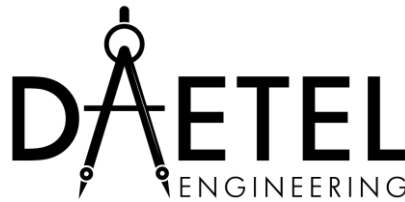


Stormwater Management Report

Prepared For

**Parking Lot Reconfiguration
1 Mannino Drive
Block 40.01, Lot 76.04
Rockaway, Morris County,
New Jersey**

Prepared by:



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October 24, 2023

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Appendices

A. Design Calculations

- ◆ Underground Retention Calculations Seepage Pits

B. Stormwater Details

1. Introduction

The purpose of this report is to analyze the stormwater drainage conditions that will occur as a result of the construction of a the new Accessory Building (1,600 SF) and New Pavers (4,003 SF) in rear of building for a total impervious area of 5,603.26 sf for the site located at 1 Mannino Drive in the Rockaway, Morris County, New Jersey. At this time the site is currently built out, which includes an Existing House of Worship Building with associated parking.

The site is located at block 40.01, lot 76.04 of Rockaway, Morris County, New Jersey. The site under existing conditions, currently has a House of Worship Building with associated parking and utilities, as part of this application. The proposed development does not disturb more than one Acre or increase the impervious coverage by a quarter acre or more. According to the Borough of Rockaway, Morris County, New Jersey State regulations the project is exempt from the water quality, water quantity and ground water discharge.

In an effort to improve the stormwater conditions of the proposed development, in accordance with the Municipal's Ordinance, the applicant is proposing is detaining the generated water quantity flows by the proposed development to prevent runoff from affecting surrounding properties and to increase the ground water recharge by proposing an underground stormwater facility to recharge a portion of the roof runoff (Same area as proposed playing area). Calculations documenting the design of the stormwater management system, as illustrated on the Site Plan drawing documents, prepared by DAETEL ENGINEERING, LLC which are accompanying this report.

2. Underground Stormwater Management Facility

The stormwater management design for this project consists of a series of precast concrete seepage pits (three (3) Drywells Proposed) to fully detain the a portion of the roof runoff generated from the Accessory Building (1,600 SF) and New Pavers (4,003 SF) in rear of building for a total impervious area of 5,603.26 sf and runoff calculated as 3" multiplied by the square foot of the new impervious (5,603.26 SF), as per Borough of Rockaway stormwater requirements. The System overflows to a pipe connected to the municipal's conveyance system. Under existing Conditions the Stormwater of both the Roof Area and the rear grass area have been routed directly to the municipal's conveyance system without any storage volume to detain the water.

Methodology

The methodology used to design the stormwater management system is in compliance with all jurisdictional agency regulations. Specifically, the proposed design was developed for the site using the Municipal stormwater requirements. Design calculations are included within the Appendix of this report.

3. Conclusions

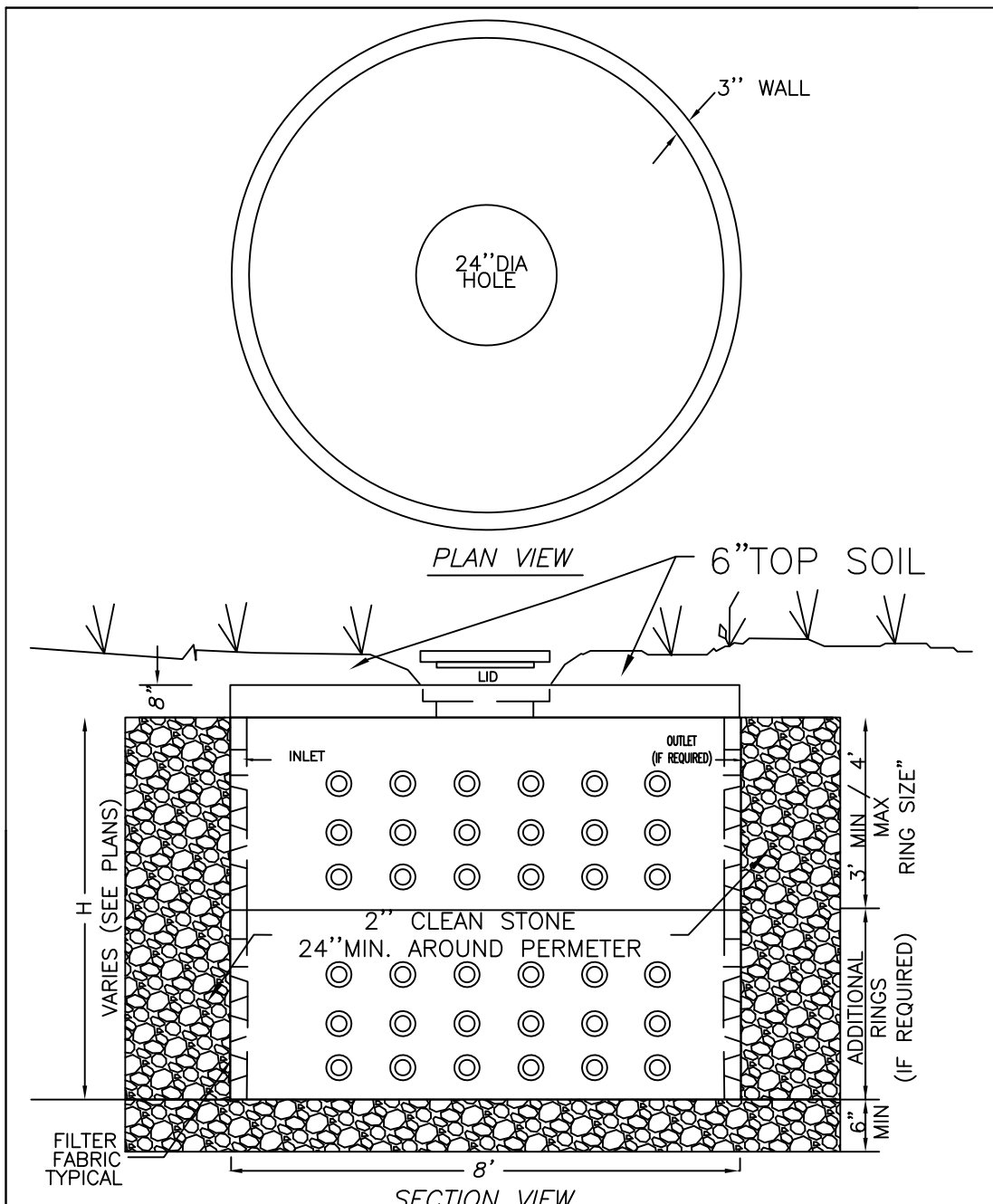
The stormwater conveyance system illustrated on the drawings prepared by Daetel Engineering, PE has sufficient capacity to detain the additional flows generated by the accessory building and rear pavers in accordance with Municipal requirements. The subject project meets all applicable governing stormwater management design criteria. Therefore, it is anticipated that the project will result in no negative impact to the surrounding neighboring properties.

A. DESIGN CALCULATIONS

◆ Underground Retention Calculations Seepage Pit (Drywell)

- **Design Volume Required (3 Inch) of the New Proposed Impervious Surface :**
0.25 FT * 5,603.26 FT= 1400.82 cubic feet (Required As The borough of rockaway)
- **Provided Volume:** 3 Drywells * 510 = 1,530 cubic feet (See Detention Tanks) -
Exceeds Design Volume

B. STORMWATER DETAILS



AS MANUFACTURED BY PEERLESS CONCRETE PRODUCTS COMPANY

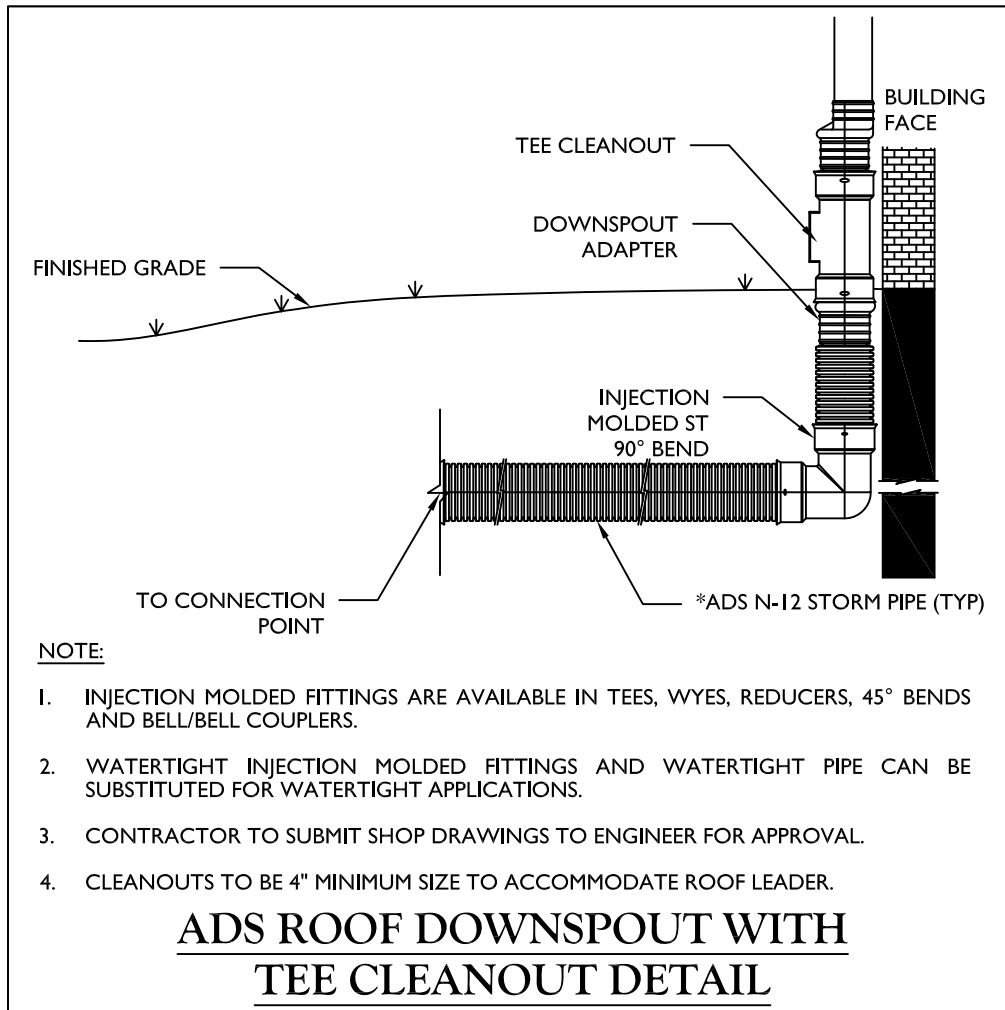
SPECIFICATIONS						
RING HEIGHT	MODEL #	VOLUME (CF)	VOLUME STONE (CF)	TOTAL VOLUME	VOLUME GALLONS	APPROX. WEIGHT
3'-0"	B-15	130	62	192	970	6,000
4'-0"	B-18	172	83	255	1,290	7,000
5'-0"	B-19	216	104	320	1,615	9,500
6'-0"	2XB-15	260	124	384	1,940	12,000
7'-0"	B-15&18	302	145	447	2,260	13,000
8'-0"	2XB-18	344	166	510	2,580	14,000
9'-0"	3XB-15	390	187	577	2,910	18,000

96" DIA . DRYWELL DETAIL

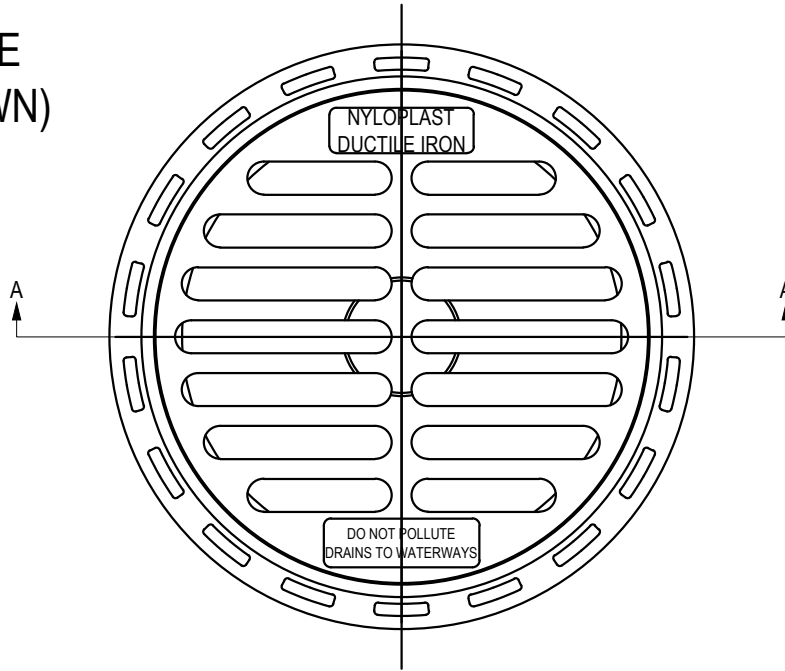
NOT TO SCALE

GNRL - DTLS - STND - GRID

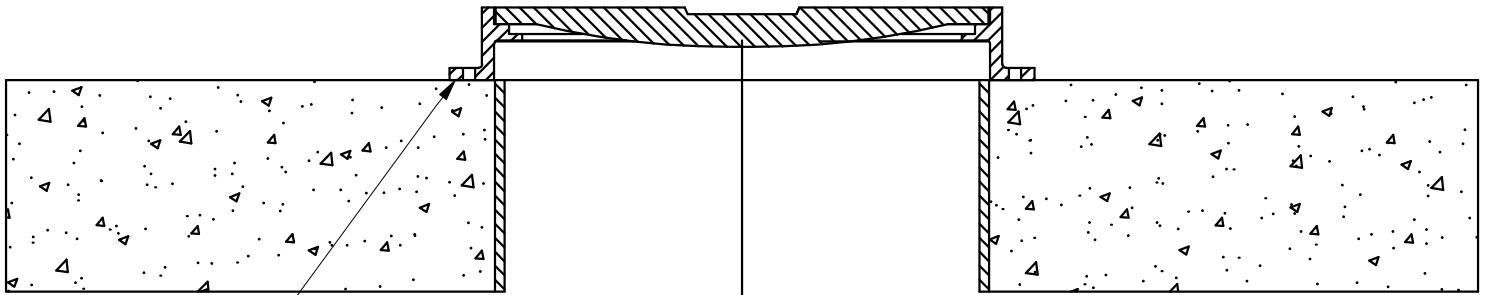
1/11/2023



24" DRAIN
BASIN FRAME & GRATE
(18" STD GRATE SHOWN)



2499CG _



FLANGE DOWN DESIGN
LOCKS FRAME INTO
CONCRETE SUPPORT RING

DRY WELL GRATE DETAIL