1.0 Executive Summary

1.1 Scope
This ICD covers the interface between the Cables WBS 4.8.2 and the Racks WBS 4.8.1. The interface is primarily mechanical and electrical, with Cables installing the racks and cable trays and cables that connect the rack contents to the different systems.

1.2 Responsibilities

<table>
<thead>
<tr>
<th>WBS</th>
<th>Represented by</th>
<th>Responsible for:</th>
</tr>
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<tbody>
<tr>
<td>4.8.2</td>
<td>P Rodriguez</td>
<td>preparing, maintaining, &amp; approving this ICD</td>
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<tr>
<td>4.8.1</td>
<td>M. Ortega</td>
<td>supporting and approving this ICD</td>
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1.3 Interface Diagram

1.4 Interface Description

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<tr>
<th>chk</th>
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<tbody>
<tr>
<td>3.1</td>
<td>Physical</td>
<td>Cable routes cables inter-rack and from racks to systems</td>
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<tr>
<td>3.2</td>
<td>RF</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
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<tr>
<td>3.4</td>
<td>Mechanical</td>
<td>Racks delivers racks, Cables installs racks</td>
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<td>Electrical</td>
<td>Installing cable trays and routing and connecting cables</td>
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<td>3.7</td>
<td>Special Fluid</td>
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<td>3.8</td>
<td>Signal</td>
<td>Installing cable trays and routing and connecting cables</td>
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</table>
2.0 Applicable Documents

- IL 293-130-08: 8-Pack Cable Tray and Equipment Layout
- SLAC Seismic Spec: Specification for Seismic Design of Building, Structures, Equipment and Systems at the Stanford Linear Accelerator Center, August 5, 1999

3.0 Interface Definition

3.1 Physical Requirements
Racks shall provide racks per IL 293-130-08. After the various systems have the equipment loaded in the racks in the Electrical Services Dept., Racks shall deliver the racks to Building 062. Cable shall install the racks per IL 293-130-08. Cable shall install electrical safety grounding cables to each rack's grounding lug. Cable Plant shall design and install the cable tray and cableways and install the inter-rack cables and cables in the trays/ways.

3.2 RF Requirements
LLRF shall provide EMI shielding techniques that Racks will execute in the EMI single-bay racks.

3.3 Structural Requirements
None

3.4 Mechanical Requirements
Racks shall specify installation requirements for the racks per UBC-97 and SLAC Seismic Spec. Cable shall hoist the racks into place, and secure them per specification IL 293-130-08.

3.5 Electrical Requirements
Cable Plant and Racks shall coordinate efforts to establish and maintain the common rack and cable layouts using the CAPTAR database and system cable coding sheets. This body of information constitutes a shared basis of requirements for Cable Plant and Racks.

Racks is responsible for ensuring installation of equipment is done per the above. After rack installation, Racks shall verify correct operation of rack infrastructure, such as electrical power and safety grounding.

Cable Plant is responsible for ensuring cabling is done per the above. Cable Plant shall ground the racks to cable trays/ways/conduits.
3.6 Thermal Requirements
None

3.7 Special Fluid Requirements
None

3.8 Signal Requirements
Cable Plant and Racks shall coordinate efforts to establish and maintain the common rack and cable layouts using the CAPTAR database and system cable coding sheets. This body of information constitutes a shared basis of requirements for Cable Plant and Racks.

Racks is responsible for ensuring installation of equipment is done per the above. After rack installation, Racks shall verify correct operation of rack infrastructure, such as electrical power and safety grounding.

Cable Plant is responsible for ensuring cabling is done per the above. Cable Plant shall ground the racks to cable trays/ways/conduits.

3.9 Other Requirements
None

4.0 Verification
Placement of the racks and cable tray/way and routing of the cables will be verified by inspection against latest revision of drawings and coding information. Operational readiness of the racks shall be verified by Racks by electrical or other testing after installation. Final verification of operational readiness of equipment in the racks shall be performed by the owner System.

5.0 Notes
The installation of racks and cables will be coordinated by Racks and Cable Plant. The system identified is responsible for the job described even though most of the actual work will be performed by Davis-Bacon labor. The sequence of events is as follows:

1. Racks prepares racks for installation, including internal power, modifications and bolt-down preparation
2. Racks delivers racks to NLCTA 8-Pack experimental area
3. Cable Plant places the racks and bolts them to the supports (already installed by Conventional Facilities 4.2) and installs electrical safety grounding
4. Cable Plant installation:
   o Cable Plant installs cable trays, ways, and conduits, grounds all to racks, and routes intra- and inter-rack cables
   o Conventional Facilities routes AC power to panels, modulator racks and mini-racks on shield wall.
Racks routes AC from panels to racks on platform. Racks inspects grounding and AC/DC power in the racks for proper operation.