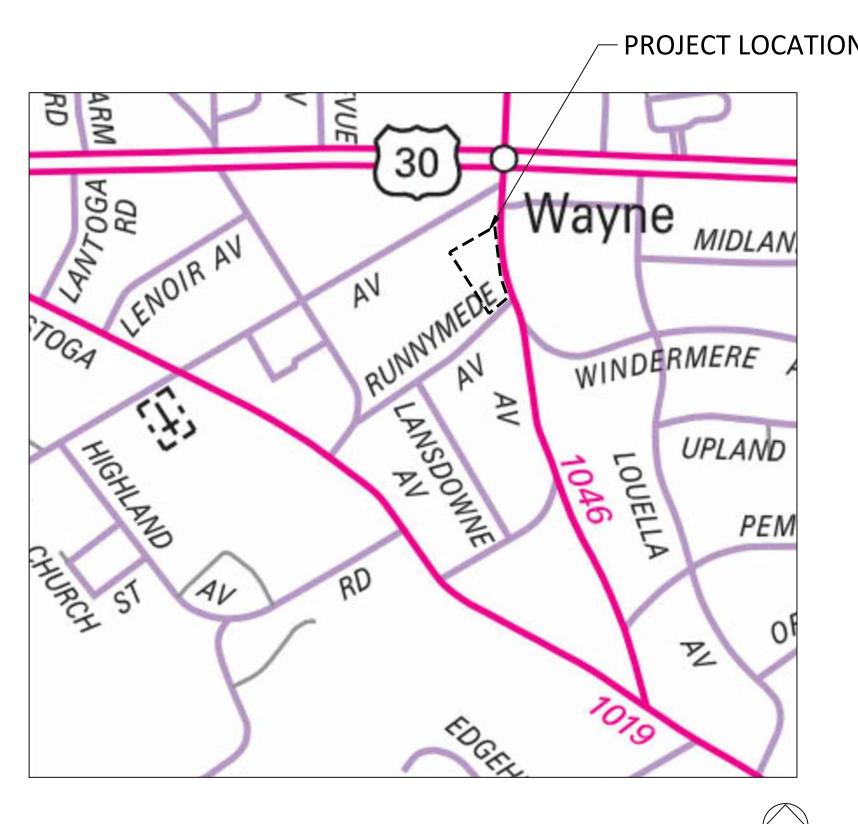
# SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT

ITHAN CREEK WATERSHED

# RADNOR TOWNSHIP, DELAWARE COUNTY, PA



PROJECT LOCATION
Wayne <sub>MIDLAN</sub>
OGA WINDERMERE
(4)
FDGRE TOTO

SERIAL# 20183342431

20183342424 20183342359 20183342385 20183342401



IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ACTIVITIES IN A CLEAN, NEAT MANNER THROUGHOUT THE CONTRACT PERIOD. ALL DEBRIS GENERATED BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEANED UP AND REMOVED FROM THE PREMISES AT THE END OF EACH WORKING DAY. IF THE CONTRACTOR FAILS TO COMPLY, THE TOWNSHIP OF MIDDLETOWN HAS THE RIGHT TO HAVE THE SITE CLEANED AT THE CONTRACTOR'S EXPENSE.

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.

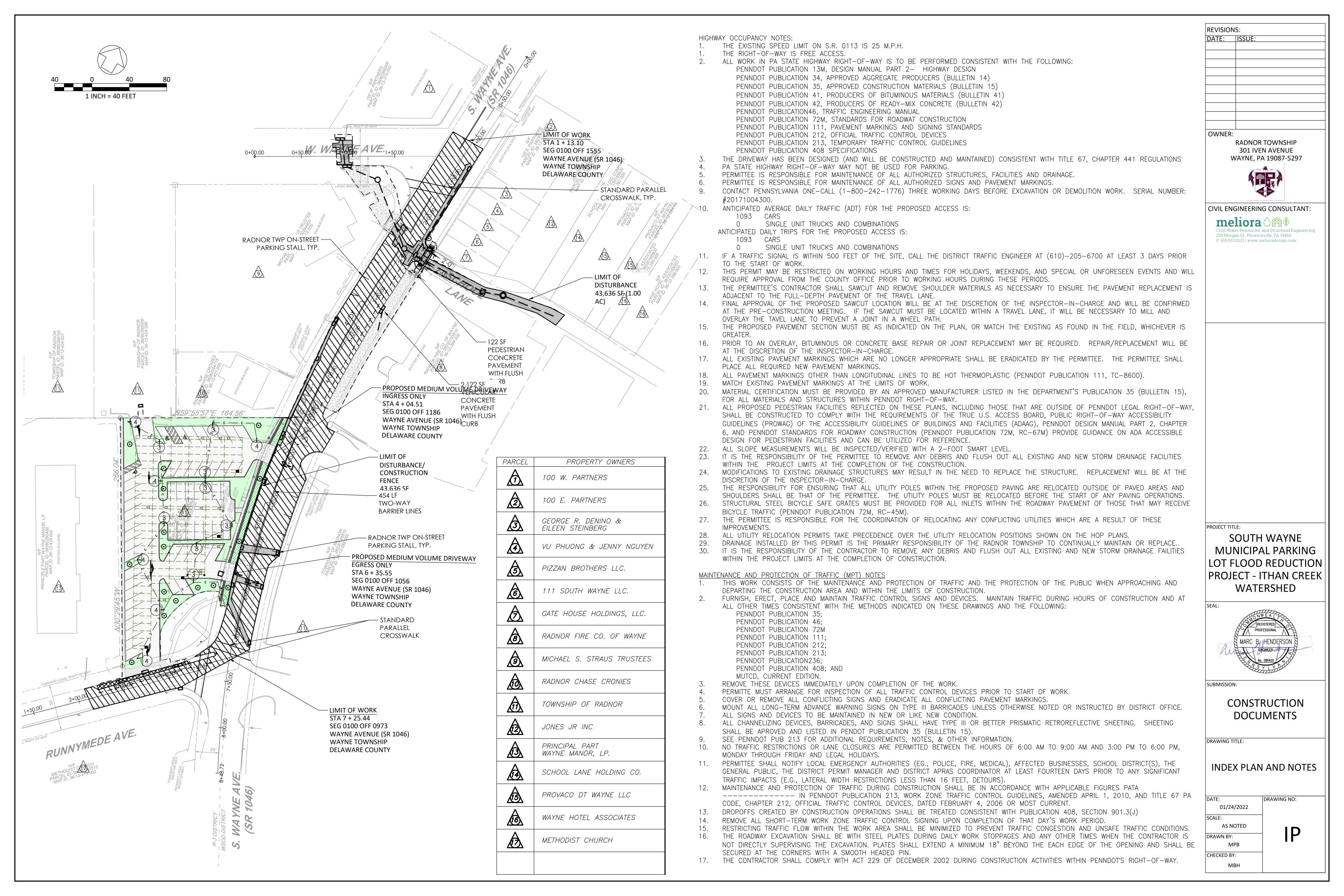
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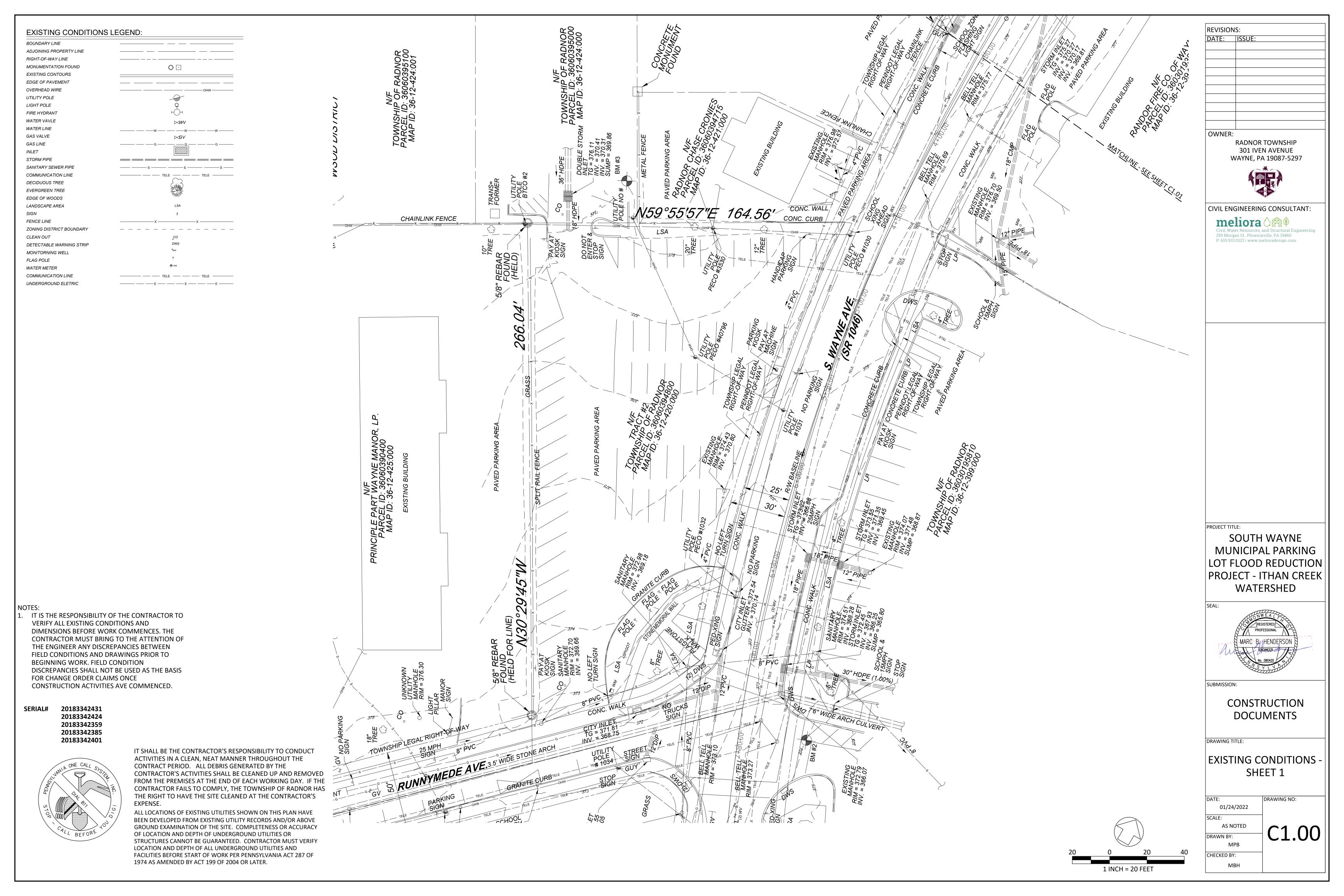
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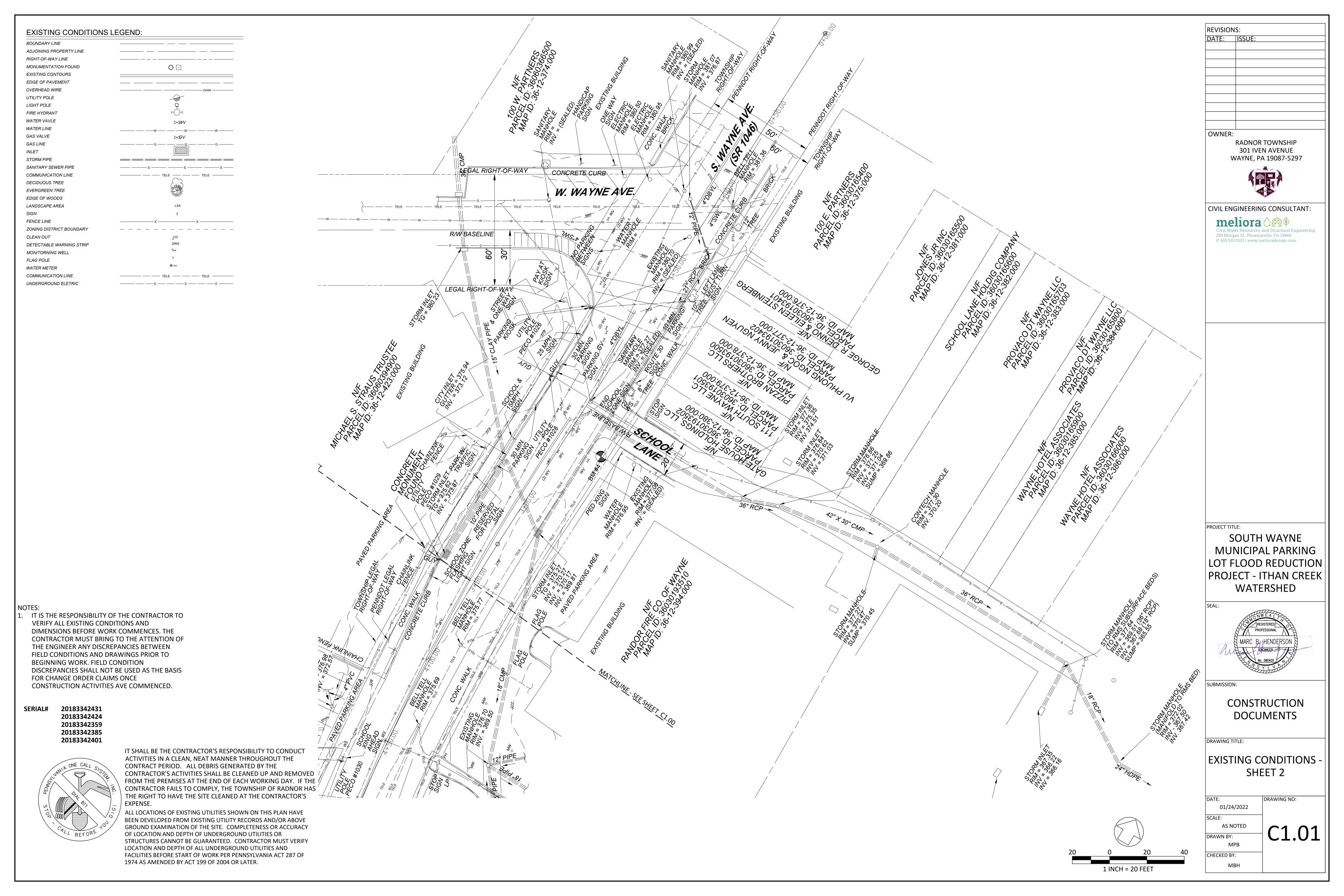
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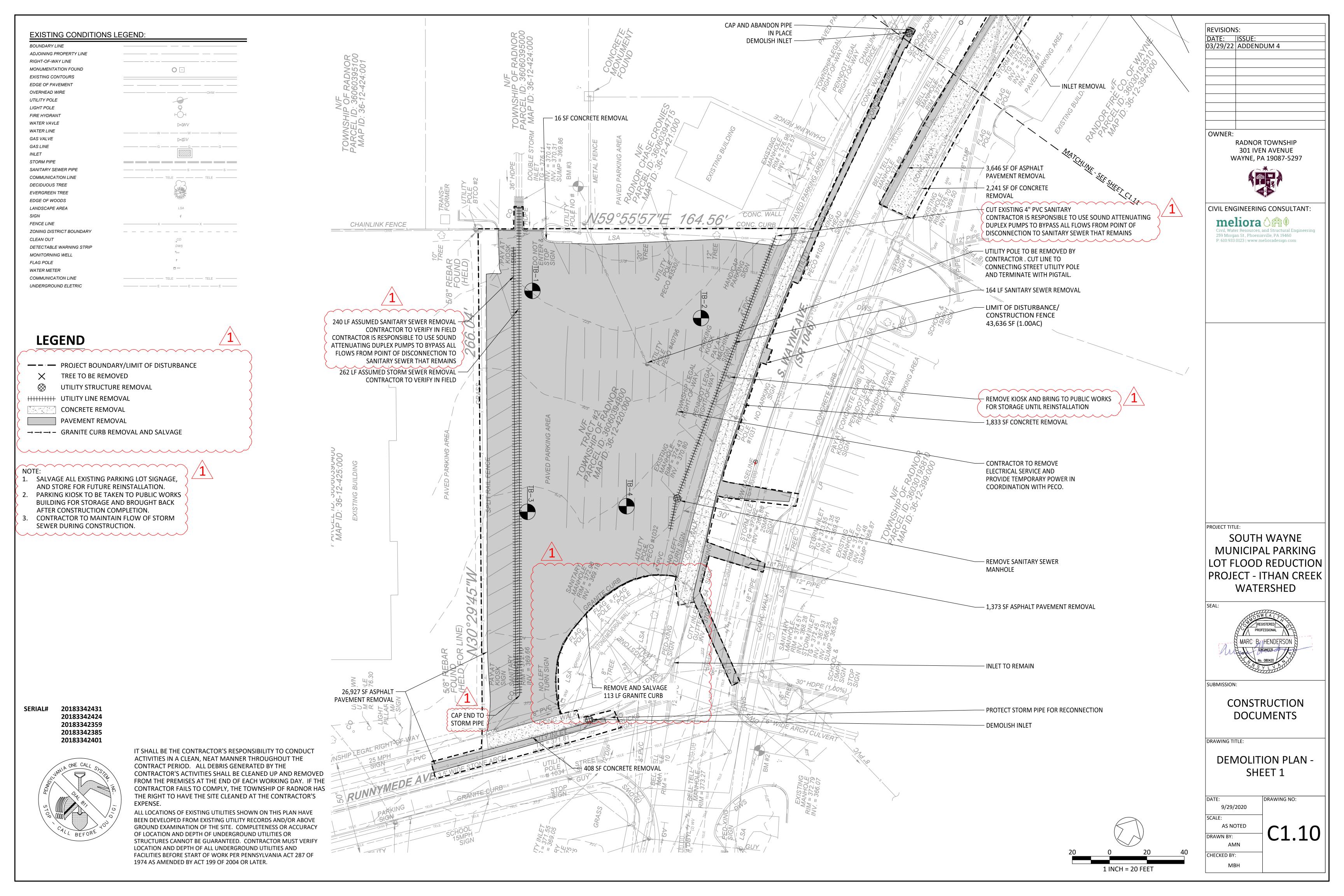
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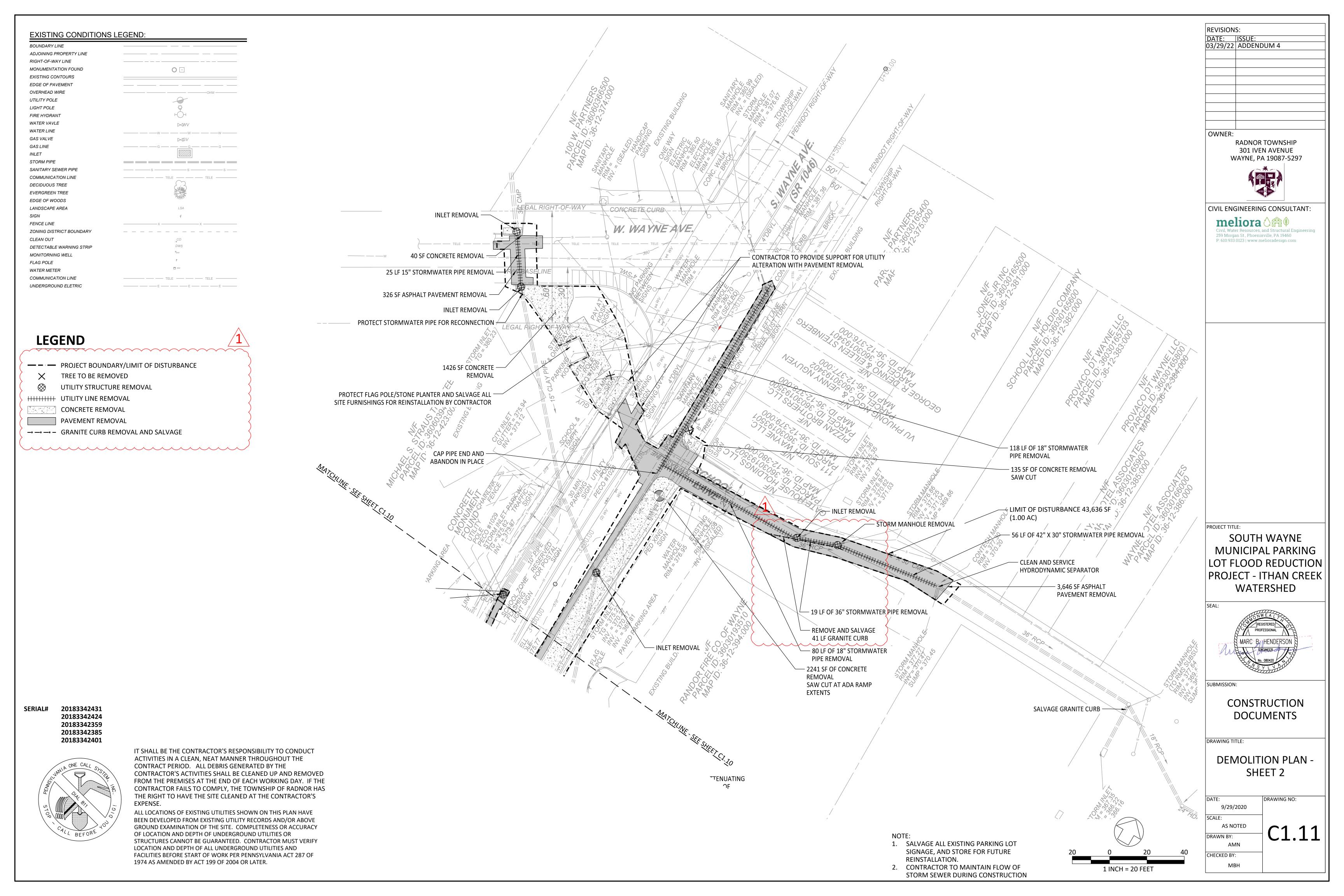
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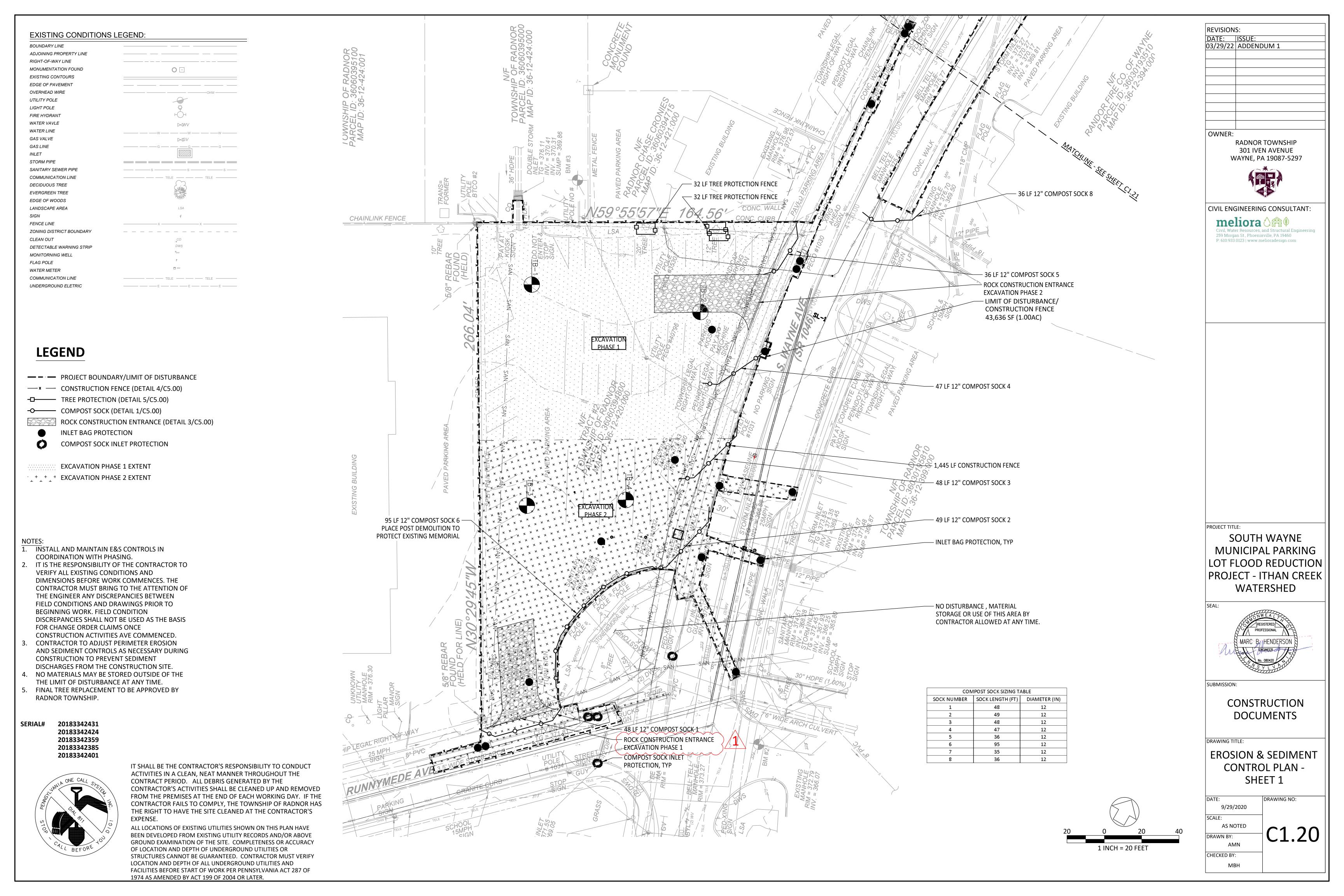


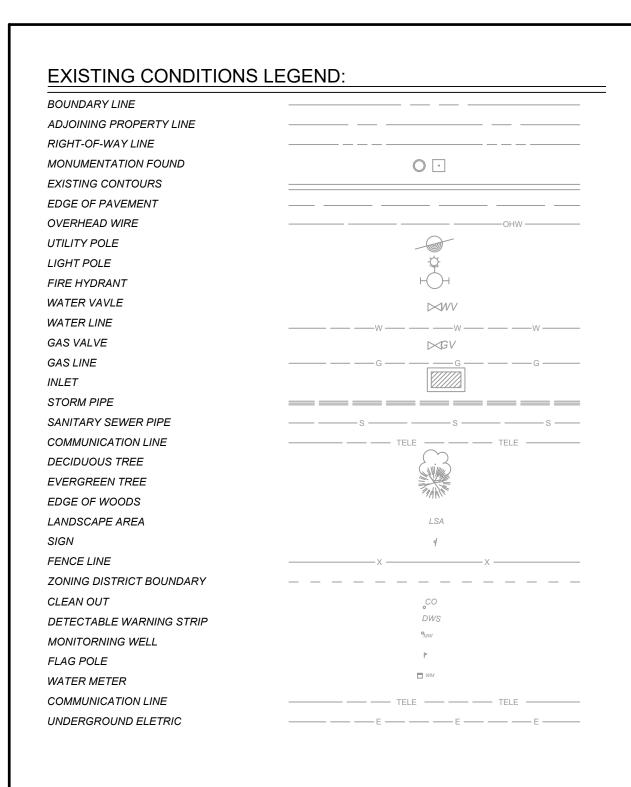












# **LEGEND**

— — PROJECT BOUNDARY/LIMIT OF DISTURBANCE

—× — CONSTRUCTION FENCE (DETAIL 4/C5.00)

TREE PROTECTION (DETAIL 5/C5.00)

COMPOST SOCK (DETAIL 1/C5.00)

ROCK CONSTRUCTION ENTRANCE (DETAIL 3/C5.00)

**INLET BAG PROTECTION** 

COMPOST SOCK INLET PROTECTION

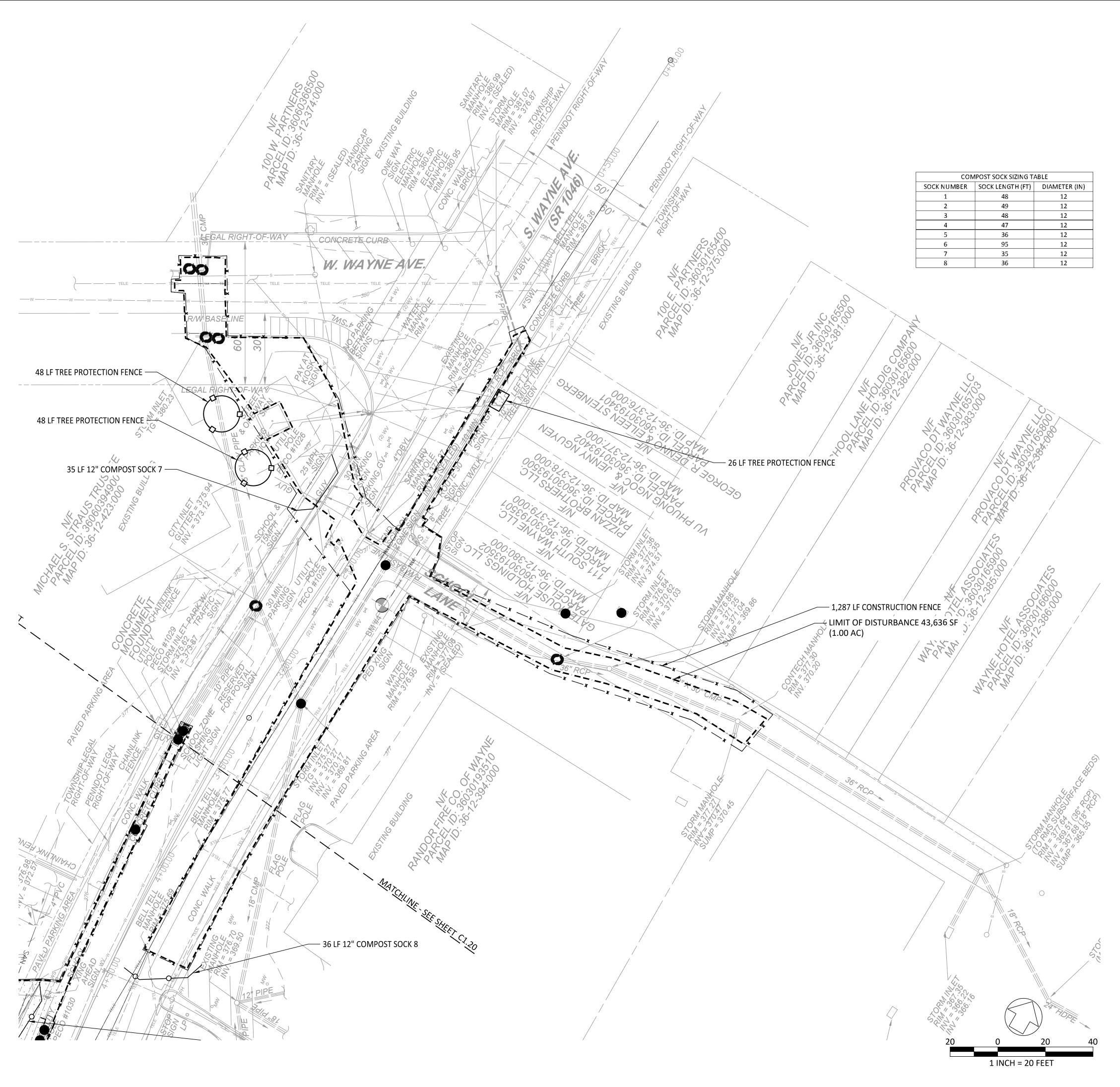
- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE WORK COMMENCES. THE CONTRACTOR MUST BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS PRIOR TO BEGINNING WORK. FIELD CONDITION DISCREPANCIES SHALL NOT BE USED AS THE BASIS FOR CHANGE ORDER CLAIMS ONCE CONSTRUCTION ACTIVITIES AVE COMMENCED.
- CONTRACTOR TO ADJUST PERIMETER EROSION AND SEDIMENT CONTROLS AS NECESSARY DURING CONSTRUCTION TO PREVENT SEDIMENT DISCHARGES FROM THE CONSTRUCTION SITE.
- 3. NO MATERIALS MAY BE STORED OUTSIDE OF THE THE LIMIT OF DISTURBANCE AT ANY TIME.
- 4. FINAL TREE REPLACEMENT TO BE APPROVED BY RADNOR TOWNSHIP. 5. CONTRACTOR SHOULD PROTECT ANY EXCAVATION FROM STORMWATER RUNOFF FROM ROAD.
- 6. CONCRETE APRON WILL BE INSTALLED IN THREE PHASES. E&S CONTROLS SHALL BE MOVED ACCORDINGLY WITHIN PHASES, AND CONTROLS ARE TO BE MOVED ONCE CONRETE SETS.

#### SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



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- ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF

1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.



**REVISIONS:** 

OWNER:

PROJECT TITLE:

DRAWING TITLE:

01/24/2022

MPB

DRAWN BY:

CHECKED BY:

SOUTH WAYNE

MUNICIPAL PARKING

LOT FLOOD REDUCTION

PROJECT - ITHAN CREEK

WATERSHED

CONSTRUCTION

DOCUMENTS

**EROSION & SEDIMENT** 

**CONTROL PLAN -**

SHEET 2

DRAWING NO:

RADNOR TOWNSHIP

**301 IVEN AVENUE** 

WAYNE, PA 19087-5297

**CIVIL ENGINEERING CONSULTANT:** 

meliora 🗘 🙉 🍕

259 Morgan St., Phoenixville, PA 19460

P: 610.933.0123 | www.melioradesign.com

DATE: ISSUE:

#### GENERAL NOTES

- 1. EXISTING SITE CONDITIONS, TOPOGRAPHIC AND UTILITY INFORMATION DEPICTED HEREON HAS BEEN COMPILED FROM EXISTING INFORMATION AND FIELD MEASUREMENTS. ACTUAL CONDITIONS MAY HAVE CHANGED AND UNDOCUMENTED CONDITIONS MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE WORK COMMENCES. THE CONTRACTOR MUST BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS PRIOR TO BEGINNING WORK. FIELD CONDITION DISCREPANCIES SHALL NOT BE USED AS THE BASIS FOR CHANGE ORDER CLAIMS ONCE CONSTRUCTION ACTIVITIES HAVE COMMENCED.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE, EXACT LOCATIONS, SIZE AND ELEVATIONS OF ALL UTILITIES OR OTHER STRUCTURES BEFORE STARTING WORK. MANY UNDERGROUND UTILITY LOCATIONS AS SHOWN ARE APPROXIMATE, AND INFORMATION MAY BE MISSING. THIS NOTICE IS GIVEN PER ACT 199 OF 2004 OF THE COMMONWEALTH OF PA. CONTACT PA ONE CALL SYSTEM 1-800-242-1776.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING UTILITY FUNCTIONS THROUGHOUT THE PROJECT. THIS MAY INCLUDE BYPASS, PUMPING, TEMPORARY POWER, STORM SEWER CONVEYANCE DURING CONSTRUCTION ACTIVITIES.
- 4. THE CONTRACTOR SHALL PROCURE AND PAY ALL PERMITS, LICENSES AND APPROVALS NECESSARY FOR THE EXECUTION OF THIS CONTRACT. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES RELATING TO THE PERFORMANCE OF THE WORK, THE PROTECTION OF ADJACENT PROPERTY, AND THE MAINTENANCE OF PASSAGES.
- 5. CONTRACTOR SHALL EXERCISE CARE TO PROTECT FROM DAMAGE EXISTING WORK, EXISTING SITE IMPROVEMENTS, EXISTING VEGETATION, ABOVE AND BELOW GRADE UTILITIES, AND ALL WORK PERFORMED. ANY DAMAGE CAUSED BY THE EXECUTION OF THE WORK BY THE CONTRACTOR OR ANY OF HIS SUBCONTRACTORS SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER OR OWNER'S REPRESENTATIVE.
- 6. IF APPLICABLE, FULLY PROTECT ALL EXISTING OR NEW TREE ROOT ZONES DURING ALL CONSTRUCTION ACTIVITIES. AT NO TIME SHALL CONSTRUCTION ACTIVITIES TAKE PLACE OR MATERIALS BE STORED WITHIN TREE DRIPLINE ZONES. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, SEE TREE PROTECTION DETAILS AND SPECIFICATIONS.
- 7. THE FACILITY WILL NOT BE IN USE DURING CONSTRUCTION, BUT ACCESS FOR EMERGENCY VEHICLES TO THE RADNOR MEMORIAL LIBRARY, FROM THE LOT, WILL BE PROVIDED AS IS POSSIBLE.
- 8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ACTIVITIES IN A CLEAN, NEAT MANNER THROUGHOUT THE CONTRACT PERIOD. ALL DEBRIS GENERATED BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEANED UP AND REMOVED FROM THE PREMISES AT THE END OF EACH WORKING DAY. IF THE CONTRACTOR FAILS TO COMPLY, THE PROJECT MANAGER HAS THE RIGHT TO HAVE THE SITE CLEANED AT THE CONTRACTOR'S EXPENSE.
- 9. ALL SECURITY WORKERS AND CONSTRUCTION MATERIALS TO BE PROVIDED BY THE CONTRACTOR AS NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SITE AT ALL TIMES.
- 10. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND ALL REGULATIONS APPURTENANT TO THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. ALL WORK SHALL BE DONE IN ACCORDANCE WITH PROJECT SPECIFICATIONS INCLUDING CURRENT APPLICABLE STANDARDS AND REQUIREMENTS. WHERE ANY STANDARDS SEEM IN CONFLICT WITH THESE DRAWINGS, NOTIFY THE PROJECT ENGINEER FOR DIRECTION PRIOR TO PROCEEDING WITH WORK.
- 11. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE UNITED STATES DEPARTMENT OF LABOR AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) PUBLICATIONS OF THE LATEST REVISION. NO TRENCHES OR EXCAVATION SHALL BE OPEN WHILE WORK IS NOT IN PROGRESS.

#### GENERAL EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION
- 2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE CONTRACTOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- 3. STATE LAW REQUIRES A MINIMUM THREE DAY BUSINESS DAY NOTICE, BUT NOT MORE THAN TEN BUSINESS DAYS, PRIOR TO EARTH DISTURBANCE. ORDER A UTILITY MARK OUT UTILIZING THE PENNSYLVANIA ONE CALL SYSTEM. SITE UTILITIES MUST BE FIELD LOCATED AND MARKED BEFORE THE START OF ANY SITE WORK, INCLUDING ALL PRIVATE UTILITIES. CONFIRM LOCATIONS AND INVERTS.
- 4. THE RADNOR TOWNSHIP ENGINEER SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF THE COMMENCEMENT OF ANY CONSTRUCTION OF INSTALLATION OPERATION, IN ORDER THAT PROVISION MAY BE MADE FOR INSPECTION BY THE TOWNSHIP AND THE AUTHORITY.
- 5. CONSTRUCTION AND INSTALLATION OPERATIONS SHALL ALSO BE SUBJECT TO INSPECTION BY TOWNSHIP OFFICIALS DURING THE PROGRESS OF THE WORK AND THE SUBDIVIDER, DEVELOPER, OR BUILDER SHALL PAY FOR ALL INSPECTIONS.
- 6. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- 7. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- 8. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- 9. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- 10. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAPS(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 10 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- 11. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- 12. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 13. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- 14. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.

- 15. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- 16. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS SHALL BE PROPERLY MAINTAINED. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 17. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- 18. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- 19. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- 20. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6 12 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- 21. ALL FILLS SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY 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.
- 22. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- 23. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- 24. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- 25. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- 26. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- 27. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN
- 28. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- 29. WEED-FREE HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- 30. TEMPORARY SEEDING SHALL CONSIST OF OATS (AVERE SATIVA) IN SPRING AND/OR SUMMER, AND WINTER WHEAT IN FALL AND/OR WINTER. SEED MIXED SHALL CONTAIN A MINIMUM OF 85% LIVE SEED. APPLICATION RATE IS TO BE 30 LBS. PER ACRE OR 10 LBS. PER 1000 S.F.. TEMPORARY SEEDING SHALL BE APPLIED TO THOSE AREAS THAT ARE A POTENTIAL EROSION RISK AND THOSE AREAS WHERE CONSTRUCTION ACTIVITIES HAVE ENDED.
- 31. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- 32. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- 33. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OPERATOR SHALL CONTACT THE ENGINEER FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.
- 34. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS SHALL BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- 35. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS. THE OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- 36. CONTRACTOR TO BE CO-PERMITTEE OF EROSION & SEDIMENT CONTROL PERMIT. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.

#### RECYCLING PROGRAM

1. THE CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS 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. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIAL, CONCRETE WASH WATER, SANITARY WASTES, ETC., WHICH COULD ADVERSELY IMPACT WATER QUALITY.

#### OPERATION AND MAINTENANCE

- 1. THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION & MAINTENANCE OF ALL E&S AND STORMWATER MANAGEMENT FACILITIES DURING CONSTRUCTION. UPON FINAL APPROVAL AND ACCEPTANCE OF THE PROJECT BY THE OWNER WILL ASSUME RESPONSIBILITY FOR ALL LONG-TERM MAINTENANCE.
- 2. A WRITTEN MAINTENANCE REPORT MUST BE KEPT AT THE SITE DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE SITE CONTRACTOR TO ENSURE THAT THIS OPERATION & MAINTENANCE SCHEDULE BE MAINTAINED AND LOGGED

#### TEMPORARY STABILIZATION NOTES

- 1. EROSION CONTROL BLANKET SHALL BE INSTALLED WHERE INDICATED ON SHEET C2.0.
- 2. WEED-FREE HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE OR PER PLANTING SPECIFICATION. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN. HAY OR MULCH IS NOT A SUBSTITUTION FOR ECB WHERE INDICATED ON PLANS.
- 3. TEMPORARY SEEDING SHALL CONSIST OF OATS (AVERE SATIVA) IN SPRING AND/OR SUMMER, AND WINTER WHEAT IN FALL AND/OR WINTER. SEED MIXED SHALL CONTAIN A MINIMUM OF 85% LIVE SEED. APPLICATION RATE IS TO BE 30

LBS. PER ACRE OR 10 LBS. PER 1000 S.F.. TEMPORARY SEEDING SHALL BE APPLIED TO THOSE AREAS THAT ARE A POTENTIAL EROSION RISK AND THOSE AREAS WHERE CONSTRUCTION ACTIVITIES HAVE ENDED.

#### **CONSTRUCTION SEQUENCE**

- AT LEAST THREE DAYS PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, ORDER A UTILITY MARK OUT UTILIZING THE PENNSYLVANIA ONE CALL SYSTEM. SITE UTILITIES MUST BE FIELD LOCATED AND MARKED BEFORE THE START OF ANY SITE WORK, INCLUDING ALL PRIVATE UTILITIES. CONFIRM LOCATIONS AND INVERTS OF ALL EXISTING STORM AND SANITARY STRUCTURES..
- 2. COORDINATE WITH THE RESPONSIBLE UTILITY CONTACT 30 DAYS PRIOR TO ANY WORK INVOLVING UTILITY RELOCATION IS TO BE INITIATED.
- UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- 4. INSTALL TEMPORARY ROCK CONSTRUCTION ENTRANCES, AS SHOWN ON THE EROSION & SEDIMENTATION PLAN, PRIOR TO BEGINNING DEMOLITION.
- 5. INSTALL CONSTRUCTION FENCING ALONG LIMIT OF DISTURBANCE. INSTALL INLET PROTECTION, TREE PROTECTION AND COMPOST SOCKS AS SHOWN ON THE PLAN PRIOR TO ANY LAND-DISTURBING ACTIVITIES. NO DISTURBANCE CAN TAKE PLACE OUTSIDE OF THE LIMIT OF DISTURBANCE. NO WORK SHALL TAKE PLACE OUTSIDE OF THE PROJECT LIMIT.
- 6. DEMOLISH PAVEMENT, SIDEWALK AND CURB. REMOVE ELECTRICAL SERVICE WITHIN PARKING LOT. REMOVE AND STORE PARKING KIOSK FOR FUTURE USE.
- 7. PERFORM SITE DEMOLITION OF MISCELLANEOUS STRUCTURES AS INDICATED ON PLAN. ONLY DEMOLISH EXISTING STORMWATER PIPES AND INLETS AS THEY ARE REPLACED OR AFTER NEW CONVEYANCE IS PROVIDED.
- PERFORM MAJOR PARKING LOT EXCAVATIONS AND STORMWATER INSTALLATION IN PHASE ACCORDING TO SHEET C1.20.
   EXCAVATE TO THE DESIGN DEPTH AS SHOWN ON PLAN TO ACHIEVE SUFFICIENT SOIL BEARING CAPACITY. A
- LICENSED GEOTECHNICAL ENGINEER MUST BE ON-SITE AT ALL TIMES DURING EXCAVATION OF UNSUITABLE MATERIAL TO DETERMINE FINAL

  8.2. ONCE UNSUITABLE SOILS HAVE BEEN EXCAVATED AND A LICENSED GEOTECHNICAL ENGINEER HAS DETERMINED
- UNDERLYING SOILS HAVE SUFFICIENT BEARING CAPACITY TO SUPPORT THE TERRE ARCH STORAGE SYSTEM (3000 PSF), BACKFILL EXCAVATION WITH CLEAN SUITABLE FILL TO THE ELEVATION SHOWN ON PLANS FOR THE TERRE ARCH STONE MATTRESS.
- 8.3. INSTALL STONE MATTRESS TO THE DEPTH AND EXTENTS SHOWN ON PLAN AND DETAIL SHEETS. INSTALL TERRE ARCH 26 STORAGE SYSTEM IN COORDINATION WITH DESIGN DOCUMENTS AND TERRE ARCH INSTALLATION INSTRUCTIONS.
- 8.4. INSTALL REMAINING STORMWATER STRUCTURES AND PIPES AS INDICATED ON STORMWATER MANAGEMENT PLAN AND IN COORDINATION WITH PHASING SHOWN ON C1.20.
- 8.5. REPEAT ABOVE STEPS FOR PHASE 2 OF EXCAVATION AND STORMWATER INSTALLATION.
- 9. PERFORM MAJOR EXCAVATIONS FOR THE SCHOOL LANE STORMWATER CONNECTION AND INSTALL STORMWATER STRUCTURES AND PIPES AS SHOWN ON THE STORMWATER MANAGEMENT PLAN.
- 10. PERFORM MAJOR EXCAVATIONS AND INSTALLATION OF CONCRETE APRON IN FRONT OF EXISTING FIREHOUSE.
- 10.1. CONSTRUCTION AND INLET REPLACEMENT TO BE PERFORMED IN THREE PHASES AS INDICATED ON C1.53.
- 10.2. EACH PHASE MUST BE FULLY COMPLETED AND THE PAVEMENT USABLE BEFORE MOVING ON TO THE NEXT PHASE.
- 11. PERFORM MAJOR EXCAVATIONS AND ROUGH GRADE FOR CURB INSTALLATION AS INDICATED ON GRADING PLAN, REMOVING ANY DELETERIOUS MATERIAL 2-INCHES OR LARGER. REMOVE EXCESS CUT FROM SITE AND DISPOSE OF IN A LEGAL MANNER IN ACCORDANCE WITH THE SOLID WASTE MANAGEMENT REGULATIONS (SEE RECYCLING PROGRAM NOTE ON C117).
- 12. INSTALL CURBING. AFTER CURBS ARE PLACED, IMMEDIATELY STABILIZE GRADED SOILS IN VICINITY OF CURBS. (LEVEL SURFACE AND SLOPES)
- 13. INSTALL ELECTRICAL UTILITIES AS APPROPRIATE TO LOCATION AND ELEVATIONS ON PLAN. LIMIT THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME TO THAT WHICH CAN BE EXCAVATED AND BACK-FILLED IN ONE WORKING DAY. NO MORE THAN 50 LINEAR FEET OF OPEN TRENCH SHOULD EXIST WHEN UTILITY LINE INSTALLATION CEASES AT THE END OF ANY WORK DAY. IMMEDIATELY STABILIZE DISTURBED AREAS.
- 14. GRADE AS SHOWN ON PLANS AND DETAILS. INSTALL TREES AND LIGHTING
- 15. INSTALL PAVEMENT AS SHOWN ON PLANS AND DETAILS. FINAL WEARING COURSE FOR ALL ASPHALT TO BE INSTALLED FOLLOWING COMPLETION OF CONSTRUCTION.
- 16. STRIPE PARKING LOT AND NUMBER PARKING SPOTS. REINSTALL TRAFFIC SIGNS AND PARKING KIOSK. STRIPE SOUTH WAYNE AVENUE ACCORDING TO THE PAVEMENT MARKING PLAN.
- 17. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (VEGETATED AREAS SHALL BE CONSIDERED PERMANENTLY STABILIZED WHEN A UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED), REMOVE TEMPORARY INLET PROTECTION CONTROLS ONLY. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST ALSO BE STABILIZED IMMEDIATELY.
- 18. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND FLUSH OUT ALL EXISTING AND NEW STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETE OF THE CONSTRUCTION.

#### TRAFFIC CONTROL NOTES

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FLAGGERS WHEN LANE CLOSURES ARE NECESSARY.
- 2. NO TRUCKS TO ENTER OR EXIT CONSTRUCTION ZONE BETWEEN 1430 AND 1500.
- 3. TRUCKS EXITING PARKING LOT CONSTRUCTION SITE TO ONLY MAKE RIGHT TURNS ONTO RUNNYMEADE AVE AND S WAYNE AVE.

4. CONSTRUCTION OF THE CONCRETE APRON AT FIRE HOUSE TO BEGIN NO EARLIER THAN JUNE 17, 2022. CONSTRUCTION

OF THE CONCRETE APRON MUST BE COMPLETED BY SEPTEMBER 2, 2022.

5. DURING CONSTRUCTION OF CONCRETE APRON IN FRONT OF FIRE HOUSE, CONTRACTOR MUST LEAVE NON-CONSTRUCTION PHASE AREAS OPEN FOR FIRE HOUSE USE.

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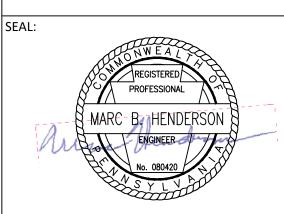


CIVIL ENGINEERING CONSULTANT

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PROJECT TITLE:

SOUTH WAYNE
MUNICIPAL PARKING
LOT FLOOD REDUCTION
PROJECT - ITHAN CREEK
WATERSHED



BMISSION:

CONSTRUCTION DOCUMENTS

DRAWING TITLE

EROSION & SEDIMENT CONTROL NOTES

DATE:

01/24/2022

SCALE:

AS NOTED

DRAWN BY:

MPB

DRAWING NO:

C1.2

CHECKED BY: MBH

#### CONSTRUCTION SEQUENCE - PARKING LOT WORK

- 1. AT LEAST THREE DAYS PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, ORDER A UTILITY MARK OUT UTILIZING THE PENNSYLVANIA ONE CALL SYSTEM. SITE UTILITIES MUST BE FIELD LOCATED AND MARKED BEFORE THE START OF ANY SITE WORK, INCLUDING ALL PRIVATE UTILITIES. CONFIRM LOCATIONS AND INVERTS OF ALL EXISTING STORM AND SANITARY STRUCTURES..
- 2. COORDINATE WITH THE RESPONSIBLE UTILITY CONTACT 30 DAYS PRIOR TO ANY WORK INVOLVING UTILITY RELOCATION IS TO BE INITIATED.
- 3. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- 4. INSTALL TEMPORARY ROCK CONSTRUCTION ENTRANCES, AS SHOWN ON THE EROSION & SEDIMENTATION PLAN, PRIOR TO BEGINNING DEMOLITION.
- 5. INSTALL CONSTRUCTION FENCING ALONG LIMIT OF DISTURBANCE INCLUDING ANY GATES NECESSARY TO CLOSE SITE WHILE WORK IS NOT BEING PERFORMED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE SITE.
- 8. REMOVE ELECTRICAL SERVICE WITHIN PARKING LOT. REMOVE AND STORE PARKING KIOSK FOR FUTURE
- 9. INSTALL INLET PROTECTION, TREE PROTECTION (AS NECESSARY) AND COMPOST SOCKS AS SHOWN ON THE PLAN PRIOR TO ANY LAND-DISTURBING ACTIVITIES. NO DISTURBANCE CAN TAKE PLACE OUTSIDE OF THE LIMIT OF DISTURBANCE. NO WORK SHALL TAKE PLACE OUTSIDE OF THE PROJECT LIMIT.
- 10. DEMOLISH PAVEMENT, SIDEWALK AND CURB (BY SAW CUT ONLY).
- 11. PERFORM SITE DEMOLITION OF MISCELLANEOUS STRUCTURES AS INDICATED ON PLAN. ONLY DEMOLISH EXISTING STORMWATER PIPES AND INLETS AS THEY ARE REPLACED OR AFTER NEW CONVEYANCE IS PROVIDED.
- 12. PERFORM MAJOR PARKING LOT EXCAVATIONS AND STORMWATER INSTALLATION IN PHASE ACCORDING TO SHEET C1.20. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL TO FACILITY ALL TRAFFIC INCLUDING CONSTRUCTION VEHICLE ENTRANCE AND EXIT FORM THE SITE. THE CONTRACTOR IS ALSO RESPONSIBLE FOR FACILITATING BUS TRAFFIC THROUGH CONSTRUCTION ZONE SHOULD WORK IMPEDE FREE FLOW OF BUS TRAFFIC. THIS INCLUDES MATERIAL DELIVERIES, EXPORT OF FILL, UTILITY INSTALLATION, LANE CLOSURE, WORK WITHIN THE RIGHT OF WAY, AND ANY OTHER IMPEDIMENT FROM THE PROJECT TO TRAFFIC PATTERNS.
- 12.1. EXCAVATE TO THE DESIGN DEPTH AS SHOWN ON PLAN TO ACHIEVE SUFFICIENT SOIL BEARING CAPACITY. A LICENSED GEOTECHNICAL ENGINEER MUST BE ON-SITE AT ALL TIMES DURING EXCAVATION OF UNSUITABLE MATERIAL TO DETERMINE FINAL GRADE.
- 12.2. ONCE UNSUITABLE SOILS HAVE BEEN EXCAVATED AND A LICENSED GEOTECHNICAL ENGINEER HAS DETERMINED UNDERLYING SOILS HAVE SUFFICIENT BEARING CAPACITY TO SUPPORT THE TERRE ARCH STORAGE SYSTEM (3000 PSF), BACKFILL EXCAVATION WITH CLEAN SUITABLE FILL TO THE ELEVATION SHOWN ON PLANS FOR THE TERRE ARCH STONE MATTRESS.
- 12.3. INSTALL STONE MATTRESS TO THE DEPTH AND EXTENTS SHOWN ON PLAN AND DETAIL SHEETS. INSTALL TERRE ARCH 26 STORAGE SYSTEM IN COORDINATION WITH DESIGN DOCUMENTS AND TERRE ARCH INSTALLATION INSTRUCTIONS.
- 12.4. INSTALL REMAINING STORMWATER STRUCTURES AND PIPES AS INDICATED ON STORMWATER MANAGEMENT PLAN AND IN COORDINATION WITH PHASING SHOWN ON C1.20.
- 12.5. REPEAT ABOVE STEPS FOR PHASE 2 OF EXCAVATION AND STORMWATER INSTALLATION.
- 13. DUE TO STAGING LIMITATIONS, IT IS ASSUMED THE MAJOR EXCAVATIONS WILL TAKE PLACE IN A MINIMUM OF TWO PHASES WITH EXPORT OF UNSUITABLE MATERIAL AND THE IMPORT OF SUITABLE FILL TAKING PLACE IN SECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STAGE CONSTRUCTION IN AN EFFICIENT MANNER AND PROTECT NEW WORK AS THE PROJECT PROGRESSES. THIS INCLUDE CLEAN STONE FROM CONTAMINATION.
- 14. INSTALL ALL INLETS, MANHOLES, STRUCTURES, AND PIPES WITHIN THE PARKING LOT LIMITS.
- 15. WHEN TRAFFIC CAN BE LIMITED TO ONE LANE, COMPLETE STORMWATER PIPE CROSSINGS FOR THE INLETS AND PIPES WITHIN S. WAYNE AVENUE. FULL ROAD CLOSURES SHOULD BE AVOIDED DUE TO BUS AND EMERGENCY VEHICLE TRAFFIC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TRAFFIC CONTROL AND FLAGMEN TO FACILITATE MOVEMENT OF VEHICLES DURING LANE CLOSURES..
- 16. PERFORM MAJOR EXCAVATIONS AND ROUGH GRADE FOR CURB INSTALLATION AS INDICATED ON GRADING PLAN, REMOVING ANY DELETERIOUS MATERIAL 2-INCHES OR LARGER. REMOVE EXCESS CUT FROM SITE AND DISPOSE OF IN A LEGAL MANNER IN ACCORDANCE WITH THE SOLID WASTE MANAGEMENT REGULATIONS (SEE RECYCLING PROGRAM NOTE ON C1.22).
- 17. INSTALL CURBING. AFTER CURBS ARE PLACED, IMMEDIATELY STABILIZE GRADED SOILS IN VICINITY OF CURBS. (LEVEL SURFACE AND SLOPES)
- 18. INSTALL ELECTRICAL UTILITIES AS APPROPRIATE TO LOCATION AND ELEVATIONS ON PLAN. LIMIT THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME TO THAT WHICH CAN BE EXCAVATED AND BACK-FILLED IN ONE WORKING DAY. NO MORE THAN 50 LINEAR FEET OF OPEN TRENCH SHOULD EXIST WHEN UTILITY LINE INSTALLATION CEASES AT THE END OF ANY WORK DAY. IMMEDIATELY STABILIZE DISTURBED AREAS.
- 19. GRADE AS SHOWN ON PLANS AND DETAILS. INSTALL TOPSOIL, TREES AND LIGHTING.
- 20. INSTALL PAVEMENT AS SHOWN ON PLANS AND DETAILS. FINAL WEARING COURSE FOR ALL ASPHALT TO BE INSTALLED FOLLOWING COMPLETION OF CONSTRUCTION. STRIP PARKING LOT FOLLOWING PAVING.
- 21. STRIPE PARKING LOT AND NUMBER PARKING SPOTS. REINSTALL TRAFFIC SIGNS AND PARKING KIOSK. STRIPE SOUTH WAYNE AVENUE ACCORDING TO THE PAVEMENT MARKING PLAN.
- 22. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (VEGETATED AREAS SHALL BE CONSIDERED PERMANENTLY STABILIZED WHEN A UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED), REMOVE TEMPORARY INLET PROTECTION CONTROLS ONLY. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST ALSO BE STABILIZED IMMEDIATELY.
- 23. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND CLEAN ALL EXISTING AND NEW STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETION OF THE CONSTRUCTION.

#### CONSTRUCTION SEQUENCE - W. WAYNE AVE AND SCHOOL LANE STORMWATER PIPE WORK

- 1. WORK FOR THIS PORTION OF THE PROJECT MAY ONLY START AFTER JUNE 17, 2022 TO REDUCE IMPACT ON BUS TRAFFIC. WORK CAN NOT TAKE PLACE WHILE PARKING LOT IS ACTIVELY UNDER CONSTRUCTION.
- 2. AT LEAST THREE DAYS PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, ORDER A UTILITY MARK OUT UTILIZING THE PENNSYLVANIA ONE CALL SYSTEM. SITE UTILITIES MUST BE FIELD LOCATED AND MARKED BEFORE THE START OF ANY SITE WORK, INCLUDING ALL PRIVATE UTILITIES. CONFIRM LOCATIONS AND INVERTS OF ALL EXISTING STORM AND SANITARY STRUCTURES..
- 3. COORDINATE WITH THE RESPONSIBLE UTILITY CONTACT 30 DAYS PRIOR TO ANY WORK INVOLVING UTILITY RELOCATION IS TO BE INITIATED.
- 4. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- 5. INSTALL CONSTRUCTION FENCING ALONG LIMIT OF DISTURBANCE. INSTALL INLET PROTECTION, TREE PROTECTION AND COMPOST SOCKS AS SHOWN ON THE PLAN PRIOR TO ANY LAND-DISTURBING ACTIVITIES. NO DISTURBANCE CAN TAKE PLACE OUTSIDE OF THE LIMIT OF DISTURBANCE. NO WORK SHALL TAKE PLACE OUTSIDE OF THE PROJECT LIMIT.
- 6. DEMOLISH PAVEMENT, SIDEWALK AND CURB (BY SAW CUT ONLY).
- 7. PERFORM SITE DEMOLITION OF MISCELLANEOUS STRUCTURES AS INDICATED ON PLAN. ONLY DEMOLISH EXISTING STORMWATER PIPES AND INLETS AS THEY ARE REPLACED OR AFTER NEW CONVEYANCE IS PROVIDED.
- 8. COORDINATE UTILITY RELOCATIONS.
- 9. PERFORM MAJOR EXCAVATIONS AND STORMWATER PIPE INSTALLATION ACCORDING TO PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUPPORT AND FACILITATE UTILITY RELOCATIONS AS NECESSARY AND TO COORDINATE WITH UTILITY CONTRACTORS AS NECESSARY. ONCE CONSTRUCTION HAS BEGUN, IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO COORDINATE WITH THE UTILITY CONTRACTORS TO ENSURE WORK IS PERFORMED IN A TIMELY MANNER TO ENABLE CONSTRUCTION.
- 10. FULL ROAD CLOSURES SHOULD ONLY BE USED WHEN NECESSARY FOR MAJOR WORK WITHIN S. WAYNE AVENUE. W. WAYNE AVENUE WORK SHOULD UTILIZE LANE CLOSURES WHERE PRACTICAL. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL TO FACILITY ALL TRAFFIC INCLUDING CONSTRUCTION VEHICLE ENTRANCE AND EXIT FORM THE SITE. THE CONTRACTOR IS ALSO RESPONSIBLE FOR FACILITATING BUS TRAFFIC THROUGH CONSTRUCTION ZONE SHOULD WORK IMPEDE FREE FLOW OF BUS TRAFFIC. THIS INCLUDES MATERIAL DELIVERIES, EXPORT OF FILL, UTILITY INSTALLATION, LANE CLOSURE, WORK WITHIN THE RIGHT OF WAY, AND ANY OTHER IMPEDIMENT FROM THE PROJECT TO TRAFFIC PATTERNS.
- 11. PERFORM MAJOR EXCAVATIONS FOR THE SCHOOL LANE STORMWATER CONNECTION AND INSTALL STORMWATER STRUCTURES AND PIPES AS SHOWN ON THE STORMWATER MANAGEMENT PLAN. FOLLOW STAGING GUIDANCE AND ENSURE MINIMAL DISRUPTION TO BUSINESS AND RESIDENCE PARKING.
- 12. INSTALL PAVEMENT AS SHOWN ON PLANS AND DETAILS. FINAL WEARING COURSE FOR ALL ASPHALT TO BE INSTALLED FOLLOWING COMPLETION OF CONSTRUCTION.
- 13. STRIPE TRAVEL LANES AND PARKING TO MATCH EXISTING. REINSTALL TRAFFIC SIGNS. STRIPE SOUTH WAYNE AVENUE ACCORDING TO THE PAVEMENT MARKING PLAN.
- 14. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (VEGETATED AREAS SHALL BE CONSIDERED PERMANENTLY STABILIZED WHEN A UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED), REMOVE TEMPORARY INLET PROTECTION CONTROLS ONLY. AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST ALSO BE STABILIZED IMMEDIATELY.
- 15. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND CLEAN ALL EXISTING AND NEW STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETE OF THE CONSTRUCTION.

#### CONSTRUCTION SEQUENCE - RADNOR FIRE COMPANY APRON

- 1. WORK FOR THIS PORTION OF THE PROJECT MAY ONLY START AFTER JUNE 17, 2022 TO REDUCE IMPACT ON BUS TRAFFIC. CONSTRUCTION OF THE CONCRETE APRON MUST BE COMPLETED BY SEPTEMBER 2, 2022
- 2. WORK MUST BE COORDINATED WITH RADNOR FIRE COMPANY.
- 3. ONLY ONE SECTION OF APRON MAY BE OUT OF SERVICE AT ANY GIVEN TIME. PRIOR TO APRON BEING PUT IN SERVICE, CONCRETE COMPRESSION STRENGTH MUST EXCEED 4000 PSI AS DEMONSTRATED BY
- 4. AT LEAST THREE DAYS PRIOR TO THE START OF EARTH DISTURBANCE ACTIVITIES, ORDER A UTILITY MARK OUT UTILIZING THE PENNSYLVANIA ONE CALL SYSTEM. SITE UTILITIES MUST BE FIELD LOCATED AND MARKED BEFORE THE START OF ANY SITE WORK, INCLUDING ALL PRIVATE UTILITIES. CONFIRM LOCATIONS AND INVERTS OF ALL EXISTING STORM AND SANITARY STRUCTURES..
- 5. COORDINATE WITH THE RESPONSIBLE FIRE COMPANY CONTACT 30 DAYS PRIOR TO ANY WORK TO THE APRON.
- 6. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED 4 DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.
- 7. INSTALL CONSTRUCTION FENCING ALONG LIMIT OF DISTURBANCE. INSTALL INLET PROTECTION, TREE PROTECTION AND COMPOST SOCKS AS SHOWN ON THE PLAN PRIOR TO ANY LAND-DISTURBING ACTIVITIES. NO DISTURBANCE CAN TAKE PLACE OUTSIDE OF THE LIMIT OF DISTURBANCE. NO WORK SHALL TAKE PLACE OUTSIDE OF THE PROJECT LIMIT.
- 8. DEMOLISH PAVEMENT. FOLLOW STAGING PROVIDED ON PLANS.
- 9. INSTALL NEW PAVEMENT USING HIGH EARLY STRENGTH CONCRETE PER PLAN. CONCRETE MUST ACHIEVE 4000 PSI COMPRESSIVE STRENGTH PRIOR TO BEING PUT BACK IN SERVICE.
- 10. REPEAT PROCESS FOR REMAINING TWO SECTIONS OF APRON.
- 11. FOR THE INLET REPLACEMENT, EXCAVATE TO THE BOTTOM DEPTH OF INLET AS SHOWN ON PLAN TO

ACHIEVE SUFFICIENT SOIL BEARING CAPACITY OF NEW INLET. A LICENSED GEOTECHNICAL ENGINEER MUST BE ON-SITE AT ALL TIMES DURING EXCAVATION OF UNSUITABLE MATERIAL TO DETERMINE FINAL GRADE.

- 11.1. ONCE UNSUITABLE SOILS HAVE BEEN EXCAVATED AND A LICENSED GEOTECHNICAL ENGINEER HAS DETERMINED UNDERLYING SOILS HAVE SUFFICIENT BEARING CAPACITY TO SUPPORT THE INLET AND NEW PAVEMENT, BACKFILL EXCAVATION WITH CLEAN SUITABLE FILL TO THE ELEVATION SHOWN ON PLANS
- 12. INSTALL PAVEMENT AS SHOWN ON PLANS AND DETAILS.
- 13. FINAL WEARING COURSE FOR ALL ASPHALT TO BE INSTALLED FOLLOWING COMPLETION OF CONSTRUCTION.
- 14. REINSTALL TRAFFIC SIGNS AND PARKING KIOSK. STRIPE SOUTH WAYNE AVENUE ACCORDING TO THE PAVEMENT MARKING PLAN.
- 15. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED (VEGETATED AREAS SHALL BE CONSIDERED PERMANENTLY STABILIZED WHEN A UNIFORM 70% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED), REMOVE TEMPORARY INLET PROTECTION CONTROLS ONLY AREAS DISTURBED DURING REMOVAL OF THE CONTROLS MUST ALSO BE STABILIZED IMMEDIATELY.
- 16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ANY DEBRIS AND CLEAN ALL EXISTING AND NEW STORM DRAINAGE FACILITIES WITHIN THE PROJECT LIMITS AT THE COMPLETE OF THE CONSTRUCTION.
- 17. DURING CONSTRUCTION OF CONCRETE APRON IN FRONT OF FIRE HOUSE, CONTRACTOR MUST LEAVE NON-CONSTRUCTION PHASE AREAS OPEN FOR FIRE HOUSE USE.

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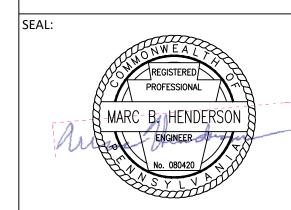
RADNOR TOWNSHIP 301 IVEN AVENUE WAYNE, PA 19087-5297



CIVIL ENGINEERING CONSULTANT

PROJECT TITLE:

SOUTH WAYNE
MUNICIPAL PARKING
LOT FLOOD REDUCTION
PROJECT - ITHAN CREEK
WATERSHED



SUBMISSION

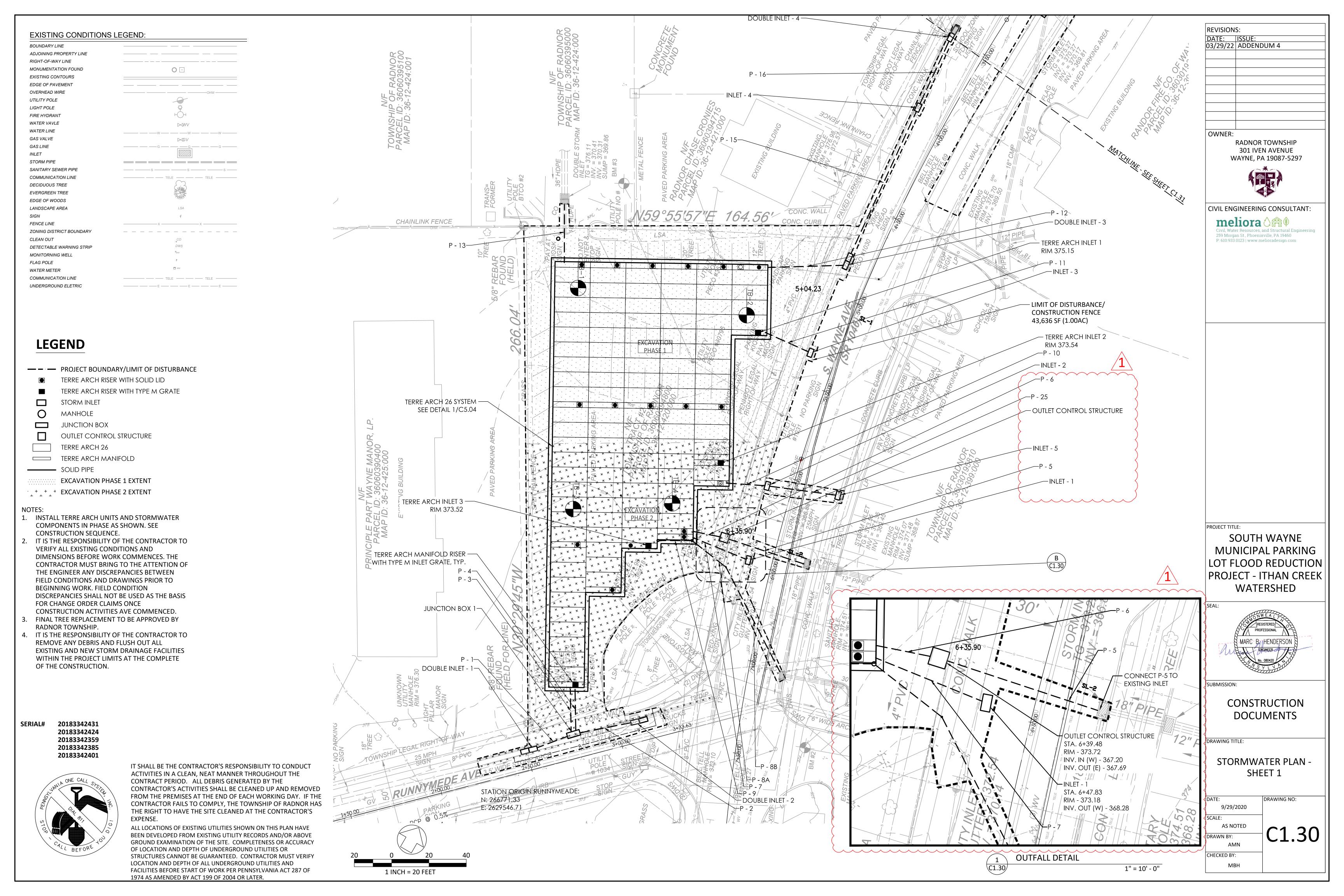
CONSTRUCTION DOCUMENTS

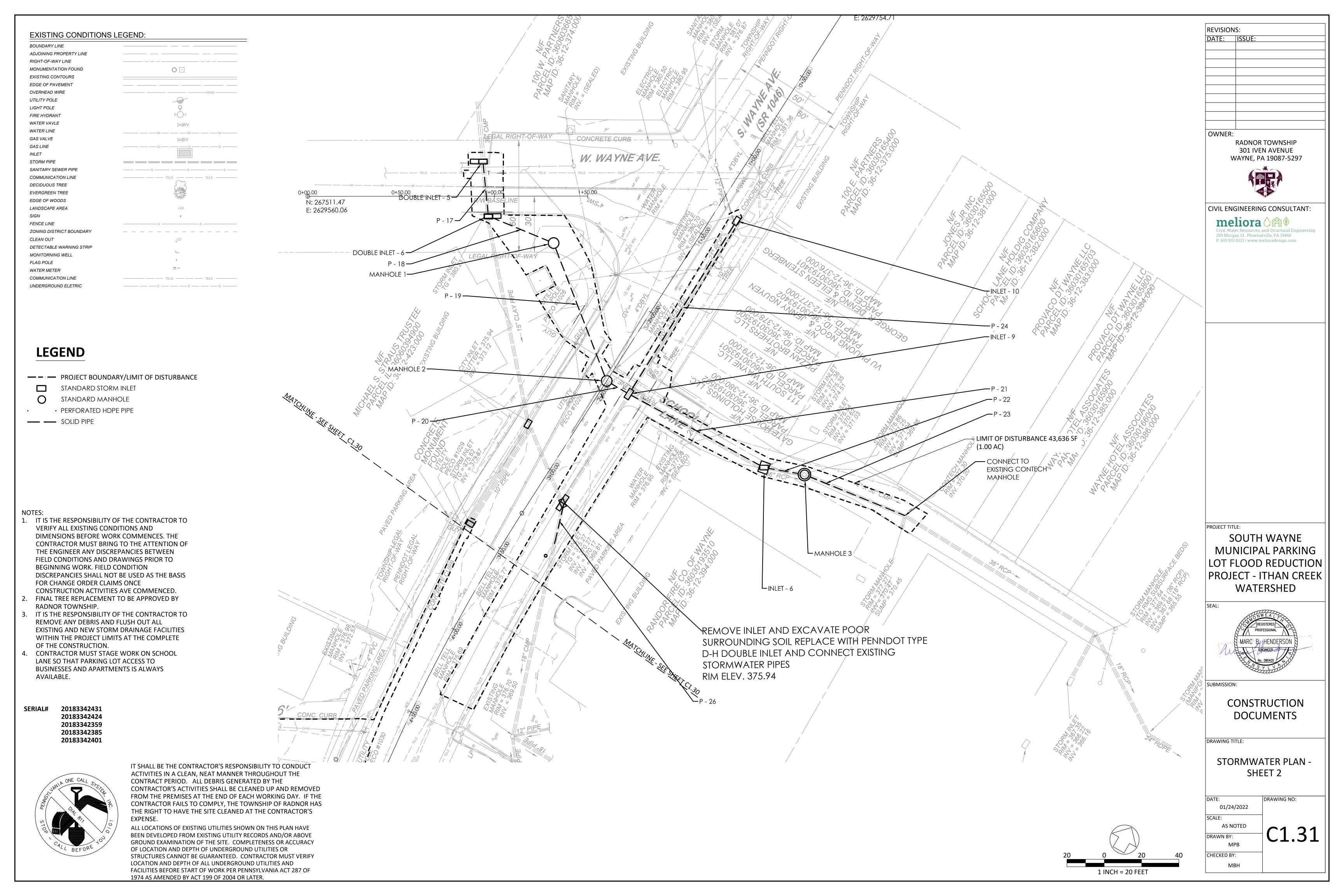
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# SOUTH WAYNE PARKING LOT

	Structure Table	
Structure Name	Structure Details	STRUCTURE DESCRIPTION
DOUBLE INLET - 1	RIM = 372.458 SUMP = 368.250 INV OUT = 369.250	TYPE M DOUBLE INLET
DOUBLE INLET - 2	RIM = 371.774 SUMP = 368.050 INV OUT = 369.050	TYPE C DOUBLE INLET
DOUBLE INLET - 3	RIM = 375.698 SUMP = 368.177 INV OUT = 369.177	TYPE C DOUBLE INLET
DOUBLE INLET - 4	RIM = 375.738 SUMP = 371.800 INV IN = 372.800 INV OUT = 372.800	TYPE M DOUBLE INLET
INLET - 1	RIM = 373.180 SUMP = 367.282 INV OUT = 368.282	STANDARD TYPE M INLET
INLET - 2	RIM = 374.077 SUMP = 366.880 INV IN = 367.880 INV OUT = 367.880	STANDARD TYPE C INLET
INLET - 3	RIM = 375.118 SUMP = 367.523 INV OUT = 368.523	STANDARD TYPE C INLET
INLET - 4	RIM = 375.705 SUMP = 371.000 INV IN = 372.000 INV OUT = 372.000	STANDARD TYPE M INLET
INLET - 5	RIM = 374.087 SUMP = 367.000 INV OUT = 369.000	STANDARD TYPE C INLET
JUNCTION BOX 1	RIM = 372.301 SUMP = 366.417 INV IN = 368.000 INV IN = 368.000 INV OUT = 367.417 INV OUT = 367.417	CUSTOM JUNCTION BOX
OUTLET CONTROL STRUCTURE	RIM = 373.719 SUMP = 366.200 INV IN = 367.200 INV OUT = 367.690	CUSTOM BOX

				Pipe	e Table			
Pipe Name	Description	Dia. (in.)	Length (ft.)	Slope	Pipe Start	Pipe End	Invert Start	End Invert
P - 1	POLYMER COATED CMP	18	23.1	5.41%	DOUBLE INLET - 1	JUNCTION BOX 1	369.25	368.00
P - 2	POLYMER COATED CMP	18	33.6	3.12%	JUNCTION BOX 1	DOUBLE INLET - 2	368.00	369.05
P - 3	POLYMER COATED CMP	18	25.3	0.86%	JUNCTION BOX 1	MANIFOLD - 3	367.42	367.20
P - 4	POLYMER COATED CMP	18	23.7	5.72%	JUNCTION BOX 1	MANIFOLD - 3	367.42	366.06
P - 5	POLYMER COATED CMP	18	44.8	1.81%	OUTLET CONTROL STRUCTURE		367.69	366.88
P - 6	POLYMER COATED CMP	18	17.2	0.00%	OUTLET CONTROL STRUCTURE		367.20	367.20
P - 7	POLYMER COATED CMP	15	32.1	3.37%	INLET - 1		368.28	367.20
P - 8A	SDR 35 PVC PIPE	3	23.1	0.00%	45 ELBOW - 2	45 ELBOW-1	366.00	366.00
P - 8B	SDR 35 PVC PIPE	3	65.3	0.00%	45 ELBOW-1	EXISTING INLET	366.00	366.00
P - 9	PERF. HDPE PIPE	4	18.2	0.00%	45 ELBOW - 2	CAP - 1	366.00	366.00
P - 10	POLYMER COATED CMP	15	21.9	3.10%	INLET - 2	MANIFOLD - 2	367.88	367.20
P - 11	POLYMER COATED CMP	15	26.6	4.98%	INLET - 3	MANIFOLD - 1	368.52	367.20
P - 12	POLYMER COATED CMP	15	41.9	4.72%	DOUBLE INLET - 3		369.18	367.20
P - 13	POLYMER COATED CMP	18	32.6	9.54%	DOUBLE INLET AT LIBRARY		370.31	367.20
P - 15	POLYMER COATED CMP	15	88.4	2.79%	INLET - 4	DOUBLE INLET - 3	372.00	369.53
P - 16	POLYMER COATED CMP	15	41.5	1.93%	DOUBLE INLET - 4	INLET - 4	372.80	372.00
P - 25	POLYMER COATED CMP	18	38.3	2.92%	INLET - 5	INLET - 2	369.00	367.88

Pipe Table

79.1

13.8

82.4

22.0

58.2

22.5

Length (ft.) | Slope

Pipe Start

0.87% DOUBLE INLET - 5

0.87% | DOUBLE INLET - 6

1.04% | MANHOLE 1

0.65% | MANHOLE 2

1.07% | INLET - 9

0.79% | INLET - 6

0.97% | MANHOLE 3

2.35% | INLET - 10

2.76% | INLET - 7

Pipe End

MANHOLE 1

MANHOLE 2

MANHOLE 3

TYPE 5 MH-X

EXISTING PIPE

INLET - 9

INLET - 6

INLET - 9

DOUBLE INLET - 6 374.19

Invert Start | End Invert

373.94

373.61

371.91

371.82

370.94

370.77

374.65

369.87

373.94

373.61

372.78

371.82

370.94

370.77

370.20

372.08

369.25

Dia. (in.)

30

30

30

36

42

18

## SCHOOL LANE STORM CONNECTION

Structure Table				
Structure Name	Structure Details	Structure Description		
DOUBLE INLET - 5	RIM = 379.618 SUMP = 373.192 INV OUT = 374.192	DOUBLE CITY INLET		
DOUBLE INLET - 6	RIM = 379.949 SUMP = 372.938 INV IN = 373.938 INV OUT = 373.938	DOUBLE CITY INLET		
INLET - 6	RIM = 376.950 SUMP = 370.940 INV IN = 370.940 INV OUT = 370.940	4'X5' TYPE 5 INLET BOX WITH TYPE C FRAME		
INLET - 7	RIM = 375.940 SUMP = 369.810 INV IN = 370.270 INV OUT = 369.810	D-H DOUBLE INLET		
INLET - 9	RIM = 376.519 SUMP = 371.820 INV IN = 371.820 INV IN = 372.085 INV OUT = 371.820	3' X 5' TYPE 5 INLET BOX WITH TYPE M FRAME AND GRATE		
INLET - 10	RIM = 379.868 SUMP = 374.654 INV OUT = 374.654	STANDARD TYPE M INLET		
MANHOLE 1	RIM = 379.769 SUMP = 373.609 INV IN = 373.609 INV OUT = 373.609	TYPE 5		
MANHOLE 2	RIM = 377.054 SUMP = 371.910 INV IN = 372.785 INV OUT = 371.910	TYPE 5		
MANHOLE 3	RIM = 376.782 SUMP = 370.767 INV IN = 370.767 INV OUT = 370.767	TYPE 6		

re Description	Pipe Name	Description	Ī
INLET	P - 17	33" X 26" POLYMER COATED CMP PIPE ARCH	Ī
IIVLLI	P - 18	POLYMER COATED CMP	İ
	P - 19	POLYMER COATED CMP	Ī
INLET	P - 20	POLYMER COATED CMP	Ī
	P - 21	40" X 31" POLYMER COATED CMP PIPE ARCH	Ī
NLET BOX	P - 22	POLYMER COATED CMP	Ī
FRAME	P - 23	40" X 31" POLYMER COATED CMP PIPE ARCH	Ī
	P - 24	POLYMER COATED CMP	Ī
NLET	P - 26	POLYMER COATED CMP	Ī
INLET BOX FRAME AND GRATE  (PE M INLET			

03/23/22 /10021100111 +
OWNER:
RADNOR TOWNSHIP 301 IVEN AVENUE
WAYNE, PA 19087-5297
1002 = 1901
CIVIL ENGINEERING CONSULTANT:
meliora 🖒 🎮 🕸
Civil, Water Resources, and Structural Engineering 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123   www.melioradesign.com
PROJECT TITLE:
SOUTH WAYNE
MUNICIPAL PARKING
LOT FLOOD REDUCTION
PROJECT - ITHAN CREEK
WATERSHED
SEAL:
REGISTERED
PROFESSIONAL
ENGINEER No. 080420
NSY LY
SURMISSION
SUBMISSION:
CONSTRUCTION
DOCUMENTS
DRAWING TITLE
DRAWING TITLE:
PIPE AND STRUCTURE
TABLES
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
DATE
DATE: DRAWING NO: 9/29/2020
SCALE:

AS NOTED

AMN

MBH

DRAWN BY:

CHECKED BY:

REVISIONS:

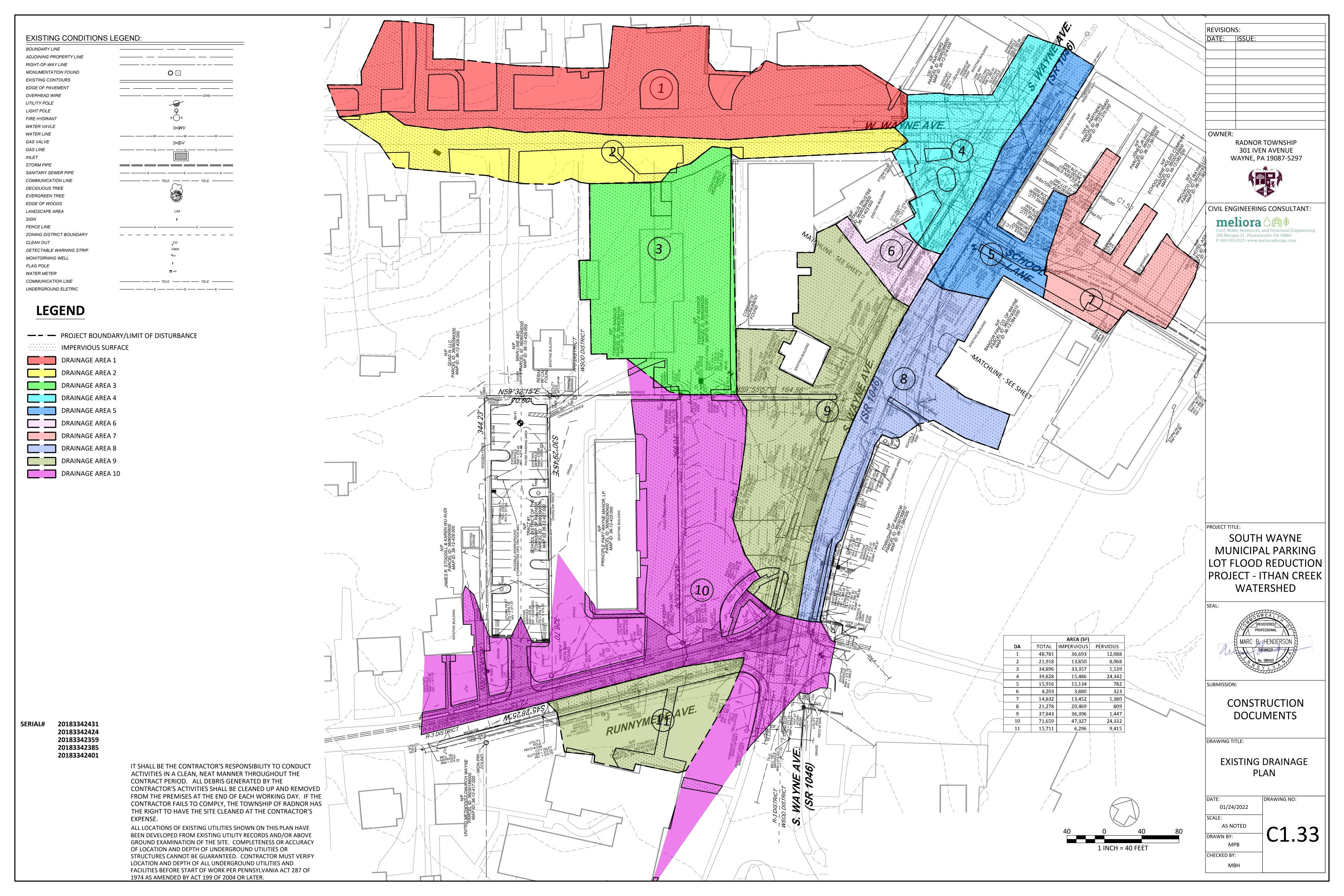
DATE: ISSUE: 03/29/22 ADDENDUM 4

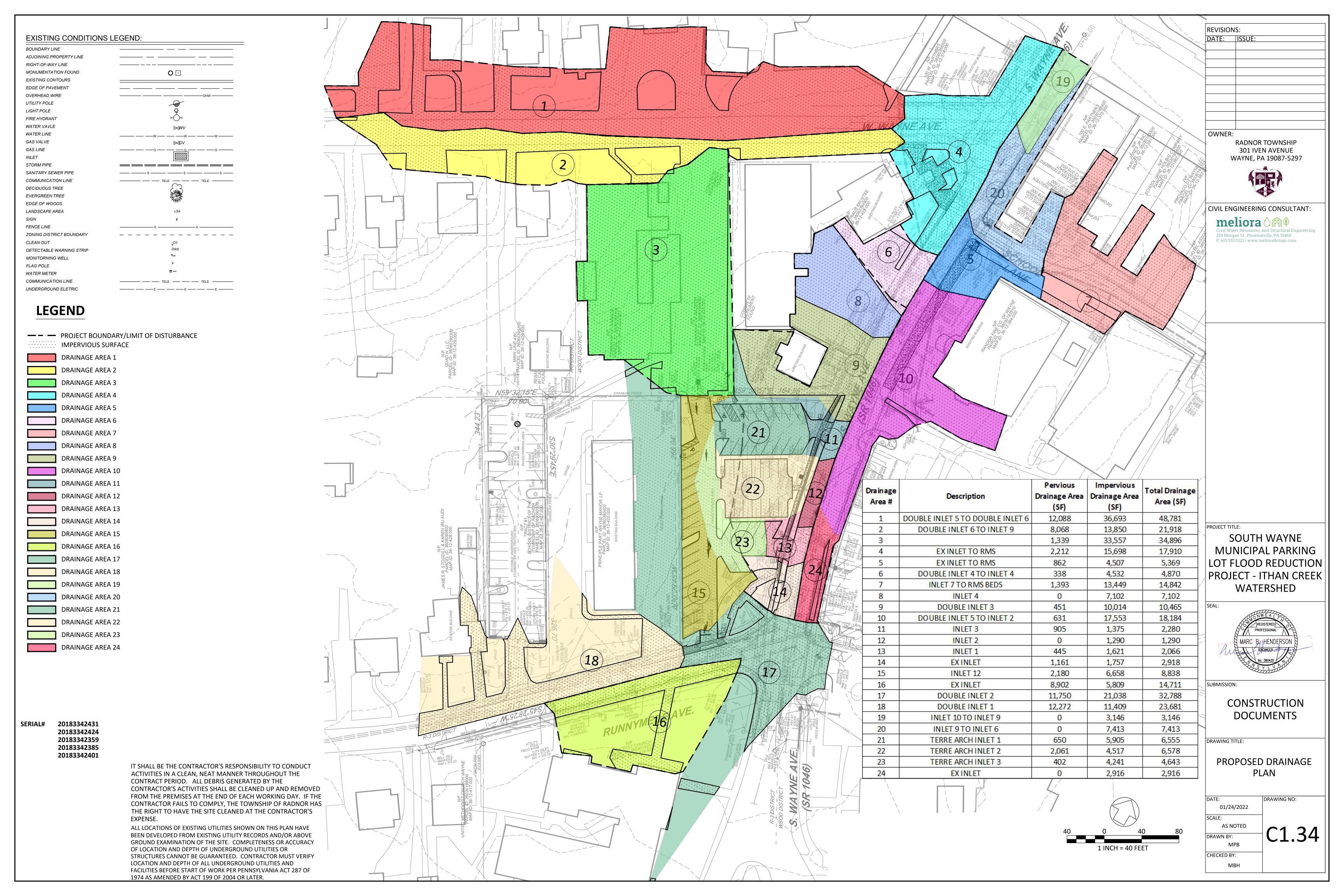
SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401

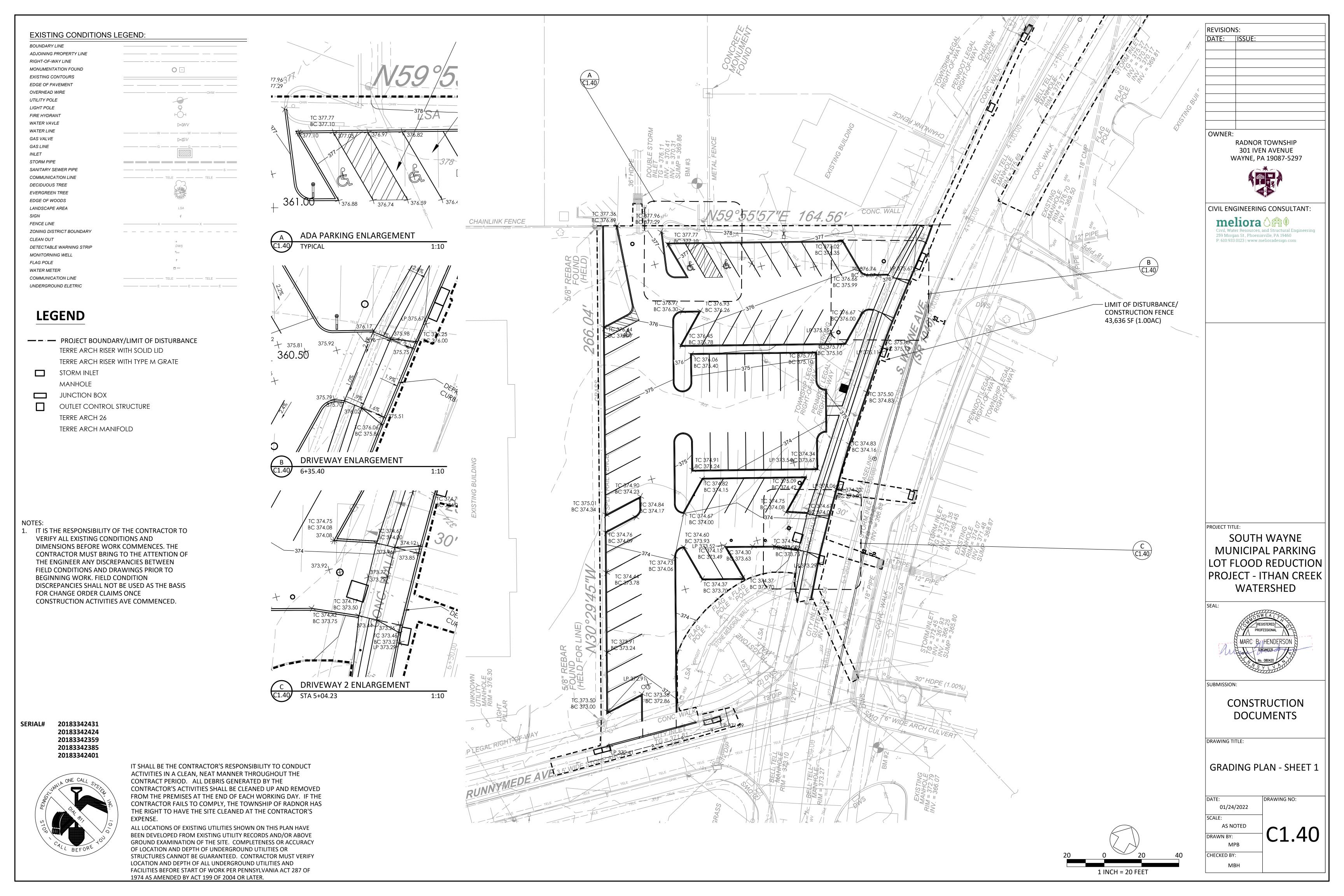


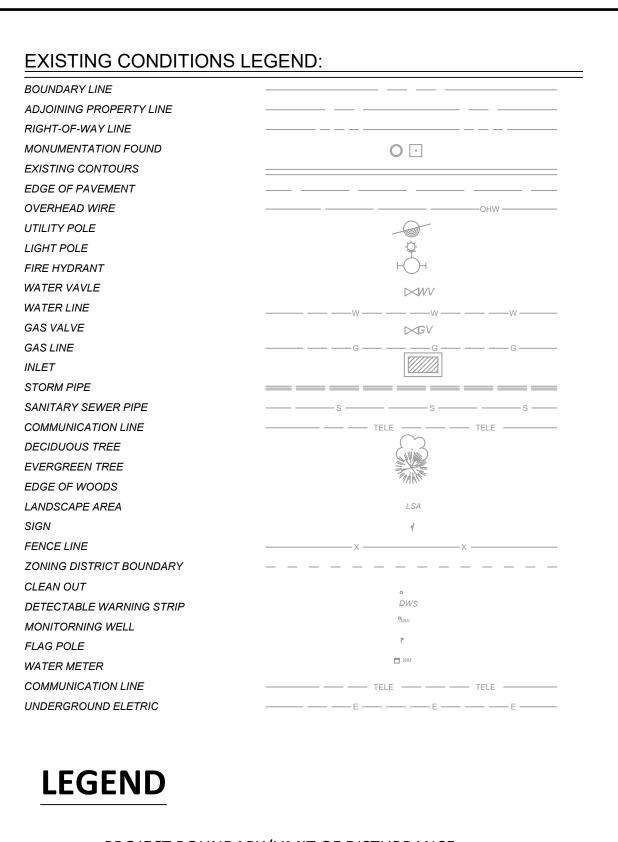
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— — PROJECT BOUNDARY/LIMIT OF DISTURBANCE

TERRE ARCH RISER WITH SOLID LID

TERRE ARCH RISER WITH TYPE M GRATE

MANHOLE

JUNCTION BOX

OUTLET CONTROL STRUCTURE

STORM INLET

TERRE ARCH 26 TERRE ARCH MANIFOLD

**EXCAVATION EXTENT** 

**EXCAVATION PHASE 1 EXTENT** 

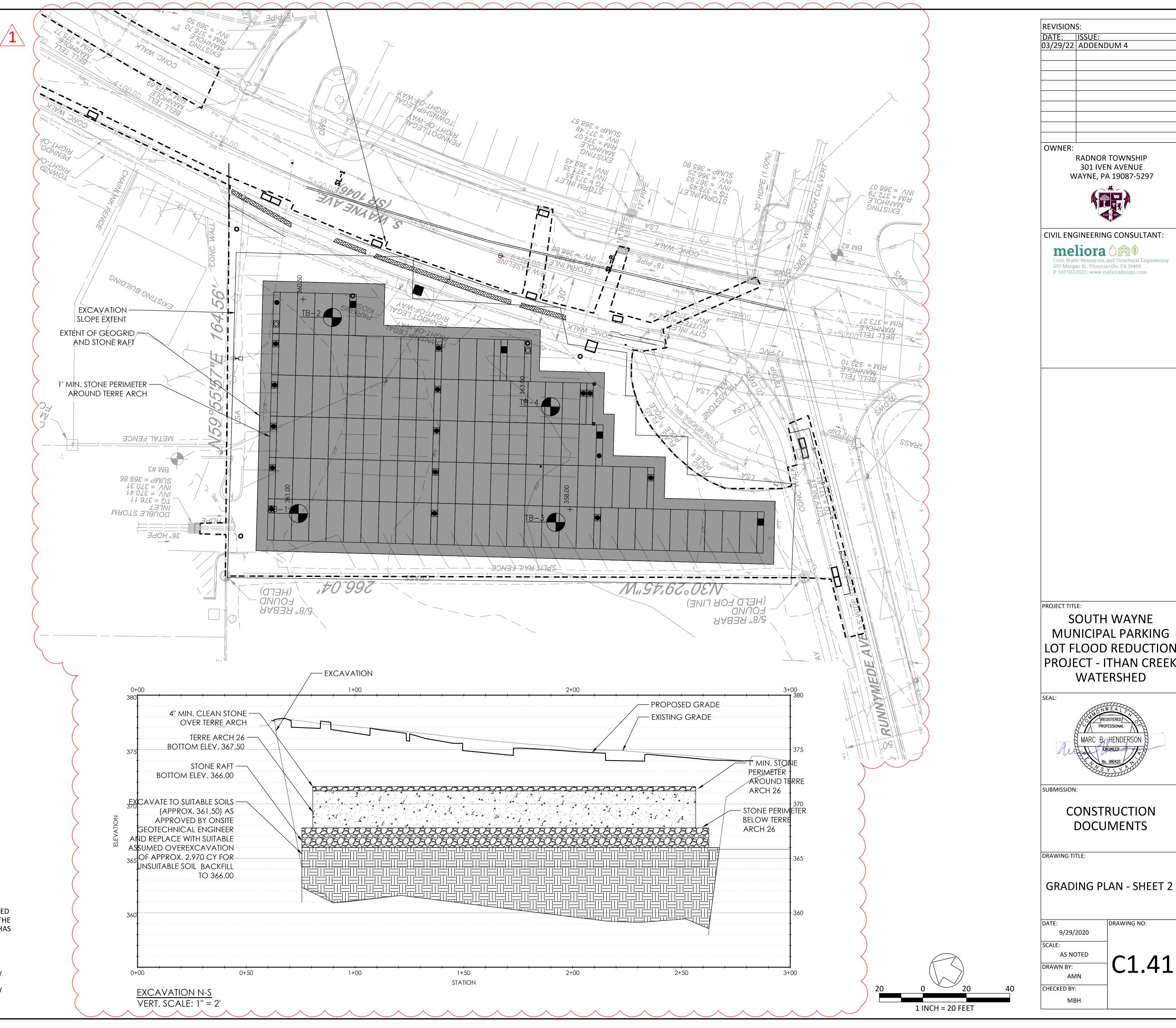
· \_ + \_ + \_ + EXCAVATION PHASE 2 EXTENT

- 1. EXCAVATE IN PHASE FOR TERRE ARCH INSTALLATION AS SHOWN. 2. A LICENSED GEOTECHNICAL ENGINEER MUST BE PRESENT TO ENSURE UNSUITABLE SOILS ARE COMPLETELY EXCAVATED LEAVING SUBSOILS THAT HAVE A MINIMUM OF 3000 PSF BEARING CAPACITY.
- 3. CLEAN BACKFILL SHALL BE PLACED AS SHOWN ON PLANS TO ACHIEVE A BEARING CAPACITY OF 3000 PSF AS ADVISED BY A LICENSED GEOTECHNICAL ENGINEER
- 4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE WORK COMMENCES. THE CONTRACTOR MUST BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS PRIOR TO BEGINNING WORK. FIELD CONDITION DISCREPANCIES SHALL NOT BE USED AS THE BASIS FOR CHANGE ORDER CLAIMS ONCE CONSTRUCTION ACTIVITIES AVE COMMENCED.
- 5. FINAL TREE REPLACEMENT TO BE APPROVED BY RADNOR TOWNSHIP.

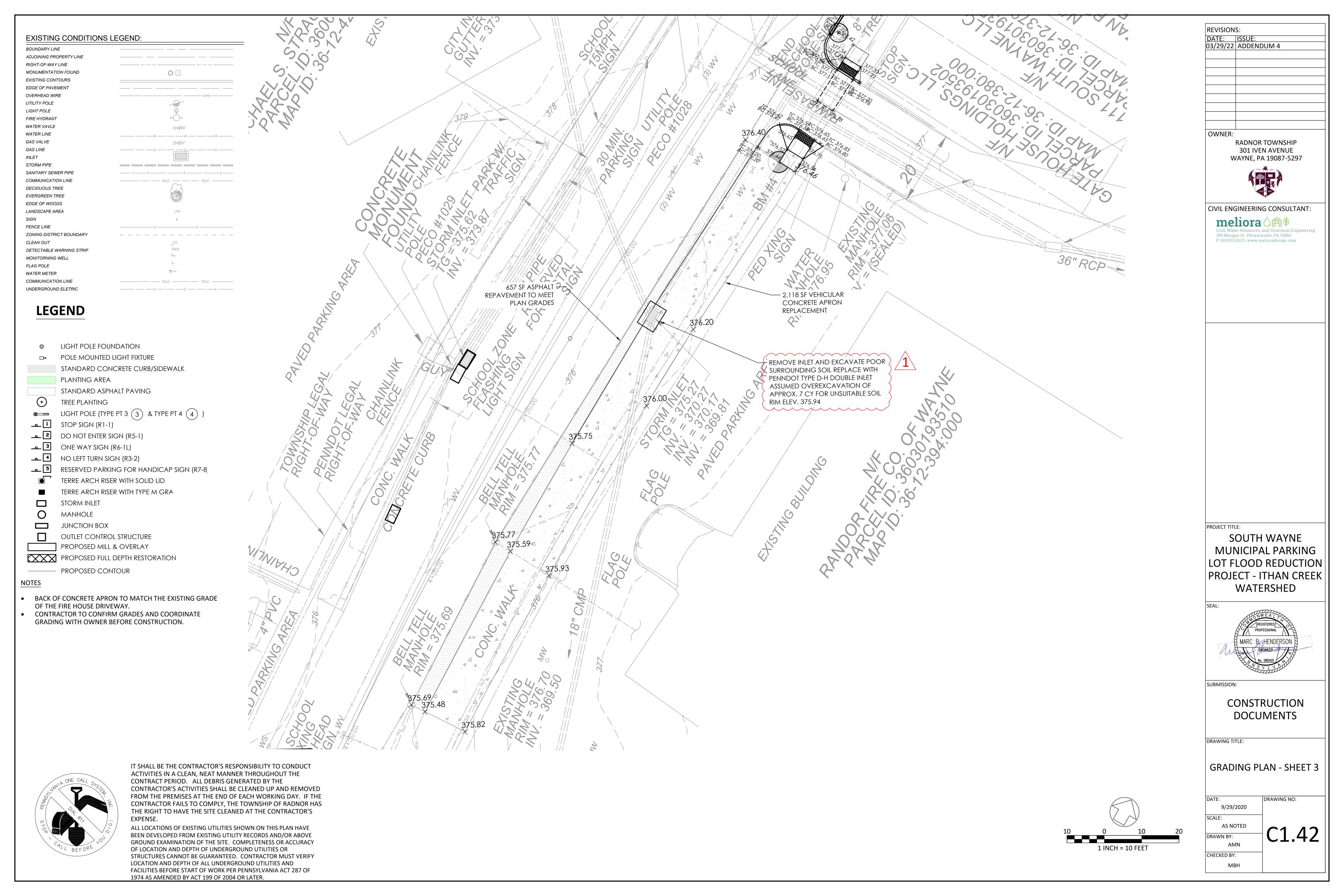
SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401

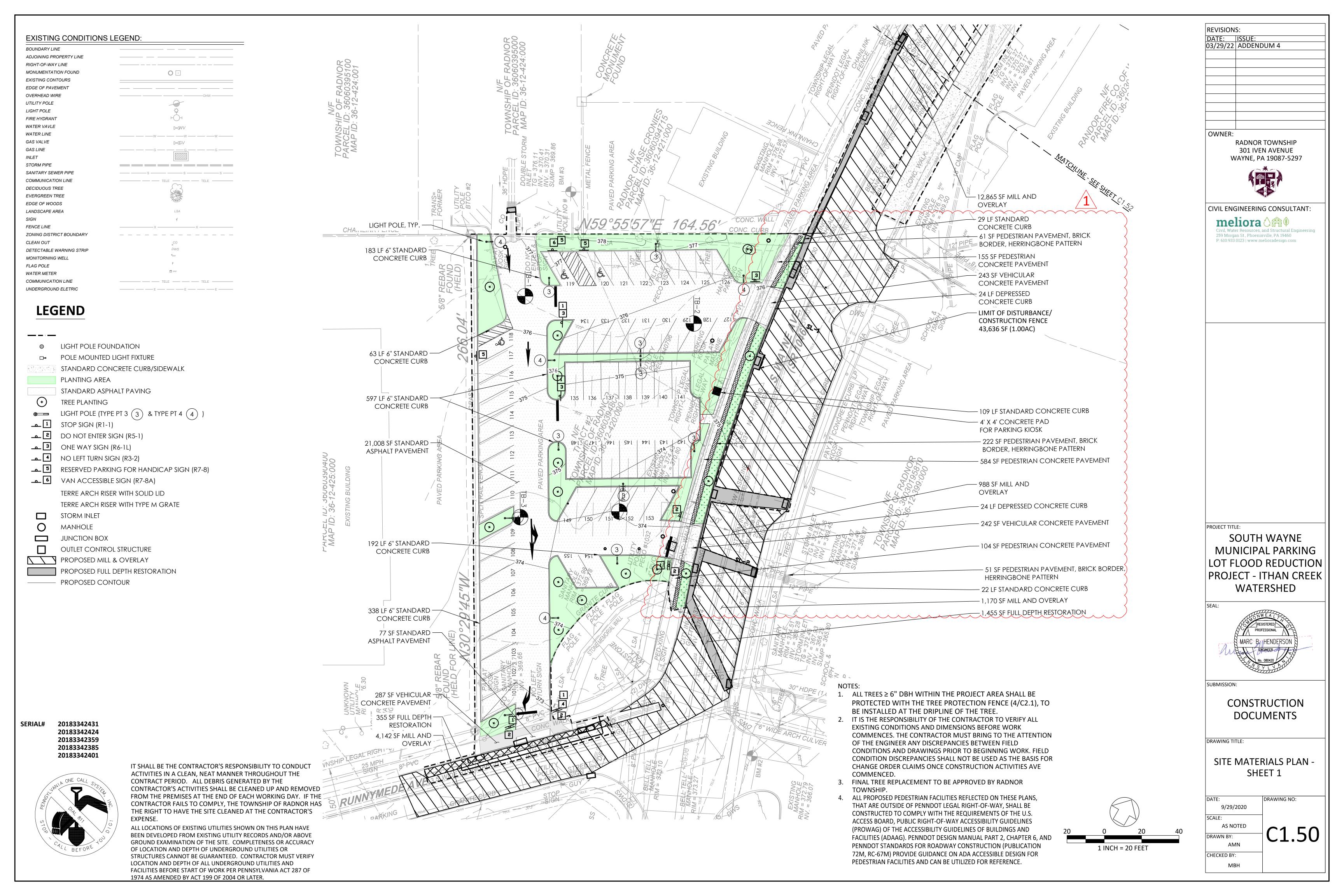


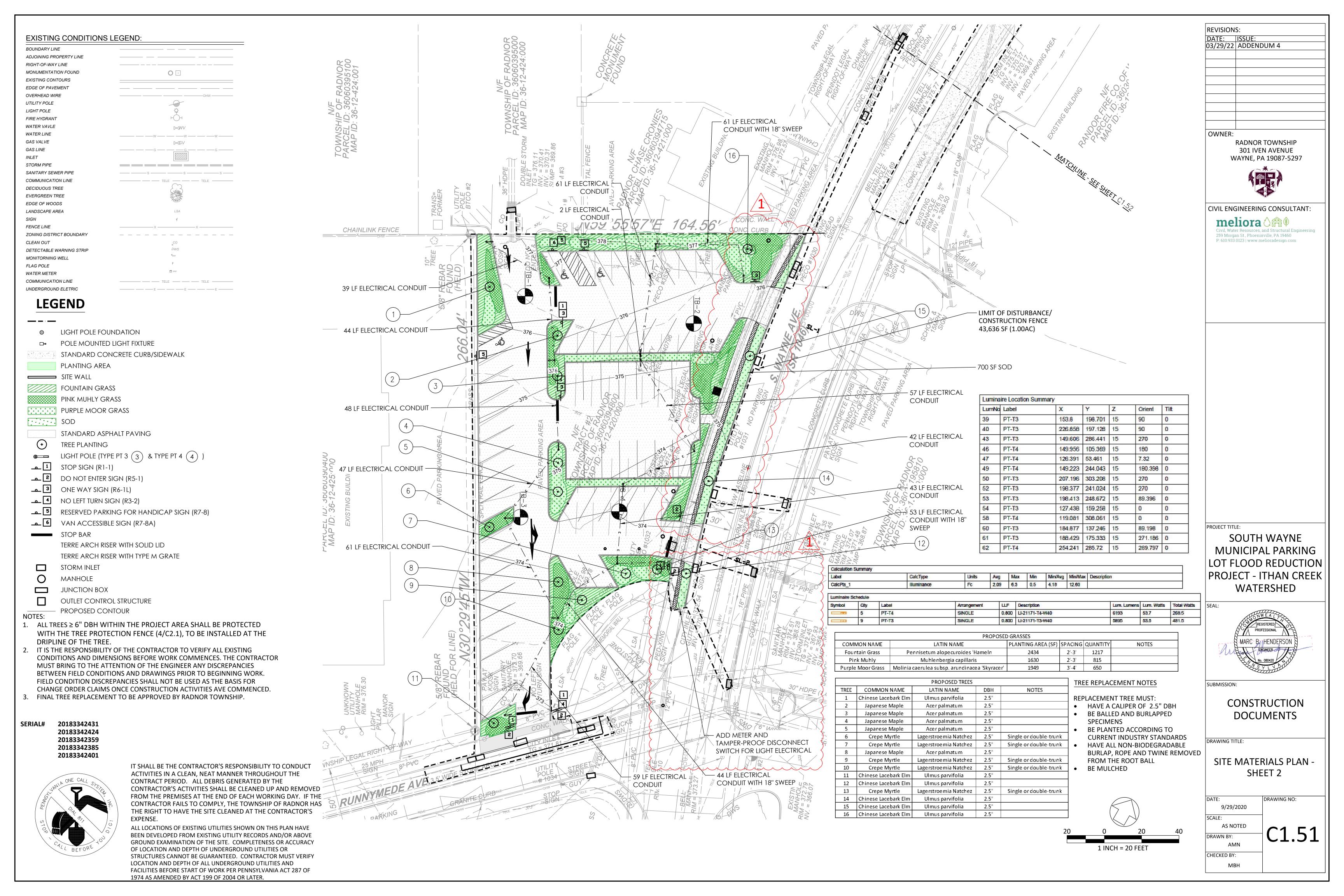
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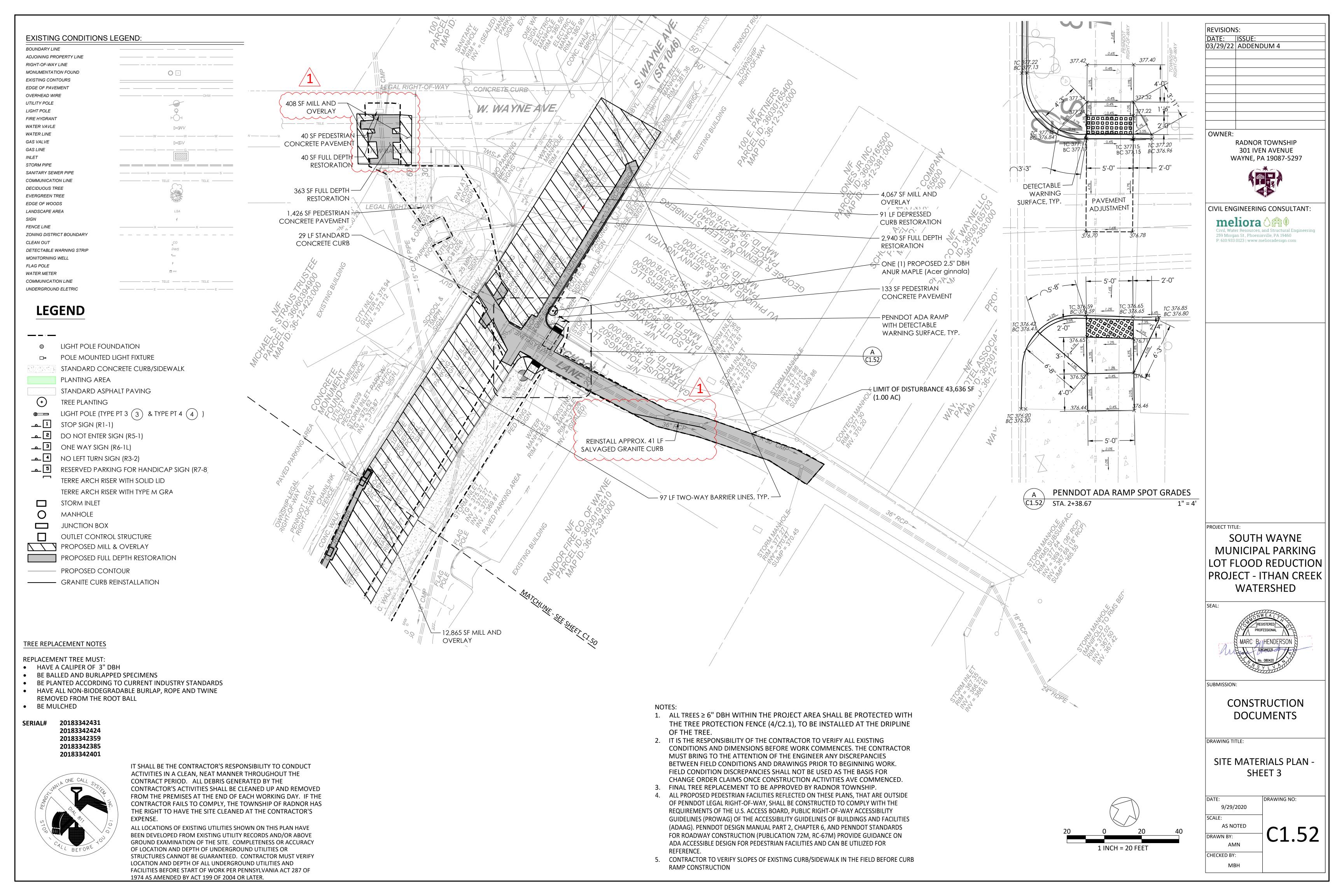


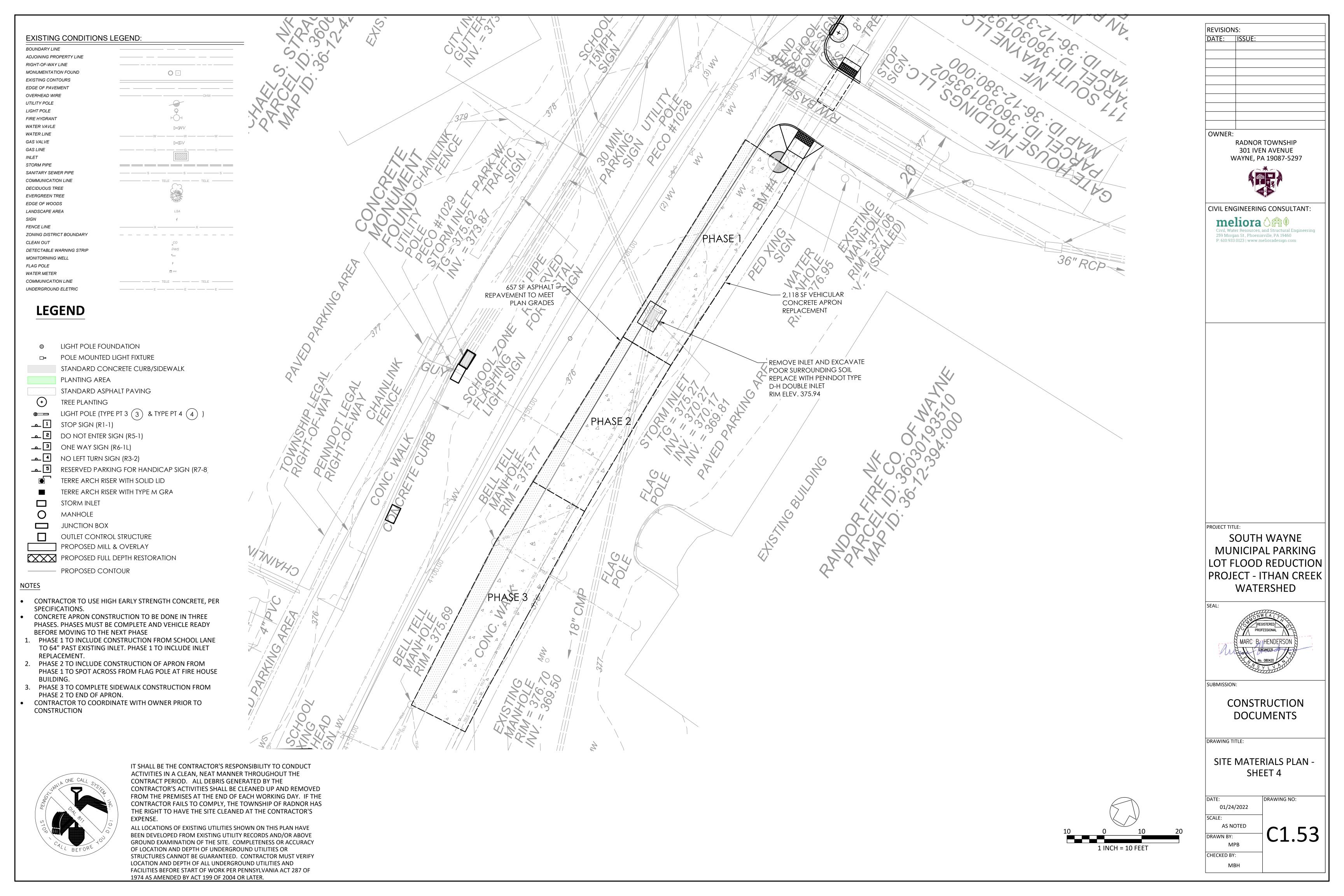
MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK **GRADING PLAN - SHEET 2** 

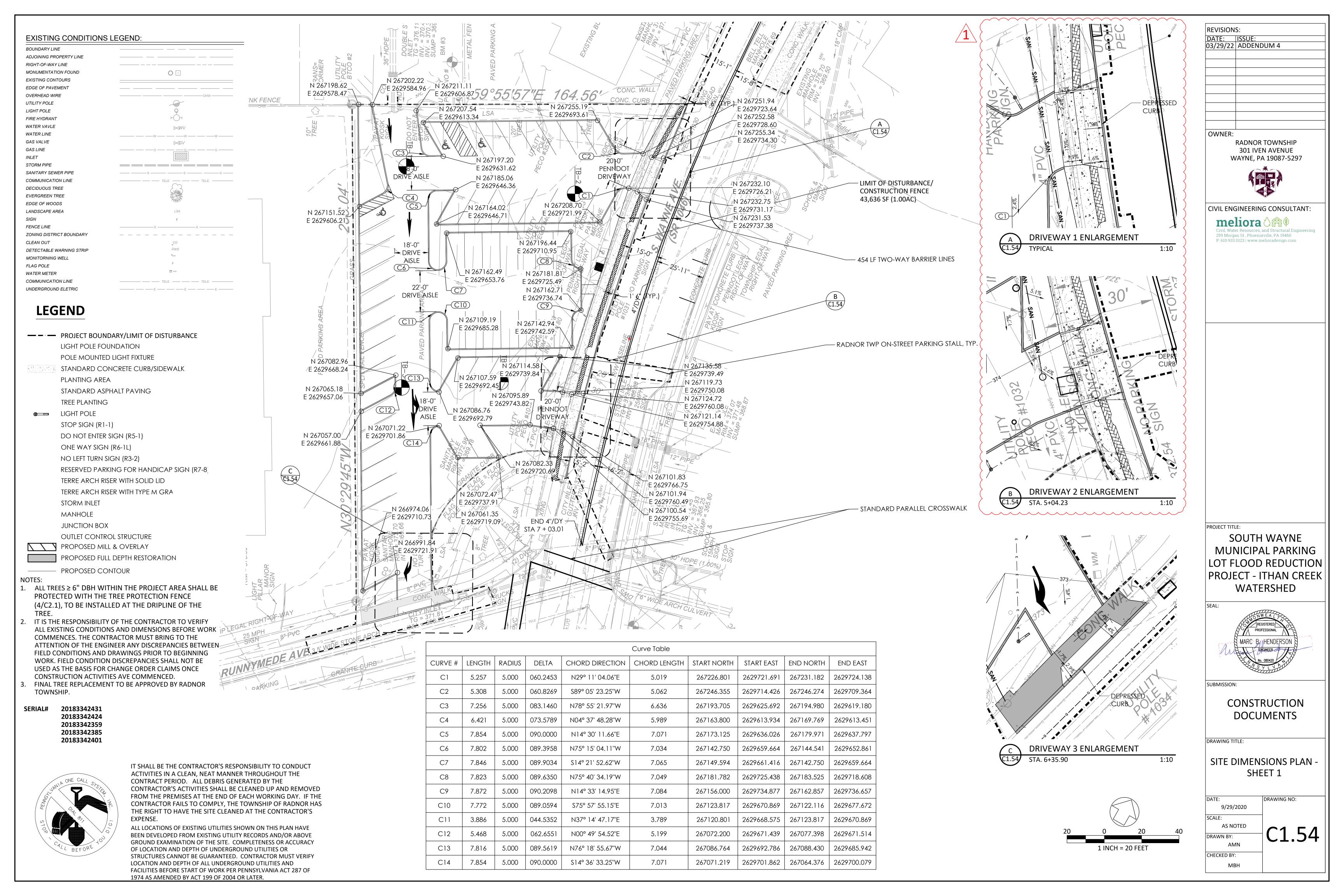


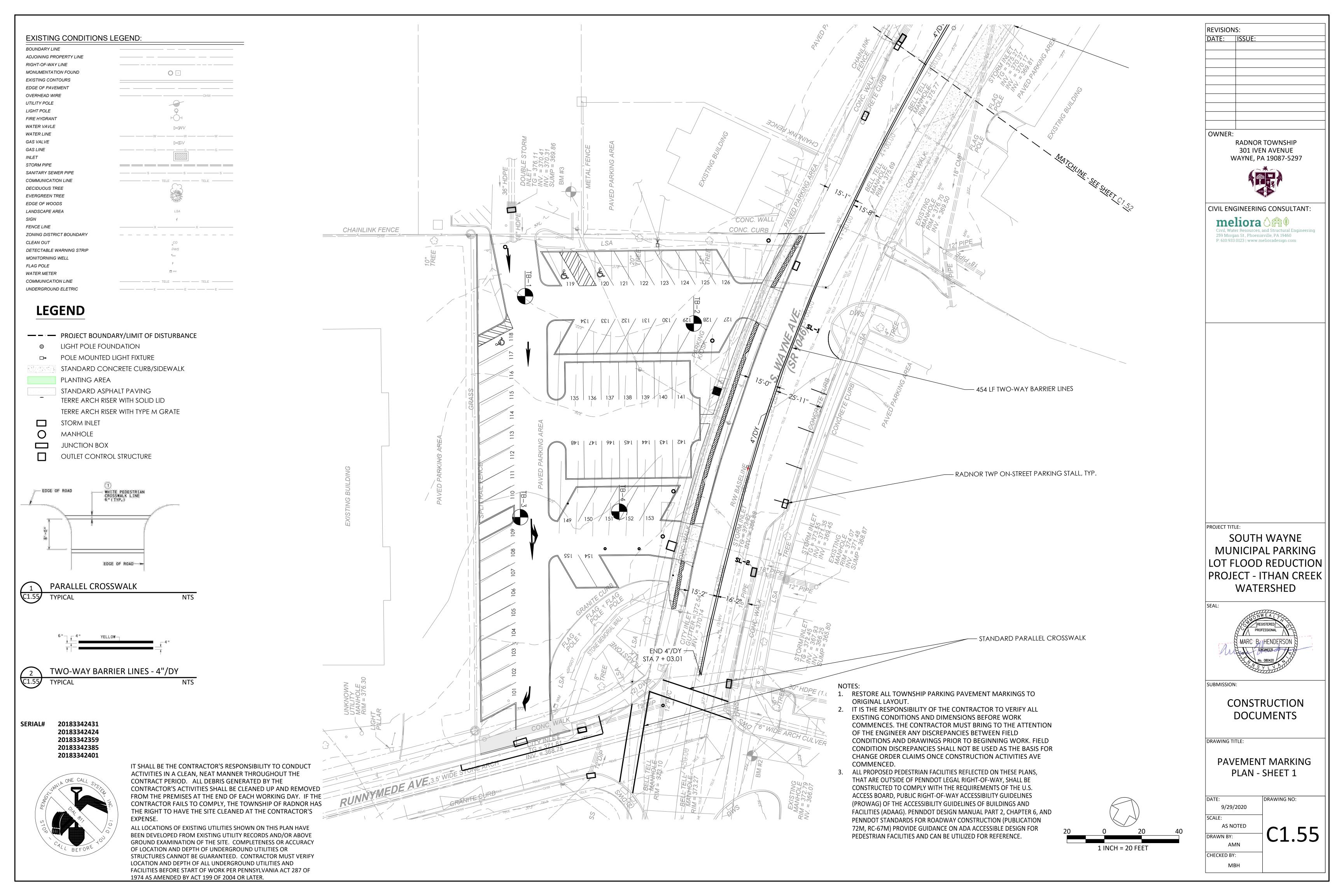


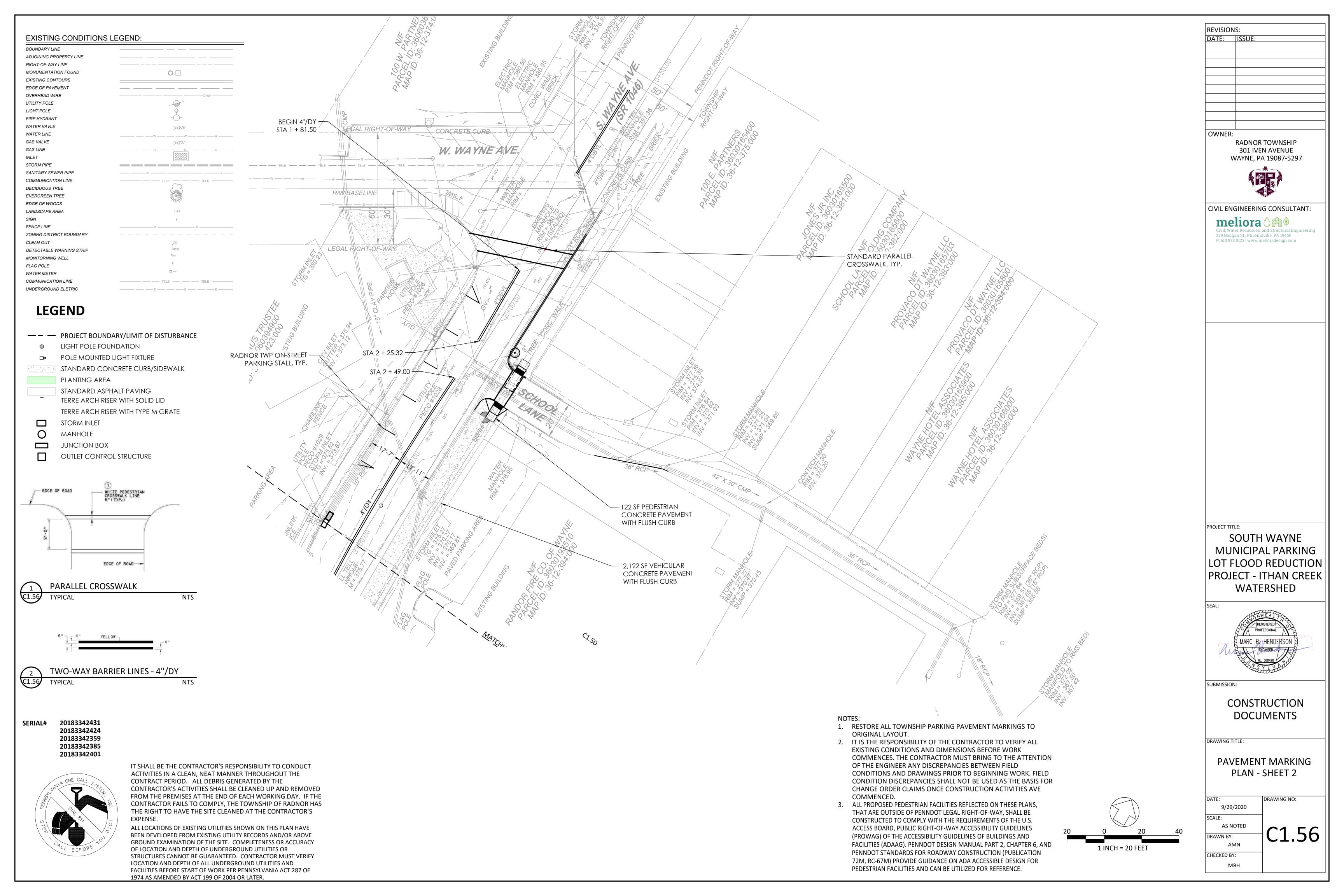












#### **EXISTING CONDITIONS LEGEND: BOUNDARY LINE** ADJOINING PROPERTY LINE RIGHT-OF-WAY LINE MONUMENTATION FOUND $\bigcirc$ EXISTING CONTOURS EDGE OF PAVEMENT OVERHEAD WIRE UTILITY POLE LIGHT POLE FIRE HYDRANT WATER VAVLE WATER LINE GAS VALVE **GAS LINE** STORM PIPE \_\_\_\_\_\_\_\_\_\_\_ SANITARY SEWER PIPE COMMUNICATION LINE DECIDUOUS TREE **EVERGREEN TREE** EDGE OF WOODS LANDSCAPE AREA FENCE LINE ZONING DISTRICT BOUNDARY CLEAN OUT DETECTABLE WARNING STRIP MONITORNING WELL FLAG POLE WATER METER COMMUNICATION LINE UNDERGROUND ELETRIC **LEGEND**

— — PROJECT BOUNDARY/LIMIT OF DISTURBANCE

TERRE ARCH RISER WITH SOLID LID

TERRE ARCH RISER WITH TYPE M GRATE

STORM INLET MANHOLE

JUNCTION BOX

OUTLET CONTROL STRUCTURE

TERRE ARCH 26 TERRE ARCH MANIFOLD

SOLID PIPE

—— SANITARY PIPE — E — ELECTRIC LINE

———— GAS RELOCATION

**──▼ ─** WATER RELOCATION

——— TELECOM RELOCATION

### UTILITY RELOCATION NOTES

1) PECO GAS - PECO TO RELOCATE GAS MAIN UNDER PROPOSED STORM PIPE WITH A MIN. OF 18" CLEARANCE. CONTRACTOR TO PROVIDE CONSTRUCTION SUPPORT IN COORDINATION WITH PECO NOT LIMITED TO EXCAVATION AND EXPOSURE OF GAS MAIN.

2 PECO ELECTRIC - CONTACT PECO ELECTRIC TO INSTALL ELECTRICAL CONNECTION TO UTILITLY POLES ALONG SOUTH WAYNE FOR SITE

# **GENERAL NOTES**

1. ALL ELECTRICAL ASSEMBLY TO INCLUDE (2) 2" CONDUIT WITH (1) 6 / 3 COPPER WIRE

CONTRACTOR TO COORDINATE WITH TELECOM FOR PROTECTION OF TELECOM LINE DURING EXCAVATION FOR

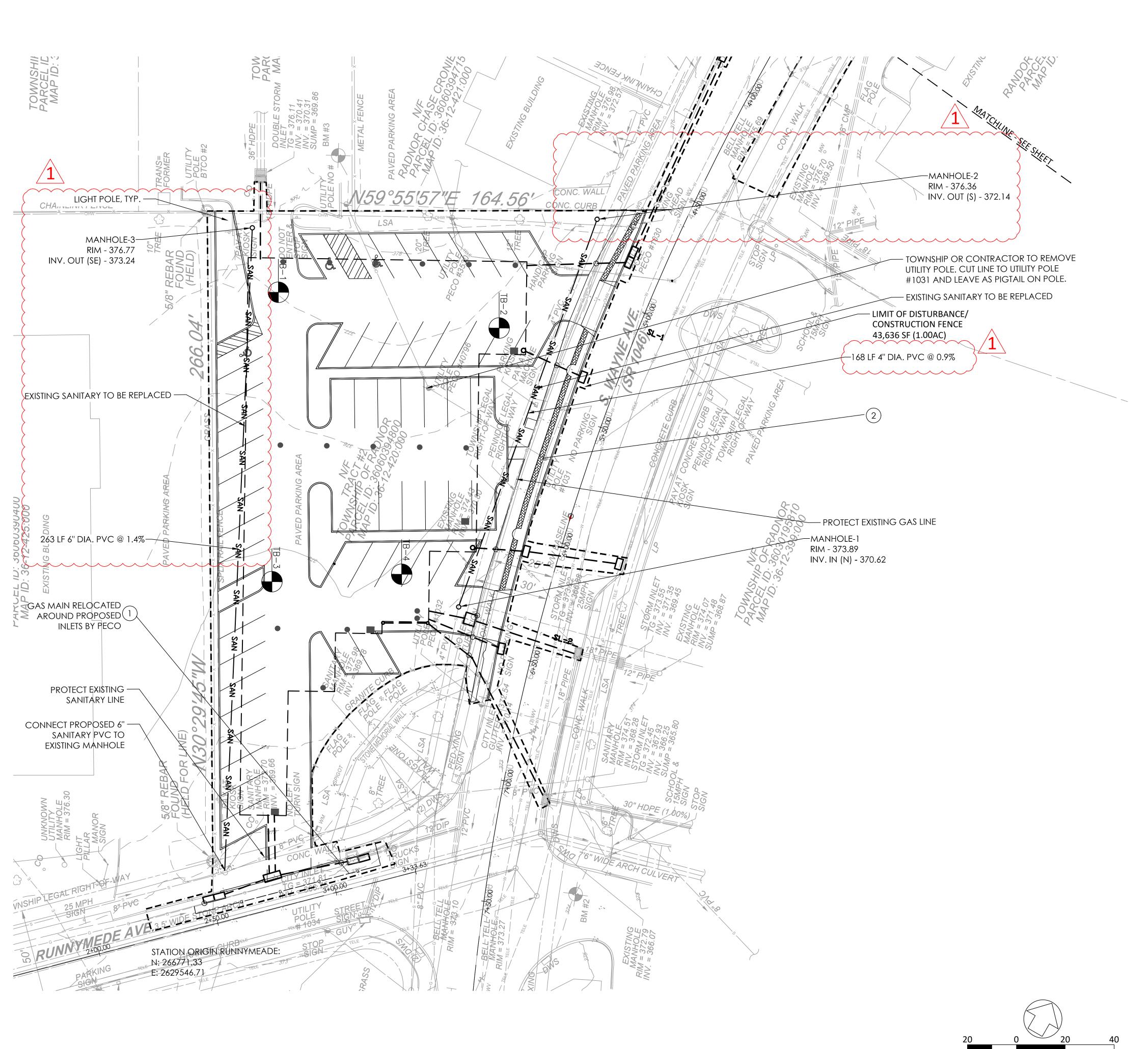
SUBSURFACE BED 3. INSTALL SANITARY MANHOLES 2 AND 3 EARLY IN CONSTRUCTION SEQUENCE SO THAT CONTRACTOR CAN PUMP TO CONTINUE FLOWS DURING WORK.

#### SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ACTIVITIES IN A CLEAN, NEAT MANNER THROUGHOUT THE CONTRACT PERIOD. ALL DEBRIS GENERATED BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEANED UP AND REMOVED FROM THE PREMISES AT THE END OF EACH WORKING DAY. IF THE CONTRACTOR FAILS TO COMPLY, THE TOWNSHIP OF RADNOR HAS THE RIGHT TO HAVE THE SITE CLEANED AT THE CONTRACTOR'S EXPENSE.

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**REVISIONS:** DATE: ISSUE: 03/29/22 ADDENDUM 4

OWNER:

RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297

CIVIL ENGINEERING CONSULTANT:

meliora 🗘 🕮 🏺 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com

PROJECT TITLE:

SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED

CONSTRUCTION **DOCUMENTS** 

DRAWING TITLE:

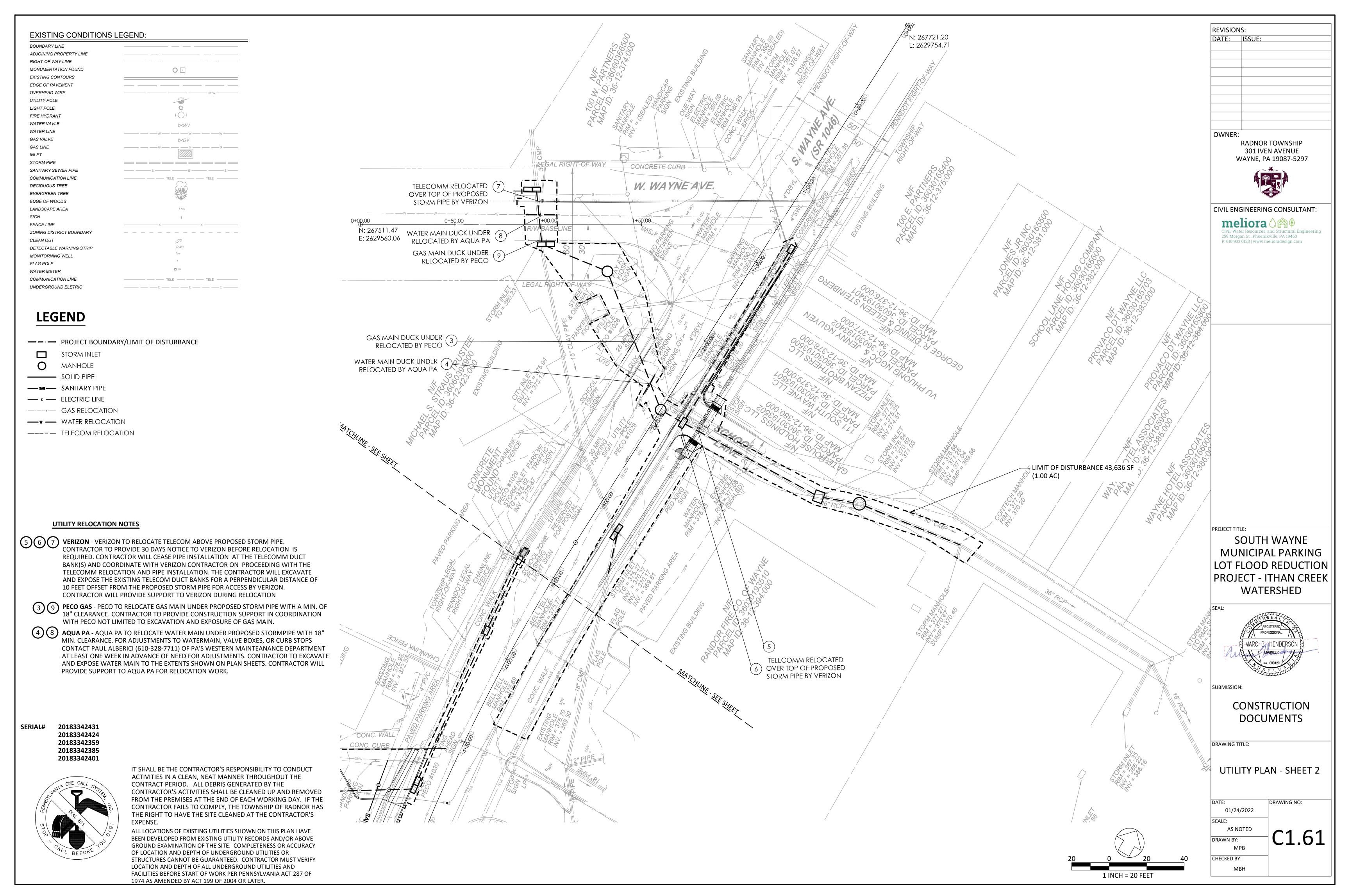
**UTILITY PLAN - SHEET 1** 

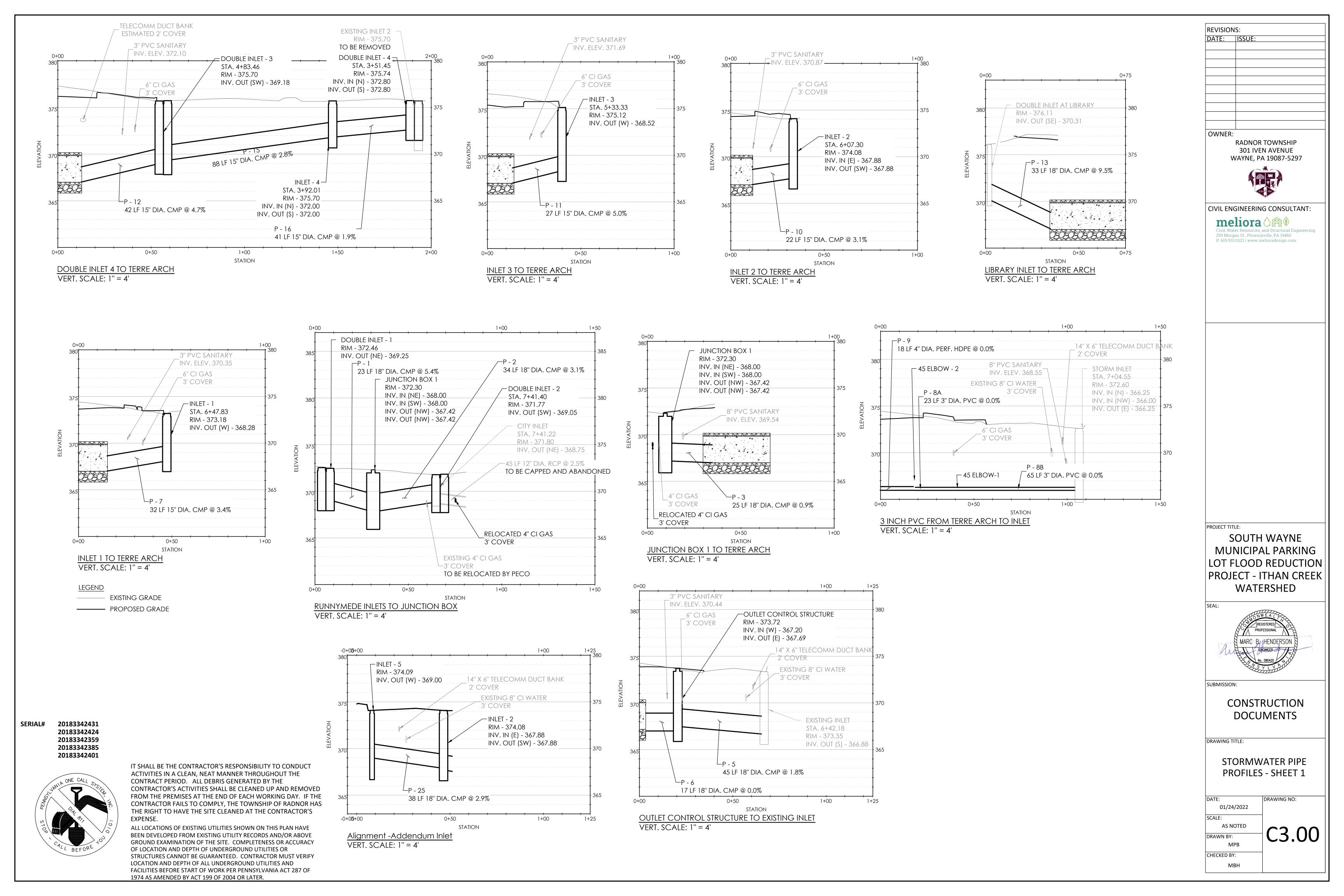
DRAWING NO: 9/29/2020 AS NOTED C1.60 DRAWN BY:

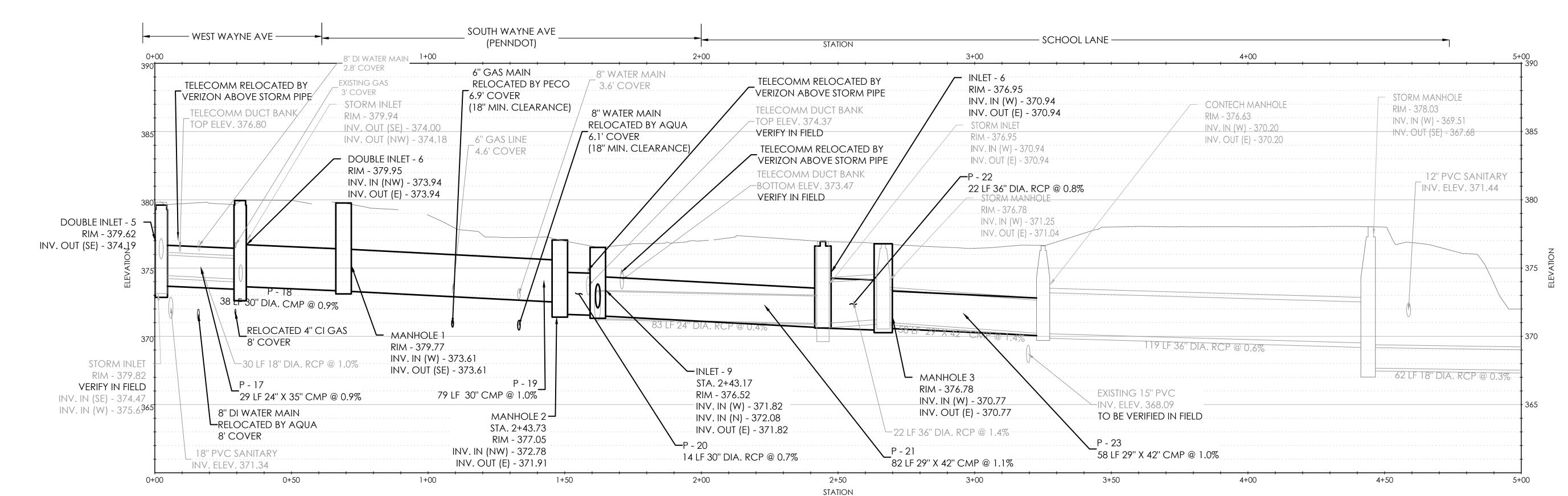
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CHECKED BY:

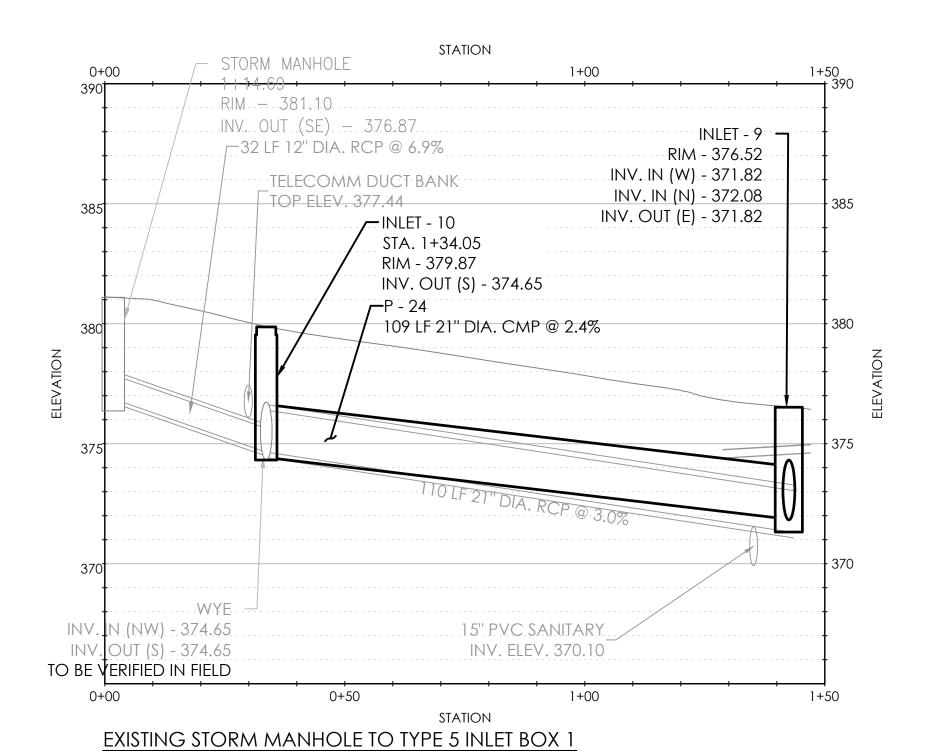
1 INCH = 20 FEET







INLET 7 TO RMS SUBSURFACE BED VERT. SCALE: 1" = 4'



SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401

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VERT. SCALE: 1" = 4'

EXPENSE.

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.

LOT FLOOD REDUCTION
PROJECT - ITHAN CREEK
WATERSHED

SEAL:

MARC B. HENDERSON

ENGINEER

No. 080420

No. 080420

SOUTH WAYNE

MUNICIPAL PARKING

SOBIVIISSION.

PROJECT TITLE:

**REVISIONS:** 

OWNER:

RADNOR TOWNSHIP

**301 IVEN AVENUE** 

WAYNE, PA 19087-5297

**CIVIL ENGINEERING CONSULTANT:** 

meliora 🗘 🕮 🌘

259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com

DATE: ISSUE:

CONSTRUCTION DOCUMENTS

DRAWING TITLE:

STORMWATER PIPE PROFILES - SHEET 2

ATE: DRAWING NO: O1/24/2022

CALE: AS NOTED RAWN BY: C3.01

DRAWN BY:
MPB
CHECKED BY:

МВН

PROPOSED GRADE

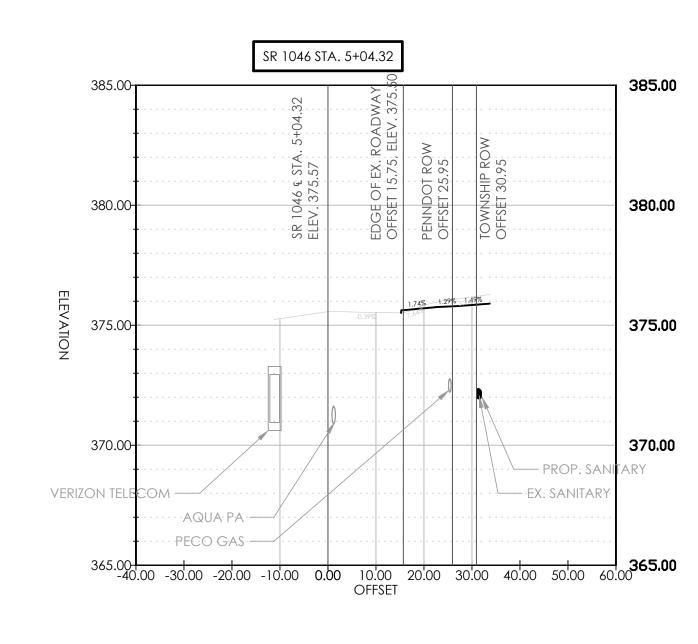
#### NOTES:

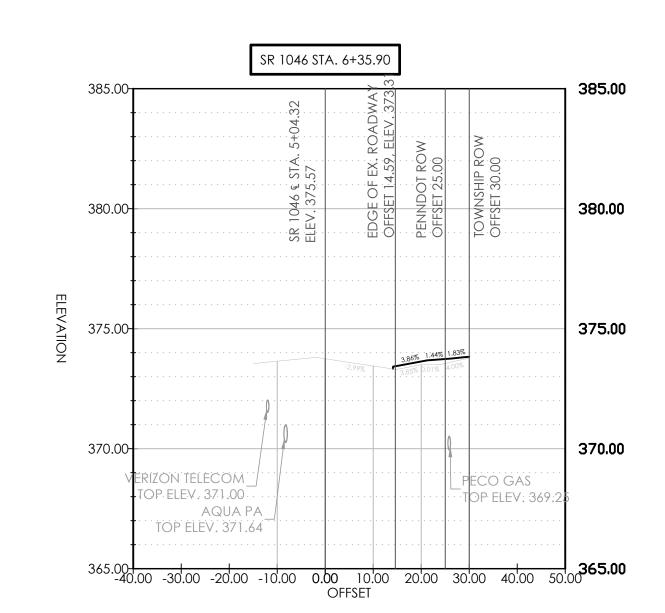
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- 2. FINAL TREE REPLACEMENT TO BE APPROVED BY RADNOR TOWNSHIP.

SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



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### UTILITY RELOCATION NOTES

VERIZON - VERIZON TO RELOCATE TELECOM ABOVE PROPOSED STORM PIPE.
CONTRACTOR TO PROVIDE 30 DAYS NOTICE TO VERIZON BEFORE RELOCATION IS
REQUIRED. CONTRACTOR WILL CEASE PIPE INSTALLATION AT THE TELECOMM DUCT
BANK(S) AND COORDINATE WITH VERIZON CONTRACTOR ON PROCEEDING WITH THE
TELECOMM RELOCATION AND PIPE INSTALLATION. THE CONTRACTOR WILL EXCAVATE
AND EXPOSE THE EXISTING TELECOM DUCT BANKS FOR A PERPENDICULAR DISTANCE OF
10 FEET OFFSET FROM THE PROPOSED STORM PIPE FOR ACCESS BY VERIZON.
CONTRACTOR WILL PROVIDE SUPPORT TO VERIZON DURING RELOCATION

**PECO GAS** - PECO TO RELOCATE GAS MAIN UNDER PROPOSED STORM PIPE WITH A MIN. OF 18" CLEARANCE. CONTRACTOR TO PROVIDE CONSTRUCTION SUPPORT IN COORDINATION WITH PECO NOT LIMITED TO EXCAVATION AND EXPOSURE OF GAS MAIN.

AQUA PA - AQUA PA TO RELOCATE WATER MAIN UNDER PROPOSED STORMPIPE WITH 18" MIN. CLEARANCE. FOR ADJUSTMENTS TO WATERMAIN, VALVE BOXES, OR CURB STOPS CONTACT PAUL ALBERICI (610-328-7711) OF PA'S WESTERN MAINTEANANCE DEPARTMENT AT LEAST ONE WEEK IN ADVANCE OF NEED FOR ADJUSTMENTS. CONTRACTOR TO EXCAVATE AND EXPOSE WATER MAIN TO THE EXTENTS SHOWN ON PLAN SHEETS. CONTRACTOR WILL PROVIDE SUPPORT TO AQUA PA FOR RELOCATION WORK.

2	0	(	)	2	20	40
			11011	20.55		
		1	INCH =	= 20 FE	:ET	

**REVISIONS:** DATE: ISSUE: OWNER: RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297 CIVIL ENGINEERING CONSULTANT: meliora 🖒 🙉 🕸 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com PROJECT TITLE: SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED CONSTRUCTION DOCUMENTS DRAWING TITLE: **DRIVEWAY PROFILES** DRAWING NO: 01/24/2022 DRAWN BY: MPB CHECKED BY: MBH

STATION 1+00 2+00 MANHOLE-1-MANHOLE-2-RIM - 373.89 RIM - 376.34 INV. IN (N) - 370.62 PROPOSED GRADE — INV. IN (N) - 372.15 EXISTING MH-3-INV. OUT (S) - 372.14 CONNECT EXISTING 4" -RIM - 376.98 EXISTING GRADE -PVC TO PROPOSED INV. OUT (S) - 372.60 MANHOLE EXISTING MH-1 RIM - 372.98 INV. IN (N) - 369.20 INV. OUT (NE) - 369.18 97 LF 3" DIA. PVC @ 1.7%— 3" SDR 35 PVC PIPE 15" POLYMER COATED CMP INV. ELEV. 365.98 - CONNECT TO EXISTING INV. ELEV. 367.29 EXISTING MH-2 SANITARY LINE . . RIM - 374.43 -14 LF 4" DIA. PVC @ 1.0% 1.5" POLYMER COATED CMP. 15" POLYMER COATED CMP ··INV.: IN (N) -- 370.82 INV. ELEV. 367.70 INV. ELEV. 367.57 INV. IN (N) - 370.82 \_ 15" POLYMER COATED CMP 360 ⊏179 LF 3" DIA. PVC @ 1.0%<sup>-</sup> INV. OUT (S) - 370.82 18" POLYMER COATED CMP\_\_ TO BE REMOVED INV. ELEV. 367.20 └─152 LF 4" DIA. PVC @ 1.0% 1+00 2+00 STATION SANITARY SEWER FROM MH-1 TO MH-2

\_,...,\_ \_,...\_\_ PROPOSED GRADE

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE WORK COMMENCES. THE CONTRACTOR MUST BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS PRIOR TO BEGINNING WORK. FIELD CONDITION DISCREPANCIES SHALL NOT BE USED AS THE BASIS FOR CHANGE ORDER CLAIMS ONCE CONSTRUCTION ACTIVITIES AVE COMMENCED.

2. FINAL TREE REPLACEMENT TO BE APPROVED BY RADNOR TOWNSHIP.

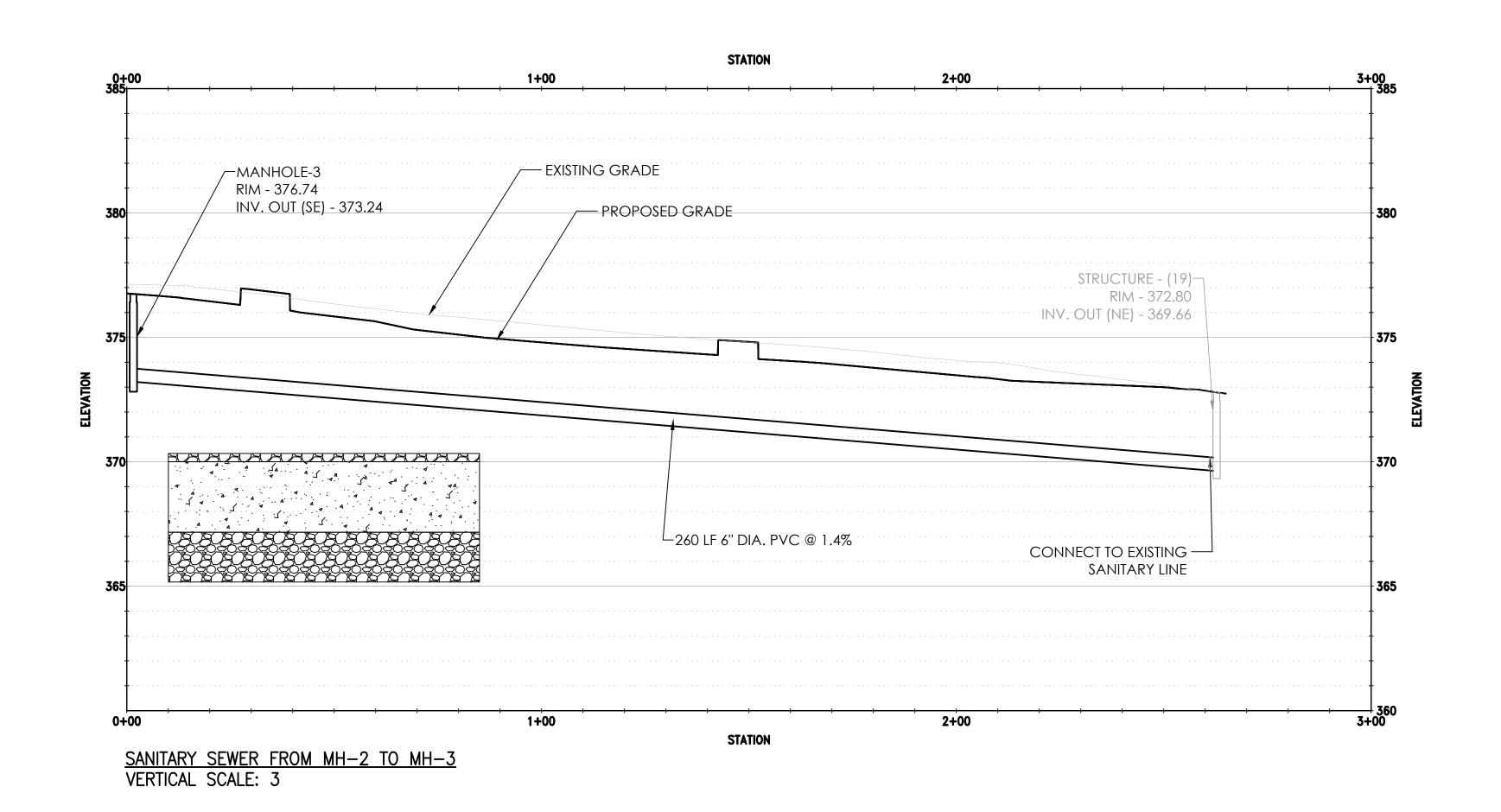
SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ACTIVITIES IN A CLEAN, NEAT MANNER THROUGHOUT THE CONTRACT PERIOD. ALL DEBRIS GENERATED BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEANED UP AND REMOVED FROM THE PREMISES AT THE END OF EACH WORKING DAY. IF THE CONTRACTOR FAILS TO COMPLY, THE TOWNSHIP OF RADNOR HAS THE RIGHT TO HAVE THE SITE CLEANED AT THE CONTRACTOR'S EXPENSE.

VERTICAL SCALE: 3

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.



1 INCH = 20 FEET

PROJECT TITLE: SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED

CONSTRUCTION

**DOCUMENTS** 

**UTILITY PROFILES - SHEET** 

DRAWING NO:

DRAWING TITLE:

01/24/2022

MPB

MBH

DRAWN BY:

CHECKED BY:

**REVISIONS:** 

OWNER:

RADNOR TOWNSHIP

**301 IVEN AVENUE** 

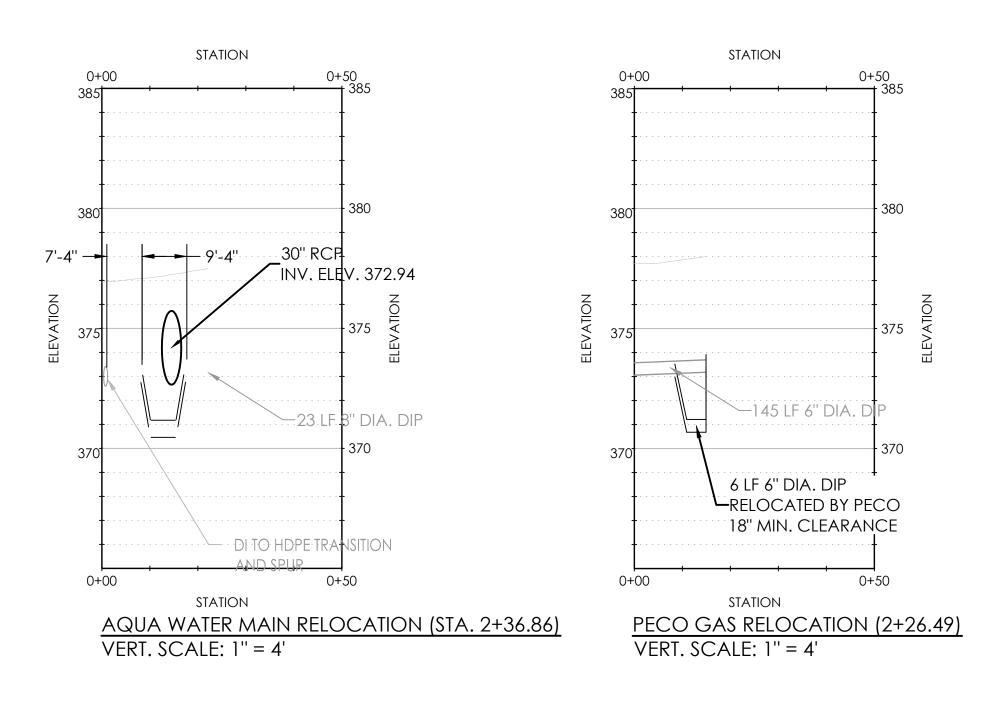
WAYNE, PA 19087-5297

CIVIL ENGINEERING CONSULTANT:

meliora 🗘 🙉 🏶

259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com

DATE: ISSUE:



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#### NOTES:

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE WORK COMMENCES. THE CONTRACTOR MUST BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS PRIOR TO BEGINNING WORK. FIELD CONDITION DISCREPANCIES SHALL NOT BE USED AS THE BASIS FOR CHANGE ORDER CLAIMS ONCE CONSTRUCTION ACTIVITIES AVE COMMENCED.
- 2. FINAL TREE REPLACEMENT TO BE APPROVED BY RADNOR TOWNSHIP.

SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



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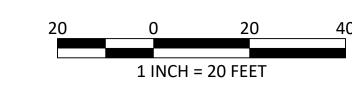
ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.

### UTILITY RELOCATION NOTES

VERIZON - VERIZON TO RELOCATE TELECOM ABOVE PROPOSED STORM PIPE.
CONTRACTOR TO PROVIDE 30 DAYS NOTICE TO VERIZON BEFORE RELOCATION IS
REQUIRED. CONTRACTOR WILL CEASE PIPE INSTALLATION AT THE TELECOMM DUCT
BANK(S) AND COORDINATE WITH VERIZON CONTRACTOR ON PROCEEDING WITH THE
TELECOMM RELOCATION AND PIPE INSTALLATION. THE CONTRACTOR WILL EXCAVATE
AND EXPOSE THE EXISTING TELECOM DUCT BANKS FOR A PERPENDICULAR DISTANCE OF
10 FEET OFFSET FROM THE PROPOSED STORM PIPE FOR ACCESS BY VERIZON.
CONTRACTOR WILL PROVIDE SUPPORT TO VERIZON DURING RELOCATION

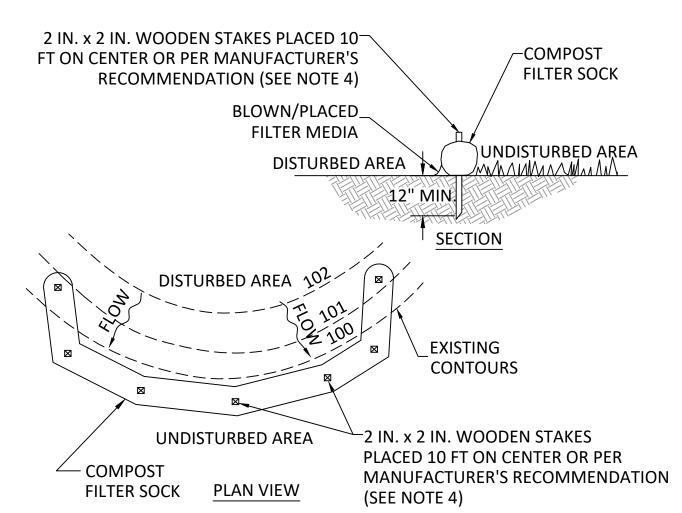
**PECO GAS** - PECO TO RELOCATE GAS MAIN UNDER PROPOSED STORM PIPE WITH A MIN. OF 18" CLEARANCE. CONTRACTOR TO PROVIDE CONSTRUCTION SUPPORT IN COORDINATION WITH PECO NOT LIMITED TO EXCAVATION AND EXPOSURE OF GAS MAIN.

AQUA PA - AQUA PA TO RELOCATE WATER MAIN UNDER PROPOSED STORMPIPE WITH 18" MIN. CLEARANCE. FOR ADJUSTMENTS TO WATERMAIN, VALVE BOXES, OR CURB STOPS CONTACT PAUL ALBERICI (610-328-7711) OF PA'S WESTERN MAINTEANANCE DEPARTMENT AT LEAST ONE WEEK IN ADVANCE OF NEED FOR ADJUSTMENTS. CONTRACTOR TO EXCAVATE AND EXPOSE WATER MAIN TO THE EXTENTS SHOWN ON PLAN SHEETS. CONTRACTOR WILL PROVIDE SUPPORT TO AQUA PA FOR RELOCATION WORK.

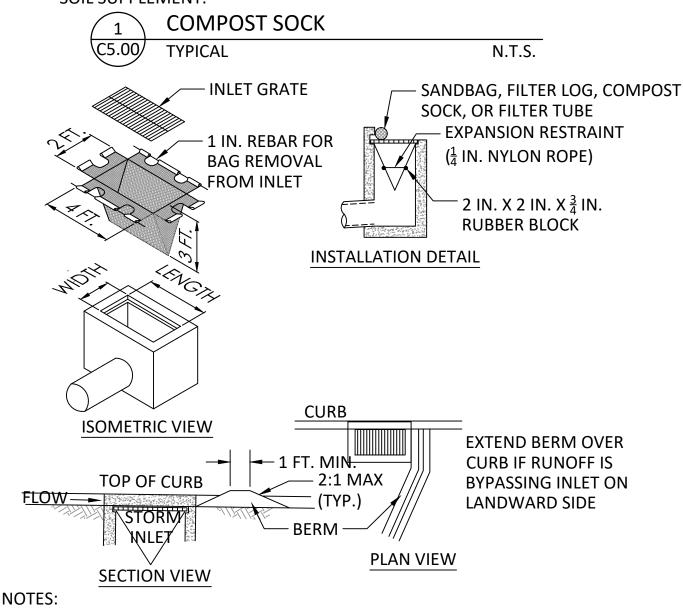


REVISIONS: DATE: ISSUE: OWNER: RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297 CIVIL ENGINEERING CONSULTANT: meliora 🗘 🙉 🏶 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com PROJECT TITLE: SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED CONSTRUCTION DOCUMENTS DRAWING TITLE: **UTILITY PROFILES - SHEET** DRAWING NO: 01/24/2022 DRAWN BY: MPB CHECKED BY:

MBH



- 1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL
- 2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
- 4. FOR PAVED SURFACE APPLICATIONS, OBJECTS OF CONSIDERABLE MASS (I.E. CONCRETE BLOCKS. SAND BAGS. ETC.) SHALL BE USED IMMEDIATELY DOWNSLOPE OF COMPOST FILTER SOCKS IN LIEU OF STAKES. MAXIMUM SPACING OF STABILIZING OBJECTS SHALL BE EQUAL TO THE MANUFACTURER'S RECOMMENDATION FOR STAKE SPACING.
- 5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR.
- 8. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.



### MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

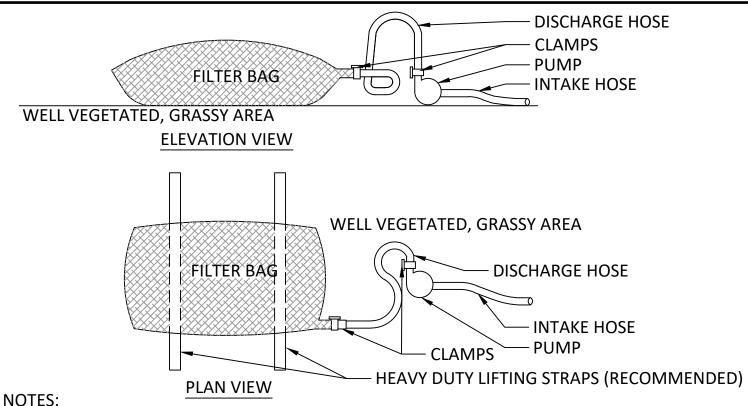
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

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.

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

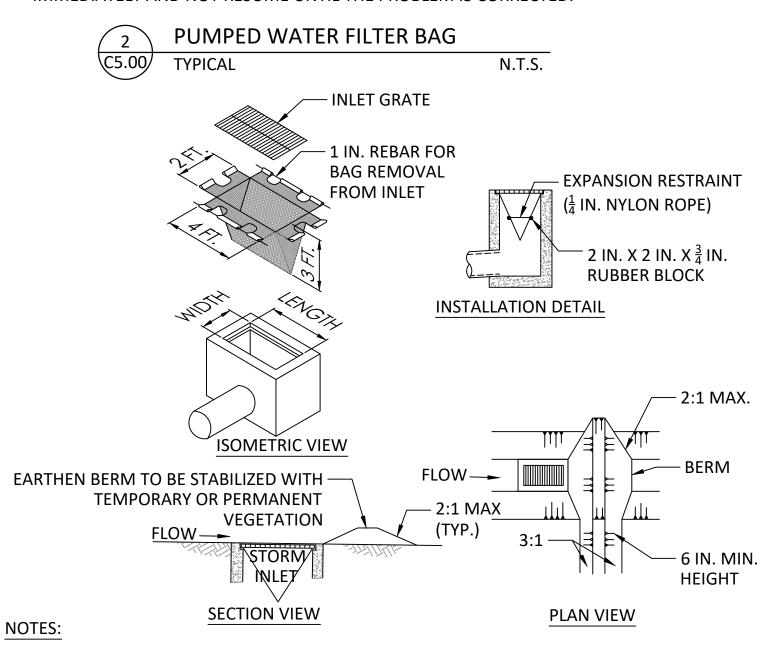
FILTER BAG INLET PROTECTIO TYPE C C5.00 TYPICAL N.T.S.



LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
M	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

- A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
- BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA. AND DISCHARGE ONTO STABLE. EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
- NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.
- THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
- THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.
- FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



#### MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

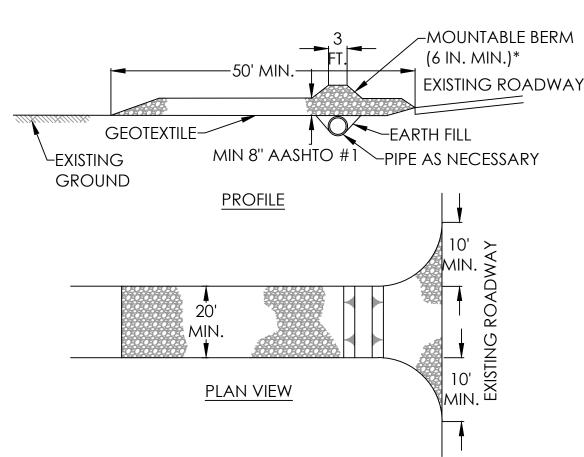
ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

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 ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

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





#### \* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

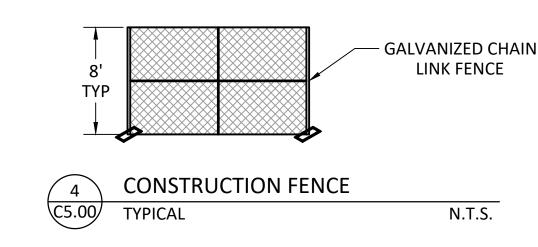
#### NOTES:

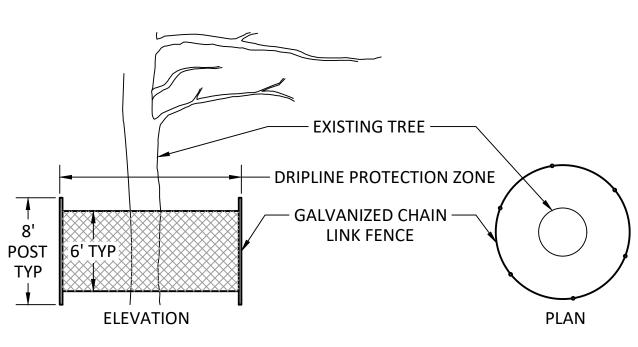
- 1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION
- ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE. 2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT
- REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF
- DITCH BEING CROSSED. 4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

ROCK CONSTRUCTION ENTRANCE

N.T.S.

**TYPICAL** 

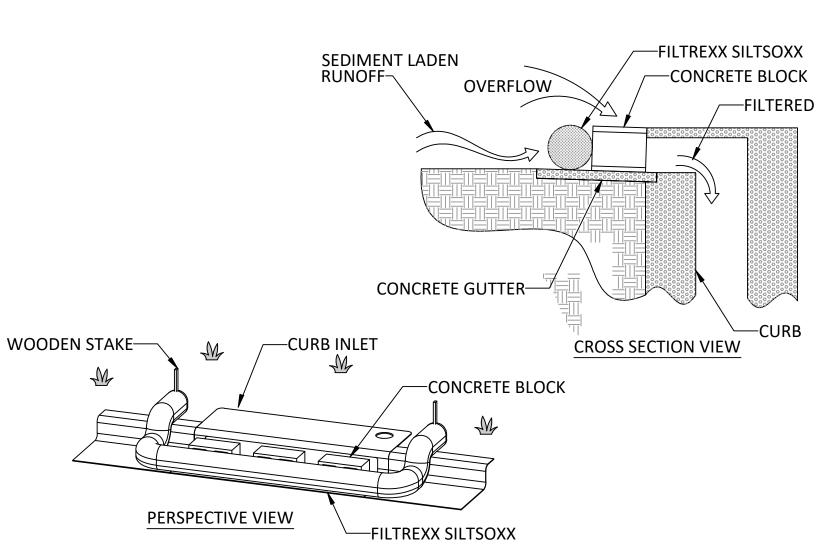




N.T.S.

TREE PROTECTION FENCE

**TYPICAL** 

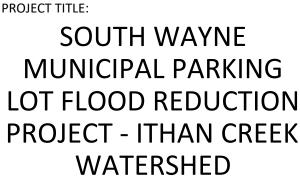


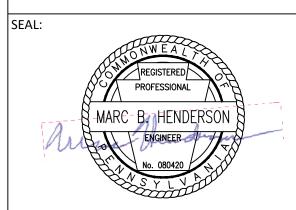
#### NOTES:

- 1. INSTALL FILTREXX SILTSOXX IN FRONT OF CURB OPENING TO A MINIMUM OF 12" BEYOND THE OPENING, EACH SIDE.
- 2. ANCHOR THE FILTREXX SILTSOXX BEHIND THE CURB WITH A WOODEN STAKE. STAKES SHALL BE ANCHORED A MINIMUM OF 12" INTO SOIL.
- 3. STANDARD INLET PROTECTION FOR CURB INLET PROTECTION AND CURB SEDIMENT CONTAINMENT WILL USE 8" DIAMETER INLET PROTECTION. DURING CURB INSTALLATION, INLET PROTECTION SHALL BE COMPACTED TO BE SLIGHTLY SHORTER THAN CURB HEIGHT.
- 4. IF INLET PROTECTION BECOMES CLOGGED WITH DEBRIS AND SEDIMENT, THEY SHALL BE MAINTAINED SO AS TO ASSURE PROPER DRAINAGE AND WATER FLOW INTO THE STORM DRAIN. IN SEVERE STORM EVENTS, OVERFLOW OF THE INLET PROTECTION MAY BE ACCEPTABLE TO KEEP THE AREA FROM FLOODING.
- 5. CURB AND DRAIN INLET PROTECTION SHALL BE POSITIONED SO AS TO PROVIDE A PERMEABLE PHYSICAL BARRIER TO THE DRAIN ITSELF, ALLOWING SEDIMENT TO COLLECT ON THE OUTSIDE OF THE INLET PROTECTION.
- 6. CONCRETE BLOCKS SHALL BE USED A SPACER TO KEEP THE FILTREXX SILTSOXX FROM BLOCKING THE CURB OPENING. CONCRETE BLOCKS SHALL BE USED AT BOTH ENDS OF THE OPENING AND EVERY 4'.









CONSTRUCTION

DRAWING TITLE

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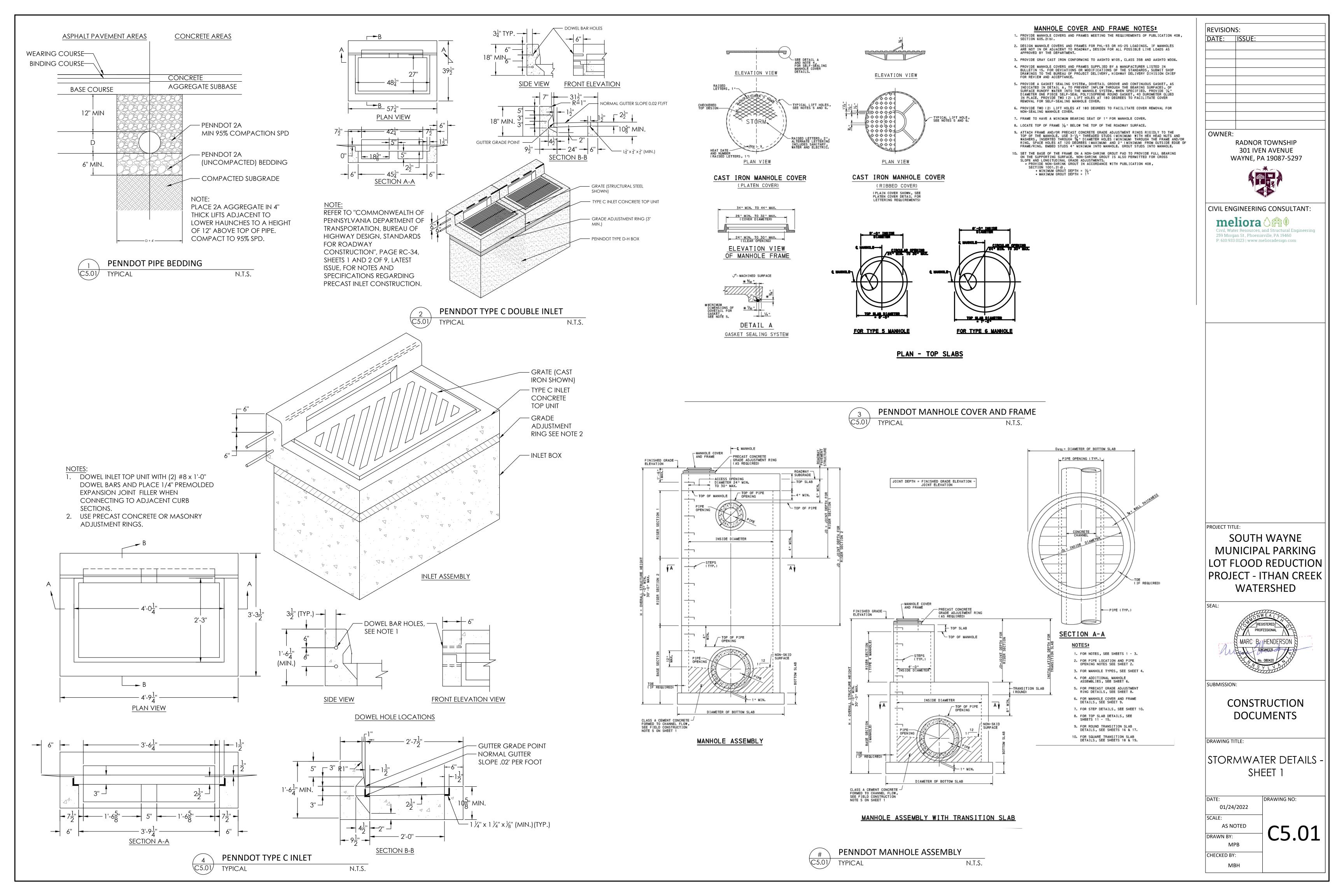
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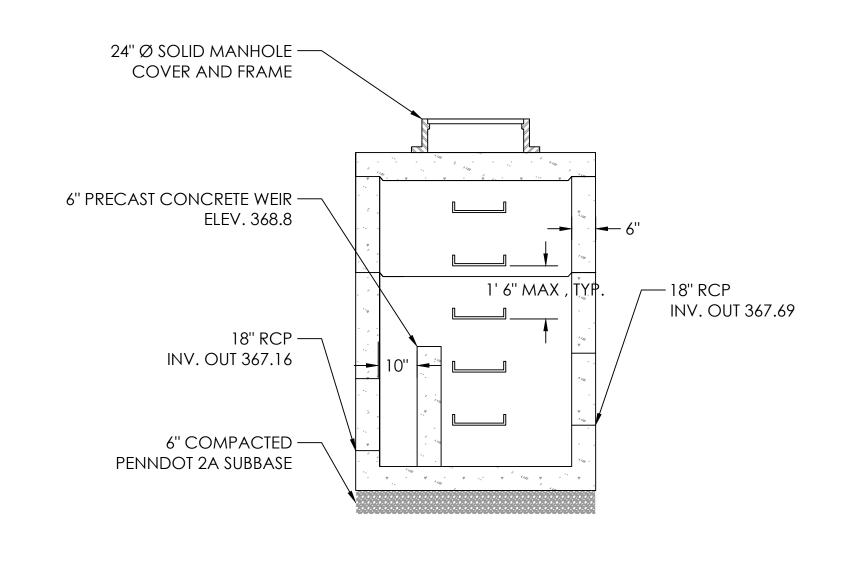
**EROSION & SEDIMENT** CONTROL DETAILS

DOCUMENTS

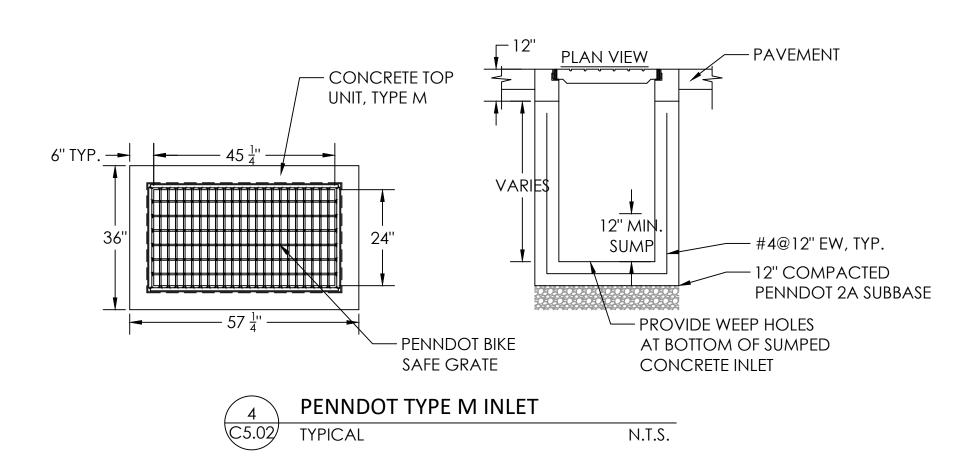
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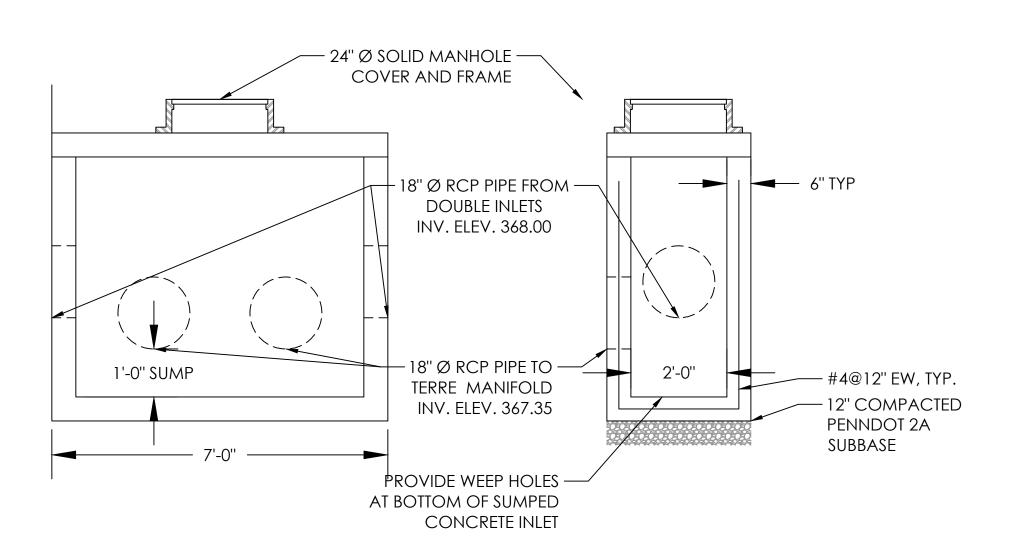




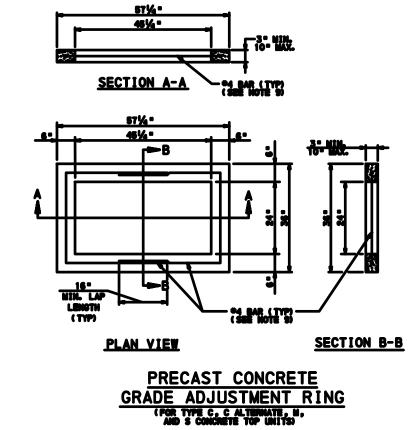
"S1" BARS

TOP SLAB WITH SHIPLAP JOINT (PRECAST ONLY)

SECTION D-D
TIONAL REINFORCEMENT NOT SHOWN







O OUTSIDE DIAMETER OF PIPE TO PIPE OPENING
REDUCTION IN WALL THICKNESS DIMENSION
S INSIDE FACE OF BOX WALL TO OUTSIDE DIAMETER OF

PRECAST CONCRETE GRADE ADJUSTMENT RING NOTES:

1. PRECAST CONCRETE ADJUSTMENT RINGS ARE PERMITTED FOR TYPE C, C ALTERNATE,
M, S AND D-H CONCRETE INLET TOPS. DO NOT USE PRECAST CONCRETE ADJUSTMENT
PLANS TO BASE TYPE C PRANCE.

2. ONLY ONE GRADE ADJUSTMENT RING IS PERMITTED FOR NEW CONSTRUCTION PROJECTS. GRADE ADJUSTMENT RINGS ARE INCIDENTAL TO THE COST OF THE TOP UNITS OR FRAMES.

3. PROVIDE ADJUSTMENT RING WHICH IS FLUSH WITH THE DOES NOT ALLOW EXCESSIVE MOVEMENT.

SHAPES TO FORM A RECTANGLE TO MATCH THE REQUIRED DIMENSIONS. SECTIONS AME NOT PERMITTED TO BE LESS THAN 1'-6" IN LENGTH.

PROVIDE 1'S" CONCRETE COVER FOR REINFORCEMENT AT EACH END.

5. FABRICATOR IS RESPONSIBLE FOR LIFTING, HANDLING AND TRANSPORTATION

STRESSES.

6. PROVIDE CLASS AA CEMENT CONCRETE, MODIFIED (DESIGN COMPRESSIVE STRENGTH

7. A HIGHER STRENGTH OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER STRENGTH

S. PROVIDE GRADE GO DEFORMED REINFORCEMENT BAR

9. REINFORCEMENT REQUIREMENTS:

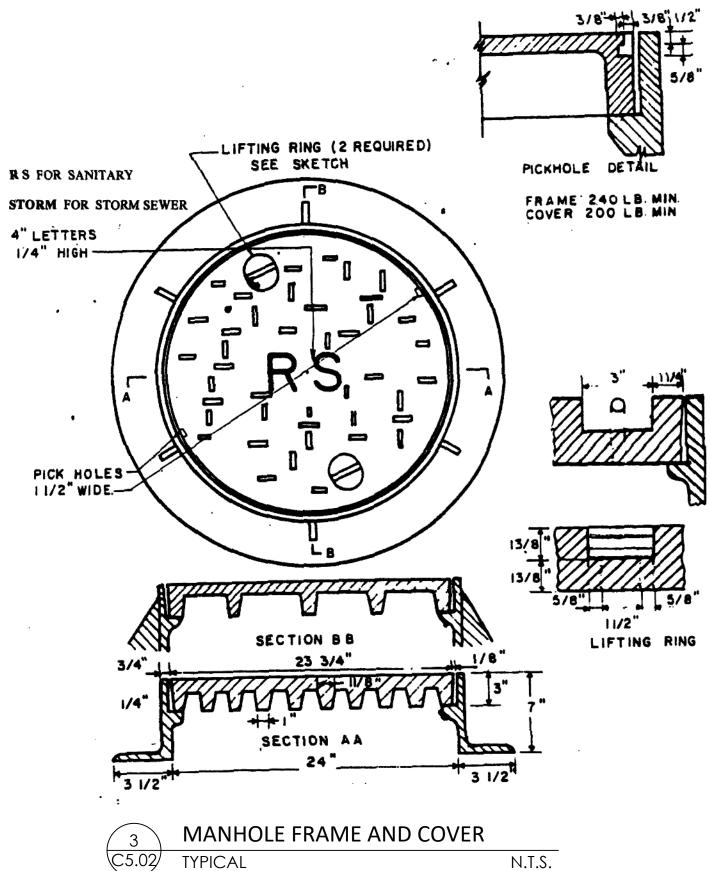
• DEFTHS LESS THAN OR EQUAL TO 6" PROVIDE ONE 94 BAR
PLACED AT CENTER OF THICKNESS.

• DEFTHS GREATER THAN 6" AND LESS THAN OR EQUAL TO 10"
PROVIDE ONE 94 BAR PLACED 14" CLEAR FROM THE TOP AND

10. SET PRECAST CONCRETE GRADE ADJUSTMENT RINGS ON A MON-SHRINK GROUT PAD TO PROVIDE FULL BEARING ON THE SUPPORTING SURFACE.

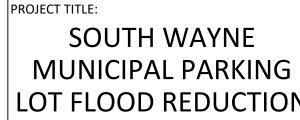
• PROVIDE NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408

11. TAPERED PRECAST CONCRETE ADJUSTMENT RINGS ARE PERMITTED AS LONG AS THE MINIMUM AND MAXIMUM DIMENSIONS REQUIRED ARE BETWEEN 3° AND 10°.

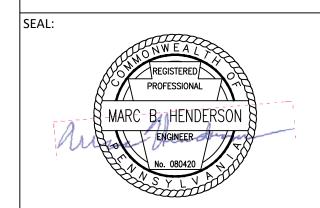




REVISIONS:



LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED



SUBMISSION:

CONSTRUCTION DOCUMENTS

DRAWING TITLE:

MBH

STORMWATER DETAILS -SHEET 2

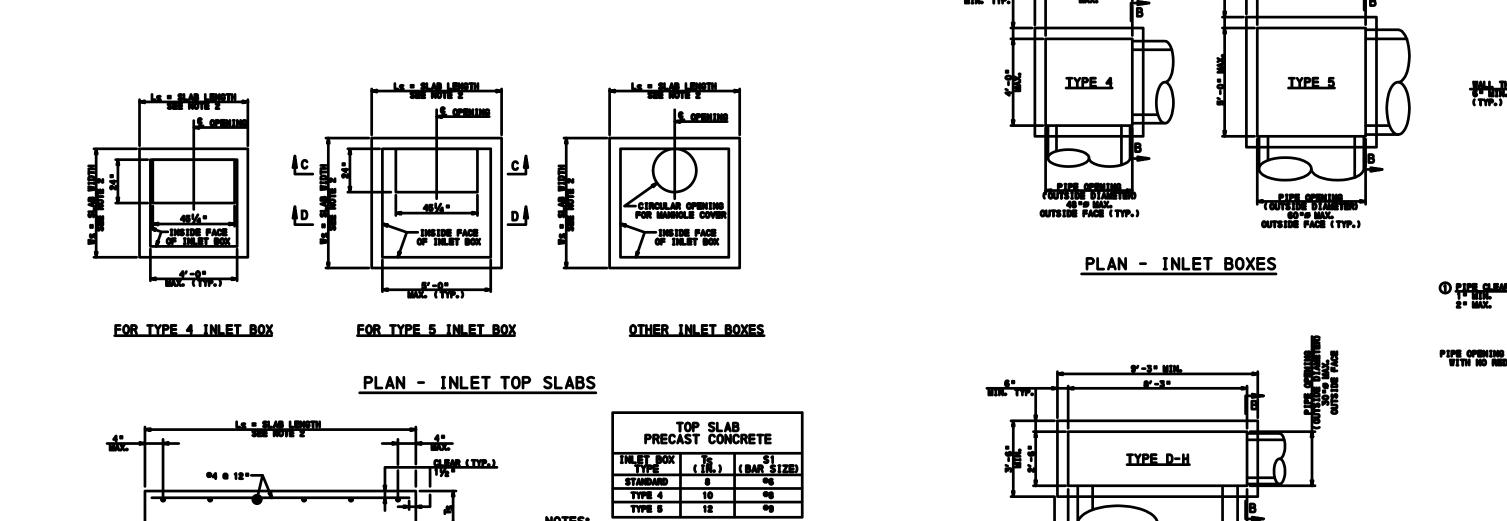
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SCALE:
 AS NOTED

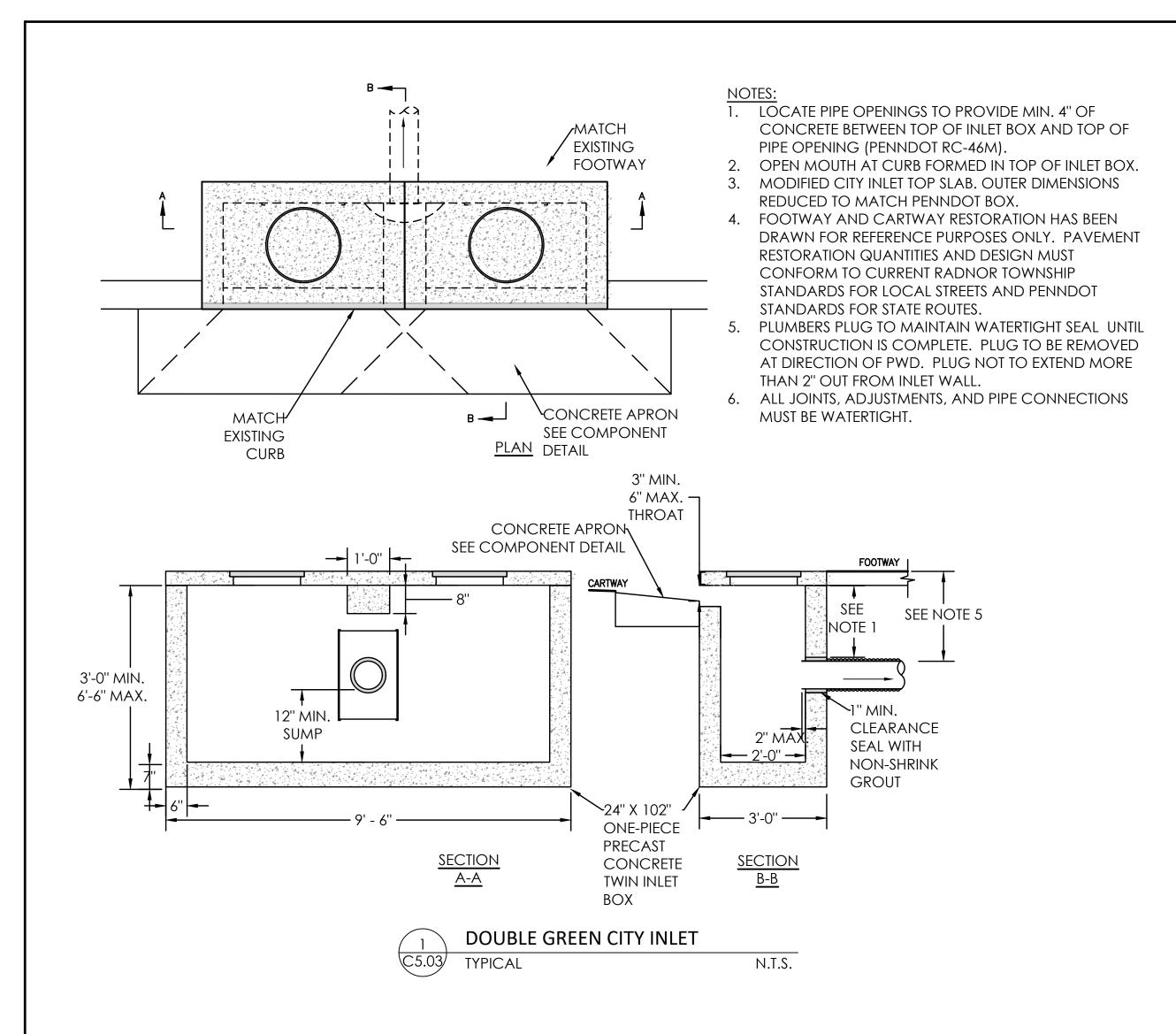
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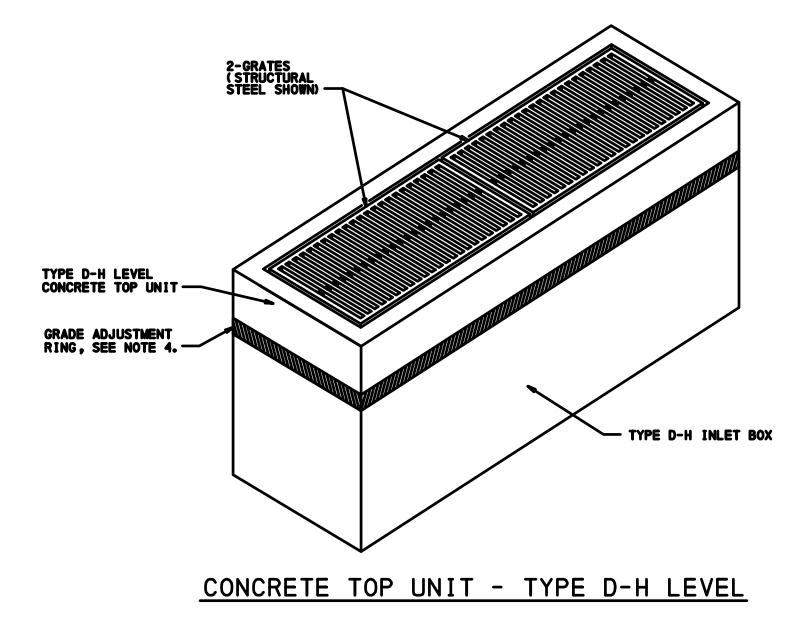
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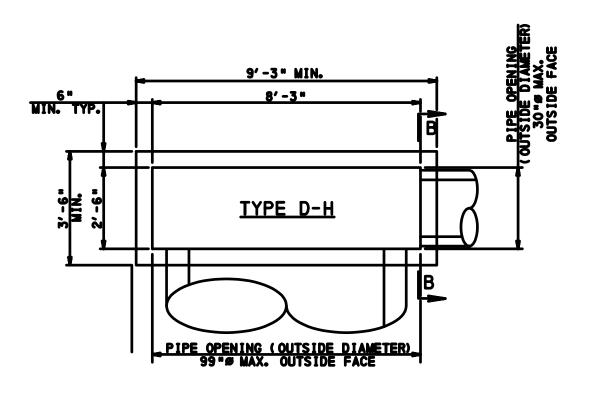
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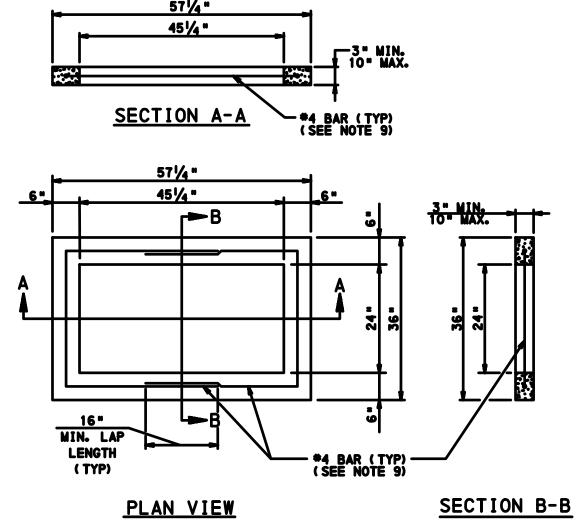
C. ANY REINFORCEMENT BARS LESS THAN C" IN LENGTH, BUE TO THE LOCATION OF THE OPENING, ARE NOT REQUIRED. PLAN - INLET BOXES







PLAN - INLET BOXES



PRECAST CONCRETE

GRADE ADJUSTMENT RING

(FOR TYPE C, C ALTERNATE, M,
AND S CONCRETE TOP UNITS)

PRECAST CONCRETE GRADE ADJUSTMENT RING NOTES:

- 1. PRECAST CONCRETE ADJUSTMENT RINGS ARE PERMITTED FOR TYPE C, C ALTERNATE, M, S AND D-H CONCRETE INLET TOPS. DO NOT USE PRECAST CONCRETE ADJUSTMENT RINGS TO RAISE TYPE C FRAMES.
- 2. ONLY ONE GRADE ADJUSTMENT RING IS PERMITTED FOR NEW CONSTRUCTION PROJECTS. GRADE ADJUSTMENT RINGS ARE INCIDENTAL TO THE COST OF THE TOP UNITS OR FRAMES.
- 3. PROVIDE ADJUSTMENT RING WHICH IS FLUSH WITH THE INLET TOP AND DOES NOT ALLOW EXCESSIVE MOVEMENT.
- 4. GRADE ADJUSTMENT RINGS ARE PERMITTED TO BE FABRICATED IN DIFFERENT SHAPES TO FORM A RECTANGLE TO MATCH THE REQUIRED DIMENSIONS. SECTIONS ARE NOT PERMITTED TO BE LESS THAN 1'-6" IN LENGTH.

   PROVIDE 1 ½ " CONCRETE COVER FOR REINFORCEMENT AT EACH END.

   MAXIMUM GAP BETWEEN PIECES = ½"
- 5. FABRICATOR IS RESPONSIBLE FOR LIFTING, HANDLING AND TRANSPORTATION STRESSES.
- 6. PROVIDE CLASS AA CEMENT CONCRETE, MODIFIED [DESIGN COMPRESSIVE STRENGTH = f'c = 4,000 PSI] IN THE PRECAST CONCRETE ADJUSTMENT RINGS.
- 7. A HIGHER STRENGTH OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER STRENGTH CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT. SUBMIT MIX DESIGNS TO THE DEPARTMENT FOR REVIEW AND ACCEPTANCE.
- 8. PROVIDE GRADE 60 DEFORMED REINFORCEMENT BARS THAT MEET THE REQUIREMENTS OF ASTM A615 OR ASTM A706.
- 9. REINFORCEMENT REQUIREMENTS:

   DEPTHS LESS THAN OR EQUAL TO 6": PROVIDE ONE #4 BAR PLACED AT CENTER OF THICKNESS.

   DEPTHS GREATER THAN 6" AND LESS THAN OR EQUAL TO 10": PROVIDE ONE #4 BAR PLACED 11/2" CLEAR FROM THE TOP AND BOTTOM SURFACES FOR A TOTAL OF TWO BARS.
- 10. SET PRECAST CONCRETE GRADE ADJUSTMENT RINGS ON A NON-SHRINK GROUT PAD TO PROVIDE FULL BEARING ON THE SUPPORTING SURFACE.

   PROVIDE NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1001.2(d).

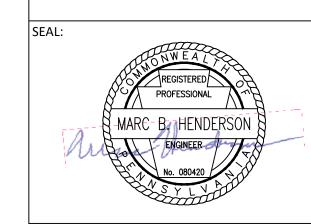
   MAXIMUM GROUT DEPTH = 1/2 "
- 11. TAPERED PRECAST CONCRETE ADJUSTMENT RINGS ARE PERMITTED AS LONG AS THE MINIMUM AND MAXIMUM DIMENSIONS REQUIRED ARE BETWEEN 3" AND 10".

2	PENNDOT TYPE D-H INLET	
C5.03	TYPICAL	N.T.S.



PROJECT TITLE:

SOUTH WAYNE
MUNICIPAL PARKING
LOT FLOOD REDUCTION
PROJECT - ITHAN CREEK
WATERSHED



SUBMISS

CONSTRUCTION DOCUMENTS

DRAWING TITLE:

STORMWATER DETAILS -SHEET 3

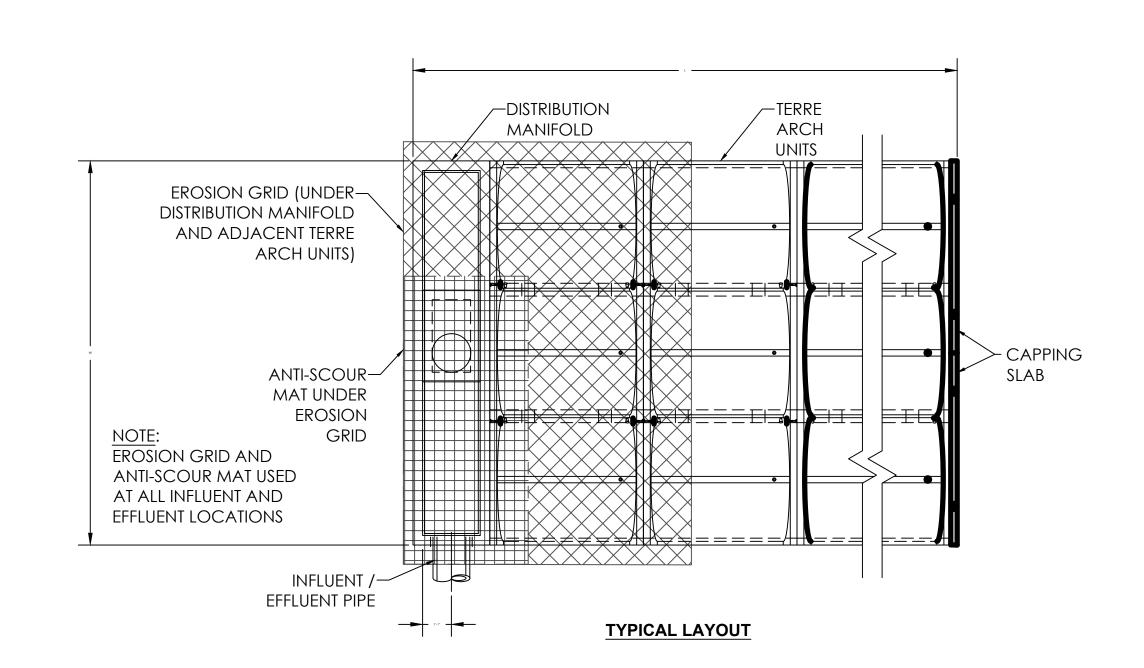
DATE:
01/24/2022

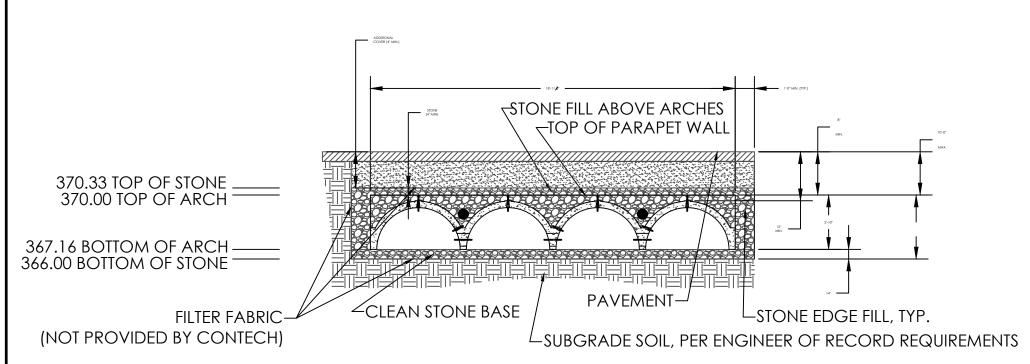
SCALE:
AS NOTED

DRAWN BY:
MPB

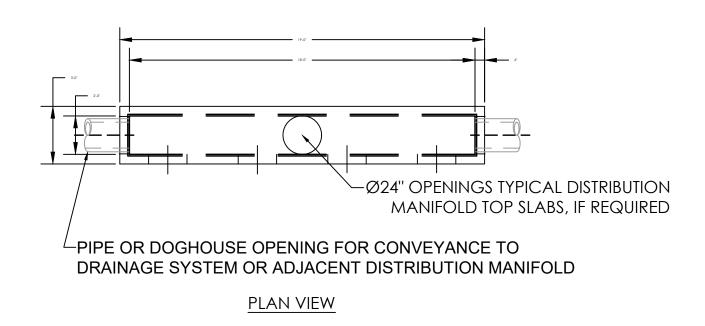
CHECKED BY:

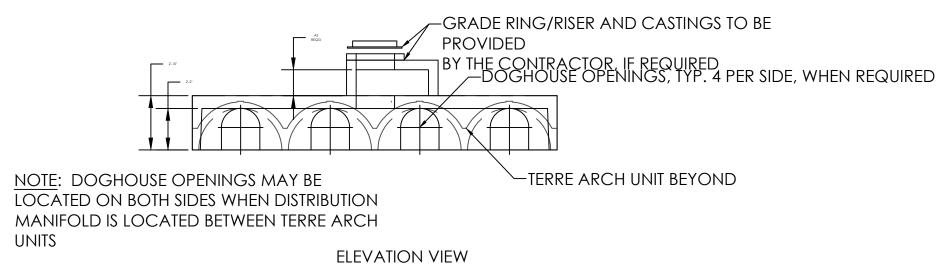
MBH



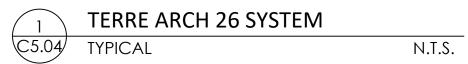


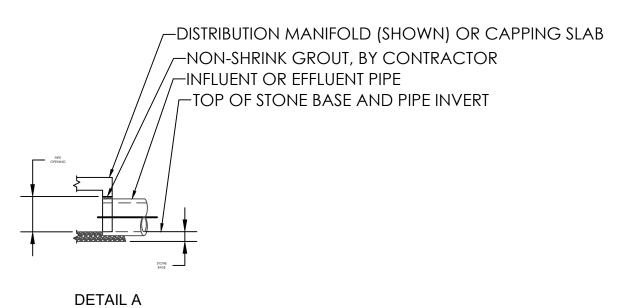
# TYPICAL BACKFILL DETAIL (STONE BASE)

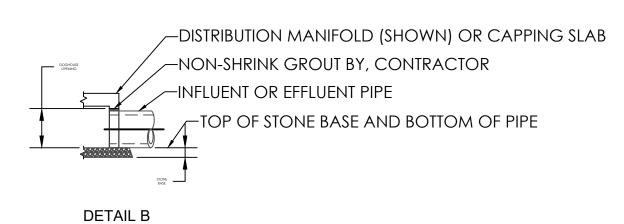




## TERRE ARCH 26 DISTRIBUTION MANIFOLD

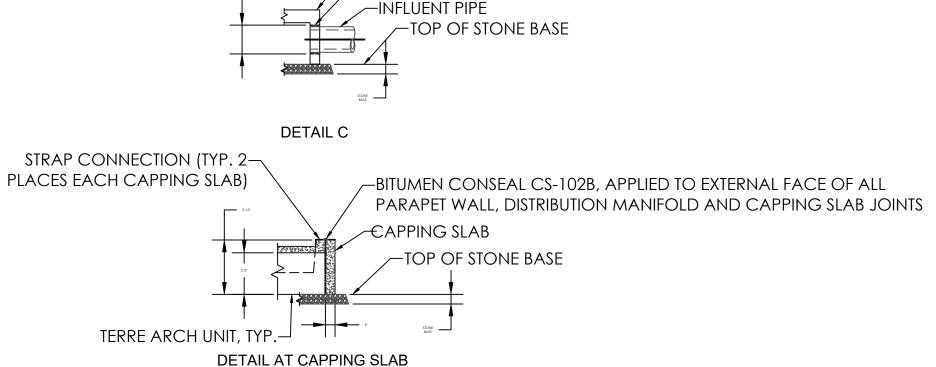




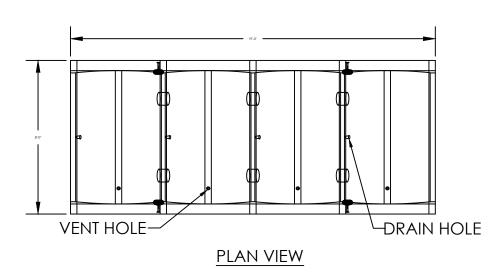


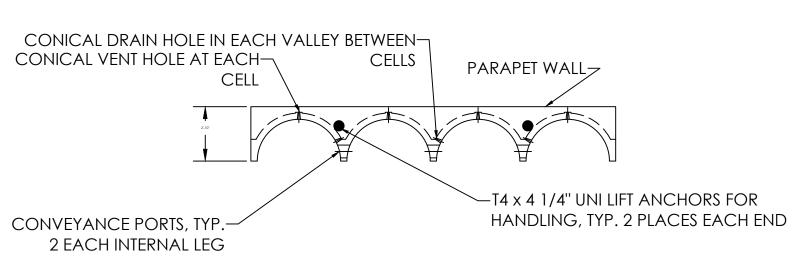
-NON-SHRINK GROUT, BY CONTRACTOR

—DISTRIBUTION MANIFOLD (SHOWN) OR CAPPING SLAB



## PIPE AND CAPPING SLAB DETAILS (STONE BASE)





ELEVATION VIEW
TERRE ARCH 26 STRUCTURE

## GENERAL NOTES

- 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- TERRE ARCH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- 3. STRUCTURE SHALL MEET AASHTO HS25 LOAD RATING, ASSUMING EARTH COVER OF 1' 10' ABOVE TOP OF ARCH.
- 4. FILTER FABRIC OR GEOTEXTILE IS REQUIRED TO PREVENT SILT MIGRATION FROM THE SIDES OR TOP INTO THE VOID SPACE OF THE STONE.

### INSTALLATION NOTES

- A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- B. UNDERLYING SOIL AND SUB-GRADE MATERIAL SHALL HAVE DESIGN LOADING OF NOT LESS THAN 3,000 POUNDS PER SQUARE FOOT (PSF), AS ESTABLISHED BY ENGINEER.
- C. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE TERRE ARCH AND ASSOCIATED STRUCTURES (NO CHAINS ARE PERMITTED).
- D. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL TERRE ARCH STRUCTURES, DISTRIBUTION MANIFOLDS AND CAPPING SLAB SECTIONS
- E. CONTRACTOR TO INSTALL TWO STRAP CONNECTIONS (PROVIDED BY CONTECH) AT EACH CAPPING SLAB.F. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH ALL PIPE INVERTS WITH
- FINAL CONTRACT DRAWINGS.

  G. 1' MINIMUM EARTH COVER ABOVE TOP OF ARCH. CONTECH RECOMMENDS STONE FOR THE FIRST 8" OF COVER.

TERRE ARCH 26 DESIGN DETAILS			
PART TYPE	WEIGHT (LBS)	DIMENSIONS	
DISTRIBUTION MANIFOLD	11,500	3'-0" x 19'-0" x 2'-10"	
ARCH	13,500	8'-0" x 19'-0" x 2'-10"	
CAPPING SLAB (2 REQUIRED PER ARCH)	1,400	0'-4" x 9'-6" x 2'-10"	

#### <u> 10tes:</u>

- 1. TERRE ARCH CONFIGURATIONS SHALL BE SET ON A CLEAN ANGULAR STONE BASE. THE TOP 2 INCHES OF STONE BED SHALL BE #8 AASHTO (CLEAN 1/2" STONE) AND THE REMAINDER OF THE STONE BASE SHALL BE #5 AASHTO (CLEAN 1 1/2" STONE).
- 2. MINIMUM REQUIRED ALLOWABLE BEARING CAPACITY IS 3000 PSF

DATE:	ISSUE:
OWNER:	
	RADNOR TOWNSHIP
301 IVEN AVENUE	
WAYNE, PA 19087-5297	

**REVISIONS:** 

CIVIL ENGINEERING CONSULTANT:

meliora Civil, Water Resources, and Structural Engineering 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com

SEAL:

REGISTERED
PROFESSIONAL

MARC B. HENDERSON
ENGINEER
No. 080420

SUBMISSION:

CONSTRUCTION

SOUTH WAYNE

MUNICIPAL PARKING

LOT FLOOD REDUCTION

PROJECT - ITHAN CREEK

WATERSHED

DOCUMENTS

DRAWING TITLE:

PROJECT TITLE:

STORMWATER DETAILS -SHEET 4

DATE:

01/24/2022

SCALE:

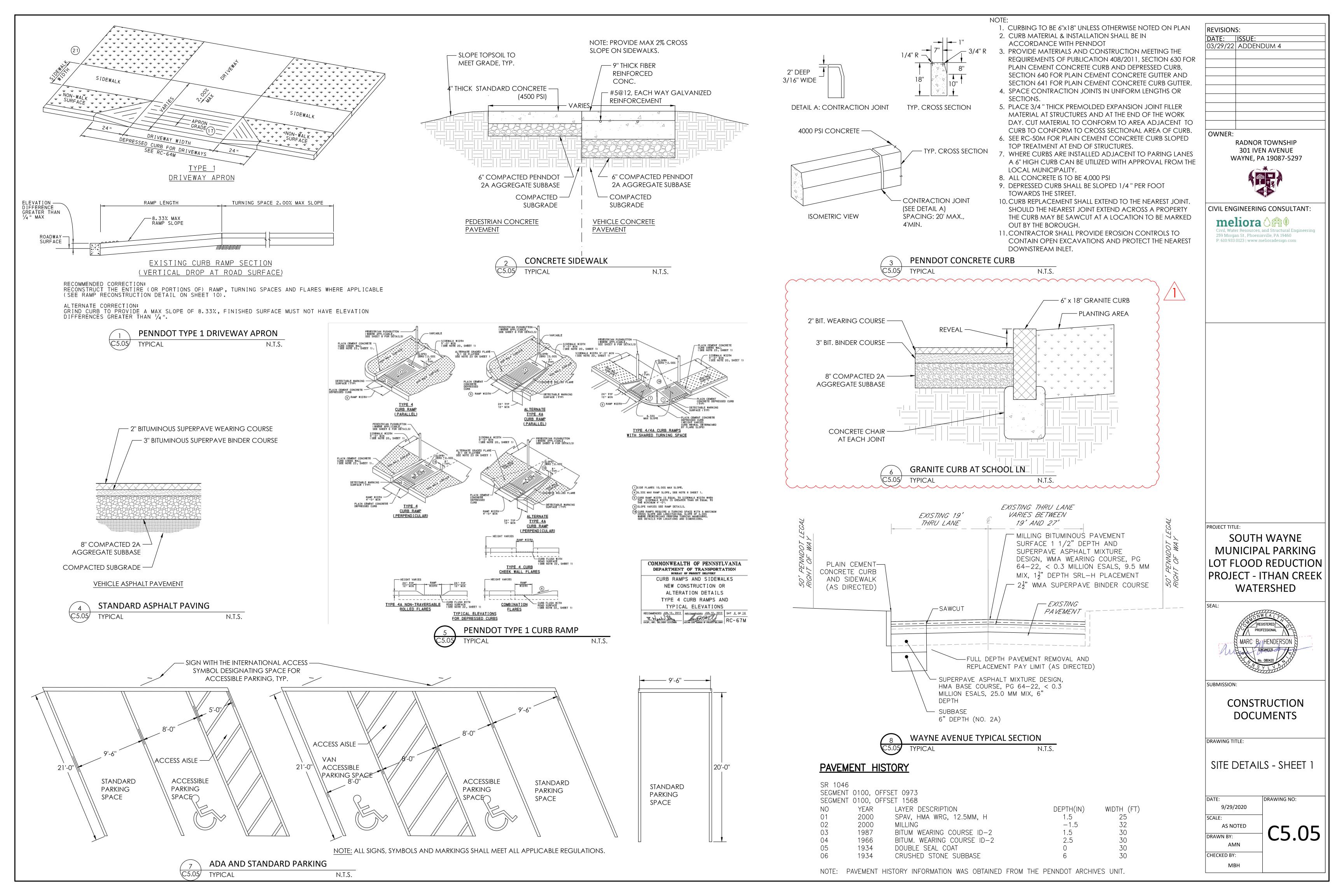
AS NOTED

DRAWN BY:

MPB

CHECKED BY:

MBH





STOP SIGN

N.T.S.



SPECIFIED SIGN LOCATION.

TYPICAL

DO NOT ENTER SIGN

NOTE:

1. ALL SIGNS TO MEET STANDARDS FROM FEDERAL HIGHWAY

ADMINISTRATION (FHWA). SEE MANUAL ON UNIFORM TRAFFIC

CONTROL DEVICES (MUTCD) FOR DIMENSIONS AND SIZING.

2. ALL TRAFFIC AND PARKING SIGNS TO BE MOUNTED ON RIB-BAK GREEN

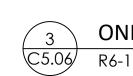
VAN

ENAMEL FINISH FLANGED SIGN POSTS MEETING ASTM A499 AND ASTM A576 STANDARDS. MOUNTING ELEVATIONS TO MEET ALL CURRENT FHWA AND AASHTO CURRENT DESIGN STANDARDS FOR EACH

N.T.S.







ONE WAY SIGN R6-1L AND R6-1R

N.T.S.



NO LEFT TURN SIGN

N.T.S.



RESERVED PARKING FOR HANDICAPPED SIGN

NOTE: STOP LINES TO BE SOLID WHITE

LINES THAT COMPLETELY TRAVERSE

– VARIES –

EACH TRAFFIC LANE

STOP BAR

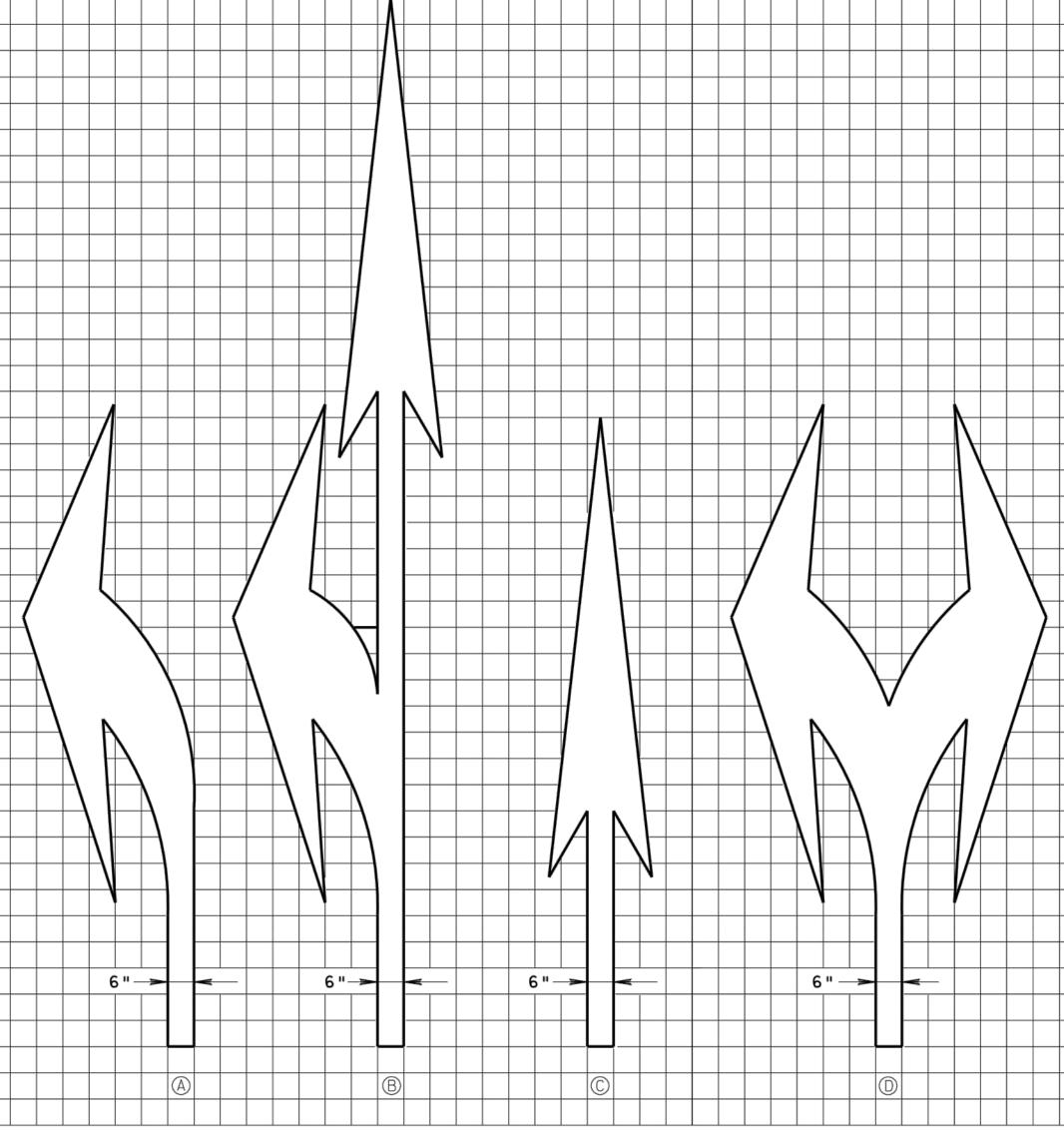
C5.06 TYPICAL

C5.06 R7-8

N.T.S.

2'-0''

N.T.S.



EACH GRID EQUALS 6" x 6"

1.67' x 12'

ARROW	QUANTITY FOR PAVEMENT MARKING REMOVAL
A	20 FT <sup>2</sup>
®	32 FT <sup>2</sup>
©	13 FT <sup>2</sup>
(D)	32 FT <sup>2</sup>



3′ × 12′

MARKING ARROWS

3.6' x 20'

N.T.S.

5.5′ × 12′

ACCESSIBLE VAN ACCESSIBLE SIGN C5.06 R7-8a N.T.S. BRICK PAVERS WITH GRAY POLYMERIC SAND REFER TO C1.50 SITE MATERIALS PLAN FOR PATTERN ADJACENT CONDITION VARIES, SEE PLAN. HOLD SOIL  $\frac{1}{2}$ " BELOW FINISHED GRADE OF BRICK PAVEMENT. MEET CONCRETE PAVEMENT FLUSH  $\frac{1}{4}$ " X 5" BLACK STEEL EDGING W/ $\frac{5}{16}$ "X15" STAKES @ 18" OC, 8" OVERLAP OF SEGMENTS. HOLD TOP OF STEEL EDGE  $\frac{1}{2}$ " BELOW GRADE OF PAVEMENT. – 1" SAND SETTING BED — FILTER FABRIC - COMPACTED AGGREGATE, PENNDOT 2A - COMPACTED SUBGRADE SUBMIT SAMPLE OF BRICK TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION STEEL EDGING SHALL BE DURAEDGE MANUFACTURED BY THE JD RUSSELL COMPANY **BRICK PAVERS** 

N.T.S.

\_\_\_\_\_

DATE: ISSUE: 03/29/22 ADDENDUM 4 OWNER:

REVISIONS:

RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297

CIVIL ENGINEERING CONSULTANT:

meliora 🗘 🕮 🌵 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com

PROJECT TITLE:

SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED



SUBMISSION:

CONSTRUCTION **DOCUMENTS** 

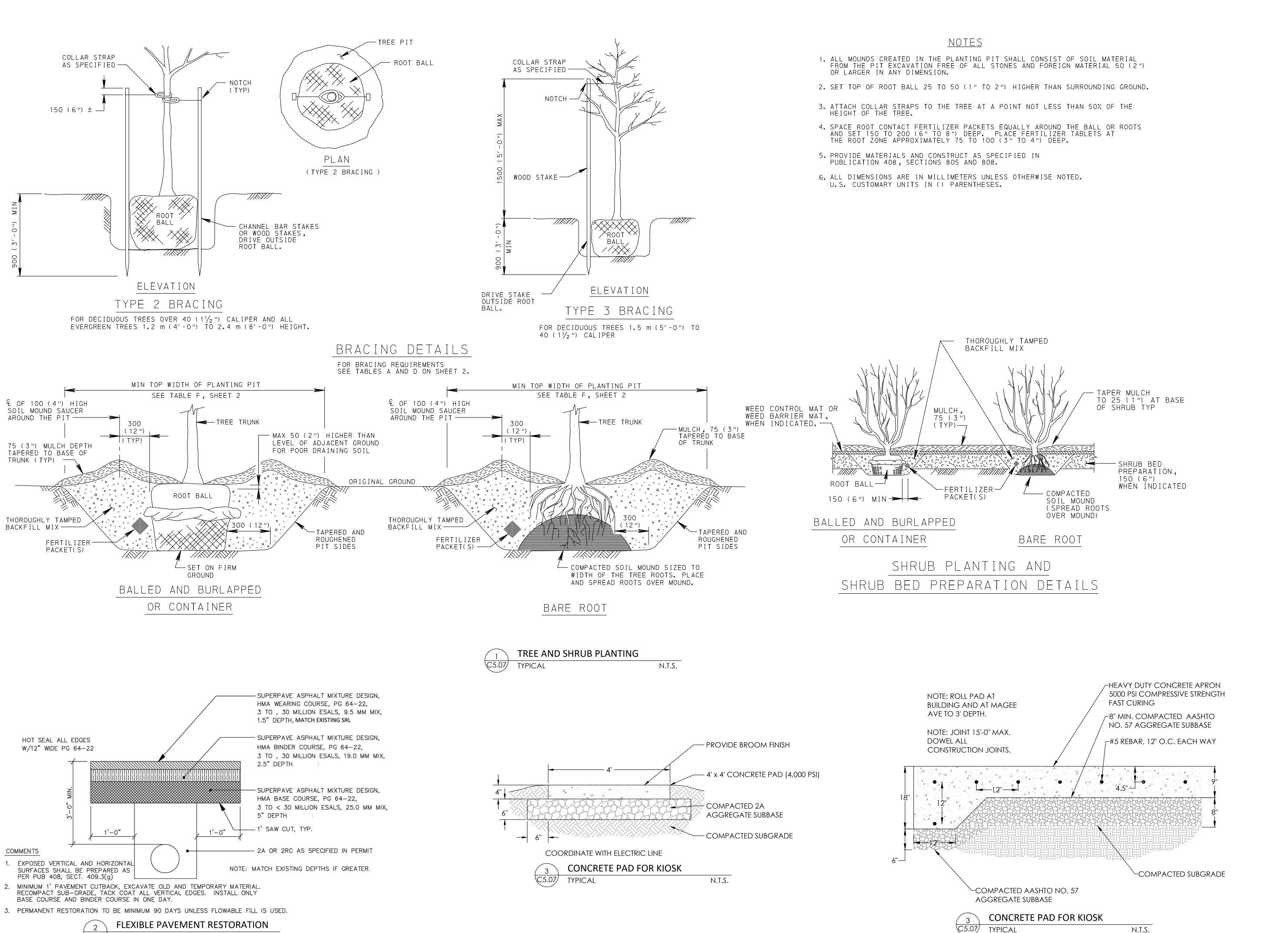
DRAWING TITLE:

CHECKED BY:

MBH

STEDETAILS-SHEET 2

DRAWING NO: 9/29/2020 AS NOTED C5.06 DRAWN BY: AMN



TYPICAL

N.T.S.

**REVISIONS:** DATE: ISSUE: OWNER: RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297 CIVIL ENGINEERING CONSULTANT: meliora 🖒 🕮 🏶 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com PROJECT TITLE: **SOUTH WAYNE** MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK WATERSHED SUBMISSION: **CONSTRUCTION** DOCUMENTS DRAWING TITLE:

SITE DETAILS - SHEET 3

01/24/2022

AS NOTED

MPB

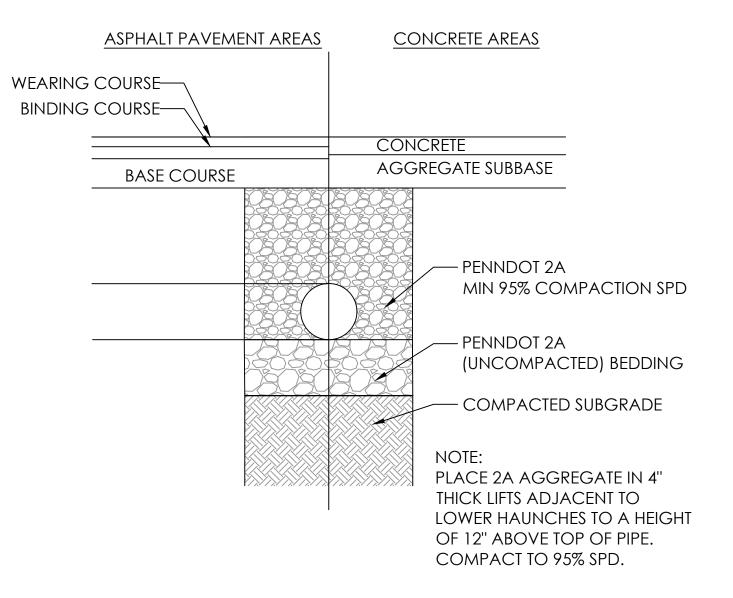
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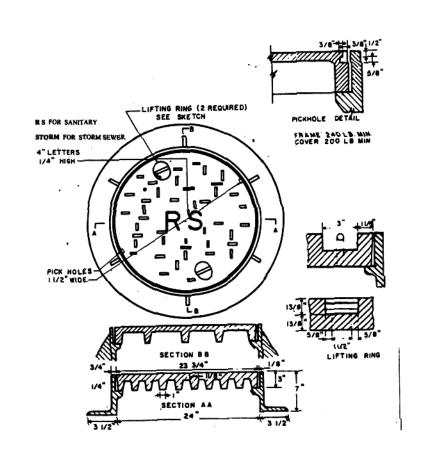
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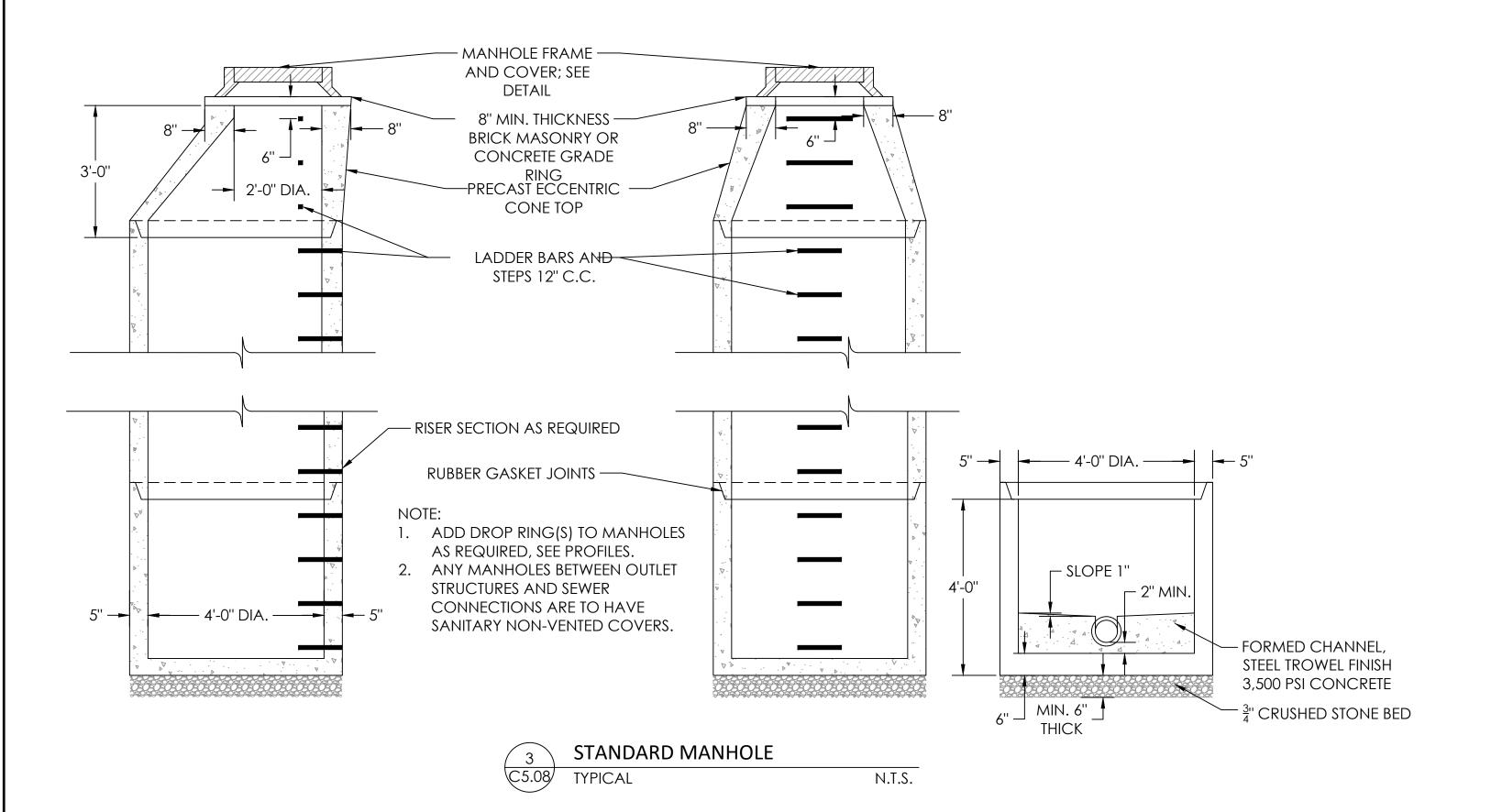
C5.07

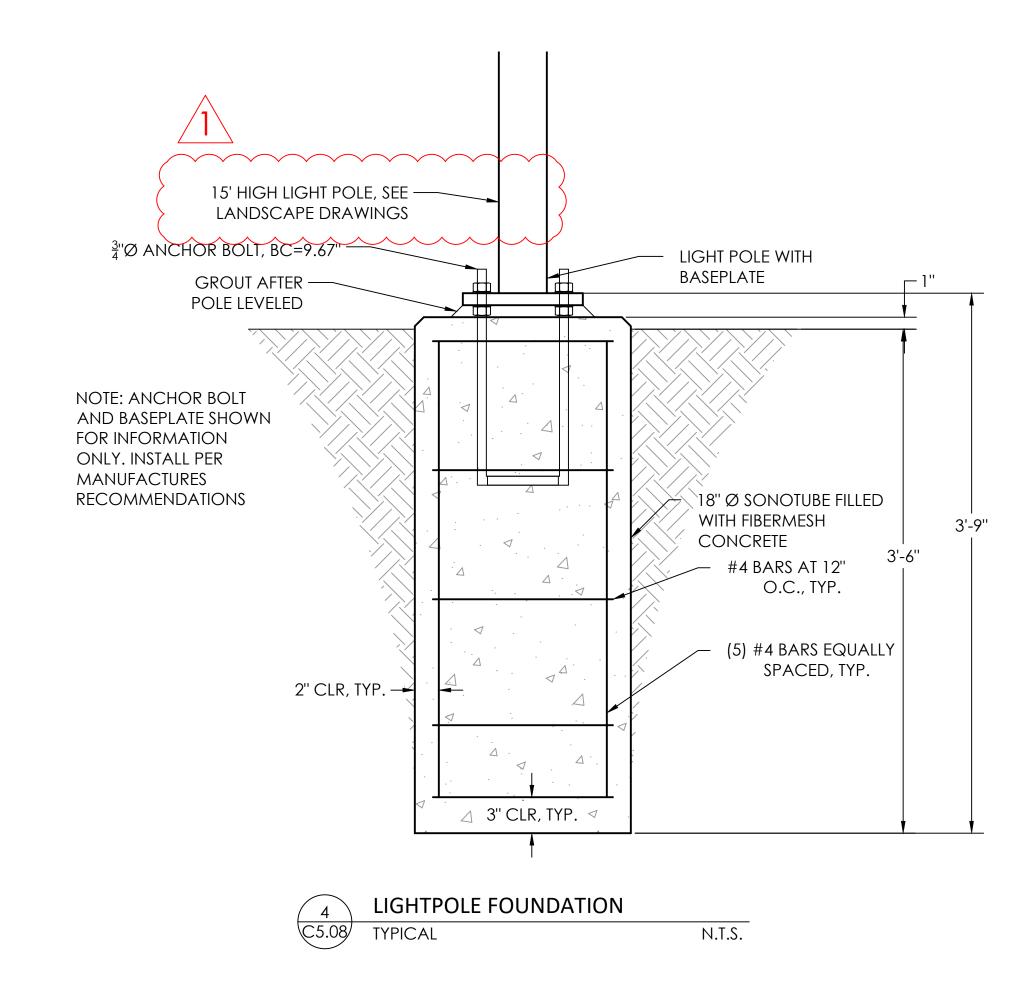












REVISIONS: DATE: ISSUE: 03/29/22 ADDENDUM 4 OWNER: RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297 CIVIL ENGINEERING CONSULTANT: meliora 🗘 🕮 🏶 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com PROJECT TITLE: SOUTH WAYNE WATERSHED

MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK

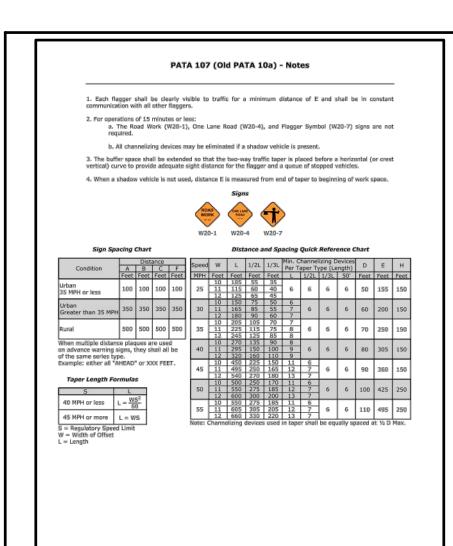
CONSTRUCTION **DOCUMENTS** 

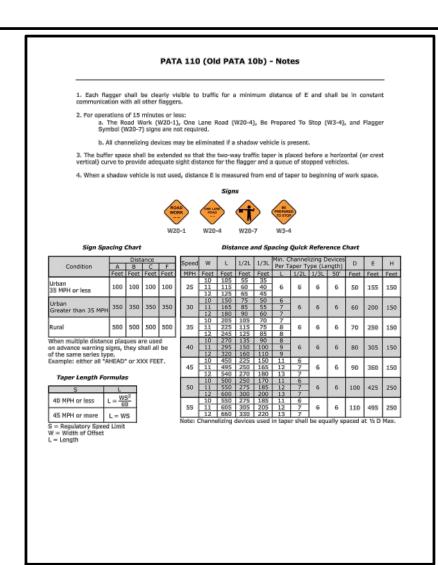
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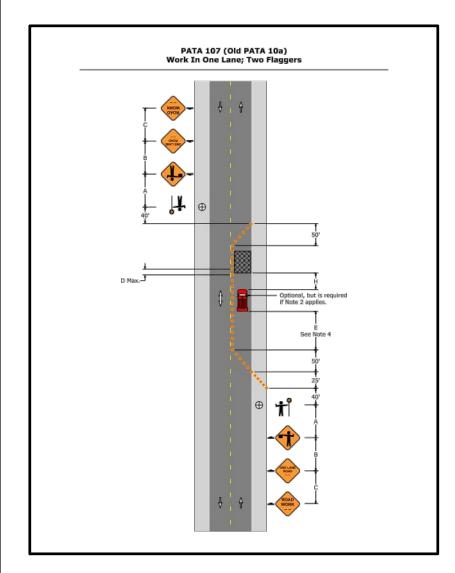
UTILITY DETAILS

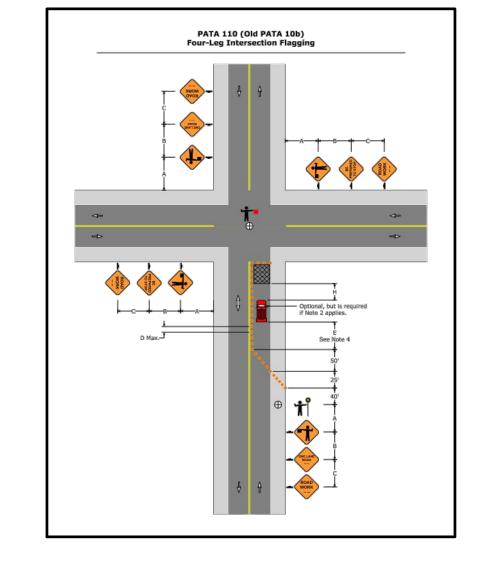
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CHECKED BY: MBH

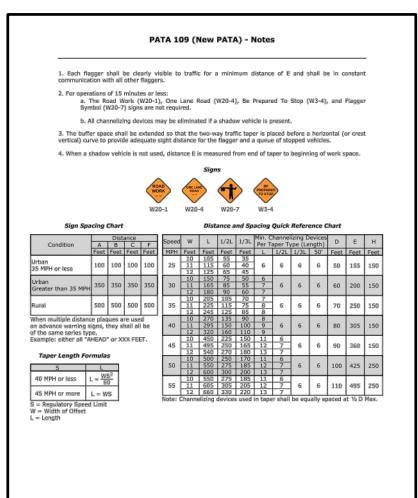


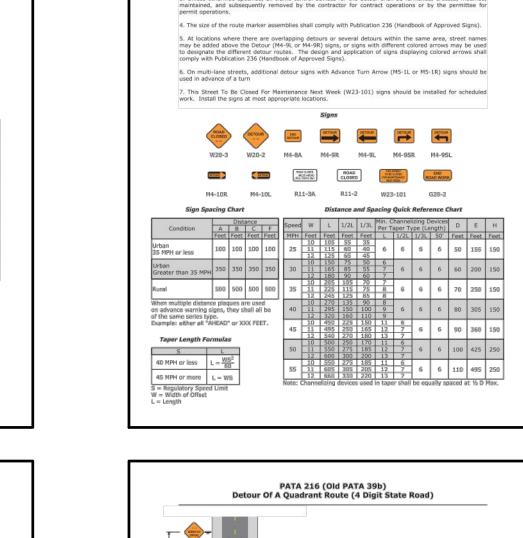


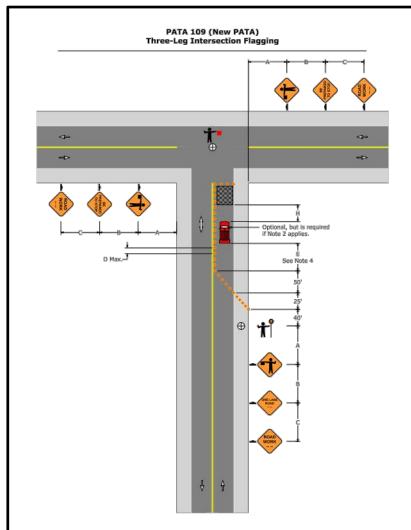


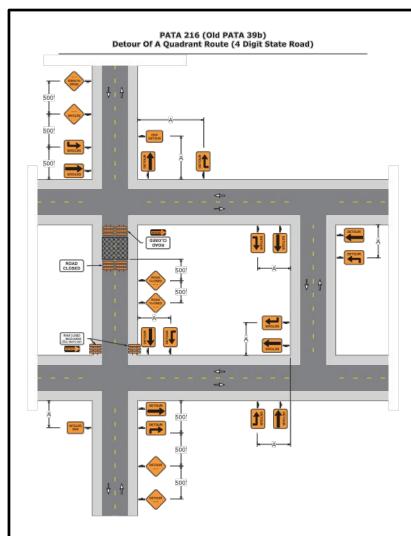


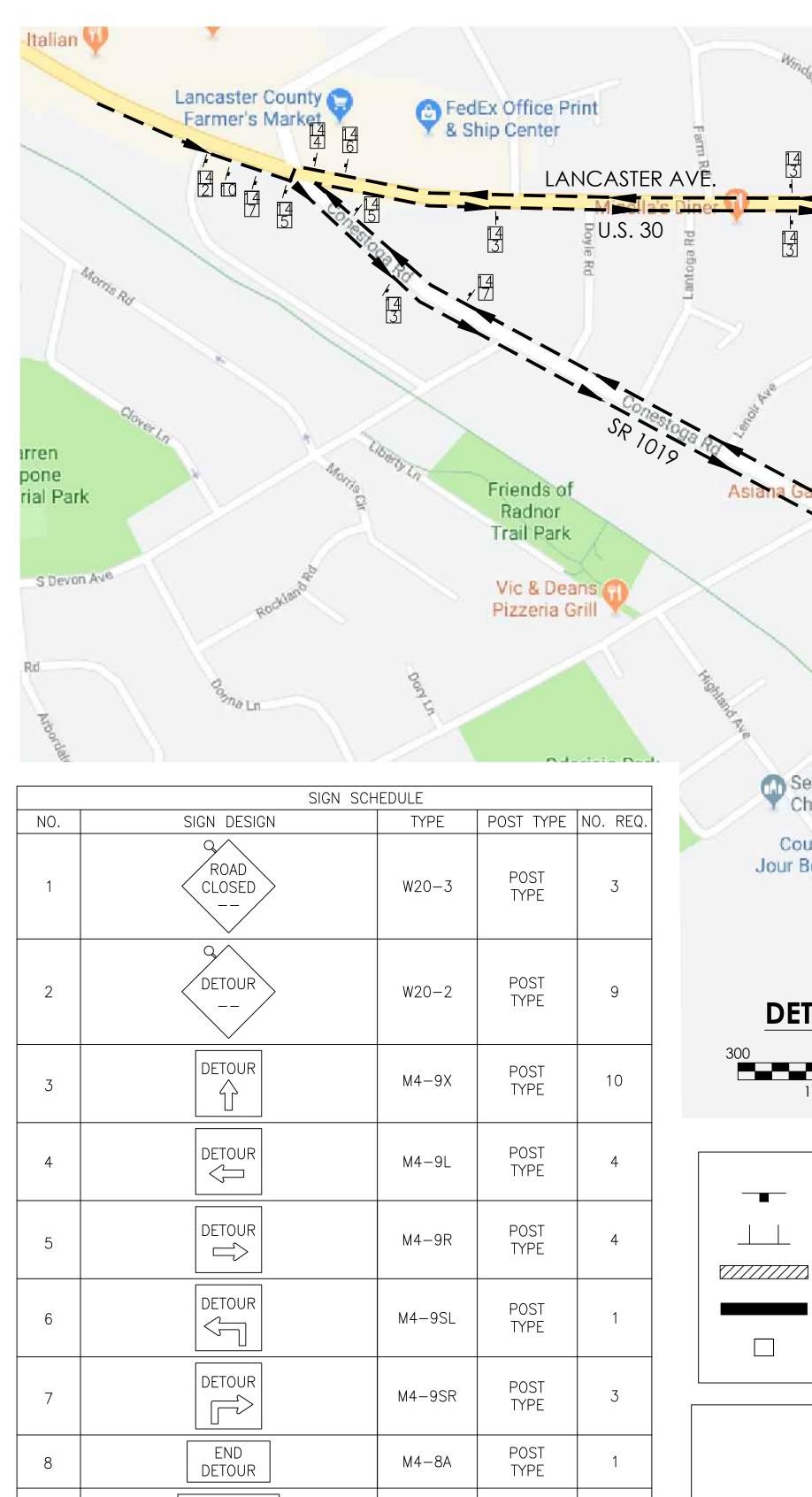
PATA 216 (Old PATA 39b) - Notes











R11-2

NO. 3

R11 - 3A

M4-10L

M4-10R

SPECIAL

**SPECIAL** 

ROAD

CLOSED

SOUTH WAYNE AVE.

10

12

13

14

CLOSED BETWEEN

RUNNEMEADE AVE. FOLLOW DETOUR

ROAD CLOSED

AHEAD

**ETOUR** 

DETOUR

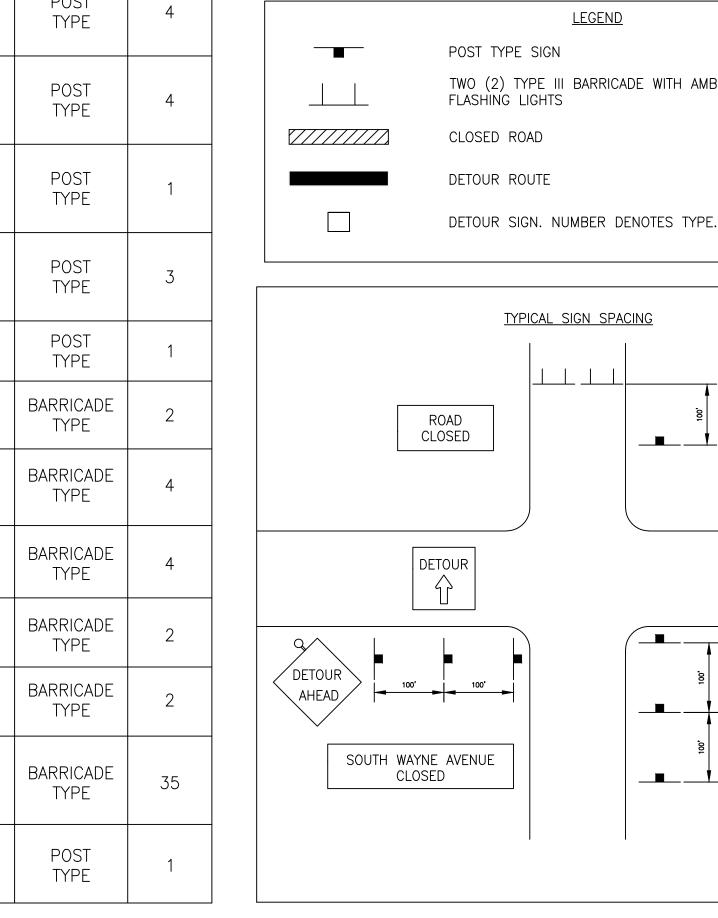
S. WAYNE

AVENUE

THIS ROAD TO BE CLOSED

XX/XX/XXXX

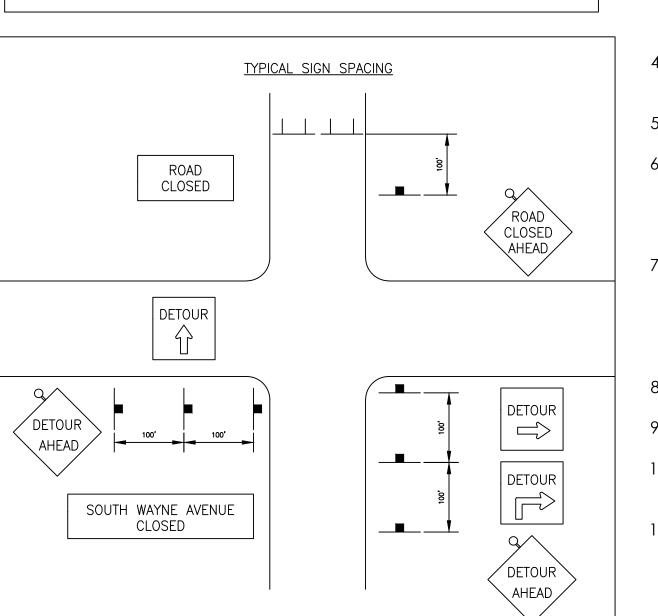
LOCAL TRAFFIC ONLY



# Upland Way Wayne Art Center Second Baptist Thurch of Wayne Couture Du Jour Boutique **DETOUR ROUTE** GENERAL NOTES <u>LEGEND</u> 1. ALL SIGNAGE TO BE IN ACCORDANCE WITH MUTCD, PUB 213, AND POST TYPE SIGN PUB 236. SUGGESTED MAINTENANCE OF TRAFFIC SHOWN IS MINIMUM TWO (2) TYPE III BARRICADE WITH AMBER REQUIRED; CONTRACTOR SHALL PROVIDE ADDITIONAL TRAFFIC

Wayne Center Q

White Dog Cafe Wayne



CONTROL MEASURES AS DIRECTED BY TOWNSHIP ENGINEER. THIS WORK WILL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND

Midland Ave

Windermere Ave

Radio Middle School

- 2. PLACE W20-1 ROAD WORK AHEAD AND G20-2 END ROAD WORK WHERE APPROPRIATE
- 3. FOR MORE INFORMATION ABOUT STANDARD AND SPECIAL SIGNS, REFER TO THE CURRENT EDITIONS OF "STANDARD HIGHWAY SIGNS" AND "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", BOTH FROM THE FEDERAL HIGHWAY ADMINISTRATION.
- 4. ONLY TYPE III BREAKAWAY BARRICADES THAT ARE NCHRP-350 COMPLIANT SHALL BE USED; WOODEN BARRICADES ARE NOT ALLOWED.
- 5. FLASHING/STEADY WARNING LIGHTS SHALL NOT BE AFFIXED TO ANY BARRICADE OR SIGN.
- 6. THE CONTRACTOR IS DIRECTED TO NOTIFY PENNDOT PRESS OFFICE (SUBMIT ROAD RESTRICTION FORM), THE RADNOR TOWNSHIP POLICE FIRE DEPARTMENT, AMBULANCE, SCHOOL DISTRICT AND POST OFFICE TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND 24 HOURS PRIOR TO IMPLEMENTATION OF THE DETOUR.
- 7. UNLESS NOTED OTHERWISE, ALL SIGNS AND BARRICADES SHALL BE FURNISHED BY THE CONTRACTOR AND PLACED AT THE LOCATIONS DESIGNATED BY THE TOWNSHIP ENGINEER. IF SO DIRECTED BY THE TOWNSHIP ENGINEER AND TMC, AND AT THE UNIT PRICE BID, THE CONTRACTOR SHALL SUPPLY AND PLACE ADDITIONAL SIGNS AND BARRICADES.
- 8. THE CONTRACTOR SHALL COORDINATE WITH THE TOWNSHIP ENGINEER
- SHOULD THE NEED ARISE TO CLOSE AN ADDITIONAL LOCAL ROAD. 9. ALL SIGNS SHALL BE LOCATED WITHIN THE BOROUGH, TOWNSHIP, COUNTY OR STATE RIGHT-OF-WAY.
- 10. SUBMIT A COMPLETED M-937R FORM TO THE DISTRICT HAULING PERMIT OFFICE (610-205-6787) AND THE INSPECTOR-IN-CHARGE TEN (10) WORKING DAYS IN ADVANCE OF ALL TRAFFIC RESTRICTIONS.
- 11.NOTIFY THE DISTRICT 6-0 REGIONAL TRAFFIC MANAGEMENT CENTER (RTMC), 610-205-6934, FIFTEEN (15) MINUTES IN ADVANCE OF ANY PROPOSED LANE OR SHOULDER RESTRICTION, ROAD CLOSURE, OR ANY OPERATION IMPEDING THE FLOW OF TRAFFIC. NOTIFY THE RTMC WHEN THE ROAD IS RESTORED TO NORMAL OPERATION.

12. INSTALL DROP OFF PROTECTION AS SPECIFIED IN PUBLICATION 408, SECTION 901.3(J).

OWNER: **RADNOR TOWNSHIP 301 IVEN AVENUE** WAYNE, PA 19087-5297 CIVIL ENGINEERING CONSULTANT: meliora 🗘 🕮 🏺 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com PROJECT TITLE: **SOUTH WAYNE** MUNICIPAL PARKING LOT FLOOD REDUCTION PROJECT - ITHAN CREEK **WATERSHED** 

**REVISIONS:** 

DATE: ISSUE:

**CONSTRUCTION** DOCUMENTS

DRAWING TITLE:

MBH

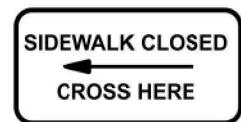
TRAFFIC CONTROL PLAN

E: 01/24/2022	DRAWING NO:
LE: AS NOTED	
WN BY:	C6.00
CKED BY:	



# SIDEWALK CLOSED

R9-11A (24" X 12")



W20-1 (36" X 36")



R9-11A (24" X 18")



USE OTHER SIDE

(USE LEFT OR RIGHT ARROW

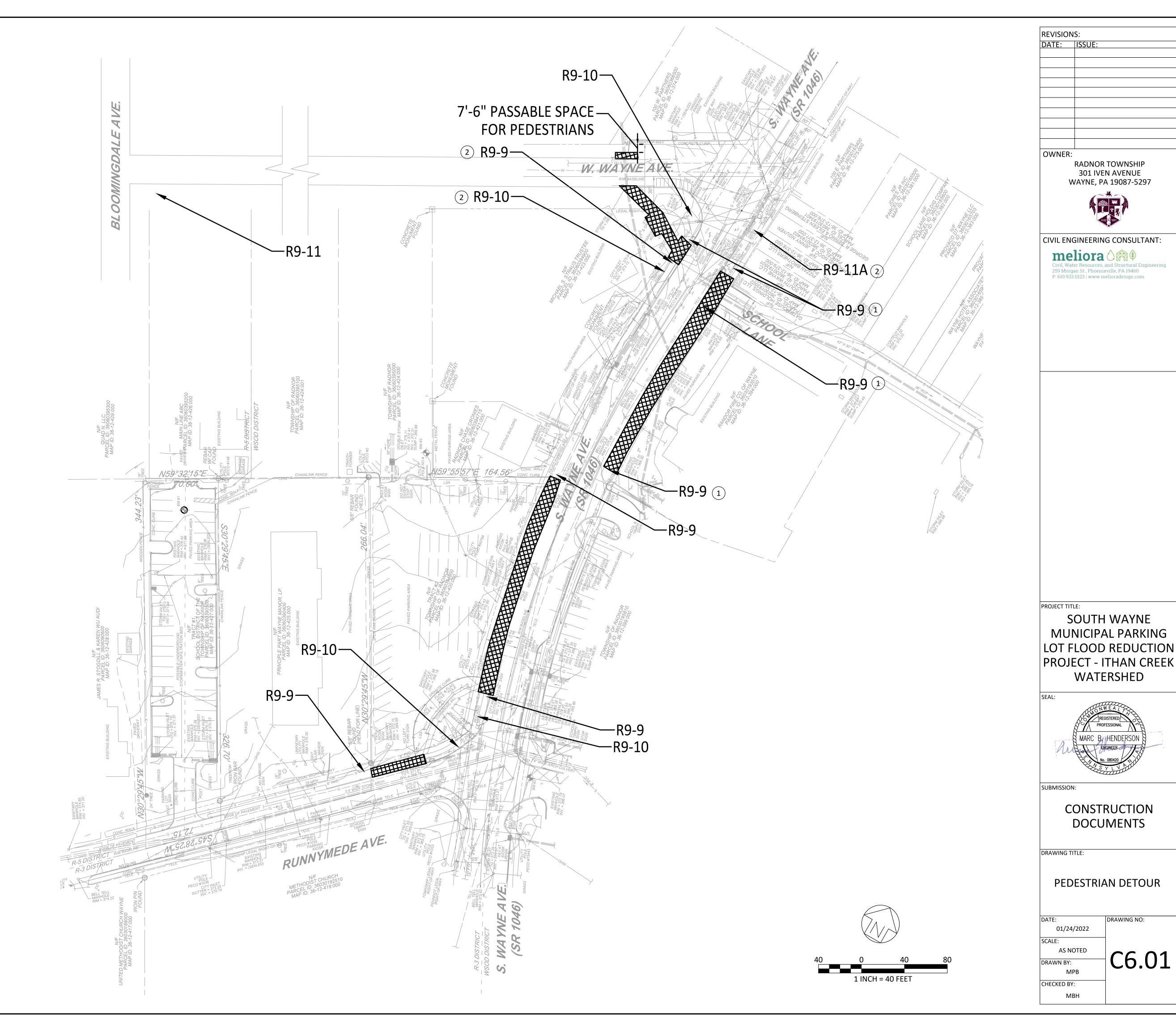
AS APPROPRIATE)

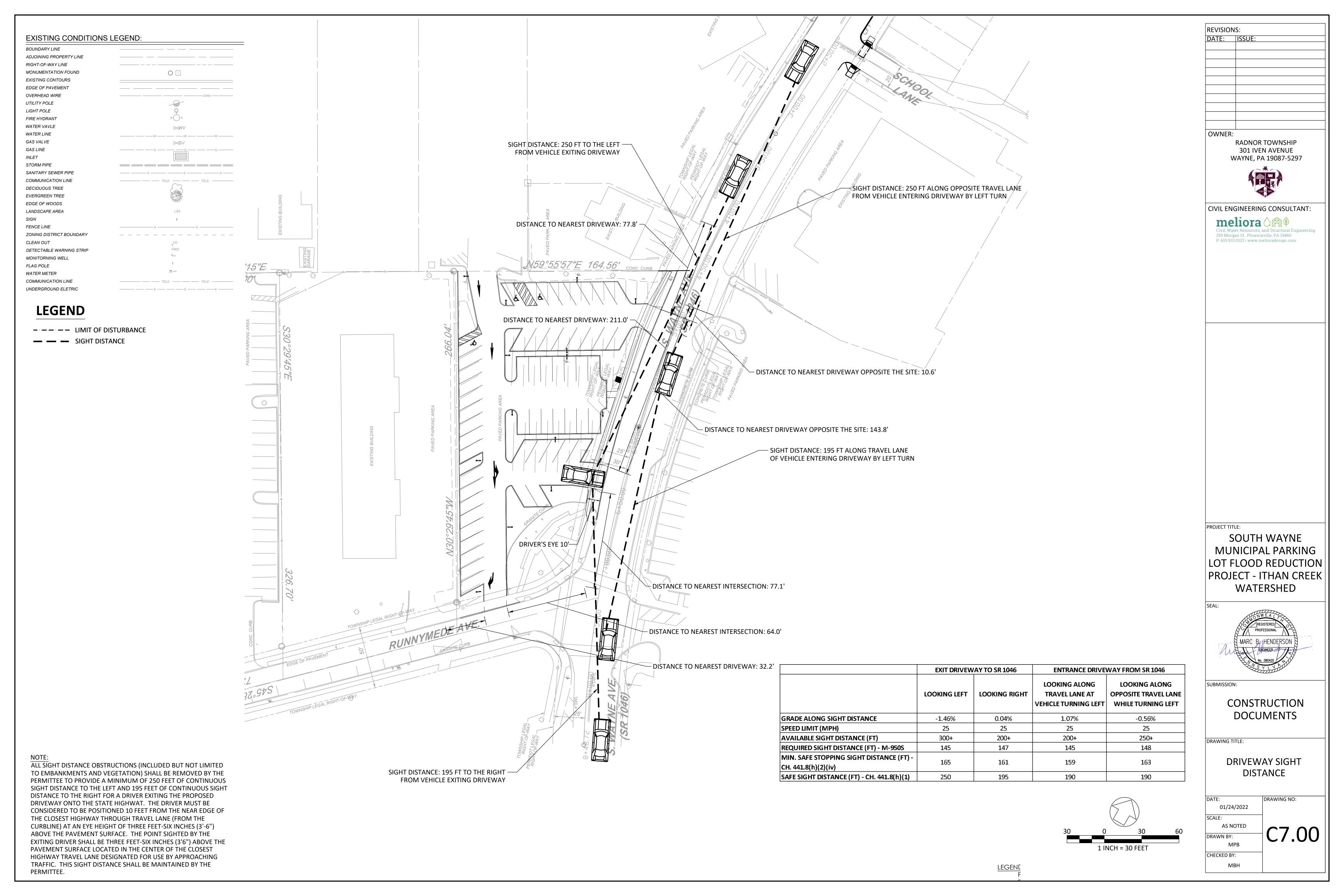
## **LEGEND**

- PEDESTRIAN DETOUR PHASE 1
- PEDESTRIAN DETOUR PHASE 2

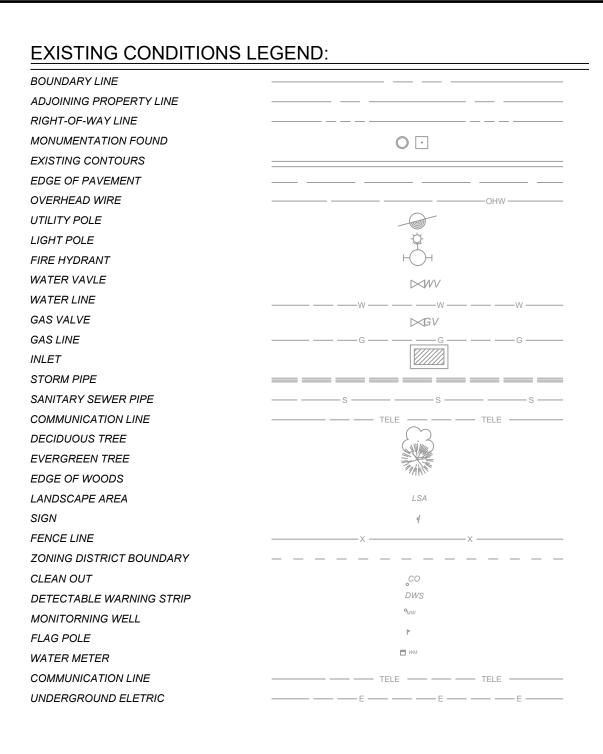
CONSTRUCTION AREA

- 1. COORDINATE CONSTRUCTION WITH PEDESTRIAN DETOURS IN PHASES TO ALLOW PEDESTRIAN SIDEWALK ACCESS AT ALL TIMES.
- 2. PROTECT ALL CLOSED SIDEWALK CONSTRUCTION AREAS WITH APPROPRIATE CHANNELIZING. MUST BE APPROVED BY PERMITS INSPECTOR.
- 3. PLACE W20-1 ROAD WORK AHEAD AND G20-2 END ROAD WORK SIGNS WHERE APPROPRAITE









# **LEGEND**

— — PROJECT BOUNDARY/LIMIT OF DISTURBANCE

TERRE ARCH RISER WITH SOLID LID

TERRE ARCH RISER WITH TYPE M GRATE

STORM INLET MANHOLE

JUNCTION BOX

OUTLET CONTROL STRUCTURE

TERRE ARCH 26

TERRE ARCH MANIFOLD

—— SANITARY PIPE

——— SOLID PIPE

— E — ELECTRIC LINE

———— GAS RELOCATION

**──▼ ─** WATER RELOCATION

——— TELECOM RELOCATION

### UTILITY RELOCATION NOTES

1) PECO GAS - PECO TO RELOCATE GAS MAIN UNDER PROPOSED STORM PIPE WITH A MIN. OF 18" CLEARANCE. CONTRACTOR TO PROVIDE CONSTRUCTION SUPPORT IN COORDINATION WITH PECO NOT LIMITED TO EXCAVATION AND EXPOSURE OF GAS MAIN.

PECO ELECTRIC - CONTACT PECO ELECTRIC TO INSTALL ELECTRICAL CONNECTION TO UTILITLY POLES ALONG SOUTH WAYNE FOR SITE LIGHTING.

#### **GENERAL NOTES**

- 1. ALL ELECTRICAL ASSEMBLY TO INCLUDE (2) 2" CONDUIT WITH
- (1) 14 / 3 COPPER WIRE
- CONTRACTOR TO COORDINATE WITH TELECOM FOR PROTECTION OF TELECOM LINE DURING EXCAVATION FOR SUBSURFACE BED

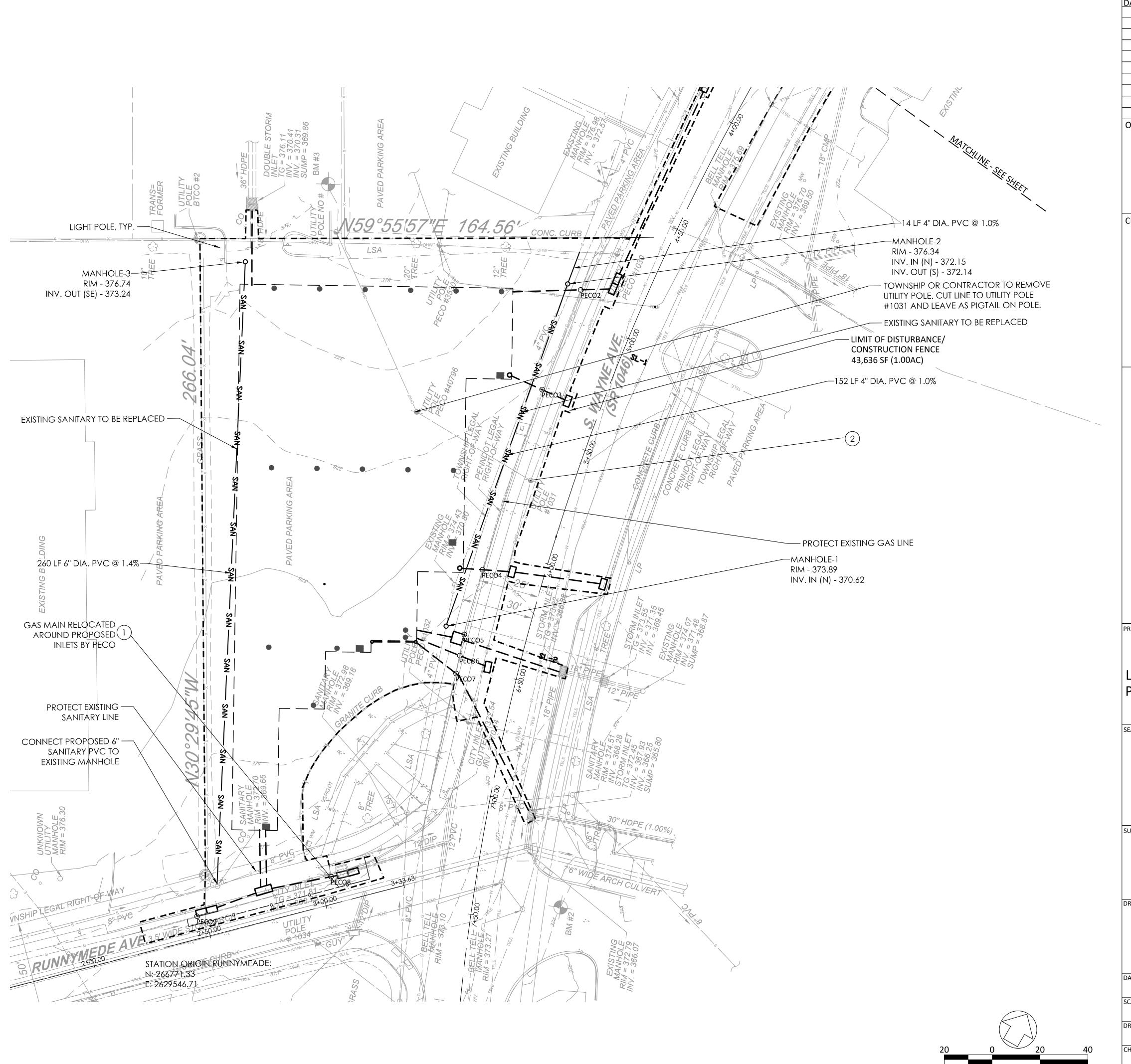
PECO Relocation Stations		
Point	Station	Offset
PECO1	2+20.65	31.488
PECO2	4+89.08	26.265
PECO3	5+32.64	25.618
PECO4	6+09.91	25.4421
PECO5	6+37.33	25.595
PECO6	6+46,08	25.225
PECO7	6+53.51	24.974
PECO8	3+05.04	-11.217
PECO9	2+46,69	-9.246

#### SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ACTIVITIES IN A CLEAN, NEAT MANNER THROUGHOUT THE CONTRACT PERIOD. ALL DEBRIS GENERATED BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEANED UP AND REMOVED FROM THE PREMISES AT THE END OF EACH WORKING DAY. IF THE CONTRACTOR FAILS TO COMPLY, THE TOWNSHIP OF RADNOR HAS THE RIGHT TO HAVE THE SITE CLEANED AT THE CONTRACTOR'S EXPENSE.

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.



**REVISIONS:** DATE: ISSUE:

OWNER:

RADNOR TOWNSHIP **301 IVEN AVENUE** WAYNE, PA 19087-5297

CIVIL ENGINEERING CONSULTANT:

meliora 🗘 🕮 🏺 259 Morgan St., Phoenixville, PA 19460 P: 610.933.0123 | www.melioradesign.com

PROJECT TITLE: SOUTH WAYNE MUNICIPAL PARKING LOT FLOOD REDUCTION

PROJECT - ITHAN CREEK WATERSHED



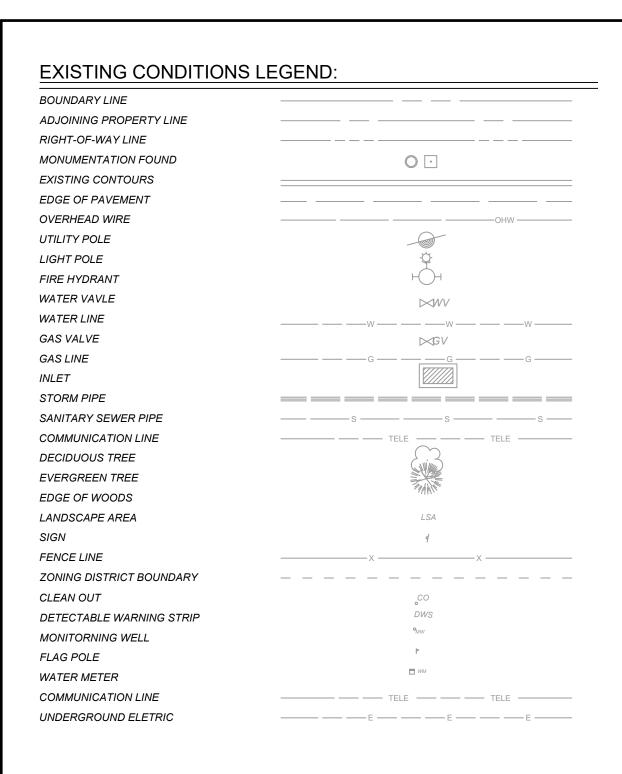
CONSTRUCTION DOCUMENTS

DRAWING TITLE:

1 INCH = 20 FEET

PECO PLAN - SHEET 1

DRAWING NO: 01/24/2022 P1.01 DRAWN BY: MPB CHECKED BY:



# **LEGEND**

— — PROJECT BOUNDARY/LIMIT OF DISTURBANCE

STORM INLET

MANHOLE

SOLID PIPE

SANITARY PIPE

— E — ELECTRIC LINE

——— GAS RELOCATION

WATER RELOCATIONTELECOM RELOCATION

PECO Relocation Stations		
Point	Station	Offse
PECO0	0+96.52	8.47
PECO1	2+20.65	31.4
PECO2	4+89.08	26.2
PECO3	5+32.64	25.6
PECO4	6+09.91	25.4
PECO5	6+37.33	25.5
PECO6	6+46.08	25.2
PECO7	6+53.51	24.9
PECO8	3+05.04	-11.2
PECO9	2+46.69	-9.2

### **UTILITY RELOCATION NOTES**

VERIZON - VERIZON TO RELOCATE TELECOM ABOVE PROPOSED STORM PIPE.
CONTRACTOR TO PROVIDE 30 DAYS NOTICE TO VERIZON BEFORE RELOCATION IS
REQUIRED. CONTRACTOR WILL CEASE PIPE INSTALLATION AT THE TELECOMM DUCT
BANK(S) AND COORDINATE WITH VERIZON CONTRACTOR ON PROCEEDING WITH THE
TELECOMM RELOCATION AND PIPE INSTALLATION. THE CONTRACTOR WILL EXCAVATE
AND EXPOSE THE EXISTING TELECOM DUCT BANKS FOR A PERPENDICULAR DISTANCE OF
10 FEET OFFSET FROM THE PROPOSED STORM PIPE FOR ACCESS BY VERIZON.
CONTRACTOR WILL PROVIDE SUPPORT TO VERIZON DURING RELOCATION

PECO GAS - PECO TO RELOCATE GAS MAIN UNDER PROPOSED STORM PIPE WITH A MIN. OF 18" CLEARANCE. CONTRACTOR TO PROVIDE CONSTRUCTION SUPPORT IN COORDINATION WITH PECO NOT LIMITED TO EXCAVATION AND EXPOSURE OF GAS MAIN.

AQUA PA - AQUA PA TO RELOCATE WATER MAIN UNDER PROPOSED STORMPIPE WITH 18"
MIN. CLEARANCE. FOR ADJUSTMENTS TO WATERMAIN, VALVE BOXES, OR CURB STOPS
CONTACT PAUL ALBERICI (610-328-7711) OF PA'S WESTERN MAINTEANANCE DEPARTMENT
AT LEAST ONE WEEK IN ADVANCE OF NEED FOR ADJUSTMENTS. CONTRACTOR TO EXCAVATE
AND EXPOSE WATER MAIN TO THE EXTENTS SHOWN ON PLAN SHEETS. CONTRACTOR WILL
PROVIDE SUPPORT TO AQUA PA FOR RELOCATION WORK.

#### SERIAL# 20183342431 20183342424 20183342359 20183342385 20183342401



IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT ACTIVITIES IN A CLEAN, NEAT MANNER THROUGHOUT THE CONTRACT PERIOD. ALL DEBRIS GENERATED BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEANED UP AND REMOVED FROM THE PREMISES AT THE END OF EACH WORKING DAY. IF THE CONTRACTOR FAILS TO COMPLY, THE TOWNSHIP OF RADNOR HAS THE RIGHT TO HAVE THE SITE CLEANED AT THE CONTRACTOR'S EXPENSE.

ALL LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS AND/OR ABOVE GROUND EXAMINATION OF THE SITE. COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES BEFORE START OF WORK PER PENNSYLVANIA ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004 OR LATER.

