

WILLIAM M. DORAN and SONS

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STORMWATER MAINTENANCE PLAN

FOR

ESH PROPERTIES, LLC
BLOCK 224 LOTS 10, 11, 12, 12.01 & 12.02
NORTH BRUNSWICK TOWNSHIP
MIDDLESEX COUNTY, NJ

Prepared by:


Daniel M. Doran, PE & PLS



date

Stormwater Structures: The Stormwater structures that are to be installed within the development located on Block 224 Proposed Lot 9.01 are the following:

- a. 598 15" ADS Pipe
- b. 275 LF 24" ADS Pipe
- c. 246 LF 24" RCP. Class IV
- d. Precast Concrete Headwall
- e. Riprap
- f. (8) precast concrete inlets
- g. 75 LF 5' high chain link fence

The details and location of these structures are shown on the Stormwater Plans for ESH Properties, LLC, said plans have been prepared by William M. Doran & Sons. A copy of the Stormwater Plans are included at the end of this document. When available, an "as built" plan of the system shall be made part of this document.

Party Responsible for the Maintenance of the Stormwater Structures:

ESH Properties, LLC

name

1 Kirkstone Circle, Westfield, NJ 07090

Address

732-620-3962

telephone #

The above information shall be recorded on the deed(s) of the property. Any changes in this information, (i.e. sale of the property), must also be recorded on the deed(s).

The above party shall evaluate this maintenance plan for its effectiveness at least once a year and revise the plan as necessary.

The above party must retain and, upon request, make available the maintenance plan and associated logs and other records for the review by a public entity with administrative, health, environmental, or safety authority over the site.

Preventive and corrective maintenance shall be performed to maintain the function of the stormwater management measure, including repairs or replacement to the structure, removal of sediment, debris, or trash, restoration of eroded areas, snow and ice removal, fence repair or replacement, and the restoration of vegetation.

All maintenance work shall be in accordance with the North Brunswick Township Stormwater Ordinance.

General Maintenance:

The entire system shall be inspected at least four times a year as well as after every major storm, (those storms that exceed 1 inch of rainfall).

Removal of silt shall be performed twice a year, (April and November) at a minimum.

Disposal of sediment, removed from the system, shall be in accordance with all local, state and federal waste regulations.

All structural components shall be inspected for cracking, subsidence, spalling, erosion and deterioration at least once a year. Replacement of components as required.

Maintenance Costs:

The owners are recommended to contract a licensed maintenance company to perform the maintenance of the system. This contract should be renewed at least once a year. Consideration shall be given to the perspective company, in regards to their ability to perform the required tasks. The costs for performing these tasks will change over time. Yet, if the system is properly and regularly inspected the degree of maintenance required should not fluctuate over time.

Access to Structures: The entire stormwater system is located on the site with the components of the system easily accessible for anyone inspecting or maintaining the system.

**Inspection Checklist / Maintenance Actions
STORMWATER PIPE NETWORK & INLETS**

Checklist (circle one): Quarterly / Annual / Monthly / Special Event Inspection

Checklist No. _____ **Inspection Date:** _____

Date of most recent rain event: _____

Rain Condition (circle one):
Drizzle / Shower / Downpour / Other _____

Ground Condition (circle one):
Dry / Moist / Ponding / Submerged / Snow accumulation

The following inspection items and preventative/corrective maintenance actions listed below represent general requirements. The responsible party shall adjust the items and actions to better meet the conditions of the site, the specific design *targets*, and the requirements of regulatory authorities.

Component No. Component Name	For Inspector		For Maintenance Crew
	Inspection Item and Inspection Item No.	Result	Preventative / Corrective Maintenance Actions
STORM WATER SYSTEM	1	Condition of inlet grates	Y__ N__ Work Order # _____
	2	Excessive sediment, silt, or trash accumulation at inlet	Y__ N__ Work Order # _____
	3	Inlet Structure	Y__ N__ Work Order # _____
	4	Condition of pipe network	Y__ N__ Camera Pipe Work Order # _____
	5	Concrete Headwall	Y__ N__ Check Structure Work Order # _____
	6	Chain Link Fence	Y__ N__ Condition of fence Work Order # _____
NOTES:			

Preventative Maintenance Record

Corresponding Checklist No. _____
 Component No. _____, Inspection Item No. _____

Work Logs

Activities	Components	Date Completed
Sediment/debris removal Sediment removal should take place when the system is thoroughly dry.	A – Inlets	
	B – Pipe Network	
	C – Headwall	
	D - Fence	
System Components	Comments	
	A –	
	B –	
	C –	
	D -	
(List additional tasks, if applicable)		

Vegetation/silt removed by _____ (type of equipment) with minimum disruption to the remaining vegetation.

All use of fertilizers, pesticides, mechanical treatments, and other means to ensure optimum vegetation health must not compromise the intended purpose of the stormwater management measure. The fertilizer applied is _____ (type), and _____ (quantity per usage) is applied _____ (frequency of use).

Debris, sediment, and trash are handled (onsite / by _____ (contractor name) to disposal site _____).

Crew member: _____ / _____ **Date:** _____
(name/ signature)

Supervisor: _____ / _____ **Date:** _____
(name/ signature)

File this Preventative Maintenance Record in the Maintenance Log after performing maintenance.

Corrective Maintenance Record

1. **Work Order #** _____ **Date Issued** _____

2. **Issue to be resolved:**

3. The issue was from **Corresponding Checklist No.** _____, **Component No** _____ **Inspection Item No.** _____.

4. **Required Actions**

Actions	Planned Date	Date Completed
(List additional tasks, if applicable)		

5. **Responsible person(s):**

6. **Special requirements**

- Time of the season or weather condition: _____
- Tools/equipment: _____
- Subcontractor (name or specific type): _____

Approved by _____ / _____ **Date** _____
(name/signature)

Verification of completion by _____ / _____ **Date** _____
(name/signature)

File this Corrective Maintenance Record in the Maintenance Log after performing maintenance.