



Reclaimed Water Service - how, why, where, when?

Reclaim *your* Future

Policy Manual



A RESOURCE TO USE WISELY

COMMONLY ASKED QUESTIONS ABOUT THE RECLAIMED WATER PROGRAM

WHAT IS THE "RECLAIMED WATER" PROGRAM?

The "Reclaimed Water" Program is a service of the City of Clearwater's Public Works Administration/Public Utilities Department in cooperation with the Southwest Florida Water Management District. This program will provide safe reclaimed water to utility customers for a variety of non-potable purposes.

WHAT IS RECLAIMED WATER?

Reclaimed water is wastewater that has been highly treated (Advanced Wastewater Treatment) and transformed into a product that meets high water quality standards. The reclaimed water will be delivered to homes and businesses through an underground distribution system entirely separate from the drinking water (potable) system.

WHERE IS RECLAIMED WATER SERVICE AVAILABLE?

Presently, residential reclaimed water service is available to a limited portion of Clearwater - Island Estates, Clearwater Beach, North Greenwood, Drew & Union St., Harbor Oaks, and Seville/ Sunset, Del Oro. Plans are underway to extend service to Skycrest area, Coachman Ridge/Lake Chautauqua, Glen Oaks/Palmetto, and Clearwater Harbor.

The City has developed a Reclaimed Water Master Plan that includes a schedule for phased future extensions of this system. Scheduled expansions of the reclaimed water system will take place over a number of years well into the 21st. Century. Due to the limited supply, some portions of the City may never be provided with reclaimed water service.

The Reclaimed Water Master Plan includes several criteria to determine where and when reclaimed water lines will be extended, including proximity to existing system, costs for expansion, customer interest and amount of water presently used in the area for irrigation purposes.

WHY RECLAIMED WATER?

Engineering studies show that more than 50% of the drinking water used in the State of Florida is used for irrigation purposes. City officials realize that water conservation is of utmost importance since growth in our area of Florida is putting pressure on a finite resource--water.

The encouragement and promotion of water conservation and use of reclaimed water are State objectives. In fact, Clearwater's permits to operate its water supply and wastewater treatment systems include conditions that require the City to explore the utilization of reclaimed water. Water reuse in Florida is not optional anymore. We can't afford to use our water just once.

By connecting to the reclaimed water system, you become a practicing conservationist of an important resource. Conserving water and preserving the local environment show foresight in planning for a better tomorrow!

HOW CAN RECLAIMED WATER BE USED?

In the City of Clearwater, reclaimed water will primarily be used for irrigation of open or green space on residential, multi-family, commercial, park and school properties, etc. It may also be used for washing vehicles and other non-drinking purposes. It is **not** appropriate for the City's reclaimed water to be used for *drinking*, *bathing*, *filling swimming pools* or any other use that may involve prolonged contact. It may **not** be piped into any building used for residential purposes.

*Irrigation of edible crops that will be peeled, skinned, cooked or thermally processed before consumption is allowed. All others must be irrigated indirectly.

* Any existing water supply to an irrigation system must be disconnected before connecting to the reclaimed water system.

NO HOSE BIBBS ARE ALLOWED ON A SYSTEM SUPPLIED BY RECLAIMED WATER EXCEPT THAT WHICH MAY BE SUPPLIED BY THE CITY AND LOCATED BELOW GROUND IN A LOCKABLE METER BOX AT THE SERVICE CONNECTION WHEN REQUESTED BY THE CUSTOMER.

IS RECLAIMED WATER SAFE?

Reclaimed water is the result of wastewater that has been highly treated and disinfected. To be used by the public, reclaimed water must meet strict standards of quality established by the Florida Department of Environmental Protection (FDEP). The "Reclaimed Water" system is monitored 24 hours a day by City personnel to ensure consistent quality standards are met. Testing is performed at the laboratory on site at the wastewater treatment plant as well as by independent laboratories. .

Physical contact with reclaimed water is not known to have any negative effects. Therefore, any incidental contact should not be reason for alarm. However, remember that: 1) reclaimed water is primarily used for irrigation, not for consumption or sanitary purposes; 2) irrigation should occur at a time when human or animal contact is least likely; 3) the effectiveness of any program relies on people and equipment.

HOW DOES RECLAIMED WATER BENEFIT YOU?

The City of Clearwater's "Reclaimed Water" System helps you in many ways.

First, by reducing current and future demand for fresh water used for irrigation and other appropriate non-potable uses, reclaimed water helps you save water while conserving the Floridian Aquifer, the primary drinking water source in our area.

Second, reclaimed water helps you save money. Presently, there are no connection fees charged by the City for connection to the reclaimed system during the construction of the distribution system in your area. However, customers/property owners may have some initial expenses involved with tying in new or existing private systems to the City's point-of-connection. Once connected, all users are allowed unlimited reasonable usage of reclaimed water for a set monthly availability fee plus a metered rate. Additional savings will be realized by delaying for years the costs to develop new fresh water sources.

Well water irrigators will save on pump costs from operation, maintenance and repair. Under drought conditions, reclaimed water irrigation is not subject to water restrictions, which apply to well and drinking water. In addition, reclaimed water is odorless and will not stain concrete, unlike most shallow well water supplies.

Third, use of reclaimed water helps save the environment by recharging the ground water supply.

ARE THERE ANY RESTRICTIONS ON RECLAIMED WATER?

To conserve the resource, no irrigation is allowed between the hours of 8:01 a.m. and 5:59 p.m. on each day of the week. When applied, reclaimed water should be used only to the extent necessary for irrigation of lawns, gardens and individual plants.

HOW IS RECLAIMED WATER SERVICE OBTAINED?

Reclaimed water service is a new infrastructure system being developed by the City and is not currently available in most areas. If interested in obtaining reclaimed water service, property owners should contact the City of Clearwater Public Utilities Department at telephone (727) 562-4960 for availability information. For any technical questions on the reclaimed water system call Jerry Wells with the Public Utilities Department at 727-562-4960

In areas where reclaimed water distribution mains are already installed, there are four (4) steps required to obtain service:

1. Fill out an application at the Clearwater Customer Service Office on the first floor of the Municipal Service Building at 100 S. Myrtle Avenue in Clearwater. Applications can be filled out in the field when the preliminary inspection is performed. Currently there are no application or connection fees.
2. Upon installation of the City service line, complete the connection of your existing private system to the City's point-of-connection. New private systems will require a permit and subsequent inspections through the City's Planning & Development Services Department. At this time the city valve at the point-of-connection will be locked "off".
3. When connection is completed, call the Public Utilities Office at (727) 562-4960 to arrange for an inspection.
4. Reclaimed water service will be provided upon correction of any deficiencies found during inspection.

RESIDENTIAL RECLAIMED WATER PRE-INSPECTION CHECK LIST

1. The customer/property owner shall install a PVC nipple and PVC ball valve at the City's point of connection. The customer/property owner shall provide his/her own valve box within two (2) feet maximum of the City's meter box. This valve box will be centered over the customer's ball valve and will be visible at all times.

 2. Customer/property owner shall disconnect and cap below ground any existing irrigation service line connection before connecting to the reclaimed water system. A minimum of 3' separation between pipe ends is required if previous source was drinking water. The disconnection must be visible for inspection.

 3. Only a single source of water is allowed for irrigation. For example, if a property owner requests reclaimed water, then only reclaimed water may be used to supply the irrigation system. The only variance is that a single completely separate line with one zone (from the potable system or well) may be installed to supply water to vegetable gardens or exotic plants. This separate zone may not be dedicated to sprinkle any part of the lawn.

 4. No hose bibbs (spigots) are allowed on any private system served by reclaimed water. **When requested**, the City may install a hose bibb with a special adapter below ground and within the meter box at the point of connection. Any existing hose connections on the customer/property owner's irrigation system are to be eliminated and cut and capped below ground.

 5. **Except for edible crops that will be peeled, skinned, cooked or thermally processed before consumption, no direct irrigation of vegetable gardens with reclaimed water is allowed. Bubbler or drip irrigation is acceptable. Soaker (semi permeable) hoses are allowed in conjunction with the reclaimed water system only if the following criteria are met:**
 - A. The pipe supplying the hose is painted purple at the point of connection.
 - B. The soaker hose is permanently secured to the supply pipe. No hose thread connections are allowed.
 - C. The soaker hose must be completely installed below ground.

 6. Sprinkler heads must be adjusted to eliminate over-spray to non-turf areas. No ponding or run-off is allowed.

 7. The customer/property owner or their agent must be present during the inspection to operate each zone of the sprinkler system for the inspector.

 8. **No unauthorized use of reclaimed water is allowed. The filling of swimming pools, drinking, use in residential air conditioners, etc. is prohibited. Reclaimed water may not be piped into any residential building. No cross connection with any other source of water is permitted.**

 9. A well and pump may remain only if there is a single hose connection in the immediate area of the pump discharge for well water and not for drinking purposes.

 01. The City's service connection shall remain locked off until City inspectors are present.

 12. The initial inspection and one re-inspection will be provided at no charge. All subsequent re-inspections due to failed inspections will result in a service charge of \$35.00 per occurrence as stated in the City Of Clearwater Code of Ordinances, Appendix A- Schedule of Fees, Rates, and Charges. Section 4- Miscellaneous Additional Charges, Item # 14.
- * After successful connection to the reclaimed system, the lawn meter (if applicable) shall be removed by the City of Clearwater service technician. Per City Ordinance Sec. 32.376 irrigation with potable water in a service area serviced by reclaimed water is not allowed. If the homeowner wishes to retain the lawn meter for uses other than irrigation there will be a charge for a backflow prevention device.**
- The City of Clearwater will re-inspect the reclaimed water system at each residence once a year as part of our cross connection control program**

WHAT IS THE RATES FOR RECLAIMED WATER SERVICE?

As the reclaimed water system expands, monthly rates for the use or availability may gradually be adjusted. Customers, property owners should check with the Clearwater Customer Service Office (telephone 727-562-4600) to verify current rates or for additional information. The current monthly-reclaimed water rates are:

(f)

Reclaimed water rates. There is hereby established a uniform schedule of rates and charges for the use or availability of use of the reclaimed water system. The reclaimed water rate shall be a monthly fee consisting of an availability charge as the basic allowance in the following table, plus a charge per 1,000 gallons of reclaimed water consumed as indicated. Such rates shall take effect for bills issued on or after dates as shown in the following table, and shall remain in effect thereafter unless amended:

	October 1, 2011	October 1, 2012	October 1, 2013	October 1, 2014	October 1, 2015
Single-family, duplex or triplex (per domestic water account), commercial/industrial or multi-family dwelling and open space					
Availability charge	11.18	11.68	12.21	12.76	13.33
Usage—Metered per 1,000 gallons used	0.93	0.97	1.01	1.06	1.11

1. One availability fee shall be charged to a property and not to each of the multiple individual potable water accounts. For example, a shopping center with multiple stores, each having a separate potable water account, will normally only have one reclaimed availability fee billed to the account that is responsible for irrigation (i.e. the owner of the shopping center or parcel).
2. *Service out of municipal limits.* Accounts outside of the corporate limits of the city shall be subject to a surcharge equal to 25 percent of the monthly charges.

BACKFLOW PREVENTERS, THERMAL EXPANSION & YOUR HOT WATER HEATER

A message to City of Clearwater Water Customers!!

CROSS CONNECTION CONTROL: The City of Clearwater is required to protect the public potable, (drinking) water supply from potential cross connections with the non-potable reclaimed water. Therefore, a backflow prevention device will be installed at your potable water service connection. This device prevents water from flowing backwards through the water meter and into the public potable water supply system. Backflow or back siphonage through the meter could occur if water from another source (e.g. reclaimed water) was connected to the potable system and the pressure in the potable system was overcome.

CHANGE IN YOUR PLUMBING SYSTEM: Before the installation of the backflow preventer, your home/business plumbing system has operated as an "open" system. The public potable water system provided a "cushion" that absorbed pressure build-up in your plumbing system caused by water expansion. Water expands when heated in your hot water heater. This is called "thermal expansion". Thermal expansion can occur several times a day.

Since water cannot be compressed, the expanding water creates a rapid pressure increase in the water heater and system piping. Internal pressures repeatedly occurring during hot water heater cycles have the potential to create pressure on the plumbing system as well as impacting the integrity of the hot water heater itself. Conditions that may be experienced as a result of this phenomenon could be: intermittent dripping faucets or shower heads, discharge from the temperature and pressure (T&P) valve on the hot water heater, etc.

Experience shows that thermal expansion may occur as a result of any number of reasons that may exist on the property: faulty pressure reducing valves, inadvertent long term closing of private valves, installation of booster pumps, etc. Should such a condition exist or become apparent on your property, you are cautioned to follow the manufacturers recommended testing and maintenance procedure for your hot water heater.

SOLUTION TO THERMAL EXPANSION: A number of products are available to address the thermal expansion issue. The two that will provide long term service are a properly sized thermal expansion tank installed at the hot water heater or a ball cock and relief valve assembly installed in place of ball cock assemblies in your toilet tank. These devices can be purchased and installed by the property owner and/or a licensed plumbing contractor.

Either solution requires periodic maintenance to ensure that the device is in good continuous working order. For more information regarding these assemblies, contact your local plumber/supplier.

For more information concerning reclaimed water go to myclearwater.com/reclaimed

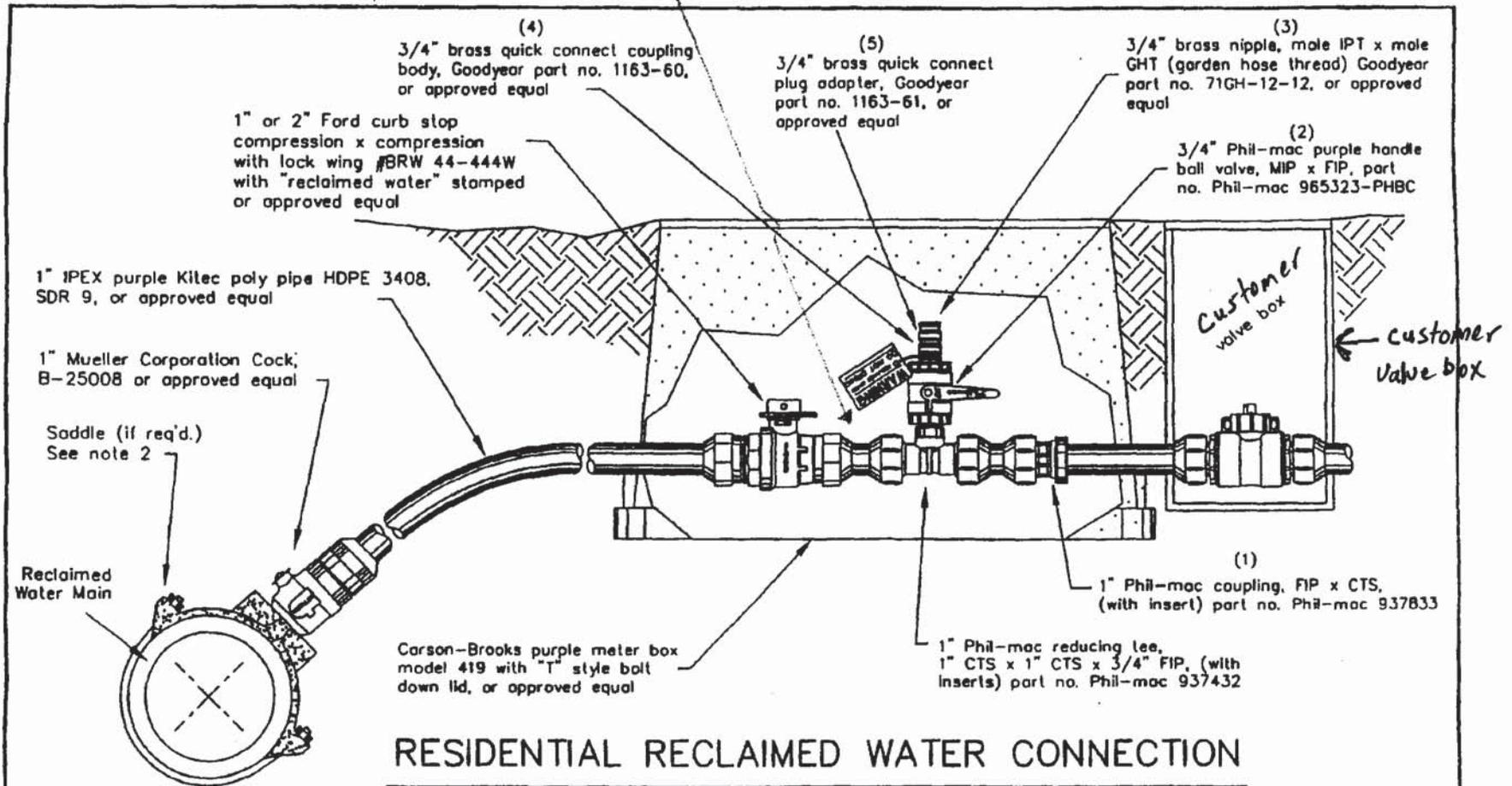
Sec. 32.380.1 Incentives.

Because the overall objective is to maximize usage of reclaimed water and to lessen the impact of effluent discharge into Tampa Bay, all customers willing to abandon a private well, lake, or pond irrigation system and connect to the reclaimed water system at any time:

- (1) Shall be offered a rebate of up to \$ 600.00 as reimbursement for a licensed well driller or professional to properly plug or abandon the well, lake, or pond irrigation system; and
- (2) Shall receive an incentive credit of \$240.00 on the utility account.

Those customers willing to abandon a private well, lake, or pond irrigation system and connect to the reclaimed water system during project construction shall, in addition, not be charged a tap fee.

NOTE: RECLAIMED METER SHALL BE INSTALLED IN CITY PROVIDED METER BOXES, BEFORE HOSE CONNECTION. IF METER NOT SHOWN IN DRAWING



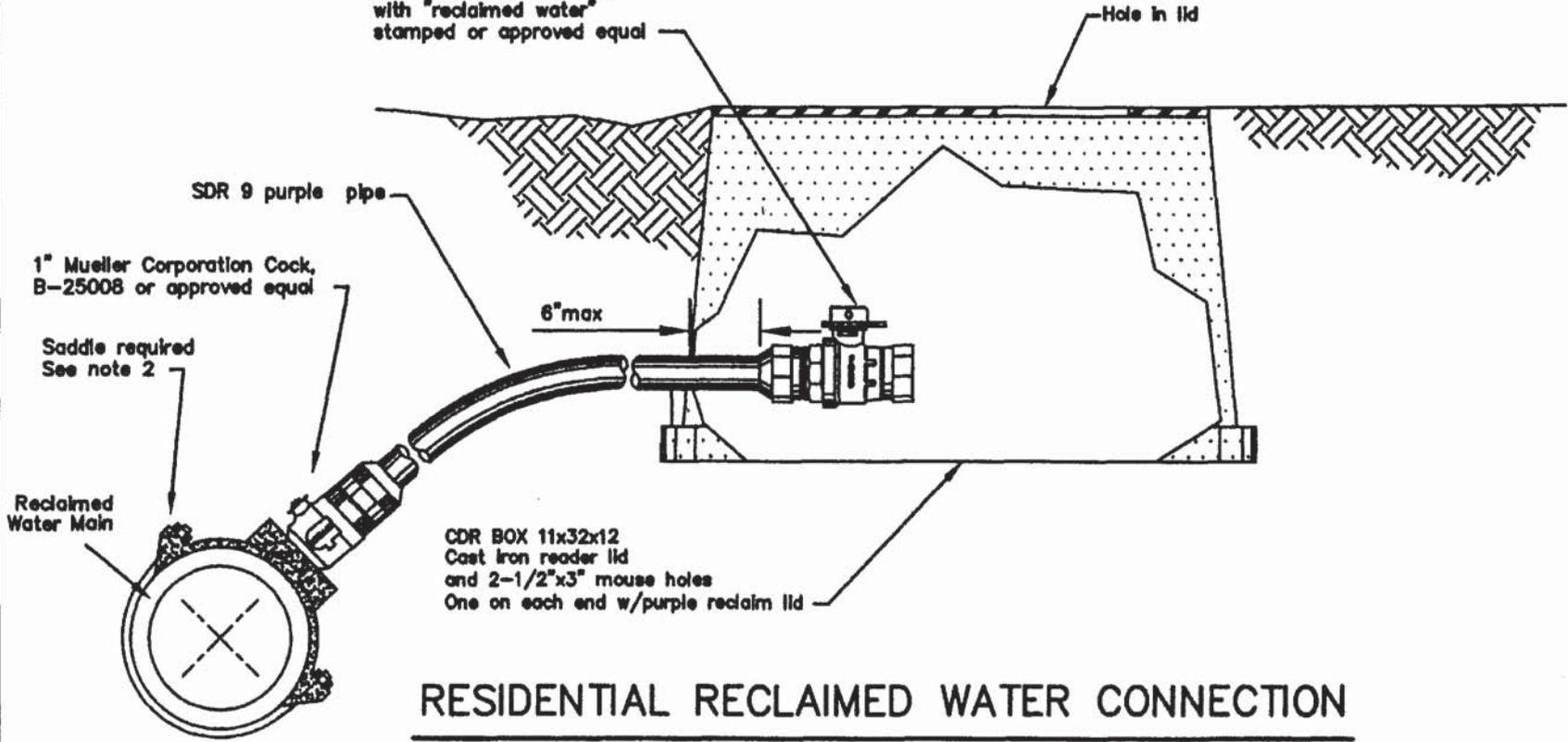
RESIDENTIAL RECLAIMED WATER CONNECTION

NOTES:

1. If a customer does not have an in ground sprinkler system, item (1) is replaced with a 1" Phil-mac blanking plug, part no. Phil-mac 8039.
2. Saddles required for all service connections to 4" PVC mains; for 2" service connections to 6" and larger PVC mains.
3. Saddles shall have double stainless steel straps with epoxy coated ductile iron body.

				CITY OF CLEARWATER, FLORIDA PUBLIC WORKS ADMINISTRATION ENGINEERING	
				REDRAWN BY B.V.D.	RESIDENTIAL RECLAIMED WATER CONNECTION
				CHECKED BY G.C.H.	DATE 07/22/97
				DESIGNED BY T.H.	INDEX NO. 501
REV.	DATE	DESCRIPTION	APP.	DETAIL	
				1 OF 1	

Ford curb stop with lock wing and compression inlet
 1" - #BRW 43-444W-Q or
 2" - #BRW 41-777W-Q
 with "reclaimed water" stamped or approved equal



RESIDENTIAL RECLAIMED WATER CONNECTION

NOTES:

1. Saddles required for all service connections to mains.
2. Iron service saddle shall be Ford FC202 series with stainless steel band and epoxy coated ductile iron body, or approved equal.

				CITY OF CLEARWATER, FLORIDA PUBLIC WORKS ADMINISTRATION ENGINEERING		
				DRAWN BY S.K.	RESIDENTIAL RECLAIMED WATER CONNECTION	DATE 5/05
				CHECKED BY R.F.	DETAIL	INDEX NO. 501
REV.	DATE	DESCRIPTION	APP.	DESIGNED BY A.B.		
4	5/05	Replaced detail	R.F.			
						1 of 1

Cooling Tower to Reclaimed Schematic Detail

Note: Lawn Meter, RP Device, Customer Owned Shutoffs and Connection to Cooling Tower Feed to be Above Ground

