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| Title | Perform soil strength tests in a civil engineering laboratory | | |
| Level | 4 | Credits | 12 |

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| Purpose | People credited with this unit standard are able to perform soil strength tests in a civil engineering laboratory. |
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| Classification | Infrastructure Civil Engineering > Infrastructure Laboratory |
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| Available grade | Achieved |
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable organisational and legislative requirements.
- 2 Applicable legislation, regulations, rules, standards and codes include but are not limited to the: Health and Safety at Work Act 2015, Hazardous Substances and New Organisms Act 1996, and their associated regulations and subsequent amendments; ISO/IEC 17025:2018 *General requirements for the competence of testing and calibration laboratories*, available from <https://www.iso.org/store.html>; NZS 4402:1986 *Methods of testing soils for civil engineering purposes - Preliminary and general*, available at <https://www.standards.govt.nz/>.
- 3 Evidence is required for two soil strength tests used in a civil engineering laboratory, which may include but are not limited to – California Bearing Ratio - remoulded, California Bearing Ratio - undisturbed, unconfined compressive strength - standard, unconfined compressive strength - autographic, laboratory shear vane, point load.
- 4 Definitions
Organisational requirements refer to instructions to staff on policy and procedures which are formally documented or generally accepted at the worksite. This may include legislation; industry standards and methods; national and international standards and methods; standard operating procedures; specifications; manuals; and manufacturer's information.
Perform refers to completing the individual components of the test sequentially in terms of the relevant test method and organisational requirements. Components will vary between tests and include but are not limited to – the completion of tasks from sample and equipment preparation to the calculation and reporting of results. Perform does not include the evaluation or the troubleshooting of tests.
Samples may include but are not limited to – prepared materials and test materials such as standards and reagents.

- 5 It is recommended people achieve Unit 26647, *Describe soil strength tests in a civil engineering laboratory*, or demonstrate equivalent knowledge and skills, before being assessed against this unit standard.

Outcomes and performance criteria

Outcome 1

Perform soil strength tests in a civil engineering laboratory.

Performance criteria

- 1.1 Samples and equipment are prepared.
- 1.2 Test is performed.
- 1.3 Test measurements are checked to be within precision requirements.
- 1.4 Test equipment is maintained and stored.
- 1.5 Results are recorded, and calculations are performed.
Range may include but is not limited to – sample site, sample description.
- 1.6 Results are reported.

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| 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 | 21 January 2011 | 31 December 2016 |
| Review | 2 | 19 February 2015 | 31 December 2021 |
| Review | 3 | 23 January 2020 | N/A |
| Rollover and Revision | 4 | 24 October 2024 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0101 |
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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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.