

November 2, 2023

LOTT'S CONCRETE PRODUCTS – QUALITY CONTROL MANUAL

Prestress Steel

1. Prestress strand shall be 7/16" - 7 wire stress relieved 270ksi in accordance with ASTM A416. Maintain certified mill test reports to be supplied upon request.
2. Prestress strand shall be free from excessive rust, scale and pitting. A light oxide coating is permissible.
3. Bonded tendon anchorages tested in an unbonded state shall develop 90% of the minimum specified ultimate strength of the prestressed steel without exceeding anticipated set at time of anchorage, and without slip.
4. Formwork shall not restrain elastic shortening, deflection, or camber resulting from the application of the prestressing force. Formwork shall be sufficiently rigid as to not allow displacement of prestress strands beyond required tolerances.
5. Prestress strand shall be placed with a tolerance of +/- 0.25in both vertically and horizontally.
6. Prestressing force shall be determined by measuring tendon elongation and checking jack pressure with a calibrated gauge or dynamometer. The gauge or dynamometer shall have been calibrated within six months prior to use. Maintain calibration records to be supplied upon request.

Reinforcing Steel

1. All reinforcing steel cast in lintels shall be deformed grade 60 bars conforming to ASTM A615.
2. Reinforcement shall be bent cold and placed to a tolerance of +/- 0.5in.

3. Reinforcement shall be free of deleterious materials that may reduce bond at the time of concrete placement.
4. Reinforcement shall be secured to prevent displacement during concrete placement.

Concrete

1. Ready mixed concrete shall be batched, mixed, and transported in accordance with ASTM C-94. Plant equipment and facilities shall conform to "Certification of Ready Mixed Concrete Production Facilities (Checklist with Instructions)" of the National Ready Mixed Concrete Association.
2. Concrete produced by on-site volumetric batching and continuous mixing shall be batched and mixed in accordance with ASTM C-685. A minimum compressive strength of 4,000psi shall be used for all precast lintels and a minimum of 6,000psi shall be used for all prestressed lintels.
3. A minimum of 2 sets of 3 cylinders shall be taken from each type of concrete mix used within a period of 30 days. Compressive strength tests shall be performed by an ACI certified testing facility and all results kept on premises. Concrete cylinders must be prepared and cured in accordance with ASTM C-192. All slump tests shall be performed in accordance with ASTM C-143.
4. All concrete mix designs shall be kept on premises for review.