

EVANS ARCHITECTS AIA

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MATTHEW EVANS RA PP

STORMWATER MAINTENANCE MANUAL FOR
BLOCK 177.08, LOT: 21
691 EAGLE ROCK AVENUE,
WEST ORANGE, NEW JERSEY
DATE: November 8, 2024



Date 11-8-24

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PART I: BACKGROUND DATA

A. Introduction

The New Jersey Administrative Code NJAC 7:8-5.8 entitled “Maintenance Requirements” sets forth rules and refers to the New Jersey Stormwater Best Practices Manual (the BMP manual) by the New Jersey Department of Environmental Protection (NJDEP). Chapter 8 of the BMP

manual entitled “Maintenance and Retrofit of Stormwater Management Measures” specifically addresses the requirements for maintenance of a major development. Major development is defined in the aforementioned administrative code as any development that provides for ultimately disturbing one or more acres of land or increasing the amount of impervious surface by one quarter of an acre or more. This report is prepared to address the maintenance component of the herein described development to ensure the effective, efficient, and enduring service of a particular stormwater measure. This plan contains preventative and corrective maintenance tasks and procedures.

The party responsible for the preventative and corrective maintenance of the stormwater measures described herein is:

Dong Nam NY LLC Hyungkee Oh, Ph.D. President B & H Consulting and Development Co.
L.L.C. 295 Herbert Avenue Suite A Closter, NJ 07624 Tel: 201-394-0201

B. Project Description

The 691 Eagle Rock Avenue project proposes to construct a residential building and parking structure on Block 177.08, Lot 21 in the Township of West Orange. The total tract area is approximately 0.143 acres.

C. Stormwater Maintenance Objective

The stormwater system proposed for this development is intended to treat, attenuate and convey the stormwater that impacts the residential development. This maintenance plan is prepared to ensure the system in place is operating efficiently and reliably. The responsible party shall ensure the long-term/perpetual operation, maintenance, repair, and safety of the stormwater management facilities. In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance, the responsible party noted in section A. shall take immediate action, to remove the danger.

Maintenance procedures are required to maintain the intended operation and safe condition of the stormwater management facility by reducing the occurrence of problems and malfunctions. To be effective, maintenance shall be performed on a regular basis and include such routine procedures as training of staff, periodic inspections, silt and debris removal and disposal, upkeep of moving parts, control of mosquitoes and other insects, and review of maintenance and inspection work to identify where the maintenance program could be more

effective.

Repair procedures are required to correct a problem or malfunction at a stormwater management facility and to restore the facility's intended operation and safe condition. Based upon the severity of the problem, repairs shall be performed on an as-needed or emergency basis and include such procedures as structural repairs, mosquito control, removal of debris, sediment and trash which threaten discharge capacity, erosion repair, snow and ice removal, fence repair, and restoration of vegetation.

In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance, the responsible party noted in section A will have fourteen (14) days to initiate maintenance and repair of the facility in a manner that is approved by the municipal engineer or its designee.

D. Maintenance of Conveyance Systems

The proposed conveyance system has adequate access for inspection and/or maintenance. The use of the proposed conveyance system is consistent with the community's surroundings for this area.

All conveyance systems including inlets, manholes, concrete chambers and pipes are expected to receive and/or accumulate debris and sediment. These systems must be inspected for clogging and excessive debris and sediment accumulation at four (4) times annually as well as after every storm exceeding 2 inches of rainfall. Sediment removal should take place when all runoff has drained from the conveyance network and the systems are reasonably dry. 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.

All structural components must be inspected for cracking, subsidence, breaching, wearing, and deterioration at least annually and after any significant rainstorm event. The condition of surrounding and above lying materials shall be inspected for evidence of potential failures or deterioration.

Two people will be needed to perform routine maintenance of the conveyance systems. The routine equipment expected to be utilized for the maintenance tasks include a jet vacuum vehicle, shovels, lighting equipment and a wheel barrel or truck for the debris hauling. Water, mosquito control chemicals, and concrete repair materials may also be required depending on the structure condition. No manufacturer's instructions or user manuals are available for these components.

MAINTENANCE INSPECTION FOR CONVEYANCE SYSTEMS
691 EAGLE ROCK AVENUE, WEST ORANGE NJ
NOTE: INSPECTIONS TO BE EVALUATED DURING A PERIOD OF DRY AND WARM WEATHER AND LOW TIDE CONDITIONS AT THE

PROJECT SITE

Yes	No	Maintenance Evaluation	Action(s) Required if Answer “Yes”
☐	☐	Is there a buildup of sediment (in excess of 2 inches), trash, debris or any other stormwater pollution?	Remove sediment and evaluate on-site upstream systems. Dispose debris in accordance with local, state and federal requirements.
☐	☐	Is there Standing water?	Evaluate downstream systems for clogging or trash sediment buildup.
☐	☐	Is there any structural failure?	Consult engineer to determine safety and/or stability of the system.
☐	☐	Are there visible signs of cracking, subsidence, erosion or deterioration of any of the storm conveyance systems?	Consult engineer to determine safety and/or stability of the system.
☐	☐	Are there any root intrusions or any other vegetation within catch basins, outlet control structures or storm manholes?	Remove roots and dispose vegetation in accordance with local, state and federal regulations.
☐	☐	Are ladder rungs in manholes or outlet structures damaged, missing or misaligned?	Repair or replace.
☐	☐	Is there a buildup of sediment, trash, debris, leaves or any other pollution clogging conveyance of stormwater.	Remove all pollution.
☐	☐	Is the rear yard trench drain conveying stormwater uniformly along its entire length of grate?	Repair or replace.
☐	☐	Are any covers or grates missing, damaged or only partially in place at any catch basin, outlet control structure or manhole?	Repair or replace.

E. Maintenance of Underground Detention Systems

The proposed underground detention system provides adequate ability for inspection and/or maintenance. The use of the proposed system allows for an optimized development and a minimization of disturbance.

The underground detention basin, including all chambers, pipe, manholes, outlet control structures and appurtenances must be inspected for clogging and excessive debris and sediment accumulation at least four (4) times annually as well as after every storm exceeding 2 inches of rainfall. Sediment removal should take place when all runoff has drained from the conveyance network and the systems are reasonably dry. 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.

All structural components must be inspected for cracking, subsidence, breaching, wearing, and deterioration at least annually and after any significant rainstorm event. The condition of surrounding and above lying materials shall be inspected for evidence of potential failures or deterioration.

Two people will be needed to perform routine maintenance of the conveyance systems. The routine equipment to be utilized for the maintenance tasks include a jet vacuum vehicle, shovels, lighting equipment and a wheel barrel or truck for the debris hauling. No manufacturer's instructions or user manuals are available for maintenance of these components. Maintenance would only take place in the adjacent components of the system, i.e. the pumps, catch basins, pipes, outlet control structure and other units outside the underground detention system. Water, mosquito control chemicals, and concrete repair materials may also be required depending on the structure condition.

MAINTENANCE INSPECTION FOR UNDERGROUND DETENTION SYSTEM
691 EAGLE ROCK AVENUE, WEST ORANGE
NOTE: INSPECTIONS TO BE EVALUATED DURING A PERIOD OF DRY AND WARM WEATHER AND LOW TIDE CONDITIONS AT THE PROJECT SITE

Yes	No	Maintenance Evaluation	Action(s) Required if Answer "Yes"
☐	☐	Is there a buildup of sediment (in excess of 2 inches), trash, debris or any other stormwater pollution within the header pipes or outlet control structure?	Remove sediment, trash, debris, etc. Dispose debris in accordance with local, state and federal requirements.
☐	☐	Is there any structural failure?	Consult engineer to determine safety and/or stability of the system.
☐	☐	Are there visible signs of cracking, subsidence, erosion or deterioration of any of the underground detention system?	Consult engineer to determine safety and/or stability of the system.
☐	☐	Are there any signs of unusual color, odor or turbidity within the discharged water?	Evaluate header pipes and structures for possible sediment, trash and debris. Cleanse system if any of the aforementioned obstructions are encountered. Dispose obstructions in accordance with local, state and federal requirements.
☐	☐	Are there root intrusions or any other plant growth occurring with the system(s)?	Remove vegetation and dispose in accordance with local, state and federal regulations.
☐	☐	Are mosquito or other insect habitats consistently present in the area as a result of the structure(s)?	Use appropriate mosquito insecticides or agents to control or eliminate insect breeding.

F. Maintenance of Water Quality Unit

The proposed Water Quality Unit allows for adequate access for both inspection and/or maintenance. The use of the proposed system allows for removal of total suspended solids (TSS), soluble heavy metals, oil and grease, and total nutrients from stormwater.

We recommend that inspections be conducted quarterly during the first two (2) years of operation. Additionally, we recommend that the Water Quality Unit be inspected after major storm events. Following the first two (2) years of operation, we recommend two (2) scheduled inspections annually. The first inspection shall occur late in the rainy season, and the second inspection should occur in the late summer/early fall when flows into the system should be minimal.

Routine Inspection Schedule

- 1 Open the main hatchway. Allow fresh air to ventilate the unit for at least 10 minutes.
- 2 Using a portable floodlight, examine the top of the filter deck from the outside of the unit. Note any accumulation of material on the top of the deck. Visually examine the filter cartridge tops to confirm that all filters are still soundly fastened to the filter deck.
- 3 If there is a significant amount of accumulated material on the filter deck, or if any of the filter cartridges appear in need of replacement, a complete maintenance event should be scheduled.
- 4 With a graduated rod, measure the sediment accumulation in the sedimentation basin through the overflow pipe. If the level of sediment is greater than 6 inches, a complete maintenance event should be scheduled.
- 5 Accomplish the repair or cleaning as needed and return the unit to operation

The Water Quality Unit has been designed to require maintenance annually. The need for a complete maintenance event shall be determined based on the routine inspection. If there is a significant amount of material on the filter deck or an accumulated level of sediment in the sediment basin greater than 6", a complete maintenance event shall be scheduled. We recommend one complete maintenance event annually.

Maintenance Schedule

- The Water Quality Unit will require periodic filter cartridge replacement and sedimentation basin cleanout with a vacuum truck.
- Maintenance involved dumping the spent filter media from the cartridge into the sedimentation basin where it may be removed by vacuum truck along with the settled sediment and remaining liquid. The lightweight, empty cartridges are then removed from the structure.
- Replacement cartridges are installed

Applicable safety (OSHA) and disposal regulations should be followed during all maintenance activities. All maintenance activities shall be performed as specified in the manufactures operations manual.

OPERATIONS AND MAINTENANCE GUIDELINES

CDS Stormwater Treatment Unit

INTRODUCTION

The CDS unit is an important and effective component of your storm water management program and proper operation and maintenance of the unit are essential to demonstrate your compliance with local, state and federal water pollution control requirements.

The CDS technology features a patented non-blocking, indirect screening technique developed in Australia to treat water runoff. The unit is highly effective in the capture of suspended solids, fine sands and larger particles. Because of its non-blocking screening capacity, the CDS unit is un-matched in its ability to capture and retain gross pollutants such as trash and debris. In short, CDS units capture a very wide range of organic and in-organic solids and pollutants that typically result in tons of captured solids each year such as: Total suspended solids (TSS) and other sedimentitious materials, oil and greases, trash, and other debris (including floatables, neutrally buoyant, and negatively buoyant debris). These pollutants will be captured even under very high flow rate conditions.

CDS units are equipped with conventional oil baffles to capture and retain oil and grease. Laboratory evaluations show that the CDS units are capable of capturing up to 70% of the free oil and grease from storm water. CDS units can also accommodate the addition of oil sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff.

OPERATIONS

The CDS unit is a non-mechanical self-operating system and will function any time there is flow in the storm drainage system. The unit will continue to effectively capture pollutants in flows up to the design capacity even during extreme rainfall events when the design capacity may be exceeded. Pollutants captured in the CDS unit's separation chamber and sump will be retained even when the units design capacity is exceeded.

CDS UNIT INSPECTION

Access to the CDS unit is typically achieved through two manhole access covers – one allows inspection (and clean out) of the separation chamber (screen/cylinder) & sump and another allows inspection (and cleanout) of sediment captured and retained behind the screen.

The unit should be periodically inspected to determine the amount of accumulated pollutants and to ensure that the cleanout frequency is adequate to handle the predicted pollutant load being processed by the CDS unit. The unit should be periodically inspected for indications of vector infestation, as well. The recommended cleanout of

solids within the CDS unit's sump should occur at 75% to 85% of the sump capacity. However, the sump may be completely full with no impact to the CDS unit's performance.

CONTECH Stormwater Solutions (previously CDS Technologies) recommends the following inspection guidelines: For new initial operation, check the condition of the unit after every runoff event for the first 30 days. For ongoing operations, the unit should be inspected after the first six inches of rainfall at the beginning of the rainfall season and at approximately 30-day intervals. The visual inspection should ascertain that the unit is functioning properly (no blockages or obstructions to inlet and/or separation screen), evidence of vector infestation, and to measure the amount of solid materials that have accumulated in the sump, fine sediment accumulated behind the screen, and floating trash and debris in the separation chamber. This can be done with a calibrated dipstick, tape measure or other measuring instrument so that the depth of deposition in the sump can be tracked.

CDS UNIT CLEANOUT

The frequency of cleaning the CDS unit will depend upon the generation of trash and debris and sediments in your application. Cleanout and preventive maintenance schedules will be determined based on operating experience unless precise pollutant loadings have been determined.

Access to the CDS unit is typically achieved through two manhole access covers – one allows cleanout of the separation chamber (screen/cylinder) & sump and another allows cleanout of sediment captured and retained behind the screen. For units possessing a sizable depth below grade (depth to pipe), a single manhole access point would allow both sump cleanout and access behind the screen.

CONTECH Stormwater Solutions Recommends The Following:

NEW INSTALLATIONS: Check the condition of the unit after every runoff event for the first 30 days. The visual inspection should ascertain that the unit is functioning properly (no blockages or obstructions to inlet and/or separation screen), measuring the amount of solid materials that have accumulated in the sump, the amount of fine sediment accumulated behind the screen, and determining the amount of floating trash and debris in the separation chamber. This can be done with a calibrated "dip stick" so that the depth of deposition can be tracked. Refer to the "Cleanout Schematic" (**Appendix B**) for allowable deposition depths and critical distances. Schedules for inspections and cleanout should be based on storm events and pollutant accumulation.

ONGOING OPERATION: During the rainfall season, the unit should be inspected at least once every 30 days. The floatables should be removed and the sump cleaned when the sump is 75-85% full. If floatables accumulate more rapidly than the settleable solids, the floatables should be removed using a vacuum truck or dip net before the layer thickness exceeds approximately one foot.

Cleanout of the CDS unit at the end of a rainfall season is recommended because of the nature of pollutants collected and the potential for odor generation

from the decomposition of material collected and retained. This end of season cleanout will assist in preventing the discharge of pore water from the CDS® unit during summer months.

USE OF SORBENTS –The addition of sorbents is **not a requirement** for CDS units to effectively control oil and grease from storm water. The conventional oil baffle within a unit assures satisfactory oil and grease removal. However, the addition of sorbents is a unique enhancement capability unique to CDS units, enabling increased oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems.

Under normal operations, CDS units will provide effluent concentrations of oil and grease that are less than 15 parts per million (ppm) for all dry weather spills where the volume is less than or equal to the spill capture volume of the CDS unit. During wet weather flows, the oil baffle system can be expected to remove between 40 and 70% of the free oil and grease from the storm water runoff.

CONTECH Stormwater Solutions only recommends the addition of sorbents to the separation chamber if there are specific land use activities in the catchment watershed that could produce exceptionally large concentrations of oil and grease in the runoff, concentration levels well above typical amounts. If site evaluations merit an increased control of free oil and grease then oil sorbents can be added to the CDS unit to thoroughly address these particular pollutants of concern.

Recommended Oil Sorbents

Rubberizer® Particulate 8-4 mesh or OARS™ Particulate for Filtration, HPT4100 or equal. Rubberizer is supplied by Haz-Mat Response Technologies, Inc. 4626 Santa Fe Street, San Diego, CA 92109 (800) 542-3036. OARS is supplied by AbTech Industries, 4110 N. Scottsdale Road, Suite 235, Scottsdale, AZ 85251 (800) 545-8999.

The amount of sorbent to be added to the CDS separation chamber can be determined if sufficient information is known about the concentration of oil and grease in the runoff. Frequently the actual concentrations of oil and grease are too variable and the amount to be added and frequency of cleaning will be determined by periodic observation of the sorbent. As an initial application, CDS recommends that approximately 4 to 8 pounds of sorbent material be added to the separation chamber of the CDS units per acre of parking lot or road surface per year. Typically this amount of sorbent results in a ½ inch to one (1") inch depth of sorbent material on the liquid surface of the separation chamber. The oil and grease loading of the sorbent material should be observed after major storm events. Oil Sorbent material may also be furnished in pillow or boom configurations.

The sorbent material should be replaced when it is fully discolored by skimming the sorbent from the surface. The sorbent may require disposal as a special or hazardous waste, but will depend on local and state regulatory requirements.

CLEANOUT AND DISPOSAL

A vacuum truck is recommended for cleanout of the CDS unit and can be easily accomplished in less than 30-40 minutes for most installations. Standard vacuum operations should be employed in the cleanout of the CDS unit. Disposal of material from the CDS unit should be in accordance with the local municipality's requirements. Disposal of the decant material to a POTW is recommended. Field decanting to the storm drainage system is not recommended. Solids can be disposed of in a similar fashion as those materials collected from street sweeping operations and catch-basin cleanouts.

MAINTENANCE

The CDS unit should be pumped down at least once a year and a thorough inspection of the separation chamber (inlet/cylinder and separation screen) and oil baffle performed. The unit's internal components should not show any signs of damage or any loosening of the bolts used to fasten the various components to the manhole structure and to each other. Ideally, the screen should be power washed for the inspection. If any of the internal components is damaged or if any fasteners appear to be damaged or missing, please contact CONTECH at 800.338.2211 to make arrangements to have the damaged items repaired or replaced.

The screen assembly is fabricated from Type 316 stainless steel and fastened with Type 316 stainless steel fasteners that are easily removed and/or replaced with conventional hand tools. The damaged screen assembly should be replaced with the new screen assembly placed in the same orientation as the one that was removed.

CONFINED SPACE

The CDS unit is a confined space environment and only properly trained personnel possessing the necessary safety equipments should enter the unit to perform particular maintenance and/or inspection activities beyond normal procedure. Inspections of the internal components can, in most cases, be accomplished by observations from the ground surface.

VECTOR CONTROL

Most CDS units do not readily facilitate vector infestation. However, for CDS units that may experience extended periods of non-operation (stagnant flow conditions for more than approximately one week) there may be the potential for vector infestation. In the event that these conditions exist, the CDS unit may be designed to minimize potential vector habitation through the use of physical barriers (such as seals, plugs and/or netting) to seal out potential vectors. The CDS unit may also be configured to allow drain-down under favorable soil conditions where infiltration of storm water runoff is permissible. For standard CDS units that show evidence of mosquito infestation, the

application of larvicide is one control strategy that is recommended. Typical larvicide applications are as follows:

SOLID B.t.i. LARVICIDE: ½ to 1 briquet (typically treats 50-100 sq. ft.) one time per month (30-days) or as directed by manufacturer.

SOLID METHOPRENE LARVICIDE (not recommended for some locations): ½ to 1 briquet (typically treats 50-100 sq. ft.) one time per month (30-days) to once every 4-½ to 5-months (150-days) or as directed by manufacturer.

RECORDS OF OPERATION AND MAINTENANCE

CONTECH Stormwater Solutions recommends that the owner maintain annual records of the operation and maintenance of the CDS unit to document the effective maintenance of this important component of your storm water management program. The attached **Annual Record of Operations and Maintenance** form (see **Appendix A**) is suggested and should be retained for a minimum period of three years.

MAINTENANCE INSPECTION FOR WATER QUALITY UNIT
550 BERGEN BOULEVARD – PALISADES PARK
NOTE: INSPECTIONS TO BE EVALUATED DURING A PERIOD OF DRY AND WARM WEATHER AND LOW TIDE CONDITIONS AT THE PROJECT SITE

Yes	No	Maintenance Evaluation	Action(s) Required if Answer "Yes"
☐	☐	Is there a buildup of oil, sediment and grease within the forebay and on surrounding pavement. Is there trash and debris within the system vault.	Remove oil, sediment and grease and dispose debris in accordance with local, state and federal requirements. Remove trash and debris from the system vault.
☐	☐	Is there any structural failure?	Consult engineer to determine safety and/or stability of the system.
☐	☐	Are there visible signs of cracking, subsidence, erosion or deterioration of any part of the storm filter unit?	Consult engineer to determine safety and/or stability of the system.
☐	☐	Are there any root intrusions or any other vegetation within the storm filter?	Remove roots and dispose vegetation in accordance with local, state and federal regulations.
☐	☐	Are any covers or grates missing, damaged or only partially in place at any water quality structure?	Repair or replace.

ANNUAL RECORD OF OPERATION AND MAINTENANCE

OWNER _____
 ADDRESS _____
 OWNER REPRESENTATIVE _____ PHONE _____

INSTALLATION:
 MODEL DESIGNATION _____ DATE _____
 SITE LOCATION _____

INSPECTIONS:

DATE/ INSPECTOR	SCREEN/INLET INTEGRITY	FLOATABLES DEPTH	DEPTH TO SEDIMENT (inches)	SEDIMENT VOLUME* (CUYDS)	SORBENT DISCOLORATION

DEPTH FROM COVER TO BOTTOM OF SUMP (SUMP INVERT) _____

DEPTH FROM COVER TO SUMP @ 75% FULL _____

VOLUME OF SUMP @ 75% FULL = _____ CUYD

VOLUME/INCH DEPTH _____ CUFT/IN OF SUMP

VOLUME/FOOT DEPTH _____ CUYD/FT OF SUMP

Calculate Sediment Volume = (Depth to Sump Invert – Depth to Sediment)(Volume/inch)

OBSERVATIONS OF FUNCTION: _____

CLEANOUT:

DATE	VOLUME FLOATABLES	VOLUME SEDIMENTS	METHOD OF DISPOSAL OF FLOATABLES, SEDIMENTS, DECANT AND SORBENTS

OBSERVATIONS: _____

SCREEN MAINTENANCE:

DATE OF POWER WASHING, INSPECTION AND OBSERVATIONS:

CERTIFICATION: _____ TITLE: _____ DATE: _____

INSPECTION CHECKLIST

1. During the rainfall season, inspect and check condition of unit at least once every 30 days ☐
2. Ascertain that the unit is functioning properly (no blockages or obstructions to inlet and/or separation screen) ☐
3. Measure amount of solid materials that have accumulated in the sump (Unit should be cleaned when the sump is 75-85% full) ☐
4. Measure amount of fine sediment accumulated behind the screen ☐
5. Measure amount of floating trash and debris in the separation chamber ☐

MAINTENANCE CHECKLIST

1. Cleanout unit at the end and beginning of the rainfall season ☐
2. Pump down unit (at least once a year) and thoroughly inspect separation chamber, separation screen and oil baffle ☐
3. No visible signs of damage or loosening of bolts to internal components observed * ☐

*** If there is any damage to the internal components or any fasteners are damaged or missing please contact CONTECH (800.338.1122).**

PART II: MAINTENANCE LOGS

**A. MAINTENANCE LOG
FOR CONVEYANCE SYSTEMS**

**INSTRUCTIONS:
THIS LOG SHALL BE UPDATED TO INCLUDE ALL MAINTENANCE
PERFORMED AT A SPECIFIC STORMWATER MEASURE**

550 BERGEN BOULEVARD -- PALISADES PARK

DATE	PERSON CONDUCTING MAINTENANCE	AREA OF MAINTENANCE	PROBLEM(S) FOUND	ACTION(S) TAKEN

**B. MAINTENANCE LOG
FOR UNDERGROUND DETENTION SYSTEM**

**INSTRUCTIONS:
THIS LOG SHALL BE UPDATED TO INCLUDE ALL MAINTENANCE
PERFORMED AT A SPECIFIC STORMWATER MEASURE**

550 BERGEN BOULEVARD – PALISADES PARK

DATE	PERSON CONDUCTING MAINTENANCE	AREA OF MAINTENANCE	PROBLEM(S) FOUND	ACTION(S) TAKEN

**C. MAINTENANCE LOG
FOR WATER QUALITY UNIT**

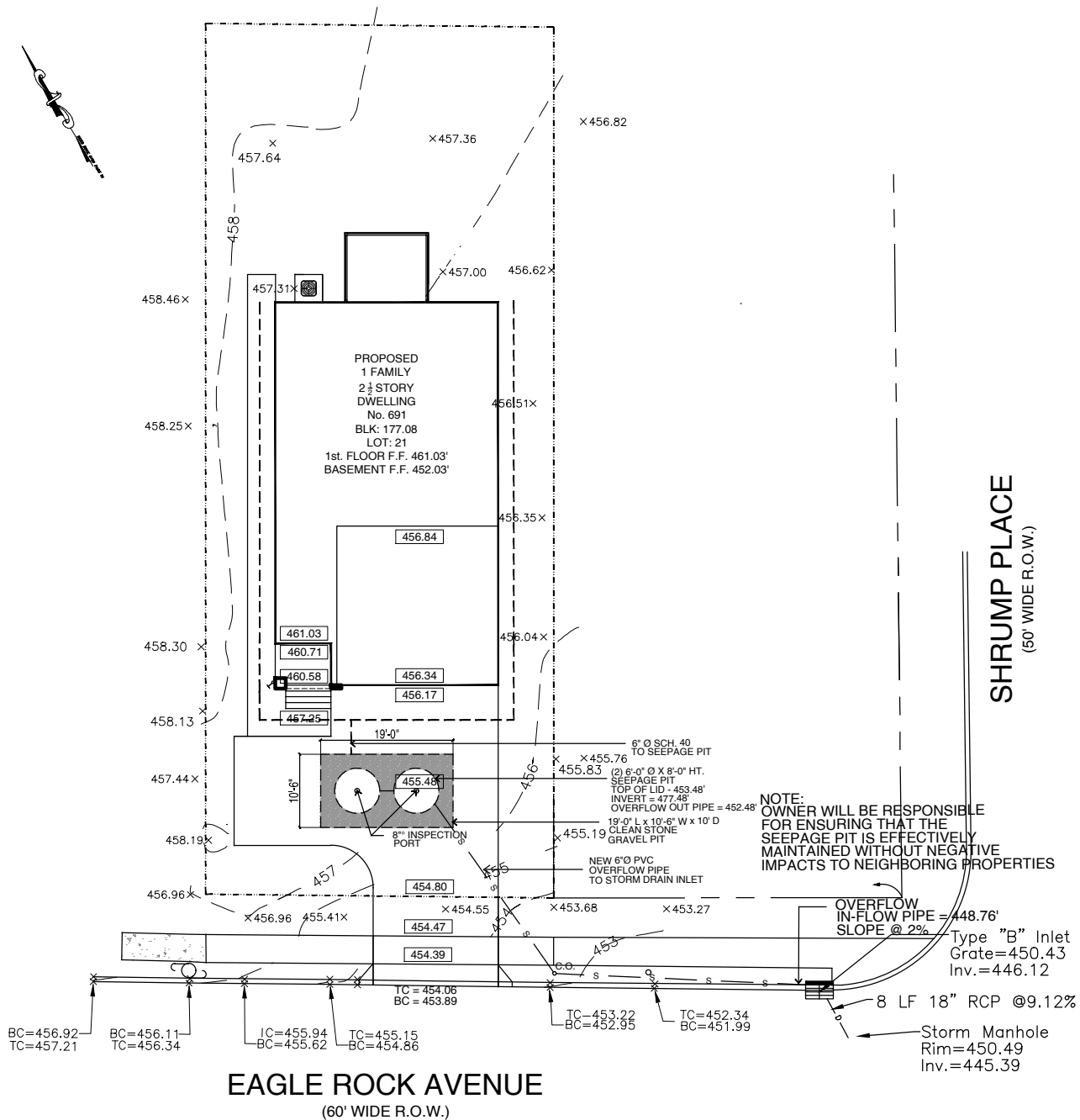
INSTRUCTIONS:

**THIS LOG SHALL BE UPDATED TO INCLUDE ALL MAINTENANCE
PERFORMED AT A SPECIFIC STORMWATER MEASURE**

550 BERGEN BOULEVARD – PALISADES PARK

DATE	PERSON CONDUCTING MAINTENANCE	AREA OF MAINTENANCE	PROBLEM(S) FOUND	ACTION(S) TAKEN

PART II: FIGURES



EVANS ARCHITECTS AIA

MATTHEW G. EVANS
ARCHITECT - PROFESSIONAL PLANNER

470 CHAMBERLAIN AVENUE
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**PROPOSED ONE FAMILY
FOR:
NWAIWU PROPERTIES, LLC
691 EAGLE ROCK AVENUE
BLOCK: 177.08 LOT: 21
WEST ORANGE, NJ**

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DRW BY	DATE	REV	COMMENT
CRR	12.18.23	1	COMMENT AS PER MUNICIPAL ENGINEER
CRR	04.18.24	2	RESUBMISSION
CRR	07.08.24	3	CHANGES AS PER MEETING 08.15.24
CRR	09.23.24	4	CHANGES AS PER MEETING 10.10.24

GRADING / DRAINAGE PLAN

MATTHEW G. EVANS
ARCHITECT • PLANNER

ea

R.A. LIC. NO. 13803
P.P. LIC. NO. 5662

SHEET
NUMBER

GD-1