

USE OF GROUNDING STRAPS

Work description: Purpose of the procedure consists in providing step by step instructions for using the grounding straps to protect the work area

Scope: This document is applicable for the maintenance personnel on the Honolulu Rail Transit Project (H RTP).

References:

PPE and precautions

Insulated Gloves, Hot Stick, ground strap

Competencies or qualifications

Track access

Licenses or permits required

Train Driver

Tools and equipment required

Ground Strap Installation

The technician installing grounding straps shall:

- Wear adequate insulated hand-gloves;
- Once got from OCC the permit to access the track, look in the direction from where trains might arrive;
- Make sure third rail is not energized;
- If third rail is energized, ask and confirm with SCADA operator de-energization or activate the Blue light Station;
- Avoid any hand-contact with tracks;
- Grounding straps shall be positioned in the vicinity of third rail supports.

Grounding straps shall be positioned only on de-energized sections of third rail. It is required to connect to ground third rail. Grounding straps have to be positioned only by trained personnel.

Before positioning the grounding straps, the technician shall:

- Confirm with the OCC that the section is de-energized;
- Verify by means of hot sticks that the section is de-energized.

Special train runs can be requested by the City or might be proposed by HRH on the basis of the contingent situation. In this second case, no special train run shall be performed until approved by the City

Scheduled Special Train Runs

In the event it is deemed necessary a service adjustment, the City shall:

- Inform HRH O&M Director about the need for special train runs, at least three working days in advance, specifying:
 - o Date (single day alteration) or Start Date/End Date (alteration requested for multiple days);
 - o Service scheme (e.g. additional train(s) running on the entirety of on a portion of the operating segment);
 - o Single run or multiple runs. In this second case the timetable has to be specified.

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☐ Director, Operations and Maintenance

☐ Department Manager

☐ Manager, HSE (Operations and Maintenance)

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The O&M Director shall:

- Inform the line managers (operation, maintenance managers) about the requested change;
- Make sure that the operation and maintenance implications of the requested changes are thoroughly assessed by the operation manager and the maintenance manager/director;
- Provide a feedback to the City about the requested change.

Hot Stick Verification

1. Hot sticks are shown in the figure below:
2. Put the green stick in contact with the rail;
3. Put the red stick in contact with the third rail;
4. Once verified that there is no voltage, remove the red stick;
5. Once the red stick is removed, remove the green stick.




Figure 1 : Hot stick

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Grounding Strap Application	<p>Grounding straps consist of 3 clamps connected through a cable. Two clamps shall be connected to the running rails, one to the third rail.</p> <ol style="list-style-type: none"> 1. Connect 1 clamp to the rail; 2. Connect 1 clamp to the other rail; 3. Connect 1 clamp to third rail.  <p>Figure 2 : Correctly positioned grounding straps</p> <p>Note: the track section where the work has to be performed might be energized on from both ends. In this case, grounding straps shall be applied on both ends of the work area.</p>
Grounding Strap Removal	<ol style="list-style-type: none"> 1. Inform the working crew of the upcoming removal of grounding straps and make sure they are at least 1 feet far from third rail; 2. Remove the clamp connected to the third rail; 3. Remove the clamp connected to the rails; 4. Clear the area from the straps; 5. Inform the OCC when complete.

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