

SERIAL NUMBER: 20232612353 (NORTH LEBANON TWP) DATE: 09/18/23

STECKBECK ENGINEERING & SURVEYING, INC., HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF 1974 AS AMENDED BY ACT 121 OF 2008 OF THE PENNSYLVANIA GENERAL ASSEMBLY, IT HAS PERFORMED THE FOLLOWING IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) SHOWN ON THE DRAWINGS:

(1) PURSUANT TO SECTION 4, CLAUSE (2) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC. REQUESTED THE LINE AND FACILITY INFORMATION PRESCRIBED BY SECTION 2, CLAUSE (4) FROM A ONE CALL SYSTEM NOT LESS THAN TEN NOR MORE THAN NINETY WORKING DAYS BEFORE FINAL DESIGN IS TO BE COMPLETED.

(2) PURSUANT TO SECTION 4, CLAUSE (3) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC. SHOWN UPON THE DRAWING(S) THE POSITION AND TYPE OF EACH FACILITY OWNERS LINE, DERIVED PURSUANT TO THE RÈQUEST MADE AS REQUIRED BY SECTION 4, CLAUSE (2), AND THE NAME OF THE FACILITY OWNER, AND THE FACILITY OWNERS DESIGNATED OFFICE ADDRESS AND THE TELEPHONE NUMBER AS SHOWN ON THE LIST REFERRED TO IN SECTION 3.

(3) PURSUANT TO SECTION 4, CLAUSE (4) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC. MADE A REASONABLE EFFORT TO PREPARE THE CONSTRUCTION DRAWING(S) TO AVOID DAMAGE TO AND MINIMIZE INTERFERENCE WITH A FACILITY OWNERS FACILITIES IN THE CONSTRUCTION AREA BY MAINTAINING AN EIGHTEEN-INCH CLEARANCE OF THE FACILITY OWNERS FACILITIES WHERE POSSIBLE.

(4) PURSUANT TO SECTION 4, CLAUSE (5) OF SAID ACT, STECKBECK ENGINEERING & SURVEYING, INC., SHALL BE DEEMED TO HAVE MET THE OBLIGATIONS OF CLAUSE (2) BY CALLING A ONE CALL SYSTEM AND SHOWING AS PROOF THE SERIAL NUMBER OF THE ONE CALL NOTICE ON THE DRAWING(S). NORTH LEBANON TOWNSHIP, LEBANON COUNTY ID NO. 20232612353.

AND STECKBECK ENGINEERING & SURVEYING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTEE THAT THE INFORMATION RECEIVED PURSUANT TO SAID REQUEST AND AS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE, BUT STECKBECK ENGINEERING & SURVEYING, INC. IS REFLECTING SAID INFORMATION ON THESE DRAWINGS ONLY DUE TO THE REQUIREMENTS OF THE SAID ACT 187, DECEMBER 19, 1996.

WINDSTREAM 1450 CENTER POINT ROAD HIAWATHA, IA 52233 CONTACT: LOCATE DESK PERSONNEL EMAIL: LOCATE.DESK@WINDSTREAM.COM PHONE: 800-289-1901 VERIZON PENNSYLVANIA, LLC 1026 HAY STREET PITTSBURGH, PA 15221 CONTACT: DEBORAH BARUM PHONE: 412-344-3901 NORTH LEBANON TOWNSHIP 725 KIMMERLINGS ROAD LEBANON, PA 17046

CONTACT: OFFICE PERSONNEL EMAIL: PHONE: 171-273-7132 FIRSTENERGY CORPORATION 21 S, MAIN STREET AKRON, OH 44308

CONTACT: MELLYSSA ADAMS EMAIL: MADAMS@FIRSTENERGYCORP.COM PHONE: 610-807-3174

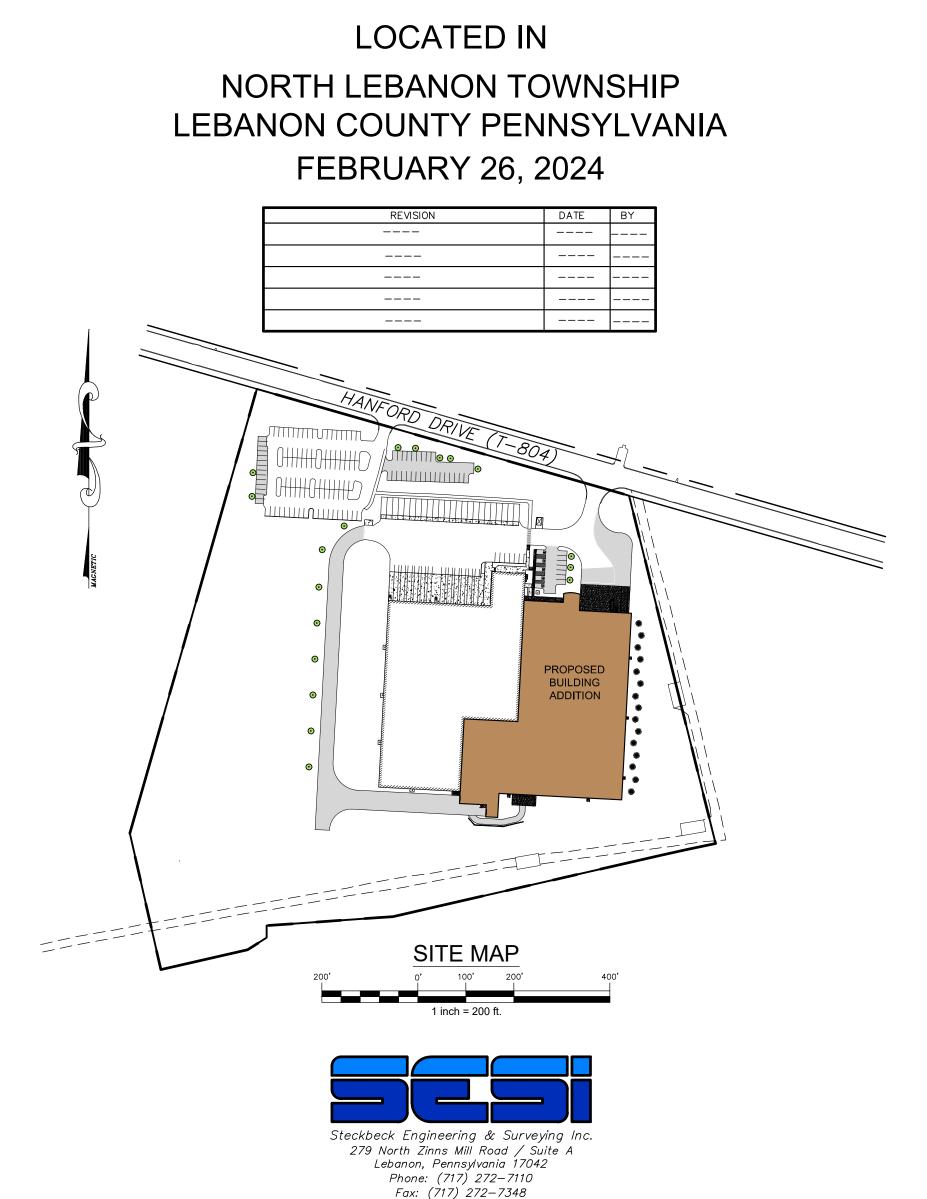
COMCAST CABLE LEBANON C/O USIC LOCATING SERVCIES, INC. 16085 HAMILTON CROSSING CARMEL, IN 46032 CONTACT: USIC OFFICE PERSONNEL PHONE: 800-811-7981 CITY OF LEBANON AUTHORITY 2311 RIDGEVIEW ROAD LEBANON, PA 17042 CONTACT: BOB SENTZ EMAIL: BESENTZ@LEBANONAUTHORITY.ORG PHONE: 717-272-2841 LUMEN FORMERLY LEVEL 3 1025 ELDORADO BLVD BROOMFIELD, CO 80021 CONTACT: LUMEN OPERATOR PERSONNEL EMAIL: RELOCATIONS@LUMEN.COM PHONE: 877-366-8344 EXT. 3 UGI UTILITIES INC. 1301 AIP DRIVE MIDDLETOWN, PA 17057 CONTACT: STEPHEN BATEMAN EMAIL: SBATEMAN@UGI.COM PHONE: 610-807-3174

		-
NORTH LEBANON TOWNSHIP BOARD OF SUPERVISORS REVIEW CERTIFICATE	OWNERS CERTIFICATION AND ACKNOWLEDGMENT	
AT A MEETING HELD ON, 2024, THE BOARD OF SUPERVISORS OF NORTH LEBANON TOWNSHIP LEBANON COUNTY, PENNSYLVANIA APPROVED THE LAND DEVELOPMENT PLAN OF THE PROPERTY AS SHOWN HEREON.	COMMONWEALTH OF PENNSYLVANIA ) COUNTY OF )	
	ON THIS, THE DAY OF, 2024, BEFORE ME, A NOTARY PUBLIC THE UNDERSIGNED OFFICER, PERSONALLY APPEARED KNOWN TO ME (OR SATISFACTORILY PROVEN) TO BE THE	
REVIEWED & APPROVED DATE	PERSON(S) WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSE AND SAY THAT HE/THEY ARE THE OWNERS OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN THEREOF WAS MADE AT	
REVIEWED & APPROVED DATE	HIS/THEIR DIRECTION, THAT HE/THEY ACKNOWLEDGE THE SAME TO BE HIS/THEIR ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER PROPERTY	ENGINEER'S CERTIFICATION
REVIEWED & APPROVED DATE	IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION") ARE HEREBY DEDICATED TO PUBLIC USE, AND THAT ALL STORM WATER MANAGEMENT FACILITIES ARE TO BE PERMANENT FIXTURES THAT CAN BE ALTERED OR REMOVED ONLY AFTER APPROVAL OF A REVISED PLAN BY NORTH LEBANON TOWNSHIP.	I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, THE ST MANAGEMENT FACILITIES SHOWN AND DESCRIBED HEREON AR IN CONFORMANCE WITH THE NORTH LEBANON TOWNSHIP SUB DEVELOPMENT ORDINANCE.
NORTH LEBANON TOWNSHIP PLANNING	SCOUT COLD STORAGE LEBANON HANFORD, LLC DATE	STEPHEN A. SHERK, P.E.
COMMISSION REVIEW CERTIFICATE           AT A MEETING HELD ON, 2024, THE NORTH		SURVEYOR'S CERTIFICATION
LEBANON TOWNSHIP PLANNING COMMISSION REVIEWED THIS PLAN.		I HEREBY CERTIFY, TO THE BEST OF MY KNOWLEDGE, THAT AND PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CO THE ACCURACY REQUIRED BY THE NORTH LEBANON TOWNSHI LAND DEVELOPMENT ORDINANCE.
CHAIRMAN SECRETARY	NOTARY PUBLIC	JASON E. CHERNICH, P.L.S.

# PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

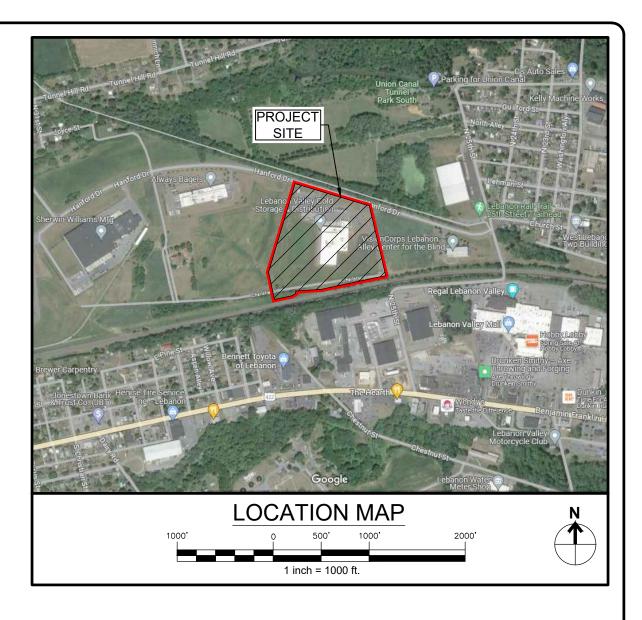
FOR

# SUNNY LANE FOODS SCOUT COLD LOGISTICS, LLC



LEBANON COUNTY PLANNING DEPARTMENT THIS PLAN REVIEWED BY THE LEBANON COUNTY PLANNING KNOWLEDGE, THE STORM WATER DEPARTMENT THIS \_\_\_\_\_ DAY OF \_\_\_\_\_. ESCRIBED HEREON ARE DESIGNED BANON TOWNSHIP SUBDIVISION AND LAND EXECUTIVE DIRECTOR NORTH LEBANON TOWNSHIP ENGINEER

DATE CERTIFICATION Y KNOWLEDGE, THAT THE SURVEY REVIEWED REON IS TRUE AND CORRECT TO TH LEBANON TOWNSHIP SUBDIVISION AND RECORDER OF DEEDS RECORDED THIS \_\_\_\_ DAY OF RECORDED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_, IN THE OFFICE FOR RECORDING OF DEEDS, ETC. IN AND FOR THE COUNTY OF LEBANON, PENNSYLVANIA, IN DATE PLAN BOOK \_\_\_\_, PAGE \_\_\_\_\_.



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# OWNER

SCOUT COLD STORAGE LEBANON HANFORD, LLC 4686 UNIVERSITY DRIVE COLLEGEDALE TN. 37363 CONTACT: TOM DIPIRRO EMAIL: TOMDIPIRRO@SCOUTCOLD.COM PHONE: (201)-376-1769

# SOURCE OF TITLE

DEED BOOK: 2335 PAGE: 5926 PIN: 27-2327941-371036-0000 SITE AREA: 22.83 AC.

# ZONING COMPLIANCE CHART

NORTH LEBANON TOWNSHIP ZONING DISTRICT: "I" INDUSTRIAL ZONING DISTRICT

LOT AREA LOT WIDTH LOT COVERAGE FRONT YARD SETBACK SIDE YARD SETBACK REAR YARD SETBACK BUILDING HEIGHT

<u>REQUIRED</u> 2 ACRES 200'

# SITE DATA

SITE AREA SITE ZONING EXISTING USE PROPOSED USE SOURCE OF WATER SOURCE OF SEWER SITE ADDRESS

MANUFACTURING MANUFACTURING PUBLIC PUBLIC 2750 HANFORD DRIVE STORMWATER MANAGEMENT DISTRICT LEBANON COUNTY RESIDUAL

# PARKING DATA

- 1 SPACE FOR EVERY 1 EMPLOYEE ON THE LARGEST SHIFT. - 1 SPACE PER 200 S.F. OF EXECUTIVE OFFICE FLOOR AREA.

- EMPLOYEES: 115 - OFFICE AREA: 5,000 S.F.=25 SPACES
- 140 REQUIRED PARKING SPACES - 162 PROPOSED PARKING SPACES PROVIDED

BM	IP/OUTFALL LO	CATIONS
BMP	LATITUDE	LONGITUDE
BASIN 1	40° 20' 34.49"	76° 27' 38.84"
BASIN 2	40° 20' 35.28"	76° 27' 27.74"

OCCUPANT

SUNNY LANE FOODS & BAKERY, LLC 2750 HANFORD DRIVE LEBANON PA. 17042 CONTACT: TODD LANGE PHONE: (717)-202-0415

# SITE ADDRESS

LEBANON, PA. 17042

2750 HANFORD DRIVE

# 50% 100' 20' (EACH SIDE)

22.83 Acres INDUSTRIAL (I)

### STANDARD STORMWATER NOTES

- 1. ALL STORM WATER 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 STORM WATER MANAGEMENT FACILITIES SHALL BE MAINTAINED IN GOOD WORKING CONDITION SO THAT THEY ARE PERFORMING THEIR DESIGN FUNCTION, IN A MANNER ACCEPTABLE TO TH COUNTY, AS REQUIRED BY THE NORTH LEBANON TOWNSHIP SUBDIVISION & LAND DEVELOPMENT ORDINANCE. MAINTENANCE SHALL INCLUDE PERFORMING ROUTINE MAINTENANCE AND REPAIR OR REPLACEMENT OF DAMAGED FACILITIES, VEGETATION OR STORM WATER AREAS TO CONDITIONS AS SHOWN ON THE APPROVED PLAN AND IN ACCORDANCE WITH THE NORTH LEBANON TOWNSHIP
- SUBDIVISION & LAND DEVELOPMENT ORDINANCE. 3. ANY DRAINAGE AND UTILITY EASEMENTS SHOWN ON THE PLAN SHALL BE CONSTRUCTED, OWNED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLAN AND SHALL BE REFERENCED WITHIN
- THE PROPERTY DEED. 4. RUNOFF FROM THE LOT IMPROVEMENTS SHALL BE DIRECTED TO THE STORM WATER MANAGEMENT FACILITIES. STORM WATER RUNOFF FROM EXISTING NATURAL SWALES AND/OR OTHER EXISTING DRAINAGE CONVEYORS SHALL NOT BE DIRECTED TOWARDS OR INTERCEPTED BY THE STORM WATER
- MANAGEMENT FACILITIES. 5. TOWNSHIP OFFICIALS AND THEIR AGENTS OR EMPLOYEES HAVE THE RIGHT OF ACCESS FOR INSPECTION AND, IN CASES OF CONSTRUCTION DEFAULT, CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITIES.
- 6. CONTACT NORTH LEBANON TOWNSHIP AT (717) 273-7132 PRIOR TO CONSTRUCTION TO COORDINATE INSPECTIONS OF STORMWATER MANAGEMENT FACILITIES BY THE TOWNSHIP ENGINEER. NO OCCUPANCY IS PERMITTED UNTIL STORMWATER MANAGEMENT FACILITIES HAVE BEEN INSTALLED AND APPROVED THROUGH INSPECTION BY THE TOWNSHIP ENGINEER. 7. ROOF DRAINS SHALL NOT BE CONNECTED TO STREETS, SANITARY SEWERS OR ROADSIDE DITCHES.
- 8. INFILTRATION FACILITIES HAVE BEEN TESTED AND DESIGNED IN ACCORDANCE WITH ACCEPTABLE MEASURES AND ONCE CONSTRUCTED MUST WORK AS DESIGNED. FAILURE OF INFILTRATION FACILITIES TO WORK AS DESIGNED WILL FAD TO TESTING. IF TESTING INDICATES FACILITIES WERE COMPACTED OR OTHERWISE NOT CONSTRUCTED AS PER PLAN, THE INSTALLER OF THE FACILITIES WILL BE RESPONSIBLE FOR CONSTRUCTING THE FACILITIES TO THEIR DESIGNED WORKING CONDITION.
- 9. A PDF COPY OF THE APPROVED PCSM PLAN SHALL BE SUBMITTED TO THE TOWNSHIP UPON RECORDING 10. A PDF COPY OF THE APPROVED PCSM PLAN SHALL BE SUBMITTED TO THE TOWNSHIP UPON
- RECORDING 11. THESE STRUCTURES ARE THE RESPONSIBILITY OF THE PROPERTY OWNER WHEN LOCATED ON
- PRIVATE PROPERTY. ACCESS TO BE PROVIDED TO THE TOWNSHIP FOR THE PURPOSE OF INSPECTION TO THE TOWNSHIP.
- 12. A PDF COPY OF THE APPROVED PCSM PLAN SHALL BE SUBMITTED TO THE TOWNSHIP UPON RECORDING.

# SURVEY NOTES:

- 1. BENCHMARK
- BM1: MAG NAIL ON SOUTHERN SIDE OF HANFORD DRIVE, EAST OF EASTERN ENTRANCE, 58'± WEST OF A CATCH BASIN NORTHING: 371165.53
- 2328727.61 EASTING: ELEVATION: 459.22 BM2: MAG NAIL ON SOUTHERN SIDE OF HANFORD DRIVE, 11.5'± EAST OF A CATCH BASIN
- NORTHING: 371501.95 2327546.90 EASTING: ELEVATION: 460.89
- VERTICAL DATUM: NAVD 88 (1.60 FEET LOWER THAN RECORD PLAN DATUM) HORIZONTAL DATUM: NAD83 - PA SOUTH ZONE
- . UNDERGROUND UTILITIES ARE SHOWN 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. STECKBECK ENGINEERING & SURVEYING, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE, OR GUARANTEE THAT THE UNDERGROUND UTILITY LOCATION PROVIDED BY OTHERS AND REFLECTED ON THESE DRAWINGS ARE CORRECT AND ACCURATE. STECKBECK ENGINEERING & SURVEYING, INC. ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

#### **STANDARD WATER NOTES - CITY OF LEBANON AUTHORITY:** CONTACT INFORMATION FOR THE CITY OF LEBANON AUTHORIT

#### CITY OF LEBANON AUTHORITY 2311 RIDGEVIEW ROAD

LEBANON, PA 17042 CONTACT: BOB SENTZ, BSENTZ@LEBANONAUTHORITY.ORG, 717-272-2841

- 2. WATER SYSTEMS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH THE CITY OF LEBANON AUTHORITY'S "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 LOCATIONS AND VERIFY WATER MAIN
- OSSINGS. EXCAVATED AREAS. AND 5. WATER LATERAL CONNECTION REQUIRES AN APPLICATION AND PAYMENT FOR A CAPACITY FEE WITH THE AUTHORITY PRIOR TO MAKING THE WATER TAPS
- 6. FIRE SERVICE CONNECTION REQUIRES AN APPLICATION AND PAYMENT FOR A CAPACITY FEE WITH THE AUTHORITY PRIOR TO MAKING THE FIRE LINE TAP. 7. ANY WORK WITHIN PENNDOT 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 REQUIRES THE CONTRACTOR TO PROVIDE A REFUNDABLE DEPOSIT TO THE AUTHORITY UNTIL PENNDOT SIGNS OFF ON THE PERMIT AFTER CONSTRUCTION IS COMPLETE
- 8. ANY WORK WITHIN MUNICIPAL RIGHT-OF-WAY'S 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, BUREAU OF WATER, AND WATERLINE CONSTRUCTION CONTRACTOR. 11.THE BUREAU OF WATER WILL INSPECT THE WATER MAIN INSTALLATION AND TESTING.
- THERE ARE FEES CHARGED TO THE DEVELOPER / CONTRACTOR FOR INSPECTION SERVICES. WATER MAIN CONSTRUCTION AND FEES SHALL BE COORDINATED WITH THE AUTHORITY 12. THE PROPERTY OWNER / DEVELOPER SHALL INSTALL THE WATER TAP AND SERVICE LINE
- TO THE CURB STOP UNDER THE INSPECTION OF THE BUREAU OF WATER. THE PROPERTY OWNER IS RESPONSIBLE FOR THE WATER SERVICE AFTER THE CURB STOP. THE BUREAU OF WATER WILL INSTALL THE WATER METER WITHIN THE BUILDING OR AN APPROVED METER PIT AS INSTRUCTED BY THE BUREAU OF WATER. CONTACT THE BUREAU OF WATER METER DEPARTMENT FOR METER INSTALLATION, 2200 WEST CHESTNUT STREET,
- 13. WATER SERVICE LATERALS OVER 100-FEET FROM THE CURB STOP TO THE ENTRANCE OF THE BUILDING REQUIRES THE INSTALLATION OF A METER PIT WITHIN 10-FEET OF THE CURB STOP. METER PITS SHALL BE APPROVED BY THE METER DEPARTMENT PRIOR TO INSTALLATION
- 14. SEWER AND WATER MAINS SHALL HAVE A MINIMUM OF AN 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. AT THE CONCLUSION OF THE INSTALLATION 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 LATERALS SHALL BE TERMINATED 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 SAW CUTTING, EXCAVATION, LATERAL TERMINATION, BACKFILL, AND PAVING, SHALL BE DONE BY THE CONTRACTOR AND INSPECTED BY THE BUREAU OF WATER.

# **GEOLOGICS HAZARDS MITIGATION PLAN**

- 1. IF SINKHOLES DEVELOP ON SITE DURING CONSTRUCTION, THE DEVELOPER SHALL EMPLOY THE SERVICES OF A PA REGISTERED PROFESSIONAL GEOLOGIST OR PA REGISTERED PROFESSIONAL ENGINEER SPECIALIZING IN GEOTECHNICAL ENGINEERING. SAID PROFESSIONAL SHALL PROVIDE A PLAN AND PROCEDURE DESIGNED TO MITIGATE
- ANY POTENTIAL HAZARDS ASSOCIATED WITH SUBSURFACE CONDITIONS. DURING CONSTRUCTION, THE GEOLOGIC PROFESSIONAL SHALL PERFORM AN ON-SITE INSPECTION OF THE AREAS DESIGNATED FOR STORMWATER MANAGEMENT FACILITIES TO DOCUMENT THE PRESENCE OF ANY HAZARDS ASSOCIATED WITH THE SUBSURFACE CONDITIONS. THE PROFESSIONAL SHALL PROVIDE A REPORT TO THE DEVELOPER AT THE CONCLUSION OF THE SITE INVESTIGATION THAT DOCUMENTS HIS/HER FINDINGS AND PROVIDES RECOMMENDATIONS FOR THE MITIGATION OF ANY POTENTIAL
- SUBSURFACE HAZARDS SHOULD THEY EXIST. A COPY OF THIS REPORT SHALL BE MADE AVAILABLE TO NORTH LEBANON TOWNSHIP FOR REVIEW. ALL STORM WATER CONVEYANCE, SANITARY SEWER, AND WATER DISTRIBUTION FACILITIES SHALL BE CONSTRUCTED WITH WATERTIGHT JOINTS ACCORDING TO
- RECOMMENDED MANUFACTURER PROCEDURE AND SPECIFICATIONS. 4. THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT ALL REMEDIAL ACTIONS AS RECOMMENDED BY THE GEOLOGIC PROFESSIONAL.

# GENERAL NOTES

- 1. ANY REVISIONS TO THIS PLAN AFTER THE DATE OF PLAN PREPARATION OR LATEST REVISION SHALL NOT BE THE RESPONSIBILITY OF STECKBECK ENGINEERING & SURVEYING, INC. SUBSTITUTIONS FOR ANY MATERIAL NOTED ON THESE PLANS REQUIRES PRIOR WRITTEN APPROVAL OF STECKBECK ENGINEERING & SURVEYING, INC.
- NO ONE SHALL SCALE FROM THESE PLANS PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE
- DIRECTED BY THE ENGINEER RESPONSIBLE FOR THE PLANS. ALL DIMENSIONS SHOWN ON THE PLANS ARE TAKEN FROM THE FACE OF CURB AND EXTERIOR FACE OF THE BUILDINGS, UNLESS OTHERWISE NOTED ON THE PLAN.
- NO WALL, FENCE, OR OTHER STRUCTURE SHALL BE ERECTED, ALTERED OR MAINTAINED, AND NO HEDGE, TREE, SHRUB OR GROWTH SHALL BE PLANTED OR MAINTAINED WHICH EXCEEDS TWO AND ONE-HALF (2 1/2') FEET AS IT MAY RESULT IN A VISUAL OBSTRUCTION WITHIN THE CLEAR SIGHT TRIANGLES AT STREET INTERSECTIONS.
- DRIVEWAY PERMIT SHALL BE SECURED FROM TOWNSHIP PRIOR TO ISSUANCE OF A BUILDING/ZONING PERMIT. STREET LIGHTING SHALL BE PROVIDED BY THE INDIVIDUAL LOT BUYERS. NORTH
- LEBANON TOWNSHIP SHALL REVIEW AND APPROVE A STREET LIGHTING PLAN FOR EACH LOT AS A PART OF THE LAND DEVELOPMENT PLAN PROCESS. LIGHTS SHALL BE CONSTRUCTED, OWNED, MAINTAINED, AND POWERED AT LOT BUYERS EXPENSE, AS PART OF LAND DEVELOPMENT OF EACH LOT. SPECIFICATIONS AND DETAILS FOR STREET LIGHTS SHALL BE PER MET-ED STANDARDS
- DURING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS, NO ALTERATION FROM THE PLAN MAY BE MADE WITHOUT TOWNSHIP APPROVAL. CHANGES TO THE APPROVED PLAN SHALL ONLY BE AUTHORIZED BY WRITTEN APPROVAL OF THE TOWNSHIP OR THE TOWNSHIP'S AGENT (E.G., COUNTY ENGINEER).
- ALL PLAN SHEETS, INCLUDING STORMWATER MANAGEMENT REPORT, EROSION CONTROL REPORT ARE PART OF THIS PLAN AND ARE ENFORCEABLE AS IF THEY APPEARED IN TOTAL HEREIN. 10. A MAJOR REVISION TO THE BUILDING AND PARKING CONFIGURATION SHALL REQUIRE A
- REVISED LAND DEVELOPMENT PLAN APPROVAL FOR THE LOT BEING REVISED. 11. WHEREVER SIDEWALKS ARE INTERRUPTED BY ROADWAYS, INTERSECTIONS, DRIVEWAYS, OR OTHER BARRIERS, ADA COMPLIANT HANDICAPPED RAMPS, INCLUDING DETECTABLE WARNING SURFACES, MUST BE PROVIDED. ANY EXISTING HANDICAPPED RAMPS ALONG
- THE FRONTAGE OF THE SITE MUST BE REPLACED WITH COMPLIANT RAMPS. DEPRESSED CURBS MUST TRANSITION IN SUCH A WAY AS TO NOT INHIBIT ADA COMPLIANCE OF SURFACES. 12. TREES OR SHRUBS SHALL NOT BE PLANTED IN SWALES OR WITHIN 5 FEET OF BURIED
- UTILITY LINES. 13. ALL PROPOSED SIGN(S) SHALL COMPLY WITH ALL NORTH LEBANON TOWNSHIP ZONING ORDINANCE REGULATIONS AND SHALL BE INSTALLED BY THE DEVELOPER AT THEIR
- **EXPENSE** 14. IT IS A REQUIREMENT THAT A NEW LAND DEVELOPMENT PLAN SHALL BE FILED WITH THE TOWNSHIP AND COUNTY FOR ANY FUTURE EXPANSION OF THE FACILITIES ON THIS SIT NOT SHOWN ON THESE PLANS. THE TOWNSHIP AND MUNICIPAL AUTHORITY SHALL HAVE THE RIGHT TO REVISE OR AMEND THE NOTES AND REQUIREMENTS SET FORTH ON THIS PLAN AND TO REVISE OR AMEND THE DEVELOPER AGREEMENTS WHENEVER A NEW LAND
- DEVELOPMENT PLAN IS FILED 15. A STREET CUT PERMIT WILL BE REQUIRED BY NORTH LEBANON TOWNSHIP FOR ANY WORK WITHIN HANFORD DRIVE, AS WELL AS A \$10,000; 24-MONTH BOND.
- 16. ALL JOINTS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT SHOULD BE SAW CUT AND SEALED WITH PG 64-22
- 17. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND, INCLUDING BUT NOT LIMITED TO TELEPHONE, CABLE, ELECTRIC, GAS, WATER AND SEWER. CONNECTION TO PUBLIC SEWER AND WATER IS REQUIRED. 18. THE DEVELOPER SHALL BE FINANCIALLY RESPONSIBLE FOR ANY ATTORNEY FEES WHERE
- 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. THESE FEES ARE IN ADDITION TO SUBMISSION FEES CHARGED BY THE TOWNSHIP AND AUTHORITY. PAYMENT OF ALL INVOICES IS 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. 19. A STORM WATER PLAN SHALL BE REVIEWED AND APPROVED BY THE TOWNSHIP PRIOR TO CONSTRUCTION OF THE RAIL SPUR LINE AND ASSOCIATED IMPROVEMENTS. 20. PER NLT ORDINANCE 2-2010, ALL COMMERCIAL AND INDUSTRIAL BUILDINGS ARE
- REQUIRED TO PROVIDE A RAPID ENTRY SYSTEM OR A KNOX LOCK BOX PRIOR TO ISSUANCE OF AN OCCUPANCY PERMIT.

# FLOODPLAIN NOTE

CCORDING FEMA FLOOD INSURANCE RATE MAP, MAP NUMBER 42075C0252E & 42075C0254E EFFECTIVE, 07/08/2020, FLOODPLAIN DOES NOT EXIST ON THE SUBJECT PROPERTY

# WETLAND NOTE

ACCORDING TO AN INVESTIGATION PERFORMED BY VORTEX ENVIRONMENTAL ON 12/21/23. NO WETLANDS EXIST ON THIS SITE.

# BUILDING CODE NOTE

ALL CONSTRUCTION SHALL BE SUBJECT TO THE REQUIREMENTS OF THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE, AS ADOPTED BY THE MUNICIPALITY.

NPDES APPROVAL THE NPDES PERMIT WAS APPROVED ON \_\_\_\_\_. THE PERMIT WILL EXPIRE ON \_\_\_\_\_ \_\_\_\_\_. NPDES PERMIT \_\_\_\_\_.

# SEWER AND WATER NOTES

1. THE PROPOSED BUILDING WILL CONNECT TO A NEW WELL LOCATED ONSITE. 2. THE PROPOSED BUILDING WILL WILL BE SERVICED BY A NEW ON-LOT SEWER DISPOSAL SYSTEM TO BE LOCATED JUST NORTHWEST OF THE PROPOSED BUILDING 3. CONNECTION TO BOTH PUBLIC SEWER AND WATER IS NOT REQUIRED FOR THIS SITE.

# PURPOSE OF PLAN

THE PURPOSE OF THIS PLAN IS TO ADD A NEW PROPOSED MANUFACTURING AND OFFICE SPACE ADDITION TO THE EXISTING BUILDING. THE PLAN ALSO PROPOSED ADDITIONAL OFF-STREET PARKING AND LOADING DOCK. STORMWATER MANAGEMENT UPGRADES ARE ALSO PROPOSED BY THIS PLAN. SANITARY SEWER WILL BE UPDATED AS PART OF THIS

# CONTRACTOR NOTES

#### THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON SITE PRIOR TO THE START OF CONSTRUCTION. UNDERGROUND UTILITIES HAVE BEEN SHOWN 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. STECKBECK ENGINEERING & SURVEYING, INC. (SESI) 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. SESI ASSUMES NO LIABILITY FOR ANY DAMAGE INCURRED AS A RESULT OF UNDERGROUND UTILITIES OMITTED OR INACCURATELY SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. DAMAGE TO ANY UTILITY SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER, UTILITY COMPANY OR AUTHORITY. AT THE CONTRACTOR'S EXPENSE.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS FROM THE MUNICIPALITY, COUNTY, STATE OR AUTHORITY RELATIVE TO CONSTRUCTION SHOWN ON THIS PLAN. 4. 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL. TRENCH BARRICADING, COVERING, SHEETING AND SHORING, AS THE NEED ARISES.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GRADING PLAN IS IMPLEMENTED CORRECTLY, THAT A MINIMUM COVER IS MAINTAINED OVER ALL UTILITY PIPES, AND THAT PROPER DRAINAGE IS PROVIDED DURING CONSTRUCTION. PROVIDE 95% MODIFIED PROCTOR DENSITY PER ASTMD-698 IN AREAS WHERE
- PROPOSED UTILITIES ARE LOCATED ON FILL. 8. WHERE APPLICABLE, ALL TOPS AND INVERTS PROVIDED FOR MANHOLES. INLETS, ETC., ARE FOR THE PURPOSE OF SHOWING GENERAL CONFORMANCE TO DESIGN STANDARDS ONLY. CUT SHEETS SHALL BE PREPARED BY A REGISTERED SURVEYOR PRIOR TO THE ORDERING OF ANY STRUCTURES. ANY
- DISCREPANCIES SHALL BE RESOLVED PRIOR TO THE START OF WORK. THESE PLANS, PREPARED BY SESI, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR, OF ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF STECKBECK ENGINEERING & SURVEYING, INC. (SESI) REGISTERED PROFESSIONAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY OSHA. 10. CONTRACTORS SHALL NOT STORE CONSTRUCTION MATERIALS OR LOCATE
- TRASH RECEPTACLES (DUMPSTERS) ON PAVED CARTWAYS OF DEDICATED AND UNDEDICATED STREETS. 11. ALL MUD FROM CONSTRUCTION ACTIVITIES THAT GETS TRACKED ONTO STREETS, EITHER DEDICATED OR UNDEDICATED, SHALL BE CLEANED BY THE
- BUILDER/CONTRACTOR AT THE END OF EACH WORKDAY. 12. DIGGING TEST PITS: IN LOCATIONS WHERE NEW UNDERGROUND UTILITIES ARE TO BE CONNECTED TO EXISTING UNDERGROUND UTILITIES, THE CONTRACTOR WILL NOT BE PERMITTED TO PROCEED WITH THE NEW CONSTRUCTION UNTIL HE HAS DUG TEST PITS AND DETERMINED THE EXACT LOCATION AND ELEVATION OF THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR IS ADVISED THAT NO EXCAVATION IS PERMITTED IN THE UNDERGROUND UTILITY LOCATION WITHOUT THE PRESENCE OR WRITTEN APPROVAL OF AN AUTHORIZED REPRESENTATIVE OF THE OWNER OF THE SUBSURFACE UTILITY. DIG SUCH TEST PITS AT THE LOCATIONS AGREED TO BY THE OWNER OF THE SUBSURFACE UTILITY AND THE ENGINEER, AS SHOWN ON THE UTILITY PLAN SHEETS.

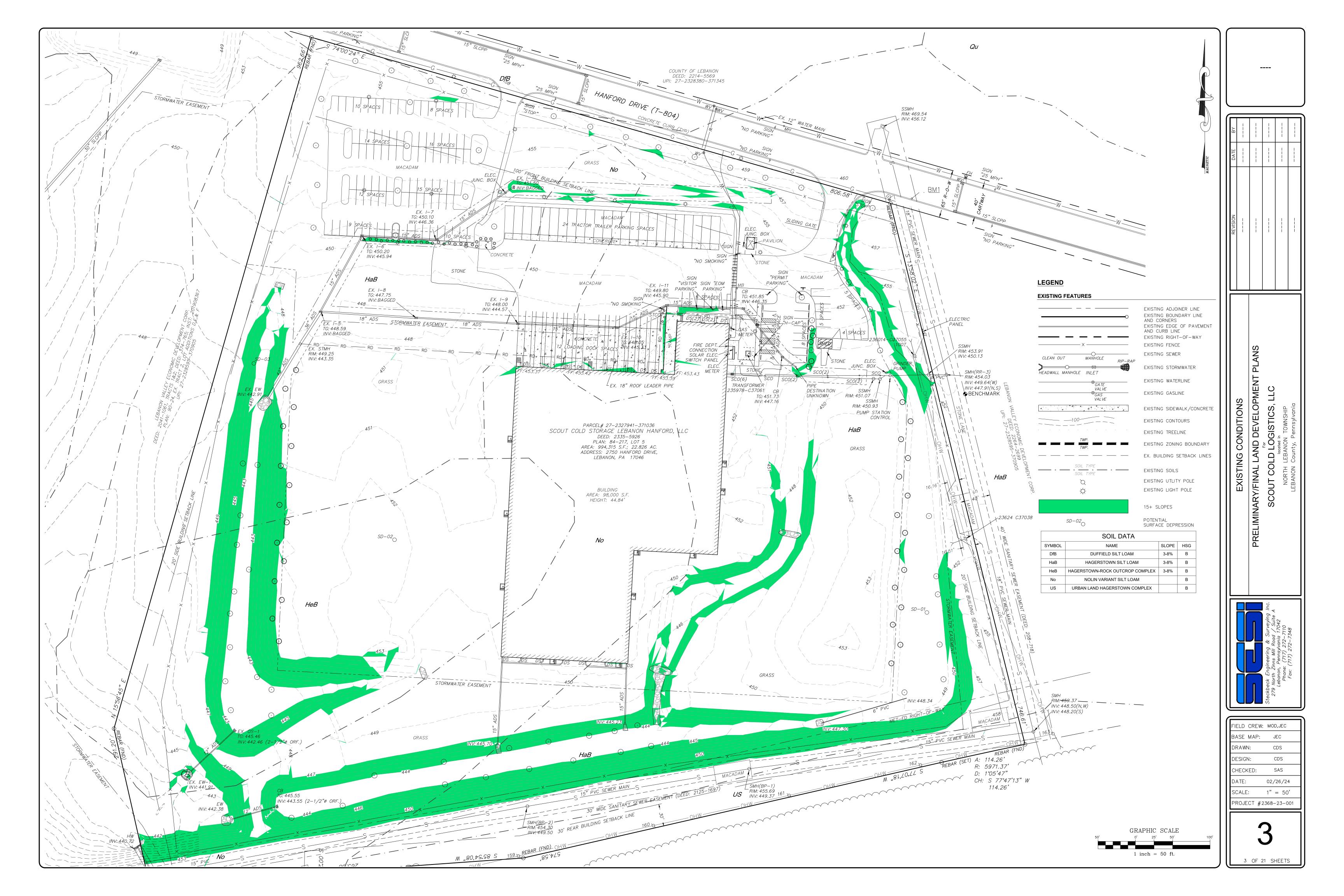
## **EROSION & SEDIMENT POLLUTION CONTROL GUIDELINES**

- 1. A LOGICAL CONSTRUCTION SEQUENCE SHALL BE DEVELOPED THAT INCLUDES THE INSTALLATION OF E&SPC FACILITIES AND BEST MANAGEMENT PRACTICES (BMPS). BEFORE EARTH MOVING MAY COMMENCE.
- 2. E&SPC FACILITIES AND BMPS SHALL BE CORRECTLY INSTALLED AND MAINTAINED. MAINTENANCE INFORMATION AND CONSTRUCTION DETAILS MAY BE OBTAINED FROM THE COUNTY CONSERVATION DISTRICT
- EARTH DISTURBANCE SHALL TAKE PLACE WITHIN A DEFINED LIMIT OF DISTURBANCE AND IMMEDIATELY PRIOR TO CONSTRUCTION. 4. DEVELOPMENT PLANS SHALL PRESERVE SALIENT NATURAL FEATURES, MINIMIZE LAND CUTS AND FILLS, AND CONFORM TO THE GENERAL TOPOGRAPHY. PLANS SHALL BE DESIGNED AND IMPLEMENTED SO AS TO CREATE THE LEAST POTENTIAL FOR EROSION AND TO ADEQUATELY CONTAIN THE VOLUME AND REDUCE THE VELOCITY OF SURFACE WATER RUNOFF
- NATURAL VEGETATION SHALL BE RETAINED, PROTECTED, AND SUPPLEMENTED PRIOR TO AND DURING CONSTRUCTION. TOPSOIL SHALL BE REMOVED FROM CONSTRUCTION AREAS AND STOCKPILED FOR FINAL GRADING AND SEEDBED PREPARATION. DOWNSLOPE AREAS OF ANY STOCKPILES, CONSTRUCTION, OR BORROW AREAS SHALL BE PROTECTED WITH CORRECTLY INSTALLED AND MAINTAINED SILT FENCE. STRAW BALES, OR SEDIMENT TRAPS PRIOR TO ANY EARTH DISTURBANCE IN ORDER TO MINIMIZE
- SEDIMENT LADEN RUNOFF ALL CUTS AND FILLS SHALL BE BROUGHT TO FINAL GRADE EARLY IN THE CONSTRUCTION SEQUENCE AND STABILIZED IMMEDIATELY WITH SEED AND
- MULCH 8. ONLY DRIVEWAY EXCAVATIONS THAT CAN BE STABILIZED WITH A CRUSHED STONE BASE THE SAME DAY SHALL BE COMPLETED. 9. CURRENT REGULATIONS STATE:
- UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY Α. STAGE OR PHASE OF AN ACTIVITY, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION
- EROSION AND SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED UNTIL THE PERMANENT STABILIZATION IS COMPLETED. C. FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY TO BE CONSIDERED PERMANENTLY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING:
- a. A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION: b. AN ACCEPTABLE BMP WHICH PERMANENTLY MINIMIZES
- ACCELERATED EROSION AND SEDIMENTATION. 10. THE PENN STATE EROSION CONTROL AND CONSERVATION PLANTINGS ON NONCROPLAND GUIDE OR AGRONOMY GUIDE SHALL BE CONSULTED FOR PERMANENT AND TEMPORARY SEEDING AND MULCHING TYPES AND RATES. STRAW MULCH SHALL BE APPLIED AT A RATE OF AT LEAST 3 TONS PER ACRE OR 5 BALES PER 1000 SQUARE FEET. SLOPES STEEPER THAN 3:1 SHALL BE CORRECTLY LINED WITH APPROPRIATE TURF REINFORCEMENT MATTING. OTHER HELPFUL PUBLICATIONS INCLUDE TURFGRASS ESTABLISHMENT (SPECIAL CIRCULAR 163), TURF SEED AND SEED MIXTURES (EXTENSION CIRCULAR 391), AND PRINCIPALS OF TURFGRASS IRRIGATION (SPECIAL CIRCULAR 158). THE PUBLICATIONS REFERENCED ARE AVAILABLE FROM THE PENN STATE ÉXTENSION OFFICE.
- 11. ALL RECYCLING AND DISPOSAL OF CONSTRUCTION WASTE SHALL BE IN ACCORDANCE WITH LOCAL AND STATE RULES AND REGULATIONS FOR WASTE MANAGEMENT. CONSTRUCTION WASTE INCLUDES, BUT IS NOT LIMITED TO: EXCESS SOIL AND ROCK, BUILDING MATERIALS, CONCRETE AND CONCRETE WASH WATER, SANITARY WASTE, AND ANY OTHER MATERIALS THAT COULD ADVERSELY IMPACT SURFACE OR GROUND WATER QUALITY.

### **NLTMA SANITARY SEWER NOTES:**

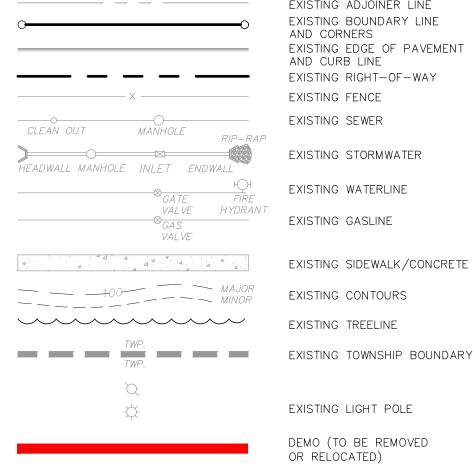
- 1. EXISTING SEWER WILL NOT BE DISTURBED IN ANY WAY. 2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/NLTMA STANDARDS.
- 3. PROPOSED GRAVITY LATERALS SHALL BE SLOPED AT A MINIMUM 1/4" PER FOOT, UNLESS OTHERWISE NOTED ON THE PLAN. 4. STANDARD CLEANOUTS MUST BE "SCREWED ON" CAPS (PLUGS) AND THEY ARE TO BE
- WATER TIGHT 5. SPACE BETWEEN TEST TEE & SEWER MAIN WILL BE AS REQUIRED BY NLTMA.
- TRENCH MUST REMAIN OPEN FOR INSPECTION. ANY TRENCH THAT IS FILLED MUST BE UNCOVERED FOR INSPECTION. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT NI TMA FOR INSPECTION 7. A PRE-CONSTRUCTION MEETING WILL BE REQUIRED.
- 8. METAL MARKING TAPE WILL BE PLACED 12" ABOVE THE PIPE FOR THE ENTIRE HORIZONTAL RUN 9. AIR TESTING FOR ALL SEWER MAINS AND LATERALS SHALL BE 5LBS/5 MIN. NO DROP. 10. VACUUM TEST OF MANHOLES SHALL BE 10 LBS. VACUUM WITH AN ALLOWABLE DROP OF
- 1 | B / 1 M | N. 11. VACUUM TEST UNIT SHALL BE PLACED IN THE FRAME AREA ONLY.
- 12. LINE WILL BE PLUGGED AT THE COMPLETION OF EACH WORKDAY TO PREVENT DEBRIS AND WATER FROM ENTERING THE LINE
- 13. AN APPOINTED NLTMA INSPECTOR MUST BE PRESENT AT ALL TIMES WHEN ANY SEWER WORK IS PERFORMED.
- 14. INSPECTORS WILL BE AVAILABLE FROM 8 AM TO 3 PM. A 1/2 HOUR LUNCH BREAK WILL BE TAKEN DAILY DURING WHICH TIME NO SEWER WORK WILL BE ALLOWED.
- 15. ALL LINES SHALL BE FLUSHED WITH FRESH WATER TO CLEAR CONSTRUCTION DEBRIS UPON COMPLETION OF THE PROJECT. 16. MANDRELL TESTING WILL BE CONDUCTED FOR ALIGNMENT OF THE PIPE.
- 17. DAMAGED OR CRACKED MANHOLE SECTIONS WILL BE REJECTED. 18. DOUBLE MASTIC ON ALL JOINTS ON MANHOLES.
- 19. STEPS MUST BE ALIGNED
- 20. NO CONCRETE PATCHING OF ANY KIND WILL BE ACCEPTED ON LEAKING JOINTS OR ON ANY CRACKED OR DAMAGED MANHOLES SECTIONS. 21. GROUTING OF THE INVERT IN ANY INVERT OUT PIPES SHALL BE DONE. 22. AFTER CONSTRUCTION IS COMPLETE THE CONSTRUCTED SEWER SHALL NOT BE TESTED
- UNTIL 30 DAYS HAS PASSED.
- 23. NO DROP MANHOLES OR INSIDE SPLASH MANHOLES WILL BE ALLOWED. 24. RE-BAR MUST BE INSTALLED AT THE END OF EACH LATERAL CONNECTED TO THE MAIN TO FACILITATE LATERAL LOCATION.
- 25. BUILDING OWNER SHALL BE REQUIRED TO PARTICIPATE IN THE NLTMA "STRONG WASTE MANAGEMENT PROGRAM" WHICH REQUIRES AN AGREEMENT BY THE OWNER TO MONITER, SAMPLE AND TEST SEWAGE DISCHARGE SEMI-ANNUALLY AT OWNER'S EXPENSE AND SUPPLY RESULTS TO NLTMA. 26. BUILDING OWNER GRANTS PERPETUAL RIGHT OF ACCESS TO THE SEWER LATERALS AND
- MANHOLES SHOWN HEREON FOR PURPOSE OF INSPECTION, MONITORING AND/OR SAMPLING. 27. NO PRODUCTION AREA OR STORAGE AREA FLOOR DRAINS ARE ALLOWED.
- 28. THE APPLICANT ACKNOWLEDGES THAT APPROVAL OF THIS LAND DEVELOPMENT PLAN DOES NOT CONSTITUTE APPROVAL OF THE WASTEWATER DISCHARGE FROM THE PROPOSED FACILITY. APPLICANT ACKNOWLEDGES THAT DISCHARGE MUST COMPLY WITH THE CRITERIA SET FORTH IN THE NORTH LEBANON TOWNSHIP MUNICIPAL AUTHORITY (NLTMA) STRONG WASTE MANAGEMENT ORDINANCE. COMPLIANCE WITH THE ORDINANCE MIGHT NECESSITATE THAT APPLICANT CONSTRUCT PRETREATMENT FACILITIES TO TREAT WASTEWATER PRIOR TO DISCHARGE INTO THE NLTMA SEWER SYSTEM. APPLICANT ACKNOWLEDGES THEY ARE REQUIRED TO MAKE APPLICATION TO NLTMA FOR A STRONG WASTE MANAGEMENT PERMIT AND THAT NO DISCHARGE FROM THE SUBJECT FACILITY CAN COMMENCE UNTIL APPROVAL HAS BEEN GRANTED BY NLTMA AND/OR THE PERMIT HAS BEEN ISSUED IF PERMIT IS DEEMED NECESSARY BY NLTMA UNDER THE TERMS OF THE STRONG WASTE MANAGEMENT ORDINANCE
- 29. IT IS A REQUIREMENT THAT A NEW LAND DEVELOPMENT PLAN SHALL BE FILED WITH THE TOWNSHIP AND COUNTY FOR ANY FUTURE EXPANSION OF THE FACIITIES ON THIS SITE THE TOWNSHIP AND MUNICIPAL AUTHORITY SHALL HAVE THE RIGHT TO REVISE OR AMEND THE NOTES AND REQUIREMENTS SET FORTH ON THIS PLAN AND TO REVISE OR AMEND THE DEVELOPER AGREEMENTS WHENEVER A NEW LAND DEVELOPMENT PLAN IS FILED. 30. BUILDING OWNER GRANTS PERPETUAL RIGHT OF ACCESS TO NLTMA, IT'S EMPLOYEES,
- AGENTS OR ASSIGNS FOR THE SEWER LATERALS AND MANHOLES SHOWN HEREON FOR PURPOSES OF INSPECTION, MONITORING AND/OR SAMPLING. 31. NLTMA HAS GRANTED APPROVAL OF THE SEWER DESIGN DEPICTED ON THIS PLAN UNDER THE FOLLOWING CONDITIONS:
  - 1. ALL FEES SHALL BE PAID BEFORE A SEWER PERMIT WILL BE ISSUED. 2. THE STRONG WASTE PERMIT APPLICATION SHALL BE APPROVED AND ANY PRETREATMENT REQUIRED BY NLTMA SHALL BE INSTALLED AND OPERABLE TO THE SATISFACTION OF NLTMA BEFORE CONNECTION OR USE OF THE NLTMA SEWER SYSTEM IS PERMITTED.
  - 3. THE STRONG WASTE PERMIT MAY BE AMENDED AT ANY TIME BY THE NITMA BASED UPON LAB TESTING AND QUALITY OF THE APPLICANT'S SEWAGE DISCHARGE WHICH IS VARIABLE, WITH SUCH CHANGES TO PRETREATMENT DEEMED NECESSARY TO ASSURE THAT THE APPLICANT'S DISCHARGE MEETS ALL APPLICABLE NLTMA STANDARDS.

		-				
DATE BY						
REVISION						
	NOLES	PRELIMINARY/FINAL LAND DEVELOPMENT PLANS		Iocated in NORTH LEBANON TOWNSHIP	LEBANON County, Pennsylvania	
			Steckbeck Engineering & Surveying Inc. 279 North Zinns Mill Road / Suite A	Lebanon, Pennsyvania 17042 Phone: (717) 272–7110	Fax: (717) 272–7348	
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	2	OF 2	21 SF	HEETS	0	





# LEGEND **EXISTING FEATURES**



EXISTING ADJOINER LINE EXISTING BOUNDARY LINE AND CORNERS EXISTING EDGE OF PAVEMENT AND CURB LINE EXISTING RIGHT-OF-WAY EXISTING FENCE EXISTING SEWER EXISTING STORMWATER EXISTING WATERLINE EXISTING GASLINE EXISTING TREELINE EXISTING TOWNSHIP BOUNDARY EXISTING LIGHT POLE DEMO (TO BE REMOVED OR RELOCATED)

\_\_\_\_

	DEMOLITION PLAN PRELIMINARY/FINAL LAND DEVELOPMENT PLANS For SCOUT COLD LOGISTICS, LLC Incomed in NORTH LEBANON TOWNSHIP LEBANON County, Pennsyvania	
	Steckbeck Engineering & Surveying Inc. 279 North Zinns Mill Road / Suite A Lebanon, Pennsylvania 17042 Phone: (717) 272–7348 Fax: (717) 272–7348	
	FIELD CREW: MOD,JEC BASE MAP: JEC	
	DRAWN: CDS	
	DESIGN: CDS	
	CHECKED: SAS	
	DATE: 02/26/24 SCALE: 1" = 50'	
	PROJECT #2368-23-001	
GRAPHIC SCALE 0' 25' 50' 100' 1 inch = 50 ft.	4	
	4 OF 21 SHEETS	

# LEGEND EXISTING FEATURES

# \_\_\_\_\_ \_\_ \_\_ \_\_\_ ------CLEAN OUT MANHOLE RIP-RAP HEADWALL MANHOLE INLET ENDWALL H FIRE GATE FIRE VALVE HYDRANT GAS VALVE \_\_\_\_\_

EXISTING ADJOINER LINE EXISTING BOUNDARY LINE AND CORNERS EXISTING EDGE OF PAVEMENT AND CURB LINE EXISTING RIGHT-OF-WAY EXISTING FENCE EXISTING SEWER EXISTING STORMWATER EXISTING WATERLINE EXISTING GASLINE

SOIL TYPE - · -D

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EXISTING SIDEWALK/CONCRETE EXISTING CONTOURS

EXISTING TREELINE

EXISTING TOWNSHIP BOUNDARY LIMITS OF FIELD SURVEY

EXISTING SOILS EXISTING UTLITY POLE

EXISTING LIGHT POLE

EXISTING PAVED AREA

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# PROPOSED FEATURES

Ron Pin Co	NCRETE MOI	
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~	MANHOLE	RIP-RAI
HEADWALL MANHOLE	INLET E	NDWALL
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	OGATE VALVE OGAS	FIRE HYDRAN
<sup>Δ</sup> 4 Δ	VALVE	۲
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PROPOSED BUILDING SETBACK
PROPOSED BOUNDARY LINE AND CORNERS
PROPOSED EDGE OF PAVEMENT AND CURB LINE
PROPOSED RIGHT-OF-WAY
PROPOSED FENCE
PROPOSED SEWER
PROPOSED STORMWATER
PR. ELECTRIC SERVICE LINE
PR. WATER SERVICE LINE
PROPOSED DOMESTIC WATERLIN
PROPOSED GASLINE
PROPOSED CONCRETE/SIDEWAL
PROPOSED CONTOURS

PROPOSED TREELINE PROPOSED UTLITY POLE PROPOSED LIGHT POLE PROPOSED SIGN

PROPOSED NEW PAVING AREA

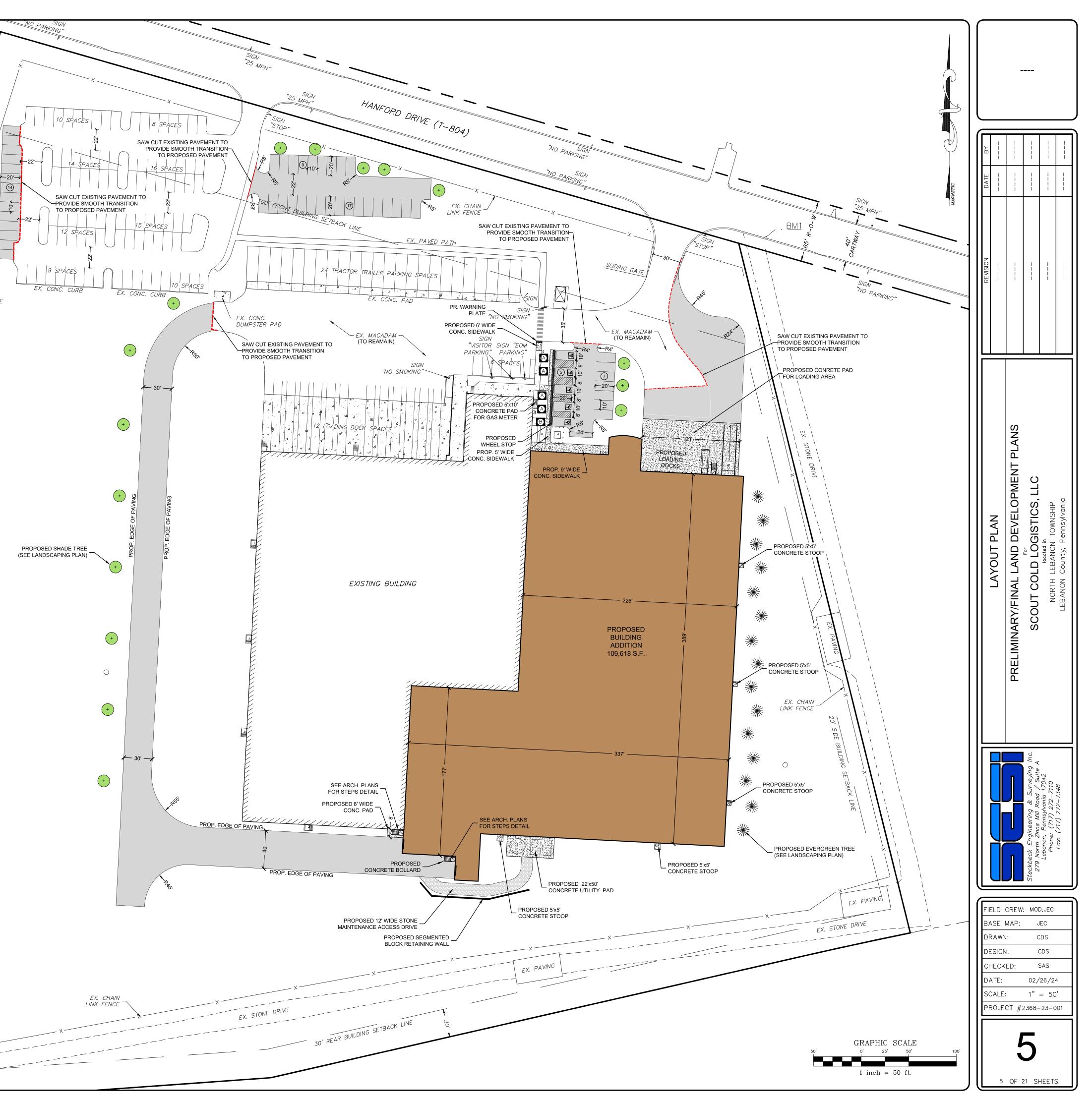
# SIGNAGE LEGEND

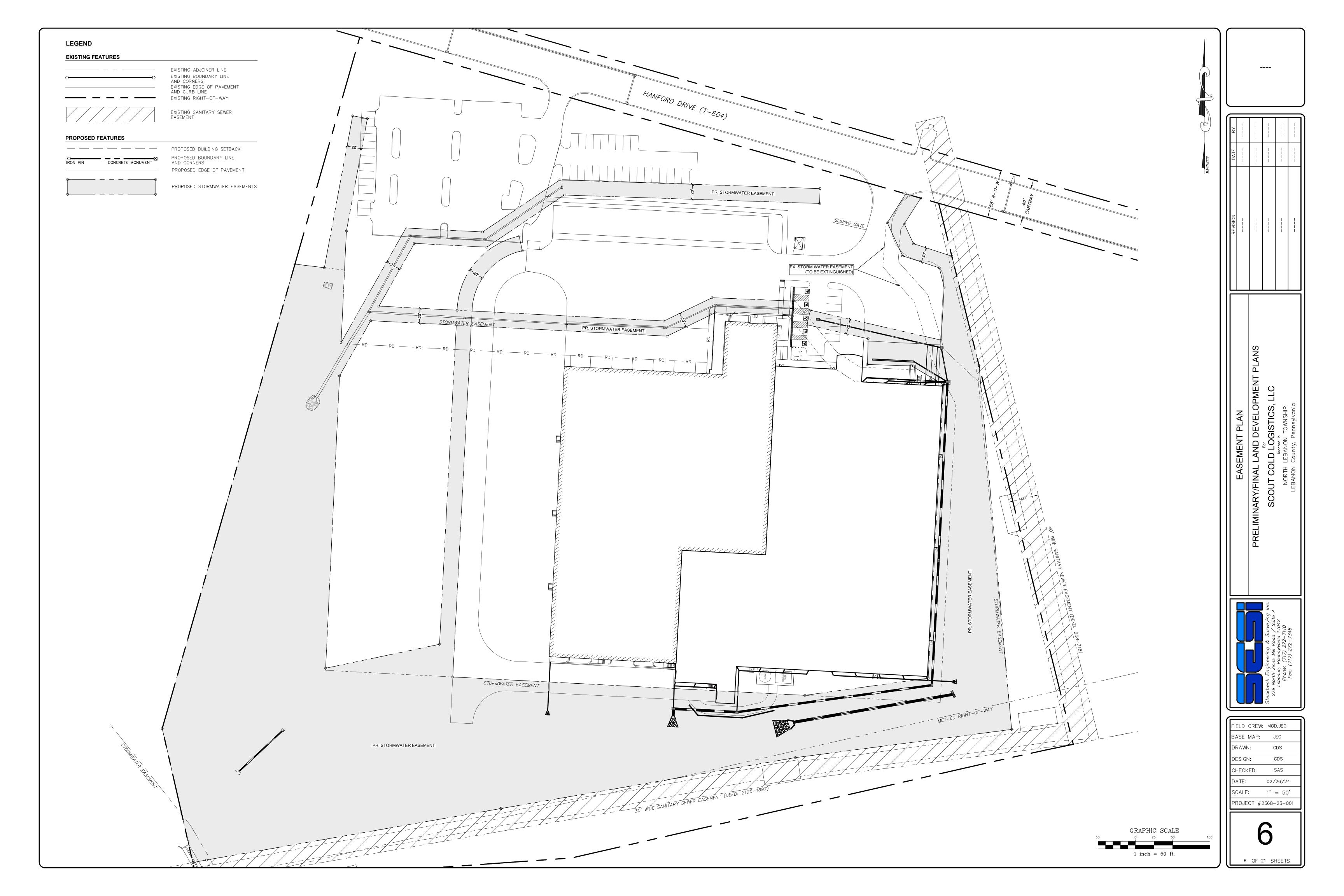
SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.
۵	HANDICAP SIGN WITH VAN ACCESIBLE SIGN	12X18 6X12	R7-8 R7-8B
в	HANDICAP SIGN	12X18	R7-8

EX. CHAIN LINK FENCE

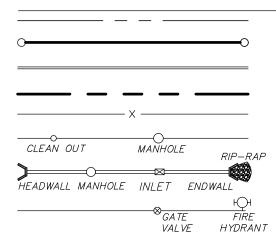
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EXISTING FEATURES



EXISTING ADJOINER LINE EXISTING BOUNDARY LINE AND CORNERS EXISTING EDGE OF PAVEMENT AND CURB LINE EXISTING RIGHT-OF-WAY EXISTING FENCE EXISTING SEWER EXISTING STORMWATER EXISTING WATERLINE

AMENDED SOILS W/CONSERVE

\_\_\_\_\_\_HUU\_\_\_\_\_\_\_MAJOR  $-\otimes_{GAS}$ VALVE SOIL TYPE 

SOIL TYPE

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EXISTING SIDEWALK/CONCRETE EXISTING CONTOURS EXISTING TREELINE EXISTING GASLINE

EXISTING SOILS EXISTING UTLITY POLE EXISTING LIGHT POLE

LOR

SD-03

EX.'EW

PR. 6" PERFORATED

UNDERDRAIN (TYP.)

0

UA-

EX. OUTLET STRUCTURE OS-1

EXISTING 2.5" ORIFICE TO BE

TO BE MODIFIED

INV. IN: 442.00' 🛏

SEALED

(EX. EW-1 / INV: 441<u>.91</u>

-443-

INV. OUT: 442.46'

NEW RIM ELEV.: 446.46'

|INV: 442.91

DP 002

## PCSM FEATURES

	LOW MAINETANCE BASIN MIX
NPDES	NPDES BOUNDARY
LOD —	DISTURBANCE LIMITS

URBANCE LIMITS

INFILTRATION TEST PIT

• TP-01

Map Symbol	Soil Name	Slope	Hydrologic Group
DfB	Duffield silt loam	3-8%	В
HaB	Hagerstown silt loam	3-8%	В
HeB	Hagerstown-Rock outcrop complex	3-8%	В
No	Nolin variant silt loam	-	В
US	Urban land-Hagerstown complex		D

### SCHEDULE OF MUNICIPAL INSPECTIONS

- A. THE TOWNSHIP ENGINEER SHALL INSPECT ALL PHASES OF CONSTRUCTION OF THE STORMWATER MANAGEMENT IMPROVEMENTS. INSPECTIONS SHALL INCLUDE THE FOLLOWING: a. STORM SEWER PIPE TRENCHING AND INSTALLATION
  - b. SWALE EXCAVATION AND INSTALLATION
  - c. INFILTRATION BASINS 1-2 & DETENTION BASIN 1 ROUGH GRADING
    - EXCAVATION TO SUBGRADE
    - UNDERDRAIN SYSTEM INSTALLATION
    - AMENDED SOIL INSTALLATION
    - OUTLET STRUCTURE AND OUTLET PIPE INSTALLATION (INCLUDING ANTI-SEEP COLLARS AND CLAY CORE)
  - d. FINAL SITE STABILIZATION

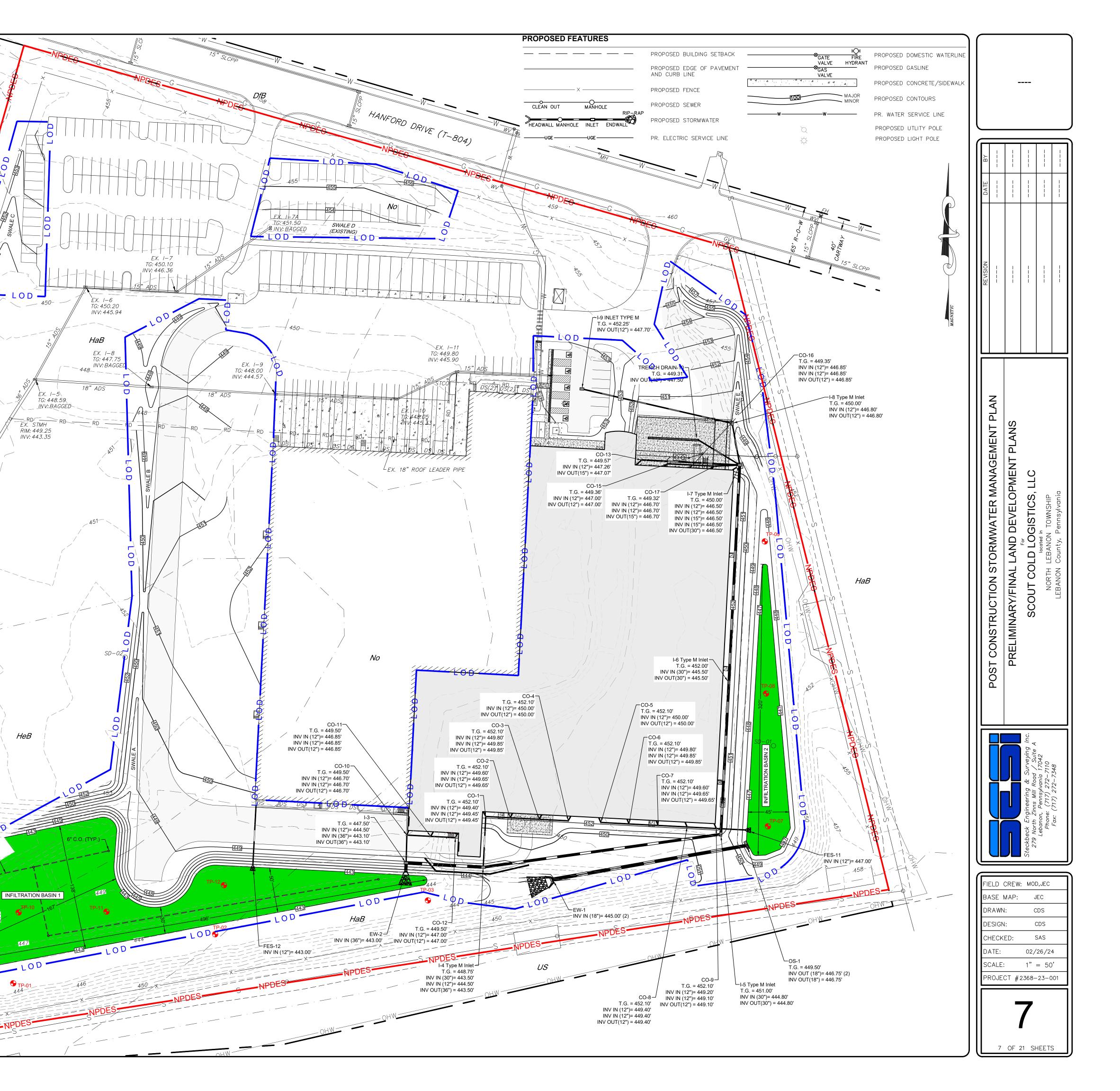
B. DURING ANY STAGE OF THE WORK, IF THE TOWNSHIP ENGINEER DETERMINES THAT THE SWM BMPS ARE NOT BEING INSTALLED IN ACCORDANCE WITH THE APPROVED SWM SITE PLAN, NORTH LEBANON TOWNSHIP SHALL PROVIDE WRITTEN NOTIFICATION TO THE LAND OWNER AND/OR DEVELOPER AND THE STIPULATING THE DEFICIENCIES AND REQUIRE THAT THE DEFICIENCIES BE CORRECTED WITHIN 30 DAYS (OR LONGER AS MAY BE REQUIRED). IF THE DEFICIENCIES ARE NOT CORRECTED WITHIN THE SPECIFIED PERIOD OF TIME, NORTH LEBANON TOWNSHIP MAY:

- 1. REVOKE ANY EXISTING PERMITS UNTIL SUCH DEFICIENCIES ARE CORRECTED TO THE SATISFACTION OF THE TOWNSHIP ENGINEER.
- 2. UTILIZE FINANCIAL SECURITY POSTED BY THE OWNER AND/OR DEVELOPER AS PART OF THE DEVELOPER'S IMPROVEMENT GUARANTEE AGREEMENT TO INSTALL ANY UNFINISHED FACILITIES OR REMEDY ANY IMPROPERLY CONSTRUCTED FACILITIES.
- 3. PURSUE OTHER LEGAL REMEDIES PURSUANT TO ARTICLE XI OF THIS ORDINANCE. 4. AFTER RECEIPT OF THE CERTIFICATE OF COMPLETION LETTER AND AS-BUILT PLAN BY NORTH LEBANON TOWNSHIP, A FINAL INSPECTION SHALL BE CONDUCTED BY TOWNSHIP ENGINEER OR DESIGNATED REPRESENTATIVE TO CERTIFY COMPLIANCE WITH THIS ORDINANCE.

C. SWM BMPS SHOULD BE INSPECTED BY THE LANDOWNER, OR THE OWNER'S DESIGNEE (INCLUDING THE TOWNSHIP FOR DEDICATED AND OWNED FACILITIES), ACCORDING TO THE

- FOLLOWING LIST OF MINIMUM FREQUENCIES: 1. ANNUALLY FOR THE FIRST FIVE (5) YEARS FOLLOWING CONSTRUCTION.
  - 2. ONCE EVERY THREE (3) YEARS THEREAFTER.
  - 3. DURING OR IMMEDIATELY FOLLOWING A 10-YEAR OR GREATER STORM. THE 10-YEAR STORM IS 4.6 INCHES OF RAINFALL IN A 24-HOUR PERIOD.

BMP         INFILTRATION VOLUME (C.F.)         STORAGE VOLUME (C.F.)           NFILTRATION BASIN 1         59,922         325,525           NFILTRATION BASIN 2         12,190         46,329



#### POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE SCOUT COLD LOGISTICS, LLC - SUNNY LANE FOODS BUILDING EXPANSION

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN FOR THE PROPOSED PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR SCOUT COLD LOGISTICS, LLC - SUNNY LANE FOODS BUILDING EXPANSION LOCATED AT 2750 HANFORD DRIVE IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.

#### PROJECT DETAILS

HE TOTAL TRACT OF PROPERTY IN QUESTION IS 22.83 ACRES. THE TOTAL SITE AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS 8.90 ACRES. THE PROJECT SITE IS A DEVELOPED LOT WITHIN AN EXISTING BUSINESS PARK. THE PARCEL CONTAINS AN EXISTING 98.000 S.F. BUILDING WITH ASSOCIATED PARKING AREAS. LOADING DOCKS. AND EXISTING STORMWATER MANAGEMENT FACILITIES. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE SITE WAS DEVELOPED IN 2016. PRIOR TO DEVELOPMENT, THE SITE WAS AN AGRICULTURAL FIELD DATING BACK TO THE EARLY 1990'S. THE SITE IS BORDERED TO THE NORTH BY HANFORD DRIVE, TO THE EAST AND WEST BY AGRICULTURAL FIELDS, AND TO THE SOUTH BY THE NORFOLK SOUTHERN RAILROAD. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A 110.00 +/- S F. BUILDING EXPANSION WITH ASSOCIATED LOADING DOCKS. PARKING AREAS, AND INTERNAL ACCESS. DRIVE. THE BUILDING EXPANSION WILL BE SERVED BY PUBLIC WATER AND SEWER. PROPOSED IMPROVEMENTS ALSO INCLUDE MODIFICATIONS TO THE EXISTING STORMWATER MANAGEMENT BASINS TO BRING ALL SITE DEVELOPMENT (INCLUDING PREVIOUS SITE IMPROVEMENTS AND THE PROPOSED EXPANSION) UP TO CURRENT NPDES STANDARDS FOR PCSM DESIGN. THE THREE EXISTING BASINS WILL BE MODIFIED INTO TWO (2) ABOVE GROUND INFILTRATION BASINS TO MANAGE THE SITE RUNOFF. THE NEAREST MAPPED DOWNSTREAM SURFACE WATER IS THE QUITTAPAHILLA CREEK WHICH IS DESIGNATED AS A TROUT STOCKED FISHERY (TSE) THE QUITTAPAHILLA CREEK IS IMPAIRED ACCORDING TO CATEGORY 4C OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: STREAMBANK MODIFICATIONS / DESTABILIZATION - HABITAT ALTERATIONS AND AQUATIC LIFE: URBAN RUNOFF / STORM SEWERS - FLOW REGIME MODIFICATION. THE QUITTAPAHILLA CREEK IS ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL: SOURCE UNKNOWN - PATHOGENS.

#### CALCULATIONS

POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES WERE DESIGNED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED IN THE PENNSYLVANIA STORMWATER MANAGEMENT BMP MANUAL (PA DEP BUREAU OF WATERSHED MANAGEMENT, DECEMBER 2006), AND THE NORTH LEBANON TOWNSHIP STORMWATER MANAGEMENT ORDINANCE (ORDINANCE NO. 6-2022, 7/18/2022).

#### HYDROLOGY

A STORMWATER MANAGEMENT CONTROL SYSTEM IS PROPOSED TO MINIMIZE THE ADDITIONAL RUNOFF VOLUME GENERATED BY THE PROPOSED IMPROVEMENTS AND TO CONTROL THE FLOW TO A RATE LESSER THAN OR EQUAL TO THE PRE-DEVELOPMENT RUNOFF. FOLLOWING THE REQUIREMENTS OF THE PA CODE CHAPTER 102.8 AND THE NORTH LEBANON TOWNSHIP SWM ORDINANCE.

THE PROPOSED SITE IMPROVEMENTS WILL SHARE STORMWATER MANAGEMENT FACILITIES WITH THE EXISTING SITE IMPROVEMENTS. IN ORDER TO SHOW COMPLIANCE WITH CURRENT REGULATIONS, THE ENTIRE SITE IS BEING RE-ANALYZED FROM AN OVERALL VOLUME, RATE, AND WATER QUALITY PERSPECTIVE. TO ACHIEVE THIS, EXISTING CONDITIONS ARE ASSUMED AS MEADOW, PRIOR TO ANY DEVELOPMENT ON THE SITE. FOR CALCULATION PURPOSES, POST-CONSTRUCTION CONDITIONS ASSUME THAT ALL SITE DEVELOPMENT (ALL IMPROVEMENTS CONSTRUCTED AND 2016 AND PROPOSED NOW IN 2024) IS "PROPOSED" AND TREATED AS NEW IMPERVIOUS IN THE STORMWATER MANAGEMENT CALCULATIONS.

IN ORDER TO PROVIDE WATER QUALITY, VOLUME CONTROL, AND RATE CONTROL, THE SITE WILL BE SERVED BY TWO (2) INFILTRATION BASIN FACILITIES. THESE TWO (2) FACILITIES WILL BE LOCATED WITHIN THE SAME AREAS AS THE EXISTING STORMWATER MANAGEMENT BASINS LOCATED ON SITE. THE EXISTING BASINS WILL BE EXPANDED AND MODIFIED TO MEET CURRENT DESIGN STANDARDS.

THE BASINS ARE DESIGNED TO MANAGE THE POST-DEVELOPMENT DISCHARGE RATE TO A RATE EQUAL OR LOWER THAN THE PRE-DEVELOPMENT RATE AND TO MANAGE THE 2-YR 24-HOUR VOLUME INCREASE THROUGH INFILTRATION. THE CURVE NUMBERS ARE TAKEN FROM TR-55. SUPPORTING CALCULATIONS CAN BE SEEN IN THE DEP PCSM SPREADSHEETS.

PER THE NORTH LEBANON TOWNSHIP SWM MANAGEMENT ORDINANCE, POST-DEVELOPMENT DISCHARGE FLOW RATES MUST MEET THE FOLLOWING CRITERIA. Pre Developed Post Developed

Pre - Developed	Post Developed
2 - year	< or = to 1-yr Pre
5 - year	< or = to 2-yr Pre
10 - year	$\leq$ or = to 5-yr Pre
25 - year	< or = to 25-yr Pre
100 - year	$\leq$ or = to 100-yr Pre

THE SCS METHOD WAS USED TO DETERMINE PEAK FLOW RATES FOR BOTH PRE- AND POST-DEVELOPED CONDITIONS. THE RESULTING POST DEVELOPMENT RUNOFF FLOW RATES HAVE BEEN REDUCED TO REQUIRED PRE-DEVELOPMENT RELEASE RATES AS REQUIRED IN THE TABLE ABOVE AND SEEN IN THE FLOW SUMMARY TABLE LATER IN THIS REPORT. HYDROCAD V10.0 SOFTWARE WAS USED TO PERFORM ALL BASIN ROUTING CALCULATIONS.

THIS PCSM PLAN IS DESIGNED TO MINIMIZE ANY INCREASE IN STORMWATER RUNOFF VOLUME AND PREVENT AN INCREASE IN THE RATE OF STORMWATER RUNOFF. IN ORDER TO ANALYZE THE EFFECTIVENESS OF THE PROPOSED STORMWATER MANAGEMENT PLAN THE DRAINAGE PATTERN IS ANALYZED AS TWO (2) POINTS OF INTEREST.

DP 001 - DISCHARGE POINT 001 IS TAKEN NEAR THE SOUTHWESTERN PROPERTY CORNER WHERE ALL EXISTING AND PROPOSED BASIN OUTLET PIPES DISCHARGE. RUNOFF FROM DP 001 WILL FLOW THROUGH A SERIES OF EXISTING CULVERTS AND CHANNELS PRIOR TO REACHING THE QUITTAPAHILLA CREEK.

OP 002 - DISCHARGE POINT 002 IS TAKEN ALONG THE WESTERN PROPERTY LINE WHERE A SMALL PORTION OF PRE- AND POST-DEVELOPMENT RUNOFF WILL SHEET FLOW ONTO ADJACENT PROPERTY. RUNOFF FROM DP 002 WILL FLOW ACROSS ADJACENT PROPERTY PRIOR TO REACHING THE SAME LOCATION AS DP 001 AND DOWNSTREAM SERIES OF EXISTING CULVERTS AND CHANNELS PRIOR TO REACHING THE QUITTAPAHILLA CREEK.

#### THERMAL IMPACTS ANALYSIS

EXISTING RUNOFF FROM THE SITE IS CURRENTLY TREATED BY THREE (3) EXISTING STORMWATER BASINS. THE EXISTING BASINS WILL RE MODIFIED INTO TWO (2) INFILTRATION BASINS TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS. RUNOFF REACHING THE INFILTRATION BASINS WILL BE COOLED BY THE NATIVE VEGETATION IN THE BASIN BOTTOMS BEFORE BEING INFILTRATED THROUGH THE ENGINEERED SOIL MIX AND INTO THE GROUND. ADDITIONALLY, OVERFLOW FROM FROM INFILTRATION BASIN 2 WILL DISCHARGE INTO INFILTRATION BASIN 1 IN A TREATMENT TRAIN WHICH WILL PROVIDE ADDITIONAL THERMAL RELIEF. SHADE TREES ARE ALSO PROPOSED IN AND AROUND THE NEW PARKING LOT EXPANSIONS TO SHADE THESE AREAS AND PROVIDE ADDITIONAL TEMPERATURE RELIEF FOR RUNOFF THAT FLOWS OVER THE IMPERVIOUS SURFACES.

### WATER QUALITY AND NON-DISCHARGE ANALYSIS

THE SITE HAS BEEN DESIGNED TO MEET THE NPDES REQUIREMENTS AS CALCULATED IN THE DEP PCSM SPREADSHEET - QUALITY. THROUGH THE IMPLEMENTATION OF THE STRUCTURAL BMPS, THE WATER QUALITY REQUIREMENTS HAVE BEEN MET FOR THIS SITE. PLEASE SEE THE STANDARD DEP PCSM SPREADSHEETS FOR A MORE IN-DEPTH DESCRIPTION OF HOW THE REQUIREMENTS ARE MET FOR THIS SITE.

#### PROPOSED BEST MANAGEMENT PRACTICES

INFILTRATION BASIN - TWO (2) INFILTRATION BASINS WILL BE UTILIZED TO PROMOTE INFILTRATION, EVAPORATION, AND EVAPOTRANSPIRATION AND CONTROL FLOW AND VOLUME LEAVING THE SITE.

#### OFFSITE DISCHARGE ANALYSIS

HE FOLLOWING IS AN EXCERPT FROM THE PA DEP FAQ SHEET LABELED CHAPTER 102 OFF-SITE DISCHARGES OF STORMWATER TO NON-SURFACE WATERS (JANUARY 2, 2019), FAQ #2 STATES, "PERSONS PROPOSING TO DISCHARGE MUST HAVE THE LEGAL AUTHORITY TO DISCHARGE THEIR STORMWATER FITHER THROUGH FITHER A COMMON LAW FASEMENT OR AN EXPRESS FASEMENT. FOR SITES THAT DISCHARGE TO EXISTING SWALES, DITCHES, STORM SEWERS OR SIMILAR STRUCTURES WHERE THE NEW ACTIVITIES WILL NOT RESULT IN A CHANGE IN VOLUME OR RATE OF STORMWATER RUNOFF (FOR ALL STORM EVENTS), THE EXISTING COMMON LAW EASEMENT COULD BE RELIED UPON."

THE SITE DISCHARGES TO ALL DISCHARGE POINTS IN A SIMILAR MANNER AND AT A RATE THAT IS LESS THAN PRE-DEVELOPMENT FOR ALL STORM EVENTS.

#### CHAPTER 102.8 (B) ANALYSIS

THE DOWNSTREAM CHANNEL IS PROTECTED BY THE FLOW REDUCTION PROVIDED FROM THE PROPOSED STORMWATER MANAGEMENT FACILTIES. THE STRUCTURAL BMPS ALLOW FOR REDUCED FLOW TO THE DISCHARGE POINTS, AND THEREFORE THE DOWNSTREAM CHANNEL WILL NOT BE IMPACTED. THE SAME FLOW REDUCTION AND WATER QUALITY BENEFITS PROVIDED BY THE STRUCTURAL BMPS WILL ALSO SERVE TO PROTECT THE EXISTING DRAINAGE FEATURES AND DOWNSTREAM VEGETATION.

#### SOIL INFORMATION AND GEOLOGY

HE FOLLOWING SOILS ARE FOUND WITHIN OR ADJACENT TO THE AREA TO BE DISTURBED BY EARTH MOVING ACTIVITIES. THESE SOILS CAN ERODE WHEN DISTURBED. EROSION WILL BE CONTROLLED WITH STANDARD EROSION CONTROLS SUCH AS FILTER SOCK, SLOPE AND SWALE MATTING, RIPRAP OUTLET PROTECTION, INLET PROTECTION, ROCK FILTER, AND ROCK CONSTRUCTION ENTRANCE.

Map Symbol	Soil Name	Slope	Hydrologic Group
DfB	Duffield silt loam	3-8%	В
HaB	Hagerstown silt loam	3-8%	В
HeB	Hagerstown-Rock outcrop complex	3-8%	В
No	Nolin variant silt loam	-	В
US	Urban land-Hagerstown complex	-	В

\*IF SOILS ARE BOLD, THEY ARE DISTURBED DURING CONSTRUCTION ON THIS PROJECT.

#### KARST NOTES

THE SITE IS UNDERLAIN BY THE ONTELAUNEE FORMATION WHICH IS COMPRISED OF DOLOMITE LIMESTONE, AND CHERT, DOLOMITE AND LIMESTONE ARE SUSCEPTIBLE TO KARST ACTIVITY. THE PA DEP'S EMAPPA IDENTIFIES FIVE (5) SURFACE DEPRESSIONS ON THE PROJECT PROPERTY BUT NO SINKHOLES.

THE GEOTECHNICAL ENGINEERING REPORT FOR STORMWATER MANAGEMENT PREPARED BY ECS MID-ATLANTIC, LLC DID IDENTIFY THREE POTENTIAL (3) SURFACE DEPRESSIONS ON SITE. THESE POTENTIAL SURFACE DEPRESSIONS WILL BE EXPLORED WITH A TEST PIT AT FACH LOCATION UNDER THE SUPERVISION OF ECS PRIOR TO CONSTRUCTION AT THE SITE IN ORDER TO DETERMINE IF POTENTIAL REPAIRS ARE NECESSARY BASED ON THE AVAILABLE INFORMATION. THE RISK OF SINKHOLES AND RELATED KARST ACTIVITY ON THE SITE IS MODERATE. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED DURING CONSTRUCTION, THE LOCAL CONSERVATION DISTRICT WILL BE IMMEDIATELY CONTACTED AND A GEOTECHNICAL ENGINEER WILL BE REQUIRED TO OVERSEE ANY MITIGATION MEASURES.

IN ORDER TO REDUCE THE RATE OF SINKHOLE DEVELOPMENT AND IN KEEPING WITH THE GUIDELINES AND RECOMMENDATIONS OF THE PA BMP MANUAL, ECS RECOMMENDS THAT THE FOLLOWING DESIGN PRINCIPLES BE INCORPORATED:

 USE EXISTING DRAINAGE PATTERNS: O THE PROPOSED INFILTRATION BASINS WILL BE LOCATED IN THE SAME LOCATION AS THE EXISTING STORMWATER MANAGEMENT BASINS

• KEEP STORMWATER AWAY FROM KNOWN SINKHOLES OR PROBLEMATIC SUBSIDENCE AREAS: O THERE ARE NO KNOWN SINKHOLES ON SITE.

- AVOID CONCENTRATING STORMWATER:
- REDUCE RUNOFF VOLUME AND VELOCITY:
- USE BROAD SHALLOW BASINS:
- PONDING DEPTH OF LESS THAN 3'. MAINTAIN THE FACILITIES POST CONSTRUCTION:
- O UNDERDRAINS ARE PROVIDED FOR EACH BASIN.

DUFFIELD SOILS - THE DUFFIELD SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM FROM LIMESTONE BEDROCK. SLOPES RANGE FROM 0 TO 35 PERCENT. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 40 INCHES. MEAN ANNUAL TEMPERATURE IS 53 DEGREES F. DUFFIELD SOILS ARE SUSCEPTIBLE TO CUTBANKS AND CAVE INS AND MAY BE CORROSIVE TO STEEL AND CONCRETE THIS SOIL MAY ALSO BE FASHLY FRODIBLE AND SUBJECT TO HYDRIC INCLUSIONS LOW STRENGTH, SLOW PERCOLATION, PIPING, AND A POOR SOURCE OF TOPSOIL. THIS SOIL IS ALSO SUSCEPTIBLE TO SHRINK/SWELL AND HAS THE POTENTIAL FOR SINKHOLE FORMATION. THIS SOIL IS ALSO SUBJECT TO WETNESS BUT NOT PONDING. HAGERSTOWN SOILS - THE HAGERSTOWN SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM OF HARD GRAY LIMESTONE. SLOPE RANGES FROM 0 TO 45 PERCENT. PERMEABILITY IS MODERATE, MEAN ANNUAL PRECIPITATION IS 30 TO

HAGERSTOWN SOILS MAY ALSO BE SUSCEPTIBLE TO FROST ACTION, SHRINK-SWELL, AND SINKHOLES.

SOIL USE LIMITATIONS AND RESOLUTIONS

- TRENCHING AND EXCAVATION OPERATIONS.
- SEDIMENT-LADEN WATER OFF-SITE.
- UTILIZED, AND WATER SHALL BE PUMPED TO AN UNDISTURBED AREA UPSTREAM OF A PERIMETER CONTROL BMP SUCH AS A FILTER
- LOW STRENGTH/LANDSLIDE PRONE: THE MAXIMUM PROPOSED SLOPE ON THE SITE IS 3:1. THIS WILL REDUCE THE POTENTIAL FOR
- LANDSLIDES, AND SHALL BE STABILIZED IMMEDIATELY. PROPOSED INFILTRATION AREAS
- PIPING: ANTI-SEEP COLLARS WILL BE PROVIDED AS PART OF THE PCSM AND PIPELINE DESIGNS.
- SURFACES SHALL BE PROMPTLY SEALED
- THE LIKELIHOOD OF WATER INFILTRATING NEAR OR UNDER THESE STRUCTURES.
- SINKHOLE FORMATION: SEE KARST NOTES ABOVE.
- TO AN UNDISTURBED AREA UPSTREAM OF A PERIMETER CONTROL (FILTER SOCK).
- FLOODING: THE SITE IS NOT LOCATED WITHIN A MAPPED FLOODPLAIN.

### GENERAL SOIL NOTES

- OTHER OBJECTIONABLE MATERIAL NEED TO HAVE APPROPRIATE E&S CONTROLS. 2. 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.
- THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- 6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- ALTERED DURING CONSTRUCTION AND THEY SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

#### INFILTRATION TESTING REQUIREMENTS

INFILTRATION TESTING HAS BEEN CONDUCTED AND RESULTS ARE PROVIDED IN THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY ECS MID-ATLANTIC INCLUDED AS AN APPENDIX TO THIS PCSM REPORT.

OWNERSHIP, OPERATIONS AND MAINTENANCE

SHORT-TERM OWNERSHIP, OPERATIONS AND MAINTENANCE OF THE PCSM BMPS IS THE RESPONSIBILITY OF THE CONTRACTOR (UNKNOWN AT THIS TIME), WHO SHALL BE LISTED AS THE CO-PERMITTEE ON THE NPDES PERMIT. LONG-TERM OWNERSHIP, OPERATIONS AND MAINTENANCE OF THE PCSM BMPS IS THE RESPONSIBILITY OF THE PROPERTY OWNER HEREIN IDENTIFIED AS SCOUT COLD LOGISTICS. LLC.

INDIVIDUAL BMP DESCRIPTION, CONSTRUCTION SEQUENCE, AND MAINTENANCE

### BMP 6.4.2: INFILTRATION BASIN

GENERAL OVERALL BMP DESCRIPTION

AN INFILTRATION BASIN IS A SHALLOW IMPOUNDMENT THAT STORES AND INFILTRATES RUNOFF OVER A LEVEL, UN-COMPACTED (PREFERABLY UNDISTURBED AREA) WITH RELATIVELY PERMEABLE SOILS.

TWO (2) INFILTRATION BASINS WILL BE LOCATED ON SITE. THE BOTTOMS WILL BE CONSTRUCTED WITH AN ENGINEERED SOIL MIXTURE TO ASSIST IN THE WATER QUALITY BENEFITS OF FILTRATION AS WELL AS TO PROMOTE VEGETATION GROWTH AND INFILTRATION. THE INFILTRATION BASIN FACILITIES WILL BE PLANTED WITH ERNST CONSERVATION SEEDS "RETENTION BASIN FLOOR MIX - LOW MAINTENANCE" MIX WHICH WILL PROMOTE POLLUTANT REMOVAL. THE PRIMARY FUNCTION OF THESE BMPS IS TO MANAGE STORMWATER RUNOFF VOLUME AND CONTROL THE PEAK RATE LEAVING THE SITE. PLEASE SEE THE PCSM PLAN AND REPORT FOR DETAILS, SPECIFICATIONS AND CALCULATIONS.

#### CONSTRUCTION SEQUENCE

- 1. PROTECT INFILTRATION BASIN AREA FROM COMPACTION PRIOR TO INSTALLATION. 2. IF POSSIBLE, INSTALL INFILTRATION BASIN DURING THE LATER PHASES OF SITE CONSTRUCTION TO PREVENT SEDIMENTATION
- INI FTS AND PIPES 3. INSTALL AND MAINTAIN PROPER EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
- COMPACT SUBGRADE
- 5. INSTALL OUTLET CONTROL STRUCTURES.
- 6. SEED AND STABILIZE TOPSOIL. (VEGETATE IF APPROPRIATE WITH NATIVE PLANTINGS)

### MAINTENANCE

- 1. WHILE VEGETATION IS BEING ESTABLISHED, PRUNING AND WEEDING MAY BE REQUIRED. 2. DETRITUS MAY ALSO NEED TO BE REMOVED EVERY YEAR. PERENNIAL PLANTINGS MAY BE CUT DOWN AT THE END OF THE GROWING
- 4. DURING PERIODS OF EXTENDED DROUGHT, AREAS MAY REQUIRE WATERING.

#### MAINTENANCE AND INSPECTION

- PER YEAR AND AFTER MAJOR RUNOFF EVENTS (> 1-INCH RAINFALL DEPTH).
- 2. THE VEGETATION ALONG THE SURFACE OF THE INFILTRATION FACILITY SHALL BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS SHALL BE RE-VEGETATED AS SOON AS POSSIBLE.

#### O RUNOFF WILL BE NATURALLY CONCENTRATED IN THE PROPOSED BASINS WHICH ARE DESIGNED IN ACCORDANCE WITH THE BELOW PRINCIPLES TO REDUCE THE RISK OF SINKHOLE FORMATIONS. ALL STORMWATER PIPE WILL UTILIZE WATER-TIGHT

O ON-SITE RUNOFF VOLUME WILL BE REDUCED IN ACCORDANCE WITH TOWNSHIP AND CHAPTER 102 REQUIREMENTS.

O INFILTRATION BASIN 1 HAS A MAXIMUM PONDING DEPTH OF LESS THAN 3.5' AND INFILTRATION BASIN 2 HAS A MAXIMUM

O POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES WILL BE MAINTAINED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE AGREEMENT REQUIRED BY THE TOWNSHIP AND RECORDED WITH THE PLAN. PROVIDE UNDERDRAINS OR OTHER MEANS FOR DEWATERING IN STORMWATER MANAGEMENT FACILITIES IF NEEDED:

45 INCHES. MEAN ANNUAL AIR TEMPERATURE IS 45 TO 58 DEGREES. HAGERSTOWN SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO STEEL BUT NOT CONCRETE. THIS SOIL MAY ALSO BE EASILY ERODIBLE AND SUBJECT TO A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, AND A POOR SOURCE OF TOPSOIL.

NOLIN SOILS - THE NOLIN SERIES CONSISTS OF VERY DEEP, WELL DRAINED SOILS FORMED IN ALLUVIUM DERIVED FROM LIMESTONES, SANDSTONES, SILTSTONES, SHALES, AND LOESS. THESE NEARLY LEVEL TO MODERATELY STEEP SOILS ARE ON FLOOD PLAINS, IN DEPRESSIONS WHICH RECEIVE RUNOFF FROM SURROUNDING SLOPES, OR ON NATURAL LEVEES OF MAJOR STREAMS AND RIVERS. SLOPE RANGES FROM 0 TO 25 PERCENT, BUT IS DOMINANTLY 0 TO 3 PERCENT, MEAN ANNUAL TEMPERATURE IS 56 DEGREES F, AND THE MEAN ANNUAL PRECIPITATION IS 43 INCHES. NOLIN SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO CONCRETE BUT NOT STEEL. THIS SOIL MAY ALSO BE SUBJECT TO FLOODING, A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, AND PIPING. NOLIN SOILS MAY ALSO BE SUSCEPTIBLE TO SINKHOLE FORMATION.

• CUT-BANK CAVING: ALL APPLICABLE OSHA STANDARDS AND REGULATIONS SHALL BE IMPLEMENTED AT ALL TIMES DURING

• CORROSION OF STEEL AND CONCRETE: ALL UNDERGROUND FOUNDATIONS AND STRUCTURES SHALL BE PROPERLY PROTECTED AGAINST CORROSION, WHICH MAY INCLUDE COATING THESE STRUCTURES WITH CORROSION-RESISTANT MATERIAL • EASILY ERODIBLE: EROSION AND SEDIMENT POLLUTION CONTROLS WILL BE IMPLEMENTED TO AVOID THE TRANSPORTATION OF

• DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, EXCAVATING TRENCHES, DEWATERING BASINS, ETC. THE GEOTECHNICAL REPORT DID NOT IDENTIFY ANY AREAS OF HIGH GROUNDWATER. IF DEWATERING IS REQUIRED, A SUMP PIT AND FILTER BAG SHALL BE

• HYDRIC SOILS/HYDRIC INCLUSIONS: A WETLAND FIELD SURVEY WAS CONDUCTED AND NO WETLANDS ARE LOCATED ON SITE.

EROSION AND LAND SLIDE ACTION. ALL PROPOSED BERMS SHALL BE COMPACTED FULLY IN ORDER TO PROTECT AGAINST

• SLOW PERCOLATION: ADEQUATE PRECAUTIONS WILL BE TAKEN TO ENSURE THAT THE PCSM BMPS INFILTRATE WITHIN THE REQUIRED TIME PERIOD, INCLUDING INFILTRATION TESTING AND SOIL MODIFICATION/UNDERDRAIN INSTALLATION, IF NECESSARY. INFILTRATION TESTS PREVIOUSLY PERFORMED INDICATED THAT THE INFILTRATION RATE AT THE SITE IS ADEQUATE IN THE

 POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION. AS THE MAJORITY OF THE PROJECT CONSISTS OF CONSTRUCTION OF IMPERVIOUS AREAS, THE TOPSOIL REQUIRED WILL BE MINIMAL. • FROST ACTION: ALL IMPERVIOUS SURFACES SHALL BE GRADED AT A MINIMUM OF 1% IN ONE DIRECTION, SO THAT WATER WILL NOT COLLECT ON THE SURFACE AND CAUSE DAMAGE DURING FREEZE/THAW CYCLES. CRACKS WHICH DEVELOP IN THE IMPERVIOUS

• SHRINK/SWELL: ALL SITE GRADING SHALL DIRECT WATER AWAY FROM BUILDINGS AND OTHER IMPERVIOUS SURFACES TO REDUCE

• WETNESS: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, DEWATERING BASINS, ETC. SHOULD DEWATERING BE REQUIRED, A SUMP PIT AND FILTER BAG SHALL BE UTILIZED, AND WATER SHALL BE PUMPED

1. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND

3. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

4. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS

5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

7. THE LOCAL CONSERVATION DISTRICT SHALL BE CONTACTED IF SEEPS OR SPRINGS ARE ENCOUNTERED AND THE DESIGNS ARE

AND/OR DAMAGE FROM CONSTRUCTION ACTIVITY. AFTER INSTALLATION, PREVENT SEDIMENT LADEN WATER FROM ENTERING

4. IF NECESSARY, EXCAVATE INFILTRATION BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE FROM ROCK AND DEBRIS. DO NOT

7. DO NOT REMOVE INLET PROTECTION OR OTHER EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.

3. AREAS SHOULD BE INSPECTED AT LEAST TWO TIMES PER YEAR FOR SEDIMENT BUILDUP, EROSION VEGETATIVE CONDITIONS ETC.

1. CATCH BASINS AND INLETS (UPGRADIENT OF INFILTRATION FACILITY) SHOULD BE INSPECTED AND CLEANED AT LEAST TWO TIMES

3. VEHICLES SHOULD NOT BE PARKED OR DRIVEN OVER AN INFILTRATION AREA, AND CARE SHOULD BE TAKEN TO AVOID EXCESSIVE

COMPACTION BY MOWERS

- 4. INSPECT THE FACILITY AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. MOSQUITOES SHOULD NOT BE A PROBLEM IF THE WATER DRAINS IN 72 HOURS. MOSQUITOES REQUIRE A CONSIDERABLY LONG BREEDING PERIOD WITH RELATIVELY STATIC WATER LEVELS
- 5. ALSO INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SLOPE STABILITY IN THE BERMS.
- 6. THE SEED MIXTURE PLANTED IN THE BOTTOM OF THE BASINS SHALL BE MOWED DOWN TO A HEIGHT OF 8-INCHES WHEN IT REACHES A HEIGHT OF 24-INCHES DURING THE FIRST FULL GROWING SEASON ONLY. IN ALL SUBSEQUENT YEARS, ANY MATERIAL STILL STANDING FROM THE PREVIOUS GROWING SEASON SHALL BE MOWED IN EARLY SPRING TO A HEIGHT OF 2-INCHES PRIOR TO THE CURRENT YEAR'S GROWTH REACHING A HEIGHT OF 2-INCHES. THE SEED MIXTURE SHALL NOT BE MOWED AGAIN UNTIL THE FOLLOWING SPRING. IN ALL INSTANCES, CLIPPINGS SHALL BE COMPOSTED OR TAKEN TO AN APPROVED YARD WASTE RECYCLING FACILITY. MOWING SHALL AVOID ALL PLUG PLANTINGS IN THE BASIN BOTTOM (WHEN APPLICABLE).
- 7. REMOVE ACCUMULATED SEDIMENT FROM BASIN AS REQUIRED. RESTORE ORIGINAL CROSS SECTION AND INFILTRATION RATE.
- 8. SHOULD ANY INFILTRATION BASIN FAIL TO DEWATER WITHIN A 72-HOUR TIME PERIOD THE OWNER SHALL INVESTIGATE ALTERNATIVE SOLUTIONS
- REPLACE THE ENGINEERED SOIL LAYER AND / OR THE UNDERDRAIN SYSTEM. THE ENGINEERED SOIL LAYER SHOULD BE REMOVED. THE SOIL LAYER AT THE BOTTOM OF THE ENGINEERED SOIL SHALL BE SCARIFIED. THE ENGINEERED SOIL LAYER SHALL BE REPLACED PER THE PCSM PLAN SPECIFICATIONS.
- CONDUCT AN INVESTIGATION BY A QUALIFIED INDIVIDUAL IN ORDER TO DETERMINE THE CAUSE OF FAILURE AND MAKE A DETERMINATION AS TO THE BEST COURSE OF ACTION AS TO RETURN THE SITE TO THE STANDARDS OF THE LOCAL MUNICIPAL AUTHORITY AND THE PA DEP.

#### SWALES

#### **OPERATION & MAINTENANCE**

ALTERNATIVES INCLUDE

- 1. MAINTENANCE ACTIVITIES TO BE DONE ANNUALLY AND WITHIN 48 HOURS AFTER EVERY MAJOR STORM EVENT (>1-INCH RAINFALL DEPTH):
- a. INSPECT AND CORRECT EROSION PROBLEMS, DAMAGE TO VEGETATION, AND SEDIMENT AND DEBRIS ACCUMULATION (ADDRESS WHEN >3 INCHES AT ANY SPOT OR COVERING VEGETATION).
- b. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION AND FORMATION OF RILLS OR GULLIES, CORRECT AS NEEDED. c. INSPECT FOR POOLS OF STANDING WATER; DEWATER AND DISCHARGE TO AN APPROVED LOCATION AND RESTORE TO DESIGN
- d. MOW AND TRIM VEGETATION TO ENSURE SAFETY, AESTHETICS, PROPER SWALE OPERATION, OR TO SUPPRESS WEEDS AND INVASIVE VEGETATION; DISPOSE OF CUTTINGS IN A LOCAL COMPOSTING FACILITY; MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING
- e. INSPECT FOR LITTER: REMOVE PRIOR TO MOWING. f. INSPECT FOR UNIFORMITY IN A CROSS-SECTION AND LONGITUDINAL SLOPE, CORRECT AS NEEDED.
- g. INSPECT SWALE INLET (CURB CUTS, PIPES, ETC.) AND OUTLET FOR SIGNS OF EROSION OR BLOCKAGE, CORRECT AS NEEDED.
- h. WRITTEN REPORTS DOCUMENTING ALL INSPECTIONS, REPAIRS, AND MAINTENANCE ACTIVITIES SHALL BE MAINTAINED ON SITE BY THE PROPERTY OWNER AT ALL TIMES.
- 2. MAINTENANCE ACTIVITIES TO BE DONE AS NEEDED:
- a. PLANT ALTERNATIVE GRASS SPECIES IN THE EVENT OF UNSUCCESSFUL ESTABLISHMENT. b. RE-SEED BARE AREAS; INSTALL APPROPRIATE EROSION CONTROL MEASURES WHEN NATIVE SOIL IS EXPOSED OR EROSION
- CHANNELS ARE FORMING. c. ROTO-TILL AND REPLANT SWALE IF DRAW DOWN TIME IS MORE THAN 48 HOURS.
- d. INSPECT AND CORRECT CHECK DAMS WHEN SIGNS OF ALTERED WATER FLOW (CHANNELIZATION, OBSTRUCTIONS, EROSION, ETC.) ARE IDENTIFIED.
- e. WATER DURING DRY PERIODS, FERTILIZE, AND APPLY PESTICIDE ONLY WHEN ABSOLUTELY NECESSARY.
- 3. WINTER CONDITIONS ALSO NECESSITATE ADDITIONAL MAINTENANCE CONCERNS, WHICH INCLUDE THE FOLLOWING:
- a. INSPECT SWALE IMMEDIATELY AFTER SPRING MELT, REMOVE RESIDUALS (E.G. SAND) AND REPLACE DAMAGED VEGETATION WITHOUT DISTURBING REMAINING VEGETATION. b. IF ROADSIDE OR PARKING LOT RUNOFF IS DIRECTED TO THE SWALE, MULCHING AND/OR SOIL AERATION/MANIPULATION MAY BE
- REQUIRED IN THE SPRING TO RESTORE STRUCTURE AND MOISTURE CAPACITY AND TO REDUCE THE IMPACTS OF DEICING AGENTS. c. USE NONTOXIC, ORGANIC DEICING AGENTS, APPLIED EITHER AS BLENDED, MAGNESIUM CHLORIDE-BASED LIQUID PRODUCTS OR AS PRETREATED SALT.
- d. USE SALT-TOLERANT VEGETATION IN SWALES.

#### OVERALL PCSM CONSTRUCTION SEQUENCE

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS. THE LANDOWNER. ALL APPROPRIATE MUNICIPAL OFFICIALS. THE E&S PLAN PREPARER, PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE OF THE COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.

- 2. INSTALL PERIMETER E&S CONTROLS (SEE CONSTRUCTION SEQUENCE).
- 3. INSTALL INFILTRATION BASINS 1 & 2. CARE SHOULD BE TAKEN TO MINIMIZE SOIL COMPACTION IN THESE AREAS BEFORE AND AFTER CONSTRUCTION. SUCCESS HAS BEEN ACHIEVED WITH MINIMAL COMPACTION UTILIZING A "ROCK SLINGER".
- 5. CONSTRUCT IMPROVEMENTS. AFTER THE IMPROVEMENTS ARE CONSTRUCTED ADD TOPSOIL TO THE POST-CONSTRUCTION PERVIOUS AREAS TO BE PERMANENTLY STABILIZED.
- 6. APPLY THE SPECIFIED PERMANENT STABILIZATION ACROSS THE SITE.

### NPDES PERMIT NOTES

- 1. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER GENERAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 90 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE
- 2. PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER INDIVIDUAL PERMIT MUST SUBMIT TO THE COUNTY CONSERVATION DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 180 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVFRAGE.
- 3. ALL EARTHMOVING CONTRACTORS MUST BE ADDED AS CO-PERMITTEES TO THE NPDES PERMIT.
- 4. SITE INSPECTIONS AND MONITORING REPORTS THE PERMITTEE AND CO-PERMITTEE(S) SHALL COMPLY WITH ALL OF THE MONITORING AND REPORTING REQUIREMENTS, AS OUTLINED IN PART A.2 OF THE NPDES PERMIT. THE PERMITTEE AND CO-PERMITTEE(S) SHALL ENSURE THAT SITE INSPECTIONS ARE CONDUCTED AT LEAST WEEKLY AND AFTER EACH MEASURABLE PRECIPITATION EVENT BY QUALIFIED PERSONNEL. A WRITTEN REPORT SHALL BE KEPT FOR EACH INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF PART A.2.A
- 5. THE DEP "VISUAL INSPECTION CHECKLIST" SHOULD BE COMPLETED FOR EACH INSPECTION AND SHOULD BE AVAILABLE ON-SITE FOR INSPECTION BY DEP OR COUNTY CONSERVATION DISTRICT PERSONNEL 6. AFTER ALL EARTHMOVING ACTIVITY HAS CEASED AND THE ENTIRE PERMITTED AREA IS PERMANENTLY STABILIZED, THE PERMITTEE
- MUST SUBMIT A NOTICE OF TERMINATION TO THE LOCAL COUNTY CONSERVATION DISTRICT TO CLOSE OUT THE PERMIT. ALLOWING THE NPDES PERMIT TO EXPIRE IS DETERMINED TO BE A VIOLATION OF THE NPDES PERMIT. BMP CRITICAL STAGES
- PER REQUIREMENTS OF THE PA DEP A LICENSED PROFESSIONAL OR DESIGNEE MUST BE PRESENT FOR THE INSTALLATION OF ALL BMP AND STORMWATER CONTROLS. PLEASE CONTACT THE DESIGN PROFESSIONAL OR ENSURE A LICENSED PROFESSIONAL IS PRESENT BEFORE BEGINNING THE FOLLOWING CONSTRUCTION ACTIVITIES:
- PERMANENT SITE STABILIZATION INFILTRATION BASINS 1 & 2
- O EXCAVATION/ROUGH GRADING
- O OUTLET PIPE, ANTI-SEEP COLLAR, CLAY CORE INSTALLATION
- O UNDERDRAIN AND AMENDED SOILS INSTALLATION

**PROJECT WASTES NOTES** 

THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, EXISTING ON-SITE REFUSE, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. 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 SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE. WASTE MATERIALS WITH OR FROM THE POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) BEST MANAGEMENT PRACTICES

SEDIMENT DEPOSITED AND ACCUMULATED IN PCSM BMPS SHALL BE REMOVED FROM THE BMP AND DISPOSED OF PROPERLY.

• CUTTINGS AND TRIMMINGS FROM PCSM BMPS SHALL BE DISPOSED OF IN A LOCAL COMPOSTING FACILITY. • LITTER CLEANED FROM PCSM BMPS SHALL BE DISPOSED OF IN A TRASH RECEPTACLE FOR PICK UP BY THE LOCAL REFUSE HAULER.

STAGING OF EARTHMOVING

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED.

CONSTRUCTION OF THE SITE IMPROVEMENTS IS EXPECTED TO BEGIN IN THE SUMMER OF 2024. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. SHOULD ANY SINKHOLES OR GROUNDWATER SOURCES BE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER IMMEDIATELY. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT.

#### SEQUENCE OF CONSTRUCTION

1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL

ENGINEER, AND A REPRESENTATIVE OF THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING. 2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES

SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES. 3. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWING DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING BY THE LOCAL CONSERVATION DISTRICT OR BY DEP PRIOR T

4. INSTALL THE ALTERNATE ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE ATTACHED PLAN.

5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE CONSTRUCTION FENCE, ETC.)

6 LOCATE STAKE AND FLAG AREAS MARKED AS INFILITRATION PCSM BMP'S (LE INFILITRATION BASINS 1 & 2) REFER TO PCSM PLA FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION, NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING

7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 1-5 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BI INSTALLED ALONG THE CONTOUR WHERE POSSIBLE. AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY A TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SIL SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED.

8. INSTALL INLET PROTECTION FOR EXISTING INLETS AS INDICATED ON THE ATTACHED PLAN.

9. INSTALL ROCK FILTER OUTLETS #1 & #2.

IMPLEMENTATION.

10. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND A LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."

11. EXCAVATE AS REQUIRED TO INSTALL INFILTRATION BASIN 1 AS SHOWN ON THE PCSM PLAN. INSTALL THE OUTLET PIPE ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILI EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION A EMERGENCY SPILLWAY. INSTALL RIPRAP APRON AT THE BASIN OUTFALL. THE INFILTRATION BASIN SHALL BE OVER-EXCAVATED AN SCARIFIED IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET T AVOID LOCALIZED COMPACTION. INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE TH ENGINEERED SOIL MIX TO THE REQUIRED ELEVATION WITHIN THE INFILTRATION BASIN. INSTALL THE SILT SOCK AT LOCATION 6 T PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASI BOTTOM. WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL O DESIGNEE SHALL BE PRESENT ONSITE DURING EXCAVATION TO SUBGRADE OUTLET PIPE INSTALLATION ANTI-SEEP COLLAR AN CLAY CORE INSTALLATION, INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING O INFILTRATION BASIN 1.

12. INSTALL ROCK FILTERS #1 & #2.

13. EXCAVATE AS REQUIRED TO INSTALL INFILTRATION BASIN 2 AS SHOWN ON THE PCSM PLAN. INSTALL THE OUTLET PIPE ALON WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILI EMBANKMENT COMPACTING TO 95% MAX DRY DENSITY, INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION A EMERGENCY SPILLWAY. INSTALL RIPRAP APRON AT THE BASIN OUTFALL. THE INFILTRATION BASIN SHALL BE OVER-EXCAVATED AN SCARIFIED IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVER UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET T AVOID LOCALIZED COMPACTION. INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE TH ENGINEERED SOIL MIX TO THE REQUIRED ELEVATION WITHIN THE INFILTRATION BASIN. INSTALL THE SILT SOCK AT LOCATION 7 T PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASII BOTTOM. WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL O DESIGNEE SHALL BE PRESENT ONSITE DURING EXCAVATION TO SUBGRADE, OUTLET PIPE INSTALLATION, ANTI-SEEP COLLAR AN CLAY CORE INSTALLATION, INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING ( **INFILTRATION BASIN 2.** 

14. INSTALL ROCK FILTER #3.

15. INSTALL SWALES A, B, C, AND E. ENSURE EROSION CONTROL LINING IS INSTALLED IN ACCORDANCE WITH THE PLAN DETAILS.

16. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION. 17. CLEAR AND STRIP ANY TOPSOIL ACROSS THE AREA OF THE BUILDING PAD AND PROPOSED PAVED AREAS AND PLACE ON THE

TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. ENSURE THE SILT SOCK AT LOCATION 8 BELOW THE TOPSOIL STOCKPILE IS INSTALLED AS SHOWN ON THE ATTACHED PLAN.

18. ROUGH GRADE THE DISTURBED AREA AS NECESSARY FOR CONSTRUCTION OF THE BUILDING, INTERNAL ACCESS DRIVE, AND PAVED AREAS 19. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. INSTALL INLET PROTECTION ON ALL

IN ETS IDENTIFIED ON THE PLAN DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND LITHIN TRENCHES SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH. THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS T PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED. FINE-GRADE AREA.

20. INSTALL THE STONE SUB-BASE FOR THE PAVED AREAS AND CONCRETE SLABS PER PLAN REQUIREMENTS

21. CONSTRUCT THE PROPOSED BUILDING AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE LOT. 22 FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN, DURING THIS TIME, FRAME FARTH MOVING FOUIPME

WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS, SPREAD A MINIMUM OF 6 INCHES ( TOPSOIL ON FRESHLY GRADED AREAS: REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. FINAL PASSES DURING FIN GRADING SHALL BE MADE AT RIGHT ANGLES TO THE SLOPES PREPARE THE REMAINDER OF THE DISTURBED AREA FOR PERMANEN STABILIZATION. SEEDBED SHALL BE PREPARED IN ACCORDANCE WITH ACCEPTED PRACTICES. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS

23. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT A FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORAF VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT B RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATIO SPECIFICATIONS.

24. PAVE THE REQUIRED AREAS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA STABILIZED (DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTIN ACCELERATED EROSION AND SEDIMENTATION IN ALL AREAS TRIBUTARY TO THE CONTROLS) IF FARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.

25. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCES SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD B CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE ALI 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 ALI AREAS TRIBUTARY TO THE CONTROLS) WITH APPROVAL OF THE LOCAL CONSERVATION DISTRICT.

26. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEC AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP. OR DISCHARGE ANY BUILDING MATERIAL OR WASTES C OR OFF THE SITE. THESE BUILDING WASTES INCLUDE. BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIAL CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.

27. PER NPDES REQUIREMENTS, "WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANC WITH THE APPROVED PCSM PLAN. OR UPON SUBMISSION OF THE NOT IF SOONER. THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.

CONTRACTOR NOTES

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWING DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY DEP PRIO TO IMPLEMENTATION.

2. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND A LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALI PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."

3. IF SOIL IT IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.

4. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT A FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT B RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATIO SPECIFICATIONS.

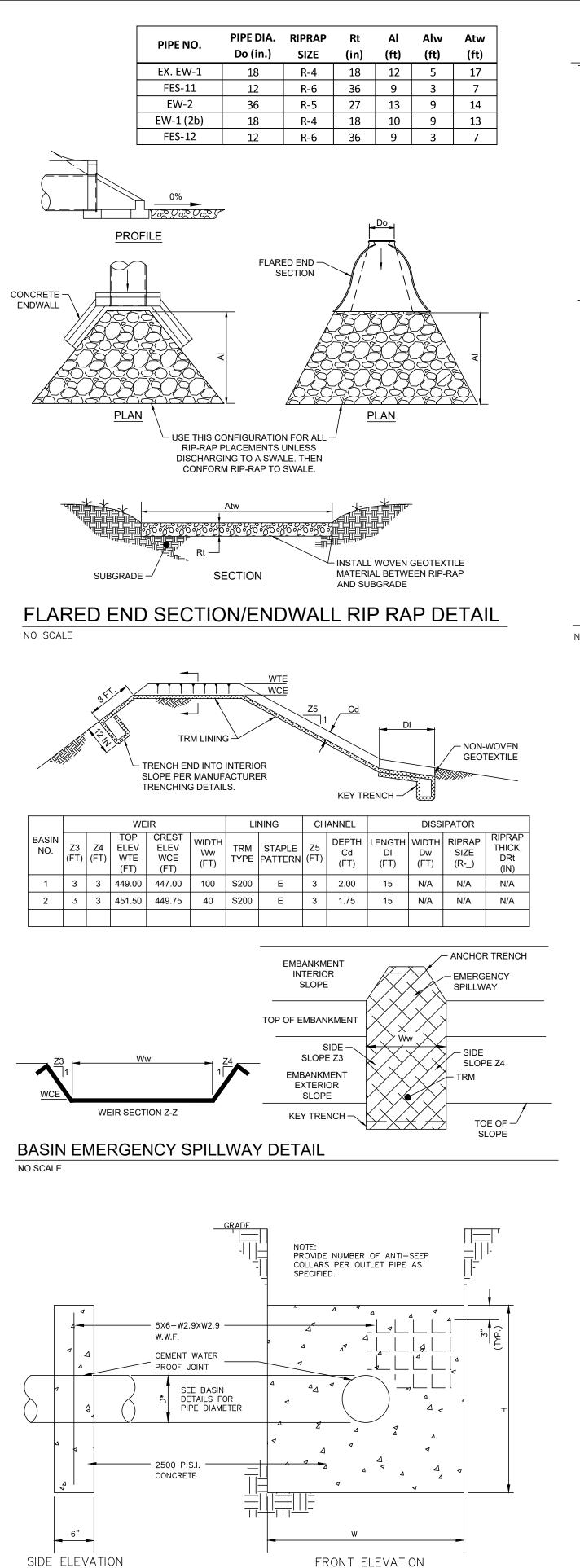
5. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCES SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF PRIMARY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. REMOVE AL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED (DEFINED AS A MINIMUM UNIFOR 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION IN ALI AREAS TRIBUTARY TO THE CONTROLS).

6. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 E SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRET WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.

7. PER NPDES REQUIREMENTS, "WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN. OR UPON SUBMISSION OF THE NOT IF SOONER. THE PERMITTEE SHALL FILE WITH TH DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY TH PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERM AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS."

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IIT ED IS. DR					Engineering . th Zinns Mill R.	Lebanon, Pennsyvania 17042 Phone: (717) 272–7110	Fax: (717) 272–7348	
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8 OF 21 SHEE



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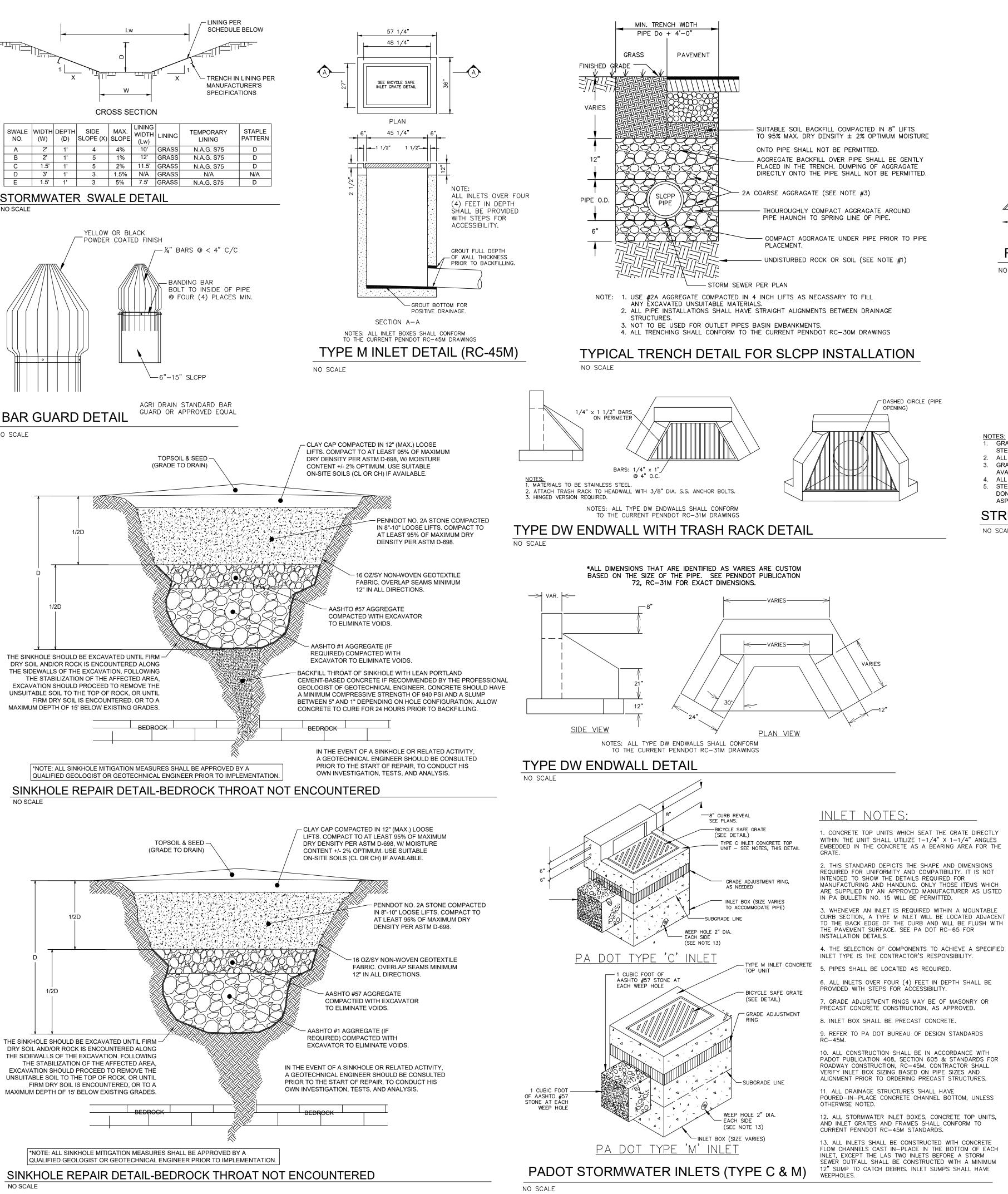
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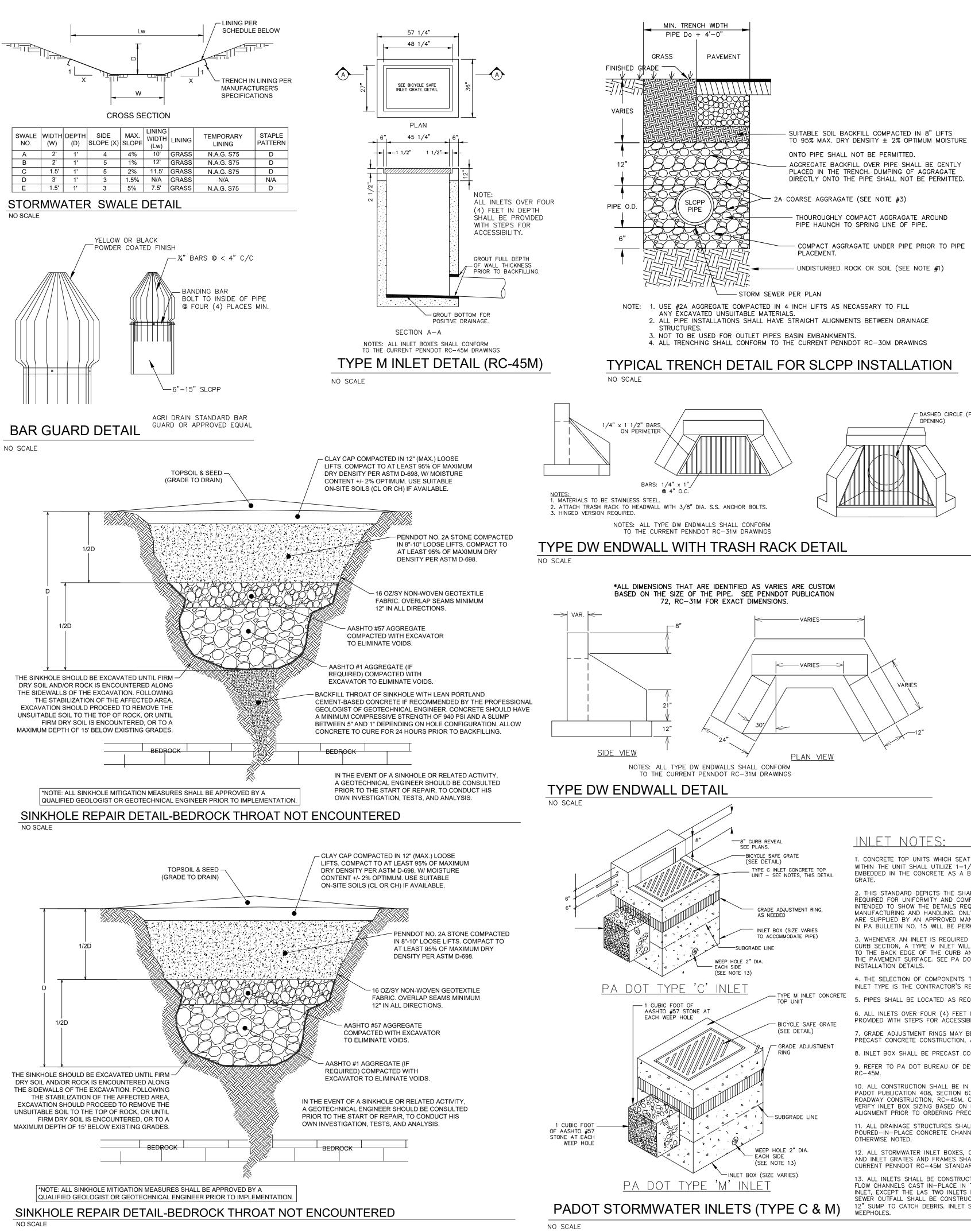
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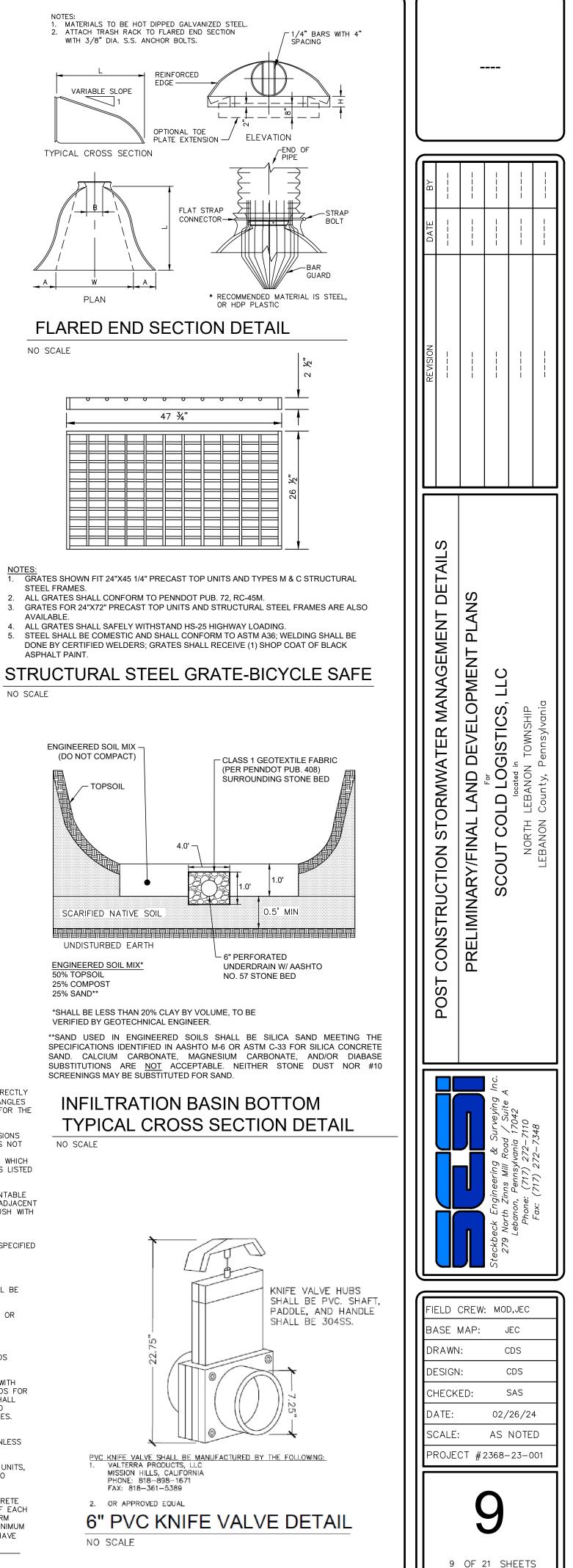
3.35' 3.35'

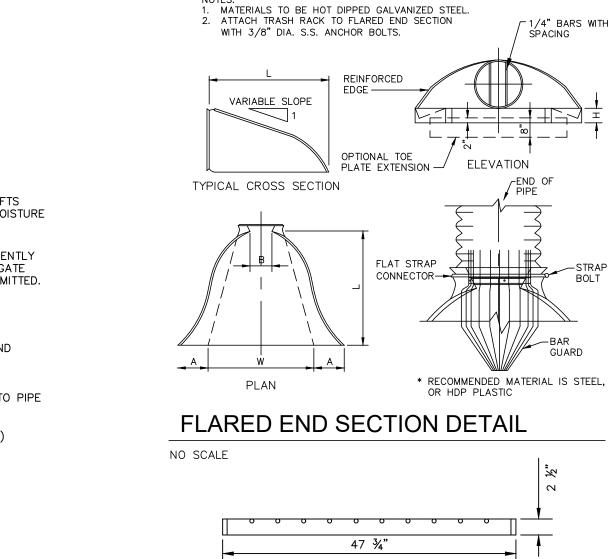




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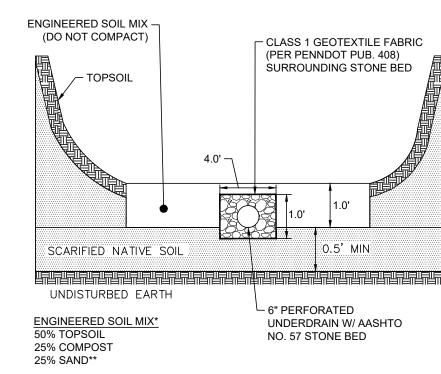
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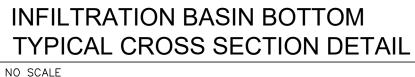
DONE BY CERTIFIED WELDERS; GRATES SHALL RECEIVE (1) SHOP COAT OF BLACK

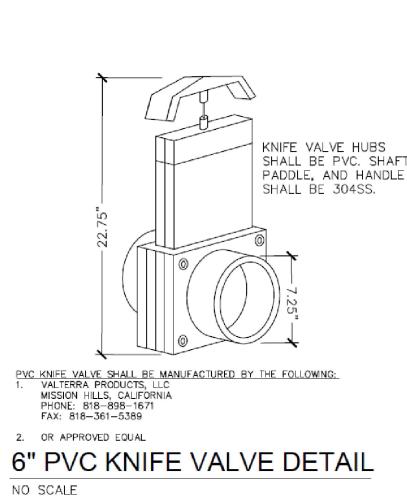
ALL GRATES SHALL CONFORM TO PENNDOT PUB. 72, RC-45M.

4. ALL GRATES SHALL SAFELY WITHSTAND HS-25 HIGHWAY LOADING

\*SHALL BE LESS THAN 20% CLAY BY VOLUME, TO BE VERIFIED BY GEOTECHNICAL ENGINEER.

\*\*SAND USED IN ENGINEERED SOILS SHALL BE SILICA SAND MEETING THE SPECIFICATIONS IDENTIFIED IN AASHTO M-6 OR ASTM C-33 FOR SILICA CONCRETE SAND. CALCIUM CARBONATE, MAGNESIUM CARBONATE, AND/OR DIABASE SUBSTITUTIONS ARE <u>NOT</u> ACCEPTABLE. NEITHER STONE DUST NOR #10 SCREENINGS MAY BE SUBSTITUTED FOR SAND.





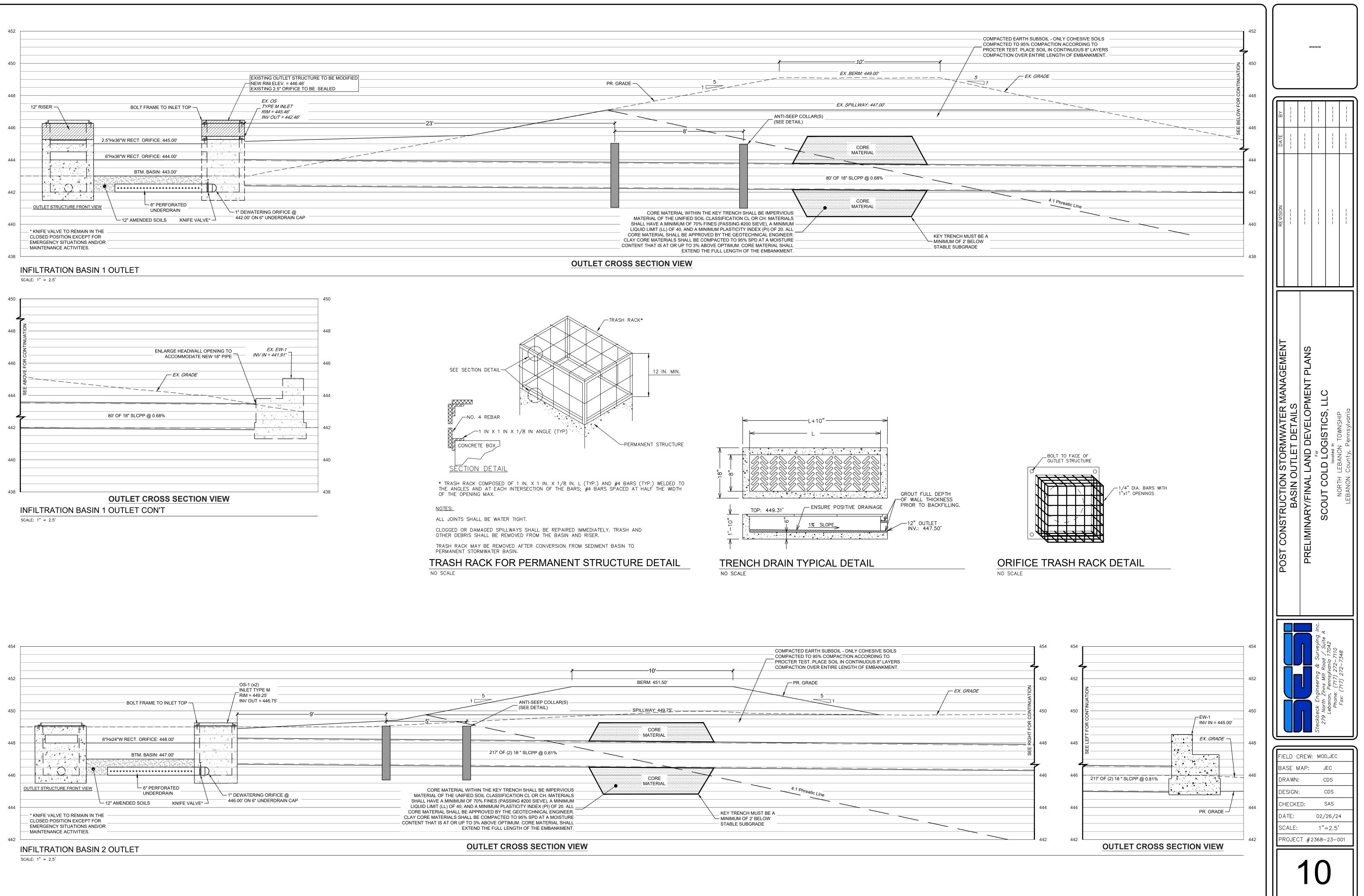
REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED

ROADWAY CONSTRUCTION, RC-45M. CONTRACTOR SHALL ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.

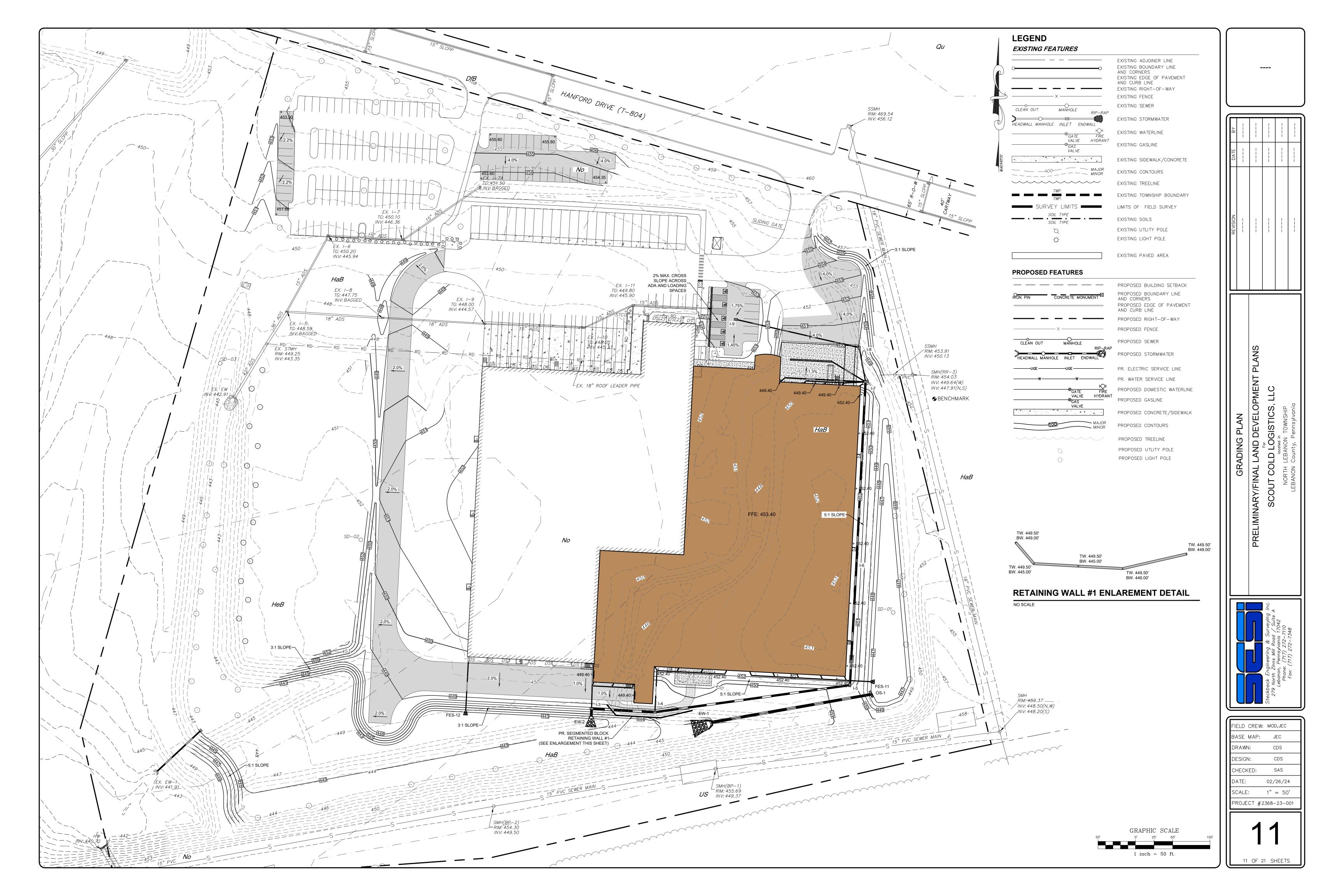
POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS

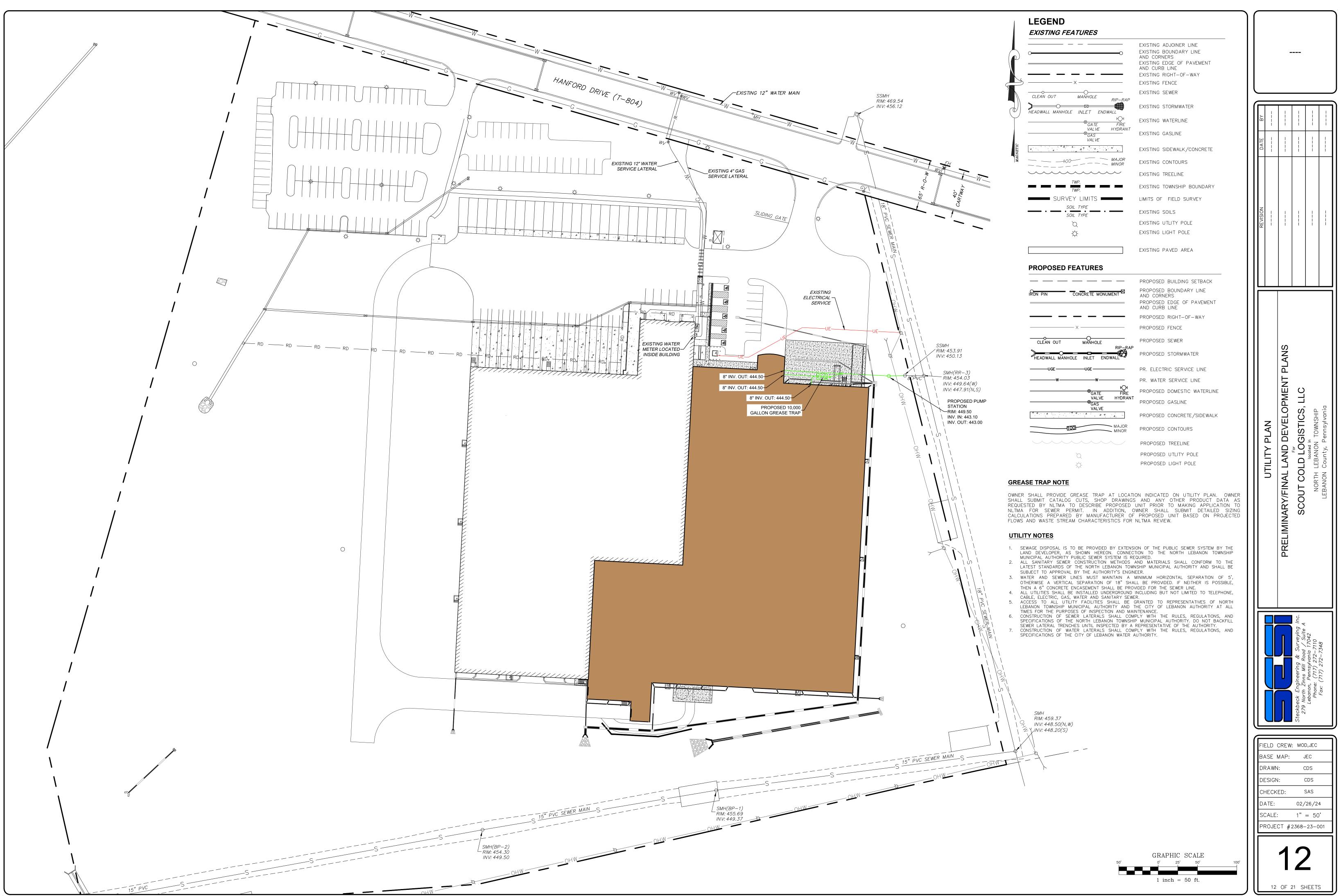
12. ALL STORMWATER INLET BOXES, CONCRETE TOP UNITS,

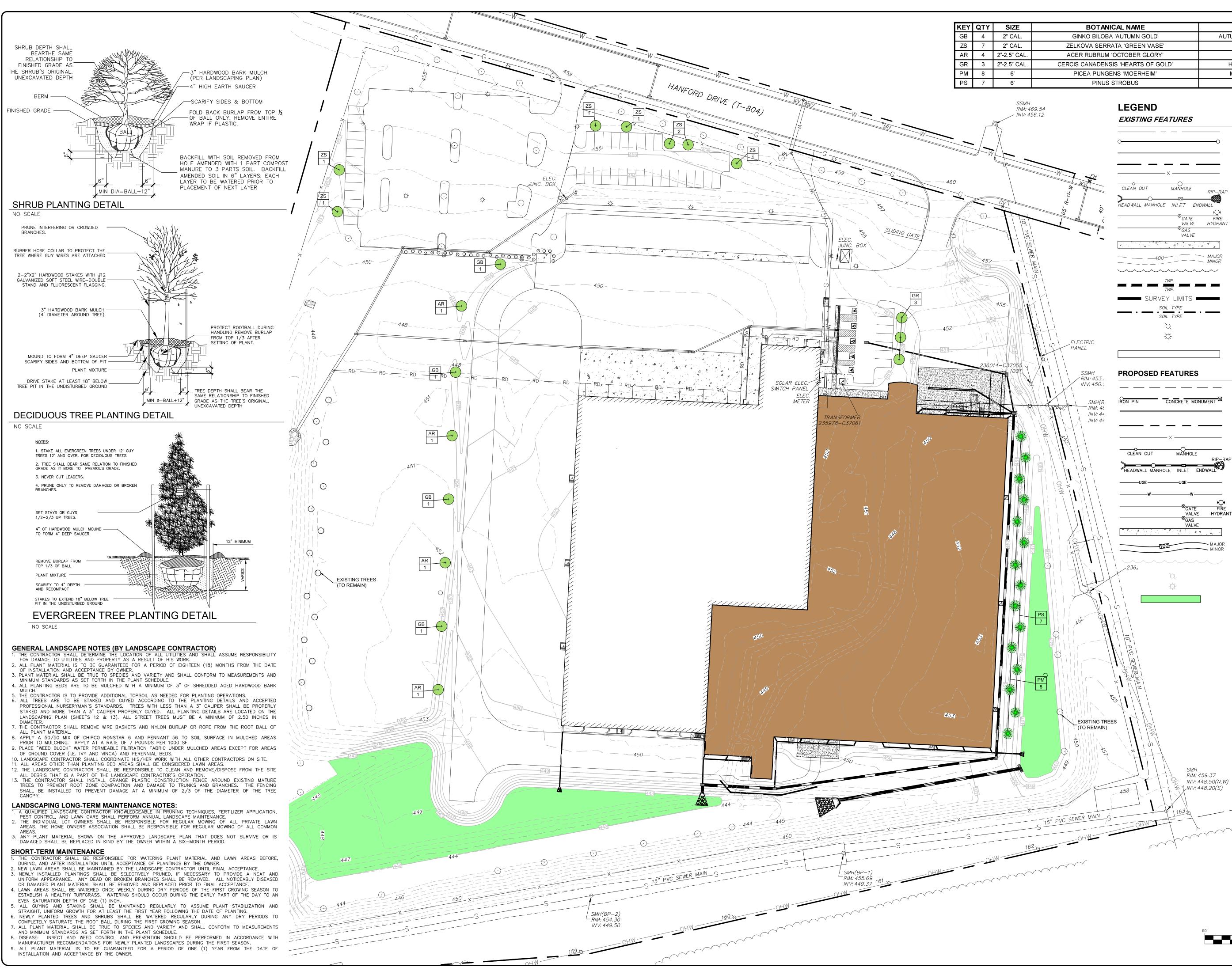
FLOW CHANNELS CAST IN-PLACE IN THE BOTTOM OF EACH SEWER OUTFALL SHALL BE CONSTRUCTED WITH A MINIMUM



10 OF 21 SHEETS







BOTANICAL NAME	COMMON NAME
GINKO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD MAIDENHAIR TREE
ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA
ACER RUBRUM 'OCTOBER GLORY'	RED MAPLE
CERCIS CANADENSIS 'HEARTS OF GOLD'	HEARTS OF GOLD REDBUD
PICEA PUNGENS 'MOERHEIM'	MOERHEIM BLUE SPRUCE
PINUS STROBUS	EASTERN WHITE PINE
	GINKO BILOBA 'AUTUMN GOLD' ZELKOVA SERRATA 'GREEN VASE' ACER RUBRUM 'OCTOBER GLORY' CERCIS CANADENSIS 'HEARTS OF GOLD' PICEA PUNGENS 'MOERHEIM'

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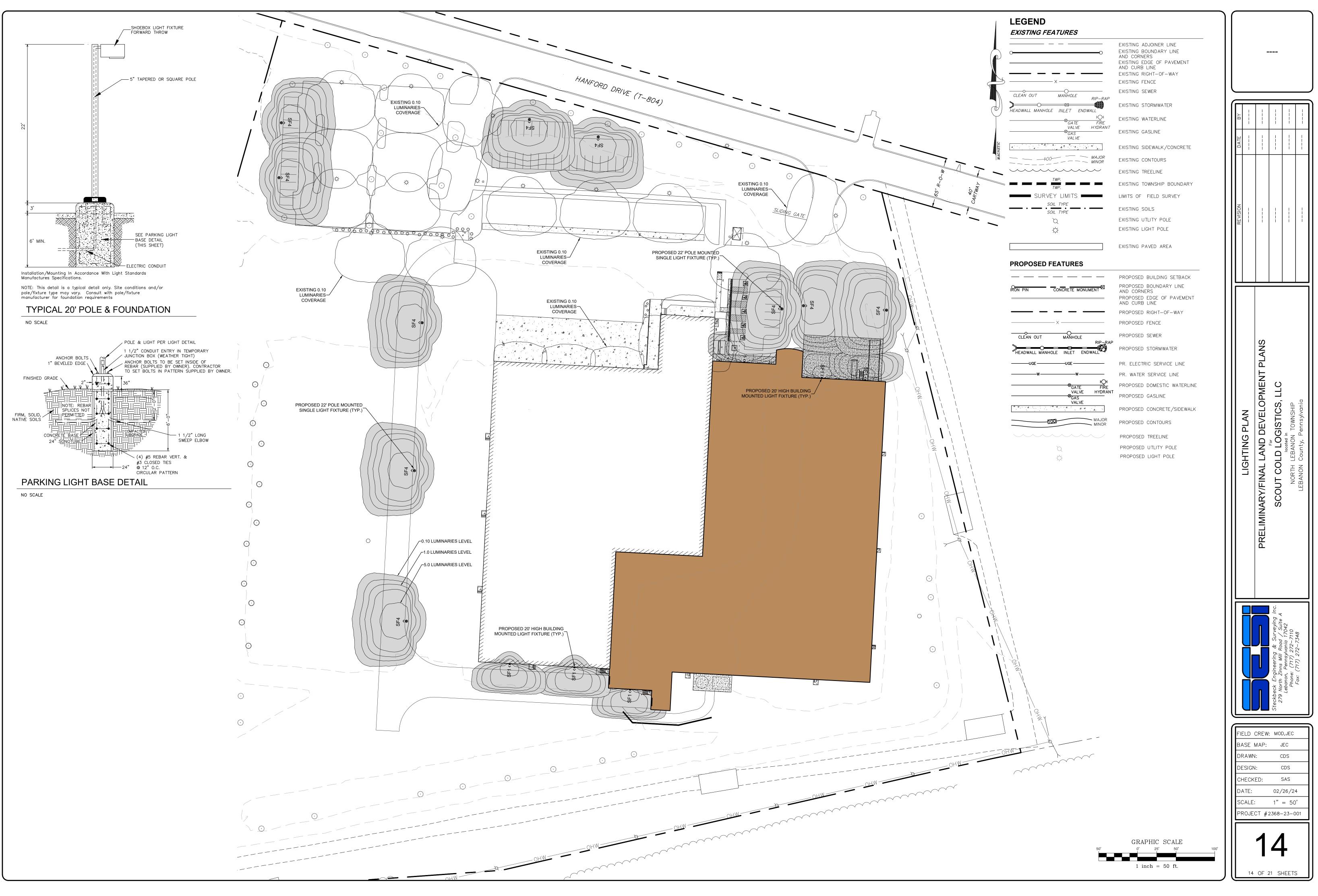
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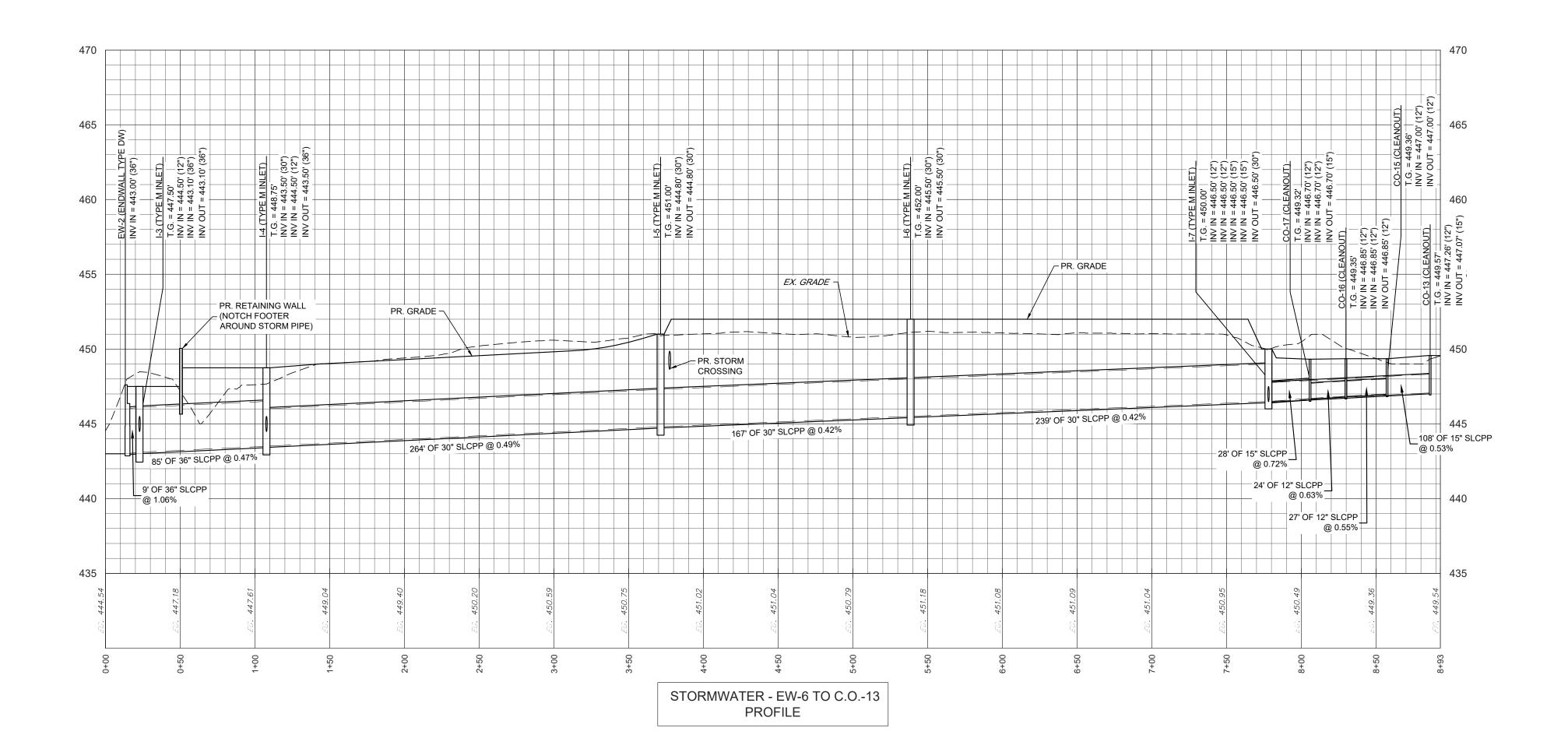
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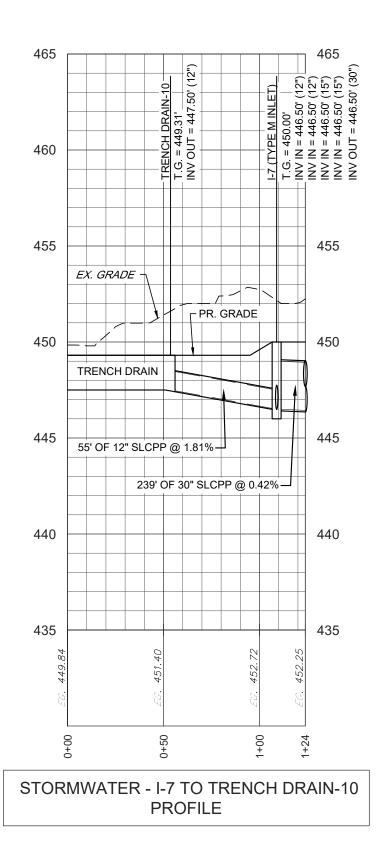
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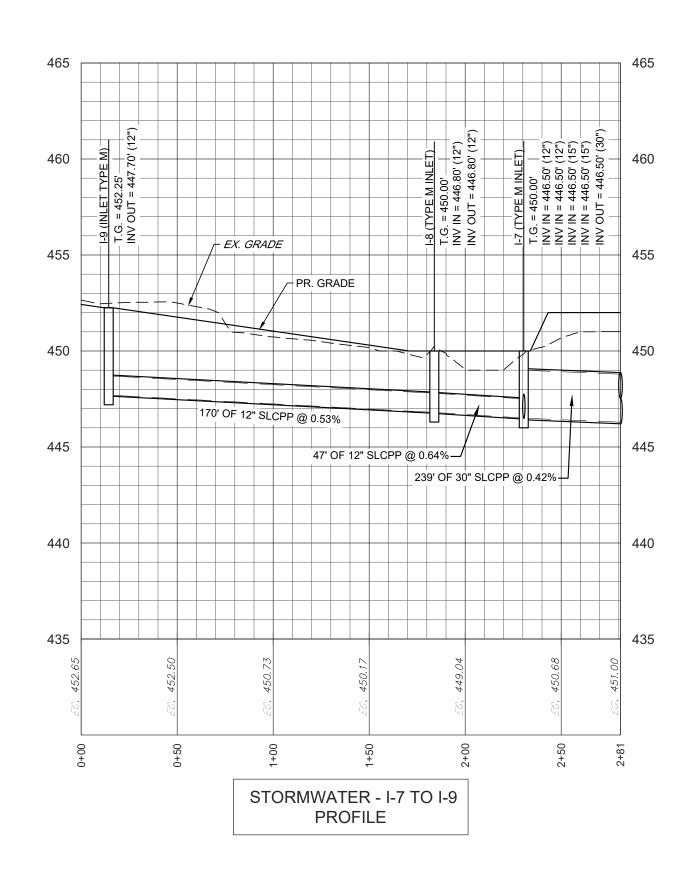
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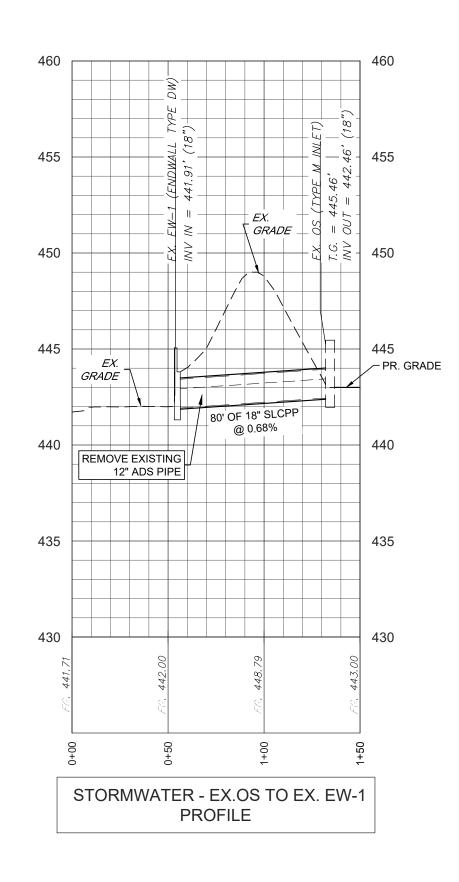
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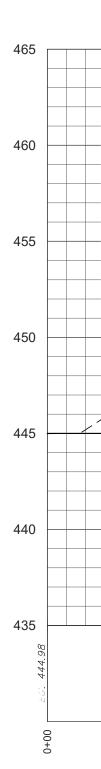


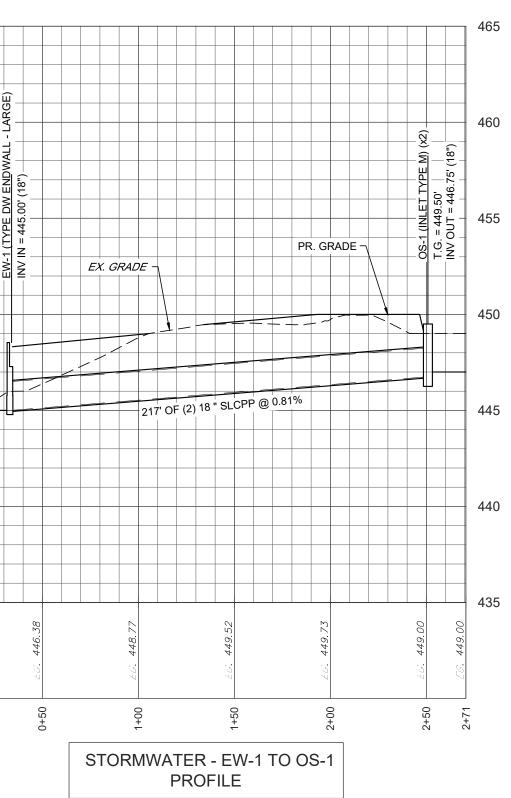






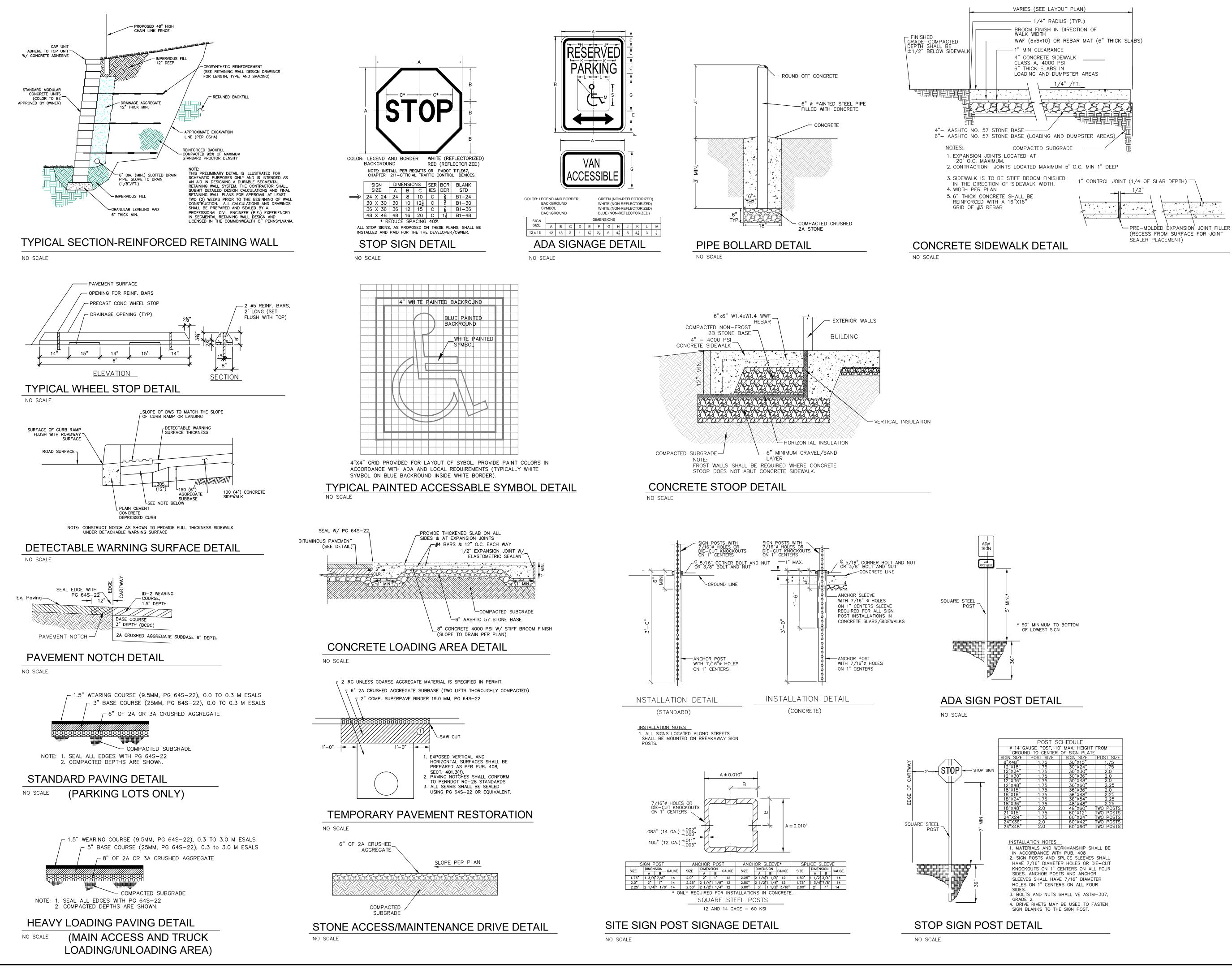






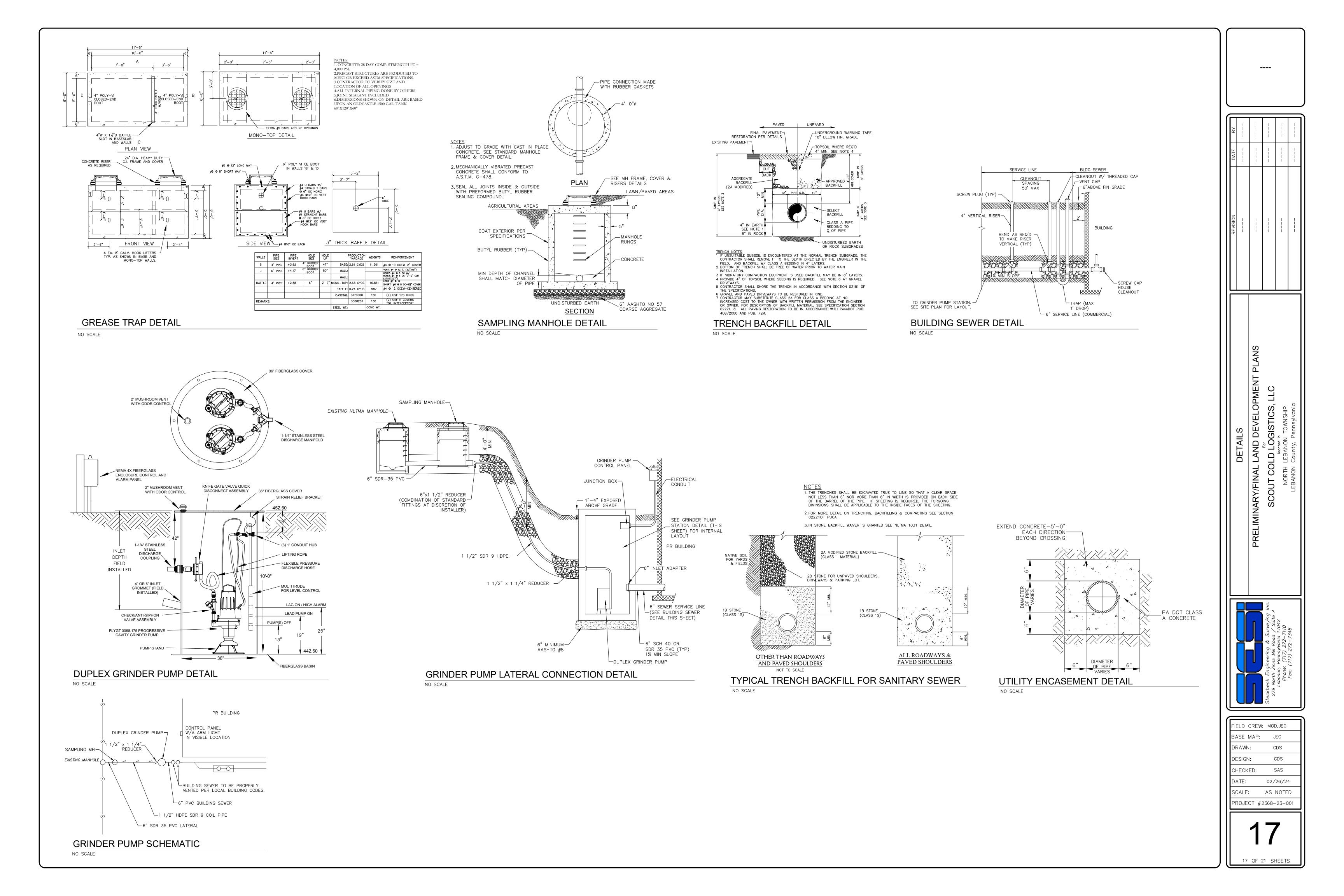
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	PROFILES	PRELIMINARY/FINAL LAND DEVELOPMENT PLANS		Iocated in NORTH LEBANON TOWNSHIP	LEBANON County, Pennsylvania			
			Steckbeck Engineering & Surveying Inc. 279 North Zinns Mill Road / Suite A	Lebanon, Pennsylvania 17042 Phone: (717) 272–7110	Fax: (717) 272–7348			
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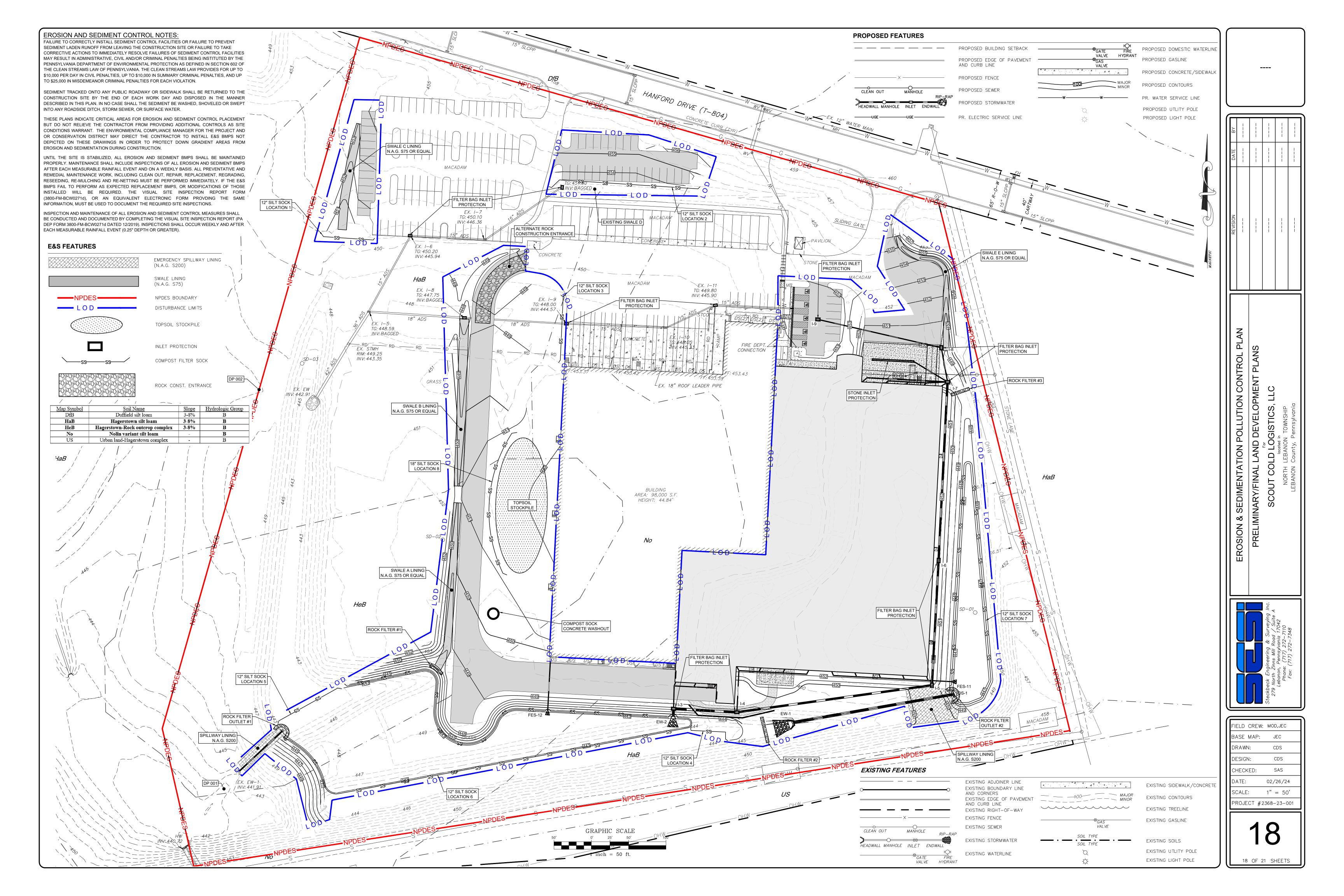
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POST SIZE	SIGN SIZE	POST SIZE
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1.75	30"X24"	1.75
1.75	30"X30"	2.0 2.0 2.0
1.75	30"X36"	2.0
1.75	<u>30"X48"</u>	2.0
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1.75	36"X36"	2.0
1.75	36"X48"	2.25 2.25
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1.75	60"X12"	TWO POSTS
1.75	60"X24"	TWO POSTS
2.0	60"X42"	TWO POSTS
2.0	60"X60"	TWO POSTS

DATE BY							
REVISION							
	DETAILS	PRELIMINARY/FINAL LAND DEVELOPMENT PLANS	SCOUT COLD LOGISTICS, LLC	Iocated in NORTH LEBANON TOWNSHIP	LEBANON County, Pennsylvania		
			Steckbeck Engineering & Surveying Inc. 279 North Zinns Mill Road / Suite A	Lebanon, Pennsylvania 17042 Phone: (717) 272–7110	Fax: (717) 272–7348		
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#### **EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE** SCOUT COLD LOGISTICS, LLC - SUNNY LANE FOODS BUILDING EXPANSION

THIS NARRATIVE IS INTENDED TO ACCOMPANY THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR THE PROPOSED PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR SCOUT COLD LOGISTICS, LLC - SUNNY LANE FOODS BUILDING EXPANSION LOCATED AT 2750 HANFORD DRIVE IN NORTH LEBANON TOWNSHIP, LEBANON COUNTY. THIS NARRATIVE SHALL BE CONSIDERED A PART OF THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN.

### PROJECT DESCRIPTION

THE TOTAL TRACT OF PROPERTY IN QUESTION IS 22.83 ACRES. THE TOTAL SITE AND EARTH DISTURBANCE AS PART OF THIS PROJECT IS 8.90 ACRES. THE PROJECT SITE IS A DEVELOPED LOT WITHIN AN EXISTING BUSINESS PARK. THE PARCEL CONTAINS AN EXISTING 98,000 S.F. BUILDING WITH ASSOCIATED PARKING AREAS, LOADING DOCKS, AND EXISTING STORMWATER MANAGEMENT FACILITIES. BASED ON GOOGLE EARTH HISTORICAL IMAGERY, THE SITE WAS DEVELOPED IN 2016. PRIOR TO DEVELOPMENT, THE SITE WAS AN AGRICULTURAL FIELD DATING BACK TO THE EARLY 1990'S. THE SITE IS BORDERED TO THE NORTH BY HANFORD DRIVE. TO THE EAST AND WEST BY AGRICULTURAL FIELDS. AND TO THE SOUTH BY THE NORFOLK SOUTHERN RAILROAD. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A 110,00 +/- S.F. BUILDING EXPANSION WITH ASSOCIATED LOADING DOCKS, PARKING AREAS, AND INTERNAL ACCESS DRIVE. THE BUILDING EXPANSION WILL BE SERVED BY PUBLIC WATER AND SEWER. PROPOSED IMPROVEMENTS ALSO INCLUDE MODIFICATIONS TO THE EXISTING STORMWATER MANAGEMENT BASINS TO BRING ALL SITE DEVELOPMENT (INCLUDING PREVIOUS SITE IMPROVEMENTS AND THE PROPOSED EXPANSION) UP TO CURRENT NPDES STANDARDS FOR PCSM DESIGN. THE THREE EXISTING BASINS WILL BE MODIFIED INTO TWO (2) ABOVE GROUND INFILTRATION BASINS TO MANAGE THE SITE RUNOFF. THE NEAREST MAPPED DOWNSTREAM SURFACE WATER IS THE QUITTAPAHILLA CREEK WHICH IS DESIGNATED AS A TROUT STOCKED FISHERY (TSF), THE QUITTAPAHILLA CREEK IS IMPAIRED ACCORDING TO CATEGORY 4C OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR AQUATIC LIFE: STREAMBANK MODIFICATIONS / DESTABILIZATION - HABITAT ALTERATIONS AND AQUATIC LIFE: URBAN RUNOFF / STORM SEWERS - FLOW REGIME MODIFICATION. THE QUITTAPAHILLA CREEK IS ALSO IMPAIRED ACCORDING TO CATEGORY 5 OF THE PA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT FOR RECREATIONAL: SOURCE UNKNOWN - PATHOGENS.

#### THERMAL IMPACTS ANALYSIS

EXISTING RUNOFF FROM THE SITE IS CURRENTLY TREATED BY THREE (3) EXISTING STORMWATER BASINS. THE EXISTING BASINS WILL BE MODIFIED INTO TWO (2) INFILTRATION BASINS TO TREAT THE MAJORITY OF THE DISTURBED SITE AND PROPOSED IMPERVIOUS AREAS, RUNOFF REACHING THE INFILTRATION BASINS WILL BE COOLED BY THE NATIVE VEGETATION IN THE BASIN BOTTOMS BEFORE BEING INFILTRATED THROUGH THE ENGINEERED SOIL MIX AND INTO THE GROUND. ADDITIONALLY, OVERFLOW FROM FROM INFILTRATION BASIN 2 WILL DISCHARGE INTO INFILTRATION BASIN 1 IN A TREATMENT TRAIN WHICH WILL PROVIDE ADDITIONAL THERMAL RELIEF. SHADE TREES ARE ALSO PROPOSED IN AND AROUND THE NEW PARKING LOT EXPANSIONS TO SHADE THESE AREAS AND PROVIDE ADDITIONAL TEMPERATURE RELIEF FOR RUNOFF THAT FLOWS OVER THE IMPERVIOUS SURFACES.

#### DOWNSTREAM WATERCOURSE ANALYSIS

THE FOLLOWING IS AN EXCERPT FROM THE PA DEP FAQ SHEET LABELED CHAPTER 102 OFF-SITE DISCHARGES OF STORMWATER TO NON-SURFACE WATERS (JANUARY 2, 2019). FAQ #2 STATES, "PERSONS PROPOSING TO DISCHARGE MUST HAVE THE LEGAL AUTHORITY TO DISCHARGE THEIR STORMWATER FITHER THROUGH FITHER A COMMON I AW EASEMENT OR AN EXPRESS EASEMENT. FOR SITES THAT DISCHARGE TO EXISTING SWALES, DITCHES, STORM SEWERS OR SIMILAR STRUCTURES WHERE THE NEW ACTIVITIES WILL NOT RESULT IN A CHANGE IN VOLUME OR RATE OF STORMWATER RUNOFF (FOR ALL STORM EVENTS), THE EXISTING COMMON LAW EASEMENT COULD BE RELIED UPON."

THE SITE DISCHARGES TO EACH DISCHARGE POINT IN A SIMILAR MANNER AND AT A RATE THAT IS LESS THAN PRE-DEVELOPMENT FOR ALL STORM EVENTS.

DP 001 - DISCHARGE POINT 001 IS TAKEN NEAR THE SOUTHWESTERN PROPERTY CORNER WHERE ALL EXISTING AND PROPOSED BASIN OUTLET PIPES DISCHARGE. RUNOFF FROM DP 001 WILL FLOW THROUGH A SERIES OF EXISTING CULVERTS AND CHANNELS PRIOR TO REACHING THE QUITTAPAHILLA CREEK.

DP 002 - DISCHARGE POINT 002 IS TAKEN ALONG THE WESTERN PROPERTY LINE WHERE A SMALL PORTION OF PRE- AND POST-DEVELOPMENT RUNOFF WILL SHEET FLOW ONTO ADJACENT PROPERTY. RUNOFF FROM DP 002 WILL FLOW ACROSS ADJACENT PROPERTY PRIOR TO REACHING THE SAME LOCATION AS DP 001 AND DOWNSTREAM SERIES OF EXISTING CULVERTS AND CHANNELS PRIOR TO REACHING THE QUITTAPAHILLA CREEK.

#### SOIL INFORMATION AND GEOLOGY

THE FOLLOWING SOILS ARE FOUND WITHIN OR ADJACENT TO THE AREA TO BE DISTURBED BY EARTH MOVING ACTIVITIES. THESE SOILS CAN ERODE WHEN DISTURBED. EROSION WILL BE CONTROLLED WITH STANDARD EROSION CONTROLS SUCH AS FILTER SOCK, SLOPE AND SWALE MATTING, RIPRAP OUTLET PROTECTION, INLET PROTECTION, ROCK FILTER, AND ROCK CONSTRUCTION ENTRANCE.

Map Symbol	Soil Name	Slope	Hydrologic Group
DfB	Duffield silt loam		В
HaB Hagerstown silt loam		3-8%	В
HeB	Hagerstown-Rock outcrop complex		В
No	Nolin variant silt loam	=	В
US	Urban land-Hagerstown complex	-	В

\*IF SOILS ARE BOLD, THEY ARE DISTURBED DURING CONSTRUCTION ON THIS PROJECT.

#### KARST NOTES

HE SITE IS UNDERLAIN BY THE ONTELAUNEE FORMATION WHICH IS COMPRISED OF DOLOMITE, LIMESTONE, AND CHERT. DOLOMITE AND LIMESTONE ARE SUSCEPTIBLE TO KARST ACTIVITY. THE PA DEP'S EMAPPA IDENTIFIES FIVE (5) SURFACE DEPRESSIONS ON THE PROJECT PROPERTY BUT NO SINKHOLES

THE GEOTECHNICAL ENGINEERING REPORT FOR STORMWATER MANAGEMENT PREPARED BY ECS MID-ATLANTIC, LLC DID IDENTIFY THREE POTENTIAL (3) SURFACE DEPRESSIONS ON SITE. THESE POTENTIAL SURFACE DEPRESSIONS WILL BE EXPLORED WITH A TEST PIT AT EACH LOCATION UNDER THE SUPERVISION OF ECS PRIOR TO CONSTRUCTION AT THE SITE IN ORDER TO DETERMINE IF POTENTIAL REPAIRS ARE NECESSARY, BASED ON THE AVAILABLE INFORMATION. THE RISK OF SINKHOLES AND RELATED KARST ACTIVITY ON THE SITE IS MODERATE. SHOULD A GEOTECHNICAL HAZARD BE ENCOUNTERED DURING CONSTRUCTION, THE LOCAL CONSERVATION DISTRICT WILL BE IMMEDIATELY CONTACTED AND A GEOTECHNICAL ENGINEER WILL BE REQUIRED TO OVERSEE ANY MITIGATION MEASURES.

- IN ORDER TO REDUCE THE RATE OF SINKHOLE DEVELOPMENT AND IN KEEPING WITH THE GUIDELINES AND RECOMMENDATIONS OF HE PA BMP MANUAL, ECS RECOMMENDS THAT THE FOLLOWING DESIGN PRINCIPLES BE INCORPORATED USE EXISTING DRAINAGE PATTERNS:
- O THE PROPOSED INFILTRATION BASINS WILL BE LOCATED IN THE SAME LOCATION AS THE EXISTING STORMWATER MANAGEMENT BASINS KEEP STORMWATER AWAY FROM KNOWN SINKHOLES OR PROBLEMATIC SUBSIDENCE AREAS:
- O THERE ARE NO KNOWN SINKHOLES ON SITE. AVOID CONCENTRATING STORMWATER:
- O RUNOFF WILL BE NATURALLY CONCENTRATED IN THE PROPOSED BASINS WHICH ARE DESIGNED IN ACCORDANCE WITH THE BELOW PRINCIPLES TO REDUCE THE RISK OF SINKHOLE FORMATIONS. ALL STORMWATER PIPE WILL UTILIZE WATER-TIGHT JOINTS
- REDUCE RUNOFF VOLUME AND VELOCITY: O ON-SITE RUNOFF VOLUME WILL BE REDUCED IN ACCORDANCE WITH TOWNSHIP AND CHAPTER 102 REQUIREMENTS.
- USE BROAD SHALLOW BASINS: O INFILTRATION BASIN 1 HAS A MAXIMUM PONDING DEPTH OF LESS THAN 3.5' AND INFILTRATION BASIN 2 HAS A MAXIMUM PONDING DEPTH OF LESS THAN 3'. MAINTAIN THE FACILITIES POST CONSTRUCTION:
- O POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES WILL BE MAINTAINED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE AGREEMENT REQUIRED BY THE TOWNSHIP AND RECORDED WITH THE PLAN. PROVIDE UNDERDRAINS OR OTHER MEANS FOR DEWATERING IN STORMWATER MANAGEMENT FACILITIES IF NEEDED:
- O UNDERDRAINS ARE PROVIDED FOR EACH BASIN.

DUFFIELD SOILS - THE DUFFIELD SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM FROM LIMESTONE BEDROCK, SLOPES RANGE FROM 0 TO 35 PERCENT, PERMEABILITY IS MODERATE, MEAN ANNUAL PRECIPITATION IS 40 INCHES, MEAN ANNUAL TEMPERATURE IS 53 DEGREES F. DUFFIELD SOILS ARE SUSCEPTIBLE TO CUTBANKS AND CAVE INS AND MAY BE CORROSIVE TO STEEL AND CONCRETE. THIS SOIL MAY ALSO BE EASILY ERODIBLE AND SUBJECT TO HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, PIPING, AND A POOR SOURCE OF TOPSOIL. THIS SOIL IS ALSO SUSCEPTIBLE TO SHRINK/SWELL AND HAS THE POTENTIAL FOR SINKHOLE FORMATION. THIS SOIL IS ALSO SUBJECT TO WETNESS BUT NOT PONDING.

HAGERSTOWN SOILS - THE HAGERSTOWN SERIES CONSISTS OF DEEP AND VERY DEEP, WELL DRAINED SOILS FORMED IN RESIDUUM OF HARD GRAY LIMESTONE. SLOPE RANGES FROM 0 TO 45 PERCENT. PERMEABILITY IS MODERATE. MEAN ANNUAL PRECIPITATION IS 30 TO 45 INCHES, MEAN ANNUAL AIR TEMPERATURE IS 45 TO 58 DEGREES, HAGERSTOWN SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE TO STEEL BUT NOT CONCRETE. THIS SOIL MAY ALSO BE EASILY ERODIBLE AND SUBJECT TO A SEASONALLY HIGH WATER TABLE. HYDRIC INCLUSIONS. LOW STRENGTH. SLOW PERCOLATION. PIPING. AND A POOR SOURCE OF TOPSOIL. HAGERSTOWN SOILS MAY ALSO BE SUSCEPTIBLE TO FROST ACTION, SHRINK-SWELL, AND SINKHOLES. NOLIN SOILS - THE NOLIN SERIES CONSISTS OF VERY DEEP, WELL DRAINED SOILS FORMED IN ALLUVIUM DERIVED FROM LIMESTONES, SANDSTONES, SILTSTONES, SHALES, AND LOESS. THESE NEARLY LEVEL TO MODERATELY STEEP SOILS ARE ON FLOOD PLAINS, IN DEPRESSIONS WHICH RECEIVE RUNOFF FROM SURROUNDING SLOPES, OR ON NATURAL LEVEES OF MAJOR STREAMS AND RIVERS. SLOPE RANGES FROM 0 TO 25 PERCENT, BUT IS DOMINANTLY 0 TO 3 PERCENT. MEAN ANNUAL TEMPERATURE IS 56 DEGREES F. AND THE MEAN ANNUAL PRECIPITATION IS 43 INCHES. NOLIN SOILS MAY BE SUSCEPTIBLE TO CUT BANKS AND CAVE INS AND CORROSIVE

TO CONCRETE BUT NOT STEEL. THIS SOIL MAY ALSO BE SUBJECT TO FLOODING, A SEASONALLY HIGH WATER TABLE, HYDRIC INCLUSIONS, LOW STRENGTH, SLOW PERCOLATION, AND PIPING. NOLIN SOILS MAY ALSO BE SUSCEPTIBLE TO SINKHOLE FORMATION. SOIL USE LIMITATIONS AND RESOLUTIONS

- CUT-BANK CAVING: ALL APPLICABLE OSHA STANDARDS AND REGULATIONS SHALL BE IMPLEMENTED AT ALL TIMES DURING TRENCHING AND EXCAVATION OPERATIONS. • CORROSION OF STEEL AND CONCRETE: ALL UNDERGROUND FOUNDATIONS AND STRUCTURES SHALL BE PROPERLY PROTECTED AGAINST CORROSION, WHICH MAY INCLUDE COATING THESE STRUCTURES WITH CORROSION-RESISTANT MATERIAL.
- EASILY ERODIBLE: EROSION AND SEDIMENT POLLUTION CONTROLS WILL BE IMPLEMENTED TO AVOID THE TRANSPORTATION OF SEDIMENT-LADEN WATER OFF-SITE • DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE: THE SITE MAY REQUIRE DEWATERING OF PITS DURING
- CONSTRUCTION, I.E. WHEN POURING FOOTERS, EXCAVATING TRENCHES, DEWATERING BASINS, ETC. THE GEOTECHNICAL REPORT DID NOT IDENTIFY ANY AREAS OF HIGH GROUNDWATER. IF DEWATERING IS REQUIRED, A SUMP PIT AND FILTER BAG SHALL BE UTILIZED, AND WATER SHALL BE PUMPED TO AN UNDISTURBED AREA UPSTREAM OF A PERIMETER CONTROL BMP SUCH AS A FILTER SOCK
- HYDRIC SOILS/HYDRIC INCLUSIONS: A WETLAND FIELD SURVEY WAS CONDUCTED AND NO WETLANDS ARE LOCATED ON SITE. • LOW STRENGTH/LANDSLIDE PRONE: THE MAXIMUM PROPOSED SLOPE ON THE SITE IS 3:1. THIS WILL REDUCE THE POTENTIAL FOR EROSION AND LAND SLIDE ACTION. ALL PROPOSED BERMS SHALL BE COMPACTED FULLY IN ORDER TO PROTECT AGAINST LANDSLIDES, AND SHALL BE STABILIZED IMMEDIATELY.
- SLOW PERCOLATION: ADEQUATE PRECAUTIONS WILL BE TAKEN TO ENSURE THAT THE PCSM BMPS INFILTRATE WITHIN THE REQUIRED TIME PERIOD, INCLUDING INFILTRATION TESTING AND SOIL MODIFICATION/UNDERDRAIN INSTALLATION, IF NECESSARY INFILTRATION TESTS PREVIOUSLY PERFORMED INDICATED THAT THE INFILTRATION RATE AT THE SITE IS ADEQUATE IN THE PROPOSED INFILTRATION AREAS
- PIPING: ANTI-SEEP COLLARS WILL BE PROVIDED AS PART OF THE PCSM AND PIPELINE DESIGNS. • POOR SOURCE OF TOPSOIL: THE ADEQUACY OF THE TOPSOIL WILL BE EVALUATED UPON THE COMMENCEMENT OF EXCAVATION. AS THE MAJORITY OF THE PROJECT CONSISTS OF CONSTRUCTION OF IMPERVIOUS AREAS, THE TOPSOIL REQUIRED WILL BE MINIMAI
- FROST ACTION: ALL IMPERVIOUS SURFACES SHALL BE GRADED AT A MINIMUM OF 1% IN ONE DIRECTION, SO THAT WATER WILL NOT COLLECT ON THE SURFACE AND CAUSE DAMAGE DURING FREEZE/THAW CYCLES. CRACKS WHICH DEVELOP IN THE IMPERVIOUS SURFACES SHALL BE PROMPTLY SEALED
- SHRINK/SWELL: ALL SITE GRADING SHALL DIRECT WATER AWAY FROM BUILDINGS AND OTHER IMPERVIOUS SURFACES TO REDUCE THE LIKELIHOOD OF WATER INFILTRATING NEAR OR UNDER THESE STRUCTURES. • SINKHOLE FORMATION: SEE KARST NOTES ABOVE.
- WETNESS: THE SITE MAY REQUIRE DEWATERING OF PITS DURING CONSTRUCTION, I.E. WHEN POURING FOOTERS, DEWATERING BASINS, ETC. SHOULD DEWATERING BE REQUIRED, A SUMP PIT AND FILTER BAG SHALL BE UTILIZED, AND WATER SHALL BE PUMPED TO AN UNDISTURBED AREA UPSTREAM OF A PERIMETER CONTROL (FILTER SOCK). • FLOODING: THE SITE IS NOT LOCATED WITHIN A MAPPED FLOODPLAIN.

#### GENERAL SOIL NOTES

- OTHER OBJECTIONABLE MATERIAL NEED TO HAVE APPROPRIATE E&S CONTROLS.
- WITH LOCAL REQUIREMENTS OR CODES.
- MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- 6. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

#### CALCULATIONS

TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES WERE DESIGNED IN ACCORDANCE WITH THE STANDARDS ESTABLISHED IN THE EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL (PA DEP BUREAU OF WATERWAYS ENGINEERING AND WETLANDS, MARCH 2012).

#### CONSERVATION DISTRICT GENERAL E&S NOTES

- DISCRETION.
- BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
- THE SITE.
- CONDITIONS OF CHAPTER 102 AND/OR OTHER STATE OR FEDERAL REGULATIONS.

- PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF CLEAN FILL".

#### **TEMPORARY CONTROL MEASURES**

- 1. TOPSOIL STOCKPILE
- b. STOCKPILES SHALL BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE TEMPORARY SEEDING SPECIFICATION CONTAINED HEREON
- d. STOCKPILE HEIGHTS MUST NOT EXCEED 35' IN HEIGHT. SIDE SLOPES SHALL BE 2:1 OR FLATTER.

#### 2. SILT SOCK

- a. SILT SOCK SHALL BE USED TO INTERCEPT SEDIMENT-LADEN RUNOFF FROM SMALL WATERSHEDS. ANGLE TO THE MAIN SOCK ALIGNMENT.
- c. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ½ THE ABOVE GROUND HEIGHT OF SOCK. EXCESSIVE FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED.
- 3. INTERIM STABILIZATION / TEMPORARY EROSION CONTROL MATTING EXPOSED AREAS.
- b. TEMPORARY SEEDING/MULCHING/MATTING SHALL BE AS APPLIED AS SPECIFIED ON THE SEEDING SCHEDULE CONTAINED ON THE E&SPC PLAN.
- CONTAINED HEREON.
- 4. ALTERNATE ROCK CONSTRUCTION ENTRANCE
- EXISTING ROADWAY
- b. ROCK CONSTRUCTION ENTRANCE SHALL BE A MINIMUM OF 100'L AND 20'W. REFER TO THE PLAN DETAIL FOR ADDITIONAL SPECIFICATIONS.

#### 5. INLET FILTER BAGS

- DEPTH
- b. FILTER BAGS SHOULD BE CLEANED AND/OR REPLACED WHEN THE BAG IS HALF FULL OR WHEN FLOW CAPACITY HAS BEEN
- REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET.
- RINSED AT A LOCATION WHERE THE RINSE WATER WILL ENTER A SEDIMENT TRAP OR SEDIMENT BASIN.
- d. DAMAGED FILTER BAGS SHOULD BE REPLACED.

#### ROCK FILTER

- a. A RIPRAP BERM SHALL BE PROVIDED WHERE SHOWN ON THE PLAN AND AT ALL LOCATIONS OF CONCENTRATED FLOWS.
- b. A 6" LAYER OF COMPOST SHALL BE ANCHORED TO THE UPSLOPE SIDE OF THE ROCK FILTER. c. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE FILTER.

# NEW STONE SHALL BE USED TO REBUILD THE FILTER.

### PERMANENT CONTROL MEASURES

- 1. PERMANENT GRASS / LEGUME COVER
- ATTACHED E&SPC PLAN CONTAINED ON THE ATTACHED E&SPC PLAN.
- 2. RIP RAP OUTLET PROTECTION

a. RIP-RAP SHALL BE USED AT ALL PIPE OUTLETS TO REDUCE THE OUTFLOW VELOCITY AND MINIMIZE EROSION POTENTIAL AT THE

1. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND

2. 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

3. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS. 4. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE

5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

7. THE LOCAL CONSERVATION DISTRICT SHALL BE CONTACTED IF SEEPS OR SPRINGS ARE ENCOUNTERED AND THE DESIGNS ARE ALTERED DURING CONSTRUCTION AND THEY SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR

1. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE LOCAL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE DISTRICT MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS

2. 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 ACCELERATED EROSION AND/OR SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT.

3. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP. SUCH AS A PUMPED WATER FILTER

4. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE EARTH DISTURBANCE ACTIVITY, 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.

5. 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

6. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND MAKE SURE THE SITE(S) RECEIVING THE EXCESS HAS AN APPROVED AND FULLY IMPLEMENTED EROSION AND SEDIMENT CONTROL PLAN THAT MEETS THE

7. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL ROCK STONE DREDGED MATERIAL USED ASPHALT 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 OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)

8. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL

9. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO VISUAL PROPERTY INSPECTIONS FLECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION 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 A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE

a. A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A

c. STOCKPILES SHALL BE LOCATED SO THAT ALL SWALES CAN FUNCTION AS DESIGNED

b. SILT SOCK MUST BE INSTALLED AT LEVEL GRADE. BOTH ENDS OF THE SILT SOCK SHALL EXTEND UP-SLOPE AT A 45-DEGREE

d. ALL AREAS OF CONCENTRATED FLOW AND AT ALL AREAS WHERE THE SILT SOCK HAS COLLAPSED OR UNDERCUT DUE TO

a. TEMPORARY SEEDING/MATTING AND MULCHING SHALL BE APPLIED WHERE INDICATED TO PROVIDE INTERIM STABILIZATION TO

c. 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 RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WILL BE RE-DISTURBED WITHIN 1 YEAR MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY SEEDING SPECIFICATION CONTAINED HEREON. DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS

a. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE CONSTRUCTION TRAFFIC WILL BE ENTERING AND LEAVING THE SITE. THE ROCK CONSTRUCTION ENTRANCE IS USED TO ELIMINATE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE

a. INLET FILTER BAGS SHOULD BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT GREATER THAN 0.25" IN

C. ACCUMULATED SEDIMENT SHOULD BE DISPOSED OF IN THE APPROVED MANNER. BAGS THAT WILL BE REUSED SHOULD BE

d. ROCK FILTERS WILL BE REMOVED WHEN CLOGGED WITH SEDIMENT. THE STONE SHALL BE WASHED FREE OF ALL SEDIMENT OR

a. ALL DISTURBED AREAS THAT ARE NOT PAVED SHALL BE PERMANENTLY STABILIZED WITH GRASS TO MINIMIZE EROSION. ALL SWALES SHALL BE PERMANENTLY SEEDED AS REQUIRED IN ACCORDANCE WITH THE SEEDING SPECIFICATION SHOWN ON THE

b. PERMANENT GRASS COVER SHALL BE APPLIED AS SPECIFIED IN ACCORDANCE WITH THE SEEDING SCHEDULE AND NOTES

OUTLET PIPE b. RIP-RAP SHALL BE INSTALLED IN ACCORDANCE WITH THE DIMENSIONS AND MATERIALS SHOWN ON THE ATTACHED PLAN.

3. CHANNEL/SLOPE LINING INSTALLATION

a. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.

- b. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- c. ROLL CENTER BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- d. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP, USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS. e. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED DEEP X 6" WIDE TRENCH. BACKFILL AND
- COMPACT THE TRENCH AFTER STAPLING. f. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR C350 MATTING). g. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40-FOOT INTERVALS. USE A ROW OF
- STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN
- h. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

# STABILIZATION SPECIFICATIONS

- 1. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
- 2. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- 3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS 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. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
- 4. AREAS WHICH ARE TO BE TOP-SOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES (12 INCHES ON COMPACTED SOILS) PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUT-SLOPES SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL
- 5. LIME AND FERTILIZER SHOULD BE APPLIED IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS. IF SOIL TEST RESULTS ARE NOT AVAILABLE, APPLY AT LEAST 6 TONS OF AGRICULTURAL GRADE LIMESTONE AND 1000 POUNDS OF 10-20-20 FERTILIZER PER ACRE.
- 6. APPLY SEED AT REQUIRED RATES. IF LEGUMES ARE PLANTED, BE SURE TO INOCULATE THE SEED WITH THE CORRECT LEGUME INOCULANT. SEED MAY BE BROADCAST ON THE SURFACE AND A LAYER OF MULCH APPLIED AT THE NECESSARY RATES. HYDROSEEDING IS ANOTHER METHOD OF SEEDING, WHERE THE SEED, FERTILIZER, AND MULCH ARE MIXED WITH WATER TO FORM AN EMULSION. THIS METHOD SHOULD ONLY BE DONE WITH THE CORRECT EQUIPMENT OR BY PROFESSIONALS.
- 7. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
- 8. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE. THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS
- 9. AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES STEEPER THAN 3:1, ALL AREAS OF CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.

MAINTENANCE

- 1. THE APPLICANT/OR HIS DESIGNEE SHALL BE RESPONSIBLE FOR MAINTAINING ALL FACILITATES SHOWN ON THIS PLAN.
- 2. DIVERSIONS, CHANNELS, AND STOCKPILES MUST BE STABILIZED IMMEDIATELY. 3. ANY PERMANENTLY SEEDED AREA THAT BECOMES ERODED OR DISTURBED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS
- RE-SOWN AND MULCH REAPPLIED, OR, AT THE DISCRETION OF THE OWNER, SOD INSTALLED. 4. SILT SOCK MUST BE INSTALLED AT LEVEL GRADE ALONG THE CONTOURS. BOTH ENDS OF EACH SILT SOCK SECTION MUST EXTEND AT LEAST 8 FEET UP-SLOPE AT 45-DEGREE ANGLES TO THE MAIN ALIGNMENT. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SILT SOCK.
- 5. ANY SILT SOCK SECTION THAT HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A NEW SECTION OF SILT SOCK.
- 6. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
- 7. 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 RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED 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.
- 3 AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (DEFINED AS A MINIMUM LINIFORM 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.
- 9. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT CONTROL BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 10. ANY SEDIMENT REMOVED FROM BMPS DURING CONSTRUCTION WILL BE RETURNED TO UPLAND AREAS ON SITE AND INCORPORATED INTO THE SITE GRADING IN A MANNER THAT WILL NOT CAUSE EROSION OR SEDIMENTATION. ALL AREAS DISTURBED DURING THIS PROCESS WILL BE MULCHED AND PERMANENTLY STABILIZED WITH SEED.
- 11. E&S BMPS SHALL BE INSPECTED FOLLOWING EACH MEASURABLE RAINFALL THROUGH THE DURATION OF THE PROJECT. INSPECTIONS SHALL BE LOGGED ON DEP FORM 3800-FM-BCW0271D (DATED 12/2019) AND SHALL SHOW THE DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THAT THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO THE COUNTY CONSERVATION DISTRICT OR OTHER REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION

STAGING OF EARTHMOVING

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED.

CONSTRUCTION OF THE SITE IMPROVEMENTS IS EXPECTED TO BEGIN IN THE SUMMER OF 2024. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION. SHOULD ANY SINKHOLES OR GROUNDWATER SOURCES BE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER IMMEDIATELY. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY,

OVER UNDISTURBED VEGETATED AREAS. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT.

SEQUENCE OF CONSTRUCTION

- 1. AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL SUB-CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE CIVIL ENGINEER, AND A REPRESENTATIVE OF THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. PERIMETER E&S CONTROLS MAY BE INSTALLED PRIOR TO THE PRE-CONSTRUCTION MEETING.
- 2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 3. 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 BY THE LOCAL CONSERVATION DISTRICT OR BY DEP PRIOR TO IMPLEMENTATION.
- 4. INSTALL THE ALTERNATE ROCK CONSTRUCTION ENTRANCE AS SHOWN ON THE ATTACHED PLAN.
- 5. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.)
- 6. LOCATE, STAKE, AND FLAG AREAS MARKED AS INFILTRATION PCSM BMP'S (I.E. INFILTRATION BASINS 1 & 2). REFER TO PCSM PLAN FOR ADDITIONAL INFORMATION AND LOCATION OF PCSM BMP'S. THESE AREAS SHOULD NOT BE COMPACTED DURING CONSTRUCTION. NO CONSTRUCTION TRAFFIC SHALL OCCUR IN THESE AREAS EXCEPT AS NECESSARY FOR EXCAVATION/GRADING.
- 7. INSTALL PERIMETER SILT SOCK ON THE SITE AT LOCATIONS 1-5 AS INDICATED ON THE ATTACHED PLAN. SILT SOCK IS TO BE INSTALLED ALONG THE CONTOUR WHERE POSSIBLE, AT A LEVEL GRADE. THE SILT SOCK SHOULD BE POSITIONED IN SUCH A WAY AS TO PREVENT ANY SEDIMENT FROM LEAVING THE SITE. SEDIMENT ACCUMULATING TO HALF THE HEIGHT OF THE SILT SOCK SHALL BE REMOVED IN ORDER TO RESTORE THE SEDIMENT STORAGE CAPACITY OF THESE AREAS. IN THE CASE OF A FAILURE OF THE SILT SOCK DUE TO HIGH FLOWS, A NEW SECTION OF SILT SOCK SHALL BE INSTALLED ACROSS THE FAILED PORTION OF THE SILT SOCK. AT NO POINT SHALL UN-STABILIZED AREA DRAIN OFFSITE UNCONTROLLED.
- 8. INSTALL INLET PROTECTION FOR EXISTING INLETS AS INDICATED ON THE ATTACHED PLAN.

9. INSTALL ROCK FILTER OUTLETS #1 & #2.

- 10. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
- 11. EXCAVATE AS REQUIRED TO INSTALL INFILTRATION BASIN 1 AS SHOWN ON THE PCSM PLAN. INSTALL THE OUTLET PIPE ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILL

EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAY, INSTALL RIPRAP APRON AT THE BASIN OUTFALL, THE INFILTRATION BASIN SHALL BE OVER-EXCAVATED AND SCARIFIED IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE REQUIRED ELEVATION WITHIN THE INFILTRATION BASIN, INSTALL THE SILT SOCK AT LOCATION 6 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING EXCAVATION TO SUBGRADE, OUTLET PIPE INSTALLATION, ANTI-SEEP COLLAR AND CLAY CORE INSTALLATION, INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASIN 1.

### 12. INSTALL ROCK FILTERS #1 & #2.

13. EXCAVATE AS REQUIRED TO INSTALL INFILTRATION BASIN 2 AS SHOWN ON THE PCSM PLAN. INSTALL THE OUTLET PIPE ALONG WITH THE ASSOCIATED OUTLET STRUCTURE. CONSTRUCT IMPERVIOUS CLAY CORE, ANTI-SEEP COLLARS, AND BACKFILL EMBANKMENT, COMPACTING TO 95% MAX DRY DENSITY. INSTALL NORTH AMERICAN GREEN S200 SLOPE PROTECTION AT EMERGENCY SPILLWAY. INSTALL RIPRAP APRON AT THE BASIN OUTFALL. THE INFILTRATION BASIN SHALL BE OVER-EXCAVATED AND SCARIFIED IN ACCORDANCE WITH THE PLAN DETAIL. THE EXCAVATOR SHOULD AVOID EXCAVATING TO THE FINAL DESIGN INVERT UNTIL THE ENGINEERED SOIL MIX IS READY TO BE PLACED. THIS WILL MINIMIZE THE EXPOSURE OF SUBGRADE SOIL AND AID IN REDUCING COMPACTION. WHEN EXCAVATING TO FINAL INVERT SUBGRADES UTILIZE A SMOOTH (TOOTHLESS) BLADE BUCKET TO AVOID LOCALIZED COMPACTION. INSTALL THE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE PLAN DETAILS. PLACE THE ENGINEERED SOIL MIX TO THE REQUIRED ELEVATION WITHIN THE INFILTRATION BASIN, INSTALL THE SILT SOCK AT LOCATION 7 TO PREVENT ANY POTENTIAL SEDIMENTATION OF THE ENGINEERED SOILS. ANY SOIL COMPACTION SHOULD BE AVOIDED IN THE BASIN BOTTOM. WHEN SEEDING THE BASIN MIXES BE SURE TO HAND RAKE THE SEED INTO THE SOIL. A LICENSED PROFESSIONAL OR DESIGNEE SHALL BE PRESENT ONSITE DURING EXCAVATION TO SUBGRADE, OUTLET PIPE INSTALLATION, ANTI-SEEP COLLAR AND CLAY CORE INSTALLATION, INSTALLATION OF THE UNDERDRAIN SYSTEM, ENGINEERED SOILS, AND FINAL GRADING/SEEDING OF INFILTRATION BASIN 2.

#### 14. INSTALL ROCK FILTER #3.

15. INSTALL SWALES A, B, C, AND E. ENSURE EROSION CONTROL LINING IS INSTALLED IN ACCORDANCE WITH THE PLAN DETAILS. 16. IF SOIL IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.

17. CLEAR AND STRIP ANY TOPSOIL ACROSS THE AREA OF THE BUILDING PAD AND PROPOSED PAVED AREAS AND PLACE ON THE TOPSOIL STOCKPILE AS SHOWN ON THE ATTACHED PLAN AND IN ACCORDANCE WITH PLAN DETAILS. ENSURE THE SILT SOCK AT LOCATION 8 BELOW THE TOPSOIL STOCKPILE IS INSTALLED AS SHOWN ON THE ATTACHED PLAN.

18. ROUGH GRADE THE DISTURBED AREA AS NECESSARY FOR CONSTRUCTION OF THE BUILDING, INTERNAL ACCESS DRIVE, AND PAVED AREAS.

19. INSTALL WATER, SANITARY SEWER, STORM SEWER, AND ALL OTHER UTILITIES AT THIS TIME. INSTALL INLET PROTECTION ON ALL IN FTS IDENTIFIED ON THE PLAN, DURING AND FOLLOWING STORM EVENTS PROVIDE A MEANS TO DEWATER PITS AND UTILITY TRENCHES. SPOIL MATERIAL FROM EXCAVATION OF THE TRENCHES SHALL BE PLACED ON THE UP-SLOPE SIDE OF THE TRENCH THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THAT WHICH WILL BE BACKFILLED THE SAME DAY, AND ANY AFFECTED BMP'S SHALL BE IMMEDIATELY STABILIZED AND REPAIRED. THE TOPSOIL EXCAVATED FROM THE TRENCH SHALL BE CAREFULLY REMOVED AND STOCKPILED SEPARATELY FROM THE SUBSOIL. THE TOPSOIL SHALL BE RESTORED TO THE GRADED AREAS TO PRE-CONSTRUCTION CONDITIONS. WATER PUMPED FROM PITS AND TRENCHES SHALL BE FILTERED BY MEANS OF A FILTER BAG. IMMEDIATELY AFTER TRENCHES HAVE BEEN BACKFILLED, FINE-GRADE AREA.

20. INSTALL THE STONE SUB-BASE FOR THE PAVED AREAS AND CONCRETE SLABS PER PLAN REQUIREMENTS.

21. CONSTRUCT THE PROPOSED BUILDING AND ATTACHED UTILITIES (ROOF DRAINS, SANITARY CONNECTIONS, WATER CONNECTIONS, ETC.) IMMEDIATELY UPON COMPLETION OF EARTH DISTURBANCE ACTIVITIES FINAL GRADE AND STABILIZE THE

22. FINE GRADE ANY REMAINING AREAS AS SHOWN ON THE GRADING PLAN. DURING THIS TIME, FRAME EARTH MOVING EQUIPMENT WILL BE EMPLOYED TO REMOVE TOPSOIL AND EXCESS "FILL" MATERIAL, IF ANY EXISTS. SPREAD A MINIMUM OF 6 INCHES OF TOPSOIL ON FRESHLY GRADED AREAS; REFER TO THE TOPSOIL APPLICATION NOTES ON THE PLAN. 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. EACH SEED MIXTURE SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RATES AND INSTRUCTIONS

23. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

24. PAVE THE REQUIRED AREAS. DO NOT INSTALL SURFACE (WEARING) COURSE UNTIL ALL DOWNSTREAM VEGETATED AREA IS 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). IF EARTHMOVING ACTIVITIES CEASE FOR FOUR (4) DAYS OR MORE TEMPORARY STABILIZATION SHALL BE APPLIED. SEE "STABILIZATION SPECIFICATIONS" IN THE E&S PLAN FOR FURTHER DETAILS.

25. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF ANY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. 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) WITH APPROVAL OF THE LOCAL CONSERVATION DISTRICT.

26. THE OPERATOR SHALL REMOVE FROM THE SITE. RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 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 WASTES ON OR OFF THE SITE, THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS DNCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALI

27. PER NPDES REQUIREMENTS, "WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS."

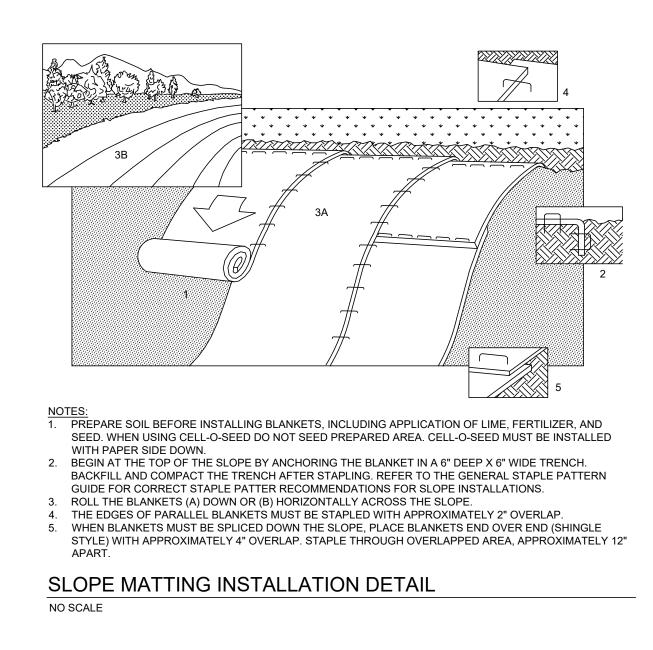
### CONTRACTOR NOTES

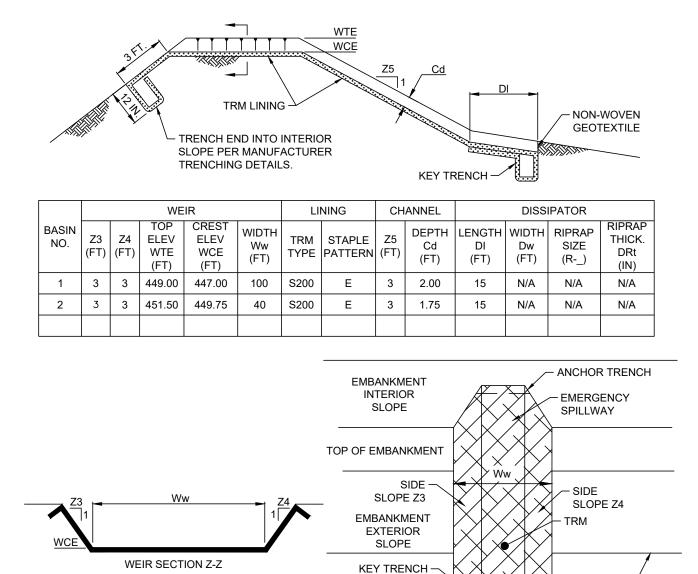
- 1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY DEP PRIOR TO IMPLEMENTATION
- 2. PER NPDES REQUIREMENTS, "UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT."
- 3. IF SOIL IT IS TAKEN TO OR BORROWED FROM ANOTHER CONSTRUCTION SITE, SAID SITE MUST HAVE AN APPROVED E&SPC PLAN. SEE THE "SOIL LIMITATIONS AND RESOLUTIONS" SECTION OF THIS E&S PLAN FOR FURTHER INFORMATION.
- 4. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- 5. ALL SEDIMENT DEPOSITED WITHIN STORM SEWER CONVEYANCE PIPES SHALL BE REMOVED PRIOR TO COMPLETION OF THE PROJECT. ANY WATER PUMPED FROM THE STORMWATER BASIN OR OTHER AREA OF THE SITE SHALL BE PUMPED THROUGH A FILTER BAG AND THE COLLECTED SEDIMENT SHALL BE DISPOSED OF PROPERLY. ALL AREAS DISTURBED DURING THIS PROCESS SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. THE COUNTY CONSERVATION DISTRICT SHOULD BE CONTACTED PRIOR TO CONVERSION OR REMOVAL OF PRIMARY E&S BMPS AND MAY REQUIRE A SITE INSPECTION. 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).
- 6. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 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 WASTES ON OR OFF THE SITE. THESE BUILDING WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY.

7. PER NPDES REQUIREMENTS, "WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS."

EROSION & SEDIMENTATION POLLUTION CONTROL NOTES       REVISION         EROSION & SEDIMENTATION POLLUTION CONTROL NOTES       REVISION         EROSION & SEDIMENTATION POLLUTION CONTROL NOTES          Steckbeck Engineering & Surveying In:       For         Fax:       (77) 272-7348         Fax:       For         Fax:       (77) 272-7348         Fax:       For	DATE ВY 				
EROSION & PRELIN	REVISION 				
Steckbeck Engineering & Surveying Inc. 279 North Zinns Mill Road / Suite A Lebanon, Pennsylvania 17042 Phone: (717) 272–7348 Fax: (717) 272–7348		PRELIMINARY/FINAL LAND DEVELOPMENT PLANS		Iocated in NORTH LEBANON TOWNSHIP	LEBANON County, Pennsylvania
			k Engineering & Surveying Inc. orth Zinns Mill Road / Suite A	banon, Pennsyvania 17042 Phone: (717) 272–7110	Fax: (717) 272–7348

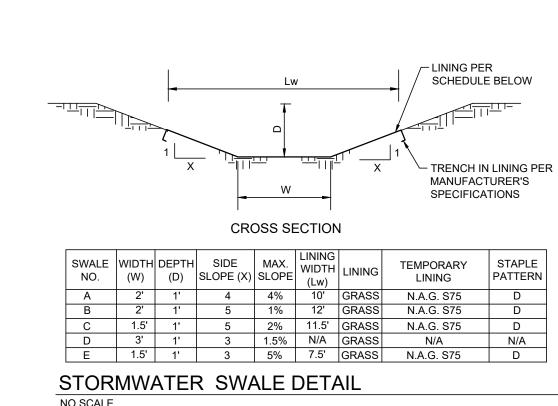
19 OF 21 SHFF





TOF OF -

SLOPE



SECTION

PIPE NO.

EX. EW-1

FES-11

EW-2

EW-1 (2b)

<u>PROFILE</u>

PLAN

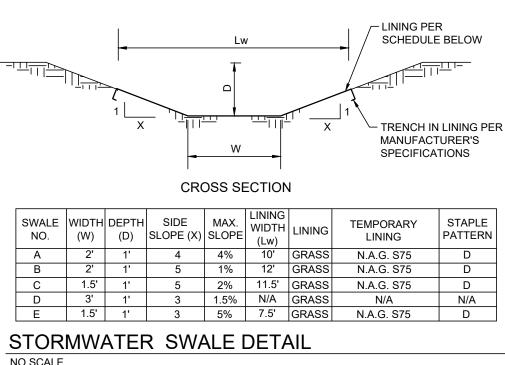
SUBGRADE ·

CONCRETE -

ENDWALL

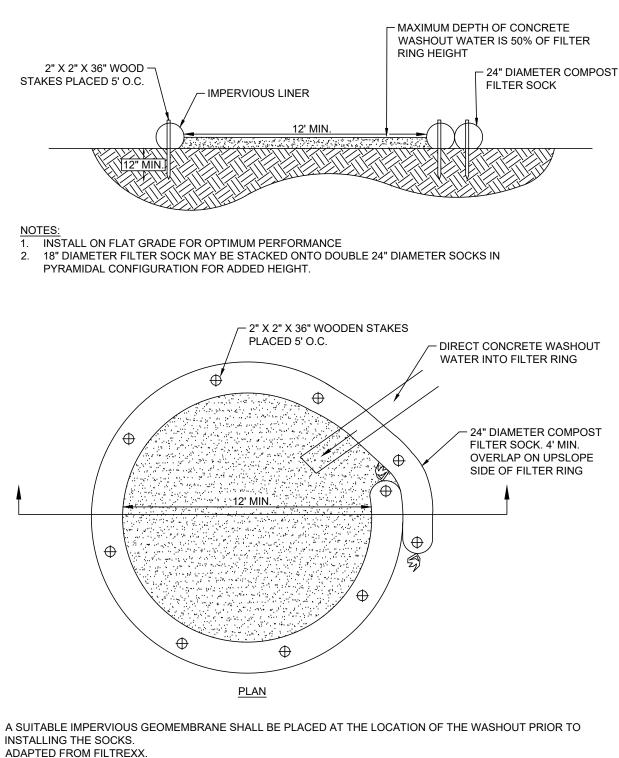
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FES-12



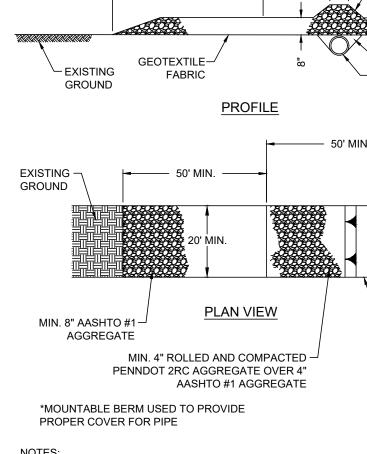
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BASIN EMERGENCY SPILLWAY DETAIL NO SCALE



TYPICAL COMPOST SOCK WASHOUT INSTALLATION

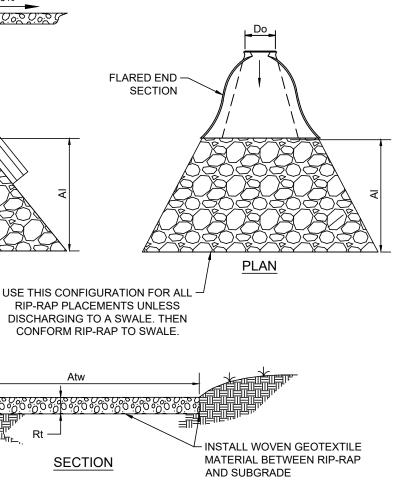
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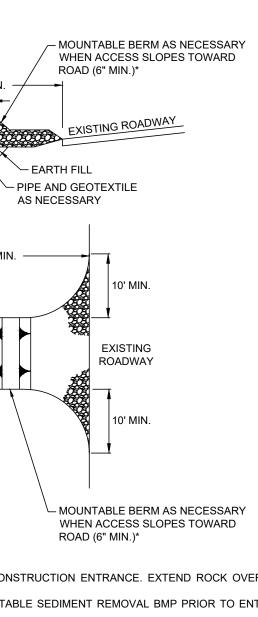
- . REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE. . RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING
- ROCK CONSTRUCTION ENTRANCE. 3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE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

ALTERNATE ROCK CONSTRUCTION ENTRANCE NO SCALE

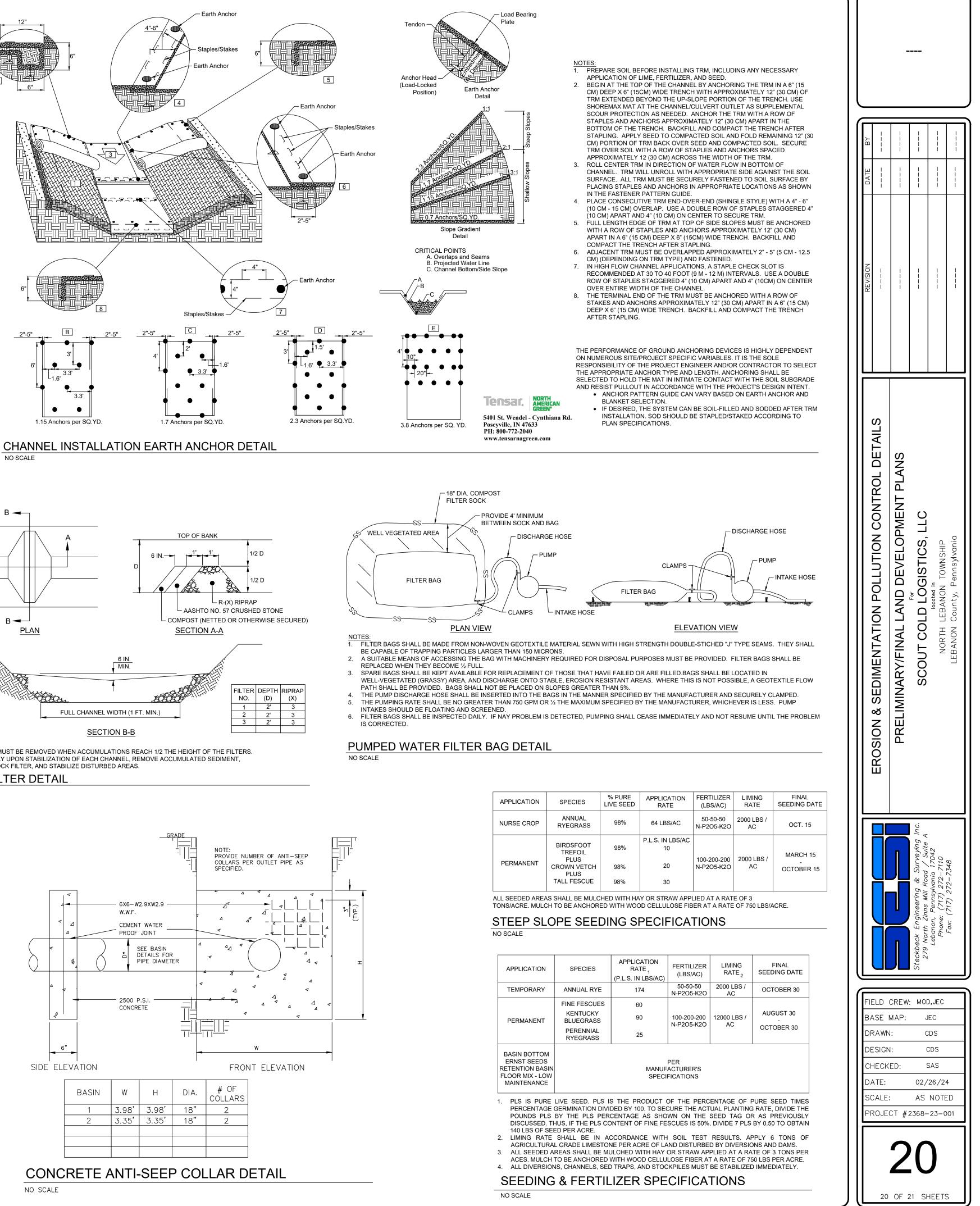
PIPE DIA. Do (in.)	RIPRAP SIZE	Rt (in)	Al (ft)	Alw (ft)	Atw (ft)
18	R-4	18	12	5	17
12	R-6	36	9	3	7
36	R-5	27	13	9	14
18	R-4	18	10	9	13
12	R-6	36	9	3	7

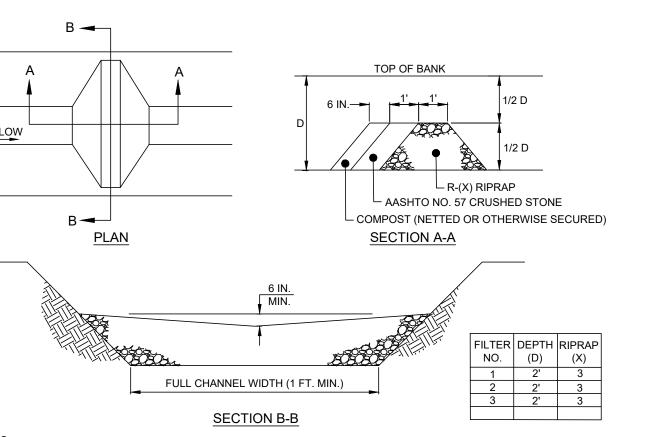


FLARED END SECTION/ENDWALL RIP RAP DETAIL



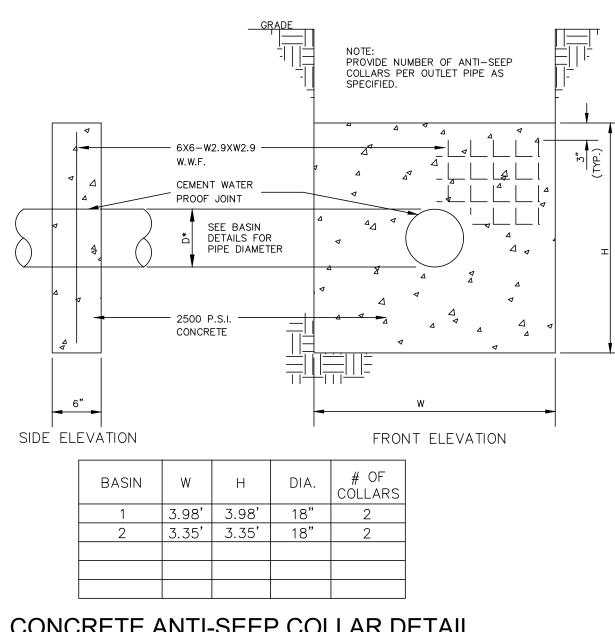
COVER AS SPECIFIED BY THE MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED

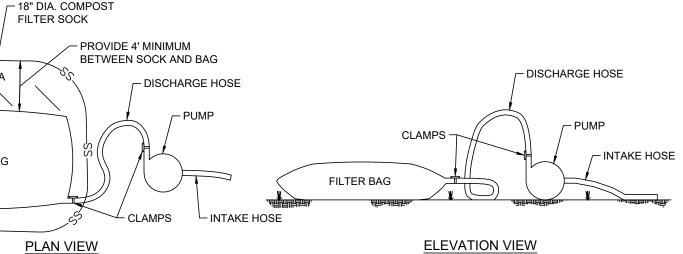




SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS. 2. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL. REMOVE ACCUMULATED SEDIMENT. REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS. ROCK FILTER DETAIL

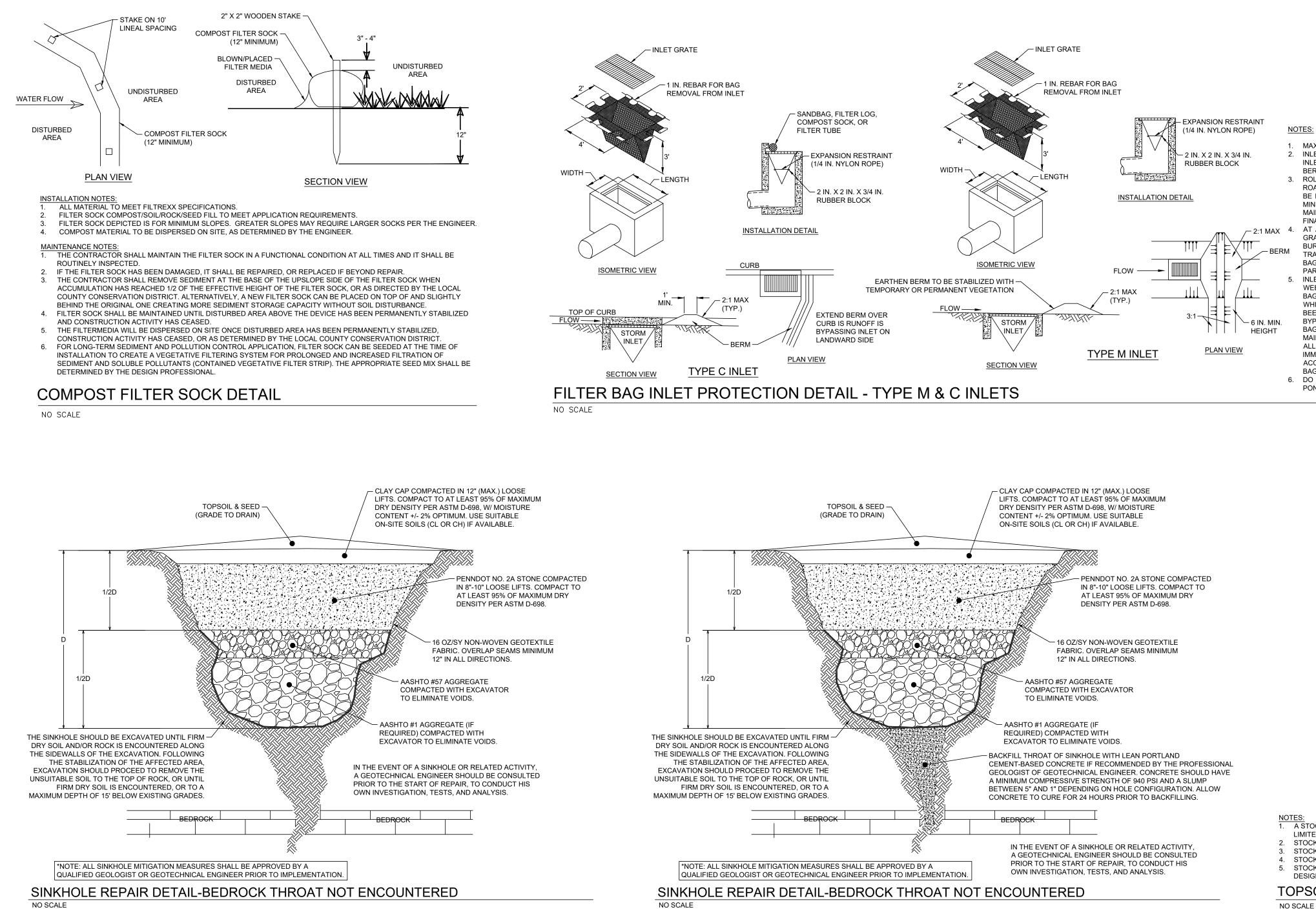
NO SCALE





APPLICATION	SPECIES	% PURE LIVE SEED	APPLICATION RATE	FERTILIZER (LBS/AC)	LIMING RATE	FINAL SEEDING DATE
NURSE CROP	ANNUAL RYEGRASS	98%	64 LBS/AC	50-50-50 N-P2O5-K2O	2000 LBS / AC	OCT. 15
	BIRDSFOOT TREFOIL PLUS	98%	P.L.S. IN LBS/AC 10	100-200-200	2000 LBS /	MARCH 15
PERMANENT	CROWN VETCH PLUS	98%	20	N-P2O5-K2O	AC	OCTOBER 15
	TALL FESCUE	98%	30			

APPLICATION	SPECIES	APPLICATION RATE 1 (P.L.S. IN LBS/AC)	FERTILIZER (LBS/AC)	LIMING RATE <sub>2</sub>	FINAL SEEDING DATE
TEMPORARY	ANNUAL RYE	174	50-50-50 N-P2O5-K2O	2000 LBS / AC	OCTOBER 30
PERMANENT	FINE FESCUES	60	100-200-200 N-P2O5-K2O	12000 LBS / AC	
	KENTUCKY BLUEGRASS	90			AUGUST 30 -
	PERENNIAL RYEGRASS	25			OCTOBER 30
BASIN BOTTOM ERNST SEEDS RETENTION BASIN FLOOR MIX - LOW MAINTENANCE	PER MANUFACTURER'S SPECIFICATIONS				



NOTES:

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

COMPOST FILTER SOCK A STOCKPILE SHALL BE USED TO CONTAIN ALL STRIPPED TOPSOIL IN A LIMITED AREA IN ORDER TO KEEP DISTURBANCE TO A MINIMUM.

- STOCKPILES ARE TO BE STABILIZED IMMEDIATELY. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
- DESIGNED. **TOPSOIL STOCKPILE**

