

## WACEL SKILLS MATRIX: CONCRETE/MASONRY FIELD PROFESSIONALS AND SPECIAL INSPECTORS

Skill	Concrete Field Testing Level I	Reinforced Concrete Special Inspector	Structural Concrete Special Inspector
Understands the fundamentals of concrete at the basic level: <ul style="list-style-type: none"> <li>– components</li> <li>– quality indicators</li> <li>– hydration</li> <li>– water-cement ratio</li> <li>– air entrainment</li> <li>– approved mix designs</li> <li>– batch tickets</li> <li>– curing to include cold and hot weather concreting</li> </ul>	✓	✓	✓
Can determine specified testing requirements.	✓	✓	✓
Can properly take concrete and air temperature.	✓	✓	✓
Can properly perform a slump test.	✓	✓	✓
Can properly test for concrete unit weight.	✓	✓	✓
Can test for air entrainment (pressure and volumetric).	✓	✓	✓
Can properly cast, store and transport concrete cylinders.	✓	✓	✓
Can properly cast, store and transport concrete beams.	✓	✓	✓
Can prepare thorough and legible field reports.	✓	✓	✓
Knowledge of ACI and ASTM concrete requirements.	✓	✓	✓
Can interpret plans, specifications, shop drawings and details for material, dimension, size and location.		✓	✓
Can perform visual inspection of reinforcing steel placement.		✓	✓
Has knowledge of proper handling and placement of epoxy-coated rebar.		✓	✓
Can inspect basic vertical and horizontal formwork.		✓	✓
Can perform post-tensioned concrete inspections.			✓
Can perform observations, inspections, and testing for tilt-up concrete structures.			✓