

WALLER COUNTY ROAD AND BRIDGE DEPT.



Ross McCall, P.E.
County Engineer

To: Waller County Commissioners Court

From: Ross McCall, County Engineer

Re: Amendment to Subdivision and Development Regulations: Engineering Design Standards – Wearing Surface – Concrete

Item 7 on the agenda for December 6, 2023 is to amend the Subdivision and Development Regulations to modify road construction criteria. The amendment, if approved, would modify Appendix A, Section 8.2 – Concrete:

- 8.2.1 Design Engineer shall determine class of concrete for each structure. Aggregate used in the mix shall be on the TxDOT Quality Monitoring Schedule. Batch design will be required for each class of concrete. Test specimens will be required for each 500 SY or a minimum of one cylinder for each class of concrete. For structural concrete, test cylinders will be required for each 50 CY. A slump test will be required for each set of test beams or cylinders. Air entraining and retarding agents used shall be from approved TxDOT list.
- 8.2.2 Fly ash is allowed in the mix, up to 25% maximum by weight.
- 8.2.3 Concrete pavement shall be a 5 ½ sack mix and a 28-day compressive strength of 3500 PSI. Structural concrete shall have a 28-day compressive strength of 4000 PSI.
- 8.2.4 Minimum pavement requirements shall be as follows:
 - 8.2.4.1 Subgrade – in accordance with A6.1
 - 8.2.4.2 Arterial Street – minimum thickness is eight (8) inches with #5 bars longitudinally on six (6) inch centers, and #5 bars transversely on twenty-four (24) in centers.
 - 8.2.4.3 Collector Street - minimum thickness is seven (7) inches with #5 bars longitudinally on nine (9) inch centers, and #5 bars transversely on twenty-four (24) inch centers.
 - 8.2.4.4 Local Street - minimum thickness is six (6) inches with #5 bars longitudinally on twelve (12) inch centers, and #5 bars transversely on thirty (30) inch centers.
 - 8.2.4.5 At irregularities; two (2) #5 bars will be provided, the first at three (3) inches and the second at six (6) inches from the edge of the irregularity. An irregularity is any change in the width, thickness, and/or continuity of the structural cross section. (i.e.

headers, manholes, valves, drainage inlets, utility covers, etc.)

8.0.4.6 Crack control joints shall be spaced no greater than twenty (20) feet apart and properly sealed. Additional crack control joints shall be provided where necessary to prevent uncontrolled cracking.

8.2.4.7 All reinforcing steel shall be a minimum Grade 60, ASTM A615.