

Title	Design cableway systems for vertical, semi-vertical, and horizontal loads		
Level	5	Credits	10

Purpose	<p>This unit standard is intended for people working as advanced operators with extensive experience in the application of advanced techniques in industrial rope access work.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – perform cableway calculations for vertical, semi-vertical, and horizontal loads; and – design cableway systems for vertical, semi-vertical, and horizontal loads for carrying out advanced rope access work.
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Classification	Lifting Equipment > Industrial Rope Access
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Available grade	Achieved
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Guidance Information

- 1 All tasks must be carried out in accordance with:
 - a quality management systems;
 - b designer's requirements and manufacturer's operating instructions; and government and local government legislation, regulations, bylaws, Health and Safety at Work Act 2015 and New Zealand Standards;
 - c *Industrial Rope Access in New Zealand: Best Practice Guidelines May 2012* available from the website <https://worksafe.govt.nz/>; and
 - d AS/NZS 1891 parts 1 - 4:2009 *Industrial fall-arrest systems and devices*: AS/NZS 4488 parts 1 and 2:1997 *Industrial rope access systems*. New Zealand Standards are available from <http://www.standards.co.nz>, and their subsequent amendments.
- 2 Definition

Advanced rope access work refers to work that requires knowledge of mathematics and vector forces, as well as comprehensive training and guidance with extensive experience in the application of advanced rope techniques.
- 3 Training and assessment

People working towards, and being assessed against, this unit standard should note that work in the industrial rope access industry usually takes place at heights well above ground level and, therefore, requires a level of physical fitness and ability to work at heights.

Outcomes and performance criteria

Outcome 1

Perform cableway calculations for vertical, semi-vertical, and horizontal loads.

Range three different points on the cableway.

Performance criteria

- 1.1 Perform vector mathematics for the points throughout load transfer.
- 1.2 Calculate safe working loads for the points throughout load transfer.

Outcome 2

Design cableway systems for vertical, semi-vertical, and horizontal loads for carrying out advanced rope access work.

Performance criteria

- 2.1 Select three different anchor points for the cableway system that is being planned and designed.
- 2.2 Select the required equipment for the cableway system that is being planned and designed.
- 2.3 Design the cableway system for the safe movement of a load.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	10 December 2020	N/A

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.