Plumbing Systems Testing Procedures

System Verification and Functional Performance Test Flow Chart

**EQUIPMENT DW / LG PIPING WASTE / VENT PIPING**

Submittal Approval

Shop Drawing Approval

Shop Drawing Approval

Installation (PC)

Installation (PC)

Installation (PC)

Inspections (MDA)

Inspections (MDA)

Inspections (MDA)

Piping connections complete (PC)

Leak Testing (MC)

MDA Witness

Contractor

Corrects

Deficiency

Hydro Testing (MC)

MDA Witness

Permanent power to Equipment complete (EC)

Pass

Pass

NO

NO

Issues noted in

ISU Log

YES

YES

BAS wiring, devices and programming complete for monitoring

Fixture and Equipment Connections Complete

Fixture and Equipment Connections Complete

Contractor and Subs perform pre-startup inspections, testing and document on PFCs;

PFC’s submitted to CxA for Review

Pipe Flushing / Certification Complete

Contractor issues Request for Startup to MDA

Contractor and Subs perform inspections and document on PFC’s;

PFC’s submitted to CxA for Review

Contractor and Subs perform inspections and document on PFC’s;

PFC’s submitted to CxA for Review

Issues noted in

ISU Log

Equipment Startup

APPROVED

APPROVED

NO

NO

Ready for Operation

Completed PFC’s and startup documentation submitted to

CxA for Review

Contractor Corrects Issues

Issues noted in

ISU Log

YES

YES

Ready for Operation

Ready for Operation

APPROVED

NO

TAB Performs Pre-TAB Inspections on DHW

YES

IT Connectivity Complete;

BAS Panels Online

BAS Graphics Approved by MDA BAS Group and O&M

BAS Graphics Complete;

Submit to MDA BAS for Review

Contractor

Corrects

Deficiencies

Issues noted in

TAB ISU Log

DHW TAB

(TAB)

Sanitize DW Systems

FUNCTIONAL PERFORMANCE TESTING

(CxA, Contractor, MDA)

Contractor Corrects Issues

Issues noted in

ISU Log

NO

Contractor issues Request for Functional Performance Testing to MDA

Contractor and Subs perform pre-test of systems using PFC procedure

BAS POINT VERIFICATION

(TAB)

PLUMBING EQUIPMENT

Glossary:

BAS Building Automation System

CxA Commissioning Authority

DHW Domestic Hot Water

DW Domestic Water

EC Electrical Contractor

FPT Functional Performance Test

ISU Issues Log

IT Information Technology

MC Mechanical Contractor

MDA MD Anderson

O&M Operations and Maintenance

PC Plumbing Contractor

PFC Prefunctional Checklist

TAB Test and Balance

Contractor Corrects Issues

Issues noted in

ISU Log

SUBSTANTIAL COMPLETION

DEFERRED TESTING

NO

YES

Pass

**WARRANTY PERIOD**

Pass

YES

INTEGRATED

SYSTEMS TEST

(CxA, Contractor, MDA)