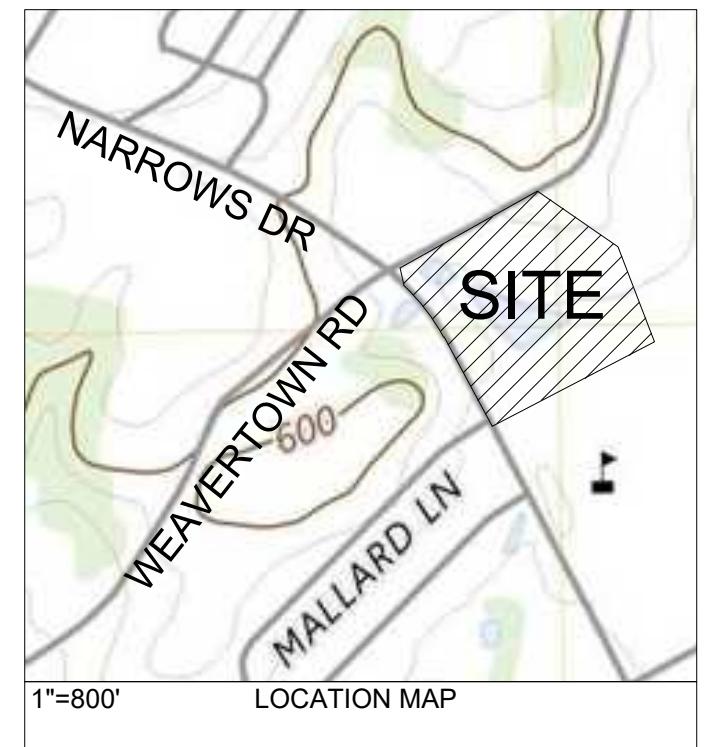


**PRELIMINARY/FINAL SUBDIVISION &  
LAND DEVELOPMENT PLAN  
FOR  
WHISPERING PINES - NARROWS DRIVE  
NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PA  
DECEMBER 30, 2025  
REVISED:**



NORTH LEBANON TOWNSHIP ENGINEER REVIEW CERTIFICATE	
Reviewed by the North Lebanon Township Engineer this _____ day of _____, 20____	
Signature of the North Lebanon Township Engineer	
LEBANON COUNTY PLANNING DEPARTMENT	
_____, 20____	Reviewed

NORTH LEBANON TOWNSHIP PLANNING COMMISSION  
REVIEW CERTIFICATE

Reviewed

NORTH LEBANON TOWNSHIP SUPERVISORS

The North Lebanon Township Board of Supervisors has approved this plan as submitted or as revised to the date of signatures affixed hereunto. No other plan or plans shall be recognized. Approval includes all documentation including the comments or requirements of official reviewing individuals or agencies. Acceptance is based on compliance with applicable ordinances, rules and regulations. This plan may not be considered as a guarantee by the person or agency that the design of any part of the plan will function as anticipated under any or all conditions or situations. Additionally, that by approval of the plan, the Township expressly declines the assumption of liability for errors, omissions or mistakes in judgement in the design, engineering, construction, or expected function of the matters approved.

Approved \_\_\_\_\_

Approved \_\_\_\_\_

Approved \_\_\_\_\_

PLAN CERTIFICATE (SUEW) \_\_\_\_\_  
I hereby certify that the plan shown and described herein as well as all drawings bearing my seal are true and correct as to accuracy as required by the Lebanon County and North Lebanon Township Ordinances.

\_\_\_\_\_, 20\_\_\_\_

Joshua T. Weaver, P.E.

CARBONATE GEOLOGY CERTIFICATION  
I, Joshua T. Weaver, P.E., to the best of my knowledge, certify that the proposed stormwater management facilities (circle one) are not underlain by carbonate geology.

\_\_\_\_\_, 20\_\_\_\_

Joshua T. Weaver, P.E.

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGEMENT OF PLAN AND OFFER OF DEDICATION  
COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF LEBANON

On this, the \_\_\_\_\_ day of \_\_\_\_\_, 2024, before me, the undersigned officer, personally appeared EVELINA M. KRALL, who being duly sworn according to law, deposes and says that she is the OWNER of the property shown on this plan, that the plan thereof was made at her direction, that she acknowledges the same to be her act and plan, that she desires the same to be recorded, and 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. She also hereby acknowledges that this proposed Subdivision/Land Development may be subject to the requirements of additional Township, State and Federal regulations.

Evelina M. Krall (Owner)

Notary

My Commission Expires \_\_\_\_\_, 20\_\_\_\_

12/31/2025 9:37 AM

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGEMENT OF PLAN AND OFFER OF DEDICATION  
COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF LEBANON

On this, the \_\_\_\_\_ day of \_\_\_\_\_, 2024, before me, the undersigned officer, personally appeared ROBERT F. KRALL, who being duly sworn according to law, deposes and says that he is the OWNER of the property shown on this plan, that the plan thereof was made at his direction, that he acknowledges the same to be his act and plan, that he desires the same to be recorded, and 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. He also hereby acknowledges that this proposed Subdivision/Land Development may be subject to the requirements of additional Township, State and Federal regulations.

Robert F. Krall (Owner)

Notary

My Commission Expires \_\_\_\_\_, 20\_\_\_\_

**GENERAL NOTES:**

1. BENCHMARK: SANITARY SEWER MANHOLE LOCATED WEST OF THE PROPERTY ON NARROWS DRIVE.  
ELEVATION: 567.32  
VERTICAL: 100.000000 MWD 23  
HORIZONTAL DATUM: NAD83 - COR\_96  
2. MATTHEW & HOCKLEY ASSOCIATES PERFORMED THE SURVEY ON AUGUST 7, 2025.

3. UNDERGROUND UTILITIES ARE SHOWN ACCORDING TO INFORMATION PROVIDED BY OTHERS AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION/EXCAVATION OR DRASTICALLY. THE ACTUAL LOCATIONS OF THESE UTILITIES MAY NOT BE FIELD VERIFIED DUE TO THE LOCATIONS AND CONDITIONS OF THE UTILITIES. THE CONTRACTOR IS NOT RESPONSIBLE FOR ANY DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

4. NO FLOODPLAIN EXISTS ON-SITE IN ACCORDANCE WITH THE FLOOD INSURANCE RATE MAP FOR LEBANON COUNTY, PENNSYLVANIA (ALL JURISDICTIONS), MAP NUMBER 42075C0257E, EFFECTIVE DATE JULY 8, 2020.

5. NO WETLANDS ARE SHOWN AS SHOWN WAS DETERMINED BY A WETLAND STUDY CONDUCTED BY VORTEX ENVIRONMENTAL.

6. ANY AMENDMENT TO THESE PLANS AFTER THE DATE OF PLAN PREPARATION OR LATEST REVISION DATE SHALL NOT BE THE RESPONSIBILITY OF CHRISLAND ENGINEERING.

7. NO ONE SHALL SCALE FROM THESE PLANS FOR CONSTRUCTION PURPOSES.

8. THE INFORMATION SHOWN ON THIS DRAWING MAY HAVE ALSO BEEN PROVIDED BY DIGITAL FILE. AFTER A DIGITAL FILE IS RELEASED FROM CHRISLAND ENGINEERING, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SURE IT IS FIELD VERIFIED.

9. ALL SITE DEVELOPMENT SHALL BE DONE IN ACCORDANCE WITH FEDERAL, STATE, COUNTY, AND TOWNSHIP STANDARDS AND REQUIREMENTS.

10. CHRISLAND ENGINEERING HAS NOT PERFORMED ANY SUBSURFACE INVESTIGATIONS, GEOLOGICAL STUDIES, SOUNDINGS OR EVALUATIONS OF THE SUBSURFACE CONDITIONS PRESENT THROUGHOUT THE SITE. NUMEROUS UNKNOWN GEOLOGICAL SITE CONDITIONS AND THE UTILIZATION OF NUMEROUS CONSTRUCTION PRACTICES MEAN THAT CHRISLAND ENGINEERING CANNOT CONSIDER EVERY POTENTIAL GEOLOGICAL IMPACT CAUSED BY CONSTRUCTION ON ANY PROPERTY. THIS SITE IS NOT SUBJECT OF A SITE PLAN.

11. IT IS THE RESPONSIBILITY OF THE LANDOWNER, LAND PURCHASER, OR OTHER PROPERTY OWNER TO DETERMINE WHETHER ANY PORTION OF THE SITE DEPICTED ON THIS PLAN TO PERFORM THEIR OWN INDIVIDUAL EVALUATION OF THE GEOLOGY OF THIS SITE TO ASCERTAIN THE GEOLOGICAL FORMATION(S) WHICH UNDERLAY IT, AND THE IMPACT WHICH THOSE FORMATION(S) MAY HAVE UPON THEIR LAND OR ANY CONSTRUCTION PROPOSED THEREON, INCLUDING THE ABILITY TO CONSTRUCT THE REQUIRED STORM WATER MANAGEMENT FACILITIES AND OTHER SITE WORK IN ACCORDANCE WITH THE APPROVED SUBDIVISION PLAN.

12. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE COST OF ANY ROCK REMOVAL, SWALEHOLE, SOLUTION CHANNELS OR ROCK FRACTURES, OR FOR THE CONSTRUCTION, ENGINEERING, PERMITTING AND INSPECTION COST IMPACT WHICH ANY OF THESE GEOLOGICAL FEATURES MAY HAVE UPON THE LAND OWNER.

13. MATERIALS AND DETAILS SPECIFIED ON THE APPROVED PLAN SHALL NOT BE ALTERED DURING CONSTRUCTION WITHOUT WRITTEN APPROVAL BY THE LEBANON COUNTY PLANNING DEPARTMENT.

14. THE CONTRACTOR SHALL MAINTAIN VERTICALLY DIMINISHING UTILITIES AND ELEVATIONS ON SITE PRIOR TO THE START OF CONSTRUCTION/UNDERGROUND UTILITIES CONSTRUCTION ACCORDING TO INFORMATION PROVIDED BY OTHERS AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION/EXCAVATION OR BLASTING. THE ACTUAL LOCATIONS OF THESE UTILITIES HAVE NOT BEEN FIELD VERIFIED AND THE LOCATIONS ARE APPROXIMATE. CHRISLAND ENGINEERING DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE UNDERGROUND UTILITY LOCATION INFORMATION PROVIDED BY OTHERS AND REFLECTED ON THESE DRAWINGS IS CORRECT AND ACCURATE. CHRISLAND ENGINEERING ASSUMES NO LIABILITY FOR ANY DAMAGE INCURRED AS A RESULT OF UNDERGROUND UTILITIES OMITTED OR INACCURATELY SHOWN.

15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE, SUBJECT TO ANY REQUIREMENT TO THE SATISFACTION OF THE OWNER, UTILITY COMPANY OR AUTHORITY, AT THE CONTRACTOR'S EXPENSE.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS FROM THE MUNICIPALITY, COUNTY, STATE OR AUTHORITY RELATIVE TO CONSTRUCTION SHOWN ON THIS PLAN.

17. THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING AND RECORD DRAWINGS AS MAY BE REQUIRED BY THE MUNICIPALITY AND/OR THE VARIOUS AUTHORITIES RELATIVE TO THE CONSTRUCTION SHOWN ON THESE PLANS.

18. ALL PROPOSED SIGNS SHALL BE IN ACCORDANCE WITH THE NORTH LEBANON TOWNSHIP ZONING ORDINANCE.

19. THE PROPOSED SITE IS LOCATED WITHIN THE "TULPEHOCKEN A" STORMWATER MANAGEMENT DISTRICT.

20. ALL APPLICABLE CORNER MARKERS SHALL BE SET UP UPON APPROVAL OF THE FINAL SUBDIVISION PLAN. RESETTING OF CORNER MARKERS AFTER CONSTRUCTION OF THE DWELLINGS AND BUILDINGS SHOWN HEREON SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR LOT OWNER.

21. ALL PROPOSED UTILITIES SHALL BE LOCATED CLEAR OF ANY OBSTRUCTIONS WITH A HEIGHT GREATER THAN 30 INCHES.

22. ALL EASEMENTS SHALL BE LOCATED CLEAR OF ANY OBSTRUCTIONS WITH A HEIGHT GREATER THAN 30 INCHES.

23. ALL PLAN SHEETS, INCLUDING THE APPROVED POST-CONSTRUCTION STORMWATER MANAGEMENT REPORT AND EROSION AND SEDIMENT POLLUTION CONTROL REPORT ARE PART OF THIS PLAN AND ARE ENFORCEABLE AS IF THEY APPEARED IN TOTAL HEREIN.

24. THE DEVELOPER SHALL BE FINANCIALLY RESPONSIBLE FOR ANY ATTORNEY FEES WHEN THE ATTORNEY IS ENGAGED ON BEHALF OF THE TOWNSHIP/AUTHORITY RELATING TO THE REVIEW OF THE SUBDIVISION PLANS OR LAND DEVELOPMENT PLANS THAT ARE SUBMITTED TO THE TOWNSHIP/AUTHORITY. ATTORNEY FEES ARE DUE AND PAYABLE WITHIN 30 DAYS OF RECEIPT BUT IN ALL CASES PRIOR TO PLAN APPROVAL BY THE BOARD OF SUPERVISORS. ANY QUESTIONS ON INVOICES MUST BE REPORTED TO THE TOWNSHIP/AUTHORITY IN WRITING WITHIN 10 DAYS OF RECEIPT OF THE BILL.

25. A DRIVEWAY PERMIT WILL BE REQUIRED FROM THE TOWNSHIP.

26. A STREET CUT PERMIT WILL BE REQUIRED FROM THE TOWNSHIP.

27. ALL INSPECTIONS OF COMPLETED ITEMS SHALL BE REQUESTED IN WRITING AT LEAST 48 HOURS IN ADVANCE OF THE FINAL INSPECTION DATE & TIME.

28. INSPECTIONS ARE REQUIRED FOR THE FOLLOWING ACTIVITIES:

1. UPON COMPLETION OF PRELIMINARY SITE PREPARATION INCLUDING STRIPPING OF VEGETATION, STOCKPILING OF TOPSOIL AND TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES.

2. UPON COMPLETION OF ROUGH GRADING, BUT PRIOR TO PLACING TOPSOIL, PERMANENT DRAINAGE OR OTHER SITE IMPROVEMENTS AND GROUND COVERS.

3. DURING THE CONSTRUCTION OF PERMANENT STORM WATER MANAGEMENT AND BMP FACILITIES. ALL STORM SEWERS, CULVERTS, ETC. PRIOR TO BACKFILLING.

4. UPON FINAL COMPLETION OF PERMANENT STORM WATER MANAGEMENT AND BMP FACILITIES AND THE ESTABLISHMENT OF GROUND COVERS AND PLANTINGS.

5. AFTER REVIEW OF THE AS-BUILT DRAWINGS BUT PRIOR TO THE RELEASE OF THE FINAL FINANCIAL GUARANTEE FOR COMPLETION OF FINAL GRADING, VEGETATIVE CONTROLS REQUIRED BY THE BMP STANDARDS OR OTHER SITE RESTORATION.

6. FINANCIAL SECURITY FOR THE IMPROVEMENTS WILL NOT BE CONSIDERED FOR RELEASE UNLESS THE TOWNSHIP ENGINEER IS PROPERLY NOTIFIED AND THE SUBSURFACE IMPROVEMENTS ARE INSPECTED PRIOR TO BACKFILLING.

7. WATER NOTES - CITY OF LEBANON AUTHORITY

1. CONTACT INFORMATION FOR THE CITY OF LEBANON AUTHORITY  
CITY OF LEBANON, 100 N. MARKET ST., LEBANON, PA 17042  
BOB SEINTZ, BSEINTZ@LEBANONAUTHORITY.ORG, 717-272-1100

2. WATER SYSTEMS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE CURRENT CITY OF LEBANON AUTHORITY 'GENERAL SPECIFICATIONS FOR WATER SYSTEM CONSTRUCTION'.

3. THE CONSTRUCTION OF WATER MAINS REQUIRES A WATER MAIN EXTENSION AGREEMENT BETWEEN THE DEVELOPER AND THE AUTHORITY.

4. EXISTING WATER MAINS ARE SHOWN AT AN APPROXIMATE LOCATION. THE CONTRACTOR SHALL EXCAVATE TEST PITS TO DETERMINE ACTUAL LOCATION AND VERIFY WATER MAIN SIZES AND DEPTHS AT UTILITY CROSSINGS, EXCAVATED AREAS, AND HE-LOC LOCATIONS.

5. WATER SERVICE CONNECTION REQUIRES AN APPLICATION AND PAYMENT OF REQUIRED FEES WITH THE AUTHORITY PRIOR TO MAKING THE WATER TAPS.

6. FIRE SERVICE CONNECTION REQUIRES AN APPLICATION AND PAYMENT OF REQUIRED FEES WITH THE AUTHORITY PRIOR TO MAKING THE FIRE LINE TAP. THE LINE TAP AGREEMENT ALSO REQUIRES:

7. ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A PENNDOT HIGHWAY OCCUPANCY PERMIT (HOP). THE PERMIT TYPICALLY IS REQUIRED TO BE IN THE AUTHORITY'S NAME AND THE AUTHORITY MAY REQUIRE THE CONTRACTOR TO PROVIDE A FINANCIAL GUARANTEE UNTIL PENNDOT SIGNS OFF ON THE PERMIT AFTER CONSTRUCTION IS COMPLETE.

8. ANY WORK WITHIN MUNICIPAL RIGHT-OF-WAYS MIGHT REQUIRE A MUNICIPAL PERMIT. THE PERMIT SHALL BE ACQUIRED IN THE CONTRACTOR'S NAME.

9. THE AUTHORITY SHALL APPROVE ALL MATERIALS PRIOR TO CONSTRUCTION.

10. A MANDATORY PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE AUTHORITY AND WATERLINE CONSTRUCTION CONTRACTOR.

11. THE CITY OF LEBANON AUTHORITY WILL INSPECT THE WATER MAIN INSTALLATION AND ASSIST IN COORDINATING TESTING. THESE FEES SHALL BE COORDINATED WITH THE AUTHORITY.

12. THE CONTRACTOR OR DEVELOPER SHALL INSTALL THE WATER TAP AND SERVICE LINE TO THE CURB STOP UNDER THE INSPECTION OF THE CITY OF LEBANON AUTHORITY. THE PROPERTY OWNER IS RESPONSIBLE FOR THE WATER SERVICE AFTER THE CURB STOP. THE CITY OF LEBANON AUTHORITY WILL INSTALL THE WATER METER WITHIN THE BUILDING OR AN APPROVED METER PIT AS REQUESTED. CONTACT THE CITY OF LEBANON AUTHORITY METER DEPARTMENT FOR METER INSTALLATION, 2200 WEST CHESTNUT STREET, 717-273-2506.

13. METER PIT INSTALLATIONS ARE MANDATORY. ANY EXEMPTION TO METER PIT INSTALLATION IS AT THE DISCRETION OF THE CITY OF LEBANON AUTHORITY. METER PITS SHALL BE INSTALLED WITHIN 10-FEET OF THE CURB STOP. METER PITS SHALL BE APPROVED BY THE METER DEPARTMENT PRIOR TO CONSTRUCTION.

14. SEWER AND WATER MAINS SHALL HAVE A MINIMUM OF 18-INCH SEPARATION, OR THE SEWER MAIN SHALL BE CONCRETE ENCASED IN THE AREA WHERE THE 18-INCH SEPARATION CANNOT BE MAINTAINED.

15. WATER MAINS AND LATERALS THAT ARE LESS THAN 18-INCHES FROM A STORM SEWER OR CULVERT SHALL BE INSULATED WITH A FOAM WRAP.

16. THE CONSTRUCTION OF THE WATER SYSTEM AND SERVICE LINES, AND SUCCESSFUL TESTING THEREOF, THE WATER SYSTEM WILL BE OFFERED FOR DEDICATION TO THE CITY OF LEBANON AUTHORITY.

17. ALL EXISTING WATER SERVICE TERMINATIONS SHALL BE AT THE WATER MAIN BY TURNING OFF THE CORPORATION STOP AT THE MAIN AND THE SERVICE LINES CUT AND CRIMPED WITHIN ONE FOOT OF THE CORPORATION STOP. ALL WORK, INCLUDING SWAG CUTTING, EXCAVATION, LATERAL TERMINATION, BACKFILL, AND PAVING, SHALL BE DONE BY THE CONTRACTOR AND INSPECTED BY THE CITY OF LEBANON AUTHORITY.

18. AS PEER NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE, THE PROJECT DEPICTED HEREIN IS LOCATED WITHIN THE TULPEHOCKEN A STORMWATER MANAGEMENT DISTRICT.

19. THE STORMWATER MANAGEMENT FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED BY THE DEVELOPER IN ACCORDANCE WITH THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN. OWNERSHIP AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE LANDOWNER, HIS SUCCESSORS, AND ASSIGNS, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE HEREIN.

20. STORMWATER MANAGEMENT FACILITIES SHALL BE MAINTAINED IN GOOD WORKING CONDITION SO THAT THEY ARE FUNCTIONING PROPERLY AND ACCORDING TO THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN.

21. THE CONTRACTOR OR DEVELOPER SHALL MAINTAIN THE STORMWATER MANAGEMENT FACILITIES IN GOOD WORKING CONDITION SO THAT THEY ARE FUNCTIONING PROPERLY AND ACCORDING TO THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN.

22. THE CONTRACTOR OR DEVELOPER SHALL MAINTAIN THE STORMWATER MANAGEMENT FACILITIES IN GOOD WORKING CONDITION SO THAT THEY ARE FUNCTIONING PROPERLY AND ACCORDING TO THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN.

23. THE CONTRACTOR OR DEVELOPER SHALL MAINTAIN THE STORMWATER MANAGEMENT FACILITIES IN GOOD WORKING CONDITION SO THAT THEY ARE FUNCTIONING PROPERLY AND ACCORDING TO THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN.

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25. THE CONTRACTOR OR DEVELOPER SHALL MAINTAIN THE STORMWATER MANAGEMENT FACILITIES IN GOOD WORKING CONDITION SO THAT THEY ARE FUNCTIONING PROPERLY AND ACCORDING TO THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN.

26. THE CONTRACTOR OR DEVELOPER SHALL MAINTAIN THE STORMWATER MANAGEMENT FACILITIES IN GOOD WORKING CONDITION SO THAT THEY ARE FUNCTIONING PROPERLY AND ACCORDING TO THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN.

27. CONTRACTORS AND PROPERTY OWNERS SHALL NOT STORE CONSTRUCTION MATERIALS OR LOCATE TRASH RELATED TO CONSTRUCTION ON THE PAVED CARTWAY STREETS.

28. ALL MUD FROM CONSTRUCTION ACTIVITIES THAT IS TRACKED ONTO STREETS SHALL BE CLEANED BY THE RESPONSIBLE CONTRACTOR OR PROPERTY OWNER AT THE END OF EACH WORKDAY.

29. STORMWATER INLETS OR DRAINAGE PIPES WHICH BECOME FILLED WITH MUD OR DEBRIS FROM CONSTRUCTION ACTIVITIES SHALL BE CLEANED BY THE RESPONSIBLE CONTRACTOR OR PROPERTY OWNER.

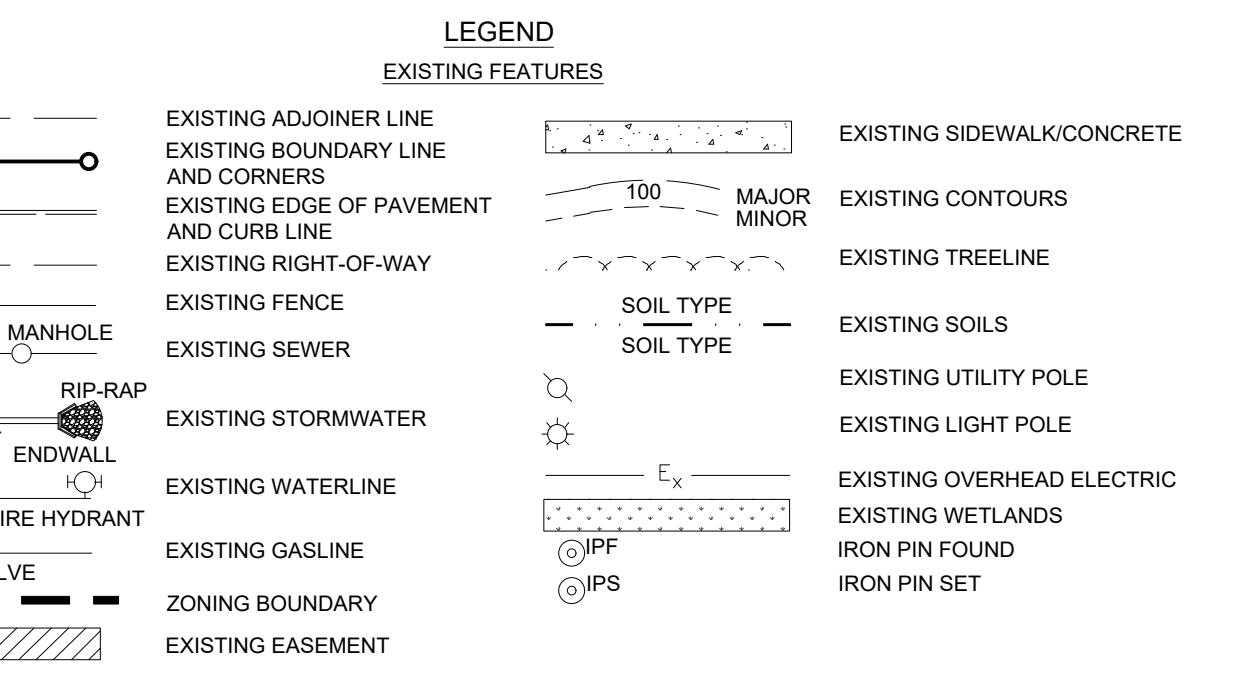
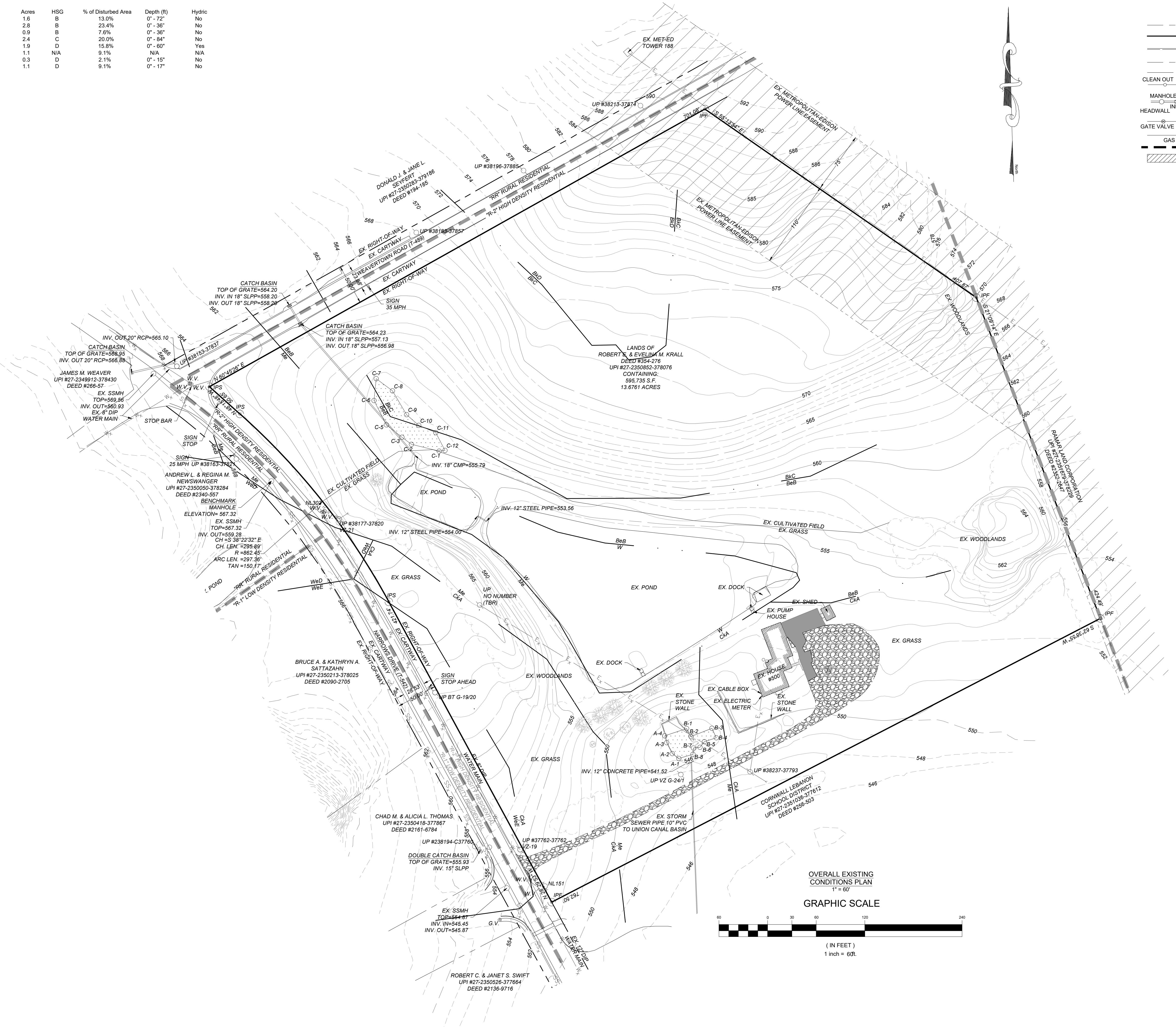
30. NO OCCUPANCY PERMIT SHALL BE ISSUED UNTIL THE STORMWATER MANAGEMENT FACILITIES HAVE BEEN INSTALLED AND APPROVED THROUGH INSPECTION BY THE TOWNSHIP.

31. ADDITIONAL NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT REQUIREMENTS:

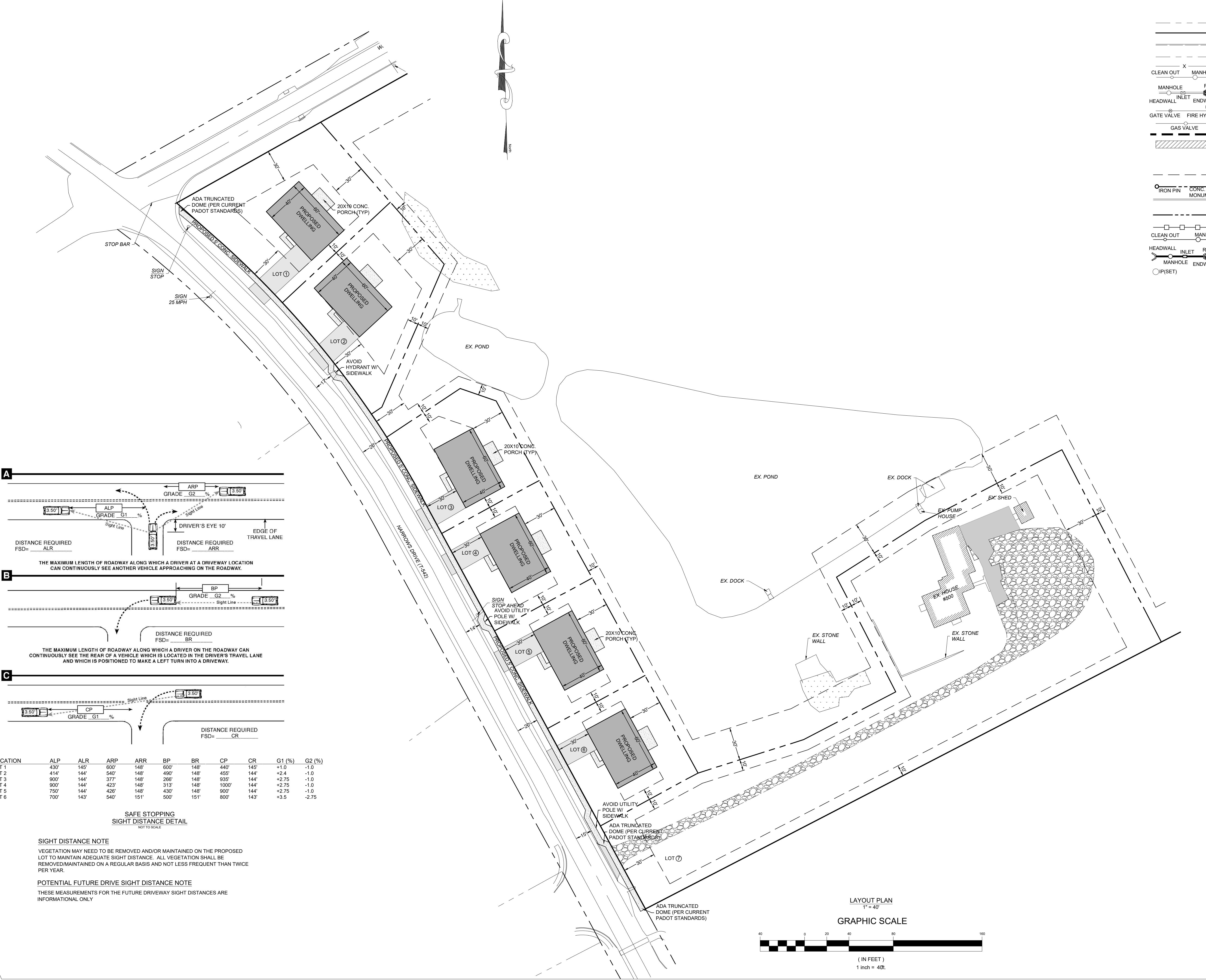
1. ALL STORMWATER MANAGEMENT FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED BY THE DEVELOPER IN ACCORDANCE WITH THE DESIGN CONDITIONS AND SPECIFICATIONS IDENTIFIED ON THIS PLAN. OWNERSHIP AND MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE LANDOWNER, HIS SUCCESSORS, AND ASSIGNS, UNLESS SPECIFICALLY IDENTIFIED OTHERWISE HEREIN.

## SOIL CHART:

Map Unit Symbol	Map Unit Name	Acres	HSG	% of Disturbed Area	Depth (ft)	Hydric
BeB	Bedington Shaly Silt Loam	1.6	B	13.0%	0'-72"	No
BkC	Berks Channery Silt Loam	2.8	B	23.4%	0'-36"	No
BkD	Berks Channery Silt Loam	0.9	B	7.6%	0'-36"	No
CKA	Chesterburg Silt Loam	2.4	C	20.0%	0'-64"	No
Me	Melvin Variant Silt Loam	1.9	D	15.6%	0'-60"	Yes
W	Water	1.1	N/A	9.1%	0'-15"	N/A
WeD	Weber Channery Silt Loam	0.3	D	2.1%	0'-15"	No
WeW	Weber Shaly Silt Loam	1.1	D	9.1%	0'-17"	No





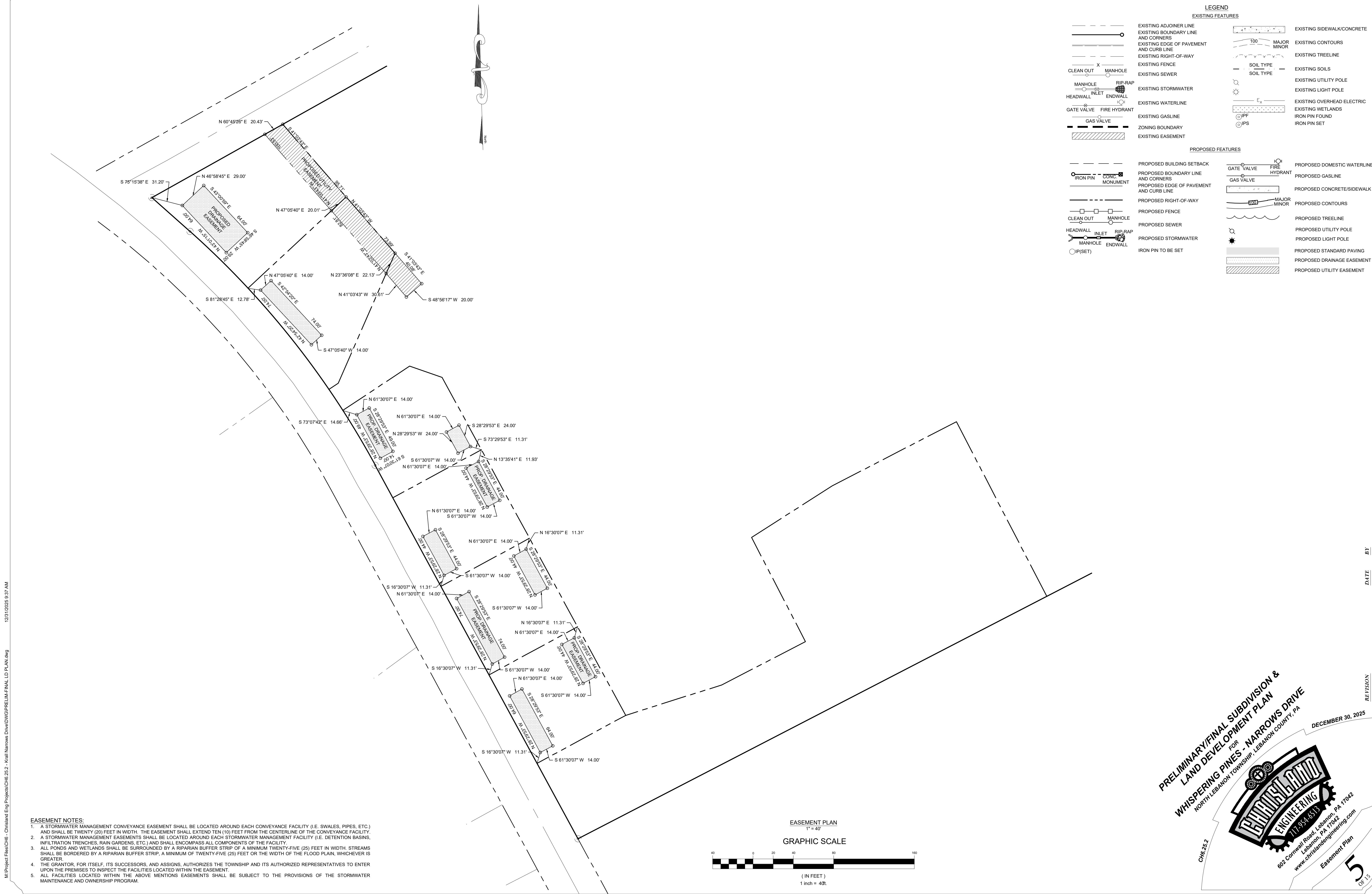


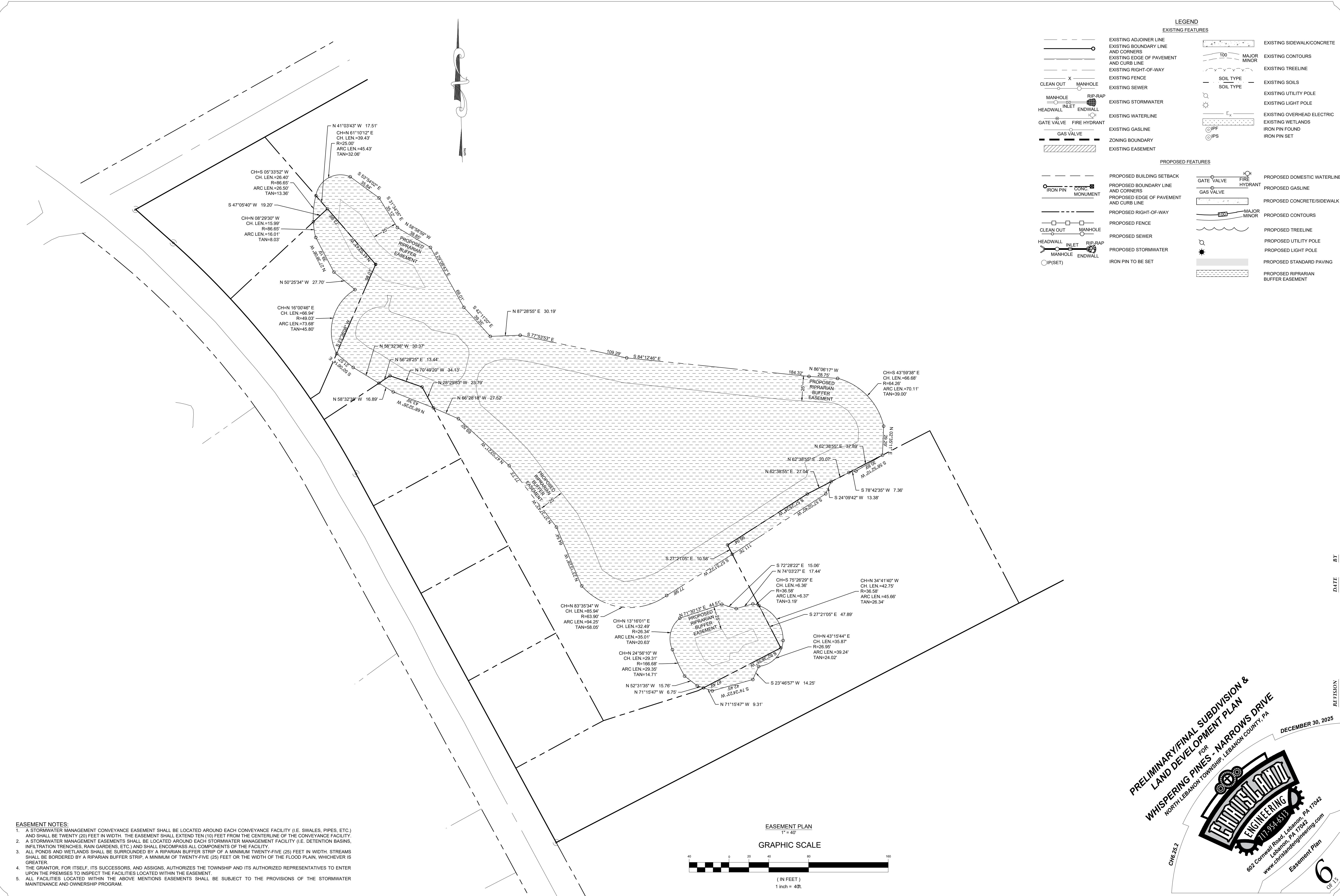
PRELIMINARY/FINAL SUBDIVISION &  
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NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PA  
DECEMBER 30, 2025

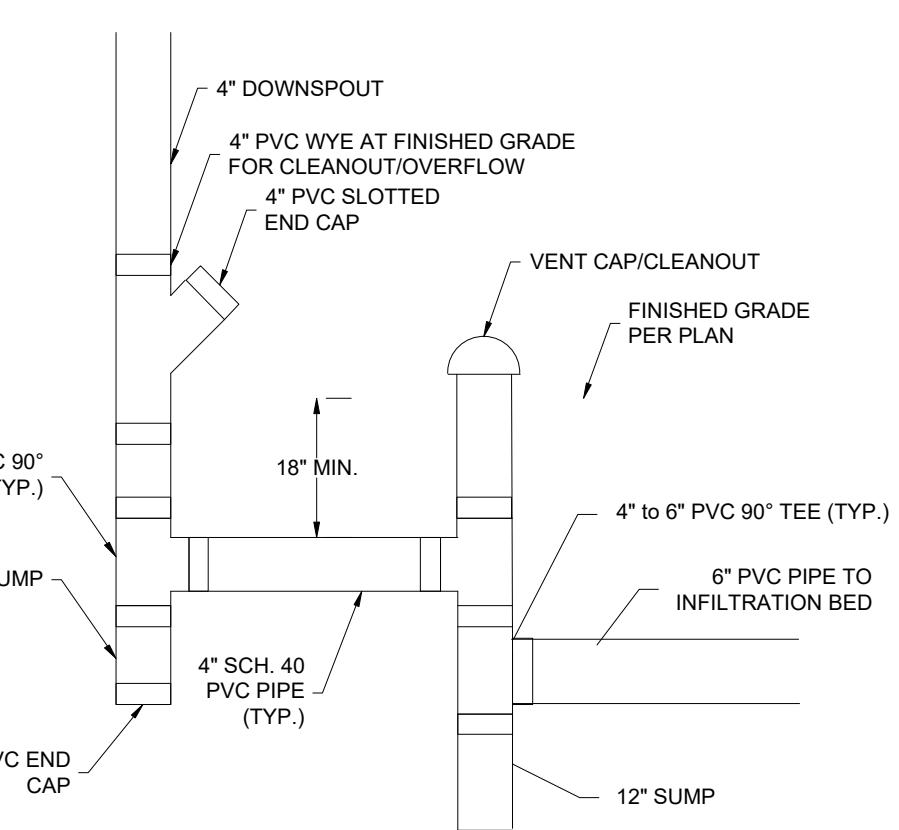
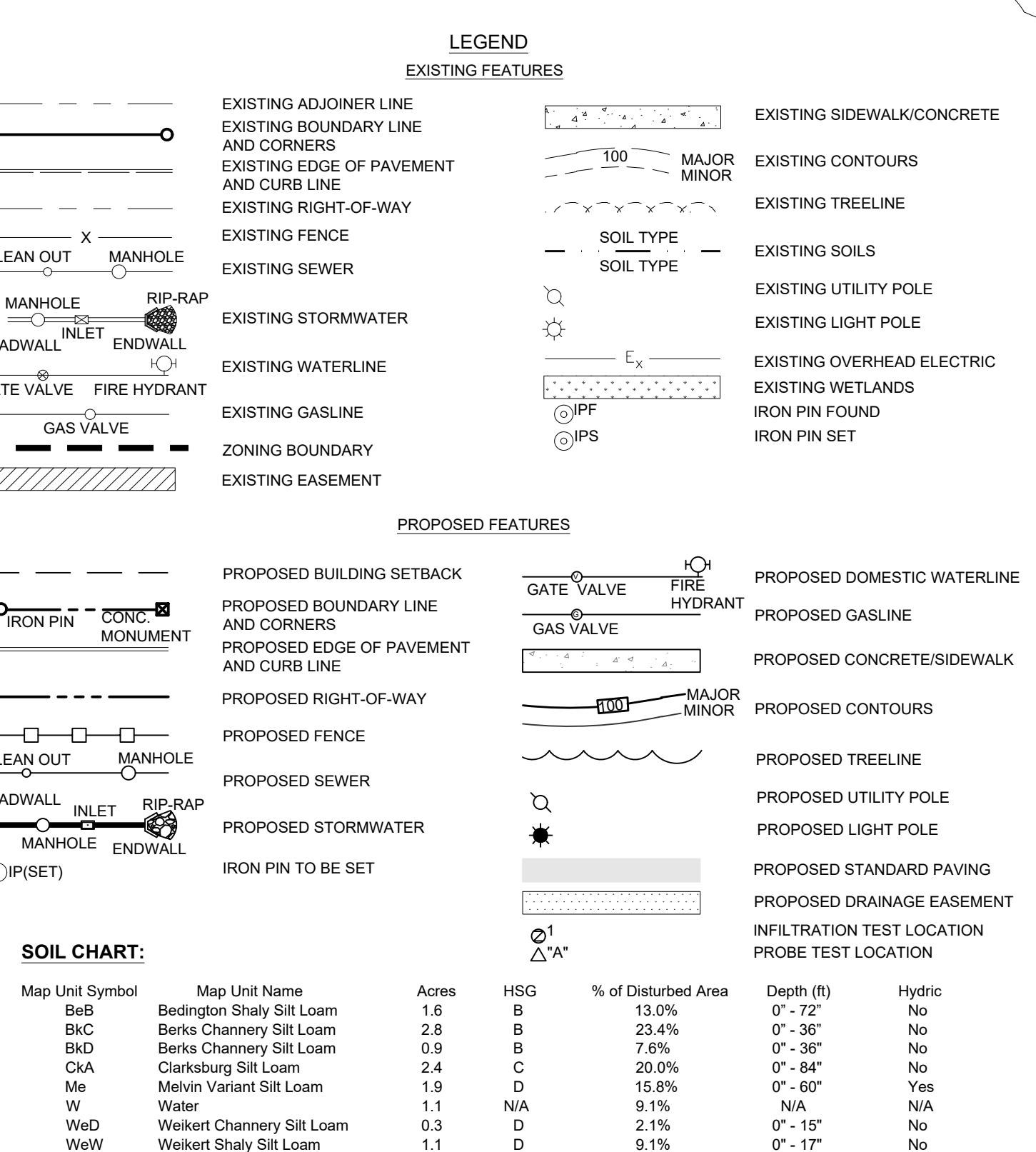
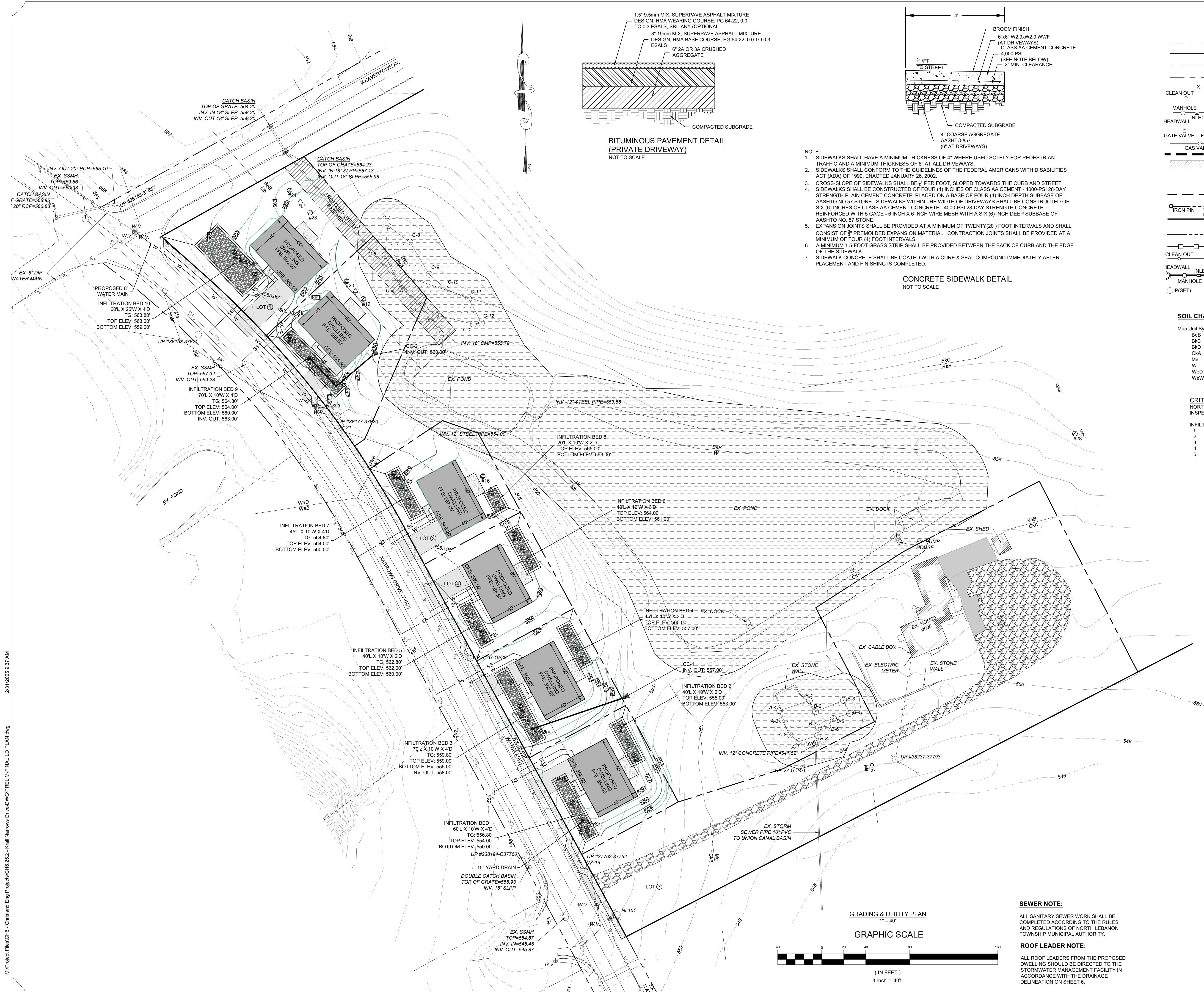
CH6252

Engineering  
717-934-6513  
602 Cornwall Road, Lebanon, PA 77042  
www.chrisandergroup.com  
Layout Plan

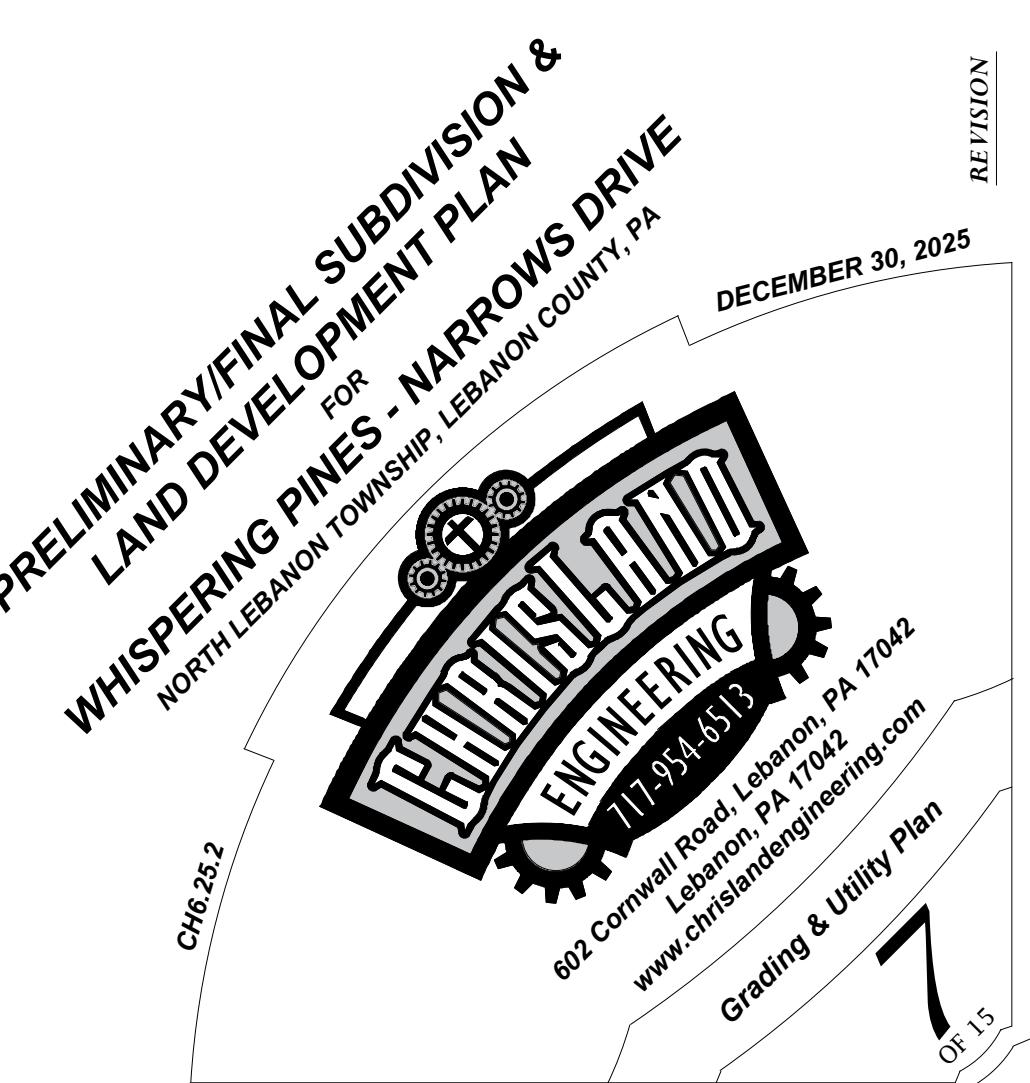
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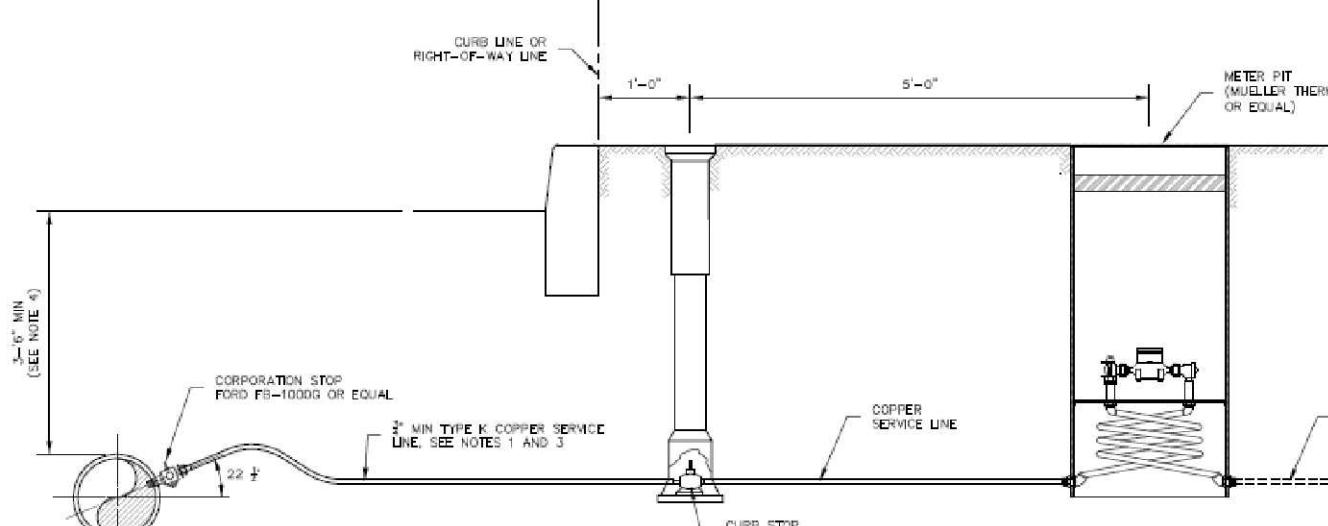




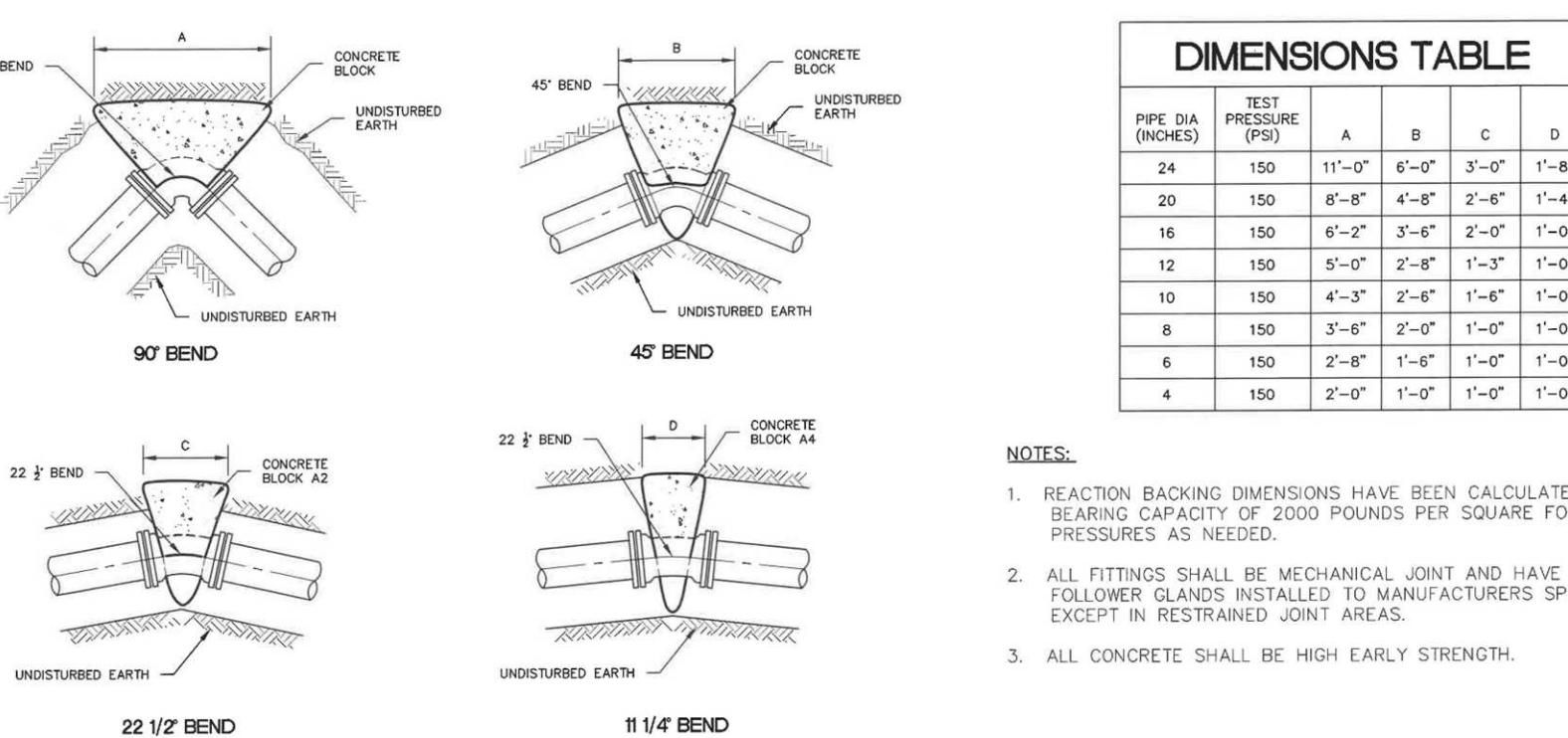


DOWNSPOUT/ROOF LEADER DETAIL  
NOT TO SCALE





TYPICAL WATER SERVICE CONNECTION w/METER PIT DETAIL



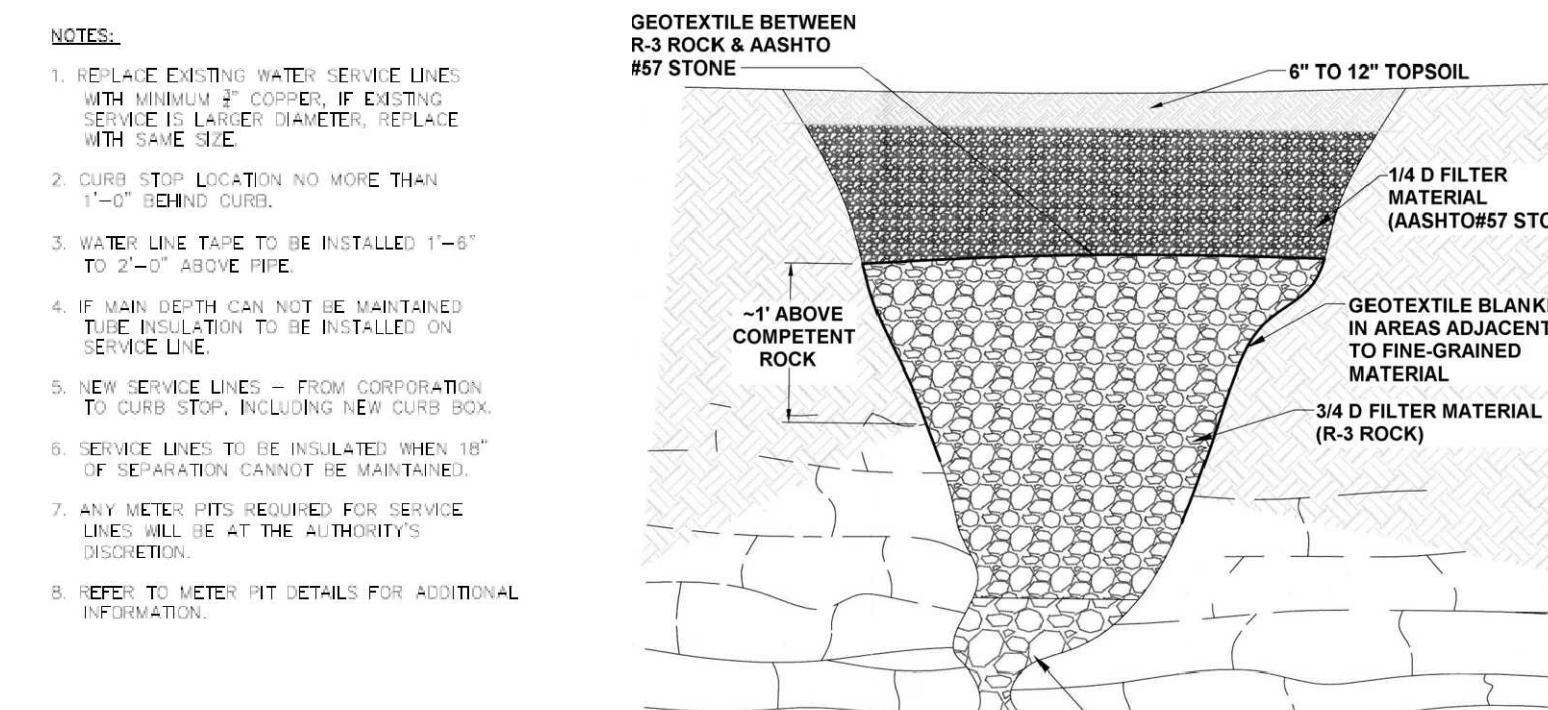
REACTION BACKING DETAILS

1.5" COMPACTED SUPERPAVE (PADOT) PER SPECIFIC DESIGN 9.5MM WEARING. 0.3-3 ESAL. SRLA TO BE BASED ON ADT (TWP. INSPECTION REQUIRED). 4" COMPACTED SUPERPAVE (PADOT) PER SPECIFIC DESIGN 25MM BASE COURSE. 0.3-3 ESAL: SRL TO BE BASED ON ADT. BITUMINOUS TACK COURSE IS REQUIRED BETWEEN THE BASE COURSE AND WEARING COURSE. (TWP. INSPECTION REQUIRED).

1. ALL SPECIFIED MATERIAL THICKNESS IS FULLY COMPACTED DEPTH.  
2. MAXIMUM GRADES OUTSIDE OF RIGHT-OF-WAY SHALL NOT EXCEED 2:1 FOR CUT AND 3:1 FOR FILL.  
3. ALL SPECIFIED MATERIAL THICKNESS IS FULLY COMPACTED DEPTH.  
4. ROADWAY SUBBASE, AGGREGATE, PAVING, CURBING, SIDEWALK, ETC. LOCATED WITHIN THE BOROUGH RIGHT-OF-WAY SHALL REQUIRED BOROUGH AND COUNTY INSPECTION.

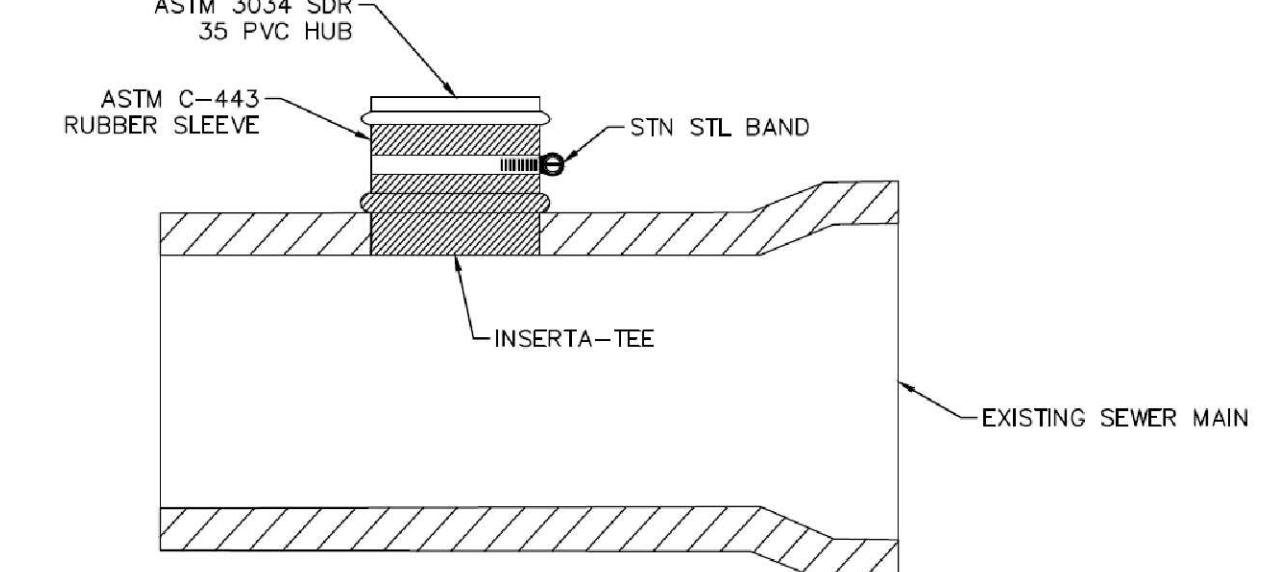
STREET CROSS-SECTION WITH SIDEWALK

NOT TO SCALE



NOTES:

1. REPLACE EXISTING WATER SERVICE LINES WITH MINIMUM 2" COPPER IF EXISTING SERVICE IS LARGER DIAMETER. REPLACE WITH SAME SIZE.
2. CURB STOP LOCATION NO MORE THAN 1'-0" TO 2'-0" ABOVE PIPE.
3. WATER LINE TAP TO BE INSTALLED 1'-0" TO 2'-0" ABOVE PIPE.
4. IF MAIN DEPTH CAN NOT BE MAINTAINED THE TAP IS TO BE INSTALLED ON SERVICE LINE.
5. NEW SERVICE LINES - FROM CORPORATION STOP TO CURE STOP, INCLUDING NEW CURB BOX.
6. SERVICE LINES TO BE INSULATED WHEN 18" OF SEPARATION CANNOT BE MAINTAINED.
7. ANY METER PITS REQUIRED FOR SERVICE LINES WILL BE AT THE AUTHORITY'S DISCRETION.
8. REFER TO METER PIT DETAILS FOR ADDITIONAL INFORMATION.



NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR EXPOSING EXISTING SEWER MAIN AT PROPOSED CONNECTION POINT AS REQUIRED FOR INSTALLATION OF NEW INSERTA-TEE.
2. CONTRACTOR SHALL PREPARE EXCAVATION INCLUDING PROVIDING SHORING IF NEEDED ACCORDING TO OSHA REGULATIONS AND TO SATISFACTION OF NLTM.
3. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED.
4. NLTM SHALL BE RESPONSIBLE FOR MACHINE DRILLING NEW OPENING INTO EXISTING MAIN AND INSTALLING NEW INSERTA-TEE AT DEVELOPER'S COST.
5. CONTRACTOR SHALL CONNECT TO ONE SIDE OF INSERTA-TEE AND CONTINUE SEWER EXTENSION PER SITE PLAN AND DETAILS INCLUDED IN DRAWINGS.
6. CONTRACTOR SHALL COORDINATE CONNECTION TO EXISTING SEWER MAIN WITH NLTM.
7. INSERTA-TEES ARE ONLY PERMITTED FOR USE FOR CONNECTING TO EXISTING MAINS AND FOLLOWING APPROVAL BY NLTM.

INSERTA-TEE DETAIL  
NOT TO SCALE

## THE VADLE™ CURB BOX LOCK

MOST CURB STOPS AND CURB BOXES INSTALLATION INSTRUCTION:  
1) WHEN INSTALLING MOST CURB STOPS SIMPLY PLACE THE VADLE™ ON A PROPERLY PREPARED SUB BASE UNDER THE CURB STOP.

2) IF THE ANTI-TWIST RING FITS OVER THE KEY OF THE CURB STOP, THEN PUSH THE RING INTO THE VADLE™ UNTIL IT LOCKS INTO PLACE (WITH THE 3 MUELLER MARKS) OR PULL THE RING OUT OF THE VADLE™ ON THE SIDE OF THE VADLE™ CENTERING RING WITH THE CUT-OUT IN IT AND PRESS DOWN UNTIL THE RING IS RESTING ON THE CURB STOP. THE RING WILL LOCK OVER THE CURB STOP.

3) SOME CURB STOPS HAVE A CONE SHAPED DESIGN, PLACE THE LARGER END OF THE VALVE BODY IN THE LARGER SIDE OF THE VADLE™.

4) PLACE THE CURB BOX OVER THE VADLE™.

5) FINALLY BACK FILL ON ALL SIDES IN EQUAL LIFTS.

ALL CURB BOXES AND THE VADLE™ PLACED UPSIDE DOWN:

1) WITH ANTI-TWIST 1" FORGE MALLEABLE KEY OR 1" MCDONALD INVERTED PLUG CURB STOP, SIMPLY TURN THE VADLE™ UPSIDE DOWN AND PUSH INTO THE GROUND SECURELY UNDER THE CURB STOP.

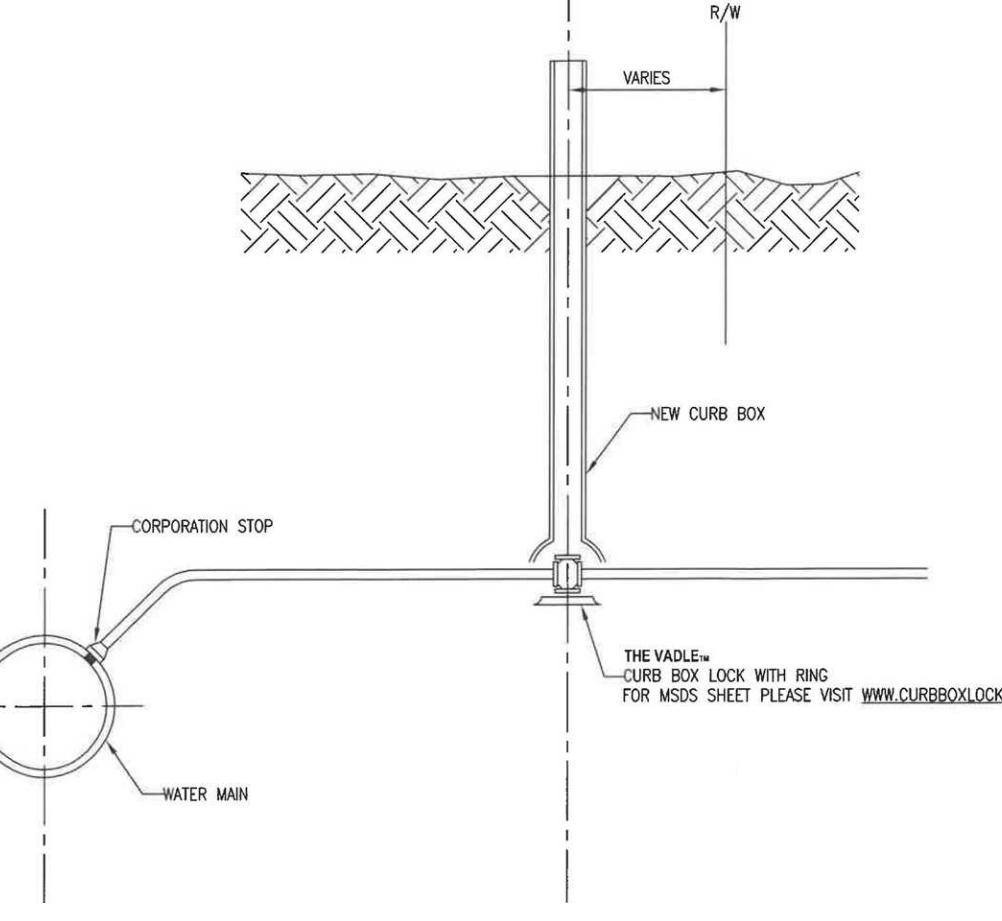
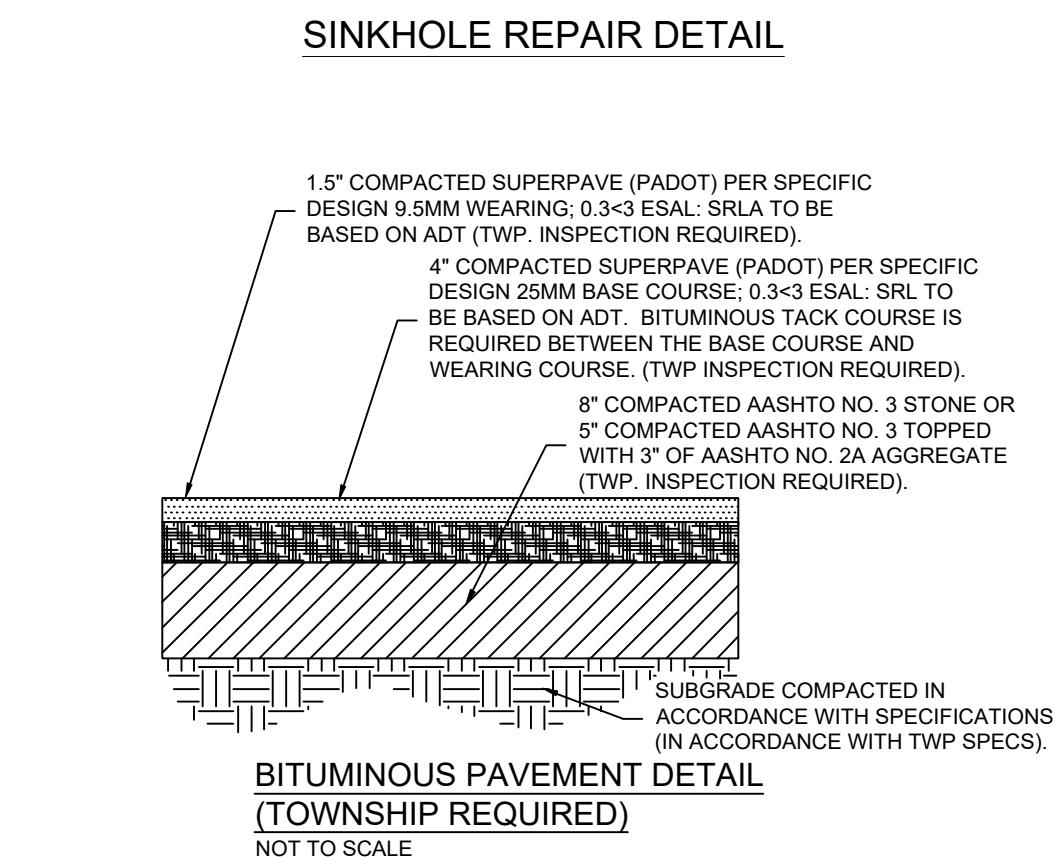
2) THAN SET THE VALVE ON THE VADLE™ AND PUT THE CURB BOX OVER THE VALVE.

3) THESE TWO CURB STOPS FIT SECURELY IN THE CURB BOX. THE VADLE™ SERVES AS A STABLE BASE AND FOUNDATION IN THIS APPLICATION.

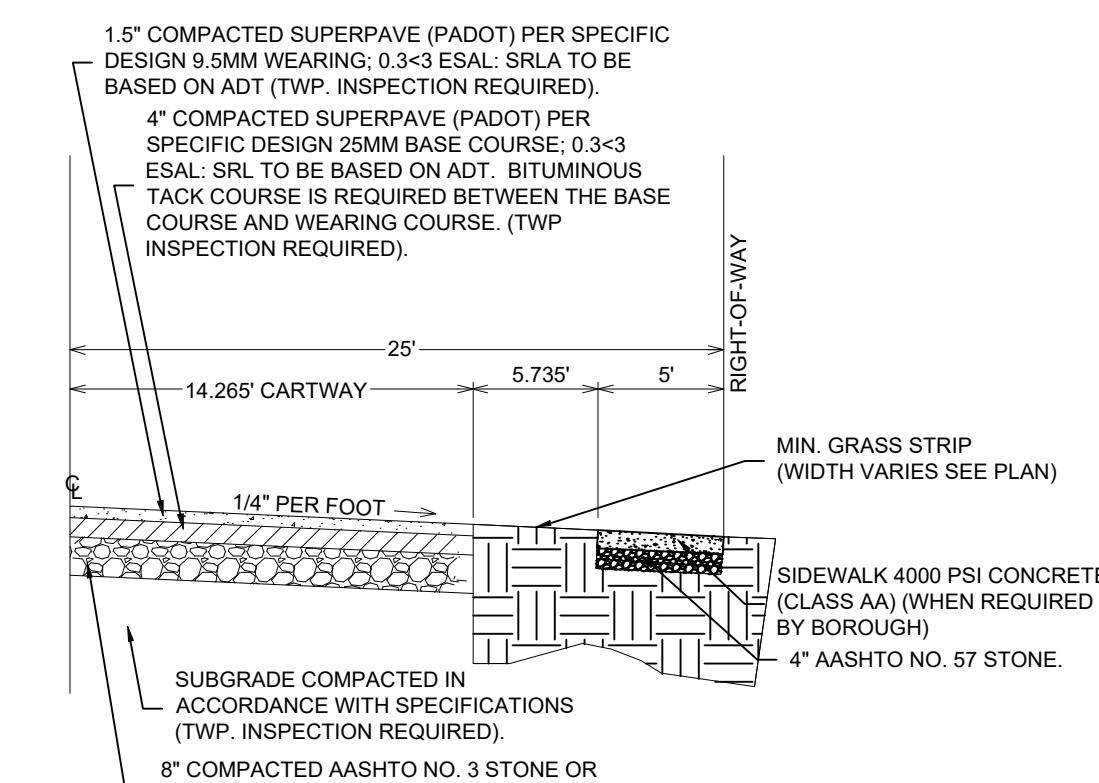
SOFT OR UNSTABLE GROUND:

1) WHEN INSTALLING IN CONDITIONS WITH SOFT OR UNSTABLE GROUND, THE VADLE™ CAN BE SECURED TO A LARGER BASE SUCH AS A BRICK OR A STEPPING STONE.

2) SIMPLY SCREW THE VADLE™ DOWN ONTO A LARGER BASE WITH ANY FORM OF ANCHORING SCREWS TO CREATE A SOLID SECURE FOUNDATION.

CURB BOX LOCK WITH RING  
NOT TO SCALE

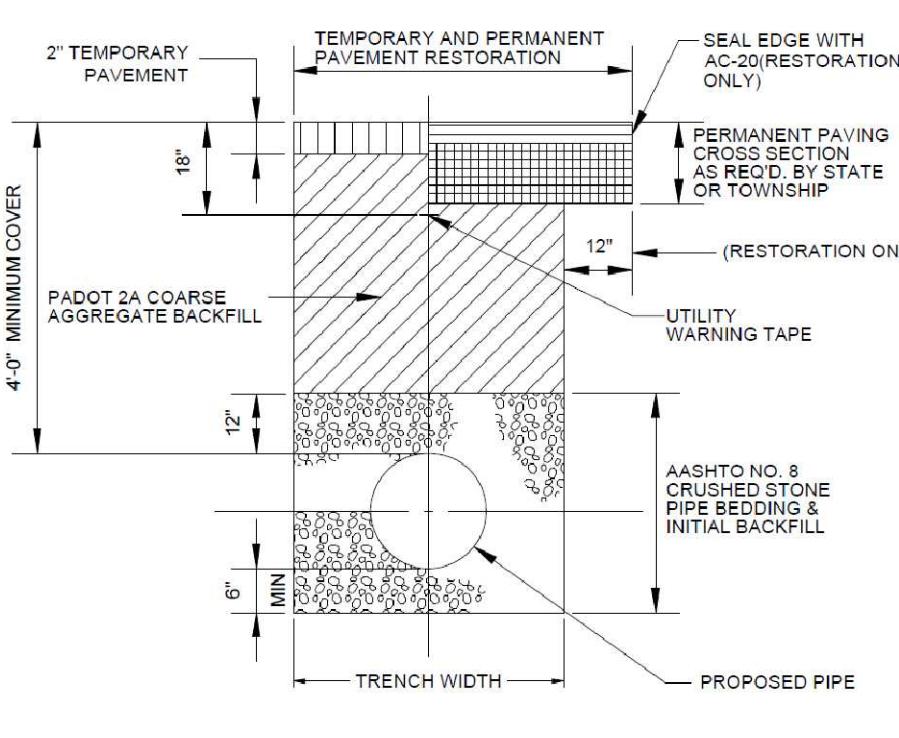
SINKHOLE REPAIR DETAIL



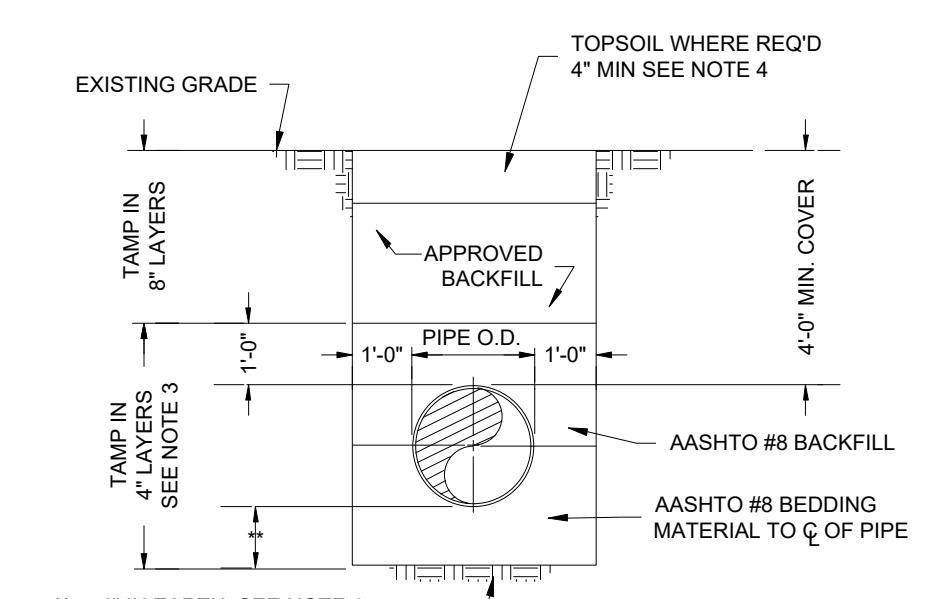
1. ALL SPECIFIED MATERIAL THICKNESS IS FULLY COMPACTED DEPTH.  
2. MAXIMUM GRADES OUTSIDE OF RIGHT-OF-WAY SHALL NOT EXCEED 2:1 FOR CUT AND 3:1 FOR FILL.  
3. ALL SPECIFIED MATERIAL THICKNESS IS FULLY COMPACTED DEPTH.  
4. ROADWAY SUBBASE, AGGREGATE, PAVING, CURBING, SIDEWALK, ETC. LOCATED WITHIN THE BOROUGH RIGHT-OF-WAY SHALL REQUIRED BOROUGH AND COUNTY INSPECTION.

STREET CROSS-SECTION WITH SIDEWALK

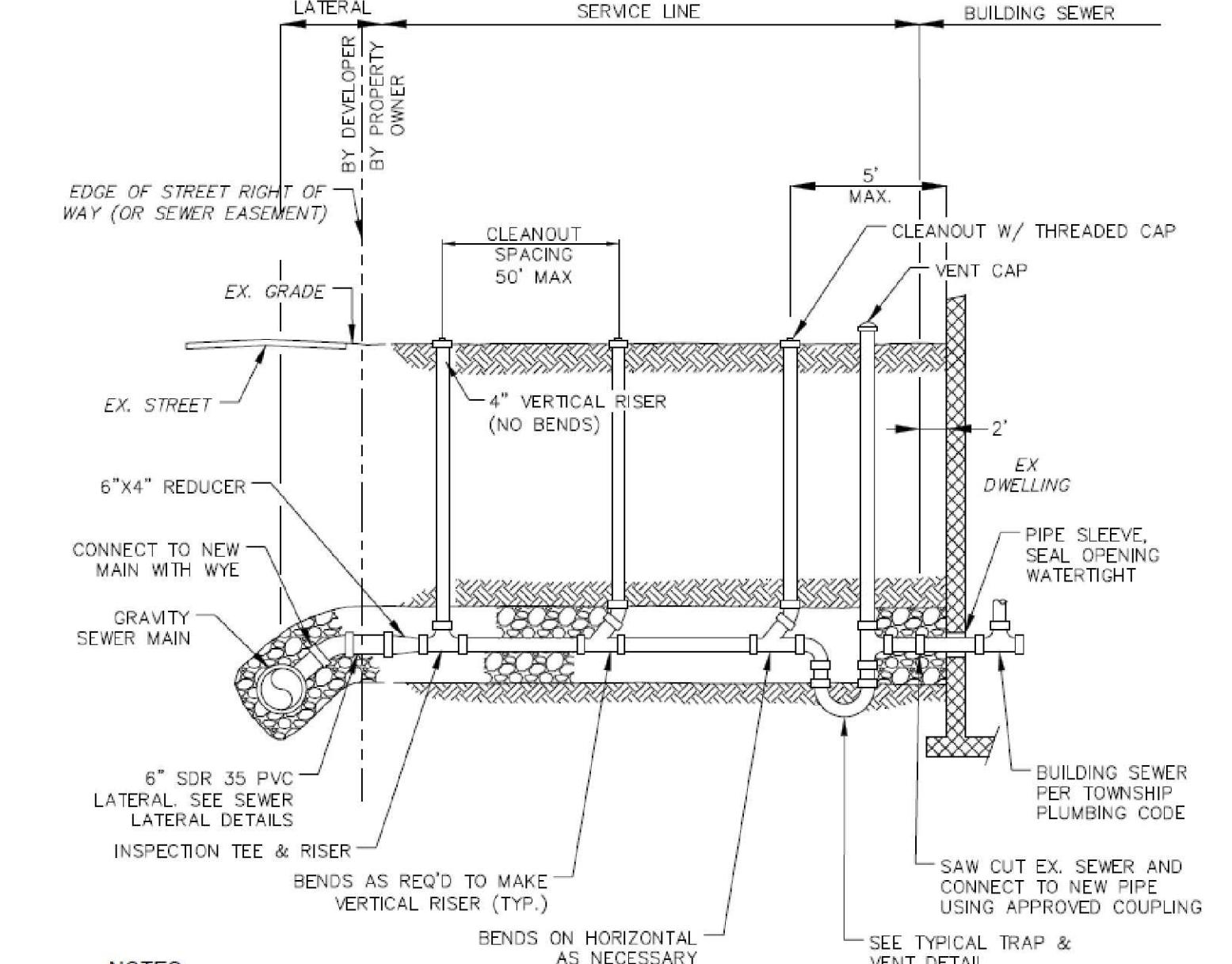
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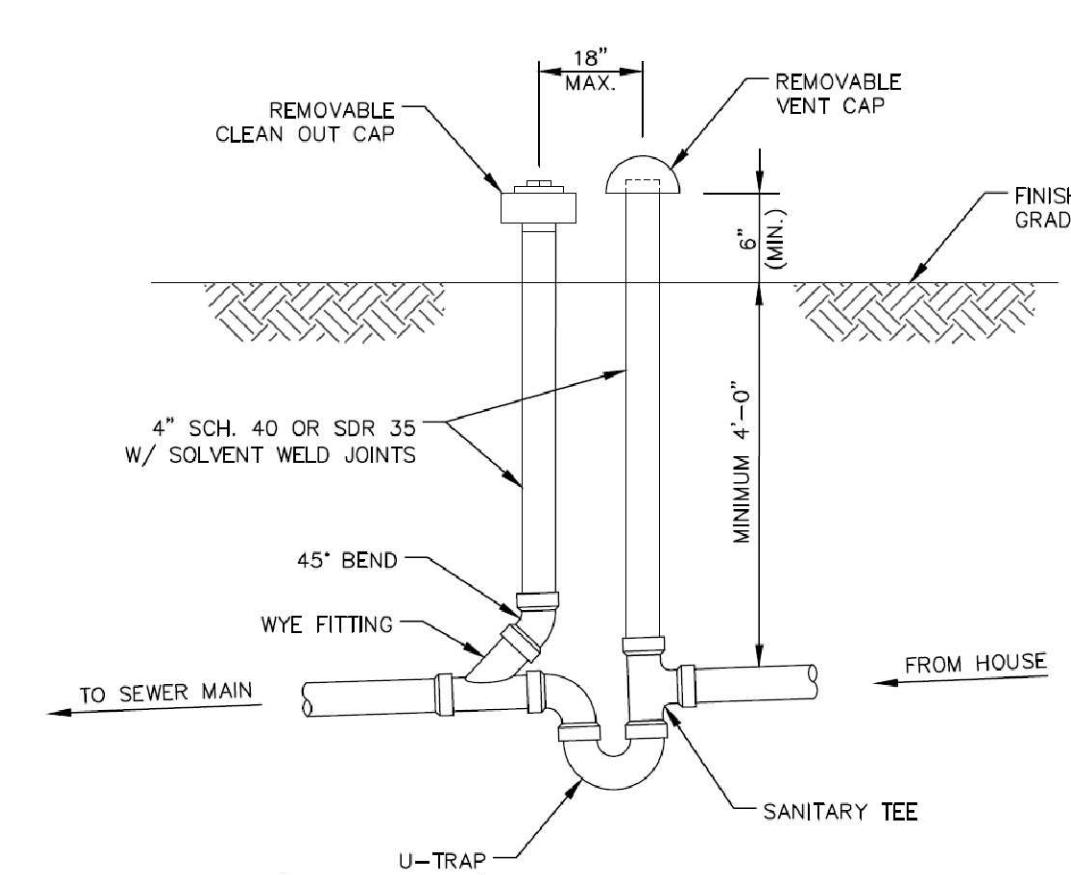
TRENCH RESTORATION DETAIL



1. IF UNSUITABLE SUBSOIL IS ENCOUNTERED AT THE NORMAL TRENCH SUBGRADE, THE CONTRACTOR SHALL REMOVE IT TO THE DEPTH DIRECTED BY THE ENGINEER IN THE FIELD, AND BACKFILL W/ CLASS A BEDDING IN 4" LAYERS.  
2. BOTTOM OF TRENCH SHALL BE FREE OF WATER PRIOR TO WATER MAIN INSTALLATION.  
3. IF VIBRATORY COMPACTION EQUIPMENT IS USED BACKFILL MAY BE IN 8" LAYERS.  
4. PROVIDE 4" OF TOPSOIL WHERE SEEDING IS REQUIRED. SEE NOTE 6 AT GRAVEL DRIVEWAYS.  
5. CONTRACTOR SHALL SHORE THE TRENCH IN ACCORDANCE WITH OSHA REGULATIONS.  
6. GRAVEL AND PAVED DRIVEWAYS TO BE RESTORED IN KIND.  
7. COMPACT BACKFILL IN TRENCHES INSIDE TOWNSHIP ROW PER TOWNSHIP REQUIREMENTS.  
8. ALL PAVING RESTORATION IS REQUIRED WITHIN 90 DAYS (OR AS SOON AS POSSIBLE IF TRENCH IS INITIALLY RESTORED BETWEEN OCTOBER 30 AND APRIL 1).  
9. PERMANENT RESTORATION IS REQUIRED WITHIN 90 DAYS (OR AS SOON AS POSSIBLE IF TRENCH IS INITIALLY RESTORED BETWEEN OCTOBER 30 AND APRIL 1).

TYPICAL TRENCH DETAIL  
NOT TO SCALE

NOTES:  
1 PROVIDE 6" OF AASHTO NO. 8 (1B) STONE BELOW PIPE AND 12" ABOVE PIPE (TYPICAL ENTIRE LENGTH OF LATERAL)  
2 MINIMUM SLOPE 1% (1/8" PER FT)  
3 MINIMUM DEPTH OF COVER = 4 FT  
4 PIPE MATERIALS:  
- SERVICE LINE - PVC SDR 35 (PUSH-ON JOINTS)  
- PVC SCH 40, SOLVENT WELD

GRAVITY SERVICE LINE  
INSTALLATION DETAIL  
NOT TO SCALETYPICAL TRAP &  
VENT ASSEMBLY  
NOT TO SCALE

DATE

BY

12/30/2025

REVISION

01



## SUBSURFACE INFILTRATION BED

A SUBSURFACE INFILTRATION BED GENERALLY CONSISTS OF A VEGETATED, HIGHLY PEROUS SOIL MEDIA UNDERLAYN BY A UNIFORMLY GRADED AGGREGATE (OR ALTERNATIVE) BED FOR TEMPORARY STORAGE AND INFILTRATION OF STORMWATER RUNOFF. THE BED IS LOCATED IN A PERMEABLE GROUND SURFACE, SUCH AS LAWNS, MEADOWS, AND PLAYFIELDS, WHICH ARE LOCATED DOWNSTREAM FROM NEARBY IMPERVIOUS AREAS. SUBSURFACE INFILTRATION BEDS CAN BE STEPPED OR TERRACED DOWN SLOPING TERRAIN PROVIDED THAT THE BASE OF THE BED REMAINS LEVEL. STORMWATER RUNOFF FROM NEARBY IMPERVIOUS AREAS (INCLUDING ROOFTOPS, PARKING LOTS, ROADS, WALKWAYS, ETC.) CAN BE CONVEYED TO THE SUBSURFACE STORAGE MEDIA, WHERE IT IS THEN DISTRIBUTED VIA A NETWORK OF PERFORATED PIPING. THE STORAGE MEDIA FOR SUBSURFACE INFILTRATION BEDS TYPICALLY CONSISTS OF CLEAN-WASHED, UNIFORMLY GRADED AGGREGATE, HOWEVER, OTHER STORAGE MEDIA ALTERNATIVES ARE AVAILABLE.

CONSTRUCTION SEQUENCE

1. DUE TO THE NATURE OF CONSTRUCTION SITES, SUBSURFACE INFILTRATION SHOULD BE INSTALLED TOWARD THE END OF THE CONSTRUCTION PERIOD, IF POSSIBLE. (INFILTRATION BEDS MAY BE USED AS TEMPORARY SEDIMENT BASINS OR TRAPS AS DISCUSSED ABOVE).
2. INSTALL AND MAINTAIN ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES (AS PER THE PENNSYLVANIA EROSION AND SEDIMENTATION CONTROL PROGRAM MANUAL) DURING CONSTRUCTION.
3. THE EXISTING SUBGRADE UNDER THE BED AREAS SHOULD NOT BE COMPACTED OR SUBJECT TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO GEOTEXTILE AND STONE BED PLACEMENT.
4. WHERE EROSION OF SUBGRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING, THIS MATERIAL SHOULD BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE (OR EQUIVALENT) AND LIGHT TRACTOR. ALL FINE GRADING SHOULD BE DONE BY HAND. ALL BED BOTTOMS SHOULD BE AT LEVEL GRADE.
5. EARTHEN BERMS (IF USED) BETWEEN INFILTRATION BEDS SHOULD BE LEFT IN PLACE DURING EXCAVATION. THESE BERMS DO NOT REQUIRE COMPACTION IF PROVEN STABLE DURING CONSTRUCTION.
6. INSTALL UPSTREAM AND DOWNSTREAM CONTROL STRUCTURES, CLEANOUTS, PERFORATED PIPING, AND ALL OTHER NECESSARY STORMWATER STRUCTURES.
7. GEOTEXTILE AND BED AGGREGATE SHOULD BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE PREPARATION AND INSTALLATION OF STRUCTURES. GEOTEXTILE SHOULD BE PLACED IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDATIONS. ADJACENT STRIPS OF GEOTEXTILE SHOULD OVERLAP A MINIMUM OF 16 INCHES. IT SHOULD ALSO BE SECURED AT LEAST 4 FEET OUTSIDE OF BED IN ORDER TO PREVENT ANY RUNOFF OR SEDIMENT FROM ENTERING THE STORAGE BED. THIS EDGE STRIP SHOULD REMAIN IN PLACE UNTIL ALL BARE SOILS CONTIGUOUS TO BEDS ARE STABILIZED AND VEGETATED. AS THE SITE IS FULLY STABILIZED, EXCESS GEOTEXTILE ALONG BED EDGES CAN BE CUT BACK TO THE EDGE OF THE BED.
8. CLEAN-WASHED, UNIFORMLY GRADED AGGREGATE SHOULD BE PLACED IN THE BED IN MAXIMUM 8-INCH LIFTS. EACH LAYER SHOULD BE LIGHTLY COMPAKTED, WITH CONSTRUCTION EQUIPMENT KEPT OFF THE BED BOTTOM AS MUCH AS POSSIBLE.
9. APPROVED SOIL MEDIA SHOULD BE PLACED OVER INFILTRATION BED IN MAXIMUM 6-INCH LIFTS.
10. SEED AND STABILIZE TOPSOIL.
11. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

## MAINTENANCE ISSUES

SUBSURFACE INFILTRATION IS GENERALLY LESS MAINTENANCE INTENSIVE THAN OTHER PRACTICES OF ITS TYPE, GENERALLY REQUIRING ONLY ANNUAL INSPECTION AND MAINTENANCE ACTIVITIES. MAINTENANCE ACTIVITIES SUCH AS RECHARGE GARDENS AND VEGETATED SWALES AND THEREFORE REQUIRES LESS MAINTENANCE. MAINTENANCE ACTIVITIES REQUIRED FOR THE SUBSURFACE BED ARE SIMILAR TO THOSE OF ANY INFILTRATION SYSTEM AND FOCUS ON REGULAR SEDIMENT AND DEBRIS REMOVAL. THE FOLLOWING REPRESENTS THE RECOMMENDED MAINTENANCE EFFORTS:

1. ALL ROCK "THROATS" SHOULD BE INSPECTED AND CLEANED AT LEAST 2 TIMES PER YEAR TO ENSURE THE "THROAT" WILL NOT BECOME CLOGGED WITH LEAVES AND DEBRIS, SPECIFICALLY DURING THE FALL.
2. THE OVERLYING VEGETATION OF SUBSURFACE INFILTRATION FEATURES SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED AS SOON AS POSSIBLE.

## VEHICULAR ACCESS ON PAVED DRIVES WHERE SUBSURFACE INFILTRATION FACILITIES ARE LOCATED BEHIND THEM IS PERMITTED

## SPECIFICATIONS

THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS, BUT ARE BY NO MEANS EXCLUSIVE OR LIMITING.

1. STONE FOR INFILTRATION BEDS SHALL BE 2-INCH TO 1-INCH UNIFORMLY GRADED COARSE AGGREGATE, WITH A WASH LOSS OF NO MORE THAN 0.5%, AASHTO SIZE NUMBER 3 PER AASHTO SPECIFICATIONS, PART I, 19TH ED., 1998, OR LATER AND SHALL HAVE VOIDS 40% AS MEASURED BY ASTM-C29.

2. NON-WOVEN GEOTEXTILE SHALL CONSIST OF NEEDED NON-WOVEN POLYPROPYLENE FIBERS AND MEET THE FOLLOWING PROPERTIES: A GRAB TENSILE STRENGTH (ASTM-D4632) 120 LBS. MULLEN BURST STRENGTH (ASTM-D3786) 225 PSI C. FLOW RATE (ASTM-D4491) 1200 HRS. 70% E. HEAT-SET OR HEAT-CALCINED FABRICS ARE NOT PERMITTED. ACCEPTABLE TYPES INCLUDE MIRAFI 140N, AMOCO 4547, AND GEOTEX 451.

3. PIPE SHALL BE CONTINUOUSLY PERFORATED, SMOOTH INTERIOR, WITH A MINIMUM INSIDE DIAMETER OF 6-INCHES. HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL MEET AASHTO M252, TYPE S OR AASHTO M294, TYPE S.

## 4. STORM DRAIN INLETS AND STRUCTURES

a. CONCRETE CONSTRUCTION: CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 1001, PENNDOT SPECIFICATIONS, 1990 OR LATEST EDITION.

b. PRECAST CONCRETE INLETS AND MANHOLES: PRECAST CONCRETE INLETS MAY BE SUBSTITUTED FOR CAST-IN-PLACE STRUCTURES AND SHALL BE CONSTRUCTED AS SPECIFIED FOR CAST-IN-PLACE. PRECAST STRUCTURES MAY BE USED IN ONLY THOSE AREAS WHERE THERE IS NO CONFLICT WITH EXISTING UNDERGROUND STRUCTURES THAT MAY NECESSITATE REVISION OF INVERTS. TYPE M STANDARD PENNDOT INLET BOXES WILL BE MODIFIED TO PROVIDE MINIMUM 12 INCH SUMP STORAGE AND BOTTOM LEACHING BASINS, OPEN TO GRAVEL SUMPS IN SUB-GRADE, WHEN SITUATED IN THE RECHARGE BED.

c. ALL PVC CATCH BASINS/CLEANOUTS/INLINE DRAINS SHALL HAVE H-10 OR H-20 RATED GRATES, DEPENDING ON THEIR PLACEMENT (H-20 IF VEHICULAR LOADING).

d. STEEL REINFORCING BARS OVER THE TOP OF THE OUTLET STRUCTURE SHALL CONFORM TO ASTM A615, GRADES 60 AND 40.

e. PERMANENT TURF REINFORCEMENT MATTING SHALL BE INSTALLED ACCORDING TO MANUFACTURERS' SPECIFICATIONS.

		1 (P.L.S. IN LBS/AC)	2 (LBS/ACRE)	
TEMPORARY	ANNUAL RYE	174	50-50-50 N-P <sub>2</sub> O-K <sub>2</sub>	OCTOBER 30
PERMANENT	FINE FESCUES	60	6	
KENTUCKY BLUEGRASS	90	100-200-200 N-P <sub>2</sub> O-K <sub>2</sub>	AG GRADE	AUGUST 30 AND OCTOBER 30
PERENNIAL RYEGRASS	25			
ATHLETIC FIELDS	KENTUCKY BLUEGRASS	150	100-200-200 N-P <sub>2</sub> O-K <sub>2</sub>	AG GRADE
PERENNIAL RYEGRASS	25			AUGUST 30 AND OCTOBER 30
SWALE	F.M. BROWN CONSERVE LOW MAINTENANCE BASIN	20	100-200-200 N-P <sub>2</sub> O-K <sub>2</sub>	AG GRADE
	STEEP SLOPES			
NURSE CROP	ANNUAL RYE	64	50-50-50 N-P <sub>2</sub> O-K <sub>2</sub>	1 TON/AC AG GRADE*
PERMANENT	BIRDFOOT TREFOIL PLUS	10	100-200-200 N-P <sub>2</sub> O-K <sub>2</sub>	1 TON/AC AG GRADE*
	PLUS TALL FESCUE	30		MARCH 15 AND OCT. 15

1. PLS IS PURE LIVE SEED. PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATION DIVIDED BY 100. TO SECURE THE ACTUAL PLANTING RATE, DIVIDE THE POUNDS PLS BY THE PLANTING RATE. THE PLANTING RATE IS 100 PLS/ACRE FOR ANNUAL RYE AS JUST DISCUSSED. THUS, IF THE PLS CONTENT OF FINE FESCUES IS 60%, DIVIDE 60 PLS/ACRE TO OBTAIN 140 POUNDS OF SEED PER ACRE.

2. LIMING RATE SHALL BE IN ACCORDANCE WITH SOIL TEST RESULTS. APPLY 6 TONS OF AGRICULTURAL GRADE LIMESTONE/AC OF LAND DISTURBED BY DIVERSIONS AND DAMS.

- ALL SEEDED AREAS SHALL BE MULCHED WITH STRAW APPLIED AT A RATE OF

3 TONS/ACRE. MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER @ 750 LBS/AC.

- ALL DIVERSIONS, CHANNELS, SEED TRAPS AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

## SEEDING AND FERTILIZER SPECIFICATIONS

NOT TO SCALE

## POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) STANDARD NOTES

### PCSM REQUIREMENTS

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

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

### PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

IF 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 OPERATION AND MAINTENANCE OF PCSM BMPs.

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.

### PERMIT TERMINATION

UPON PERMANENT STABILIZATION OF THE EARTH DISTURBANCE ACTIVITY AND INSTALLATION OF BMPs IN ACCORDANCE WITH AN APPROVED PLAN, THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DEPARTMENT OR CONSERVATION DISTRICT.

THE NOTICE OF TERMINATION MUST INCLUDE:

- (1) THE FACILITY NAME, ADDRESS AND LOCATION
- (2) THE OPERATOR NAME AND ADDRESS
- (3) THE NPDES PERMIT NUMBER
- (4) THE REASON FOR PERMIT TERMINATION
- (5) IDENTIFICATION OF THE PERSONS WHO HAVE AGREED TO AND WILL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM
- (6) COPIES OF THE RECORD INSTRUMENT, FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RETAIN A COPY OF THE RECORD INSTRUMENT OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM AND THE RELATED OBLIGATIONS IN THE RECORDS OF TITLE OF THE PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE 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.
- (7) FINAL CERTIFICATION: 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 10 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 THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

- (2) THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS 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 BMPs.

### NORTH LEBANON TOWNSHIP INFILTRATION PRACTICES (SUBSURFACE BEDS, DRY WELLS, SEEPAGE PITS & TRENCHES) & NOTES:

1. REGULARLY CLEAN OUT ROOF GUTTER SYSTEMS WHICH ARE CONNECTED TO INFILTRATION FACILITY.
2. CLEAN AND/OR REPLACE FILTER SCREENS THAT INTERCEPT ROOF RUNOFF AS NECESSARY.
3. CATCH BASINS, INLETS, AND CLEANOUTS UPGRADEMENT OF THE INFILTRATION FACILITIES SHOULD BE INSPECTED AND CLEANED AS NECESSARY OR AT LEAST TWO TIMES PER YEAR AND AFTER RUNOFF EVENTS OF GREATER THAN ONE (1) INCH OF RAIN.
4. VEGETATION ALONG THE SURFACE OF THE INFILTRATION FACILITY SHALL BE MAINTAINED IN GOOD CONDITION. MOW TO ENSURE SAFETY, AESTHETICS, PROPER FACILITY OPERATION, AND TO SUPPRESS WEEDS AND INVASIVE VEGETATION. DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY. MOW ONLY WHEN THE AREA IS DRY TO AVOID ROTTING.
5. CARE SHALL BE TAKEN TO AVOID COMPACTION BY MOWERS. VEHICULAR ACCESS ON THE SURFACE ABOVE THE INFILTRATION AREA SHALL BE PROHIBITED.
6. RESEED BARE AREAS USING NATIVE GRASS SPECIES. INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED, OR EROSION CHANNELS ARE FORMING.
7. IT MAY BE NECESSARY TO WATER THE VEGETATION ABOVE THE INFILTRATION FACILITY DURING DRY PERIODS TO MAINTAIN VEGETATIVE HEALTH.
8. INSPECTIONS OF THE INFILTRATION FACILITIES SHALL BE CONDUCTED WITHIN 48 HOURS AFTER EVERY STORM EVENT OF GREATER THAN ONE (1) INCH OF RAIN, OR FOUR TIMES PER YEAR AT A MINIMUM.
9. INSPECT AND CORRECT EROSION PROBLEMS, SUBSIDENCE, SINKHOLES, DAMAGE TO VEGETATION, AND THE GROWTH OF UNWANTED OR INVASIVE VEGETATION.
10. VERIFY THAT ALL WATER IN THE FACILITY HAS DRAINED DOWN WITHIN 72 HOURS AFTER THE RAINFALL EVENT. IF DRAWDOWN TIMES ARE EXCEEDING 72 HOURS, DRAIN THE FACILITY VIA PUMPING AND CLEAN OUT ANY PERFORATED PIPING OR OTHER STORAGE STRUCTURES. IF SLOW DRAINAGE PERSISTS, THE FACILITY MAY REQUIRE REPLACEMENT.

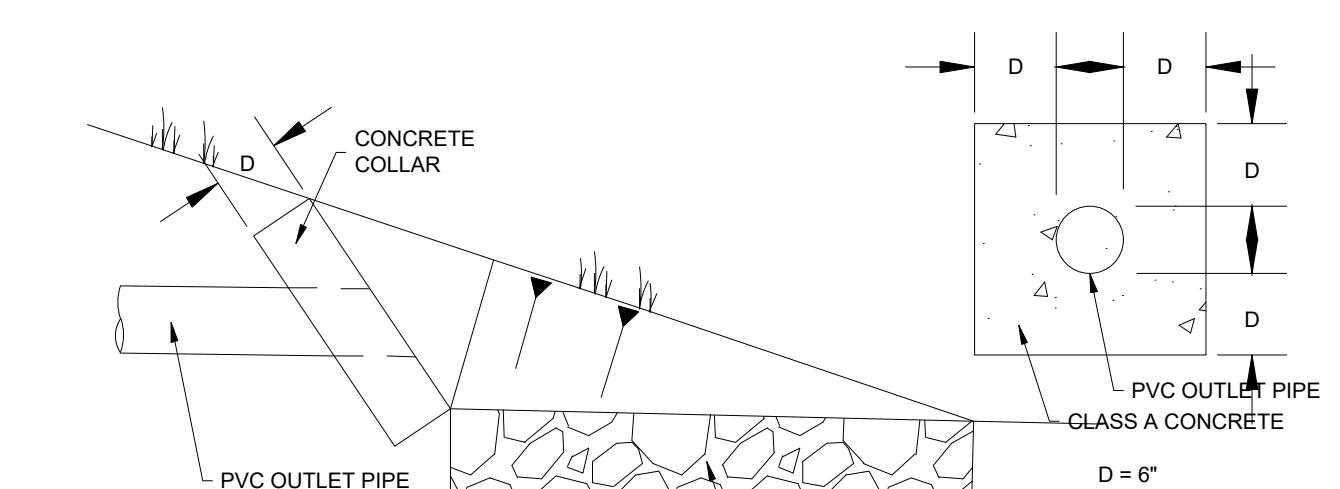
C. ALL STRUCTURES EXPECTED TO RECEIVE ANNUAL TRAP DEBRIS AND SEDIMENT, INCLUDING CATCH BASINS, INLETS, CLEANOUTS, PIPES AND OUTLET STRUCTURES SHOULD BE DESIGNED FOR CLOGGING AND EXCISE DEBRIS AND SEDIMENT ACCUMULATION. DEBRIS ACCUMULATION SHALL BE ADDRESSED WHEN SEDIMENT IS GREATER THAN 3 INCHES DEEP. DISPOSE OF SEDIMENT AND DEBRIS IN COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

D. INSPECT ALL PIPES, CATCH BASINS, INLETS, CLEANOUTS AND OUTLET STRUCTURES FOR DEFICIENCIES AND REPAIR OR REPLACE IF REQUIRED. COMMON DEFICIENCIES INCLUDE BROKEN CONCRETE, CRUSHED OR RUSTED PIPES, MISSING GRATE OR BLOCKAGES CAUSED BY LITTER OR FOREIGN MATERIALS.

E. NOTIFY MUNICIPAL OFFICIALS IF THERE IS EVIDENCE OF WATER CONTAMINATION OR HAZARDOUS MATERIAL SPILLS.

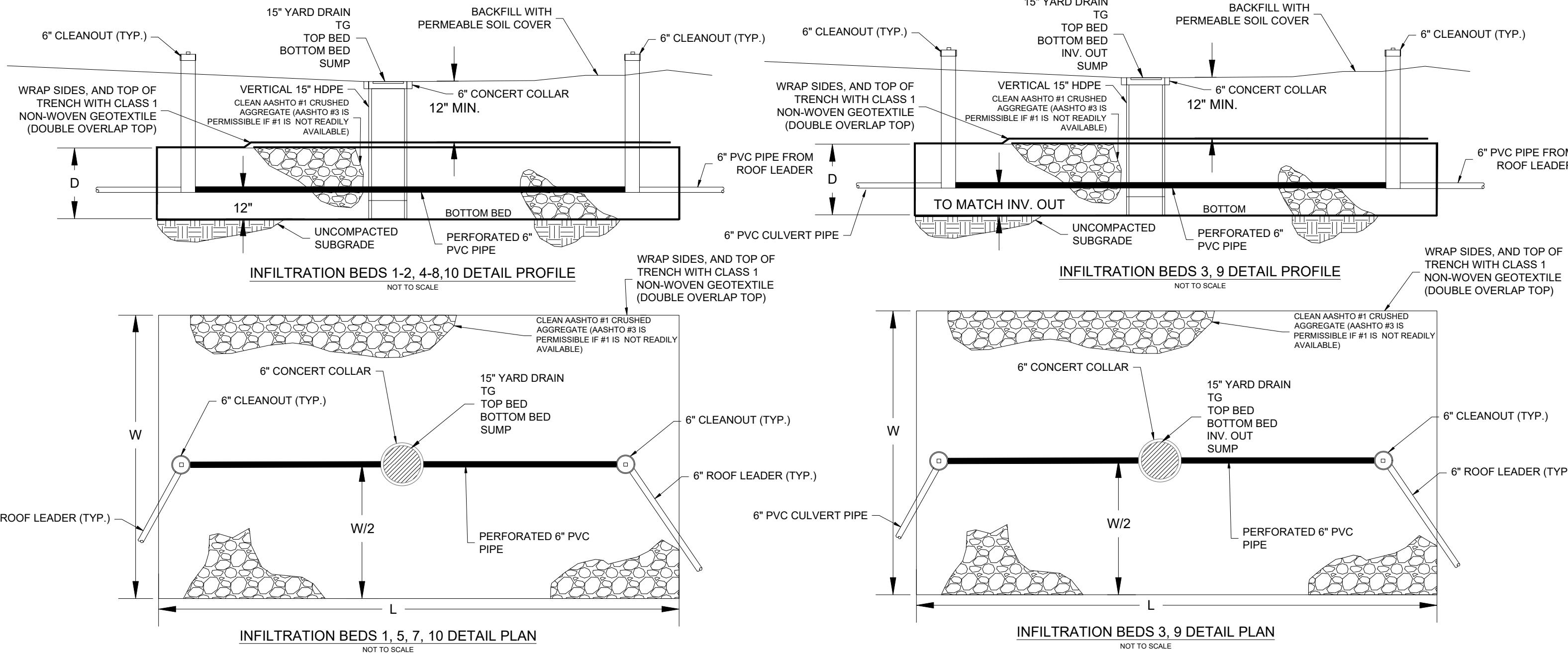
9. ACCESS SHALL BE GRANTED TO ALL AUTHORIZED LOCAL, STATE, AND FEDERAL AGENCIES FOR BMP INSPECTIONS AT REASONABLE TIMES AND WITH REASONABLE FREQUENCY.

10. WRITTEN REPORTS DOCUMENTING ALL INSPECTIONS, REPAIRS, AND MAINTENANCE ACTIVITIES SHALL BE MAINTAINED ON SITE BY THE PROPERTY OWNER AT ALL TIMES.

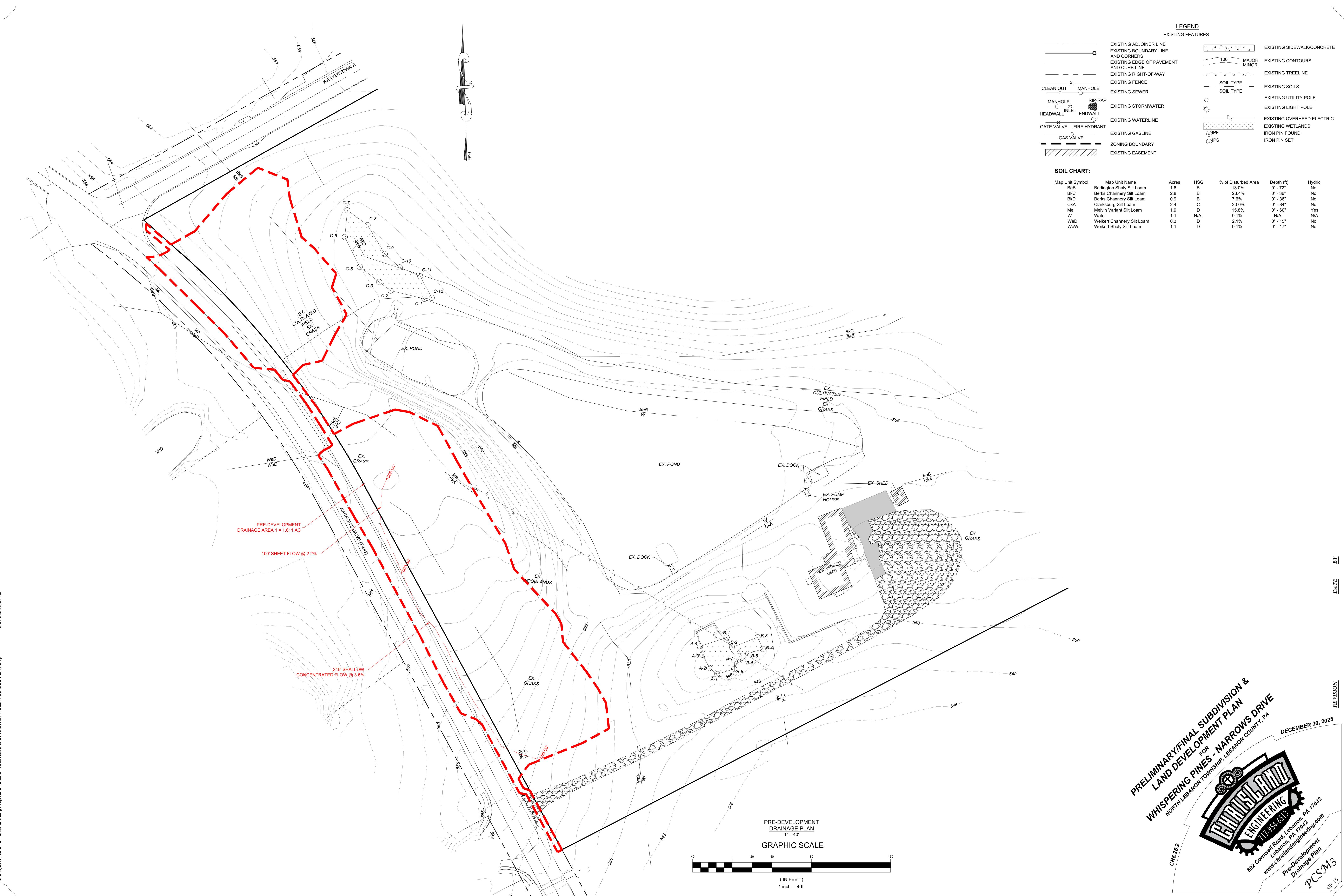


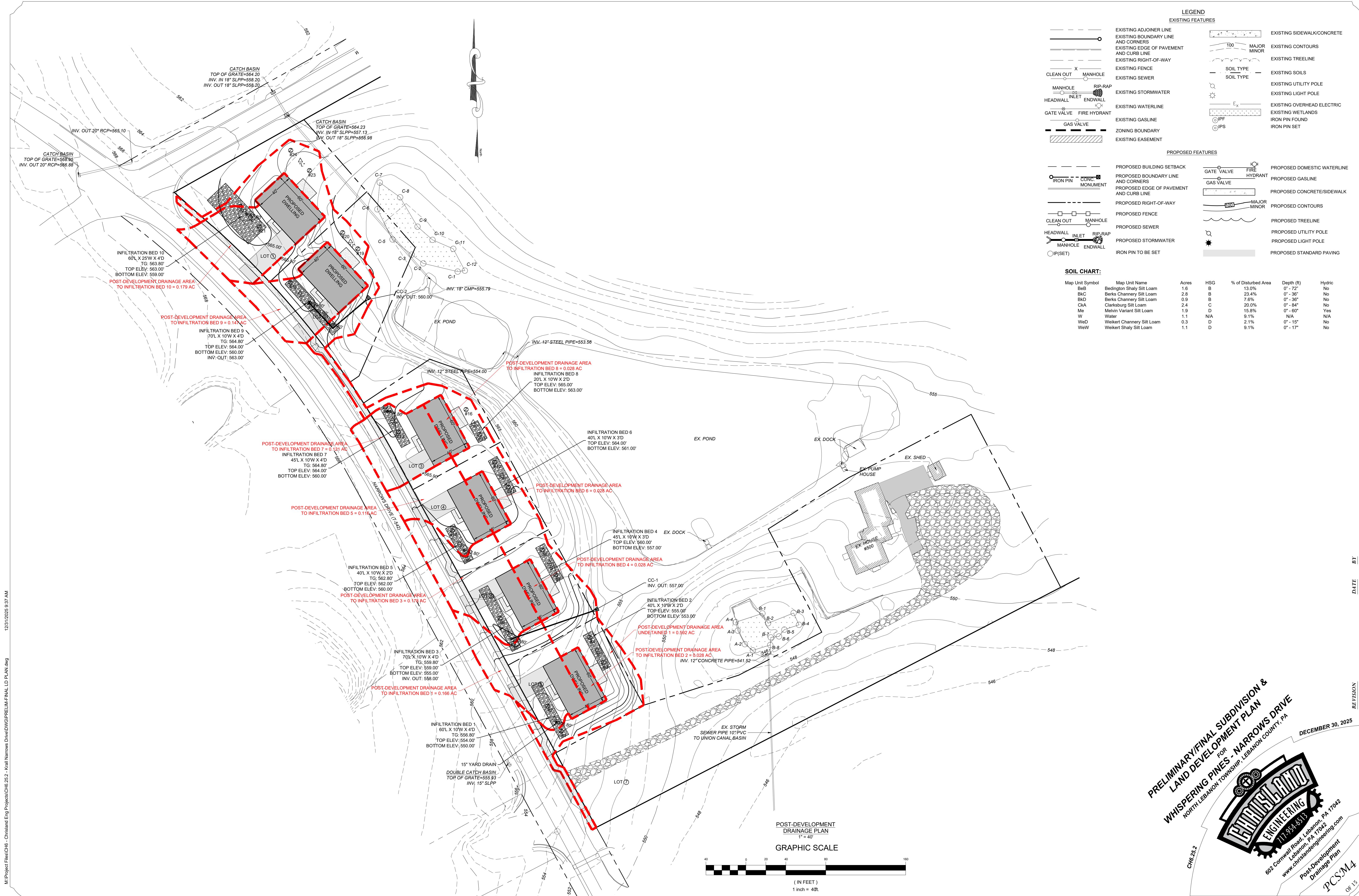
CONCRETE COLLAR DETAIL  
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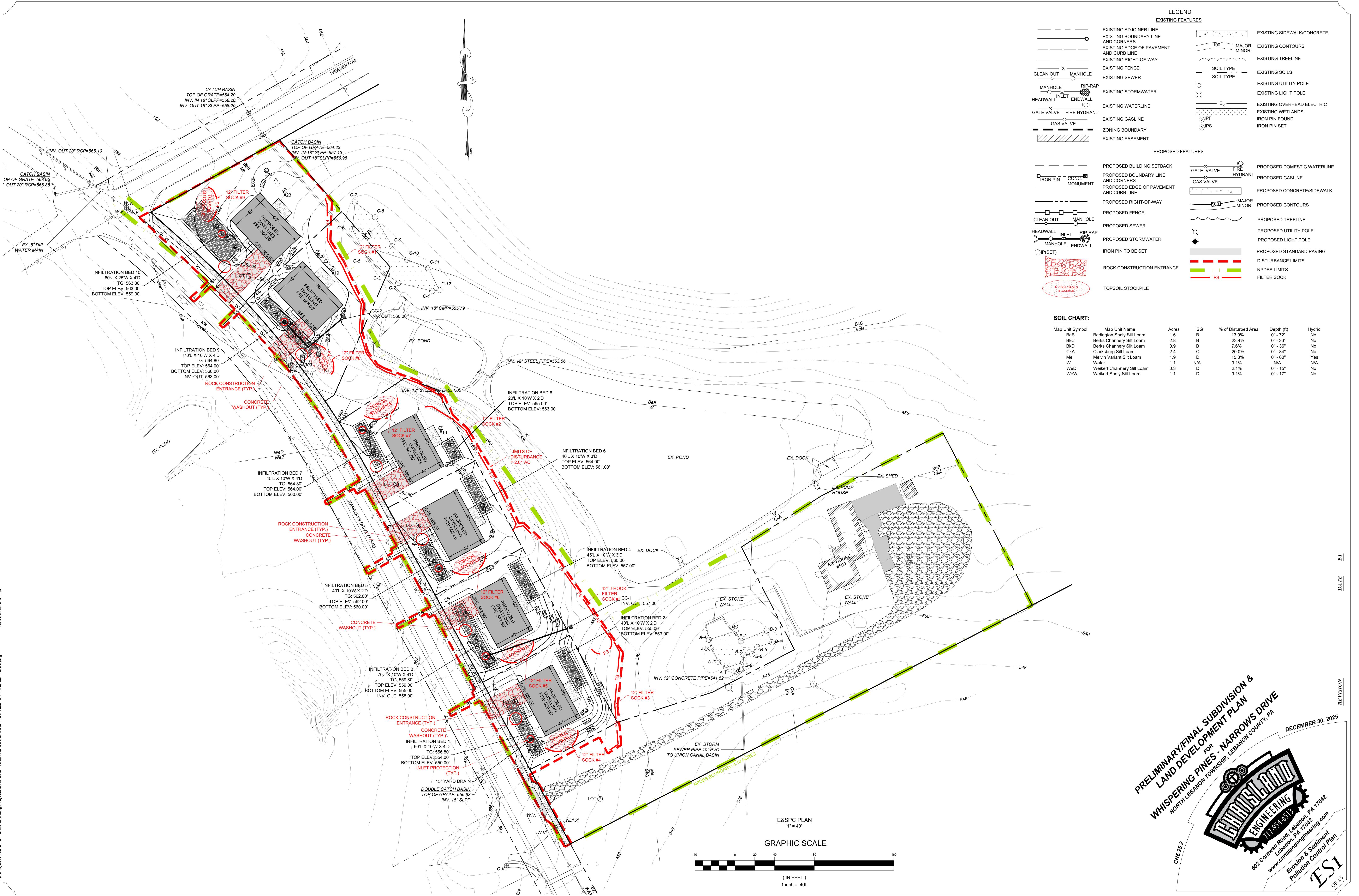
OUTLET NO.	PIPE DIA., D <sub>0</sub> (in)	TAILWATER CONDITION	L <sub>a</sub> (ft)	W (ft)	Q (cfs)	V (fps)	RIPRAP (R-?)	DEPTH (ft)
CC-1	6	Min 8	10	0.18	1.46		3	1
CC-2	6	Min 8	10	0.25	2.40		3	1



BMP NAME	Width 'W' (ft)	Length 'L' (ft)	Depth 'D' (ft)	Bottom Elevation (ft)	Top Elevation 'TG' (ft)	Top of Grade (ft)	Sump Elevation (ft)
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EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE  
PRELIMINARY/FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN FOR WHISPERING PINES – NARROWS DRIVE  
NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PA 17046

A. SITE LOCATION

THE SITE IS LOCATED AT 500 NARROWS DRIVE IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY, PA 17046 (SEE USGS MAP).

B. PROJECT DESCRIPTION

THE PURPOSE OF THIS PLAN IS TO PROPOSE THE SUBDIVISION OF AN R-2 HIGH DENSITY RESIDENTIAL PARCEL, RESULTING IN 6 RESIDENTIAL LOTS FOR SINGLE FAMILY DWELLINGS, 1 RESIDENTIAL LOT CONTAINING THE EXISTING RESIDENTIAL DWELLING, 1 RESIDENTIAL LOT, UTILITIES, BITUMINOUS DRIVEWAYS, AND ASSOCIATED STORMWATER MANAGEMENT FACILITIES (SEE SITE PLAN).

C. EXISTING SITE CONDITIONS & DOWNSTREAM DRAINAGE PATH

THE DEeded acreage for this site is 13.64 acres. The site currently consists of a residential dwelling, cultivated fields, and grass open space. The property has been in its current condition since at least 1993 according to research done on Pennsylvania Imagery Navigator (PASDS). The site generally slopes to the center, towards an existing pond. Once leaving the property, the runoff is intercepted by the unit to Tulpehocken Creek, in the Tulpehocken Creek watershed. The chapter 93 designation is cold water fishes (CWF).

ASSESSMENT USE: COLD WATER FISHES

ATTAIN USE: IMPAIRED

IMPAIRMENT SOURCE: AGRICULTURE, EROSION FROM DERELICT LAND (BARREN LAND)

IMPAIRMENT CAUSE: SILTATION

ASSESSMENT USE: WATER CONTACT SPORTS

ATTAIN USE: IMPAIRED

IMPAIRMENT SOURCE: UNKNOWN

IMPAIRMENT CAUSE: PATHOGENS

D. SOIL LIMITATIONS AND RESOLUTIONS

THE FOLLOWING SOILS ARE FOUND WITHIN OR ADJACENT TO THE AREA DISTURBED BY EARTH MOVING ACTIVITIES.

SOIL CHART:

Map Unit Symbol	Map Unit Name	Acres	HSG	% of Disturbed Area	Depth (ft)	Hydric
BeB	Bedington Shaly Silt Loam	1.5	B	13.0%	0'-72"	No
BkC	Berks Channery Silt Loam	2.8	B	23.4%	0'-36"	No
BkD	Berks Channery Silt Loam	0.9	B	7.6%	0'-36"	No
CKA	Clarksburg Silt Loam	2.4	C	20.0%	0'-84"	No
Me	Melvin Variant Silt Loam	1.9	D	15.8%	0'-60"	Yes
W	Water	1.1	W	9.1%	N/A	N/A
WeD	Weber Channery Silt Loam	0.3	D	21.7%	0'-15"	No
WeW	Weber Channery Silt Loam	1.1	D	9.1%	0'-17"	No

MANY SOIL LIMITATIONS EXIST FOR THE PROPOSED PROJECT. THE WEB SOIL SURVEY INDICATES THAT THE LAWNS AND LANDSCAPING ESTABLISHMENT LIMITATIONS CLASSIFIED AS NOT RATED TO VERY LIMITED DUE TO LOW EXCHANGE CAPACITY, DROUGHTNESS, DUSTINESS, LARGE STONES CONTENT, PONDING, FLOODING, DEPTH TO SATURATED ZONE, GRAVEL CONTENT, DEPTH TO BEDROCK, AND SLOPE. THESE POTENTIAL LIMITATIONS SHOULD NOT BE A PROBLEM SINCE THE PROJECT SITE IS CURRENTLY VEGETATED. FURTHERMORE, THE SITE WILL BE STABILIZED WITH BUILDING COVERAGE, BITUMINOUS PAVEMENT, AND GRASS COVER OVER NEWLY GRADED TOPSOIL.

THE WEB SOIL SURVEY INDICATES THAT THE DWELLINGS WITHOUT BASEMENTS LIMITATIONS AS NOT RATED TO VERY LIMITED DUE TO SLOPE, DEPTH TO HARD BEDROCK, LARGE STONES, DEPTH TO THE SATURATED ZONE, DEPTH TO BEDROCK, AND SLOPE. THE DWELLINGS WITH BASEMENTS LIMITATIONS AS NOT RATED TO VERY LIMITED DUE TO SLOPE, DEPTH TO HARD BEDROCK, LARGE STONES, DEPTH TO THE SATURATED ZONE, PONDING, FLOODING, AND SHRINK-SWELL POTENTIAL. THESE LIMITATIONS WILL BE TAKEN INTO CONSIDERATION WHEN THE PROJECT IS DESIGNED.

THE D5 SOIL RUTTING HAZARD LIMITATION CLASSIFIED AS NOT RATED TO SEVERE DUE TO LOW STRENGTH. STANDARD CONSTRUCTION PRACTICES WILL BE UTILIZED TO AVOID EXCESSIVE RUTTING AND EROSION ASSOCIATED WITH RUTTING WILL BE CONTROLLED WITH STANDARD EROSION AND SEDIMENT POLLUTION CONTROLS.

E. CALCULATIONS

TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES WERE DESIGNED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED IN THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL (PA DEP BUREAU OF SOIL AND WATER CONSERVATION, MARCH 2012).

RUNOFF CALCULATIONS WERE PERFORMED USING THE RATIONAL METHOD IN ACCORDANCE WITH PA DEP AND NORTH LEBANON TOWNSHIP REGULATIONS. THE PROPOSED CONDITION PEAK RATES OF RUNOFF AND RUNOFF VOLUMES WILL REMAIN CONSISTENT WITH EXISTING CONDITIONS. THE VEGETATIVE COVER WILL BE RESTORED TO EXISTING CONDITIONS TO MITIGATE ANY POTENTIAL INCREASE IN PEAK RATES OF RUNOFF AND RUNOFF VOLUMES.

F. STAGING OF EARTHMOVING

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED BY THE LEBANON COUNTY CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.

CONSTRUCTION OF THE SITE IMPROVEMENTS IS EXPECTED TO BEGIN SPRING OF 2026. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. IF THE CONTROLS SHOWN ON THE PLAN ARE INCAPABLE OF ADDRESSING THE EROSION AND SEDIMENT CONTROL PROBLEMS ON THE LOT, THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ADOPTING ADEQUATE ALTERNATIVE MEASURES.

THE CONSTRUCTION SEQUENCE FOR DEVELOPMENT OF THE PROJECT SHALL BE AS FOLLOWS:

1. FOR ANY PROPERTY CONTAINING A POST-CONSTRUCTION STORMWATER CONTROL MEASURE (SCM), THE PERMITTED OR CO-PERMITTED SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ENSURE THE EXCLOSURE OF THE SCM AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF TITLE SEARCH OF THE SUBJECT PROPERTY.

THE RECORDED INSTRUMENT MUST IDENTIFY THE SCM(S), PROVIDE FOR NECESSARY ACCESS RELATED TO THE LONG-TERM OPERATION AND MAINTENANCE OF SCM(S) AND PROVIDE NOTICE OF THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF SCM(S) AS A COVENANT THAT BOUNDS 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).

INSTRUMENT RECORDINGS ARE REQUIRED FOR ALL LOTS WHERE ONE OR MORE SCMS WILL BE LOCATED AND SUBJECT TO LONG-TERM OPERATION AND MAINTENANCE. INSTRUMENT RECORDINGS ARE REQUIRED TO BE SUBMITTED TO THE LEBANON COUNTY CONSERVATION DISTRICT WITHIN 30 DAYS OF NPDES PERMIT AUTHORIZATION OR PRIOR TO SCHEDULING THE PRECONSTRUCTION MEETING.

2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE PA DEP, LEBANON COUNTY CONSERVATION DISTRICT, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE EAS PLAN PREPARED, THE PCSM PLAN PREPARED, AND A REPRESENTATIVE FROM THE LEBANON COUNTY CONSERVATION DISTRICT (277-5275) TO AN ON-SITE PRECONSTRUCTION MEETING. THE LIMITS OF DISTURBANCE SHALL BE FIELD MARKED ON THE PROJECT SITE USING PAINT OR FLAGGING.

ALSO, 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.

3. INSTALL STABILIZED CONSTRUCTION ENTRANCE(S), THE BASE COURSE SHALL BE ASHTO #1 INSTALLED AT A MINIMUM OF 20-FT WIDE AND 50-FT LONG.

4. STAKE OUT LIMITS OF PROPOSED EARTH DISTURBANCE PRIOR TO ANY EARTH DISTURBANCE ACTIVITIES TAKING PLACE.

5. INSTALL FILTER SOCK AT TOPSOIL STOCKPILE AND OTHER AREAS AS INDICATED ON THE ATTACHED PLAN. FILTER SOCKS SHALL BE INSTALLED ALONG THE CONTOUR AT A LEVEL GRADE.

UPON INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPs, AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTED SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.

6. CLEAR, GRUB, AND STRIP AREAS AS NECESSARY TO CONSTRUCT IMPROVEMENTS. EXCESS TOPSOIL SHALL BE PLACED ON THE TOPSOIL/SPOL STOCKPILE SHOWN HEREON. IMMEDIATELY STABILIZE TOPSOIL STOCKPILE.

7. ROUGH GRADE SITE FOR INSTALLATION OF THE PROPOSED DWELLINGS, DRIVEWAYS, AND STORMWATER MANAGEMENT FACILITIES.

TAKE CARE TO AVOID UNNECESSARY COMPACTION OF THE INFILTRATION FACILITY BOTTOMS. EXCAVATION SHALL TAKE PLACE FROM OUTSIDE THE LIMITS OF THE INFILTRATION FACILITIES. IF COMPACTION OCCURS, THE INFILTRATION FACILITY BOTTOMS SHALL BE SCARIFIED TO LOSEN THE SOILS PRIOR TO PLACEMENT OF THE AMENDED SOILS.

8. CONSTRUCT INFILTRATION BEDS AND INSTALL GEOTEXTILE AND STONE.

9. BACKFILL AND BRING SITE TO NECESSARY GRADE FOR INSTALLATION OF THE PROPOSED DWELLINGS. PLACE STONE BASE FOR DRIVEWAYS AS SOON AS PRACTICABLE. CONSTRUCT OR EXTEND UTILITIES AS NEEDED, AND COMPLETE ASSOCIATED GRADING.

10. CONSTRUCT DWELLINGS AND DRIVEWAYS.

11. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. SPREAD 6-IN OF TOPSOIL ON FRESHLY GRADED AREAS. FINAL PASSES DURING FINE GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES. PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANENT STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE

WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS.

12. SEED ALL REMAINING DISTURBED AREAS AND SEEDED AREAS. MULCH WITH HAY OR STRAW AT A MINIMUM RATE OF THREE (3) TONS PER ACRE (OR MULCH AS A PART OF HYDROSEEDING).

13. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS). ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING.

14. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTE IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTE ON OR OFF THE SITE.

15. UPON COMPLETION OF PROPOSED IMPROVEMENTS, STABILIZATION OF THE SITE, AND FOLLOWING NECESSARY INSPECTION ACTIVITIES, THE DEVELOPER SHALL SUBMIT A NOTICE OF TERMINATION TO THE LEBANON COUNTY CONSERVATION DISTRICT.

G. TEMPORARY CONTROL MEASURES

1. TOPSOIL STOCKPILE

a. A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA TO KEEP DISTURBANCE TO A MINIMUM.  
b. STOCKPILES SHALL BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE TEMPORARY SEEDING SPECIFICATION CONTAINED HEREON.  
c. STOCKPILE HEIGHTS MUST NOT EXCEED 35' IN HEIGHT. SIDE SLOPES SHALL BE 2:1 OR FLATTER.

2. FILTER SOCK

a. FILTER SOCK SHALL BE USED TO INTERCEPT SEDIMENT-LADEN RUNOFF FROM SMALL WATERSHEDS.  
b. FILTER SOCK MUST BE INSTALLED AT LEVEL GRADE.  
c. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF SOCK.

3. INTERIM STABILIZATION

a. TEMPORARY SEEDING AND MULCHING SHALL BE APPLIED WHERE INDICATED TO PROVIDE INTERIM STABILIZATION TO EXPOSED AREAS.  
b. TEMPORARY SEEDING/MULCHING SHALL BE ASPLIED AS SPECIFIED ON THE SEEDING SCHEDULE CONTAINED ON THE E&SPC.

4. ROCK CONSTRUCTION ENTRANCE

a. A STABILIZED PAD OF CRUSHED STONE (ASHTO #1) SHALL BE LOCATED WHERE CONSTRUCTION TRAFFIC WILL ENTER THE PROJECT SITE. THE PROPOSED PRECONSTRUCTION ENTRANCE IS USED TO ELIMINATE THE TRACKING OF FLOWING SEDIMENT ONTO THE EXISTING CARTWAY.  
b. PUBLIC STREET SWEEPING WITH A VACUUM SWEEPER AND ROLLING OF DIRT AND GRAVEL ROADS SHALL BE COMPLETED AT THE END OF EACH WORKDAY (OR MORE FREQUENTLY AS NEEDED).  
c. INSPECT AREA TO BE SWEEPED FOR MATERIALS THAT MAY BE HAZARDOUS PRIOR TO BEGINNING SWEEPING OPERATIONS.  
d. MANUAL CLEANING OF TIRES WITH A BROOM SHALL BE COMPLETED PRIOR TO SITE EGRESS.

H. PERMANENT CONTROL MEASURES

1. PERMANENT GRASS OR LEGUME COVER

a. ALL DISTURBED AREAS THAT ARE NOT PAVED SHALL BE PERMANENTLY STABILIZED WITH GRASS TO MINIMIZE EROSION.  
b. PERMANENT GRASS COVER SHALL BE APPLIED AS SPECIFIED IN ACCORDANCE WITH THE SEEDING SCHEDULE AND NOTES CONTAINED ON THE ATTACHED E&SPC PLAN.

2. MULCH

a. MULCH SHALL BE APPLIED TO ALL SEDED AREAS TO HELP ESTABLISH A PERMANENT GRASS COVER AND TO PREVENT EROSION ON ALL AREAS PERMANENTLY STABILIZED WITH SEED.  
b. MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE. MULCH SHALL BE ANCHORED WITH WOOD FIBER FIBER AT 750 LBS./ACRE.

3. SOD

a. SOD SHALL BE INSTALLED IN AREAS WHERE PERMANENT STABILIZATION WITH SEED ALONE IS DIFFICULT.  
b. SOIL MATERIALS AND INSTALLATION SHALL MEET THE APPROVAL OF THE LEBANON COUNTY CONSERVATION DISTRICT.  
c. ALL PERMANENT AND TEMPORARY SPILLWAYS ARE TO BE SODDED TO PROVIDE IMMEDIATE EROSION PROTECTION. SOD SHALL EXTEND FROM THE SPILLWAY TO THE TOP OF THE SLOPE OF THE TRAP EMBANKMENT.

I. MAINTENANCE

1. THE APPLICANT/His DESIGNEE SHALL BE RESPONSIBLE FOR MAINTAINING ALL FACILITIES SHOWN ON THIS PLAN.

2. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH RUNCFT EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACE, REGRADING, RESEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY.

3. STOCKPILES MUST BE STABILIZED IMMEDIATELY.

4. ALL SEDIMENT REMOVED FROM SEDIMENT TRAPPING DEVICES SHALL BE DISPOSED OF WITHIN THE SITE IN A MANNER THAT WILL NOT CAUSE EROSION OR SEDIMENTATION. ALL AREAS DISTURBED DURING THIS PROCESS WILL BE MULCHED AND PERMANENTLY STABILIZED WITH SEEDS.

5. ANY PERMANENTLY SEDED AREA THAT BECOMES ERODED OR DISTURBED SHALL HAVE THE TOPSOIL REPLACED. THE GRASS RE-SEED AND MULCH REAPPLIED, OR, AT THE DISCRETION OF THE OWNER, SOD INSTALLED.

6. FILTER SOCK MUST BE INSTALLED AT LEVEL GRADE. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK.

7. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

8. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED, AND WHICH WILL REMAIN EXPOSED MUST BE STABILIZED IMMEDIATELY DURING NON-GERMINATING PERIODS. MULCH MUST BE APPLIED AT THE RECOMMENDED RATE. DISTURBED AREAS WHICH DO NOT HAVE GRAVEL, GROUNDS, OR CONCRETE, SHALL BE RE-STABILIZED WITHIN ONE (1) YEAR MAY BE STABILIZED IN ACCORDANCE WITH TEMPORARY SEEDING SPECIFICATIONS. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE RE-DISTURBED WITHIN ONE (1) YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT SEEDING SPECIFICATIONS.

9. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS), TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST BE STABILIZED IMMEDIATELY.

10. THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF-SITE LOCATION. THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL IN MOST CASES RESIDE WITH THE OPERATOR. 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.

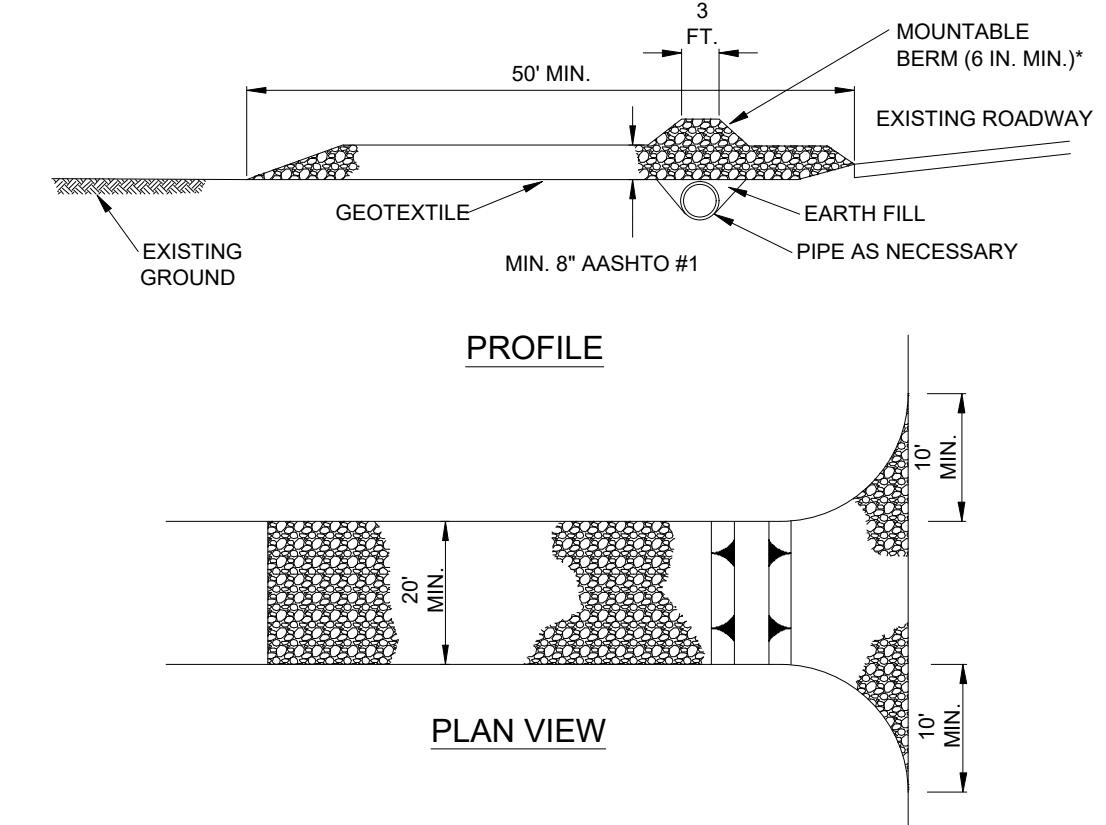
L. CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE

		1 (P.L.S. IN LBS/AC)	2 (LBS/ACRE)	TONS/ACRE	
TEMPORARY	ANNUAL RYE	174	50-60-50 N-2-5-2	6	AG GRADE OCTOBER 30
PERMANENT	FINE FESCUES KENTUCKY BLUEGRASS	60 90 25	100-200-200 N-2-5-2	6	AG GRADE AUGUST 30 AND OCTOBER 30
ATHLETIC FIELDS	KENTUCKY BLUEGRASS PERENNIAL FESCUES	150	100-200-200 N-2-5-2	6	AG GRADE AUGUST 30 AND OCTOBER 30
SWALE	F. M. BROWN COPPER LOW MAINTENANCE BASIN	20	100-200-200 N-2-5-2	6	AG GRADE AUGUST 30 AND OCTOBER 30
	STEEP SLOPES				
NURSE CROP	ANNUAL RYE	64	50-60-50 N-2-5-2	1 TON/AC AG GRADE*	OCT. 15
PERMANENT	BIRDSFOOT TREFOIL PLUS	10	100-200-200 N-2-5-2	1 TON/AC AG GRADE*	MARCH 15 AND OCT. 15
PLUS TALL FESCUE	30				

1. PLS IS PURE LIVE SEED. PLS IS THE PRODUCT OF THE PERCENTAGE OF PURE SEED TIMES PERCENTAGE GERMINATION DIVIDED BY 100. TO SECURE THE ACTUAL PLANTING RATE, DIVIDE THE POUNDS PLS BY THE PLS PERCENTAGE SHOWN ON THE SEED TAG OR AS PREVIOUSLY DISCUSSED. THUS, IF THE PLS CONTENT OF FINE FESCUES IS 50%, DIVIDE 7 PLS BY 0.50 TO OBTAIN 140 POUNDS OF SEED PER ACRE.  
2. LIMESTONE/AC OF LAND DISTURBED BY DIVERSIONS AND DAMS  
- ALL SEEDED AREAS SHALL BE MULCHED WITH STRAW APPLIED AT A RATE OF 3 TONS/ACRE. MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER @ 750 LBS/AC.  
- ALL DIVERSIONS, CHANNELS, SED TRAPS AND STOCKPILES MUST BE STABILIZED IMMEDIATELY.

#### SEEDING AND FERTILIZER SPECIFICATIONS

NOT TO SCALE



\* 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.

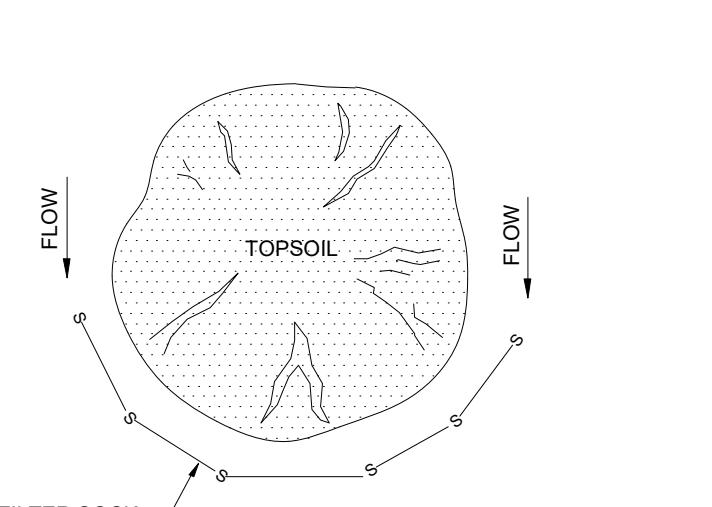
MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

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 ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

PUBLIC STREET SWEEPING WITH A VACUUM SWEEPER AND ROLLING OF DIRT AND GRAVEL ROADS TO BE COMPLETED AT THE END OF EACH WORK DAY (OR MORE FREQUENTLY AS NEEDED). TIRES SHALL BE MANUALLY CLEANED PRIOR TO SITE EGRESS.

#### STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE

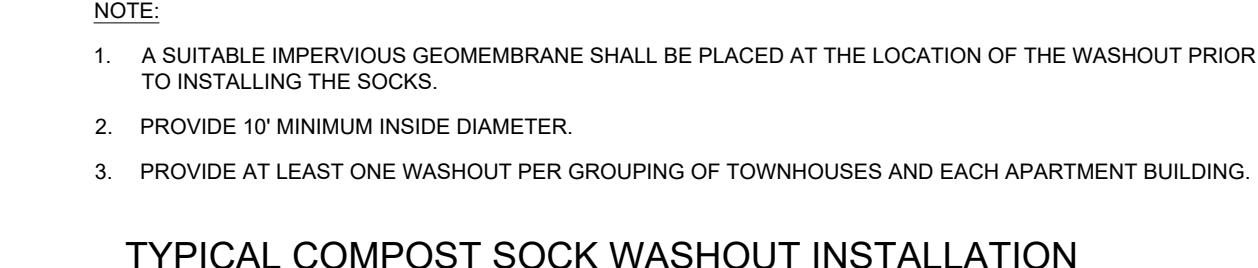
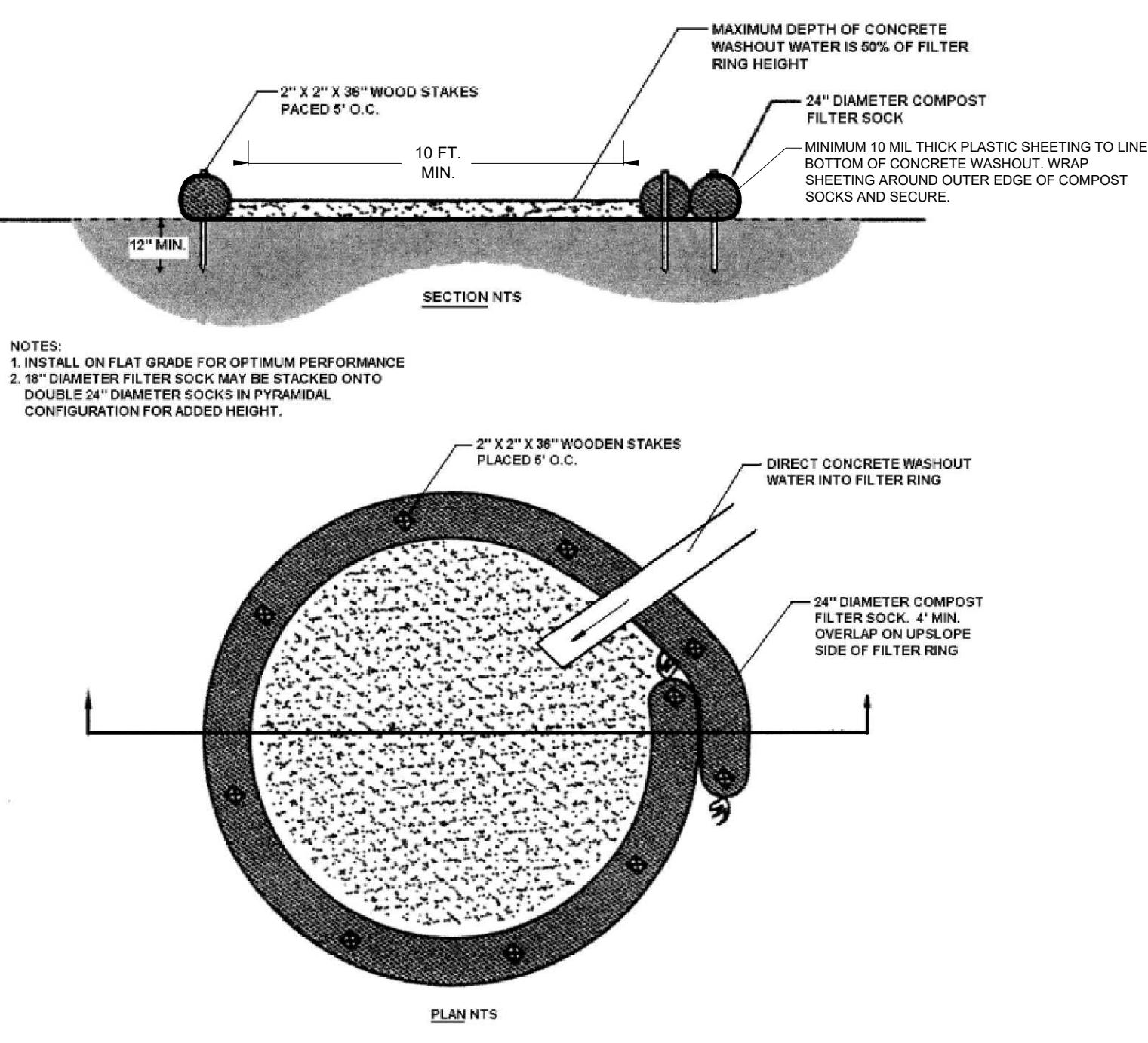
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NOTE: FILTER SOCK  
1) A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A MINIMUM.  
2) STOCKPILES ARE TO BE STABILIZED IMMEDIATELY.  
3) STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET.  
4) STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.  
5) STOCKPILES SHALL BE LOCATED SO THAT ALL SWALES CAN FUNCTION AS DESIGNED.

#### TOPSOIL STOCKPILE

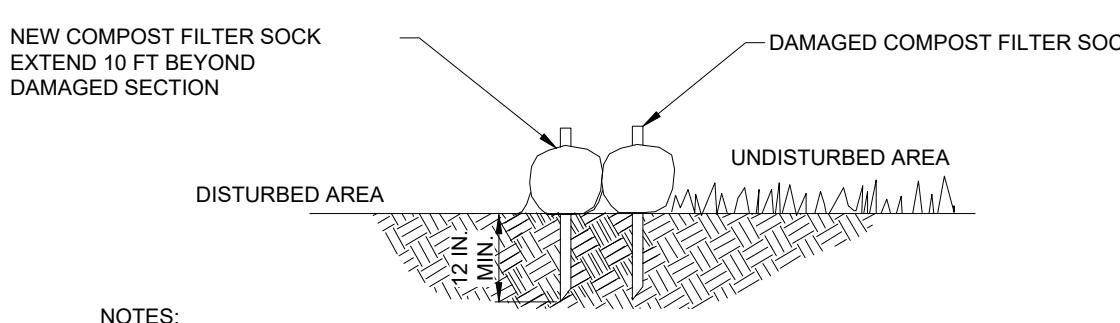
NO SCALE



NOTE:  
1. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.  
2. PROVIDE 10' MINIMUM INSIDE DIAMETER.  
3. PROVIDE AT LEAST ONE WASHOUT PER GROUPING OF TOWNHOUSES AND EACH APARTMENT BUILDING.

#### TYPICAL COMPOST SOCK WASHOUT INSTALLATION

NOT TO SCALE



NOTES:  
COMPOST FILTER SOCK OF EQUAL OR GREATER DIAMETER SHALL BE INSTALLED WHERE FAILURE OF A COMPOST FILTER SOCK HAS OCCURRED DUE TO CONCENTRATED FLOW.  
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT.

#### ADDITIONAL FILTER SOCK AT DAMAGED FILTER SOCK

NOT TO SCALE

