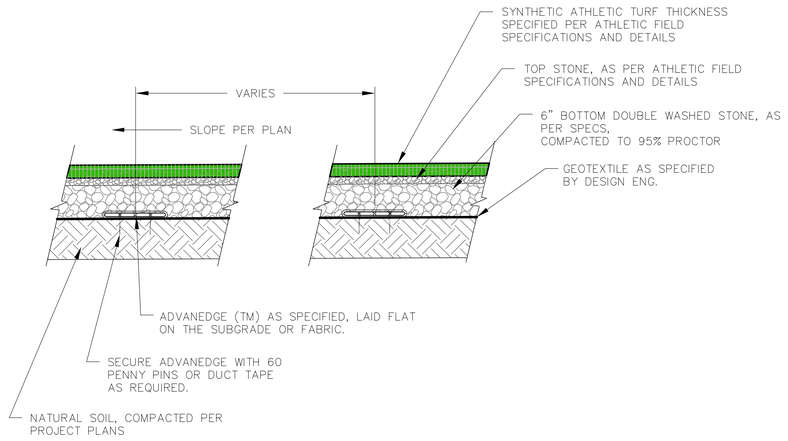
SYNTHETIC TRUF ATHLETIC FIELD DRAIN PROFILE



NOTES:

1. PIPE INSTALLATION DEPTH, SPACING, SLOPE AND BACKFILL MATERIAL SHALL BE DETERMINED AND SPECIFIED BY DESIGN ENGINEER.
2. THE USE OF FABRIC AROUND ADVANEDGE OR IN THE TRENCH SHALL BE DETERMINED BY DESIGN ENGINEER TAKING INTO ACCOUNT THE PARTICLE SIZE DISTRIBUTION OF THE BACKFILL AND INSITU MATERIAL.

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REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
1	FORMATTING UPDATES AND RENAMED	TJR	03/09/16	

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

SYNTHETIC TURF ATHLETIC FIELD DRAIN PROFILE (ADVANEDGE)

DRAWING NUMBER: STD-1222

ADS. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
ADVANCED DRAINAGE SYSTEMS, INC.

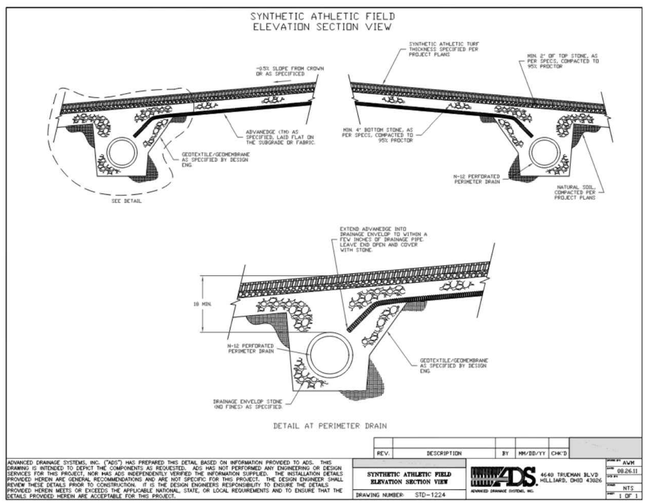
DRAWN BY: AWM
DATE: 08.26.11
DATE BY:
SCALE: NTS
SHEET 1 OF 1

NOTES

- CONTRACTOR SHALL SUBMIT ARTIFICIAL TURF SAMPLE AND CROSS SECTION DETAIL FOR REVIEW AND APPROVAL BY CLIENT, AND CIVIL ENGINEER, PRIOR TO ORDERING, OR INSTALLATION

1 CIV1110 — ARTIFICIAL TURF AND ADVANEDGE DRAINAGE SCHEMATIC DETAIL

N.T.S.



REV	DESCRIPTION	BY	MM/DD/YY	CHK'D

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

SYNTHETIC ATHLETIC FIELD ELEVATION SECTION VIEW

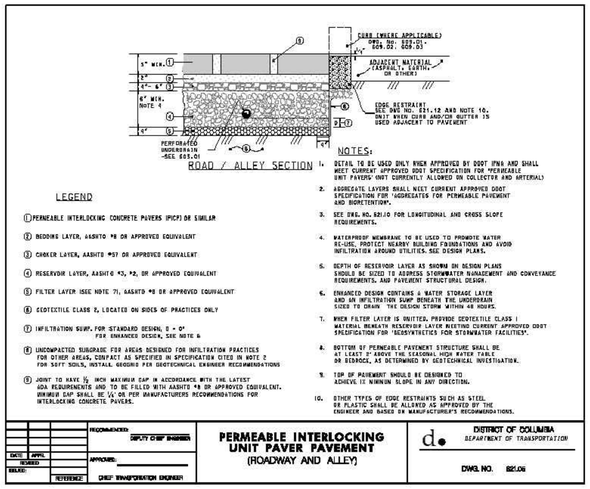
DRAWING NUMBER: STD-1224

ADS. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
ADVANCED DRAINAGE SYSTEMS, INC.

DRAWN BY: AWM
DATE: 08.26.11
DATE BY:
SCALE: NTS
SHEET 1 OF 1

2 CIV1110 — ADVANEDGE DRAINAGE EDGE DETAIL INTO GRAVEL DETENTION RESERVOIR

N.T.S.


CURB (WHERE APPLICABLE) DPW STD. NO. 609.01 609.02, 609.03
4"
ADJACENT MATERIAL (ASPHALT, EARTH, OR OTHER)
6" MIN. NOTE 6
EDGE RESTRAINT SEE DWG NO. 621.12 AND NOTE 10. UNIT MUST BE FLUSH AND/OR BUTTED TO USED ADJACENT TO PAVEMENT
PERFORATED UNDERDRAIN -SEE 625.01
ROAD / ALLEY SECTION
LEGEND
NOTES:
1. DETAIL TO BE USED ONLY WHEN APPROVED BY DDOT HPAS AND SHALL MEET CURRENT APPROVED DDOT SPECIFICATION FOR "PERMEABLE UNIT PAVERS" UNIT CURRENTLY ALLOWED ON COLLECTOR AND ARTERIALS
2. AGGREGATE LAYERS SHALL MEET CURRENT APPROVED DDOT SPECIFICATION FOR "AGGREGATES FOR PERMEABLE PAVEMENT AND BIORETENTION".
3. SEE DWG. NO. 621.10 FOR LONGITUDINAL AND CROSS SLOPE REQUIREMENTS.
4. WATERPROOF MEMBRANE TO BE USED TO PROMOTE WATER RE-USE, PROTECT NEARBY BUILDING FOUNDATIONS AND AVOID INFILTRATION AROUND UTILITIES. SEE DESIGN PLANS.
5. DEPTH OF RESERVOIR LAYER AS SHOWN ON DESIGN PLANS SHOULD BE SIZED TO ADDRESS STORMWATER MANAGEMENT AND CONVEYANCE REQUIREMENTS, AND PAVEMENT STRUCTURAL DESIGN.
6. ENHANCED DESIGN CONTAINS A WATER STORAGE LAYER AND AN INFILTRATION SUMP BENEATH THE UNDERDRAIN SIZED TO DRAIN THE DESIGN STORM WITHIN 48 HOURS.
7. WHEN FILTER LAYER IS OMITTED, PROVIDE GEOTEXTILE CLASS I MATERIAL BENEATH RESERVOIR LAYER MEETING CURRENT APPROVED DDOT SPECIFICATION FOR "GEOSYNTHETICS FOR STORMWATER FACILITIES".
8. BOTTOM OF PERMEABLE PAVEMENT STRUCTURE SHALL BE AT LEAST 3" ABOVE THE SEASONAL HIGH WATER TABLE OR BEDROCK, AS DETERMINED BY GEOTECHNICAL INVESTIGATION.
9. TOP OF PAVEMENT SHOULD BE DESIGNED TO ACHIEVE 1% MINIMUM SLOPE IN ANY DIRECTION.
10. OTHER TYPES OF EDGE RESTRAINTS SUCH AS STEEL OR PLASTIC SHALL BE ALLOWED AS APPROVED BY THE ENGINEER AND BASED ON MANUFACTURER'S RECOMMENDATIONS.

1. PERMEABLE INTERLOCKING CONCRETE PAVERS (PICP) OR SIMILAR
2. BEDDING LAYER, AASHTO #8 OR APPROVED EQUIVALENT
3. CHOKER LAYER, AASHTO #57 OR APPROVED EQUIVALENT
4. RESERVOIR LAYER, AASHTO #3, #2, OR APPROVED EQUIVALENT
5. FILTER LAYER (SEE NOTE 7), AASHTO #8 OR APPROVED EQUIVALENT
6. GEOTEXTILE CLASS I, LOCATED ON SIDES OF PRACTICES ONLY
7. INFILTRATION SUMP. FOR STANDARD DESIGN, 0 - 0" FOR ENHANCED DESIGN, SEE NOTE 6
8. UNCOMPACTED SUBGRADE FOR AREAS SCHEMED FOR INFILTRATION PRACTICES FOR OTHER AREAS, COMPACT AS SPECIFIED IN SPECIFICATION CITED IN NOTE 2 FOR SOFT SOILS, INSTALL GEOGRID PER GEOTECHNICAL ENGINEER RECOMMENDATIONS
9. JOINT TO HAVE ½ INCH MAXIMUM GAP IN ACCORDANCE WITH THE LATEST ADA REQUIREMENTS AND TO BE FILLED WITH AASHTO #8 OR APPROVED EQUIVALENT. MINIMUM GAP SHALL BE 1/8 OR PER MANUFACTURERS RECOMMENDATIONS FOR INTERLOCKING CONCRETE PAVERS.

RECOMMENDED: DEPUTY CHIEF ENGINEER
APPROVED: CHIEF TRANSPORTATION ENGINEER

PERMEABLE INTERLOCKING UNIT PAVER PAVEMENT
(ROADWAY AND ALLEY)

DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION
DWG NO. 621.06

PUBLIC RIGHT-OF-WAY (PROW) PERMEABLE PAVERS FOR ALLEY AREA

PERMEABLE PAVEMENT STORAGE VOLUME COMPUTATIONS

$Sv = SA_{PP} \times [(d_r \times \eta_m) + (0.5 \times i \times t_F)]$

BMP NAME	SAPP (sf) Surface Area of Permeable Pavement	dr (in) Reservoir Depth	ηm Media Volume of Voids	i (ft/day) Infiltration Rate	tF (day) Time to Fill	Storage Volume Sv (ft³)
7526-2-1	399	6.00	0.40	—	—	80

PERMEABLE PAVEMENT STORAGE VOLUME COMPUTATIONS

$Sv = SA_{PP} \times [(d_r \times \eta_m) + (0.5 \times i \times t_F)]$

BMP NAME	SAPP (sf) Surface Area of Permeable Pavement	dr (in) Reservoir Depth	ηm Media Volume of Voids	i (ft/day) Infiltration Rate	tF (day) Time to Fill	Storage Volume Sv (ft³)
7526-1-2	108,013	6.00	0.40	—	.083	21,603
7526-1-2	22,000	48.00	0.40	—	.083	35,200
					TOTAL	56,803
Sv for Bio-Retention						7,203
Sv for 60" Pipe						2,651
					TOTAL	66,657

DETENTION NARRATIVE/SUMMARY

THE DETENTION REQUIREMENT HAS BEEN MET AND EXCEEDED THROUGH A COMBINATION OF THE FOLLOWING:

1. GRAVEL RESERVOIRS WITHIN THE ARTIFICIAL TURF SYSTEM
   - 108,013 SF WITH 6" OF GRAVEL BASE PLUS
   - 22,000 SF WITH A 48" (4') GRAVEL RESERVOIR
2. BIO-RETENTION STORAGE (SEE BIO-RETENTION CALCULATIONS)
3. 60" STORAGE PIPE – 150' OF 60" PIPE HAS 2,651 CF OF STORAGE

ANY PROPOSED DEVIATION FROM THE STORMWATER MANAGEMENT DETAILS OR SPECIFICATIONS SHOWN ON THESE PLANS WILL REQUIRE SUBMISSION TO DOEE AS A FORMAL PLAN REVISION FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. ALL SUBMITTALS RELATED TO THE STORMWATER MANAGEMENT FACILITIES SHALL BE PROVIDED TO THE OWNER, ARCHITECT, AND CIVIL ENGINEER FOR REVIEW AND COMPLIANCE VERIFICATION.

**NOTE
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY WORK PRODUCT. THE DRAWINGS, ATTACHED DOCUMENTS, AND THE DOCUMENTS MUST NOT BE AFORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

DISTRICT OF COLUMBIA
KYLE U. OLIVER
#PE900770
3/7/2023
CIVIL
PROFESSIONAL ENGINEER

GOVERNMENT OF THE DISTRICT OF COLUMBIA
PERMIT OPERATIONS DIVISION
PLANS APPROVED
Permit No. BCIV2300110 Date 11/16/23

These plans are conditionally approved as submitted or noted during plan review and are subject to field inspection. Approved plans must be kept on site and are needed for all inspections. No changes or modifications to these plans. Changes require a revision permit with the revised plans. Trade Permits are required for trade work, e.g. Electrical or Plumbing

Structural Review - Glenn Kechejian - 11-16-2023
DDOT Review - Shwantanishka Zackery - 11-16-2023
DOEE SE-SW Review - Saba Gharavi - 11-16-2023
HPRB Review - Timothy Dennee - 11-16-2023
DC Water Review - Vahid Bihardi - 11-16-2023

VIKA CAPITOL
ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ TRANSPORTATION COORDINATORS
PROJECT COORDINATOR:
VIKA CAPITOL, LLC ★ 4910 MASSACHUSETTS AVENUE, NW SUITE 16 ★ WASHINGTON, DC 20016 ★ PHONE: 202.244.4140 ★ WWW.VIKACAPITOL.COM
BRIAN RUHL
ruhl@vikacapitol.com

MARET SCHOOL
PROPOSED ATHLETIC FIELDS
SQUARE 2319, LOT 832
5901 UTAH AVE. NW
WASHINGTON, D.C. 20015

STORMWATER MANAGEMENT NOTES AND DETAILS

VIKA CAPITOL REVISIONS

#	DATE	DESCRIPTION

DATE: 23-FEB-2023
DES. KUO DWN. BJR
SCALE: AS SHOWN
PROJECT/FILE NO. VC00626D
SHEET NO. CIV1110

Board of Zoning Adjustment
District of Columbia
CASE NO. 21100
EXHIBIT NO. 369

LAYOUT: CIV1110 SWM DETS; Plotted By: merkel

S:\0000-1000\00626D - 5901 Utah Ave. NW - Final Eng\Used\construction documents\VC00626D_00D.dwg - Mar 29, 2023 AT 5:02:45 PM