

## **WATER SERVICE BRANCH PROCEDURES**

2008

The Branch Services Section of the Engineering Division coordinates the application process for new service branches. There are basically three different branch application processes dependent on the location and type of development.

The "Certified Person" referred to is one who has taken a test to ensure that he is familiar with our rules and regulations for installing service from the right-of-way line up to and including the meter setting or detector check setting. The test is given by appointment and you may schedule to take it by calling John Waters (591-7836) at least two days in advance. There is no charge for the test, however you must purchase the Water Works Rules and Regulations manual (\$8.00) prior to taking the test.

The bond that is referred to is a \$1,000 performance bond. The bond runs from January 1 to December 31. We provide the bond form for your insurance company to complete. A sample of the form is included at the back of this section.

Payment for branches and meters is made to the Water Works Cashier in cash, check or visa prior to receipt of service.

### **CINCINNATI WATER WORKS - LAWS, ORDINANCES, RULES, REGULATIONS AND STANDARD DRAWING REFERENCES:**

BRANCHES- Sections 401-31, 32, 33, 35, 41 and 36

METERS----- Sections 401-43, 51, 52, 53,54 and 55

STANDARD DRAWINGS - 108-1 thru 108-22

### **SERVICE BRANCH 2" OR SMALLER ON DEDICATED RIGHT-OF-WAY**

For new service on existing dedicated streets, a building permit or plumbing permit must be presented at time of application. Application must be made by a plumber who is bonded and certified to do this type of work. The following is the general procedure when applying for a service branch two inches or less in size.

- 1 The applicant must complete a **CROSS-CONNECTION QUESTIONNAIRE**. (blue form) This card provides us with information about branch and meter size, desired branch location as well as proposed use of the new service. The branch location is specified from the nearest fire hydrant and cross street as well as the side of the street that the tap will run to. **EXAMPLE:** You are building on the **west side** of Vine Street and the nearest cross street is Mitchell Avenue. Typical branch measurements would be- **WEST SIDE OF VINE 105 FEET SOUTH OF THE FIRST FIRE HYDRANT SOUTH OF MITCHELL.**
- 2 Provide a plot plan showing property lines and all easements for each tap

3 The Application Clerk transfers all necessary information from the Cross-Connection Questionnaire to an application form. All applicable service fees are charged at this time including meter, branch and bulk fee for unmetered construction water. SEE TABLES AT END OF THIS SECTION FOR PRICE LISTS. IN MOST CASES THE "ANY STREET" PRICE WILL APPLY TO THESE BRANCHES. **SEE SPECIAL NOTE #8 ON THE PRICE LIST FOR RESTRICTED CONDITIONS.**

4 After paying the cashier, the applicant picks up the meter and a "blue topped" stake from our storeroom. The stake is used by the applicant to mark the actual tap location.

The whole process usually takes 15 to 30 minutes, depending on the number of people making application and how busy the cashiers are.

The next day the application goes to the Inspection Department for street opening permit and a field check of the tap location. Call (513) 591-7873 to inform the inspection office that you have set the stake at the tap location. After we receive the street opening permit, the Tap Contractor will install the tap within 30 days.

### **SERVICE BRANCH 4" AND LARGER**

The applicant must complete a CROSS-CONNECTION QUESTIONNAIRE. This card provides us with information about branch and meter size, desired branch location as well as proposed use of the branch.

Two sets of site plans must be submitted for review. If the domestic service will require a meter 3" or larger one plumbing plan will be needed also. The Assistant Supervisor of Customer Service reviews these plans for compliance with our standard drawings and regulations. The Engineering Planning Section will review the second site plan to determine if requested flow demands can be met. Additionally, Engineering reviews right-of-way issues, particularly assessments and easements. We will make our initial response to the applicant for revisions/questions within ten days of receipt. Six sets of approved plans are required at the time the branch is sold.

Contact Ellen Betsch (591-7833) for questions.

### **ITEMS TO BE INCLUDED ON SITE PLAN**

- 1 Right-of-way line
- 2 Property line closing around proposed project and/or Book, Page and Parcel from the Hamilton County Auditors records
- 3 Existing water main and any fire hydrants on project's frontage

- 4 Dimension from nearest fire hydrant to proposed tap
- 5 Size of existing water main and size of proposed tap
- 6 Standard drawing that you will be complying with for your meter and/or detector check setting. [ These drawings are found in the back of CWW Rules and Regulations and in the Engineering Standard Drawing Book ]
- 7 Current flow test from the two fire hydrants that straddle your proposed tap. In most cases the flow test must be less than one year old. Contact Engineering Records at ( 513) 591-7855 to check on available flow test information.
- 8 Piping route and appurtenances on site[ Fire hydrants, bends etc.]
- 9 Check with the municipality that controls the street opening permits in the area of your project to see if they will require a "bore and case" of the right-of-way. If the paving will be "open cut" we will install from the water main to the right-of-way line and do restoration within the right-of-way at the "any street" price. [ SEE COST OF SERVICE BRANCH PRICE SHEET AT END OF THIS SECTION ] If a bore and case is required, we will sell the branch at the "restricted price" and you will need to contract a bore and case contractor.[ **SEE ITEM #8 OF COST OF SERVICE BRANCH PRICE SHEET** ]
- 10 HAMILTON COUNTY ENGINEERS SPECIAL PROVISIONS/TRAFFIC NOTES to be on all plans in the county. [THESE NOTES AT END OF SECTION] **DO NOT** use these notes on plans within the city limits of Cincinnati. The Department of Public Works will address traffic control and right-of-way requirements for each permit. Contact Sue Ernst at (513) 352-3480 for questions about permits within the city limits.

The preceding requirements cover most but not all situations. When preparing site plans please be attentive to actual conditions at the site that would compromise your tap installation. For example: DRAINAGE DITCHES, CATCH BASINS, SEWER CHAMBERS, TELEPHONE AND LIGHT POLES, GRADE CHANGES AT YOUR PROPERTY LINE

When a two inch or smaller domestic branch is needed and there is a four inch or larger fire branch being purchased, the domestic tap is made on the fire branch at DUAL SERVICE rate. See Standard Drawing 108-9 for an example. [see branch cost sheet for prices]

Dual service connections that require a three inch or larger domestic meter are made by installing a tee on the fire branch near the property line. This is done by the site contractor. A control valve is purchased from the Water Works to be installed on this domestic line. See Standard Drawing 108-10 for an example.

#### **SUBDIVISION / "CURB ONLY TAPS" 2" AND SMALLER ONLY**

When a new subdivision is being developed, the developer or Certified Tapper fills out a form

D-100-S for each tap to be installed. [ see sample at end of section ] All lots in the development must be provided with a tap. The SUBDIVISION BRANCH price from the rate table applies to these taps only. In this case only materials are included [ ferrule, curb stop and "blue top stake" ] Insulator couplings are required and are an additional cost. The Certified Tapper does the actual branch installation work with a Water Works Construction Inspector present. A meter is not purchased until after the individual lot is developed. See Section 401-31R13 thru R16 and Section 401-33 of Cincinnati Water Works - Laws, Ordinances, Rules and Regulations for detailed requirements. Also see Water Works Construction Inspection fees.

### CONSTRUCTION WATER PRICES

	<i>ARLINGTON</i>					
	<i>INCORPORATED</i>	<i>UNINCORPORATED</i>	<i>HTS.</i>			
<i>CINCINNATI</i>	<i>HAMILTON CO.</i>	<i>HAMILTON CO.</i>	<i>BUTLER CO.</i>	<i>WARREN CO.</i>	<i>VENICE GARDENS</i>	<i>CUBIC FOOT</i>
	<i>CLERMONT CO.</i>					<i>CONT</i>
	\$1.67	\$2.10	\$2.22	\$2.42	\$3.44	
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1 fam.	\$83.50	\$105.00	\$111.00	\$121.00	\$172.00	50,000
2 fam	\$125.25	\$157.50	\$166.50	\$181.50	\$258.00	75,000
3 fam	\$146.13	\$183.75	\$194.25	\$211.75	\$301.00	87,500

Cost is per 1000 cubic feet of building content.

### **CINCINNATI WATER WORKS**

**2008**

#### **Cost of Service Branches**

Class	3/4"	1"	1 1/2"	2"	4"	6"	8"	10"
Any Street	\$2775.00	\$2820.00	\$3020.00	\$4540.00	\$7950.00	\$8245.00	\$9700.00	\$10345.00
Unimproved	\$1960.00	\$2235.00	\$2360.00	\$3860.00	\$6570.00	\$6705.00	\$7310.00	\$7905.00
Restricted	\$2730.00	\$2760.00	\$2965.00	\$4450.00	\$6340.00	\$6405.00	\$6805.00	\$7925.00
Subdivision	\$390.00	\$415.00	\$525.00	\$715.00	\$1665.00	\$1805.00	\$2195.00	\$2670.00

**SPECIAL NOTES:**

1. Dual service installed by the Water Works: **3/4-\$830.00, 1"-\$955.00, 1 1/2"-\$1100.00, 2"-\$1265.00**
2. Add \$80.00 for a STOP BOX or \$120.00 for a ROADWAY BOX where required by Water Works.
3. Add \$300.00 to the cost of a branch to be installed in a STATE HIGHWAY.
4. Add \$2455.00 for a branch 4" or larger on a 16" main; Add \$2685.00 for a branch 4" or larger on a 20" main.
5. Add \$2880.00 for each branch larger than 10".
6. Add \$350 for each branch 4" or larger within the City of Cincinnati
7. Branches installed at other than normal hours as required by the customer or governing authority will require

an additional overtime charge.

8. Street opening permits shall be obtained by the Water Works Contractor except when the applicant must perform preparatory work within the "right of way" as required by the Water Works or governing authority. In this case the applicant shall obtain the street opening permit

9. Standard prices do not apply to restricted streets or special conditions. A restricted street is one in which the governing authority will not permit excavation in the street paving. Special conditions as determined by the Greater Cincinnati Water Works which prohibit or prevent normal branch installations may include but are not limited to culvert, creek or railroad. In such cases, restricted prices will apply to branches. The applicant shall perform all necessary excavation, tunneling, boring/casing and final restoration. Greater Cincinnati Water Works will perform all service branch work and backfill excavation at the water main. Backfilling of the boring pit must be performed by the applicant. In some cases it may be necessary to install a stop cock in a position other than the property line. This point will be determined by Water Works.

**Valve Prices**

Size	MJ Gate	CJ Gate	MJxFlange tapping	CJxFlange tapping
4	\$187.00	\$191.00	\$233.00	\$412.00
6	\$243.00	\$341.00	\$324.00	\$262.00
8	\$377.00	\$393.00	\$481.00	\$600.00
10	\$586.00	-----	\$571.00	-----
12	\$741.00	\$752.00	\$1100.00	-----

**Meter prices**

<i>Meter Size</i>	<i>Couplings Flanges</i>	<i>encoder</i>	<i>insulator cplg</i>
5/8	\$7.00	\$233.00*	
3/4	\$6.00	\$268.00*	\$16.00
1"	\$9.00	\$305.00*	\$23.00
1 1/2"	\$24.00	\$455.00*	\$48.00
2"	\$29.00	\$520.00*	\$82.00
2"		\$922.00*	Turbine
3"		\$2284.00*	Compound or Turbine
4"		\$3688.00*	Compound, Turbine or Fire
4"		\$6000.00*	Protectus Assembly
6"		\$5427.00*	Compound, Turbine or Fire
6"		\$8000.00*	Protectus Assembly
8"		\$4229.00*	Turbine
8"		\$5844.00*	Fire Assembly
8"		\$11336.00*	Protectus Assembly
10"		\$6900.00*	Turbine
10"		\$7522.00*	Fire Assembly
10"		\$15890.00*	Protectus Assembly

(\* INCLUDES METER INTERFACE UNIT)

**No more than one pair of couplings or flanges will be sold per each new meter purchase.**

# HAMILTON COUNTY ENGINEERS

## SPECIAL PROVISIONS/TRAFFIC NOTES

**All construction must conform to: "Driveway regulations and Pavement and/or Right-of-Way Opening Provisions for the Unincorporated Area of Hamilton County as adopted by the Board of Hamilton County Commissioners" with supplements or changes thereto.**

**The owner shall save harmless the Board of County Commissioners and all its representation from all suits, actions, or claims of any character brought on account of any injuries or damages sustained by any person or persons or property in consequence of this construction project.**

### **Item 614- Maintaining Traffic**

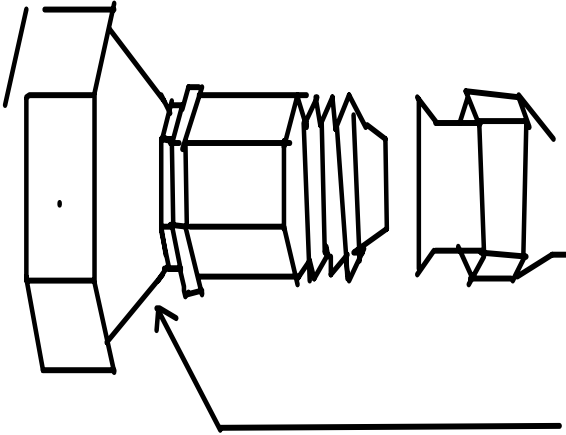
**All pavement and/or right-of-way must conform to the current addition of the State of Ohio Department of Highway Construction and Material specifications, with supplements or changes thereto. Also, the owner assumes all responsibilities and liabilities regarding strict adherence to applicable sections for the maintenance of traffic and public safety as set forth in the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways." All traffic control devices must be in place prior to starting construction.**

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Sizing Water Service Lines

Fixture type	value @35 PSI	Fixture type	value @35 PSI
Bathtub	8	Urinal: Pedestal flush valve	35
Bedpan washers	10	wall or stall	12
Combination sink and tray	3	trough 2 ft unit	2
Dental Unit	1	Wash Sink (each set of faucets)	4
Dental Lavatory	2	Water Closet : flush valve	35
Drinking Fountain (cooler)	1	Tank Type	3
Drinking Fountain(public)	2	Dishwasher: 1/2 in. connection	4
Kitchen Sink: 1/2 in. connection	3	3/4 in. connection	10
	7	Washing Machine: 1/2 in. connection	5
Lavatory: 3/8 in. connection	2	3/4 in. connection	12
	4	1 in. connection	25
Laundry Tray: 1/2 in. connection	3	Hose connection(wash down) 1/2 in.	6
	7	3/4 in.	10
shower head(shower only)	4	Hose(50 ft long-wash down) 1/2 in	6
Service Sink: 1/2 in connection	3	5/8 in	9
	7	3/4 in	12

Value of a number of units by simply multiplying.



**Insulator coupling**

Female copper by male copper. The two brass parts are insulated by a nylon dielectric bushing. **Sizes 3/4", 1", 1 1/2", and 2"**.

DIELECTRIC BUSHING

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**Material Prices**

3/4 curb stop	\$33.00	4 x 1 service saddle	\$46.00
1" curb stop	\$46.00	4 x 1 1/2 service saddle	\$54.00
1 1/2 curb stop	\$100.00	4 x 2 service saddle	\$58.00
2" curb stop	\$163.00	6 x 1 1/2 service saddle	\$62.00
curb box	\$33.00	6 x 2 service saddle	\$68.00
roadway box	\$61.00	8 x 1 1/2 service saddle	\$70.00
3/4 ferrule	\$23.00	8 x 2 service saddle	\$77.00
1" ferrule	\$30.00	10 x 1 1/2 service saddle	\$91.00
1 1/2 ferrule	\$63.00	10 x 2 service saddle	\$97.00
2" ferrule	\$110.00	1 1/2 insulator couplings	\$48.00
3/4 insulator coupling	\$16.00	2" insulator coupling	\$82.00
1" insulator coupling	\$23.00		

Meter Size	Laying length	Ford yoke sizes	
		Size	Man #
5/8"	7 1/2"	5/8"	501
3/4"	9"	5/8 x 3/4	502
1"	10 3/4"	3/4"	503
1 1/2"	13"	1"	504
2"	17"		
3"	24"		
4"	29"		
6"	36"		
8"	42"		

### Service Saddles

Effective January 1, 1977, service saddles will no longer be required for 2" service branches installed in cast and ductile iron water mains 12" and larger in diameter.

The following guidelines are to be used in determining when to use service saddles:

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<u>Branch size</u>	<u>Cast or Ductile Iron Pipe size</u>
3/4	No saddle required on any size
1	Use saddle on 3" and 4" only
1 1/2	Use saddle on 3",4",and 6" only
2	Use saddle on 3",4",6",8", and 10" only

Service saddles are required for all sizes of service branches installed on asbestos-cement pipe. Service saddles will not be permitted where not required by the above regulations.

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### Subdivision price

<u>Size</u>	<u>price w/ insulator</u>	<u>service saddle size</u>	<u>price w/service saddle</u>
3/4	\$390.00		
1"	\$415.00	4x1	\$461.00
1 1/2"	\$525.00	4x1 1/2	\$579.00
		6x1 1/2	\$587.00
2"	\$715.00	4x2	\$773.00
		6x2	\$783.00
		8x2	\$792.00
		10x2	\$812.00

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### Curb boxes

Curb boxes required on all inside settings and all manifold settings inside and outside

1) Curb box to be set on each leg of manifold

2) all outside settings where curb stop will be under paving

Curb boxes are not required on single meter branches in ford boxes

Insulator couplings are required on all branches if there is 10' or more of copper between the building and the curb stop. These couplings are available only at Cincinnati Water Works.

If a house is in excess of 100' from the curb stop the meter will normally be in a ford box. If there are only a few houses left to be built in a subdivision that started as ford boxes, the remaining houses may have ford boxes or inside settings.

There are only three valve manufacturers that have accepted valves at this time:

1)Ford (B-11 series)

2)McDonald 6101

3)Jones J-1905

Replacement branches- You must see the curb stop when inspecting a replacement. Indicate on branch card what the material is from curb stop to main. The repair department requires this information to determine if branch needs to be renewed from curb stop to main.

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**Minimum Requirements: Residential**

<i>bldg.size</i>	<i>tap</i>	<i>meter</i>	<i>Maximum operating capacity</i>	<i>Recommended operating capacity</i>
1 fam	3/4	5/8	20 gpm	10 gpm
2-6 fam	1	3/4	30 gpm	15 gpm
7-12 fam	1	1	50 gpm	25 gpm
13-20 fam	1 1/2	1	50 gpm	25 gpm
21-50 fam	1 1/2	1 1/2	100 gpm	50 gpm
51-75 fam	2	1 1/2	100 gpm	50 gpm
76-120 fam	2	2	160 gpm	80 gpm
121-175 fam	4	3	320 gpm	150 gpm
176-250 fam	4	4	500 gpm	250 gpm
251-350 fam	6	4	500 gpm	250 gpm
351-500 fam	6	6	1000 gpm	500 gpm

**Calculate trailer parks @ 75% capacity, Calculate hotels/motels @ 50% capacity**

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**Minimum Requirements: Commercial**

<i>Water demand Min and Max Flows</i>	<i>Branch Size</i>	<i>Meter Size</i>
0.25 to 20	3/4	5/8
0.50 to 30	3/4	3/4
0.50 to 30	1	3/4
0.75 to 50	1	1
0.75 to 50	1.5	1
1.50 to 100	1.5	1.5
1.50 to 100	2	1.5
2.0 to 160	2	2
0.50 to 320	4	3
0.75 to 500	4	4
0.75 to 500	6	4
1.5 to 1000	6	6
1.5 to 1000	8	6
50.0 to 2400	8	8
75.0 to 3800	10	10
120.0 to 5000	12	12

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Branch Number	Date		Branch Number	Date
1	1837	<i>Subject to have</i>	150000	1950
5000	1855	<i>Gooseneck or</i>	155000	1951
10000	1857	<i>Basket ferrule</i>	160000	1952
15000	1866		165000	1953
20000	1873		170000	1955
25000	1881		175000	1956
30000	1885		175615	
35000	1888		<i>branch &amp; meter #'s same from here on</i>	
40000	1892		180000	1957
45000	1895		185000	1958
50000	1900		190000	1959
55000	1904		195000	1960
60000	1908		200000	1961
65000	1910		205000	1962
70000	1913		207160 <i>first branch with no curb box required</i>	
75000	1915		210000	1963
80000	1918		215000	1964
85000	1922		220000	1965
88000	<i>all prior branches are lead</i>		225000	1966
90000	1924		225420 <i>first &amp; only plastic branch (2")</i>	
95000	1926	<i>Brass</i>	230000	1967
100000	1927		240000	1972
101808	1928		250000	1976
<i>all branches after this are copper</i>			260000	1983
110000	1930		270000	1988
115000	1933		275000 <i>mtrs inside EMR C/B</i>	
120000	1935		279500 <i>F/B with C/B</i>	
125000	1938		280000	1996
130000	1940		290700	<i>Mason</i> 2002
135000	1942		299401	<i>branches</i> 2002
140000	1946		300000	2005
145000	1948		305000	2005

### Decorative Entrances

Adopted October 13, 1993

Special (Decorative) Entrances to subdivisions will be permitted provided that the following conditions are met:

1. Full details, including plans for utility service, signs, landscaping, etc. shall be included on subdivision plans submitted for approval.
2. The requirement for adequate sight distances as included elsewhere in this manual shall be met and this shall apply to portions of entrance structures on private property.
3. Separate services for electric water or other utility services shall be provided for each side of the entrance street.
4. The developer shall be responsible for maintaining, including the payment, to the appropriate utility company for installation and service(use) charges of the installed items, until such time as they are turned over to a viable, established Homeowners Association.
5. In instances where an island is included as part of an entrance, consideration must be given in the design, to adequate turning radius for large/long vehicles such as moving vans and fire department vehicles.
6. Those portions of island beyond back of curb or edge of pavement shall be listed as a separate lot with eventual title in the name of the Homeowners Association. The island lot shall be an undivided lot and shall contain no utility easements.
7. Service branches serving an island lot shall be installed prior to pavement construction. Electrical or Gas service

may, with the approval of the utility company, be installed after paving. Water service branches shall be installed as approved by the agency providing water service.

8. The utility branches to, and all lines within the island, shall be in a position, and located as approved by the various utility companies/agencies. This approval shall be obtained prior to final plan approval.
- I. No service branches to house lots on either side of the subdivision street shall pass under any portion of the private island lot.

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**Fire Branches**

Size	Size Meter required for setting	
Branch	inside bldg	outside pit
2"FB	3/4" mtr	3/4" mtr
4"FB	3/4" mtr	3/4" mtr
6"FB	3/4" mtr	3/4" mtr
8"FB	3/4" mtr	3/4" mtr