**DISCONNECTION NOTES**

1. Runoff from disconnected downspouts shall drain in a safe and non-erosive manner through vegetated areas to the property line or swale.

2. The length of the "disconnection" shall be 60 feet or greater. Turf must be perpetually reserved and maintained as lush vegetation.

3. Disconnected downspouts shall be located on gradual slopes less than 5% and directed away from the buildings to maintain sheet flow.

4. The contributing area of rooftop to each disconnected downspout shall be 500 sq. ft. or less.

5. Downspouts must be at least 10 feet away from the nearest impervious surface to discourage 're-connections'. Disconnected flowpaths cannot overlap.

---

**QUEEN ANNE'S COUNTY**

**DEPARTMENT OF PUBLIC WORKS**

**SINGLE LOT RESIDENTIAL ONLY**

**ROOFTOP DISCONNECTION CREDIT DETAIL**

**STANDARD NO. SLR-101.01**
DISCONNECTION NOTES

1. RUNOFF FROM DISCONNECTED DISCHARGES SHALL DRAIN IN A SAFE AND NON-EROSIVE MANNER THROUGH VEGETATED AREAS TO THE PROPERTY LINE OR SWALE.

2. THE LENGTH OF THE "DISCONNECTION" SHALL BE 10 FEET OR GREATER, WITH THE LENGTH BEING EQUAL TO OR GREATER THAN THE LENGTH OF THE IMPERVIOUS SURFACE. TURF MUST BE PERPETUALLY RESERVED AND MAINTAINED AS LUSH VEGETATION.

3. THE MAXIMUM IMPERVIOUS FLOW PATH SHALL BE 75 FEET.

4. DISCONNECTION AREAS SHALL BE LOCATED ON GRADUAL SLOPES LESS THAN 5%.

APPROVED 12/01/15
DATE

SINGLE LOT RESIDENTIAL ONLY
NON-ROOFTOP DISCONNECTION
CREDIT DETAIL

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS

STANDARD NO. SW-102.01
CONSTRUCTION INSPECTIONS

1. CALL THE QUEEN ANNE’S COUNTY DEPARTMENT OF PUBLIC WORKS AT 410-758-0925 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:

2. SUBGRADE PREPARATION.

3. INSTALLATION OF THE 2” OVERDRAIN (IF REQUIRED BY DPW).

4. COMPLETION OF PAVER INSTALLATION AND STABILIZATION OF SURROUNDING SOILS.

CONSTRUCTION NOTES

1. SUBGRADE SHALL BE LEVEL AND UNCOMPACTED. NO FILTER CLOTH IS ALLOWED.

2. ALL AGGREGATE SHALL BE WASHED TO BE FREE OF DUST, DIRT AND FINES. THE SUBBASE SHALL BE PLACED IN LIFTS AND LIGHTLY ROLLED TO ACHIEVE A MODERATE LEVEL OF COMPACTION.

3. PAVERS SHALL BE SLOPED NO MORE THAN 5% IN ANY DIRECTION. THE 6” LAYER OF #2 STONE SHALL BE WEDGED TO ACHIEVE THE DESIRED SURFACE SLOPE.

4. AREAS DRAINING ONTO THE PERMEABLE PAVEMENT SHALL BE MINIMIZED. DOWNSPOUTS SHALL NOT BE DIRECTED ONTO PERMEABLE PAVEMENT AREAS.

5. IF REQUIRED BY DPW, THE 2” PVC OVERDRAIN SHALL BE EITHER DAYLIGHTED OR DIRECTED INTO A POP-UP EMMITTER. ONCE EXITING THE STONE BASE, THE OVERDRAIN SHALL HAVE A MINIMUM 1.0% SLOPE. THE UPSTREAM END OF THE PIPE SHALL BE CAPPED.

MAINTENANCE NOTES

1. PERMEABLE PAVEMENT SURFACES SHALL BE SWEPT (NOT WASHED) QUARTERLY TO REMOVE SEDIMENT AND VEGETATIVE DEBRIS THAT WOULD CLOG THE PAVEMENT.

2. PREVENT SOIL AND/OR MULCH FROM ENTERING AND CLOGGING THE EDGE DRAIN(S). NO VEGETATION IS ALLOWED IN THE EDGE DRAIN.

3. ENSURE THAT MULCH AND DEBRIS FROM LANDSCAPE BEDS DOES NOT DRAIN ONTO THE PAVEMENT OR GRAVEL.

4. IF PRESENT, ENSURE PROPER DRAINAGE THROUGH THE OVERDRAIN AND ENSURE THAT THE OUTFALL OR POP-UP EMMITTER IS NOT CLOGGED.
CONSTRUCTION INSPECTIONS

1. CALL THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS AT 410-758-0925 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:

2. EXCAVATION TO SUBGRADE

3. PLACEMENT OF GEOTEXTILE, OBSERVATION WELL, INFLOW PIPE(S) AND STONE BUT BEFORE WRAPPING THE TOP LAYER OF FILTER FABRIC.

4. AFTER FINE GRADING AND PERMANENT STABILIZATION OF DRYWELL AND SURROUNDING SOILS.

| TREATED AREA (sq.ft.) | STONE VOL. (cu.ft.) | PVC SIZE | DRYWELL AREA AT...
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>100</td>
<td>4&quot;</td>
<td>2' DEEP</td>
</tr>
<tr>
<td>500</td>
<td>200</td>
<td>4&quot;</td>
<td>100</td>
</tr>
<tr>
<td>750</td>
<td>300</td>
<td>6&quot;</td>
<td>150</td>
</tr>
<tr>
<td>1000</td>
<td>400</td>
<td>6&quot;</td>
<td>200</td>
</tr>
</tbody>
</table>

SITE PLAN SYMBOL

DW-###

TREATED AREA (cu.ft.)

SIZING CHART

CROSS SECTION

APPROVED

DATE

SCALE: NO SCALE

REVISIONS:

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY

DRYWELL DETAIL

STANDARD NO. SLR-104.01
CONSTRUCTION NOTES

1. DRYWELLS ARE NOT RECOMMENDED FOR CONSTRUCTION NEXT TO HOUSES WITH BASEMENTS. THEY SHOULD BE AT LEAST 10' AWAY FROM ANY FOUNDATION OR PROPERTY LINE, 50' FROM A SEPTIC SYSTEM, 50' FROM A DEEP WELL, AND 100' FROM A SHALLOW WELL.

2. GUTTER SCREENS AND/OR DOWNSPOUT FILTERS SHALL BE PROVIDED TO MINIMIZE THE INPUT OF LEAVES, DEBRIS, AND GRIT INTO THE DRYWELL. (TYPE "DOWNSPOUT FILTER" IN YOUR FAVORITE SEARCH ENGINE TO FIND EXAMPLES FOR PURCHASE.)

3. PROVIDE AN OVERFLOW PIPE THAT DISCHARGES ONTO A SPLASHBLOCK. PROVIDE POSITIVE DRAINAGE AWAY FROM THE HOUSE THAT FLOWS IN A NON-EROSIVE MANNER TO A STABLE OUTFALL.

MAINTENANCE NOTES

1. CLEAN GUTTERS, DOWNSPOUTS AND DOWNSPOUT FILTERS (IF USED) ANNUALLY. ENSURE CONTINUED FUNCTION OF SCREENS AND/OR FILTERS.

2. CHECK OBSERVATION WELL AFTER MAJOR STORMS. IF WATER PONDS FOR MORE THAN 48 HOURS OR MORE THAN 6" OF SEDIMENT HAS ACCUMULATED, THE GRAVEL MEDIA SHOULD BE EXCAVATED AND REPLACED.

3. PONDING WATER, SATURATED SOILS, OR ALGAL GROWTH ON THE SURFACE ABOVE THE DRYWELL ARE SIGNS OF FAILURE DUE TO SEDIMENTATION OF THE GRAVEL MEDIA. REFER TO ITEM 2.

4. NO STRUCTURES (SHEDS, POOLS, ETC.) SHALL BE BUILT OVER OR WITHIN 10 FEET OF THE DRYWELL. IMPERVIOUS COVERAGE SUCH AS WALKS, PATIOS, ETC. IS DISCOURAGED SINCE IT INTERFERES WITH FUTURE REPLACEMENT OF THE STONE IF/WHEN IT GETS REPLACED.

QUEEN ANNE’S COUNTY
DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY

DRYWELL NOTES

STANDARD NO. SLR-104.02
CONSTRUCTION INSPECTIONS
1. CALL THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS AT 410-758-0925 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:
2. EXCAVATION TO SUBGRADE AND BEFORE PLACEMENT OF SOIL.
3. FINE GRADING AND PERMANENT STABILIZATION OF ADJACENT SOILS.

CONSTRUCTION NOTES
1. RAINGARDENS SHALL BE CONSTRUCTED AFTER ALL UPSTREAM AREAS HAVE BEEN STABILIZED WITH EITHER IMPERVIOUS SURFACES OR TOPSOIL AND VEGETATION.
2. RAIN GARDEN EXCAVATION SHALL BE ROUGH AND UNCOMPACTED. IF SMEARING OF BOTTOM OR WALLS OCCURS, SCRATCH WITH A RAKE AS NECESSARY TO EXPOSE ROUGH EARTH.
3. LANDSCAPING MATERIALS SHOULD BE INSTALLED DURING THE SPRING OR FALL IF POSSIBLE.
4. OVERFLOW FROM RAIN GARDEN SHALL BE DIRECTED OVER A 10' WIDE MINIMUM EARTH SPILLWAY STABILIZED WITH TURF AND SHALL NOT BE A SOURCE OF DOWNSTREAM EROSION.
5. THE OWNER IS ENCOURAGED TO ENHANCE THE VISUAL APPEAL OF THE RAIN GARDEN BY ADDING STONE OR TIMBER RETAINING WALLS.

SIZING CHART

<table>
<thead>
<tr>
<th>TREATED AREA (sq.ft.)</th>
<th>RAINGARDEN AREA (sq.ft.)</th>
<th>SUGGESTED DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>70</td>
<td>14' x 6'</td>
</tr>
<tr>
<td>1000</td>
<td>140</td>
<td>20' x 8'</td>
</tr>
<tr>
<td>1500</td>
<td>210</td>
<td>24' x 10'</td>
</tr>
<tr>
<td>2000</td>
<td>280</td>
<td>30' x 11'</td>
</tr>
</tbody>
</table>

MINIMUM SETBACKS
1. 10 FEET FROM A BUILDING OR PROPERTY LINE
2. 25 FEET FROM A SEPTIC RESERVE AREA
3. 15 FEET FROM A DEEP WELL
4. 25 FEET FROM A SHALLOW WELL

CROSS SECTION

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY
RAIN GARDEN
CONSTRUCTION DETAIL

STANDARD NO. SLR–105.01
PLANT SELECTION
1. THE OWNER IS ENCOURAGED TO WORK WITH A REGISTERED LANDSCAPE ARCHITECT OR NURSERY TO CREATE AN ATTRACTIVE AND FUNCTIONAL MIX OF NATIVE PLANT SPECIES THAT ARE TOLERANT OF BOTH SATURATED AND DRY CONDITIONS.
2. INFORMATION ON APPROPRIATE SPECIES IS AVAILABLE BY TYPING "BAYSCAPES NATIVE PLANTS" INTO YOUR FAVORITE SEARCH ENGINE.
3. THE SCHEDULE AND TYPICAL DETAIL BELOW CAN BE USED AS A BASIS FOR PLANT SELECTION AND GROUPINGS, IF DESIRED.

SOIL SPECIFICATIONS
1. THE RAIN GARDEN PLANTING SOIL SHALL HAVE A COMPOSITION OF 50% SAND, 20% COMPOSTED LEAVES, AND 30% TOPSOIL.
2. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, DEBRIS, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH.
3. SOIL SHALL BE FREE OF PLANTS (OR PLANT PARTS) OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, OR CANADIAN THISTLE.
4. PLANTING SOIL SHALL BE OVERFILLED BY 1" TO 2" TO ALLOW FOR SETTLING. DO NOT COMPACT.

RAIN GARDEN PLANTING SCHEDULE

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Symb.</th>
<th>Size</th>
<th>70 QTY.</th>
<th>140 QTY.</th>
<th>210 QTY.</th>
<th>280 QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILEX GLABRA</td>
<td>INKBERRY</td>
<td>IG</td>
<td>2 GAL.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ARONIA MELANOCARPA</td>
<td>BLACK CHOKEBERRY</td>
<td>AM</td>
<td>2 GAL.</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>MYRICA CERIFERA</td>
<td>BAYBERRY</td>
<td>MC</td>
<td>2 GAL.</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

GROUND COVER:
<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Symb.</th>
<th>Size</th>
<th>70 QTY.</th>
<th>140 QTY.</th>
<th>210 QTY.</th>
<th>280 QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANDROPOGON VIRGINICUS</td>
<td>BROOMSEDGE</td>
<td>IV</td>
<td>PLUG</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>LIATRIS SPICATA</td>
<td>BLAZING STAR</td>
<td>LS</td>
<td>PLUG</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>EUPATORIUM FISTULOSUM</td>
<td>JOE-PYE WEED</td>
<td>EF</td>
<td>PLUG</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>

PLANTING EXAMPLE
FOR 140 sq.ft. RAINGARDEN

MAINTENANCE CRITERIA:
1. WATER PLANTS LIBERALLY THE FIRST GROWING SEASON AND DURING PERIODS OF DROUGHT THEREAFTER.
2. REMOVE ACCUMULATED TRASH AND VEGETATIVE DEBRIS EVERY FEW MONTHS.
3. PRUNE AND REMOVE DEAD VEGETATION PERIODICALLY, AS WITH ANY LANDSCAPE BED. IF SPECIFIC PLANTS ARE NOT SURVIVING, REPLACE WITH A DIFFERENT SPECIES. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
4. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH. THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS.
5. REFRESH MULCH WITH AN ADDITIONAL THIN LAYER ANNUALLY. REMOVE ALL MULCH AND REPLACE WITH A NEW THREE-INCH LAYER EVERY 3-5 YEARS.

APPROVED 12/01/15
DATE

DIRECTOR, DEPT. OF PUBLIC WORKS
CHIEF OF ENGINEERING

SCALE:
NO SCALE

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS

SINGLE LOT RESIDENTIAL ONLY
RAIN GARDEN LANDSCAPING DETAILS AND NOTES

STANDARD NO. SLR-105.02
CONSTRUCTION INSPECTIONS
1. CALL THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS AT 410-758-0925 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:
2. EXCAVATION TO SUBGRADE AND BEFORE PLACEMENT OF SOIL.
3. FINE GRADING AND PERMANENT STABILIZATION OF ADJACENT SOILS.

SIZING CHART

<table>
<thead>
<tr>
<th>TREATED AREA (sq.ft.)</th>
<th>RAINGARDEN AREA (sq.ft.)</th>
<th>PVC SIZE</th>
<th>SUGGESTED DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>70</td>
<td>4&quot;</td>
<td>14</td>
</tr>
<tr>
<td>1000</td>
<td>140</td>
<td>6&quot;</td>
<td>20</td>
</tr>
<tr>
<td>1500</td>
<td>210</td>
<td>6&quot;</td>
<td>24</td>
</tr>
<tr>
<td>2000</td>
<td>280</td>
<td>8&quot;</td>
<td>30</td>
</tr>
</tbody>
</table>

MINIMUM SETBACKS
1. 10 FEET FROM A BUILDING OR PROPERTY LINE
2. 25 FEET FROM A SEPTIC RESERVE AREA
3. 15 FEET FROM A DEEP WELL
4. 25 FEET FROM A SHALLOW WELL

RAIN GARDEN CROSS SECTION
(THROUGH LONG DIMENSION)

NOTE: ALL STONE SHALL BE 1" TO 2" WASHED GRAVEL

SEE DOWNSPOUT DETAIL ABOVE

4" PERFORATED PIPE - 10' MIN. WITH END CAP

SEE SOIL SPECS. PER 106.02

USE EXCAVATED SOIL TO FORM 6" BERM AROUND RAIN GARDEN

4" PVC TO POP-UP EMITTER

4" PERFORATED PIPE, 6' LONG AND CAPPED ON ENDS, SURROUNDED BY STONE

3" MULCH LAYER

3' X 3' X 1' DEEP STONE INFLOW APRON

PVC PIPE SIZE PER CHART

CONTINUED BELOW

PVC PIPE SIZE PER CHART

ROOF DOWNSPOUT
DOWNSPOUT FILTER (OMIT IF GUTTER SCREENS ARE PROVIDED)

SPASH BLOCK

HOUSE FOUNDATION

2% MIN.

SITE PLAN SYMBOL

WSR ###
TREATED AREA (sq.ft.)

APPROVED 1/20/15

DATE

DIRECTOR, DEPT. OF PUBLIC WORKS

CHIEF OF ENGINEERING

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS

SINGLE LOT RESIDENTIAL ONLY

WET SOIL RAIN GARDEN
CONSTRUCTION DETAIL

STANDARD NO. SLR-106.01
CONSTRUCTION NOTES

1. RAIN GARDENS SHALL BE CONSTRUCTED AFTER ALL UPSTREAM AREAS HAVE BEEN STABILIZED WITH EITHER IMPERVIOUS SURFACES OR TOPSOIL AND VEGETATION.

2. RAIN GARDEN EXCAVATION SHALL BE ROUGH AND UNCOMPACTED. IF SMEARING AT BOTTOM OR WALLS OCCURS, SCRATCH WITH A RAKE AS NECESSARY TO EXPOSE ROUGH EARTH.

3. LANDSCAPING MATERIALS SHOULD BE INSTALLED DURING THE SPRING OR FALL IF POSSIBLE.

4. OVERFLOW FROM RAIN GARDEN SHALL BE DIRECTED OVER A 3" DEEP BY 10' WIDE DEPRESSION IN THE PERIMETER BERM AND SHALL NOT BE A SOURCE OF DOWNSTREAM EROSION.

5. THE OWNER IS ENCOURAGED TO ENHANCE THE VISUAL APPEAL OF THE RAIN GARDEN BY USING STONE OR TIMBER RETAINING WALLS INSTEAD OF USING EXCAVATED SOIL. EPDM LINER MAY BE NEEDED TO MAKE A WATERTIGHT WALL.

SOIL SPECIFICATIONS

1. THE RAIN GARDEN PLANTING SOIL SHALL HAVE A COMPOSITION OF 50% SAND, 20% WOOD CHIPS LEAVES, AND 30% TOPSOIL.

2. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH.

3. SOIL SHALL BE FREE OF DEBRIS AND PLANTS (OR PLANT PARTS) OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, OR CANADIAN THISTLE.

4. PLANTING SOIL SHALL BE OVERFILLED BY 2–3" TO ALLOW FOR SETTLING. DO NOT COMPACT.

MAINTENANCE CRITERIA:

1. WATER PLANTS LIBERALLY THE FIRST GROWING SEASON AND DURING PERIODS OF DROUGHT THEREAFTER.

2. REMOVE ACCUMULATED TRASH AND VEGETATIVE DEBRIS EVERY FEW MONTHS AND ENSURE THAT INFLOW PIPE(S) FLOW FREELY.

3. PRUNE AND REMOVE DEAD VEGETATION PERIODICALLY, AS WITH ANY LANDSCAPE BED. IF SPECIFIC PLANTS ARE NOT SURVIVING, REPLACE WITH A DIFFERENT SPECIES. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

4. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH. THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS.

5. REFRESH MULCH WITH AN ADDITIONAL THIN LAYER ANNUALLY. REMOVE ALL MULCH AND REPLACE WITH A NEW THREE-INCH LAYER EVERY 3–5 YEARS.
WET SOIL RAIN GARDEN PLANTING SCHEDULE

<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>Symb</th>
<th>Size</th>
<th>70 QTY</th>
<th>140 QTY</th>
<th>210 QTY</th>
<th>280 QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clethra Alnifolia</td>
<td>Sweet Pepperbush</td>
<td>CA</td>
<td>2 Gal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Itea Virginica</td>
<td>Virginia Sweetspire</td>
<td>IV</td>
<td>2 Gal</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Viburnum Nudum</td>
<td>Smooth Witherod</td>
<td>VN</td>
<td>2 Gal</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Ground Cover:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Symb</th>
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<th>70 QTY</th>
<th>140 QTY</th>
<th>210 QTY</th>
<th>280 QTY</th>
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<tbody>
<tr>
<td>Calamagrostis Canadensis</td>
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<td>Plug</td>
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<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Helium Autumnale</td>
<td>HA</td>
<td>Plug</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Lobelia Cardinalis</td>
<td>LC</td>
<td>Plug</td>
<td>6</td>
<td>12</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>

PLANTING EXAMPLE
FOR 140 sq. ft. RAIN GARDEN

PLANT SELECTION

1. The owner is encouraged to work with a registered landscape architect or nursery to create an attractive and functional mix of native plant species that are tolerant of both saturated and dry conditions.

2. Information on appropriate species is available by typing "bayscapes native plants" into your favorite search engine.

3. The schedule and typical detail below can be used as a basis for plant selection and groupings, if desired.

APPROVED 12/01/15

DIRECTOR, DEPT. OF PUBLIC WORKS

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY
WET SOIL RAIN GARDEN
PLANTING NOTES & SCHEDULE

STANDARD NO. SLR-106.03
CONSTRUCTION INSPECTIONS

1. CALL THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS AT 410-758-0925 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:

2. EXCAVATION TO SUBGRADE AND BEFORE PLACEMENT OF SOIL.

3. FINE GRADING AND PERMANENT STABILIZATION OF ADJACENT SOILS.

SITE PLAN SYMBOL

TREATED AREA (sq. ft.)

SIZING CHART

<table>
<thead>
<tr>
<th>TREATED AREA (sq. ft.)</th>
<th>BIO-SWALE AREA (sq. ft.)</th>
<th>SUGGESTED DIMENSIONS</th>
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<td>50 3</td>
</tr>
<tr>
<td>2000</td>
<td>190</td>
<td>65 3</td>
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</tbody>
</table>

TOP OF SWALE

SWALE SHALL DISCHARGE TO NATIVE GRADE OR INTO DOWNSTREAM SWALE

FLOW

0.8% TO 2%

PROFILE VIEW

TOP OF SWALE

4" LOAM & SEED WITH SOD OR EROSION CONTROL MATTING

CROSS SECTION

2'-0" TO 3'-0"

PLANTING SOIL

NATIVE SOIL

NATIVE SOIL

QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS

SINGLE LOT RESIDENTIAL ONLY

BIO-SWALE CONSTRUCTION DETAIL

STANDARD NO. SW-107.01

APPROVED 12/01/15

DIRECTOR, DEPT. OF PUBLIC WORKS

CHIEF OF ENGINEERING
CONSTRUCTION NOTES
1. BIO-SWALES SHALL BE CONSTRUCTED AFTER ALL UPSTREAM AREAS HAVE BEEN STABILIZED WITH EITHER IMPERVIOUS SURFACES OR TOPSOIL AND VEGETATION.

2. TRENCH EXCAVATION SHALL BE ROUGH AND UNCOMPACTED. IF SMEARING OF BOTTOM OR WALLS OCCURS, SCRATCH AWAY THE SMEAR WITH A RAKE.

3. OVERFLOW FROM BIO-SWALE SHALL BE DIRECTED OVER A 6’ WIDE MINIMUM EARTH SPILLWAY STABILIZED WITH TURF GRASS OR A TIMBER CHECK DAM. THE DISCHARGE SHALL NOT BE A SOURCE OF DOWNSTREAM EROSION.

4. BIO-SWALE STABILIZATION SHALL BE EITHER 4” TOPSOIL, TURF-GRASS SEED AND EROSION CONTROL MATTING OR 4” TOPSOIL AND SOD.

MAINTENANCE CRITERIA:
1. WATER VEGETATION LIBERALLY THE FIRST GROWING SEASON AND DURING PERIODS OF DROUGHT THEREAFTER.

2. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.

3. THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS.

MINIMUM SETBACKS
1. 10 FEET FROM A BUILDING OR PROPERTY LINE
2. 25 FEET FROM A SEPTIC RESERVE AREA
3. 15 FEET FROM A DEEP WELL
4. 25 FEET FROM A SHALLOW WELL

SOIL SPECIFICATIONS
1. THE BIO-SWALE PLANTING SOIL SHALL HAVE A COMPOSITION OF 50% SAND, 20% COMPOSTED LEAVES, AND 30% TOPSOIL.

2. SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, DEBRIS, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH.

3. SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE.

4. PLANTING SOIL SHALL BE OVERFILLED BY 2-3” TO ALLOW FOR SETTLING. COMPACT LIGHTLY PRIOR TO STABILIZATION.

QUEEN ANNE’S COUNTY DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY
BIO-SWALE NOTES

STANDARD NO. SW-107.02
CONSTRUCTION INSPECTIONS

1. CALL THE QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS AT 410-758-0925 PRIOR TO CONSTRUCTION AND IMMEDIATELY FOLLOWING EACH OF THE FOLLOWING PHASES:

2. CONSTRUCTION OF PLANTER WALLS AND UNDERDRAIN AND BEFORE BACKFILLING OVER LINER.

3. INSTALLATION OF PLANT MATERIALS.

** COORDINATE PLANTER TOP ELEVATION WITH FINISHED FLOOR. RECOMMEND 12" to 24" OF PLANTER WALL EXPOSED ABOVE GRADE.

DAYLIGHT Emitter AT OR BELOW BOTTOM OF PLANTING SOIL

PLANter WALL MATERIAL PER OWNER'S SPECIFICATION

EL. 3'-0"
EL. 2'-6"
EL. 2'-3"
EL. 2'-0"

PLANter WALL CROSS SECTION

5' 5% MIN.

18" DEPTH AFTER SETTLING ONE WEEK MIN.

4" LAYER OF #2 STONE

45 MIL. EPDM LINER. TURN DOWN TO FOOTER ELEVATION

4" PVC TO POP-UP Emitter

12"x6" CR-6 BASE

2" LAYER OF SEPTIC SAND

3" TOPSOIL

INSPCTION PORT WITH CAP

AFFIX LINER 3" FROM TOP

6" MIN.

5' MIN.

FINISHED GRADE

HOUSE

PLANter CROSS SECTION

SITE PLAN SYMBOL

TREATED AREA (sq.ft.)

CUT (TYP.)

FOLD (TYP.)

FOLD UP-SIDE

FOLD UP-SIDE

FOLD UP-SIDE

FOLD UP-BACK

HOUSE NOT SHOWN (HOUSE FOR CLARITY)

GUTTER INFLOW DETAIL

DIRECTION OF DOWNSPOUT FILTER (IF USED)

TURN DOWN DOWNSPOUT WITH ELBOW

SPLASHBLOCK

LINER CUT/FOLD DETAIL

CUT OFF FOR FRONT

TURN DOWN

PLANTER

4. SINGLE LOT RESIDENTIAL ONLY

FLOW-THROUGH PLANter PLAN AND SECTION

QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS

STANDARD NO. SLR-108.01

APPROVED

DATE

DIRECTOR, DEPT. OF PUBLIC WORKS

CHIEF OF ENGINEERING

SCALE:

NO SCALE

REVISIONS:
MINIMUM SETBACKS
1. 5 FEET FROM A SEPTIC RESERVE AREA
2. 5 FEET FROM ANY WELL

NOTE: ALL DIMENSIONS ARE INTERIOR

4" SOLID PVC

POP-UP EMITTER

45 MIL. EPDM LINER. TURN DOWN TO FOOTER ELEVATION

PLAN VIEW

NOTE: ADDITIONAL WALL TYPES MAY BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.

SURROUNDING GRADE 2% MIN

8"x8" TREATED LANDSCAPE TIMBERS. 6 COURSES TIED TOGETHER WITH GALVANIZED SPIKES.

TIMBER PLANTER

SLOPE TOP OF BRICK OR PRE-CAST CAP BLOCK

PARSE OR INSTALL STONE/BRICK VENEER

SURROUNDING GRADE 2% MIN

8"X8"X16" CMU - FOUR COURSES. FILL BOTTOM 2 COURSES WITH CONCRETE

24" LONG #4 REINF. BARS @ 30" O.C.

MASONRY PLANTER

MORTARED STONE WALL

SURROUNDING GRADE 2% MIN

15"

STONE PLANTER

WALL CONSTRUCTION DETAILS

QUEEN ANNE'S COUNTY DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY
FLOW-THROUGH PLANTER CONSTRUCTION DETAILS

STANDARD NO. SLR-108.02
PLANT SELECTION
1. THE HOMEOWNER IS ENCOURAGED TO WORK WITH A REGISTERED LANDSCAPE ARCHITECT OR NURSERY TO CREATE AN ATTRACTIVE AND FUNCTIONAL MIX OF NATIVE PLANT SPECIES THAT ARE TOLERANT OF BOTH SATURATED AND DRY CONDITIONS.
2. INFORMATION ON APPROPRIATE SPECIES IS AVAILABLE BY TYPING "BAYSCAPEC NATIVE PLANTS" INTO YOUR FAVORITE SEARCH ENGINE.
3. THE SCHEDULE AND TYPICAL DETAIL BELOW CAN BE USED AS A BASIS FOR PLANT SELECTION AND GROUPINGS, IF DESIRED.

CONSTRUCTION NOTES
1. PLANTERS SHALL BE CONSTRUCTED AFTER EXTERIOR SIDING HAS BEEN INSTALLED.
2. LANDSCAPING MATERIALS SHOULD BE INSTALLED DURING THE SPRING OR FALL IF POSSIBLE.
3. GUTTER SCREENS AND/OR DOWNSPOUT FILTERS SHALL BE PROVIDED TO PRE-TREAT ANY ROOF AREAS THAT FLOW INTO A PLANTER. DOWNSPOUT FILTERS SHALL BE ORIENTED SO LEAVES AND DEBRIS FALL OUTSIDE THE PLANTER. (TYPE "DOWNSPOUT FILTER" IN YOUR FAVORITE SEARCH ENGINE TO FIND EXAMPLES FOR PURCHASE.)

FLOW-THROUGH PLANTER LANDSCAPE SCHEDULE

<table>
<thead>
<tr>
<th>BOTANICAL NAME</th>
<th>COMMON NAME</th>
<th>SIZE</th>
<th>QTY.</th>
<th>QTY.</th>
<th>QTY.</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHRUBS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ILEX GLABRA (MALE ONLY)</td>
<td>INKBERRY</td>
<td>2 GAL.</td>
<td>PICK</td>
<td>ONE</td>
<td>PICK</td>
<td>TWO</td>
</tr>
<tr>
<td>ARONIA MELANOCARPUS</td>
<td>BLACK CHOKEBERRY</td>
<td>2 GAL.</td>
<td>PICK</td>
<td>ONE</td>
<td>PICK</td>
<td>TWO</td>
</tr>
<tr>
<td>MYRTICA CERIFERA</td>
<td>BAYBERRY</td>
<td>2 GAL.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROUND COVER:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANDROPOGON VIRGINICUS</td>
<td>BROOMEDGE</td>
<td>PLUG</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>LIATRIS SPICATA</td>
<td>BLAZING STAR</td>
<td>PLUG</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>SEMPERVIVUM GLOBIFERUM</td>
<td>HENS &amp; CHICKS</td>
<td>PLUG</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

SOIL SPECIFICATIONS
1. THE PLANTING SOIL SHALL HAVE A COMPOSITION OF 50% SAND, 20% COMPOSTED LEAVES, AND 30% TOPSOIL.
2. TOPSOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, DEBRIS, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH.
3. TOPSOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE.

MAINTENANCE CRITERIA:
1. WATER PLANTS LIBERALLY THE FIRST GROWING SEASON AND DURING PERIODS OF DROUGHT THEREAFTER.
2. REMOVE ACCUMULATED TRASH AND VEGETATIVE DEBRIS EVERY FEW MONTHS.
3. PRUNE AND REMOVE DEAD VEGETATION PERIODICALLY, AS WITH ANY LANDSCAPE BED. IF SPECIFIC PLANTS ARE NOT SURVIVING, REPLACE WITH A DIFFERENT SPECIES. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
4. SILT AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
5. THE TOPSOIL AND FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. EXISTING PLANT MATERIAL CAN BE TEMPORARILY REMOVED AND RE-PLANTED IN THE NEW SOIL.

SIZING CHART

<table>
<thead>
<tr>
<th>TREATED AREA (sq.ft.)</th>
<th>PLANTER AREA (sq.ft.)</th>
<th>SUGGESTED INTERIOR DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>500</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>750</td>
<td>30</td>
<td>8</td>
</tr>
<tr>
<td>1000</td>
<td>40</td>
<td>10</td>
</tr>
</tbody>
</table>

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS
SINGLE LOT RESIDENTIAL ONLY
FLOW-THROUGH PLANTER NOTES
STANDARD NO. SLR-108.03

Q. Chang
Chief of Engineering

12/01/15

DATE

SCALES:
NO SCALE

REVISIONS:

DEPARTMENT OF PUBLIC WORKS
CHIEF OF ENGINEERING
GRAPHIC SCALES (1"=10' AND 1"=20' PREFERRED)

SCALE: 1" = 40'
(Each tick = 2')

Scale: 1" = 30'
(Each tick = 2')

SCALE: 1" = 20'
(Each tick = 1')

SCALE: 1" = 10'
(Each tick = 1')

SLOPE CALCULATOR

<table>
<thead>
<tr>
<th>SLOPE</th>
<th>VERTICAL FEET PER 10' HORIZ.</th>
<th>VERTICAL FEET PER 25' HORIZ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.50%</td>
<td>0.05' or 5/8&quot;</td>
<td>0.13' or 1.5&quot;</td>
</tr>
<tr>
<td>0.80%</td>
<td>0.08' or 1&quot;</td>
<td>0.20' or 2 3/8&quot;</td>
</tr>
<tr>
<td>1.0%</td>
<td>0.10' or 1 1/4&quot;</td>
<td>0.25' or 3&quot;</td>
</tr>
<tr>
<td>1.5%</td>
<td>0.15' or 1 3/4&quot;</td>
<td>0.38' or 4 1/2&quot;</td>
</tr>
<tr>
<td>2%</td>
<td>0.20' or 2 3/8&quot;</td>
<td>0.50' or 6&quot;</td>
</tr>
<tr>
<td>5%</td>
<td>0.50' or 6&quot;</td>
<td>1.25' or 15&quot;</td>
</tr>
<tr>
<td>10%</td>
<td>1.00' or 12&quot;</td>
<td>2.5' or 30&quot;</td>
</tr>
<tr>
<td>1:10</td>
<td>2.00' or 24&quot;</td>
<td>5' or 60&quot;</td>
</tr>
</tbody>
</table>

MINIMUM SLOPE = 0.5% ON PAVEMENT
AND 0.8% ON GRASS (1.0% PREFERRED)

APPROVED 12/01/15
DATE

DIRECTOR, DEPT. OF PUBLIC WORKS

CHIEF OF ENGINEERING

SCALE: NO SCALE

QUEEN ANNE'S COUNTY
DEPARTMENT OF PUBLIC WORKS

STORMWATER PLAN
DESIGN TOOLS

STANDARD NO. SLR-109.01