# Procedure Checklist
# ASTM C-39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens

| | | P | F | N/A |
|---|---|---|---|---|
| **Item** | | | | |
| 1. | Remove specimen from moist storage, but keep moist. | | | |
| 2. | Check specimen for perpendicularity (less than $0.5^{o}$) to the axis and planeness (0.002”) of ends | | | |
| 3. | Determine diameter to nearest 0.01 inch by averaging two diameters measured at right angles to each other at about mid-height of the specimen. | | | |
| 4. | Wipe clean the bearing faces of the upper and lower bearing blocks and of the test specimen. | | | |
| 5. | Place test specimen on lower bearing block. | | | |
| 6. | Align the axis of the specimen with the center of thrust of the top (spherically seated) block. | | | |
| 7. | Verify that the load indicator is set to zero. | | | |
| 8. | Prior to applying the load on the specimen, tilt the movable portion of the spherically seated block gently by hand so that the bearing face appears to be parallel to the top of the test specimen. | | | |
| **When Using Unbonded Caps perform steps 9 and 10.** | | | | |
| 9. | Verify the alignment of the specimen after application of load, but before reaching 10% of the anticipated specimen strength. | | | |
| 10. | Check to see that the axis of the cylinder does not depart from vertical by more than $0.5^{o}$ and the ends of the cylinder are centered within the retaining rings. | | | |
| 11. | Apply load continuously and without shock, at a rate of movement corresponding to a stress rate of 35 ± 7 psi/sec, during the latter half of the anticipated loading phase. | | | |
| 12. | Make no adjustment in the rate of movement as the ultimate load is being approached and the stress rate decreases due to cracking. | | | |
| 13. | Apply the load until complete failure occurs and the specimen displays a well-defined fracture pattern. | | | |
| 14. | Record maximum load. | | | |
| 15. | Note the type of fracture pattern. | | | |
| 16. | Calculate the compressive strength and report with required precision according to ASTM C39. | | | |

**Remark:** **Compressive Strength = ± 10% of calculated PSI of IA results**

Date:_____ Technician:_____ IA Observer:_____

Technician’s E-mail Address:_____

Employer’s/ Supervisor’s E-mail Address: _____