

**PART 1: GENERAL**

1.01 Purpose:

This standard is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. The responsibility of the engineer is to apply the principles of this section such that the University may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be justified through LCC analysis and submitted to the University for approval.

1.02 References:

- A. ASTM F441 – Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80.

1.03 Requirements:

- A. “Fin Water” shall be defined as water that drips off the fins of cooling coils in the HVAC system. The term “condensate” refers to the steam system.
- B. There are several types of recovered water at the University. Refer to Appendix 6.02.20 – Water Recovery and Reuse for detailed descriptions of each type.
- C. Fin water shall be recovered and either retained on site for reuse or piped back to the central plan via the tunnel system.
- D. Stormwater volumes shall be collected via a gutter or roof drainage system, retained, and reused for non-potable uses such as landscape irrigation, toilet and urinal flushing, and custodial uses.

[LEED SS Credit 6.1: Stormwater Design: Quantity Control - Implement a stormwater management plan that results in a 25% decrease in the volume of stormwater runoff from the two-year 24-hour design storm.]

[LEED WE Credit 1.1: Water Efficient Landscaping - Reduce potable water consumption for irrigation by 50% from a calculated mid-summer baseline case.]

[LEED WE Credit 1.2: Water Efficient Landscaping - Achieve WE Credit 1.1.and use only captured rainwater for irrigation.]

**5.22.20 – WATER RECOVERY SYSTEMS**  
**DESIGN AND CONSTRUCTION STANDARD**

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- E. Where perimeter drainage systems exist or where installed due to site drainage issues, the PSP shall evaluate the potential of perimeter drain water recovery. Such water shall only be used for on-site irrigation.
- F. Oversize recovered water piping due to potential scaling issues.
- G. Provide recovered water piping with steel sleeve where routed in footpath or in other exposed areas where piping could be damaged.
- H. Provide pipe labels to say "Recovered Water every 50 feet in the mains; fin water piping should be labeled "Fin Water" every 50 feet until it joins a source that is not fin water (e.g., once through recovery).
- I. Provide shutoff valves (bronze gate for sizes 4" and larger) at all sides of a tee connection.
- J. All source connections should be hard-plumbed to prevent introduction of oil, solvents, trash, etc., into system

**PART 2: PRODUCTS**

2.01 Piping:

- A. Recovered water piping shall be schedule 40 Chlorinated Polyvinyl Chloride (CPVC) piping.
- B. Provide steel sleeve on exposed recovered water piping routed in footpath and on any exposed piping within 4' of finished floor.

2.02 Tanks:

- A. Recovered water tanks shall be polyethylene or fiberglass, drainable, and completely opaque to prevent light from entering.
- B. Provide with inlet screens to prevent debris from entering tank.
- C. Provide with automatic overflow drainage to prevent water from backing up in system.

END OF STANDARD