

# PRELIMINARY/FINAL LAND DEVELOPMENT PLAN FOR WESTTOWN SCHOOL - OAK LANE PROJECT

WESTTOWN TOWNSHIP - CHESTER COUNTY - PENNSYLVANIA

## REQUESTED WAIVERS/MODIFICATIONS

- SECTIONS 144-311(B)(3) AND 144-803.B(3)(C) - TO PERMIT HOPE DRAIN BASINS TO BE INSTALLED AS OPPOSED TO CONCRETE INLETS IN SELECT LOCATIONS  
**ACTION BY THE SUPERVISORS:**
- SECTIONS 144-311(B)(4) AND 144-803.B(3)(G) - TO HAVE THE REQUIREMENT OF A TWO-INCH DROP FROM ALL INLET PIPE INVERT ELEVATIONS TO MOST SHALLOW OUTLET PIPE INVERT ELEVATION  
**ACTION BY THE SUPERVISORS:**
- SECTIONS 144-311(B)(6) AND 144-803.B(3)(G) - TO REDUCE THE MINIMUM STORM SEWER SIZE TO EIGHT-INCHES  
**ACTION BY THE SUPERVISORS:**
- SECTIONS 144-311(B)(4) AND 144-803.B(3)(M) - TO REDUCE THE REQUIRED COVER FOR STORM SEWERS IN LAWN AREAS FROM 24-INCHES TO 12-INCHES  
**ACTION BY THE SUPERVISORS:**
- SECTION 144-311(B)(1) - TO ALLOW VELOCITIES WITHIN STORM SEWER TO BE LESS THAN THREE FEET PER SECOND  
**ACTION BY THE SUPERVISORS:**
- SECTIONS 144-311(C)(3) AND 144-803.B(4)(K) - TO ALLOW 0% SLOPE FOR INFILTRATION/WATER QUALITY BASIN BOTTOMS  
**ACTION BY THE SUPERVISORS:**
- SECTIONS 144-311(C)(5) AND 144-803.B(4)(G) - TO ALLOW SMOOTH-LINED CORRUGATED HOPE (SLCPP) OUTLET PIPES FOR BASINS, TO ALLOW CONCRETE ANTI-SEEP COLLARS FOR BMP 1 AND BMP-4 TO BE DESIGNED IN ACCORDANCE WITH THE PADEP E45 CONTROL MANUAL  
**ACTION BY THE SUPERVISORS:**
- SECTION 144-100A - PRELIMINARY PLAN APPLICATION  
**ACTION BY THE SUPERVISORS:**
- SECTION 144-102.B(7) - TOTAL TRACT BOUNDARY LINES WITH BEARINGS AND DISTANCES  
**ACTION BY THE SUPERVISORS:**
- SECTION 144-425.6(1) - LOT OR PERIMETER YARD REQUIREMENTS  
**ACTION BY THE SUPERVISORS:**



OVERVIEW PLAN  
SCALE: 1" = 500'

## PARKING DATA

CALCULATION OF PARKING BURDEN: (BASED ON TPD TRANSPORTATION OPERATIONAL ANALYSIS, AMENDMENT NO. 1, DATED 3/21/2023 - 83 ENTERING VEHICLES)	
NEW SPACES REQUIRED:	83
NEW SPACES PROVIDED:	161
EXISTING EVENT PARKING SPACES:	76
161 TOTAL SPACES (SURPLUS OF 86 SPACES)	
ALTERNATE CALCULATION OF PARKING BURDEN: (BASED ON WESTTOWN TWP CODE 170-105.01) - 2 SPACES/5 SEATS (300 BLEACHER SEATS)	
NEW SPACES REQUIRED:	120
NEW SPACES PROVIDED:	161
EXISTING EVENT PARKING SPACES:	76
161 TOTAL SPACES (SURPLUS OF 44 SPACES)	

## AREA AND BULK REQUIREMENTS

MIN LOT AREA = 2 AC  
LOT AREA: 8,452,730.91 SF (194.05 AC)\*

MIN LOT WIDTH = 200 FEET  
LOT WIDTH (WESTTOWN RD) = 1,800 FEET\*\*

SETBACKS:  
SIDE YARD - ONE (50'), BOTH (100')  
REAR YARD - 50'  
FRONT YARD - 50' MIN. (60' ALONG RT 926)

MAX BUILDING COVERAGE: 20%  
EXISTING BUILDING COVERAGE: 0.14%  
PROPOSED BUILDING COVERAGE: 0.18%

MAX TOTAL IMPERVIOUS COVERAGE: 40%  
EXISTING IMPERVIOUS COVERAGE: 6.44 AC / 3.34%  
PROPOSED IMPERVIOUS COVERAGE: 1.91 AC / 4.1%

MAX DENSITY: (TRACT AREA X 0.5) = 41.02 AC

MAX BUILDING HEIGHT: 30 FEET (3 STORY)  
MAX PROPOSED BUILDING HEIGHT: 30 FEET (2 STORY)

BUFFER REQUIREMENTS: 50 FEET

SEWER: PUBLIC

WATER: PRIVATE

IMPERVIOUS AREA (§144-402.C(1))	
EX. IMPERVIOUS SURFACES	10,676 SF
EX. IMPERVIOUS PROPOSED TO BE REPLACED	10,181 SF
EX. IMPERVIOUS TO BE PERMANENTLY REMOVED AND REPLACED WITH PERVIOUS GRASS COVER	445 SF
NEW ADDITIONAL IMPERVIOUS SURFACES	248,103 SF
PERCENTAGE OF SITE COVERED BY IMPERVIOUS SURFACES:	
EXISTING (%)	1.34 %
PROPOSED (%)	33.71 %

- A PORTION OF THE SUBJECT TRACT (13.55 ACRES) IS LEASED FOR AGRICULTURAL PURPOSES
- \*\* REPRESENTS THE SMALLEST LOT FRONTAGE

## PROJECT NARRATIVE

THE APPLICANT/OWNER (WESTTOWN SCHOOL) PROPOSES TO CONSTRUCT TWO (2) NEW SYNTHETIC TURF ATHLETIC FIELDS, ONE OF WHICH IS PROPOSED TO BE LIGHTED, ALONG OAK LANE - A LOCATION WITHIN THE SCHOOL CAMPUS WHERE EXISTING ATHLETIC FIELDS AND FACILITIES PRESENTLY EXIST. A NEW SUPPORT BUILDING HAVING TEAM ROOMS, RESTROOMS, AN ELEVATOR, AND STORAGE IS PROPOSED AS WELL AS A NEW 48-SPACE OFF-STREET PARKING FACILITY. THE SCHOOL'S EXISTING SCOTTALL FIELD WILL BE DISPLACED AND RECONSTRUCTED. THE NEW SUPPORT BUILDING WILL BE SERVED BY THE CAMPUS WATER SYSTEM (PRIVATE), PECO ELECTRIC, AND PUBLIC SEWER.

STRUCTURAL STORM-WATER BMPs ARE PROPOSED IN ORDER TO ADDRESS RATE CONTROL, VOLUME CONTROL, AND WATER QUALITY REQUIREMENTS.

THE PROPOSED STRUCTURAL BMPs INCLUDE TWO (2) INFILTRATION BASINS AND TWO (2) SUBSURFACE DETENTION/INFILTRATION BEDS (EACH LOCATED BENEATH THE SYNTHETIC TURF ATHLETIC FIELDS). ALSO, THE SAND/ROCK/GRASS INFILL, GEOTEXTILE FABRIC, AND AGGREGATE BASE OF THE SYNTHETIC TURF ATHLETIC FIELDS ACT AS A CONSTRUCTED FILTER PRIOR TO RUNOFF REACHING THE UNDERGROUND BMPs.

THE DEVELOPMENT AREA COMPRISES 17.51 AC OF THE 144.05 ACRE SUBJECT PARCEL.



PENNSYLVANIA ACT 121 (2008) REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.

DATE: 12/11/2018 BY: TURNER LAND SURVEYING SERIAL NO: 20183452261

## UTILITY LIST

CONTACT PA ONE CALL AT 1-800-242-1776 FOR INDIVIDUAL UTILITY TELEPHONE NUMBERS.

WESTTOWN TOWNSHIP	
COMCAST CABLE 1004 CORNERSTONE BLVD DOWNTOWN, PA 19335 ATTN: TOM RUSSELL TOM.RUSSELL@CABLE.COMCAST.COM	TRANSCONTINENTAL GAS / WILLIAMS GAS 91 FARMER RD PRINCETON, NJ 08540 ATTN: DAN SCHWEITZER DAN.SCHWEITZER@WILLIAMS.COM
AQUA PENNSYLVANIA INC. 762 N LANCASTER AVE BRYAN MAHR, PA 19010 ATTN: STEVE PIZZI SPIZZI@AQUAAMERICA.COM	WESTTOWN TOWNSHIP 1034 HILMINGTON PIKE WEST CHESTER, PA 19382 ATTN: MARK GROSS MGROSS@WESTTOWN.ORG
BUCKEYE PARTNERS FIVE TEK PARK 4444 HAMILTON BLVD BREINIGSVILLE, PA 18031 ATTN: DAVE JONES DAJONES@BUCKEYE.COM	VERIZON PENNSYLVANIA LLC 1050 VIRGINIA DR FORT WASHINGTON, PA 19034 ATTN: LURA LIPPINCOTT LAURA.LIPPINCOTT@ONE.VERIZON.COM
PECO ENERGY CO/USIC 450 S HENDERSON RD SUITE B KING OF PRUSSIA, PA 19406 ATTN: NIKKIA SIMPKINS NIKKIASIMPKINS@USICLLC.COM	

## LIST OF DRAWINGS

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\*DENOTES POST CONSTRUCTION STORM-WATER MANAGEMENT PLAN SHEETS

## CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN, AND OFFER OF DEDICATION - CORPORATION

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF CHESTER

ON THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED \_\_\_\_\_ OF \_\_\_\_\_, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT THE CORPORATION IS THE \_\_\_\_\_ OF THE PROPERTY SHOWN ON THIS PLAN, THAT THEY ARE AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF THE CORPORATION, THAT THE PLAN IS THE ACT AND DEED OF THE CORPORATION, THAT THE PLAN IS SUBMITTED WITH THE FREE WILL AND CONSENT OF THOSE WHO HAVE SIGNED, THAT THE CORPORATION DESIRES THE SAME TO BE RECORDED AND THAT ON BEHALF OF THE CORPORATION FURTHER ACKNOWLEDGES THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY ARE HEREBY DEDICATED TO THE PUBLIC USE - (EXCEPTING THOSE AREAS LABELED 'NOT FOR DEDICATION').

OWNER \_\_\_\_\_  
NOTARY \_\_\_\_\_  
MY COMMISSION EXPIRES \_\_\_\_\_, 20\_\_\_\_

## DRAINAGE PLAN ACKNOWLEDGEMENT

THE STORMWATER MANAGEMENT SYSTEM IS TO BE A PERMANENT FEATURE THAT CAN NOT BE ALTERED OR REMOVED WITHOUT APPROVAL BY WESTTOWN TOWNSHIP. ANY REVISION TO THE APPROVED SANI SITE PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE MUNICIPALITY. A REVISED EROSION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE CONSERVATION DISTRICT OR MUNICIPALITY (AS APPLICABLE) FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES.

SIGNATURE OF OWNER \_\_\_\_\_ DATE \_\_\_\_\_

## DRAINAGE PLAN CERTIFICATION

ON THIS DATE \_\_\_\_\_, I, \_\_\_\_\_, AS ENGINEER, HAVE REVIEWED AND HEREBY CERTIFIES THAT THE DRAINAGE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE WESTTOWN TOWNSHIP CODE, CHAPTER 144, 'STORMWATER MANAGEMENT' AS AMENDED.

ON BEHALF OF WESTTOWN TOWNSHIP, \_\_\_\_\_ ON THIS DATE \_\_\_\_\_, 20\_\_\_\_, HAS REVIEWED AND HEREBY CERTIFIES TO THE BEST OF MY KNOWLEDGE THAT THE SANI SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE WESTTOWN TOWNSHIP CODE, CHAPTER 144, 'STORMWATER MANAGEMENT'.

## CERTIFICATE OF REVIEW BY THE WESTTOWN TOWNSHIP PLANNING COMMISSION

REVIEWED BY THE PLANNING COMMISSION OF WESTTOWN TOWNSHIP, CHESTER COUNTY, PA, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

## CERTIFICATE OF APPROVAL BY THE WESTTOWN TOWNSHIP BOARD OF SUPERVISORS

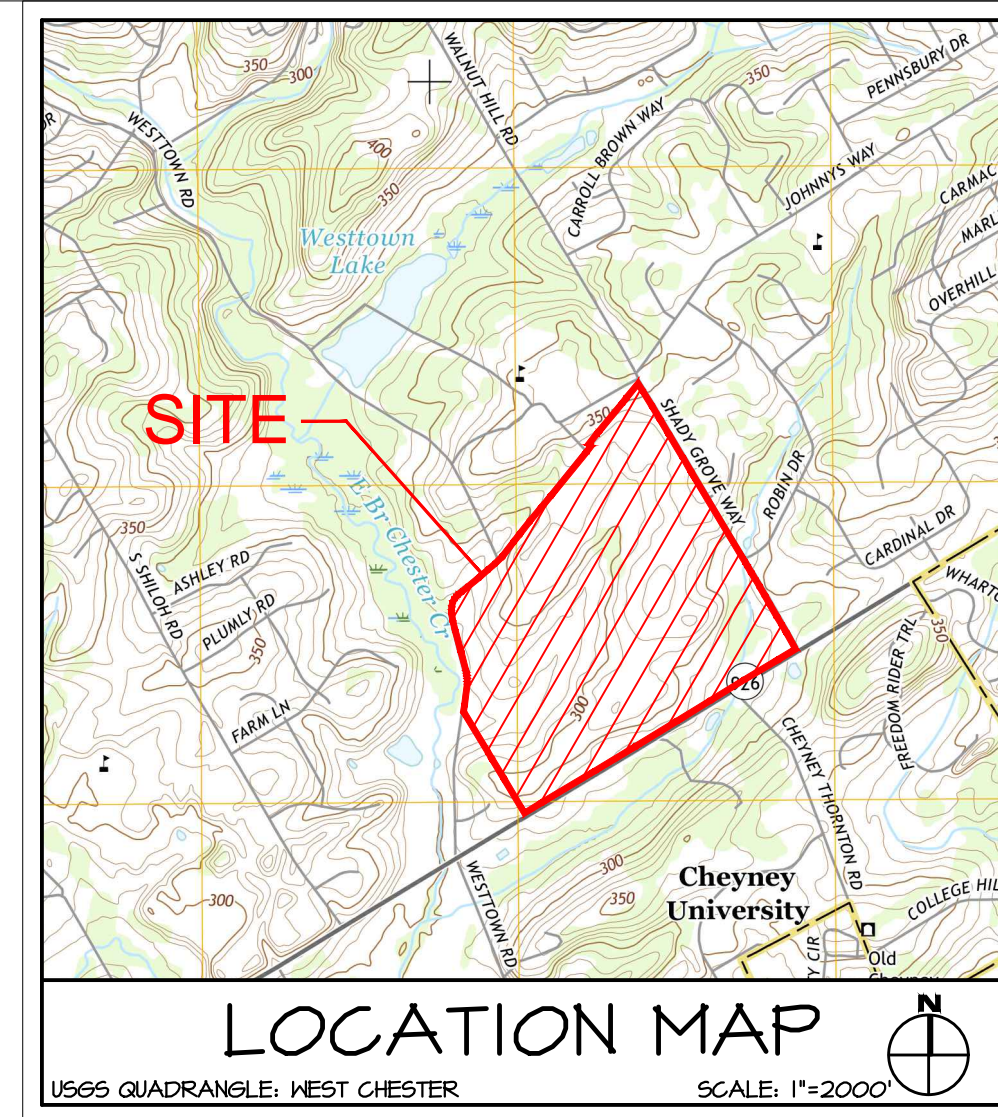
APPROVED BY THE BOARD OF SUPERVISORS OF WESTTOWN TOWNSHIP, CHESTER COUNTY, PA, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

## CERTIFICATE OF REVIEW BY THE CHESTER COUNTY PLANNING COMMISSION

REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

## RECORDER'S CERTIFICATE

RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF CHESTER COUNTY AT WEST CHESTER, PA, IN PLAN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_, THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.



## OWNER/APPLICANT

WESTTOWN SCHOOL  
475 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 394-0123

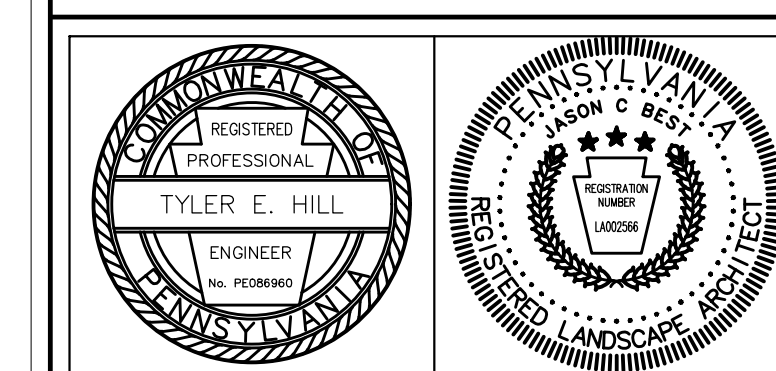
## SOURCE OF TITLE

UPI NO: \_\_\_\_\_  
DEED BOOK/PAGE: 67-5-27  
DEED BOOK 4401, PAGE 491

## ZONING

ZONING DISTRICT: A/C (AGRICULTURAL / CLUSTER RESIDENTIAL)  
EXISTING USE(S): SCHOOL (PRINCIPAL USE)  
AGRICULTURE (ACCESSORY USE)  
ATHLETIC FIELD (ACCESSORY USE)  
PROPOSED USE(S): SCHOOL (PRINCIPAL USE)  
AGRICULTURE (ACCESSORY USE)  
ATHLETIC FIELD (ACCESSORY USE)

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. _____	_____	_____



POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

## PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
COVER SHEET  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
WESTTOWN SCHOOL  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

DRAWING NO.  
**1 of 48**

RECORDER OF DEEDS  
UPI NO(S): 67-5-27

NOTES:

A. SURVEYING AND BASEMAPPING NOTES

1. PLANIMETRIC AND TOPOGRAPHIC SURVEY PREPARED BY SITE ENGINEERING CONCEPTS, LLC - SOUTHEASTERN, PA 18384, (484) 222-0061. SURVEY DATES: 2013 AS AMENDED/UPDATED THROUGH 2018.
2. LIMIT OF DETAILED, FIELD-RUN TOPOGRAPHIC AND PLANIMETRIC SURVEY ARE DEFINED ON THE EXISTING CONDITIONS PLANS. ALL BOUNDARY AND PLANIMETRIC INFORMATION IS CONSIDERED SURVEY AREA IS TAKEN FROM AVAILABLE CHESTER COUNTY GIS RESOURCES.
3. BENCHMARK, CONCRETE MONUMENT EAST OF THE OAK LANE/WESTTOWN ROAD INTERSECTION, ELEVATION: 320.88 NAVD 88 VERTICAL DATUM. OTHER CAMPUS BENCHMARKS CAN BE FOUND FROM PLANS TITLED "WESTTOWN SCHOOL CONTROL MONUMENT LOCATION MAPS" PREPARED BY HOWELL KLINE SURVEYING, LLC, DATED 7/31/2006.
4. DETAILED SURVEY AREA REPRESENTS A COMPILATION OF SEVERAL SURVEYS OF VARIOUS AREAS OF THE WESTTOWN SCHOOL CAMPUS CONDUCTED FROM 2013 TO 2019 THAT HAVE BEEN COMBINED TOGETHER. COORDINATE SYSTEM USED IS LAMBERT NA 83 / CORS 46 PA SOUTH ZONE 3102.
5. UNDERGROUND ELECTRIC LINES WERE FIELD SURVEYED FROM MASTER LOCATORS INC. FIELD MARKINGS IN AUGUST 2010. MOST WATER, STEAM, AND SANITARY UTILITY PIPE LOCATIONS AND SIZES WERE TAKEN FROM ARCHIVED PLANS FROM WESTTOWN SCHOOL AND CONSULTATIONS/MARKUPS BY WESTTOWN FACILITIES STAFF BASED ON THEIR RECOLLECTIONS. THIS PIPE LOCATIONS AND SIZES ARE VERY APPROXIMATE AND WERE NOT FIELD LOCATED OR SURVEYED. SOME MANHOLES, CLEANOUTS, ETC. WERE FIELD SURVEY LOCATED. CONSTRUCTION/EXCAVATION ACTIVITIES SHALL NOT RELY ON THIS SURVEY. PA ONE CALL, FIELD INVESTIGATION, OR OTHER UTILITY LOCATING METHODS OR SERVICES SHALL BE UTILIZED.
6. WETLANDS DELINEATION PERFORMED BY LANDSTUDIES, INC., WWW.LANDSTUDIES.COM, IN MAY 2018, WETLANDS FLAGGING LOCATED BY FIELD SURVEY IN MAY 2018. ON SEPTEMBER 18, 2022, VORTEX ENVIRONMENTAL, INC. (WWW.VORTEXENVIRONMENTAL.COM) CONDUCTED A SUBSEQUENT WETLAND ASSESSMENT AND CONFIRMED THAT THE BOUNDARIES OF THE WETLAND AREAS AND OTHER "WATERS OF THE COMMONWEALTH" DELINEATED BY LANDSTUDIES, INC. IN 2018 ARE ACCURATELY DEPICTED ON THESE LAND DEVELOPMENT PLANS.

B. STORMWATER MANAGEMENT

1. THE APPLICANT/OWNER IS RESPONSIBLE FOR SUBMITTING STORMWATER MANAGEMENT FACILITY INSPECTION REPORTS TO WESTTOWN TOWNSHIP IN A FORM AND ON A SCHEDULE AS DIRECTED BY WESTTOWN TOWNSHIP. THE FIRST REPORT IS TO BE SUBMITTED 1 YEAR AFTER COMPLETION OF CONSTRUCTION, BE PREPARED AT THE DIRECTION OF A PROFESSIONAL ENGINEER, AND INCLUDE INFORMATION REGARDING THE CONDITION OF THE FACILITIES AND RECOMMENDATIONS FOR ANY NECESSARY REPAIRS.
2. ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, AND PA DEP CHAPTER 102 REGULATIONS.
3. IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 102 OF THE ADMINISTRATIVE CODE, TITLE 25 (PA DEP RULES AND REGULATIONS), A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND ITS ACCOMPANYING NARRATIVE MUST BE AVAILABLE ON SITE DURING CONSTRUCTION UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED OR WITH DRAINAGE AREAS OF LESS THAN 1.00 MILE. THE IMPLEMENTATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL FACILITIES.
4. THE WATERSHED AREA CONTRIBUTING TO THE UNNAMED TRIBUTARY OF EAST BRANCH CHESTER CREEK FOR THIS PROJECT/PROJECT AREA DISCHARGES APPROXIMATELY 340 LF UPSTREAM OF THE FEMA FLOODPLAIN OF TRIBUTARY 2 OF EAST BRANCH CHESTER CREEK. THIS FLOODPLAIN AREA IS NOT CLOSE ENOUGH TO THE PROJECT LIMIT LINE TO BE SHOWN ON THE GRADING PLANS FOR THIS PROJECT. THE FLOODPLAIN SHOWN ON THE FEMA MAPPING FOR TRIBUTARY 2 OF THE EAST BRANCH CHESTER CREEK REFLECTS "ZONE X", A SPECIAL FLOOD HAZARD BOUNDARY (0.2% ANNUAL CHANCE FLOOD AREA, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH OF LESS THAN 1.00 FT. OR WITH DRAINAGE AREAS OF LESS THAN 1.00 MILE) REFER TO FLOOD INSURANCE RATE MAP (MAP NO. 42024402156) PUBLISHED BY THE U.S. DEPARTMENT OF HOUSING AND CITY PLANNING, FEDERAL EMERGENCY MANAGEMENT AGENCY ON 9/24/2007.
5. A BLANKET EASEMENT OVER THE ENTIRETY OF PROJECT AREA (LIMIT OF DISTURBANCE) IS GRANTED TO THE TOWNSHIP FOR THE PURPOSE OF ACCESSING PRIVATE UTILITIES AND STORM DRAINAGE INFRASTRUCTURE FOR INSPECTIONS, REPAIRS, AND (IF NECESSARY) REPLACEMENT. THIS BLANKET EASEMENT.
6. NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF ANY STORMWATER MANAGEMENT FACILITIES THAT COULD ADVERSELY AFFECT THE FUNCTION OF THE FACILITIES OR CONFLICT WITH THE EASEMENT AGREEMENT. THE MUNICIPALITY SHALL HAVE THE RIGHT TO:
  - 6.1. ACCESS THE SITE TO INSPECT STORMWATER FACILITIES AT ANY REASONABLE TIME
  - 6.2. REQUIRE THAT THE LAND OWNER TAKE CORRECTIVE MEASURES AND ASSIGN THE LAND OWNER REASONABLE TIME PERIODS FOR ANY NECESSARY ACTION.
  - 6.3. AUTHORIZE MAINTENANCE TO BE DONE AND LIEN ALL COST OF ALL WORK AGAINST THE PROPERTIES OF THE PRIVATE ENTITY RESPONSIBLE FOR MAINTENANCE.

PROTECTIVE WRAP TO ENSURE THE GASKET IS FREE OF DEBRIS. IF SLOPP IS NOT DEEMED ACCEPTABLE FOR BASIN DISCHARGE, RCP SHALL BE USED. ALL REINFORCED CONCRETE STORM PIPE (RCP) SHALL BE PROVIDED WITH WATER-TIGHT "O" RING GASKETS.

14. DISCHARGE FROM SITE IMPROVEMENTS SHALL HONOR DRAINAGE DIVIDES SHOWN ON THE STORMWATER MANAGEMENT PLAN OR IN THE POST CONSTRUCTION STORMWATER MANAGEMENT REPORT. ROOF DRAINS FROM THE PROPOSED BUILDINGS SHALL BE CONNECTED DIRECTLY TO THE DRAINAGE STRUCTURES WHERE INDICATED. SPLASH BLOCKS SHALL BE PROVIDED WHERE DOWNPOUTS DISCHARGE AT-GRADE.

15. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS, INCLUDING OVERLAND FLOWS AND DISCHARGE FROM ROOF DOWNPOUTS AND OVERFLOWS.

16. ALL STORMWATER FACILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS OF THE MUNICIPALITY AND/OR PENNDOT, AS APPLICABLE.

C. OTHER UTILITIES

1. UNDERGROUND ELECTRIC LINES WERE FIELD SURVEYED FROM MASTER LOCATORS INC. FIELD MARKINGS IN AUGUST 2010. MOST WATER, STEAM, AND SANITARY UTILITY PIPE LOCATIONS AND SIZES WERE TAKEN FROM ARCHIVED PLANS FROM WESTTOWN SCHOOL AND CONSULTATIONS/MARKUPS BY WESTTOWN FACILITIES STAFF BASED ON THEIR RECOLLECTIONS. THIS PIPE LOCATIONS AND SIZES ARE VERY APPROXIMATE AND WERE NOT FIELD LOCATED OR SURVEYED. SOME MANHOLES, CLEANOUTS, ETC. WERE FIELD SURVEY LOCATED. CONSTRUCTION/EXCAVATION ACTIVITIES SHALL NOT RELY ON THIS SURVEY. PA ONE CALL, FIELD INVESTIGATION, OR OTHER UTILITY LOCATING METHODS OR SERVICES SHALL BE UTILIZED.
2. ALL WATER MAINS SHOWN AS PROPOSED ON THESE PLANS ARE PRIVATELY OWNED AND MAINTAINED.
3. ALL SANITARY SEWER MAINS/FACILITIES SHOWN AS PROPOSED ON THESE PLANS ARE PRIVATELY OWNED AND MAINTAINED.
4. A BLANKET EASEMENT IS HEREBY ESTABLISHED AS PART OF THESE PLANS FOR THE RIGHT OF ENTRY AND ACCESS BY WESTTOWN TOWNSHIP FOR THE INSPECTION AND ENFORCEMENT OF OPERATIONS AND MAINTENANCE REQUIREMENTS FOR SANITARY SEWER INFRASTRUCTURE IN ACCORDANCE WITH ORDINANCE REQUIREMENTS AND/OR OAH AGREEMENT(S).
5. ALL FIRE PROTECTION SYSTEMS MUST BE DESIGNED BY A PROFESSIONAL LICENSED IN PENNSYLVANIA, APPROVED BY LOCAL CODE OFFICIALS, AND BASED ON REAL CONDITIONS WITH THE NECESSARY TESTING.

D. ACCESS & STREETS

1. NO NEW PUBLIC STREETS ARE PROPOSED OR OFFERED FOR DEDICATION AS PART OF THIS PLAN. CONSTRUCTION OF ANY IMPROVEMENTS TO PUBLIC STREETS SHOWN ON THIS PLAN SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
2. A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 BEFORE DRIVEWAY ACCESS TO A STATE HIGHWAY IS PERMITTED (P.L. 1242, NO. 429) KNOWN AS THE "STATE HIGHWAY LAW". ACCESS TO THE STATE HIGHWAY SHALL ONLY BE AS AUTHORIZED BY THE HIGHWAY OCCUPANCY PERMIT, AND THE BOROUGH COUNCIL'S APPROVAL OF THIS PLAN IN NO WAY IMPLIES THAT SUCH PERMIT CAN BE ACQUIRED. THE TOWNSHIP, UPON APPROVING THE BUILDING PERMIT REQUEST, SHALL NOT BE HELD LIABLE FOR DAMAGES TO PERSONS OR PROPERTY ARISING OUT OF THE ISSUANCE OR DENIAL OF A PERMIT BY THE DEPARTMENT.
3. ON A CORNER LOT OR AT A POINT OF ENTRY ON A PUBLIC ROAD, NOTHING SHALL BE ERRECTED, PLACED, OR ALLOWED TO GROW IN A MANNER WHICH OBSCURES VISION:
  - ABOVE THE HEIGHT OF 25 FEET MEASURED FROM THE CENTER LINE GRADES OF THE INTERSECTING STREETS; AND
  - WITHIN THE AREA BOUNDED BY THE CENTER LINES OF INTERSECTING STREETS AND A LINE JOINING POINTS ON THESE CENTER LINES DISTANCES FROM THE INTERSECTION AS SPECIFIED IN CHAPTER 144, SUBDIVISION AND LAND DEVELOPMENT.
4. THERE SHALL BE NO PLANTINGS, GROUND COVER, OR OTHER OBJECTS PLACED WITHIN THE ROAD RIGHT-OF-WAY ABOVE 18 INCHES IN HEIGHT.

E. ATHLETIC FIELD LIGHTING NOTES

1. THE ATHLETIC FIELD LIGHTING SYSTEM MAY ONLY BE ENERGIZED IN CONJUNCTION WITH AN EVENT DIRECTLY RELATED TO AND UNDER THE CONTROL OF THE EDUCATIONAL OR SPORTS PROGRAM OF WESTTOWN SCHOOL.
2. NO PRIVATE ORGANIZATIONS OR OTHER PUBLIC ENTITIES MAY USE THE ATHLETIC FIELD LIGHTS FOR LIGHTED EVENTS OF ANY KIND.

F. GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO INSTALL CURB RAMPS TO THE LATEST ADA OR PENNDOT STANDARDS AT THE TIME OF CONSTRUCTION.
2. ALL CONSTRUCTION SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA) WHERE REQUIRED.
3. ALL CONSTRUCTION SHALL BE SUBJECT TO THE REQUIREMENTS OF THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE, AS ADOPTED BY THE MUNICIPALITY.
4. THE CONTRACTOR SHALL INSPECT THE SITE AND VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ELA GROUP, INC. MAKES NO REPRESENTATIONS AS TO THE SUBSURFACE CONDITIONS OF THE PROJECT SITE INCLUDING DEPTH OF BEDROCK, GEOLOGICAL CONDITIONS, SOIL STABILITY, ETC. THE CONTRACTOR SHALL REVIEW AND FAMILIARIZE THEMSELVES WITH ALL SURVEYING AND BASEMAPPING NOTES ASSOCIATED WITH THESE PLANS PRIOR TO BIDDING AND CONSTRUCTION.

INFILTRATION SYSTEM CONSTRUCTION NOTES

INFILTRATION SYSTEM CONSTRUCTION NOTES

1. ENTIRE BOTTOM OF INFILTRATION SYSTEM SHALL BE CONSTRUCTED ON UNDISTURBED GROUND. THE AREAS FOR THE INFILTRATION SYSTEMS SHALL BE FIELD STAKED AND FENCED OFF WITH HIGH VISIBILITY CONSTRUCTION FENCING AS INDICATED IN THE CONSTRUCTION SEQUENCE AND WHERE SHOWN ON THE PLANS.
2. SEE INFILTRATION SYSTEMS DETAILS.
3. THE INFILTRATION AREAS MUST REMAIN UNDISTURBED PRIOR TO CONSTRUCTION TO PREVENT COMPACTION OF THE UNDERLYING SOILS. THE INFILTRATION AREAS MUST BE PROTECTED AT ALL TIMES FROM ANY SILTATION AND COMPACTION BOTH DURING AND FOLLOWING CONSTRUCTION. INSTALL AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES IMMEDIATELY.
4. THE CONTRACTOR MUST UTILIZE APPROPRIATE EARTHMOVING EQUIPMENT AND TECHNIQUES IN THE CONSTRUCTION OF THE INFILTRATION SYSTEMS TO ELIMINATE POTENTIAL COMPACTION OF THE SOIL WITHIN THE AREA RESERVED FOR THE INFILTRATION SYSTEMS. EARTHMOVING EQUIPMENT SHALL NOT BE PERMITTED DIRECTLY ON THE AREA OF THE INFILTRATION TRENCH DURING OR AFTER CONSTRUCTION.
5. HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE PROPOSED LOCATION OF THE INFILTRATION SYSTEMS TO MINIMIZE COMPACTION OF THE SOIL.
6. EXCAVATE THE INFILTRATION SYSTEMS TO DESIGN DIMENSIONS.

INFILTRATION VERIFICATION NOTES

1. INFILTRATION VERIFICATION OF INFILTRATION RATES ARE REQUIRED FOR ALL INFILTRATION FACILITIES AND SHALL BE CONDUCTED AT THE INFILTRATION ELEVATION (IE SUBGRADE ELEVATION). INFILTRATION TEST SHALL UTILIZE A DOUBLE RING INFILTROMETER TEST AND IN ACCORDANCE WITH PROCEDURES IN APPENDIX C OF THE PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL. NO FACTOR OF SAFETY SHOULD BE CONSIDERED IN DETERMINING IF POST-DEVELOPMENT INFILTRATION RATES ARE WITHIN THE ACCEPTABLE RANGE. A MINIMUM OF TWO (2) TESTS SHALL BE COMPLETED IN EACH INFILTRATION FACILITY.
2. THE PRESENCE/ABSENCE OF A LIMITING LAYER WITHIN 2 FEET OF THE BOTTOM OF THE BASIN SHALL BE VERIFIED WITH THE USE OF A HAND-PROBE HAVING AN APPROXIMATE DIAMETER OF 1" OR GREATER BY EXTENDING THE PROBE INTO THE GROUND A MINIMUM OF 2 FEET ON AN APPROXIMATELY 25 FT GRID PATTERN ACROSS THE BOTTOM OF THE BASIN. THE TOWNSHIP SHALL BE NOTIFIED IF A LIMITING LAYER IS ENCOUNTERED WITHIN 2 FEET OF THE PROPOSED BASIN SUBGRADE ELEVATION.
3. IF BEDROCK IS PRESENT, A GEO-TECHNICAL PROFESSIONAL SHALL INSPECT THE EXPOSED ROCK IN ORDER TO DETERMINE THE MOST APPROPRIATE COURSE OF ACTION. IN GENERAL, OVER-EXCAVATE A MINIMUM OF 2' BELOW INFILTRATION ELEVATION AND BACKFILL WITH SUITABLE ON-SITE SOIL LIGHTLY TAMPED IN PLACE. THE SUITABILITY OF ON-SITE SOILS IS TO BE DETERMINED BY THE OVERSEENING ENGINEER/GEO-TECHNICAL PROFESSIONAL. INFILTRATION TESTING SHALL BE PERFORMED IN BACKFILLED AREAS IF THE AREA EXCEEDS 100 SF OR AS DEEMED APPROPRIATE BY THE OVERSEENING ENGINEER/GEO-TECHNICAL PROFESSIONAL. ROCK REMOVAL SHOULD BE HANDLED ON A CASE-BY-CASE BASIS AND UNDER THE SUPERVISION OF A GEO-TECHNICAL PROFESSIONAL. FLOATING BOULDERS AND/OR FRAGMENTED ROCKS WHICH CAN READILY BE RETRIEVED AND WHICH ARE DEEMED NOT TO NEGATIVELY IMPACT THE FUNCTIONALITY OF THE FACILITY MAY PROVIDE STABILITY WITHIN THE SOIL/BEDROCK INTERFACE, REDUCE THE LIKELIHOOD OF SUBSIDENCE, AND MAY BE LEFT IN PLACE.
4. FOR BELOW-GROUND FACILITIES, A GEO-TECHNICAL ENGINEER SHALL BE CONTACTED TO ENSURE BACKFILL MATERIALS PROVIDE PROPER STRUCTURAL SUPPORT AND INFILTRATION RATES.
5. IF OTHER LIMITING LAYERS, SUCH AS GROUNDWATER, OR REDOXIMORPHIC FEATURES INDICATIVE OF A SEASONALLY HIGH WATER TABLE ARE ENCOUNTERED THE GEO-TECHNICAL ENGINEER, STORMWATER DESIGN ENGINEER, AND TOWNSHIP ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN ORDER TO DETERMINE AN APPROPRIATE COURSE OF ACTION. ADDITIONAL MEASURES AND/OR AN ALTERNATE DESIGN MAY BE REQUIRED.
6. IF FIELD VERIFIED RATES ARE LESS THAN 0.20 IN/HR OR GREATER THAN 6.0 IN/HR, THE FOLLOWING STEPS SHOULD BE TAKEN:
  - IF THE FIELD VERIFIED INFILTRATION RATES ARE EXCESSIVELY HIGH (>6.0 IN/HR):

IF THE FIELD VERIFIED INFILTRATION RATES ARE EXCESSIVELY HIGH (>6.0 IN/HR)

1. DETERMINE THE EXTENT OF THE MATERIALS EXHIBITING THE HIGH INFILTRATION RATES THROUGH A COMBINATION OF VISUAL-MANUAL CLASSIFICATION, HAND PROBING, DENSITY TESTING, OR OTHER SUITABLE METHODS AS DETERMINED BY THE GEO-TECHNICAL ENGINEER.
2. OVER EXCAVATE THE MATERIALS TO THE DEPTH WHERE THE MATERIAL TYPE CHANGES OR A MAXIMUM DEPTH OF 2 FEET, WHICHEVER IS ENCOUNTERED FIRST.
3. IN-PLACE INFILTRATION TESTING (MIN. TWO TEST PITS) OF THE NATURAL SOIL MATERIAL MUST BE PERFORMED AFTER THE UNSUITABLE MATERIAL IS EXCAVATED TO CONFIRM ACCEPTABLE INFILTRATION RATES PRIOR TO PLACEMENT OF THE SUITABLE SOIL. SOIL TESTING SHALL UTILIZE A DOUBLE RING INFILTROMETER TEST AND BE IN ACCORDANCE WITH PROCEDURES IN APPENDIX C OF THE PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
4. IF EXCESSIVE RATES ARE ASSOCIATED WITH HEATHERED OR BROKEN ROCK, THE ROCK SURFACE SHOULD BE EXAMINED BY THE GEO-TECHNICAL ENGINEER PRIOR TO REPLACEMENT OF SUITABLE MATERIAL TO EVALUATE KARST POTENTIAL.
5. REPLACE THE EXCAVATED MATERIAL WITH FINER GRAINED MATERIALS APPROVED BY THE GEO-TECHNICAL ENGINEER. SUITABLE SOIL MIXTURES CAN CONSIST OF A BLEND OF ON-SITE AND/OR OFF-SITE MATERIALS AVAILABLE TO THE CONTRACTOR, AND SUBJECT TO TESTING AND APPROVAL OF THE GEO-TECHNICAL ENGINEER, OR SHOULD BE CONSISTENT WITH THE INFILTRATION BASIN AMENDED SOIL SPECIFICATIONS. IN-SITU INFILTRATION TESTING (MIN. 2 TESTS) OF THE BACKFILLED MATERIAL IS REQUIRED FOR ALL BACKFILLED AREAS EXCEEDING 100 SF.
6. SUITABLE SOIL MIXTURES MAY CONSIST OF MATERIALS BLENDED BY VOLUME RATIOS AS DETERMINED BY THE GEO-TECHNICAL ENGINEER.
7. MATERIALS SHOULD BE LIGHTLY TRACKED INTO PLACE IN NON-STRUCTURAL AREAS.
8. IF MATERIAL REPLACEMENT IS LOCATED OUTSIDE OF STRUCTURAL AREAS, SOIL SHOULD BE PLACED IN ACCORDANCE WITH THE RECOMMENDED METHODS DESCRIBED FOR AMENDED SOIL PLACEMENT IN THE CONSTRUCTION SEQUENCE.
9. IF MATERIAL REPLACEMENT IS REQUIRED IN STRUCTURAL AREAS (EX. BELOW GRADE SWM FACILITIES IN PAVED AREAS), MATERIAL PLACEMENT SPECIFICATIONS, INCLUDING MATERIALS TYPE, MIX RATIO, COMPACTIVE EFFORT AND REQUIRED DENSITY SHOULD BE DETERMINED BY THE GEO-TECHNICAL ENGINEER.

IF THE FIELD VERIFIED INFILTRATION RATES ARE EXCESSIVELY LOW (<0.20 IN/HR)

1. DETERMINE THE EXTENT OF THE MATERIALS EXHIBITING THE LOW INFILTRATION RATES THROUGH A COMBINATION OF VISUAL-MANUAL CLASSIFICATION, HAND PROBING, DENSITY TESTING, OR OTHER SUITABLE METHODS AS DETERMINED BY THE GEO-TECHNICAL ENGINEER.
2. OVER EXCAVATE THE MATERIALS TO THE DEPTH WHERE THE MATERIAL TYPE CHANGES OR A MAXIMUM DEPTH OF 2 FEET, WHICHEVER IS ENCOUNTERED FIRST.

DEPTH OF 2 FEET, WHICHEVER IS ENCOUNTERED FIRST. IF SUFFICIENTLY PERMEABLE SOIL IS NOT ENCOUNTERED WITHIN TWO FEET, THE UNSUITABLE MATERIAL SHALL BE REPLACED WITH SUITABLE MATERIAL. MERELY REPLACE THE UNSUITABLE MATERIAL WITH MORE PERMEABLE MATERIAL, AS THIS SIMPLY CREATES A "BATH TUB".

3. IN-PLACE INFILTRATION TESTING (MIN. TWO TEST PITS) OF THE NATURAL SOIL MATERIAL MUST BE PERFORMED AFTER THE UNSUITABLE MATERIAL IS EXCAVATED TO CONFIRM ACCEPTABLE INFILTRATION RATES PRIOR TO PLACEMENT OF THE SUITABLE SOIL. SOIL TESTING SHALL UTILIZE A DOUBLE RING INFILTROMETER TEST AND BE IN ACCORDANCE WITH PROCEDURES IN APPENDIX C OF THE PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.

4. IF ROCK IS ENCOUNTERED, THE ROCK SHOULD BE REMOVED TO A MINIMUM DEPTH OF 2 FEET BELOW THE BOTTOM OF BASIN AND SHOULD BE EXAMINED BY THE GEO-TECHNICAL ENGINEER PRIOR TO REPLACEMENT OF SUITABLE MATERIAL TO EVALUATE KARST POTENTIAL AND ENSURE THE ROCK HAS SUFFICIENT INFILTRATION ABILITY TO MEET THE MINIMUM CRITERIA (0.20 IN/HR).

5. REPLACE THE EXCAVATED MATERIAL WITH FINER GRAINED MATERIALS APPROVED BY THE GEO-TECHNICAL ENGINEER. SUITABLE SOIL MIXTURES CAN CONSIST OF A BLEND OF ON-SITE AND/OR OFFSITE MATERIALS AVAILABLE TO THE CONTRACTOR, AND SUBJECT TO TESTING AND APPROVAL OF THE GEO-TECHNICAL ENGINEER, OR SHOULD BE CONSISTENT WITH THE INFILTRATION BASIN AMENDED SOIL SPECIFICATIONS.

6. SUITABLE SOIL MIXTURES MAY CONSIST OF MATERIALS BLENDED BY VOLUME RATIOS AS DETERMINED BY THE GEO-TECHNICAL ENGINEER.

7. MATERIALS SHOULD BE LIGHTLY TRACKED INTO PLACE IN NON-STRUCTURAL AREAS.

8. IF MATERIAL REPLACEMENT IS LOCATED OUTSIDE OF STRUCTURAL AREAS, SOIL SHOULD BE PLACED IN ACCORDANCE WITH THE RECOMMENDED METHODS DESCRIBED FOR AMENDED SOIL PLACEMENT IN THE CONSTRUCTION SEQUENCE.

9. IF MATERIAL REPLACEMENT IS REQUIRED IN STRUCTURAL AREAS (EX. BELOW GRADE SWM FACILITIES IN PAVED AREAS), MATERIAL PLACEMENT SPECIFICATIONS, INCLUDING MATERIALS TYPE, MIX RATIO, COMPACTIVE EFFORT AND REQUIRED DENSITY SHOULD BE DETERMINED BY THE GEO-TECHNICAL ENGINEER.

10. IF, THROUGH REMEDIATION, EXCESSIVELY LOW INFILTRATION RATES CANNOT BE MADE TO MATCH THE MINIMUM ACCEPTABLE INFILTRATION RATE AT THE LOCATION OF THE PROPOSED FACILITIES AS DETERMINED BY THE RECOMMENDED PRACTICES MANUAL, THE TOWNSHIP ENGINEER SHALL CEASE AND THE APPLICANT MUST SUBMIT FOR REVIEW AND APPROVAL A REVISED COURSE OF ACTION.

INSPECTION SCHEDULE  
CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN

CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN FOR WHICH A LICENSED PROFESSIONAL OR DESIGNER SHALL BE PRESENT ON SITE:

1. ALL STAGES OF CONSTRUCTION OF INFILTRATION BASINS BMP # 1 & BMP 4 INCLUDING, BUT NOT LIMITED TO: EXCAVATION/SUBGRADE PREPARATION, UNDERDRIP INSTALLATION, APPROVAL OF AND PREPARATION OF AMENDED SOIL MATERIALS.
2. ALL STAGES OF CONSTRUCTION OF SYNTHETIC TURF FIELDS AND BELOW-FIELD DRAINAGE SYSTEMS, INCLUDING INFILTRATION BEDS BMP 2 & BMP 3. THIS INCLUDES: EXCAVATION/SUBGRADE PREPARATION, FILL PLACEMENT AND COMPACTION, GEOTEXTILE FABRIC INSTALLATION, STONE BACKFILL PLACEMENT, AND DISTRIBUTION PIPE/OUTLET STRUCTURE INSTALLATION.
3. ALL OTHER SPECIFIC TIMES REQUIRED BY THE MUNICIPALITY, CONTRACT DOCUMENTS, PADEP, AND THE CHESTER COUNTY CONSERVATION DISTRICT.

PCSM PLANNING AND DESIGN NOTES §102.8(B)

1. THIS PCSM PLAN PRESERVES THE INTEGRITY OF STREAM CHANNELS AND MAINTAINS AND PROTECTS THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITIES OF THE RECEIVING SYSTEM THROUGH THE USE OF STORMWATER BMPs, INCLUDING ABOVE- AND BELOW-GROUND INFILTRATION BMPs TO MITIGATE THE INCREASE IN PEAK RUNOFF RATES, MITIGATE THERMAL IMPACTS, REDUCE/MINIMIZE POLLUTANTS.
2. THIS PCSM PLAN MINIMIZES THE INCREASE OF STORMWATER RUNOFF RATE AND VOLUME AS THE TURF FIELD IS PERVIOUS, ALLOWING RUNOFF TO SLOWLY PERCOLATE THROUGH THE STONE SUBBASE TO THE SURFACE OF THE TURF WHERE IT INFILTRATES INTO THE GROUND. TWO INFILTRATION BASINS WILL PROVIDE ADDITIONAL RATE AND VOLUME CONTROL.
3. THIS PCSM PLAN MINIMIZES IMPERVIOUS AREAS BY PROVIDING PERVIOUS SYNTHETIC TURF FIELD SURFACES WHICH ALLOWS PERCOLATION THROUGH THE BASE STONE AND THE SCARIFIED, UNCOMPACTED SUBGRADE, ALLOWING INFILTRATION INTO ADDITIONAL LARGE PORTION OF THE PROJECT INVOLVES REGRADING EXISTING GRASS AND AGRICULTURAL AREAS.
4. THIS PCSM PLAN MAXIMIZES THE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION THROUGH AVOIDING ENCROACHMENT UPON EXISTING DRAINAGE FEATURES, LIMITING THE EARTH DISTURBANCE TO ONLY AREAS NECESSARY FOR THE PROJECT CONSTRUCTION.
5. THIS PCSM PLAN MINIMIZES LAND CLEARING AND GRADING BY CONSTRUCTING IN AN ALREADY-DEVELOPED AREA AND CONSTRUCTING IMPROVEMENTS IN STAGES.
6. THIS PCSM PLAN MINIMIZES SOIL COMPACTION BY CONSTRUCTING OVER ALREADY-DEVELOPED AREAS AND INSTALLING INFILTRATION WATER QUALITY BMPs TO THE MAXIMUM EXTENT FEASIBLE.
7. THIS PCSM PLAN UTILIZES OTHER STRUCTURAL OR NON-STRUCTURAL BMPs THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF, INCLUDING BIO-INFILTRATION BASINS AND SUBSURFACE INFILTRATION BEDS.

PCSM REPORT REFERENCE

REFER TO THE APPROVED PCSM REPORT TITLED "NPDES PCSM MODULE 2/POST CONSTRUCTION STORMWATER MANAGEMENT REPORT FOR WESTTOWN SCHOOL OAK LANE PROJECT" DATED JANUARY 21, 2023, WITH A REVISION DATE OF SEPTEMBER 18, 2023 FOR COMPLETE SUPPORTING CALCULATIONS AND DOCUMENTATION REGARDING THE PROPOSED STORMWATER MANAGEMENT IMPROVEMENTS DEPICTED IN THIS PLAN SET.

SURFACE WATERS

RECEIVING SURFACE WATER: EAST BRANCH CHESTER CREEK DESIGNATED USE: TSF, MF

RECEIVING SURFACE WATER: UNT. TO EAST BRANCH CHESTER CREEK DESIGNATED USE: TSF, MF

Stormwater BMP Information Chart 5.B revised March 15, 2016

Proposed Structural BMPs (site specific)	Infiltration Information				Drainage Information				BMP Information				Elevation of E&S Sediment Basin Bottom (if applies)					
	Measured Infiltration Rate <sup>1</sup> in./hr.	Factor of Safety	Design Infiltration Rate in./hr.	Dewatering Time <sup>1</sup> hrs.	Total Drainage Area to BMP sq. ft.	Total Impervious Drainage Area to BMP sq. ft.	Infiltration BMP Surface Area sq. ft.	Total Drainage Area Loading Ratio <sup>2</sup>	Impervious Area Loading Ratio <sup>3</sup>	Volume of Runoff Tributary to BMP During the 2yr/24hr Design Storm <sup>4</sup> cf	Calculated Infiltration Volume (from storms up to and including 2yr/24hr) <sup>5</sup> cf	Calculated Managed Volume (from storms up to and including 2yr/24hr) <sup>6</sup> cf		Maximum water surface elevation in BMP from 2yr storm <sup>7</sup>	Infiltration Elevation Bottom of Bed/ Basin <sup>8</sup>	Elevation of Infiltration Test <sup>8</sup>		
BMP 6.4.2 Infiltration Basin	BMP 1	0.81	2	0.44	33.7	N/E @ 285	216,893	95304	11,329	19.1	5	19,880	11,844	15,322	290.57	288.5(sq)/289.5(ft)	287, 288.5, 289	289.5
	BMP 4	1.67	2	0.84	16.7	GW @ 307	424,430	15823	18,641	22.8	0.8	25,095	18,850	311.01		309.0		310.0
BMP 6.4.3 Subsurface Infiltration Bed	BMP 2	4.65	2	2.32	1.7	N/E @ 312	96,824	96,824	75,725	1	1	24,426	24,426	24,426	316.75	316.0	315.5/316	n/a
	BMP 3	2.02	2	1.01	10.8	N/E @ 315	96,824	96,824	26,795	4	4	24,426	24,426	24,426	321.04	319.0	318.5/319.5	n/a

All information should be based on the 2-year/24-hour storm. Provide page numbers from the stormwater narrative identifying the location of the above information.

<sup>1</sup> Can include active infiltration time - dewatering time should not exceed 72 hours after the 2-year/24-hour storm  
<sup>2</sup> Depth to limiting zone is recommended to be at least 2 ft below infiltration testing elevation/proposed infiltration elevation.  
<sup>3</sup> A maximum of 2 feet of Hydraulic head is recommended.  
<sup>4</sup> Provide supporting field notes/documentation from soil evaluation.  
<sup>5</sup> This value should be greater than or equal to the Volume to be Infiltrated or Managed by the BMP.  
<sup>6</sup> A maximum of 1.5 is recommended.  
<sup>7</sup> A maximum of 5:1 is recommended; however, in carbonate geology areas, a maximum of 3:1 is recommended.  
<sup>8</sup> Calculated runoff volume that is managed in ways other than infiltration to address 25 PA Code Ch 102.8(g)(2)  
<sup>9</sup> The infiltration testing information should be located on the plan view of the PCSM Plan and should include infiltration test elevation and rate.

Any deviations from the recommendations above should be adequately justified by a qualified professional and included with the application.

NOTE: This chart is for summary purposes only and should be consistent with all design calculations and worksheets.

SOILS

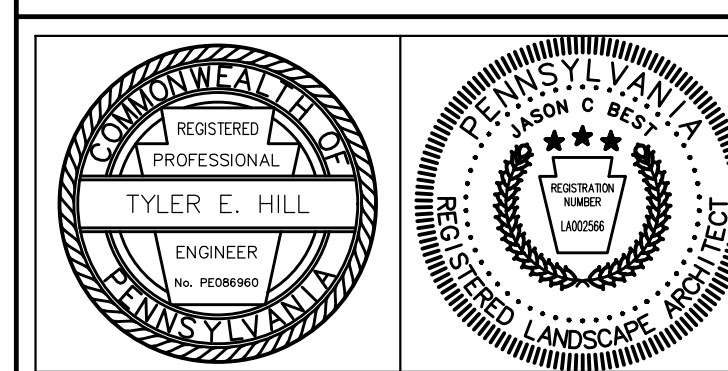
- CoB CALIFON LOAM, 3 TO 8 PERCENT SLOPES, H5G 'D'
- GqC GLENELG SILT LOAM, 8 TO 15 PERCENT SLOPES, H5G 'B'
- MaA MANOR LOAM, 0 TO 3 PERCENT SLOPES, H5G 'B'
- MoB MANOR LOAM, 3 TO 8 PERCENT SLOPES, H5G 'B'
- MoB MANOR LOAM, 8 TO 15 PERCENT SLOPES, H5G 'B'

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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743 S. BROAD ST.  
LITITZ, PA 17543  
(717) 626-7271  
elagroup.com



POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT SUBJECT: GENERAL PLAN NOTES FOR WESTTOWN SCHOOL - OAK LANE PROJECTS WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA CLIENT: WESTTOWN SCHOOL 975 WESTTOWN ROAD WEST CHESTER, PA 19382 (610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	N/A

DRAWING: C:\Users\jason\Acad\Docs\ELA\_Group\1091-001\_Oak Lane Project\Project Files\CAD Data\LD-Final\Cover.dwg - PLOTTED: Sep 27, 2023 10:33 am



## CONSTRUCTION SEQUENCE

(CRITICAL STAGES OF IMPLEMENTATION IN BOLD AND UNDERLINED BELOW)

**CONTRACTOR TO ASSURE THAT A LICENSED PROFESSIONAL OR THEIR DESIGNEE IS PRESENT ON SITE DURING ALL CRITICAL STAGES IDENTIFIED BELOW AS UNDERLINED.**

CONSTRUCTION IS EXPECTED TO BEGIN IN THE SPRING OF 2014. AFTER ALL MUNICIPAL AND STATE APPROVALS HAVE BEEN RECEIVED, CONSTRUCTION WILL PROCEED IN A TIMELY MANNER IN ORDER TO LIMIT THE POTENTIAL FOR ACCELERATED EROSION AND SEDIMENTATION. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONSTRUCTION SEQUENCE PRIOR TO BREAKING GROUND TO MINIMIZE THE POTENTIAL FOR ANY SCHEDULING CONFLICTS. THE SEQUENCE OF EARTHMOVING ACTIVITIES SHALL BE APPROXIMATED AS FOLLOWS:

### CONSTRUCTION STAGING NOTES

- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE CHESTER COUNTY CONSERVATION DISTRICT AND WESTTOWN TOWNSHIP.
- BEFORE COMMENCEMENT OF EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE E45 PLAN PREPARER, PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES, AND REPRESENTATIVES OF THE CHESTER COUNTY CONSERVATION DISTRICT AND WESTTOWN TOWNSHIP TO AN ON-SITE PRE-CONSTRUCTION MEETING.
- AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INCORPORATED AT 1-800-242-1116 TO LOCATE BURIED UTILITIES.
- THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF APPENDIX 64, EROSION AND SEDIMENT CONTROL, RULES AND REGULATIONS, TITLE 28, PART I, DEPARTMENT OF ENVIRONMENTAL RESOURCES, SUB-PART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102 - EROSION CONTROL.
- PROCEDURES ENSURING THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH DEP / COUNTY CONSERVATION DISTRICT REGULATIONS. INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, AND SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR THE PROPER MANAGEMENT OF WASTE MATERIALS AND LITTER CONTROL, WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED TO DISPOSAL.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- UPON COMPLETION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY, DISTURBED AREAS OF THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION. EROSION AND SEDIMENT CONTROL BMP'S SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT STABILIZATION IS ACHIEVED. IN ORDER FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE/PHASE OF AN ACTIVITY TO BE CONSIDERED PERMANENTLY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING: (1) A MINIMUM UNIFORM 10% PERENNIAL VEGETATIVE COVER WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION. (2) AN ACCEPTABLE BMP, WHICH PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.
- NOTE THAT THE PADEP NPDES REQUIRES INSPECTION OF THE POST CONSTRUCTION STORMWATER MANAGEMENT FACILITIES BY A LICENSED PROFESSIONAL. SEE CRITICAL STAGES OF PCSM IMPLEMENTATION.

### GENERAL SEQUENCING OF CONSTRUCTION ACTIVITIES:

- DELINEATE LIMITS OF DISTURBANCE AS PART OF THE GRADING/STAKING PROCESS. LIMITS OF DISTURBANCE SHALL BE DEFINED BY THE LIMITS OF PROPOSED GRADING OR AS INDICATED ON THE PLANS.
- INSTALL STABILIZED CONSTRUCTION ENTRANCES #1 & #2 IN ACCORDANCE WITH THE PLAN LOCATION AND DETAILS PROVIDED. RCE #3 MAY BE INSTALLED AT THE SITE TIME OR LATER IN CONSTRUCTION AS THE CONTRACTOR SEES NECESSARY. AT THE DISCRETION OF THE CONTRACTOR, THE RCE #3 MAY BE INSTALLED CONCURRENTLY WITH RCE #1 INSTALLATION TO AVOID DISTURBING THE ENTRANCE LATER IN CONSTRUCTION. INLETS I-A10 AND I-A11, AS WELL AS THE PIPE CONNECTING THESE INLETS MAY SIMILARLY BE INSTALLED CONCURRENTLY WITH RCE #3 INSTALLATION. SEDIMENT LADEN RUNOFF AND TRACKING OF MUD ONTO THE PUBLIC ROADWAY IS NOT PERMITTED.
- STABILIZE AREA(S) THAT WILL BE USED FOR CONSTRUCTION STAGING. THE LOCATION OF STAGING AREA(S) IS TO BE APPROVED BY THE DESIGN OPERATORS DISTRICT AND WESTTOWN TOWNSHIP AT THE TIME OF THE PRE-CONSTRUCTION MEETING.
- INSTALL ALL PERIMETER E45 CONTROLS SUCH AS COMPOST FILTE SOCKS AND SILT FENCES.
- CLEAR AND GRUB ONLY THE AREAS NECESSARY TO INSTALL PERIMETER BMP'S, SUCH AS COMPOST FILTER SOCK, SILT FENCE, AND OUTLET FILTERS, AS SHOWN ON THE PLAN.
- INSTALL ALL PERIMETER CONTROLS IN THE LOCATIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE DETAILS PROVIDED. SOCK SHALL BE INSTALLED PARALLEL TO THE CONTOURS OR CONSTRUCTED AT LEVEL ALIGNMENT. BOTH ENDS OF THE SOCK SECTIONS MUST EXCEED AT LEAST 45 DEGREES TO THE MAIN FILTER SOCK ALIGNMENT. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH ONE-HALF OF THE HEIGHT OF THE EXPOSED FILTER SOCK OR AS DIRECTED BY THE ENGINEER. ANY SECTION THAT BECOMES COMPROMISED MUST IMMEDIATELY BE REPLACED OR AN ADDITIONAL FILTER SOCK, SECTION DEPENDANT ON ENGINEER AND/OR MANUFACTURER RECOMMENDATIONS.
- DELINEATE AREA(S) NEEDED FOR STAGING WITHIN THE LIMITS SHOWN ON THE PLANS. ALTERNATE OR ADDITIONAL LOCATIONS SHALL BE APPROVED BY THE CONSERVATION DISTRICT AND WESTTOWN TOWNSHIP.
- THE CONSTRUCTION STAGING AREA MUST BE IMMEDIATELY STABILIZED AND MAINTAINED IN ORDER TO PREVENT ANY SEDIMENT LADEN RUNOFF. STONE OR OTHER SUITABLE STABILIZATION FOR THE STAGING AREA SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES. SEDIMENT LADEN RUNOFF IS NOT PERMITTED FROM THE CONSTRUCTION STAGING AREAS.
- WHEN ALL PERIMETER E45 CONTROLS HAVE BEEN INSTALLED EARTHWORK MAY COMMENCE. STRIP AND STOCKPILE TOPSOIL ONLY FROM AREAS NECESSARY.
- AFTER TOPSOIL HAS BEEN REMOVED FROM THE PROPOSED SYNTHETIC TURF FIELDS AND BMP'S 2 AND 3, FIELD STAKE AND INSTALL HIGH VISIBILITY CONSTRUCTION FENCING AROUND THE LIMITS OF THESE BMP'S. THE FENCING SHALL REMAIN IN PLACE TO PREVENT CONSTRUCTION TRAFFIC FROM COMPACTING THESE AREAS UNTIL SUCH TIME THAT EXCAVATION OF THE BMP'S IS READY TO COMMENCE.
- BEgin BY CONSTRUCTING SEDIMENT BASIN 4 (SEE SITE SPECIFIC SEQUENCE OF BMP INSTALLATION).**
- CONCURRENTLY, OR FOLLOWING THE CONSTRUCTION OF SEDIMENT BASIN 4, BEGIN CONSTRUCTION OF SEDIMENT TRAP 1 (SEE SITE SPECIFIC SEQUENCE OF BMP INSTALLATION).**
- BEGIN REMOVING EXISTING ATHLETIC IMPROVEMENTS AND OTHER FEATURES TO BE REMOVED.
- DUE TO THE LIMITED DRAINAGE AREAS TO SEDIMENT TRAP 1 AND SEDIMENT BASIN 4 DURING EARLY STAGES OF CONSTRUCTION, BULK EARTHMOVING IS PERMITTED TO OCCUR CONCURRENTLY WITH INSTALLATION OF THE SEDIMENT REMOVAL FACILITIES.
- DURING BULK EARTHMOVING, THE CONTRACTOR SHOULD MAINTAIN A DIVERSION BERM AT THE GREST OF THE SOUTHEASTERN FILL SLOPE TO DIVERT RUNOFF FROM THE SITE TO SEDIMENT BASIN 4 TO THE MAXIMUM EXTENT PRACTICAL.
- CONTINUE BULK EARTHMOVING, INSTALL PIPE RUNS FROM EH-B2 TO I-B6 AND MH-B3 TO I-B14 AS PRACTICAL.
- AS BULK EARTHWORK NEARS COMPLETION IN THE AREA OF THE PROPOSED PARKING LOT BEGIN INSTALLING PROPOSED SEWER LINE AND STORM PIPE RUN FROM EH-A2 TO I-A11.
- FINE GRADE THE PARKING AREA AND INSTALL STONE SUBBASE AS SOON AS POSSIBLE.
- BEGIN CONSTRUCTION OF THE BUILDINGS LOCATED BETWEEN THE PARKING LOT AND FIELDS.
- CONCURRENTLY FINE GRADE SYNTHETIC TURF FIELD AREAS AND BEGIN EXCAVATION OF INFILTRATION BMP'S 2 AND 3 (SEE SITE SPECIFIC SEQUENCE OF BMP INSTALLATION, DUE TO SHALLOW SUBGRADE ELEVATIONS, THE CONTRACTOR IS TO TAKE THE UTMOST CAUTION TO GRADE THESE AREAS AND EXCAVATION OF THE INFILTRATION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SUBGRADE REMAINS UNCOMPACTED AND THAT DESIGN INFILTRATION RATES ARE ACHIEVED. IT IS RECOMMENDED THAT THE INFILTRATION AREAS BE MARKED OR FENCED OFF DURING FINE GRADING OF THE FIELD PERIMETER AREAS.**
- AS FINE GRADING AND BUILDING FRAMING NEAR COMPLETION BEGIN INSTALLING OTHER SITE IMPROVEMENTS SUCH AS CURB, SIDEWALK, FENCING, DUGOUTS, SOFTBALL/BASEBALL IMPROVEMENTS, ETC. SPREAD TOPSOIL AND SEED.
- WHEN ALL AREAS TRIBUTARY TO INFILTRATION BASINS 1 AND 4 HAVE BEEN SUBSTANTIALLY STABILIZED, CONTACT THE DESIGN ENGINEER, COUNTY CONSERVATION DISTRICT, AND WESTTOWN TOWNSHIP TO CONFIRM THE CONDITIONS AND BEGIN CONSTRUCTING THE SEDIMENT REMOVAL FACILITIES TO PERMANENT PCSM BMP'S (SEE SITE SPECIFIC SEQUENCE OF BMP INSTALLATION).**
- FINISH SYNTHETIC TURF FIELD INSTALLATION.**
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER SHALL CONTACT THE CHESTER COUNTY CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO THE REMOVAL/CONVERSION OF THE E45 BERM.
- WHEN THE SITE HAS ACHIEVED A UNIFORM 10% VEGETATIVE COVER, THE REMAINING TEMPORARY SITE EROSION CONTROLS (SUCH AS FILTER SOCKS, INLET PROTECTION SEDIMENT TRAP, ETC.) SHALL BE REMOVED. ANY DISTURBANCE CREATED DURING THIS PROCEDURE SHALL BE STABILIZED IMMEDIATELY THROUGH SEEDING AND MULCHING. SEE SITE SPECIFIC SEQUENCE OF BMP INSTALLATION FOR NOTES REGARDING THE CONVERSION OF TEMPORARY SEDIMENT REMOVAL FACILITIES TO PERMANENT STORMWATER BMP'S.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMP'S, INSTALLATION OF ALL PERMANENT BMP'S, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE CHESTER COUNTY CONSERVATION DISTRICT AND WESTTOWN TOWNSHIP FOR A FINAL INSPECTION.

## SITE SPECIFIC SEQUENCE OF BMP INSTALLATION

### BMP 1 SEQUENCE OF CONSTRUCTION:

- BEGIN CONSTRUCTION BY STRIPPING TOPSOIL FROM THE AREA AND EXCAVATE KEY TRENCH FOR BASIN BERM. THE KEY TRENCH SHOULD ROLLED OR TAMPED PRIOR TO CLAY CORE INSTALLATION. A GEOTECHNICAL PROFESSIONAL SHALL BE ON SITE DURING CONSTRUCTION OF THE BASIN BERM/CLAY CORE.
- INSTALL THE ENDPALL/OUTLET PROTECTION, OUTLET PIPE, ANTI-SEEP COLLAR(S), AND OUTLET STRUCTURE.
- BEGIN INSTALLING CLAY CORE AND BASIN BERM. CONCURRENTLY, EXCAVATION OF THE BASIN AREA MAY BEGIN AT THE CONTRACTOR'S DISCRETION TO PUSH AND SPREAD THE SOILS ACROSS THE BOTTOM.
- EXCAVATE BASIN TO FINISHED GRADE ELEVATION. DO NOT EXCAVATE TO SUBGRADE ELEVATION OR INSTALL AMENDED SOILS UNTIL ALL IMPROVEMENTS ARE CONSTRUCTED AND THE ENTIRE CONTRIBUTING AREA HAS BEEN STABILIZED. INSTALL DEWATERING FACILITY/SKIMMER.
- FINE GRADE BASIN SIDES/BERM AND EMERGENCY SPILLWAY. INSTALL EROSION CONTROL MATTING AND STABILIZE ALL SIDE SLOPES WITH SLOPE MATTINGS.
- WELL ALL SITE IMPROVEMENTS HAVE BEEN CONSTRUCTED AND THE CONTRIBUTING AREA STABILIZED BEGIN BASIN CONVERSION PROCESS.
- REMOVE DEWATERING FACILITY/SKIMMER.
- EXCAVATE BASIN BOTTOM TO SUBGRADE ELEVATION, BEGINNING IN ONE END AND WORKING BACKWARDS WITH THE EXCAVATOR AS TO MAINTAIN A MINIMUM 12" OF COVER BETWEEN SUBGRADE AND EQUIPMENT TRACKS.
- IN-SITU INFILTRATION TESTING SHALL BE CONDUCTED AT THE SUBGRADE ELEVATION PRIOR TO AMENDED SOIL PLACEMENT. BASED ON PRELIMINARY GEOTECHNICAL TESTING, AN AREA OF UNSUITABLE SOIL MAY BE PRESENT IN THE AREA OF TP-15 WHICH SHOULD BE INVESTIGATED BY A GEOTECHNICAL PROFESSIONAL IN ORDER TO DETERMINE THE EXTENT OF UNSUITABLE SOIL AND TO DETERMINE AN APPROPRIATE RESTORATION TECHNIQUE (SEE INFILTRATION SYSTEM CONSTRUCTION NOTES).
- THE CONTRACTOR SHALL SCHEDULE INFILTRATION IN ADVANCE TO ALLOW FOR TESTING IMMEDIATELY AFTER EXCAVATION IN ORDER TO ENSURE THAT THE BACKFILLING OF STONE IS ACCOMPLISHED IN A TIMELY MANNER. THE INFILTRATION SUBGRADE MAY NOT BE EXPOSED FOR MORE THAN 48 HOURS AND SHOULD BE OPENED DURING A PERIOD OF DRY WEATHER.
- FOLLOWING SUBGRADE APPROVAL, BEGIN INSTALLING THE AMENDED SOILS UTILIZING A METHOD WHICH DOES NOT CAUSE COMPACTION TO THE AMENDED SOIL MATERIALS OR THE NATIVE SUBGRADE. AN APPROPRIATE METHOD WOULD BE TO DUMP THE AMENDED SOIL ALONG THE EASTERN EDGE OF THE BASIN AND UTILIZE A TRACKED SKID LOADER TO PUSH AND SPREAD THE SOILS ACROSS THE BOTTOM, FREQUENTLY SCARIFYING THE SOIL WITH THE BUCKET TEETH.
- IT IS RECOMMENDED THAT THE CONTRACTOR HAS A FROST HOOK/RIPPER IMPLEMENT ON SITE FOR SUBGRADE/AMENDED SOIL PREPARATION IN THE EVENT THAT COMPACTION IS OBSERVED, SOIL BLENDING/RESTORATION IS NECESSARY, OR OTHER CONSTRUCTION TECHNIQUES ARE REQUIRED.
- IF THE UTILIZED AMENDED SOIL BLEND DIFFERS FROM THE SPECIFIED PROPRIETARY BLEND OR IS MIXED ON-SITE ADDITIONAL INFILTRATION TESTING MAY BE REQUIRED AT THE DISCRETION OF THE DESIGN ENGINEER, MUNICIPALITY, OR CONSERVATION DISTRICT.
- FOLLOWING AMENDED SOIL PLACEMENT/APPROVAL, INSTALL UNDERDRAINS AND CONNECT TO OUTLET STRUCTURE. IMMEDIATELY STABILIZE BASIN BOTTOM.

### BMP 4 SEQUENCE OF CONSTRUCTION:

- BEGIN CONSTRUCTION BY STRIPPING TOPSOIL FROM THE AREA AND EXCAVATE KEY TRENCH FOR BASIN BERM. THE KEY TRENCH SHOULD ROLLED OR TAMPED PRIOR TO CLAY CORE INSTALLATION. A GEOTECHNICAL PROFESSIONAL SHALL BE ON SITE DURING CONSTRUCTION OF THE BASIN BERM/CLAY CORE.
- INSTALL THE ENDPALL/OUTLET PROTECTION, OUTLET PIPE, ANTI-SEEP COLLAR(S), AND OUTLET STRUCTURE.
- BEGIN INSTALLING CLAY CORE AND BASIN BERM. CONCURRENTLY, EXCAVATION OF THE BASIN AREA MAY BEGIN AT THE CONTRACTOR'S DISCRETION TO PUSH AND SPREAD THE SOILS ACROSS THE BOTTOM.
- EXCAVATE BASIN TO FINISHED GRADE ELEVATION. DO NOT EXCAVATE TO SUBGRADE ELEVATION OR INSTALL AMENDED SOILS UNTIL ALL IMPROVEMENTS ARE CONSTRUCTED AND THE ENTIRE CONTRIBUTING AREA HAS BEEN STABILIZED. INSTALL DEWATERING FACILITY/SKIMMER.
- FINE GRADE BASIN SIDES/BERM AND EMERGENCY SPILLWAY. INSTALL EROSION CONTROL MATTING AND STABILIZE ALL SIDE SLOPES WITH SLOPE MATTINGS.
- WELL ALL SITE IMPROVEMENTS HAVE BEEN CONSTRUCTED AND THE CONTRIBUTING AREA STABILIZED BEGIN BASIN CONVERSION PROCESS.
- REMOVE DEWATERING FACILITY/SKIMMER.
- EXCAVATE BASIN BOTTOM TO SUBGRADE ELEVATION, BEGINNING IN ONE END AND WORKING BACKWARDS WITH THE EXCAVATOR AS TO MAINTAIN A MINIMUM 12" OF COVER BETWEEN SUBGRADE AND EQUIPMENT TRACKS.
- IN-SITU INFILTRATION TESTING SHALL BE CONDUCTED AT THE SUBGRADE ELEVATION PRIOR TO AMENDED SOIL PLACEMENT (SEE INFILTRATION SYSTEM CONSTRUCTION NOTES).
- THE CONTRACTOR SHALL SCHEDULE INFILTRATION IN ADVANCE TO ALLOW FOR TESTING IMMEDIATELY AFTER EXCAVATION IN ORDER TO ENSURE THAT THE BACKFILLING OF STONE IS ACCOMPLISHED IN A TIMELY MANNER. THE INFILTRATION SUBGRADE MAY NOT BE EXPOSED FOR MORE THAN 48 HOURS AND SHOULD BE OPENED DURING A PERIOD OF DRY WEATHER.
- FOLLOWING SUBGRADE APPROVAL, BEGIN INSTALLING THE AMENDED SOILS UTILIZING A METHOD WHICH DOES NOT CAUSE COMPACTION TO THE AMENDED SOIL MATERIALS OR THE NATIVE SUBGRADE. AN APPROPRIATE METHOD WOULD BE TO DUMP THE AMENDED SOIL IN THE SOUTHERN END OF THE BASIN AND, DUE TO THE SIZE OF THE BASIN, UTILIZE A SMALL TRACKED BULLDOZER, SUCH AS A CAT D3, TO PUSH AND SPREAD THE SOILS ACROSS THE BOTTOM, FREQUENTLY SCARIFYING THE SOIL WITH THE BUCKET TEETH OR A REAR-MOUNTED FROST HOOK/RIPPER.
- IT IS RECOMMENDED THAT THE CONTRACTOR HAS A FROST HOOK/RIPPER IMPLEMENT ON SITE FOR SUBGRADE/AMENDED SOIL PREPARATION IN THE EVENT THAT COMPACTION IS OBSERVED, SOIL BLENDING/RESTORATION IS NECESSARY, OR OTHER CONSTRUCTION TECHNIQUES ARE REQUIRED. GIVEN THE TOPOGRAPHY IN THE AREA OF BASIN 4 AND THE LIKELIHOOD OF COMPACTION DURING INSTALLATION AND EXCAVATOR WITH A FROST HOOK/RIPPER MAY BE REQUIRED TO PROVIDE ADEQUATE SCARIFICATION/DE-COMPACTION.
- IF THE UTILIZED AMENDED SOIL BLEND DIFFERS FROM THE SPECIFIED PROPRIETARY BLEND OR IS MIXED ON-SITE ADDITIONAL INFILTRATION TESTING MAY BE REQUIRED AT THE DISCRETION OF THE DESIGN ENGINEER, MUNICIPALITY, OR CONSERVATION DISTRICT.
- FOLLOWING AMENDED SOIL PLACEMENT/APPROVAL, INSTALL UNDERDRAINS AND CONNECT TO OUTLET STRUCTURE. IMMEDIATELY STABILIZE BASIN BOTTOM.

### BMP 2 SEQUENCE OF CONSTRUCTION:

- BEGIN BY STRIPPING TOPSOIL FROM THE ENTIRE SYNTHETIC TURF FIELD AREA.
- ROUGH GRADE FIELD AREA TO PERIMETER SUBGRADE ELEVATIONS AND BEGIN PLACING FILL IN THE SOUTHEASTERN END OF THE FIELD.
- BEGIN EXCAVATING PERIMETER TRENCHES AND INFILTRATION STORAGE VOLUME AREA BEGINNING AT EITHER END OF THE FIELD AND WORKING BACKWARDS AS TO KEEP THE EXCAVATOR OFF OF THE SUBGRADE.
- IN-SITU INFILTRATION TESTING IS REQUIRED TO CONFIRM THE INFILTRATIVE CAPACITY OF THE SUBGRADE HAS BEEN MAINTAINED THROUGH THE EXCAVATION PROCESS. IF EQUIPMENT OR METHOD OTHER THAN THAT DESCRIBED HEREIN IS UTILIZED A GEOTECHNICAL PROFESSIONAL SHALL PROVIDE OVERSIGHT FOR PRESERVING, RESTORING, OR ENHANCING THE INFILTRATION CAPACITY OF THE SUBGRADE SOILS.
- THE CONTRACTOR SHALL SCHEDULE INFILTRATION IN ADVANCE TO ALLOW FOR TESTING IMMEDIATELY AFTER EXCAVATION IN ORDER TO ENSURE THAT THE BACKFILLING OF STONE IS ACCOMPLISHED IN A TIMELY MANNER. THE INFILTRATION SUBGRADE MAY NOT BE EXPOSED FOR MORE THAN 48 HOURS AND SHOULD BE OPENED DURING A PERIOD OF DRY WEATHER.
- FINE GRADE REMAINING FIELD SUBGRADE (OUTSIDE OF INFILTRATION AREA) AND INSTALL DRAINAGE COMPONENTS (I.E. GEOTEXTILE FABRIC ON SIDEWALKS, PERIMETER COLLECTOR PIPES, OUTLET STRUCTURE, ETC.)
- INSTALL FIELD CURBING.
- BEGIN SPREADING STONE SUBBASE UTILIZING STONE THROWER OR BULLDOZER. CONSTRUCTION EQUIPMENT IS NOT PERMITTED ON THE INFILTRATION SUBGRADE AT ANY TIME DURING CONSTRUCTION.
- CAP STONE SUBGRADE WITH LEVELING COURSE AND FINE GRADE TO FINISHED GRADE.
- INSTALL TURF CARPET.

### BMP 3 SEQUENCE OF CONSTRUCTION:

- TOPSOIL FROM THE ENTIRE SYNTHETIC TURF FIELD AREA.
- ROUGH GRADE FIELD AREA TO PERIMETER SUBGRADE ELEVATIONS AND BEGIN PLACING FILL IN THE SOUTHEASTERN END OF THE FIELD.
- BEGIN EXCAVATING PERIMETER TRENCHES AND INFILTRATION STORAGE VOLUME AREA BEGINNING AT EITHER END OF THE FIELD AND WORKING BACKWARDS AS TO KEEP THE EXCAVATOR OFF OF THE SUBGRADE.
- IN-SITU INFILTRATION TESTING IS REQUIRED TO CONFIRM THE INFILTRATIVE CAPACITY OF THE SUBGRADE HAS BEEN MAINTAINED THROUGH THE EXCAVATION PROCESS. IF EQUIPMENT OR METHOD OTHER THAN THAT DESCRIBED HEREIN IS UTILIZED A GEOTECHNICAL PROFESSIONAL SHALL PROVIDE OVERSIGHT FOR PRESERVING, RESTORING, OR ENHANCING THE INFILTRATION CAPACITY OF THE SUBGRADE SOILS.
- THE CONTRACTOR SHALL SCHEDULE INFILTRATION IN ADVANCE TO ALLOW FOR TESTING IMMEDIATELY AFTER EXCAVATION IN ORDER TO ENSURE THAT THE BACKFILLING OF STONE IS ACCOMPLISHED IN A TIMELY MANNER. THE INFILTRATION SUBGRADE MAY NOT BE EXPOSED FOR MORE THAN 48 HOURS AND SHOULD BE OPENED DURING A PERIOD OF DRY WEATHER.
- FINE GRADE REMAINING FIELD SUBGRADE (OUTSIDE OF INFILTRATION AREA) AND INSTALL DRAINAGE COMPONENTS (I.E. GEOTEXTILE FABRIC ON SIDEWALKS, PERIMETER COLLECTOR PIPES, OUTLET STRUCTURE, ETC.)
- INSTALL FIELD CURBING.
- BEGIN SPREADING STONE SUBBASE UTILIZING STONE THROWER OR BULLDOZER. CONSTRUCTION EQUIPMENT IS NOT PERMITTED ON THE INFILTRATION SUBGRADE AT ANY TIME DURING CONSTRUCTION.
- CAP STONE SUBGRADE WITH LEVELING COURSE AND FINE GRADE TO FINISHED GRADE.
- INSTALL TURF CARPET.

## SOIL LIMITATIONS AND RESOLUTIONS

THE FOLLOWING RESOLUTIONS ADDRESS TYPICAL ON-SITE SOIL USE LIMITATIONS THAT MAY BE ENCOUNTERED AND GENERIC RESOLUTIONS. A QUALIFIED GEOTECHNICAL PROFESSIONAL SHALL BE CONSULTED DURING APPROPRIATE STAGES/PHASES OF CONSTRUCTION TO EVALUATE, MAKE RECOMMENDATIONS, AND PROVIDE REVISIONS FOR ALL SOIL USE LIMITATIONS, CONSTRUCTION TECHNIQUES, AND OTHER SOILS-RELATED ITEMS.

- CAVING OF CUTBANKS:** EXCAVATIONS SHOULD BE ADEQUATELY SLOPED, BENCHED, OR SUPPORTED TO MINIMIZE COLLAPSE AND TO PROTECT PERSONNEL. ALL EXCAVATIONS SHOULD BE COMPLETED IN ACCORDANCE WITH OSHA REQUIREMENTS.
- CORROSION OF CONCRETE:** GENERALLY NOT WITNESSED DURING CONSTRUCTION AS THIS OCCURS OVER EXTENDED PERIODS OF TIME. WHERE SOILS ARE HIGH IN CHLORIDES, LOH IN PH, OR WHERE SOILS HAVE HIGH MOISTURE CONTENT, CORROSION OF STEEL IS ACCELERATED. IF ON-SITE SOILS ARE FOUND TO BE HIGH IN CHLORIDES, LOH IN PH, OR HIGH IN MOISTURE AS IS TYPICAL IN CLAYEY SOILS, THE THICKNESS OF THE CONCRETE AND THE AMOUNT OF REINFORCING STEEL SHOULD BE INCREASED ACCORDING TO THE RECOMMENDATIONS OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI). SOILS WHERE STEEL IS BURIED OR PRESENT SHOULD BE KEPT DRY, IDEALLY WITH LESS THAN 17.5% MOISTURE CONTENT. MAINTAINING DRY SOILS ALSO PREVENTS CHLORIDES FROM BEING MOISTURE SENSITIVE TO STEEL. FINALLY, LINING THE SOIL CAN RAISE THE PH TO 7.10, WHICH IS NOT CONSIDERED CORROSIVE TO STEEL.
- DISOUGHTY, DROUGHT VULNERABLE SOILS** HAVE AVAILABLE WATER STORAGE WITHIN THE ROOT ZONE FOR GROWTH. THESE SOILS ARE MORE SUSCEPTIBLE TO DROUGHT. IRRIGATION PRACTICES MAY BE NECESSARY FOR CERTAIN LANDSCAPING APPLICATIONS. PROVIDE SALT SUPPRESSION TECHNIQUES AS NECESSARY OR WHERE REQUIRED.
- EASILY ERODIBLE SOILS:** SITES WITH EASILY ERODIBLE SOILS SHOULD BE SLOPED TO PROMOTE DRAINAGE AWAY FROM WORK AREAS. DISTURBED SOILS SHOULD BE SEALED WITH A SMOOTH DRUM ROLLER EACH DAY AND PRIOR TO PRECIPITATION NETWORKS OF HALL/CONSTRUCTION ROADS SHOULD BE ESTABLISHED AND CONSTRUCTION TRAFFIC RESTRICTED TO USING THEM IN ORDER TO KEEP DISTURBANCE MINIMAL. DISTURBED AREAS SHOULD BE SEEDED AND MULCHED IMMEDIATELY.
- DEPTH TO SATURATED ZONE/SEASONAL HIGH WATER TABLE:** IF GROUNDWATER IS ENCOUNTERED DURING TRENCHING PROCEDURES, THE SEDIMENT-LADEN WATER SHALL BE PUMPED TO AN APPROVED SEDIMENT-REMOVAL FACILITY SUCH AS A SILT FILTER BAG AND DISCHARGED AT A STABILIZED POINT OF DISCHARGE.
- FROST ACTION FILL AND/OR BACKFILL** SHALL NOT BE PLACED ON FROZEN OR SATURATED GROUND.
- HYDRIC/HYDRIC INCLUSIONS:** REFER TO THE SITE PLANS FOR LOCATION(S) OF WETLANDS AND THE APPLICABLE WETLANDS DELINEATION REPORT FOR DETAILED DESCRIPTION OF WETLANDS PRESENT ON SITE. DISTURBANCE WITHIN WETLAND AREAS IS STRICTLY PROHIBITED WITHOUT PADEP AND/OR ARMY CORP AUTHORIZATION.
- LOW STRENGTH AND/SIDE SLOPE PRONE:** STRUCTURAL FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING 10 INCHES IN LOOSE THICKNESS AND COMPACTED WITH A VIBRATORY ROLLER HAVING A MINIMUM STATIC WEIGHT OF 10 TO 12 TONS. A MINIMUM OF 5 OVERLAPPING PASSES OF THE ROLLER SHOULD BE COMPLETED ACROSS THE ENTIRETY OF THE BUILDING PAD AND OTHER STRUCTURAL AREAS. IN AREAS WHERE STRUCTURAL FILL IS PLACED AND COMPACTED WITH HAND-OPERATED COMPACTION EQUIPMENT, A MAXIMUM LOOSE LIFT THICKNESS OF 4 INCHES IS RECOMMENDED. FOLLOWING COMPACTION, PROOF-ROLLING SHOULD BE PERFORMED USING A LOADED, TANDEM-AXLE DUMP TRUCK. ANY LOOSE OR UNSTABLE AREAS ENCOUNTERED DURING PROOF-ROLLING AND COMPACTION SHOULD BE COMPACTED IN PLACE OR REMOVED AND REPLACED WITH STRUCTURAL FILL (AS DEFINED). THE NATIVE ON-SITE STRATUM II SOILS ARE WELL-SUITED FOR USE AS STRUCTURAL FILL AND SHOULD BE USED WHEREVER POSSIBLE. TYPICAL QUANTITIES ARE EXPECTED TO BE LIMITED. STRATUM I SOILS MAY BE USED AS STRUCTURAL FILL BUT ARE EXPECTED TO BE MOISTURE SENSITIVE WITH HIGH SILT AND CLAY CONTENT. ALL FILL SHOULD BE PLACED AT, OR DEVIAE NOMINALLY FROM (1/4" - 2") THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH ASTM D1557 AND COMPACTED TO THE MINIMUM PERCENTAGE OF THE SOIL'S MAXIMUM DRY DENSITY, WHICH IS 98%. CAUTION SHOULD BE EXERCISED TO NOT DISTURB FOUNDATION SUBGRADE SOILS. SHOULD THE SUBGRADE BE DISTURBED, THE SOIL SHOULD BE COMPACTED IN PLACE OR REMOVED UNTIL FIRM SOIL IS ENCOUNTERED AND THE RESULTING MOISTURE CONTENT IS CONTROLLED WITH CONCRETE OR CONTROLLED STRUCTURAL FILL. EVERY EFFORT SHOULD BE MADE TO PREVENT WATER FROM ENTERING OPEN EXCAVATIONS. IT IS RECOMMENDED THAT FOOTING EXCAVATION AND PLACEMENT OF FOUNDATION CONCRETE BE PERFORMED ON THE SAME DAY AND DURING FAIR WEATHER CONDITIONS.
- SLOPE REPERCOLATION:** MAINTAIN POSITIVE GRADES ON SIDE AND SLOPE AWAY FROM BUILDINGS TO REDUCE PONDING OF WATER. IN-SITU INFILTRATION TESTING WITHIN INFILTRATION BMP'S IS REQUIRED AS PART OF THE CRITICAL STAGES OF PCSM IMPLEMENTATION.
- PIPING:** INCORPORATE ANTI-SEEP COLLARS IN SEDIMENT TRAPS AND BASINS AND ON PCSM BASIN DISCHARGE PIPES. INSTALL TRENCH PLUGS (CLAY DIKES) WITHIN STORM DRAINAGE AND UTILITY TRENCHING.
- POOR SOURCE OF TOPSOIL:** PERFORM SOIL TESTING TO DETERMINE APPROPRIATE SUPPLEMENTATION. SOIL AMENDMENTS AND/OR RESTORATION PRACTICES MAY BE NECESSARY IN ORDER TO ESTABLISH PERMANENT VEGETATIVE STABILIZATION.
- SHRINK-SWELL POTENTIAL:** THE SHRINK-SWELL POTENTIAL IS THE EXTENT TO WHICH THE SOIL SHRINKS AS IT DRIES OR SWELLS AS IT BECOMES WET. THE SHRINK-SWELL POTENTIAL IS INFLUENCED BY THE TYPE AND AMOUNT OF CLAY PRESENT WITHIN THE SOIL. ADDITIONAL GEOTECHNICAL TESTING AND OVERSIGHT SHOULD BE EMPLOYED WHERE STRUCTURAL FILL IS REQUIRED. STRUCTURAL FILL MAY NEED TO BE IMPORTED FROM OFFSITE.
- POTENTIAL FOR SINKHOLE FORMATION:** THE POTENTIAL FOR SINKHOLE FORMATION EXISTS IN ALL AREAS WHERE CARBONATE BEDROCK IS PRESENT AND MAY BE INCREASED WHERE SUBSURFACE DRAINAGE PATTERNS ARE ALTERED. THE PCSM BMP'S HAVE BEEN DESIGNED TO MINIMIZE THE RISK FOR SINKHOLE DEVELOPMENT. HOWEVER, DUE TO THE UNPREDICTABLE NATURE OF SINKHOLE FORMATION IT IS NOT POSSIBLE TO ENTIRELY ELIMINATE THE RISK. IN THE EVENT THAT A SINKHOLE IS OBSERVED PRIOR, DURING, OR FOLLOWING CONSTRUCTION A QUALIFIED GEOTECHNICAL PROFESSIONAL SHALL BE CONTACTED TO PROVIDE OVERSIGHT FOR REPAIR.
- POUNDING:** PONDING OCCURS IN AREAS WITH COMPACTED OR POORLY DRAINED SOILS WITHOUT POSITIVE DRAINAGE. THE SITE SHOULD BE DESIGNED TO PROVIDE POSITIVE DRAINAGE TO THE MAXIMUM EXTENT POSSIBLE. DO NOT ALLOW PONDING NEAR STRUCTURAL IMPROVEMENTS OR IN AREAS OF STRUCTURAL FILL. UTILIZE PUMPED WATER FILTER BAGS TO DEWATER EXCAVATIONS AS NECESSARY. SUBSURFACE DRAINAGE(I.E. UNDERDRAINS) SHOULD BE INSTALLED IN AREAS WHERE POST-CONSTRUCTION PONDING IS ANTICIPATED.
- WETNESS:** DUE TO THE HIGH AMOUNT OF FINES (SILT AND CLAY), THE NATIVE ON-SITE SOILS MAY BE MOISTURE SENSITIVE AND DIFFICULT TO PLACE DURING PERIODS OF ADVERSE WEATHER. IN ADDITION, THE OPTIMUM MOISTURE CONTENT OF THE SOILS SHOULD BE DETERMINED IN ORDER TO IN PLACE MOISTURE CONTENT. THEREFORE, THIS SOIL WILL LIKELY REQUIRE MIXING OR SCARIFYING TO REDUCE THE MOISTURE CONTENT TO ACCEPTABLE LEVELS PRIOR TO PLACEMENT. EVERY EFFORT SHOULD BE MADE TO PREVENT WATER FROM ENTERING OPEN FOUNDATION EXCAVATIONS. ANY WATER WHICH MAY ACCUMULATE IN THE BOTTOMS OF THE EXCAVATIONS SHOULD BE REMOVED IMMEDIATELY. IF WETNESS IS PRESENT DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL PROFESSIONAL FOR FURTHER EVALUATION AND INSTRUCTION. THE GEOTECHNICAL PROFESSIONAL SHALL PROVIDE SITE-SPECIFIC MEASURES TO RESOLVE THE SOIL LIMITATIONS.
- A GEOTECHNICAL PROFESSIONAL IS REQUIRED FOR OBSERVATION AND APPROVAL OF PROOF-ROLLING PROCEDURES, STRUCTURAL FILL PLACEMENT, FOUNDATION SUBGRADE REVIEW, STORMWATER BASIN BERM CONSTRUCTION, AND ALL CRITICAL EARTHWORK OPERATIONS.

## HYDRIC SOILS

GROUNDWATER WAS ENCOUNTERED WITHIN FOUR (4) OF THE SIXTEEN (16) TEST PITS (TP-1, TP-8, TP-12 & TP-13) AT DEPTHS RANGING FROM 15'-6" BELOW EXISTING GRADE, AS DOCUMENTED IN THE STORMWATER INFILTRATION FEASIBILITY REPORT, DATED OCTOBER 8, 2010. THERE ARE NO HYDRIC SOILS WITHIN THE LIMIT OF DISTURBANCE. WETLANDS HAVE BEEN IDENTIFIED ADJACENT TO THE PROJECT SITE AS INDICATED ON THE PLANS. NO DISTURBANCE IS PERMITTED WITHIN THE WETLANDS ON-SITE.

REFER TO THE STORMWATER INFILTRATION FEASIBILITY REPORT PREPARED BY ADVANTAGE ENGINEERS, DATED OCTOBER 8, 2010 FOR MORE INFORMATION.

## THERMAL IMPACTS

THERMAL IMPACTS ARE MITIGATED BY IMPLEMENTING MULTIPLE INFILTRATION BMP'S WHICH WILL CAPTURE AND INFILTRATE ALL "FIRST FLUSH" RUNOFF.

## GEOLOGIC FORMATION

ACCORDING TO THE PENNSYLVANIA GEOLOGIC SURVEY'S GEOLOGIC MAP OF THE STATE OF PENNSYLVANIA 1980, THE PROJECT SITE IS UNDERLAIN BY POLIOTIC SCHIST OF THE GLENARM MISSISSAUGON FORMATION (GEOLOGIC SYMBOL X<sub>2</sub>). THE FORMATION INCLUDES LENTICULAR AMPHIBOLITES BODIES HAVING OCEAN-FLOOR BASALT CHEMISTRY.

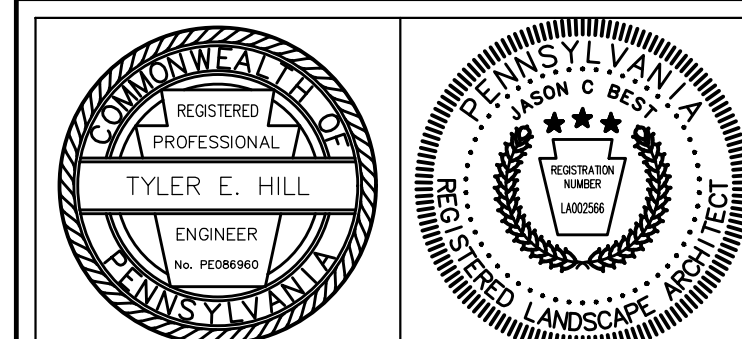
THE UNDERLYING GEOLOGY IS NOT CARBONATE AND THEREFORE NOT SUSCEPTIBLE TO THE FORMATION OF KARST FEATURES. THERE ARE NO KNOWN GEOLOGIC FORMATIONS OR SOIL CONDITIONS THAT MAY HAVE POTENTIAL TO CAUSE POLLUTION DURING OR AFTER EARTH DISTURBANCE ACTIVITIES.

SEE THE STORMWATER INFILTRATION FEASIBILITY REPORT PREPARED BY ADVANTAGE ENGINEERS, DATED OCTOBER 8, 2010 FOR DETAILED GEOLOGIC INFORMATION AND SITE SPECIFIC CONSTRUCTION RECOMMENDATIONS.

## GENERAL WASTE MANAGEMENT NOTES

- PROCEDURES WHICH ENSURE THAT THE PROPER MEASURES FOR THE RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE WILL BE UNDERTAKEN IN ACCORDANCE WITH DEPARTMENT REGULATIONS. INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MEASURES ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. THE CONTRACTOR SHALL PLAN AND IMPLEMENT MEASURES FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL DURING CONSTRUCTION. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL. DISPOSAL OF CONSTRUCTION WASTES SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GUIDELINES AND REGULATIONS (CHAPTER 25 OF THE PENNSYLVANIA CODE).
- ALL BUILDING MATERIALS AND WASTES THAT ARE REMOVED FROM THE SITE SHALL BE RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE §2802 ET SEQ., §2711 ET SEQ., AND §2871 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNSEED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- IF THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF SITE LOCATION, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL RESIDE WITH THE CONTRACTOR, AND SUBJECT TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER. IF THE SITE WILL HAVE EXCESS FILL THAT WILL NEED TO BE EXPORTED TO AN OFF SITE LOCATION, THE RESPONSIBILITY OF CLEAN FILL DETERMINATION AND ENVIRONMENTAL DUE DILIGENCE WILL BE ON THE GEOTECHNICAL ENGINEER, ON BEHALF OF THE APPLICANT.
- DEFINITIONS AND ENVIRONMENTAL DUE DILIGENCE
  - 4.1. CLEAN FILL: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.)
  - 4.1.1. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE.
  - 4.1.2. ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED FILL MATERIAL MUST BE REQUIRED TO CERTIFY THE ORIGIN OF THE FILL MATERIAL, AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.
  - 4.2. ENVIRONMENTAL DUE DILIGENCE: ACCEPTABLE INVESTIGATIVE TECHNIQUES INCLUDE, BUT ARE NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECT TO A SPILL OR RELEASE OF REGULATED SUBSTANCES. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL". ENVIRONMENTAL DUE DILIGENCE, INCLUDING ANY SAMPLING, WILL BE CONDUCTED BY THE GEOTECHNICAL ENGINEER, ON BEHALF OF THE APPLICANT.

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
2. OCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
**PCSM/E&SC NOTES**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: N/A

DRAWING NO.  
**4 of 48**



ADJOINERS

ADJ. #	UPI	DEED BK/PG	ADDRESS	OWNER 1	OWNER 2
1	61-2-214B	4407/441	1401 JOHNNYS WAY	WESTTOWN SCHOOL	
2	61-2-62	4407/441	1400 JOHNNYS WAY	WESTTOWN SCHOOL	
3	61-2-61J	850/219	909 SHADY GROVE WAY	KRAUT WILLIAM D	KRAUT DENISE ENGLANDER
4	61-2-61	7160/716	905 SHADY GROVE WAY	MILLER MARC	ELIZABETH
5	61-2G-1	8724/1421	411 SHADY GROVE WAY	MACDONALD CHRISTOPHER J	MACDONALD DANIELLE
6	61-2-80JG	6782/2306	415 SHADY GROVE WAY	LISI JASON P	KRISTINE C
7	61-2G-1H	6541/2190	411 SHADY GROVE WAY	FIORAVANTI JOSEPH M	
8	61-2G-1B	4251/1037	419 SHADY GROVE WAY	BURNS JOSEPH M	BURNS ANNE E
9	61-2G-2D	451/162	1400 THRUSH LA	HARRIS TERESA J	HARRIS GREGORY J
10	61-2R-3B	5072/1504	1005 SHADY GROVE WAY	AQUIARO DONA L	
11	61-5D-1	7674/451	1024 ROBIN DR	EGAN PAUL C	ADRIENNE CLEMENTS
12	61-5D-3	6746/232	1025 ROBIN DR	SABATINO CHRISTIAN N	
13	61-5D-4J	4573/1477	1107 SHADY GROVE WAY	CHESNEY JORDAN FRANCIS	RAYMOND MARYELYSE
14	61-5D-4	7064/1656	1111 SHADY GROVE WAY	BEHRENS EDWARD J	KREIBER PORTIA A
15	61-5D-4.2	7068/1676	1115 SHADY GROVE WAY	GRISILLO ROBERT J	MONICA K
16	61-5-2B	5579/411	1141 SHADY GROVE WAY	BLOSSOM GEORGE W	BRODESSER SUSAN
17	66-2-34	6306/1353	1400 E STREET RD	HATTERSLEY SCOTT T	
18	66-2-41.2	8406/503		THORNBURY TOWNSHIP	
19	66-2-36.2	6884/1754	1210 CHEYNEY RD	GOODEN WARREN E	ATO M
20	66-2-36.3	6245/168	1280 E STREET RD	ARMSTRONG JAMES N III	ARMSTRONG GILLIAN
21	66-2-36.4	062/23	1260 E STREET RD	HENDERSON JANE K	
22	66-2-35	2098/426	1837 UNIVERSITY CI	COMMONWEALTH OF PA	
23	66-2-34	7642/680	1225 S WESTTOWN RD	RIEDER MICHELE OWENS	
24	61-5-26.5	8757/1263	1106 STATION WAY	MATHIS BRADLEY KENT	
25	61-5-26.4	4213/1641	1103 STATION WAY	GONZALEZ DEBRA	
26	61-5-26.2	4787/571	1151 WESTTOWN RD	ZARELLI JEANETTE	
27	5/26/1967	1154/384	1144 WESTTOWN RD	YORK JANICE LYNE	
28	61-5-22.1	8174/1497	1071 STABLE LA	BENNER JOHN & JUDITH REVOCABLE TRUST	
29	61-5B-5I	7144/753	1027 FARM LA	MCDERMOTT BRYAN	ANNA YATES
30	61-5B-5O	20061/0261	1025 FARM LA	MANUEL WILLIAM H	GRACE C
31	61-5B-44	7361/1254	1023 FARM LA	SHARMA JAYA	
32	61-5B-4B	320/546	1021 FARM LA	BALLATO MICHAEL	BALLATO WHITNEY
33	61-5B-47	15/117	1014 FARM LA	HELMS CHRISTIAN PAUL	HELMS KRISTIN
34	61-5B-46	8687/2170	1011 FARM LA	WALDRON STEPHEN E	STACY L
35	64-5B-36	154/176	1022 PLUMLY RD	KERSHAW L BARRY	RUTH C
36	61-5B-35	275/41	1025 PLUMLY RD	HATTI SHIVKUMAR	VRINDA
37	61-5B-34	7245/2247	1023 PLUMLY RD	ALOISIO JONATHAN	
38	61-5B-14	8461/2194	1022 ASHLEY RD	KEEFER STEPHEN V	DANA L
39	61-5B-13	K63/18	1025 ASHLEY RD	RUGGERIO WILLIAM ANTHONY	
40	61-5B-12	224/543	1023 ASHLEY RD	KOLLIAS PETER P	KAREN
41	61-5B-1	n/a		WESTTOWN TOWNSHIP	
42	61-2-24	4407/441	1020 WESTTOWN RD	WESTTOWN SCHOOL	
43	61-2-25	4407/441	475 WESTTOWN RD	WESTTOWN SCHOOL	

REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

MID-ATLANTIC SPORTS CONSTRUCTION  
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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

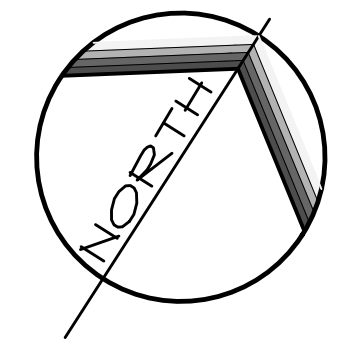
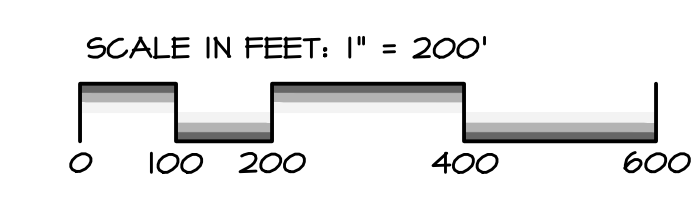
TYLER E. HILL  
REGISTERED PROFESSIONAL ENGINEER  
PENNSYLVANIA

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
PENNSYLVANIA

PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
DEED PLOT PLAN  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
WESTTOWN SCHOOL  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 200'

DRAWING NO.  
**6 of 48**



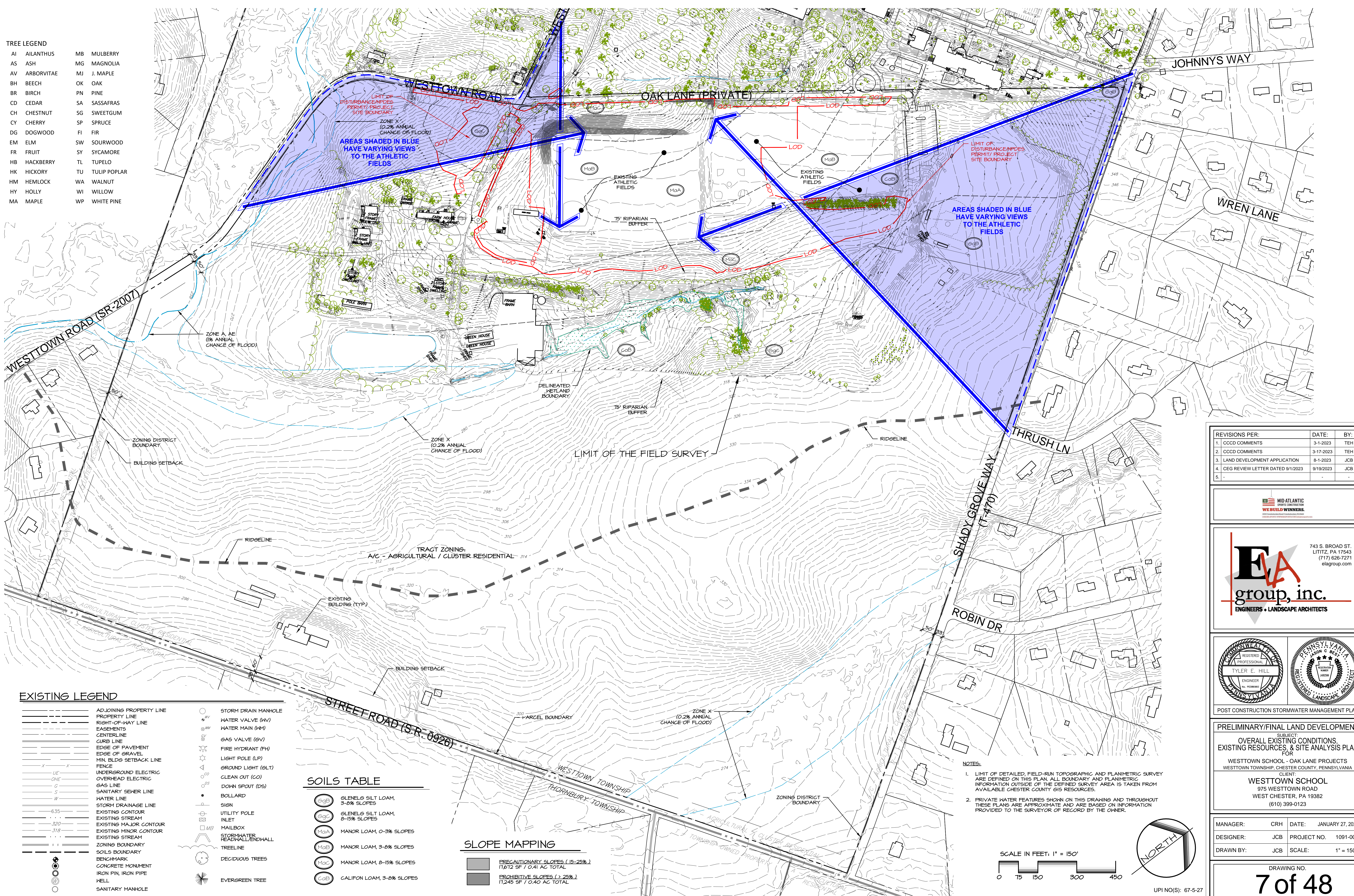
UPI NO(S): 61-5-27

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DRAWING: C:\Users\jason\Documents\ELA\_Group\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Final\EXISTING.dwg - PLOTTED: Sep 27, 2023 10:48 am

**TREE LEGEND**

AI	AILANTHUS	MB	MULBERRY
AS	ASH	MG	MAGNOLIA
AV	ARBORVITAE	MJ	J. MAPLE
BH	BEECH	OK	OAK
BR	BIRCH	PN	PINE
CD	CEDAR	SA	SASSAFRAS
CH	CHESTNUT	SG	SWEETGUM
CY	CHERRY	SP	SPRUCE
DG	DOGWOOD	FI	FIR
EM	ELM	SW	SOURWOOD
FR	FRUIT	SY	SYCAMORE
HB	HACKBERRY	TL	TUPELO
HK	HICKORY	TU	TULIP POPLAR
HM	HEMLOCK	WA	WALNUT
HY	HOLLY	WI	WILLOW
MA	MAPLE	WP	WHITE PINE



**EXISTING LEGEND**

---	ADJOINING PROPERTY LINE	○	STORM DRAIN MANHOLE
---	PROPERTY LINE	○	WATER VALVE (WV)
---	RIGHT-OF-WAY LINE	○	WATER MAIN (WM)
---	EASEMENTS	○	GAS VALVE (GV)
---	CENTERLINE	○	FIRE HYDRANT (FH)
---	CURB LINE	○	LIGHT POLE (LP)
---	EDGE OF PAVEMENT	○	GROUND LIGHT (GLT)
---	EDGE OF GRAVEL	○	CLEAN OUT (CO)
---	MIN. BLDG SETBACK LINE	○	DOWN SPOUT (DS)
---	FENCE	○	BOLLARD
---	UNDERGROUND ELECTRIC	○	SIGN
---	OVERHEAD ELECTRIC	○	UTILITY POLE
---	GAS LINE	○	INLET
---	SANITARY SEWER LINE	○	MAILBOX
---	WATER LINE	○	STORMWATER HEADWALL/ENDWALL
---	STORM DRAINAGE LINE	○	TREELINE
---	EXISTING CONTOUR	○	DECIDUOUS TREES
---	EXISTING STREAM	○	EVERGREEN TREE
---	EXISTING MAJOR CONTOUR	○	
---	EXISTING MINOR CONTOUR	○	
---	EXISTING STREAM	○	
---	ZONING BOUNDARY	○	
---	SOILS BOUNDARY	○	
---	BENCHMARK	○	
---	CONCRETE MONUMENT	○	
---	IRON PIN, IRON PIPE	○	
---	WELL	○	
---	SANITARY MANHOLE	○	

**SOILS TABLE**

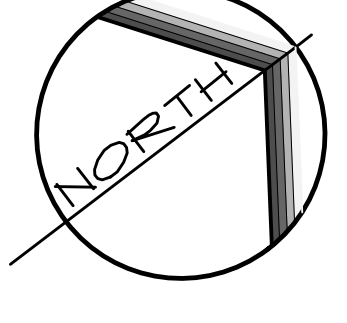
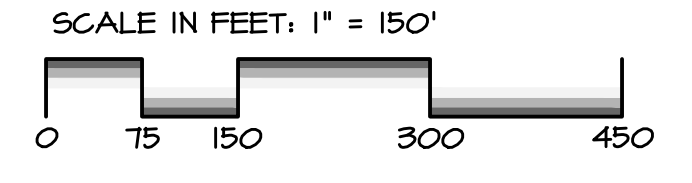
(GgB)	GLENELG SILT LOAM, 3-8% SLOPES
(GgC)	GLENELG SILT LOAM, 8-15% SLOPES
(MaA)	MANOR LOAM, 0-3% SLOPES
(MaB)	MANOR LOAM, 3-8% SLOPES
(MaC)	MANOR LOAM, 8-15% SLOPES
(CaB)	CALIFON LOAM, 3-8% SLOPES

**SLOPE MAPPING**

■	PRECAUTIONARY SLOPES (18-25%) 17,672 SF / 0.41 AC TOTAL
■	PROHIBITIVE SLOPES (> 25%) 17,245 SF / 0.40 AC TOTAL

**NOTES:**

- LIMIT OF DETAILED, FIELD-RUN TOPOGRAPHIC AND PLANIMETRIC SURVEY ARE DEFINED ON THIS PLAN. ALL BOUNDARY AND PLANIMETRIC INFORMATION OUTSIDE OF THE DEFINED SURVEY AREA IS TAKEN FROM AVAILABLE CHESTER COUNTY GIS RESOURCES.
- PRIVATE WATER FEATURES SHOWN ON THIS DRAWING AND THROUGHOUT THESE PLANS ARE APPROXIMATE AND ARE BASED ON INFORMATION PROVIDED TO THE SURVEYOR OF RECORD BY THE OWNER.



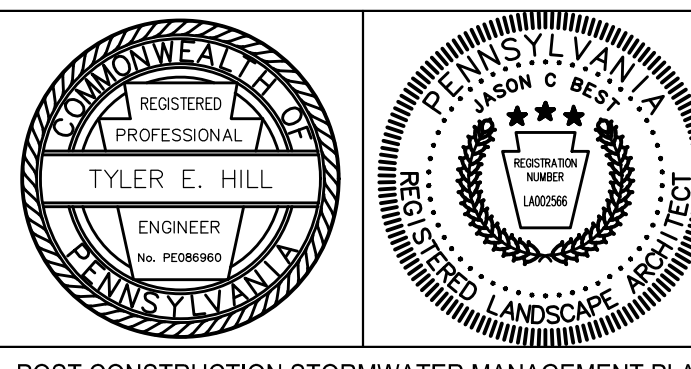
**REVISIONS PER:**

NO.	DESCRIPTION	DATE	BY
1.	CCCD COMMENTS	3-1-2023	TEH
2.	CCCD COMMENTS	3-17-2023	TEH
3.	LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4.	CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.			

**MID-ATLANTIC SPORTS CONSTRUCTION**  
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ENGINEERS & LANDSCAPE ARCHITECTS

743 S. BROAD ST.  
LITITZ, PA 17543  
(717) 626-7271  
elagroup.com



POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
OVERALL EXISTING CONDITIONS,  
EXISTING RESOURCES, & SITE ANALYSIS PLAN  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

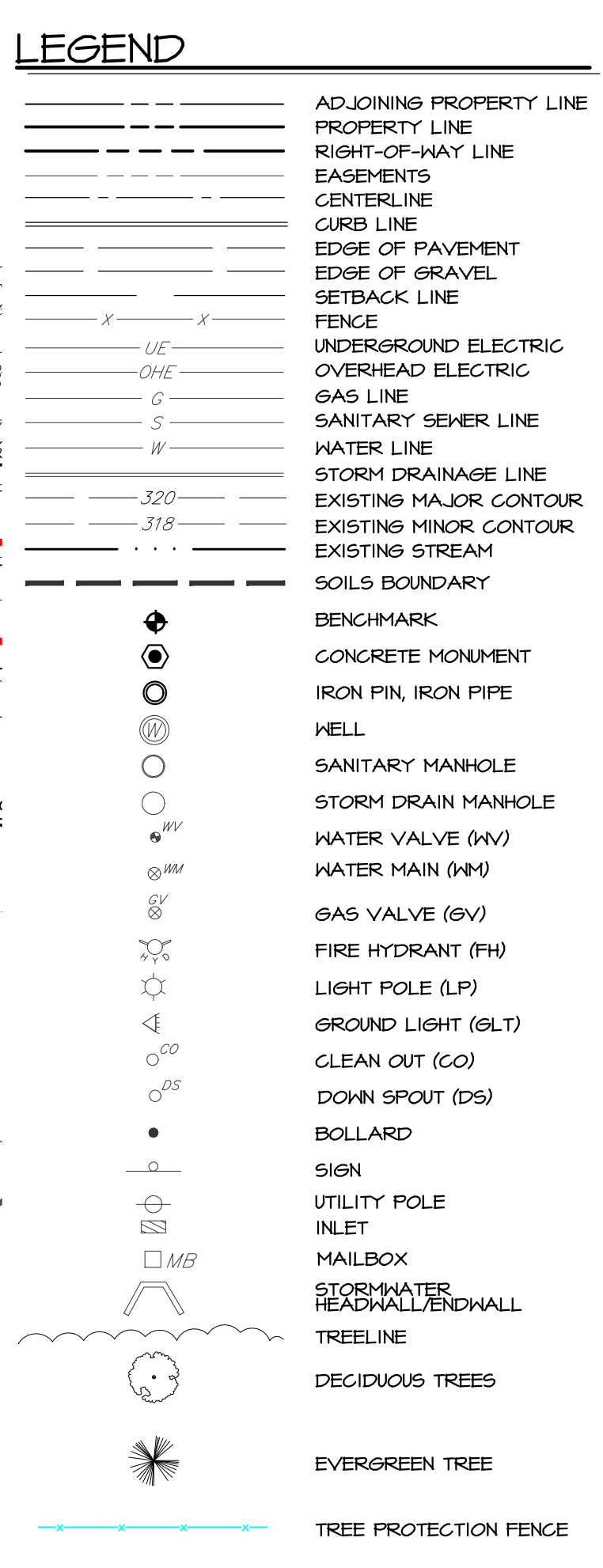
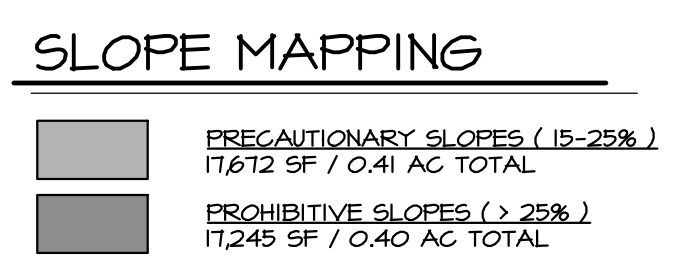
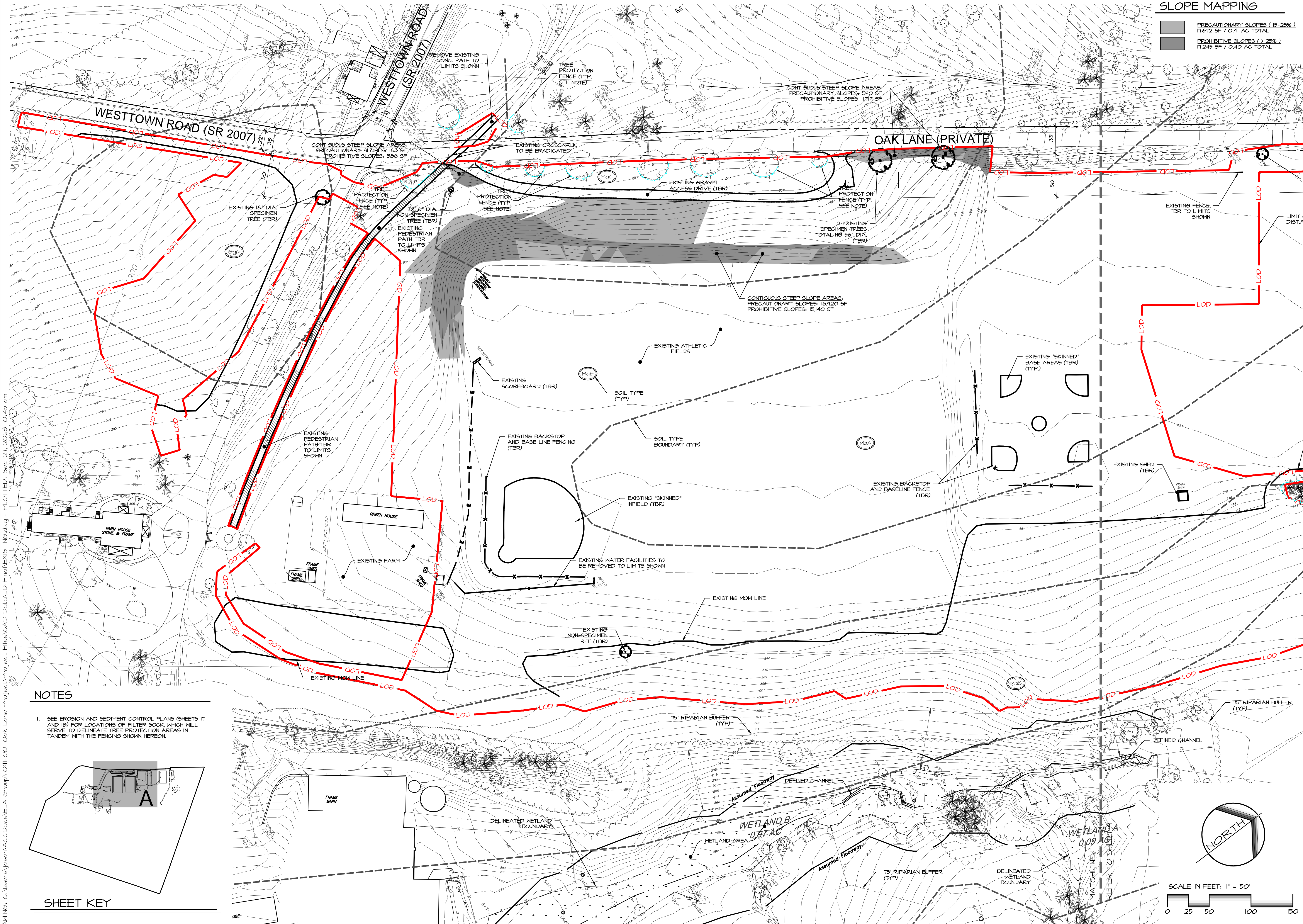
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: 1" = 150'

DRAWING NO.  
**7 of 48**

UPI NO(S): 67-5-27

DRAWING: C:\Users\jason\Documents\ELI\_Group\1001-001 Oak Lane Project\Project Files\CAD Data\LD-Final\EXISTING.dwg - PLOTTED: Sep 27, 2023 10:45 am



REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
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**EA** group, inc.
   
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TYLER E. HILL  
ENGINEER  
PENNSYLVANIA

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LANDSCAPE ARCHITECT  
PENNSYLVANIA

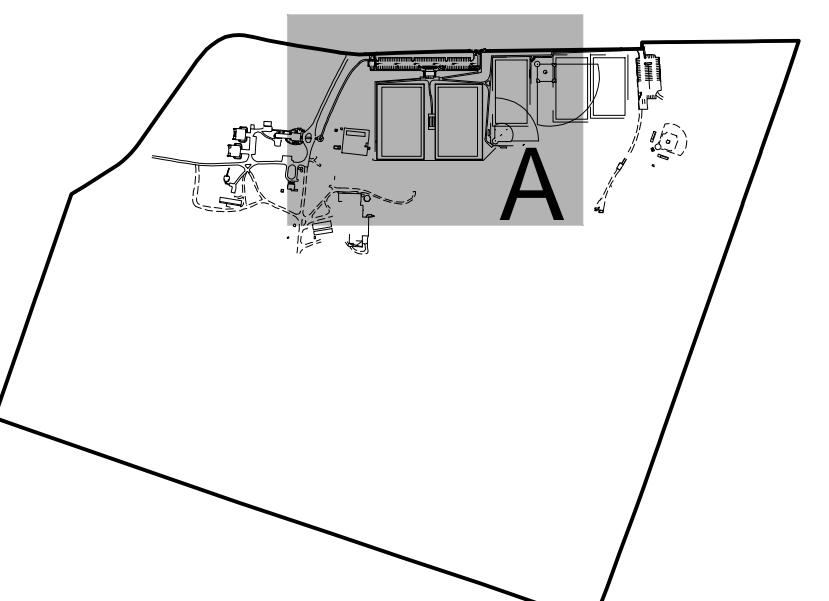
**PRELIMINARY/FINAL LAND DEVELOPMENT**  
 SUBJECT:  
**EXISTING CONDITIONS, TREE PROTECTION, AND DEMOLITION PLAN 'A'**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 50'

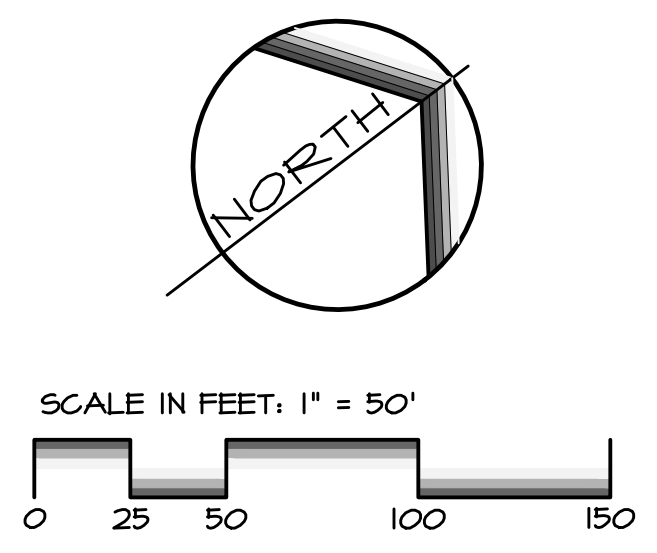
DRAWING NO.  
**8 of 48**

### NOTES

- SEE EROSION AND SEDIMENT CONTROL PLANS (SHEETS IT AND IS) FOR LOCATIONS OF FILTER SOCK, WHICH WILL SERVE TO DELINEATE TREE PROTECTION AREAS IN TANDEM WITH THE FENCING SHOWN HEREON.



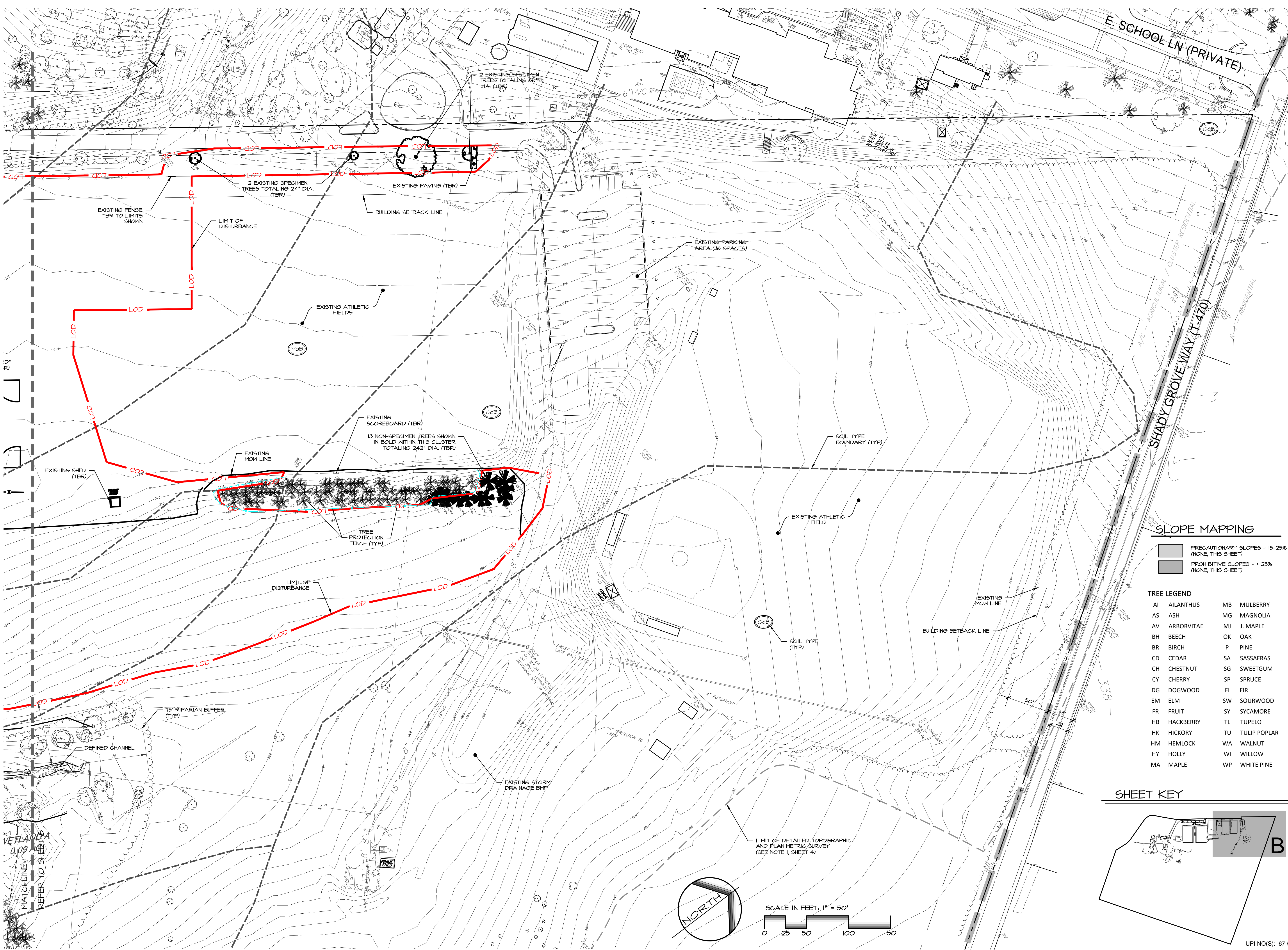
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UPI NO(S): 67-5-27



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### LEGEND

	ADJOINER PROPERTY LINE
	RIGHT-OF-WAY LINE
	EASEMENTS
	CENTERLINE
	CURB LINE
	EDGE OF PAVEMENT
	MIN. BUILD SETBACK LINE
	FENCE
	UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	GAS LINE
	SANITARY SEWER LINE
	WATER LINE
	STORM DRAINAGE LINE
	EXISTING CONTOUR
	EXISTING STREAM
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING STREAM
	ZONING BOUNDARY
	SOILS BOUNDARY
	BENCHMARK
	CONCRETE MONUMENT
	IRON PIN, IRON PIPE
	WELL
	SANITARY MANHOLE
	STORM DRAIN MANHOLE
	WATER VALVE (WV)
	WATER MAIN (WM)
	GAS VALVE (GV)
	FIRE HYDRANT (FH)
	LIGHT POLE (LP)
	GROUND LIGHT (GLT)
	CLEAN OUT (CO)
	DOWN SPOUT (DS)
	BOLLARD
	SIGN
	UTILITY POLE
	INLET
	MAILBOX
	STORMWATER HEADWALL/ENDWALL
	TREELINE
	DECIDUOUS TREES
	EVERGREEN TREE
	TREE PROTECTION FENCE

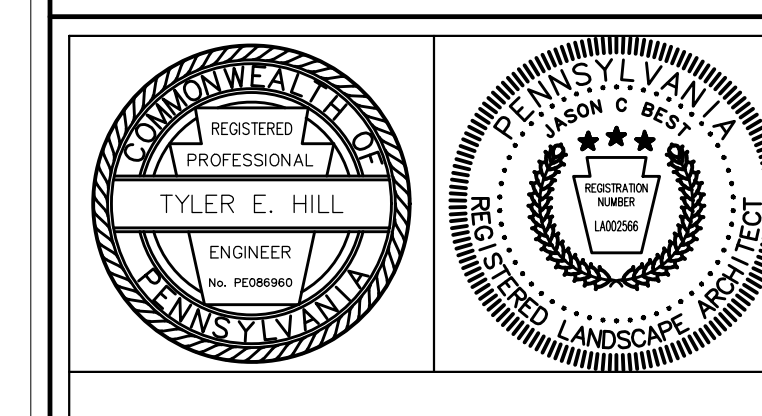
### REVISIONS PER:

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MID-ATLANTIC SPORTS CONSTRUCTION  
**WE BUILD WINNERS.**

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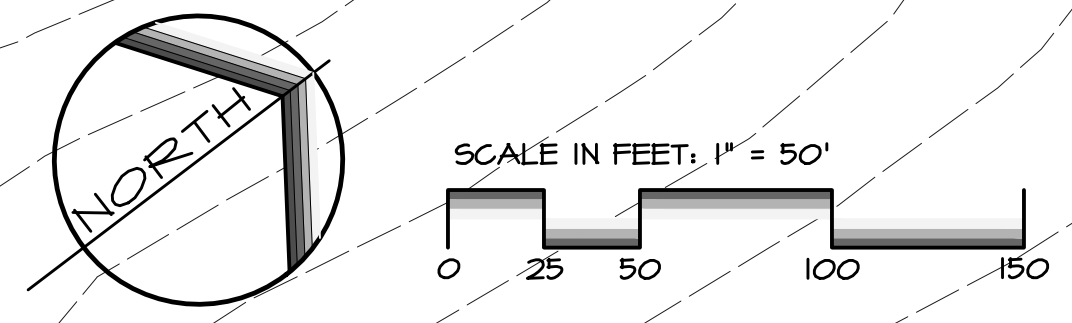
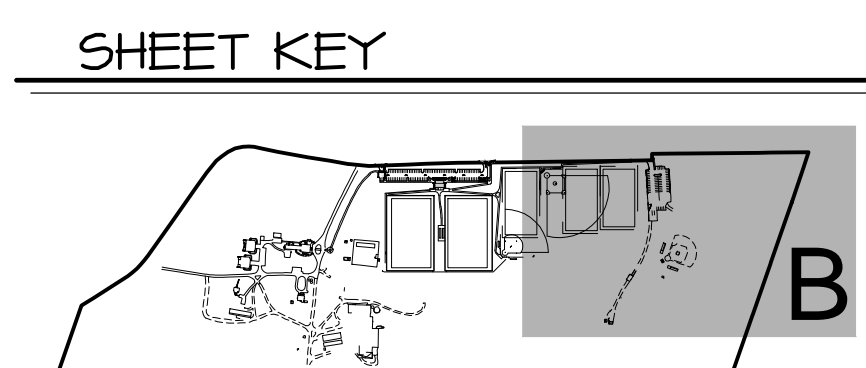
### SLOPE MAPPING

PRECAUTIONARY SLOPES - 15-25%  
(NONE, THIS SHEET)

PROHIBITIVE SLOPES - > 25%  
(NONE, THIS SHEET)

### TREE LEGEND

AI	AILANTHUS	MB	MULBERRY
AS	ASH	MG	MAGNOLIA
AV	ARBORVITAE	MJ	J. MAPLE
BH	BEECH	OK	OAK
BR	BIRCH	P	PINE
CD	CEDAR	SA	SASSAFRAS
CH	CHESTNUT	SG	SWEETGUM
CY	CHERRY	SP	SPRUCE
DG	DOGWOOD	FI	FIR
EM	ELM	SW	SOURWOOD
FR	FRUIT	SY	SYCAMORE
HB	HACKBERRY	TL	TUPELO
HK	HICKORY	TU	TULIP POPLAR
HM	HEMLOCK	WA	WALNUT
HY	HOLLY	WI	WILLOW
MA	MAPLE	WP	WHITE PINE



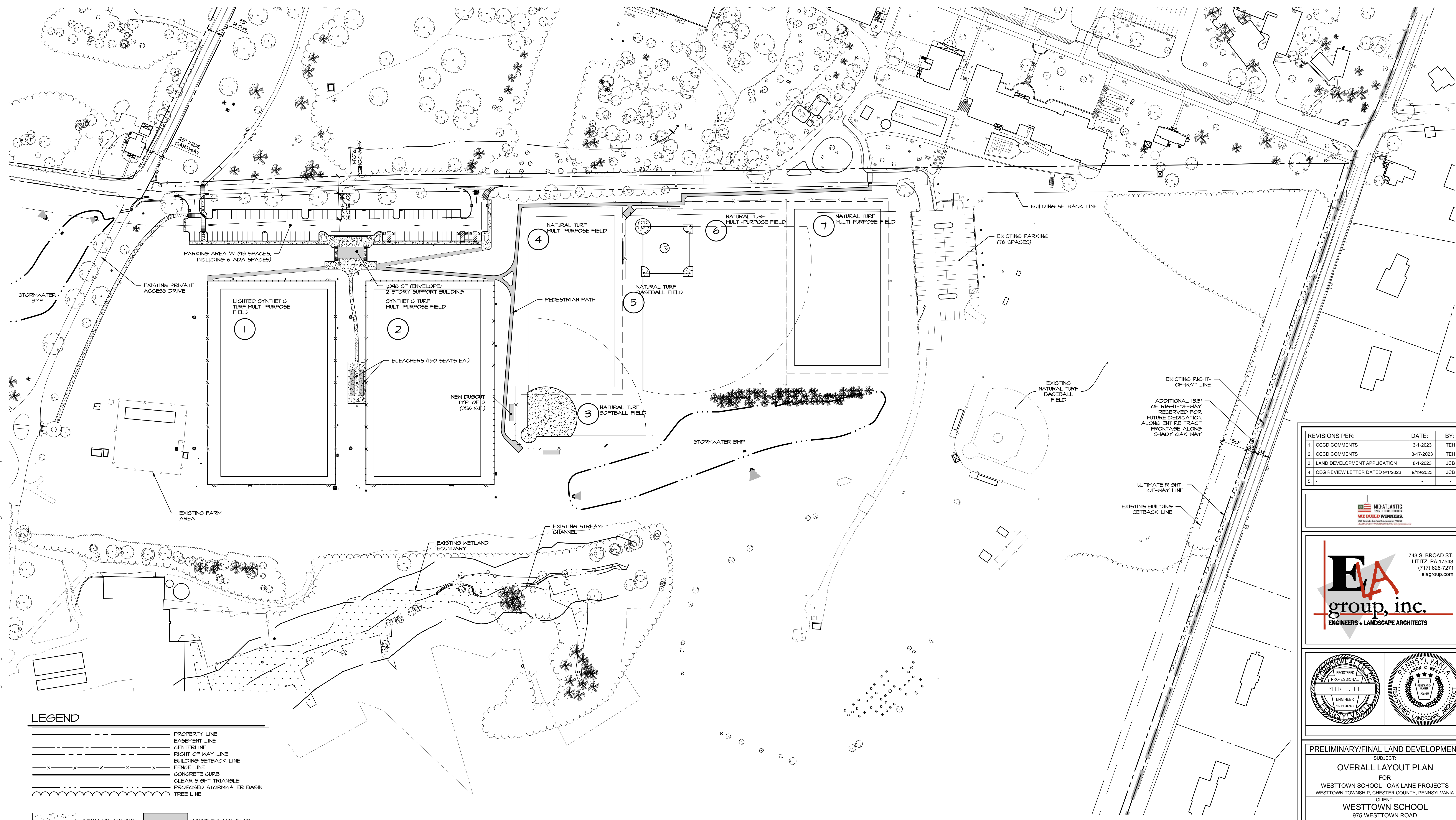
PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**EXISTING CONDITIONS, TREE PROTECTION,  
AND DEMOLITION PLAN 'A'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 50'

DRAWING NO.  
**9 of 48**

UPI NO(S): 67-5-27

DRAWING: C:\Users\jason\Documents\ELA\_Group\01-001 Oak Lane Project\Project Files\CAD Data\LD-Final\LAYOUT.dwg - PLOTTED: Sep 27, 2023 10:01 am



**LEGEND**

- PROPERTY LINE
- EASEMENT LINE
- CENTERLINE
- RIGHT OF WAY LINE
- BUILDING SETBACK LINE
- FENCE LINE
- CONCRETE CURB
- CLEAR SIGHT TRIANGLE
- PROPOSED STORMWATER BASIN
- TREE LINE

CONCRETE PAVING
 BITUMINOUS WALKWAY

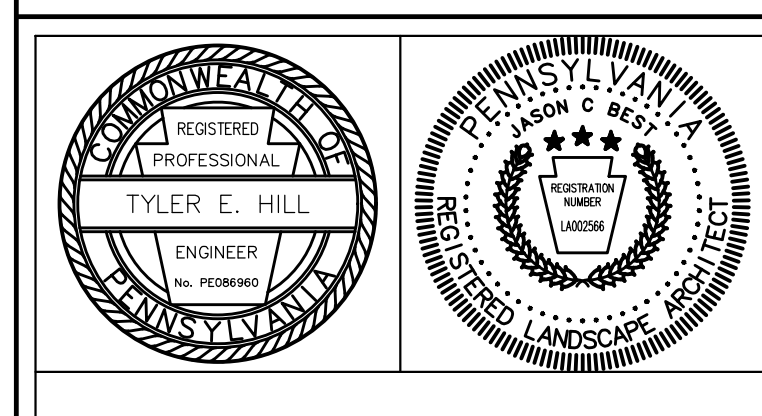
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM WATER INLET
- PROPOSED YARD DRAIN
- PROPOSED STORM WATER MANHOLE
- ♿ HANDICAP ACCESSIBLE PARKING
- ▲ SIGNAGE
- ▬ HEADWALL/ENDWALL

REVISIONS PER:	DATE:	BY:
1. CCD COMMENTS	3-1-2023	TEH
2. CCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		



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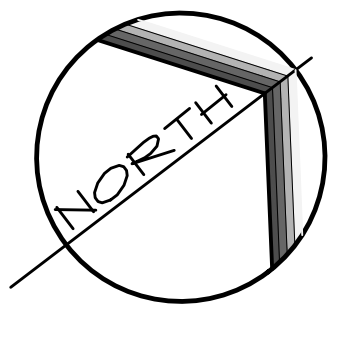
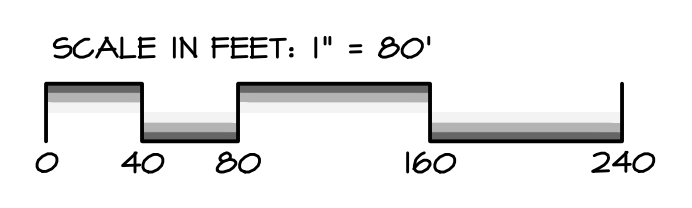
743 S. BROAD ST.  
 LITITZ, PA 17543  
 (717) 626-7271  
 elagroup.com



PRELIMINARY/FINAL LAND DEVELOPMENT  
 SUBJECT:  
**OVERALL LAYOUT PLAN**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 80'

DRAWING NO.  
**10 of 48**

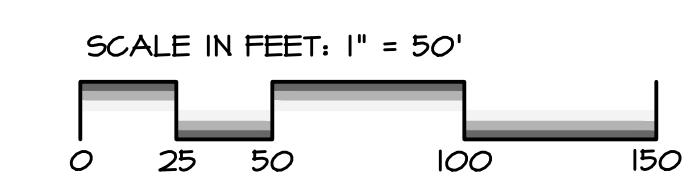
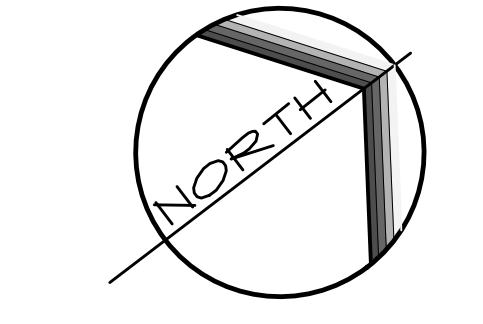
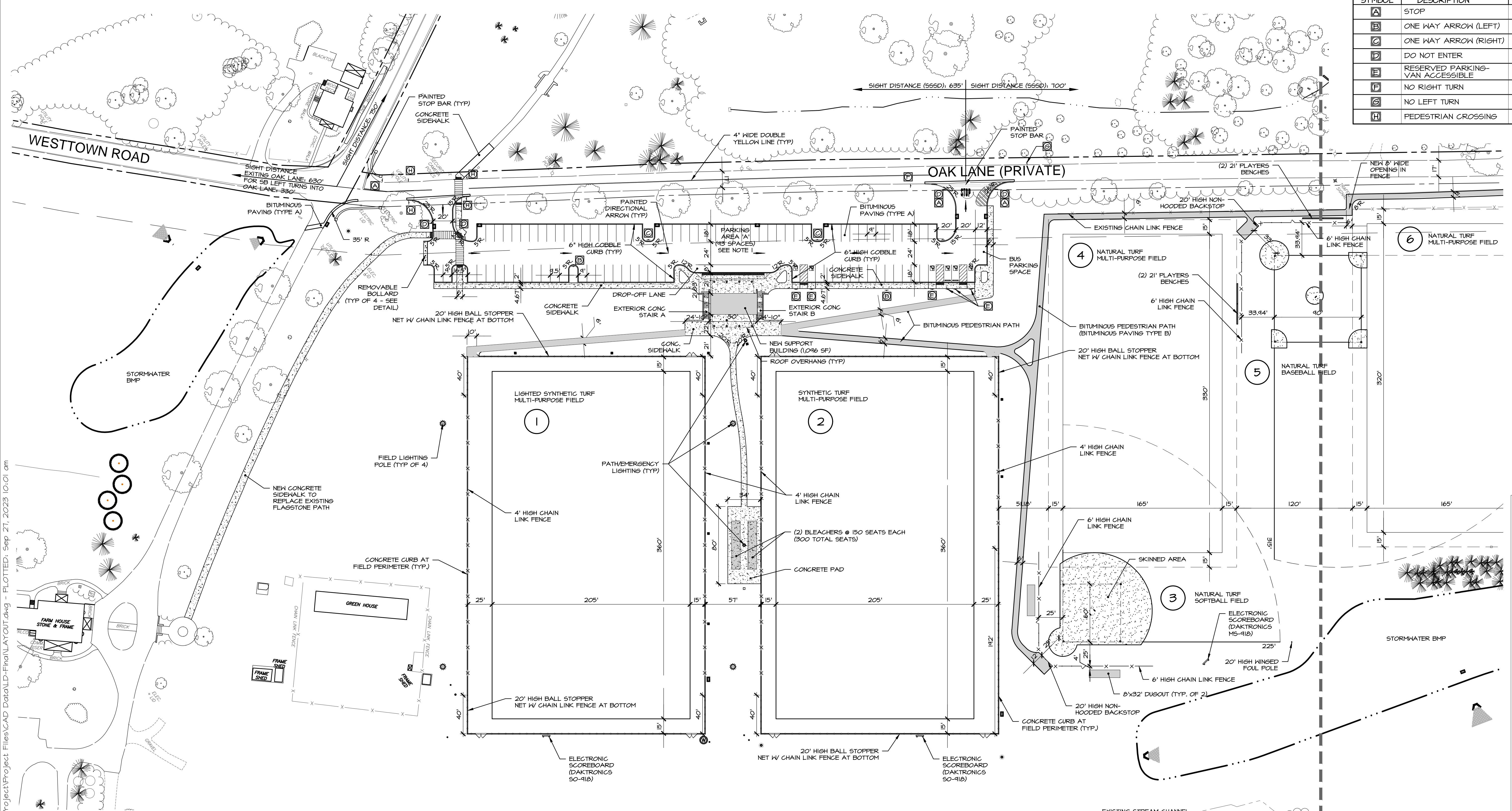


UPI NO(S): 67-5-27

DRAWING: C:\Users\jasom\Documents\ELA\_Group\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Final\Layout.dwg - PLOTTED: Sep 27, 2023 10:01 am

TRAFFIC SIGNAGE LEGEND				
SYMBOL	DESCRIPTION	SIZE	PA DOT DESIG.	NOTES
A	STOP	30"x30"	R1-1	-
B	ONE WAY ARROW (LEFT)	36"x12"	R6-1L	-
C	ONE WAY ARROW (RIGHT)	36"x12"	R6-1R	-
D	DO NOT ENTER	24"x24"	R5-1	-
E	RESERVED PARKING-VAN ACCESSIBLE	12"x18" 12"x 6"	R7-B W/ R7-8A	MOUNT 5' A.G.
F	NO RIGHT TURN	24"x24"	R3-1	SYMBOL
G	NO LEFT TURN	24"x24"	R3-2	SYMBOL
H	PEDESTRIAN CROSSING	24"x24"	W11-2	-

- NOTES:
- ALL CURBING WITHIN THE PARKING AREA 'A' SHALL BE COBBLE CURBING UNLESS OTHERWISE NOTED.
  - PARKING AREA 'A' CONSISTS OF:
    - a. 6 ADA SPACES @ 8'x10' EA.
    - b. 11 SPACES @ 9'5"x10' EA.
    - c. 16 SPACES @ 9'x10' EA.
 TOTAL: 43 SPACES

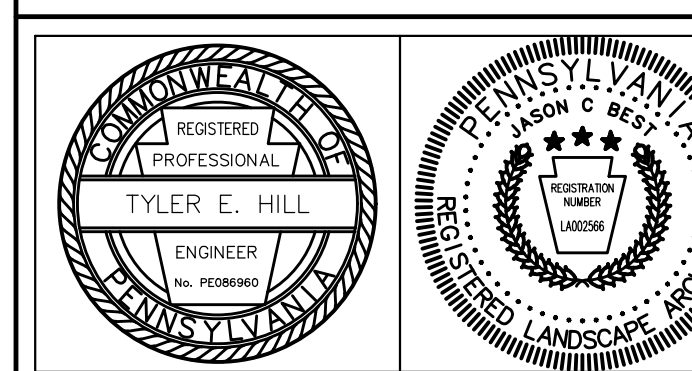


REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	JCB
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		



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(717) 626-7271  
elagroup.com



PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**LAYOUT PLAN 'A'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: 1" = 50'

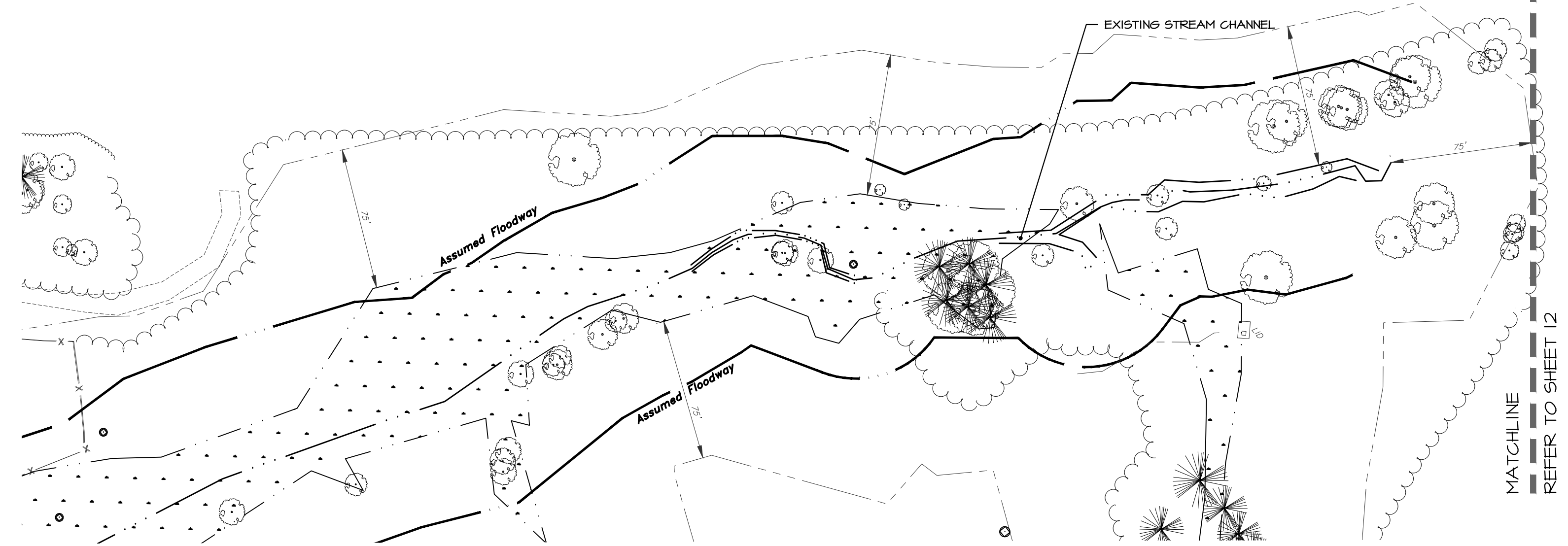
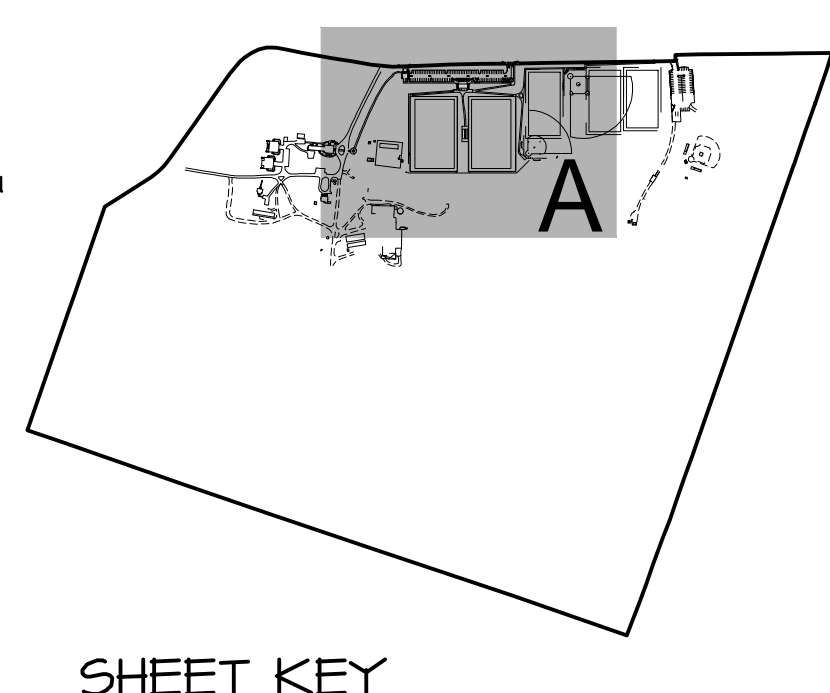
DRAWING NO.  
**11 of 48**

**LEGEND**

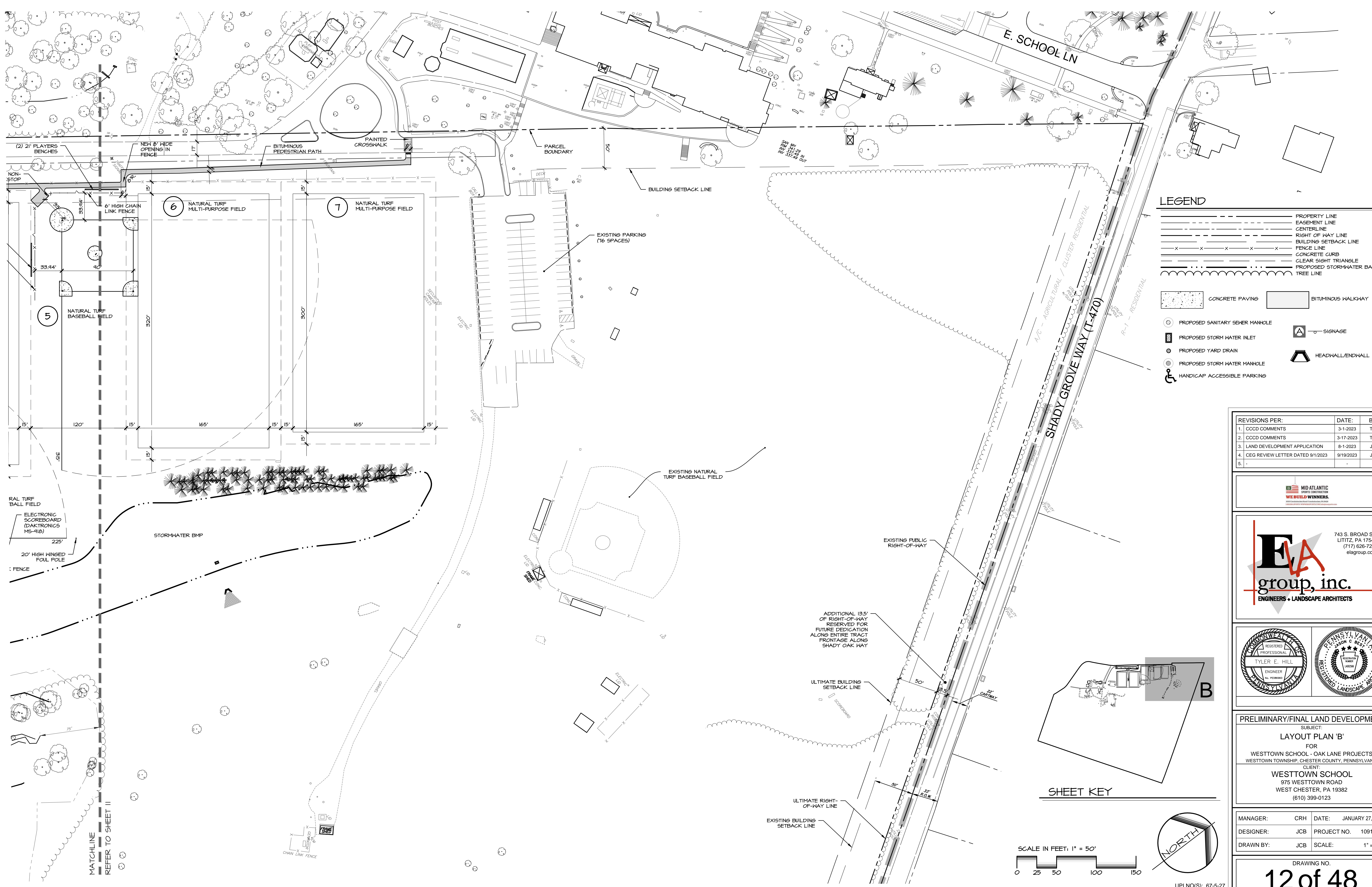
- PROPERTY LINE
- EASEMENT LINE
- CENTERLINE
- RIGHT OF WAY LINE
- BUILDING SETBACK LINE
- FENCE LINE
- CONCRETE CURB
- CLEAR SIGHT TRIANGLE
- PROPOSED STORMWATER BASIN
- TREE LINE

CONCRETE PAVING
  BITUMINOUS WALKWAY

- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED STORM WATER INLET
- PROPOSED YARD DRAIN
- PROPOSED STORM WATER MANHOLE
- HANDICAP ACCESSIBLE PARKING
- SIGNAGE
- HEADWALL/ENDWALL



DRAWING: C:\Users\jason\Documents\ELA\_Group\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Final\LAYOUT.dwg - PLOTTED: Sep 27, 2023 10:00 am



### LEGEND

	PROPERTY LINE
	EASEMENT LINE
	CENTERLINE
	RIGHT OF WAY LINE
	BUILDING SETBACK LINE
	FENCE LINE
	CONCRETE CURB
	CLEAR SIGHT TRIANGLE
	PROPOSED STORMWATER BASIN
	TREE LINE

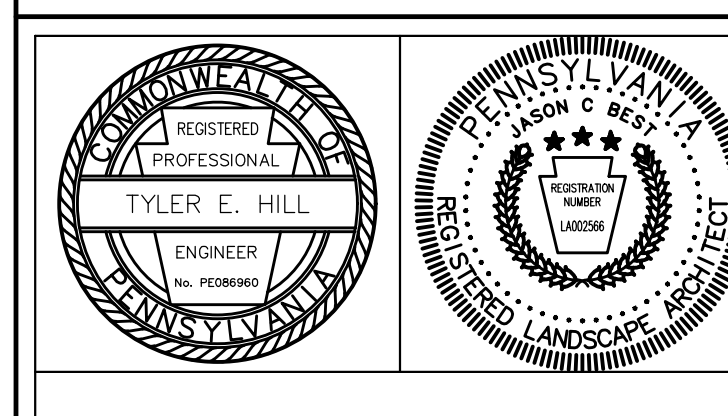
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	PROPOSED SANITARY SEWER MANHOLE		SIGNAGE
	PROPOSED STORM WATER INLET		HEADWALL/ENDWALL
	PROPOSED YARD DRAIN		
	PROPOSED STORM WATER MANHOLE		
	HANDICAP ACCESSIBLE PARKING		

REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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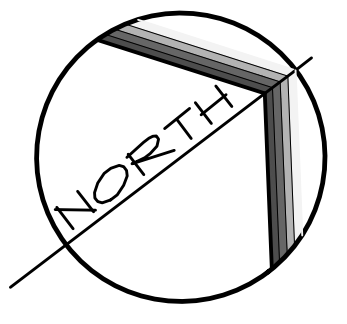
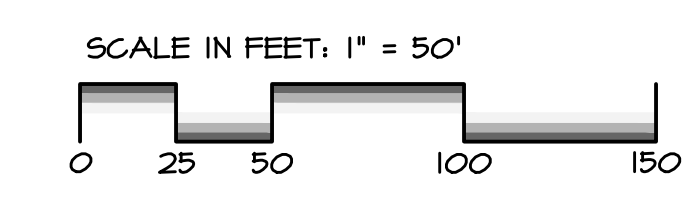
743 S. BROAD ST.  
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 (717) 626-7271  
 elagroup.com



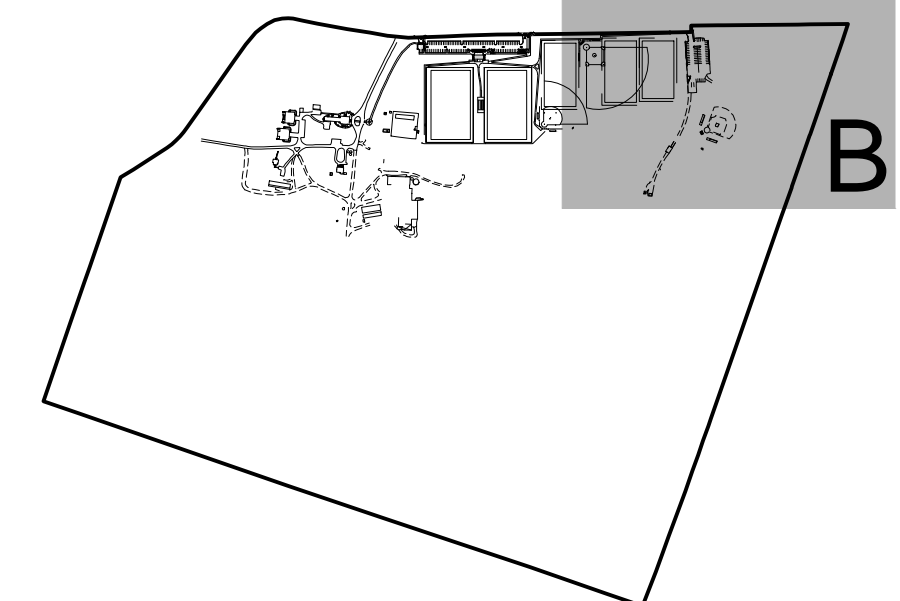
PRELIMINARY/FINAL LAND DEVELOPMENT  
 SUBJECT:  
**LAYOUT PLAN 'B'**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
 DESIGNER: JCB PROJECT NO. 1091-001  
 DRAWN BY: JCB SCALE: 1" = 50'

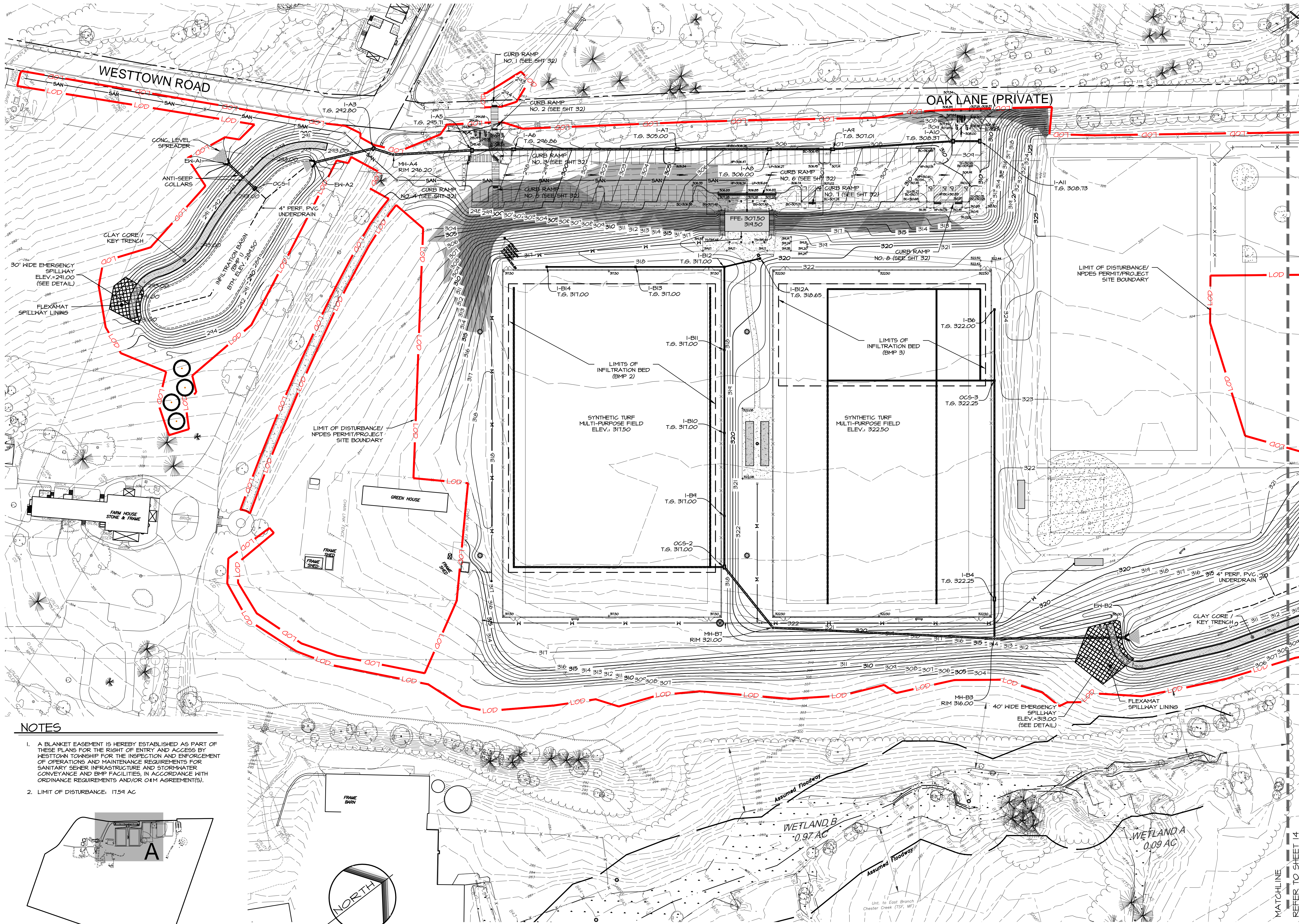
DRAWING NO.  
**12 of 48**



SHEET KEY



UPI NO(S): 67-5-27



### GRADING LEGEND

	635	PROPOSED CONTOUR
	635	EXISTING CONTOUR
	SS	EXISTING STORM SEWER PIPE/INLET/MANHOLE
		PROPOSED STORM SEWER PIPE/INLET/MANHOLE
		EXISTING ENDWALL/RIP RAP
		PROPOSED ENDWALL/RIP RAP
	S	EXISTING SANITARY SEWER AND MANHOLE
	W	EXISTING WATER LINE AND VALVE
	F	EXISTING FIRE HYDRANT
	G	EXISTING UNDERGROUND GAS LINE
	E	EXISTING ABOVE GROUND ELECTRIC LINE
	UE	EXISTING UNDERGROUND ELECTRIC LINE
	x 354.05	EXISTING SPOT GRADE
	+ 352.50	PROPOSED SPOT GRADE
	5%	SLOPE GRADIENT AND DIRECTION

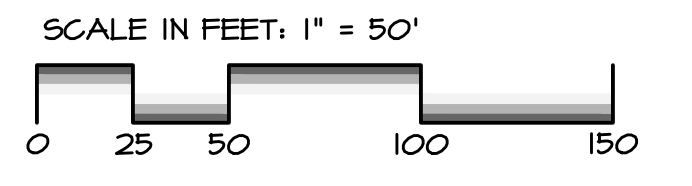
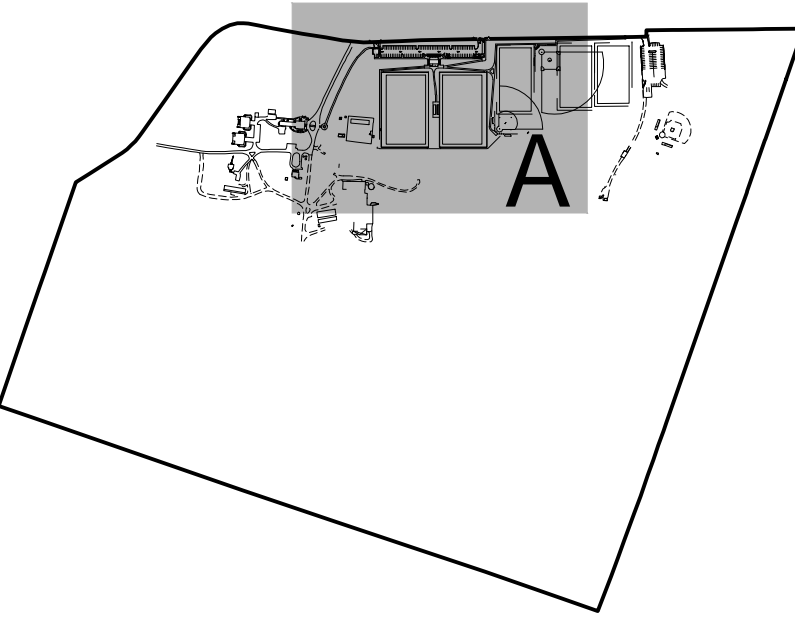
### SOILS

	CaB	CALIFORN LOAM, 3 TO 8 PERCENT SLOPES, H5G 'D'
	EgB	GLENNELG SILT LOAM, 3 TO 8 PERCENT SLOPES, H5G 'B'
	EgC	GLENNELG SILT LOAM, 8 TO 15 PERCENT SLOPES, H5G 'B'
	MaA	MANOR LOAM, 0 TO 3 PERCENT SLOPES, H5G 'B'
	MaB	MANOR LOAM, 3 TO 8 PERCENT SLOPES, H5G 'B'
	MaB	MANOR LOAM, 8 TO 15 PERCENT SLOPES, H5G 'B'

### EXISTING SLOPE MAPPING

	PRECAUTIONARY SLOPES (15-25%)	17,612 SF / 0.41 AC TOTAL
	PROHIBITIVE SLOPES (> 25%)	17,245 SF / 0.40 AC TOTAL

- ### NOTES
- A BLANKET EASEMENT IS HEREBY ESTABLISHED AS PART OF THESE PLANS FOR THE RIGHT OF ENTRY AND ACCESS BY WESTTOWN TOWNSHIP FOR THE INSPECTION AND ENFORCEMENT OF OPERATIONS AND MAINTENANCE REQUIREMENTS FOR SANITARY SEWER INFRASTRUCTURE AND STORMWATER CONVEYANCE AND BMP FACILITIES, IN ACCORDANCE WITH ORDINANCE REQUIREMENTS AND/OR O4M AGREEMENT(S).
  - LIMIT OF DISTURBANCE: 17,594 AC

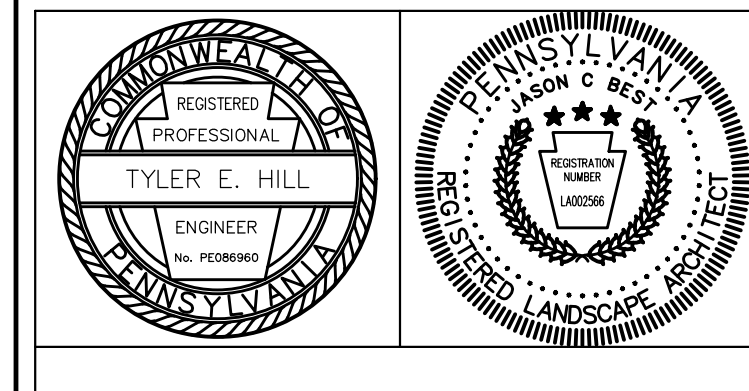


REVISIONS PER:	DATE:	BY:

MID-ATLANTIC  
CONSTRUCTION  
WE BUILD WINNERS

**EVA**  
group, inc.  
ENGINEERS + LANDSCAPE ARCHITECTS

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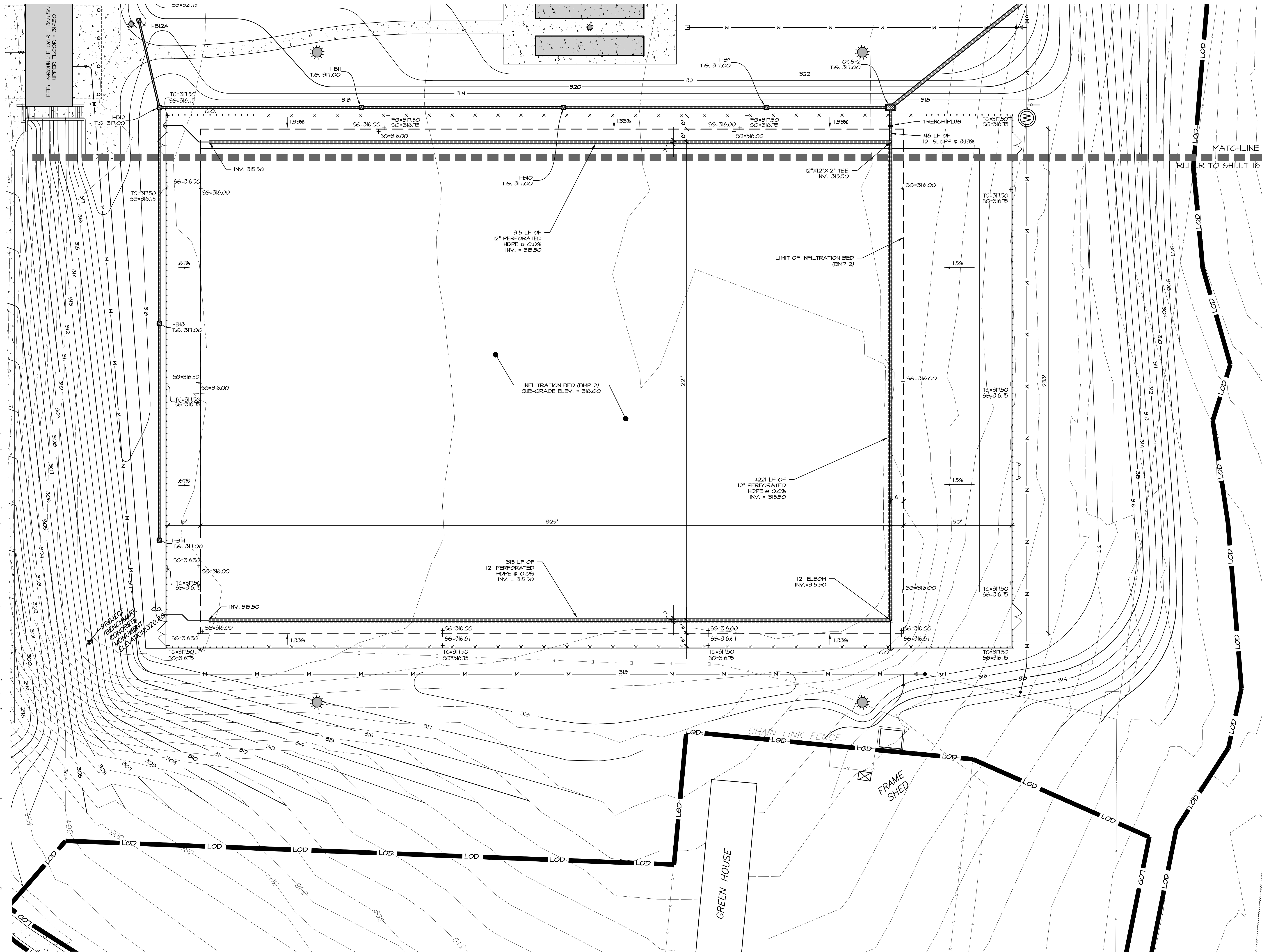
PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**GRADING PLAN 'A'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 50'

DRAWING NO.  
**13 of 48**

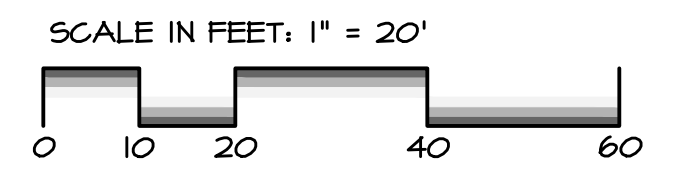
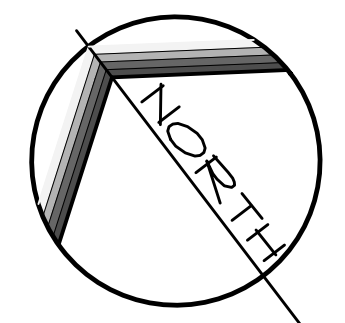


DRAWING: C:\Users\jason\OneDrive\Documents\Projects\Oak Lane Project\Project Files\CAD\Final\Grading (SUB).dwg - PLOTTED: Sep 21, 2023 10:54 am



**SUBGRADE/DRAINAGE LEGEND**

- LOD** BOUNDARY
- NPDES** BOUNDARY
- 635** PROPOSED SUBGRADE CONTOUR
- EXISTING STORM SEWER PIPE/INLET/MANHOLE
- PROPOSED STORM SEWER PIPE/INLET
- PERFORATED HDPE COLLECTOR PIPE
- 12\"/> FLAT PIPE/PANEL DRAIN
- PROPOSED CLEANOUT
- EXISTING SANITARY SEWER AND MANHOLE
- EXISTING WATER LINE AND VALVE
- EXISTING FIRE HYDRANT
- EXISTING UNDERGROUND GAS LINE
- EXISTING ABOVE GROUND ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- 5%** SLOPE GRADIENT AND DIRECTION



REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

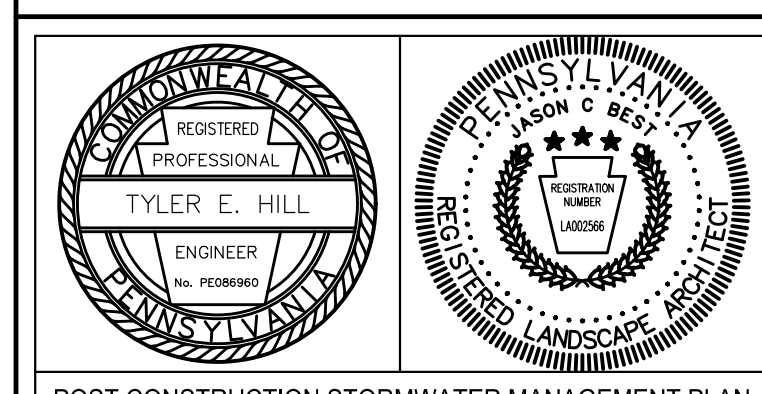


EA

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 LITITZ, PA 17543  
 (717) 626-7271  
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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
**FIELD SUB-GRADE PLAN 'A'**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

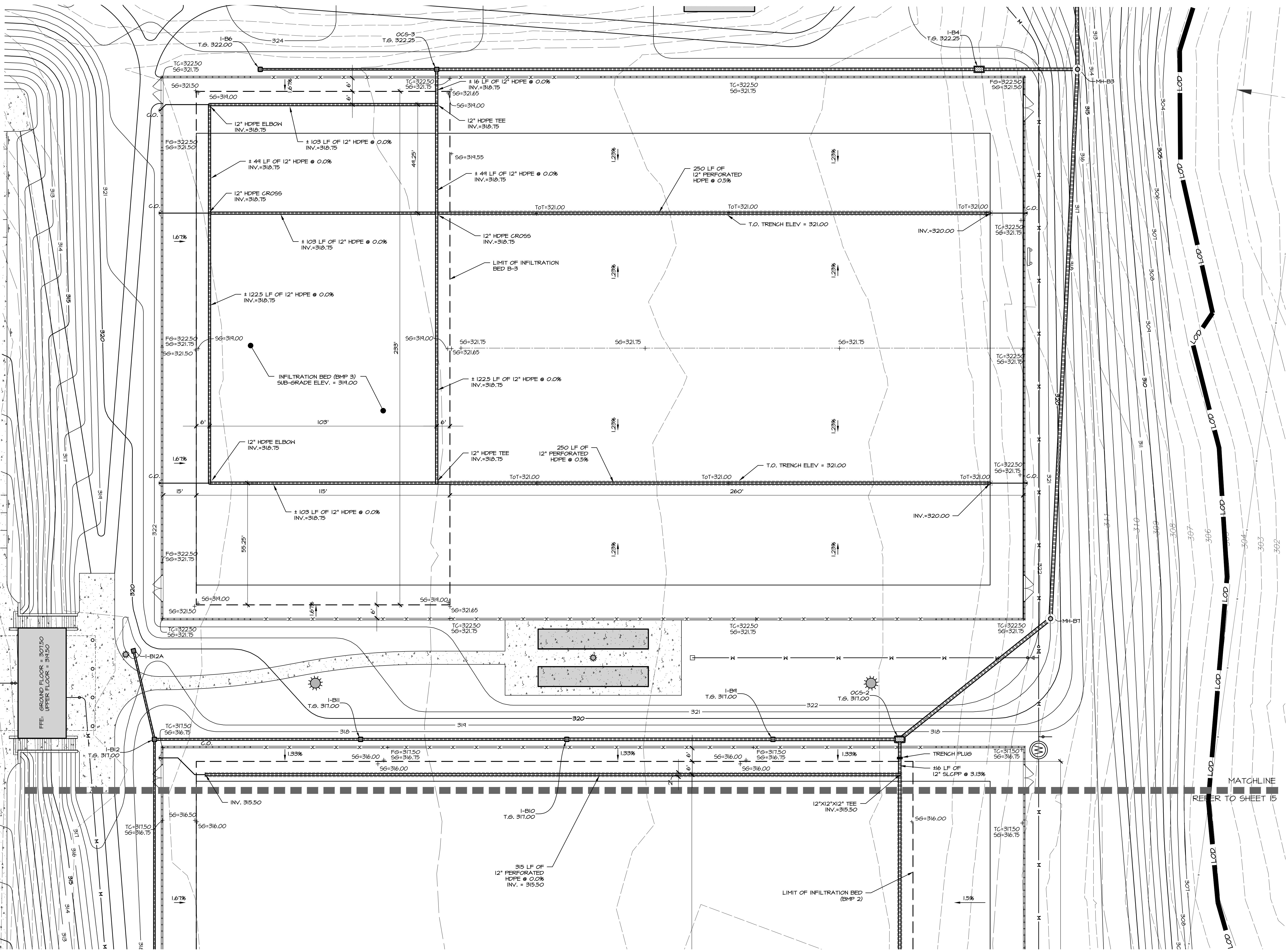
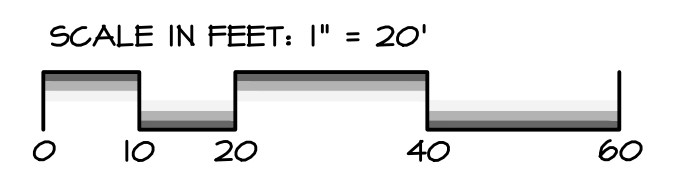
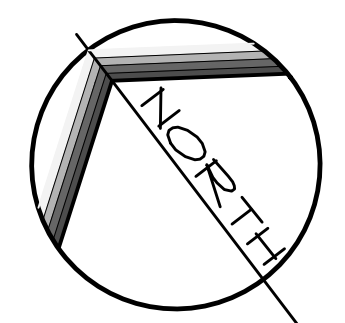
MANAGER: CRH      DATE: JANUARY 27, 2023  
 DESIGNER: JCB      PROJECT NO. 1091-001  
 DRAWN BY: JCB      SCALE: 1" = 20'

DRAWING NO.  
15 of 48

UPI NO(S): 67-5-27

**SUBGRADE/DRAINAGE LEGEND**

- LOD** LIMIT OF DISTURBANCE/PIPE BOUNDARY
- NPDES** NPDES BOUNDARY (OUTSIDE LOD)
- 635** PROPOSED SUBGRADE CONTOUR
- S** EXISTING STORM SEWER PIPE/INLET/MANHOLE
- S** PROPOSED STORM SEWER PIPE/INLET
- 1'X12" FLAT PIPE/PANEL DRAIN**
- PROPOSED CLEANOUT**
- S** EXISTING SANITARY SEWER AND MANHOLE
- W** EXISTING WATER LINE AND VALVE
- FH** EXISTING FIRE HYDRANT
- G** EXISTING UNDERGROUND GAS LINE
- A** EXISTING ABOVE GROUND ELECTRIC LINE
- UE** EXISTING UNDERGROUND ELECTRIC LINE
- +** EXISTING SPOT GRADE
- +** PROPOSED SPOT GRADE
- 5%** SLOPE GRADIENT AND DIRECTION

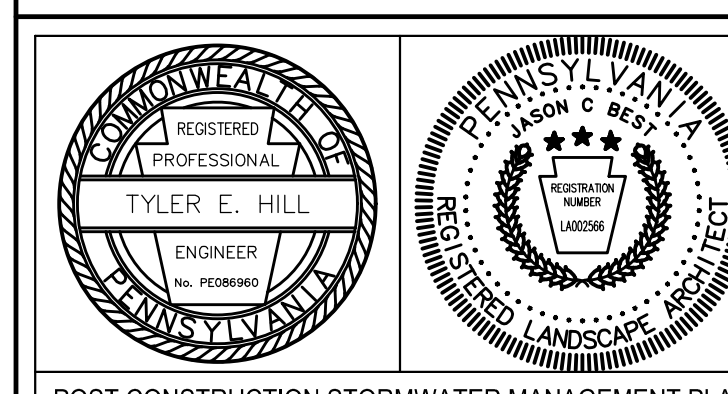


REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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 LITITZ, PA 17543  
 (717) 626-7271  
 elagroup.com



POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

**PRELIMINARY/FINAL LAND DEVELOPMENT**

SUBJECT:  
**FIELD SUB-GRADE PLAN 'B'**

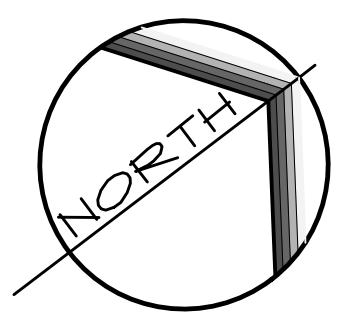
FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

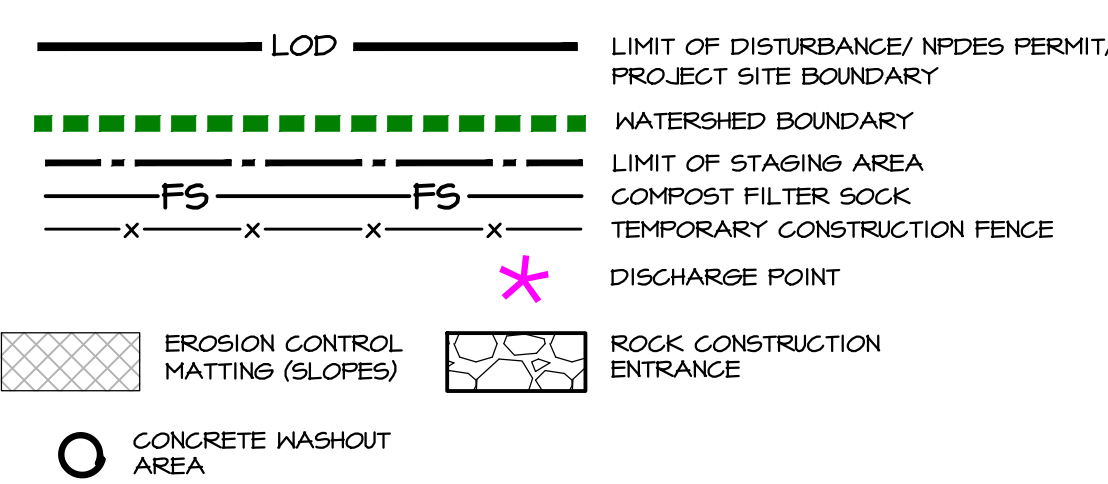
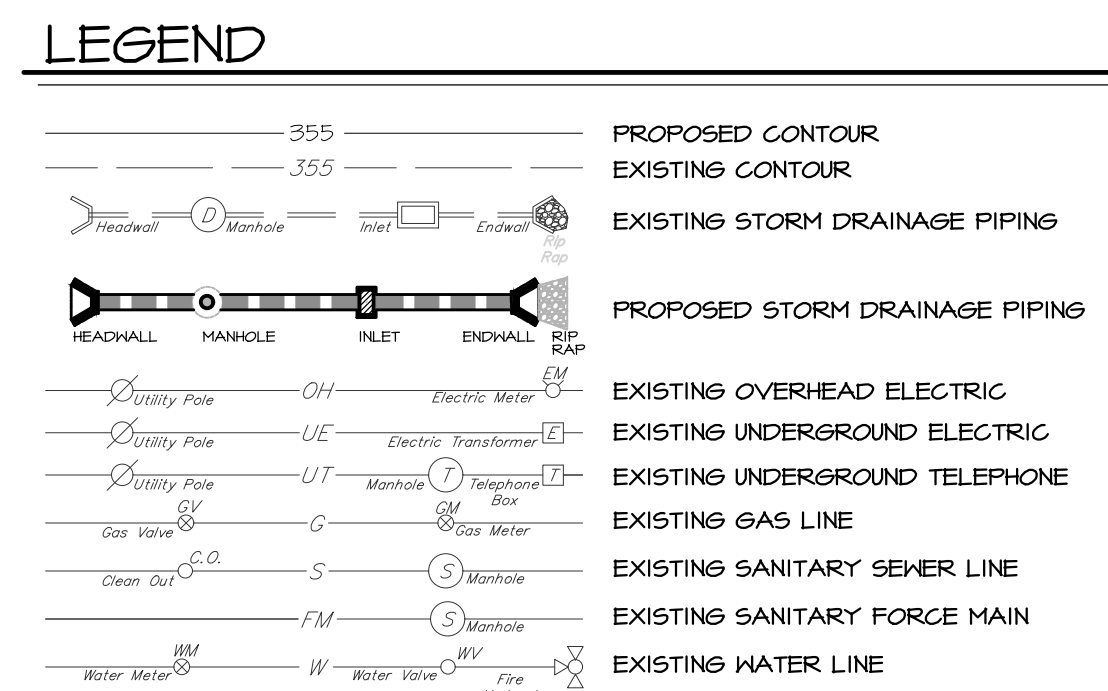
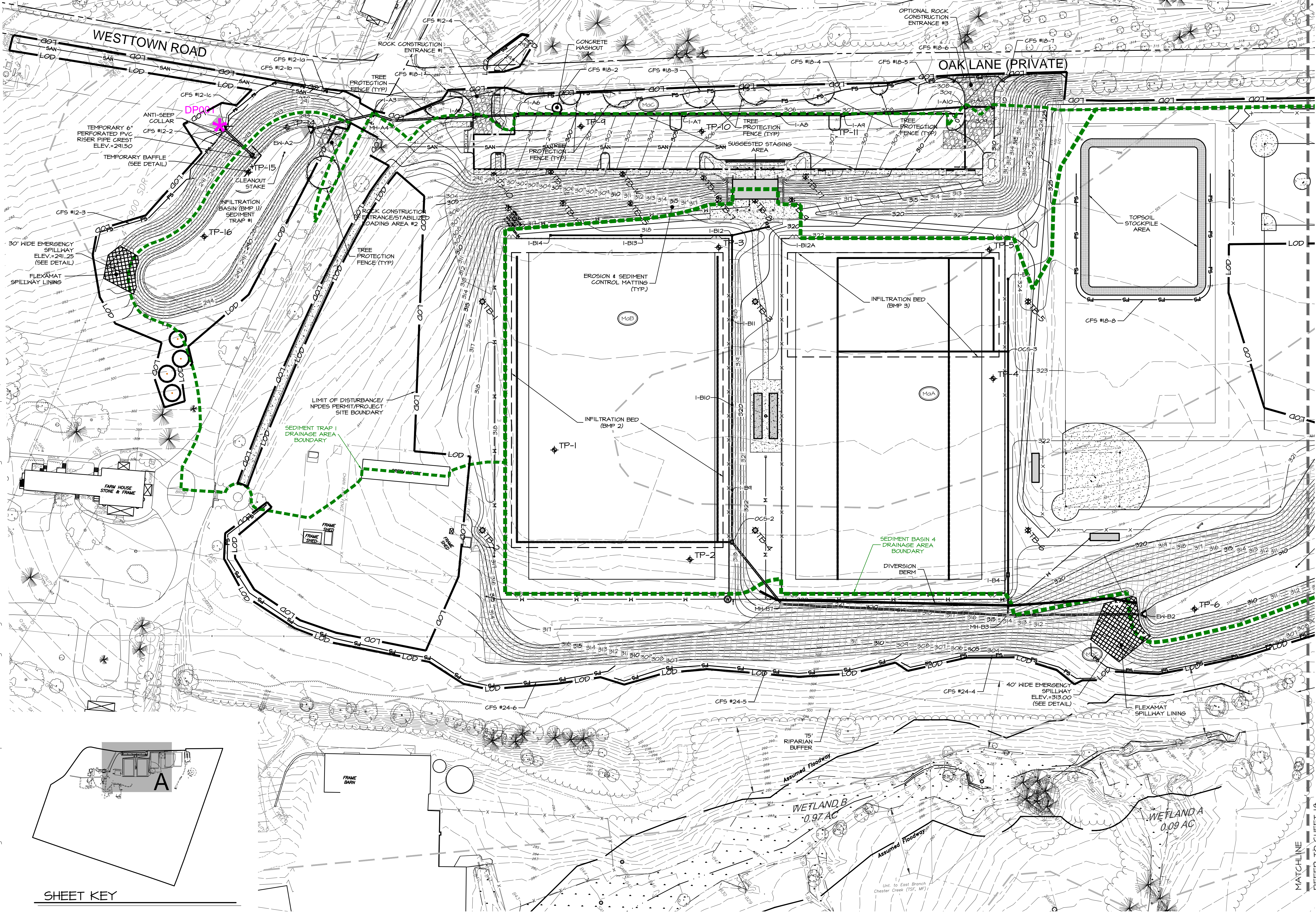
MANAGER: CRH DATE: JANUARY 27, 2023  
 DESIGNER: JCB PROJECT NO. 1091-001  
 DRAWN BY: JCB SCALE: 1" = 20'

DRAWING NO.  
**16 of 48**





SCALE IN FEET: 1" = 50'  
0 25 50 100 150



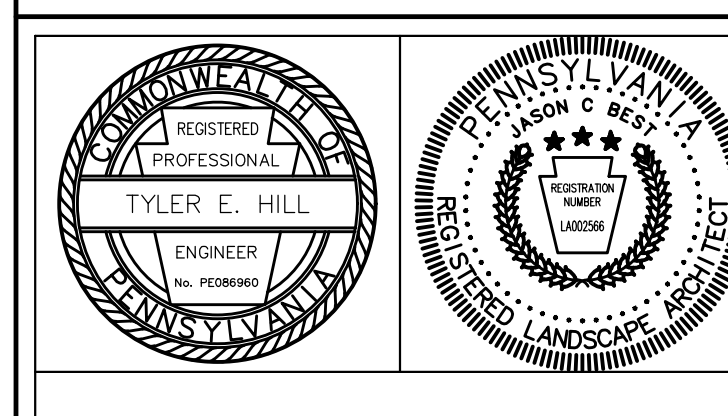
- SOILS**
- CoB** CALIFON LOAM, 3 TO 8 PERCENT SLOPES, H56 'D'
  - GqB** GLENELG SILT LOAM, 3 TO 8 PERCENT SLOPES, H56 'B'
  - GqC** GLENELG SILT LOAM, 8 TO 15 PERCENT SLOPES, H56 'B'
  - MaA** MANOR LOAM, 0 TO 3 PERCENT SLOPES, H56 'B'
  - MaB** MANOR LOAM, 3 TO 8 PERCENT SLOPES, H56 'B'
  - MaB** MANOR LOAM, 8 TO 15 PERCENT SLOPES, H56 'B'

REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		



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PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**EROSION & SEDIMENT CONTROL PLAN 'A'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: 1" = 50'

DRAWING NO.  
**17 of 48**

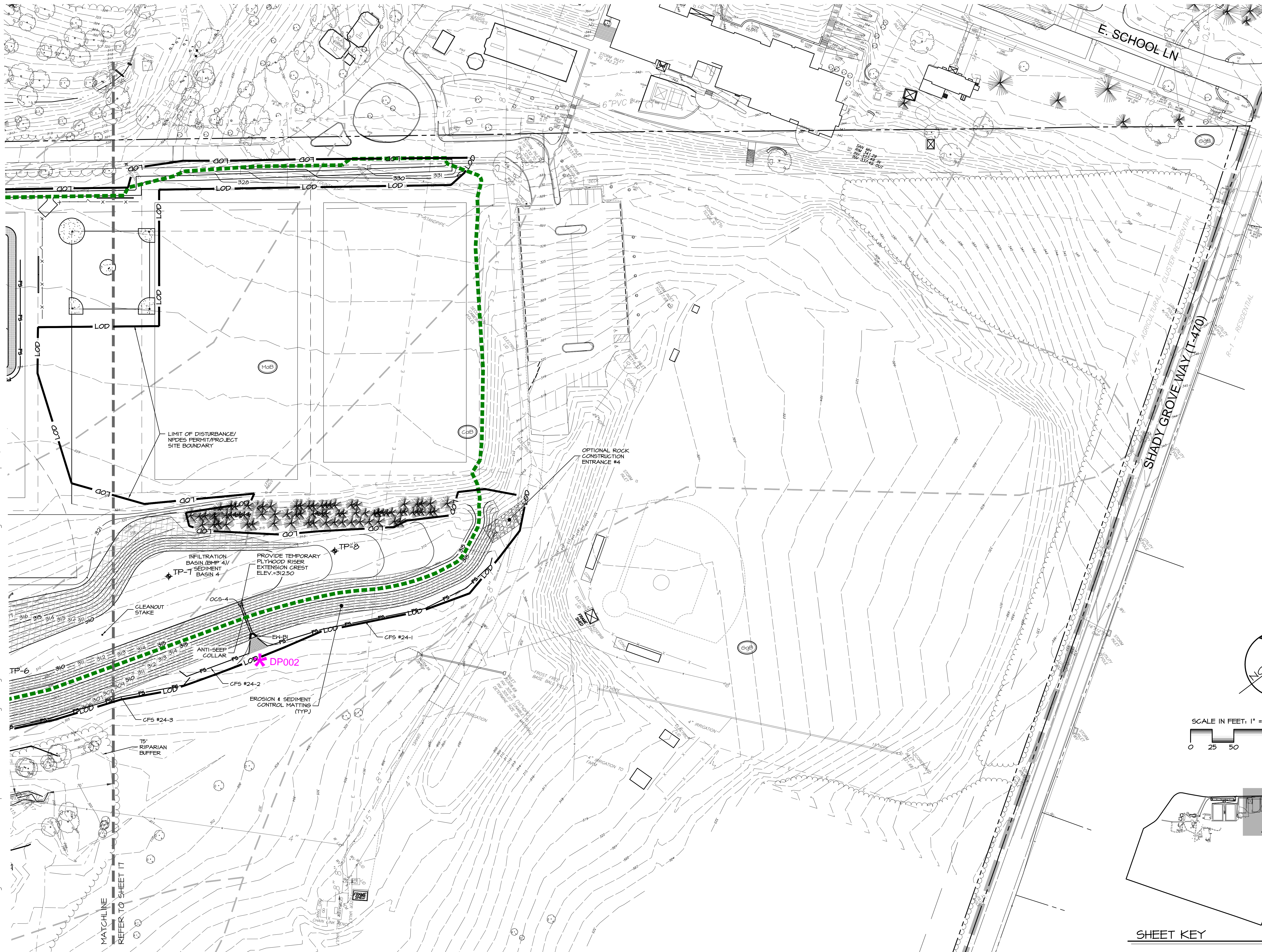
DRAWING: C:\Users\jason\OneDrive\Documents\1091-001 Oak Lane Project\Project Files\CAD\Plan\1091-001.dwg - PLOTTED: Sep 27, 2023 11:10 am

SHEET KEY

MATCHLINE REFER TO SHEET 18

UPI NO(S): 67-5-27

DRAWING: C:\Users\jason\Documents\ELA\_Group\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Final\ES&C PLAN.dwg - PLOTTED: Sep 27, 2023 11:07 am



### LEGEND

	355	PROPOSED CONTOUR
	355	EXISTING CONTOUR
		EXISTING STORM DRAINAGE PIPING
		PROPOSED STORM DRAINAGE PIPING
	OH	EXISTING OVERHEAD ELECTRIC
	UE	EXISTING UNDERGROUND ELECTRIC
	UT	EXISTING UNDERGROUND TELEPHONE
	G	EXISTING GAS LINE
	S	EXISTING SANITARY SEWER LINE
	FM	EXISTING SANITARY FORCE MAIN
	W	EXISTING WATER LINE
	LOD	LIMIT OF DISTURBANCE/ NPDES PERMIT/PROJECT SITE BOUNDARY
		WATERSHED BOUNDARY
	FS	LIMIT OF STAGING AREA
	X	COMPOST FILTER SOCK
	X	TEMPORARY CONSTRUCTION FENCE
		DISCHARGE POINT
		EROSION CONTROL MATTING (SLOPES)
		ROCK CONSTRUCTION ENTRANCE
		CONCRETE WASHOUT AREA

### SOILS

	CaB	CALIFORN LOAM, 3 TO 8 PERCENT SLOPES, H5G 'D'
	EgB	GLENELO SILT LOAM, 3 TO 8 PERCENT SLOPES, H5G 'B'
	EgC	GLENELO SILT LOAM, 8 TO 15 PERCENT SLOPES, H5G 'B'
	MaA	MAJOR LOAM, 0 TO 3 PERCENT SLOPES, H5G 'B'
	MaB	MAJOR LOAM, 3 TO 8 PERCENT SLOPES, H5G 'B'
	MaC	MAJOR LOAM, 8 TO 15 PERCENT SLOPES, H5G 'B'

### REVISIONS PER:

NO.	DESCRIPTION	DATE	BY
1.	CCCD COMMENTS	3-1-2023	TEH
2.	CCCD COMMENTS	3-17-2023	TEH
3.	LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4.	CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.			

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TYLER E. HILL  
ENGINEER  
PENNSYLVANIA

TYLER E. HILL  
LANDSCAPE ARCHITECT  
PENNSYLVANIA

PRELIMINARY/FINAL LAND DEVELOPMENT SUBJECT:  
**EROSION & SEDIMENT CONTROL PLAN 'B'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: 1" = 50'

DRAWING NO.  
**18 of 48**

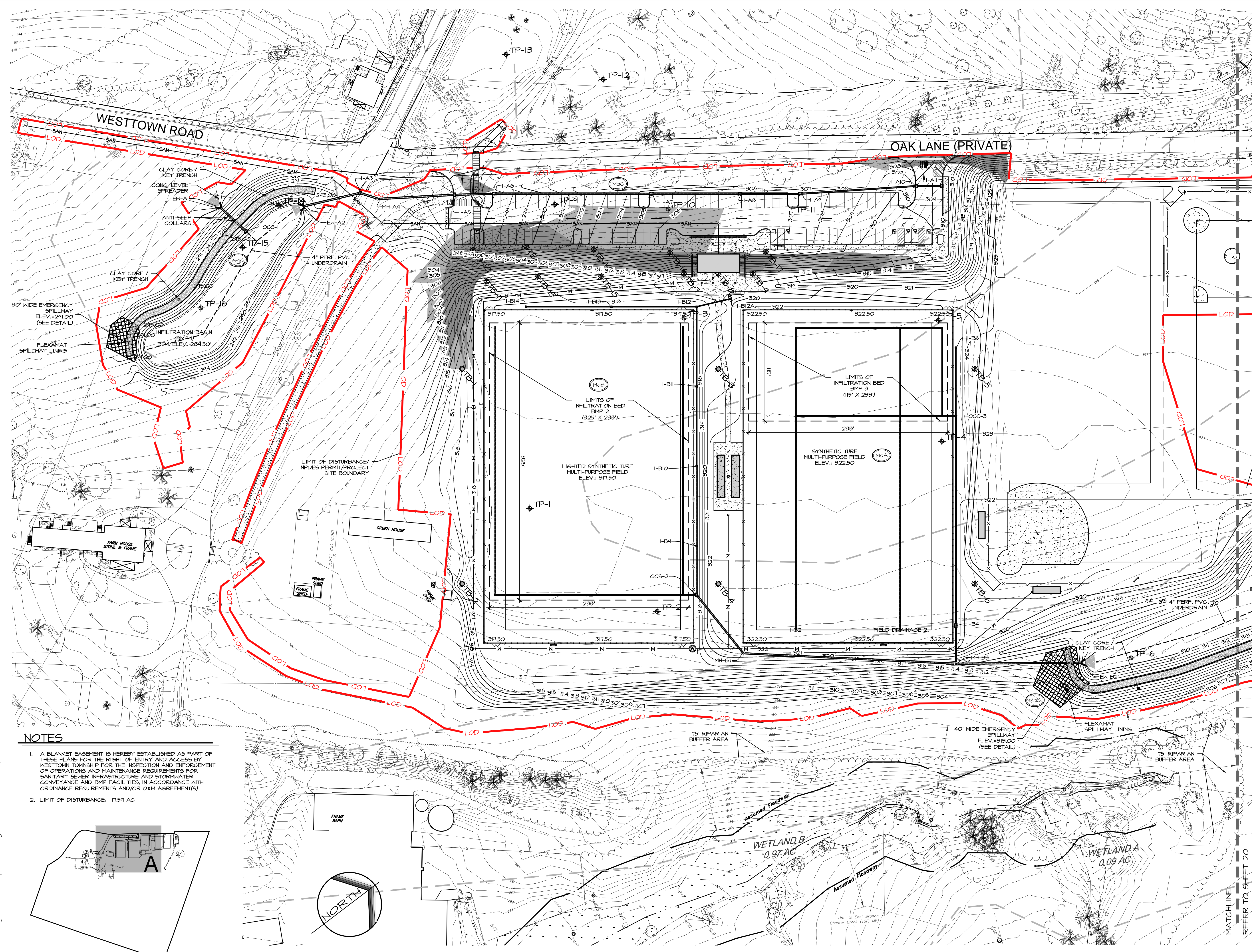
UPI NO(S): 67-5-27

NORTH

SCALE IN FEET: 1" = 50'

**B**

**SHEET KEY**



### LEGEND

	PROPOSED CONTOUR
	EXISTING CONTOUR
	EXISTING STORM SEWER PIPE/INLET/MANHOLE
	PROPOSED STORM SEWER PIPE/INLET/MANHOLE
	EXISTING ENDWALL/RIP RAP
	PROPOSED ENDWALL/RIP RAP
	EXISTING SANITARY SEWER AND MANHOLE
	EXISTING WATER LINE AND VALVE
	EXISTING FIRE HYDRANT
	EXISTING UNDERGROUND GAS LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING SPOT GRADE
	PROPOSED SPOT GRADE
	SLOPE GRADIENT AND DIRECTION
	PROJECT SITE BOUNDARY

### SURFACE WATERS

RECEIVING SURFACE WATER: EAST BRANCH CHESTER CREEK DESIGNATED USE: TSF, MF

RECEIVING SURFACE WATER: UNT. TO EAST BRANCH CHESTER CREEK DESIGNATED USE: TSF, MF

- ### SOILS
- CALIFON LOAM, 3 TO 8 PERCENT SLOPES, H56 'B'
  - GLENELG SILT LOAM, 3 TO 8 PERCENT SLOPES, H56 'B'
  - GLENELG SILT LOAM, 8 TO 15 PERCENT SLOPES, H56 'B'
  - MANOR LOAM, 0 TO 3 PERCENT SLOPES, H56 'B'
  - MANOR LOAM, 3 TO 8 PERCENT SLOPES, H56 'B'
  - MANOR LOAM, 8 TO 15 PERCENT SLOPES, H56 'B'

### EXISTING SLOPE MAPPING

- PRECAUTIONARY SLOPES (15-25%) IT, 672 SF / 0.41 AC TOTAL
- PROHIBITIVE SLOPES (> 25%) IT, 245 SF / 0.40 AC TOTAL

REVISIONS PER:	DATE:	BY:
1. OCCD COMMENTS	3-1-2023	TEH
2. OCCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.	-	-

MID-ATLANTIC  
CONSTRUCTION  
WE BUILD WINNERS

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TYLER E. HILL  
REGISTERED PROFESSIONAL ENGINEER  
PENNSYLVANIA

TYLER E. HILL  
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
PENNSYLVANIA

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

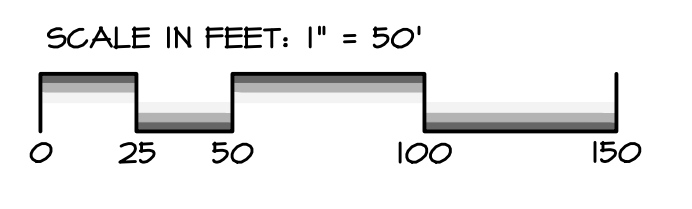
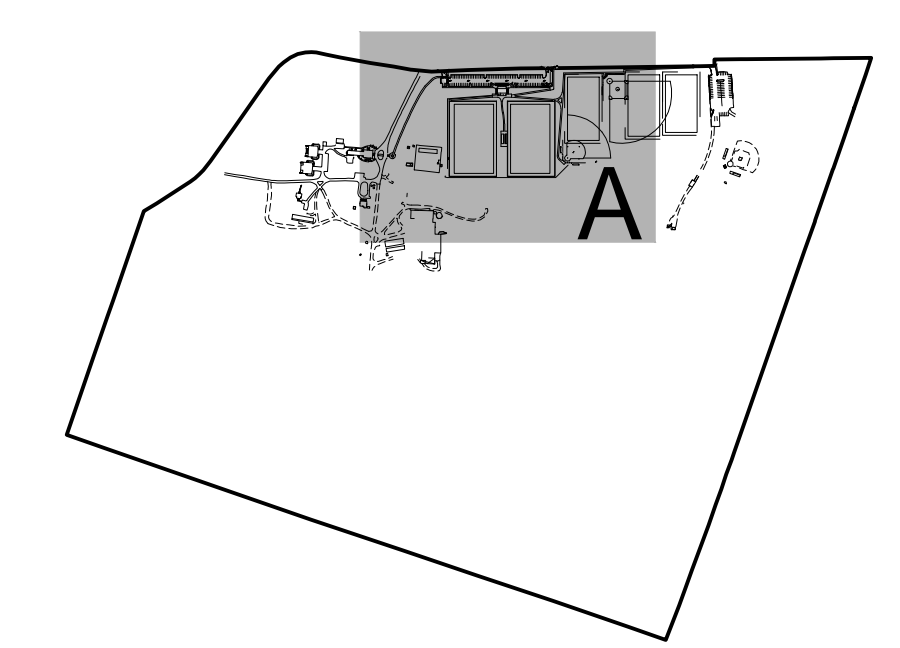
PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
**PCSM PLAN 'A'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 50'

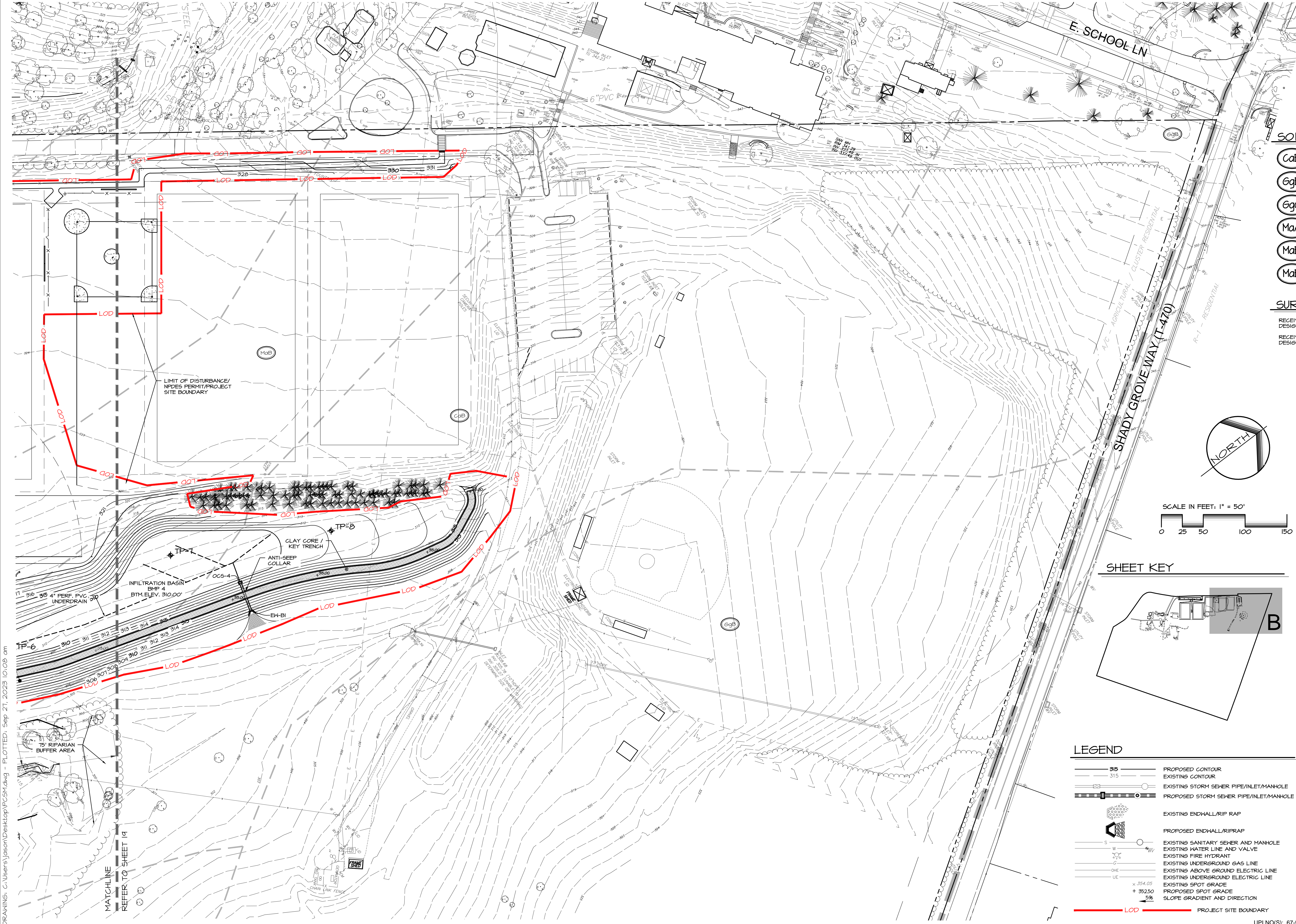
DRAWING NO.  
**19 of 48**

- ### NOTES
1. A BLANKET EASEMENT IS HEREBY ESTABLISHED AS PART OF THESE PLANS FOR THE RIGHT OF ENTRY AND ACCESS BY WESTTOWN TOWNSHIP FOR THE INSPECTION AND ENFORCEMENT OF OPERATIONS AND MAINTENANCE REQUIREMENTS FOR SANITARY SEWER INFRASTRUCTURE AND STORMWATER CONVEYANCE AND BMP FACILITIES, IN ACCORDANCE WITH ORDINANCE REQUIREMENTS AND/OR O&M AGREEMENT(S).
  2. LIMIT OF DISTURBANCE: 17.54 AC



DRAWING: C:\Users\Jason\Desktop\FCSM\dwg - PLOTTED: Sep 27, 2023 10:08 am

UPI NO(S): 67-5-27



- ### NOTES
- A BLANKET EASEMENT IS HEREBY ESTABLISHED AS PART OF THESE PLANS FOR THE RIGHT OF ENTRY AND ACCESS BY WESTTOWN TOWNSHIP FOR THE INSPECTION AND ENFORCEMENT OF OPERATIONS AND MAINTENANCE REQUIREMENTS FOR SANITARY SEWER INFRASTRUCTURE AND STORM-WATER CONVEYANCE AND BMP FACILITIES, IN ACCORDANCE WITH ORDINANCE REQUIREMENTS AND/OR O&M AGREEMENT(S).
  - LIMIT OF DISTURBANCE: 11.54 AC

- ### SOILS
- CaB** CALIFON LOAM, 3 TO 8 PERCENT SLOPES, H56 B'
  - GgB** GLENELG SILT LOAM, 3 TO 8 PERCENT SLOPES, H56 B'
  - GgC** GLENELG SILT LOAM, 8 TO 15 PERCENT SLOPES, H56 B'
  - MaA** MANOR LOAM, 0 TO 3 PERCENT SLOPES, H56 B'
  - MaB** MANOR LOAM, 3 TO 8 PERCENT SLOPES, H56 B'
  - MaB** MANOR LOAM, 8 TO 15 PERCENT SLOPES, H56 B'

### SURFACE WATERS

RECEIVING SURFACE WATER: EAST BRANCH CHESTER CREEK DESIGNATED USE: TSF, MF  
 RECEIVING SURFACE WATER: UNT. TO EAST BRANCH CHESTER CREEK DESIGNATED USE: TSF, MF

- ### EXISTING SLOPE MAPPING
- PRECAUTIONARY SLOPES - 15-25% (NONE, THIS SHEET)
  - PROHIBITIVE SLOPES - > 25% (NONE, THIS SHEET)

REVISIONS PER:	DATE:	BY:
1. OCCD COMMENTS	3-1-2023	TEH
2. OCCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		

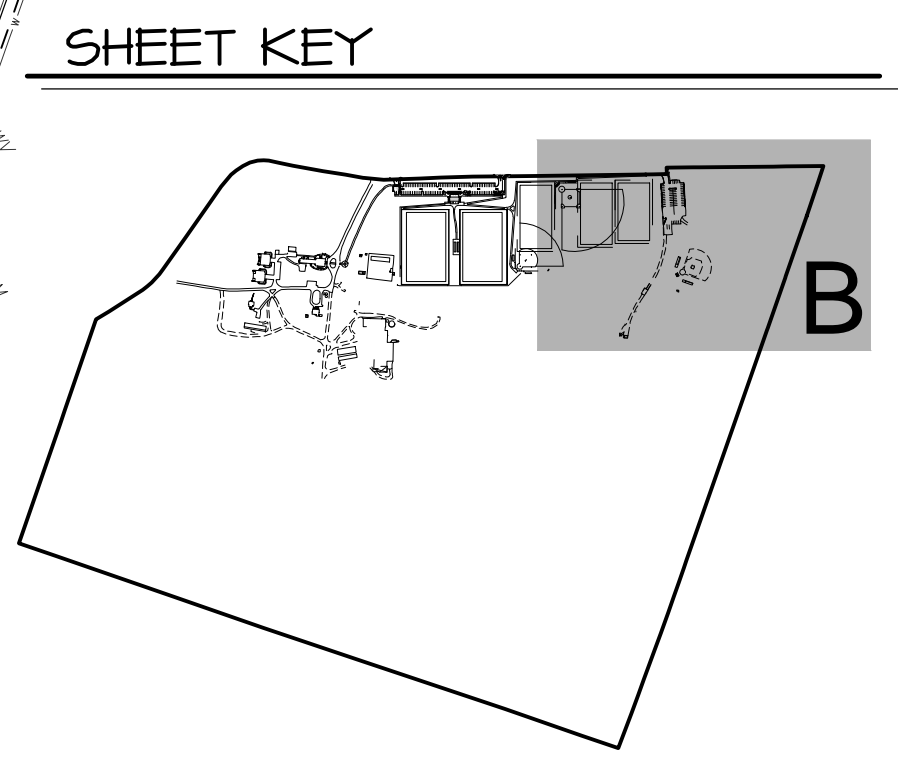
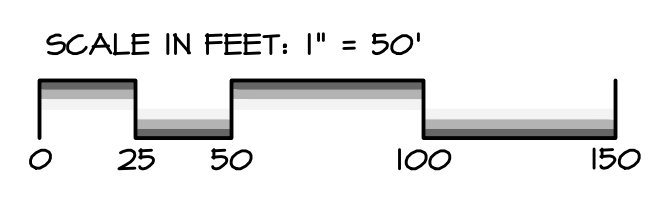


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### LEGEND

	PROPOSED CONTOUR
	EXISTING CONTOUR
	EXISTING STORM SEWER PIPE/INLET/MANHOLE
	PROPOSED STORM SEWER PIPE/INLET/MANHOLE
	EXISTING ENDWALL/RIP RAP
	PROPOSED ENDWALL/RIPRAP
	EXISTING SANITARY SEWER AND MANHOLE
	EXISTING WATER LINE AND VALVE
	EXISTING FIRE HYDRANT
	EXISTING UNDERGROUND GAS LINE
	EXISTING ABOVE GROUND ELECTRIC LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING SPOT GRADE
	PROPOSED SPOT GRADE
	SLOPE GRADIENT AND DIRECTION
	LOD
	PROJECT SITE BOUNDARY

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
**PCSM PLAN 'B'**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
 DESIGNER: JCB PROJECT NO. 1091-001  
 DRAWN BY: JCB SCALE: 1" = 50'

DRAWING NO.  
**20 of 48**

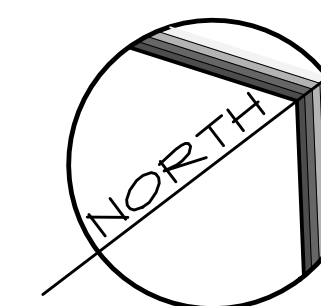
DRAWING: C:\Users\jason\Desktop\FCSM\dwg - PLOTTED: Sep 27, 2023 10:08 am

MATCHLINE  
 REFER TO SHEET 19

UPI NO(S): 67-5-27

**NOTES**

1. VALVE AND BACKFLOW PREVENTER SHALL COMPRISE: FORD PLASTIC FIT SETTER MODEL #PDPH-100-36-42-NL (OR APPROVED EQUAL) WITH HAHAGH DOUBLE LID COVER MODEL #48-LL-EXT-5). OMIT THE METER ASSEMBLY AND INSTEAD PROVIDE A SPOOL PIECE BETWEEN THE BALL VALVE AND DOUBLE CHECK VALVE ASSEMBLIES.
2. ALL SANITARY SEWER IMPROVEMENTS SHALL BE IN ACCORDANCE WITH ALL STANDARDS AND SPECIFICATIONS OF WESTTOWN TOWNSHIP.



SCALE IN FEET, 1" = 50'

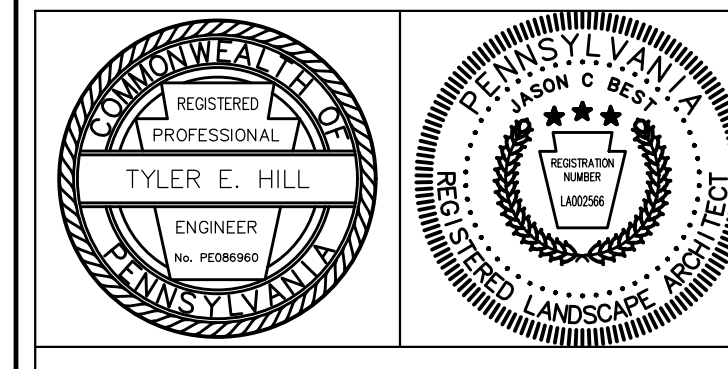


REVISIONS PER:	DATE:	BY:
1. CCCD COMMENTS	3-1-2023	TEH
2. CCCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		



**EVA** group, inc.  
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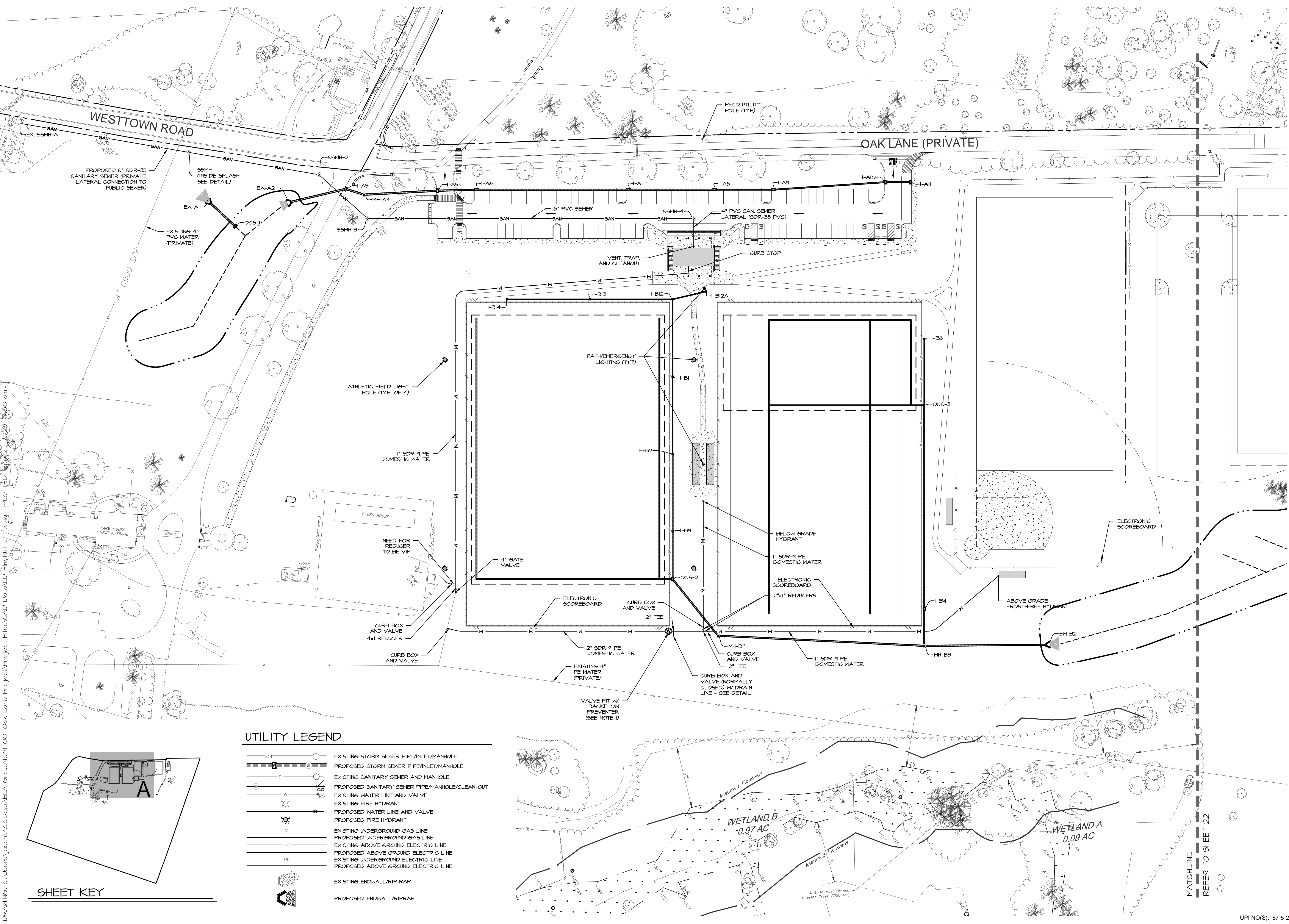
743 S. BROAD ST.  
LITITZ, PA 17543  
(717) 626-7271  
elagroup.com



PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**UTILITY PLAN 'A'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: 1" = 50'

DRAWING NO.  
**21 of 48**



**UTILITY LEGEND**

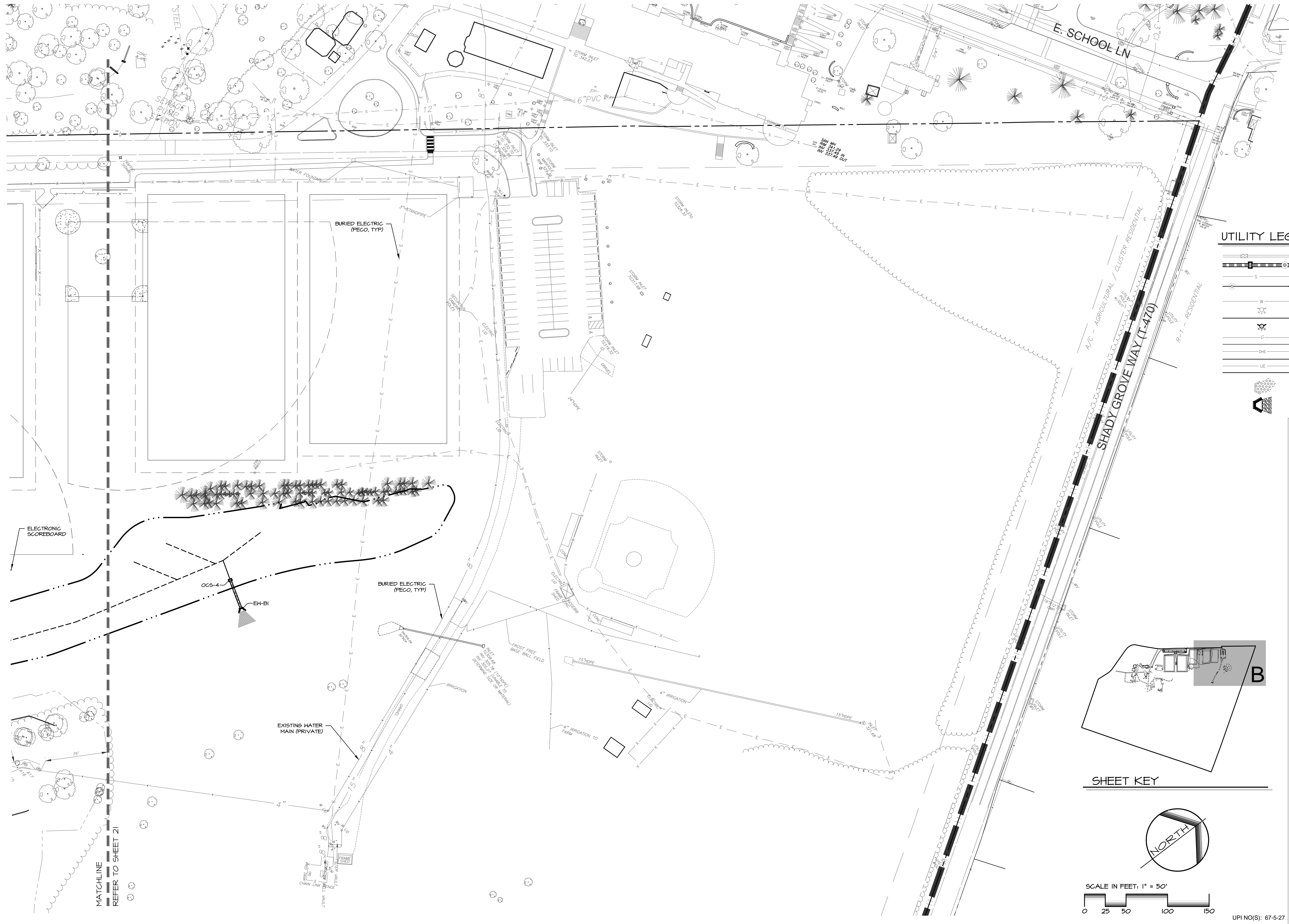
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	PROPOSED STORM SEWER PIPE/INLET/MANHOLE
	EXISTING SANITARY SEWER AND MANHOLE
	PROPOSED SANITARY SEWER PIPE/INLET/MANHOLE
	EXISTING WATER LINE AND VALVE
	EXISTING FIRE HYDRANT
	PROPOSED WATER LINE AND VALVE
	PROPOSED FIRE HYDRANT
	EXISTING UNDERGROUND GAS LINE
	PROPOSED UNDERGROUND GAS LINE
	EXISTING ABOVE GROUND ELECTRIC LINE
	PROPOSED ABOVE GROUND ELECTRIC LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	PROPOSED UNDERGROUND ELECTRIC LINE
	EXISTING ENDWALL/RIP RAP
	PROPOSED ENDWALL/RIP RAP

**SHEET KEY**

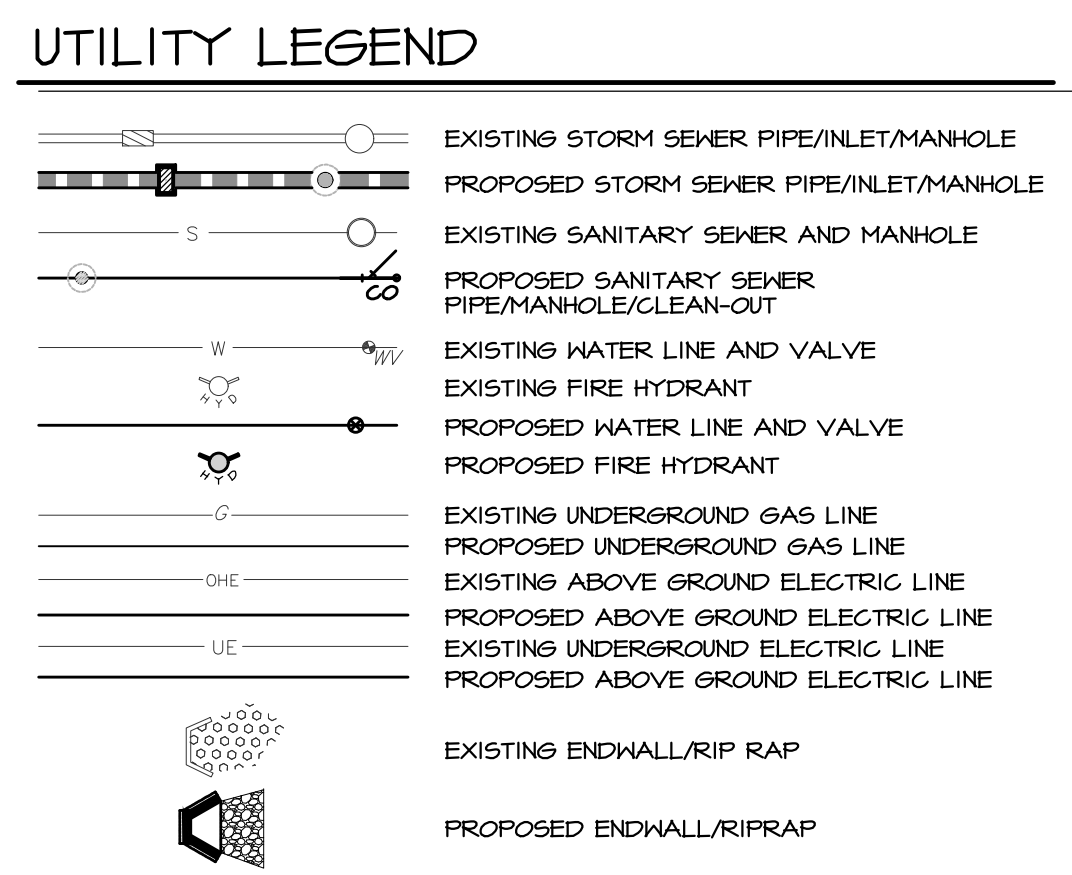
MATCHLINE  
REFER TO SHEET 22

DRAWING: C:\Users\jason\Documents\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Utility.dwg - PLOTTED: 3/1/2023 10:50 am

DRAWING: C:\Users\jason\Documents\ELA\_Group\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Final\UTILITY.dwg - PLOTTED: Sep 21, 2023 10:31 am



- NOTES**
1. VALVE AND BACKFLOW PREVENTER SHALL COMPRISE: FORD PLASTIC PIT SETTER MODEL #F08M-188-36-42-NE OR APPROVED EQUAL WITH WABASH DOUBLE LID COVER (MODEL #WB-LL-EXT-5), OMIT THE METER ASSEMBLY AND INSTEAD PROVIDE A SPOOL PIECE BETWEEN THE BALL VALVE AND DOUBLE CHECK VALVE ASSEMBLIES.
  2. ALL SANITARY SEWER IMPROVEMENTS SHALL BE IN ACCORDANCE WITH ALL STANDARDS AND SPECIFICATIONS OF WESTTOWN TOWNSHIP.



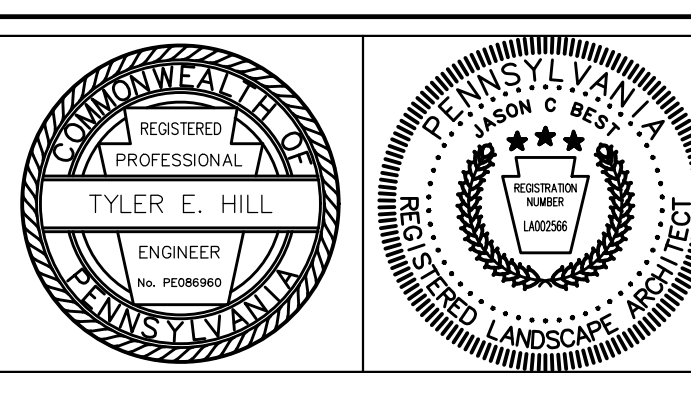
**REVISIONS PER:**

NO.	DATE	BY
1.	3-1-2023	TEH
2.	3-17-2023	TEH
3.	8-1-2023	JCB
4.	9/19/2023	JCB
5.	-	-



**EA group, inc.**  
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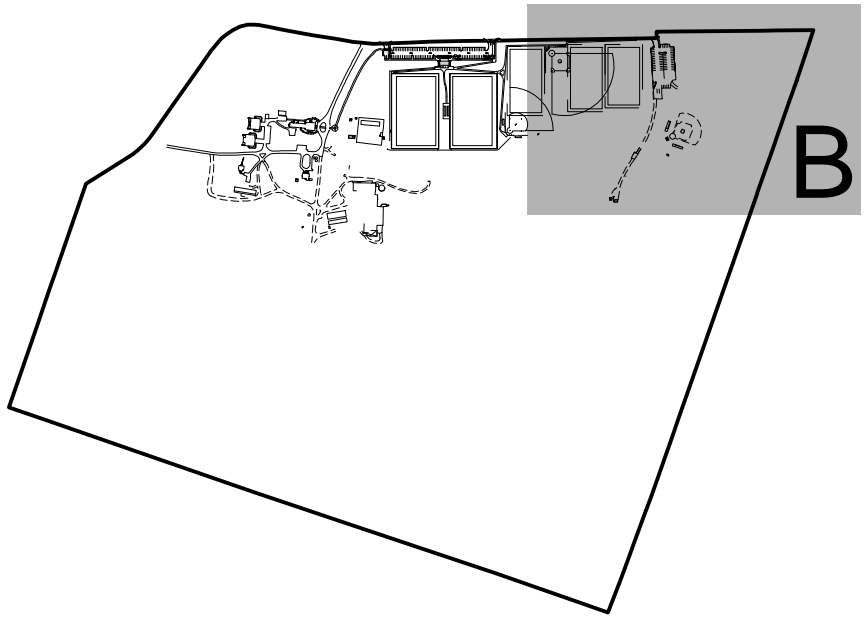
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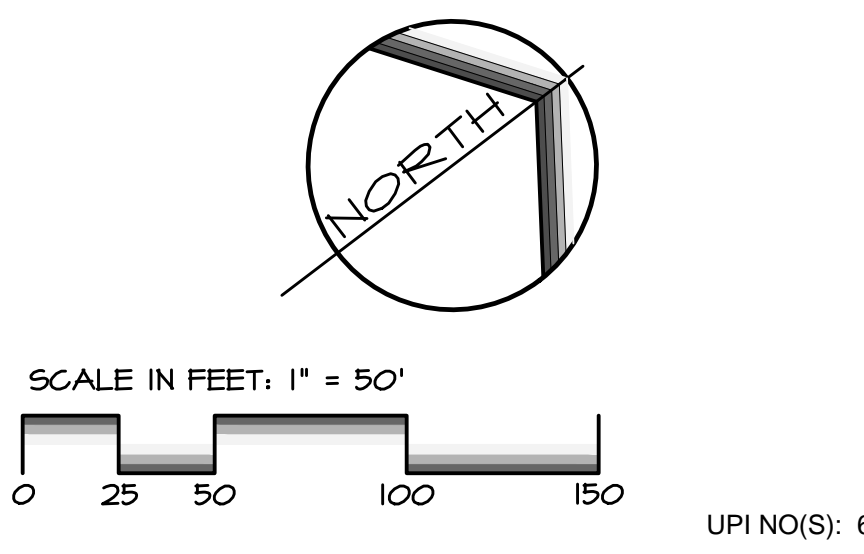
**PRELIMINARY/FINAL LAND DEVELOPMENT**  
SUBJECT:  
**UTILITY PLAN 'B'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: 1" = 50'

DRAWING NO.  
**22 of 48**



**SHEET KEY**



UPI NO(S): 67-5-27



**TREE REPLACEMENT REQ'TS**

HESTTOWN TWP CODE: 144-124.D(II)

NON-SPECIMEN: INSTALL 1" CALIPER PER 4" CALIPER REMOVED  
 SPECIMEN: INSTALL 1" CALIPER PER 1" CALIPER REMOVED

TREES TO BE REMOVED:

NON-SPECIMEN: 262"  
 SPECIMEN: 164"

COMPENSATORY PLANTINGS:

NON-SPECIMEN: 262" / 4" = 66"  
 SPECIMEN: 164" / 1" = 164"  
 66" x 164" = 230" (66 TREES AT 3.5" CALIPER)

**COMPENSATORY PLANTINGS**

- TREES HIGHLIGHTED IN BLUE ON THIS PLAN ARE COMPENSATORY PLANTINGS
- COMPENSATORY PLANTING NOTES:
- 92 EVERGREEN TREES ARE PROVIDED AS COMPENSATORY TREES, WHICH ACCOUNT FOR 41 OF THE REQUIRED 66 TREES, THE REMAINDER OF THE COMPENSATORY TREES ARE DECIDUOUS.
  - SEE THE COMPENSATORY PLANTING SCHEDULE FOUND ON SHEET 24A.

**NOTES**

- SEE SHEETS 8 AND 9 FOR THE TREES (6" OR GREATER) SCHEDULED FOR DEMOLITION AND FOR THE TREE PROTECTION AREAS THAT ARE TO BE DELINEATED.
- SEE SHEET 24A FOR THE LIST OF PROPOSED PLANTINGS AND THEIR QUANTITIES AS WELL AS VARIOUS PLANTING DETAILS.
- IF ANY EXISTING TREES ARE REMOVED IN ADDITION TO THOSE SCHEDULED FOR REMOVAL ON THE DEMOLITION PLANS, THEY SHALL BE REPLACED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE HESTTOWN TOWNSHIP CODE.
- TREES AND SHRUBS SHALL BE OF NURSERY-GROWN STOCK OF NON-COLUMNAR VARIETIES, AND SHALL BE INSECT AND PEST RESISTANT.
- A TWO-YEAR MAINTENANCE AND REPLACEMENT GUARANTEE SHALL BE PROVIDED TO THE TOWNSHIP BY THE LANDSCAPE CONTRACTOR. ALL PLANTINGS WHICH DO NOT SURVIVE AFTER THE EXPIRATION OF THE MAINTENANCE GUARANTEE SHALL BE REPLACED BY THE OWNER.

**LEGEND**

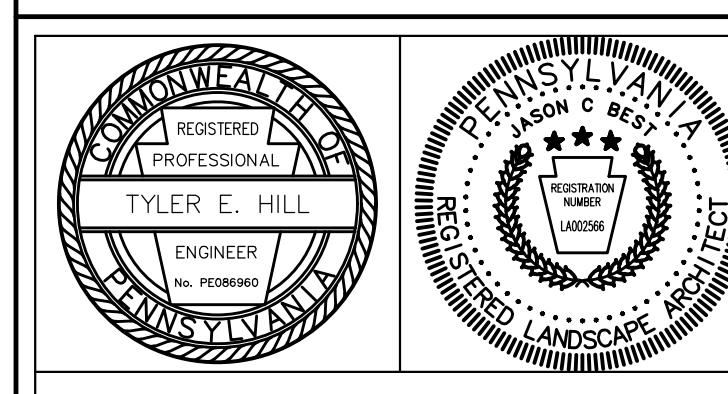
TREE PROTECTION FENCING

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
2. OCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		



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743 S. BROAD ST.  
 LITITZ, PA 17543  
 (717) 626-7271  
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PRELIMINARY/FINAL LAND DEVELOPMENT  
 SUBJECT:  
**TREE PROTECTION MANAGEMENT PLAN AND LANDSCAPE PLAN 'A'**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
 DESIGNER: JCB PROJECT NO. 1091-001  
 DRAWN BY: JCB SCALE: 1" = 60'

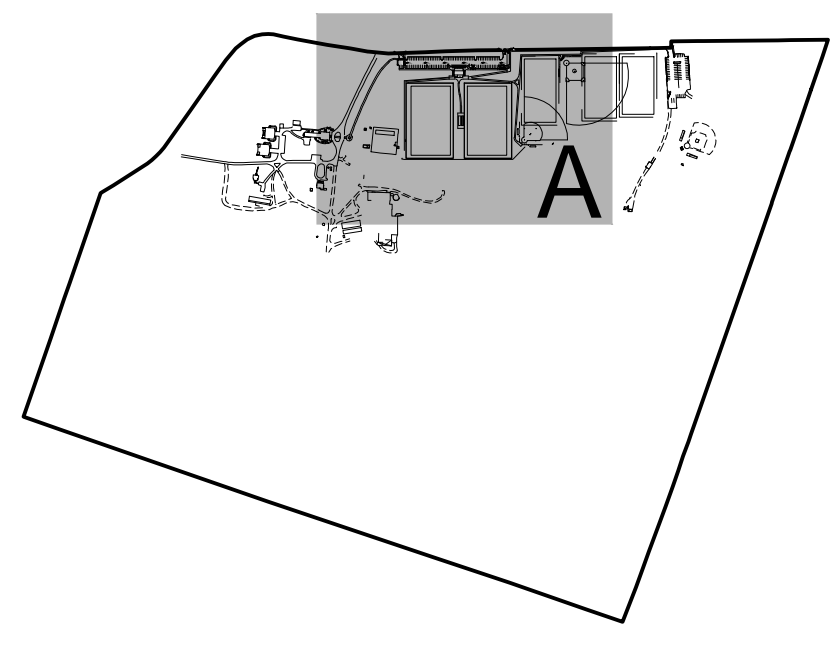
DRAWING NO.  
**23 of 48**

**EXISTING TREE LEGEND**

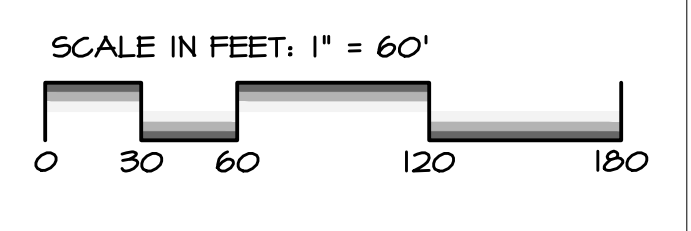
AI AILANTHUS	MB MULBERRY
AS ASH	MG MAGNOLIA
AV ARBORVITAE	MJ J. MAPLE
BH BEECH	OK OAK
BR BIRCH	PN PINE
CD CEDAR	SA SASSAFRAS
CH CHESTNUT	SG SWEETGUM
CY CHERRY	SP SPRUCE
DG DOGWOOD	FI FIR
EM ELM	SW SOURWOOD
FR FRUIT	SY SYCAMORE
HB HACKBERRY	TL TUPELO
HK HICKORY	TU TULIP POPLAR
HM HEMLOCK	WA WALNUT
HY HOLLY	WI WILLOW
MA MAPLE	WP WHITE PINE

DRAWING: C:\Users\jason\Documents\EVA\_Group\1091-001 Oak Lane Project\Project Files\CAD Data\LD-Final\LANDSCAPE.dwg - PLOTTED: Sep 27, 2023 10:06 am

**SHEET KEY**



MATCHLINE REFER TO SHEET 24



UPI NO(S): 67-5-27

**COMPENSATORY PLANTINGS** § 149-424.D(12)

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ABC	31	Abies concolor	White Fir	8'-10'	B4B	
ARA	1	Acer rubrum 'Red Sunset'	Red Sunset Maple	3.5' Cal.	B4B	
ARO	5	Acer rubrum 'October Glory'	October Glory Red Maple	3.5' Cal.	B4B	
ASB	5	Acer saccharum 'Bonfire'	Bonfire Sugar Maple	3.5' Cal.	B4B	
CL	5	Cladostis lutea	American Yellowwood	3.5' Cal.	B4B	
LT	1	Liriodendron tulipifera	Tulip Tree	3.5' Cal.	B4B	
PS	51	Pinus strobus	White Pine	8'-10'	B4B	
QA	3	Quercus alba	White Oak	3.5' Cal.	B4B	
UC	5	Ulmus x 'Frontier'	American Elm	3.5' Cal.	B4B	

**BMP 1 PLANTINGS** § 149-425.6(3)

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ARO	3	Acer rubrum 'October Glory'	October Glory Red Maple	3.5' Cal.	B4B	
BNH	1	Betula nigra 'Heritage'	Heritage River Birch	8'-10' Multi-stem	B4B	
CO	3	Celtis occidentalis	Common Hackberry	3.5' Cal.	B4B	
LT	2	Liriodendron tulipifera	Tulip Tree	3.5' Cal.	B4B	

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	REMARKS
AM	5	Aronia melanocarpa	Chokeberry	24"-30"	3 gal	
CA	5	Clethra alnifolia	Summersweet Clethra	24"-30"	3 gal	
CR	4	Cornus racemosa	Gray Dogwood	24"-30"	3 gal	
IS	14	Ilex glabra	Holly	24"-30"	3 gal	
IV	10	Ilex verticillata	Hobbleberry	24"-30"	3 gal	
MP	5	Myrica pensylvanica	Northern Bayberry	24"-30"	3 gal	
PD	12	Physocarpus opulifolius	Ninebark	24"-30"	3 gal	
SD	15	Salix discolor	Pussy Willow	24"-30"	3 gal	
VD	11	Viburnum dentatum 'Arrowwood'	Arrowwood Viburnum	24"-30"	3 gal	

**BMP 4 PLANTINGS** § 149-425.6(3)

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ARO	4	Acer rubrum 'October Glory'	October Glory Red Maple	3.5' Cal.	B4B	
BNH	3	Betula nigra 'Heritage'	Heritage River Birch	8'-10' Multi-stem	B4B	
CO	4	Celtis occidentalis	Common Hackberry	3.5' Cal.	B4B	
LT	4	Liriodendron tulipifera	Tulip Tree	3.5' Cal.	B4B	

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	REMARKS
AM	7	Aronia melanocarpa	Chokeberry	24"-30"	3 gal	
CA	20	Clethra alnifolia	Summersweet Clethra	24"-30"	3 gal	
CM	24	Cornus amomum	Silky Dogwood	24"-30"	3 gal	
CR	4	Cornus racemosa	Gray Dogwood	24"-30"	3 gal	
CS	12	Cornus sericea	Red Twig Dogwood	24"-30"	3 gal	
HV	14	Hamelis virginiana	Common Witch Hazel	24"-30"	3 gal	
IS	37	Ilex glabra	Holly	24"-30"	3 gal	
IV	36	Ilex verticillata	Hobbleberry	24"-30"	3 gal	
MP	25	Myrica pensylvanica	Northern Bayberry	24"-30"	3 gal	
PD	21	Physocarpus opulifolius	Ninebark	24"-30"	3 gal	
SD	5	Salix discolor	Pussy Willow	24"-30"	3 gal	
SN	7	Sambucus nigra	Common Elderberry	24"-30"	3 gal	
VD	25	Viburnum dentatum 'Arrowwood'	Arrowwood Viburnum	24"-30"	3 gal	

**PERIMETER LANDSCAPING (SHADY GROVE WAY)** § 149-425.6(1)

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
ABC	11	Abies concolor	White Fir	8'-10'	B4B	
ARO	14	Acer rubrum 'October Glory'	October Glory Red Maple	3.5' Cal.	B4B	
ASB	4	Acer saccharum 'Bonfire'	Bonfire Sugar Maple	3.5' Cal.	B4B	
ASB	15	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	3.5' Cal.	B4B	
CL	4	Cladostis lutea	American Yellowwood	3.5' Cal.	B4B	
CF	8	Cornus florida	Flowering Dogwood	3.5' Cal.	B4B	
PS	14	Pinus strobus	White Pine	8'-10'	B4B	
QA	10	Quercus alba	White Oak	3.5' Cal.	B4B	

**PARKING LOT PLANTINGS** § 149-425.6(2)

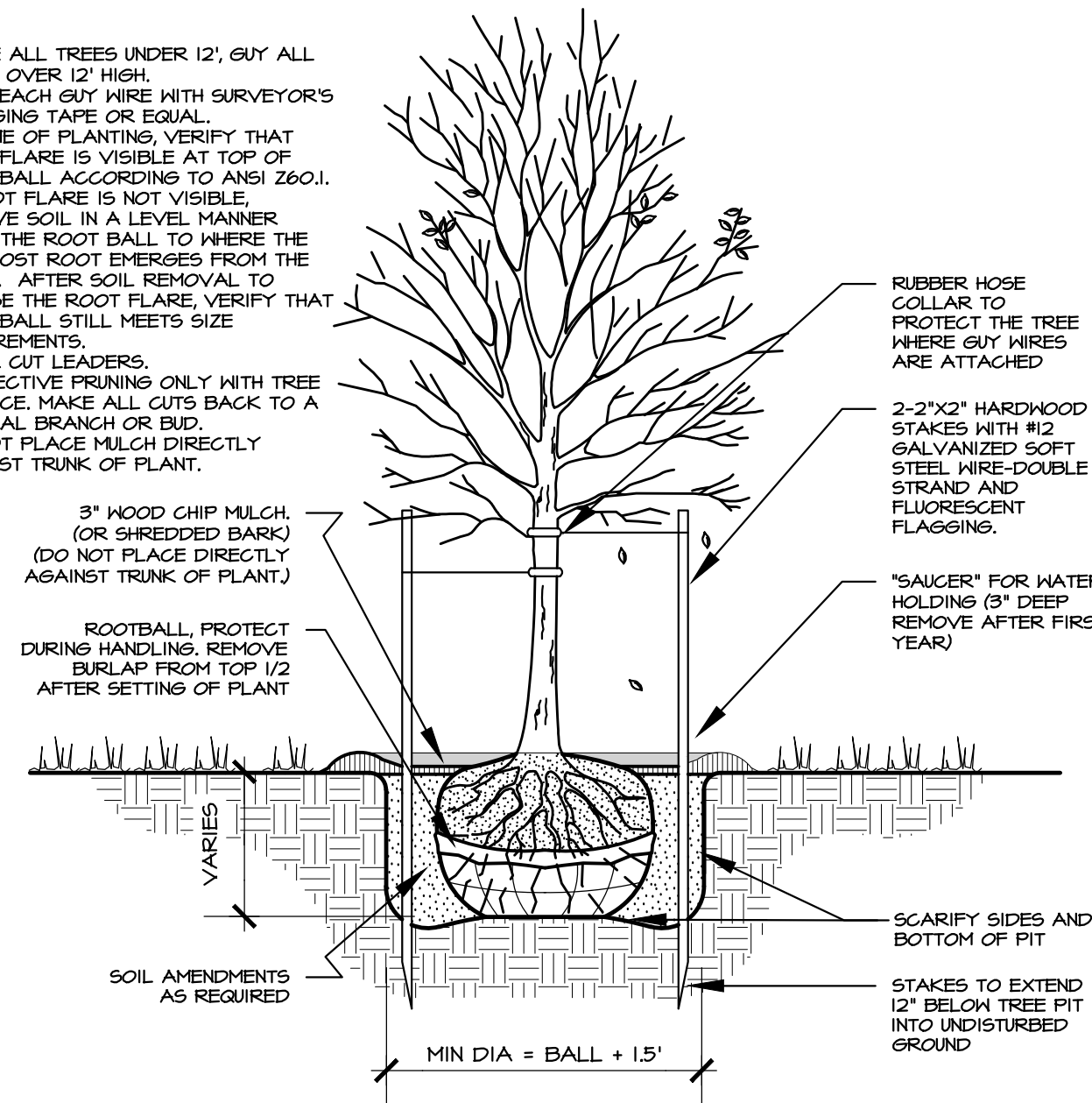
TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	REMARKS
S12	2	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	3.5' Cal.	B4B	
UC	4	Ulmus x 'Frontier'	American Elm	3.5' Cal.	B4B	
ZSH	5	Zelkova serrata 'Halka'	Halka Zelkova	3.5' Cal.	B4B	

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	REMARKS
CK	22	Calluna vulgaris 'Karl Foerster'	Feather Reed Grass	3 GAL		
CH	42	Clethra alnifolia 'Hummingbird'	Summersweet	24"-30"	3 gal	
IS	20	Itea virginica 'Sprich'	Little Henry® Sweetspire	24"-30"	3 gal	
NH	6	Nepeta x 'Walker's Low'	Walker's Low Catmint	3 GAL		

**NOTES:**

- STAKE ALL TREES UNDER 12'; GUY ALL TREES OVER 12' HIGH.
- FLAG EACH GUY WIRE WITH SURVEYOR'S FLAGGING TAPE OR EQUAL.
- AT TIME OF PLANTING, VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL ACCORDING TO ANSI Z60.1. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL, TO EXPOSE THE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS.
- NEVER CUT LEADERS.
- CORRECTIVE PRUNING ONLY WITH TREE IN PLACE. MAKE ALL CUTS BACK TO A LATERAL BRANCH OR BUD.
- DO NOT PLACE MULCH DIRECTLY AGAINST TRUNK OF PLANT.

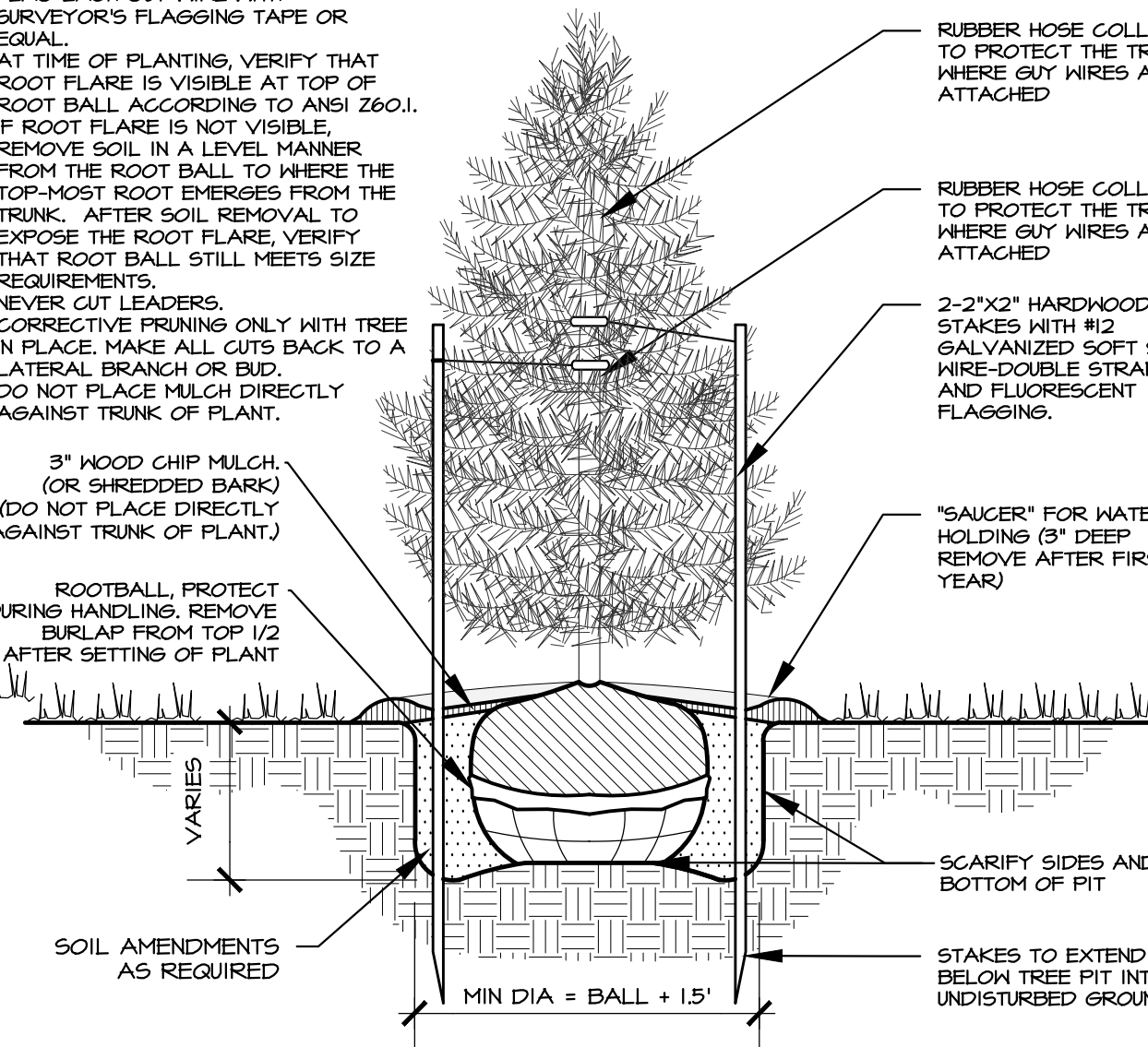


**(A) DECIDUOUS TREE PLANTING DETAIL**

NOT TO SCALE

**NOTES:**

- STAKE ALL TREES UNDER 12'; GUY ALL TREES OVER 12' HIGH.
- FLAG EACH GUY WIRE WITH SURVEYOR'S FLAGGING TAPE OR EQUAL.
- AT TIME OF PLANTING, VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL ACCORDING TO ANSI Z60.1. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL, TO EXPOSE THE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS.
- NEVER CUT LEADERS.
- CORRECTIVE PRUNING ONLY WITH TREE IN PLACE. MAKE ALL CUTS BACK TO A LATERAL BRANCH OR BUD.
- DO NOT PLACE MULCH DIRECTLY AGAINST TRUNK OF PLANT.

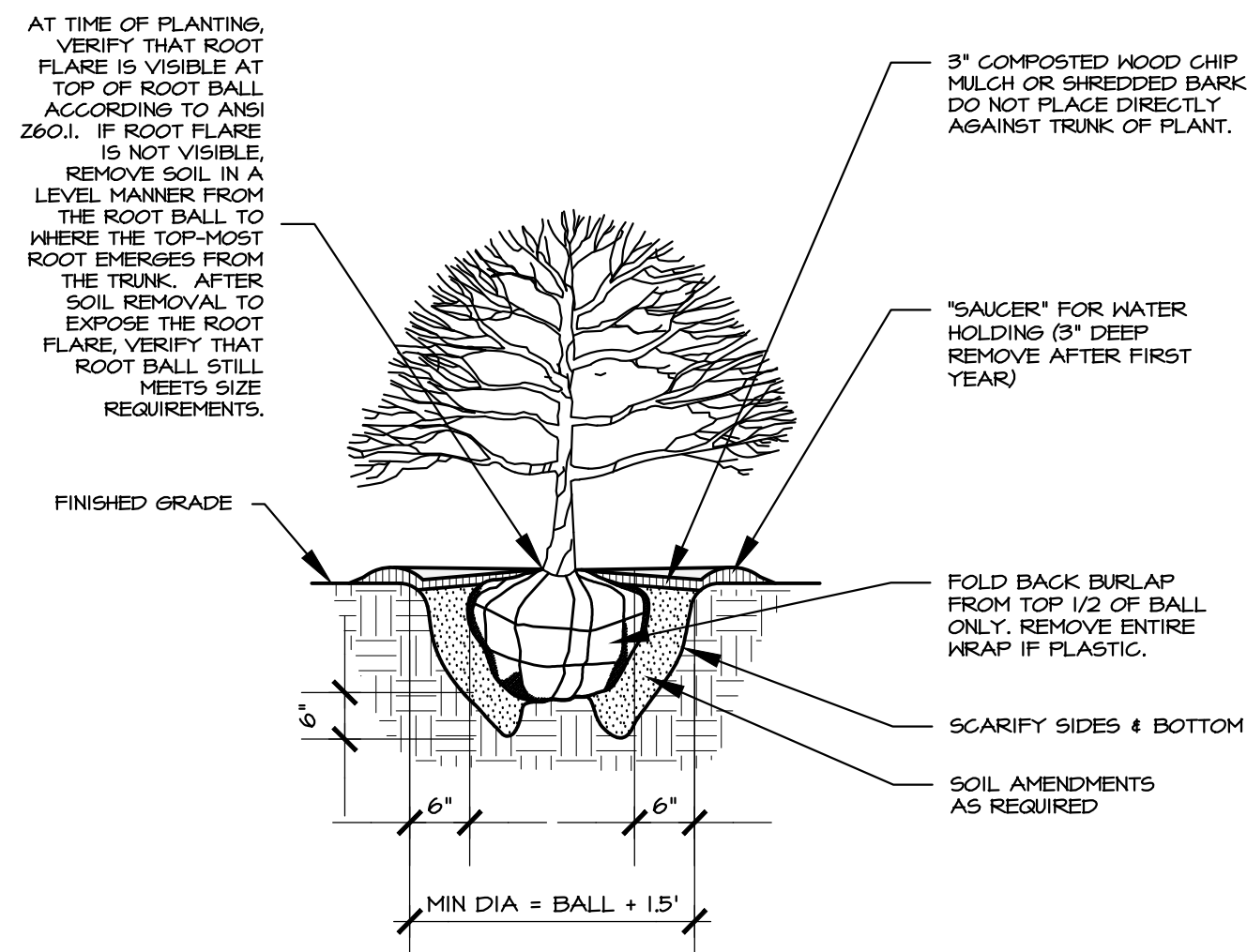


**(B) EVERGREEN TREE PLANTING DETAIL**

NOT TO SCALE

**NOTE:**

- DO NOT PLACE MULCH DIRECTLY AGAINST TRUNK OF PLANT.



**(C) SHRUB PLANTING DETAIL**

NOT TO SCALE

TABULATION OF REQUIRED LANDSCAPING			
ORDINANCE SECTION/REQUIREMENT	LENGTH	QTY REQUIRED	QTY PROVIDED
<b>PERIMETER YARD REQUIREMENTS (§ 149-925.G(1)) - NON-RESIDENTIAL (VARIES - SEE NOTE 1 BELOW)</b>			
2 CANOPY TREES PER 100 LF OF STREET FRONTAGE	8,344.11 LF	167	44 (SEE NOTE 1)
1 CANOPY TREE PER 100 LF OF OTHER PROPERTY BOUNDARIES	3,571.57 LF	36	0 (SEE NOTE 1)
1.5 ORNAMENTAL FLOWERING TREES PER 100 LF OF STREET FRONTAGE	8,344.11 LF	125	21 (SEE NOTE 1)
1 ORNAMENTAL FLOWERING TREE PER 100 LF OF OTHER PROPERTY BOUNDARIES	3,571.57 LF	36	0 (SEE NOTE 1)
6 SHRUBS PER 100 LF OF STREET FRONTAGE	8,344.11 LF	501	0 (SEE NOTE 1)
3 SHRUBS PER 100 LF OF OTHER PROPERTY BOUNDARIES	3,571.57 LF	107	0 (SEE NOTE 1)
<b>PARKING AREA REQUIREMENTS (§ 149-925.G(2)) - VARIES (SEE NOTE 2 BELOW)</b>			
1 TREE / PLANTER ISLAND < 20'	4	4	4
2 TREES / PLANTER ISLAND > 20'	4	0	0
10 SHRUBS / PLANTER ISLAND < 20'	4	40	40
20 SHRUBS / PLANTER ISLAND > 20'	4	0	0
<b>STORMWATER RETENTION/DETENTION BASINS (§ 149-925.G(3)) - VARIES (SEE NOTE 3 BELOW)</b>			
TREES (1 PER 2,000 SF OF BASIN/BMP 1 AREA) -	BASIN AREA	4	4
SHRUBS (1 PER 200 SF OF BASIN/BMP 1 AREA) -	18,714.34 SF	44	44
TREES (1 PER 2,000 SF OF BASIN/BMP 4 AREA) -	44,963.04 SF	25	25
SHRUBS (1 PER 200 SF OF BASIN/BMP 4 AREA) -	44,963.04 SF	250	250

**NOTES:**

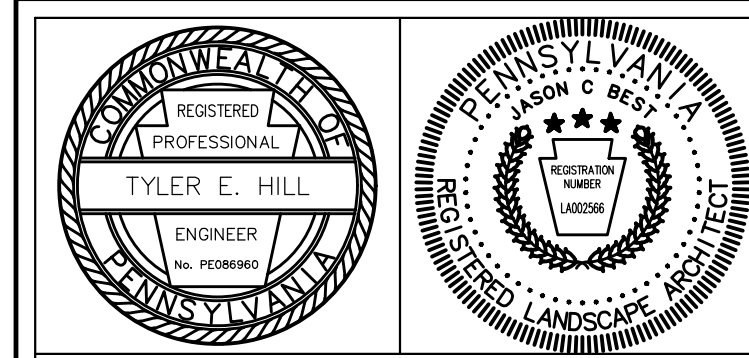
- THE SCREEN PLANTINGS PROPOSED ALONG SHADY GROVE WAY FOR THE SOLAR FARM ARE AS NEGOTIATED WITH NEIGHBORING PROPERTY OWNER(S). THE BOARD OF SUPERVISORS, DURING THE CONDITIONAL USE HEARING, REQUESTED THAT THE SCREEN PLANTINGS PROVIDED ALONG SHADY GROVE WAY FOR THE OAK LANE PROJECT MATCH WHAT HAD BEEN AGREED UPON FOR THE SOLAR FARM. RELIEF FROM STRICT CONFORMANCE WITH THE ORDINANCE REQUIREMENT IS BEING SOUGHT IN THE FORM OF A MODIFICATION.

REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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**PRELIMINARY/FINAL LAND DEVELOPMENT**

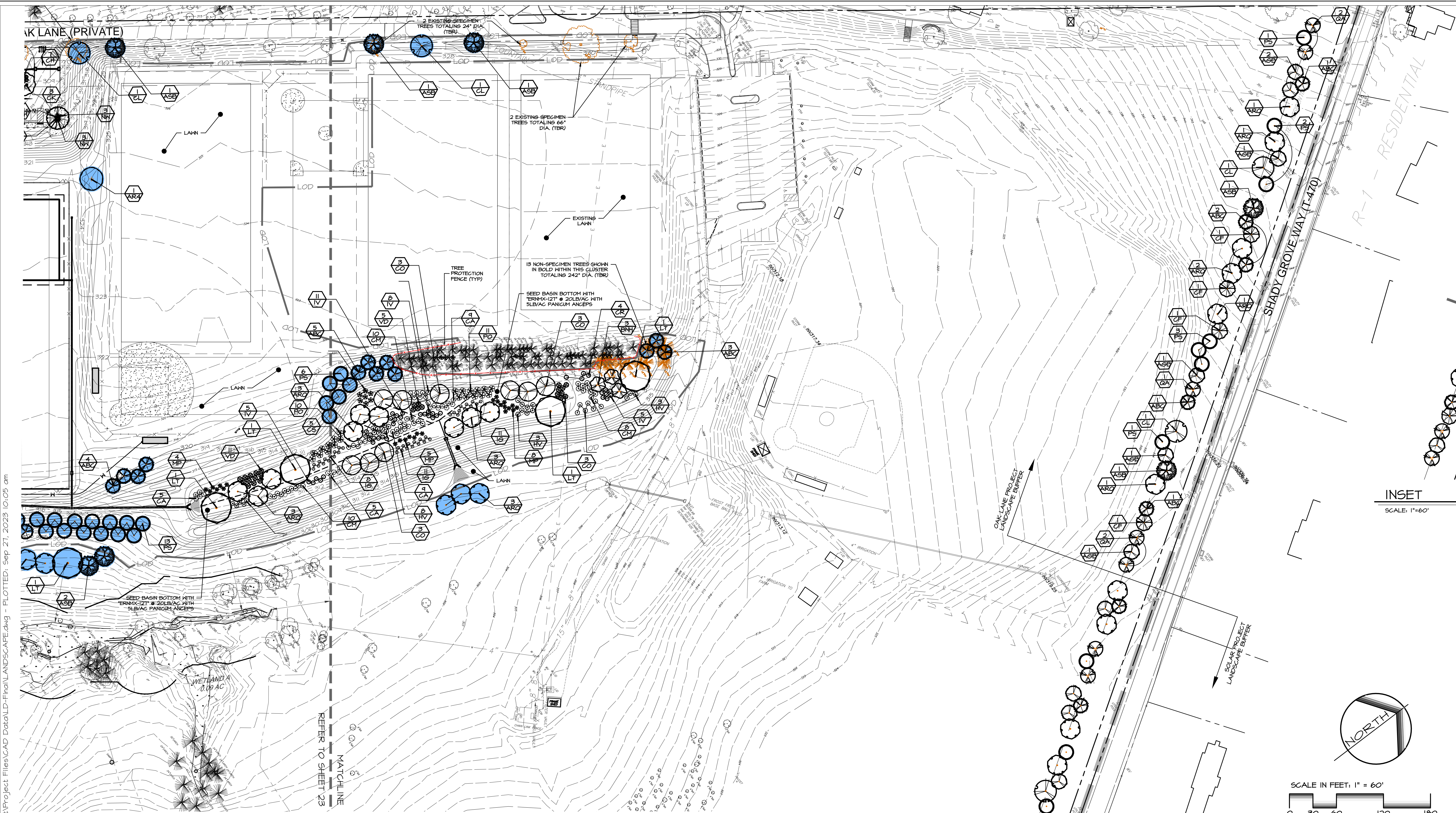
SUBJECT:  
**PLANTING SCHEDULES / DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

DRAWING NO.  
**24A of 48**





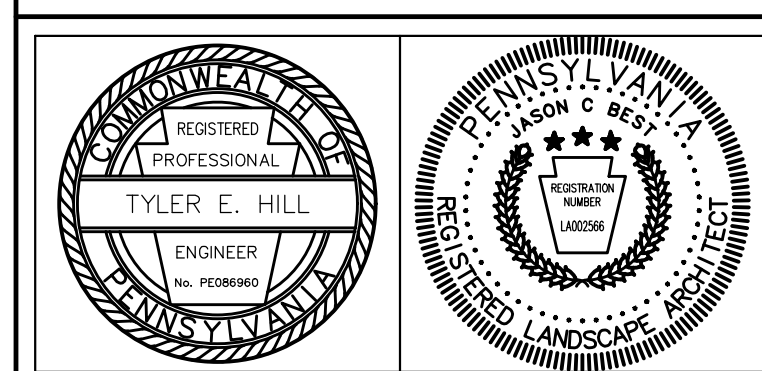
INSET  
SCALE: 1"=60'

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		

MID-ATLANTIC SPORTS CONSTRUCTION  
**WE BUILD WINNERS.**

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PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**TREE PROTECTION MANAGEMENT PLAN AND LANDSCAPE PLAN 'B'**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: AS NOTED

DRAWING NO.  
**24 of 48**

**LANDSCAPE PLAN (SHEET B)**  
SCALE: 1"=60'

**TREE REPLACEMENT REQ'TS**

WESTTOWN TWP CODE: 144-924(D)(1).  
NON-SPECIMEN: INSTALL 1" CALIPER PER 4" CALIPER REMOVED  
SPECIMEN: INSTALL 1" CALIPER PER 1" CALIPER REMOVED

TREES TO BE REMOVED:  
NON-SPECIMEN: 262"  
SPECIMEN: 164"

COMPENSATORY PLANTINGS:  
NON-SPECIMEN: 262" / 4 = 66"  
SPECIMEN: 164" / 1 = 164"  
66" + 164" = 230" (66 TREES AT 3.5" CALIPER)

**COMPENSATORY PLANTINGS**

TREES HIGHLIGHTED IN BLUE ON THIS PLAN ARE COMPENSATORY PLANTINGS

COMPENSATORY PLANTING NOTES:  
1. 82 EVERGREEN TREES ARE PROVIDED AS COMPENSATORY TREES, WHICH ACCOUNT FOR 41 OF THE REQUIRED 66 TREES. THE REMAINDER OF THE COMPENSATORY TREES ARE DECIDUOUS.  
2. SEE THE COMPENSATORY PLANTINGS SCHEDULE FOUND ON SHEET 24A.

**NOTES**

- SEE SHEETS 3 AND 4 FOR THE TREES (6" OR GREATER) SCHEDULED FOR DEMOLITION AND FOR THE TREE PROTECTION AREAS THAT ARE TO BE DELINEATED.
- SEE SHEET 24A FOR THE LIST OF PROPOSED PLANTINGS AND THEIR QUANTITIES AS WELL AS VARIOUS PLANTING DETAILS.
- IF ANY EXISTING TREES ARE REMOVED IN ADDITION TO THOSE SCHEDULED FOR REMOVAL ON THE DEMOLITION PLANS, THEY SHALL BE REPLACED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE WESTTOWN TOWNSHIP CODE.
- TREES AND SHRUBS SHALL BE OF NURSERY-GROWN STOCK OF NON-COLUMNAR VARIETIES, AND SHALL BE INSECT AND PEST RESISTANT.
- A TWO-YEAR MAINTENANCE AND REPLACEMENT GUARANTEE SHALL BE PROVIDED TO THE TOWNSHIP BY THE LANDSCAPE CONTRACTOR. ALL PLANTINGS WHICH DO NOT SURVIVE AFTER THE EXPIRATION OF THE MAINTENANCE GUARANTEE SHALL BE REPLACED BY THE OWNER.

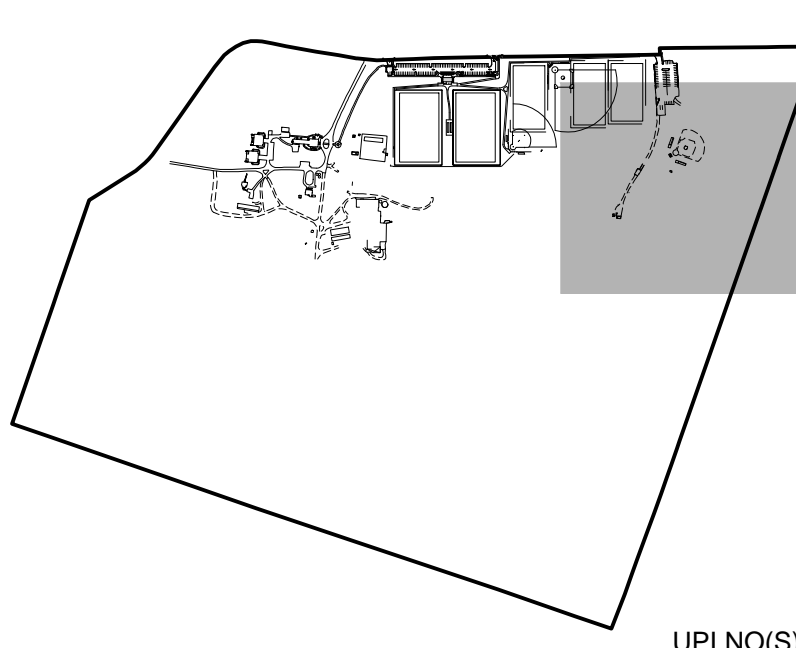
**EXISTING TREE LEGEND**

AI	AILANTHUS	MB	MULBERRY
AS	ASH	MG	MAGNOLIA
AV	ARBORVITAE	MJ	J. MAPLE
BH	BEECH	OK	OAK
BR	BIRCH	PN	PINE
CD	CEDAR	SA	SASSAFRAS
CH	CHESTNUT	SG	SWEETGUM
CY	CHERRY	SP	SPRUCE
DG	DOGWOOD	FI	FIR
EM	ELM	SW	SOURWOOD
FR	FRUIT	SY	SYCAMORE
HB	HACKBERRY	TL	TUPELO
HK	HICKORY	TU	TULIP POPLAR
HM	HEMLOCK	WA	WALNUT
HY	HOLLY	WI	WILLOW
MA	MAPLE	WP	WHITE PINE

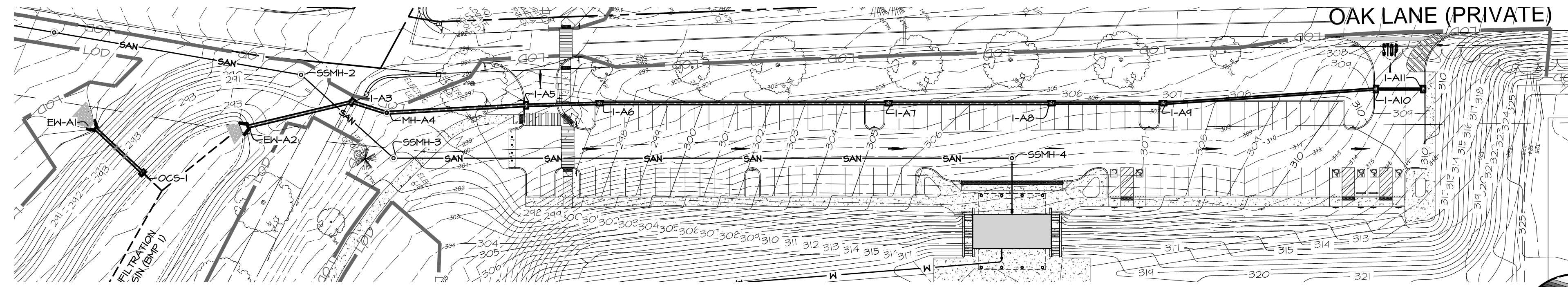
**LEGEND**

—●—●—●— TREE PROTECTION FENCING

**SHEET KEY**

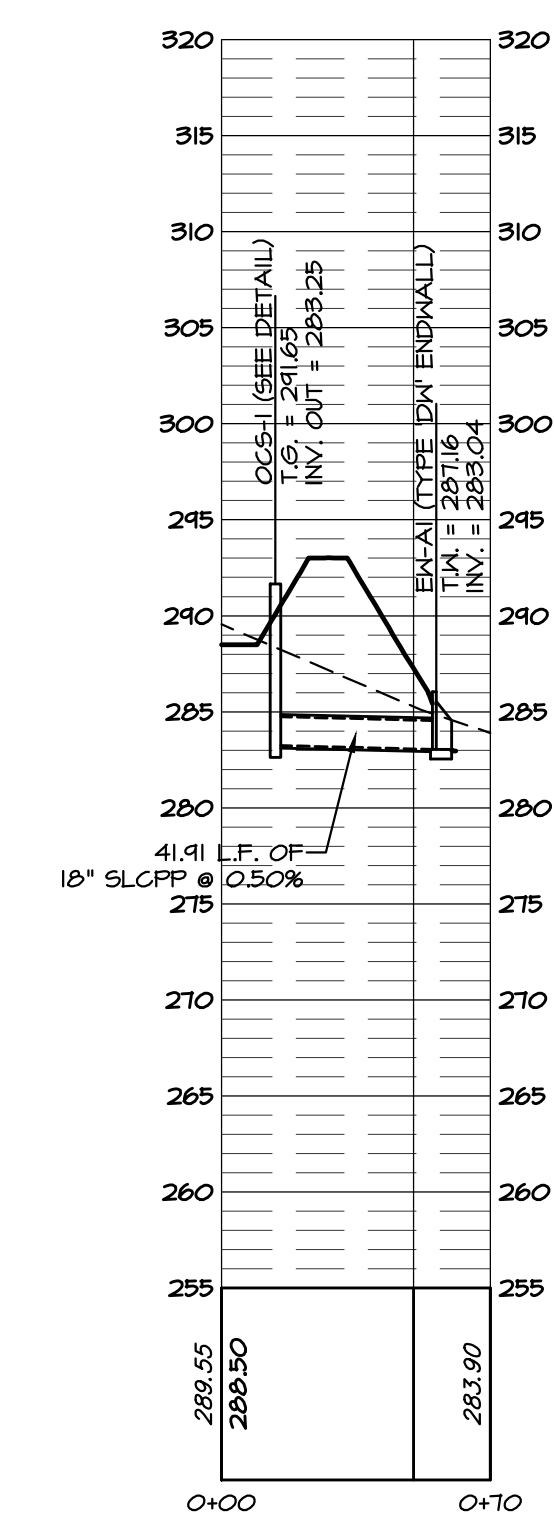
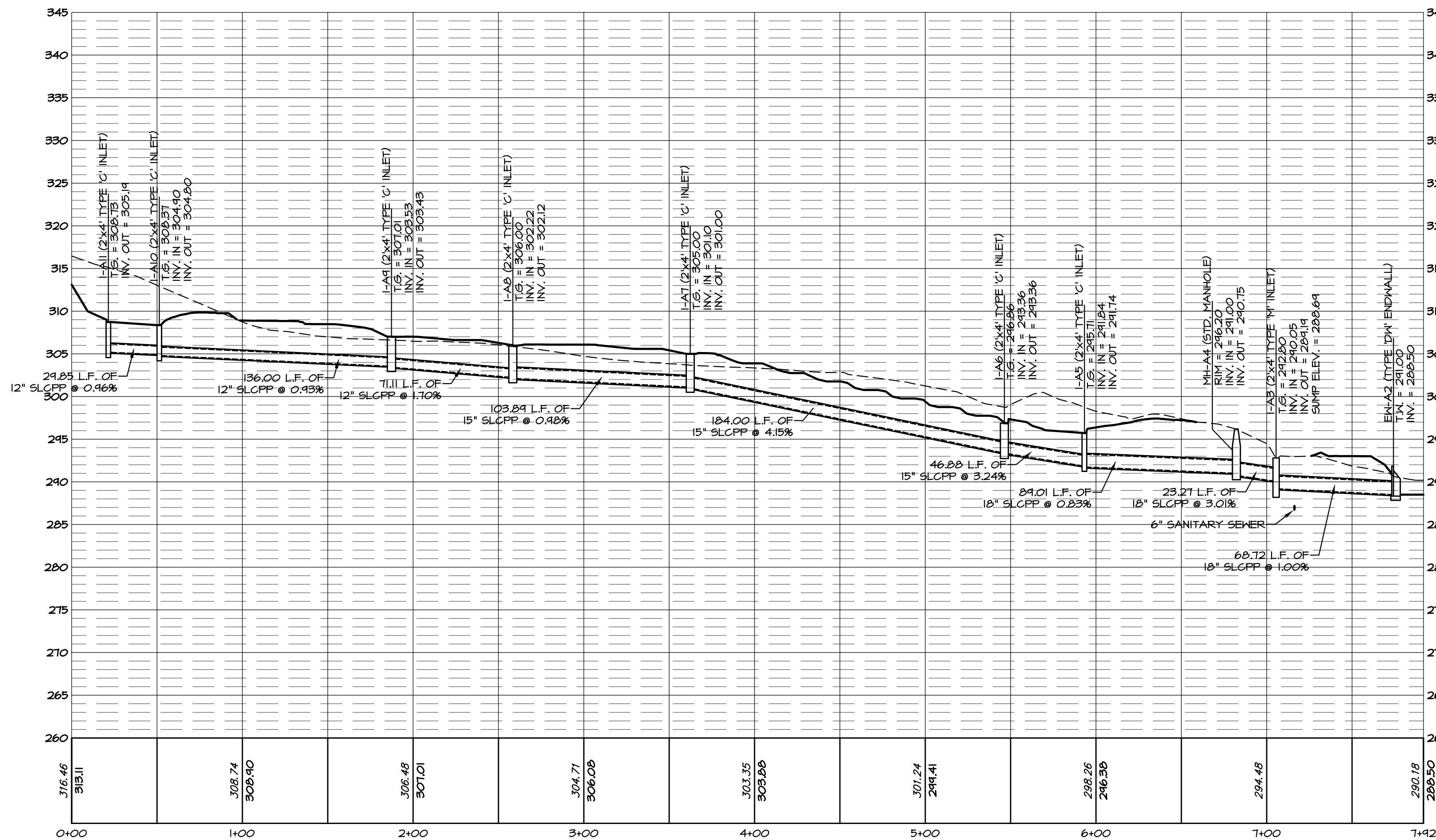
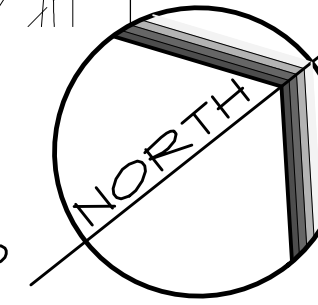


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PLAN  
SCALE: 1" = 50'

SCALE IN FEET: 1" = 50'



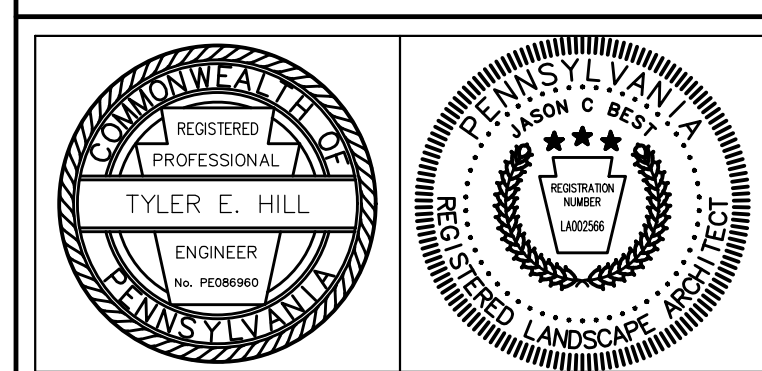
PROFILE:  
OCS-1 TO EW-A1  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 10'

REVISIONS PER:	DATE:	BY:
1. CCCD COMMENTS	3-1-2023	TEH
2. CCCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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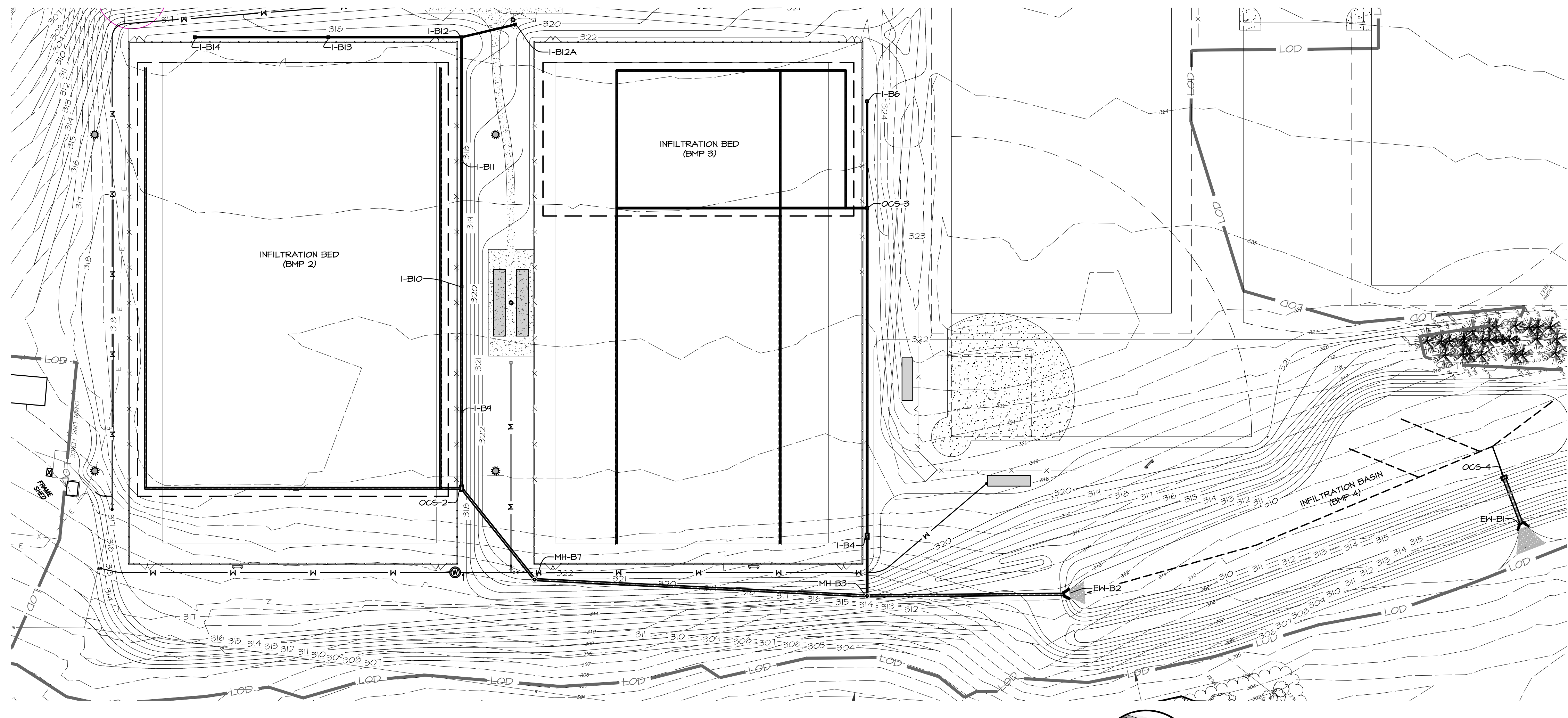
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
STORMWATER PLAN AND PROFILES  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
WESTTOWN SCHOOL  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
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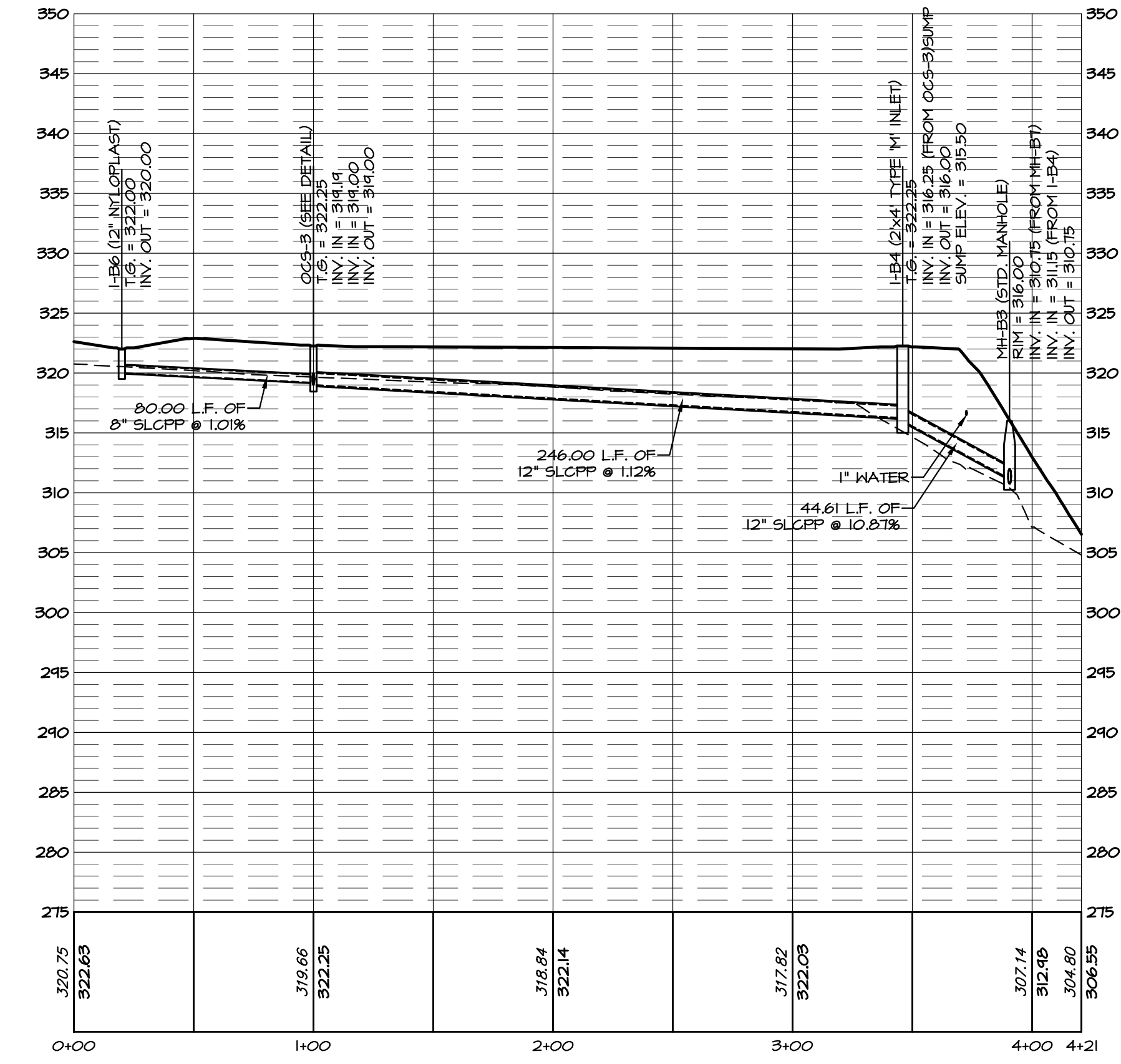
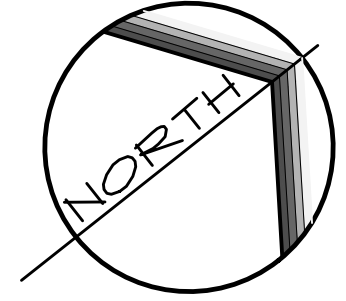
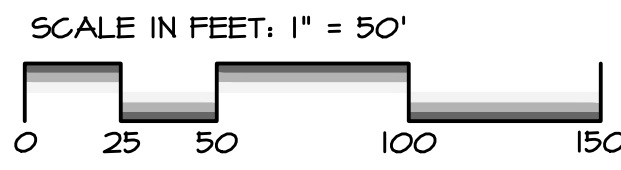
MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: AS NOTED

DRAWING NO.  
**25 of 48**

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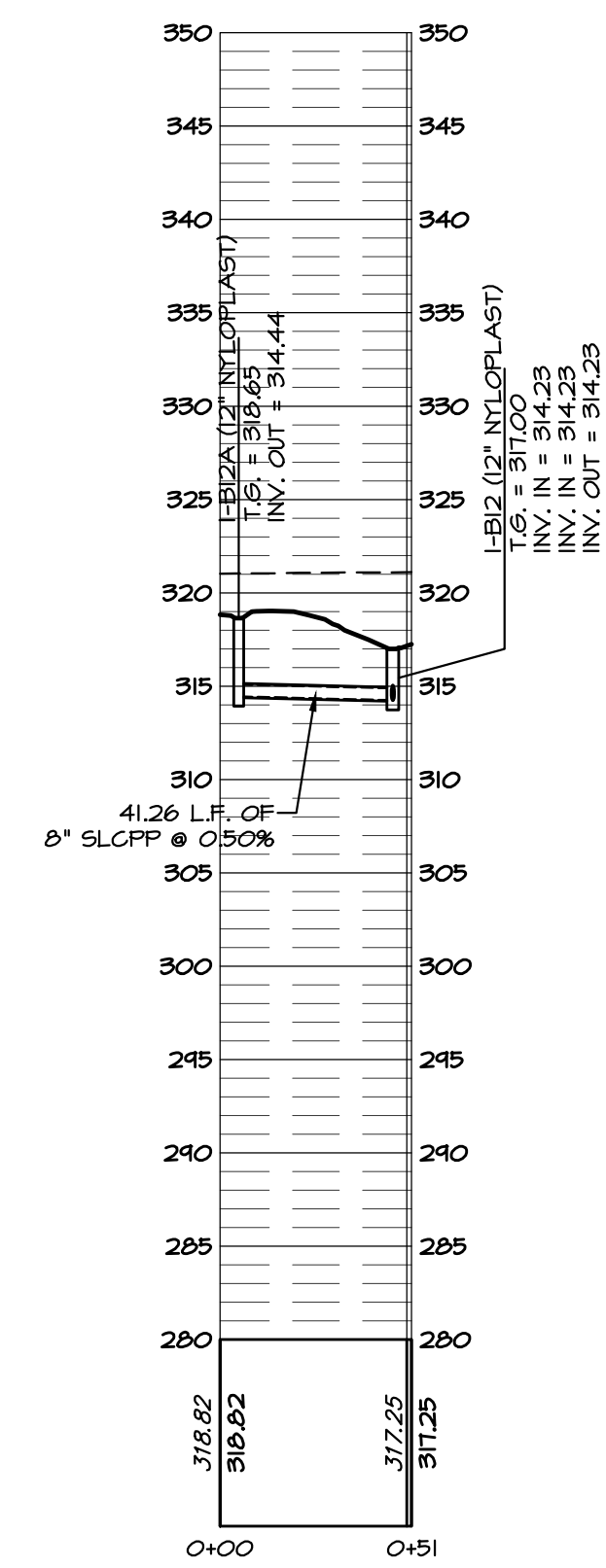


PLAN  
SCALE: 1" = 50'



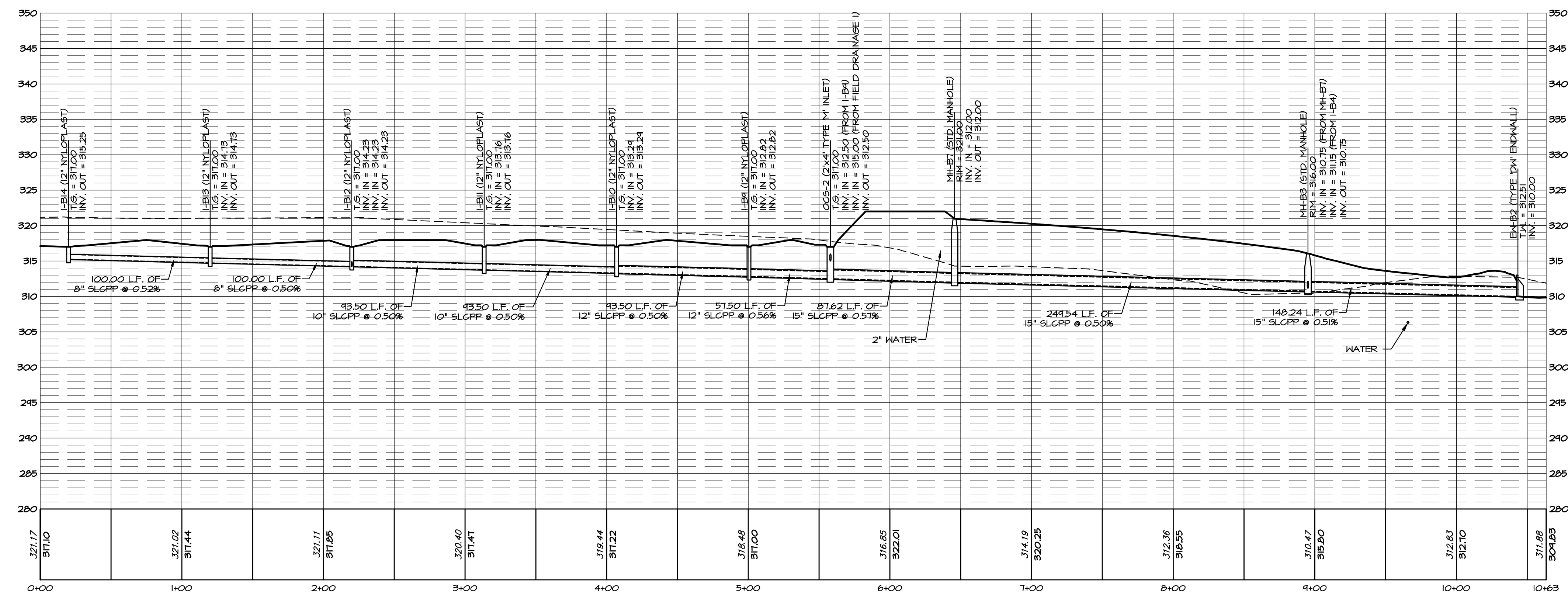
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VERTICAL SCALE: 1" = 10'



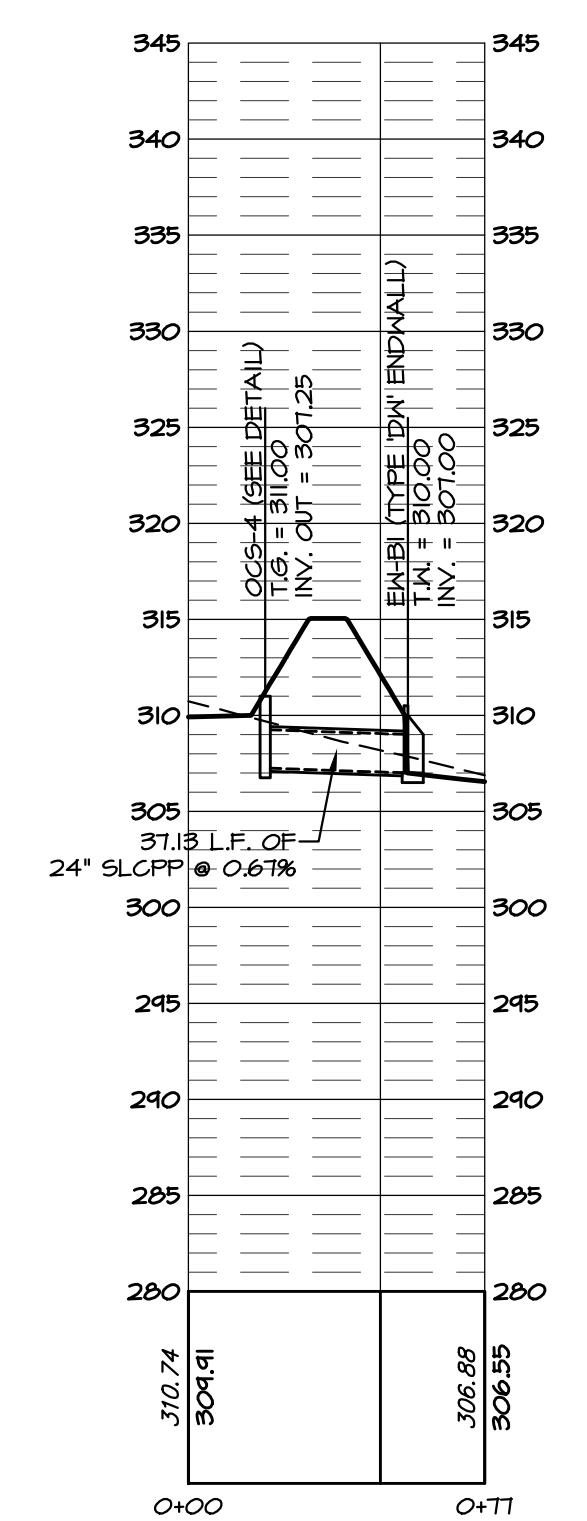
PROFILE:  
IB-12A TO I-B12

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VERTICAL SCALE: 1" = 10'



PROFILE: I-B14 TO EW-B2

HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 10'



PROFILE:  
OCS-4 TO EW-B1

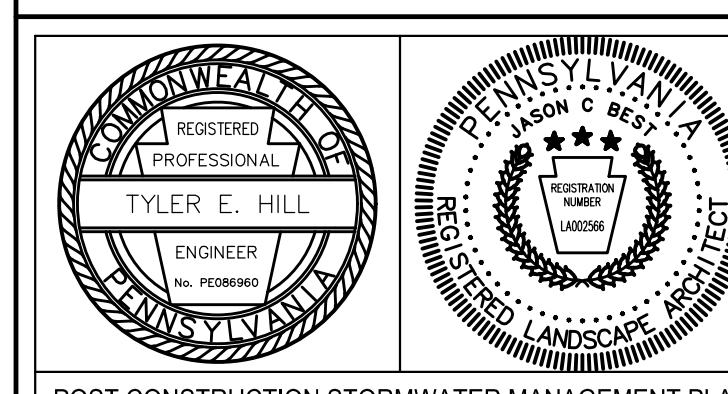
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VERTICAL SCALE: 1" = 10'

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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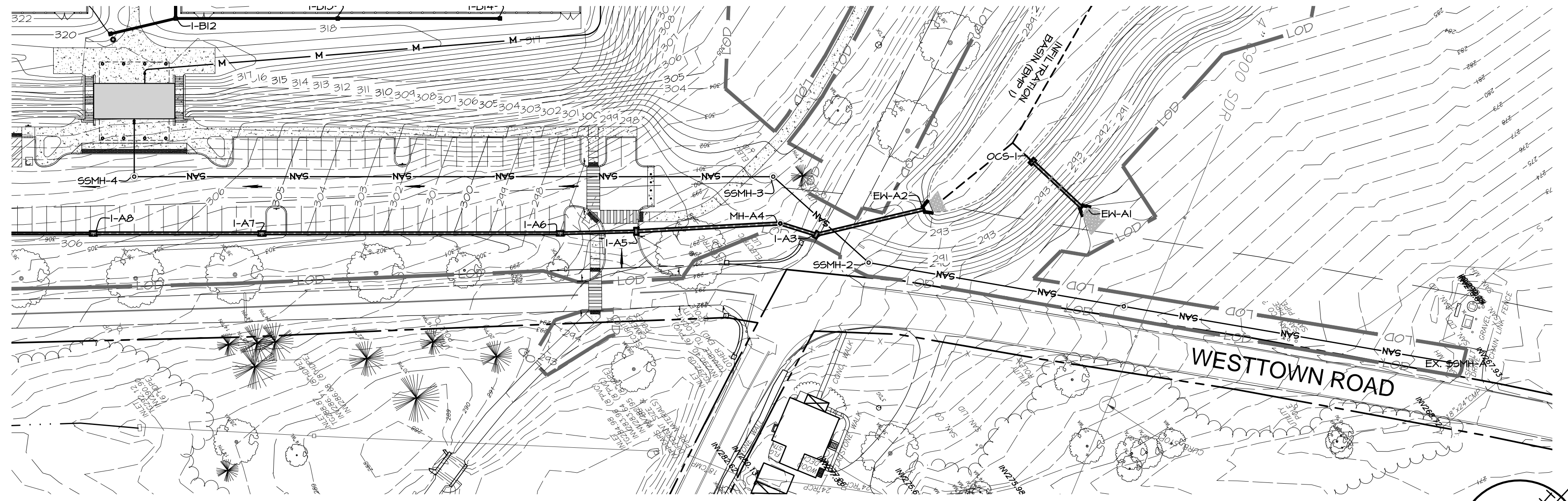


POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
STORMWATER PLAN AND PROFILES  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
WESTTOWN SCHOOL  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: AS NOTED

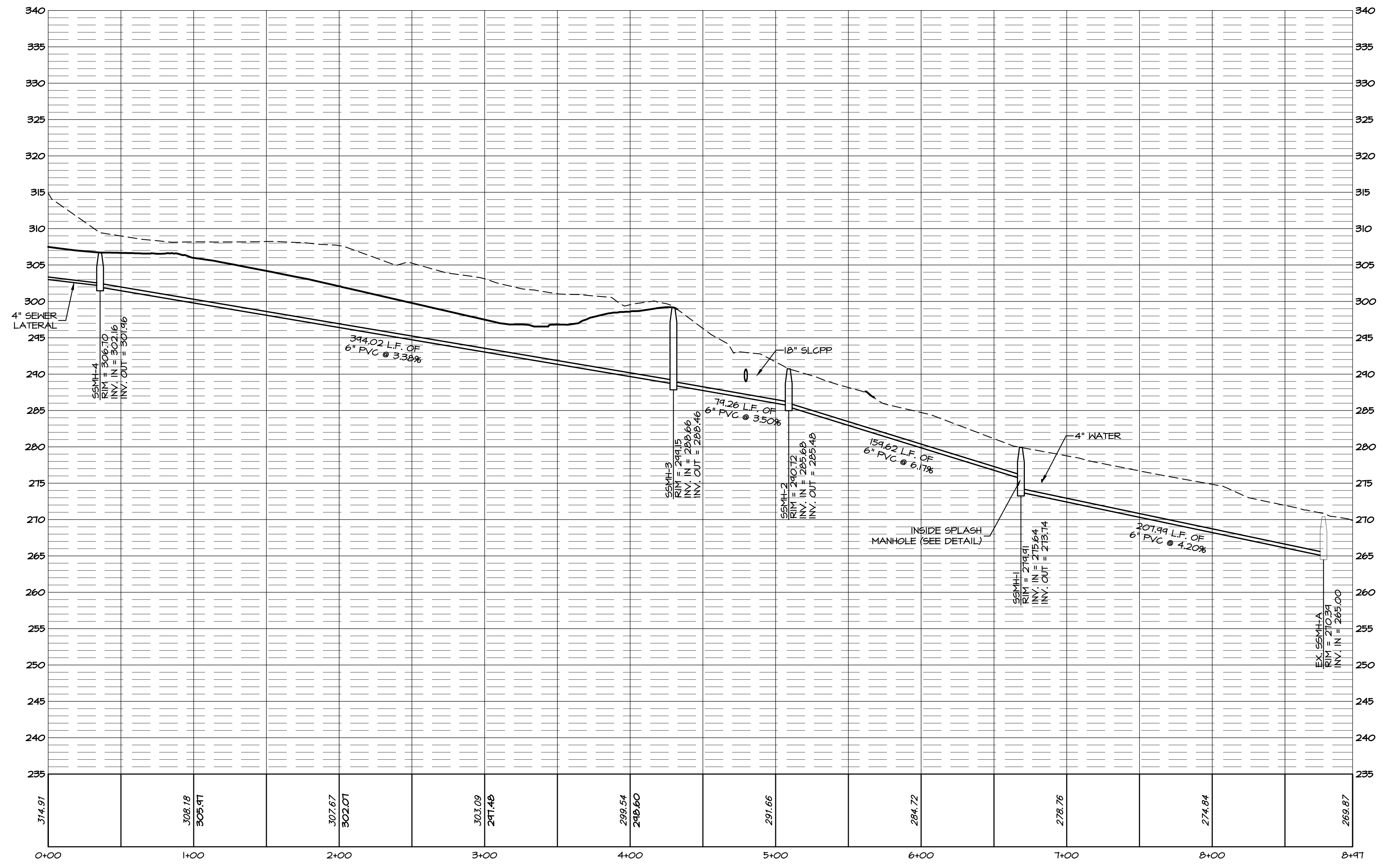
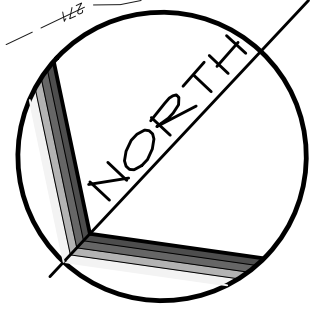
DRAWING NO.  
**26 of 48**



**PLAN**

SCALE: 1" = 50'

SCALE IN FEET: 1" = 50'



**PROFILE: SSMH-3 TO EX. SSMH-A**

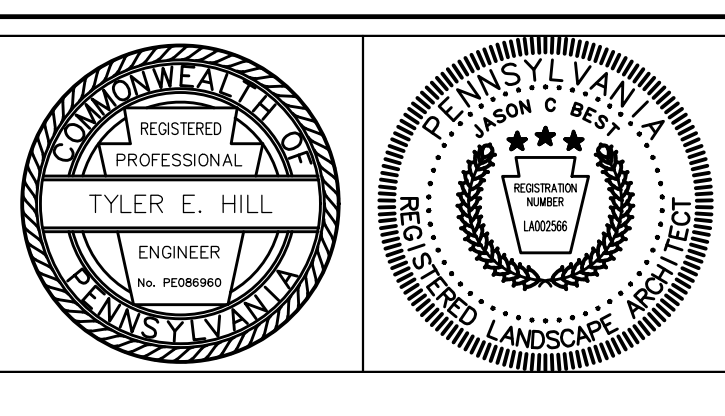
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REVISIONS PER:	DATE:	BY:
1. CCCD COMMENTS	3-1-2023	TEH
2. CCCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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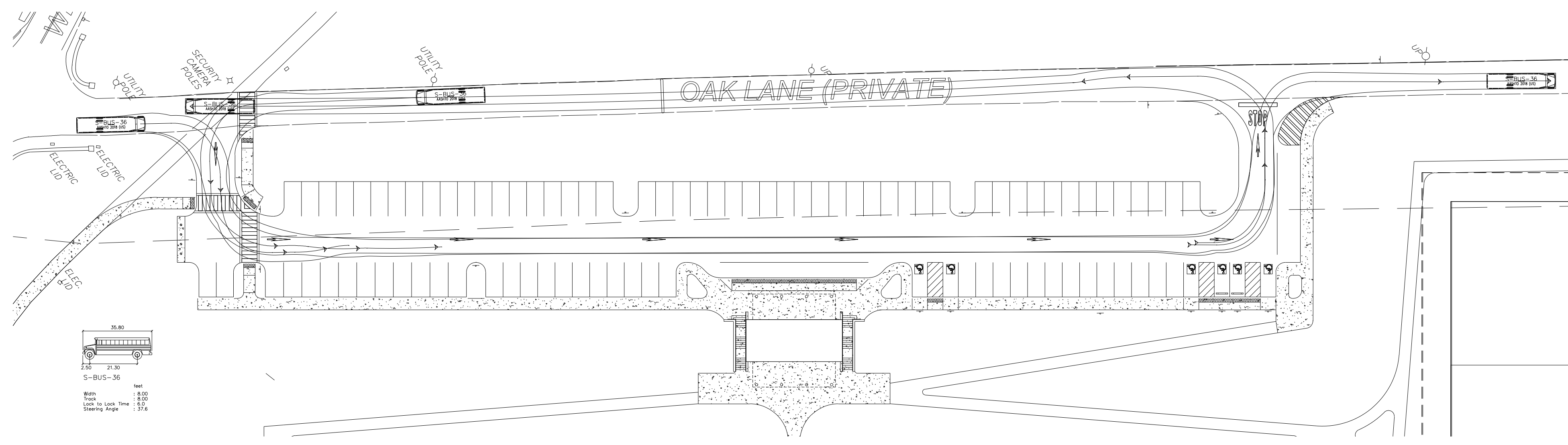
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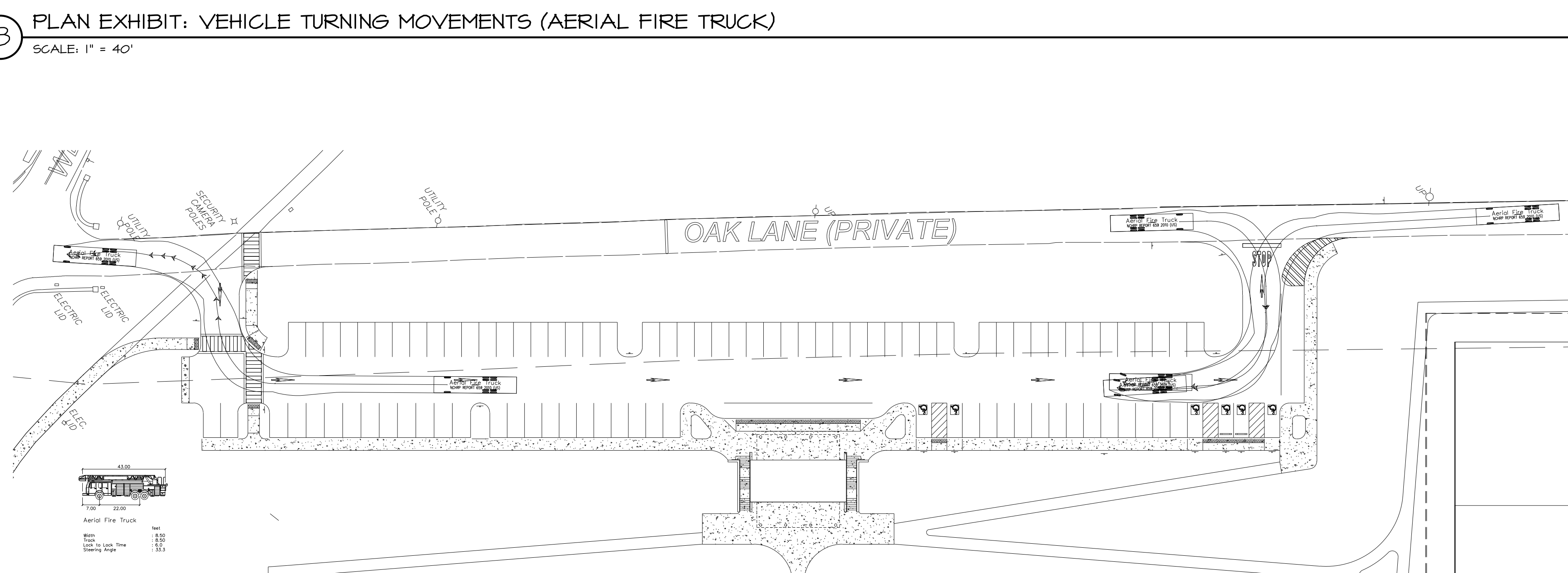
PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**SANITARY PLAN AND PROFILE**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

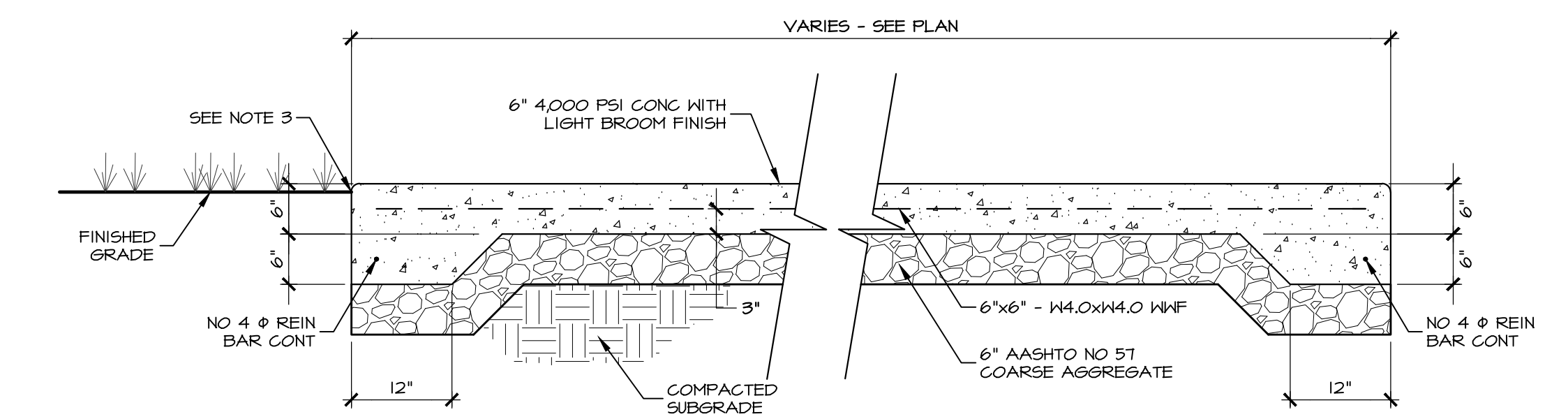
DRAWING NO.  
**27 of 48**



**A** PLAN EXHIBIT: VEHICLE TURNING MOVEMENTS (SCHOOL BUS)  
SCALE: 1" = 40'

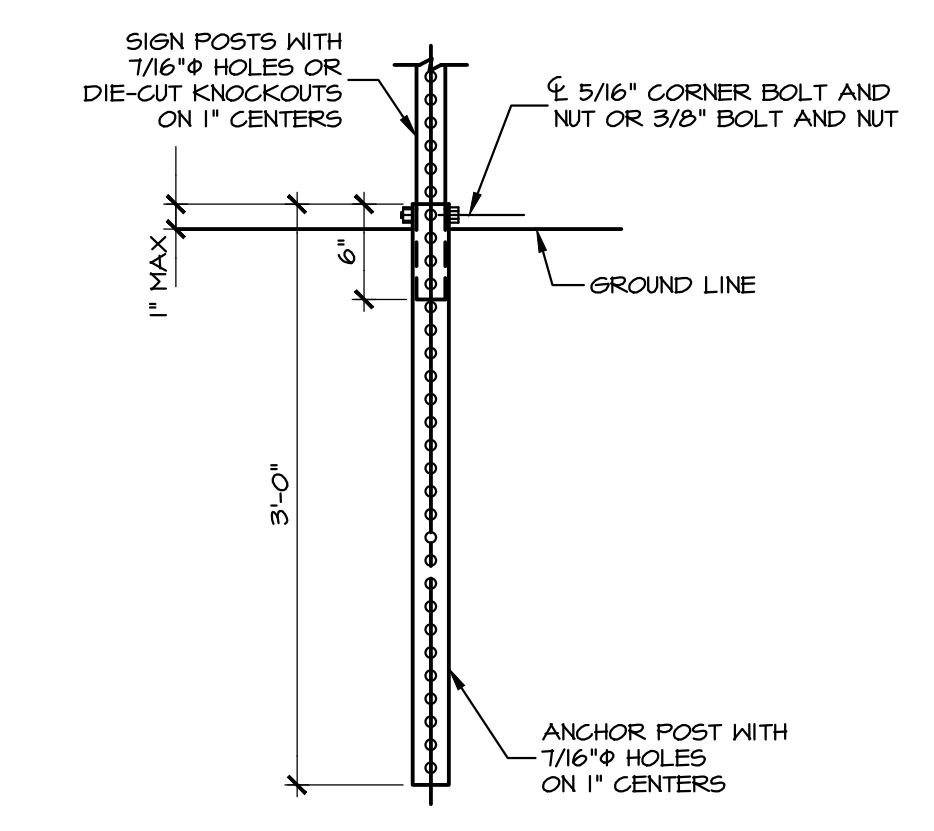


**C** PLAN EXHIBIT: VEHICLE TURNING MOVEMENTS (AERIAL FIRE TRUCK)  
SCALE: 1" = 40'

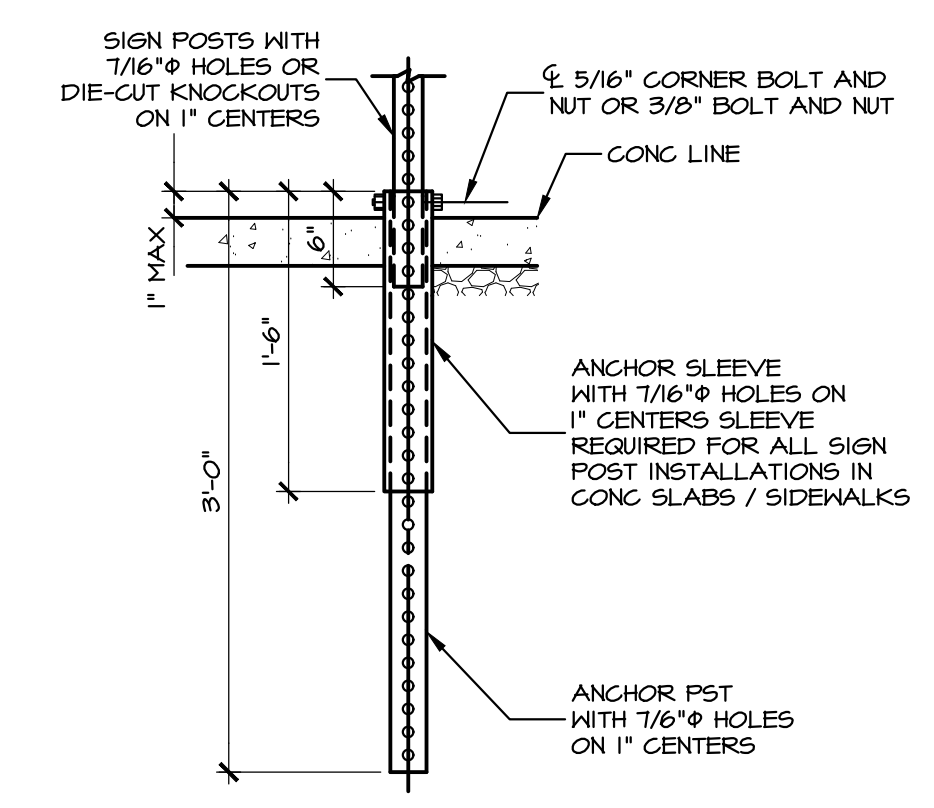


- NOTES:
1. PROVIDE EJ WITH FILLER WHERE SLAB EXCEEDS 30' IN ANY DIMENSION. PLACE EJ AT MIDPOINT OF SLAB.
  2. DIMENSIONS AS NOTED ON DRAWINGS.
  3. SEAL JOINT WITH PG 64-22 WHERE BITUMINOUS PAVING IS ADJACENT. PROVIDE EJ WITH SEALANT WHERE ADJACENT TO CONC PAVING.
  4. SLOPE PAD TO DRAIN AWAY FROM SYNTHETIC TURF FIELD WHERE ADJACENT (1.25% UNLESS NOTED OTHERWISE ON GRADING DRAWINGS).

**D** CONCRETE PAD W/ HAUNCHES  
NO SCALE

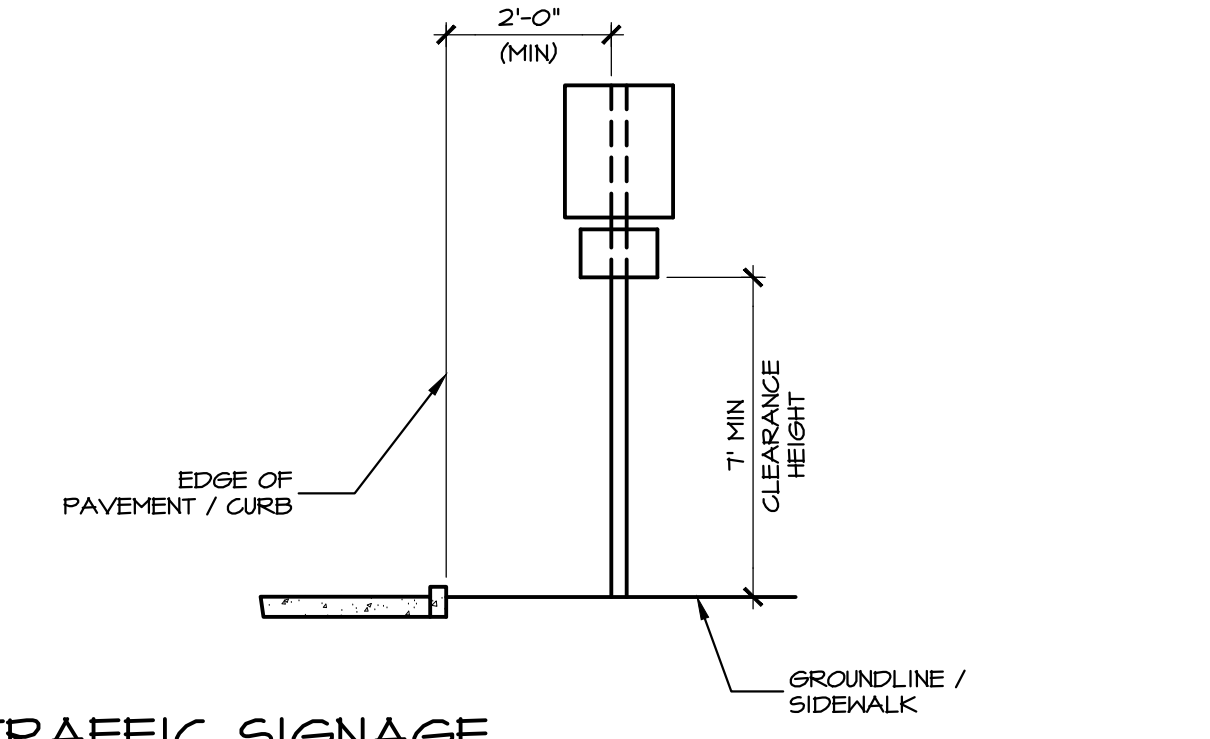


INSTALLATION DETAIL (STANDARD)



INSTALLATION DETAIL (CONCRETE)

INSTALLATION NOTES:  
1. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PUB. 40B



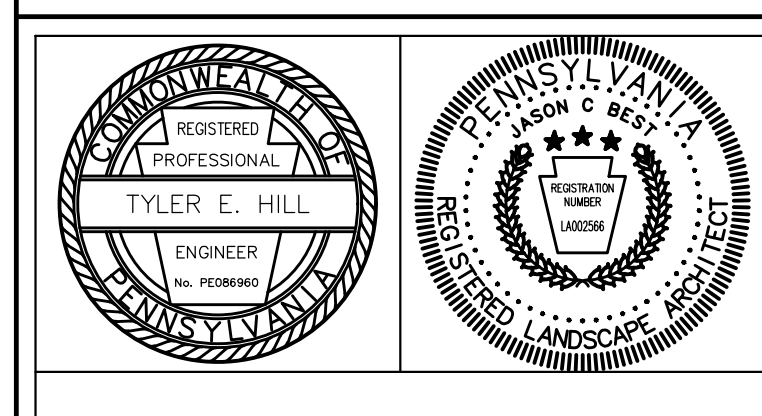
**E** TRAFFIC SIGNAGE  
NOT TO SCALE

REVISIONS PER:	DATE:	BY:
1. OCCD COMMENTS	3-1-2023	TEH
2. OCCD COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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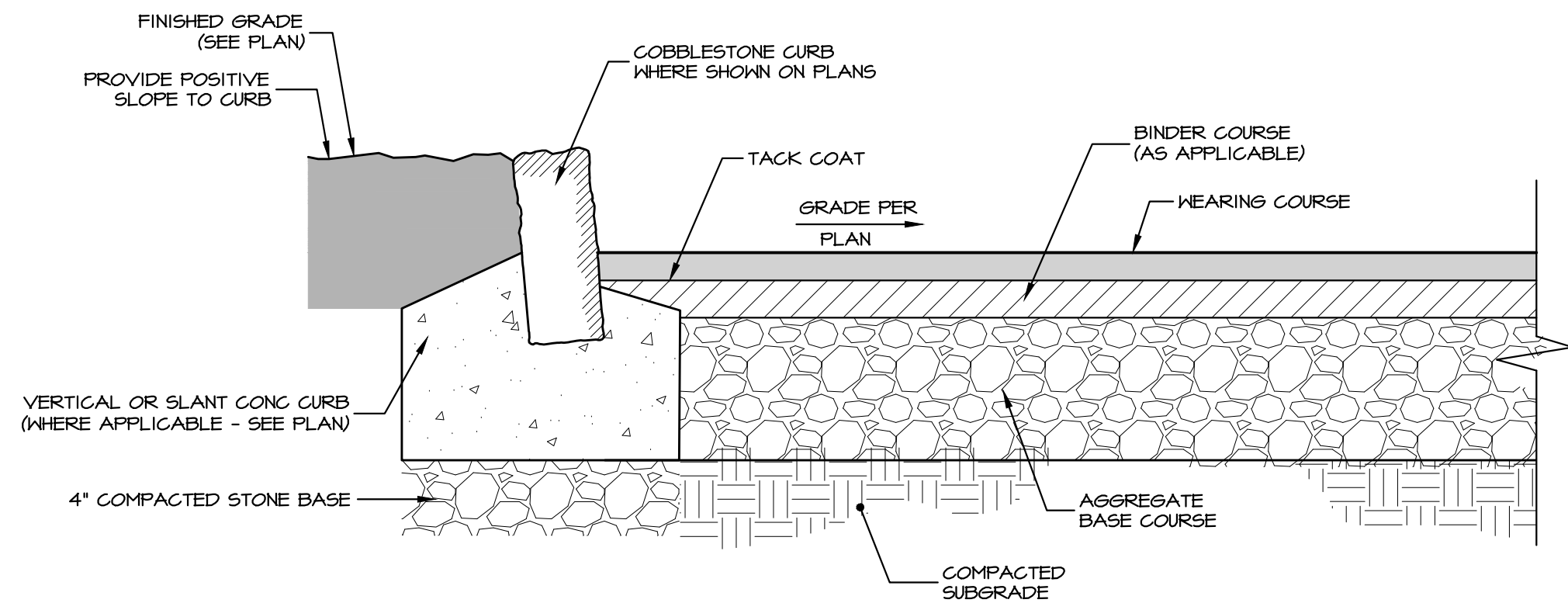
743 S. BROAD ST.  
LITITZ, PA 17543  
(717) 626-7271  
elagroup.com



PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**VEHICLE TURNING & SITE DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: AS NOTED

DRAWING NO.  
**28 of 48**



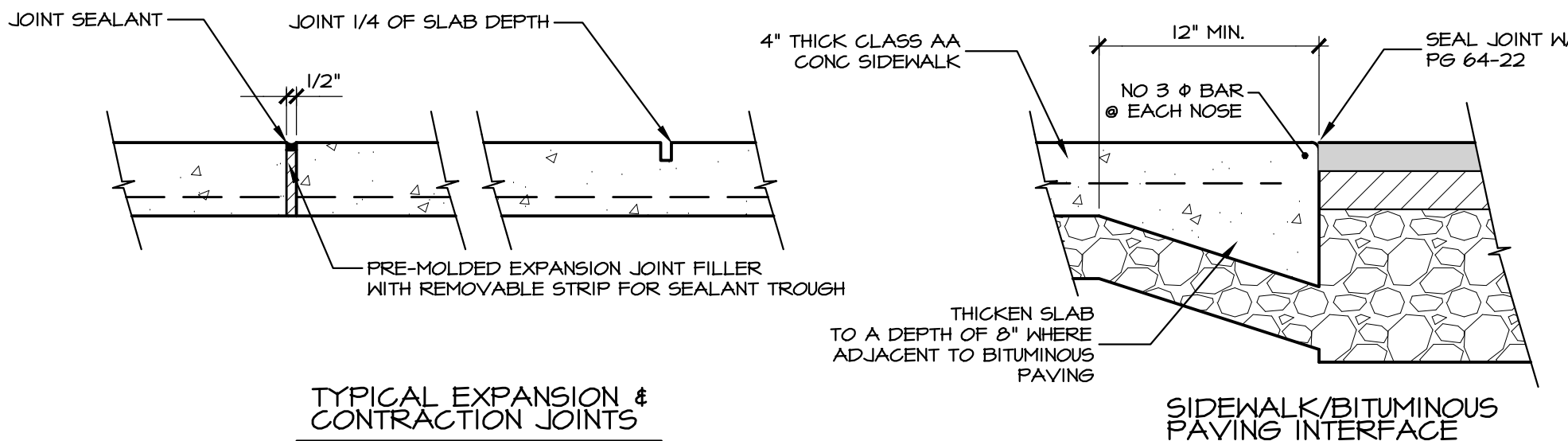
1. BITUMINOUS PAVEMENT MATERIALS ARE LISTED PER PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 40B STANDARDS, LATEST REVISIONS.
2. RECLAIMED AGGREGATE MATERIAL SHALL MEET THE REQUIREMENTS OF PA DOT PUBLICATION 40B, SECTION 103.1, TABLE A, OR 103.2, TABLE B.

BITUMINOUS PAVING SCHEDULE

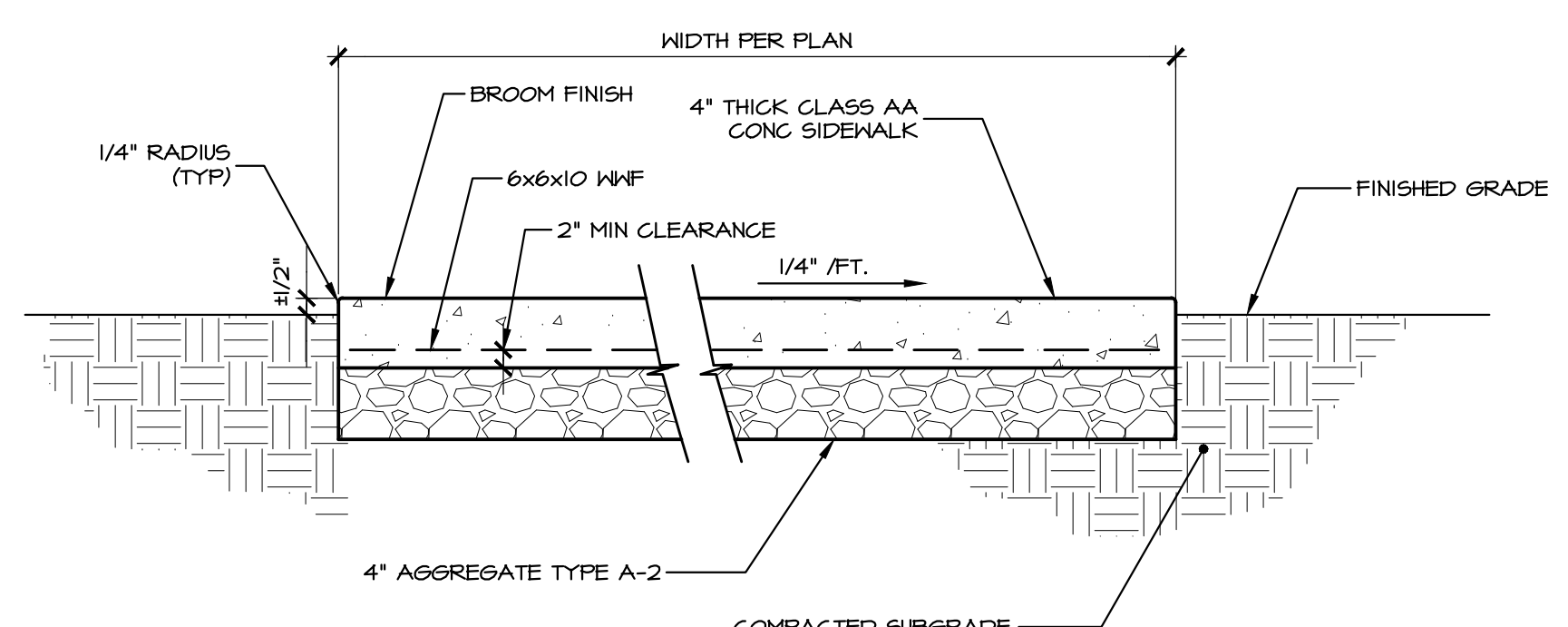
SYM	WEARING COURSE		BINDER COURSE		AGGREGATE BASE COURSE		LOCATION
	TYPE	COMPACTED THICKNESS	TYPE	COMPACTED THICKNESS	TYPE	COMPACTED THICKNESS	
A	SUPERPAVE ASPHALT DESIGN, HMA WEARING COURSE, PG 64-22, 0.0 TO 40.3 MILLION ESAL'S, 12 MM, SRL-L	2.0"	SUPERPAVE ASPHALT DESIGN, HMA BINDER COURSE, PG 64-22, 0.0 TO 40.3 MILLION ESAL'S, 14 MM MIX, 50 GRATIONS	3.0"	2A MODIFIED	6"	ACCESS DRIVES AND PARKING AREAS
B	SUPERPAVE ASPHALT DESIGN, HMA WEARING COURSE, PG 64-22, 0.0 TO 40.3 MILLION ESAL'S, 12 MM, SRL-L	1.5"	SUPERPAVE ASPHALT DESIGN, HMA BINDER COURSE, PG 64-22, 0.0 TO 40.3 MILLION ESAL'S, 14 MM MIX, 50 GRATIONS	2.5"	2A MODIFIED	6"	PEDESTRIAN PATHS

**A BITUMINOUS PAVEMENT SECTION/SCHEDULE**

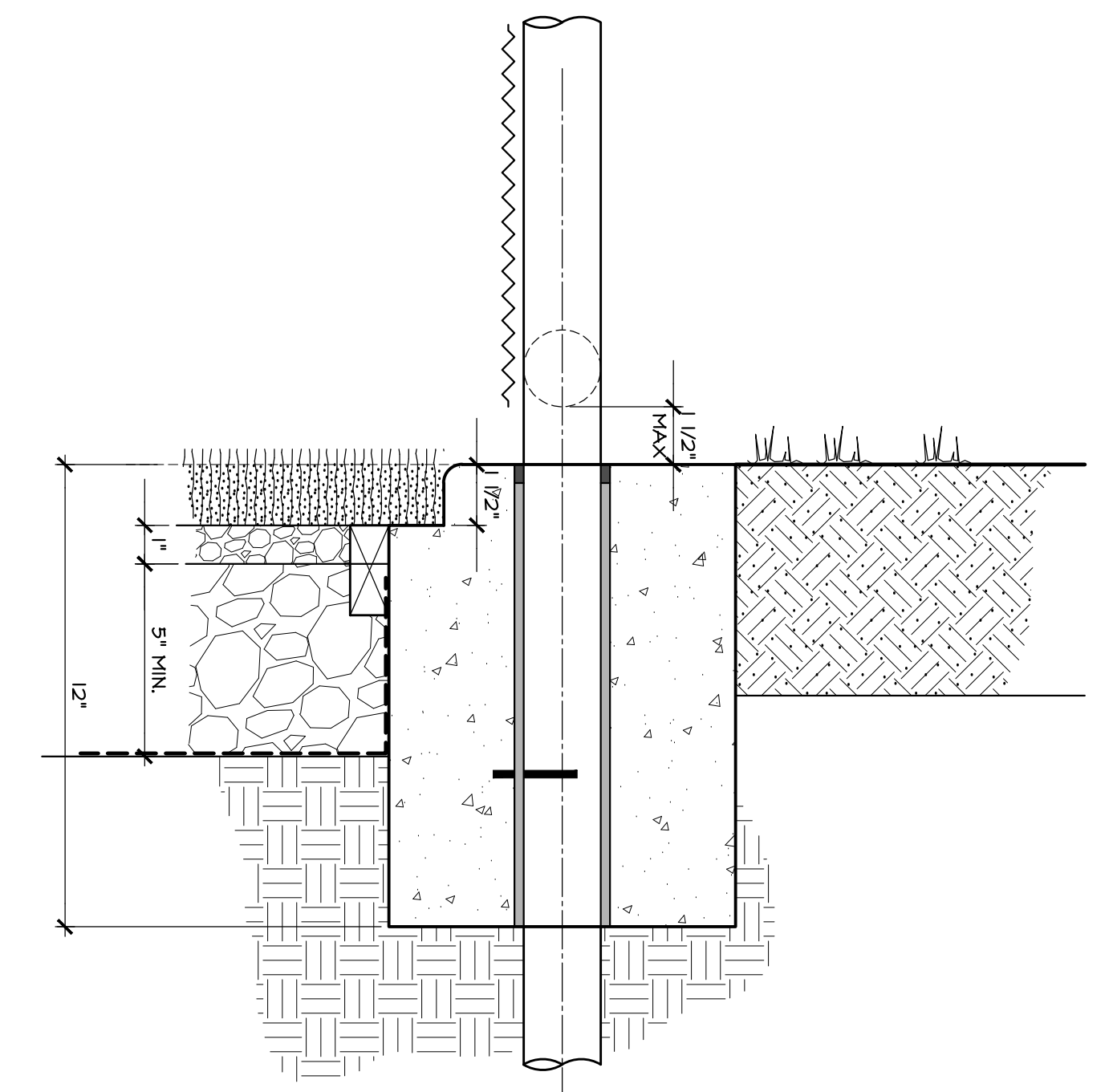
NOT TO SCALE



TYPICAL EXPANSION & CONTRACTION JOINTS

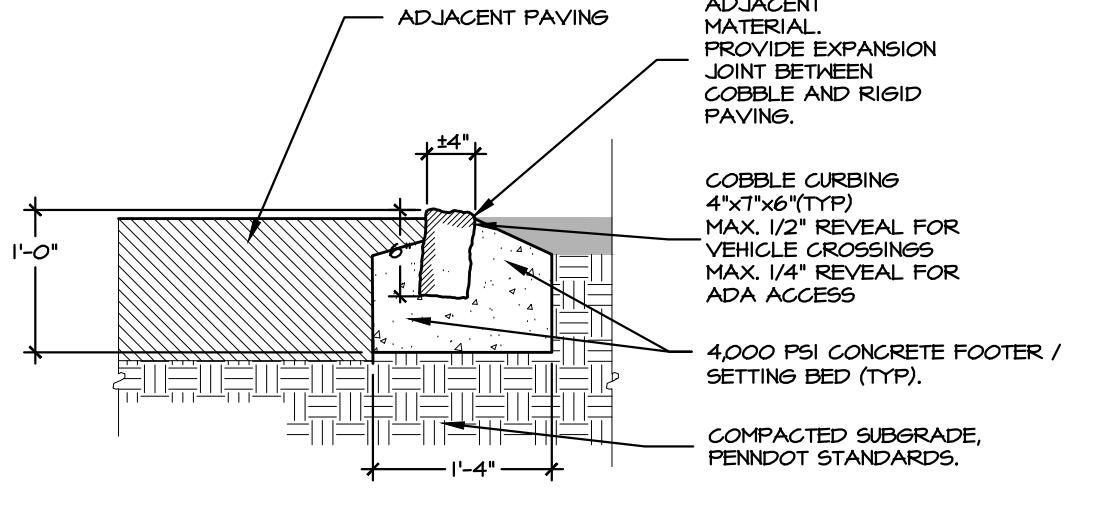
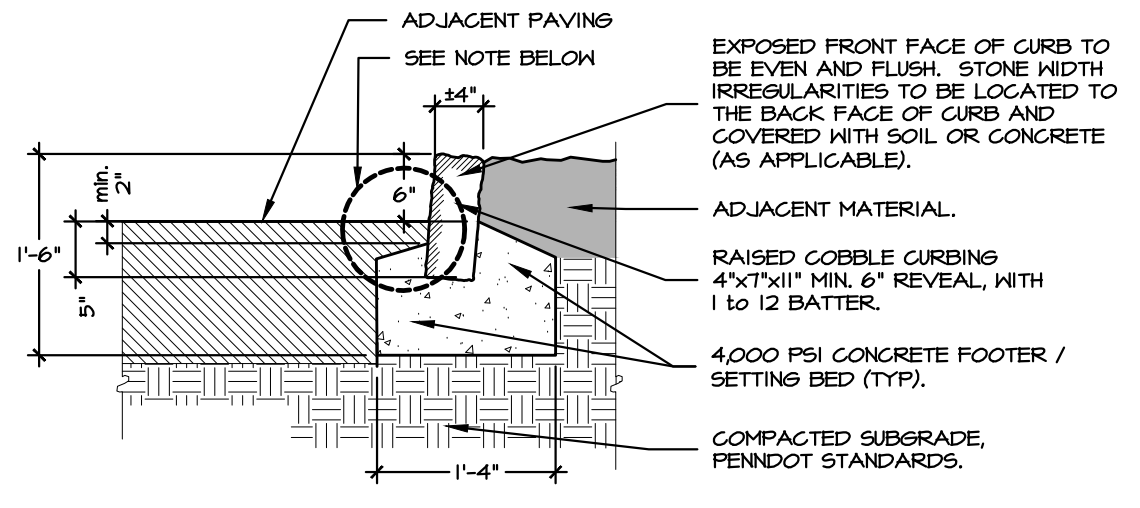


OPENLAWN AREA INSTALLATION



**C TYP TURF CURB WITH INTEGRAL FENCE**

SCALE: 3" = 1'-0"



GENERAL NOTE:

1. ALL JOINTS BETWEEN COBBLESTONES SHALL HAVE CONVEX RAKED JOINTS, MAX. WIDTH 1". NON SHRINK MORTAR TO CONFORM TO PENNDOT 40B/2007I OR AS APPROVED BY ACTUAL SAMPLE PANEL.
2. CONTRACTOR TO COORDINATE LEVEL OF CONCRETE TO ALLOW FOR EASY PLACEMENT OF APPROVED ADJACENT PAVEMENT, ASPHALT OR CONCRETE.

GENERAL NOTE:

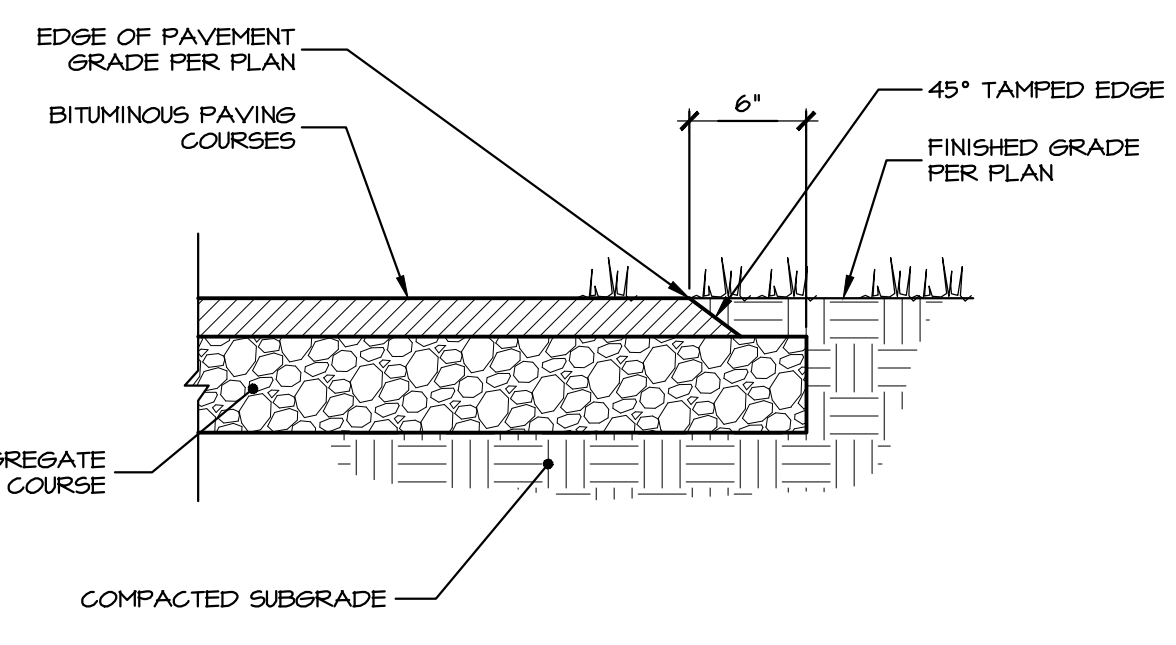
1. ALL JOINTS BETWEEN COBBLESTONES SHALL HAVE CONVEX RAKED JOINTS, MAX. WIDTH 1". NON SHRINK MORTAR TO CONFORM TO PENNDOT 40B/2007I OR AS APPROVED BY ACTUAL SAMPLE PANEL.
2. FOR ADA RAMPS, SAW CUT THE TOPS OF COBBLESTONES PRIOR TO PLACEMENT OR USE PRECUT STONES TO ENSURE A SMOOTH TRANSITION FROM PAVING TO RAMP AND COMPLIANCE WITH ADA REQUIREMENTS.

**D COBBLE CURB DETAIL**

NOT TO SCALE

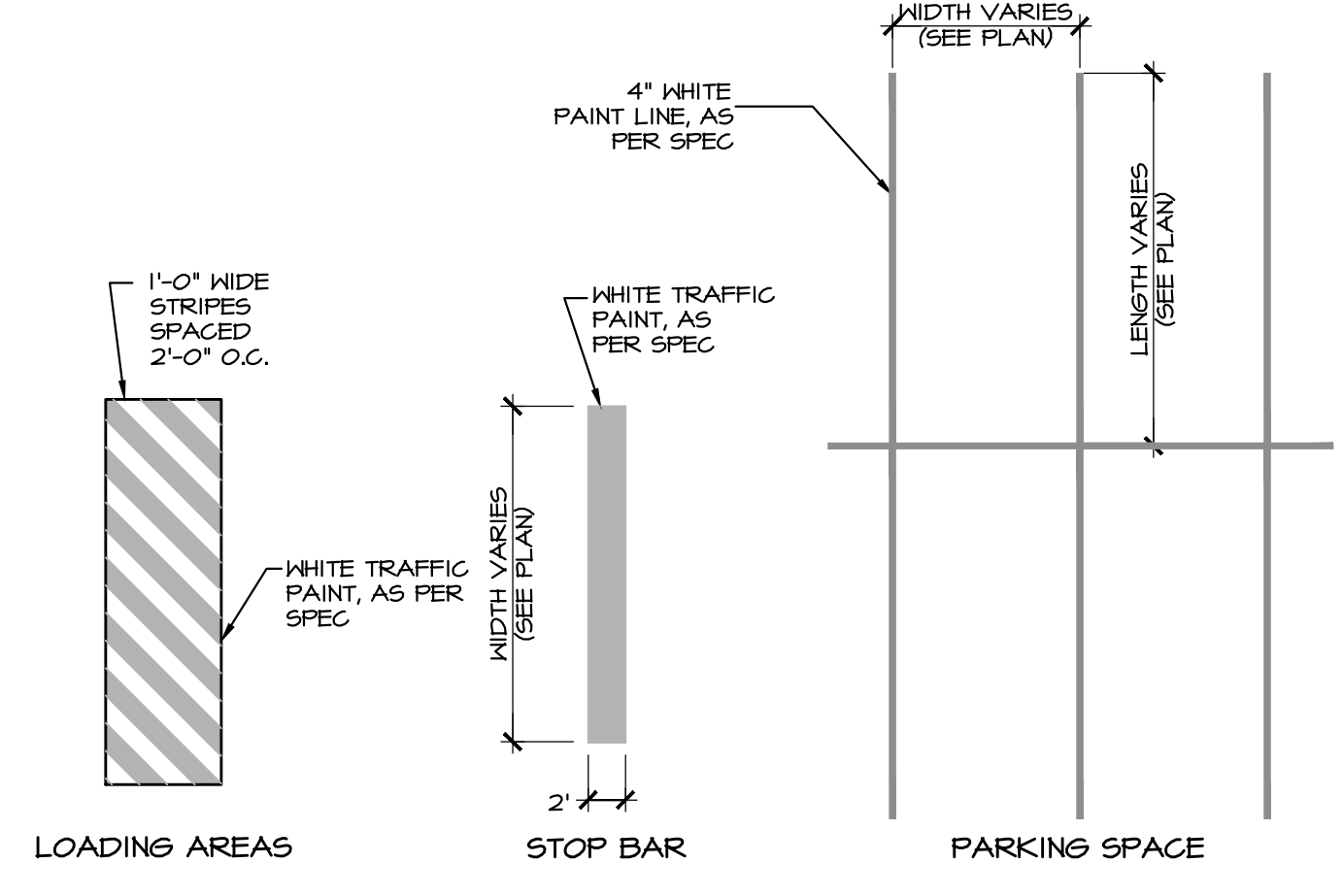
**E DEPRESSED COBBLE CURB DETAIL**

NOT TO SCALE



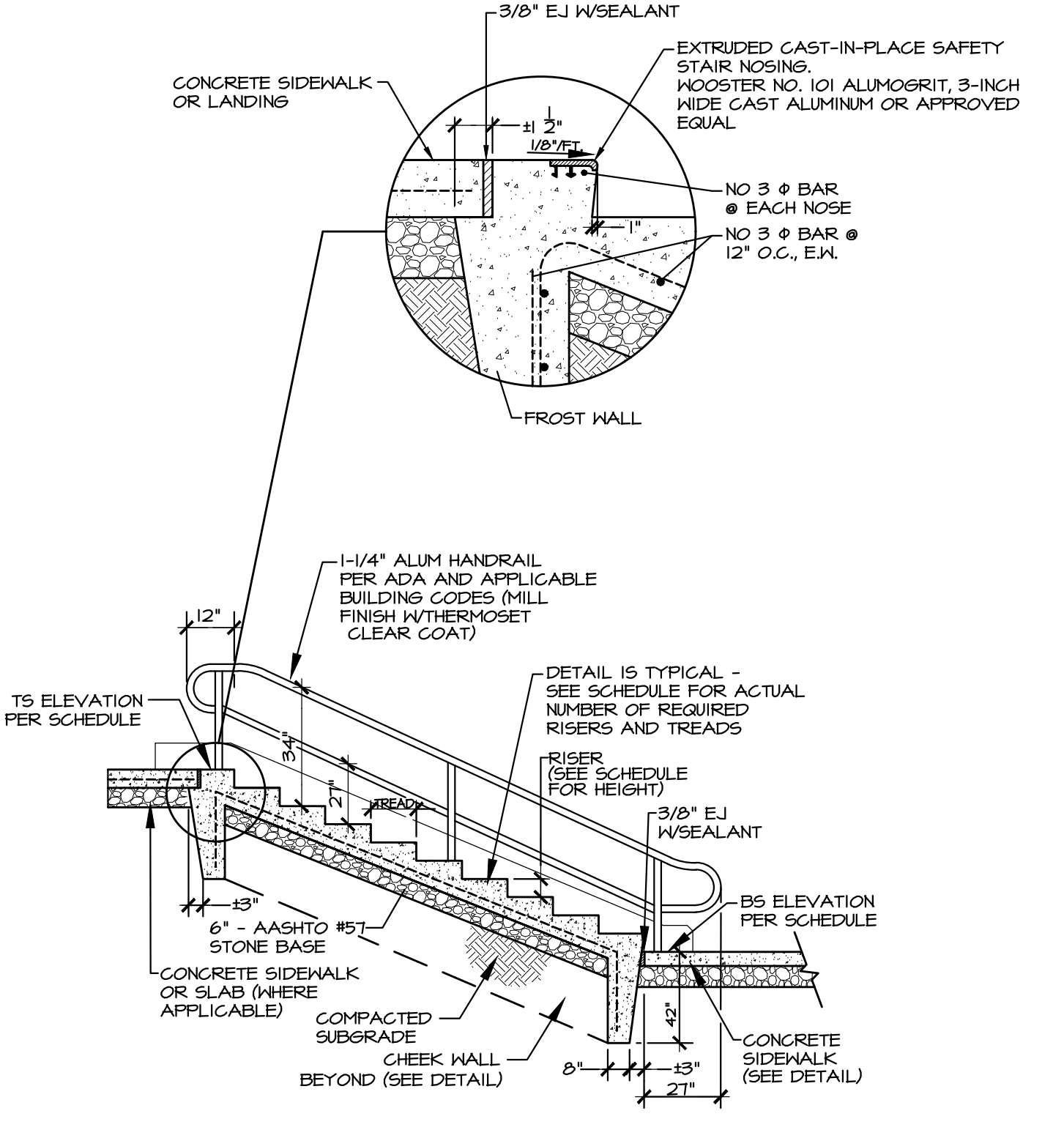
**G PAVEMENT EDGE TREATMENT (NO CURB)**

NOT TO SCALE



**H PAVEMENT MARKING DETAIL**

NOT TO SCALE



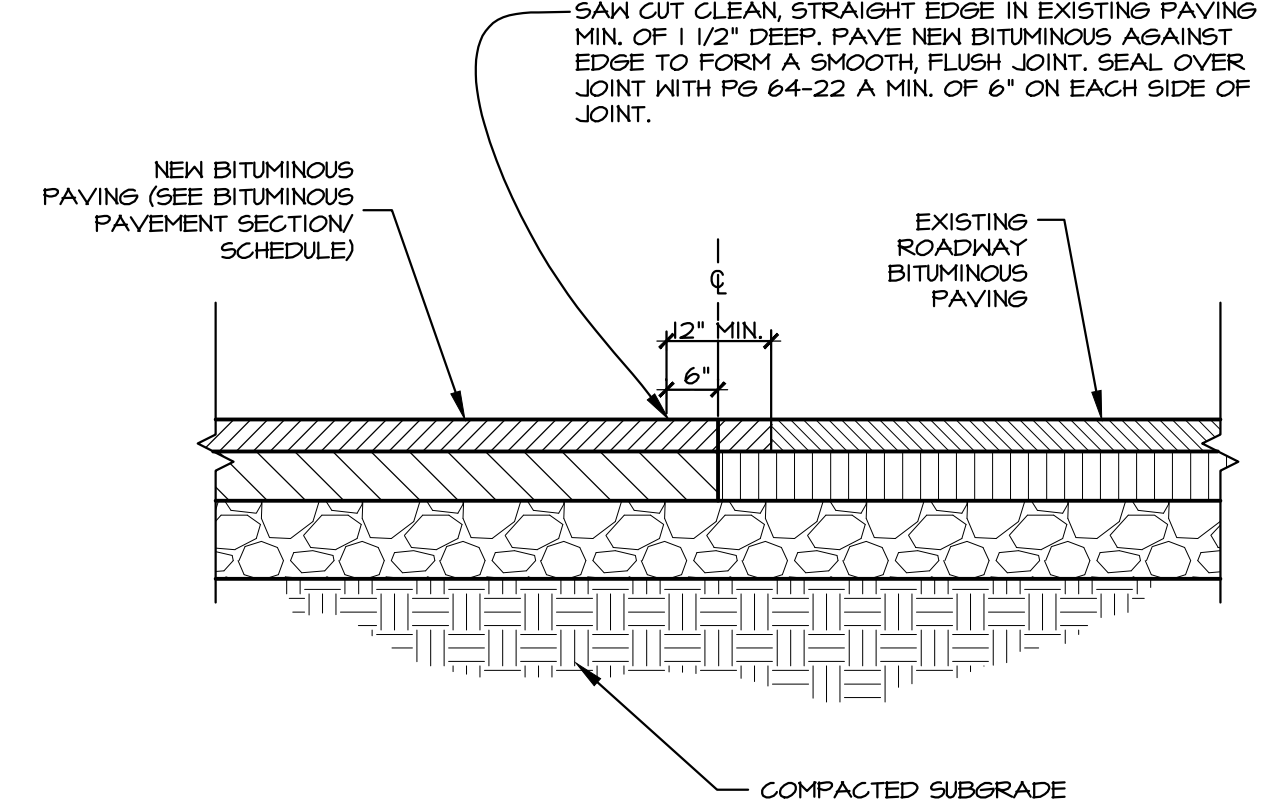
NOTES:

1. ALL CONCRETE MATERIALS FOR STAIR CONSTRUCTION SHALL BE 4000 PSI CONCRETE.
2. PER IBC, HANDRAILS MUST BE LOCATED WITHIN 30-INCHES OF REACH AND/OR NO MORE THAN 60-INCHES APART.
3. THE BOTTOM TWO (2) STAIR TREADS IN STAIRS A.1 AND B.1 VARY IN WIDTH AS THEY BOTH RETURN AROUND THE ADJACENT CHEEK WALL (SEE PLAN).

STAIR (SEE PLAN)	BS ELEV.	TS ELEV.	NO. OF RISERS	RISER HEIGHT	NO. OF TREADS	WIDTH
A.1	307.48	311.42	7	6.75"	6	5.5' (3)
A.2	311.44	315.44	7	6.75"	6	5.5'
A.3	315.51	319.44	7	6.75"	6	5.5'
B.1	307.48	311.42	7	6.75"	6	5.5' (3)
B.2	311.44	315.44	7	6.75"	6	5.5'
B.3	315.51	319.44	7	6.75"	6	5.5'

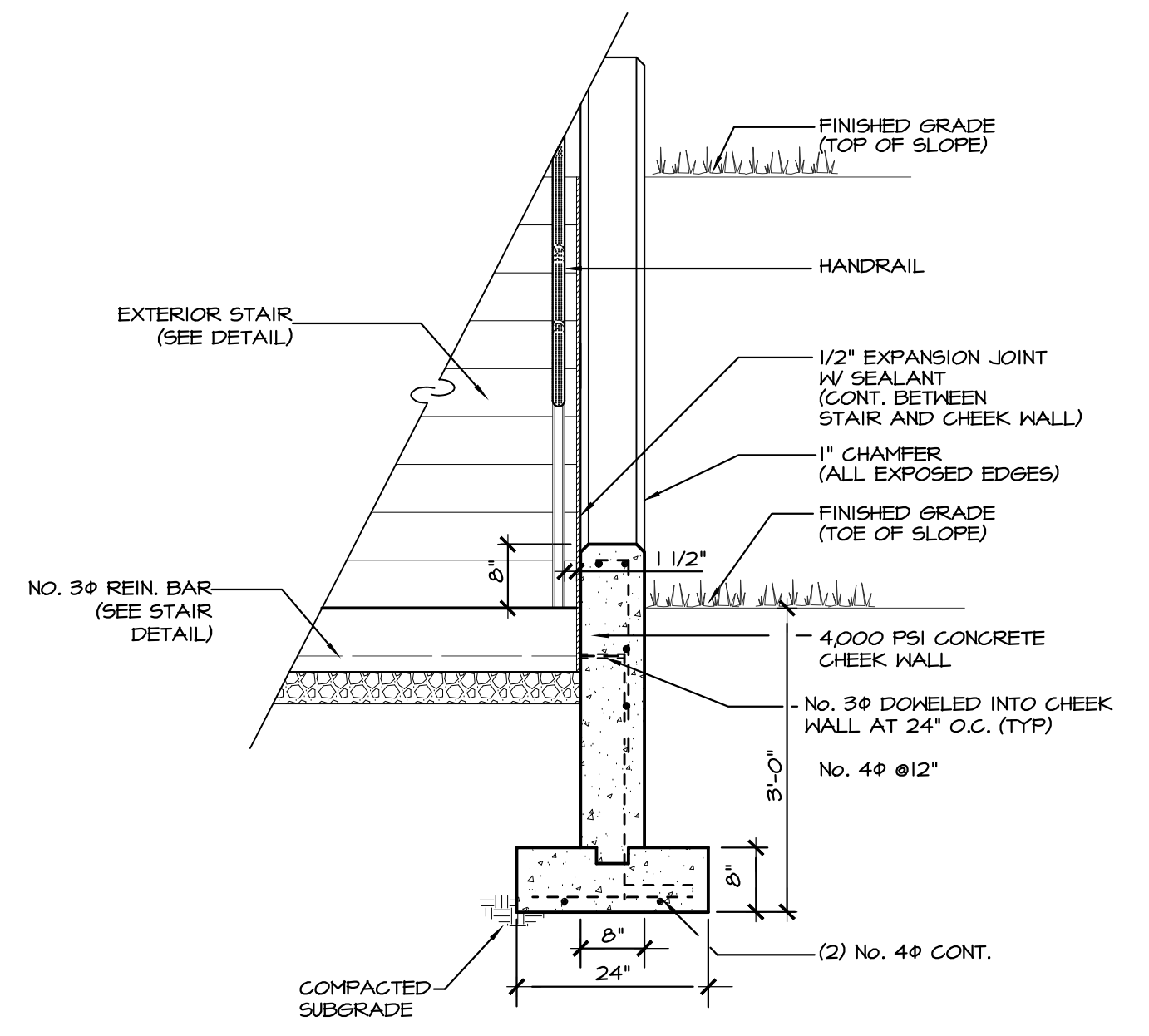
**I EXTERIOR STAIR AND CHEEK WALL DETAIL**

NOT TO SCALE



**F ROADWAY RESTORATION**

NO SCALE

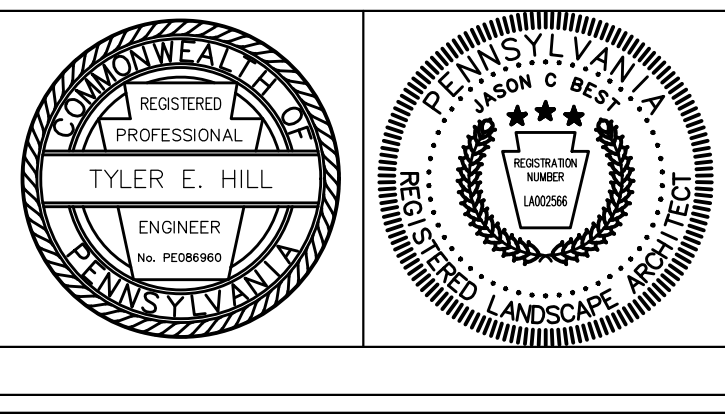


REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	JCB
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.		



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PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
**SITE DETAILS**

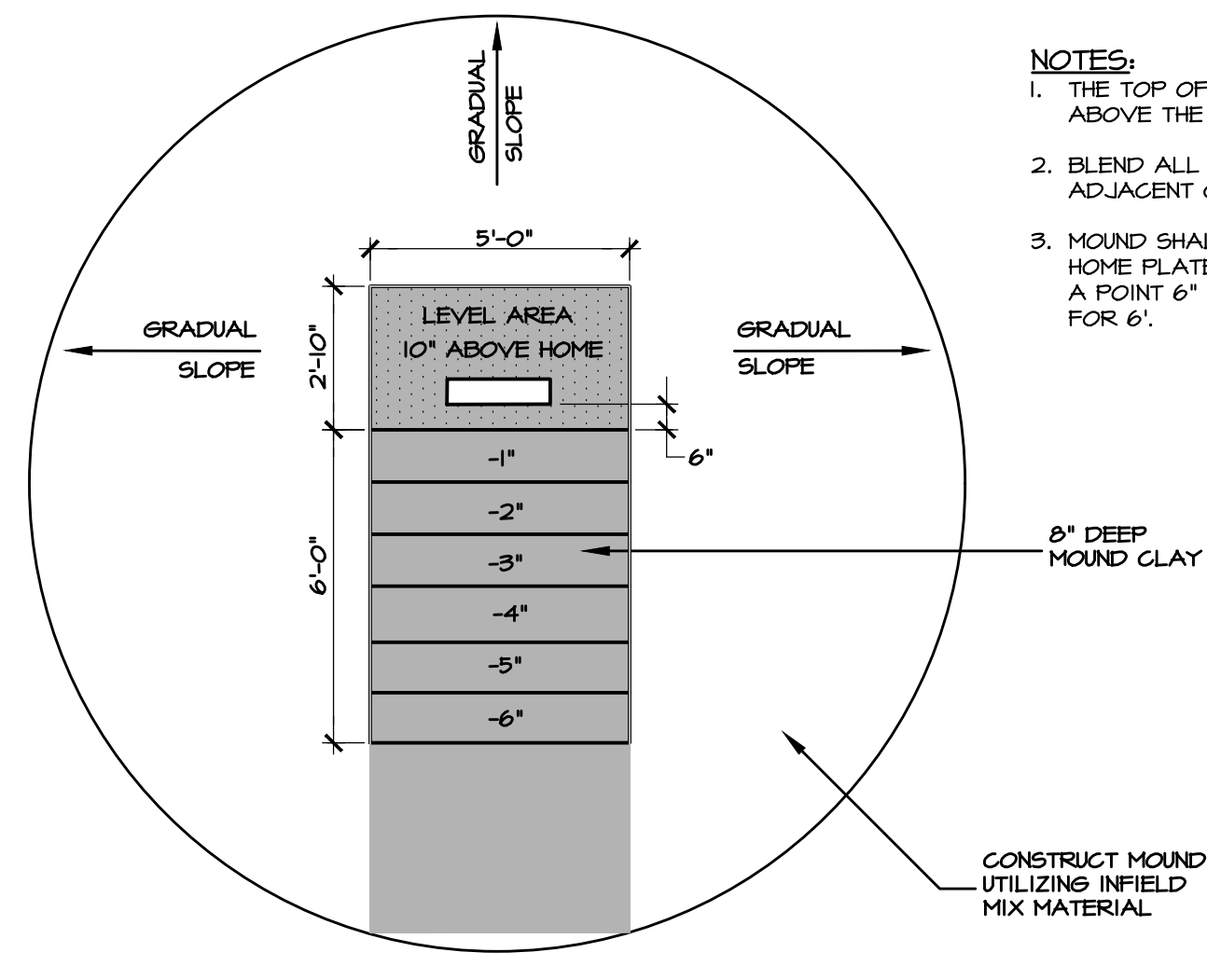
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA

CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

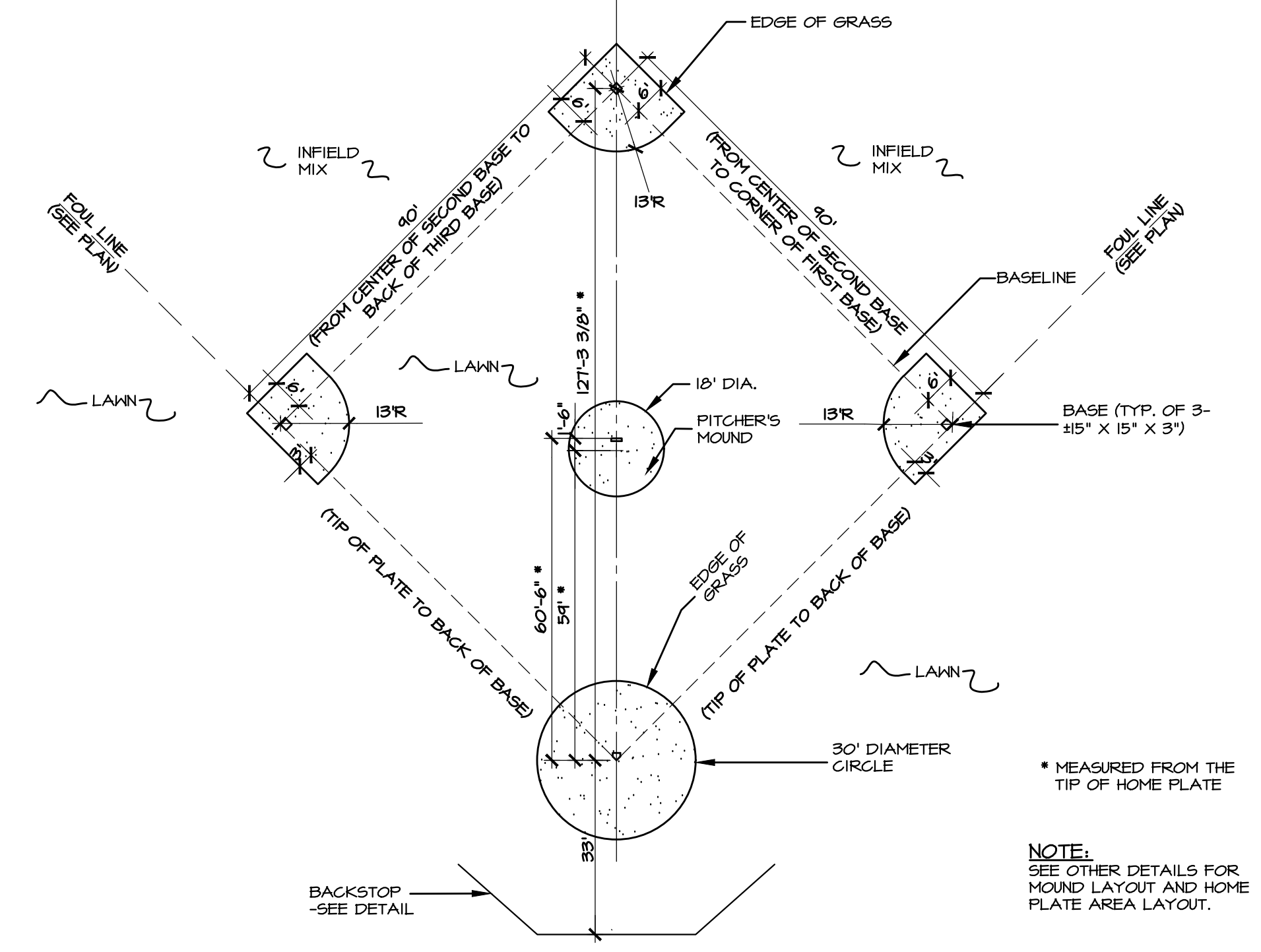
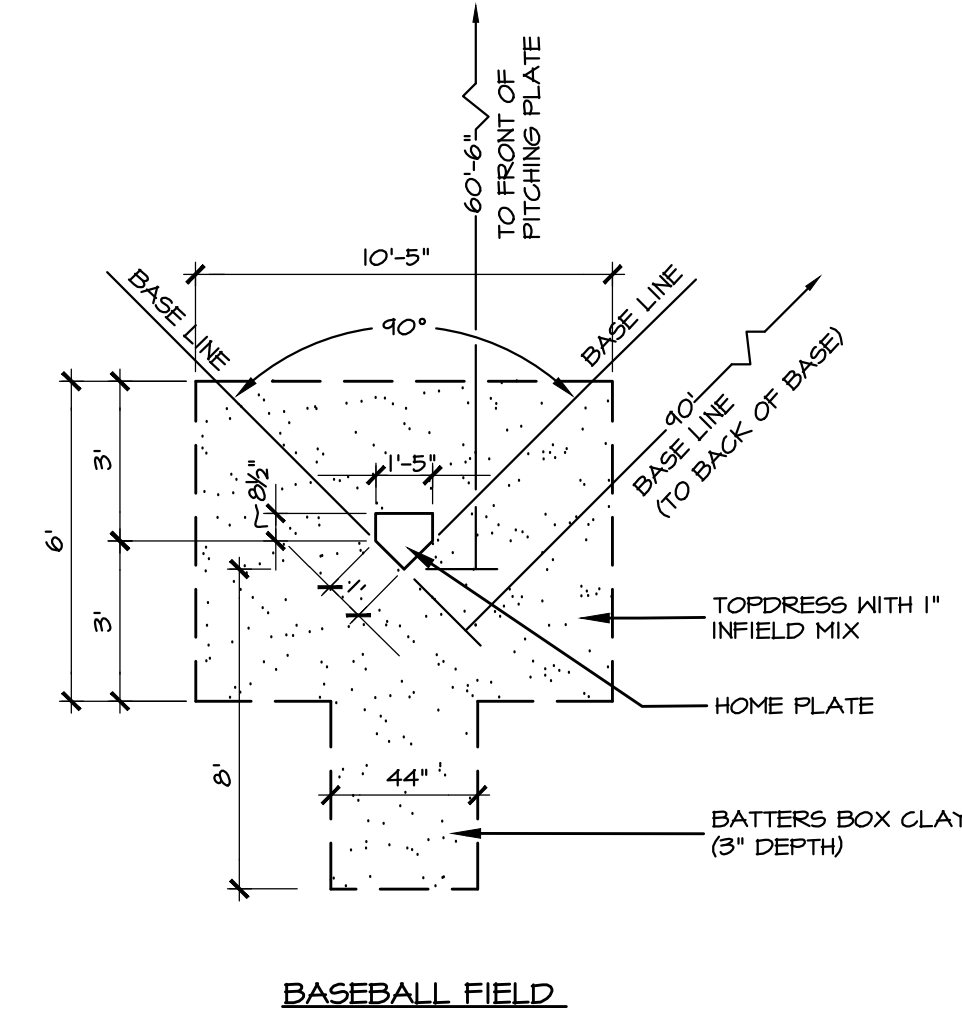
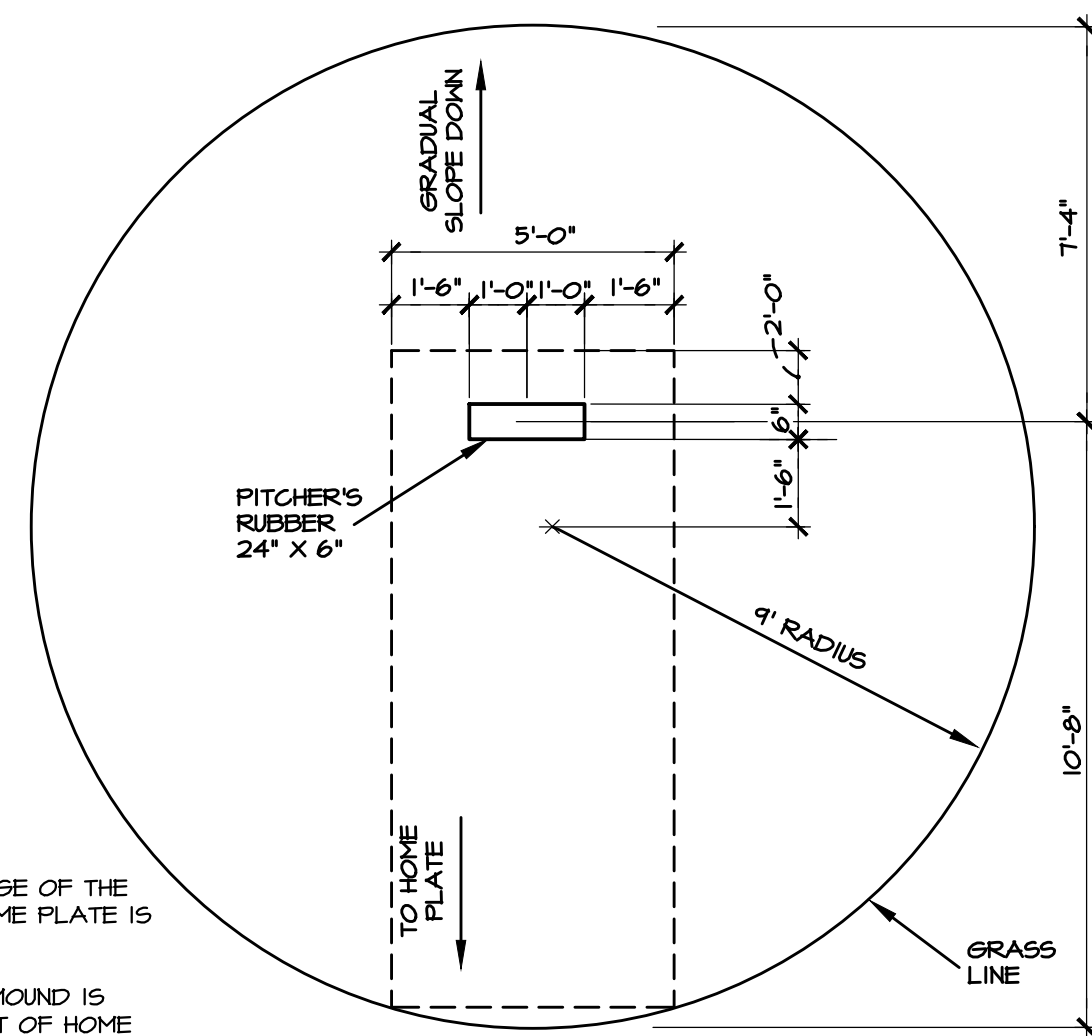
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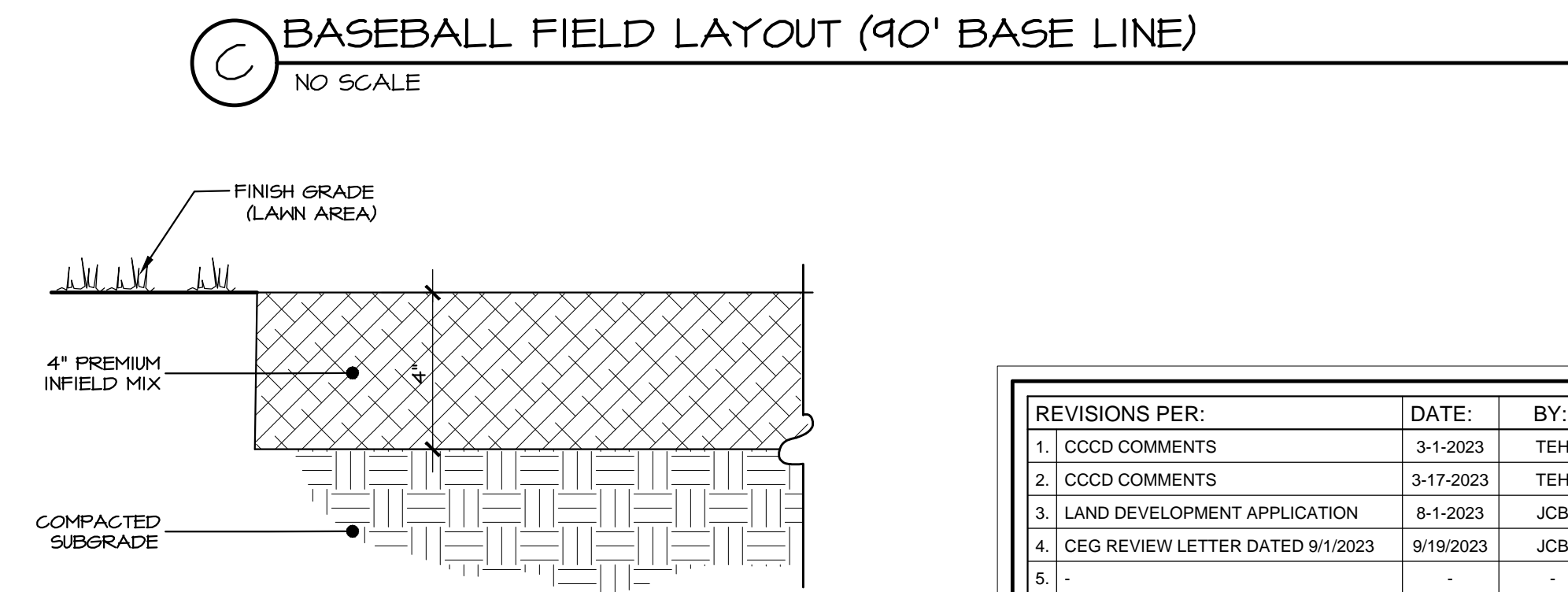


- NOTES:**
1. THE TOP OF THE PITCHER'S RUBBER SHALL BE 10' ABOVE THE ELEVATION OF HOME PLATE.
  2. BLEND ALL SLOPES GRADUAL AND UNIFORM TO ADJACENT GRADES.
  3. MOUND SHALL SLOPE UNIFORMLY IN THE DIRECTION OF HOME PLATE 1" PER HORIZONTAL FOOT, BEGINNING AT A POINT 6" IN FRONT OF THE RUBBER AND EXTENDING FOR 6'.

- NOTES:**
1. THE DISTANCE FROM THE FRONT EDGE OF THE RUBBER TO THE BACK POINT OF HOME PLATE IS 60'-6".
  2. THE CENTER RADIUS POINT OF THE MOUND IS LOCATED 54' FROM THE BACK POINT OF HOME PLATE.



- NOTES:**
1. PERFORM CHISEL PLANTING AFTER INCORPORATION OF ORGANIC MATTER TO RELIEVE COMPACTION.
  2. USE ONLY RUBBER-TIRED EQUIPMENT FOR ROOT ZONE PREPARATION, FINE GRADING, AND SEEDING.
  3. ADJUST ROOT-ZONE DEPTH AS REQUIRED TO ACCOMMODATE SOD WHERE SODDING IS INDICATED ON DRAWING, 1" - MAXIMUM.



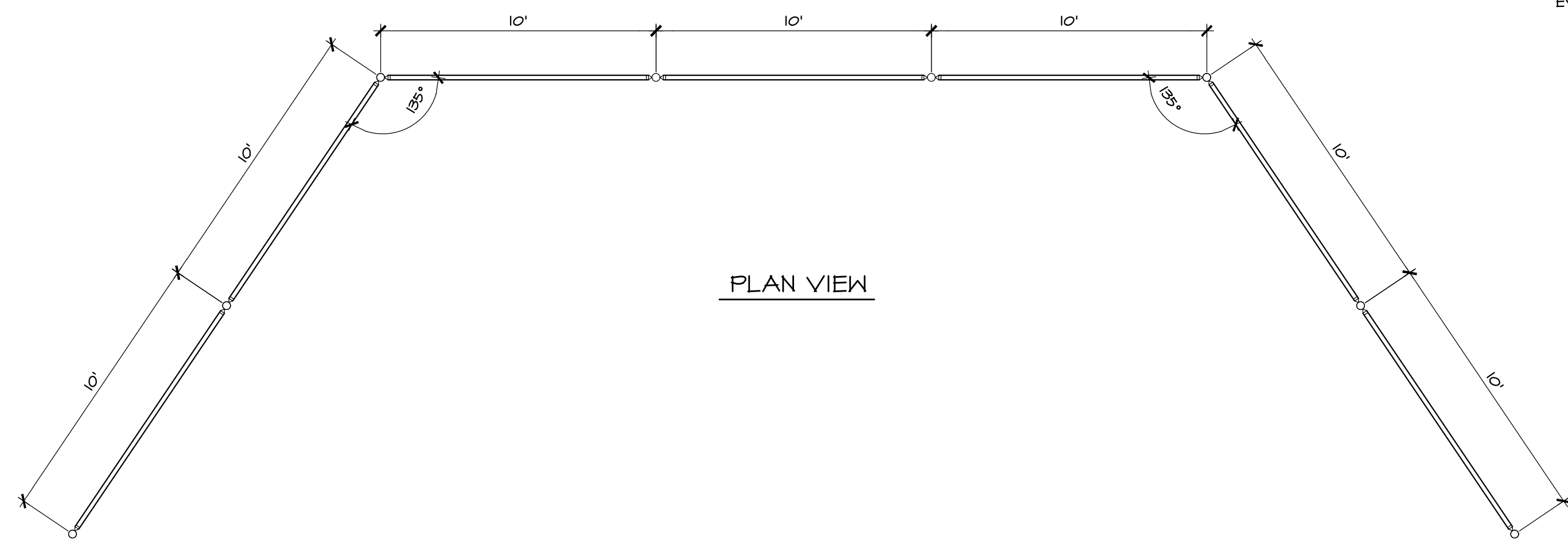
**A** BASEBALL PITCHER'S MOUND DETAIL  
NO SCALE

**B** BASEBALL FIELD HOME PLATE AREAS  
NO SCALE

**C** BASEBALL FIELD LAYOUT (90' BASE LINE)  
NO SCALE

**D** ATHLETIC FIELD PLANTING, SEEDING & SOD, DETAIL  
NO SCALE

**E** INFIELD CROSS-SECTION  
NO SCALE



**ELEVATION**

**SECTION**

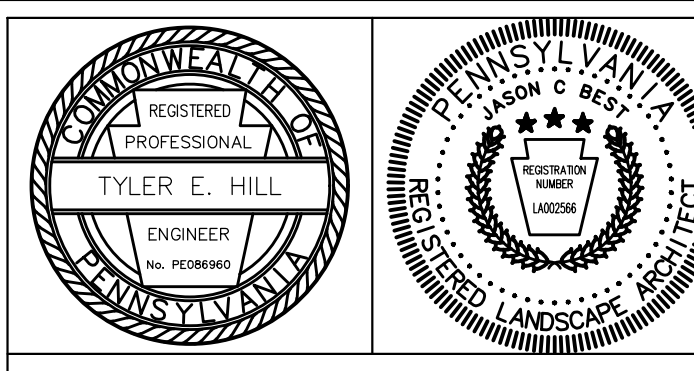
**F** CHAIN LINK BASEBALL BACKSTOP (NON-HOODED, 90' BASE LINES)  
NO SCALE

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
2. OCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.	-	-



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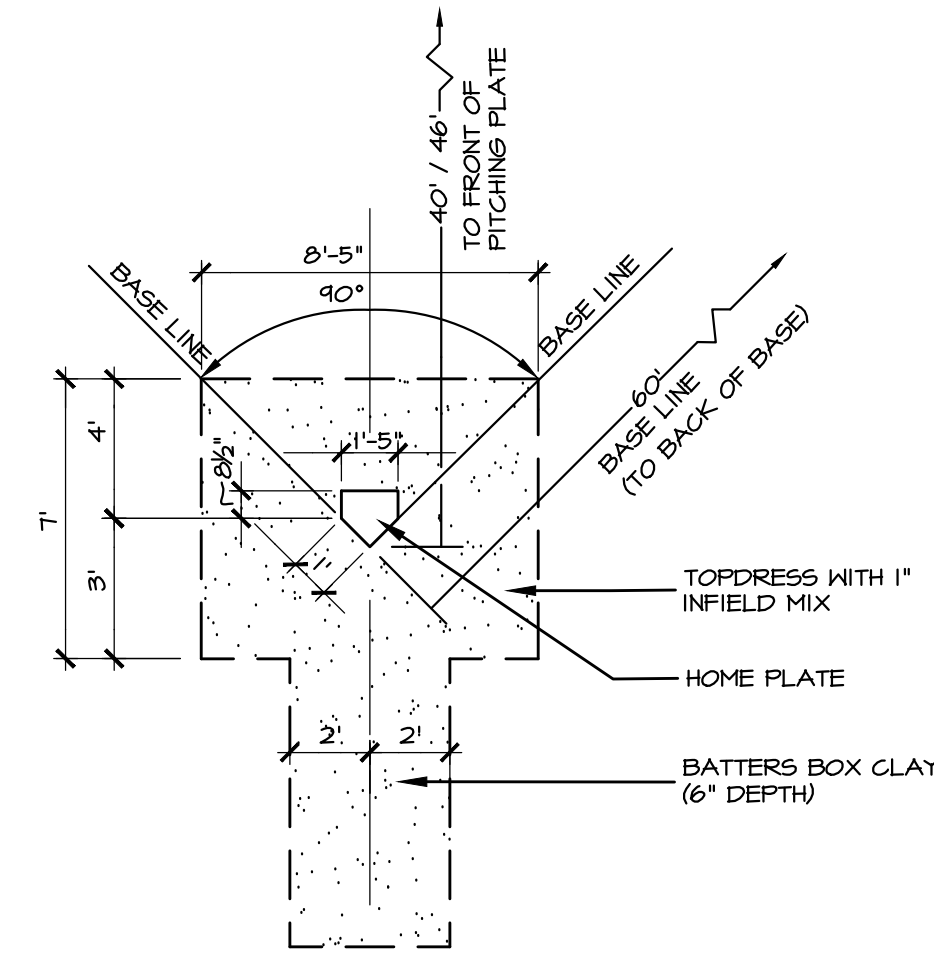
**PRELIMINARY/FINAL LAND DEVELOPMENT**  
SUBJECT:  
**EROSION & SEDIMENT CONTROL DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

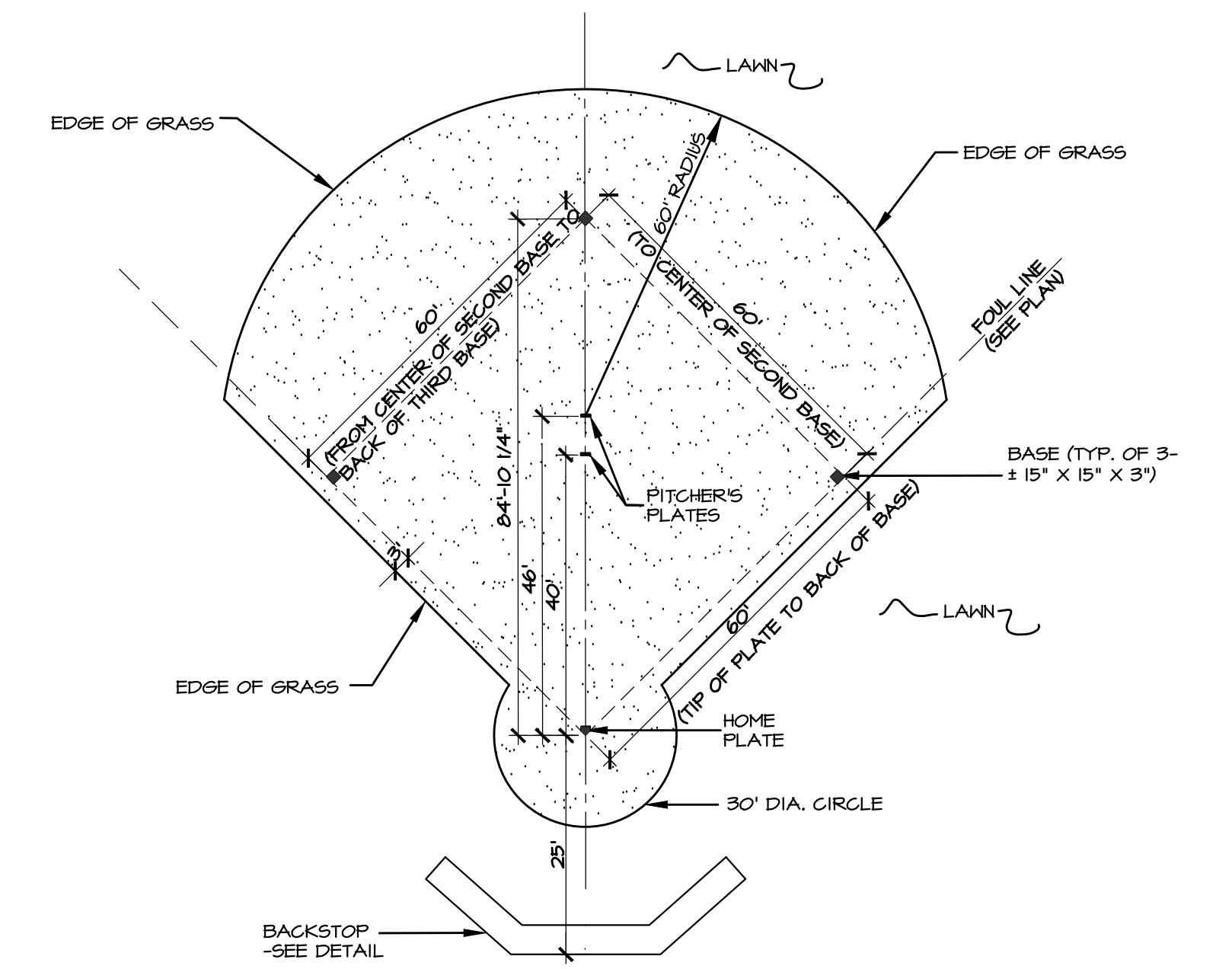
DRAWING NO.  
**30 of 48**

**FENCE AND GATE NOTES:**

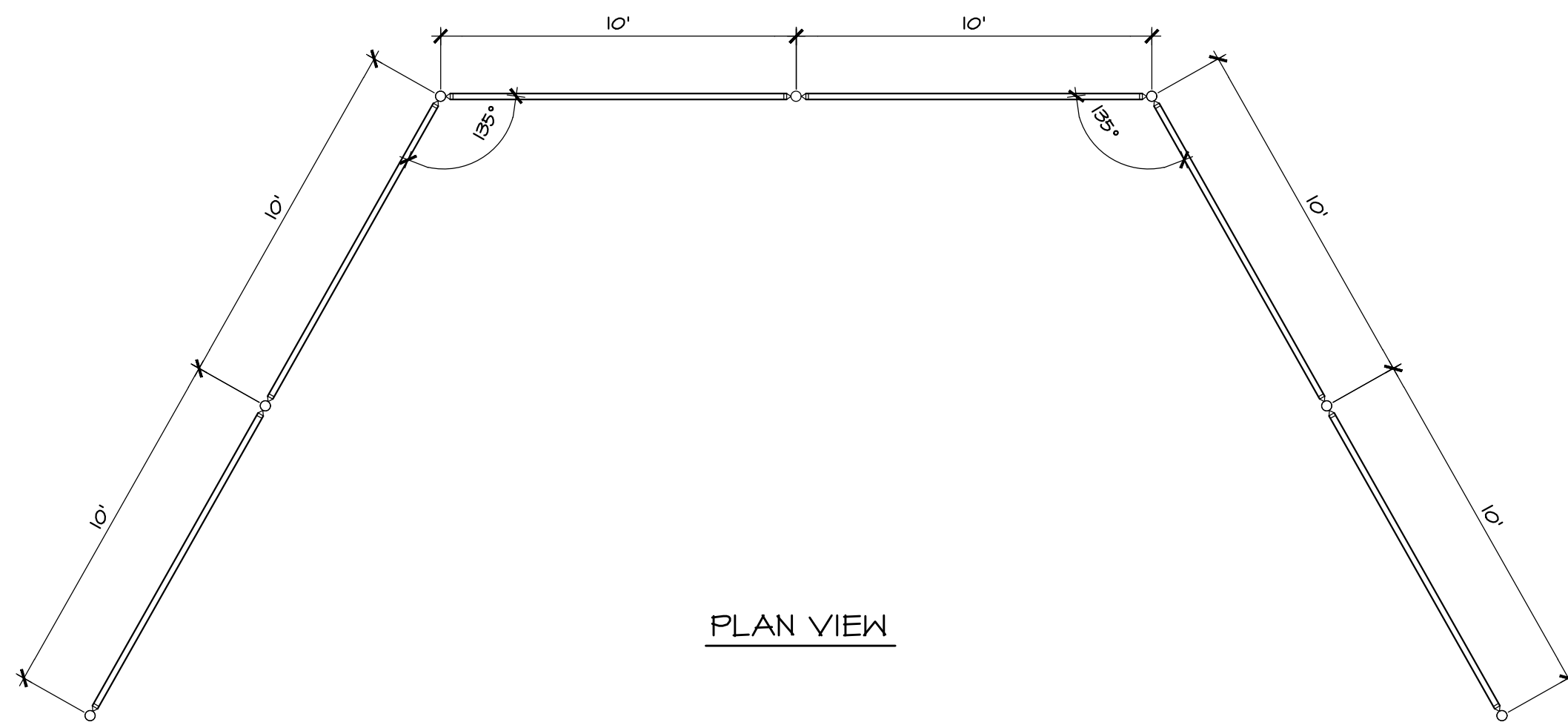
1. ALL FENCE MATERIALS SHALL BE STEEL AND PRODUCED AND MANUFACTURED IN THE U.S.A. EXCEPT FENCE POST TOPS, RAIL ENDS, AND TIES MAY BE ALUMINUM. ALL MATERIALS AND FABRICATION SHALL CONFORM TO THE CHAIN LINK FENCE MANUFACTURERS INSTITUTE (CLFMI) PRODUCT MANUAL, LATEST EDITION.
2. PROVIDE MANUALLY OPERATED SWING GATES OR CANTILEVER SLIDE GATES AS DESIGNATED ON DRAWINGS.
3. ALL DIMENSIONS ARE NOMINAL. VERIFY ACTUAL FENCE DIMENSIONS AND GATE OPENINGS IN FIELD.
4. ALL FENCE FABRIC, POSTS, RAILS, GATE FRAMES, STRETCHER BARS, AND OTHER PARTS SHALL BE PVC COATED, MEETING THE REQUIREMENTS OF CLFMI STANDARD GUIDE FOR POLYVINYL CHLORIDE (PVC). ALL COATINGS SHALL CONFORM TO CLASS 20 (FUSED), BLACK, PER ASTM 434. ALL FENCE FABRIC SHALL BE 6 GAUGE UNLESS OTHERWISE NOTED.
5. PROVIDE MID-RAIL AND TRUSS ROD AT ALL CORNERS OF FENCE, ADJOINING ALL GATES, AND AT ALL TERMINAL ENDS OF FENCE GREATER THAN FOUR (4) FEET IN HEIGHT.
6. PROVIDE BOTTOM RAIL AND TOP RAIL CONTINUOUS FOR ALL FENCE.
7. POSITION BOTTOM OF FABRIC 2" ABOVE FINISHED GRADE FOR PERIMETER FENCING. POSITION BOTTOM OF FABRIC 1" ABOVE FINISHED GRADE FOR ATHLETIC FIELD FENCING.
8. TOP OF CONCRETE FOOTINGS SHALL BE BELOW FINISH GRADE IN BITUMINOUS PAVING AND LAWN AREAS (3-INCHES IN LAWN AREAS)
9. DETAILS ARE TYPICAL - ALL DETAILS FOR FENCE AND GATES MAY NOT APPLY. PROVIDE FENCE AND GATES AS SCHEDULED ON THE DRAWINGS, IN ACCORDANCE WITH THE APPLICABLE DETAILS ON THIS SHEET, AND PER SUBMITTALS AS APPROVED BY THE OWNER.
10. ALL ATHLETIC FIELD FENCING AND GATES WITH A SCHEDULED HEIGHT OF 6'-0" OR LESS, INCLUDING AREAS WHERE BALLSTOPPER NETTING WILL BE INSTALLED, SHALL BE EQUIPPED WITH A CORRUGATED PVC FENCE TOPPER (SAFETY TOP CAP), COLOR: YELLOW. USE AER-FLO SPORTS "PLASTICAP" FENCE TOPPER OR EQUAL.



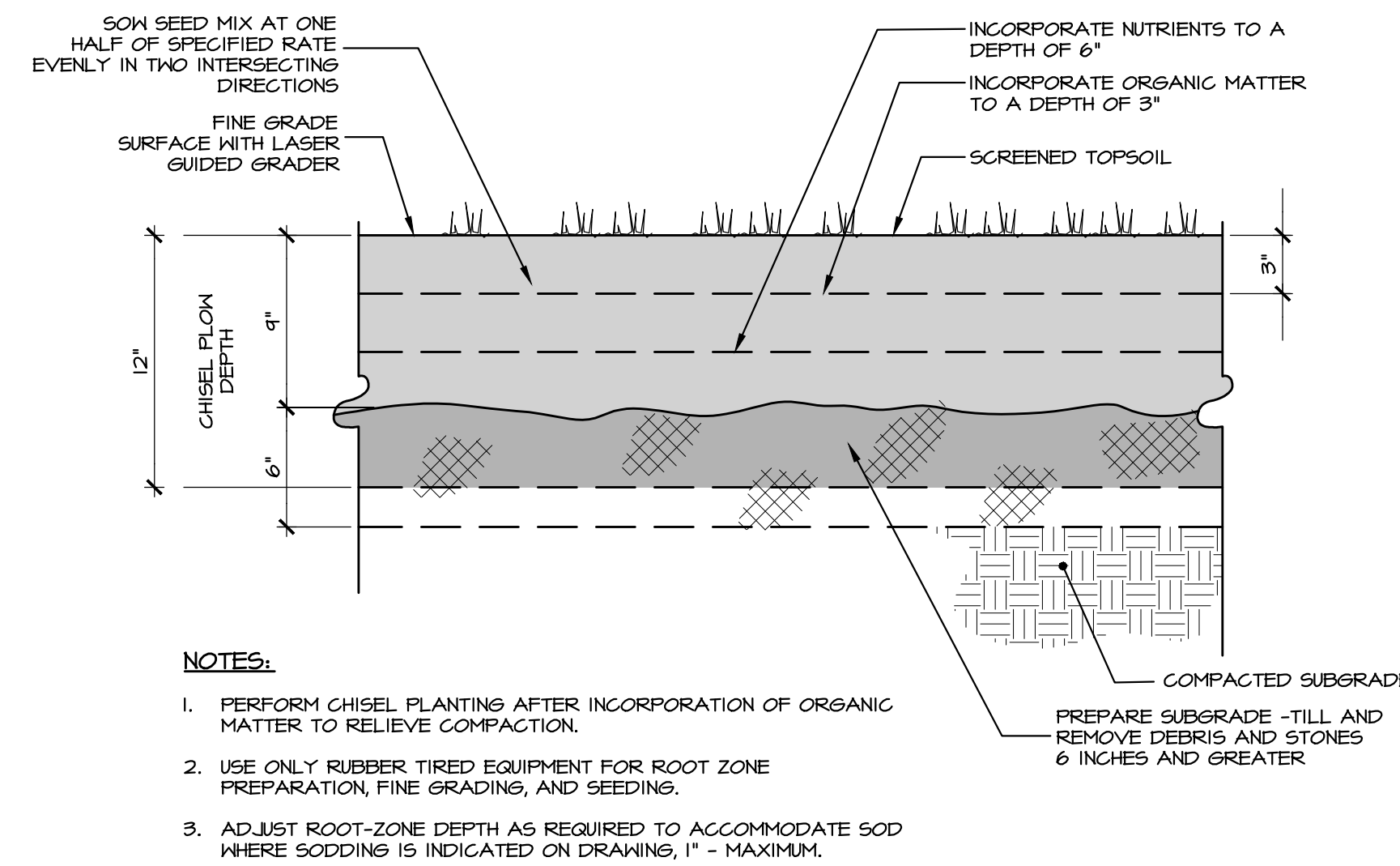
**A** SOFTBALL FIELD HOME PLATE AREA  
NO SCALE



**B** SOFTBALL INFIELD LAYOUT  
NO SCALE

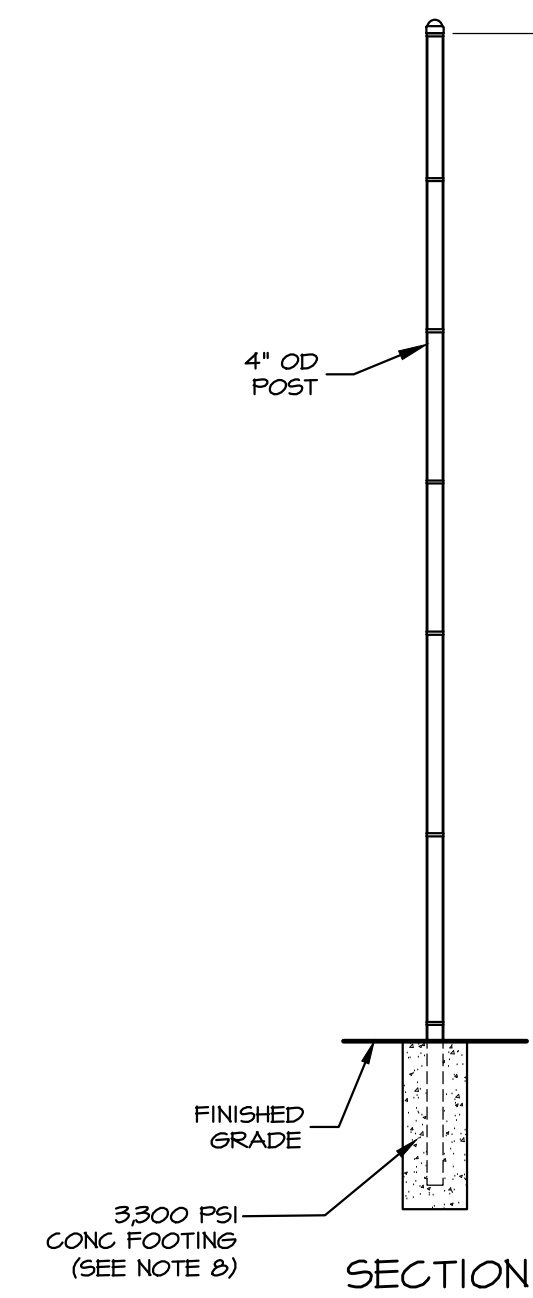
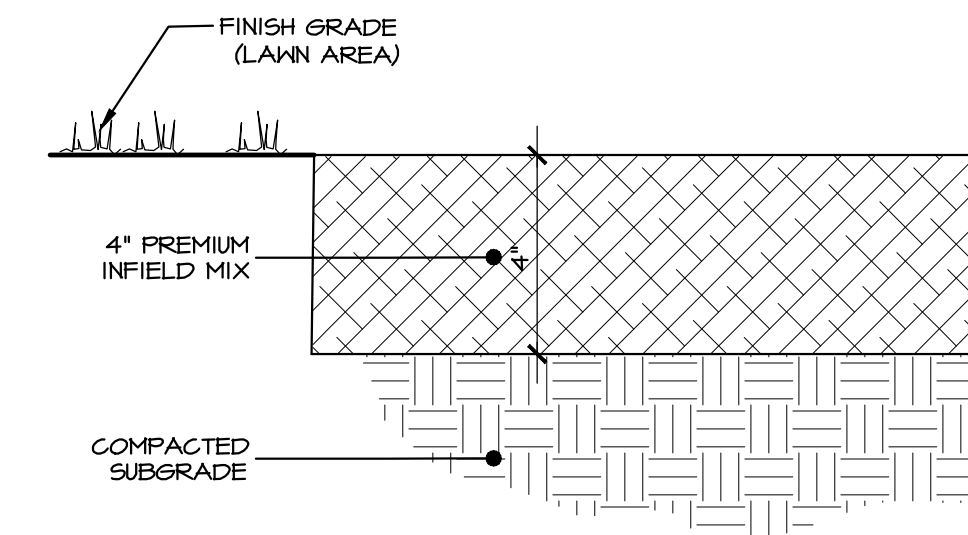


PLAN VIEW



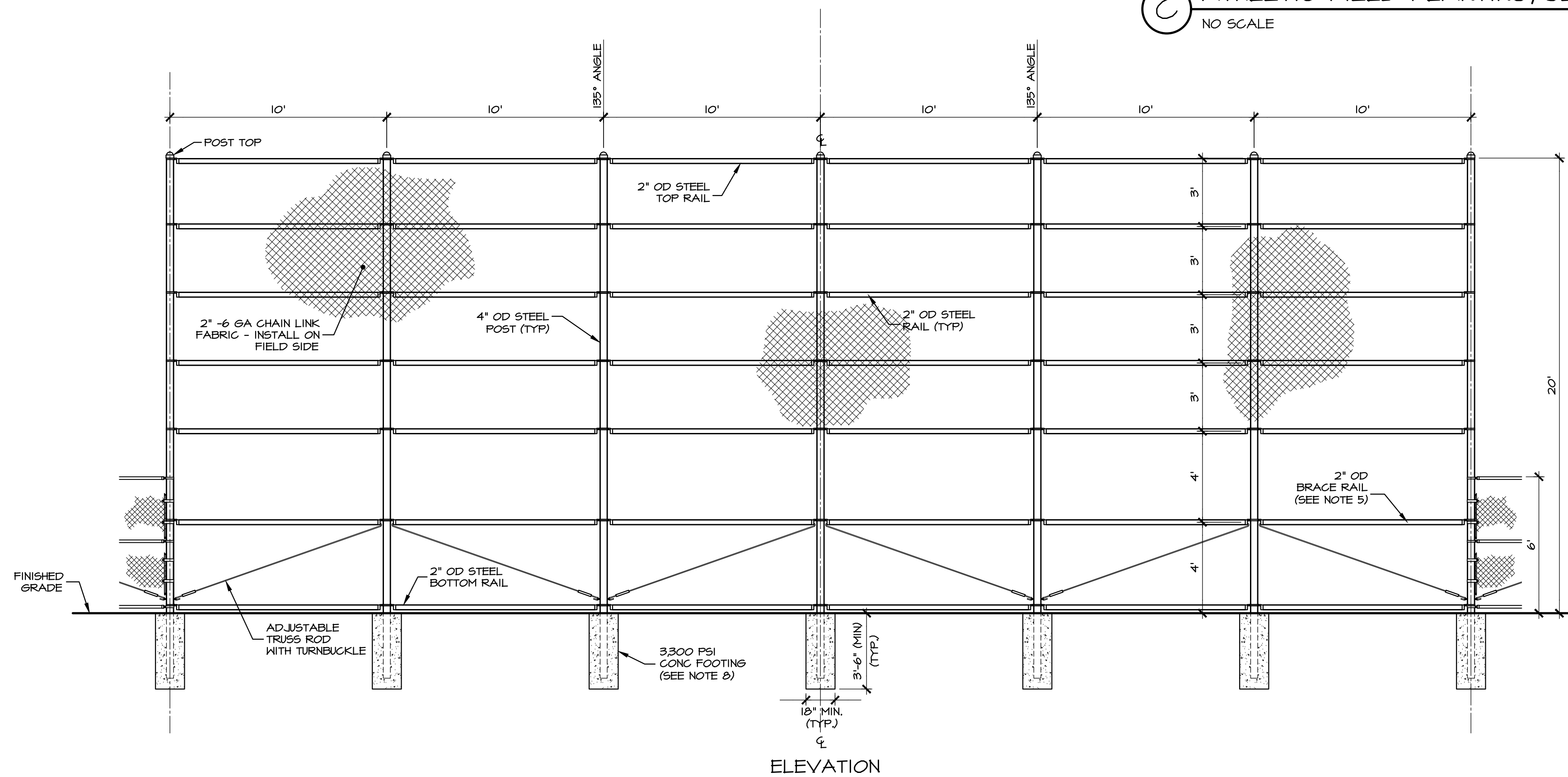
**NOTES:**

1. PERFORM CHISEL PLANTING AFTER INCORPORATION OF ORGANIC MATTER TO RELIEVE COMPACTION.
2. USE ONLY RUBBER Tired EQUIPMENT FOR ROOT ZONE PREPARATION, FINE GRADING, AND SEEDING.
3. ADJUST ROOT-ZONE DEPTH AS REQUIRED TO ACCOMMODATE SOD WHERE SODDING IS INDICATED ON DRAWING, 1" - MAXIMUM.



**D** INFIELD CROSS-SECTION  
NO SCALE

**C** ATHLETIC FIELD PLANTING, SEEDING & SOD, DETAIL  
NO SCALE



ELEVATION

**E** CHAIN LINK SOFTBALL BACKSTOP (NON-HOODED, 60' BASE LINES)  
NO SCALE

**F** LAWN PLANTING DETAIL  
NOT TO SCALE

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

MID-ATLANTIC SPORTS CONSTRUCTION  
**WE BUILD WINNERS.**

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PROFESSIONAL ENGINEER  
TYLER E. HILL  
REGISTERED PROFESSIONAL ENGINEER  
PENNSYLVANIA

PROFESSIONAL LANDSCAPE ARCHITECT  
JASON B. BISHOP  
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
PENNSYLVANIA

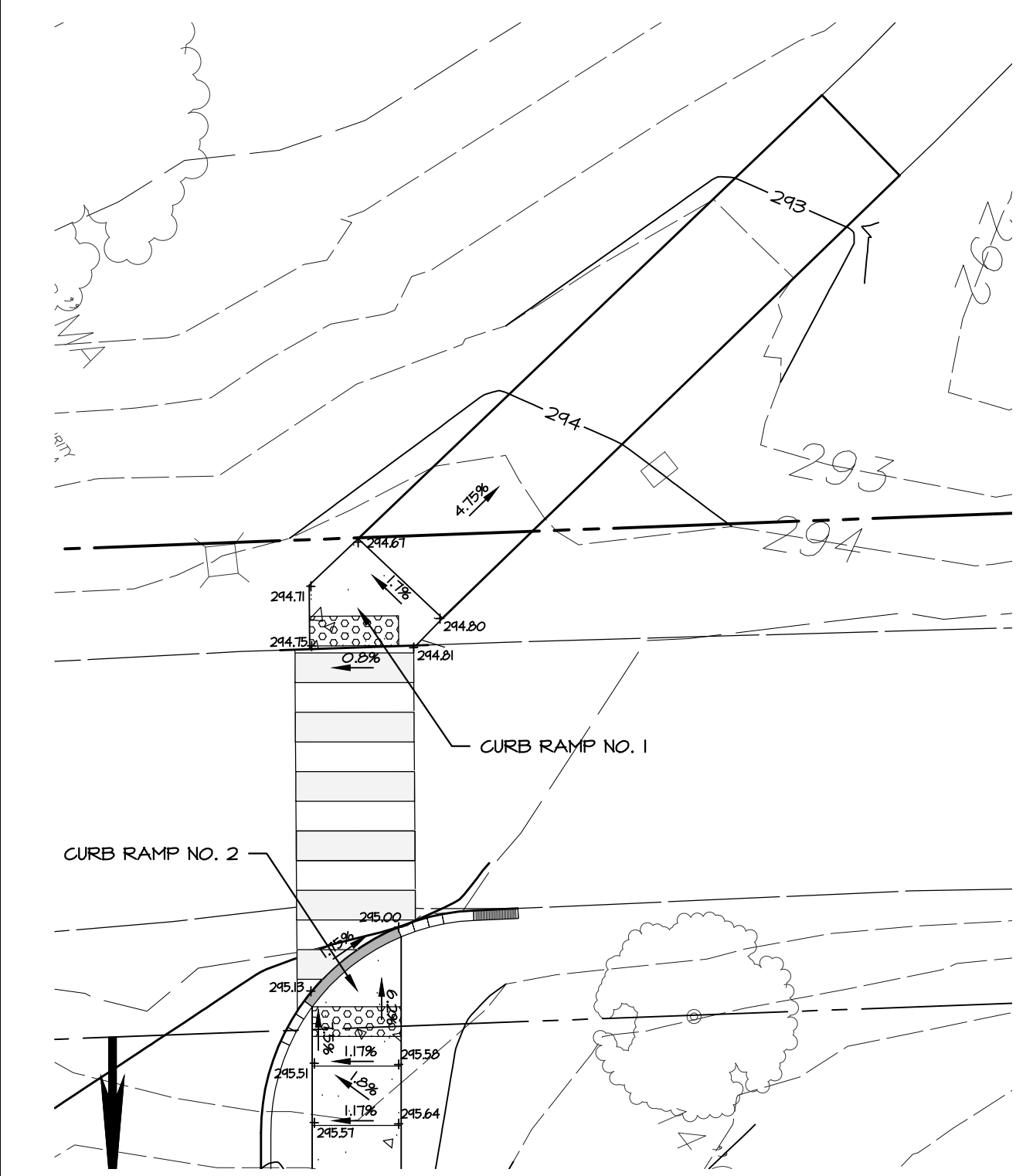
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT

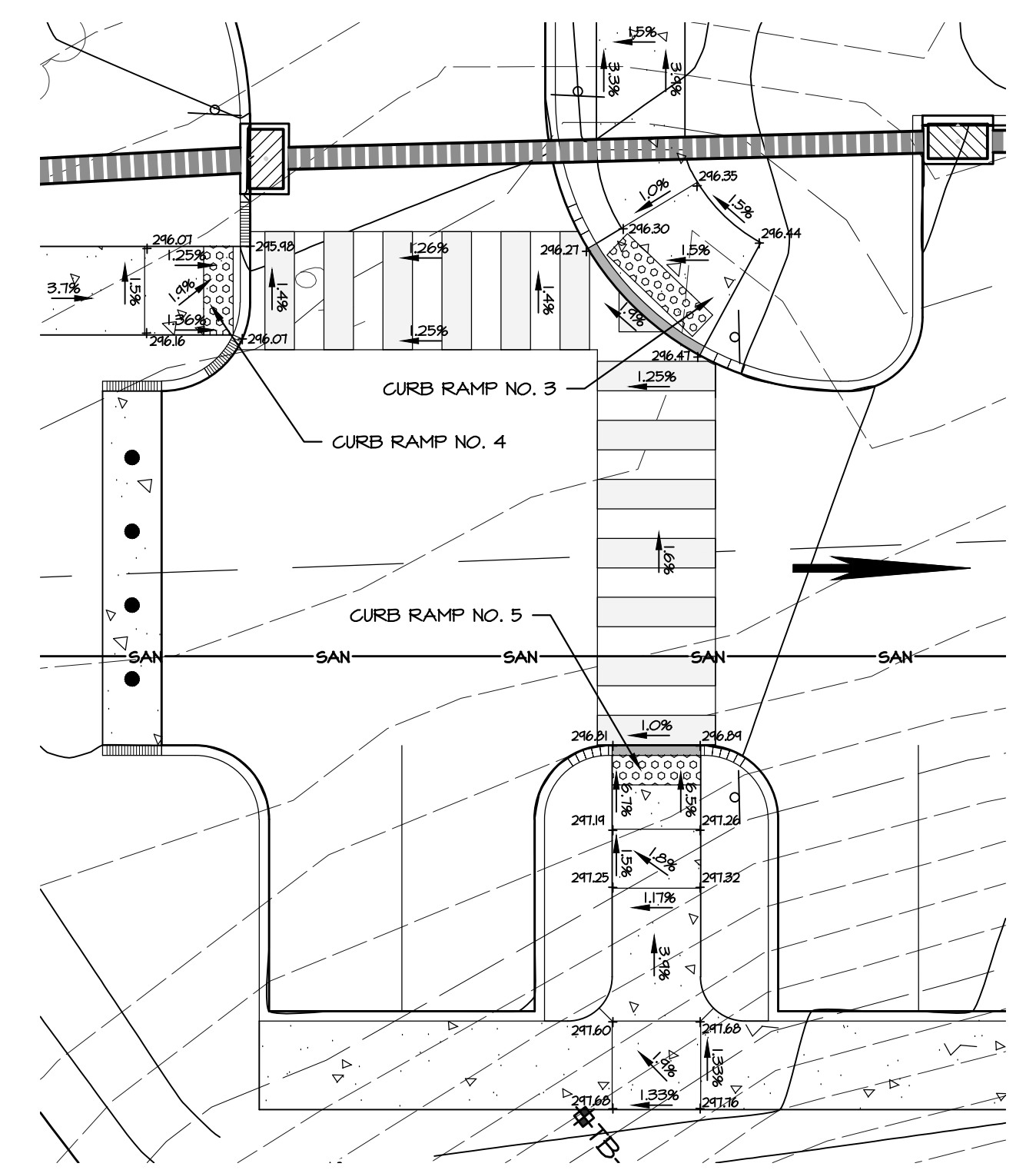
SUBJECT:  
**SITE DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

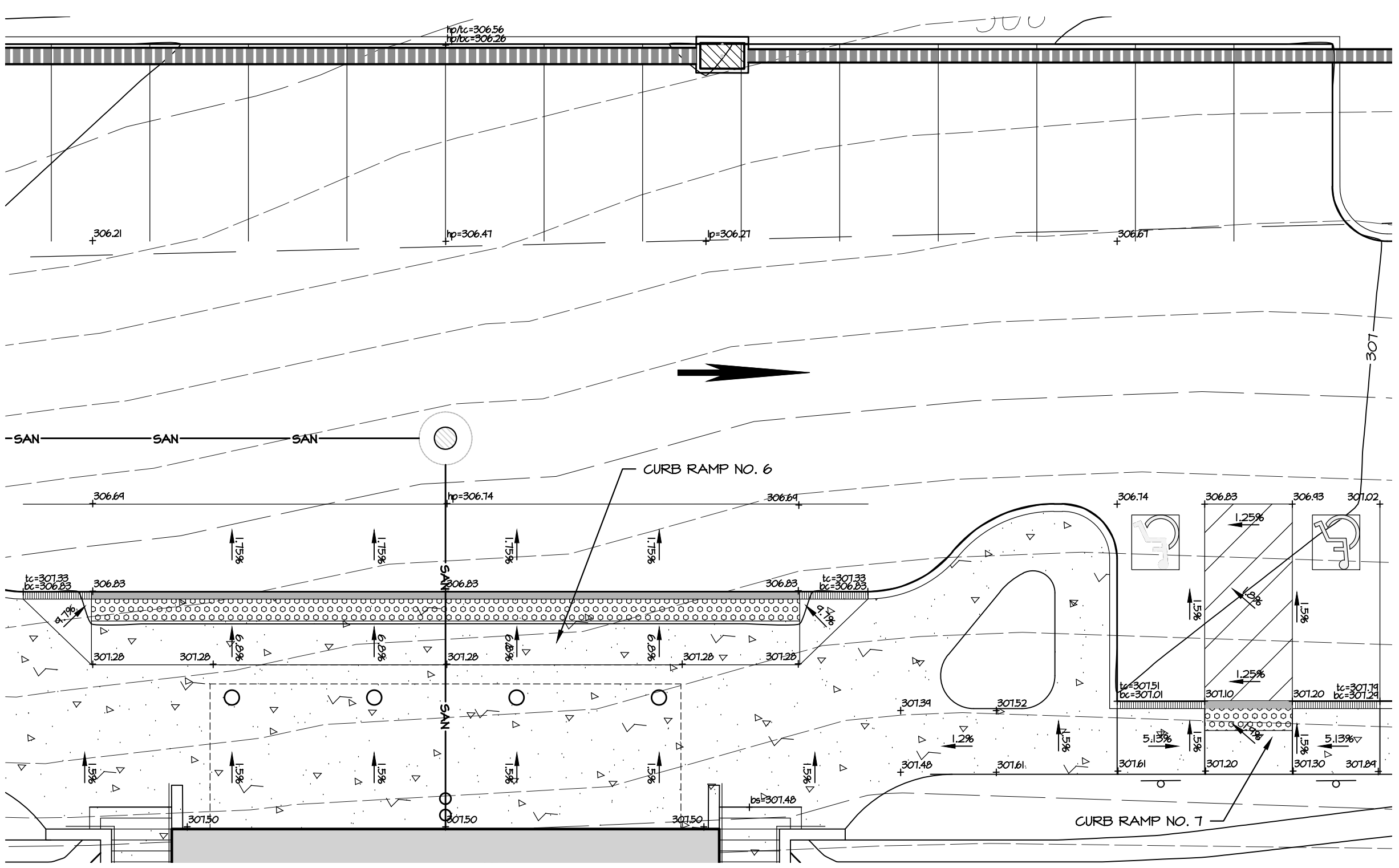




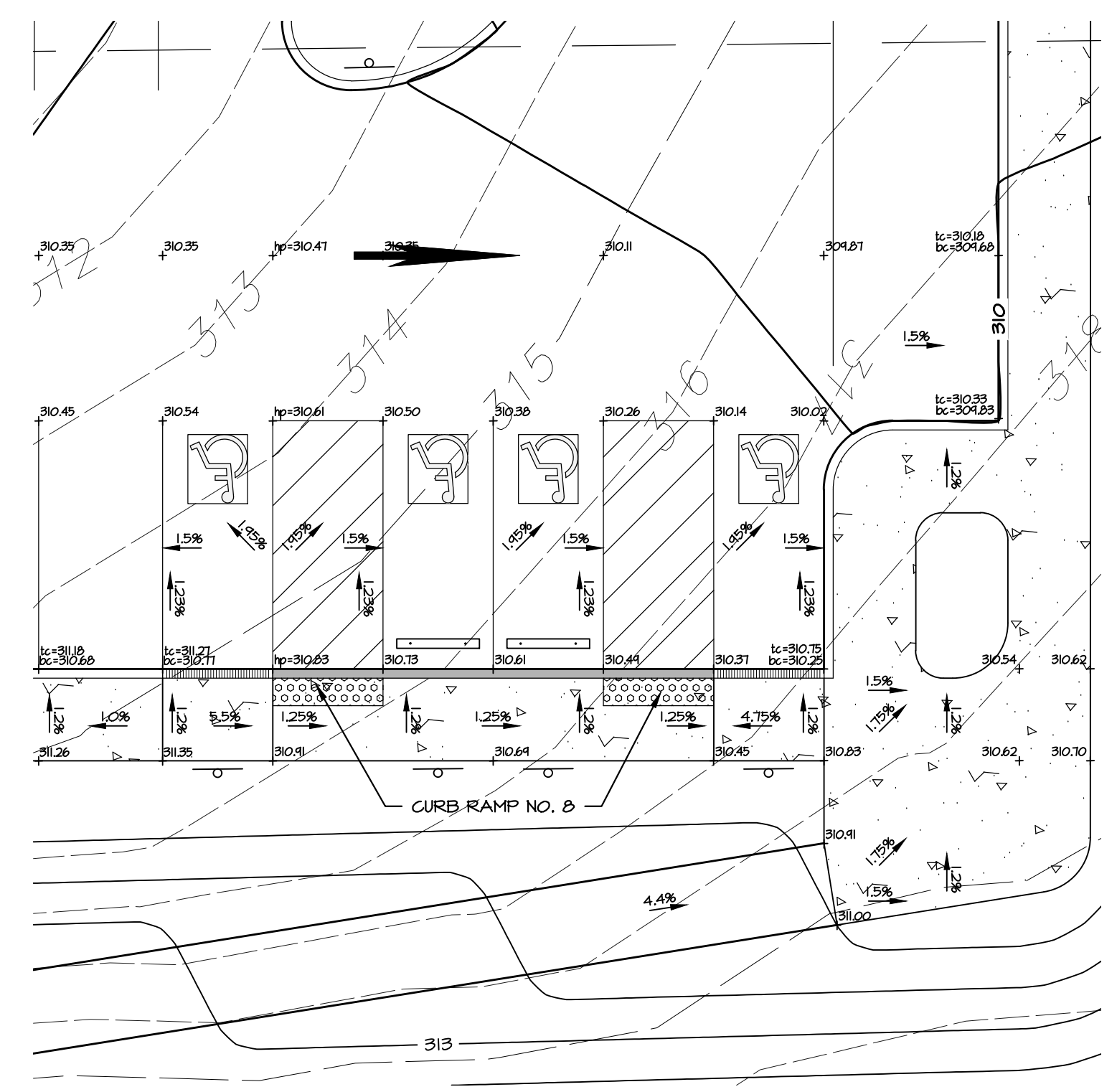
**A** GRADING ENLARGEMENT (CURB RAMP 1 & 2)  
SCALE: 1" = 10'



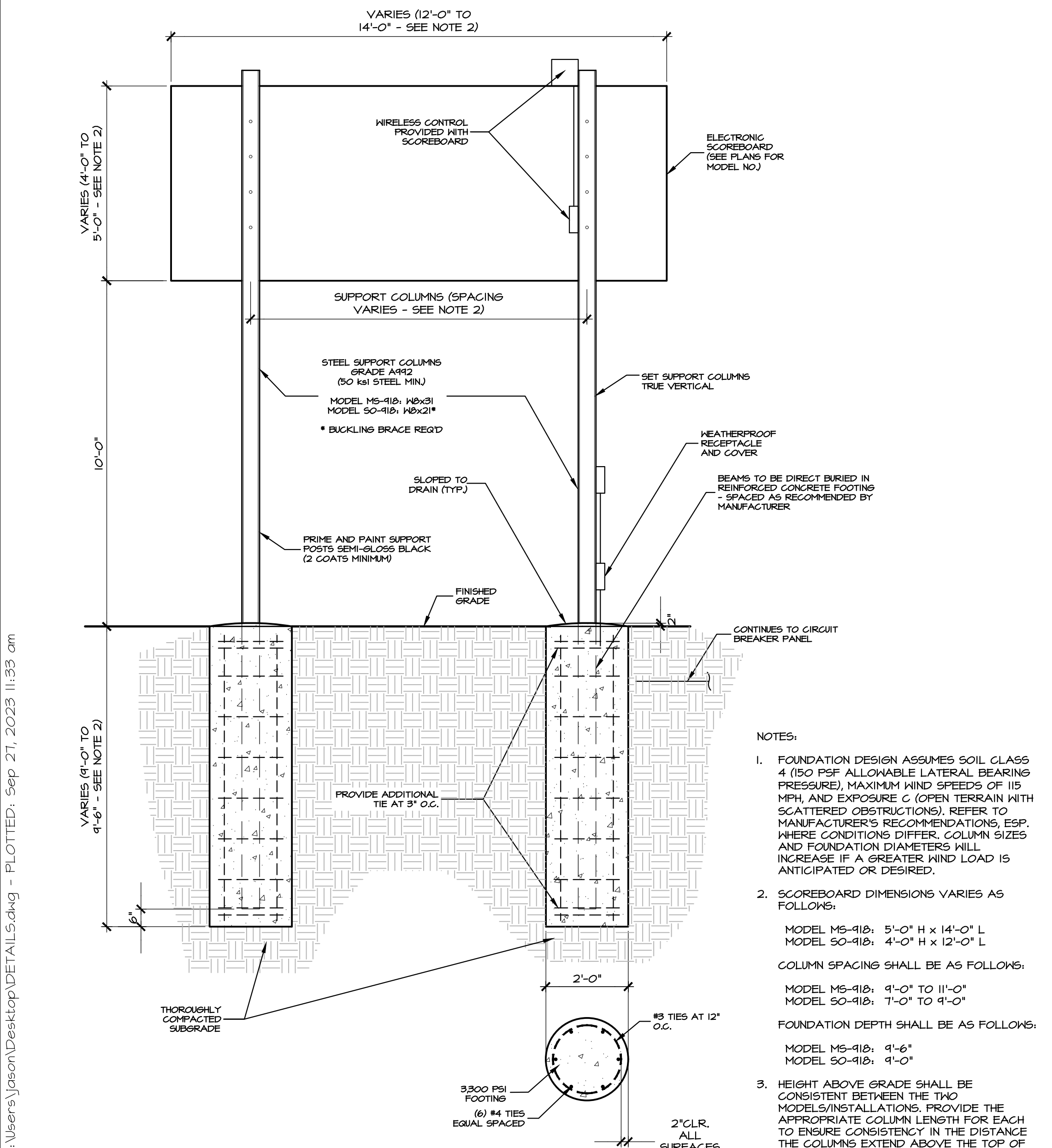
**B** GRADING ENLARGEMENT (CURB RAMP 3, 4 & 5)  
SCALE: 1" = 10'



**C** GRADING ENLARGEMENT (CURB RAMP 6 & 7)  
SCALE: 1" = 10'



**D** GRADING ENLARGEMENT (CURB RAMP 8)  
SCALE: 1" = 10'



**E** SCOREBOARD SUPPORT DETAIL  
NOT TO SCALE

### DAKTRONICS MS-918 PRODUCT SPECIFICATIONS

This outdoor LED multisport scoreboard displays period time to 99:59, HOME and GUEST scores to 99 and INNING or PERIOD to nine with included reversible caption panel. Indicators show BALL, STRIKE, OUT, H (hit) and E (error) in baseball mode. When period time is less than one minute, the scoreboard displays time to 1/10 of a second. Scoreboard shown with optional striping and amber PanaView® digits.

POWER (120 VAC)*	VINYL CAPTIONS (STANDARD)		TNMCS & VINYL CAPTIONS	
	Red/Amber Digits	White Digits	130 Watts, 1.1 Amps	200 Watts, 1.7 Amps
			260 Watts, 2.2 Amps	420 Watts, 3.5 Amps
<b>UNCRATED WEIGHT</b>	265 lb (120 kg)		345 lb (156 kg)	
<b>DIMENSIONS</b>	5'-0" H x 14'-0" W x 8" D (1.52 m, 4.27 m, 203 mm)			

\*Scoreboard requires a dedicated circuit. Models with 240 VAC power at half the indicated amperage are also offered (International Use Only).

**DAKTRONICS**

**F** SCOREBOARD MODEL INFO  
NOT TO SCALE

### DAKTRONICS SO-918 PRODUCT SPECIFICATIONS

This outdoor LED soccer scoreboard displays period time to 99:59, HOME and GUEST scores to 99 and HALF (or PERIOD or QTR) to nine. When period time is less than one minute, the scoreboard displays time to 1/10 of a second. Scoreboard shown with optional striping and amber PanaView® digits.

DIMENSIONS	UNCRATED WEIGHT	POWER (120 VAC)*
4'-0" H x 12'-0" W x 8" D (1.22 m, 3.66 m, 203 mm)	180 lb (82 kg)	Red/Amber Digits: 120 Watts, 1.0 Amp White Digits: 260 Watts, 2.2 Amps

\*Scoreboard requires a dedicated circuit. Models with 240 VAC power at half the indicated amperage are also offered (International Use Only).

**DAKTRONICS**

**G** SCOREBOARD MODEL INFO  
NOT TO SCALE

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

MID-ATLANTIC SPORTS CONSTRUCTION  
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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

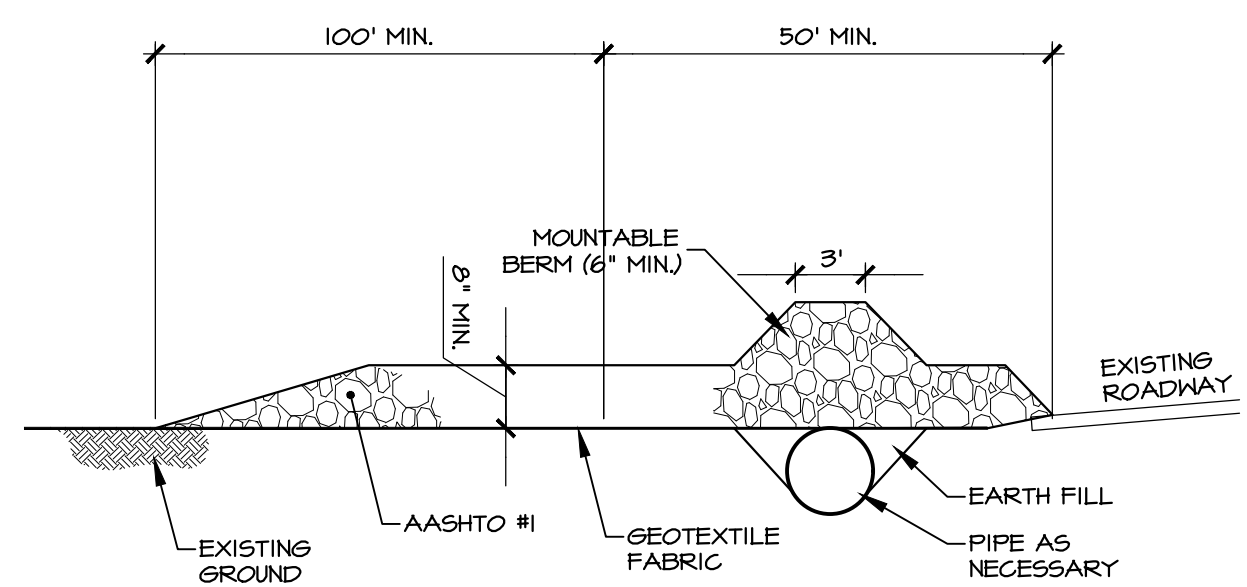
PRELIMINARY/FINAL LAND DEVELOPMENT

SUBJECT:  
**SITE DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

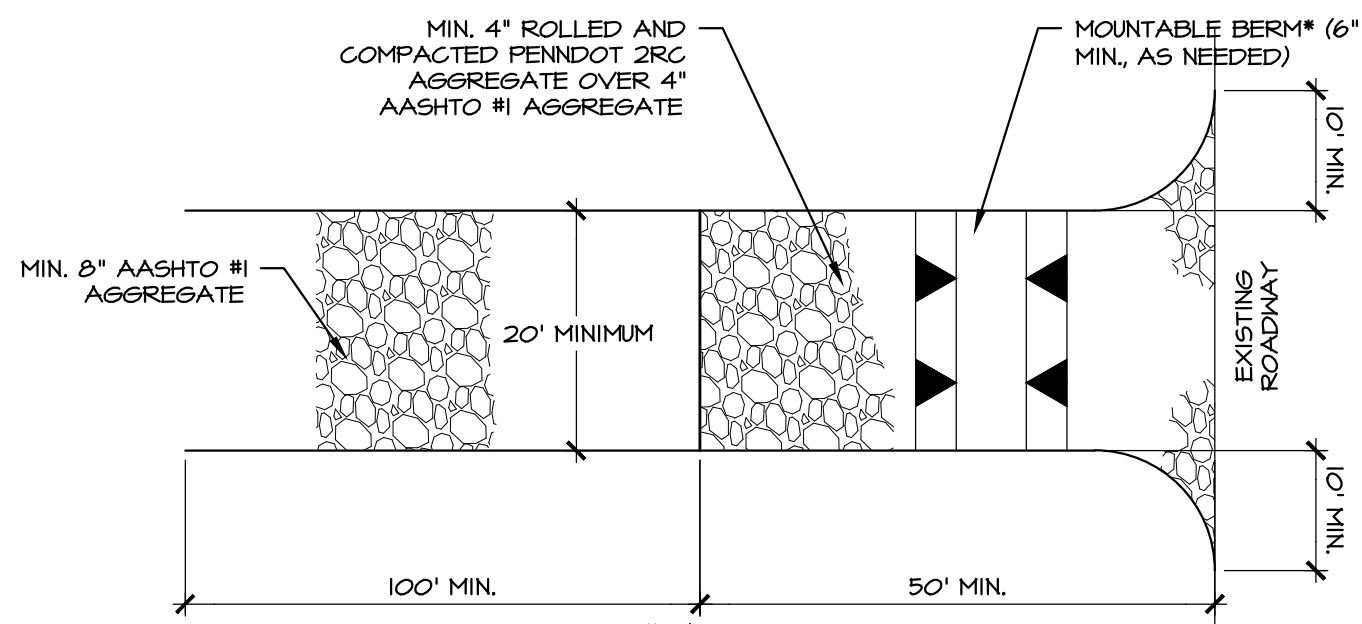
MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

DRAWING: C:\Users\jason\Desktop\DETAILS.dwg - PLOTTED: Sep 27, 2023 11:33 am





PROFILE

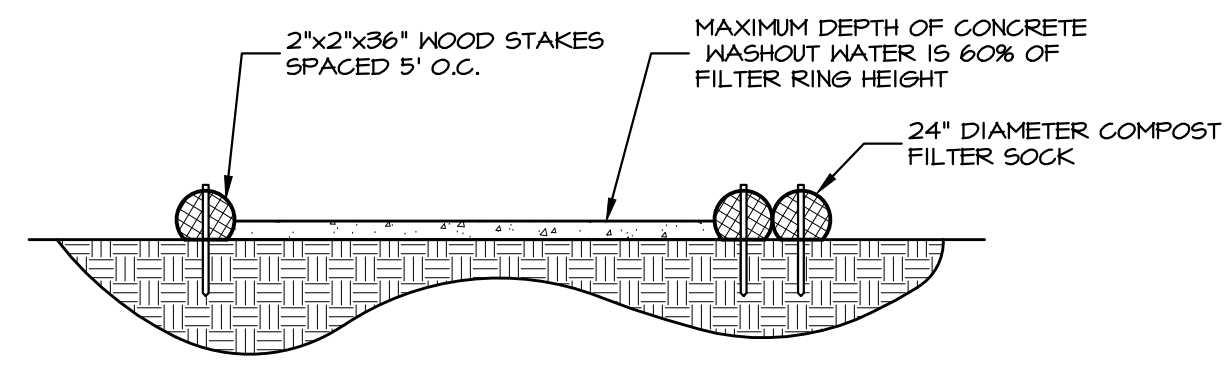


PLAN VIEW

**NOTES:**

- SEDIMENT DEPOSITED ON PUBLIC ROADWAYS SHOULD BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.
- REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK COVER FULL WIDTH OF ENTRANCE.
- RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
- MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

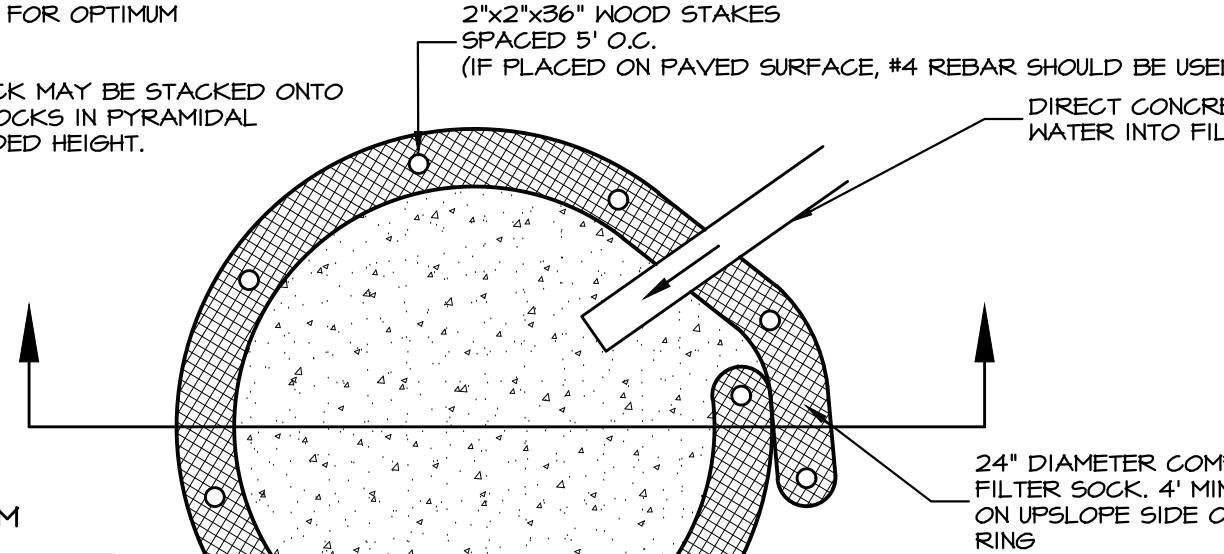
**A** ROCK CONSTRUCTION ENTRANCE  
NOT TO SCALE



**NOTES**

- INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
- 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.

**SECTION VIEW**



**PLAN VIEW**

**WASHOUT MAINTENANCE PROGRAM**

- ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.
- ACCUMULATED MATERIALS SHOULD BE REMOVED WHEN THEY REACH 75% CAPACITY.
- PLASTIC LINERS SHOULD BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.

**CONCRETE WASHOUT** - FOR ANY PROJECT ON WHICH CONCRETE WILL BE POURED OR OTHERWISE FORMED ON SITE, A SUITABLE WASHOUT FACILITY MUST BE PROVIDED FOR THE CLEANING OF CHUTES, MIXERS, AND HOPPERS OF THE DELIVERY VEHICLES UNLESS SUCH A FACILITY WILL BE USED AT THE SOURCE OF THE CONCRETE. UNDER NO CIRCUMSTANCES MAY WASH WATER FROM THESE VEHICLES BE ALLOWED TO ENTER ANY SURFACE WATERS. MAKE SURE THAT PROPER SIGNAGE IS PROVIDED TO RIVERS SO THAT THEY ARE AWARE OF THE PRESENCE OF WASHOUT FACILITIES.

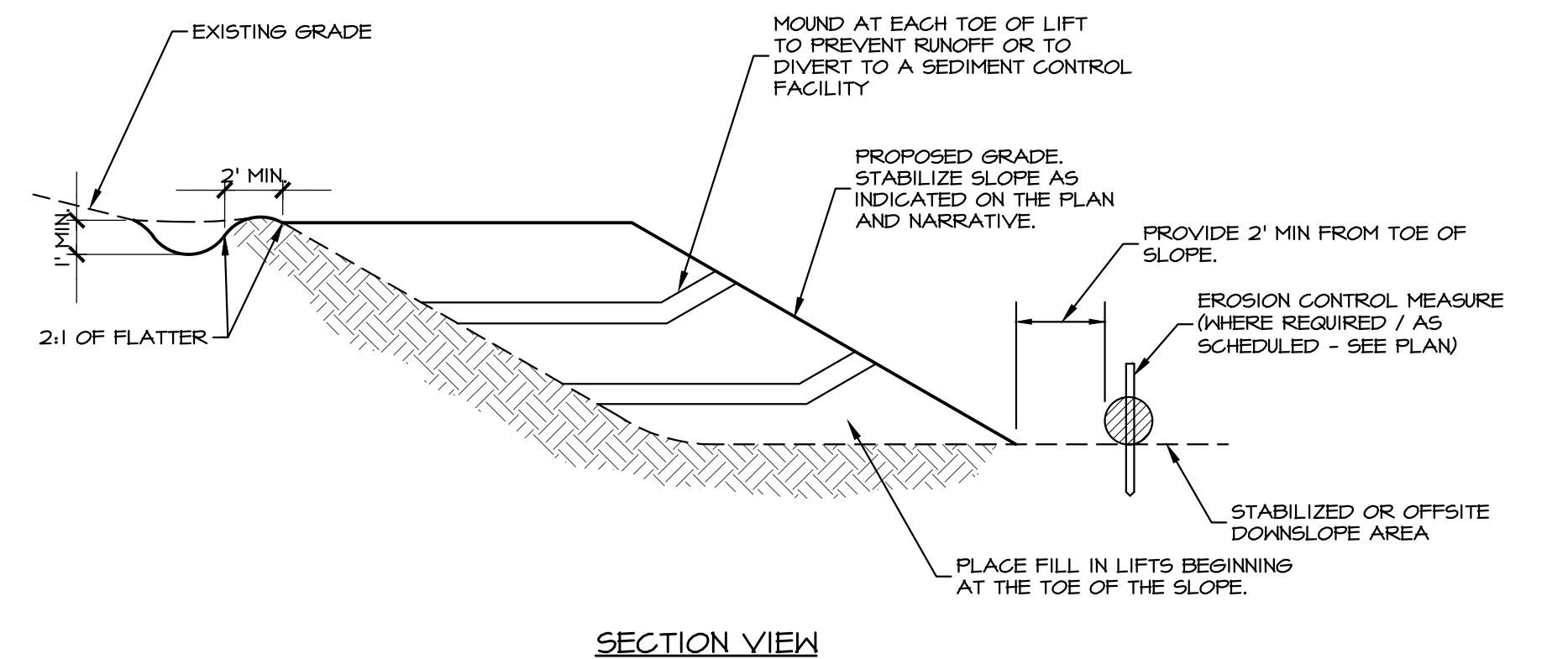
WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50 FEET OF STORM DRAINS, OPEN DITCHES OR SURFACE WATERS. THEY SHOULD BE IN A CONVENIENT LOCATION FOR THE TRUCKS, PREFERABLE NEAR THE PLACE WHERE THE CONCRETE IS BEING POURED, BUT FAR ENOUGH FROM OTHER VEHICULAR TRAFFIC TO MINIMIZE THE POTENTIAL FOR ACCIDENTAL DAMAGE OR SPILLS. WHEREVER POSSIBLE, THEY SHOULD BE LOCATED ON SLOPES NOT EXCEEDING A 2% GRADE. ADDITIONAL INFORMATION ON WASHOUTS MAY BE OBTAINED FROM EPA'S STORM-WATER WEBSITE.

**COMPOST SOCK WASHOUT**

WHEREVER COMPOST SOCK WASHOUTS ARE USED, A SUITABLE IMPERVIOUS GEOMEMBRANE SHOULD BE PLACED AT THE LOCATION OF THE WASHOUT. COMPOST SOCKS SHOULD BE STAKED IN THE MANNER RECOMMENDED BY THE MANUFACTURER AROUND PERIMETER OF THE GEOMEMBRANE SO AS TO FORM A RING WITH ENDS OF THE SOCK LOCATED AT THE UPSLOPE CORNER. CARE SHOULD BE TAKEN TO ENSURE CONTINUOUS CONTACT OF THE SOCK WITH THE GEOMEMBRANE AT ALL LOCATIONS. WHERE NECESSARY, SOCKS MAY BE STACKED AND STAKED SO AS TO FORM A TRIANGULAR CROSS-SECTION.

**WASHOUT INSPECTION SCHEDULE AND REPORTING**

- INSPECTION OF COMPOST FILTER SOCK WASHOUT AREA SHALL OCCUR AS FOLLOWS:
  - WEEKLY
  - AFTER EACH RUNOFF EVENT (THIS IS REQUIRED IN ADDITION TO THE REQUIRED WEEKLY INSPECTION)
- A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - A SUMMARY OF SITE CONDITIONS, E45 BMP AND PCSM BMP IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.
- FOR ADDITIONAL INSPECTION AND REPORTING REQUIREMENTS AND INFORMATION, SEE THE NPDES PERMIT CONDITIONS, EFFLUENT LIMITATIONS, MONITORING, AND REPORTING REQUIREMENTS.



SECTION VIEW

**NOTES:**

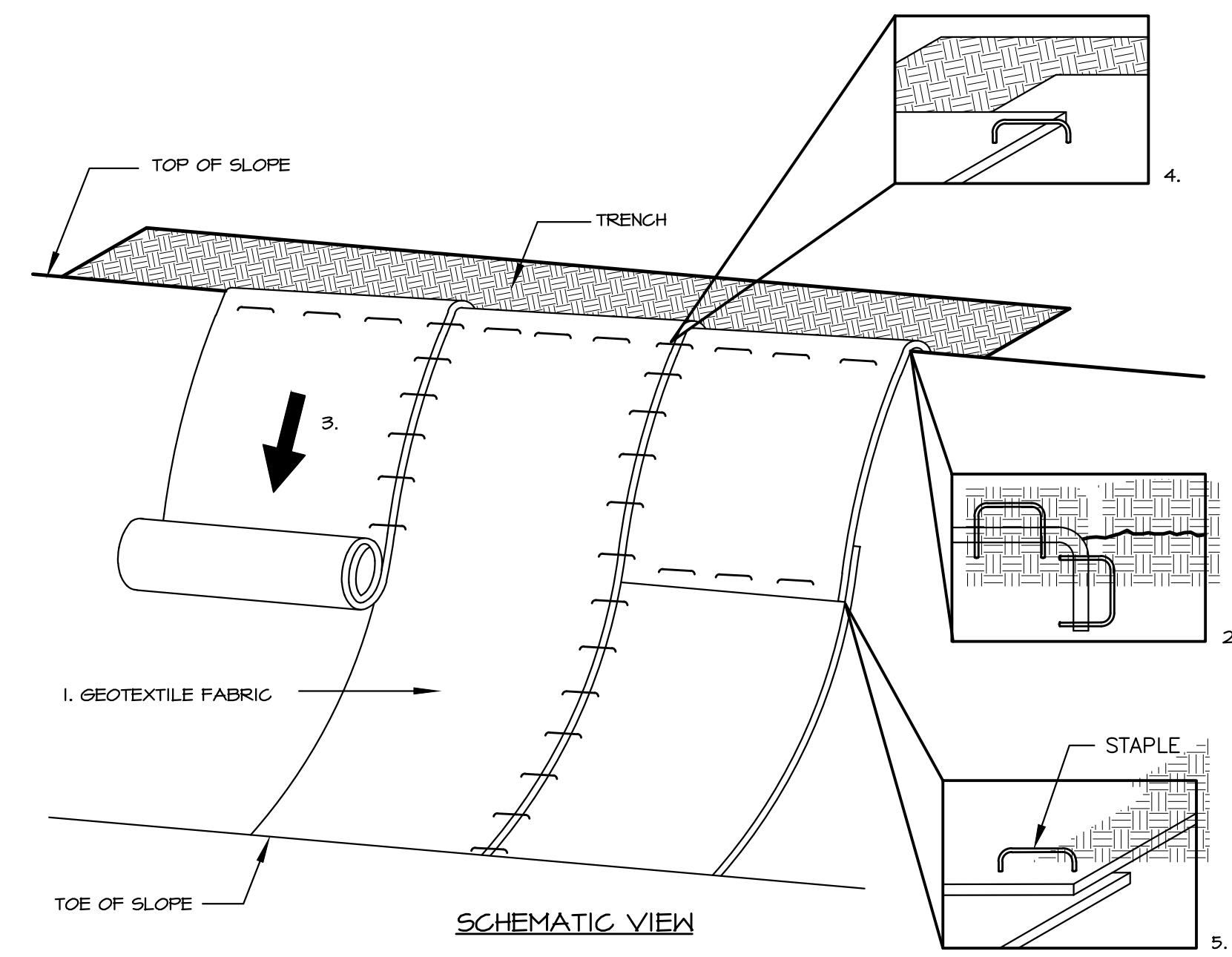
- TEMPORARY BERMS SHALL BE PLACED, MAINTAINED, AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT STORM DRAINAGE FACILITIES FUNCTIONING.
- BERMS SHALL OUTLET TO SLOPE PIPES, CHANNELS, OR OTHER APPROVED MEANS OF CONVEYING RUNOFF TO A SEDIMENT TRAP, SEDIMENT BASIN, OR COLLECTOR CHANNEL.
- CHANNEL BEHIND BERM SHALL HAVE POSITIVE GRADE TO OUTLET AND AN APPROPRIATE PROTECTIVE LINING.
- BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
- AN ACCEPTABLE ALTERNATIVE TO TOP-OF-SLOPE BERM IS TO CONTINUOUSLY GRADE THE TOP OF FILL TO DIRECT RUNOFF AWAY FROM THE FILL SLOPE TO A COLLECTOR CHANNEL, SEDIMENT TRAP, OR SEDIMENT BASIN.
- FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOOD VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 8". THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2".

**C** FILL PLACEMENT / TOP OF SLOPE BERM  
NO SCALE

**ROCK CONSTRUCTION ENTRANCE INSPECTION SCHEDULE AND REPORTING**

- INSPECTION OF ROCK CONSTRUCTION ENTRANCES SHALL OCCUR AS FOLLOWS:
  - WEEKLY
  - AFTER EACH RUNOFF EVENT (THIS IS REQUIRED IN ADDITION TO THE REQUIRED WEEKLY INSPECTION)
- A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - A SUMMARY OF SITE CONDITIONS, E45 BMP AND PCSM BMP IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

**B** FILTER SOCK CONCRETE WASHOUT  
NOT TO SCALE

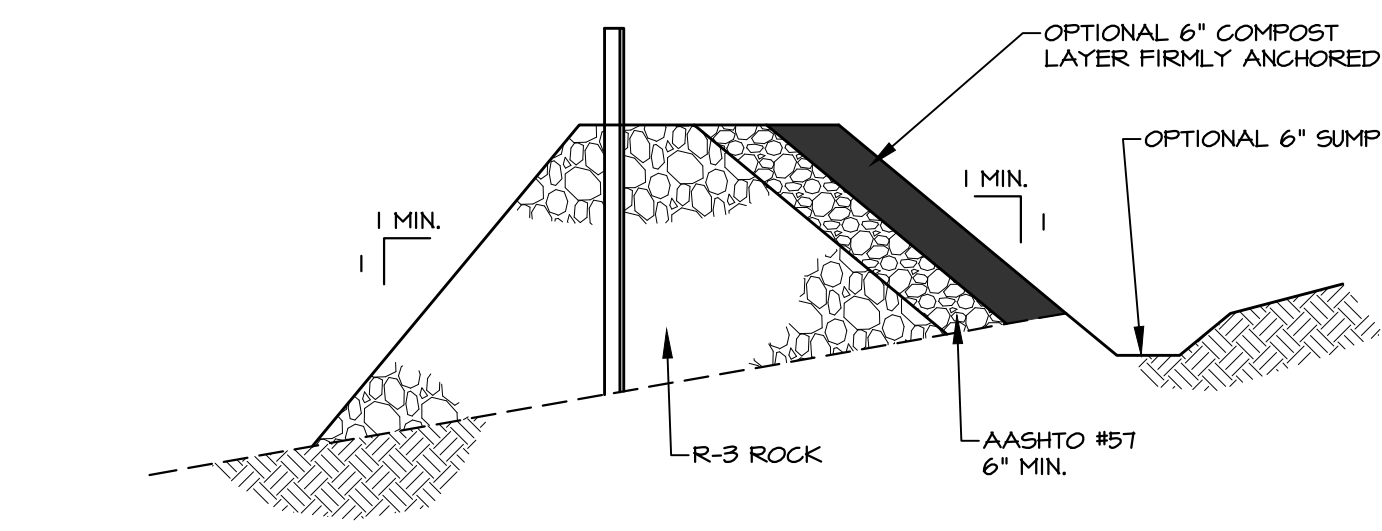


SCHMATIC VIEW

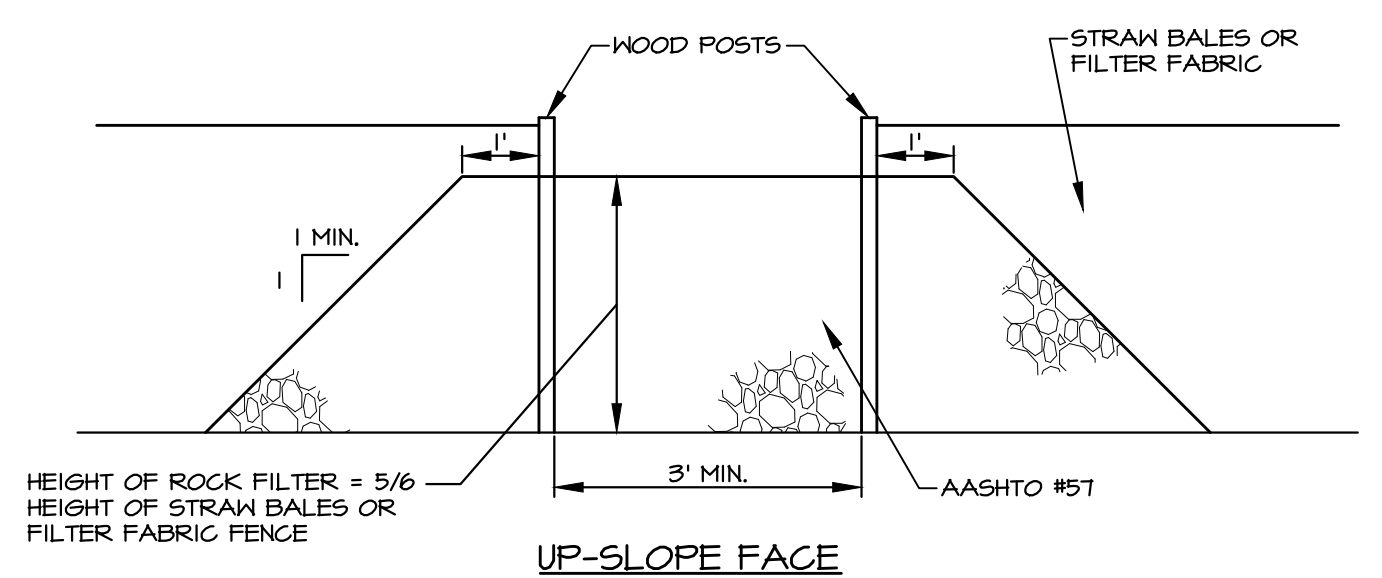
**NOTES:**

- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
- WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
- REFER TO MANUFACTURER'S SPECIFICATIONS FOR STAPLE PATTERN AND SPECIFIC INSTALLATION REQUIREMENTS.

**D** EROSION CONTROL FABRIC INSTALLATION (SLOPES)  
NO SCALE



OUTLET CROSS-SECTION



UP-SLOPE FACE

**NOTES:**

- ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT SOCK HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND BV WATERSHEDS.
- SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

**E** ROCK FILTER OUTLET  
NO SCALE

**ROCK FILTER MAINTENANCE PROGRAM**

- CHECK FOR EROSION, PIPING, AND SETTLEMENT. CLOGGED OR DAMAGED ROCK FILTERS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS.
- DISPLACED RIPRAP SHALL BE REPLACED IMMEDIATELY. DISPOSE OF MATERIALS REMOVED FROM THE ROCK FILTER BERM IN AREAS WITHIN THE LIMIT OF DISTURBANCE REQUIRING FILL MATERIAL OR LEGALLY DISPOSE OFFSITE.

**ROCK FILTER INSPECTION SCHEDULE AND REPORTING**

- INSPECTION OF ROCK FILTERS SHALL OCCUR AS FOLLOWS:
  - WEEKLY
  - AFTER EACH RUNOFF EVENT (THIS IS REQUIRED IN ADDITION TO THE REQUIRED WEEKLY INSPECTION)
- A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - A SUMMARY OF SITE CONDITIONS, E45 BMP AND PCSM BMP IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.
- FOR ADDITIONAL INSPECTION AND REPORTING REQUIREMENTS AND INFORMATION, SEE THE NPDES PERMIT CONDITIONS, EFFLUENT LIMITATIONS, MONITORING, AND REPORTING REQUIREMENTS.

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

MID-ATLANTIC SPORTS CONSTRUCTION  
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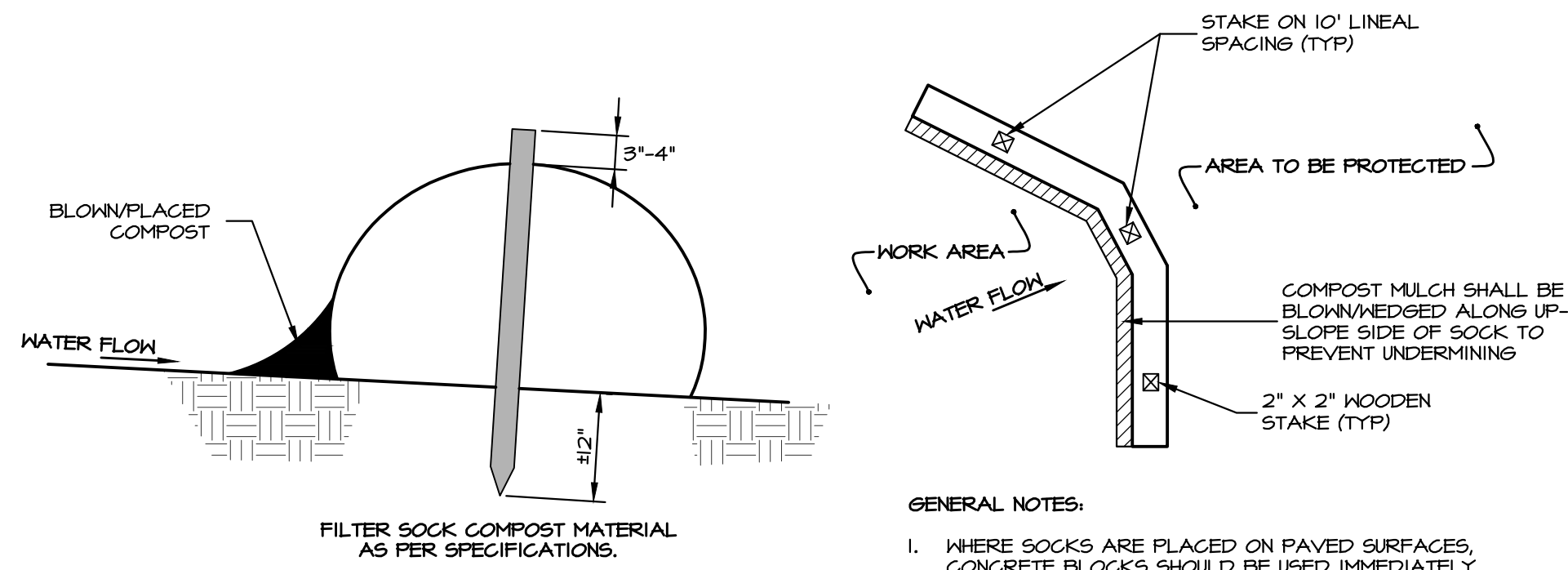
PROFESSIONAL ENGINEER  
TYLER E. HILL  
PENNSYLVANIA

PROFESSIONAL LANDSCAPE ARCHITECT  
TYLER E. HILL  
PENNSYLVANIA

PRELIMINARY/FINAL LAND DEVELOPMENT SUBJECT:  
**EROSION & SEDIMENT CONTROL DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

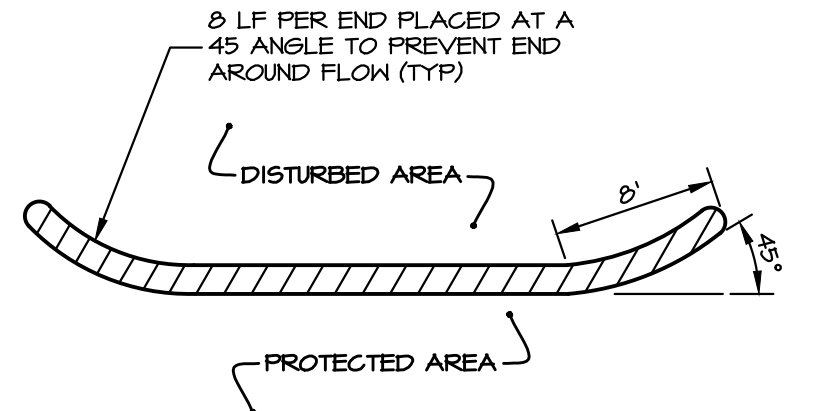
MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

DRAWING: C:\Users\jason\Desktop\DETAILS.dwg - PLOTTED: Sep 27, 2023 11:36 am



**GENERAL NOTES:**

- WHERE SOCKS ARE PLACED ON PAVED SURFACES, CONCRETE BLOCKS SHOULD BE USED IMMEDIATELY DOWN-SLOPE OF THE SOCKS (AT THE SAME INTERVALS RECOMMENDED FOR THE STAKES) TO HELP HOLD THE SOCK IN PLACE.
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. STAKES MAY BE INSTALLED IMMEDIATELY DOWN-SLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS SOCKS.
- BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- IRON 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.



**A** FILTER SOCK  
NO SCALE

**FILTER SOCK FABRIC MINIMUM SPECIFICATIONS**

MATERIAL TYPE	3 mil HDPE	5 mil HDPE	5 mil HDPE	MULTI-FILAMENT POLYPROPYLENE (MPPF)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMPPF)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	BIO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
MESH OPENINGS	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH		26 psi	26 psi	44 psi	202 psi
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 hr.	23% AT 1000 hr.		100% AT 1000 hr.	100% AT 1000 hr.
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS
TWO-PLY SYSTEMS					
INNER CONTAINMENT NETTING	HDPE BIAXIAL NET				
	CONTINUOUSLY WOUND				
	FUSION-WELDED JUNCTURES				
OUTER FILTRATION MESH	3/4" x 3/4" MAX. APERTURE SIZE				
	COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)				
	3/16" MAX. APERTURE SIZE				
SOCK FABRICS COMPOSED OF BURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.					

**COMPOST NOTES:**

- COMPOST SHOULD BE A WELL DECOMPOSED, WEED-FREE ORGANIC MATTER DERIVED FROM AGRICULTURE, FOOD, STUMP GRINDINGS, AND YARD OR WORK/BARK ORGANIC MATTER SOURCES. THE COMPOST SHOULD BE AEROBICALLY COMPOSTED. THE COMPOST SHOULD POSSESS NO OBJECTIONABLE ODORS AND SHOULD BE REASONABLY FREE (1% BY DRY WEIGHT) OF MAN-MADE FOREIGN MATTER. THE COMPOST PRODUCT SHOULD NOT RESEMBLE THE RAW MATERIAL FROM WHICH IT HAS DERIVED. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE AS THE ORGANIC COMPOST OF THE MIX.
- USE ONLY MATURE COMPOST THAT MEETS THE FOLLOWING SPECIFICATIONS. THE STANDARDS CONTAINED IN THE PENNDOT PUBLICATION 40B ARE AN ACCEPTABLE ALTERNATIVE.

**COMPOST STANDARDS**

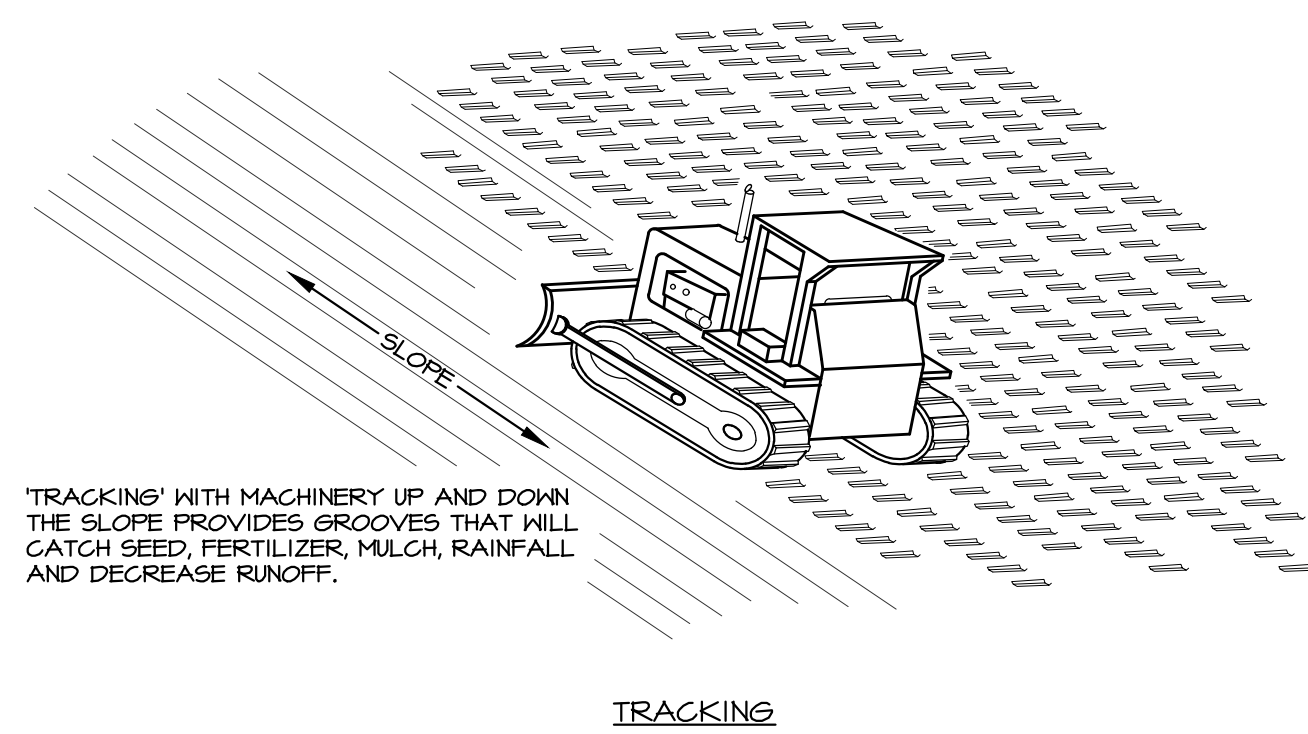
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30%-50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 ds/m (mmhos/cm) MAXIMUM

**FILTER SOCK MAINTENANCE PROGRAM**

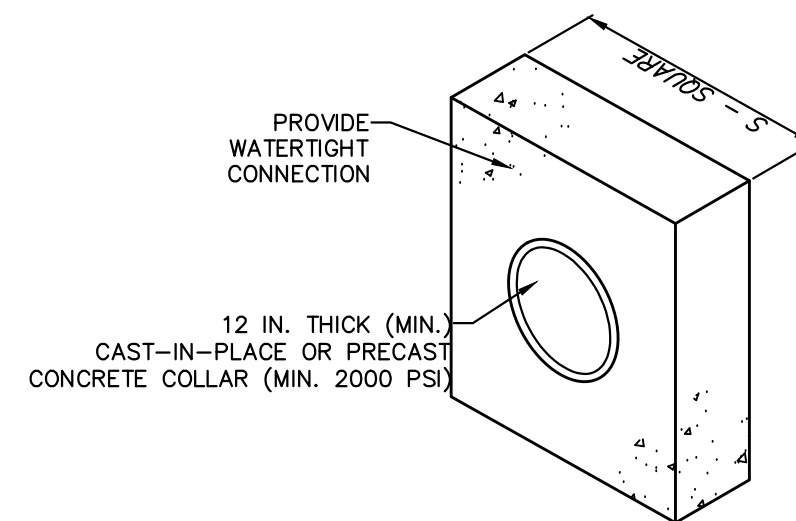
- DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF OF THE ABOVEGROUND HEIGHT OF THE SOCK. DISPOSE OF SEDIMENT REMOVED FROM THE FILTER SOCK IN AREAS WITHIN THE LIMIT OF DISTURBANCE REQUIRING FILL MATERIAL OR LEGALLY DISPOSE OFF-SITE.

**FILTER SOCK INSPECTION SCHEDULE AND REPORTING**

- INSPECTION OF COMPOST FILTER SOCKS SHALL OCCUR AS FOLLOWS:
  - WEEKLY
  - AFTER EACH RUNOFF EVENT (THIS IS REQUIRED IN ADDITION TO THE REQUIRED WEEKLY INSPECTION)
- A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - A SUMMARY OF SITE CONDITIONS, E4S BMP AND PGSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.
- FOR ADDITIONAL INSPECTION AND REPORTING REQUIREMENTS AND INFORMATION, SEE THE NPDES PERMIT CONDITIONS, EFFLUENT LIMITATIONS, MONITORING, AND REPORTING REQUIREMENTS.



**B** SLOPE TRACKING  
NO SCALE

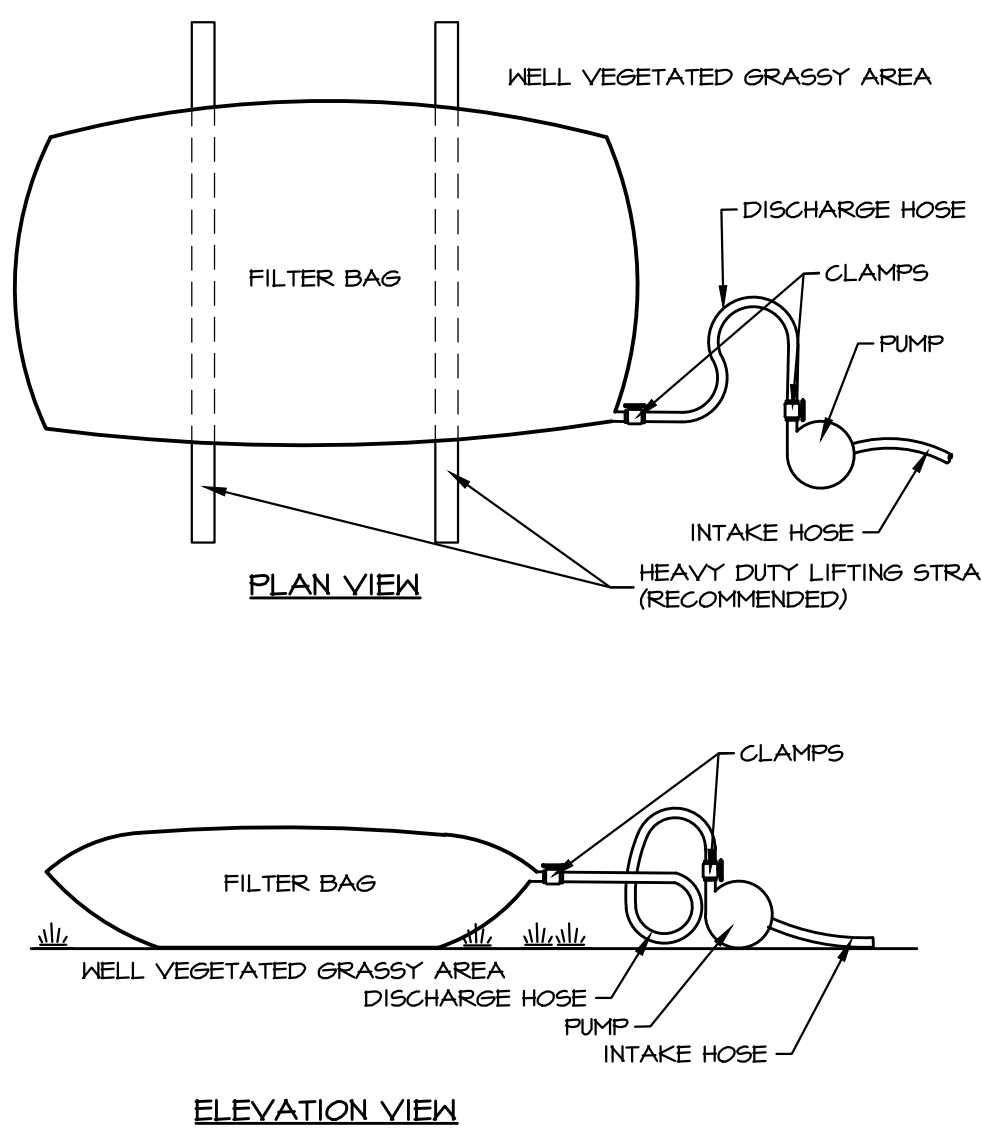


BASIN OR TRAP NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
1	18	58	2	9	9
4	24	72	1	11	N/A

- NOTES:**
- ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
  - COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

**STANDARD CONSTRUCTION DETAIL #7-16**

**C** CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS  
NOT TO SCALE



**FILTER BAG NOTES:**

- LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE SEWN WITH HIGH STRENGTH DOUBLE STITCH "J" SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 50 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

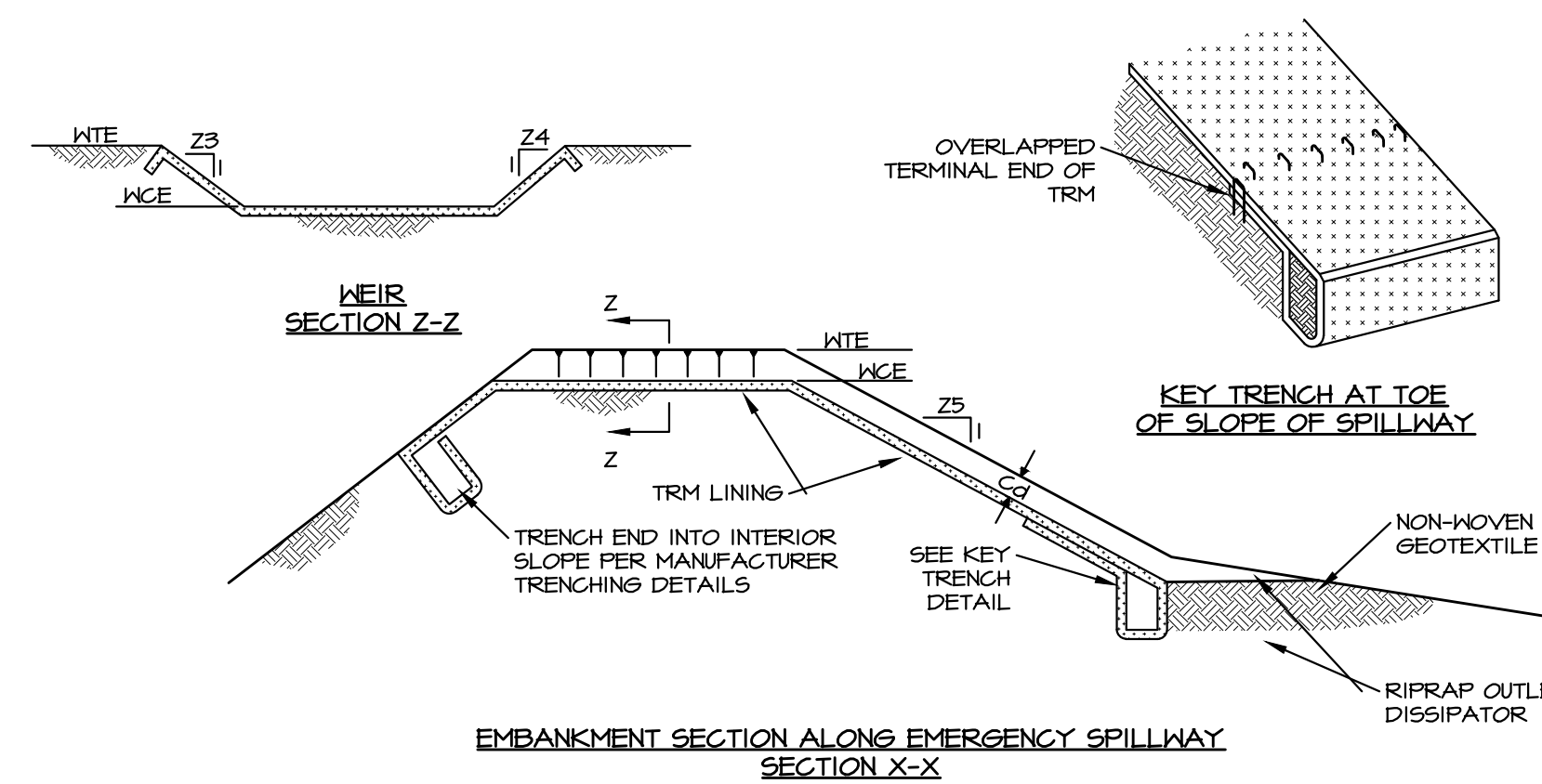
PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE
- A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY FOR 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) AREAS, 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 DOWN-SLOPE 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 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 A PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

**PUMPED WATER FILTER BAG MAINTENANCE PROGRAM**

- 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.
- DISPOSE OF SEDIMENT REMOVED FROM FILTER BAGS IN AREAS WITHIN THE LIMIT OF DISTURBANCE REQUIRING FILL MATERIAL OR LEGALLY DISPOSE OFF-SITE. USED/EMPTYED FILTER BAGS SHALL BE LEGALLY DISPOSED OFF-SITE.

**PUMPED WATER FILTER BAG INSPECTION SCHEDULE AND REPORTING**

- INSPECTION OF PUMPED WATER FILTER BAGS SHALL OCCUR AS FOLLOWS:
  - DAILY
- A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - A SUMMARY OF SITE CONDITIONS, E4S BMP AND PGSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.
- FOR ADDITIONAL INSPECTION AND REPORTING REQUIREMENTS AND INFORMATION, SEE THE NPDES PERMIT CONDITIONS, EFFLUENT LIMITATIONS, MONITORING, AND REPORTING REQUIREMENTS, ITEM NO. 2A (VISUAL INSPECTIONS) FOUND ON SHEET ESC 1.0.



BASIN NO.	WEIR			LINING			CHANNEL	
	Z3 (FT)	Z4 (FT)	TOP CREST ELEV WTE (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	
1	8	8	243.00	241.25	30	FLEXAMAT	E	3 0.5
4	8	8	314.50	313.00	40	FLEXAMAT	E	3 0.5

**NOTES:**

- RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.
- THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.
- HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
- DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.
- LINE ENTIRE LENGTH & WIDTH OF SPILLWAY 1/4 SPECIFIED EROSION CONTROL MATTING & EXTEND TO TOE OF SLOPE OF OUTSIDE EMBANKMENT

**E** BASIN EMERGENCY SPILLWAY WITH TRM LINING  
NO SCALE

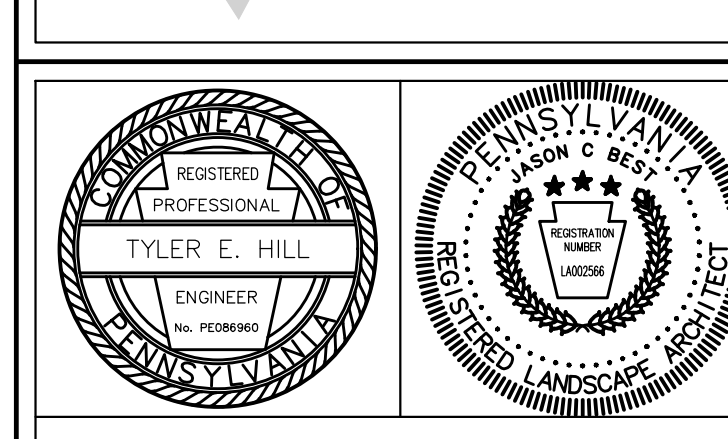
**D** PUMPED WATER FILTER BAG  
NO SCALE

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
2. OCCC COMMENTS	3-17-2023	JCB
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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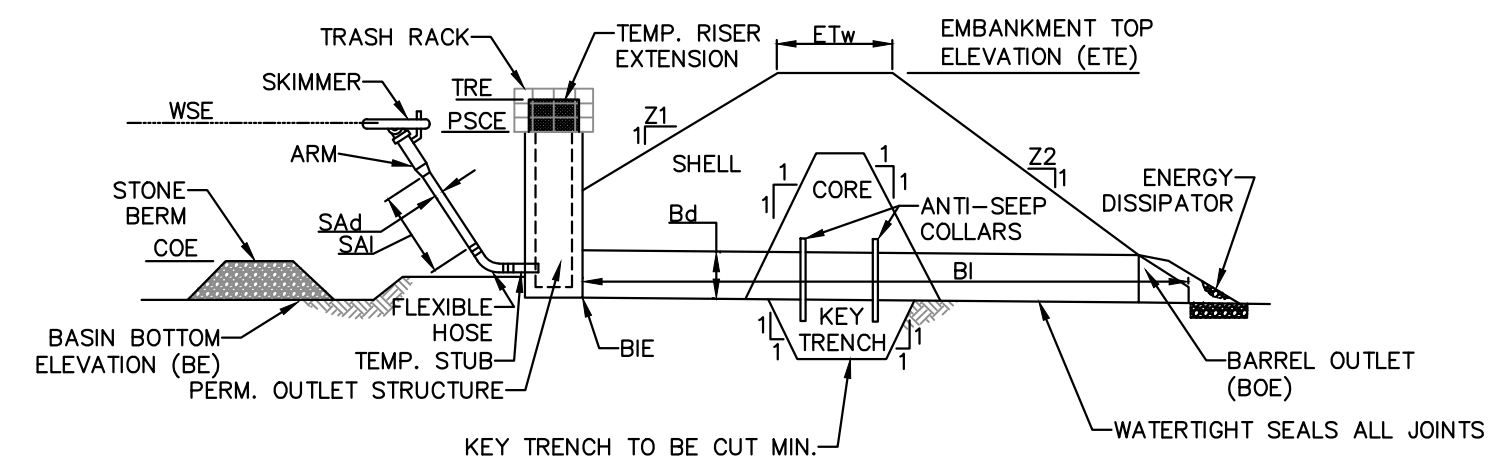
**PRELIMINARY/FINAL LAND DEVELOPMENT**

SUBJECT:  
**EROSION & SEDIMENT CONTROL DETAILS**

FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

DRAWING: C:\Users\jason\Desktop\DETAILS.dwg - PLOTTED: Sep 27, 2023 11:36 am



BASIN NO.	Z1 (FT)	Z2 (FT)	TEMP RISER EXT. ELEV. (FT)	EMBANKMENT				CLEAN OUT ELEV. COE (FT)	BOTTOM ELEV. BE (FT)
				TOP ELEV. ETE (FT)	TOP WIDTH ETw (FT)	KEY TRENCH DEPTH (FT)	KEY TRENCH WIDTH (FT)		
4	3	3	312.50	314.50	8	2	311.00	310.00	

SKIMMER			OUTLET BARREL				
DIA SAd (IN)	LENGTH SAl (FT)	MAT'L	DIA Bd (IN)	INLET ELEV BIE (FT)	MAT'L	LENGTH BI (FT)	OUTLET ELEV BOE (FT)
4"	FAIRCLOTH	SKIMMER	24	307.25	SLOPP	37	307.00

**NOTES:**

SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. IN ORDER TO FACILITATE MAINTENANCE AND RESTORATION, THE POOL AREA SHALL BE CLEARED OF ALL BRUSH, TREES, AND OBJECTIONABLE MATERIAL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

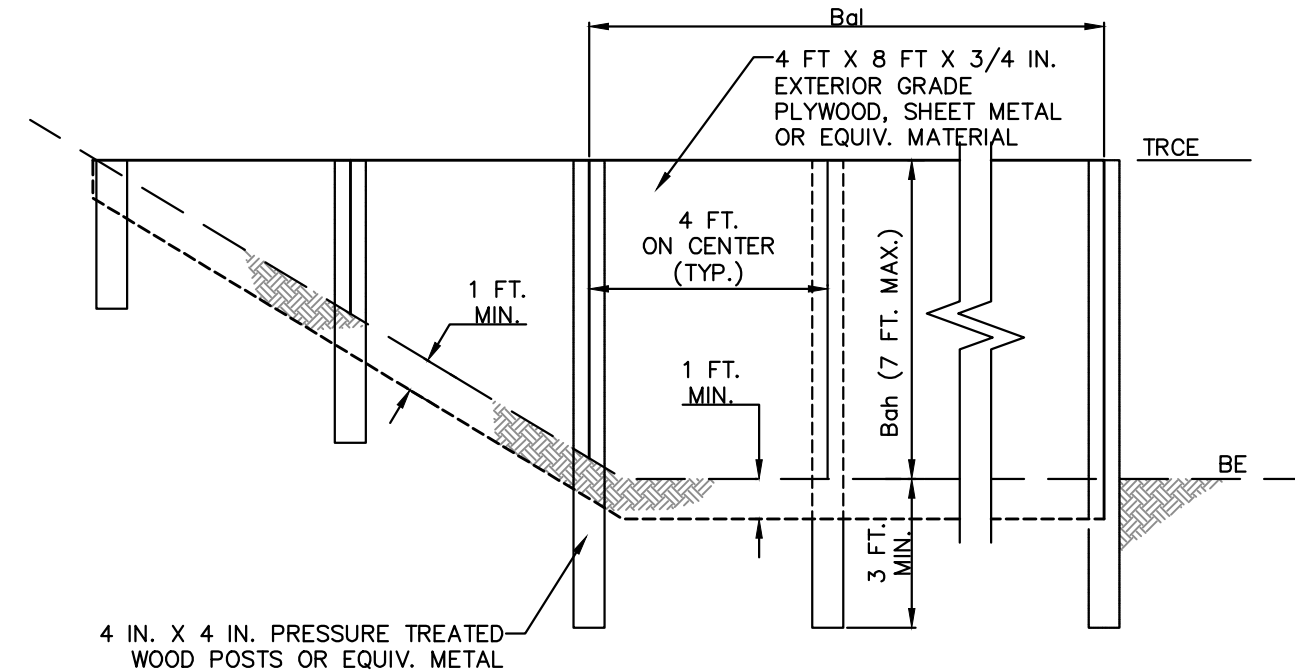
UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED, MULCHED, BLANKETED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT.

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. PROVIDE ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES. A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE BASIN RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS SHALL BE INSPECTED FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE IMMEDIATELY DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATOR SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

**STANDARD CONSTRUCTION DETAIL #7-4  
SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS - SKIMMER**  
NOT TO SCALE



BASIN OR TRAP NO.	BAFFLE		TEMPORARY RISER CREST ELEV. (FT)	BOTTOM ELEV. BE (FT)
	LENGTH Bbl (FT)	HEIGHT Bbh (FT)		
1	40	3	290.75	288.50

**NOTES:**

SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

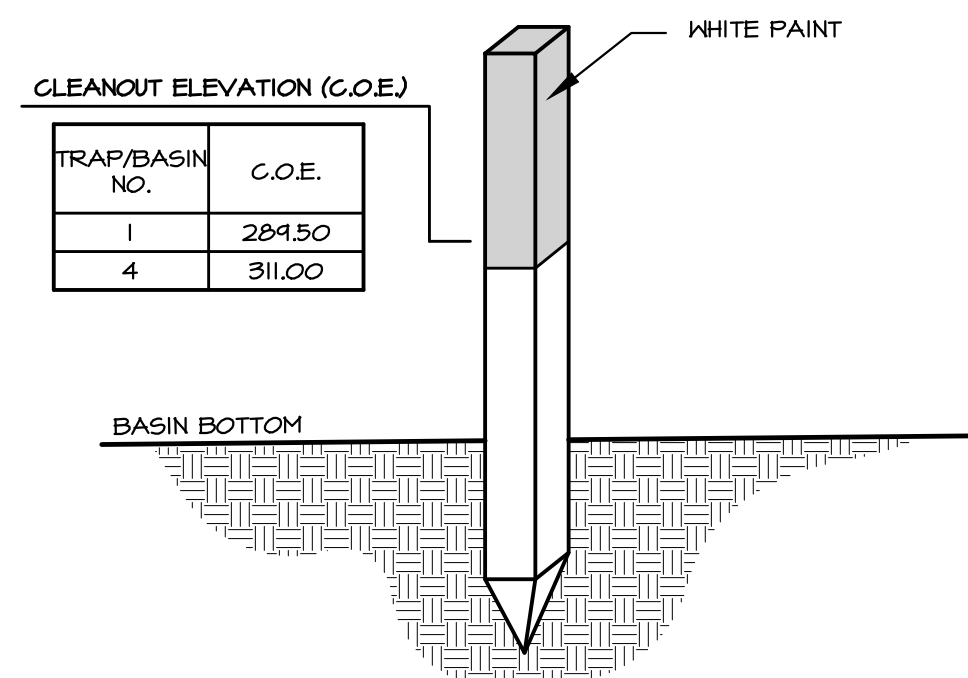
BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.

BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

**STANDARD CONSTRUCTION DETAIL #7-14**



**NOTES:**

- CLEANOUT MARKER SHALL BE PLACED NEAR THE CENTER OF THE BASIN.
- TOP OF MARKER SHALL BE PAINTED WHITE TO THE CLEANOUT ELEVATION.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES THE CLEANOUT ELEVATION MARKED ON THE STAKE.

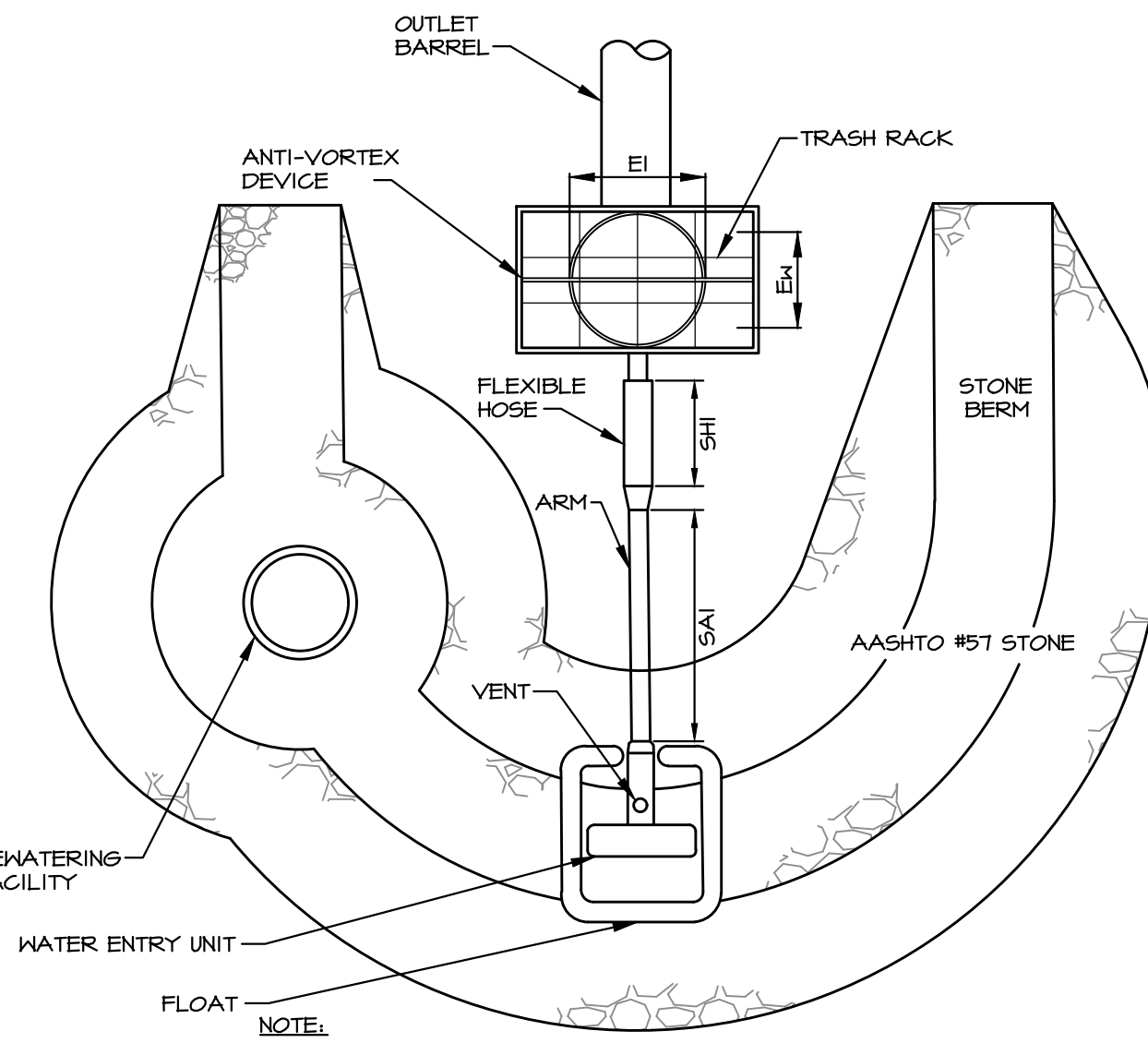
**C CLEANOUT MARKER**  
NO SCALE

**CLEANOUT STAKE INSPECTION SCHEDULE AND REPORTING**

- INSPECTION OF CLEANOUT STAKE SHALL OCCUR AS FOLLOWS:
  - WEEKLY
  - AFTER EACH RUNOFF EVENT (THIS IS REQUIRED IN ADDITION TO THE REQUIRED WEEKLY INSPECTION)
- A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - A SUMMARY OF SITE CONDITIONS, E&S BMP AND PCSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

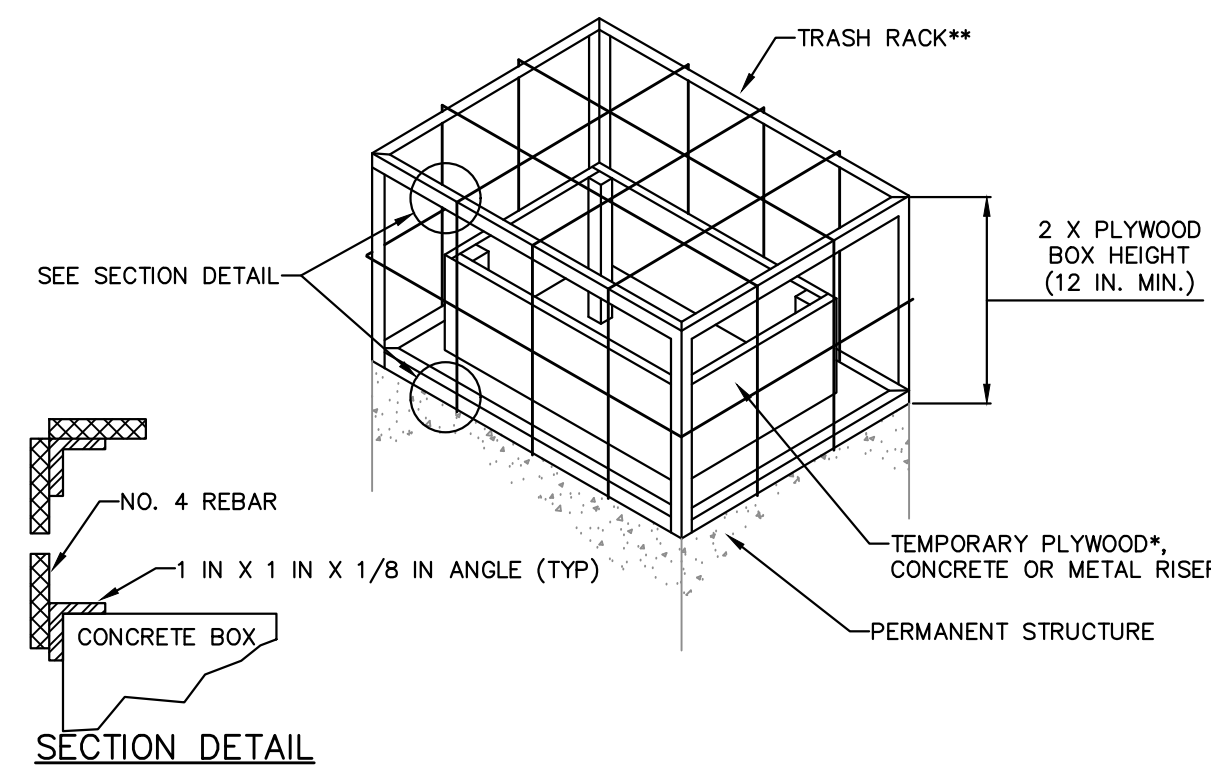
**CLEANOUT STAKE MAINTENANCE PROGRAM**

- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEANOUT ELEVATION ON THE STAKE. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN AREAS WITHIN THE LIMIT OF DISTURBANCE REQUIRING FILL MATERIAL OR LEGALLY DISPOSE OFFSITE.



**D SKIMMER WITH STONE LANDING BERM**  
NO SCALE

**A SEDIMENT BASIN 4 DETAIL**  
NOT TO SCALE



- \* 3/4 IN. PRESSURE TREATED PLYWOOD BOX WITH 2 IN. X 2 IN. PRESSURE TREATED CORNER SUPPORTS, SET INTO 1-1/2 IN. GRATE OFFSETS, CALK ALL SEAMS TO FORM WATER TIGHT SEALS.
- \*\* TRASH RACK COMPOSED OF 1 IN. X 1 IN. X 1/8 IN. L (TYP.) AND #4 BARS (TYP.) WELDED TO THE ANGLES AND AT EACH INTERSECTION OF THE BARS; #4 BARS SPACED AT HALF THE DIAMETER OF THE BARREL MAX.

**NOTES:**

BOX SHALL BE BOLTED, STRAPPED, OR OTHERWISE SECURED TO THE PERMANENT RISER.

TOP OF TEMPORARY RISER EXTENSION SHALL BE AT LEAST AS HIGH AS SEDIMENT BASIN TEMPORARY RISER AND SHALL BE 6 IN. (MINIMUM) BELOW CREST OF EMERGENCY SPILLWAY.

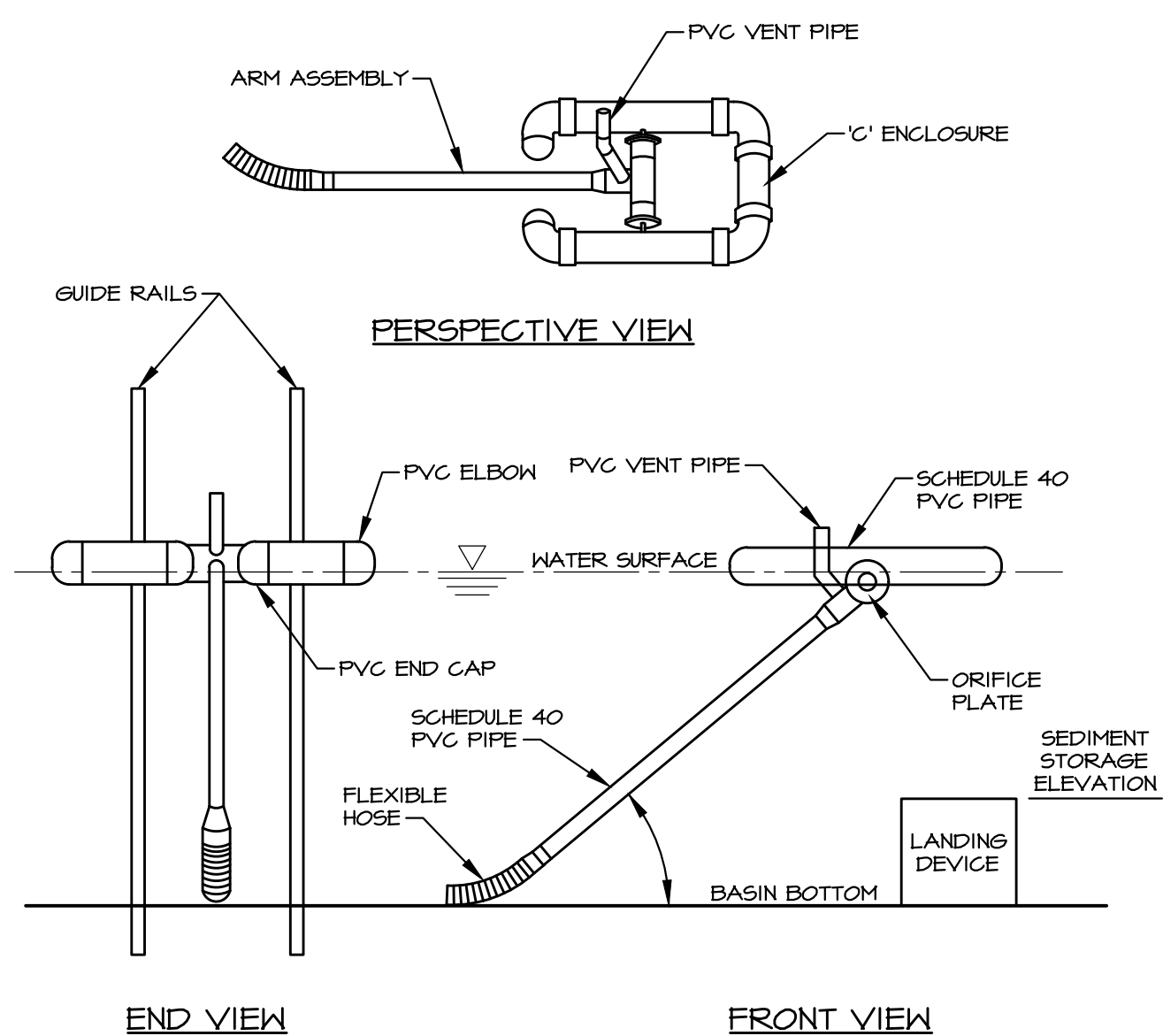
ALL JOINTS SHALL BE WATER TIGHT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

**STANDARD CONSTRUCTION DETAIL #7-10**

**E TEMPORARY RISER EXTENSION AND TRASH RACK FOR PERMANENT STRUCTURE**  
NOT TO SCALE

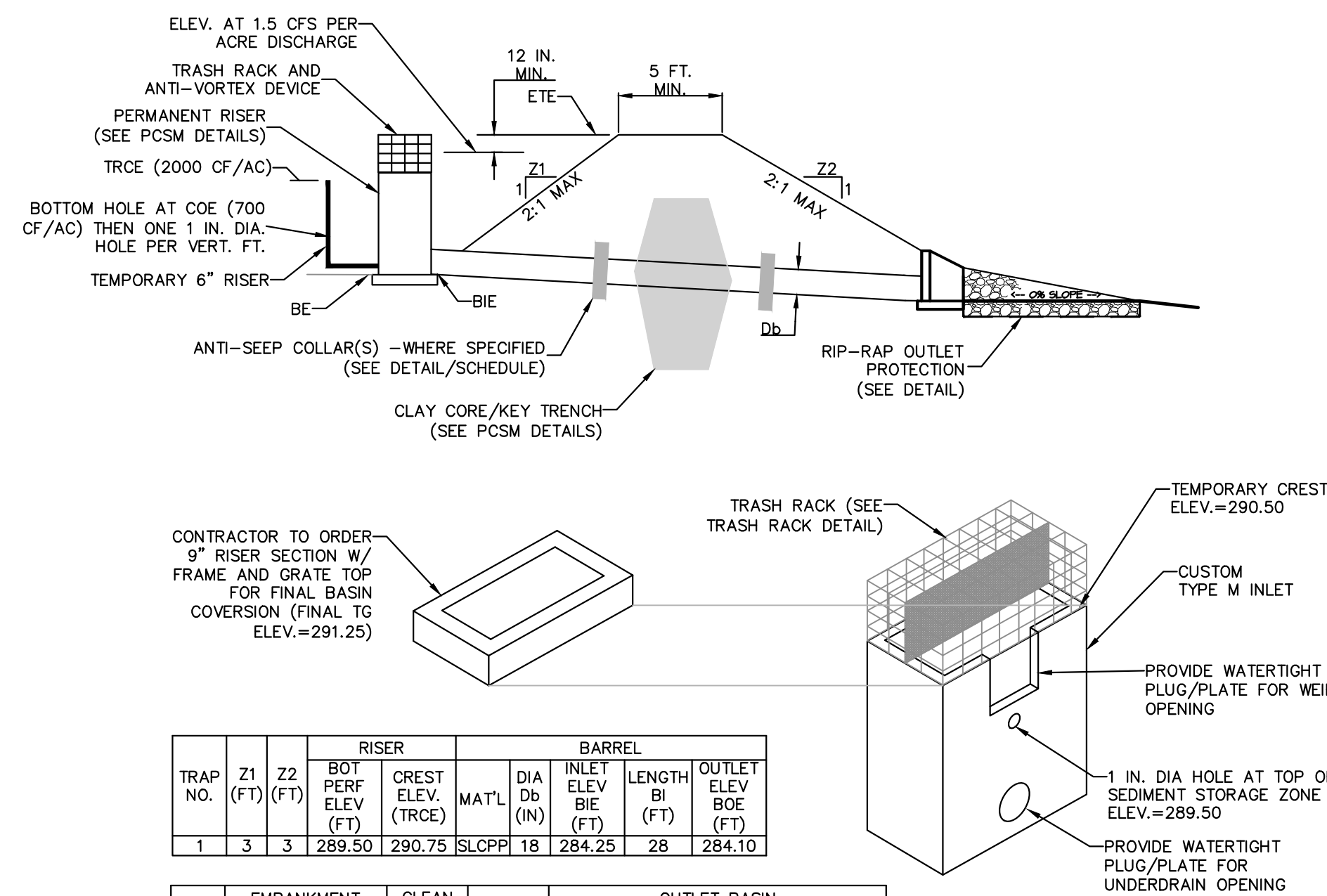
**B BAFFLE WALL**  
NOT TO SCALE



**NOTES:**

- THIS DETAIL IS PROVIDED FOR REFERENCE ONLY. SKIMMERS ARE TO BE MANUFACTURED BY J.W. FAIRCLOTH & SONS, INC. AND TO BE SIZED IN ACCORDANCE WITH THE SPECIFIC DETAILS PROVIDED WITHIN THIS PLAN SET AND INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.**
- ORIFICE DIAMETER MUST BE EQUAL TO OR LESS THAN ARM DIAMETER
- A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.
- SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.
- SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.
- A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS.

**F SKIMMER**  
NO SCALE



TRAP NO.	Z1 (FT)	Z2 (FT)	RISER			BARREL			
			BOT PERV. ELEV. (FT)	CREST ELEV. (TRCE) (FT)	MAT'L	DIA DB (IN)	INLET ELEV BIE (FT)	LENGTH BI (FT)	OUTLET ELEV BOE (FT)
1	3	3	289.50	290.75	SLOPP	18	284.25	28	284.10

TRAP NO.	EMBANKMENT TOP ELEV. ETE (FT)	TOP WIDTH ETw (FT)	CLEAN OUT ELEV. COE (FT)	BOTTOM ELEV. BE (FT)	OUTLET BASIN				
					RIPRAP SIZE (R-L) (IN)	ROCK THICK RT (IN)	DEPTH D (IN)	WIDTH OBW (FT)	LENGTH OBL (FT)
1	293.00	10'	289.50	288.50	N/A	N/A	N/A	N/A	N/A

**NOTES:**

FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.

ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.

CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS. DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO STORMWATER MANAGEMENT FACILITY.

**MODIFIED CONSTRUCTION DETAIL #8-8  
CONCRETE RISER WITH TEMPORARY DEWATERING HOLES**

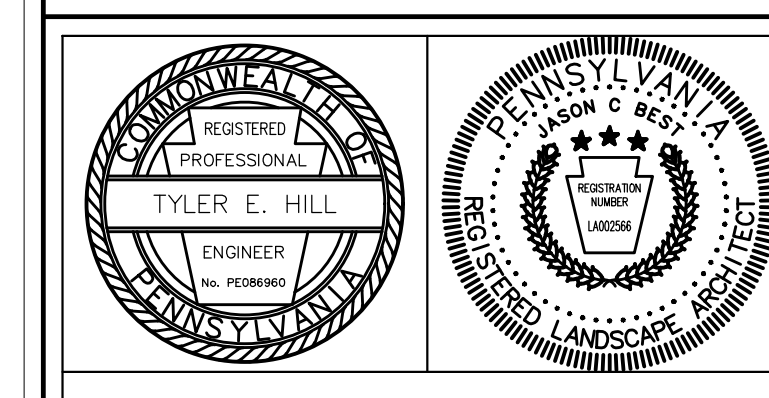
**G SEDIMENT TRAP I CROSS SECTION**  
NOT TO SCALE

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
2. OCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
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**PRELIMINARY/FINAL LAND DEVELOPMENT**  
SUBJECT:  
**EROSION & SEDIMENT CONTROL DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
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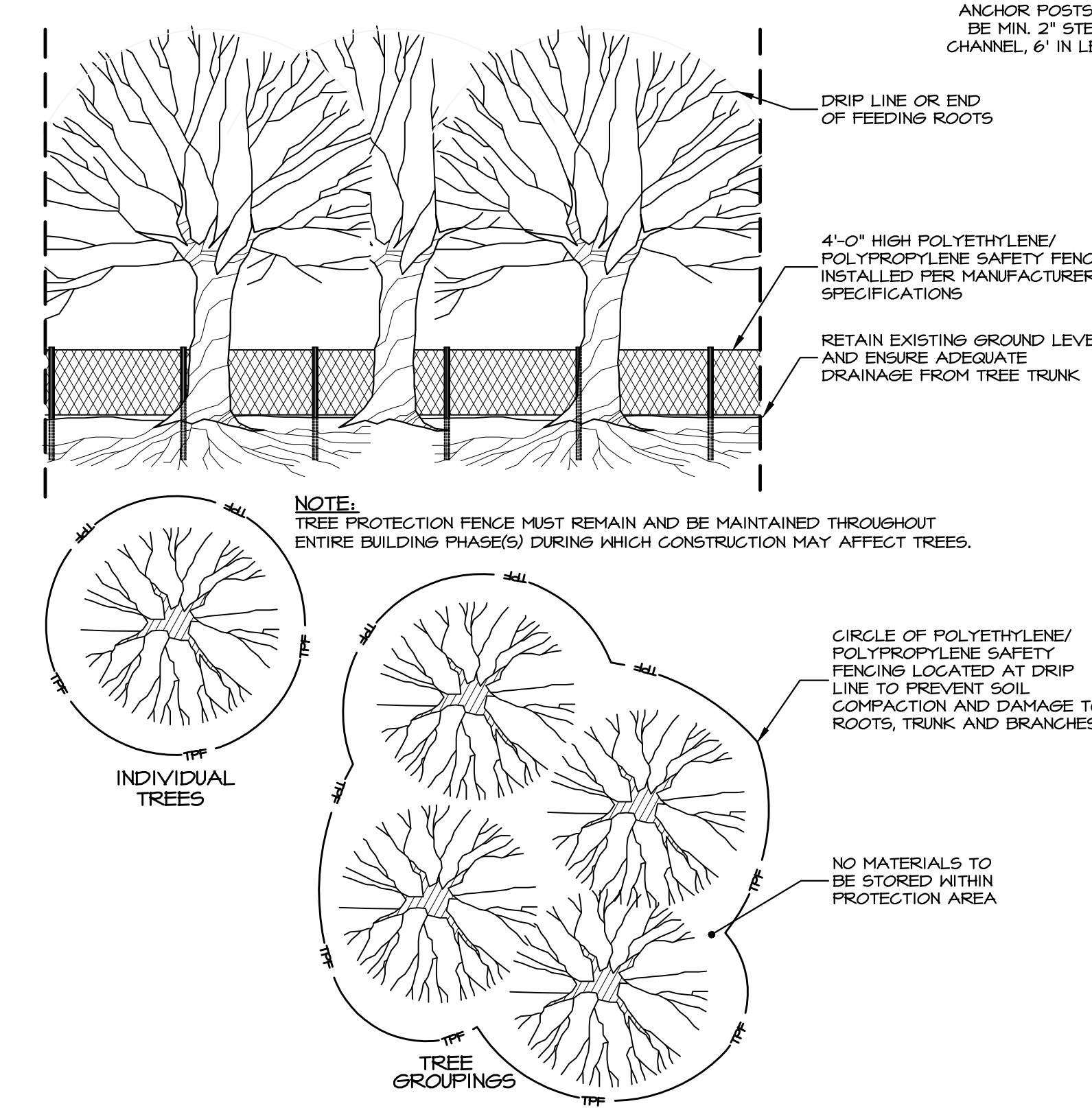
MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

MULCH TYPE	APPLICATION RATES (MIN)			NOTES
	PER ACRE	PER 1,000 sq.ft.	PER 1,000 sq.yd.	
STRAW	3 TONS	140 lb.	1,240 lb.	EITHER WHEAT OR OAT STRAW, FREE OF NEEDS, NOT CHOPPED OR FINELY BROKEN
HAY	3 TONS	140 lb.	1,240 lb.	TIMOTHY, MIXED CLOVER AND TIMOTHY OR OTHER NATIVE FORAGE GRASSES
WOOD CHIPS	4-6 TONS	185-275 lb.	1,650-2,500 lb.	MAY PREVENT GERMINATION OF GRASSES AND LEGUMES
HYDROMULCH	1 TON	47 lb.	415 lb.	SEE NOTE 5 FOR LIMITATIONS

**NOTES:**

- STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN.
- POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HR CURING PERIOD AND A SOIL TEMPERATURE OF 45° F ARE TYPICALLY REQUIRED.
- SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
- MULCH ON SLOPES OF 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING, LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5%. WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.

**A MULCH APPLICATION RATES**  
NO SCALE



**D TREE PROTECTION AND LIMIT OF DISTURBANCE FENCING**  
NO SCALE

**B TOPSOIL / STABILIZATION SPECIFICATIONS**

- UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM 10% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN DRAWINGS IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. TOPSOIL STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SIDE SLOPES MUST BE 2:1 OR FLATTER.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES - 6 TO 12 INCHES ON COMPACTED SOILS - PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO 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.
- TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. COMPACTED SOILS SHOULD BE SCARIFIED 6 TO 12 INCHES ALONG CONTOUR WHENEVER POSSIBLE PRIOR TO SEEDING.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE THE DISTURBED AREAS, DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- AN EROSION CONTROL BLANKET WILL BE INSTALLED ON ALL DISTURBED SLOPES 3:1 OR STEEPER, ALL AREAS OF
  - CONCENTRATED FLOWS, AND DISTURBED AREAS WITHIN 50' OF A SURFACE WATER.

**TEMPORARY VEGETATIVE STABILIZATION**

SPECIES	ANNUAL RYE (SPRING) OR WINTER RYE (FALL)
% PURE LIVE SEED	95%
APPLICATION RATE	200 LB/ACRE
FERTILIZER TYPE	10-10-10
FERTILIZER APPL. RATE	500 LB/ACRE
LIMING RATE	1 TON/ACRE
MULCH TYPE	HAY OR STRAW
MULCHING RATE	3 TONS/ACRE

**TEMPORARY SEEDING NOTES:**

- TOPSOIL STOCKPILES AND/OR ROUGH GRADED AREAS SHALL BE SEEDED AND MULCHED IMMEDIATELY IN ACCORDANCE WITH THE SEEDING/MULCHING SCHEDULE.
- USE HAY OR STRAW MULCH AT THE SPECIFIED RATE FOR AREAS THAT HAVE BEEN SEEDED WITH A TEMPORARY SEED MIXTURE.
- DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES.

**PERMANENT VEGETATIVE STABILIZATION**

TOPSOIL PLACEMENT DEPTH	4-8 IN.
SPECIES	KENTUCKY BLUEGRASS AND PERENNIAL RYEGRASS (1)
% PURE LIVE SEED	95%
APPLICATION RATE	81 LB/ACRE (BLUEGRASS); 240 LB/ACRE (RYEGRASS)
FERTILIZER TYPE	PER SOIL TEST (10-10-20 IF NO TEST DATA)
FERTILIZER APPL. RATE	PER SOIL TEST (1,000 LB/ACRE IF NO TEST DATA)
LIMING RATE	PER SOIL TEST (6 TONS/ACRE IF NO TEST DATA)
MULCH TYPE	HAY OR STRAW
MULCHING RATE	3 TONS/ACRE
ANCHOR MATERIAL	POLYMERIC TACKIFIER
ANCHORING METHOD	SPRAY APPLY W/ A HYDRO-SEEDER OR SIMILAR
RATE OF ANCHOR MATERIAL APPL.	20 LB/ACRE
SEEDING SEASON DATES	APRIL 1 - OCTOBER 15

**PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS:**

PERMANENT SEEDING/VEGETATIVE STABILIZATION WILL BE IN ACCORDANCE WITH THE SEEDING SCHEDULE AND THE FOLLOWING PROCEDURES:

- ROUGH GRADE AND REMOVE ALL DEBRIS, LARGE STONES, AND CONSTRUCTION MATERIALS.
- APPLY AGRICULTURAL GRADE LINE AS SPECIFIED BY THE SOIL TEST OR AT A MINIMUM RATE OF 6 TONS/ACRE.
- APPLY FERTILIZER IN ACCORDANCE WITH THE SOIL TEST. IN THE ABSENCE OF A SOIL TEST, APPLY 10-10-20 FERTILIZER AT A RATE OF 1,000 lbs/ACRE.
- TILL ALL ABOVE MATERIALS THOROUGHLY INTO A 4'-6" SOIL DEPTH.
- FINISH GRADE FOR SEEDING.
- APPLY SEED AT THE SPECIFIED APPLICATION RATE AS INDICATED ON THE SEEDING SCHEDULE(S) - SEE GENERAL SEEDING NOTE 2.
- RAKE OR DRAG TO COVER SEED LIGHTLY.
- ROLL LIGHTLY TO PLACE SEED IN CONTACT WITH THE SOIL.
- APPLY HAY OR STRAW MULCH AT A RATE OF 3 TONS/ACRE.
- MULCH SHALL BE ANCHORED AS SPECIFIED OR IN ACCORDANCE WITH THE CURRENT PENN STATE UNIVERSITY AGRONOMY GUIDE.

**PERMANENT VEGETATIVE STABILIZATION (SLOPES ≥ 8%)**

TOPSOIL PLACEMENT DEPTH	4-8 IN.
SPECIES	KENTUCKY BLUEGRASS AND PERENNIAL RYEGRASS (1)
% PURE LIVE SEED	95%
APPLICATION RATE	81 LB/ACRE (BLUEGRASS); 240 LB/ACRE (RYEGRASS)
FERTILIZER TYPE	PER SOIL TEST (10-10-20 IF NO TEST DATA)
FERTILIZER APPL. RATE	PER SOIL TEST (1,000 LB/ACRE IF NO TEST DATA)
LIMING RATE	PER SOIL TEST (6 TONS/ACRE IF NO TEST DATA)
MULCH TYPE	HAY OR STRAW
MULCHING RATE	3 TONS/ACRE
ANCHOR MATERIAL	LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETTING
ANCHORING METHOD	APPLY/STAPLE TO MANUFACTURER'S SPECS
RATE OF ANCHOR MATERIAL APPL.	REFER TO MANUFACTURER'S SPECIFICATIONS
SEEDING SEASON DATES	APRIL 1 - OCTOBER 15

**GENERAL SEEDING NOTES:**

- USE TWO (2) VARIETIES OF KENTUCKY BLUEGRASS AND TWO (2) VARIETIES OF PERENNIAL RYEGRASS IN THE PERMANENT/PERMANENT STEEP SLOPE MIXTURES, ALL IN EQUAL PARTS (I.E. 25% EACH).
- IF PERMANENT SEEDING IS NOT PRACTICAL DUE TO THE TIME OF YEAR, DISTURBED AREA SHALL BE SEEDED WITH ANNUAL RYE (SPRING) OR WINTER RYE (FALL) GRASS AT A RATE OF 200 lbs/ACRE AND MULCHED WITH STRAW AT A RATE OF 3 TONS PER ACRE.
- THE DEPARTMENT RECOMMENDS THAT SOIL TESTING BE DONE PRIOR TO SEEDING AND MULCHING TO DETERMINE THE PROPER SOIL AMENDMENTS AND APPLICATION RATES FOR THE PROPOSED SEED MIXTURE(S). SOIL TEST KITS ARE INEXPENSIVE AND MAY BE OBTAINED FROM THE COUNTY COOPERATIVE EXTENSION SERVICE OFFICES. WHEN DONE PROPERLY, SOIL TESTS CAN ACTUALLY SAVE MONEY THAT WOULD OTHERWISE BE LOST ON IMPROPER SOIL AMENDMENTS, UNSUCCESSFUL SEEDING, AND DAMAGE CAUSED BY EROSION OF UNSTABILIZED AREAS. IN THE ABSENCE OF A SOIL TEST, SOIL AMENDMENTS SHOULD BE ADDED AT THE RATES SPECIFIED BY THE SELECTED SEEDING REFERENCE.
- FILL SLOPES SHOULD BE SEEDED AND MULCHED AT REGULAR VERTICAL INCREMENTS - 15 TO 25 FEET MAXIMUM - AS THE FILL IS BEING CONSTRUCTED. THIS WILL ALLOW THE BOTTOM OF THE FILL TO PROGRESS TOWARD STABILIZATION WHILE WORK CONTINUES ON THE UPPER PORTION, MAKING FINAL STABILIZATION EASIER TO ACHIEVE AND PROVIDING SOME VEGETATIVE BUFFERING AT THE BOTTOM OF THE SLOPE.
- WHEREVER SEED AND MULCH IS APPLIED BY HYDROSEEDING METHODS, THE SEED AND MULCH SHOULD BE APPLIED IN SEPARATE APPLICATIONS WITH THE SEED BEING APPLIED FIRST AND THE MULCH SPRAYED ON TOP OF THE SEED. THIS IS TO ENSURE THAT THE SEED MAKES CONTACT WITH THE UNDERLYING SOIL. SOIL PREPARATION SHOULD BE COMPLETED PRIOR TO ADDING SEED TO THE HYDROSEEDING EQUIPMENT. RUNNING SEED THROUGH THE PUMPING SYSTEM CAN RESULT IN EXCESSIVE ABRASION OF THE SEED AND REDUCE THE PERCENTAGE OF PURE LIVE SEED IN THE APPLICATION. THEREFORE ALL SITE PREPARATION SHOULD BE COMPLETED PRIOR TO THE ARRIVAL OF THE HYDROSEEDER.
- IN CRITICAL AREAS (E.G. ADJACENT TO OR WITHIN 50 FEET OF STREAMS, PONDS, OR WETLANDS) A PROTECTIVE BLANKET SHOULD BE PROVIDED FOR ALL SEEDED AREAS. CONSIDERATION SHOULD BE GIVEN TO USE OF MULCH WITH NETTING OR PROTECTIVE BLANKETS FOR ALL SEEDED AREAS ON SLOPES 3:1 V OR STEEPER.
- WHEN WETLAND AREAS ARE TEMPORARILY DISTURBED, ISOLATE AND STOCKPILE TOPSOIL FOR REPLACEMENT AFTER GRADING IS COMPLETED. IN MOST CASES, NO SEEDING OF THE DISTURBED AREA IS NECESSARY AFTER THE TOPSOIL IS REPLACED. THE SOIL CONTAINS SUFFICIENT SEED AND ROOT MATERIAL TO REESTABLISH VEGETATION. IF TEMPORARY VEGETATIVE STABILIZATION IS NECESSARY, APPLY ANNUAL RYEGRASS AT THE RATE NOT EXCEEDING 45 LB PLS/ACRE. APPLY CLEAN STRAW AS A MULCH AT THE RATE OF 3 TONS/ACRE. NO SOIL AMENDMENTS SHOULD BE USED ON WETLAND AREAS.
- VEHICULAR TRAFFIC SHOULD BE RESTRICTED FROM AREAS TO BE SEEDED TO PREVENT SOIL COMPACTION.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 10% 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 SLIDING, SLIDING, OR OTHER MOVEMENTS.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES.
- DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.
- DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

**C SEEDING SCHEDULE & NOTES**  
NO SCALE

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
2. OCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

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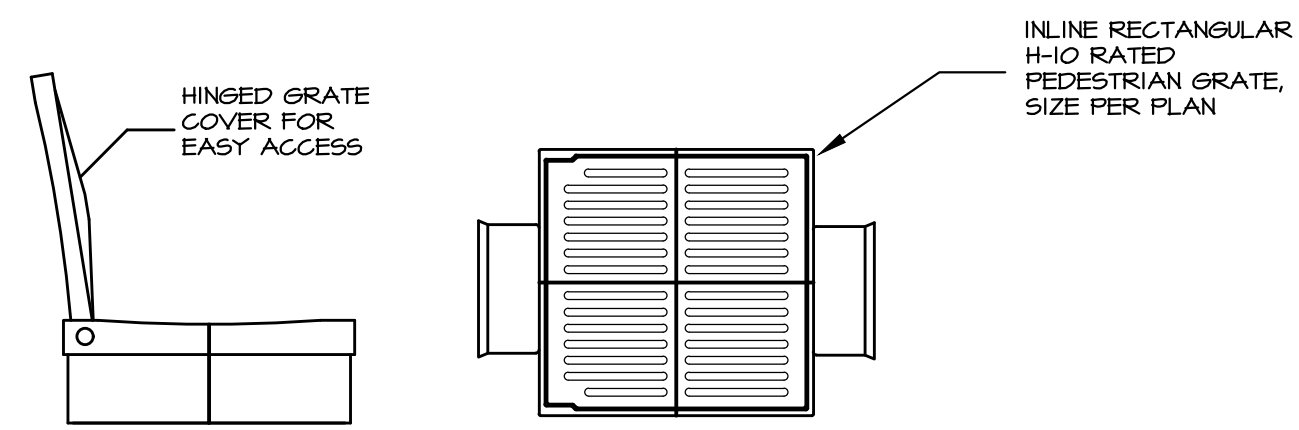
PROFESSIONAL ENGINEER  
TYLER E. HILL  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF PENNSYLVANIA

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
TYLER E. HILL  
REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
STATE OF PENNSYLVANIA

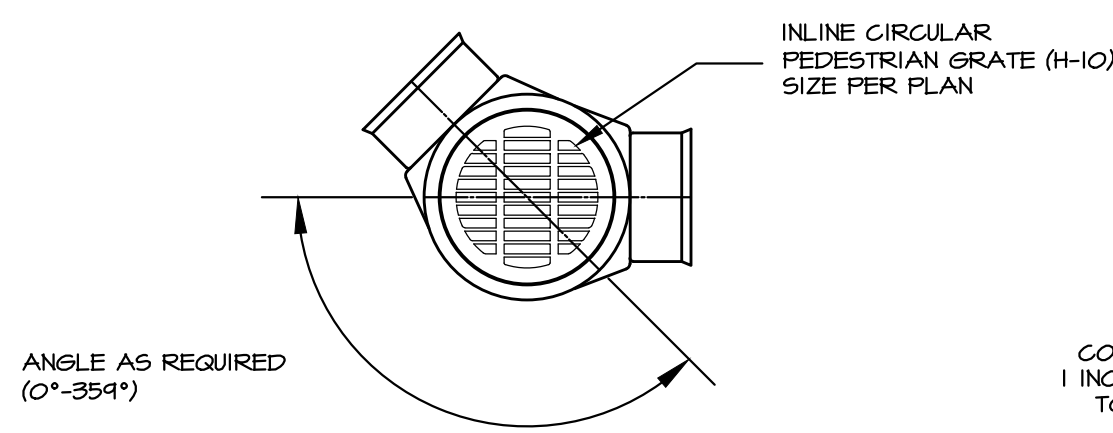
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
EROSION & SEDIMENT CONTROL DETAILS  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
WESTTOWN SCHOOL  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

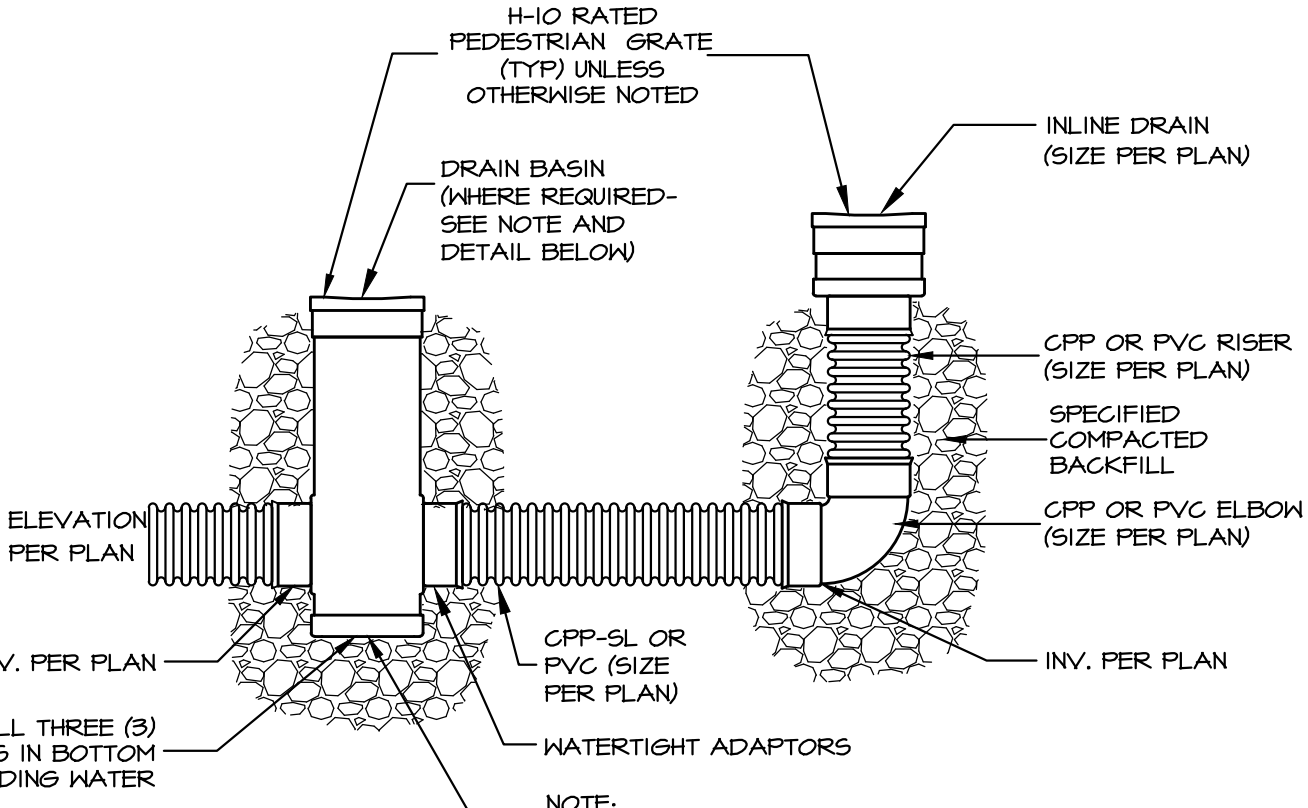


RECTANGULAR DRAIN BASIN



CIRCULAR DRAIN BASIN

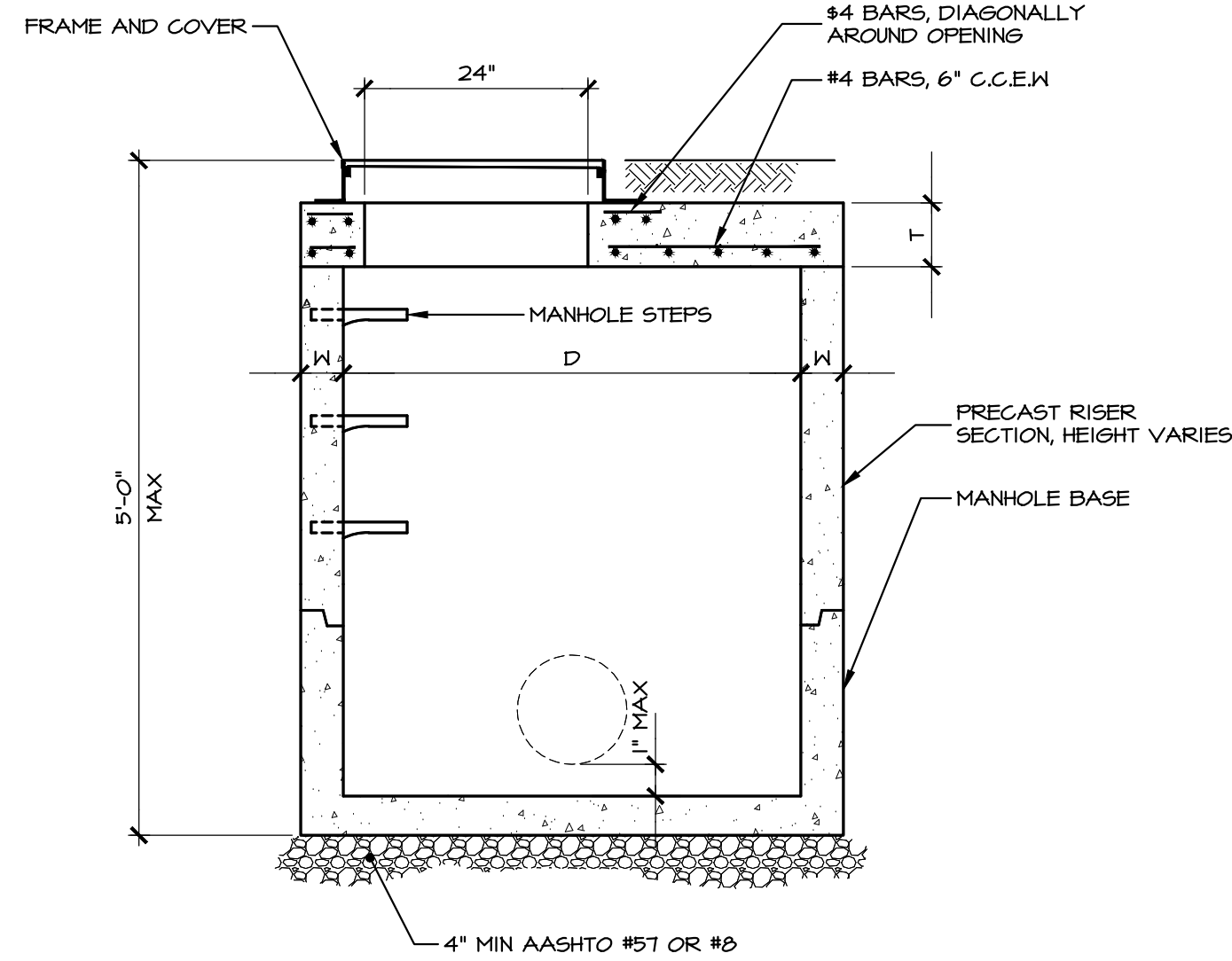
**NOTES:**  
 1. PROVIDE NYLOPLAST (OR APPROVED EQUAL) COMPONENTS, INCLUDING, BUT NOT LIMITED TO, GRATES, RISERS, CONNECTIONS. ALL COMPONENTS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. CONTRACTOR TO SELECT NECESSARY COMPONENTS BASED UPON SPECIFIED PIPE SIZE, PIPE ALIGNMENT, AND SPECIFIED ELEVATIONS.  
 2. GRATE TO BE LOCKED OR BOLTED DOWN FOR SECURE TAMPERPROOF CONNECTION.



TYP. INLINE DRAIN & DRAIN BASIN

**A NYLOPLAST INLETS DETAIL**

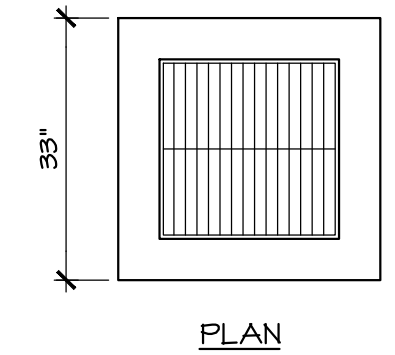
NO SCALE



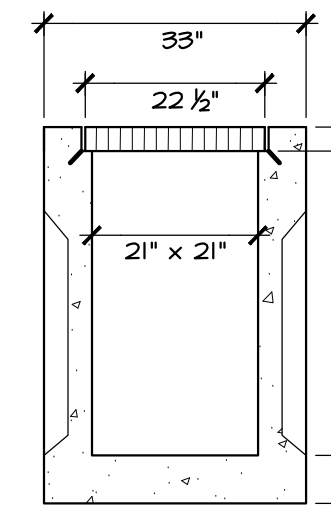
D	W	T
4'-0"	5"	6"
5'-0"	6"	8"
6'-0"	7"	8"

**B SHALLOW MANHOLE DETAIL - STORM SEWER**

NO SCALE



PLAN



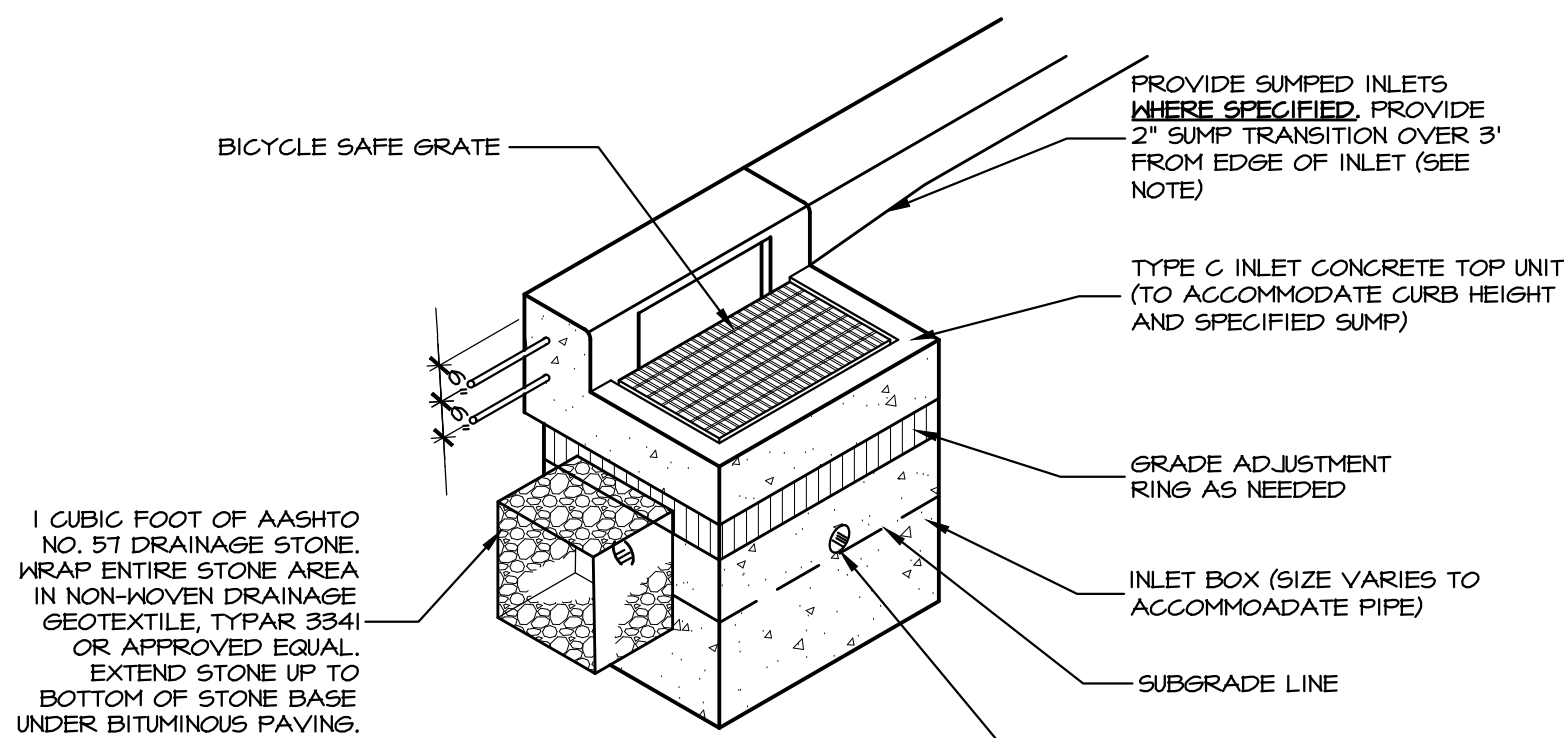
SECTION

**NOTES:**

- REFER TO "PADOT TYPE STORMWATER INLET" DETAIL FOR STANDARD INLET NOTES.
- ALL GRATES TO BE BICYCLE SAFE.
- USE RISER SECTIONS AND PRECAST GRADE RINGS AS REQUIRED TO PROVIDE INDICATED INVERT AND TOP OF GRATE ELEVATIONS.

**C 2' X 2' PRECAST YARD INLET**

NO SCALE



PA DOT TYPE 'C' INLET

1 CUBIC FOOT OF AASHTO NO. 57 DRAINAGE STONE. WRAP ENTIRE STONE AREA IN NON-WOVEN DRAINAGE GEOTEXTILE, TYPAR 3341 OR APPROVED EQUAL. EXTEND STONE UP TO BOTTOM OF STONE BASE UNDER BITUMINOUS PAVING.

PROVIDE SUMPED INLETS WHERE SPECIFIED. PROVIDE 2" SUMP TRANSITION OVER 3' FROM EDGE OF INLET (SEE NOTE)

TYPE 'C' INLET CONCRETE TOP UNIT (TO ACCOMMODATE CURB HEIGHT AND SPECIFIED SUMP)

GRADE ADJUSTMENT RINGS AS NEEDED

INLET BOX (SIZE VARIES TO ACCOMMODATE PIPE)

SUBGRADE LINE

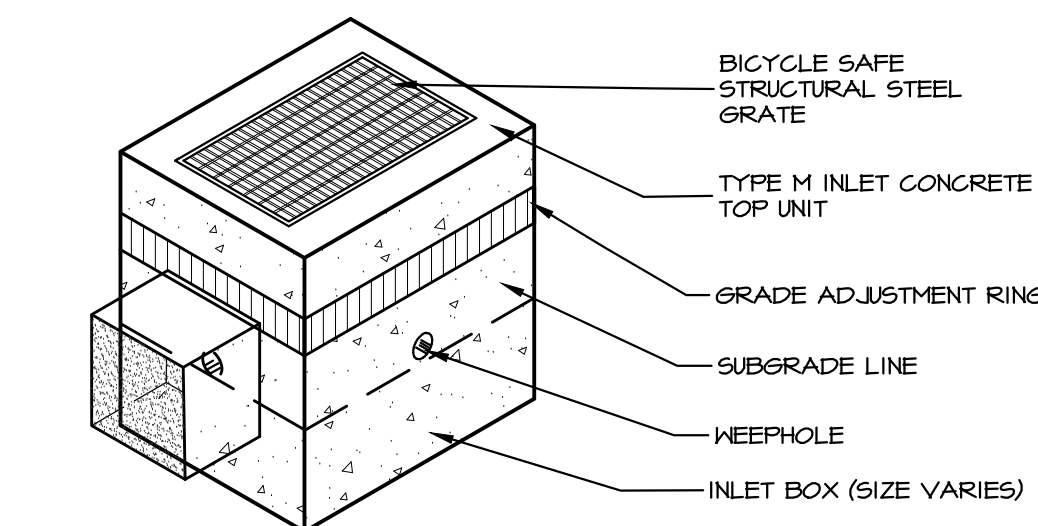
2" DIAMETER KEEP HOLES (OR APPROVED EQUAL), EACH SIDE AT INVERT OF PAVEMENT SUBGRADE, PAVED AREAS ONLY.

IF UNDERDRAINS ARE SPECIFIED, PROVIDE OPENING TO ACCOMMODATE UNDERDRAIN AS SHOWN ON PLANS.

SEE NOTES

**INLET NOTES:**

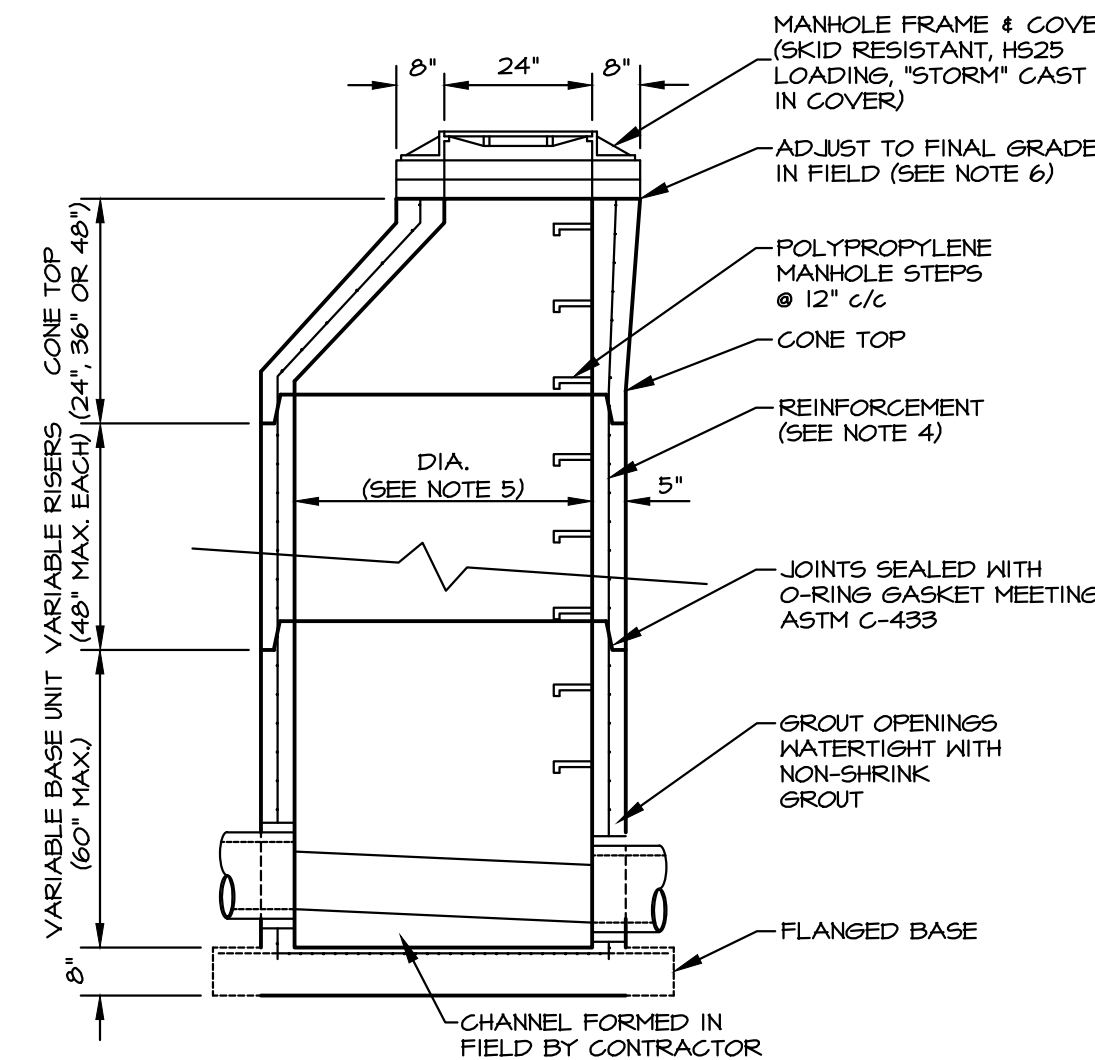
- MATERIAL AND CONSTRUCTION BASED UPON PENNDOT STANDARDS AND SPECIFICATIONS. ALL CONSTRUCTION SHALL BE IN GENERAL ACCORDANCE WITH PA DOT PUBLICATION 408, SECTION 605 & APPLICABLE PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION PERTAINING TO INLET STRUCTURES.
- THIS DETAIL DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO 15 WILL BE PERMITTED.
- INLETS WITHIN THE PENNDOT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH PENNDOT ROADWAY CONSTRUCTION STANDARDS, LATEST REVISION, AND AS PER APPROVED PENNDOT HIGHWAY OCCUPANCY PERMIT PLANS.
- INLETS WITHIN A MUNICIPAL ROADWAY/RIGHT OF WAY SHALL BE APPROVED BY THE MUNICIPALITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY INLET BOX SIZING BASED ON PIPE SIZES, MATERIAL AND ALIGNMENT PRIOR TO ORDERING PRE CAST STRUCTURES.
- CONCRETE TOP UNITS WHICH SEAT THE GRATE DIRECTLY WITHIN THE UNIT SHALL UTILIZE 1-1/4" X 1-1/4" ANSLES EMBEDDED IN THE CONCRETE AS A BEARING AREA FOR THE GRATE.
- WHenever an inlet is required within a mountable curb section, a type M inlet will be located adjacent to the back edge of the curb and will be flush with the pavement surface. SEE PA DOT RC-65 FOR INSTALLATION DETAILS.
- THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET TYPE IS THE CONTRACTOR'S RESPONSIBILITY.
- PIPES SHALL BE LOCATED AS REQUIRED.
- KEEP HOLES SHALL BE INSTALLED IN INLET BOXES WITHIN PAVED AREAS TO PERMIT DRAINAGE OF THE PAVEMENT SUBBASE, UNLESS OTHERWISE APPROVED.
- USE PRE CAST CONCRETE GRADE ADJUSTMENT RINGS FOR FINAL GRADE. BRICKS, BLOCKS, MORTAR, ETC. ARE NOT PERMITTED AS GRADE ADJUSTMENTS.
- INLET BOX SHALL BE PRE CAST CONCRETE, UNLESS OTHERWISE SPECIFIED OR APPROVED.
- ALL ON-SITE INLETS SHALL HAVE TOP UNITS TO MATCH CURB REVEAL AND SPECIFIED SUMP.
- INLETS THAT ARE FIVE FOOT OR GREATER IN DEPTH SHALL HAVE POLYPROPYLENE ENCASED MANHOLE STEPS INSTALLED.
- ALL DRAINAGE STRUCTURES SHALL HAVE POURED-IN-PLACE CONCRETE CHANNEL BOTTOM, UNLESS OTHERWISE NOTED (SUCH AS SNOOTS, WATER QUALITY INLETS, DESIGNATED SEDIMENT STORAGE, ETC.) ON THE PLANS.
- PROVIDE PRECAST OPENING IN THE INLET BOX FOR ALL ROOF LEADER DRAINAGE CONNECTIONS, UNLESS OTHERWISE APPROVED. PROVIDE OPENINGS TO THE INLET BOX AT THE REQUIRED ELEVATIONS AND LOCATION. ALL CONNECTIONS SHALL BE WATERTIGHT.
- PROVIDE PRE-CAST OPENINGS IN THE INLET BOX TO ACCOMMODATE ROADWAY, PARKING, AND BUILDING UNDERDRAINS WHERE SPECIFIED ON THE PLANS.
- A 2" SUMP ON TYPE 'C' INLETS SHALL BE PROVIDED ONLY WHERE NOTED ON THE STORMWATER PIPE PROFILES. THE 2" SUMP TRANSITION ALONG CURB GUTTER LINE SHALL BE ADJUSTED ACCORDINGLY FOR FIELD CONDITIONS, ADA REQUIREMENTS, AND/OR AS SPECIFIED/DETAILED ON THE PLANS.
- FINAL INLET TOP OF GRATE ELEVATION SHALL BE ADJUSTED TO ACCOUNT FOR SPECIFIED ROAD GRADE.
- GROUT OPENINGS AROUND PIPE CONNECTIONS TO PROVIDE A WATERTIGHT JOINT. USE NON-SHRINK GROUT ON INSIDE & OUTSIDE OF STRUCTURE.
- ALL JOINTS ADJACENT TO BITUMINOUS PAVING SHALL BE SEALED WITH PG64-22.
- PROVIDE 2'x6' INLET BOXES, DOUBLE 2'x4' BOXES, ETC. WHERE NOTED ON THE PLAN.
- CONSULT THE PLANS FOR ANY SPECIFIC SUMP REQUIREMENTS FOR TYPE 'M' INLETS LOCATED IN A SAG CONDITION.



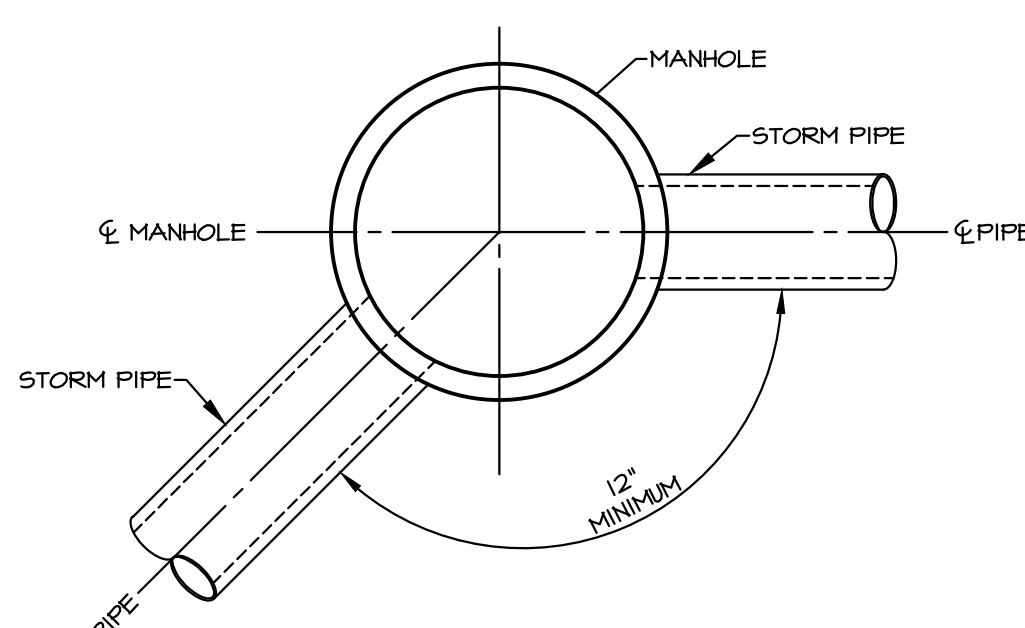
PA DOT TYPE 'M' INLET

**D PA DOT TYPE STORMWATER INLETS (TYPE 'C' & 'M')**

NO SCALE



SECTION VIEW



PLAN VIEW

**E PRECAST STORM SEWER MANHOLE**

NO SCALE

**NOTES:**

- MANHOLE BASED UPON TERRE HILL CONCRETE PRODUCTS, TERRE HILL, PA (800-242-1504). USE ONLY PADOT MANHOLES CONSTRUCTED IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-34 STANDARD, WHERE PERFORMING WORK IN PADOT RIGHTS-OF-WAY.
  - ALL PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM-C478.
  - ALL CONCRETE SHALL CONFORM TO PADOT PUBLICATION 408, SECTION T14, CLASS AA.
  - PROVIDE REINFORCEMENT IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-34 STANDARD.
  - THE DIAMETER OF THE MANHOLES PROVIDED SHALL BE BASED UPON PROVIDING A MINIMUM OF 12-INCHES OF HORIZONTAL SEPARATION BETWEEN OPENINGS LOCATED AT THE SAME DEPTH. PIPES NOT LOCATED AT THE SAME DEPTH MUST BE LOCATED VERTICALLY AT LEAST ONE TIME THE MAXIMUM OPENING DIAMETER APART WHERE THE HORIZONTAL SEPARATION IS NOT PROVIDED. IN ALL CASES, THE MAXIMUM PIPE SIZE AND OPENING IN PRECAST MANHOLES SHALL BE AS FOLLOWS:
- | MANHOLE DIA. | MAXIMUM PIPE SIZE | MAXIMUM OPENING |
|--------------|-------------------|-----------------|
| 4'-0"        | 30"               | 30"             |
| 5'-0"        | 42"               | 50"             |
| 6'-0"        | 54"               | 62"             |
| 8'-0"        | 72"               | 80"             |
- ADJUST MANHOLE TO FINAL GRADE WITH PRECAST CONCRETE GRADING RINGS. MAXIMUM ADJUSTMENT IS 12-INCHES.
  - PROVIDE GRADE ADJUSTMENT RISERS OF ADJUSTABLE INSERTS IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-34 STANDARD. LOCATE TOP OF FRAME OF ADJUSTMENT RISER 1/8" BELOW THE TOP OF THE ROADWAY SURFACE.
  - FRAME AND/OR PRECAST CONCRETE GRADE RINGS TO BE ATTACHED RIGIDLY TO THE TOP OF THE MANHOLE WITH THREADED STUDS IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-34 STANDARD. THE BASE OF THE FRAME AND/OR PRECAST CONCRETE GRADE RINGS TO BE SET IN A BED OF CEMENT MORTAR.
  - SEAL ALL JOINTS BETWEEN MANHOLE SECTIONS WITH "RAMNEK" OR EQUAL SEALANT.
  - ALL PROPOSED AND EXISTING ROOF LEADER DRAINAGE CONNECTIONS TO BE CORE-BORED INTO THE MANHOLE AT THE REQUIRED ELEVATION AND LOCATION AND ATTACHED WITH A WATERTIGHT CONNECTION.
  - CONTRACTOR SHALL VERIFY MANHOLE SIZING BASED ON PIPE SIZES, MATERIAL, AND ALIGNMENT PRIOR TO ORDERING PRECAST STRUCTURES.
  - THIS STANDARD DEPICTS THE SHAPE AND DIMENSIONS REQUIRED FOR UNIFORMITY AND COMPATIBILITY. IT IS NOT INTENDED TO SHOW THE DETAILS REQUIRED FOR MANUFACTURING AND HANDLING. ONLY THOSE ITEMS WHICH ARE SUPPLIED BY AN APPROVED MANUFACTURER AS LISTED IN PA BULLETIN NO. 15 WILL BE PERMITTED.

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

MID-ATLANTIC SPORTS CONSTRUCTION  
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REGISTERED PROFESSIONAL ENGINEER  
 TYLER E. HILL  
 PENNSYLVANIA

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT  
 JASON C. BERT  
 PENNSYLVANIA

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

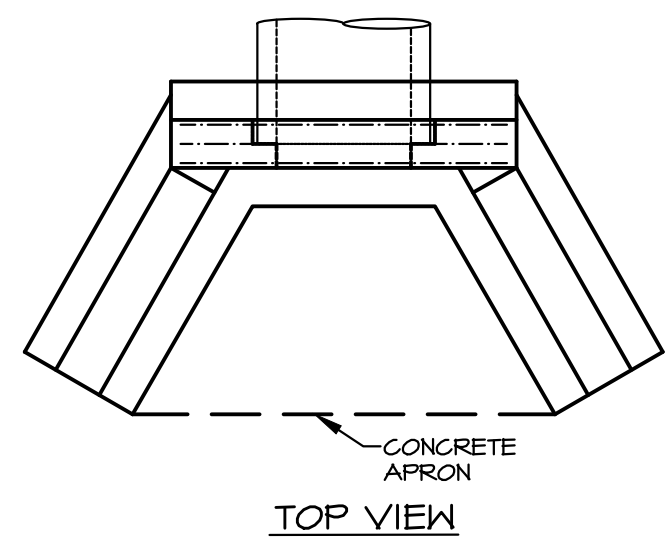
PRELIMINARY/FINAL LAND DEVELOPMENT SUBJECT:  
**STORMWATER DETAILS**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

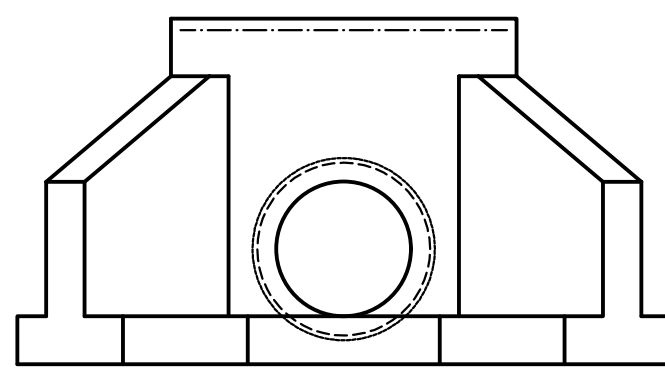
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**NOTES:**

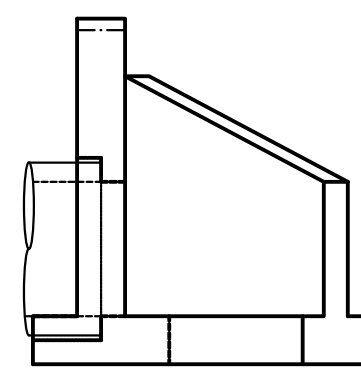
1. ALL ENDWALLS SHALL BE PRECAST IN ACCORDANCE WITH PADOT PUBLICATION 40B, SECTION 714, CLASS AA & IN ACCORDANCE WITH PADOT PUBLICATION T2, RC-31 STANDARD, AS AMENDED.
2. ALL CONCRETE SHALL CONFORM TO PADOT PUBLICATION 40B, SECTION 704, CLASS AA.
3. REINFORCING STEEL SHALL CONFORM TO PADOT PUBLICATION 40B, SECTION 704, AND PUBLICATION T2, RC-31 STANDARD.
4. EXPOSED EDGES SHALL BE CHAMFERED 1".
5. PROVIDE PIPE OPENING SIZE IN PRECAST UNITS TO ACCOMMODATE PIPE SIZE, MATERIAL AND ALIGNMENT.
6. PROVIDE CONCRETE APRON UNLESS OTHERWISE SPECIFIED.
7. GROUT OPENINGS AROUND PIPE CONNECTION TO THE STRUCTURE TO PROVIDE A WATERTIGHT JOINT AND CONNECTION USING A NON-SHRINK GROUT ON THE INSIDE AND OUTSIDE OF THE STRUCTURE.



TOP VIEW

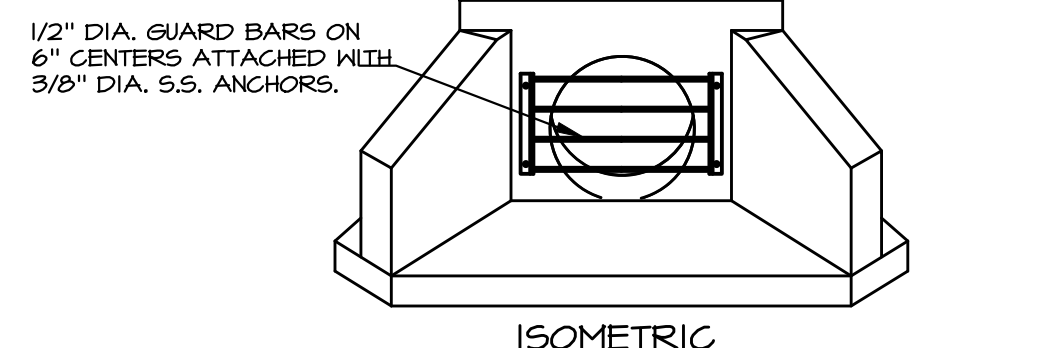


FRONT VIEW



SIDE VIEW

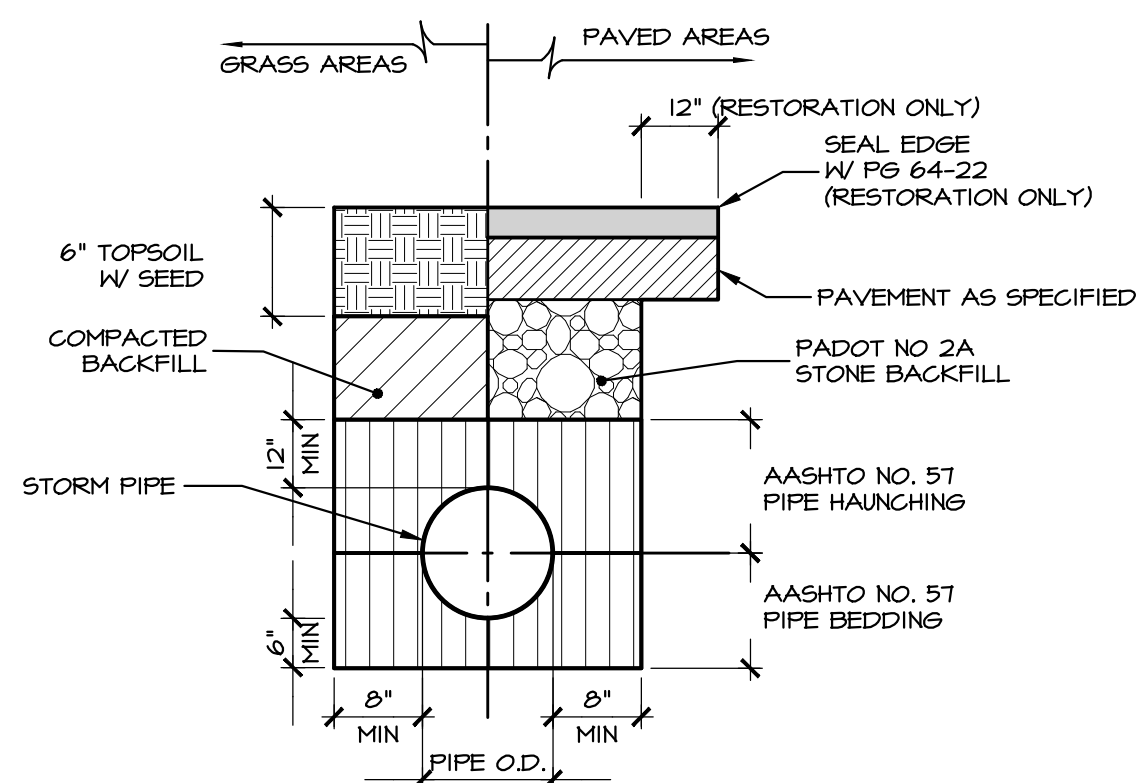
(TYPE 'DW' & 'D' ENDWALLS ONLY)



ISOMETRIC

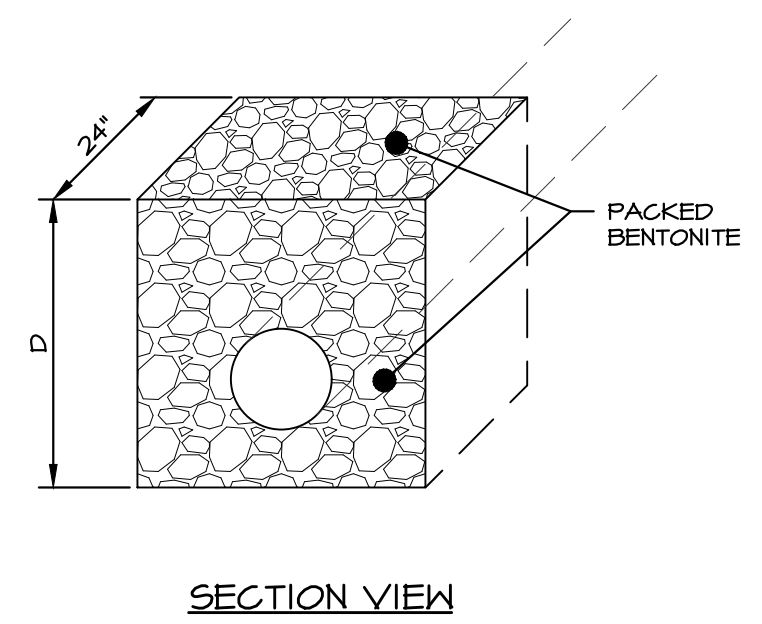
**NOTES:**

1. MATERIAL TO BE: GALVANIZED STEEL W/RUST INHIBITOR OR STAINLESS STEEL.
2. IF STEEL IS UTILIZED, THE UNIT SHALL BE FABRICATED, CLEANED AND THEN HOT DIP GALVANIZED AFTER FABRICATION.
3. DIMENSION APPROPRIATELY FOR HEADWALL UTILIZED.
4. TRASH RACK BASED ON MONARCH PRODUCTS, INC. TRASH RACK (717-930-4185).



**NOTES:**

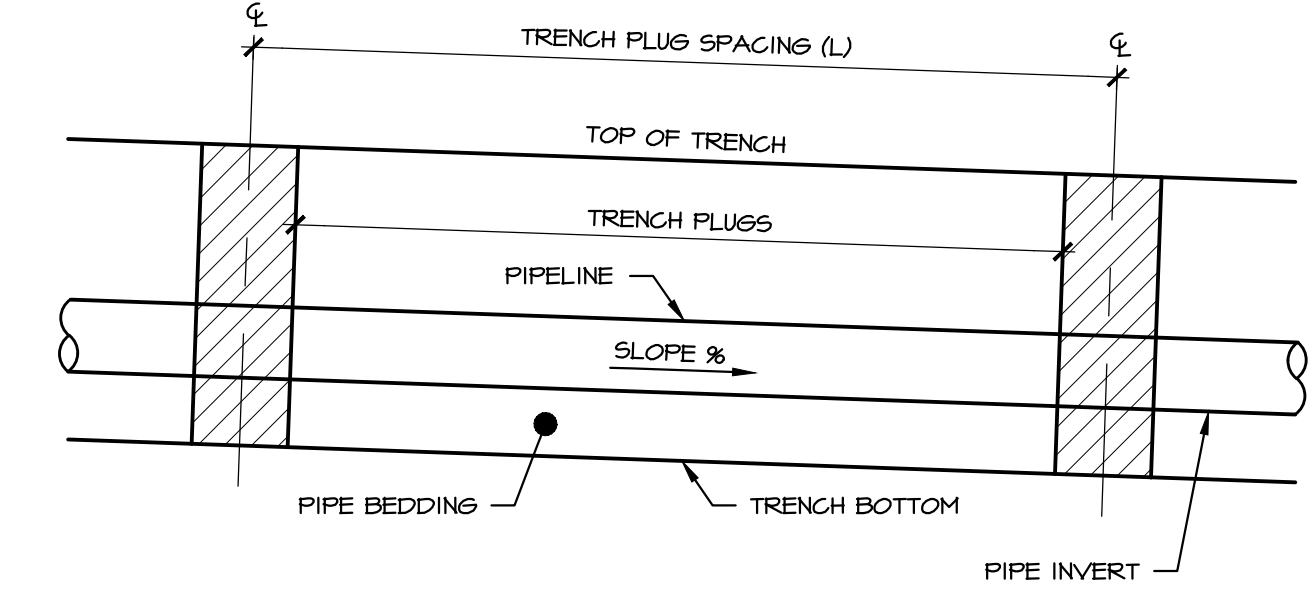
1. THIS DETAIL IS NOT TO BE USED FOR PIPES CONNECTED TO OUTLET STRUCTURES OR INTENDED TO CONVEY RUNOFF FROM STORMWATER MANAGEMENT FACILITIES.
2. STORMWATER FACILITY OUTLET PIPES SHALL BE LAID AND BACKFILLED WITH COMPACTED SOILS FROM THE SITE.



SECTION VIEW

**NOTES:**

1. TRENCH PLUGS ARE TO BE INSTALLED FOR ALL PIPES GREATER THAN 50' IN LENGTH AND LOCATED IN GRASSED AREAS.
2. FOR ALL PIPES OUTLETTING STORMWATER MANAGEMENT FACILITIES, THE FIRST TRENCH PLUG IS TO BE INSTALLED A MAXIMUM OF 10' FROM THE OUTLET STRUCTURE OR AS INDICATED ON THE DETAILS.



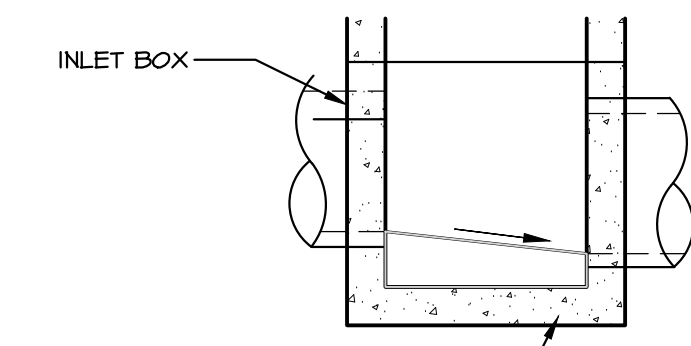
ELEVATION

**A** PRECAST TYPE 'DW' ENDWALL  
NO SCALE

**B** TRASH RACK DETAIL  
NO SCALE

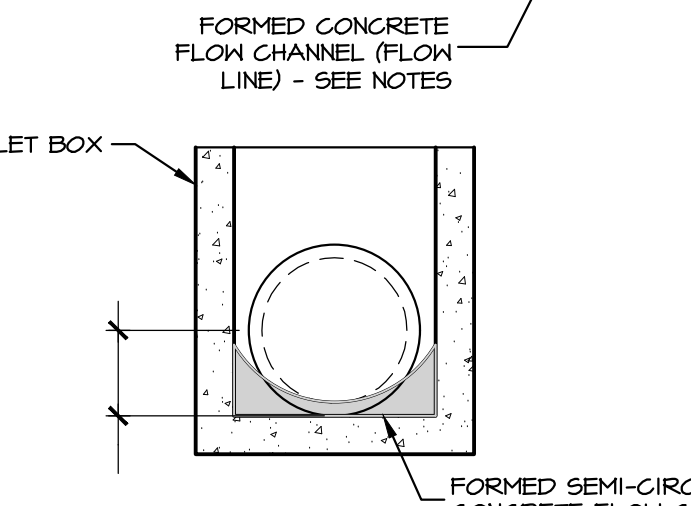
**C** STORM PIPE TRENCH DETAIL  
NO SCALE

**D** TRENCH PLUG DETAIL  
NO SCALE

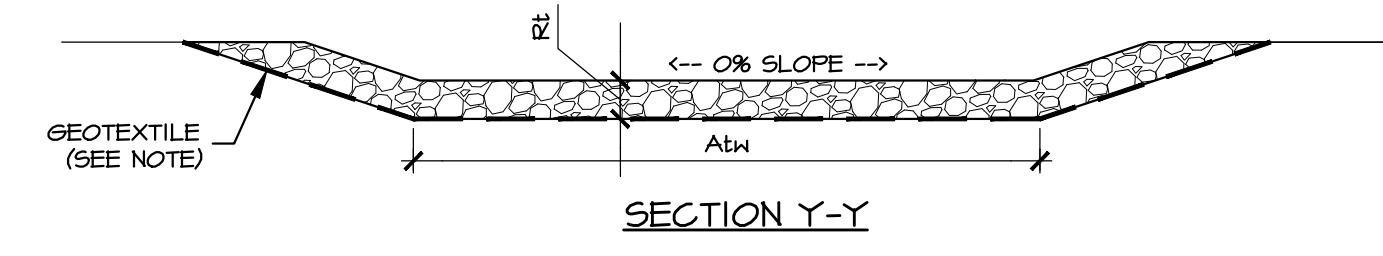


**NOTES:**

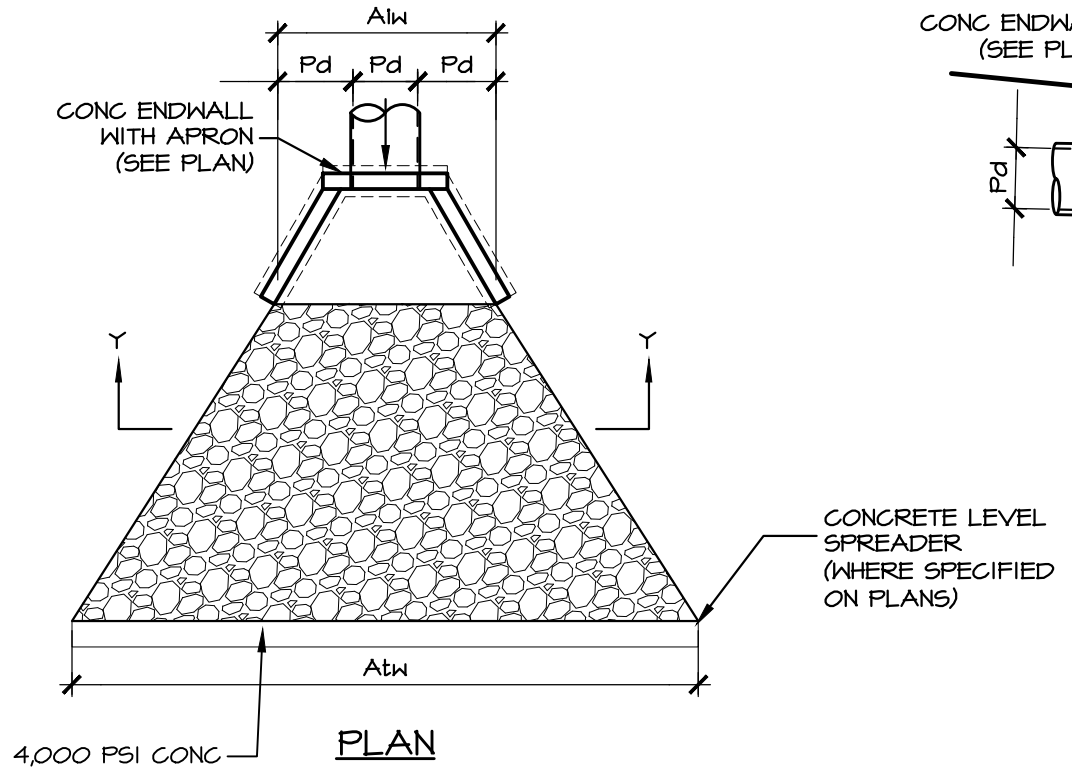
1. FORMED FLOW CHANNEL TO HAVE SEMICIRCULAR GEOMETRY AND BE CONSTRUCTED TO PROVIDE SELF-CLEANING OF INLET.
2. CONTRACTOR SHALL PROVIDE A SMOOTH, UNIFORM ELEVATION CHANGE FROM THE INVERT IN TO THE INVERT OUT ALONG THE FLOW CHANNEL FOR ALL STRUCTURES, IN ACCORDANCE WITH THE ELEVATIONS AS IDENTIFIED ON THE STORM WATER PROFILES SHEETS.
3. FLOW CHANNEL TO BE CONSTRUCTED WITH CONCRETE (3000 PSI) OR OTHER SUITABLE, COUNTY APPROVED MATERIAL.
4. ALL UNDERGROUND STORMWATER PIPING, OTHER THAN THOSE SPECIFICALLY INTENDED FOR GROUNDWATER COLLECTION, SHALL BE CONSTRUCTED WITH WATERTIGHT JOINTS AND CONNECTIONS.



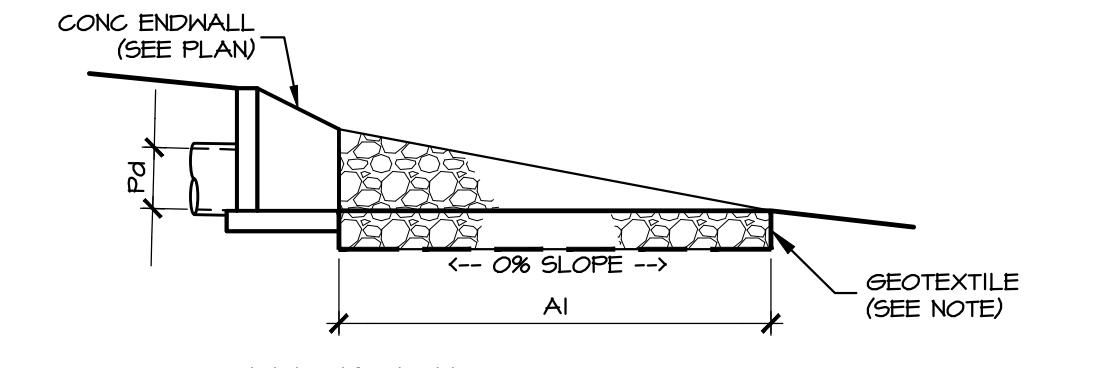
**E** CATCH BASIN FLOW CHANNEL  
NO SCALE



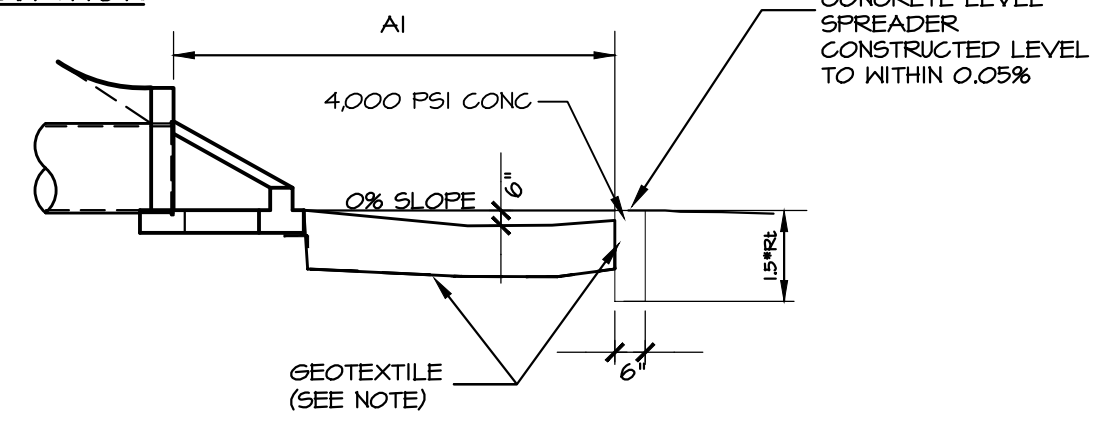
SECTION Y-Y



PLAN



ELEVATION



ELEVATION - W/ LEVEL SPREADER

**RIPRAP APRON MAINTENANCE PROGRAM**

1. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

**RIPRAP APRON INSPECTION SCHEDULE AND REPORTING**

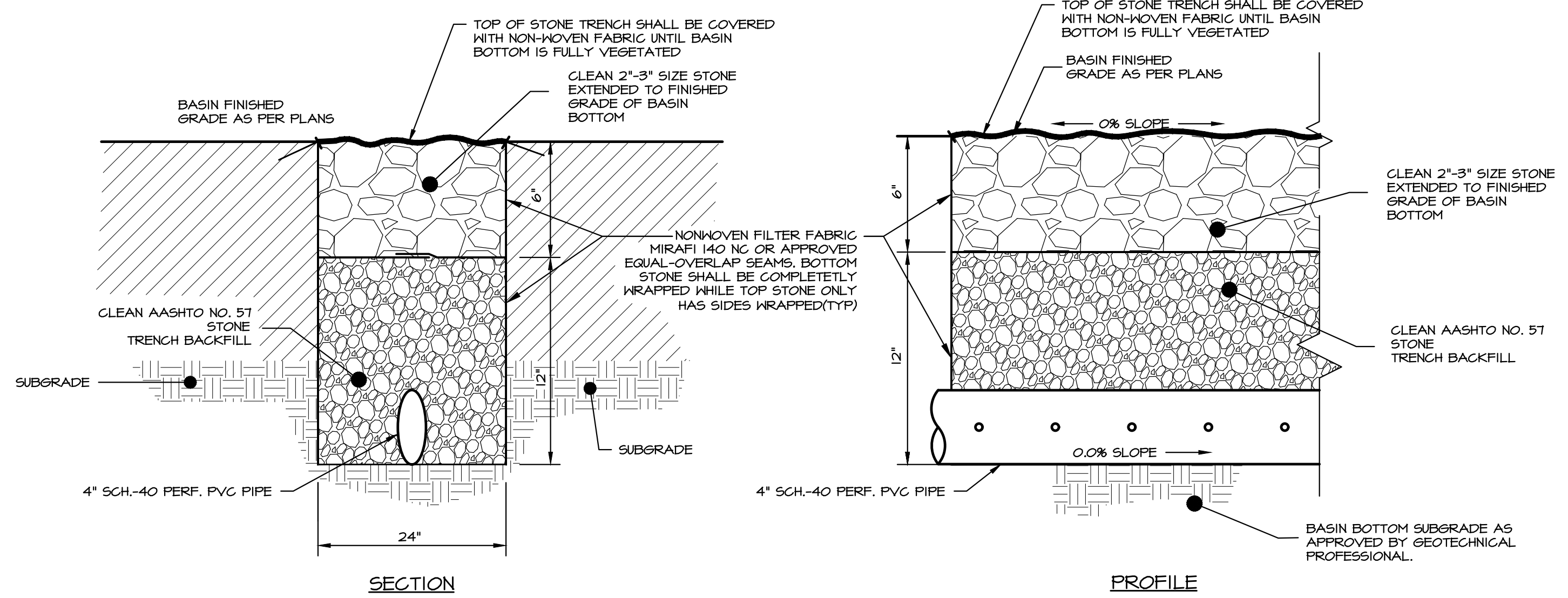
1. INSPECTION OF RIPRAP APRONS SHALL OCCUR AS FOLLOWS:
  - WEEKLY
  - AFTER EACH RUNOFF EVENT (THIS IS REQUIRED IN ADDITION TO THE REQUIRED WEEKLY INSPECTION)
2. A WRITTEN REPORT DOCUMENTING EACH INSPECTION AND ANY REPAIRS MADE SHALL BE KEPT AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
  - (1) A SUMMARY OF SITE CONDITIONS, E15 BMP AND PGM BMP IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND
  - (2) THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.
3. FOR ADDITIONAL INSPECTION AND REPORTING REQUIREMENTS AND INFORMATION, SEE THE NPDES PERMIT CONDITIONS, EFFLUENT LIMITATIONS, MONITORING, AND REPORTING REQUIREMENTS, ITEM NO. 2.A (VISUAL INSPECTIONS) FOUND ON SHEET ESC 1.0.

**NOTES:**

1. ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
2. RIPRAP APRONS SHOULD BE CONSTRUCTED AT OR NEAR ZERO GRADE FROM BACK TO FRONT AND SIDE TO SIDE. WHERE APRONS ARE CONSTRUCTED WITH A GRADIENT BACK TO FRONT, THE ROCK SIZE AND/OR APRON LENGTH SHOULD BE ADJUSTED UPWARDS TO COMPENSATE. IN NO CASE SHOULD RIPRAP APRONS BE CONSTRUCTED WITH A BACK TO FRONT GRADIENT EXCEEDING 5%.
3. INSTALL CLASS 2 GEOTEXTILE MATERIAL BETWEEN RIPRAP AND SUBGRADE.
4. USE THIS CONFIGURATION FOR ALL RIPRAP PLACEMENT AT OUTLET STRUCTURES UNLESS OTHERWISE NOTED.

OUTLET NO.	PIPE DIA. (Pd) (IN)	RIPRAP			APRON	
		SIZE (R-)	THICK. (Rt) (IN)	LENGTH (A1) (FT)	INITIAL WIDTH (A1w) (FT)	TERMINAL WIDTH (A1w) (FT)
EX-A1	18	R-4	18	12	4.5	16.5
EX-A2	18	R-4	18	12	4.5	16.5
EX-B1	24	R-4	18	14	6	22
EX-B2	15	R-3	9	9	3.75	12.75

**G** RIPRAP APRON DETAIL (W/ ENDWALL)  
NO SCALE



SECTION

PROFILE

**F** BASIN STONE DEWATERING TRENCH BASIN AND UNDERDRAIN DETAIL  
NO SCALE

REVISIONS PER:	DATE:	BY:
1. CCCC COMMENTS	3-1-2023	TEH
2. CCCC COMMENTS	3-17-2023	TEH
3. LAND DEVELOPMENT APPLICATION	8-1-2023	JCB
4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-

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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

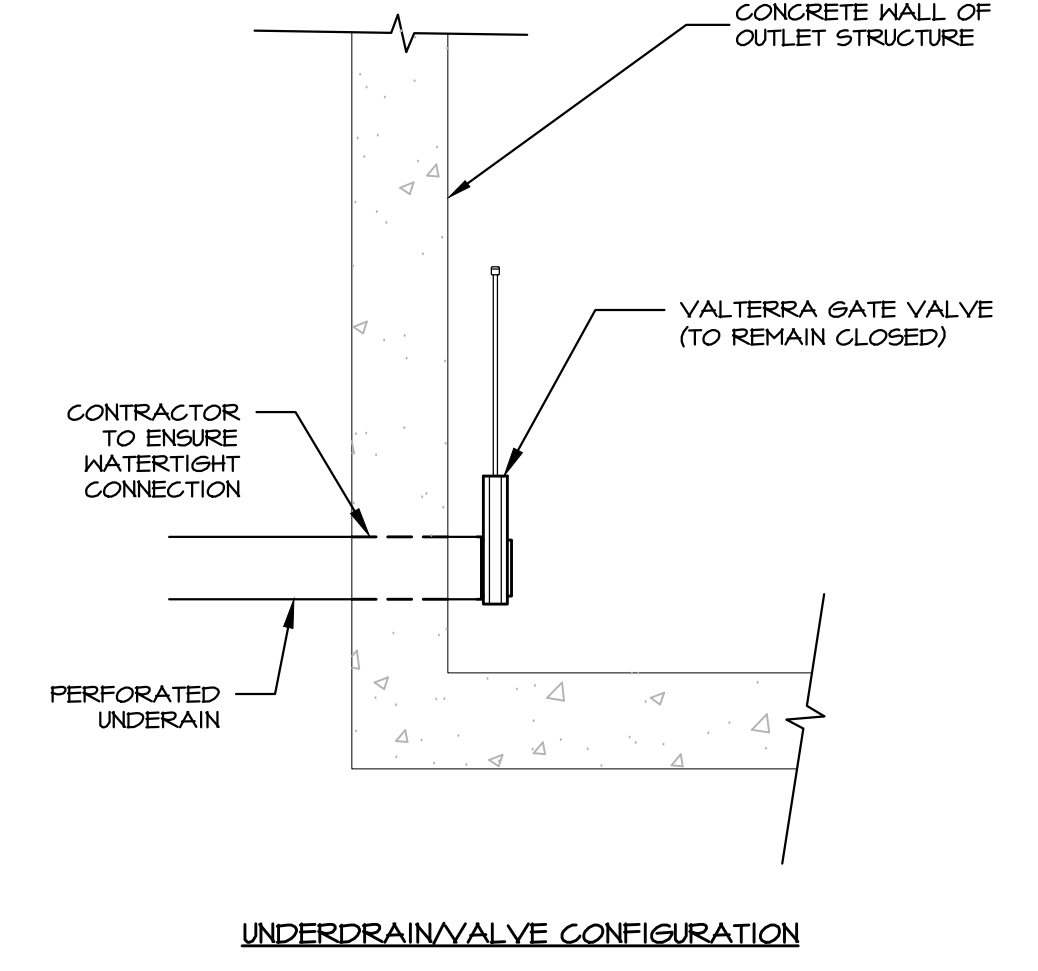
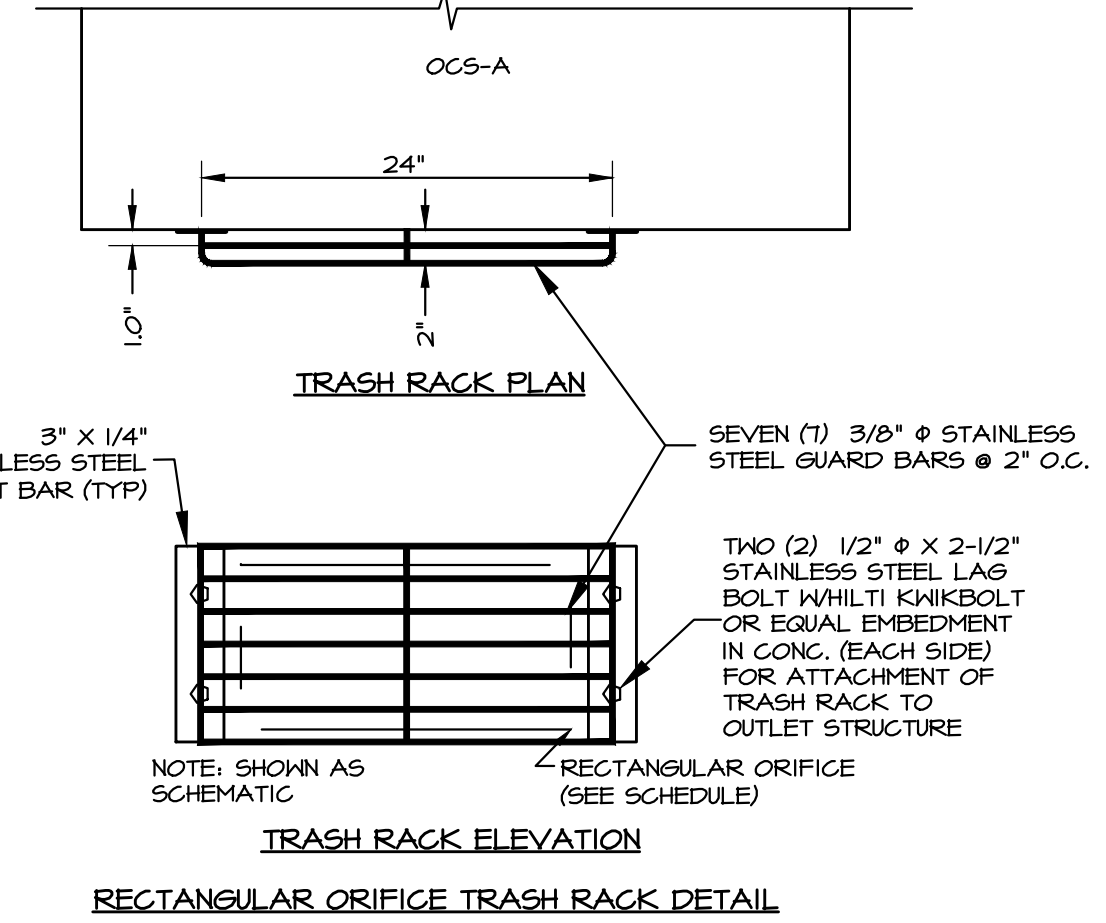
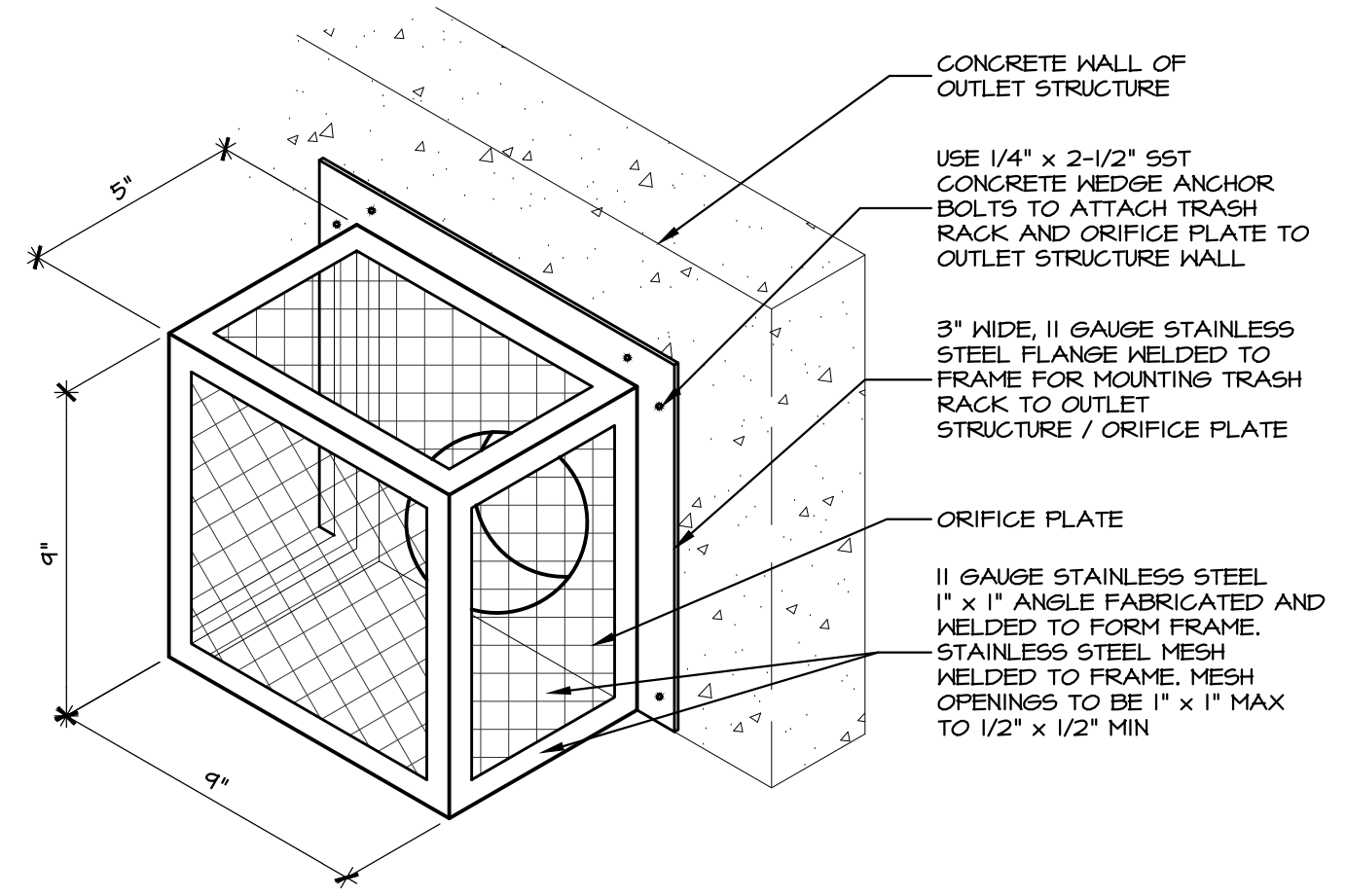
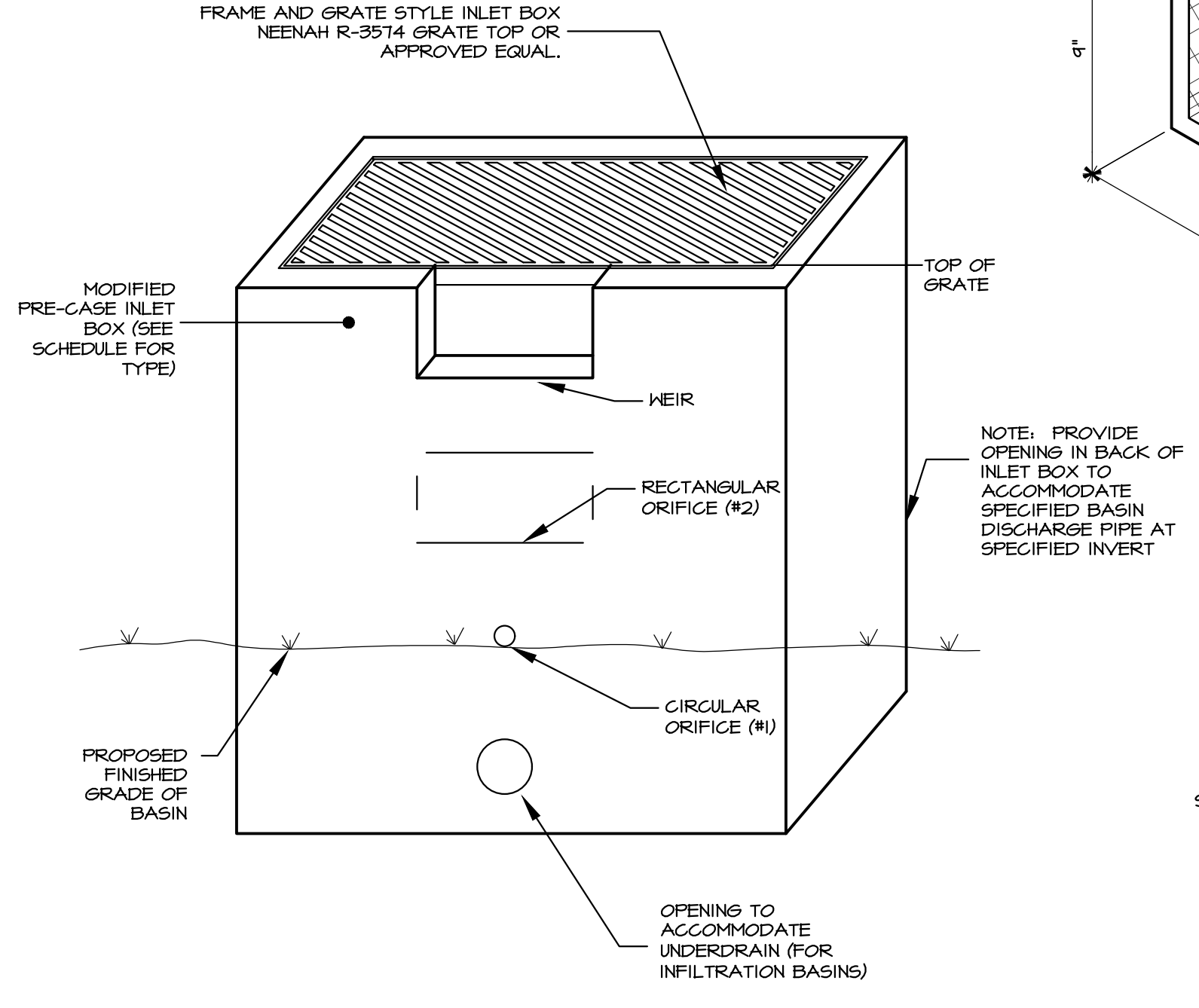
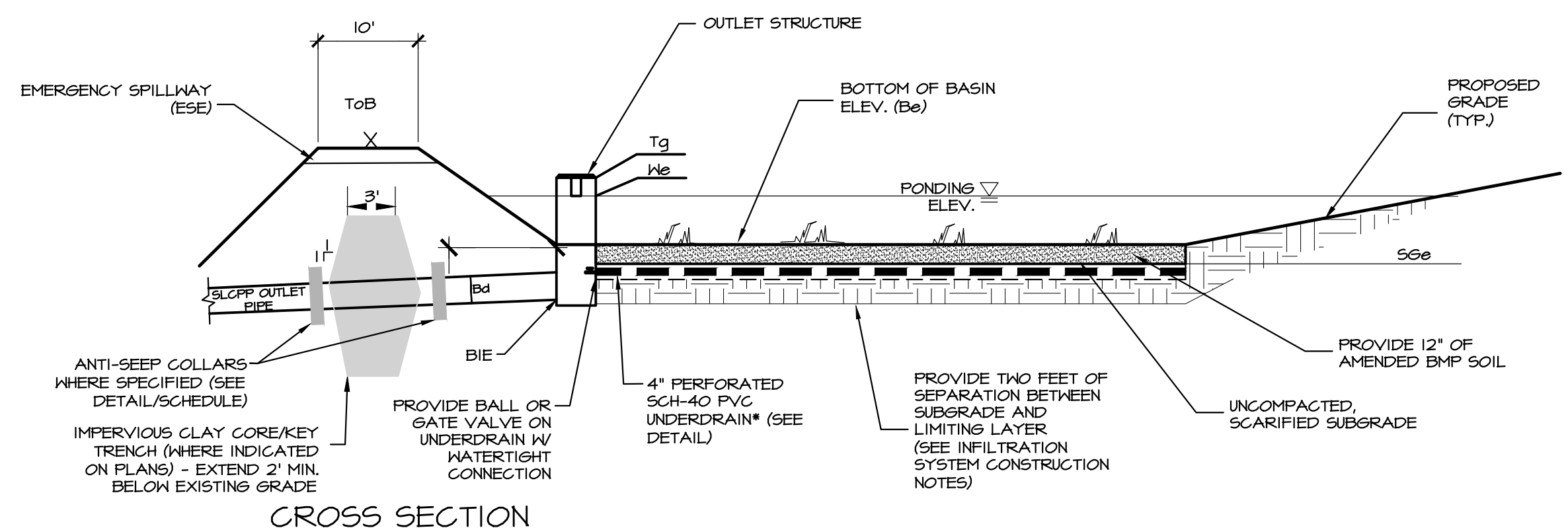
PROFESSIONAL SEAL: TYLER E. HILL, ENGINEER, PENNSYLVANIA

PRELIMINARY/FINAL LAND DEVELOPMENT SUBJECT: STORMWATER DETAILS FOR WESTTOWN SCHOOL - OAK LANE PROJECTS WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA CLIENT: WESTTOWN SCHOOL 975 WESTTOWN ROAD WEST CHESTER, PA 19382 (610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

DRAWING: C:\Users\jason\Desktop\DETAILS.dwg - PLOTTED: Sep 27, 2023 11:39 am





- NOTE**
- THE BERM SHALL BE CONSTRUCTED OF EARTH OF A CLAY BASE WITH NO TOPSOIL AND A CUTOFF TRENCH KEY CONTINUOUS ALONG THE BERM BASE. BERM MATERIAL & CONSTRUCTION SHALL BE IN ACCORDANCE WITH PADOT SPECIFICATION PUBLIC ACTION 40B, SECTION 206.
  - BASIN DISCHARGE PIPE TO BE PROVIDED WITH WATER TIGHT JOINTS. ALL CONNECTIONS TO STORM STRUCTURES SHALL BE WATER TIGHT. BACKFILL TRENCH WITH COMPACTED ONSITE MATERIAL.
  - STRIP AND REMOVE ALL TOPSOIL AND ORGANIC MATTER FROM THE SUBGRADE OF THE BASIN EMBANKMENT AREA.
  - A GEOTECHNICAL PROFESSIONAL SHALL APPROVE THE EMBANKMENT SUBGRADE PRIOR TO FILL PLACEMENT.
  - FINAL INTERIOR/EXTERIOR SIDE SLOPES SHALL NOT EXCEED A 3H:1V SLOPE. SEE APPROVED GRADING PLAN.
  - SEE INFILTRATION SYSTEM CONSTRUCTION NOTES FOR RESTRICTIONS DETAILED INFORMATION ON CONSTRUCTION REQUIREMENTS.

**UNDERDRAIN/VALVE NOTES**  
 UNDERDRAINS AND BACKUP VALVES ARE PROPOSED TO ALLOW FOR EMERGENCY MAINTENANCE ACTIVITIES ONLY. VALVES ARE TO REMAIN CLOSED AT ALL TIMES. IF UNSUITABLE CONDITIONS ARISE, SUCH AS SATURATED SOILS OR DEWATERING TIMES EXCEEDING 24 HOURS, VALVES MAY BE OPEN TEMPORARILY IN ORDER TO ESTABLISH PERMANENT VEGETATION. AFTER ESTABLISHMENT, VALVES MAY ONLY BE OPEN IN ORDER TO DRAIN THE FACILITIES AS REQUIRED FOR PERIODIC MAINTENANCE OR FOR UNFORESEEN MAINTENANCE SUCH AS SINKHOLE REPAIR OR BASIN REMEDIATION. THE TOWNSHIP SHALL BE NOTIFIED ANY TIME THAT THE VALVE IS OPENED.

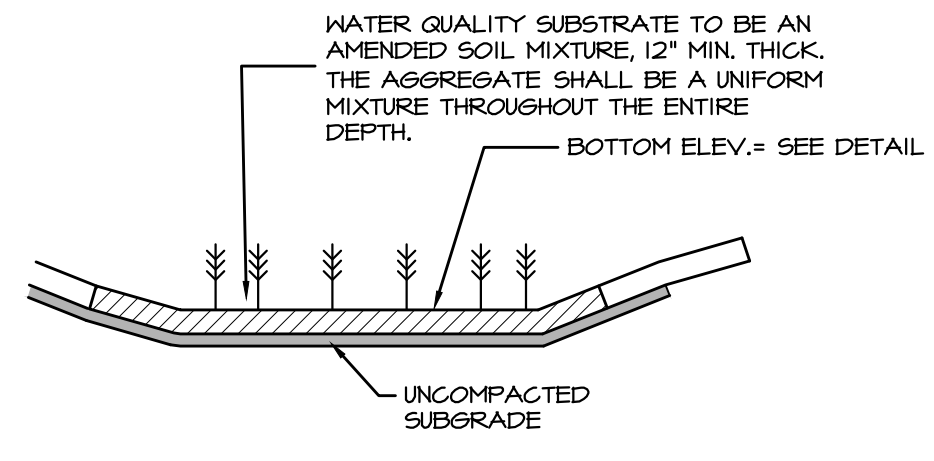
BMP NO.	BOTTOM ELEV. (Be)	SUBGRADE ELEV. (SGe)	UNDERDRAIN INVERT (UDI)	TOP OF BERM (ToB)	EMERGENCY SPILLWAY (ESE)	INFILTRATION BASIN SCHEDULE				
						TYPE	TOP OF GRATE (Tg)	WEIR/ORIFICE ELEV. (We)	INVERT ELEV. (BIE)	SIZE (IN.)
1	288.50	287.50	287.67	293.00	291.25	2'x4' INLET	291.00	289.50	284.25	18
4	310.00	309.00	309.17	314.50	313.00	2'x4' INLET	311.00	N/A	307.25	24

BMP NO.	STRUCTURE ID	ORIFICE #1		ORIFICE #2		WEIR		GRATE INLET		UNDERDRAIN		OUTLET PIPE	
		SIZE (IN)	INV. ELEV.	SIZE (IN)	INV. ELEV.	WIDTH (IN)	INV. ELEV.	TYPE	TOP OF GRATE ELEV.	SIZE (IN)	INV. ELEV.	SIZE (IN)	INV. ELEV.
1	OCS-1	N/A	N/A	N/A	N/A	24"	289.50	2'x4'	291.00	4"	287.67	18	284.25
4	OCS-4	N/A	N/A	N/A	N/A	N/A	N/A	2'x4'	311.00	4	309.17	24	307.25

\*CONTRACTOR TO CONFIRM OUTLET PIPE SIZE/INVERT FOR BASIN B-4 UTILIZING HYDROBLOXX UNDERDRAINS AND HYDROBLOXX TRANSITION BLOCK  
 \*\*SEE EROSION AND SEDIMENT CONTROL PLAN DETAILS FOR TEMPORARY OUTLET STRUCTURE CONFIGURATION WHEN ORDERING STRUCTURE

**A TYPICAL INFILTRATION BASIN/RAIN GARDEN CROSS SECTION**  
 SCALE: NTS

**B BASIN OUTLET STRUCTURE DETAIL AND SCHEDULE**  
 NO SCALE



- AMENDED SOIL MIXTURE NOTES**
- WATER QUALITY SUBSTRATES AND ASSOCIATED SOILS SHALL BE SELECTED TO ENSURE CONVEYANCE AND PERMEABILITY (MIN. 1/HR, MAX 6"/HR) TO THE PROPOSED UNDERDRAIN OR SUBGRADE.
  - IN-PLACE INFILTRATION TESTS OF THE AMENDED SOIL IS REQUIRED IN ALL INFILTRATION BMPs WHERE AMENDED SOILS ARE PROPOSED. A MINIMUM OF TWO TESTS PER BASIN SHALL BE PERFORMED UTILIZING ACCEPTABLE METHODS AS DESCRIBED IN THE PADOT BMP MANUAL IN ORDER TO CONFIRM THAT ACCEPTABLE INFILTRATION RATES HAVE BEEN ACHIEVED.
  - CLAY SOILS OR OTHER COHESIVES THAT PREVENT INFILTRATION SHALL NOT BE PERMITTED.
  - ALL SOIL TO BE UTILIZED IN THE AMENDED SOIL MIXTURE SHALL BE TESTED AND VERIFIED TO CONTAIN A MAXIMUM OF 5% CLAY CONTENT, OR A PERCENTAGE APPROVED BY THE TESTING AGENCY TO ENSURE PROPER PERMEABILITY.
  - ALL SOILS SHALL BE TESTED AND VERIFIED NOT TO CONTAIN ANY CONTAMINANTS OR OBJECTIONABLE MATERIALS THAT WOULD COMPROMISE THE INTENT OF WATER QUALITY.
  - THE LEAF BASED COMPOST SHALL BE PROVIDED WITH A MATERIAL CERTIFICATION FROM THE SUPPLIER FOR APPROVAL PRIOR TO INSTALLATION. NO BIO-SOLIDS OR OTHER SUCH CONTAMINATES ARE PERMITTED.

**RECOMMENDED PRE-MIXED BLEND:**

SMS BIO SOIL BLEND  
 NEW ENTERPRISE STONE & LIME CO., INC.  
 814-766-2211  
 www.nesl.com

IT IS RECOMMENDED THAT SMS BIO-SOIL BY NEW ENTERPRISE STONE & LIME CO., INC. ALTERNATIVE BLENDS MAY BE USED IF PRE-APPROVED BY THE TOWNSHIP AND DESIGN ENGINEER TO MEET THE FOLLOWING MINIMUM REQUIREMENTS:

**TYPICAL AMENDED SOIL MIXTURE**

33.33% FINE COMPOST  
 66.67% TOPSOIL

**FINE COMPOST FOR BMP SOIL:**

75% BY VOLUME RECYCLED PLANT WASTE  
 25% MAX. OTHER APPROVED ORGANIC FOOD WASTE (NO POST-CONSUMER FOOD WASTE, MANURE OR BIO-SOLIDS)\*\*

\*SOIL SAMPLE MUST BE PROVIDED BY DESIGN AND TOWNSHIP ENGINEER PRIOR TO PLACEMENT. CONTRACTOR TO VERIFY NO POST CONSUMER FEED WASTE OR SOLIDS USED IN PREPARATION OF SOILS.

**TOPSOIL VERIFICATION**

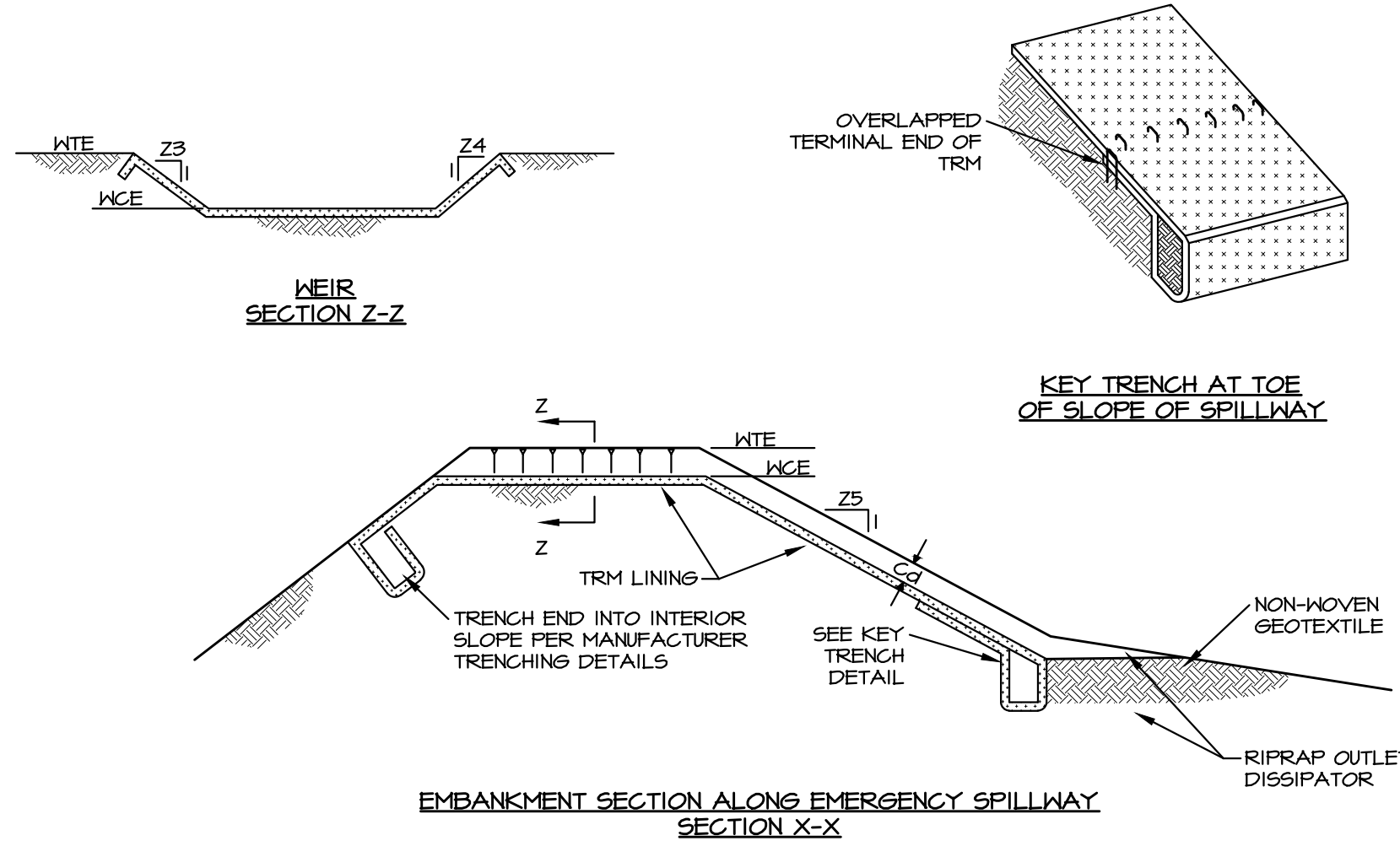
- ANY AND ALL TOPSOIL TO BE USED IN AMENDED SOIL MIXTURE SHALL UNDERGO APPROPRIATE LAB TESTING AS PRESCRIBED BY A QUALIFIED GEOTECHNICAL PROFESSIONAL IN ORDER TO DETERMINE THE SUITABILITY FOR USE IN THE ABOVE AMENDED SOIL BLEND MIX.

**SEEDING NOTES AND RECOMMENDATIONS FOR BMP BASINS**

- TO PREVENT SEED MIGRATION IN RAIN EVENTS, HYDROSEEDING OR AN APPROVED METHOD SHALL BE EMPLOYED TO THE BASIN BOTTOM ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
- SUCH HYDROSEEDING SHALL INCORPORATE AN APPROPRIATE MIXTURE OF SEED, MULCH, AND TACKIFIER COAGULANT TO WATER TO FORM A THICK SLURRY. THIS SLURRY IS APPLIED WITH PRESSURE TO PREPARED SOIL SURFACE FOR BETTER SEED GERMINATION AND PLANT DEVELOPMENT, WHILE PREVENTING EROSION.
- IN ANTICIPATED AREAS OF EROSION FROM STORMWATER INUNDATION, A LITE MATTING OR EQUAL APPROVED EROSION CONTROL LINING SHALL BE INSTALLED ALONG THE BOTTOMS ARE NOT TO BE MOVED OTHER THAN RECOMMENDED ANNUAL MAINTENANCE. IF TURF GRASS IS DESIRED, THE TYPICAL AMENDED SOIL MIXTURE SHOULD BE USED.
- WHERE A PERMANENT LINING IS SPECIFIED WITHIN THE BMP SEEDING LIMITS, A THIN LAYER OF TOP SOIL SHALL BE PROVIDED OVER THE LINING PRIOR TO SEEDING TO ALLOW FOR A GERMINATION OF THE SEED MIX.

**SEEDING SPECIFICATION**

- IT IS THE INTENT OF THE SEEDINGS TO ESTABLISH A MEADOW GRASS OR TURF GRASS BOTTOM OF THE BMP BASINS, PER THE OWNER'S PREFERENCE. MEADOW GRASSES ARE NOT TO BE MOVED OTHER THAN RECOMMENDED ANNUAL MAINTENANCE.
- THE SEED MIXTURE TO BE USED IS THE FOLLOWING (OR APPROVED EQUAL) AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ASSOCIATED SITE CONDITIONS. IT IS RECOMMENDED THAT THE SEED BE HYDRO-SEEDING INTO THE AMENDED SOILS.
- CONTRACTOR IS TO PROVIDE ERNMX-126 SEED MIX FOR TURF GRASS BOTTOMS AND ERNMX-121 SEED MIX FOR MEADOW BOTTOMS AT A RATE OF 15 LB/AC WITH AN ADDITION OF 4 LB/ACRE (0.1 LB/1000 SQ FT) OF PANICUM ANCEPS (BEAKED PANIGRASS) MD ECOTYPF INTO THE ERNMX-121, AS SPECIFIED BY ERNST SEED.



BASIN NO.	WEIR		TOP ELEV WTE (FT)	PERM. CREST ELEV WCE (FT)	WIDTH Wk (FT)	LINING
	Z3 (FT)	Z4 (FT)				
1	4.5	4.5	293.00	291.25	30	FLEXAMAT
4	6	6	315.00	313.00	40	FLEXAMAT

**C BMP AMENDED SOIL/SEEDING NOTES**  
 NOT TO SCALE

**D BASIN EMERGENCY SPILLWAY WITH TRM LINING**  
 NO SCALE

REVISIONS PER:	DATE:	BY:
1. OCCC COMMENTS	3-1-2023	TEH
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4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5.	-	-

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PROFESSIONAL ENGINEER  
 TYLER E. HILL  
 ENGINEER  
 PENNSYLVANIA

PROFESSIONAL LANDSCAPE ARCHITECT  
 JASON C. BERT  
 LANDSCAPE ARCHITECT  
 PENNSYLVANIA

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT  
 SUBJECT:  
**STORMWATER DETAILS**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
 DESIGNER: JCB PROJECT NO. 1091-001  
 DRAWN BY: JCB SCALE: AS NOTED

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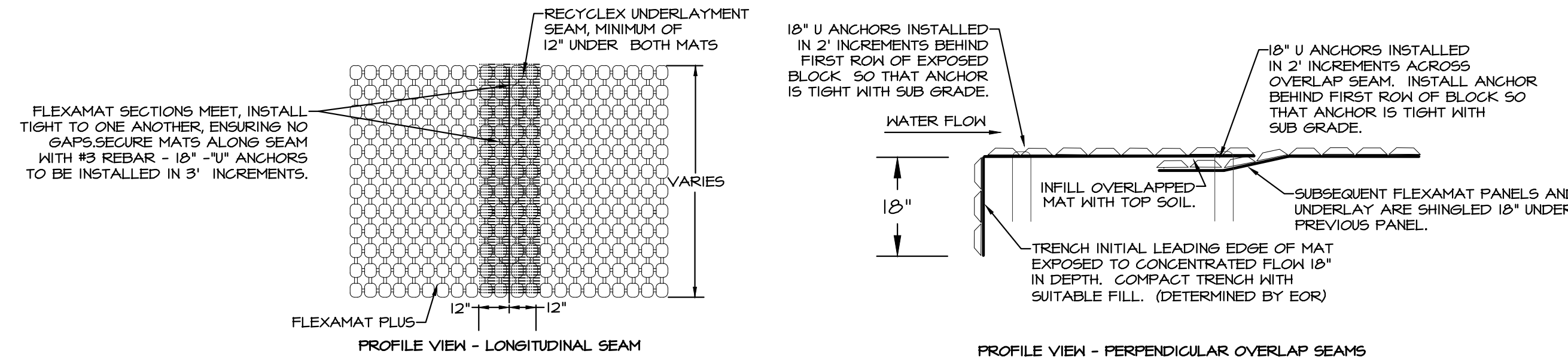
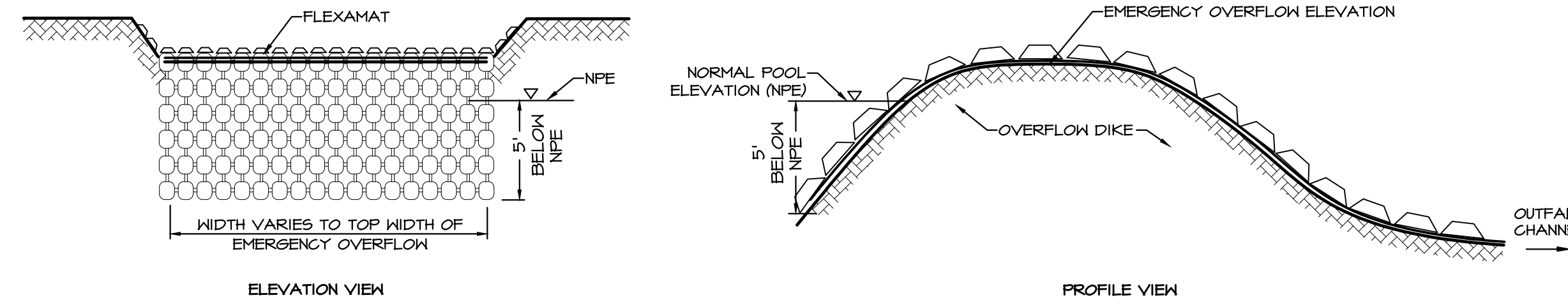
Manufacturer: Motz Enterprises, Inc.  
 Product Name: Flexamat  
 Address: 3153 Madison Road  
 Cincinnati, Ohio 45209  
 Telephone: 513-772-MOTZ (66894)  
 Fax: 513-772-6690  
 Email: info@flexamat.com  
 Website: www.flexamat.com

**CONSTRUCTION NOTES**

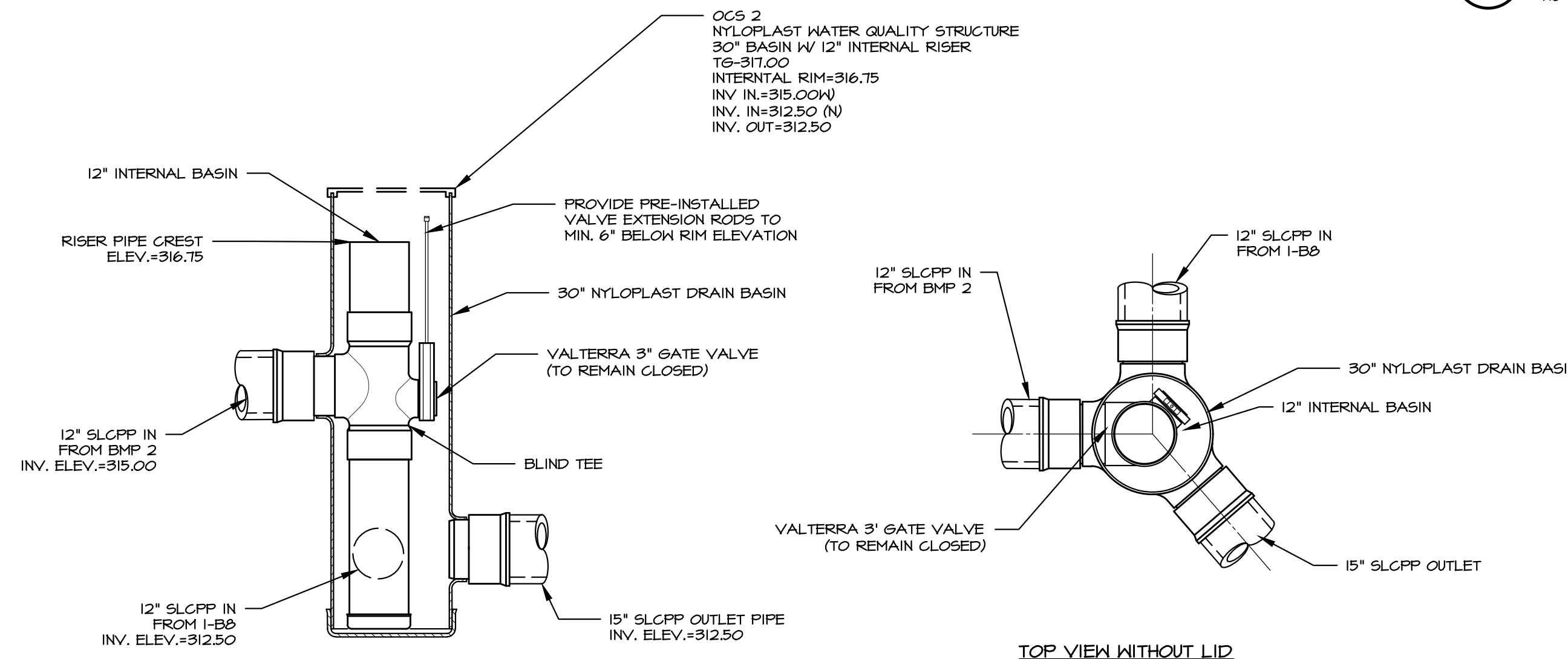
- ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS WITH NO SHARP OR ABRUPT BREAKS IN THE GRADE.
- APPLY SEED DIRECTLY TO PREPARED SOIL PRIOR TO FLEXAMAT INSTALLATION. USE SEED PER PROJECT SPECIFICATIONS.
- INSTALL FLEXAMAT ROLLS. MAT SHALL EXTEND 5' BELOW NORMAL POND ELEVATION. (FOR EMERGENCY OVERFLOW INSTALLATIONS EXTEND THE MAT 3' DOWN THE INSIDE FACE OF THE OVERFLOW DIKE.)
  - FOR WIDTHS WIDER THAN 16', INSTALL MATS ADJACENT TO ONE ANOTHER. BRIDGE LONGITUDINAL SEAM WITH RECYCLEX UNDERLAYMENT. A MINIMUM OF 12" OF TRM SHALL BE UNDER EACH MAT AND DIRECTLY AGAINST THE SUBGRADE.
  - FLIP FLEXAMAT SECTIONS BACK INTO PLACE SO THAT THEY FIT TIGHTLY.
  - SECURE SEAM BY INSTALLING 18" U-ANCHORS IN 3' INCREMENTS THE LENGTH OF THE LONGITUDINAL SEAM. U-ANCHORS CONSIST OF #3 REBAR, SHAPED INTO A U WITH 18" LEGS.
- IF ADDITIONAL SECTIONS ARE REQUIRED FOR LENGTH OF CHANNEL, OVERLAP THE DOWNSTREAM SECTION 18" WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 24". EXCAVATE 2.25" OF SOIL 18" FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH, LIGHTLY SPREAD TOPSOIL OVER INITIAL EDGE, FLIP END OF UPSTREAM MAT OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT. INSTALL 18" U-ANCHORS IN 2' INCREMENTS ACROSS THE OVERLAP.
- AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SUITABLE FILL.
- APPLY HYDRO SEEDING OVER MATTING FOLLOWING INSTALLATION.

- EXCAVATION FOR THE INFILTRATION FACILITIES SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE SEEPAGE BED/TRENCH OR LIKE FACILITY.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF (4) INFILTRATION TESTS FOR ALL INFILTRATION BMPs, EVENLY SPREAD AMONG THE INFILTRATION FOOTPRINT AT SUBGRADE ELEVATION PRIOR TO PLACEMENT OF AGGREGATE OR AMENDED SOILS TO CONFIRM ACCEPTABLE INFILTRATION RATES (0.25 TO 10.0 IN/HR).
- THE BOTTOM OF THE BED AND/OR TRENCH SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE.
- ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED.
- THE TOPS AND SIDES OF ALL SEEPAGE BEDS, TRENCHES, OR LIKE FACILITIES SHALL BE COVERED WITH DRAINAGE FABRIC. FABRIC SHALL BE NON-WOVEN FABRIC ACCEPTABLE TO THE MUNICIPAL ENGINEER.
- STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE SEEPAGE BED/TRENCH OR LIKE FACILITY AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED IN ALL FACILITIES.

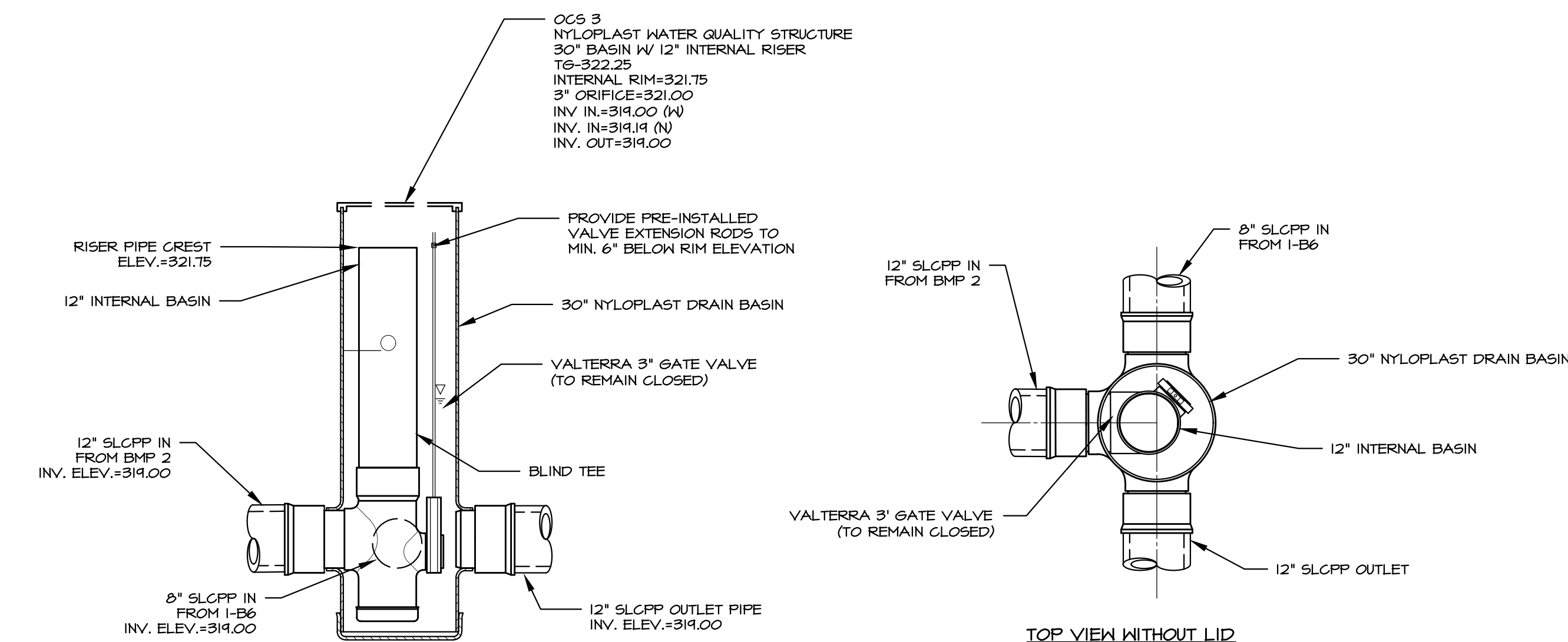
**A INFILTRATION BMP CONSTRUCTION NOTES**  
 NO SCALE



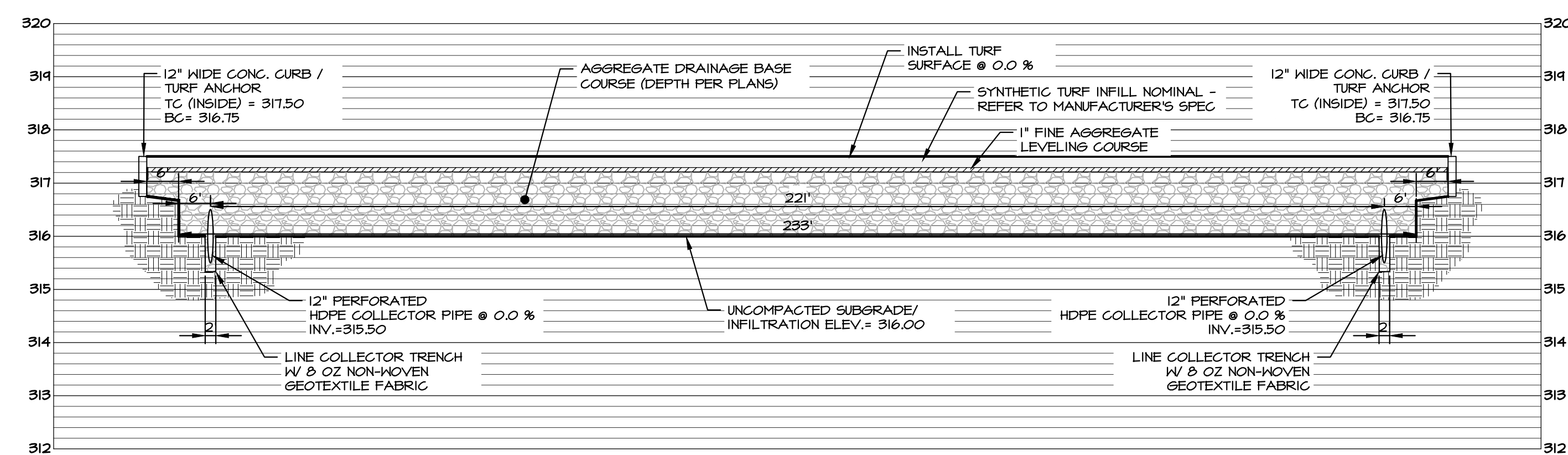
**B FLEXAMAT OVERFLOW PLAN AND PROFILE DETAIL**  
 NO SCALE



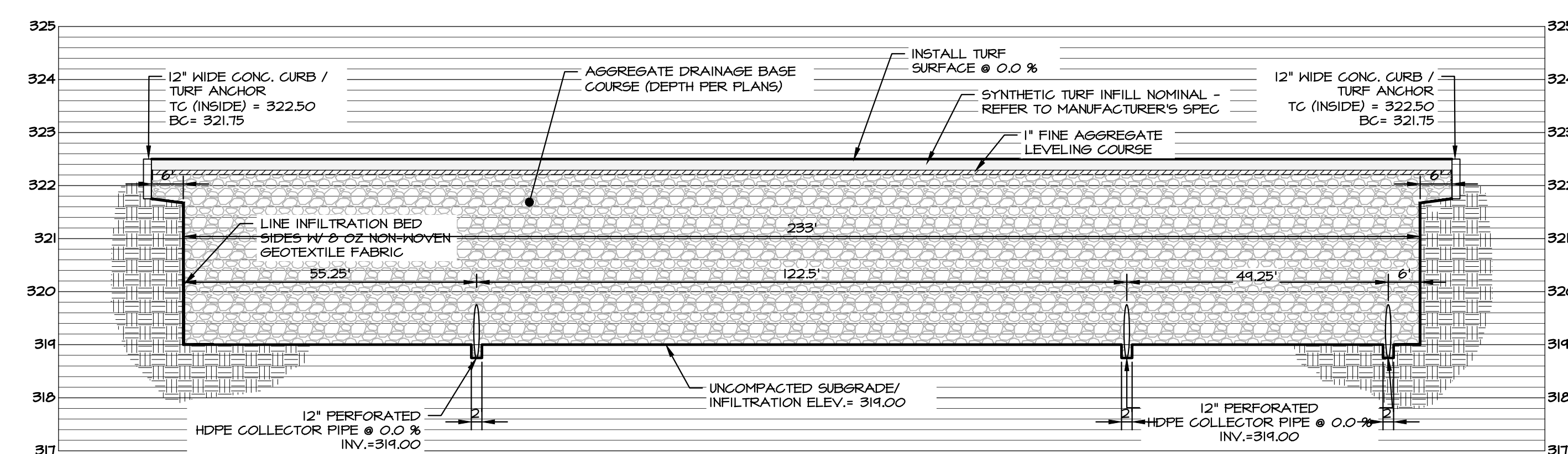
**C INFILTRATION BMP 2 OUTLET STRUCTURE DETAIL(OCS-2) - NYLOPLAST WATER CONTROL INLET**  
 NO SCALE



**D INFILTRATION BMP 3 OUTLET STRUCTURE DETAIL(OCS-3) - NYLOPLAST WATER CONTROL INLET**  
 NO SCALE



**C MULTI-PURPOSE FIELD/INFILTRATION BED (BMP 2) CROSS-SECTION 'A'**  
 HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1/2" = 1'



**D MULTI-PURPOSE FIELD/INFILTRATION BED (BMP 3) CROSS-SECTION 'A'**  
 HORIZONTAL SCALE: 1" = 20'  
 VERTICAL SCALE: 1/2" = 1'

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5. -	-	-

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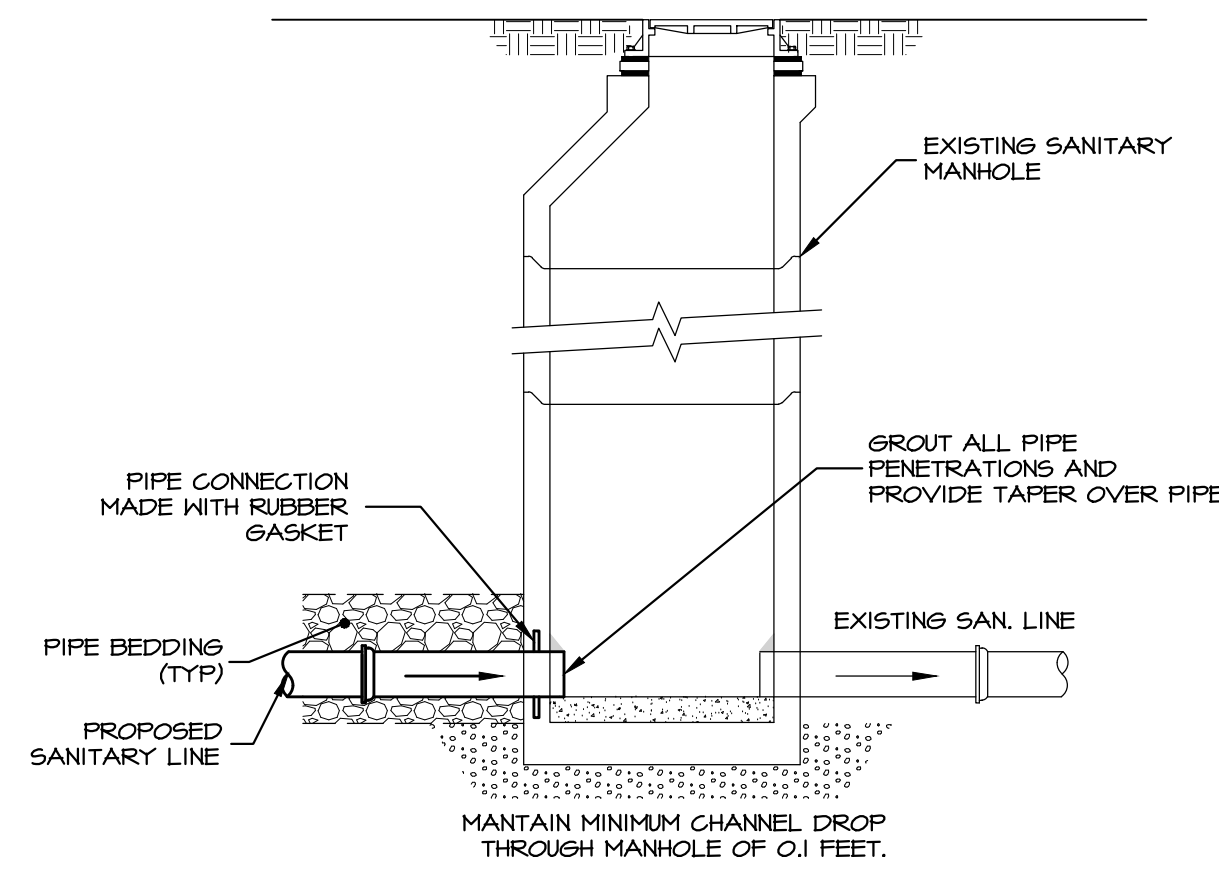
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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

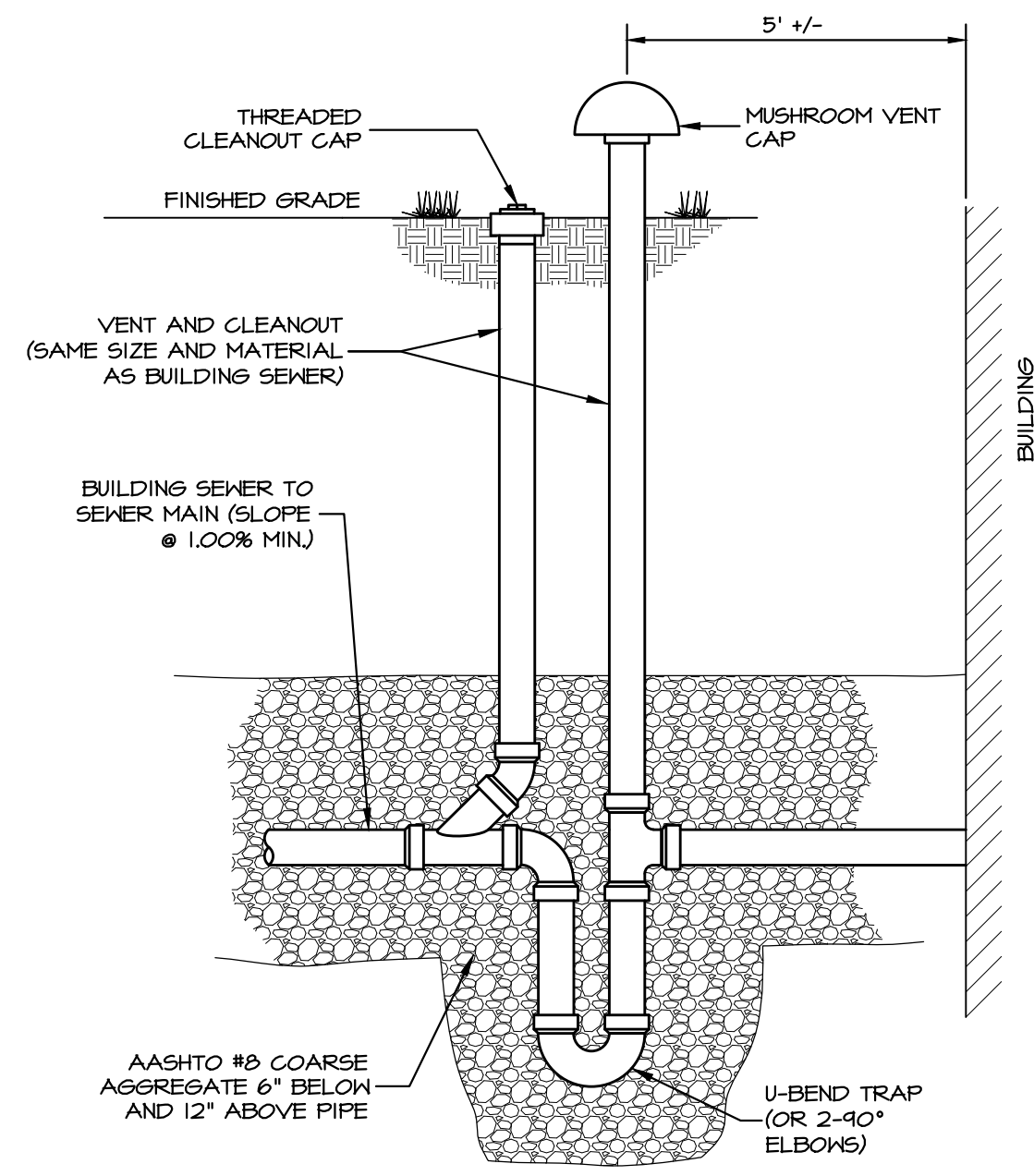
PRELIMINARY/FINAL LAND DEVELOPMENT  
 SUBJECT:  
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 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
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MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

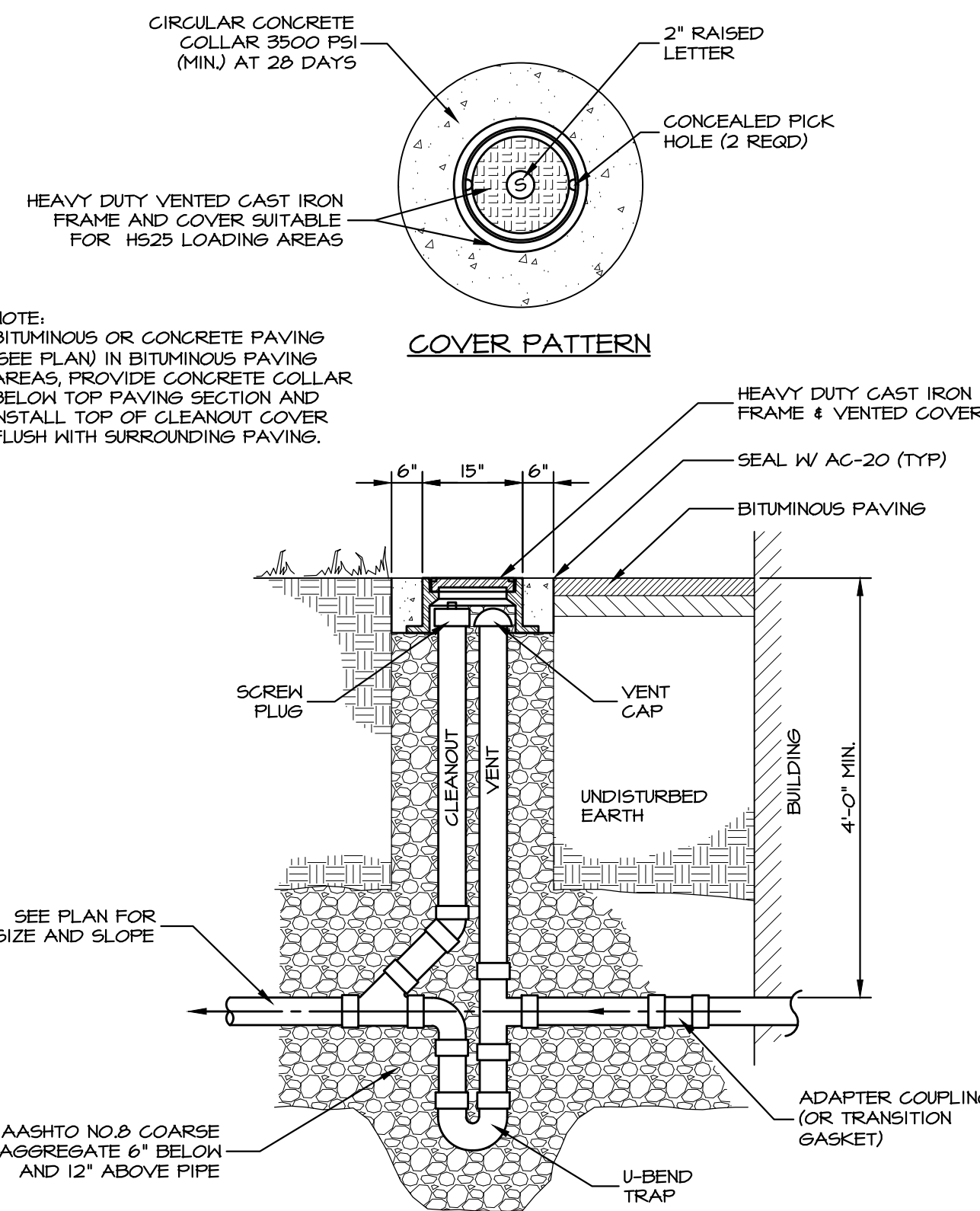
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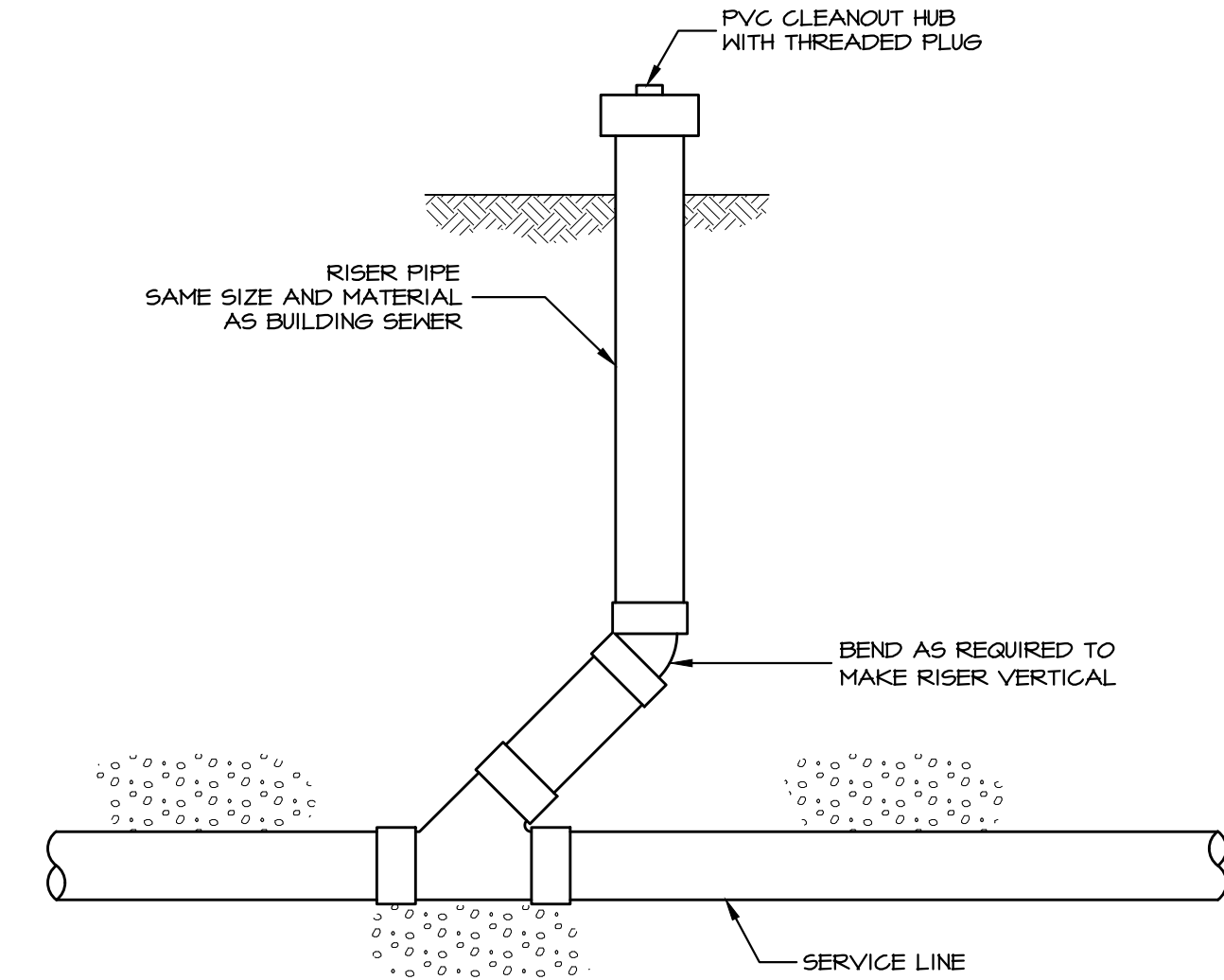
**SECTION A**  
**PROPOSED SANITARY CONNECTION TO EXISTING MANHOLE**  
 NO SCALE



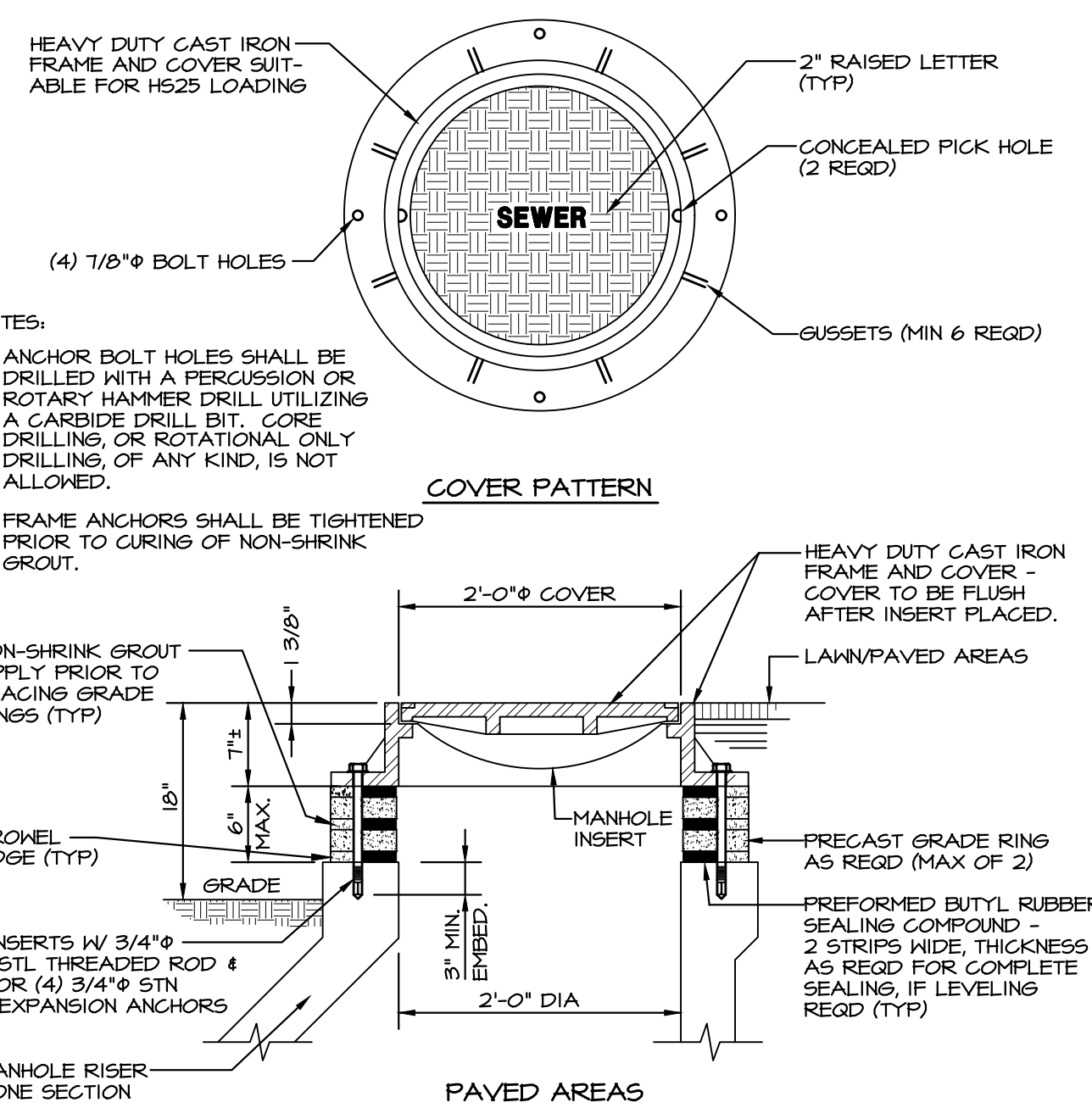
**SECTION B**  
**TRAP AND VENT DETAIL**  
 NO SCALE



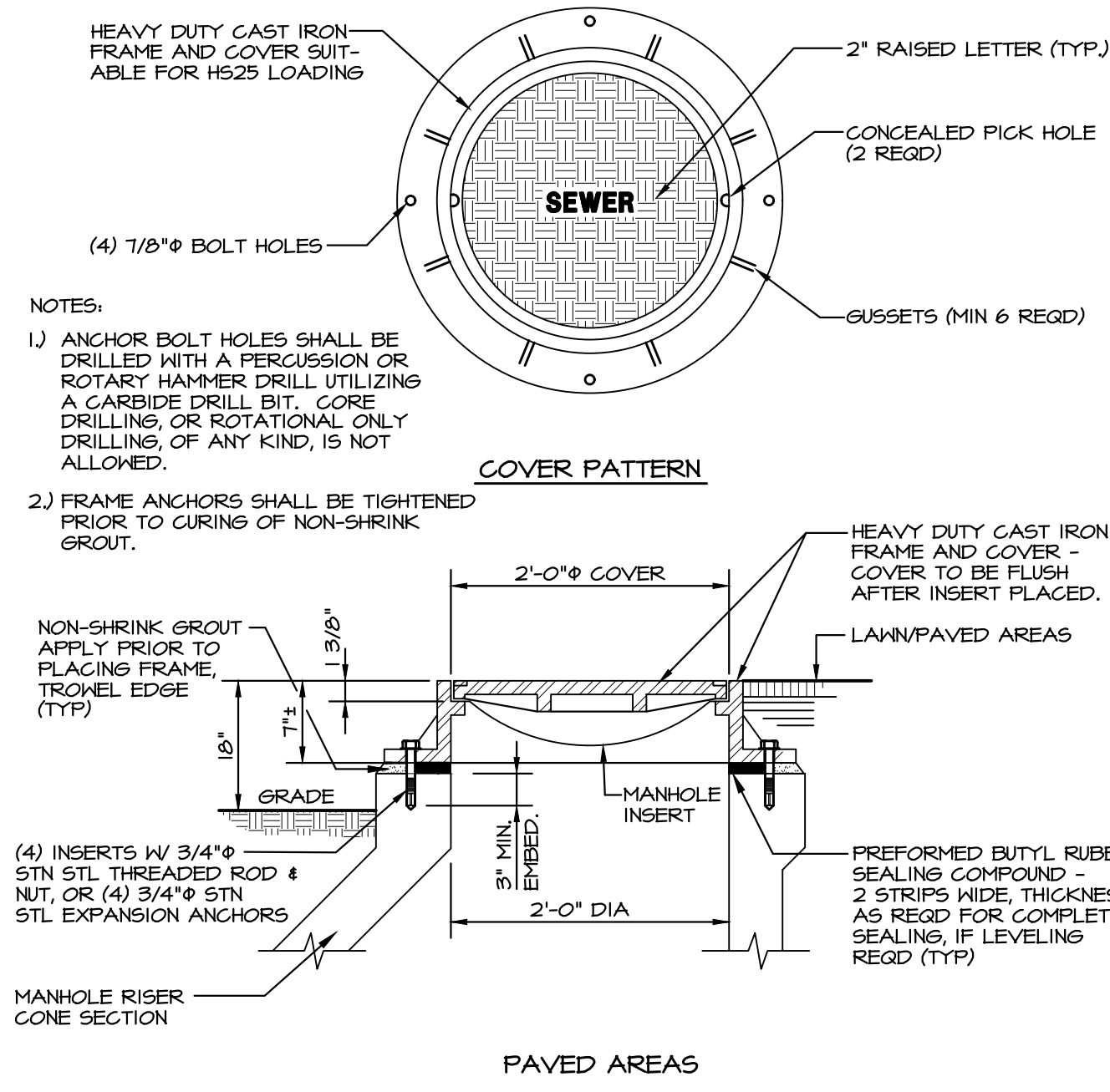
**SECTION C**  
**TRAP AND VENT DETAIL**  
 NO SCALE



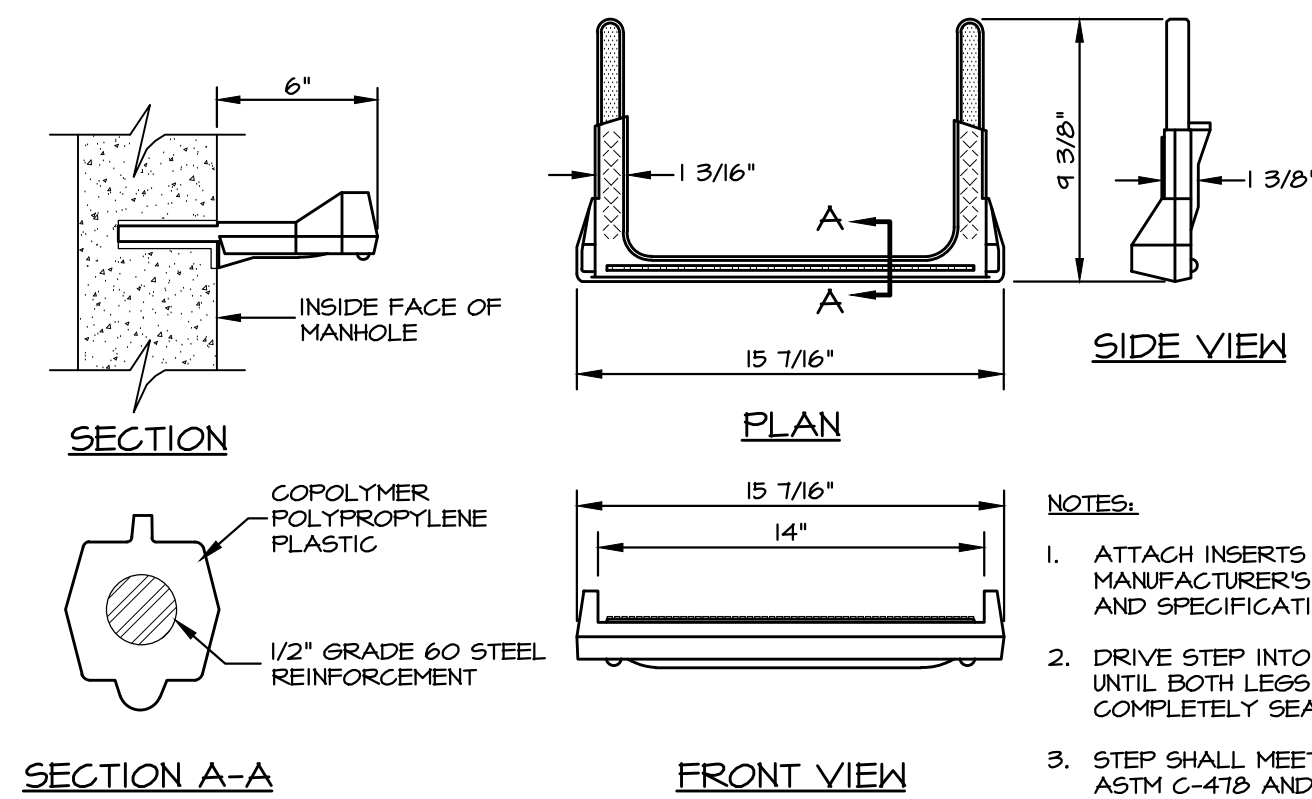
**SECTION D**  
**NEW CLEANOUT IN LAWN AREAS**  
 NO SCALE



**SECTION E**  
**STANDARD MANHOLE FRAME & COVER WITH GRADE RINGS DETAIL**  
 NO SCALE



**SECTION F**  
**STANDARD MANHOLE FRAME & COVER WITHOUT GRADE RINGS DETAIL**  
 NO SCALE

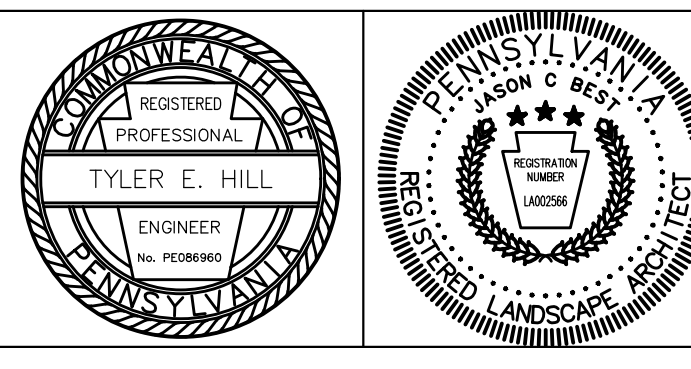


**SECTION G**  
**MANHOLE STEP DETAIL**  
 NO SCALE

REVISIONS PER:	DATE:	BY:
1. CDD COMMENTS	3-1-2023	TEH
2. CDD COMMENTS	3-17-2023	TEH
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4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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**PRELIMINARY/FINAL LAND DEVELOPMENT**  
 SUBJECT:  
**SANITARY SEWER DETAILS**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

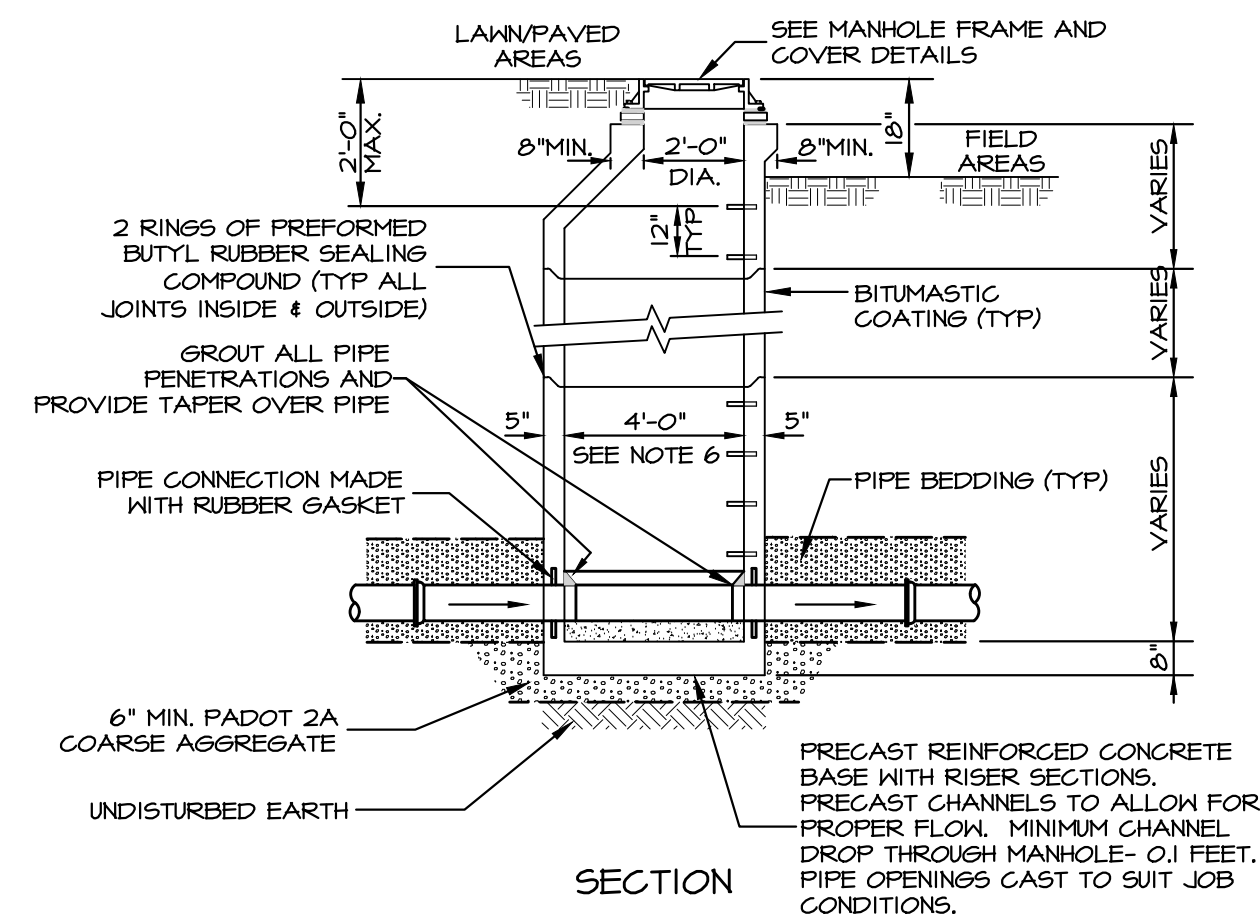
MANAGER: CRH DATE: JANUARY 27, 2023  
 DESIGNER: JCB PROJECT NO. 1091-001  
 DRAWN BY: JCB SCALE: AS NOTED

DRAWING NO.  
**42 of 48**

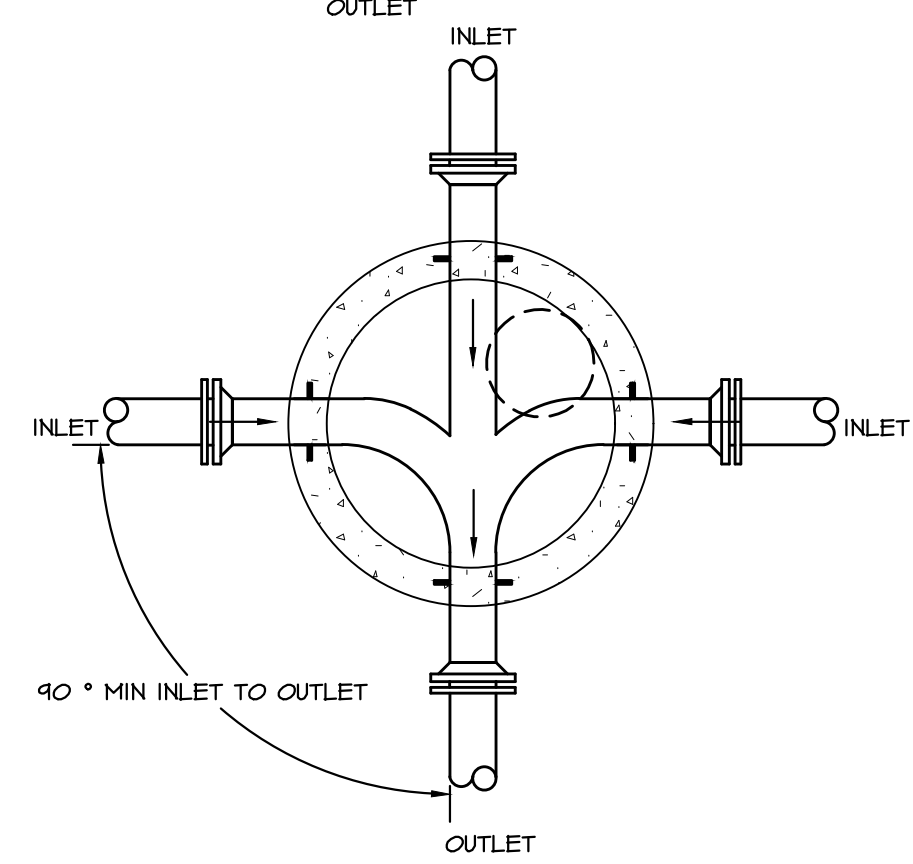
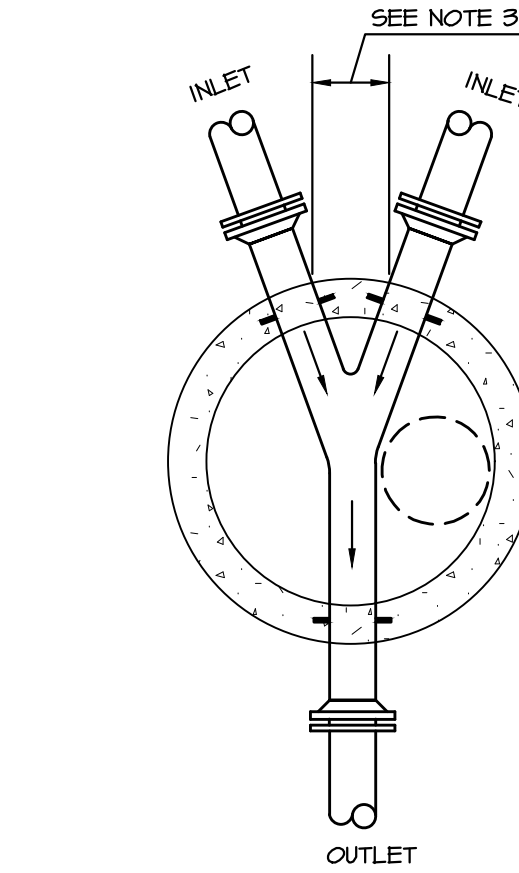
DRAWING: C:\Users\jason\Desktop\DETAILS.dwg - PLOTTED: Sep 27, 2023 11:42 am

**NOTES:**

1. ADJUST TO GRADE WITH CONCRETE GRADE RINGS (MAX. VERT. ADJUST. 6") SEE FRAME & COVER DETAILS.
2. MECHANICALLY VIBRATED PRECAST CONC SHALL CONFORM TO A.S.T.M. SPEC. C-47B.
3. IF INCOMING INVERT EXCEEDS OUTGOING INVERT BY GREATER THAN OR EQUAL TO 6", SEE INSIDE SPLASH/ INSIDE DROP MANHOLE DETAILS.
4. FOR MANHOLES WHERE TOP OF RIM TO INVERT DISTANCE IS LESS THAN 5'-0", USE FLAT TOP MANHOLE IN LIEU OF CONE TOP.
5. FILL ALL LIFTING HOLES WITH NON-SHRINK GROUT.



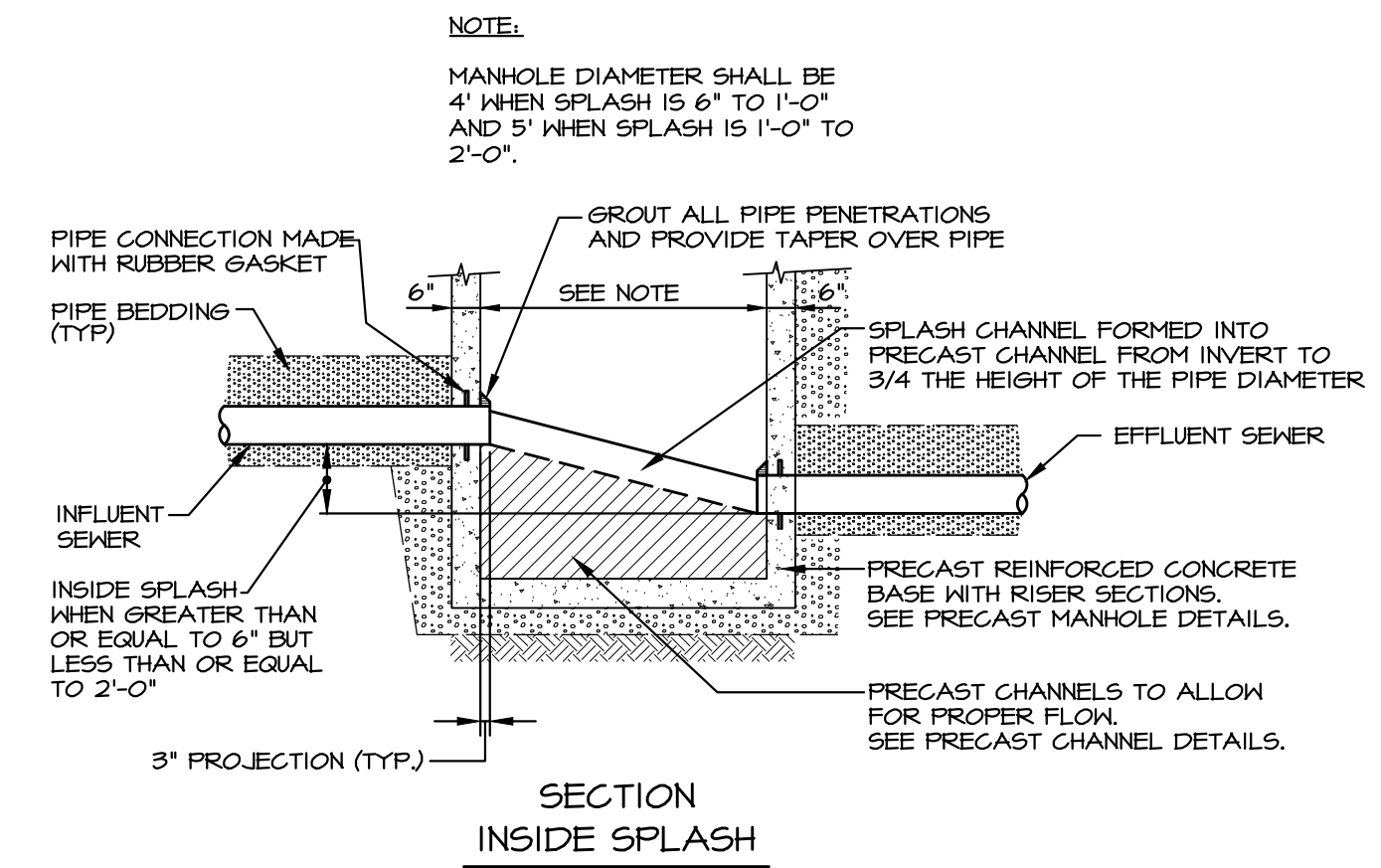
**A** PRECAST MANHOLE 8" THRU 24" SEWERS  
NO SCALE



**B** PRECAST CHANNEL  
NO SCALE

**NOTES:**

1. THREE INLET PIPES AND ONE OUTLET PIPE MAX INTO MANHOLE.
2. MINIMUM 12" SEPARATION FROM EDGE OF PIPE PENETRATION TO EDGE OF PIPE PENETRATION.
3. MINIMUM CHANNEL DROP THROUGH MANHOLE:  
STRAIGHT THROUGH 0.1 FEET  
BEND 0.2 FEET
4. ALL CHANNELS SHALL BE PRECAST, UNLESS OTHERWISE SPECIFICALLY NOTED OR APPROVED.
5. THESE DETAILS APPLY TO PRECAST AND FIELD-FORMED CHANNELS IN NEW AND EXISTING MANHOLES.
6. CHANNEL BENCH AT PIPE SHALL MATCH CROWN ELEVATION OF PIPE AND RISE 1/2" PER FOOT TO THE MANHOLE WALLS.
7. CHANNELS SHALL MATCH THE CROSS-SECTIONAL DIMENSIONS OF THE PIPES ENTERING AND EXITING THE MANHOLE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CHANGES IN PIPE SIZE.



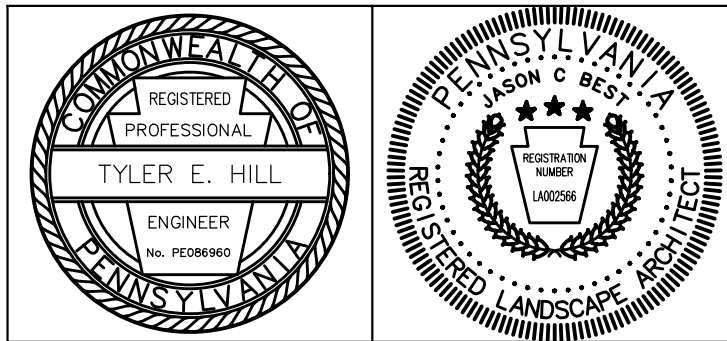
**C** STRAIGHT RUN INSIDE SPLASH MANHOLE (SSMH-1)  
NO SCALE

REVISIONS PER:	DATE:	BY:
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4. CEG REVIEW LETTER DATED 9/1/2023	9/19/2023	JCB
5. -	-	-



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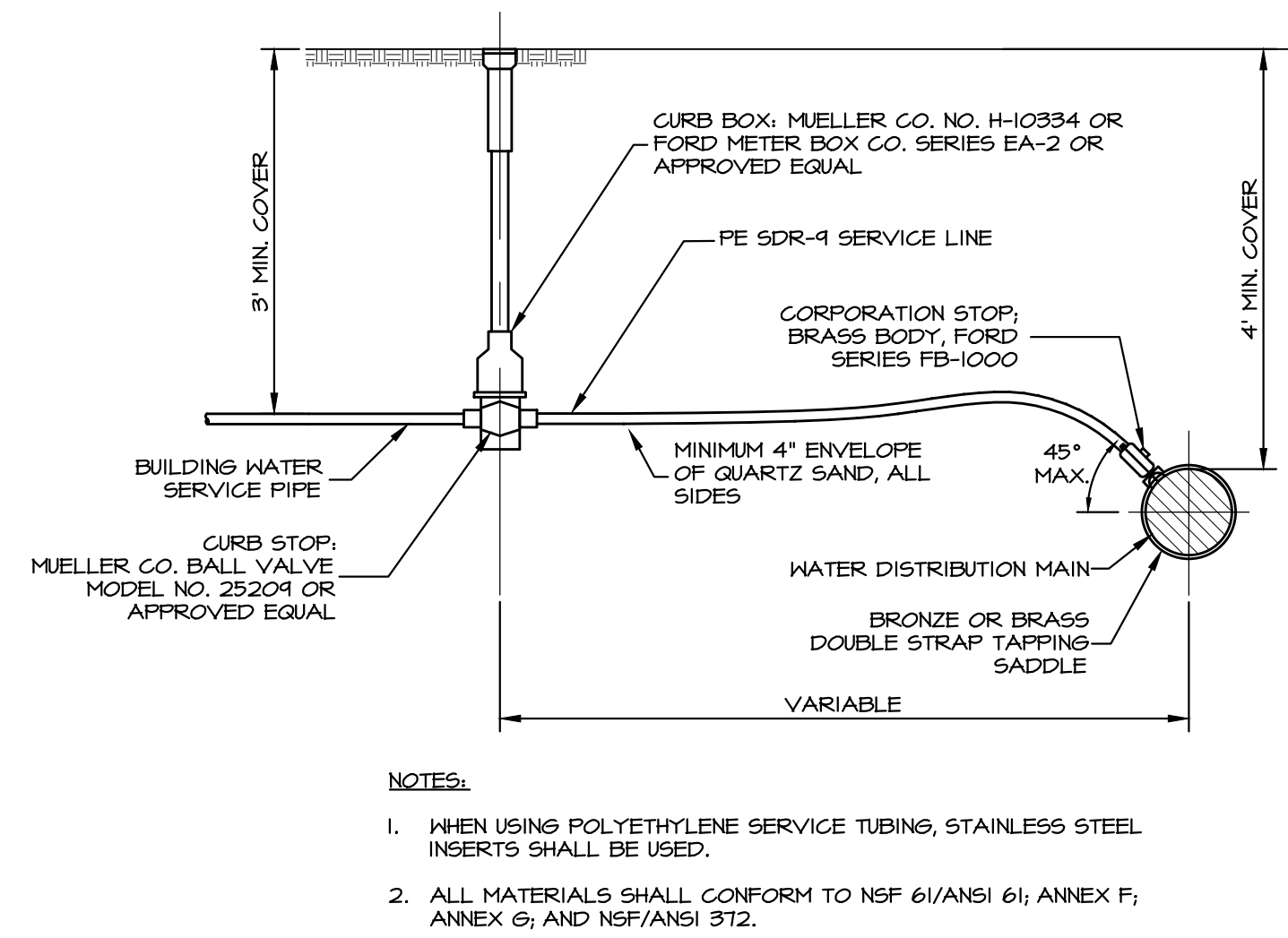
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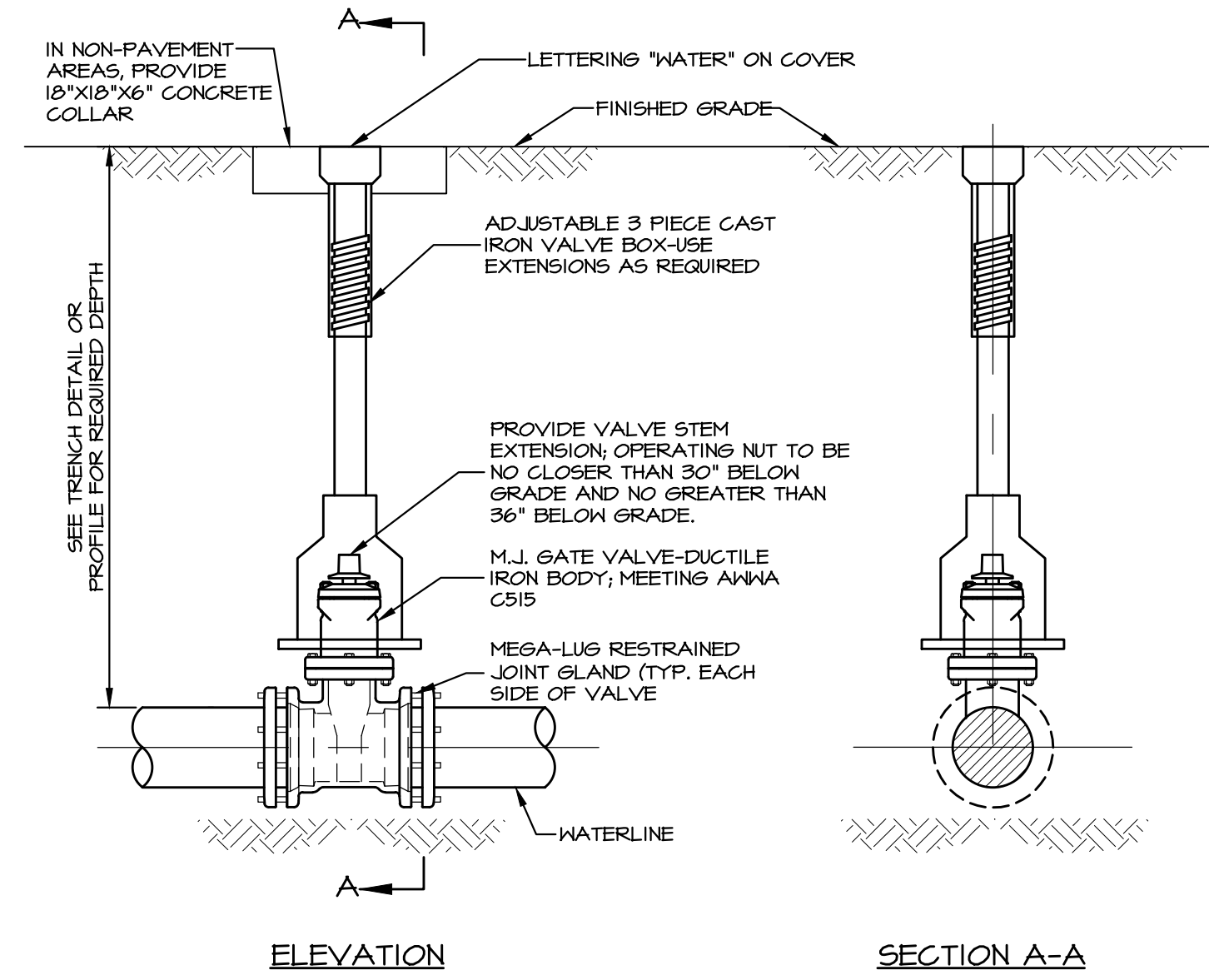
PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT:  
**SANITARY SEWER DETAILS**  
FOR  
WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT:  
**WESTTOWN SCHOOL**  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	AS NOTED

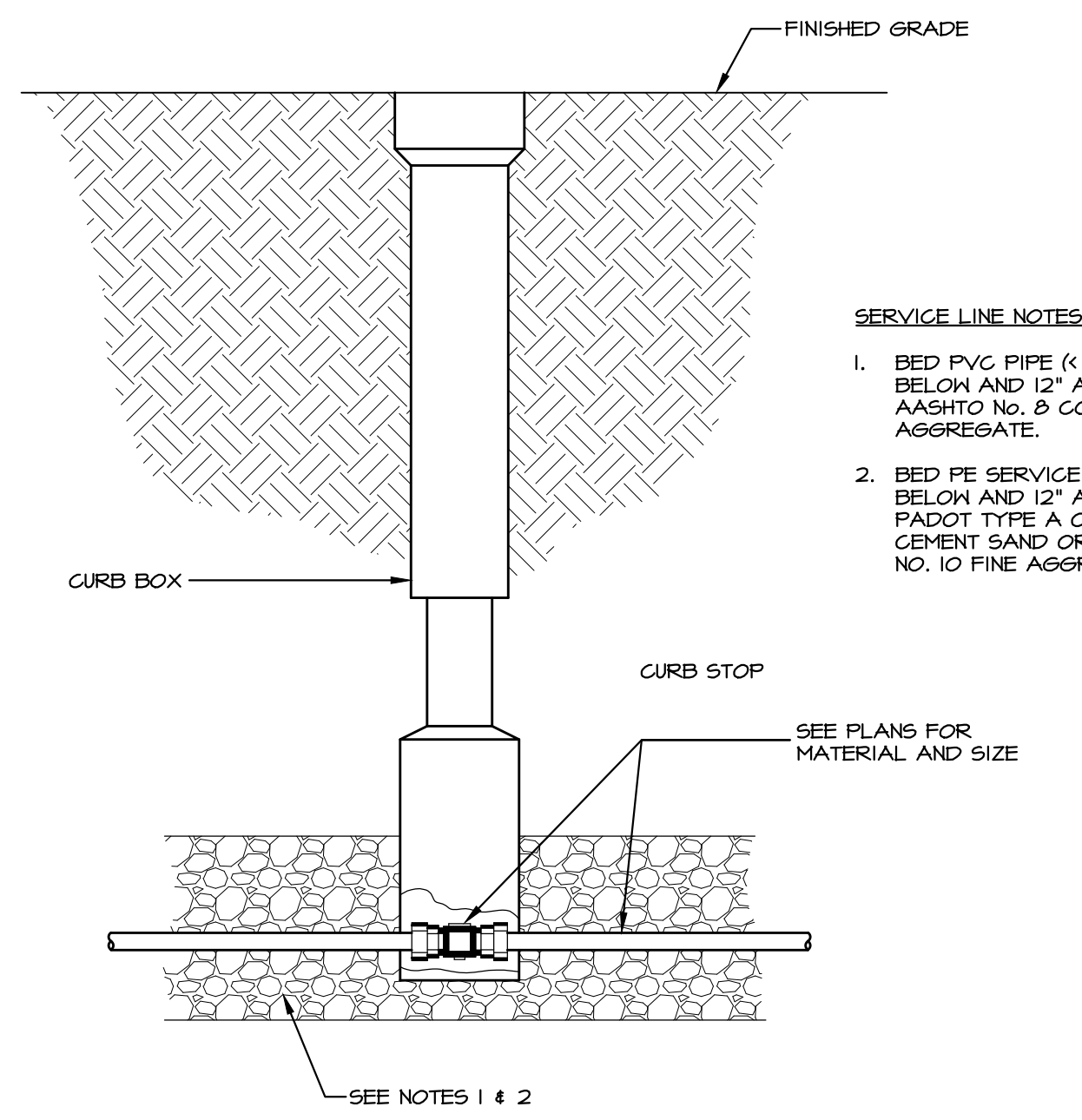
DRAWING NO.  
**43 of 48**



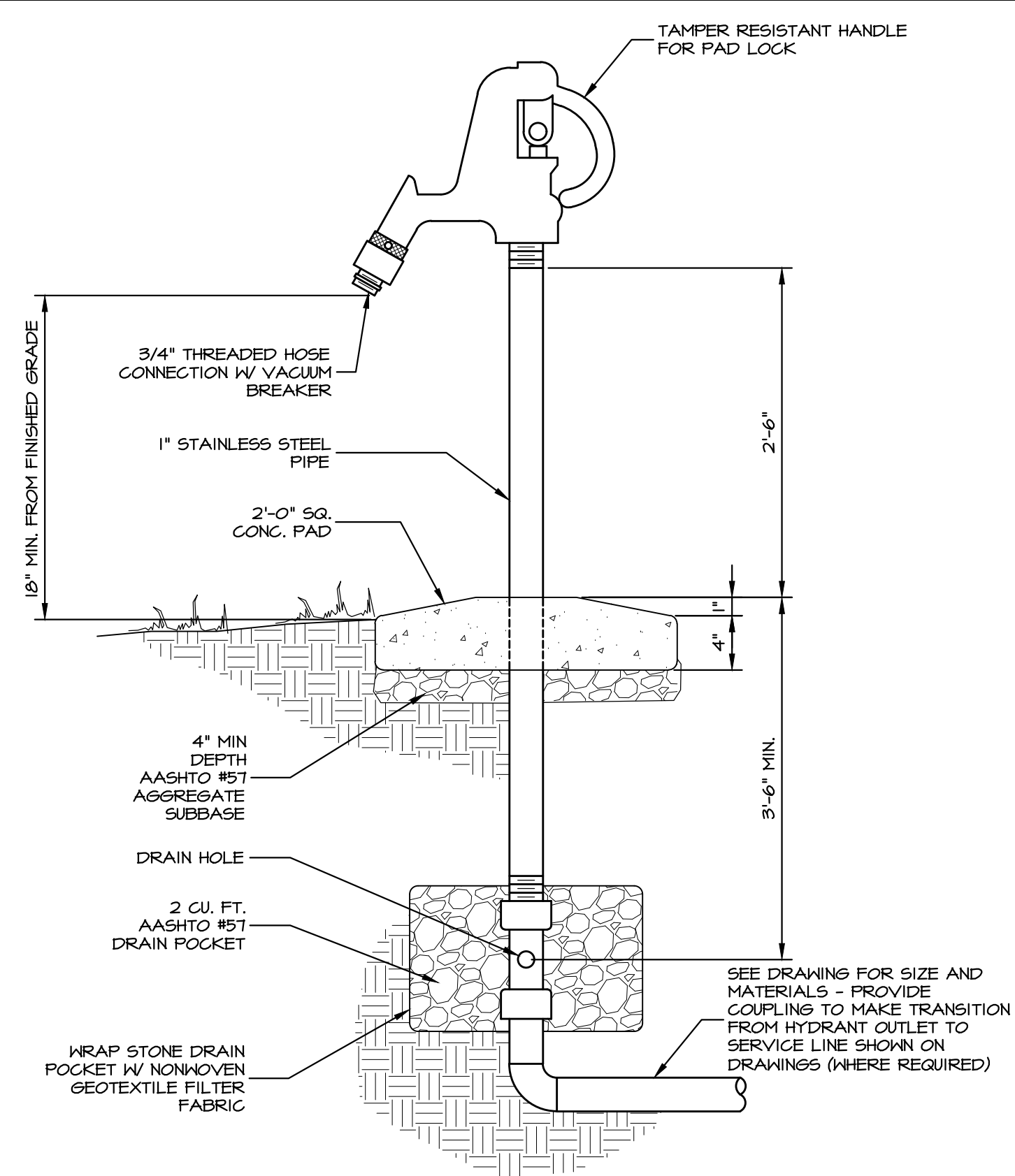
**A** WATER SERVICE CONNECTION (3/4" AND 1")  
NO SCALE



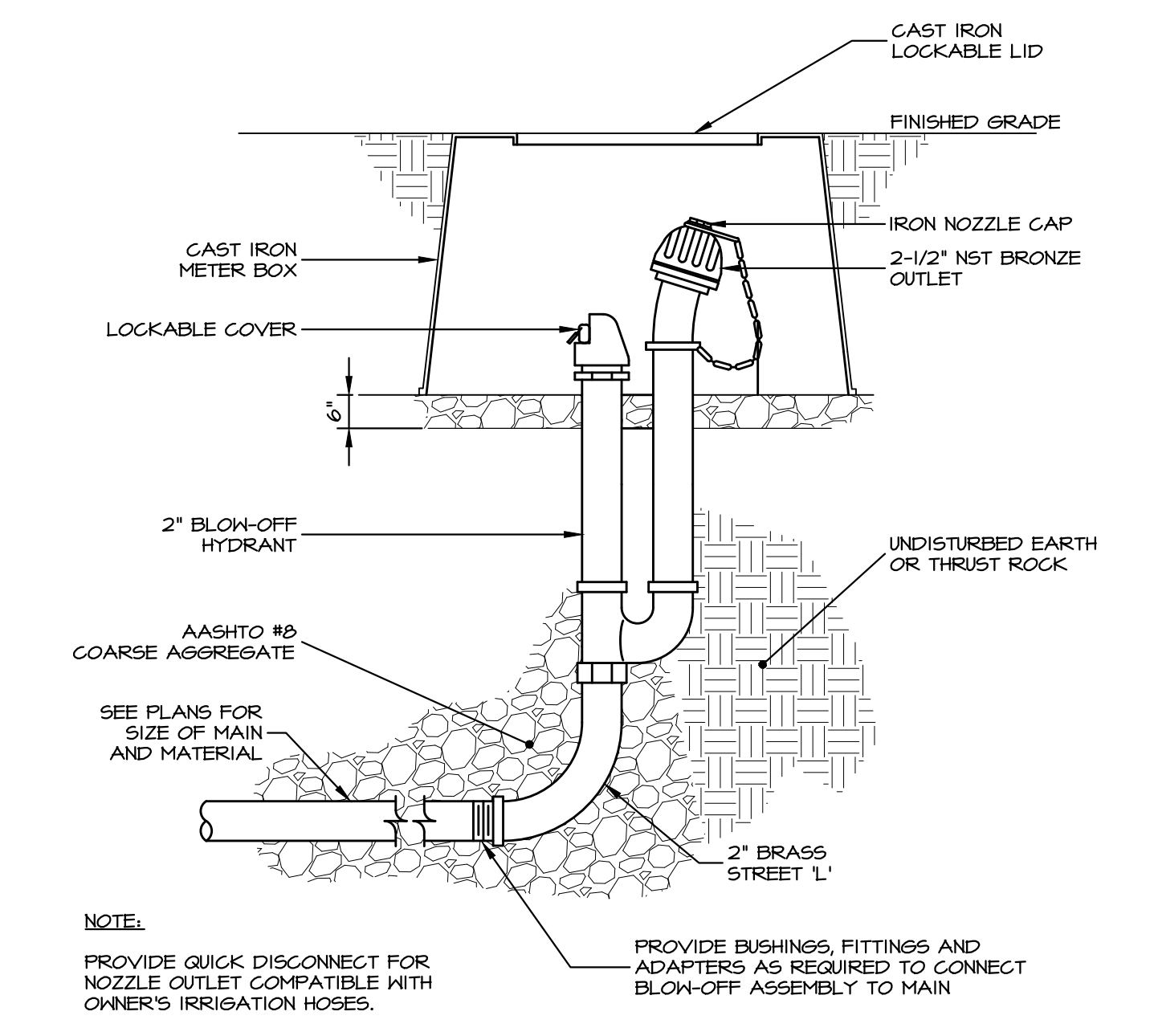
**B** GATE VALVE AND VALVE BOX  
NO SCALE



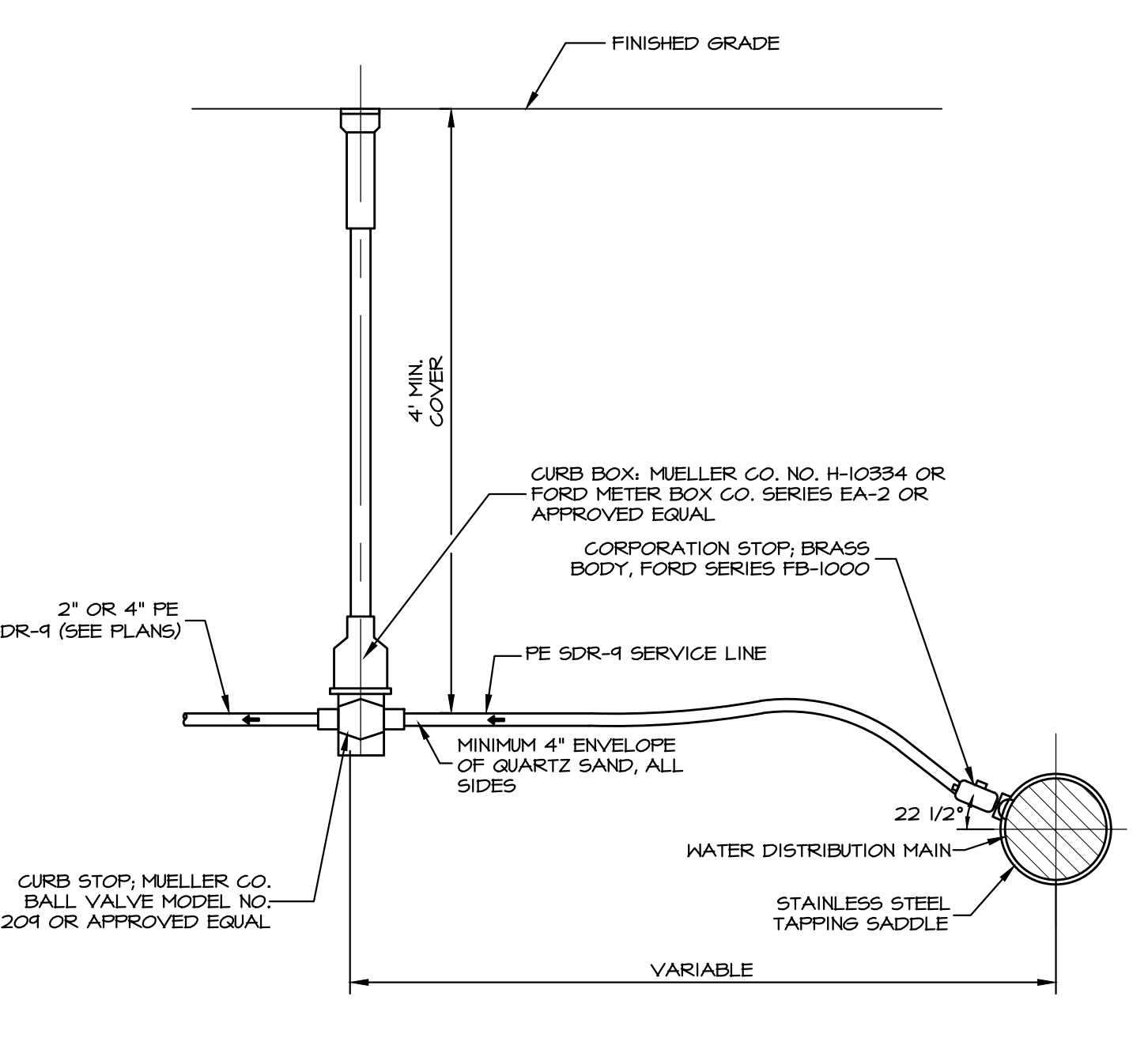
**C** CURB STOP AND BOX  
NO SCALE



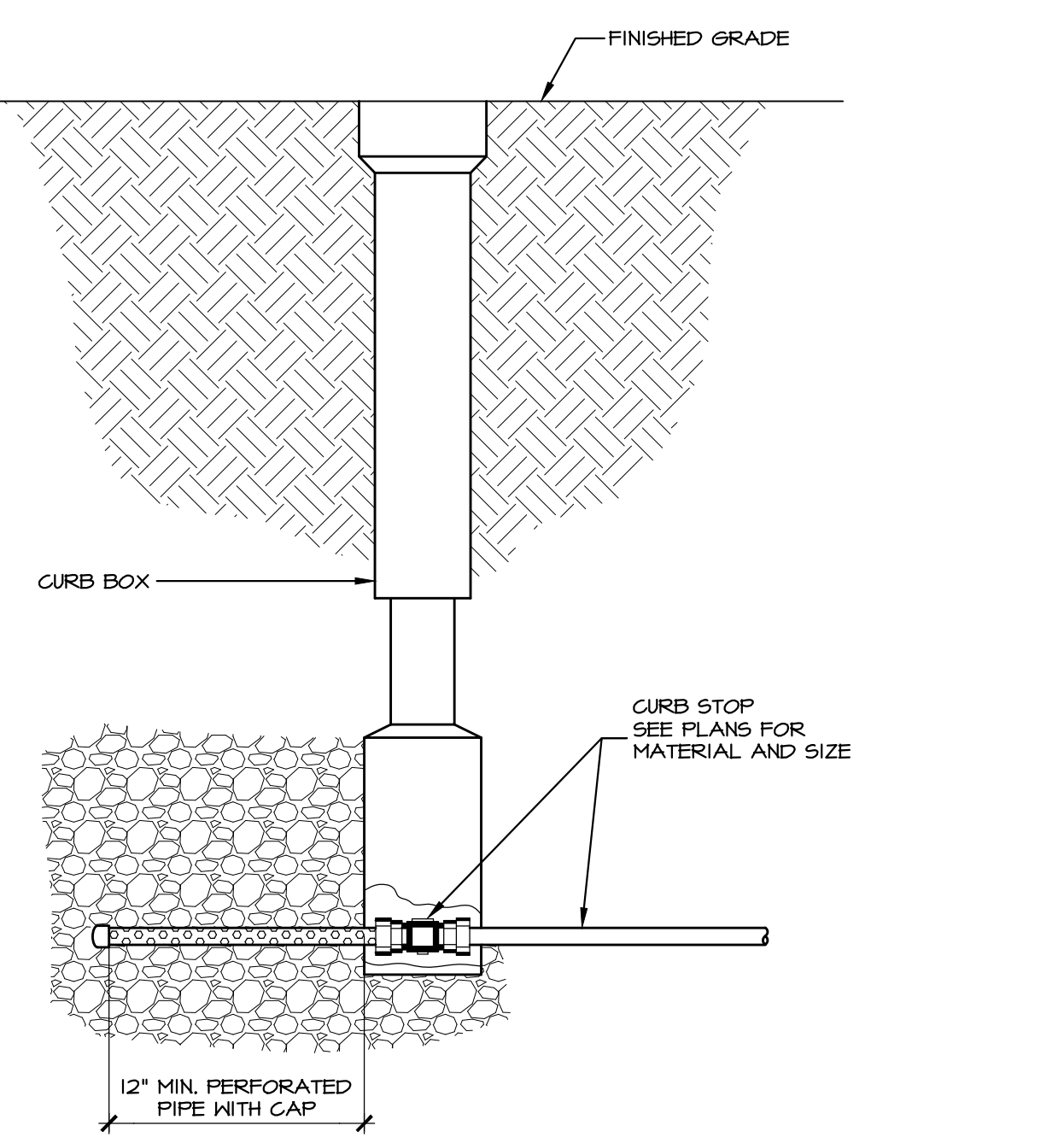
**D** NON-FREEZE YARD HYDRANT WITH VALVE BREAKER  
NO SCALE



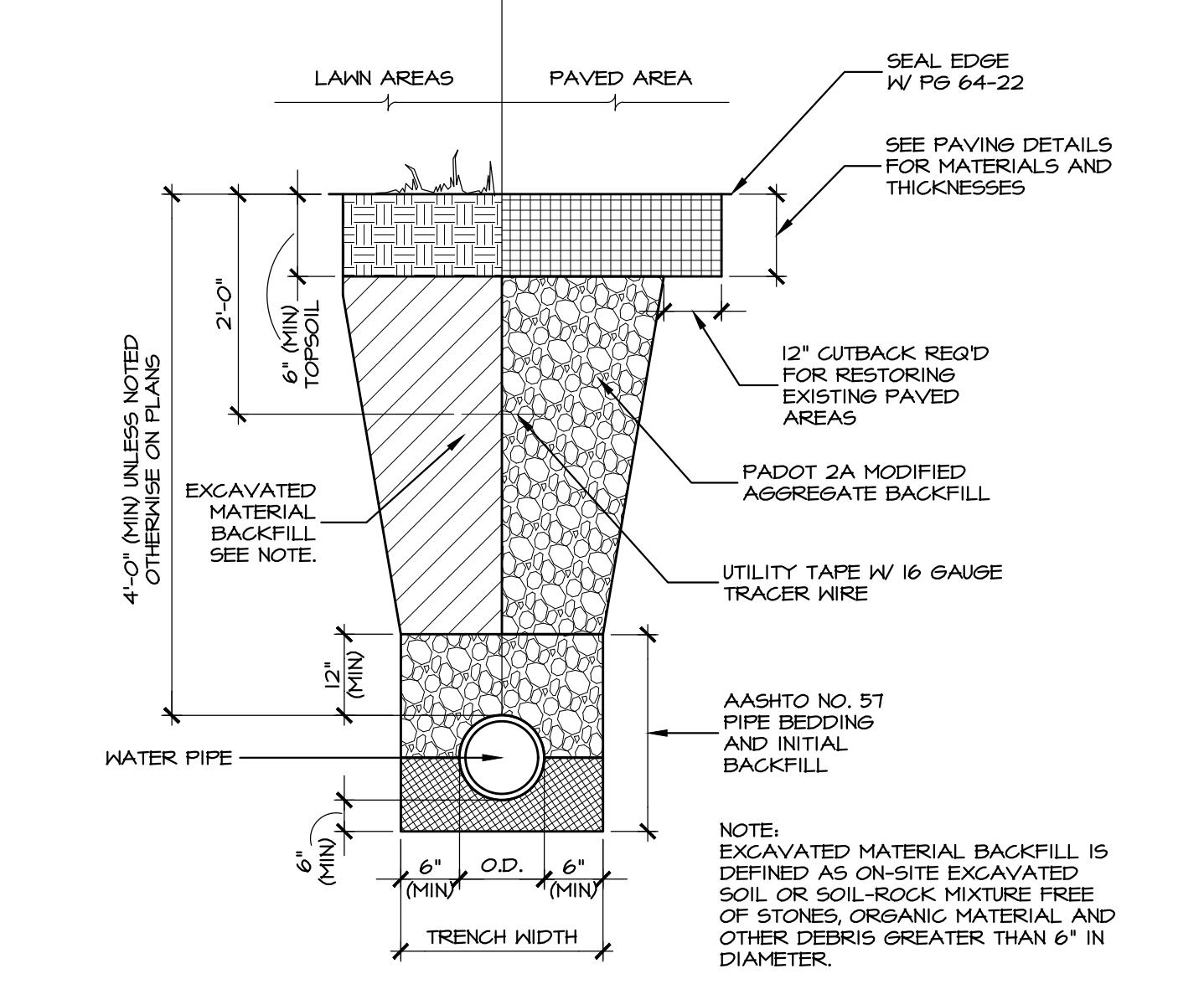
**E** IRRIGATION HYDRANT (BELOW GRADE)  
NO SCALE



**F** WATER SERVICE CONNECTION (2" AND 4")  
NO SCALE



**G** CURB STOP AND BOX W/ DRAIN LINE  
NO SCALE



**H** WATER PIPE INSTALLATION  
NO SCALE

REVISIONS PER:	DATE:	BY:
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5.	-	-

MID-ATLANTIC SPORTS CONSTRUCTION  
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PROFESSIONAL SEAL: TYLER E. HILL, ENGINEER, PENNSYLVANIA

PROFESSIONAL SEAL: TYLER E. HILL, LANDSCAPE ARCHITECT, PENNSYLVANIA

PRELIMINARY/FINAL LAND DEVELOPMENT  
SUBJECT: WATER DETAILS  
FOR WESTTOWN SCHOOL - OAK LANE PROJECTS  
WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
CLIENT: WESTTOWN SCHOOL  
975 WESTTOWN ROAD  
WEST CHESTER, PA 19382  
(610) 399-0123

MANAGER: CRH DATE: JANUARY 27, 2023  
DESIGNER: JCB PROJECT NO. 1091-001  
DRAWN BY: JCB SCALE: AS NOTED

DRAWING NO. **44 of 48**

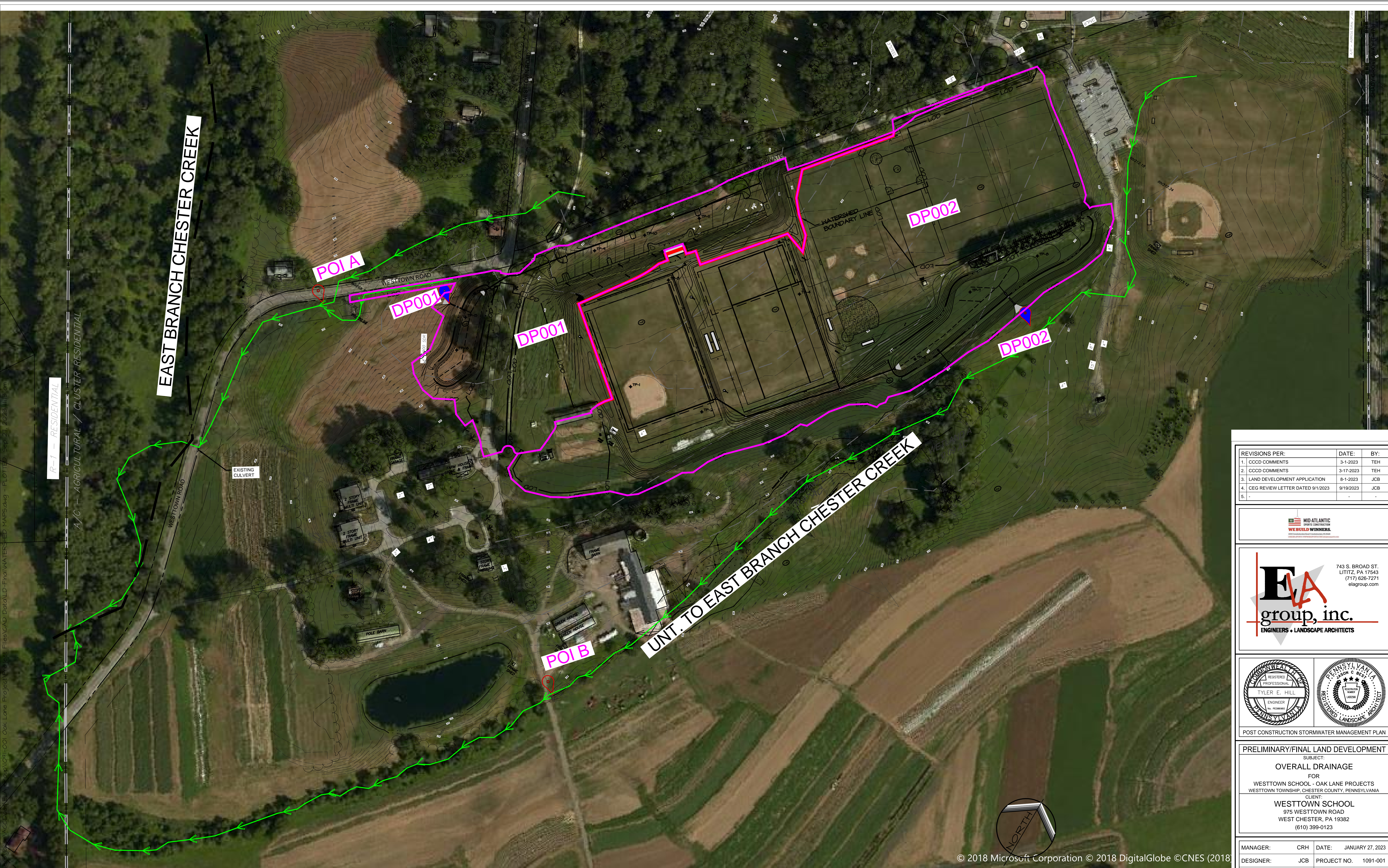
DRAWING: C:\Users\jason\Desktop\DETAILS.dwg - PLOTTED: Sep 27, 2023 11:43 am











R-1 - RESIDENTIAL  
 A/C - AGRICULTURAL / CLUSTER RESIDENTIAL

EAST BRANCH CHESTER CREEK

UNT. TO EAST BRANCH CHESTER CREEK

POI A

DP001

DP001

DP002

DP002

POI B

EXISTING CULVERT

2 STORY FRAME MULTI UNIT

2 STORY FRAME MULTI UNIT

POLE BARN

GREEN HOUSE

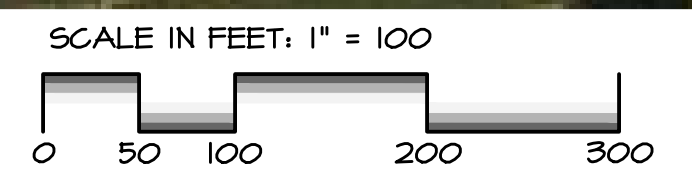
GREEN HOUSE

FRAME BARN

WATERSHED BOUNDARY LINE



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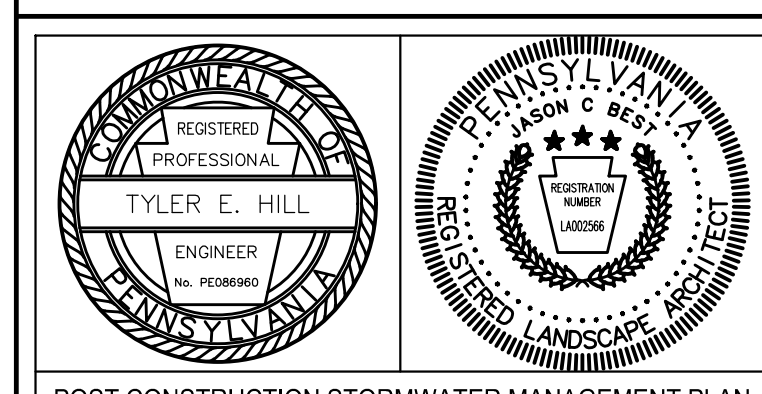


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POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

PRELIMINARY/FINAL LAND DEVELOPMENT  
 SUBJECT:  
**OVERALL DRAINAGE**  
 FOR  
 WESTTOWN SCHOOL - OAK LANE PROJECTS  
 WESTTOWN TOWNSHIP, CHESTER COUNTY, PENNSYLVANIA  
 CLIENT:  
**WESTTOWN SCHOOL**  
 975 WESTTOWN ROAD  
 WEST CHESTER, PA 19382  
 (610) 399-0123

MANAGER:	CRH	DATE:	JANUARY 27, 2023
DESIGNER:	JCB	PROJECT NO.:	1091-001
DRAWN BY:	JCB	SCALE:	1" = 100'

DRAWING NO.  
**48 of 48**

UPI NO(S): 67-5-27