

Stormwater Operation and Maintenance Plan

Responsibility:

Jim Celio (Agent for Owner) or its assigns shall be responsible for implementation of the Operation and Maintenance Plan and for any corrective action required.

Contact:

Jim Celio
27 Main Street
Hebron, CT 06248
(860) 228-9425

Operation and Maintenance Schedule:

Construction Phase

General Provisions:

- Prior to construction, all erosion/siltation control devices shown on the plan shall be installed. To prevent silt intrusion into the drainage system during construction, the contractor is to install inlet protection at all catch basins and set silt fence at all slopes which may erode in the direction of any open drainage facilities. Such preventative measures are to be maintained throughout the construction process.
- Erosion controls are to be inspected on a daily basis. Upon discovery, the contractor shall remove any sediment from an erosion control structure.
- All Exposed soils shall be immediately stabilized to prevent erosion.
- Upon installation of catch basins, inlet protection shall be installed and maintained until ready for paving.
- Prior to construction of impervious areas, all drainage structures and pipes shall be installed and inspected for proper function. During construction of other site features drainage facilities shall be inspected on a daily basis and cleaned/repared immediately upon discovery of sediment build-up or damage.

Stormwater Swales:

- Contractor to inspect weekly or after each 0.5 inch rain event.
- Contractor responsible for all associated mowing and plate maintenance during first year of construction. (Mowing should be performed when ground is dry to avoid ruts and compaction.)
- Contractor shall replace any dead or dying vegetation.
- Contractor shall clean swales after site is completely stabilized and prior to transfer.

Catch Basin Sumps:

- Contractor to inspect weekly or after each 0.5 inch rain event and clean as needed.
- Contractor shall clean sumps after site is completely stabilized and prior to transfer.

Post-Development Phase

Stormwater Swales:

Stormwater Swales shall be inspected at least annually to ensure that they are operating as intended. The outlet structures should be inspected for evidence of clogging. Potential problems that should be checked include:

- Slope Integrity
- Erosion
- Vegetative health
- Soil Stability
- Sedimentation

Any necessary repairs shall be made immediately. (Mowing should be performed when ground is dry to avoid ruts and compaction.) Sediment shall be removed as necessary.

Catch Basin Sumps:

Catch Basins shall be inspected bi-annually and cleaned at least annually, after the snow and ice season, and as soon as possible before spring rains. In general, a catch basin should be cleaned if the depth of deposits is greater than one half the sump depth. If a catch basin significantly exceeds this standard then more frequent cleanings shall be scheduled. In areas with higher pollutant loadings or discharges into sensitive bodies of water, more frequent cleans shall be necessary.

Botanical Name	Common Name
Alisma plantago-aquatica	Mud Plantain
Asclepias incarnata	Swamp Milkweed
Aster novi-belgii	New York Aster
Bidens cernua	Nodding Bur Marigold
Carex comosa	Bristly/Cosmos Sedge
Carex crinita	Fringed Sedge (Nodding)
Carex lupulina	Hop Sedge
Carex lurida	Lurid Sedge (Shallow)
Carex scoparia	Blunt Broom Sedge
Carex vulpinoidea	Fox Sedge
Eupatorium maculatum	Spotted Joe Pye Weed
Eupatorium perfoliatum	Boneset
Glyceria canadensis	Rattlesnake Grass
Glyceria striata	Fowl Mannagrass
Juncus effusus	Soft Rush
Mimulus ringens	Square Stemmed Monkey Flower
Onoclea sensibilis	Sensitive Fern
Scirpus cyperinus	Wool Grass
Scirpus validus	Soft Stem Bulrush
Verbena hastata	Blue Vervain

NEW ENGLAND WETLAND PLANTS, INC. PONDS 1, 2 & 3 VEGETATION PLANTINGS

NOTES:

1) Always apply seed mixtures on clean bare soil. The mix may be applied by hydro-seeding, mechanical spreader or on small sites it can be spread by hand. Lightly rake or roll to insure proper soil-seed contact. Best results are obtained with a Spring seeding. Late Spring and Summer seeding will benefit with a light mulching of clean weed-free straw to conserve moisture.

2) Location and quantities of specific pond plantings are to be determined by a soil scientist at time of construction of ponds.

SITE DEVELOPEMENT NARRATIVE PHASE III "COMMON DRIVE/SEWER LINE"

WORK DESCRIPTION	LOCATION	DATE INSTALLED	INITIALS	DATE RECEIVED	INITIALS
1. Pre-construction meeting w/ Town Staff					
2. Limits of clearing are to be flagged by licensed surveyor	Common drive and sewer line				
3. Town to inspect limit of clearing prior to beginning site work	Common drive and sewer line				
4. Install silt fence	Common drive and sewer main				
5. Conduct all clearing & Grubbing	Common drive and sewer line				
6. Box out roadway entrance & install construction entrance	Common drive entrance				
7. Strip topsoil & stockpile	Designated stockpile areas				
8. Install hay bale silt fence around stockpile areas	Designated stockpile areas				
9. Repair/replace all missing/damaged erosion control measures	Drainage areas & Common drive				
10. Bring drive to subgrade	Common drive				
11. Install temporary leakoffs and hay bales	Common drive				
12. Install drainage outlets, catch basins, & pipes	Drainage areas & Common drive				
13. Install sewer line and manholes Tie into SMH #7	As shown on plans				
14. Install turf matted swales	East of common drive				
15. Install Utilities	As Directed By Utility Company				
16. Finish grading drive	Common drive				
17. Pave drive	Common drive				
18. Finish grading	Remaining disturbed areas				
19. Spread topsoil, fertilize & seed	Remaining disturbed areas				
20. Maintain in place all erosion & sedimentation control devices until adjacent areas are stabilized.	Entire site				
21. Remove erosion control measures	Entire site				

INDIVIDUAL LOT SITE DEVELOPEMENT NARRATIVE

WORK DESCRIPTION	LOCATION	DATE INSTALLED	INITIALS	DATE RECEIVED	INITIALS
House Sites					
1. Limits of clearing are to be flagged by licensed surveyor	Individual lots				
2. Install hay bales/silt fence	Individual lots				
3. Box out driveway entrances & install construction entrance	Individual driveways				
4. Conduct all clearing & Grubbing	House sites and driveways				
5. Strip and stockpile topsoil	Designated stockpile areas				
6. Install hay bale silt fence around stockpile areas	Designated stockpile areas				
7. Excavate for and install footings and foundation	House sites				
8. Backfill Foundations	House sites				
9. Install all utilities	House sites				
10. Install sewer & water lines/well	House sites				
11. Pave driveways	Individual driveways				
12. Finish grade	All disturbed areas on lot				
13. Spread topsoil, fertilize & seed	All disturbed areas on lot				
14. Maintain in place all erosion & sedimentation control devices until adjacent areas are stabilized.	Individual lots				
15. Remove erosion control measures	Individual lots				

Drainage Basin Test Holes Performed By Tarbell, Heintz, & Assoc. Inc. 7/25/08

TH #1
0-9"
6-20"
20-24"
Mottling • 20"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

TH #4
0-10"
10-28"
28-66"
Mottling • 21"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

TH #2
0-9"
9-26"
26-89"
Mottling • 21"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

TH #5
0-13"
13-29"
29-65"
Mottling • 20"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

TH #3
0-9"
9-30"
30-70"
Mottling • 30"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

TH #6
0-9"
9-59"
39-89"
Mottling • 36"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

TH #7
0-10"
10-29"
29-60"
Mottling • 26"

Topsoil
Brown Fine Sandy Loam
Grey Compact Sandy Till

SITE DEVELOPEMENT NARRATIVE PHASE I "SPRING HILL LANE" & CROSS SEWER

WORK DESCRIPTION	LOCATION	DATE INSTALLED	INITIALS	DATE RECEIVED	INITIALS
1. Pre-construction meeting w/ Town Staff					
2. Limits of clearing are to be flagged by licensed surveyor	Spring Hill Lane, detention basins and cross sewer				
3. Town to inspect limit of clearing prior to beginning site work	Spring Hill Lane, detention basins and cross sewer				
4. Install silt fence	Spring Hill Lane, detention basins and cross sewer				
5. Conduct all clearing & Grubbing	Spring Hill Lane, detention basins and cross sewer				
6. Box out roadway entrance & install construction entrance	Entrance to Spring Hill Lane				
7. Strip topsoil & stockpile	Designated stockpile areas				
8. Install hay bale silt fence around stockpile areas	Designated stockpile areas				
9. Repair/replace all missing/damaged erosion control measures	Spring Hill Lane, detention basins and cross sewer				
10. Install temporary sediment basins	To be determined in field				
11. Install the detention basins #1 and #2	Two basins in open space				
12. Loam, seed, fertilize and plant vegetation	Two basins in open space				
13. Bring road to subgrade	Spring Hill Lane				
14. Install temporary leakoffs and hay bales	Spring Hill Lane				
15. Install drainage outlets, catch basins, underdrains & pipes	Detention basins and Spring Hill Lane				
16. Install sewer main and manholes to Ct Rte. 85	Spring Hill Lane & cross sewer				
17. Loam, seed, fertilize	Cross sewer main				
18. Install Utilities	As Directed By Utility Company				
19. Finish grading road	Spring Hill Lane				
20. Pave road	Spring Hill Lane				
21. Finish grading	Remaining disturbed areas				
22. Spread topsoil, fertilize & seed	Remaining disturbed areas				
23. Maintain in place all erosion & sedimentation control devices until adjacent areas are stabilized.	Entire site				
24. Remove erosion control measures	Entire site				

SITE DEVELOPEMENT NARRATIVE PHASE II "STERLING WAY"

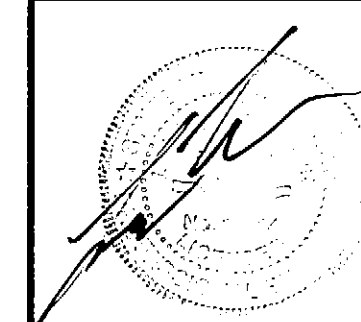
WORK DESCRIPTION	LOCATION	DATE INSTALLED	INITIALS	DATE RECEIVED	INITIALS
1. Pre-construction meeting w/ Town Staff					
2. Limits of clearing are to be flagged by licensed surveyor	Sterling Way and detention basin				
3. Town to inspect limit of clearing prior to beginning site work	Sterling Way and detention basin				
4. Install silt fence	Sterling Way and detention basin				
5. Conduct all clearing & Grubbing	Sterling Way and detention basin				
6. Box out roadway entrance & install construction entrance	Entrance to Sterling Way				
7. Strip topsoil & stockpile	Designated stockpile areas				
8. Install hay bale silt fence around stockpile areas	Designated stockpile areas				
9. Repair/replace all missing/damaged erosion control measures	Sterling Way and detention basin				
10. Install temporary sediment basins	To be determined in field				
11. Install the detention basin #5	Basin in open space/Lot #18				
12. Loam, seed, fertilize and plant vegetation	Basin in open space/Lot #18				
13. Bring road to subgrade	Sterling Way				
14. Install temporary leakoffs and hay bales	Sterling Way				
15. Install drainage outlets, catch basins, underdrains & pipes	Sterling Way and detention basin				
16. Install sewer main and manholes	Sterling Way				
17. Install Utilities	As Directed By Utility Company				
18. Finish grading road	Sterling Way				
19. Pave road	Sterling Way				
20. Finish grading	Remaining disturbed areas				
21. Spread topsoil, fertilize & seed	Remaining disturbed areas				
22. Maintain in place all erosion & sedimentation control devices until adjacent areas are stabilized.	Entire site				
23. Remove erosion control measures	Entire site				

"LAKEWOOD ESTATES"

NOTES & DETAILS

PREPARED FOR
JAMES GROSSMAN
LAKE ROAD, HILLCREST DRIVE, & RTE #85
HEBRON, CONNECTICUT

TARBELL, HEINTZ & ASSOC., INC.
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REVISION
5-12-10
9-14-10
10-12-10

JOB NO.	DATE	SCALE	DRAWN BY	SHEET NO.
1091	12-03-07	AS NOTED	E.M.W.	39 OF 39