



OPERATIONS & MAINTENANCE PLAN

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT
NORTH BRIDE BROOK ROAD, EAST LYME, CT

PREPARED FOR

PAZZ & CONSTRUCTION, LLC
297 BOSTON POST ROAD
EAST LYME, CT 06333

DATE: NOVEMBER 19, 2020
REVISED:





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GENERAL OVERVIEW

Pazz & Construction, LLC is proposing to construct a residential multi-family townhouse development on a 20.24-acre parcel of land located on the west side of North Bride Brook Road in East Lyme, CT. The subject property, hereinafter “Site”, is identified as Map 9, Lot 37-2 on the Town of East Lyme Tax Assessor Mapping.

The multi-family development will consist of the construction of 10 townhouse buildings with a total of 80 residential units. Main access to the development will be provided from the northeast via a driveway connection to North Bride Brook Road. Additional site work will include:

- 24’ access and internal driveways
- 18’ wide utility maintenance and emergency access driveway
- Exterior and garage parking
- Pedestrian walks for handicapped accessibility
- Drainage improvements including stormwater collection, treatment, infiltration & detention.
- Rain gardens / filter beds
- Connection to the existing sanitary sewer, water, electric, gas and telecom services
- Landscaping including a mixture of street trees, shrubs, foundation plantings and planting beds
- Building and site lighting
- Erosion and sedimentation control measures

The following Operations and Maintenance Plan (hereinafter Plan) has been prepared for the North Bride Brook Multi-Family Development, located on North Bride Brook Road in the Town of East Lyme, Connecticut by Yantic River Consultants, LLC to satisfy the requirements of the Town and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

PURPOSE

The purpose of this Plan is to ensure that the stormwater components are maintained and operated in accordance with design intent and all approvals and permits.

RESPONSIBLE PARTY

Pazz & Construction, LLC
297 Boston Post Road
East Lyme, CT 06333
Phone: (860) 739-0863

RECORD KEEPING

The responsible party shall keep a record of all inspections, cleanings, and maintenance and repairs performed. Copies of inspection reports and maintenance records shall be kept on-site in the development maintenance office once they are established.

SPILL CONTROL

In addition to the good housekeeping and material management practices in this plan, the following practices will be followed for spill prevention and clean-up:



- Manufacturer’s recommended methods for spill clean-up will be made available to all site maintenance personnel including the procedures and the location of the information and clean-up supplies.
- Materials and equipment necessary for spill clean-up will be made available to all site maintenance personnel. Available equipment and materials may include but are not be limited to absorbent, booms or mats, brooms, dust pans, mops, rags, gloves, goggles, sand, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned immediately after discovery.
- The spill area will be kept well-ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.
- Spills of toxic or hazardous material, regardless of size, will be reported to the appropriate State or local government agency.
- If a spill occurs, this plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean the spill if there is another one. A description of the spill, the cause, and the remediation measures will also be included.

A spill report shall be prepared by the responsible party after each occurrence. The spill report shall present a description of the release, including quantity and type of material, date of spill, circumstances leading to the release, location of spill, response actions and personnel, documentation of notifications and corrective measures implemented to prevent reoccurrence.

STORMWATER MANAGEMENT

The stormwater management system is shown on a plan entitled “Grading & Drainage Plan” Sheet 3 of 8 of the approved permit plan set. The system consists of a series of components to collect stormwater runoff from the proposed development, including roof leaders, swales, yard drains, catch basins and drainage piping. The collection system discharges to a proposed stormwater infiltration, treatment & detention system prior to discharging clean water from storm events which exceed the 10-storm in intensity to an existing catch basin in the North Bride Brook Road Right-of-Way (ROW).

The Infiltration & Detention system consists of a subsurface system backfilled with washed stone and a graded depression sized to attenuate peak flow rates as compared to pre- development (existing) conditions for the 2, 5, 10, 25, 50 and 100-year storm events. there will be no increase in peak flow rates discharging to the North Bride Brook Road ROW, inland wetlands, or adjacent properties.

Stormwater runoff from impervious surfaces will be treated as follows:

1. All catch basins shall have 2' deep sumps except where labeled as 4' sumps on the plan.
2. Flows from the collection system will be diverted through an isolator row within the Stormtech system. the isolator row will capture total suspended solids (TSS) and debris within an accessible row of lined MC-3500 chambers to allow for inspection and maintenance before flowing into adjacent units. The system will fully retain and infiltrate the water quality volume and treat water quality flow.



3. Stormwater that is not infiltrated will discharge to the detention basin, which has been graded with a flat bottom and the initial 4"Ø discharge orifice is 6" above the bottom grade to promote infiltration into the witnessed sand and gravel subsoils.

STORMWATER OPERATION & MAINTENANCE

The following operation & maintenance plan shall be implemented to ensure that the stormwater management system functions as designed.

1. Party responsible for Operations & Maintenance: Pazz & Construction, LLC
2. The following maintenance shall be performed.
 - a. Inspect each catch basin semi-annually in the fall after leaf fall and in the spring following the winter sanding season. Remove all collected sediment and debris and dispose of in an approved manner.
 - b. Inspect each vegetated/landscaped area twice annually, once in the fall as part of foliage cleanup and a second time during spring cleanup. All debris that obstructs or diverts flow shall be removed and disposed of in an approved manner.
 - c. Inspect the Stormtech MC-3500 subsurface stormwater detention & treatment system per the manufacturer's recommendations. See below.
 - d. Inspect the detention pond twice annually in the spring and fall to ensure the inlet and outlets are functioning properly. Vegetation should be mowed at least once every two years during a dry period to minimize overgrowth.
 - e. Access drives, parking areas and sidewalks shall be swept annually each spring to remove sand, salt, and other debris from the winter season.
3. A detailed inspection and maintenance log shall be maintained by the responsible party.

STORMTECH ISOLATOR ROW INSPECTION & MAINTENANCE

The Stormtech MC3500 Isolator Row shall be inspected as follows every 6 months during the first year of operation. Inspection intervals shall be adjusted based on previous observations of sediment and debris accumulations and high-water elevations. Jetting and vactoring shall be conducted in accordance with the following steps annually or when inspection shows that maintenance is necessary.

Step 1) Inspect Isolator Row for sediment

- A) Inspection ports (catch basin grates or manhole covers)
 - A.1) Remove/open grate/lid on drainage structure
 - A.2) Remove and clean Flexstorm filter if installed
 - A.3) Using a flashlight and stadia rod, measure depth of sediment and record on maintenance log
 - A.4) Lower a camera into isolator row for visual inspection of sediment levels (optional)
 - A.5) If sediment is at, or above, 3" (80 mm) proceed to step 2. If not, proceed to step 3.
- B) All Isolator Rows



- B.1) Remove grate/lid from structure at upstream end of each isolator row
- B.2) Using a flashlight, inspect down the isolator row through outlet pipe
 - (i) Mirrors on poles or cameras may be used to avoid a confined space entry
 - (ii) Follow OSHA regulations for confined space entry if entering manhole
- B.3) If sediment is at, or above, 3" (80 mm) proceed to step 2. If not, proceed to step 3.

Step 2) Clean out Isolator Row using the jetvac process.

- A) A fixed culvert cleaning nozzle with rear facing spread of 45" (1.1 m) or more is preferred
- B) Apply multiple passes of jetvac until backflush water is clean
- C) Vacuum structure sump as required

Step 3) Replace all covers, grates, filters, and lids; record observations and actions.

Step 4) Inspect and clean basins and manholes upstream of the Stormtech system.

FILTER BED INSPECTION & MAINTENANCE

The following installation and maintenance shall be implemented to ensure that the filter beds / rain gardens function as intended.

1. Short term maintenance shall be performed for the first year after installation and shall include watering, fertilizing, inspecting for erosion, and removal of invasive or weed growth until the vegetation is established.
2. Long term maintenance shall be performed annually and include:
 - A) Removal of dead vegetation. Replant & overseed as required.
 - B) Pruning and trimming of trees/shrubs and mowing of groundcover.
 - C) Removal of weeds and invasive species.
 - D) Clear yard drain grates and remove sediment from sumps.

SITE OPERATION & MAINTENANCE

The following operation & maintenance plan shall be implemented by the responsible party.

Parking Lots

The access drives and parking areas shall be swept in the spring to remove winter accumulations of road salt/sand. In addition, these areas shall be swept as necessary to clean trash and other debris.

Landscaping

Landscaping maintenance will consist of pruning, mulching, planting, mowing lawns, raking leaves, etc. Use of fertilizers and pesticides will be controlled and limited to minimal amounts necessary for healthy landscape maintenance.

Soil tests will be performed prior to fertilization. Trees and shrubs shall be fertilized as recommended for the specific soil type and composition with an organic fertilizer. Lawns shall receive a minimum of one application of fertilizer in the Fall. Liming of lawn areas to control pH will be done in the spring



if testing indicates that it is necessary. The low-maintenance slopes will not be fertilized following initial planting and stabilization.

The lawn areas, once established, will be maintained at a typical height of 3 ½". This will allow the grass to be maintained with minimal impact from weeds and/or pests. The low-maintenance areas will be maintained as a meadow or allowed to revert back to natural conditions.

Natural pest control methods shall be attempted prior to resorting to pesticides. Pesticides will only be used as a control method when a problem has been clearly identified and the other attempted natural control methods are not successful. The pesticides shall be natural as opposed to chemical whenever possible. All pesticide applications shall be by licensed applicators, to prevent over usage or misuse, where necessary. No storage, mixing or loading of pesticides may take place onsite.

Topsoil, brush, leaves, clippings, woodchips, mulch, equipment, and other material shall be stored off site.

Maintaining Native Vegetation

Existing vegetation around the perimeter of the development will be maintained in its native condition. No clearing, grading, stockpiling, storage, or development will occur in these areas.

Trash & Recycling Collection

All trash and recycling will be contained in litter/recyclable receptacles for each individual unit or the Site dumpster enclosure. All dumpsters will be equipped with covers. All trash and recycling will be collected on a regular basis and disposed of legally off-site.

Outdoor Storage

There will be no outdoor storage of hazardous chemicals, de-icing agents, fertilizer, pesticides, or herbicides anywhere on the Site. In addition, the individual leases shall prohibit the outdoor storage of non-passenger vehicles, commercial vehicles, recreational vehicles, all-terrain vehicles, boats, and etc.

Winter Maintenance

The use of chemicals for deicing, snow melting, and other related winter weather management should be minimized to the greatest extent possible. A mix of sand and calcium chloride is required. Sodium chloride shall not be used. Snow shall be shoveled and plowed from sidewalk and parking areas as soon as practical during and after winter storms. Sand accumulation shall be removed from the site at the end of the winter season or appropriate time when seasonal snow has melted. Alternative deicing methods must be submitted prior to use onsite for review to the Town of East Lyme Engineering Department for approval.