE CRITICAL STAGES.

ALL ITEMS NEEDING INSPECTION SHALL BE COORDINATED BY THE OWNER AND/OR CONTRACTOR. ALL REQUESTS FOR INSPECTIONS BY THE CONTRACTOR ARE TO BE DEEMED AS APPROVED REQUESTS ON BEHALF OF THE

INDIVIDUAL PCSM BMP INFORMATION

PCSM BMP NAME: <u>UNDERGROUND BASIN</u>

PCSM BMP DESCRIPTION/TYPE: INFILTRATION BASIN

BMP LENGTH (FT)(IF APPLICABLE): 115

BMP AREA (AC.): <u>0.73</u>

BMP DEPTH (FT): 5.1 VOLUME OF STORMWATER TREATED (CF): 3,375

VOLUME REDUCTION (CF)(IF APPLICABLE): <u>5,405</u>

OWNER ADDRESS: <u>ONE TOWER BRIDGE</u>, 100 FRONT ST., SUITE 560, WEST CONSHOHOCKEN, PA 19428

NPDES #: <u>N/A</u> RECEIVING WATERBODY: <u>UNNAMED TRIBUTARY TO WEST BRANCH</u> NESHAMINY CREEK

OWNER NAME: 180 NEW BRITAIN BLVD ASSOCIATES, LLC

PCSM BMP #: <u>1</u>

ACRES TREATED: 0.72

LIFECYCLE (YRS): 80

IMPERVIOUS AREA TREATED: 0.66

RECYCLING AND DISPOSAL

PROCEDURES, WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE, WILL BE UNDERTAKEN IN ACCORDANCE WITH DEPARTMENT REGULATIONS. INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. THE CONTRACTOR SHALL PLAN AND IMPLEMENT MEASURES FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL DURING CONSTRUCTION. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED. RATHER THAN DISPOSAL. DISPOSAL OF CONSTRUCTION WASTES SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES AND REGULATIONS.

CLEAN FILL AND ENVIRONMENTAL DUE DILIGENCE

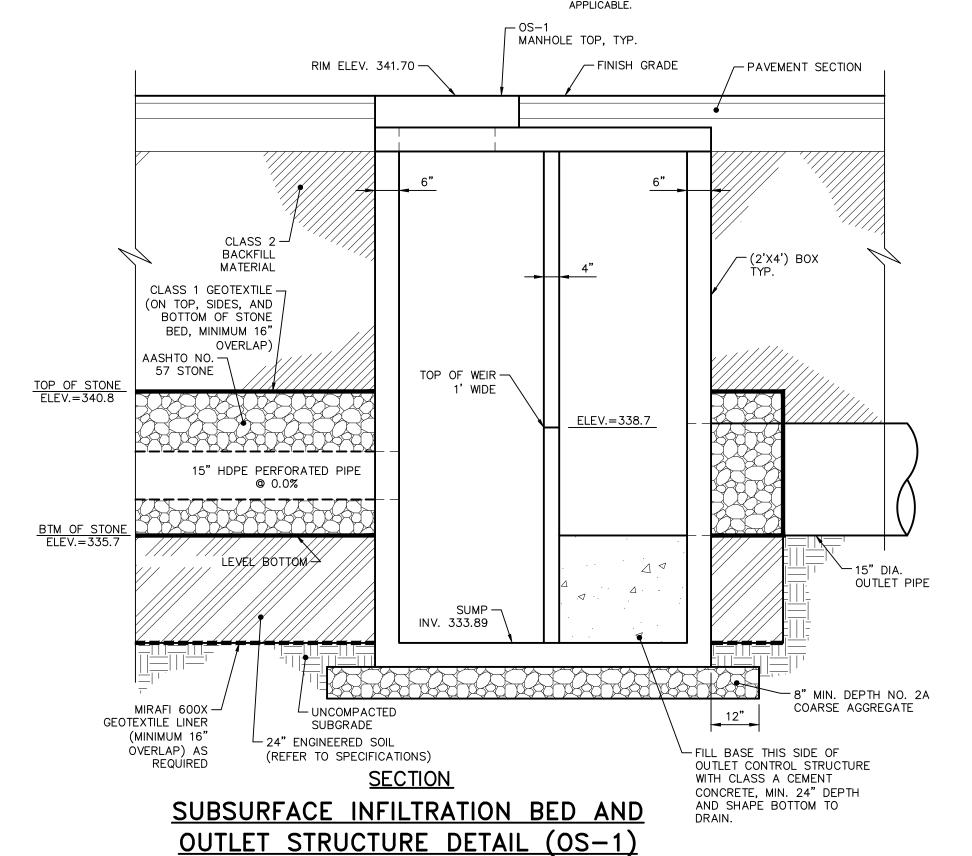
1. IF THE SITE WILL HAVE EXCESS FILL THAT WILL NEED TO BE EXPORTED TO AN OFF SITE LOCATION. THE RESPONSIBILITY OF CLEAN FILL DETERMINATION AND ENVIRONMENTAL DUE DILIGENCE RESTS ON THE APPLICANT. F ALL CUT AND FILL MATERIALS WILL BE USED ON THE SITE, A CLEAN FILL DETERMINATION IS NOT REQUIRED BY THE OPERATOR UNLESS THERE IS A BELIEF THAT A SPILL OR RELEASE OF A REGULATED SUBSTANCE

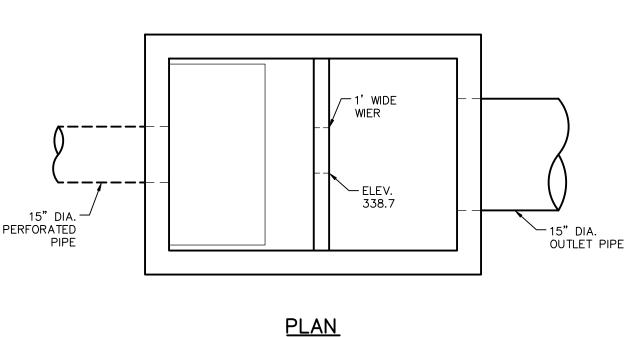
2. ALL FILL MATERIAL MUST BE USED IN ACCORDANCE WITH PA DEP'S POLICY "MANAGEMENT OF FILL" DOCUMENT

3. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT (NOT INCLUDING MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE), AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED.

4. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTIONS AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE.

5. FILL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH PA DEP'S MUNICIPAL OR RESIDENTAIL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS





SEEDING SPECIFICATIONS

13

Smooth bromegrass, plus

Birdsfoot trefoil

Recommended Seed Mixtures Seeding Rate -Pure Live Seed 1 Adverse Sites Number Most Sites Spring oats (spring), or Annual ryegrass (spring or fall), or Winter wheat (fall), or 120 Winter rye (fall) Tall fescue. or Fine fescue, or Kentucky bluegrass, plus Redtop⁴, or Perennial ryegras: Birdsfoot trefoil, plus Tall fescue Birdsfoot trefoil, plus Reed canarygrass Crownvetch, plus Tall fescue, or Perennial ryegras: Crownvetch, plus 6 5, 8 Annual ryegrass Birdsfoot trefoil, plus Crownvetch, plus Tall fescue Flatpea, plus Tall fescue, or Perennial ryegrass Serecia lespedeza, plus Tall fescue, plus Tall fescue, plus 10 Fine fescue Deertongue, plus Birdsfoot trefoil Switchgrass , or Big Bluestem, plus Birdsfoot trefoil Orchard grass, or

PENN STATE, "EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND" 1. PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATIONS DIVIDED BY 100, FOR EXAMPLE, TO SECURE THE ACTUAL PLANTING RATE FOR SWITCHGRASS, DIVIDE 12 POUNDS PLS SHOWN ON THE SEED TAG. THUS, IF THE PLS CONTENT OF A GIVEN SEED LOT IS 35%, DIVIDE 12 PLS BY 0.35 TO OBTAIN 34.3 POUNDS OF SEED REQUIRED TO PLANT ONE ACRE. ALL MIXTURES IN THIS

TABLE ARE SHOWN IN TERMS OF PLS. 2. IF HIGH-QUALITY SEED IS USED, FOR MOST SITES SEED SPRING OATS AT A RATE OF 2 BUSHELS PER ACRE, WINTER WHEAT AT 1.5 BUSHELS PER ACRE, AND WINTER RYE AT 1 BUSHEL PER ACRE. IF GERMINATION IS BELOW 90%, INCREASE THESE SUGGESTED SEEDING RATES BY 0.5 BUSHEL PER ACRE. 3. THIS MIXTURE IS SUITABLE FOR FREQUENT MOWING. DO NOT CUT SHORTER THAN 4 INCHES. 4. KEEP SEEDING RATE TO THAT RECOMMENDED IN TABLE. THESE SPECIES HAVE MANY SEEDS PER POIND AND ARE VERY COMPETITIVE. TO SEED SMALL QUANTITIES OF SMALL SEEDS SUCH AS WEEPING

5. USE FOR HIGHWAY SLOPES AND SIMILAR SITES WHERE THE DESIRED SPECIES AFTER ESTABLISHED IS 6. USE ONLY IN EXTREME SOUTHEASTERN OR EXTREME SOUTHWESTERN PENNSYLVANIA. SERECIA LESPEDEZA IS NOT WELL ADAPTED TO MOST OF PA. 7. DO NOT MOW SHORTER THAN 9 TO 10 INCHES.

LOVEGRASS AND REDTOP, DILUTE WITH DRY SAWDUST, SAND, RICE HULLS, BUCKWHEAT HULLS, ETC.

8. SEED MIXTURES CONTAINING CROWN VETCH SHOULD NOT BE USED IN AREAS ADJACENT TO WETLANDS OR STREAM CHANNELS DUE TO THE INVASIVE NATURE OF THE SPECIES.

TABLE 11. 5 Recommended Seed Mixtures for Stabilizing Disturbed Areas

	Nurse	Seed Mixture
Site Condition	Crop	(Select one mixture)
Slopes and Banks (not mowed)		
Well-drained	1 plus	3, 5, 8 , or12 ¹
Variable drainage	1 plus	3 or7
Slopes and Banks (mowed)		
Well-drained	1 plus	2 or10
Slopes and Banks (grazed/hay)		
Well-drained	1 plus	2, 3, or13
Gullies and Eroded Areas	1 plus	3, 5, 7, or12 ¹
Erosion Control Facilities (B M Ps)		
Sod waterways, spillways, frequent water flow areas	1 plus	2, 3, or4
Drainage ditches		
Shallow, less than 3 feet deep	1 plus	2, 3, or4
Deep, not mowed	1 plus	5 or7
Pond banks, dikes, levees, dams, diversion channels,		
And occasional water flow areas		
Mowed areas	1 plus	2 or3
Non-mowed areas	1 plus	5 or7
For hay or silage on diversion channels and		
Occasional water flow areas	1 plus	3 or 13
Highways 2		
Non-mowed areas		
Pure crownvetch ³	1	5 or6
Well-drained	plus	5, 7, 8, 9, or10
Variable drained	1	3 or7
Poorly drained	plus	3 or4
Areas mowed several times per year	1	2, 3, or10
Utility Right-of-way		
Well-drained	1 plus	5, 8 , or12 ¹
Variable drained	1 plus	3 or 7
Well-drained areas for grazing/hay	1 plus	2, 3, or13
Effluent Disposal Areas	1 plus	3 or4
Sanitary Landfills	1 plus	3, 5, 7 , 11 ¹ , or12 ¹
Surface mines		
Spoils, mine wastes, fly ash, slag, settling basin		
Residues and other severely disturbed areas	1 plus	3, 4, 5, 7 , 8 , 9, 11 ¹ , or12 ¹
(lime to soil test)		
Severely disturbed areas for grazing/hay	1 plus	3 or13

PENN STATE, "EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND" 1. FOR SEED MIXTURES 11 AND 12, ONLY USE SPRING OATS OR WEEPING LOVEGRASS (INCLUDED IN MIX) AS NURSE CROP

2. CONTACT THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION DISTRICT ROADSIDE SPECIALIST I SPECIFIC SUGGESTIONS ON TREATMENT TECHNIQUES AND MANAGEMENT PRACTICES. 3. SEED MIXTURES CONTAINING CROWN VETCH SHOULD NOT BE USED IN AREAS ADJACENT TO WETLANDS OR STREAM CHANNELS DUE TO THE INVASIVE OF THIS SPECIES.

DEP Recommended Temporary Seed Mixtures to be utilized

	Mixture			Seeding Rate — Pure Live Seed '		
	Number	Species		Most Sites	Adverse Sites	
	1 2	Spring oats (sprin Annual ryegrass (or Winter wheat (Winter rye (fall)	spring or fall),	64 10 90 56	96 15 120 112	
	3	Birdsfoot trefo plus Tall fescu		6 30	10 35	
		MULCI	H APPLICAT	ION RATES		
		A	PPLICATION RAT	E (MIN.)		
Μl	JLCH TYPE	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES	
	STRAW	3 TONS	140 LBS.	1,240 LBS.	EITHER WHEAT (STRAW, FREE OF NOT CHOPPED (BROKEN	WEEDS
					TIMOTHY, MIXED	CLOVE

WOOD CHIPS 4 - 6 TONS 185 - 275 LBS. 1,650 - 2,500 LBS. MAY PREVENT GERMINATION OF GRASSES AND LEGUMES HYDROMULCH 1 TON 47 LBS. 415 LBS. SHOULD NOT BE USED ON SLOPES STEEPER THAN 5% SOIL AMENDMENT APPLICATION RATE EQUIVALENTS PERMANENT SEEDING APPLICATION RATE SOIL AMENDMENT PER ACRE PER 1,000 S.F. OR AS PER SOIL TEST, MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS					
HYDROMULCH 1 TON 47 LBS. 415 LBS. ON SLOPES STEEPER THAN 5% SOIL AMENDMENT APPLICATION RATE EQUIVALENTS PERMANENT SEEDING APPLICATION RATE SOIL AMENDMENT PER ACRE PER 1,000 S.F. PER 1,000 S.Y. NOTES AGRICULTURAL LIME 6 TONS 240 LBS. 2,480 LBS. MAY NOT BE REQUIRED	WOOD CHIPS	4 - 6 TONS	185 – 275 LBS.	1,650 - 2,500 LBS.	GERMINATION OF
PERMANENT SEEDING APPLICATION RATE SOIL AMENDMENT PER ACRE PER 1,000 S.F. PER 1,000 S.Y. NOTES OR AS PER SOIL TEST, AGRICULTURAL LIME 6 TONS 240 LBS. 2,480 LBS. MAY NOT BE REQUIRED	HYDROMULCH	1 TON	47 LBS.	415 LBS.	ON SLOPES STEEPER
PERMANENT SEEDING APPLICATION RATE SOIL AMENDMENT PER ACRE PER 1,000 S.F. PER 1,000 S.Y. NOTES OR AS PER SOIL TEST, AGRICULTURAL LIME 6 TONS 240 LBS. 2,480 LBS. MAY NOT BE REQUIRED					
SOIL AMENDMENT PER ACRE PER 1,000 S.F. PER 1,000 S.Y. NOTES OR AS PER SOIL TEST, AGRICULTURAL LIME 6 TONS 240 LBS. 2,480 LBS. MAY NOT BE REQUIRED	SOIL /	AMENDMENT	APPLICATION	ON RATE EQ	UIVALENTS
AGRICULTURAL LIME 6 TONS 240 LBS. 2,480 LBS. MAY NOT BE REQUIRED		ΓE			
AGRICULTURAL LIME 6 TONS 240 LBS. 2,480 LBS. MAY NOT BE REQUIRED	SOIL AMENDMENT	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES
	AGRICULTURAL LIME	6 TONS	240 LBS.	2,480 LBS.	MAY NOT BE REQUIRED

AGRICULTURAL LIME	6 TONS	240 LBS.	2,480 LBS.	OR AS PER SOIL TEST, MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS			
10-20-20 FERTILIZER	1,000 LBS.	25 LBS.	210 LBS.	OR AS PER SOIL TEST, MAY NOT BE REQUIRED IN AGRICULTURAL FIELDS			
	TEMPORAR	Y SEEDING AP	PLICATION RAT	E			
SOIL AMENDMENT	PER ACRE	PER 1,000 S.F.	PER 1,000 S.Y.	NOTES			
AGRICULTURAL LIME	AGRICULTURAL LIME 1 TON 40 LBS. 410 LBS. TYPICALLY NOT REQUIRED FOR TOP SOIL						
10-10-10 FERTILIZER	500 LBS.	12.5 LBS.	100 LBS.	TYPICALLY NOT REQUIRED FOR TOP SOIL			
NOTE: A COMPOST BLANKET WHICH MEETS THE STANDARDS OF CHAPTER 11 OF THE PADEP E & S MANUAL MAY BE SUBSTITUTED FOR THE SOIL AMENDMENTS SHOWN IN THE TABLE ABOVE.							

NOT FOR CONSTRUCTION/NOT FOR BIDDING

NATIVE FORAGE GRASSES

2 0

01/11/22 SHEET NO. ___13__ OF ___13_ DWG. NO. ____111902028