



Southland

Commissioning of Data Centers

Date of Presentation





**Commissioning ensures
that systems operate as
intended and that building
staff can operate the
building for years to come.**

Stake Holders

- **Building Owners**

- Most building owners think that commissioning and overall quality control should be provided by the contractors and consultants involved in a project.

- **Architects and Engineers**

- Owners' Project Requirements (**OPR**) are carefully documented, which avoids any building owner misinterpretation and offers a smoother acceptance process.
- The Engineers' Basis of Design (**BOD**) is carefully reviewed and validated. Verifying that installed systems can meet this intent.

- **Construction Professionals**

- A series of checks and balances ensures the job has been completed once you've left the site.



Data Center Commissioning Process L(1) through L(5)

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Level One - Factory Witness Testing (FWT)

During Factory Witness Testing, the equipment provided by a vendor is tested at the vendor's manufacturing site prior to shipment to the jobsite. The FWT will typically follow a test procedure developed by the manufacturer to verify that the equipment operates as designed.

Data Center Commissioning Process L(1) through L(5)

Level Two A - Site Arrival Inspection (Equipment)

Site Acceptance Inspection (SAI) or L2 Receiving Checklist is performed whenever equipment is delivered to the jobsite. **It is imperative to inspect all major pieces of equipment, fabricated items, and any other pertinent materials.**

This is when any possible shipping damage or defects are located and documented.

Data Center Commissioning Process L(1) through L(5)

Level Two B – Pre-Energization (Equipment)

Once the equipment has been properly installed and is ready for startup, Southland will document this by completing our L2 Pre-Energization Check list-(FIV). Southland will also include any testing performed prior to startup, such as *torque verification, pipe pressure testing, system Fill & Flushing reports, etc.* All these tests will be documented.

Data Center Commissioning Process L(1) through L(5)

Level Three – Energization - Start up (OPT)

Once power is supplied to the equipment, Southland will start it up or have a vendor onsite do so.

A startup normally consists of testing the pump and fan rotation, operational testing of equipment and systems, and start-up of major mechanical equipment, such as Air Handling Units (AHU), Roof Top Units (RTU), packaged AC units, etc.

All the tastings will be documented in Southland's L3 Energization Start-up Checklist (OPT).

Data Center Commissioning Process L(1) through L(5)

Level Four – Functional Performance Testing

During this phase, the Commissioning Authority (**CxA**) takes the lead on testing, and Southland, along with supplying vendors, will support this process. Southland will assist the CxA with running mechanical equipment, so it can be tested according to the specified (SOO) Sequence of Operations. (FPT) scripts

Data Center Commissioning Process L(1) through L(5)

Level Five – Integrated System Testing (IST)

This is the final step before the space is turned over to the client. This involves testing each area together to ensure the system, as a whole, functions as intended and designed. Southland will play a support role and be able to help with any glitches that may occur. Normally, a pre-IST test is conducted a week before the actual test date to ensure everything is working correctly.

Data Center Commissioning Process L(1) through L(5)

- **Punchlist Management**

- To accomplish this task, we put together a hit team consisting of a small crew of specialized employees. One from each mechanical trade scope, and together they can quickly and effectively close out any and all items that come up.

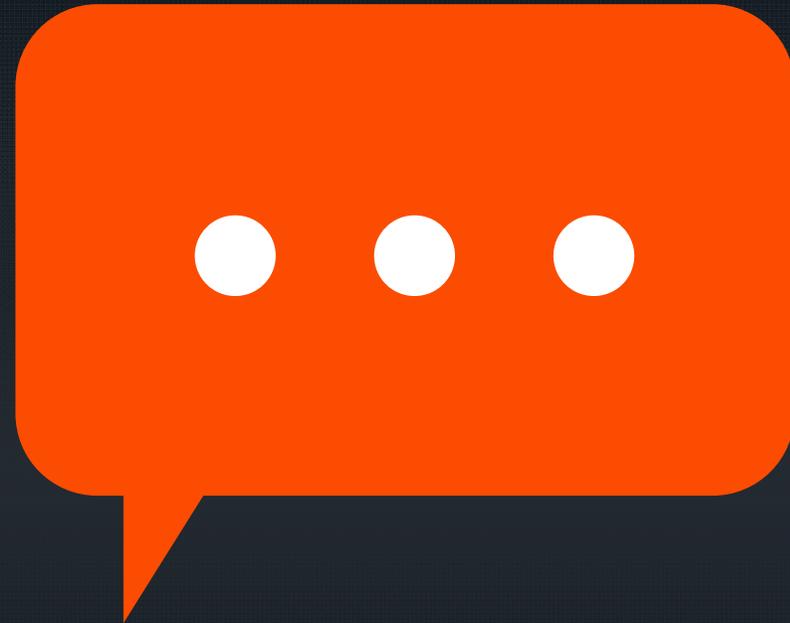
- **Closeout**

- Southland will coordinate early in the process to obtain all information/materials for closeout. This will include: O&M manuals, recommended spare parts, preventative maintenance schedules, and warranty letters from manufacturers. OFCI equipment will be the responsibility of the General Contractors' OFCI manager to assist in obtaining the necessary information/materials from OFCI vendors.

- **Warranty Information**

- Must include a coversheet on company letterhead stating the start date and the end date of the manufacturer's warranty.

Let's Talk



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