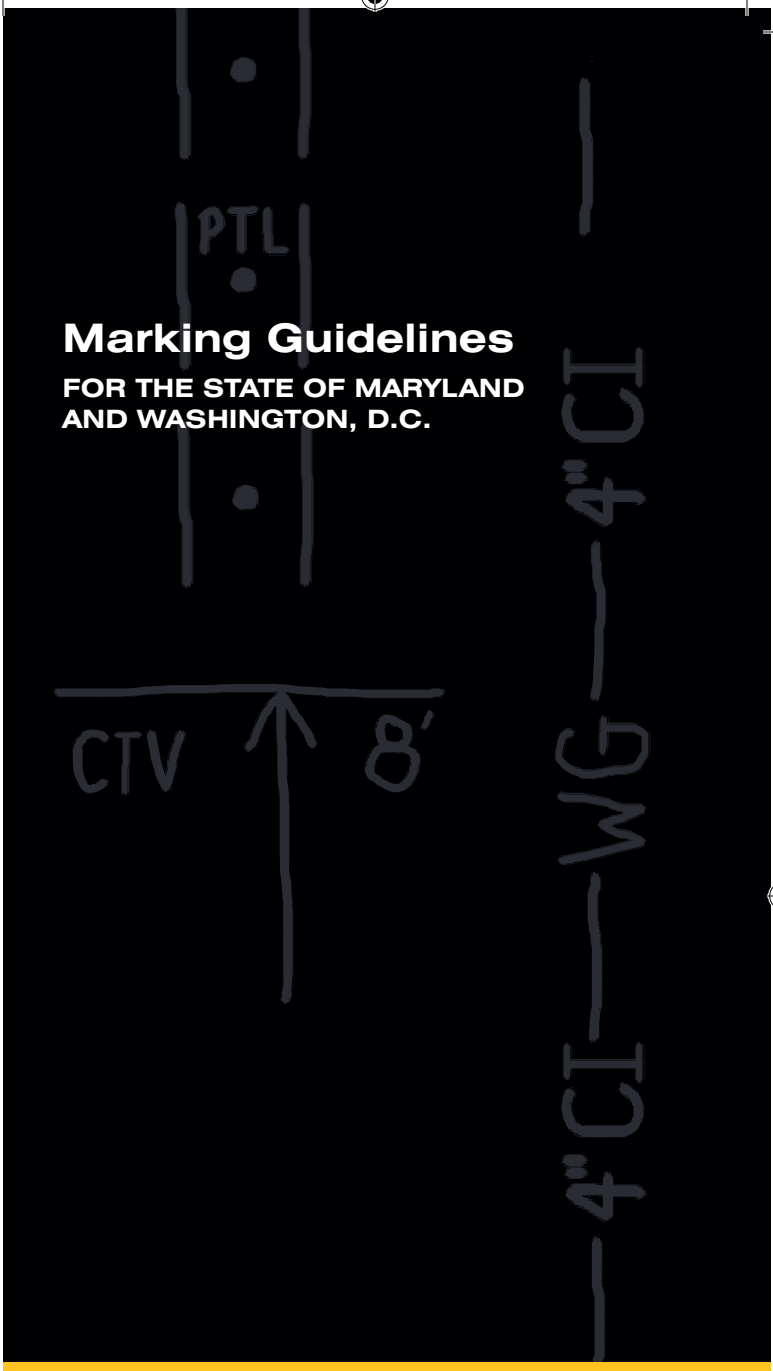

Marking Guidelines

FOR THE STATE OF MARYLAND AND WASHINGTON, D.C.

Before you dig. Every dig. MISS UTILITY 811 It's the law.

1.800.257.7777

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Foreword

Damage to underground facilities can have far-reaching consequences, from serious injury and environmental damage to the loss of vital services we depend upon every day. Preventing damage to these facilities is a responsibility shared by all stakeholders and is accomplished through various damage prevention measures.

At the heart of any damage prevention program is the exchange of accurate and consistent information between excavators and operators of underground facilities. Locating and marking underground facilities is the way operators show the approximate horizontal location of their facilities in advance of an excavation. This information helps the excavators to safely excavate around underground facilities.

In an effort to enhance the current marking practices and encourage the use of uniform marking symbols across Maryland and Washington, D.C., stakeholder representatives have agreed on a set of marking best practices that are found in this booklet. All participants in this effort are to be complimented on their dedication and contributions in devising these best practices. Operators and their locators are strongly encouraged to follow these best practices to mark their facilities.

The pictures and illustrations in this booklet are for example only and do not reflect all the markings that may be encountered in the field. Contractors are encouraged to contact the locate company and/or utility owner if they encounter any unfamiliar markings and have questions concerning their meaning. Information in this booklet is subject to change without notice. The purpose of this manual is for damage prevention education and should not be used as a legal document.

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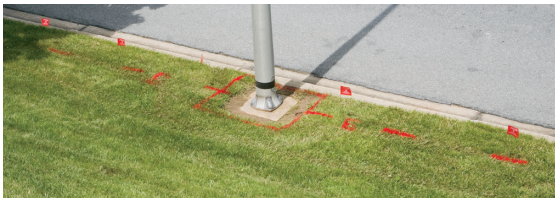
Marker Types

The marker types that are most suitable to the terrain and site conditions shall be used.



Example of structure, standard marks

End of locate request

Example of facilities continuing past locate point

When and Where Flags Can Be Used

- Areas without fixed vegetation (dirt-only lots, dirt roads, etc.)
- When inclement weather exists or is anticipated
- Heavy construction/high-traffic construction sites
- Right of ways with tall vegetation
- Flowerbeds or other landscaped areas
- In conjunction with paint

Discretion shall be utilized when using flags as it relates to public safety (e.g., playgrounds, schools, residential areas, etc.).

Example of TV pedestal, coax cable

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Facility Markings

- The American Public Works Association's (APWA) color codes shall be used to mark underground utility lines (see page 14).
- Markings shall be adequate for the intended purpose and not be excessive or oversized.

Example of structure, standard marks, corridor

Single Facility Markings Should Be

- 2″ - 4″ wide
- 6″ - 18″ long
- 2′ - 12′ distance between markings, all site specific

Dots

Dots should be used on sidewalks, driveways, flowerbeds, landscaped areas or other areas where customers may be sensitive to normal locate paint markings (e.g., stamped concrete, historical and revitalized areas, etc.).

Where practical, the utility locator may indicate the existence of private utilities by the label:

PRV

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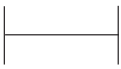
Descriptions

Conduit Markings

Conduit markings shall be used when identifying any multiple cabled or pipe facilities,

Example of conduits, underground structure

in the confines of the same trench, which are encased or contained inside an external structure other than its manufactured sheathing or coating. This should exclude direct-buried fiber optics. Example:



Corridor Marks

Corridor marks represent any structure that has a diameter that is greater than 4″ and shall be used when identifying any multiple cabled or pipe facilities in the confines of the same trench that are not encased or contained inside an external structure other than its manufactured sheathing or coating. This should include direct-buried fiber optics.

Example of structure, standard marks, lateral, corridor marks, labeling, pipe size

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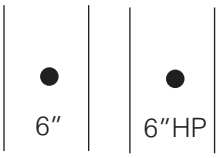
Typical pipe sizes below 6″ [¼″, ⅜″, ½″, ¾″, 1″, 1 ¼″, 1 ½″, 1 ¾″, 2″, 3″, 4″] shall be identified by a single marking.

Pipes 6″, 8″, 10″, 12″, 16″, 18″, 20″, 22″, 24″, 30″, 40″, 42″, 48″ and above shall be identified by a designated corridor pipe marking. See Figure 1-1.



- The dot will go where the locator is receiving the center strongest signal strength

Fig. 1-1

When known, the size, material type and owner of facility shall be indicated at the beginning and at the end of the locate request area and site specific in between.

Example of fiber labeling:

FO ●

Example of structure, fiber

Perimeter Markings of Structures/ Hand Dig Zone

Visual facility structures that are on or beneath the surface include, but are not limited to, manholes, underground tanks, poles, communication pedestals, gas and electric structures, vaults, water and sewer facilities.

While working in the proximity of an identified underground structure, it is the responsibility of the excavator to positively identify the outermost edges of the structure by hand or by vacuum

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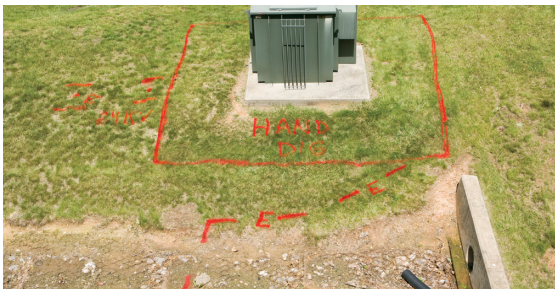
excavation equipment, or call the facility owner for assistance. In referencing below-ground structures, the structure will be identified by a minimum of a 3′ x 3′ box, see Figure 1-2.

Example of cable TV pedestal, fiber optic, coax cable

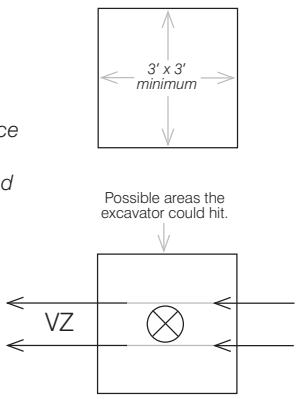
Regarding above-ground structures, perimeter size is to be established by the utility owner. Within any established perimeter, identification of the outermost edges shall be determined by hand or vacuum excavation.



Example of electric transformer, hand dig zone, corridor, lateral

Fig. 1-2

Sub-surface structure may extend beyond markings



Example of sub-surface electric transformer

Example of phone, manhole

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Offsets

In an area where marks may be destroyed (e.g., high-traffic areas, gravel areas, dirt areas, etc.), or where surface conditions are such that the placement of marks directly over the utility line is not possible, offset markings shall be used. The offset marks should be placed on a permanent surface, which is not likely to be destroyed.

Example of offsets

When possible, offset marks should be used in conjunction with marks placed in accordance with the APWA's color codes. Offset marks shall include an arrow, pointing in the direction of the utility line, with the distance in feet (measured with an appropriate instrument) to the location of the utility line shown on the right side of the arrow, and size, material type and other information on the left side of the arrow. Offset marks should be legible when facing utility. See Figure 1-3.

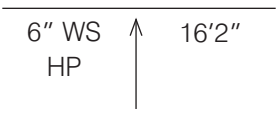

Fig. 1-3

Lateral Utilities and Utilities that Change Direction

When utilities change direction, or where lateral lines exist, they will be clearly located, and the locate marks will be closer in proximity to

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identify the change. This will include intersecting facilities, facilities changing direction, facility ends and lateral lines.

Example of standard marks, lateral

White Lining

White lining is strongly recommended for proposed excavations. When utilizing white lining, a clear footage definition of radius (in feet) around the white paint markings should be established in the ticket instructions for utility markings involving: single-point excavations, such as signs, poles, pole bases, anchors, drilling, blasting, etc.; or continuous excavation, such as trenching, plowing, boring, grading, etc.

Example of white lining

When white lining is not practical, other means of area of excavation descriptions can be used, such as site meetings, document transfers, etc.

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Definitions

Abbreviations

CI	Cast Iron
CPR	Copper
DI	Ductile Iron
PL	Plastic
PVC	Polyvinyl Chloride
RFC	Reinforced Concrete
SCC	Steel Cylinder Concrete
STL	Steel
TC	Terracotta
TR	Transite (Asbestos)
WRP/WS	Wrapped Steel
PCCP	Prestressed Concrete Cylinder Pipe
KD	Korduct
FG	Fiberglass
GALV	Galvanized Steel
LP	Low Pressure
MP	Medium Pressure
HP	High Pressure
OHP	Over High Pressure
TRANS	Transmission Line

Electric Label Definitions

PRI	Primary
SEC	Secondary
S/L	Street Lights
1/0	
#2 cables	
350s	
500s	
750s	
1,000s	
69KV	or >69,000 volts
110/115KV	or > 110,000 volts

(Listed in order of power strength)

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Sample Miss Utility Ticket Check Status

Company Name	District Code	Status	Date	Time
ALLEGHENY PWR/ UTILIQUEST	PTE02	2	20080129	09:33:12
AT&T TRANSMISSION	ATM01	1	20080129	06:50:33
AT&T TRANSMISSION TCG	TPC04	1	20080128	21:20:29
COMCAST OF MONT - UTILIQUEST	TRU01	2	20080129	09:33:12

Code Definition

1 Clear/No Conflict
2 Marked
3 24-hour delay
4 48-hour delay
5 Not Complete/In Progress: Locator has spoken to excavator and both agreed to this message
6 Locate Discrepancy
7 Not Complete/In Progress: Dispute
8 Utility Locator has not yet responded
9 Marked up to privately owned utility
10/A Incorrect work site mapping, insufficient information, and/or wrong address.

To view your ticket and Ticket Check status, please visit www.missutility.net using Search & Status

Ticket Check revised codes and rules are available at, www.missutility.net/maryland/ticketcheck.asp

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Local Damage Prevention Committees

Local Damage Prevention Committees are groups of stakeholders who are concerned about preventing damage to underground utilities.

By becoming an active member, you will have the opportunity to discuss, in an informal setting, your concerns and ideas related to preventing damage to underground utility lines, and become part of a local and statewide network of stakeholders through which important damage prevention information is communicated quickly and effectively.

In addition, your local damage prevention committee promotes partnerships. Developing partnerships with other stakeholders can result in open communication, problem solving and avoiding conflicts. There is no cost to become a member.

Local damage prevention committees meet on a regular basis in the following two geographic areas of Maryland/D.C.:

Maryland/D.C.

Miss Utility
7223 Parkway Drive, Suite 100
Hanover, MD 21076
missutility.net/maryland

Eastern Shore (Delmarva)

Utilities Service Protection Services of Delmarva, Inc.
DEC Box 600, 14198 Sussex Hwy.
Greenwood, DE 19950
missutilitydelmarva.com

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APWA Uniform Color Code for Marking Underground Utility Lines

RED–Electric Power Lines, Cables, Conduit and Lighting Cables

YELLOW–Gas, Oil, Steam, Petroleum or Gaseous Materials

ORANGE–Communication, Alarm or Signal Lines, Cables or Conduit

BLUE–Potable Water

GREEN–Sewers and Drain Lines

PURPLE–Reclaimed Water, Irrigation and Slurry Lines

PINK–Temporary Survey Markings

WHITE–Proposed Excavation

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Notes

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Know what's **below.**
Call before you dig.

Maryland/D.C.
1.800.257.7777

Eastern Shore (Delmarva)
1.800.441.8355

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