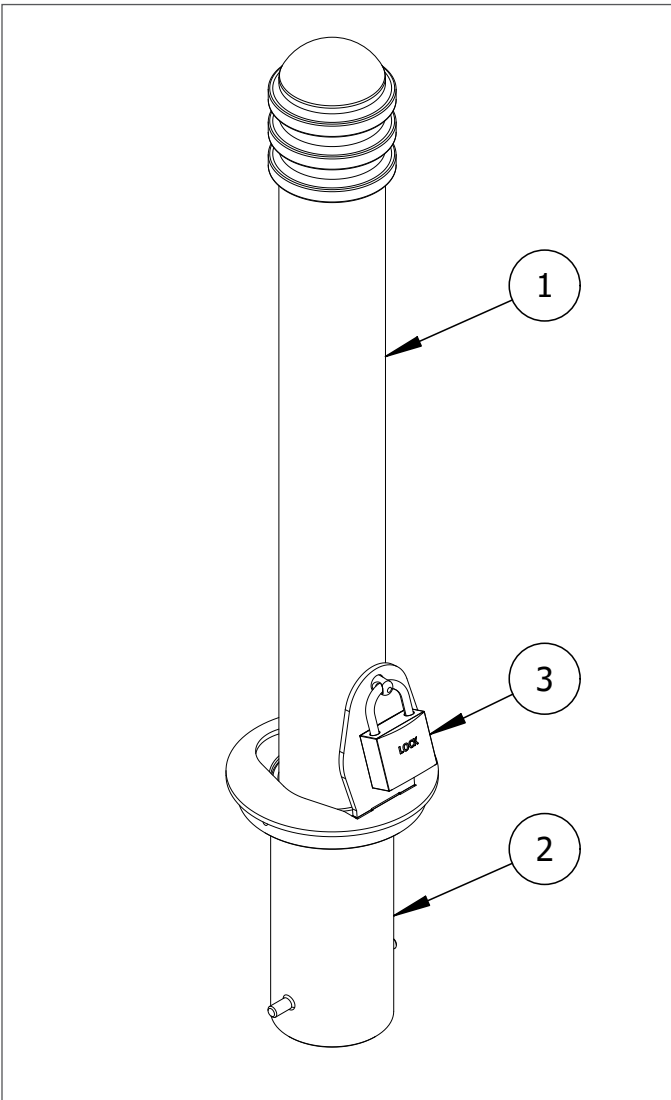






Removable Bollard Installation

Receiver with Lid

Bollards shown in the diagrams may not be the same model as the bollards shipped in this order. This does not affect the integrity of the installation.



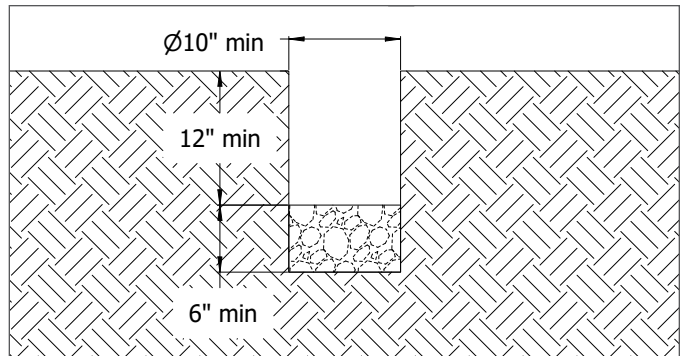
-  To protect the finish, keep bollards in original packaging until exact moment of installation.
-  Handle with care to avoid scratching or damaging bollard surfaces.
-  Once scratched, bollards cannot be repaired to original form without re-finishing the entire surface.
-  Consider local soil conditions before proceeding with bollard installation.

Before Installation

STEP 1: Study the site plans and mark the intended location of each bollard on the plan.

STEP 2: Always check for hazards such as water pipes, gas lines, and underground wiring before digging.

STEP 3: Please consult your local Building Code Department to determine the recommended depth below the frost line for digging in your area. Choose a minimum of this or 12", whichever is greater. Then add a minimum of 6" for holding the drain rock.* This is the total depth. The diameter of the hole should extend to a minimum of 10".



**Recommended depth for drain rock is a minimum of 6". Depth will also depend on local soil conditions, weather conditions, and engineering requirements.*

Parts List

#	PART	QTY
1	Removable Bollard	1
2	Receiver	1
3	Padlock (optional)	1

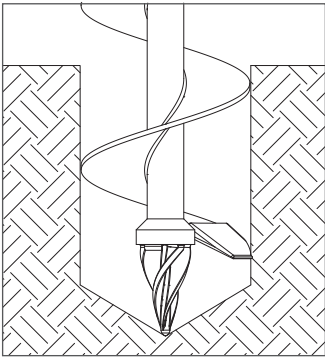
Installation Equipment

Auger	Chalk/Marker
Dirt Tamper	Measuring Tape
Level	

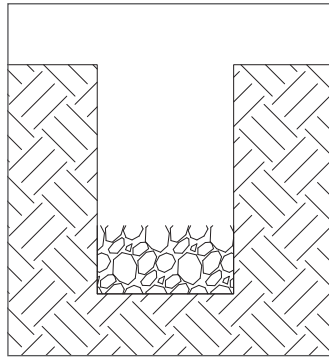
Removable Bollard Installation

Receiver with Lid

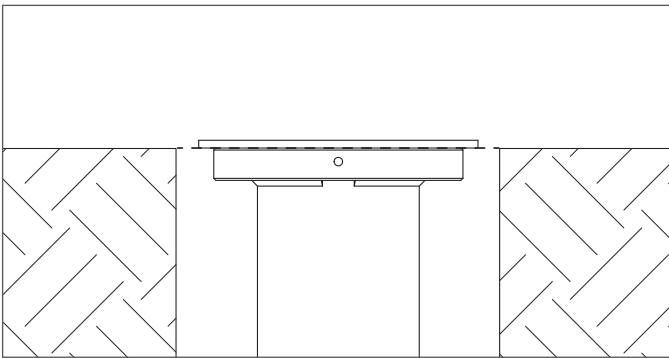
STEP 4



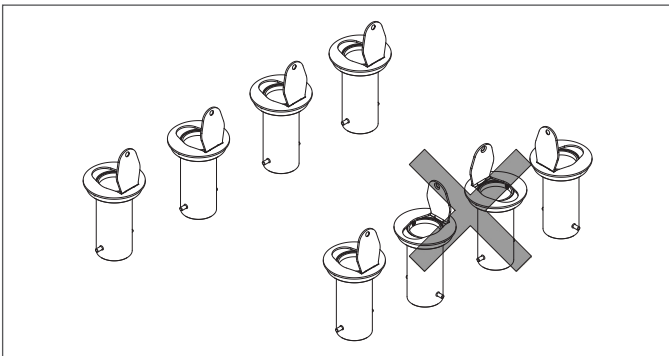
STEP 7



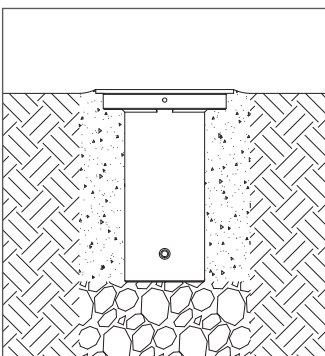
STEP 9



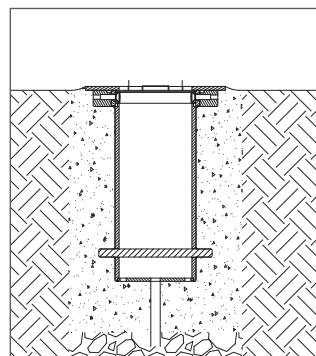
STEP 10



STEP 11 (A)



STEP 11 (B)



STEP 4: Center an auger on the installation mark and bore a hole to the required measurements.

STEP 5: Ensure the area is properly formed to create a perimeter that will hold wet concrete. Use a dirt tamper** to compact the soil below the intended surface.

STEP 6: Prepare the bollard and receiver for designated location. Keep the bollard in its protective packaging.

STEP 7: Add the drain rock to the excavation site, keeping in mind that the receiver will be installed so that the bottom edge of the receiver plate will be level with the finished surface of the concrete grade. A slight berm is recommended to help with water drainage.

Prepare the Concrete

STEP 8: Ensure that the proper ratio of water and concrete mix is used. The concrete should have a similar texture to moldable clay.

STEP 9: Close the lid of the receiver and lower it into the excavation site so that the bottom edge of the receiver plate is level with the finished surface of the concrete grade. *Note: If necessary, try dry fitting the bollard (with packaging still on) onto the mount and use a level to ensure it is plumb before proceeding with pouring concrete.*

STEP 10: Orientation of receivers should be parallel. When installing in a roadway, orient the receivers so that the lids close away from the direction of traffic. Place hinge toward oncoming vehicles so that lids left slightly open are pressed closed.

Pour the Concrete

Before pouring the concrete, determine if your local frost line is less than or greater than 12". When pouring concrete, be sure to pour it evenly. The concrete should also be slightly raised up towards the top edge of the receiver plate to create a slight berm.

STEP 11 (A): If the local frost line is less than 12", simply pour the concrete into the site.

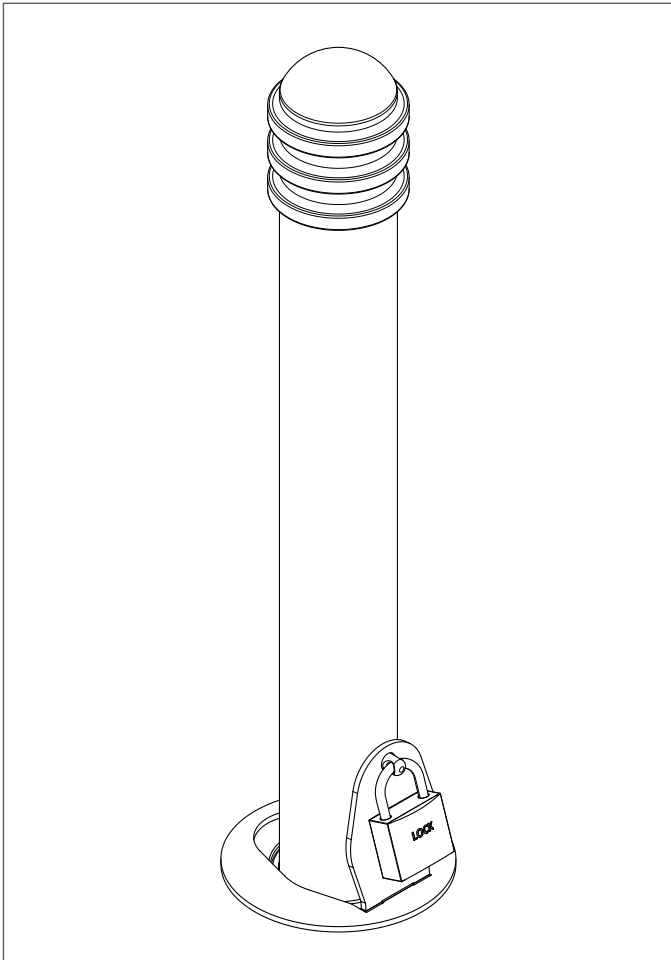
STEP 11 (B): If the local frost line is greater than 12", pour the concrete into the site and then provide adequate drainage by piping through the concrete and connecting to the drain rock layer underneath.

**Dirt tamping is not required if working on undisturbed soil.

Removable Bollard Installation

Receiver with Lid

STEP 15



STEP 12: Allow the concrete to cure for a minimum of 2–3 days. *Note: Moisture in the environment and cool temperatures can significantly slow the process.*

Secure the Bollard

STEP 13: Keep the bollard in its protective packaging. After ensuring the concrete surface has fully cured, carefully place the bollard near the installation site.

STEP 14: When ready to install, remove the bollard's protective packaging and lower it into the receiver.

STEP 15: Lift the lid of the receiver and set it over the stud. Attach the padlock and fasten.



Inspect the installation. Abrasions should be covered as soon as possible. For damage repair or other servicing needs, please contact Reliance Foundry's sales department.