

OPERATION AND MAINTENANCE MANUAL
for
Stormwater Management Facilities
at
Block 55 – Lot 8

Borough of Midland Park, Bergen County, New Jersey

March 2023



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PART I. BACKGROUND DATA

A. Purpose

This manual shall serve as the guideline for routine operation and maintenance of the stormwater management facilities situated on Lot 8 in Block 55, located in the Borough of Midland Park, Bergen County, New Jersey. This manual applies only to those facilities located within the subject property and at the immediate frontage of said lot within the Godwin Avenue right-of-way.

B. Description and Site Location

The subject property is located to the northeast of Godwin Avenue in the Borough of Midland Park. The development consists of a four-unit residential apartment building and associated site improvements. Access to the property is provided via a driveway from the Godwin Avenue traveled way. Stormwater runoff generated by roof areas and all other impervious surfaces of the building are collected and conveyed to two different drywell systems. The parking lot is collected at the catch basin inlet along the northerly side of the parking lot and discharged to the system north of the inlet. A portion of the roof area of the building is piped to the system northwest of the building.

The system located to the north of the parking lot consists of three (3) 1,000-gallon drywells. The drywells are all interconnected by 10" PVC piping and the easterly-most drywell of this system has an overflow pipe which will discharge to grade once the system is at capacity. The drywell located to the northwest of the building is a 1,000-gallon drywell. All of the drywells have concrete covers for inspection and maintenance. Both systems provide further stormwater detention, groundwater recharge and water quality treatment. The drywells are concrete chambers with open bottoms and holes around the sides. The chambers are bedded in and surrounded by crushed stone to facilitate the infiltration of stormwater into the surrounding soils.

C. Inspections and Maintenance

The following procedures shall be followed for the inspection and maintenance of the stormwater management facilities at Lot 8:

1. Drywell System

All components of the drywell systems expected to receive and/or trap debris and sediment must be inspected for clogging and excessive debris and sediment accumulation at least four (4) times annually, as well as after every storm exceeding one (1) inch of rainfall. Removal of excess sediment/debris from the system shall be conducted when the average depth of sediment exceeds 3" or at least once annually. Disposal of debris, trash, sediment and other waste material should

be done at suitable disposal/recycling sites and in compliance with all applicable local, state and federal waste regulations.

The drain time of the drywell system should be routinely observed during and after storm events. If the drain time significantly increases or decreases, or if water is retained in the basin for greater than seventy-two (72) hours, the system's stone bedding and groundwater levels shall be evaluated and appropriate measures taken to comply with the maximum drain time requirements. Measures necessary to comply with the drain time requirements may include, but not be limited to, evaluation of the stone bedding and subsurface soils to verify design permeability and groundwater depth and replacement of soil layers.

D. Authorizations

This document has been prepared in general accordance with the New Jersey Department of Environmental Protection, Best Management Practices Manual. This manual was prepared by Dykstra Walker Design Group for Lot 8 in Block 55.

The following shall be responsible for the operation and maintenance of the on-site stormwater management facilities at each property:

Nouvelle, LLC
P.O. Box 853
Midland Park, NJ 07417

(973) 726-0488
lbruni@nouvellellc.com

E. Project Contracts and Miscellaneous Correspondence

Any correspondence and contract information regarding general maintenance and material purchases for the stormwater management facilities shall be incorporated into this manual. In addition, a record of routine or corrective maintenance performed by the owner of the facilities shall be incorporated into this manual. This section shall be reviewed and updated annually along with the entire manual to incorporate pertinent correspondence.

PART II. OPERATION AND MAINTENANCE

A. General

This manual is intended as a guide for the owner of the stormwater management facilities for Lot 8 in Block 55 and outlines the proper procedures for conducting routine operation and

maintenance of these facilities. At least two (2) copies of this manual shall be available for review at the property owner's premises at all times. All correspondence and maintenance checklists shall be reproduced and distributed for inclusion into the manuals. One (1) copy of this manual, along with all updates and inclusions, shall be provided to the local mosquito control commission upon request.

B. Designated Personnel

The following list of inspectors, contractors and Professional Engineers designated by the owner of the stormwater management facilities shall be completed by the owner and updated periodically to reflect any changes in information.

<u>Name</u>	<u>Telephone Number</u>
Inspectors	
Contractors	
Professional Engineer	
Owner's Representatives	

C. Plans and Other Documentation

The following documents are included within this manual for review prior to any inspection or operation and maintenance activity:

- Stormwater Facilities Location Map; Part III, Appendix A
- Drywell Details; Part III, Appendix B

This information shall be updated periodically to incorporate any plans, sketches and other documentation that are developed for the operation, maintenance, inspection or rehabilitation of the stormwater management facilities.

D. Tools and Equipment

The following is a list of required inspection equipment for routine operation and maintenance procedures and inspections.

1. A clipboard, a pencil and the inspection checklist provided within this document.
2. A standard six (6) foot collapsible ruler.
3. A camera - photographs or observed portions of the facilities will provide a measure of performance when comparing past and present maintenance practices or conditions
4. A probe - any stiff light stick or rod with a blunt tip of sufficient strength to penetrate soil. The probe can provide information on conditions below the surface of the ground such as the depth and softness of a saturated area.
5. A weed whacker - can be used to clear non-visible areas and to perform routine maintenance.
6. A flashlight - can be used to observe the inside of the structures and piping system.

Maintenance may require heavy equipment including, but not limited to, the following:

1. Chain saw
2. Stump grinder
3. Wheelbarrow
4. Backhoe
5. Dump truck

Sources of the following materials should be identified for immediate use if warranted by the inspection.

1. Native, silty sand for filling erosion rills and gullies.
2. Topsoil mixture, fertilizer and seed.
3. Large stone rip rap for emergency repairs caused by erosion.
4. Synthetic geo-fabric netting and stakes to prevent seed and topsoil from blowing away.

E. Inspections and Inspection Checklist

The following shall serve as instructions for the owner while performing routine maintenance on or around the stormwater management facilities at each property. The owner(s) of the stormwater management facilities shall be responsible for ensuring that all routine maintenance is performed in accordance with this manual.

The most effective means of conducting the inspection is to treat each system component as an individual element, inspect it thoroughly, and fill out the checklist prior to moving on to the next element. The checklist sequence for inspection of each element is as follows:

1. *Drywell system:* Check the drywell structures for any cracks, leaks, heaving or erosion. Check for any debris or other obstructions. Observe and record the average accumulated sediment depth.

The inspection checklist included in this section should be copied and completed every time an inspection is performed. After each inspection, the owner of the stormwater management facilities shall direct maintenance operations as necessary.

INSPECTION CHECKLIST

OBSERVED ITEM	YES	NO	N/A	DIMENSIONS, LOCATIONS, COMMENTS, ETC.
Drywell System:				
a. Observed Cracks or leakage?				
b. Excess sediment build up?				
c. Debris or obstructions?				
d. Other conditions?				
Recommendations for Maintenance:				

F. Operation and Maintenance and Routine Maintenance Checklist

The owner of the stormwater management facilities at the subject property is responsible for maintenance of the facilities. This form shall be completed to document all maintenance activities performed. This form shall be reproduced for inclusion in all copies of this manual.

CONTINUING MAINTENANCE CHECKLIST

Facility Name: Godwin Avenue Supporting Housing

Maintenance Crew: _____

Date: _____

Weather: _____

MAINTENANCE ITEM	DESCRIPTON OF WORK AND EQUIPMENT USED
Drywell System:	
Other:	

G. Schedule of Inspection and Maintenance

Inspections of all components of the stormwater management facilities at the subject property shall be conducted at least four (4) times annually. Additional inspections shall be conducted after every storm event exceeding one (1) inch of rainfall.

Maintenance of the stormwater management facilities shall be performed as required based on the inspection results.

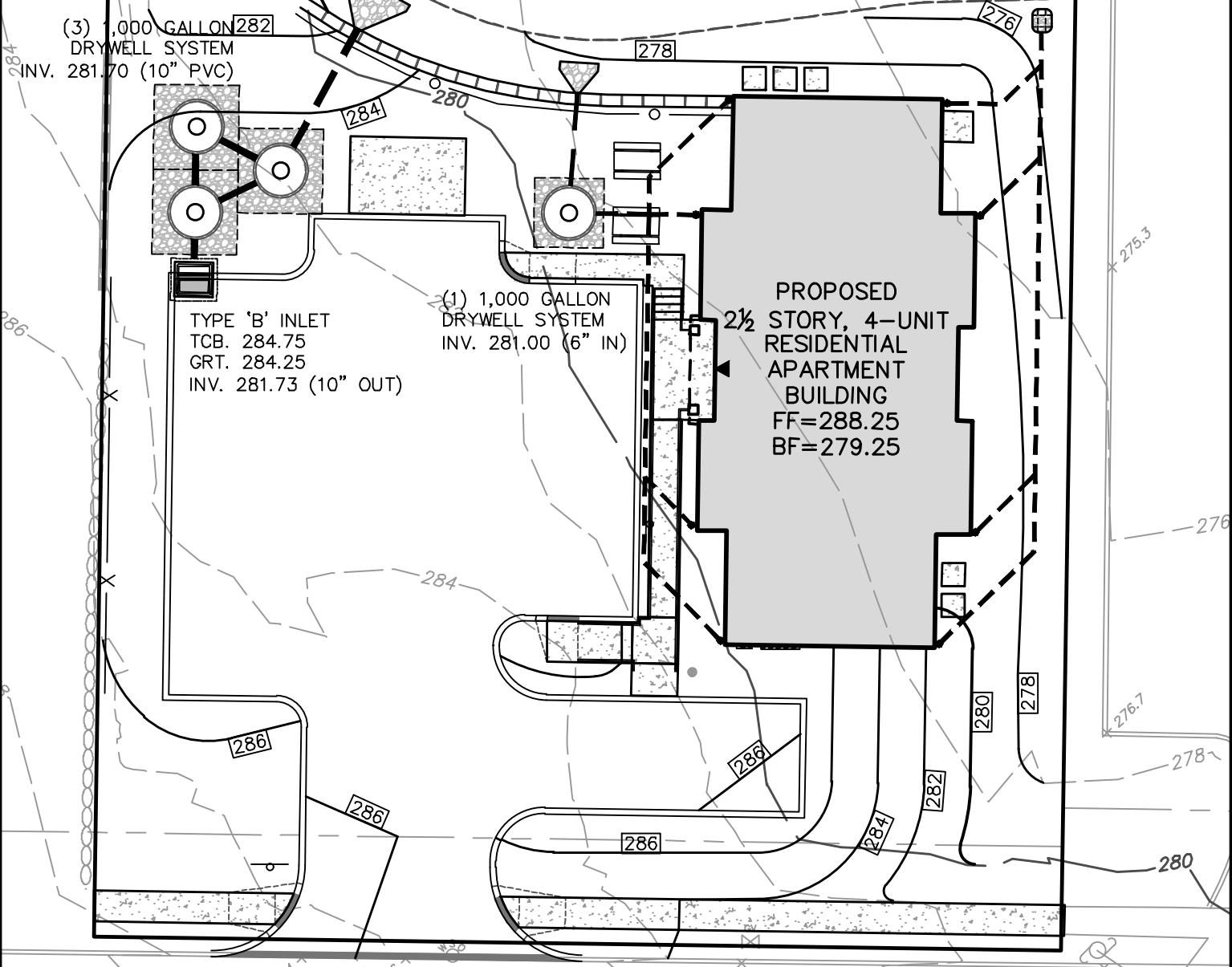
Operation & Maintenance Manual for
Stormwater Management Facilities
Block 55, Lot 8
Borough of Midland Park, Bergen County, New Jersey
March 2023

PART III. APPENDIX

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A. Stormwater Facilities Location Map

**BLOCK 55
LOT 8**
AREA=36,466 SF
(0.837 ACRES)



GODWIN AVENUE
COUNTY ROUTE 84
(40 MPH; VARIABLE WIDTH RIGHT-OF-WAY)

**DYKSTRA WALKER
DESIGN GROUP**

PA.
PROFESSIONAL ENGINEERS, PLANNERS & SURVEYORS
21 BOWLING GREEN PARKWAY, SUITE 204
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STORMWATER FACILITIES LOCATION MAP

BLOCK 55 LOT 8
GODWIN AVENUE
BOROUGH OF MIDLAND PARK
BERGEN COUNTY NEW JERSEY

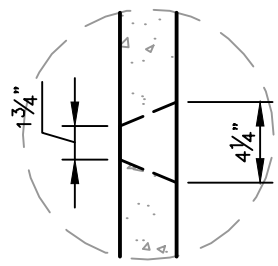
PROJECT NO.: 22004 SCALE: 1" = 20' DATE: 3/29/23

J:\sdesk\PROJ\22\22004\dwg\Preliminary Site Plan\O and M manual report figures.dwg 03/29/23 01:38:40PM, mike, LAYOUT-STORMWATER FACILITIES MAP

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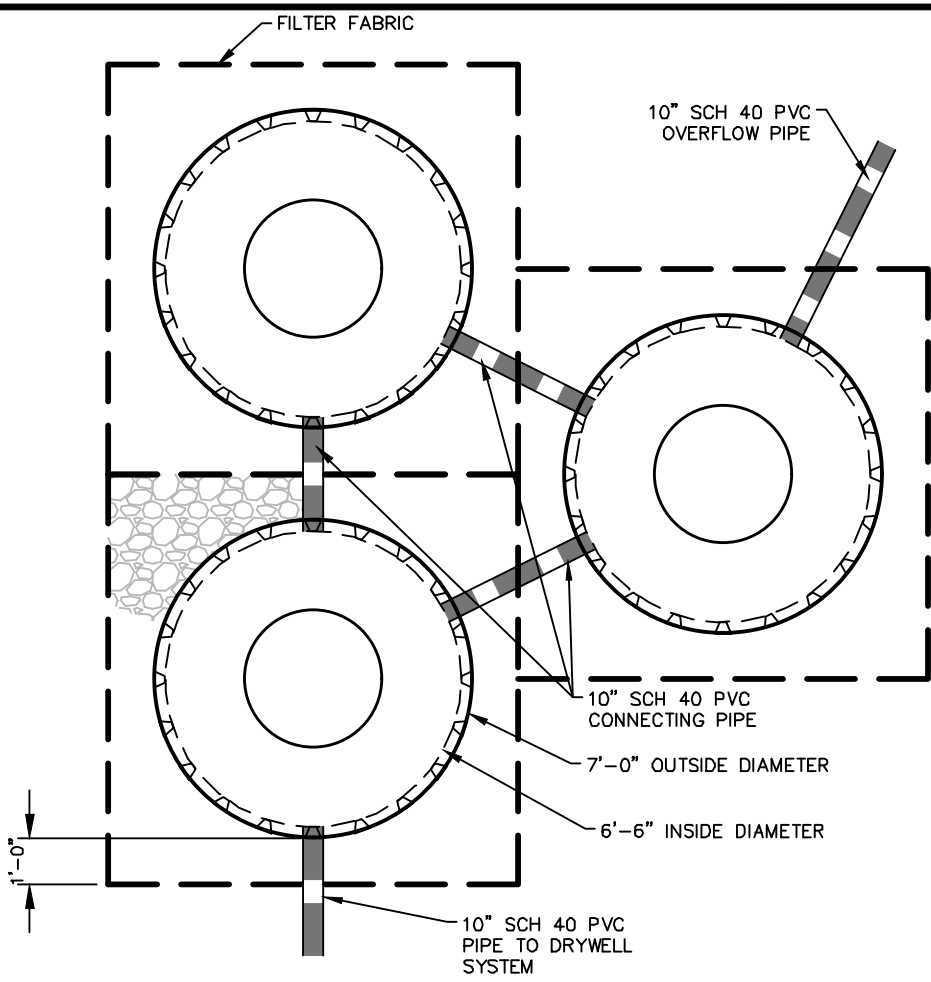
B. Drywell Detail

j:\sdesk\PROJ\22\22004\dwg\Preliminary Site Plan\O and M manual report figures.dwg 03/29/23 01:38:40PM, mike, LAYOUT-DRYWELL DETAIL (1)

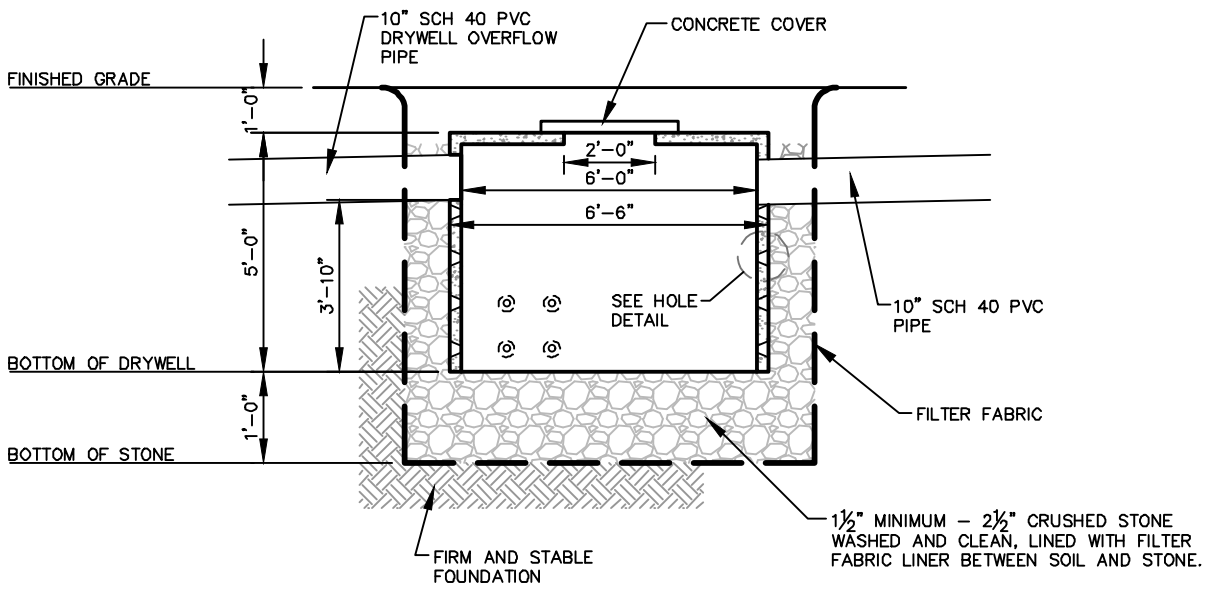


HOLE DETAIL

PEERLESS PRECAST CONCRETE
SEEPAGE PIT OR APPROVED EQUAL
6'-6" DIA. 5'-0" DEEP
RATED CAPACITY = 1,000 GALLONS
CONCRETE P.S.I. 4,500#



PLAN



SECTION

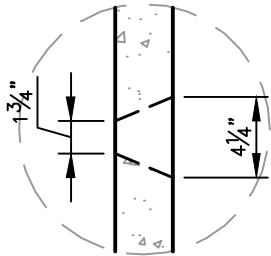
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PARKING LOT DRYWELL SYSTEM DETAIL

BLOCK 55 LOT 8
GODWIN AVENUE
BOROUGH OF MIDLAND PARK
BERGEN COUNTY NEW JERSEY

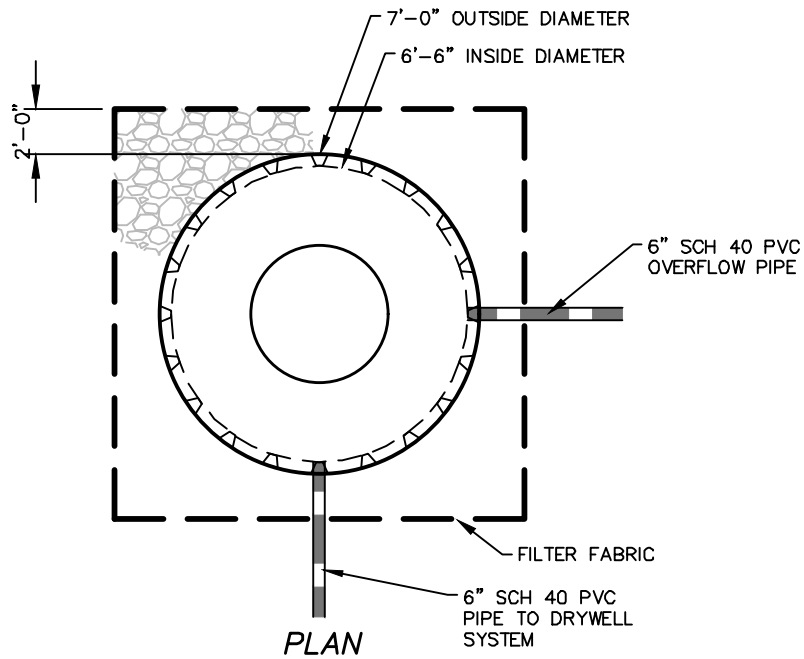
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J:\sdesk\PROJ\22\22004\dwg\Preliminary Site Plan\O and M manual report figures.dwg 03/29/23 01:38:40PM, mike, LAYOUT-DRYWELL DETAIL (2)

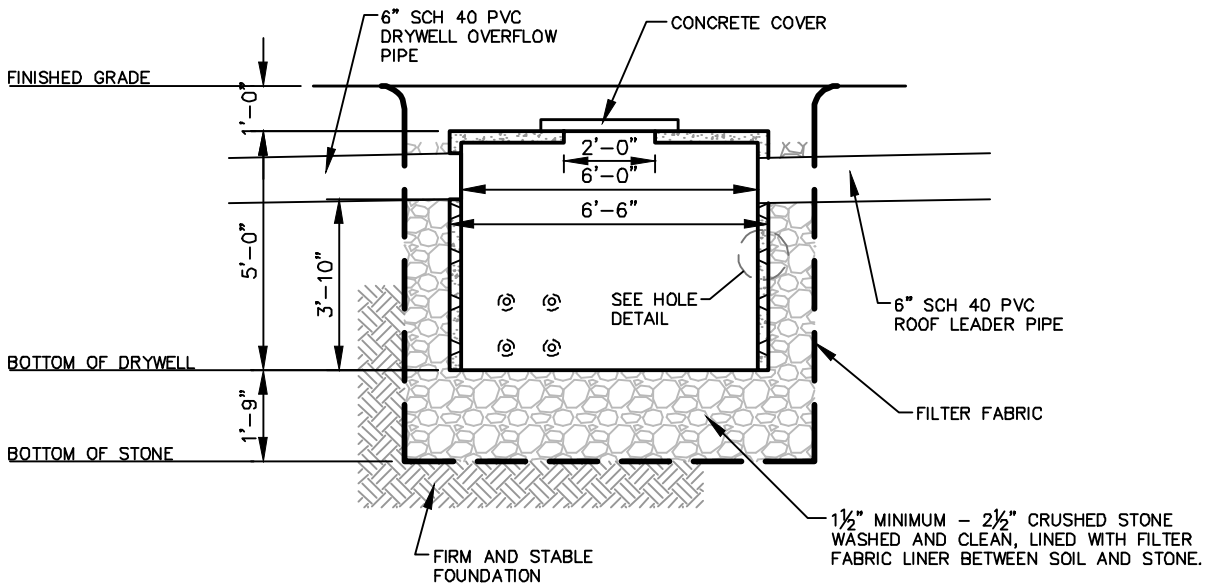


HOLE DETAIL

PEERLESS PRECAST CONCRETE
SEEPAGE PIT OR APPROVED EQUAL
6'-6" DIA. 5'-0" DEEP
RATED CAPACITY = 1,000 GALLONS
CONCRETE P.S.I. 4,500#



PLAN



SECTION

DYKSTRA WALKER
DESIGN GROUP

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ROOF DRYWELL SYSTEM DETAIL

BLOCK 55 LOT 8
GODWIN AVENUE
BOROUGH OF MIDLAND PARK
BERGEN COUNTY NEW JERSEY

PROJECT NO.: 22004

SCALE: AS NOTED

DATE: 3/29/23