

Date	Spec.	Title	Pg.	Error/Problem	Revision/Solution	Notes	Logged By	Date Updated
Standard Details								
11/22/2024	LP-2	Simplex Grinder Pump Station - Side View	N/A	Pump Offn/On/Alarm do no have distances	Added distances for Pump Off/On/Alarm		JH	11/27/2024
12/6/2024	LP-4	Typical Residential Grinder Pump Station Locaiton	N/A	No maximum distance from structure for grinder pump tank	Added "10' Max." to "5' Min." note for distance from structure.		JH	12/6/2024
11/22/2024	LP-6	LPS End Of Line Clean-Out	N/A	Vertical C/O size not noted	Added Note 3 and callout for "Vertical Standpipe"		JH	11/27/2024
11/22/2024	LP-7	LPS In-Line Clean-Out	N/A	Vertical C/O size not noted	Added Note 3 and callouts for "Vertical Standpipe"		JH	11/27/2024
11/22/2024	PS-B1	Precast Building Plan	N/A	Blockout position not noted	Added Note 6		JH	11/27/2024
11/14/2024	PCP-2A	Pump Control Panel Schematic 480V 3 PH Service	N/A	Incorrect AMP and Model # for HVAC	Changed AMP from 20 to 25 and Model # from #W12AB-A03 to #W12AF-A03		JH	11/27/2024
11/14/2024	PCP-2B	Pump Control Panel Schematic 120/208V 3 PH Service	N/A	Incorrect AMP and Model # for HVAC	Changed AMP from 20 to 25 and Model # from #W12AB-A03 to #W12AF-A03		JH	11/27/2024
11/14/2024	PCP-2C	Pump Control Panel Schematic 120/240V 3 PH Service	N/A	Incorrect AMP and Model # for HVAC	Changed AMP from 20 to 25 and Model # from #W12AB-A03 to #W12AF-A03		JH	11/27/2024
11/22/2024	PS-C2	Wet Well - Valve Vault Plan	N/A	Valve vault size clarification needed	Valve Vault has been enlarged to have 12" clearance on all 4 sides		JH	11/27/2024
11/22/2024	PS-C3	Wet Well - Valve Vault Section	N/A	Clarification needed	Added callout "Shall be one piece, flange to flange. Flange adapter will not be acceptable."		JH	11/27/2024
12/18/2024	PS-C6	Generator Pad and Bollard Details	N/A	Note needs updating	Updated Note "3" from "Supply maintenance platform if generator maintenance doors are higher than 30 inches above generator pad." to "Maintenance platforms shall be installed when the midline height of the generator breaker exceeds 6.5ft above the ground or floor, in accordance with NEC 110.26."		JH	12/19/2024
11/22/2024	PS-C8	Decorative Security Fence Detail	N/A	No gate stopping mechanism	Added gate stopping mechanism and callout "Gate Stopping Mechanism"		JH	11/27/2024
11/22/2024	PS-C9	Chainlink Security Fence Detail	N/A	No gate stopping mechanism	Added callout "Gate Stopping Mechanism"		JH	11/27/2024
12/18/2024	PS-E11	Portable Generator Connector Schedule		Missing note	Added note "2. Pump stations that require docking stations shall include a separate, dedicated load-bank connection point to facilitate initial and annual load bank testing."		JH	12/19/2024
12/6/2024	S-7	Air/Vacuum and Air Release Combination Valve Section	N/A	Clarification and missing note	Added callout "DIP" for pipe. Added note "7. ARV manhole structure shall be polymer concrete.".		JH	11/27/2024
12/11/2024	S-9	Sewer Service Connection-Short-Side	N/A	Missing note	Added note "7. No flexible couplings shall be used."		JH	12/11/2024
12/11/2024	S-10	Sewer Service Connection-Long-Side	N/A	Missing note	Added note "6. No flexible couplings shall be used."		JH	12/11/2024
12/11/2024	S-11	Sewer Service Connection-Typical Main to Lateral (Less than 8' Deep)	N/A	Missing note	Added note "3. No flexible couplings shall be used."		JH	12/11/2024
12/11/2024	S-12	Sewer Service Connection - Main to Lateral (Greater Than 8' Deep)	N/A	Missing note	Added note "5. No flexible couplings shall be used."		JH	12/11/2024
12/11/2024	W-1	Single Water Service Connection - Short-Side	N/A	Callout needs updating and notes added	Callout at top of page was updated from "Meter setter with stainless steel stiffeners" to "Meter setter" and added note "8. Plastic pipe stiffeners shall be used."		JH	12/11/2024
12/11/2024	W-2	Single Water Service Connection - Long-Side	N/A	Callout needs updating and notes added	Callout at top of page was updated from "Meter setter with stainless steel stiffeners" to "Meter setter" and added note "8. Plastic pipe stiffeners shall be used."		JH	12/11/2024
12/11/2024	W-5	Double Water Service-Domestic and Irrigation	N/A	Note needs added	Added note "8. Plastic pipe stiffeners shall be used."		JH	12/11/2024
12/11/2024	W-6	Double Water Service-Domestic and Irrigation Using Subtract Meter	N/A	Note needs added	Added note "5. Plastic pipe stiffeners shall be used."		JH	12/11/2024
12/11/2024	W-14	Gang Meter	N/A	Callout needs updating and notes added	Callout "U-branch w/ stainless steel stiffeners" was updated to "U-branch w/ meter setters" and added note "11. Plastic pipe stiffeners shall be used."		JH	12/11/2024
12/11/2024	W-15	Single Domestic Water Service Gang Meter	N/A	Callout needs updating and notes added	Callout "W/ stainless steel stiffeners" was updated to "Meter setter" and added note "11. Plastic pipe stiffeners shall be used."		JH	12/11/2024
12/11/2024	WS-10	Pressure Main Ditch and Storm Drain Ditch Crossing-DIP	N/A	Note needs updating	Updated Note "3" from "At the EOR and CFPUA's discretion, install casing pipe (per WS-8 at the crossing. The casing will need to extend a minimum of 2' past the outside wall of the storm drain." to "For open ditch crossings, install casing pipe (per WS-8 at the crossing. The casing will need to extend a minimum of 2' past the outside wall of the storm drain."		JH	12/11/2024
12/11/2024	WS-11	Pressure Main and Storm Drain Crossing-HDPE	N/A	Main sizes do not need to be called out	Callout in upper left corner was updated from "12" or smaller PVC or DIP water or force main" to "PVC or DIP water or force main"		JH	12/11/2024
12/11/2024	WS-14	Standard Notes	N/A	Needs to be updated	Deleted all previous notes and replaced with "1. All individuals engaged in CFPUA projects must adhere to the CFPUA technical standards, which encompass specifications, standard details, the design guide manual, and the material specification manual. These documents provide essential requirements for materials, construction methods, and design principles. An understanding of the above-mentioned resources is required to avoid non-compliance issues." and "2. Attention: Comply with notes on applicable details."		JH	12/11/2024
Material Specification Manual								
11/22/2024	MSM A	A 4 - PVC Pipe (2" and 3" SDR 21)	7	"NAPCO" changed names	Changed name to "Westlake Pipe & Fittings"		JH	12/5/2024
11/22/2024	MSM A	A 5 -PVC Pipe (AWWA C-900) - Potable Water (4" thru 24")	8	"NAPCO" changed names	Changed name to "Westlake Pipe & Fittings"		JH	12/5/2024
11/22/2024	MSM A	A 5.1 -PVC Pipe (AWWA C-900) - Sewer (4" thru 24")	9	"NAPCO" changed names	Changed name to "Westlake Pipe & Fittings"		JH	12/5/2024
11/22/2024	MSM D	Section D: Valves and Accessories	1		Added "D 1.6 - Valves - Direct Bury Sewer Force Main Eccentric Plug/ 14" thru 24" (MJ X MJ)"		JH	12/5/2024
11/22/2024	MSM D	D 1.3 - Valves - Resilient Seat / 2" thru 12" (FLG X FLG)	5	Restriction missing	Added "Shall not be used in direct bury applications" to "Restrictions"		JH	12/5/2024
11/22/2024	MSM D	D 1.4 - Valves - Resilient Seat/ 14" thru 48" (MJ X MJ)	6	Restriction missing and an additional requirement was removed	Added "For Sewer Force Main Installations 14" through 24" See MSM D 1.6" to "Restrictions". Removed additional requirement "Valves shall be installed vertical when used in raw sewer or sludge applications."		JH	12/5/2024
11/22/2024	MSM D	D 1.6 - Valves - Direct Bury Sewer Force Main Eccentric Plug/ 14" thru 24" (MJ X MJ)	7		Added sheet "D 1.6 - Valves - Direct Bury Sewer Force Main Eccentric Plug/ 14" thru 24" (MJ X MJ)"		JH	12/5/2024
11/22/2024	MSM E	E 1 - Fire Hydrants	3	Incorrect inlet connection type	Changed inlet connection type from "flanged" to "MJ"		JH	12/5/2024
11/22/2024	MSM F	F 2.1 - Tap Sleeves 4" thru 12", Mechanical Joint Connection/ Fabricated Stainless Steel	6		Added "HDPE" to "Design" section. Added "HDPE tapping sleeve shall be wrapped in fabric prior to backfilling." to "Restrictions" section. Added "Romac SST-H (HPDE)" to "Manufacturer" section.		JH	12/5/2024
11/22/2024	MSM M	M 7 - Polymorphic Resin Liner System / Sanitary Sewer	11	No "Warranty Responsibilities" Section	Added "Warranty Responsibilities" section. Added "Sherwin Williams Dura-Plate 6000" to "Manufacturer" section.		JH	12/6/2024
11/22/2024	MSM O	O 6 - Precast Manholes	4	"Cape Fear Precast" changed names	Changed name to "Alcrete"		JH	12/6/2024
11/22/2024	MSM O	O 6.1 - Precast Wet Well	5	"Cape Fear Precast" changed names	Changed name to "Alcrete"			
11/22/2024	MSM O	O 6.2 - Precast Vaults	6	Changed name to "Alcrete"	Changed name to "Alcrete"			
11/22/2024	MSM O	O 6.3 - Polymer Concrete Manholes	7	Missing notes in "Specification" section	Added notes "Manholes greater than 12' in depth shall be 5' in diameter.", "All joint seams shall utilize gasket and mastic joint sealant rope.", and "Exterior manhole seams shall utilize exterior wrap or manufacturers grout product." to "Specification" section.		JH	12/6/2024

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Technical Specifications								
11/26/2024	26 29 15	Pump Control Panels	1	Clarification as to acceptable level sensing	Added "or alternatively ultrasonic or radar systems" to Section "C.1.a".		JH	12/6/2024
11/26/2024	26 29 15	Pump Control Panels	2	Too many scenarios that trigger alarms	Removed sub-sections "1.b" through "1.e" in Section "E. Alarm horns and lights" sub-section "1. Activated by:."		JH	12/6/2024
11/26/2024	26 29 15	Pump Control Panels	6	No verbiage if specialized equipment is needed	Section "2.1 E" was reworded to include verbiage for specialized equipment.		JH	12/6/2024
11/26/2024	26 29 15	Pump Control Panels	7	No sub-section for non submersible pumps	Added sub-section "C. Non Submersible (Mounted above water line) ultrasonic or radar level sensor" to Section "2.2 Accessories"		JH	12/6/2024
11/26/2024	26 29 15	Pump Control Panels	8	No verbiage for spare pump or spare motor and rotataing assembly	Added sub-section "E" to Section "2.4 Spare Parts"		JH	12/6/2024
11/26/2024	26 29 15	Pump Control Panels	9	No verbiage for dry-pit stations	Reworded Section "3.3 Installation" sub-section "B" to include verbiage for dry-pit stations.		JH	12/6/2024
11/26/2024	26 29 15	Pump Control Panels	9	No verbiage for dry-pit stations	Reworded Section "3.3 Installation" sub-section "C" to include verbiage for dry-pit stations.		JH	12/6/2024
11/25/2024	26 32 13	Standby Generator	6	Manufacturer's Service Contract does not align with Manufacturer's Warranty	Changed Service contract period from "2" years to "5" years in Section 1.11 Sub-section A.		JH	12/6/2024
11/25/2024	26 32 13	Standby Generator	21	Maintenance Service Contract does not align with Service Contract	Changed Maintenance Service contract from "Quarterly" to Semi-Annually" in Section 3.7 Sub-section B.1 to match the Service Contract from Section 1.11 Sub-section B		JH	12/6/2024
11/25/2024	32 31 00	Chain Link Fencing	3	Lacking verbiage for stopping mechanism for gates	Added "7. Gates shall include a stopping mechanism per CFPUA Standard Details." to Section 2.3		JH	12/6/2024
11/25/2024	32 31 19	Decorative Fencing	4	Lacking verbiage for stopping mechanism for gates	Added "6. Gates shall include a stopping mechanism per CFPUA Standard Details." to Section 2.3		JH	12/6/2024
12/6/2024	33 05 13	Precast Concrete Manholes and Utility Structures	5	Clairification on "Coatings" section	Updated Secion G title from "Coating" to "Polymer Concrete / Coatings"		JH	12/6/2024
11/26/2024	33 32 17	Low Pressure Sewer Systems and Rsidential Grinder Pump Stations		Omission of MSM Sections and misspelling	Added MSM "N" and "O" to Section "2.1 CFPUA Materials Specification Manual". Corrected spelling of "Barnes OGP 2 HP" to "Barnes ZOGP 2 HP" in Section "2.2 Materials & Accessories".		JH	12/6/2024
Design Guidance Manual								
12/11/2024	N/A	II. Water Facilities Design Criteria - A. Water Distribution - 2. Pipe Design - g. Service Taps	7	Missing bullet from detail	Added bullet "Unused services shall be abandoned. Abandoned water services shall be disconnected from main." to sub-section "g. Service Taps".			
6/14/2024	N/A	II. Water Facilities Design Criteria - A. Water Distribution - 6. Valves, Blow-offs, and Sampling Stations - b. Generally, place valves at each street intersection	9	No verbiage where valves should not be placed	Added "Valves shall not be located within the ditch. If necessary, a tee can be cut in and both an upstream and downstream valve can be installed along the main in lieu of a valve on the tee." under sub-section "b. Generally, place valves at each street intersection.".		JH	12/6/2024
12/11/2024	N/A	III. Wastewater Facilities Design Criteria - A. Collection and Force Main Systems - 2. Gravity Mains - l.	13	Missing bullet from detail	Added "A minimum of 20' of main line, 10' upstream and 10' downstream shall be replaced for new cut in manholes on existing clay gravity sewer mains." as sub-section "l.".			
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - A. Collection and Force Main Systems - 3. Force Mains - g.	13	No verbiage for private force mains	Added "Private force mains in the NC DOT right-of-way will not be permitted to convey flow to CFPUA infrastructure unless otherwise approved through a variance." as sub-section "g.".		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - A. Collection and Force Main Systems - 5. Manholes - j.	15	Change in coating specifications	Replaced sub-section "j." from "Coat manholes in accordance with CFPUA's specifications when manhole will receive force main discharges, when manhole is the first manhole upstream of a pump station's wet well, and elsewhere as required. Polymer concrete manhole inserts may be required as directed by CFPUA. These inserts shall be provided with a minimum 50-year warranty." to "Install polymer concrete manholes in applications involving force main discharges and in other designated locations as specified by CFPUA. These manholes shall come with a minimum warranty of 50 years. Grinder pump force mains and low-capacity force main discharge manholes may be coated with an approved lining system, contingent upon prior approval from CFPUA.".		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - B. Pumping Stations - 1. General - h.	18	More information need concerning the technical memorandum ™	Added "This TM will address future opportunities for incremental capacity increases including, but not limited to, changes to shims, impellers, pumps and maximum capacity possible without changes to wet well or major electrical upgrades." to the end of sub-section "h".		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - B. Pumping Stations - 6. Site Considerations - a.	20	More information need concerning accessing pump station site	Added bullet "Access to the pump station must be provided through a private or public right-of-way." to the end of sub-section "a.".		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - B. Pumping Stations - 8. Electrcal - g.	21	Three Phase power is required	Replaced sub-section "g." from "Three-phase power is preferred. If installation of three-phase power is not feasible, variable frequency drives may be installed as an alternative with CFPUA approval." to "Three-phase power is required. A variance consideration is necessary to support single phase power."		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - B. Pumping Stations - 9. Protection of Electrcal Panels and Controls - a.	21	HVAC units are not stainless steel	Added "If required, the HVAC unit shall be stainless steel. The use of copper coils, lines, fittings, etc. is prohibited." to sub-section "a." first bullet.		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - B. Pumping Stations - 9. Protection of Electrcal Panels and Controls - a.	21	HVAC units are not stainless steel	Added "HVAC unit shall be stainless steel. The use of copper coils, lines, fittings, etc. is prohibited." to sub-section "a." second bullet.		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - C. Low Pressure Sewer Systems - 4. Force Mains - e.	24	Clairification needed	Replaced sub-section "e." from "Provide valves, meeting the requirements of the CFPUA Materials Specifications Manual, inside pump station and valve vaults." to "Furnish and install valves that meet the specifications outlined in the CFPUA Materials Specifications Manual. These valves shall be positioned per CFPUA Standard Details within the designated pump station and valve vaults, ensuring efficient operation and accessibility for maintenance.".		JH	12/6/2024
6/14/2024	N/A	III. Wastewater Facilities Design Criteria - C. Low Pressure Sewer Systems - 4. Force Mains - g.	24	Needs updated to reflect updated Technical Specification	Replaced last sentence of sub-section "g." from "If a connection is made to an existing or new manhole, the manhole shall be lined per Section 33 05 13 - Precast Concrete Manholes and Utility Structures." to "If a connection is made to an existing or new manhole, the manhole shall be polymer concrete or coated per Section 33 05 13 - Precast Concrete Manholes and Utility Structures.".		JH	12/6/2024
Plan Review Checklist								
12/6/2024	N/A	Plan Review Checklist		Needs updated to reflect updated Technical Specification	Updated requirements		BJ	12/13/2024