



CITY OF URBANA, ILLINOIS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

MEMORANDUM

TO: Mayor Laurel L. Prussing and Members of the City Council
FROM: William R. Gray, Public Works Director
Gale L. Jamison, Assistant City Engineer
Bradley M. Bennett, Civil Engineer
DATE: May 5, 2011
RE: Bioswales and Rain Gardens in City Right-Of-Way

Introduction

The Public Works Department supports the efforts of and encourages residents to construct bioswales and rain gardens on their properties. Bioswales and rain gardens improve water quality and reduce stormwater runoff from a property. They are a great way for residents to help improve the water quality of local creeks, streams, and rivers.

However, bioswales and rain gardens located in City right-of-way (ROW) pose some construction and operational concerns for public works departments. Underground utilities are often located in City ROW and their repair, rehabilitation, or replacement would adversely impact a bioswale or rain garden. Excavation activities to construct the rain garden could potentially damage underground utilities located in the ROW. The height of the vegetation could also create visibility issues for pedestrians, bicyclists, and motorists at sidewalks, driveways, and intersections.

The purpose of this memo is to review existing City policy regarding the construction of a bioswale or rain garden in City ROW. A recommended policy is also proposed.

Existing City Policy

Construction of a bioswale or rain garden in City ROW would require a ROW permit. A revocable license for utilization of the right-of-way agreement (see attached) would be required to ensure the installation is properly maintained and that the City and/or utility was not responsible for any damages to the bioswale or rain garden if utility work had to be performed in the City ROW.

Proposed City Policy Basis

The Public Works Department recommends the following policy regarding the construction of bioswales or rain gardens in City ROW:

- **City Review and Approval.** The Public Works Director or his/her designee shall review and approve all bioswales or rain gardens proposed to be constructed in City right-of-way (ROW). The Public Works Director or his/her designee shall require the property owner to submit documentation so that the following items can be reviewed and approved:
 1. Construction details for bioswale or rain garden including plan view, cross sections, vegetation plan, vegetation specifications, inlet details, and outlet details. An example rain garden construction drawing is attached for your reference.
 2. Utility locations and depths in the City ROW where the rain garden or bioswale is proposed to be located.

The following items may also be required for approval of a rain garden or bioswale in City ROW.

1. Hydrological Sizing of Rain Garden – drainage area, flow rates, retention/detention times, and infiltration rates. Modeling will be required when the Public Works Director or his/her designee determines that the design and the connection either to the street or the storm sewer system might have an adverse impact on the storm sewer system or traveled way. Property owner shall use a computer model approved by the Engineering Division. The “Recarga” computer model available at <http://dnr.wi.gov/runoff/models/> has been approved by the City for hydrological modeling.
 2. Hydraulic Profile – Define how runoff flows through rain garden and determine water depths in ROW The hydraulic profile shall not create an adverse impact on street drainage.
- **Require a ROW permit.** Property owner would be required to obtain a ROW permit and pay the required fee (currently \$75) for the bioswale or rain garden project. The ROW permit fees will cover staff engineering and site inspection time in the review of a application. Contractors working on the bioswale or rain garden within the ROW shall provide a bond and insurance certificate per Sections 20-70 and 20-71 of Urbana’s Code of Ordinances.
 - **Require a Revocable License for Utilization of the Right-of-Way.** A revocable license for utilization of the right-of-way agreement shall be required. The license agreement shall require the property owner to maintain vegetation within defined standards and would hold the City and other utilities harmless for any damages to the bioswale or rain garden for any work required for repair, rehabilitation, or replacement of the above ground and underground utilities, sidewalk, streetlights, or street pavement. A copy of the license agreement is attached.

- **Maintenance and Construction:** The property owner shall be responsible for all of the construction and maintenance costs of the bioswale or rain garden in perpetuity.

Recommended Action

The Public Works Department seeks approval by motion of the proposed City policy basis for the construction of bioswales and rain gardens in Public right-of-way.

<i>DATE</i>
<i>ADDRESS</i>

CITY OF URBANA
REVOCABLE LICENSE FOR UTILIZATION OF THE RIGHT-OF-WAY

The undersigned, as owner(s) of the real property described as follows: Lot # _____ in _____ being a Subdivision of Part of Sections _____, Township _____ North, Range 9, East of the Third Principal Meridian, in Champaign County, Illinois, in the City of Urbana (Permanent Parcel # _____), commonly known as _____ (*Address*), Urbana, Illinois, hereby request permission to utilize existing public right-of-way abutting the subject property for the following purpose(s):

- _____ 1. To install a rain garden.
- _____ 2. To install a bioswale.
- _____ 3. Other (*please specify*). _____

This license can be revoked at anytime, with or without cause by the Director of Public Works.

As a condition of the City of Urbana giving permission to utilize the public right-of-way abutting the Subject Property for the aforesaid purpose(s), the undersigned owner agrees as follows:

- (a) Upon written direction from the Director of Public Works, the owner agrees to promptly remove any property or equipment, including pipes, hardscape, or vegetation installed by owner, and to refurbish the permitted area to its original condition or pay the costs for the City to refurbish the area to its original condition if any or all of the included conditions are not achieved and or maintained. This shall include replacing any curb cuts installed for rain gardens or bioswales.
- (b) To assume the full cost of any repair or replacement of improvements installed therein should the same be destroyed, damaged or removed during the installation, maintenance or repair of utilities in such public right-of-way by the City of Urbana, University of Illinois, Ameren, AT&T, Illinois American Water, Comcast Cable, their successors and assigns, or any other utility or private party which is entitled by easement, license, or otherwise, to utilize such right-of-way, whether such rights now exist or are hereafter granted, all of which shall have rights therein superior to those of the undersigned owner(s). If the undersigned owner(s) does not wish to repair or restore

the improvements installed in the public right-of-way, within a reasonable time, such owner(s) shall restore all areas disturbed by such improvements.

- (c) To provide a landscape maintenance plan approved by the City Arborist for the permitted landscape that provides routine inspection/removal of extraneous plant material during the growing season. This includes removing all naturally occurring seedlings of any species not approved in original design.
- (d) To maintain the original design intent of the landscape and not allow plantings to encroach beyond the approved boundaries nor impair sidewalk or street visibility for perpetuity.
- (e) To provide at least a three foot buffer area from a neighboring property that is maintained at eight inches or less in height, unless the landscape is a joint endeavor between adjacent properties.
- (f) To not obstruct the use of fire hydrants or place any material in front or within five feet of either side of a fire hydrant.
- (g) To not obstruct the visibility of any directional signage. Any plantings shall not exceed four feet in height, unless approved by the City Arborist, and shall under no circumstances encroach into the sight distance triangle required, pursuant to Chapter 20, Article VI, of the *Urbana Code of Ordinances*, as now or hereafter amended.
- (h) To not allow plant material to grow onto any street light, signs, poles or other city/utility structure.
- (i) To protect, indemnify, defend, and hold harmless the City of Urbana against any and all claims, costs, actions, losses, demands, injuries and expenses of whatever nature ("Claims"), including, but not limited to attorneys' fees, on account of any injuries to persons or property resulting directly or indirectly from acts or omissions by the undersigned owner, its contractors, subcontractors, or agents or employees in conjunction with the use of the public right-of-way abutting the Subject Property for the aforesaid purpose(s).

Owner acknowledges that utilization of the public right-of-way as indicated above, involves risks that activities that occur in the public right-of-way exposes such property to the increase likelihood of harm but owner never-the-less accepts such risks.

This license shall be binding on the undersigned owner(s), their successors.

OWNER'S SIGNATURE

OWNER'S NAME TYPED or PRINTED

OWNER'S SIGNATURE

OWNER'S NAME TYPED or PRINTED

Owner(s) of record:

STATE OF ILLINOIS }
 }
 COUNTY OF CHAMPAIGN } *Seal*

I, _____, a Notary Public in and for said County, in the State aforesaid, do hereby certify that _____ is/are personally known to me to be the same person(s) whose name(s) was/here subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she/they signed, sealed, and delivered said instrument as his/her/their free and voluntary act for the uses and purposes therein set further.

Given under my hand and notarial seal this _____ day of _____, 20____.

NOTARY PUBLIC

My Commission Expires: _____

APPROVED: _____

DATE: _____

Original: *Champaign County Recorder of Deeds Office*

Cc: *City Clerk
Operations Division
Engineering Division
File*

Revised: 3/2011

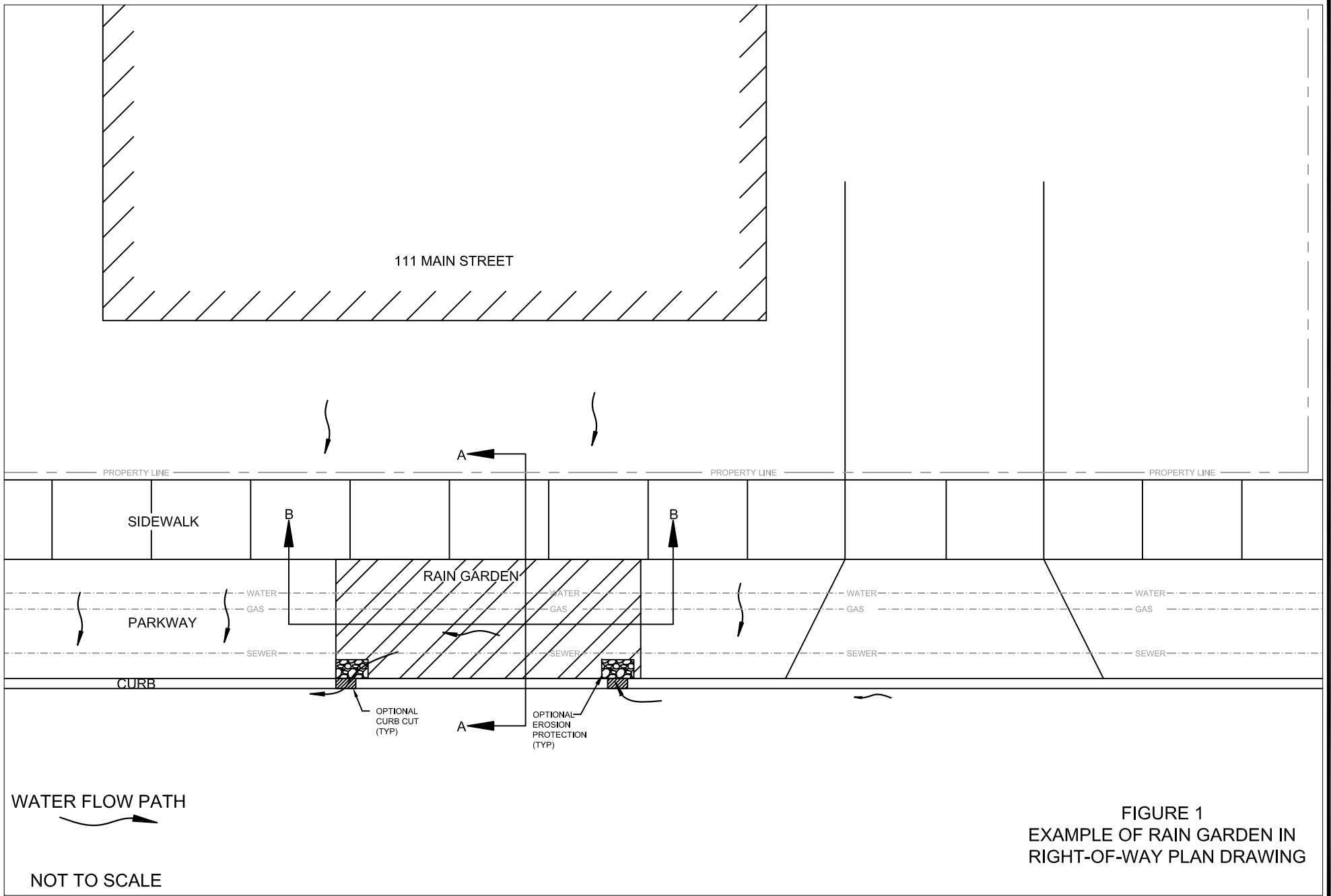


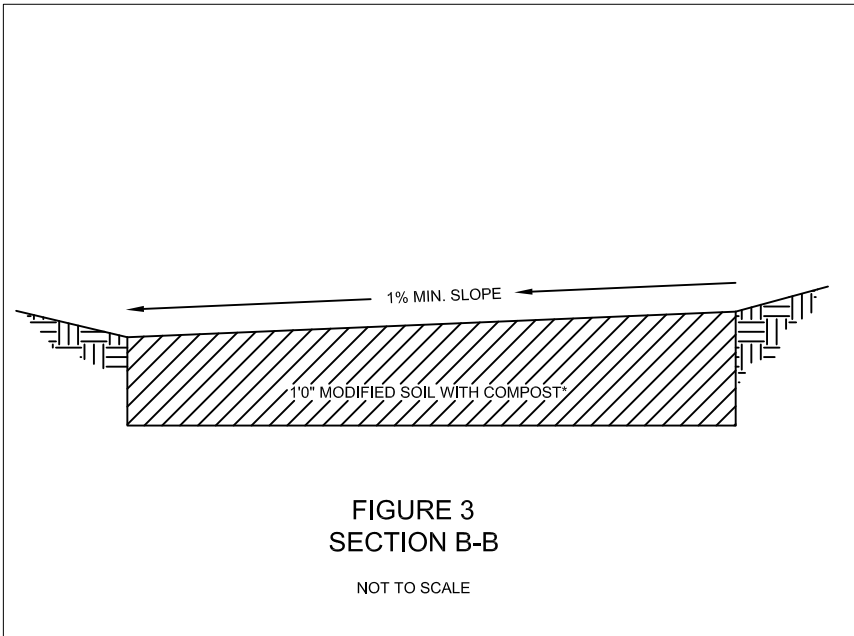
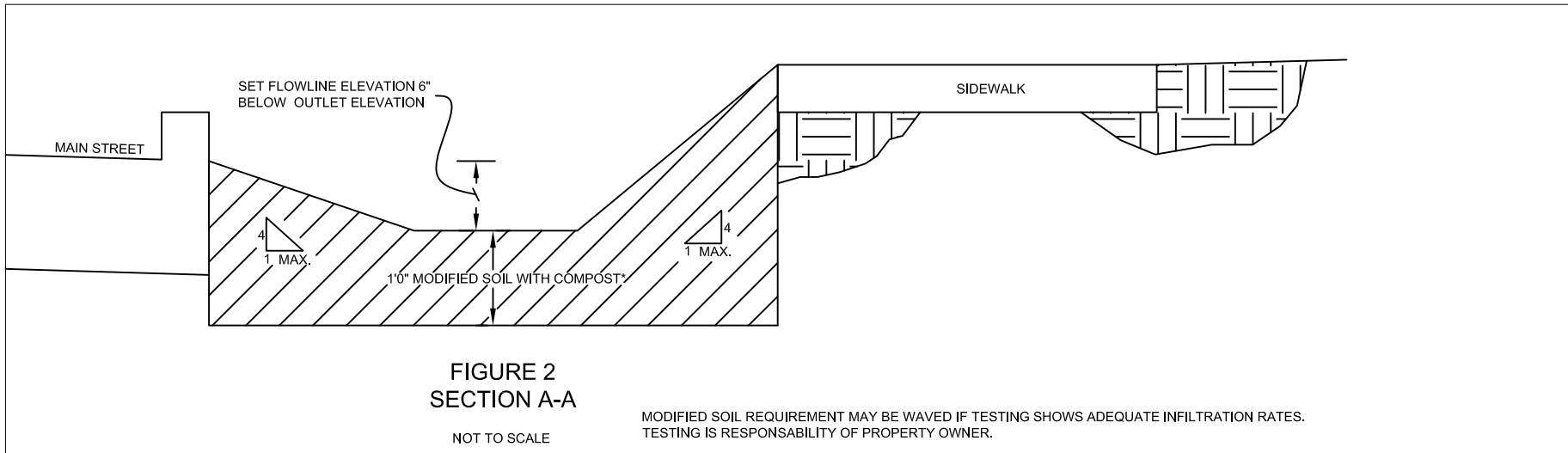
FIGURE 1
 EXAMPLE OF RAIN GARDEN IN
 RIGHT-OF-WAY PLAN DRAWING



CITY OF URBANA
 Public Works Department

EXAMPLE DRAWING
 RAIN GARDEN DESIGN

DATE	REVISIONS



Abr	Qty	Botanical Name	Common Name	Height	Spread	S. Interest	Spacing	Install Size
CM	9	Carex muskingumensis	Palm Sedge	1-3'	1.5-2'	Summer	22-30"	1-2 Gallon
EP	10	Echinacea purpurea 'Alba'	Coneflower	30"	1-2'	Summer	15-22"	1 Gallon
AI	5	Asclepias incarnata	Swamp Milk Weed	2-4'	2-4'	Summer	30"	1 Gallon
IV	5	Iris versicolor	Blue Flag Iris	2-3'	2-3'	Summer	30"	1 Gallon
MD	10	Monarda didyma 'Jacob Cline'	Bee Balm	3'	1-2'	Sp & Su	15-22"	1 Gallon
ZA	5	Zizia aurea	Golden Alexander	1-2'	1.5-2'	Summer	22"	1 Gallon

**FIGURE 4
PLANTING PLAN**

DATE	REVISIONS