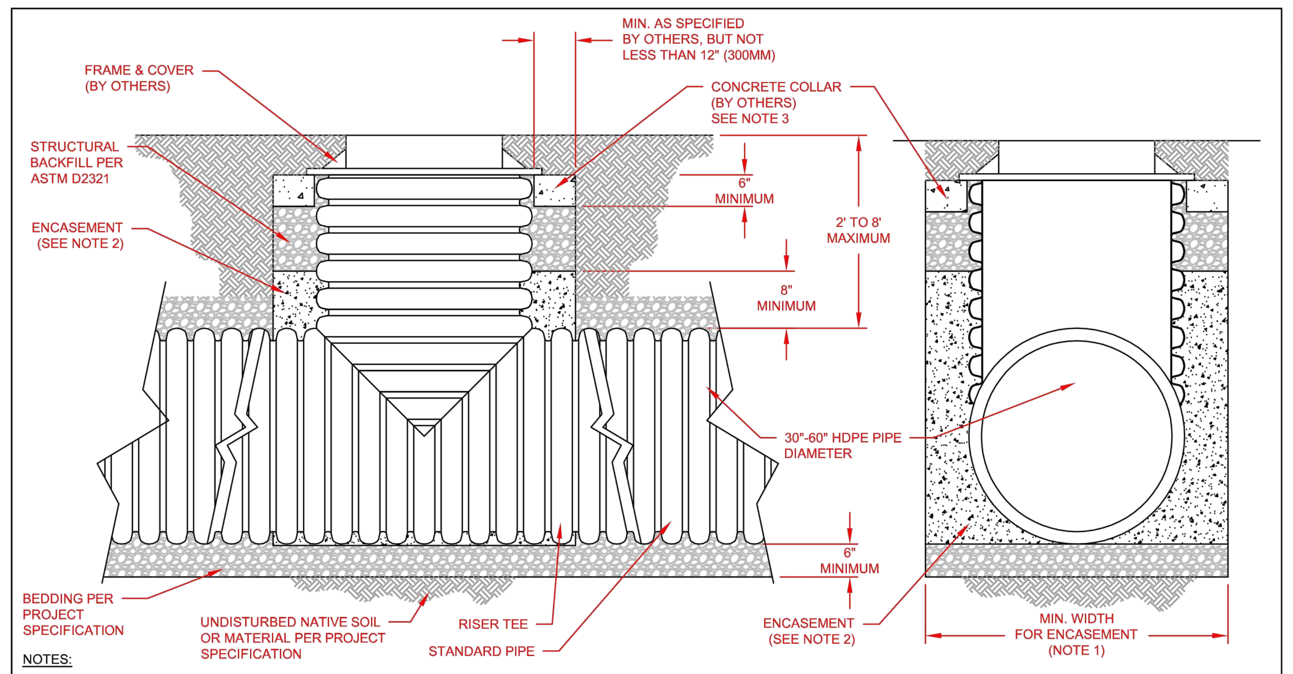
GOVERNMENT OF THE DISTRICT OF COLUMBIA
PERMIT OPERATIONS DIVISION
PLANS APPROVED
Permit No. BCIV2300110 Date 11/16/23

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 - Shawntanishia Zackery - 11-16-2023
DOEE SE-SW Review - Saba Gharavi - 11-16-2023
HPRB Review - Timothy Dennee - 11-16-2023
DC Water Review - Vahid Bilvardi - 11-16-2023



NOTES:

1. RECOMMENDED MINIMUM TRENCH WIDTH FOR ENCASEMENT AROUND RISER TEE = O.D. + 16". STANDARD PIPE INSTALLATION MAY REQUIRE A WIDER TRENCH. FOR MINIMUM TRENCH WIDTHS OF STANDARD PIPE REFERENCE THE DRAINAGE HANDBOOK
2. ENCASEMENT: FLOWABLE MATERIAL THAT CURES WITH TIME (SLURRY, FLOWABLE FILL, CLSM, CONCRETE, ETC.). DESIGNED BY OTHERS (ENGINEER OF RECORD, CONTRACT ENGINEER, ETC.) FOR THE SPECIFIC PROJECT AND SITE CONDITIONS TO CARRY ALL ANTICIPATED LOADING
3. CONCRETE COLLAR SHALL BE DESIGNED BY OTHERS (ENGINEER OF RECORD, CONTRACT ENGINEER, ETC.) FOR THE SPECIFIC PROJECT AND SITE CONDITIONS TO CARRY ALL ANTICIPATED LOADING.
4. FOR PROJECTS WHERE COVER EXCEEDS THE MINIMUM OR MAXIMUM VALUES SHOWN, CONTACT ADS FOR SPECIFIC DESIGN CONSIDERATIONS.

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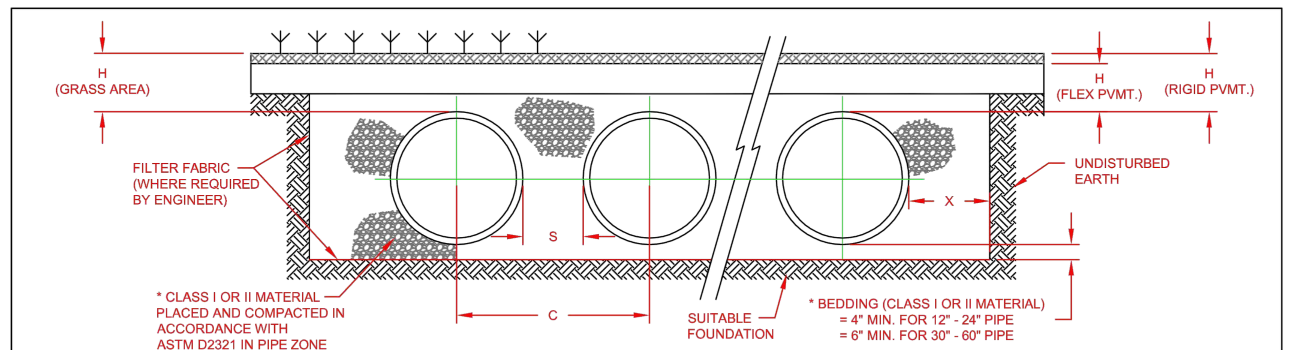
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
3	RENAMED AND RENUMBERED	TJR	02/15/16	

HDPE RISER TEE INSTALLATION (30-60in PIPE)
DRAWING NUMBER: STD-405
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
DRAWN BY: TJR DATE: 01/29/10 CHK'D BY: SCALE: NTS SHEET 1 OF 1



NOTES:

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
4. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
8. MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "S"	NOMINAL SPACING "C"	TYPICAL SIDE WALL "X"	H (NON-TRAFFIC)	H (TRAFFIC)
12" (300mm)	14.5" (368mm)	11" (279mm)	25.5" (648mm)	8" (203mm)	12" (305mm)	12" (305mm)
15" (375mm)	18" (457mm)	11.5" (292mm)	29.0" (737mm)	8" (203mm)	12" (305mm)	12" (305mm)
18" (450mm)	21" (533mm)	17.0" (432mm)	38.0" (965mm)	9" (229mm)	12" (305mm)	12" (305mm)
24" (600mm)	28" (711mm)	14.0" (356mm)	41.5" (1054mm)	10" (254mm)	12" (305mm)	12" (305mm)
30" (750mm)	36" (914mm)	18" (457mm)	53.0" (1346mm)	18" (457mm)	12" (305mm)	12" (305mm)
36" (900mm)	42" (1067mm)	22" (559mm)	63.0" (1600mm)	18" (457mm)	12" (305mm)	12" (305mm)
42" (1050mm)	48" (1219mm)	24" (610mm)	72.0" (1829mm)	18" (457mm)	12" (305mm)	24" (610mm)
48" (1200mm)	54" (1372mm)	25" (635mm)	78.5" (1994mm)	18" (457mm)	12" (305mm)	24" (610mm)
60" (1500mm)	67" (1702mm)	24" (610mm)	90" (2286mm)	18" (457mm)	12" (305mm)	24" (610mm)

* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS.

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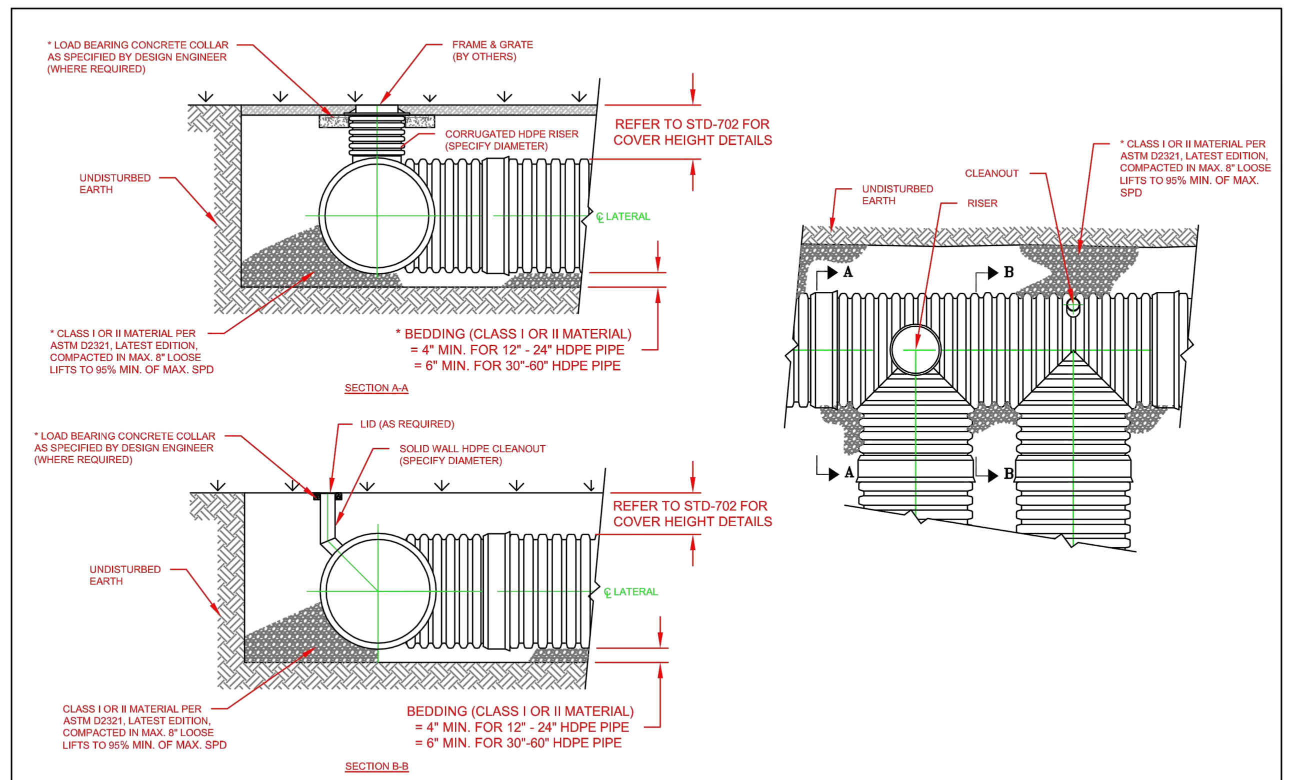
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
4	GENERAL UPDATES AND RENAMED	TJR	02/19/16	

RETENTION-DETENTION SYSTEM (CROSS-SECTION)
DRAWING NUMBER: STD-702
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
DRAWN BY: AWM DATE: 07.25.06 CHK'D BY: SCALE: NTS SHEET OF



* CLASS I BACKFILL REQUIRED AROUND 60" DIAMETER FITTINGS

* LOAD BEARING CONCRETE COLLAR SHALL BE CONSTRUCTED IN TRAFFIC AREAS SUCH THAT THE LIVE LOAD IS TRANSMITTED TO THE SURROUNDING SOIL AND NOT DIRECTLY TO THE RISER.

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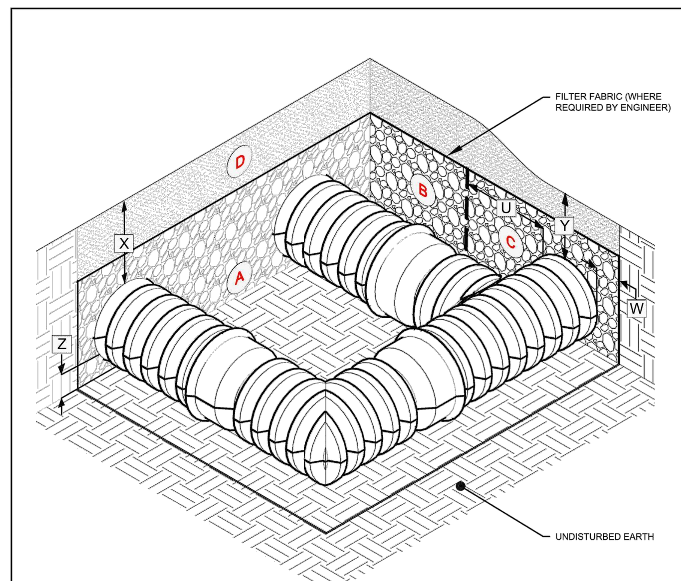
REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
4	GENERAL UPDATES AND RENAMED	TJR	02/19/16	

RETENTION-DETENTION SYSTEM (RISER AND CLEANOUT)
DRAWING NUMBER: STD-703
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
DRAWN BY: CRM DATE: 10/23/06 CHK'D BY: SCALE: NTS SHEET OF



		NOMINAL DIAMETER 12-24" (300-600 mm)	30-36" (750-900 mm)	42-60" (1050-1500 mm)
U	MIN. FITTINGS EMBEDMENT LIMIT	12" (305 mm)	12" (305 mm)	12" (305 mm)
W	TYPICAL SIDE WALL	8-10" (203-255 mm)*	18" (457 mm)	18" (457 mm)
X	MIN. PIPE COVER DEPTH UNDER NON-TRAFFIC	12" (305 mm)	12" (305 mm)	12" (305 mm)
X	MIN. PIPE COVER DEPTH UNDER TRAFFIC	12" (305 mm)	12" (305 mm)	12-24" (305-610 mm)**
X	MAX. PIPE COVER DEPTH	REFERENCE TECH NOTE(S) 2.01, 2.02, 2.04, OR 2.05		
Y	MIN. FITTINGS COVER DEPTH UNDER NON-TRAFFIC	12" (305 mm)	12" (305 mm)	12" (305 mm)
Y	MIN. FITTINGS COVER DEPTH UNDER TRAFFIC	12" (305 mm)	12" (305 mm)	24" (610 mm)
Y	MAX. FITTINGS COVER DEPTH***	8' (2.4 m)	8' (2.4 m)	8' (2.4 m)
Z	BEDDING DEPTH	4" (102 mm)	6" (152 mm)	6" (152 mm)

* TYPICAL SIDE WALLS FOR 18" AND 24" PIPE SYSTEMS ARE 9" (230 mm) AND 10" (255 mm), RESPECTIVELY
** 24" MINIMUM PIPE COVER DEPTH UNDER TRAFFIC IS REQUIRED FOR 60" SYSTEMS ONLY
*** MAY INCREASE BASED ON SPECIFIC FITTINGS CONFIGURATION, CONTACT AN ADS REPRESENTATIVE FOR ADDITIONAL DETAILS

NOTES:
1. ALL REFERENCES TO CLASS I OR II MATERIALS ARE PER ASTM D2321" STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL REFERENCES TO AASHTO MATERIAL SPECIFICATIONS ARE PER AASHTO M43 AND M145 GRADATIONS, LATEST EDITION.
3. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
4. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
5. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I OR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER.
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" (152 mm) ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. IF DIFFERENT FILL IS USED IN ZONES B AND C, FILTER FABRIC MAY BE USED AS SPECIFIED BY THE ENGINEER PER NOTE 5.
8. COVER: ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. MAXIMUM FILL HEIGHT IS LIMITED TO 8 FT (2.4 m) OVER FITTINGS FOR TYPICAL SYSTEM INSTALLATIONS. **PLEASE NOTE THESE LIMITS APPLY TO ALL FITTINGS WITHIN SYSTEMS LIMITS, AND NOT JUST MANIFOLD FITTINGS.** CONTACT AN ADS REPRESENTATIVE WHEN MAXIMUM FILL HEIGHTS EXCEED 8 FT (2.4 m) FOR INSTALLATION CONSIDERATIONS.

ACCEPTABLE FILL MATERIALS

MATERIAL LOCATION		ASTM MATERIAL CLASSIFICATION	AASHTO MATERIAL CLASSIFICATION	COMPACTION / DENSITY REQUIRED
D	**FINAL FILL:** FINAL FILL LIMITS START FROM THE TOP OF THE INITIAL BACKFILL LAYER AND END AT THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE. NOTE THAT PAVEMENT SUBBASE MAY BE INCLUDED IN THE FINAL FILL.	N/A[2]	N/A[2]	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE SPECIFIC MATERIAL AND PREPARATION REQUIREMENTS.
C	**FITTINGS EMBEDMENT:** FILL SURROUNDING THE SYSTEM FITTINGS FROM THE INVERT (BOTTOM) UP TO NO LESS THAN 6" ABOVE THE CROWN (TOP) OF THE FITTINGS	CLASS I OR II[1]	AASHTO M145 A1, A3 OR AASHTO M43 A5, A6, A56, A57, A67	COMPACT IN MAXIMUM 8" (203 mm) LOOSE LIFTS TO A MINIMUM OF 95% OF MAXIMUM STANDARD PROCTOR DENSITY
B	**PIPE EMBEDMENT:** FILL SURROUNDING THE SYSTEM PIPE FROM THE INVERT (BOTTOM) UP TO NO LESS THAN 6" ABOVE THE CROWN (TOP) OF THE PIPE	CLASS I OR II	AASHTO M145 A1, A3 OR AASHTO M43 A5, A6, A56, A57, A67	COMPACT PER THE LATEST EDITION OF ASTM D2321 SPECIFICATIONS
A	**BEDDING:** FILL BELOW THE PIPE FROM THE SUBGRADE UP TO THE INVERT (BOTTOM) OF THE PIPE	CLASS I OR II[1]	AASHTO M145 A1, A3 OR AASHTO M43 A5, A6, A56, A57, A67	COMPACT TO 90% STANDARD PROCTOR DENSITY

PLEASE NOTE:
1. 60" (1500 mm) PIPE SYSTEMS ARE LIMITED TO ASTM D2321 CLASS I (AASHTO M43 A5 OR A56) BACKFILL MATERIALS ONLY.
2. MATERIAL SPECIFICATIONS INCLUDE ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.

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REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D

RETENTION-DETENTION (SYSTEM INSTALLATION)
DRAWING NUMBER: STD-705
ADS Advanced Drainage Systems, Inc. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026
DRAWN BY: GGC DATE: 06/08/21 CHK'D BY: SDL SCALE: NTS SHEET 1 OF 1

1
CIV0960

60" STORAGE PIPE DETAILS (OR APPROVED EQUAL. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL).

NOT TO SCALE

VIKA CAPITOL
ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS
PROJECT COORDINATOR: BRIAN RUHL
ruhl@vikacapitol.com
★ VIKA CAPITOL, LLC ★ 4910 MASSACHUSETTS AVENUE, NW SUITE 16
★ WASHINGTON, DC 20016 ★ PHONE: 202.244.4140 ★
★ W W W . V I K A C A P I T O L . C O M ★

MARET SCHOOL PROPOSED ATHLETIC FIELDS

SQUARE 2319, LOT 832
5901 UTAH AVE NW
WASHINGTON, D.C. 20015

SITE DETAILS

VIKA CAPITOL REVISIONS

#	DATE	DESCRIPTION

**NOTE
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DISTRICT OF COLUMBIA ★ KYLE U. OLIVER ★ PE900770 ★ 3/17/2023 ★ CIVIL ★ PROFESSIONAL ENGINEER

DATE: 23-FEB-2023
DES. KUO DWN. BJR
SCALE: AS SHOWN
PROJECT/FILE NO. VC0626D
SHEET NO. CIV0960

Board of Zoning Adjustment
District of Columbia
CASE NO.21100
EXHIBIT NO.22E

S:\0001-1000\0626D - 5901 Utah Ave. NW -Final Eng\cadd\construction documents\VC0626D_900.dwg, ~ Mar 29, 2023 AT 5:00:08 PM

LAYOUT: CIV0960 SITE DETS, Plotted By: merkel