NEVADA IRRIGATION DISTRICT

DEVELOPMENT STANDARDS

STANDARD SPECIFICATIONS AND DETAILS
FOR
TREATED WATER SYSTEM

APPENDIX C

STANDARD SPECIFICATIONS

UPDATE LOG

These updates are provided for use as a quick reference only, and do not modify or limit in any way the standard specifications.

SECTION 12

WATER MAINS

Major revisions include:

Description	Section
Added PVC Transmission Pipe, AWWA C905, size 14” to 24”, PR 235 only.	12-2.02
Added PVC Schedule Pipe, ASTM D-1785, size 2” only, Sch 40 and 80.	12-2.02
Limited PVC maximum working pressures for Pressure Pipe, Transmission Pipe, and Schedule Pipe.	12-2.02
Eliminated steel pipe. Reason:	
This product is rarely used for water mains and must be designed and specified for each application.	
Added compact fittings, AWWA C153 for specific applications.	12-2.03
Added joint configuration restrictions.	12-2.04
Added insulated flange joint.	12-2.05
Added restrained joints and restrictions Updated DI restrained joint table and added PVC restrained joints	12-2.06
Changed locating wire to 8-gauge bare copper.	12-2.11
Added sand-cement slurry material specs.	12-2.12
Added vertical alignment installation restrictions.	12-3.03
Added water and sewer main separation requirements.	12-3.04
Added PVC bending radius restrictions.	12-3.08-B
Eliminated continuity test for locating wire.	12-3.08
Added sand-cement slurry backfill for all road crossings.	12-3.09-C
Added permeable backfill for groundwater areas.	12-3.09-D
Added temporary erosion control.	12-3.11
Added chip seal requirements.	12-4.03
Added paved road shoulder restoration.	12-4.04
Added gravel surface restoration.	12-4.05

SECTION 13

WATER MAIN TAPS

This is a new section added to our standards. Tap sizes are limited to 75 percent of the water main nominal size. Specification highlights include:

Description	Section
Includes taps up to 2" installed concurrent with construction (larger taps made with C110 or C153 fittings).	13-1.01
Includes all wet taps.	13-1.01
Written notice required for intent to wet tap.	13-1.07
Tapping saddles specified (maximum 2" outlet)	13-2.04
Use ribbon-type cutter for tapping PVC	13-2.04-B
Tapped couplings specified (maximum 2" outlet)	13-2.05
Tapping sleeves specified including size restrictions Cast iron split-sleeve Stainless-steel sleeve a) Drop-in type bolts only b) Lifter-bar types not accepted c) Suppliers restricted to JCM and PowerSeal Table of sizes and allowable sleeve types	13-2.06
Tapping sleeve installation specified Air test after assembly and before tapping Check all joints with soap solution Use only a ribbon-type cutter on PVC Remove coupon or retrieve Flush shavings and debris	13-2.06-C
Corrosion control specified	13-2.07

SECTION 14

MAIN LINE VALVE ASSEMBLIES

Major revisions include:

Description	Section
Includes taps up to 2" installed concurrent with construction (larger taps made with C110 or C153 fittings).	13-1.01

Description	Section
Eliminated double-disc gate valves	N/A
Added 100 foot-pound maximum torque for seating and unseating	14-2.02
Added restrictions on placement of RSGV relating to system working pressure.	14-2.02
Added epoxy to BFV wetted parts and corrosion-resistant surface at rubber valve seat.	14-2.02-B
Eliminated restrictions on stub-shafts for BFV.	14-2.02-B

SECTION 15

AIR-RELEASE VALVE ASSEMBLIES

Note: Department of Health Services now requires an above-ground vent pipe for ARV assemblies.

Major revisions include:

Description	Section
Referred to new AWWA C512 Air-Release Valve spec.	15-2.02
Referred to Water Main Taps for connection to the main.	15-2.03
Revised pipe and fittings for air valve laterals: 3 inch and smaller: brass 4 inch and larger: ductile iron	15-2.04
Changed to no-lead brass by referring to new Section 34	15-2.04
Revised pipe and fittings for vent pipe: 3 inch and smaller: galvanized iron 4 inch and larger: ductile iron	15-2.05
Changed to no-lead brass by referring to new Section 34	15-2.04
Added H20 box with slab for traffic locations.	15-2.10-B
Revised corrosion protection requirements.	15-3.05
Added locating wire over lateral pipe.	15-3.08

SECTION 16

BLOWOFF VALVE ASSEMBLIES

Major revisions include:

Description	Section
Referred to Water Main Taps for connection to the main.	16-2.02
Revised pipe and fittings for blowoff lateral: 2 inch: brass 4 inch and larger: ductile iron (no 3 inch allowed)	16-2.03
Changed to no-lead brass by referring to new Section 34	16-2.03
Revised pipe and fittings for blowoff discharge 2 inch: galvanized iron 4 inch and larger: ductile iron	16-2.04
Revised corrosion protection requirements	16-3.05
Added locating wire	16-3.08

SECTION 17

FIRE HYDRANT ASSEMBLIES

Major revisions include:

Description	Section
Added temporary covers for inactive hydrants	17-1.04
Added Dresser M & H Model 929 Fire Hydrant	17-2.02
Added AVK Model 2780 Fire Hydrant	17-2.02
Revised corrosion protection requirements	17-3.06

SECTION 18

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SECTION 19

SERVICE ASSEMBLIES

Major revisions include:

Description	Section
Removed 2" and smaller criteria. Now covers all sizes.	19-1.01
Added table of service line sizes and types.	19-1.04
Referred to Water Main Taps for connection to the main.	19-2.02
Added service line materials: 2": PVC 4" and larger: DIP (No 3" allowed)	19-2.03
Changed to no-lead brass by referring to new Section 34.	19-2.05 19-2-06 19-2-07
Eliminated inverted key valves for use as meter valves	19-2.06
Added meter valve: 4" and larger: Comply with Main Line Valves	19-2.06
Added H20 box with slab for traffic locations	19-2.08
Modified corrosion protection requirements	19-3.05
Added locating wire continuity test	19-3.06

SECTION 20 - 24

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SECTION 25

TESTING AND DISINFECTING WATER MAINS

Major revisions include:

Description	Section
Added requirement for backflow device on connections to existing system.	25-1.05
Revised allowable leakage for DIP to match PVC	25-2.06
Referred to new AWWA 651 for Disinfecting Water Mains	25-3.01
Added contractor responsible for disinfection	25-3.01
Added preventive and corrective measures during construction	25-3.02
Disallowed slug method	25-3.03
Described tablet method	25-3.03-A
Described allowable tablet adhesives as food-grade; Permatex Form-a-Gasket No. 1 not allowed	25-3.03-A
Described continuous-feed method	25-3.03-B
Added Contractor responsibility for reducing chlorine in discharge waters	25-3.04
Added re-disinfection criteria	25-3.06

SECTION 26

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SECTION 27

CONCRETE

In general, this section has been expanded and rearranged. Major revisions include:

Description	Section
Added “Sequence of Work”	27-1.03
Added “Lines and Grades”	27-1.06
Added “Excavation”	27-1.07
Added “Backfill”	27-1.08
Added various new materials	27-2
Separated form work requirements	27-3
Revised tolerance limits	27-3.04
Added ½" chamfers all inside & outside corners	27-3.05
Separated reinforcement placement requirements	27-4
Changed concrete designation to Class or Compressive strength	27-5.04
Added cold weather requirements	27-6.04
Added hot weather requirements	27-6.05
Added Form removal requirements	27-7.01
Expanded on curing and protecting	27-7.02
Revised and expanded finishing requirements	27-8
Added “Concrete Fillets, Topping Slabs, and Equipment Pads”	27-9
Added testing requirements	27-10
Revised measurement and payment	27-11

SECTION 29

SEEDING AND MULCHING

This section is new to the Standard Specifications. The Department of Fish and Game will often require seeding and mulching as erosion control on areas riparian to watersheds. Seeding and mulching is required by Placer County under encroachment permits. Some type of erosion control is usually required to comply with an environmental negative declaration.

SECTION 20 - 24

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SECTION 34

Added this new section to switch to no-lead brass per new regulations.