

## SUBDIVISION WATER SYSTEM NOTES

February 18, 2010

### CITRUS HEIGHTS WATER DISTRICT

- WS-1. The water contractor shall possess a State of California Class "A" General Engineering Contractor license and shall maintain same throughout construction. The contractor shall provide the District with valid contractor's license information including license number, name of license holder, classification and expiration date. The contractor shall be skilled and regularly engaged in constructing public water distribution systems.
- WS-2. All materials and installation of the water distribution system shall be in accordance with the current standards and specifications of the Citrus Heights Water District.
- WS-3. The water contractor shall be in receipt of the approved water plan prior to scheduling a pre-construction conference and at all times during construction.
- WS-4. All applicable project development charges and fees shall be paid prior to scheduling a pre-construction conference.
- WS-5. Citrus Heights Water District requires a current certificate of completion for training that qualifies individuals to perform asbestos construction work with asbestos cement pipe (ACP). The approved training must be in agreement with Local, State and Federal regulations and Citrus Heights Water District's Asbestos Cement Pipe Safety Plan.
- WS-6. The water contractor shall contact the Citrus Heights Water District five (5) working days prior to beginning construction for a pre-construction conference.
- WS-7. Location of water facilities shall be established and staked by a licensed civil engineer or land surveyor, including finish grade at fire hydrants, main valves, tees, crosses, angle points, water services and related appurtenances.
- WS-8. The water contractor shall be responsible for the location and protection of all existing utilities maintained in or across a public right-of-way or common area. The contractor shall expose and verify locations and elevations of existing underground utilities prior to construction of new improvements connecting to or in the vicinity of same.
- WS-9. The water contractor shall be responsible for coordination with the street lighting contractor to avoid conflicts in placement of water and street light systems. Water facilities must clear concrete street light foundations by a minimum horizontal distance of twenty-four inches (24").
- WS-10. All facilities to be accepted by the District shall be located within dedicated easements and rights-of-way. Ownership of the accepted system shall pass from the owner to Citrus Heights Water District at the time of written acceptance. Those portions not accepted by the District are private and are to be maintained by the property owner.
- WS-11. Water mains shall be placed four feet (4') behind the sidewalk unless otherwise specified by the Plans or Detail Drawings. Water meters shall be placed between eighteen inches (18") minimum and thirty inches (30") maximum behind the sidewalk and a maximum of three feet (3') off the side property line. Fire hydrants shall be placed between eighteen inches (18") minimum and twenty-four inches (24") maximum behind the sidewalk to centerline.

- WS-12. Minimum cover for water mains shall be thirty-six inches (36") below finish or back of sidewalk grade, whichever is greater. Ductile Iron Pipe (DIP) shall be used wherever cover becomes less than the minimum subject to prior approval.
- WS-13. Water mains shall be CL235 DR 18 AWWA C900-07 PVC or PC350 DIP unless otherwise noted. Pipe shall be free of defects and discoloration. Fire hydrant laterals shall be PC350 DIP unless otherwise noted. Polyvinylchloride (PVC) pipe shall have been manufactured within eighteen (18) months prior to installation.
- WS-14. All water mains in the pipe zone shall be backfilled with No. 2 washed sand compacted to a relative compaction of not less than ninety percent (90%) to a minimum of six inches (6") below and twelve inches (12") above the main. Backfill shall be devoid of debris and concrete, pavement, stones, solid earth chunks and particulate larger than three inches (3") in greatest dimension. Within existing roadways and existing traffic areas, the remaining trench backfill above the sand shall all be three-quarter-inch (3/4") Class 2 aggregate base compacted to City/County roadway requirements.
- WS-15. The methods for obtaining compaction shall be as specified by the most current editions of the Standard Specifications for Public Works Construction ("Greenbook") and the County of Sacramento Public Works Standard Construction Specifications. Nuclear Density Meter Testing by a licensed geotechnical engineer in accordance with ASTM Standard Test Methods for Laboratory Compaction shall be required of the Contractor for in-place soil and three-quarter-inch (3/4") Class 2 aggregate base.
- WS-16. A No. 10 insulated copper locator wire shall be affixed to water mains, fire hydrants, main and hydrant valves, and appurtenances. The wire shall be affixed to the top of pipe with ten-mil (10 mil) vinyl tape every five feet (5'). The Contractor shall conduct a continuity test on all locator wire splices. A minimum of two (2) strands of three-inch (3") wide non-detectable blue tape marked "WATER" shall be placed twelve inches (12") above main and service piping at the trench edges.
- WS-17. All AWWA key-operated valves ten-inch (10") and smaller shall be epoxy-coated resilient wedge gate valves (RWGV) unless otherwise specified. Valves twelve-inch (12") and larger shall be epoxy-coated butterfly valves (BFV) unless otherwise specified. Main and hydrant valves shall be flanged to fittings unless otherwise noted.
- WS-18. Each lot shall be provided with a one-inch (1') metered water service unless otherwise specified. Water services shall be type "K" copper with compression connections. Service saddles shall be bronze. Water meters shall be placed between eighteen inches (18") minimum and thirty inches (30") maximum behind the sidewalk or planter curb unless otherwise specified.
- WS-19. All main valves and fire hydrant valves shall be provided with a South Bay Foundry No. 1237 ductile iron valve box with lid marked "WATER" in pavement and concrete driveway and sidewalk locations. The triangular lid shall point in the direction of the water main that is isolated by the valve. All main valves and fire hydrant valves shall be provided with a Christy G-5 valve box with lid marked "WATER" in landscape, planter, rock roadway, shoulder and fire hydrant concrete access pad locations. The valve operating nut shall be fully accessible and centered in the valve access riser. Main valves, service valves, and blow-off valve boxes shall avoid conflicts with curbs, gutters, sidewalks and driveways unless approved by the District, and be visible and accessible after yard grading/landscaping is completed by the contractor/developer.