

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | www.mercergov.org



WATER SERVICE INSTALLATION PROCEDURES

1	Call for utility locates, mark area of excavation with white marking paint.
2	Obtain right-of-way use permit if applicable
3	City of Mercer Island Maintenance Department must stake meter location, please call (206) 275-7800 for location of new meter installation. <ul style="list-style-type: none">• Projects that require backflow protection must have prior approval for the location of backflow prevention assembly. Location can be verified at pre-construction meeting.
4	Call the Inspection line at least 24-hours in advance to schedule a water service pre-construction meeting with the City Inspector at (206)275-7730 or www.mybuildingpermit.com . The purpose of the meeting is to: <ul style="list-style-type: none">• Verify the location of the new meter after utility locates have been marked. If a question arises regarding the staked location, the contractor shall contact the City Inspector who will coordinate with the Maintenance Department. Any change to the meter location requires prior approval.• Verify that the customer is ready for the installation.• Verify that all materials are on site and ready for the installation (refer to water service checklist).• Schedule the water tap and inspections.
5	The city Inspector <i>must be on</i> site during all water taps. All fittings and piping must be left uncovered prior to inspection. If not, the contractor must expose all components prior to inspection. Water main taps are scheduled to be performed only on the following days: <ul style="list-style-type: none">• Tuesday, Wednesday and Thursday unless it is a holiday week.• If a holiday week, taps will not be allowed on <u><i>the holiday, the day before or the day after the holiday</i></u>.
6	The City Inspector will inspect all connections and verify that the services are installed per City of Mercer Island standard drawings.
7	Abandon the existing services at the main following installation of the new service.
8	The Maintenance Department will install the water meter upon completion and approval of water service, approval of water service as-built and form, and installation of backflow protection (if applicable). Once the City Inspector approves the final inspection please allow at least two weeks for the meter to be installed.
	Note: 5/8" crushed rock backfill is required in right-of-way and private roads/driveways.

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1½" – 2" Water Service Checklist

					Materials on Hand
1	Permits:				
	• ROW permit	#	_____		
	• Right of access and notification for easements required? (Check one)	Yes	No		
	• Water service permit	#	_____		
	• Size of service: (Check one)	1 ½"	2"		
2	Meter staked and approved A: B: C: D: (*see note below)				
3	Provide spacer and lock (Check one)				Yes No
4	Locates: (Check one)				Yes No
	• Depth of main _____ (over 3' requires valve extensions)				
5	Verify OD of water main size: _____				
6	Saddle ROMAC 202NS: _____ X 2"				
7	Saddle straps stainless steel size: OD Range _____				
8	Corp: 2" -FB5007 Male IPS X Male IPS				
9	3 - Brass 90 Ell 2" (street Ells are not permitted)				
10	2 - Nipple brass 2" X 6"				
11	Nipple brass 2" X 3"				
12	2 - Nipple brass 2" X 3" (for optional swing joint at setter)				
13	2 - Brass 90 Ell 2" (for optional swing joint at setter)				
14	Gate valve 2" RSGV female X female AWWA C509 – MH4067Ts7s				
15	8" X 8" X 1½" square brick				
16	2" SDR 9, 200 PSI length: _____, capped? (Check one)				Yes No
17	2 - Joint stiffener Insert 2" Ford 55Q				
18	2 - 2" Male quick joint Ford C8477Q				
19	Bell reducer 2" X 1 1/2" (Fowler #BFR76) (not needed for 2" meter)				
20	Brass nipple 1 ½" X 3" (not needed for 2" meter)				
21	Copper setter (circle appropriate model)				
	• 1½" VBB7612B1166, height = 12" – female IPS inlet/outlet				
	• 2" VBB7712B1177, height = 12" – female IPS inlet/outlet				
22	Meter Lid Carson model #BCF1730-RL = 1 ½" or 2" (see sheet W-18A for dimensions of steel box/lid design)				
23	Plastic meter box: See Below				
		Mid Lid Opening	Length Lid Opening	Height Overall	Base Width
	1" = MSBCF1324-12	13.75"	23.1875"	12"	12.125"
	1½" = MSBCF1730-12	17.625"	30.5"	12"	16"
	2" = MSBCF1730-18	17.625"	30.5"	18"	22.875"
24	Tracer wire 12 gauge Insulated (blue)				
25	2 x No. 36 Hose clamps				
26	Cast iron valve can top section 18" with lid VB940 marked "Water"				
	• Extension if main is over 3' deep				Yes No
27	5/8" Crushed rock				
28	Cold mix				
29	Approval to tap granted by: _____		Date Scheduled: _____		

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DEVELOPMENT SERVICES GROUP

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SINGLE FAMILY REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA)

INTRODUCTION

This guideline is a summary of the City of Mercer Island's regulations on construction of premises isolation RPBA (Reduced Pressure Backflow Assembly) for cross connection control. Cross connections are any points in a plumbing network that may become polluted should the water be allowed to flow backwards into the drinking water. Cross connections are controlled by installing a mechanical assembly called a backflow prevention assembly. Backflow assemblies are an engineered series of mechanical check valves that permit water to only flow in the intended direction and not in reverse. The Washington State Department of Health has determined certain categories of water customers have an increased risk of creating a cross connection and those water services must be protected as defined in WAC 246-290-490 via an approved air gap or a Reduced Pressure Backflow Assembly. The complete regulation can be found at WAC 246-290-490. Residential homes that are on the lakefront fall into this category. In this development guideline, references are made to the Mercer Island City Code and WAC 246-290-490.

GENERAL REQUIREMENTS:

- A permit (Water Supply Permit) is required for the installation of a Premises Isolation Backflow assembly. In some cases, a Right-of-Way use permit (ROW) may be needed. Please check at the Development Services permit counter if a ROW use permit is required.
- Backflow Prevention Assemblies must be listed on the Washington State Department of Health Approval list and installed in the approved orientation. Please check with the Cross Connection Control Specialist to verify that the assembly you plan to use is approved and for the proper installation orientation.
- A Washington State Certified Backflow Assembly tester (BAT) must test all backflow prevention assemblies upon initial installation, annually thereafter, relocating assembly, and after a known backflow incident. Please check with the Cross Connection Control Specialist for a list of approved testers.
- Location must be within 50' of water meter / property line. Location must have prior approval from Cross Connection Control Specialist. Assembly cannot be located in public right-of-way unless an Encroachment Agreement has been approved. Contact the Senior Development Engineer for encroachment agreement questions.

CONSTRUCTION REQUIREMENTS:

- RPBA must be located 12" above flood grade and not subject to flooding. This is measured from the extreme lowest portion of the assembly. (See back side of sheet)
- Location of assembly must facilitate access for maintenance and testing.
- RPBA's incorporate a relief valve that will discharge a volume of water equal to the inlet piping. For example, a 2" RPBA could flow 125 gallons per minute. Considerations must be given to terrain and must be able to accommodate this flow of water that will not be objectionable. (Ex: on a steep slope)
- Provisions must be made to provide for freeze protection. A typical installation includes a concrete pad with an insulated fiberglass enclosure.

- Unions on each end of assembly for ease of removal
- Approved inlet materials: Copper Type K, M, or brass. Below ground, copper fittings must be compression or welded.
- An as-built drawing and inspection are required prior to backfill.

This guideline is intended for informational use only. It cannot be used as a substitute for the Mercer Island Administrative Code or City Zoning Code. For more information about the regulations that may apply to your project, please consult with the Cross Control Specialist 206-275-7787 or Development Services staff.

