# LIGO LABORATORY

California Institute of Technology

1200 E. California Blvd.

Pasadena, CA 91125

**Statement of Work**

**LIGO Hanford DCS Computer Room Air Conditioning**

**C1400943-v1**

Note to LIGO users: all red text in this template is font type ‘hidden’ and comprises instructions to complete the SOW. Easier than deleting them, you can hide all red text before saving. In Word 2010, click File, Options (on the left side), Display (on the left side), and then unclick “Hidden Text”.

The “TEMPLATE” watermark can be removed by clicking Page Layout, Watermark, and then Remove Watermark.

1. **Scope**

This Statement of Work is for the supply and installation of Split System Air Conditioning at the new DCS Computer Room located at LIGO Hanford (LHO). Equipment and piping is specified in the drawings listed in this document. Also included in this work are the construction of one new partition wall, exterior trenching, installation of concrete pull vaults, and the placement of a concrete equipment pad.

All equipment and piping shall be mounted on spring isolators or neoprene rubber hangers. Outdoor units shall be on mounts designed for 1” of deflection or 3 Hz of isolation. If possible indoor mounts shall also be designed for 3Hz isolation. If this is not feasible LIGO will consider alternates.

A proposed routing of the piping is shown on the drawings but the vendor may propose simpler or more efficient alternates.

Briefly describe the work. For example: Fabrication of Vacuum Pod components for Advanced LIGO BSC-ISI Seismometers.

1. **Document Access**

Many supplemental documents and specifications are incorporated into and made a part this Statement of Work. Click on the document links to access these documents from the LIGO Document Control Center (DCC) or go on line to the LIGO Public DCC at <https://dcc.ligo.org/> to access the DCC#.

1. **Commercial Terms and Applicable LIGO Specifications:**

**Note: The documents listed below are invoked for this Statement of Work and comprise additional requirements which are integral to this Statement of Work.**

Important: C080185 and Q0900001 apply to all SOWs. Add/delete others as appropriate.

Check to be sure the latest revisions are specified below (please notify QAME or Systems if this template needs to be updated).

* [LIGO-C080185-v1](https://dcc.ligo.org/public/0002/C080185/001/C080185-00_Commerical_Terms.pdf) LIGO Commercial Items or Services Contract General Provisions
* [LIGO-Q0900001-v5](https://dcc.ligo.org/public/0001/Q0900001/005/Q0900001-V5.pdf) Advanced LIGO Supplier Quality Requirements
1. **Safety Plan:**

LIGO requires all on-site work to be covered by a written safety plan consistent with LIGO safety requirements to ensure safe work practices are followed while performing construction, maintenance, or like activities at any of the LIGO facilities.

All bidders are required to submit either a copy of their existing safety plan/program or a written description/outline of their safety program with their proposal. The bidder must also submit their plan/program for managing their subcontractor’s safety related activities. In the event that a prospective contractor/vendor lacks an acceptable existing safety plan and/or program, the contractor/vendor shall develop and implement a system safety program in compliance with the requirements negotiated at contract/PO award.

1. **Drawings and Requirements**

List all parts to be made, including the **public** hyperlink to the latest revision, and the total quantity required. If you have more than ten parts, create a separate drawing document posted to the DCC as a public document, and link here.

|  |  |
| --- | --- |
| LIGO DCC # | Description |
| D1400304-v1 | LHO DCS Facility HVAC PLAN and Sections |
| D1400305-v1 | LHO DCS Facility Reflected Ceiling Plan |
| D1400306-v1 | LHO DCS Facility Curtain Plan and Details |
| D1400307-v1 | LHO DCS Facility Schedules, Notes, and Details |
| D1400308-v1 | LHO DCS Facility Electrical / Data Site Plan |
|  |  |

Note 1: Care should be given to the selection of the AQL number. Consider the amount of time (which equals cost) required to 100% inspect a given number of parts. Contact QAME for advice.

Note 2: Additional inspection instructions beyond the AQL number can be given – such as 100% inspection of all threaded holes.

**6.0 Sub-Contracted Work:**

LIGO expects that at least 2/3 (by dollar value) of the contracted work be performed by the Supplier named on the Purchase Order. The Supplier shall be responsible for all sub-contracted work.

Add/delete as appropriate

1. **End Item Data Package:** Add/delete lines as necessary

Before acceptance of installation, the Supplier shall provide the following, as a minimum:

* Any as-built modifications (with approval of the LIGO Contracting Officer) as mark-ups to the drawings
* Owners manuals, operating manuals and installation manuals for all equipment.
1. **Delivery Requirements:**

Note any special packaging requirements here (i.e., wrap in UHV foil and Ameristat).

Delete shipping destinations that don’t apply to this SOW. Be sure to reference the shipping abbreviations (i.e., LLO) in the Delivery Schedule if there is more than one shipping destination.

LIGO requires this equipment be installed and operating by the following dates:

Jan 15, 2015.

These items will be installed at:

LIGO Hanford Observatory (LHO)
Attn: John Worden

127124 North Route 10
Richland, WA  99354

Insert a list or table detailing the delivery requirements (by P/N, as necessary). Delivery should be specified in weeks ARO (after receipt of order). Please also specify the shipping destination (i.e. LLO).

Note any first article requirements. If applicable, the SOW must state upfront that LIGO wants to assemble the first articles for fit check before the rest of the order is completed.