

STORMWATER MANAGEMENT TOOLS FOR RESIDENTIAL DEVELOPMENT

TOOL ② RAINWATER TANKS WITH INFILTRATION

If space is not big enough for a full-sized infiltration chamber (refer to the [flowchart](#) to see which tool is most suitable for your property), you can use rainwater tanks with smaller-scale infiltration tools.

Rainwater tanks can be above-ground or below-ground and infiltration tools may include a perforated pipe or open-bottom sump (also known as a perforated barrel or drywell).

Rainwater tanks are available in a variety of sizes and shapes and can even be hidden below decks or within walls.

Devices are available to filter the rainwater before it goes into your tank, and to keep your tank free from debris and mosquitoes.

Option 2A shows a **below-ground** rainwater tank connected to a **perforated pipe**.

Option 2B uses an **above-ground** rainwater tank connected to an **open-bottom sump**.

See page 6 for more information about which option is best for you.



PVC 4" Perforated Pipe from Home Depot

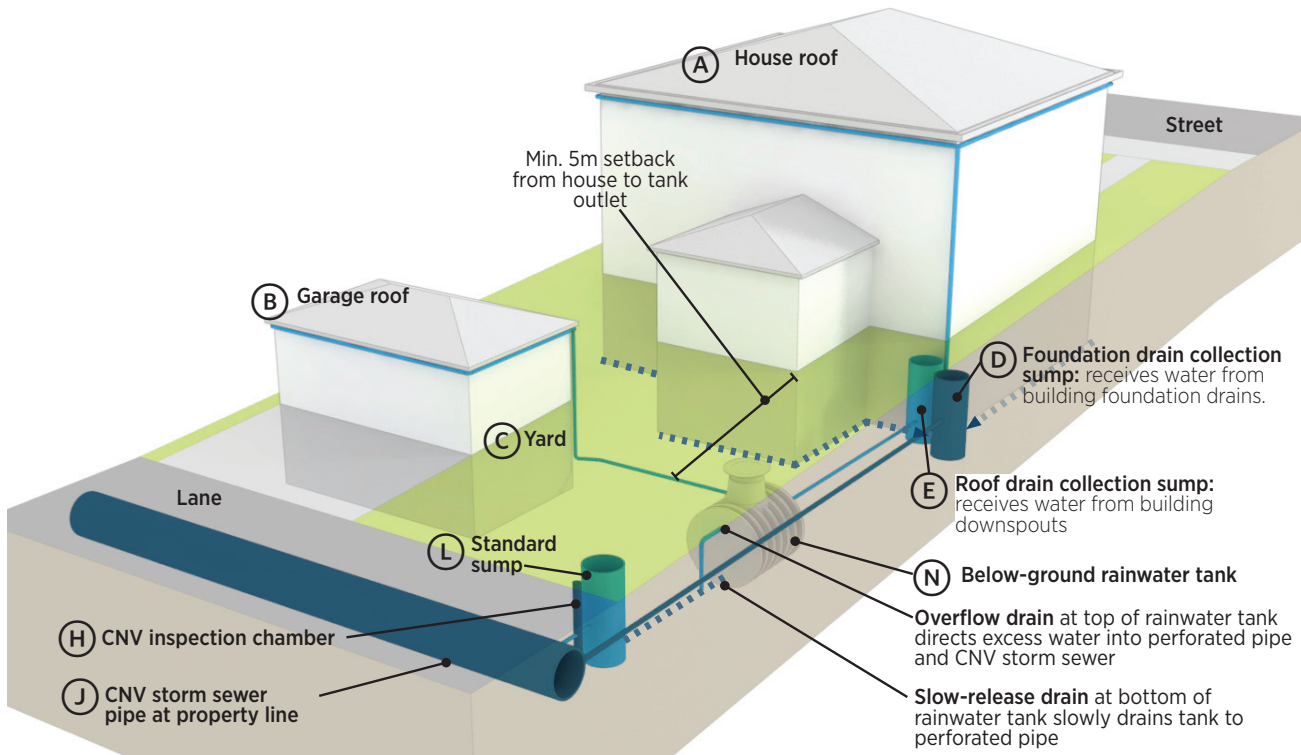
WHERE CAN I GET THE PARTS I NEED?

- **Graf "Carat"** below-ground stormwater tank available from [BARR Plastics](#): 604-852-8522
- **"HOG"** above-ground stormwater tank available from [BARR Plastics](#): 604-852-8522
- **Perforated pipe** is available at most hardware stores
- **Open-bottom sump** (also known as drywell or perforated barrel), 1.2m or 4' diameter, from [Langley Concrete](#): 1-800-667-9600 or [Lafarge concrete](#): 604-270-9155

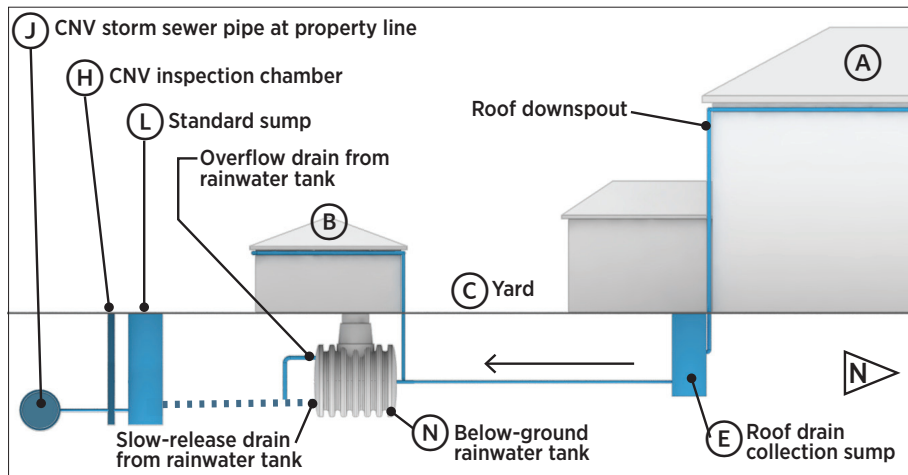
WHERE DO THE TOOLS GO ON MY PROPERTY?

The illustrations on the following pages show different layouts for rainwater tanks and infiltration tools on a typical residential lot. Two examples are given for each variation: one for a typical south-facing lot and one for a typical north-facing lot. In the north-facing lot the infiltration area is in the backyard, as that will typically be the low point of the site. Likewise, in the south-facing lot the infiltration area will typically be in the front yard. The circled letters correspond to different parts of the accompanying infiltration chamber worksheet.

OPTION 2A: BELOW-GROUND RAINWATER TANK WITH PERFORATED PIPE ON A TYPICAL NORTH-FACING LOT



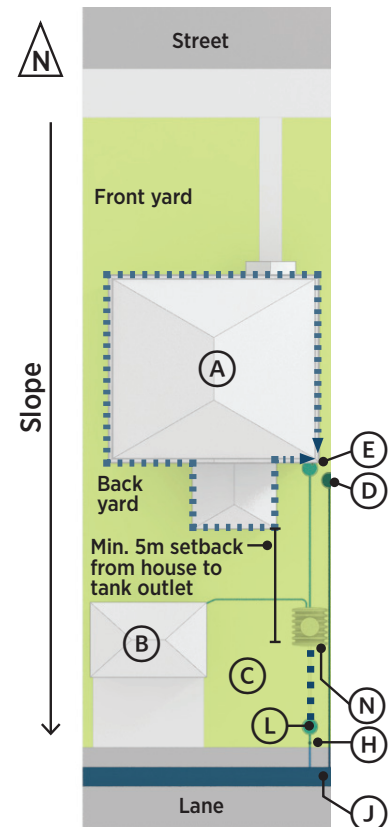
PERSPECTIVE VIEW



SECTION Note: foundation drain sump connection to CNV storm sewer pipe not shown

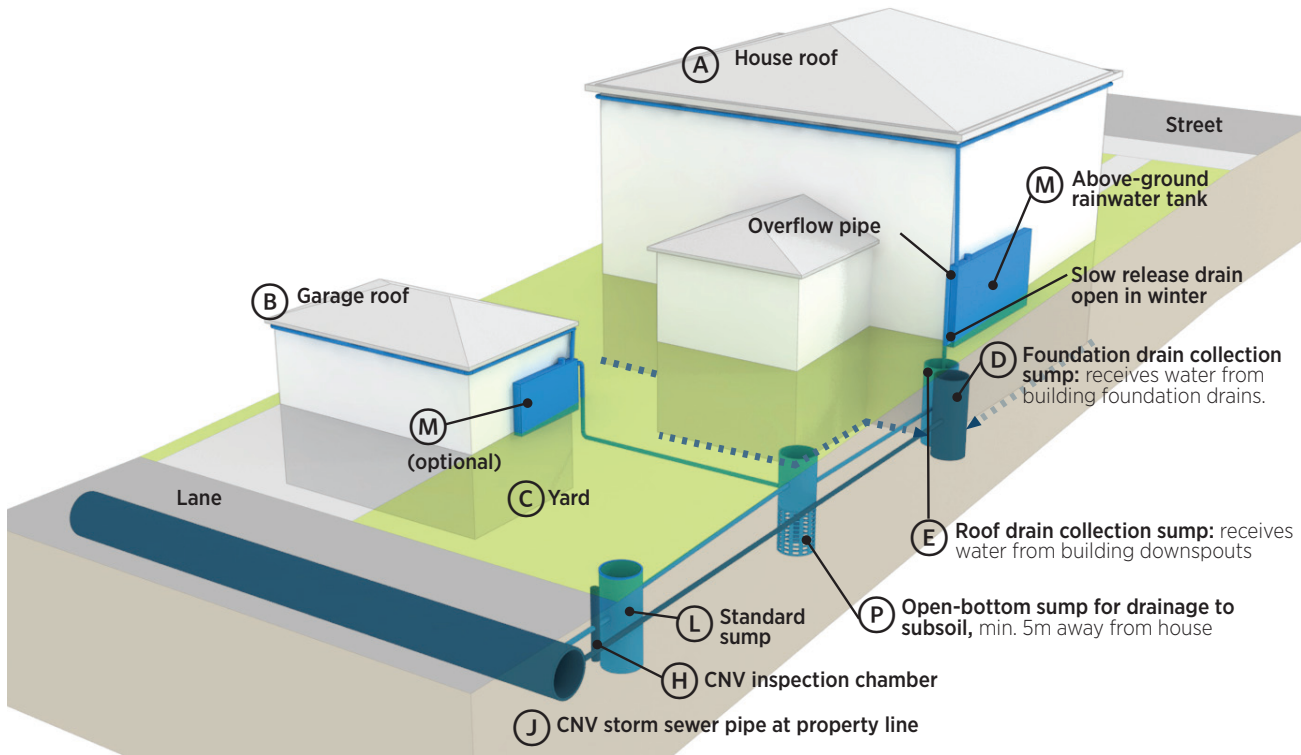
LEGEND:

- **Perforated foundation drain pipe:**
Drains water to foundation drain sump (D). Minimum 1% slope.
- **Solid foundation drain pipe:**
Drains directly to CNV storm sewer (J). Minimum 1% slope.
- **Perforated stormwater drain pipe:**
Allows rainwater to infiltrate and soak into ground. Minimum 1% slope.
- **Solid stormwater drain pipe:**
Minimum 1% slope.

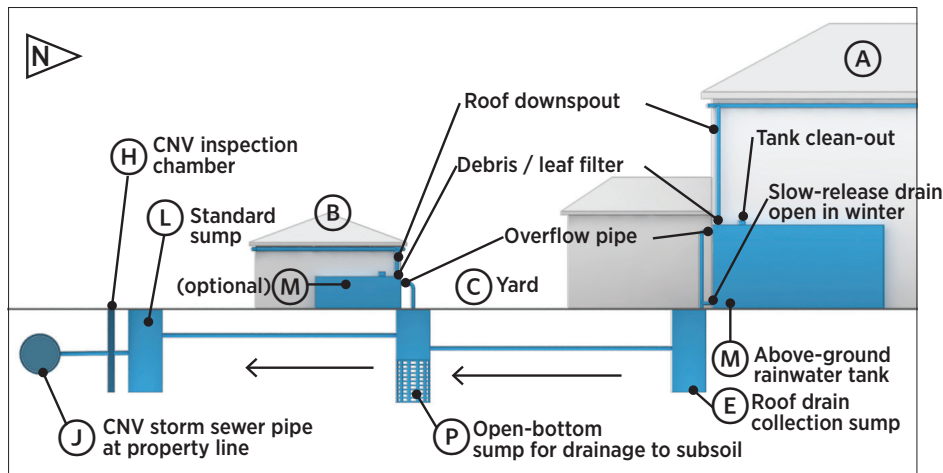


PLAN VIEW

OPTION 2B: ABOVE-GROUND RAINWATER TANK WITH OPEN-BOTTOM SUMP ON A TYPICAL NORTH-FACING LOT



PERSPECTIVE VIEW

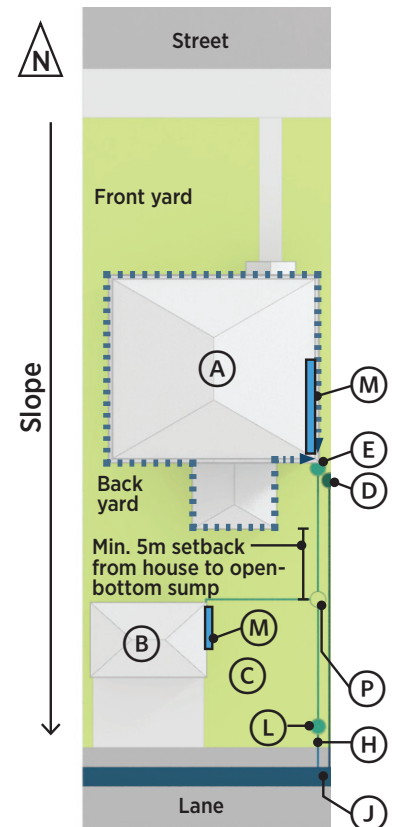


SECTION

Note: foundation drain sump connection to CNV storm sewer pipe not shown

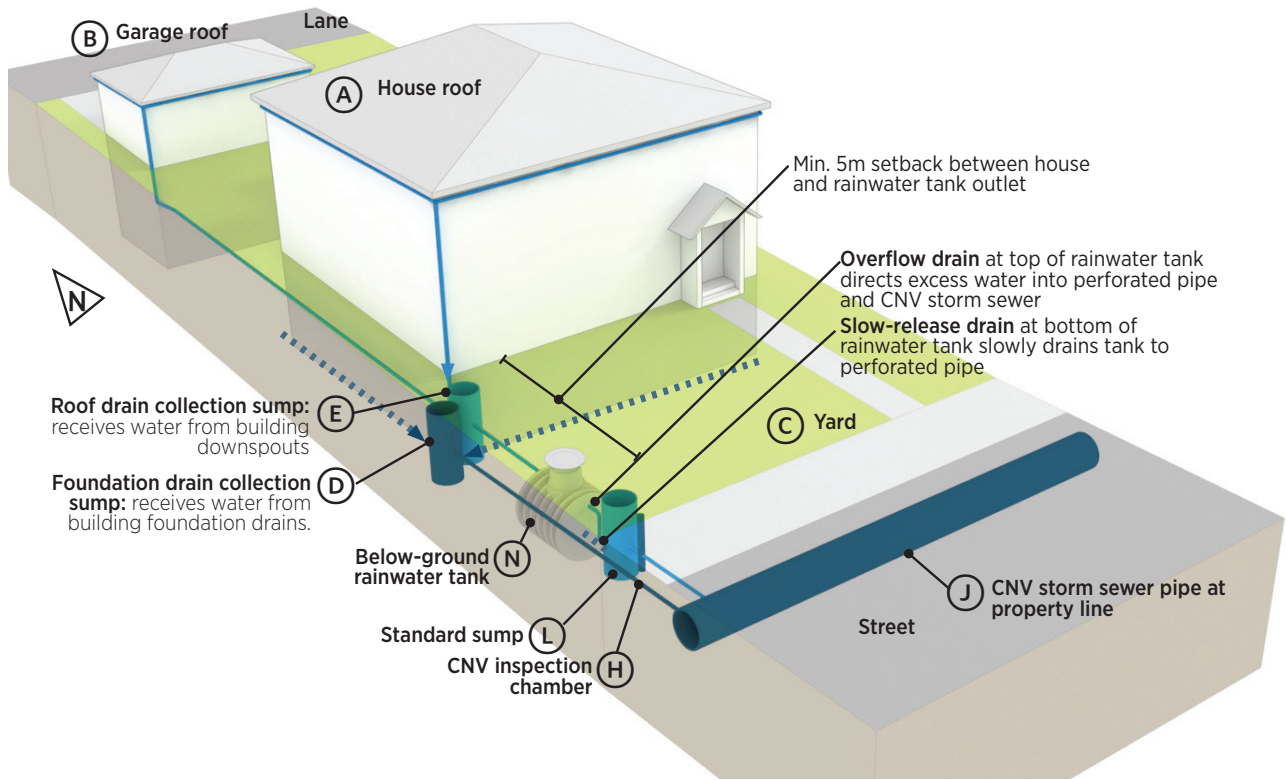
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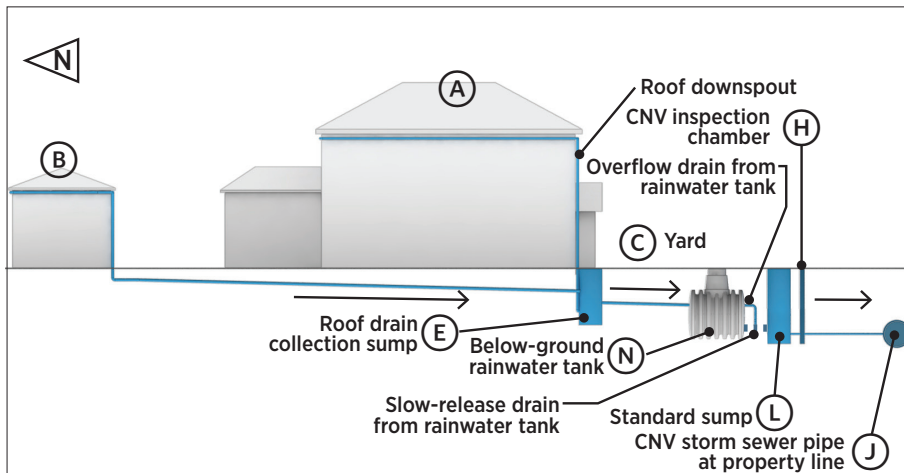


PLAN VIEW

OPTION 2A: BELOW-GROUND RAINWATER TANK WITH PERFORATED PIPE ON A TYPICAL SOUTH-FACING LOT



PERSPECTIVE VIEW

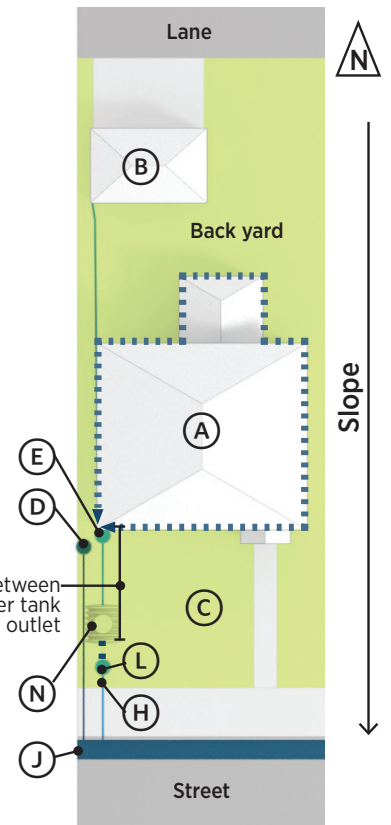


Note: foundation drain sump connection to CNV storm sewer pipe not shown

SECTION

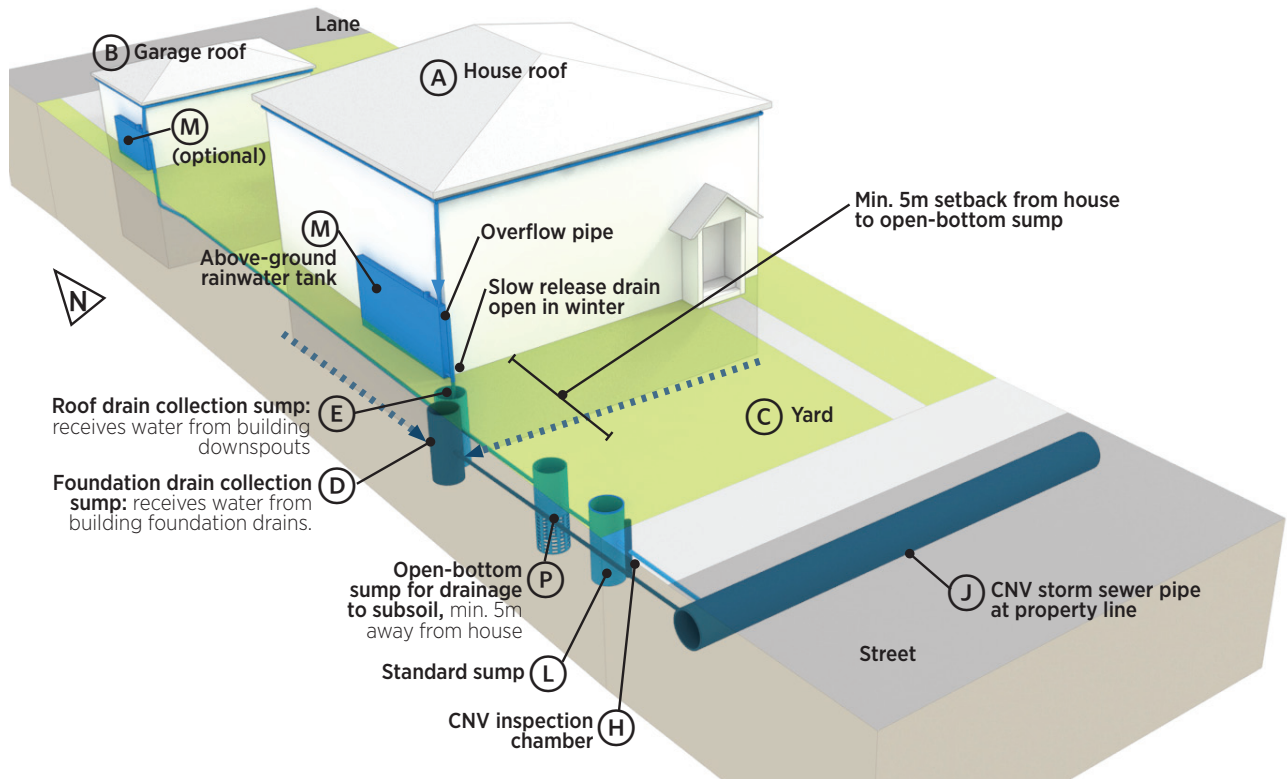
LEGEND:

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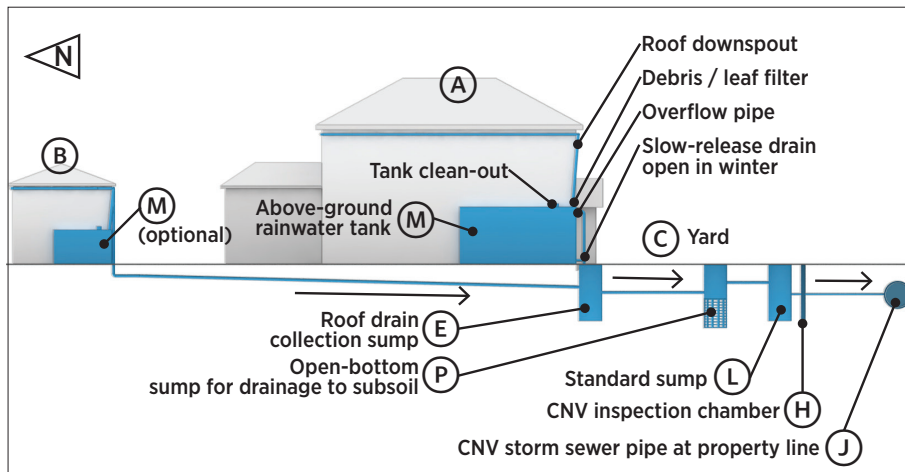


PLAN VIEW

OPTION 2B: ABOVE-GROUND RAINWATER TANK WITH OPEN-BOTTOM SUMP ON A TYPICAL SOUTH-FACING LOT



PERSPECTIVE VIEW

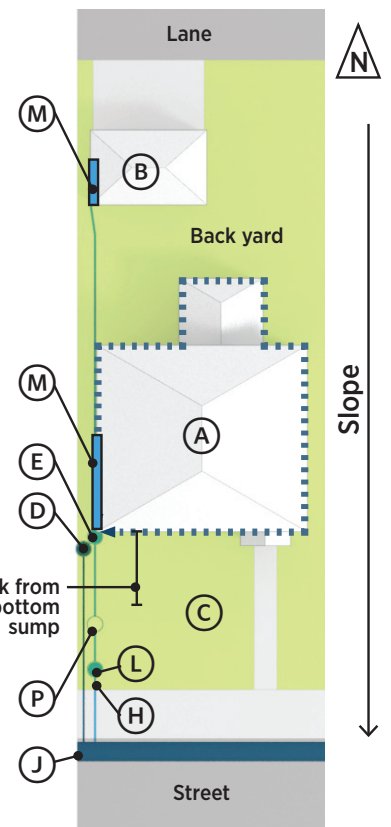


SECTION

Note: foundation drain sump connection to CNV storm sewer pipe not shown

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PLAN VIEW

WHICH OPTION SHOULD I CHOOSE?

You may wish to use the **above-ground rainwater tank option (2B)** if you want to harvest rainwater in the summer months for irrigation. The tank must have a slow-release outlet (see below) that must be kept open in winter in order to provide stormwater management benefits.

If you do not want to harvest rainwater in the summer months or do not want to have to open and close the slow-release outlet twice a year, you may wish to use the **below-ground rainwater tank option (2A)**.

HOW BIG DOES MY RAINWATER TANK NEED TO BE?

The minimum size of your rainwater tank should be **6,500 litres**, regardless of whether it is below-ground (2A) or above-ground (2B). You can join multiple, smaller tanks together to achieve this volume.

HOW BIG DOES THE SLOW-RELEASE OUTLET NEED TO BE AND HOW DOES IT WORK?

The slow-release outlet of the rainwater tank should be 9 mm (3/8") in diameter to allow the water in your tank to slowly drain in the winter months.

In option 2A (below-ground) the slow-release outlet should be designed to drain to an attached **perforated pipe** that is within a drainage trench. **It is assumed that the perforated pipe would be about 10 m (30 feet); if you do not have space for this length contact the City for guidance.**

In option 2B (above-ground) the slow-release outlet should be designed to drain into the roof drain collection sump, (E), which then drains into an open-bottom sump, (P), for drainage into the ground.