

<b>Pump Station Startup: Phase 1 Installation Verification Checklist</b> (To be completed prior to start of Phase 2)				Contractor	Construction Manager	Engineer	Inspector	Operations - Electrical	Operations - I&C	Operations - Pump Crew
Project Name, Location										
Field Installation/ Testing	All electrical or other conduits installed and tagged									
	All wiring installed, terminated, tagged, and insulation tested									
	All grounding systems installed									
	Permanent utility power installed - Record # of Phases & Actual									
	Control Panels, MCC, ATS, PLC, Radio, level controls, installed									
	Protective devices set and checked									
	UL Certification on Control Panel, all components per specs									
	Radio antenna installed and height checked									
	Piping and components installed, coated, and tested									
	Generator installed and anchored, name plate data transferred									
	All other equipment installed and anchored (including tanks)									
	Equipment and components labeled as required									
	Kiosk Structure constructed or installed and anchorage inspected									
	Kiosk lighting installed									
Site lighting installed and photocells adjusted										
Field acceptance test (Certification of Proper Installation):	Generator Load Bank (SWCAA Permit Req'd)									
	Automatic or manual transfer switch									
	Level Controls									
	Pumps (megger, rotation, oil, coolant, connections)									
	Spare Pump (megger, rotation, oil, coolant, connections)									
	L&I Inspection									
Odor Control Metering Pump and Control Panel										
Elevation Verification	Elevation:		Plan	Actual						
	Wet well floor									
	Inflow inlet invert									
	Low manhole (overflow confirmation)									
	Wet well rim									
	Ultrasonic/Multitrode									
Pressure transducer										
Walkthrough	Punch List completed and initialed									
Preliminary As- builts (Final in Phase 4)	P&ID									
	Interconnect drawings									
	Mechanical site drawing									
	Civil site drawing									
Manufacturers statement of installation	Electrical site drawing									
	Anchorage testing/inspection report									
	Instrument calibration certifications									
	Wire pull sheets and conduit schedule									
	Cable insulation resistance test results									
	Switchboard and MCC testing results									
	Factory acceptance test on Control Panel									
	Factory acceptance test on MCC									
	Factory acceptance test results for pump									
	Factory acceptance test results for generator									
Certified on-site generator test by factory rep										
Certified on-site generator noise level test at property line: _____ dB										
Submittals	Draft O&M Manuals (incorporating all approved submittals)									
	Freshwater Test Plan									
	Agenda for Contractor provided training day									
	Schedule for Phases 2 through 4									
Other as required by contract provisions										
More on reverse.										
Operations Phase 1 Checklist Approval:										
Construction Phase 1 Checklist Approval:										

Add to checklist if applicable to specific project:

	Water service installed and pressure tested							
	All pneumatic lines installed and tested							
	Permeant hoist systems test by manufacturer as applicable							
	Cathodic protection installed and tested							
Building Systems (also Building Inspector):	HVAC							
	Plumbing							
	Electrical							
	Lighting (interior and exterior)							
	Fire Alarm							
	Storm drain							
	Protective devices coordination study, arc-flash study and labelling by professional							


Optional



Not Applicable



<b>Pump Station Startup: Phase 2 Functional Demonstration Checklist</b> (To be completed prior to start of Phase 3) All Phase 2 tests require two week notice to District		Contractor	Construction Manager	Engineer	Inspector	Operations - Electrical	Operations - I&C	Operations - Pump Crew
Project Name, Location								
Remote Telemetry Unit	Verify Installation and Hookup, connectors and conduits							
	Antenna Alignment (Contractor provides bucket truck)							
	Communications Programming and Testing							
	I/O Test Modem							
	Level Control Calibration Field Verified							
	5 point verification of the pressure transducer (attach calibration record)							
System Demo	Pumping Systems	Pump Set						
		Pump Rotation						
		Guide rails						
		Crane as						
		Inspect						
	Generator and fuel tank, transfer switch, 5 pump cycles							
	Switchboard/MCC, cabinet lighting, heaters, cooling fans, all functions							
	Instrumentation							
Security System/Fire Alarm including cabinets and other as applicable								
Odor Control System (if applicable)								
Walkthrough	Punch List completed and initialed							
Approved Submittals	Data submittal for pump station new assets							
	Final O&M Manual (3 copies - Engineering, Operations, On site)							
	Inspector Redline Drawings submitted to CM							
	Contractor Redline Drawings submitted to CM							
	Other as required by contract provisions							
Operations Phase 2 Checklist Approval:								
Construction Phase 2 Checklist Approval:								

Not Applicable 

<b>Pump Station Startup: Phase 3</b> <b>Operational Testing &amp; Startup Checklist</b> (To be completed prior to start of Phase 4)		Contractor	Construction Manager	Engineer	Inspector	Operations - Electrical	Operations - I&C	Operations - Pump Crew	
Project Name, Location									
1. 5-Day Freshwater Test	Level change Start of Test: WW/HL & LL Alarms verified, 4 cycles each.								
	Pump cycling								
	Daily checks AM and PM daily checks, Cont. and District, Recorded.								
	Holding tank, all hoses, fittings, valves, etc. secure, no leaks.								
	Pull pumps, check oil, impeller, volute, etc. (at start and completion of test)								
	Run pumps off of generator power								
	Site specific:	Site lighting, SCADA, Alarms, etc. active							
		Site security: WW access secured/locked, fencing, gates							
		Cabinet heaters, fans, etc., record outside temps.							
		Pump Crew Phase III Punchlist Generated							
	Pump Crew Phase III Punchlist Completed								
	Start date: _____ Stop date: _____								
2. Contractor Provided Training Day	Pumping Systems								
	Generator as applicable, load bank & fuel tank, transfer switch, identify phase at generator.								
	Switchboard/MCC								
	Instrumentation								
	Security Systems								
	Fire Alarm								
	Other Systems as applicable								
3. Station Cleanup	Remove all temporary testing components, test plates, etc., after fresh water test								
	Remove all contractor equipment from site/asset area.								
	Operations and Maintenance Approval Letter Issued								
	Final Station cleanup								
	Fill generator fuel tank (80% full) and test fuel								
	Final Punchlist generated and distributed prior to Step 4								
4. Substantial Completion	Substantial Completion Issued								
5. Transfer of Access and Operations	Replace contractor lock with District locks, No Contractor Access w/o Rep.								
	SCADA turned on								
	Operations ready to accept maintenance & operations of station								
	Update Contractor Redline Drawings								
	Updated Inspector Redline Drawings								
6. Connect to Sewer	Verify downstream systems operational and connected	Verify plugs removed, valves open							
		Allow sewage into facility							
		Air valves confirmed functional							
	Abandon items as applicable. Coordinate with Operations								
Operations Phase 3 Checklist Approval:									
Construction Phase 3 Checklist Approval:									

Not Applicable 

<b>Pump Station Startup: Phase 4 Acceptance Checklist</b> (To be completed prior to final District acceptance of facility)		Contractor	Construction Manager	Engineer	Inspector	Operations - Electrical	Operations - I&C	Operations - Pump Crew	
Project Name, Location									
Final Signoff	Phase 1, 2 & 3 punch lists completed								
	Phase 1,2 & 3 checklists completed								
	Physically Complete Letter								
Paperwork	Transfer power bill to the District								
	Transfer water bill to the District								
	Grant Deed / Easements recorded								
	Property Owner Releases								
	Copies of all Permits to the District	Building Permit (fully approved by County/City)							
		Pressure Vessels (if applicable)							
		Other							
	Warranty Paperwork Submitted by Contractor								
Final As-builts Drawings from Engineer									
Final	Final Acceptance or Bill of Sale for Development Project								
	Copy to:	Finance Department - Cost Breakdown by Asset Category							
		Final As-built Drawings GIS and Operations							
		Regulatory Compliance							
Operations Phase 4 Checklist Approval:									
Construction Phase 4 Checklist Approval:									

Not Applicable

