

# ONFIELD CAPABILITY SHEET-2026

## MATERIALS TESTING

| Standard Number Used | Name of the Standard / Guide                                             | Latest Version                             |
|----------------------|--------------------------------------------------------------------------|--------------------------------------------|
| CSA A23.2-1C         | Sampling fresh concrete                                                  | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-3C         | Making and curing concrete test specimens                                | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-4C         | Air content of plastic concrete                                          | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-5C         | Slump of concrete                                                        | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-6C         | Density / unit weight of concrete                                        | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-7C         | Temperature measurement of concrete                                      | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-8C         | Flexural strength of concrete                                            | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-9C         | Compressive strength of cylindrical concrete specimens                   | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-12C        | Hardened air void system in concrete                                     | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-13C        | Splitting tensile strength of cylindrical concrete specimens             | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-14C        | Obtaining and testing drilled cores                                      | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-16C        | Schmidt rebound hammer testing                                           | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-21C        | Drying shrinkage / length change of concrete                             | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-23C        | Rapid chloride permeability                                              | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-1A         | Aggregate sampling                                                       | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-2A         | Aggregate gradation / moisture related testing                           | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-6A         | Specific gravity and absorption of aggregate                             | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-9A         | Soundness of aggregates                                                  | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-15A        | Petrographic examination of aggregates                                   | CSA A23.1:24 / CSA A23.2:24                |
| CSA A23.2-23A        | Micro-Deval abrasion                                                     | CSA A23.1:24 / CSA A23.2:24                |
| ASTM C31/C31M        | Making and curing concrete test specimens in the field                   | C31/C31M-25a                               |
| ASTM C39/C39M        | Compressive strength of cylindrical concrete specimens                   | C39/C39M-26                                |
| ASTM C42/C42M        | Obtaining and testing drilled cores and sawed beams of concrete          | C42/C42M-20                                |
| ASTM C78/C78M        | Flexural strength of concrete using simple beam with third-point loading | C78/C78M-22                                |
| ASTM C88/C88M        | Soundness of aggregates by use of sodium sulfate or magnesium sulfate    | Current ASTM edition to verify             |
| ASTM C117            | Materials finer than 75-um sieve in mineral aggregates by washing        | C117-23                                    |
| ASTM C127            | Relative density and absorption of coarse aggregate                      | C127-25 / current revision work item noted |
| ASTM C128            | Relative density and absorption of fine aggregate                        | Current ASTM edition to verify             |
| ASTM C136/C136M      | Sieve analysis of fine and coarse aggregates                             | C136/C136M-25                              |
| ASTM C138/C138M      | Density, yield and air content of concrete                               | Current ASTM edition to verify             |
| ASTM C143/C143M      | Slump of hydraulic-cement concrete                                       | Current ASTM edition to verify             |
| ASTM C172/C172M      | Sampling freshly mixed concrete                                          | Current ASTM edition to verify             |
| ASTM C231/C231M      | Air content of freshly mixed concrete by pressure method                 | Current ASTM edition to verify             |
| ASTM C457/C457M      | Microscopical determination of air-void system in hardened concrete      | Current ASTM edition to verify             |

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|-------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------|
| ASTM C496/C496M   | Splitting tensile strength of cylindrical concrete specimens                                   | Current ASTM edition to verify                    |
| ASTM C566         | Total evaporable moisture content of aggregate by drying                                       | C566-25                                           |
| ASTM C805/C805M   | Rebound number of hardened concrete                                                            | C805/C805M-25                                     |
| ASTM C1064/C1064M | Temperature of freshly mixed hydraulic-cement concrete                                         | Current ASTM edition to verify                    |
| ASTM C1074        | Estimating concrete strength by maturity method                                                | Current ASTM edition to verify                    |
| ASTM C1202        | Electrical indication of concrete ability to resist chloride ion penetration                   | Current ASTM edition to verify                    |
| ASTM D75/D75M     | Sampling aggregates                                                                            | Current ASTM edition to verify                    |
| ASTM D2041/D2041M | Theoretical maximum specific gravity and density of asphalt mixtures                           | Current ASTM edition to verify                    |
| ASTM D2172/D2172M | Quantitative extraction of asphalt binder from asphalt mixtures                                | Current ASTM edition to verify                    |
| ASTM D2726/D2726M | Bulk specific gravity and density of non-absorptive compacted asphalt mixtures                 | Current ASTM edition to verify                    |
| ASTM D4791        | Flat particles, elongated particles, or flat and elongated particles in coarse aggregate       | Current ASTM edition to verify                    |
| ASTM D5444        | Mechanical size analysis of extracted aggregate                                                | Current ASTM edition to verify                    |
| ASTM D6926        | Preparation of asphalt mixture specimens using Marshall apparatus                              | Current ASTM edition to verify                    |
| ASTM D6927        | Marshall stability and flow of asphalt mixtures                                                | Current ASTM edition to verify                    |
| ASTM D6938        | In-place density and water content of soil and soil-aggregate by nuclear methods               | D6938-23                                          |
| AASHTO T2         | Sampling aggregates                                                                            | Current AASHTO edition to verify                  |
| AASHTO T22        | Compressive strength of cylindrical concrete specimens                                         | Current AASHTO edition to verify                  |
| AASHTO T23        | Making and curing concrete test specimens in the field                                         | Current AASHTO edition to verify                  |
| AASHTO T27        | Sieve analysis of fine and coarse aggregates                                                   | Current AASHTO edition to verify                  |
| AASHTO T85        | Specific gravity and absorption of coarse aggregate                                            | Current AASHTO edition to verify                  |
| AASHTO T88        | Particle size analysis of soils                                                                | Current AASHTO edition to verify                  |
| AASHTO T89        | Liquid limit of soils                                                                          | Current AASHTO edition to verify                  |
| AASHTO T90        | Plastic limit and plasticity index of soils                                                    | Current AASHTO edition to verify                  |
| AASHTO T99        | Moisture-density relations using 2.5 kg rammer and 305 mm drop                                 | Current AASHTO edition to verify                  |
| AASHTO T119       | Slump of hydraulic cement concrete                                                             | Current AASHTO edition to verify                  |
| AASHTO T166       | Bulk specific gravity of compacted asphalt mixtures using SSD specimens                        | Current AASHTO edition to verify                  |
| AASHTO T168       | Sampling asphalt mixtures                                                                      | Current AASHTO edition to verify                  |
| AASHTO T180       | Moisture-density relations using 4.54 kg rammer and 457 mm drop                                | Current AASHTO edition to verify                  |
| AASHTO T193       | California Bearing Ratio                                                                       | Current AASHTO edition to verify                  |
| AASHTO T209       | Theoretical maximum specific gravity and density of asphalt mixtures                           | Current AASHTO edition to verify                  |
| AASHTO T245       | Resistance to plastic flow of asphalt mixtures using Marshall apparatus                        | Current AASHTO edition to verify                  |
| AASHTO T310       | In-place density and moisture content by nuclear methods                                       | T310-22                                           |
| AASHTO T312       | Preparing and determining density of asphalt mixture specimens by Superpave gyratory compactor | T312-22                                           |
| MTO LS-261        | Asphalt sampling/testing method referenced in MTO Laboratory Testing Manual                    | MTO Laboratory Testing Manual Rev. 39 (July 2025) |

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|------------|----------------------------------------------------------------------|---------------------------------------------------|
| MTO LS-601 | Material finer than 75 um sieve                                      | MTO Laboratory Testing Manual Rev. 39 (July 2025) |
| MTO LS-602 | Sieve analysis of aggregates                                         | MTO Laboratory Testing Manual Rev. 39 (July 2025) |
| MTO LS-618 | Micro-Deval abrasion                                                 | MTO Laboratory Testing Manual Rev. 39 (July 2025) |
| MTO LS-625 | Aggregate sampling from stockpiles/bins                              | MTO Laboratory Testing Manual Rev. 39 (July 2025) |
| MTO LS-702 | Sampling soils and granular materials                                | MTO Laboratory Testing Manual Rev. 39 (July 2025) |
| MTO LS-706 | Field density and compaction control / moisture-density relationship | MTO Laboratory Testing Manual Rev. 39 (July 2025) |

## GEOTECHNICAL SERVICES

| Standard Number Used | Name of the Standard / Guide                                                   | Latest Version                 |
|----------------------|--------------------------------------------------------------------------------|--------------------------------|
| ASTM D854            | Specific gravity of soil solids by water displacement method                   | D854-23                        |
| ASTM D2216           | Laboratory determination of water content of soil and rock                     | D2216-19                       |
| ASTM D2434           | Laboratory measurement of hydraulic conductivity of coarse-grained soils       | D2434-26                       |
| ASTM D2435/D2435M    | One-dimensional consolidation properties of soils using incremental loading    | D2435/D2435M-25                |
| ASTM D2487           | Classification of soils for engineering purposes (USCS)                        | D2487-17(2025)                 |
| ASTM D2488           | Description and identification of soils by visual-manual procedures            | D2488-26                       |
| ASTM D2573/D2573M    | Field vane shear test in saturated fine-grained soils                          | D2573/D2573M-18                |
| ASTM D3080/D3080M    | Direct shear test of soils under consolidated drained conditions               | D3080/D3080M-23                |
| ASTM D4318           | Liquid limit, plastic limit and plasticity index of soils                      | D4318-17e1                     |
| ASTM D5084           | Measurement of hydraulic conductivity of saturated porous materials            | D5084-24                       |
| ASTM D5334           | Thermal conductivity of soil and soft rock                                     | Current ASTM edition to verify |
| ASTM D6230           | Monitoring ground movement using probe-type inclinometers                      | Current ASTM edition to verify |
| ASTM D6760           | Integrity testing of concrete deep foundations by ultrasonic crosshole testing | D6760-16                       |
| ASTM D5882           | Low strain impact integrity testing of deep foundations                        | D5882-16                       |
| ASTM D6913/D6913M    | Particle-size distribution of soils using sieve analysis                       | Current ASTM edition to verify |
| ASTM D6951/D6951M    | Use of the dynamic cone penetrometer in shallow pavement applications          | Current ASTM edition to verify |
| ASTM D1586/D1586M    | Standard penetration test and split-barrel sampling of soils                   | D1586/D1586M-18e1              |
| ASTM D1587/D1587M    | Thin-walled tube sampling of fine-grained soils                                | Current ASTM edition to verify |
| ASTM D1883           | California Bearing Ratio of laboratory-compacted soils                         | Current ASTM edition to verify |
| ASTM D2166/D2166M    | Unconfined compressive strength of cohesive soil                               | Current ASTM edition to verify |

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|------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------|
| ASTM D1143/D1143M            | Deep foundation elements under static axial compressive load               | D1143/D1143M-26                                       |
| ASTM D3689/D3689M            | Deep foundation elements under static axial tensile load                   | D3689/D3689M-25                                       |
| IEEE Std 81                  | Measuring earth resistivity, ground impedance and earth surface potentials | Current IEEE edition to verify                        |
| Ontario Building Code Part 8 | Sewage systems                                                             | Current Ontario Building Code / current consolidation |

## ENVIRONMENTAL SERVICES

| Standard Number Used   | Name of the Standard / Guide                                  | Latest Version                                                    |
|------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|
| CSA Z768               | Phase I Environmental Site Assessment                         | Z768-01 (R2022)                                                   |
| CSA Z769               | Phase II Environmental Site Assessment                        | CAN/CSA-Z769-00 (R2023)                                           |
| O. Reg. 153/04         | Records of Site Condition                                     | Current consolidation: March 30, 2026 to e-Laws currency date     |
| O. Reg. 406/19         | On-Site and Excess Soil Management                            | Current e-Laws consolidation                                      |
| MECP Excess Soil Rules | Rules for Soil Management and Excess Soil Quality Standards   | December 21, 2020 document adopted by reference in O. Reg. 406/19 |
| MECP Guidelines        | Environmental investigation and monitoring guidance documents | Various current guidance documents                                |

## BUILDING SCIENCE

| Standard Number Used | Name of the Standard / Guide                                                                | Latest Version                     |
|----------------------|---------------------------------------------------------------------------------------------|------------------------------------|
| ASTM C42/C42M        | Obtaining and testing drilled cores and sawed beams of concrete                             | C42/C42M-20                        |
| ASTM C597            | Ultrasonic pulse velocity through concrete                                                  | C597-22                            |
| ASTM C805/C805M      | Rebound number of hardened concrete                                                         | C805/C805M-25                      |
| ASTM C876            | Corrosion potentials of uncoated reinforcing steel in concrete                              | C876-22b                           |
| ASTM D4541           | Pull-off strength of coatings using portable adhesion testers                               | Current ASTM edition to verify     |
| ASTM E488/E488M      | Strength of anchors in concrete elements                                                    | E488/E488M-22                      |
| CSA S478             | Durability of buildings                                                                     | Current CSA edition to verify      |
| ACI 562              | Code requirements for assessment, repair and rehabilitation of existing concrete structures | Current ACI edition to verify      |
| ICRI Guidelines      | Concrete repair and evaluation guidelines                                                   | Various current ICRI guidelines    |
| DIN 4150             | Vibration Monitoring / effects of vibration on structures                                   | Current DIN edition to verify      |
| ISO 4866             | Mechanical vibration and shock - vibration of fixed structures                              | Current ISO edition to verify      |
| MECP Guidelines      | Noise monitoring guidance documents                                                         | Various current guidance documents |