

RAIN GARDEN INSPECTION AND CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH RAIN GARDENS:

- **EROSION AND SEDIMENT CONTROL:** RAIN GARDENS SHALL NOT BE CONSTRUCTED UNTIL THE CONTRIBUTING DRAINAGE AREA IS STABILIZED. DURING CONSTRUCTION, RUNOFF SHOULD BE DIVERTED AND THE USE OF HEAVY EQUIPMENT AVOIDED TO MINIMIZE COMPACTION.
- **PLANTING SOIL:** PLANTING SOIL SHOULD BE MIXED ON-SITE PRIOR TO INSTALLATION. IF POOR SOILS ARE ENCOUNTERED BENEATH THE RAIN GARDEN, A FOUR-INCH LAYER OF WASHED GRAVEL (1/2 TO 3/4 INCH GRAVEL PREFERRED) MAY BE USED BELOW THE PLANTING SOIL MIX.
- **LANDSCAPE INSTALLATION:** THE OPTIMUM PLANTING TIME IS DURING THE FALL. SPRING PLANTING IS ALSO ACCEPTABLE BUT MAY REQUIRE WATERING.

INSPECTION:

REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:

- DURING EXCAVATION TO SUBGRADE AND PLACEMENT OF PLANTING SOIL.
- UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

MAINTENANCE CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED TO ENSURE PROPER MAINTENANCE AND LONG-TERM PERFORMANCE OF RAIN GARDENS:

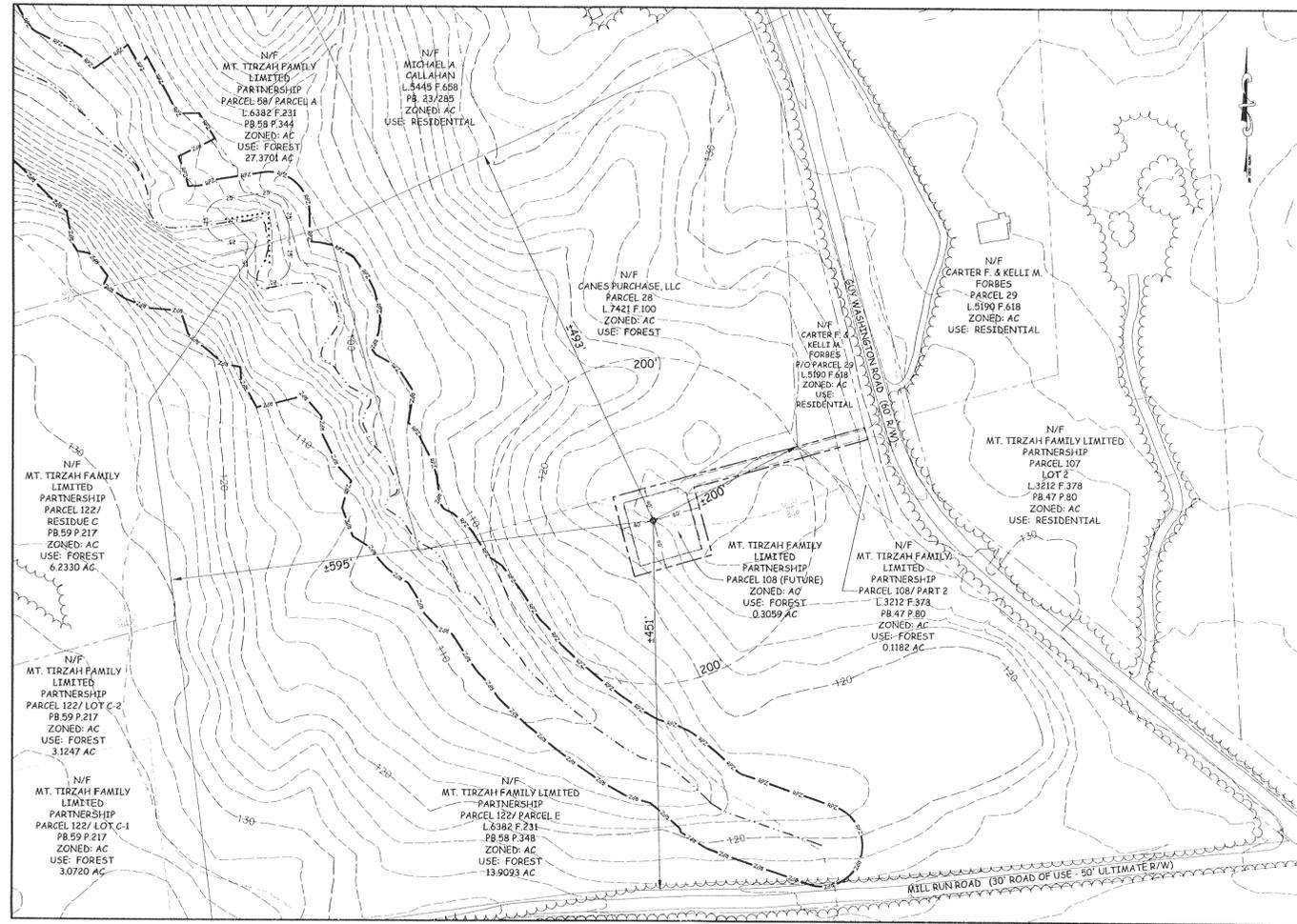
PRIVATELY OWNED PRACTICES SHALL HAVE A MAINTENANCE PLAN AND BE PROTECTED BY EASEMENT, DEED RESTRICTION, ORDINANCE, OR OTHER LEGAL MEASURES PREVENTING ITS NEGLIGENCE, ADVERSE ALTERATION, AND REMOVAL.

RAIN GARDEN MAINTENANCE IS GENERALLY NO DIFFERENT THAN THAT REQUIRED OF OTHER LANDSCAPED AREAS.

THE TOP FEW INCHES OF THE PLANTING SOIL SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE BED AS NEEDED.

WHERE PRACTICES ARE USED TO TREAT AREAS WITH HIGHER CONCENTRATIONS OF HEAVY METALS (E.G., PARKING LOTS, ROADS), MULCH SHOULD BE REPLACED ANNUALLY. OTHERWISE, THE TOP TWO TO THREE INCHES SHOULD BE REPLACED AS NECESSARY.

OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.



SWM NON-ROOFTOP DISCONNECTION NOTES

CONSTRUCTION CRITERIA:

THE FOLLOWING SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH NON-ROOFTOP DISCONNECTIONS:

- **EROSION AND SEDIMENT CONTROL:** EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN AREAS DESIGNATED FOR NON-ROOFTOP DISCONNECTIONS.
- **SITE DISTURBANCE:** TO MINIMIZE DISTURBANCE AND COMPACTION, CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

INSPECTION:

A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT ADEQUATE TREATMENT AREAS AND PERMANENT STABILIZATION HAS BEEN ESTABLISHED.

MAINTENANCE CRITERIA:

MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, HIGH FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

DEVELOPER'S RESPONSIBILITIES

PER CHARLES COUNTY SWM ORDINANCE (AUGUST 1, 2010) - SECTION 11.6:

The developer or his representative shall assure that inspections are made and approvals are given at the following specified stages of construction:

1. Upon completion of pre-excavation and construction of temporary sediment and erosion control measures;
2. Upon completion of excavation;
3. During the placement of filter fabric, observation well and base aggregate material;
4. During the construction of concrete structures;
5. During the construction of cut-off trench and embankment;
6. During the placement of surface layer;
7. During the final excavation; and
8. Upon completion of final grading and establishment of permanent vegetative stabilization.

B. Flow attenuation facilities, such as, but not limited to, open vegetated swales, ditches and open channels:

1. Upon completion of pre-excavation and construction of temporary sediment and erosion control measures;
2. During placement and backfill of underdrain systems for drywells;
3. During the construction of check dams, diaphragms, or weirs; and
4. Upon completion of final grading and establishment of permanent vegetative stabilization.

C. N/A

D. Wetlands - at the stages specific for pond construction in 10.2.C. of this section, during and after wetland reservoir area planting, and during the second growing season to verify a vegetation survival of at least fifty (50) percent.

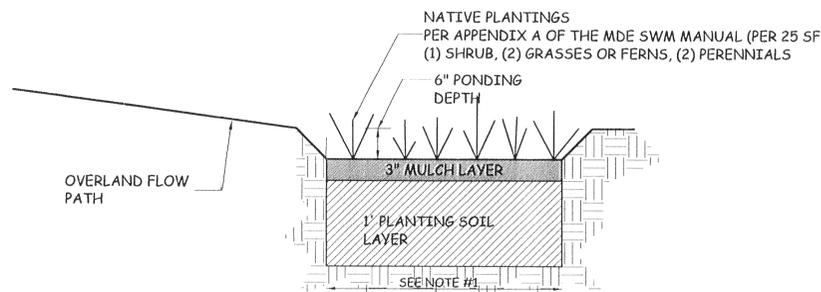
E. Filtering systems:

1. During excavation to subgrade;
2. During placement and backfill of underdrain systems;
3. During placement of geotextiles and all filter media;
4. During construction of appurtenant conveyance systems such as flow diversion structures, prefilters and filters, inlets, outlets, orifices, and flow distribution structures; and
5. Upon completion of final grading and establishment of permanent stabilization.

F. N/A

G. N/A

MT. VICTORIA TOWER - SETBACK DETAIL - 1" = 100'



RAINGARDEN DETAIL N.T.S.

NOTES:

1. CONSTRUCT TO THE DIMENSIONS SHOWN ON THE APPROVED PLAN.
2. MULCH AND PLANTING SOIL LAYER SHALL CONFORM TO THE FOUND IN APPENDIX B.4. (THIS SHEET).
3. PLANTINGS SHALL BE IN ACCORDANCE WITH APPENDIX A OF THE MDE STORMWATER MANAGEMENT MANUAL.

PLANTING REQUIREMENTS

RAINGARDEN #1, #2 and #3 (423 SF):
(17) SHRUBS, (34) GRASSES OR FERNS, (34) PERENNIALS
RAINGARDEN #4 (270 SF):
(11) SHRUBS, (22) GRASSES OR FERNS, (22) PERENNIALS

RECOMMENDED SPECIES:

FERNS	GRASSES	PERENNIALS	SHRUBS
CINNAMON FERN (OSMUNDA CINNAMOMEA)	THREE-SQUARE BULRUSH (SCIRPUS PUNGENS)	CARDINAL FLOWER (LOBELIA CARDINALIS)	HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM)
SENSITIVE FERN (ONOCLEA SENSIBILIS)	BENT SEDGE (CAREX STYLOFLEXA)	GOLDEN-ROD (SOLIDAGO AUSTRINA)	INKBERRY (ILEX GLABRA)
	SWITCHGRASS (PANICUM VIRGATUM)	NEW ENGLAND ASTER (ASTER NOVAE-ANGLIAE)	SPICEBUSH (LINDERA BENZOIN)
	VIRGINIA WILD RYE (ELYMUS VIRGINICUS)	JOE-PYE WEED (EUPATORIUM FISTULOSUM)	BUTTONBUSH (CEPHALANTHUS OCCIDENTALIS)
			SWAMP ROSE (ROSA PALUSTRIS)
			SWAMP AZALEA (RHODODENDRON VISCOSUM)

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ENGINEER, UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 13310 - EXPIRATION DATE: JANUARY 30, 2015.
JAMES LORENZI, PE
DATE: 6/24/2014

SDP #	140007
BOA DOCKET #	1327
PGM #	VSC14-0010
SED #	24-14

THIS PRINT MADE
JUN 24 2014
Lorenzi, Dodds & Gunnill, Inc.

REQUIRED PERMITS	
PGM DEVELOPMENT SERVICES PERMIT	
BUILDING PERMIT	

TAX MAP 83 - GRID 10 - PARCEL 108

MT. VICTORIA CELL TOWER

5TH ELECTION DISTRICT, CHARLES COUNTY, MARYLAND

SWM NOTES AND DETAILS

ENGINEERS - ARCHITECTS - SURVEYORS - PLANNERS
LORENZI, DODDS, AND GUNNILL, INC.
3475 LEONARDTOWN ROAD, SUITE 100
WALDORF, MARYLAND 20602

REVISIONS:
5/13/2014 PER TELECOM
6/09/2014 PER PGM
6/23/2014 PER PGM

DATE: FEBRUARY 2014	CONTRACT REFERENCE: 139086
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SCALE: NO SCALE
2 OF 2