



# DOCUMENT CHANGE NOTICE (DCN)

DOCUMENT No. (DOC-REV-GP. ID)	TITLE	NEW REV.
<del>LIGO-E980176-A-D</del>	Specification: Cable Tray Installation for the LIGO Hanford Installation	B

**CHANGE DESCRIPTION (FROM/TO):**

**PAGE 2:**

**From:**

**Section H-H: D980266-A**

**To:**

**Section H-H: D980266**

**PAGE 3:** Delete Section L-L and Section M-M and all references contained in them.

**PAGE 5:**

**4.6.2 Attachment to Vacuum Equipment**

**From:** The Cable Trays may be attached to the Vacuum Equipment Supports long as their attachment does not degrade the structural integrity of the Vacuum Equipment Supports. The Cable Trays shall not be attached to or touch the Vacuum Equipment and its plumbing.

**REASON FOR CHANGE:**

Eliminates Cable Tray runs to reduce cost. Answers questions posed by vendors.

**ACTION:**  Incorporate change  Attach DCN to drawing(s)  Other action (specify):

**DISPOSITION OF HARDWARE (IDENTIFY SERIAL NUMBERS)**

- No hardware affected (record change only)
- List S/Ns which comply already:
- List S/Ns to be reworked or scrapped:
- List S/Ns to be built with this change:
- List S/Ns to be retested per this change:
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**DCN DISTRIBUTION (X=incl. docs)**

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|------------|-----------|-----------|
| Althouse   | Barish    | Coles     |
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| x Bork     |           |           |
| x McCarthy |           |           |
| x Petrac   |           |           |
| x Baldwin  |           |           |

**SAFETY, COST, SCHEDULE, REQUIREMENTS IMPACT?**  No  Yes (If yes, enter Change Request number )

APPROVALS:	DATE	OTHER APPROVALS (specify)	DATE
ORIGINATOR: W. Baldwin <i>W. Baldwin</i>	8/21/98		
TASK LEADER: D. Coyne <i>D. Coyne</i>	8/21/98		
GROUP LEADER: A. Lazzarini <i>A. Lazzarini</i>	28 Aug 1998		
DCC RELEASE: <i>[Signature]</i>	5 Nov. 98		



## DOCUMENT CHANGE NOTICE

### CHANGE DESCRIPTION (FROM/TO):

**To:** The Cable Trays may be attached firmly to the Vacuum Equipment Supports with screws as long as their attachment does not degrade the structural integrity of the Vacuum Equipment Supports. The Cable trays shall not be attached to or touch the Vacuum Equipment and its plumbing. The Cable Trays shall not be mechanically isolated from the Vacuum Equipment Supports.

### PAGE 6:

#### From:

#### 4.9 Surface Coating

The Cable Trays shall be either uncoated, have an anodized coating, or have low-VOC paint suitable for this application.

#### To:

#### 4.9 Surface Coatings

#### 4.9.1 Coatings on Cable Trays

The Cable Trays shall be either uncoated, have an anodized coating, or have low-VOC paint suitable for this application.

#### 4.9.2 Coatings on Cable Tray Supports

If the Installer coats the Cable Tray Supports, he may use one of the following acceptable techniques:

1. Clean all external surfaces to remove all oil, grease, dirt and chips.
2. Paint with one of the following primer/paint combinations per manufacturers' recommendations:
  - A) **Primer:** Sherwin-Williams Industrial Wash Primer P60G2  
**Paint:** Medium Textured Sherwin Williams D13 Polane (R) T-Plus, Polyurethane enamel, F63 series F63TX-L2822-5864.  
**Color:** To match approximately the Vacuum Equipment Support Color
  - B) **Primer:** Thurmalux 260 Prime Coat  
**Paint:** Thurmalux 260 Finish Coat  
**Color:** Thurmalux 1-07 "Spring Day"  
**Manufacturer:** Dampen Co., Everett, MA

Note: Paint/ Primer combination B) is used on the existing Vacuum Equipment Supports

### PAGE 7:

#### From:

#### 4.11.2 Parts Cleaning

Before the Cable Tray parts are brought into the LIGO Buildings they must be degreased and bagged.

If solvents are used to clean and degrease the Cable Trays the following solvents are permitted:

- Acetone
- Isopropyl Alcohol
- Toluene



## DOCUMENT CHANGE NOTICE

### CHANGE DESCRIPTION (FROM/TO):

All other candidate cleaning fluids must be approved by Caltech.

**To:**

#### 4.11.2 Parts Cleaning

##### 4.11.2.1 LIGO Approved Solvents

Before the Cable Tray parts are brought into the LIGO Buildings they must be degreased and bagged.

If solvents are used to clean and degrease the Cable Trays the following solvents are permitted:

- Acetone
- Isopropyl Alcohol
- Toluene

Candidate cleaning fluids other than these must be approved by Caltech.

##### 4.11.2.2 Parts Bagging and Cleaning

If the Cable Trays are cut to length and degreased outside the LIGO buildings, they shall be bagged before they are transported to the LIGO and brought in the cleaning rooms in each station. The cleaned Cable Trays may then be unbagged in the cleaning rooms and carried into the LVEA. The bags shall never be taken in the LVEA and the VEAs (the rooms housing the large vacuum chambers in each station.)

The Cleaning Rooms may also be used as cutting and cleaning room. If the cleaned Cable Trays are to be kept in the Cleaning Rooms while other Cable Trays are cut to length and drilled, they shall be bagged while the Installer is cutting other trays. The cleaned, bagged trays may then be unbagged and the trays taken into the LVEA (Corner Station) and the VEAs (Mid and End Stations) to be installed.

### PAGE 12:

#### 5.1.9.2 Analog Trays

**From:** The Analog Trays shall run all the way out to the Termination Slab as discussed in Section 5.1.10 of this document.

**To:**

#### 5.1.9.2 Analog Trays

The Analog Trays shall terminate at the Electronics Rack Clusters by the Manifolds as shown in Drawing D980266, Sheet 1.

**Page 12:** Delete all of Paragraph 5.1.10.

**Page 26:** Delete Photograph E42.

**Page 27:** Delete Photograph E 43.