Revise the stem thread requirement in Section 4.4.11.3 to read as follows:

4.4.11.3 Threads. Stem threads that generate gate motion (rising stem threads at the actuator lift nut or non-rising stem threads at the gate thrust nut) shall be machine cut or rolled trapezoidal type, similar to American Standard general purpose Acme, stub-Acme, or metric DIN 103 with a surface finish of 32 micro-inch or better. Stem coupling threads and rising stem thrust nut threads may be American Standard general purpose Acme or stub-Acme or may be unified screw threads. Where unified screw threads are used, typically for hydraulic-cylinder stem connections, the pitch may not be finer than Unified National Coarse (UNC). The stem factor is used to convert the actuator nut torque (foot-pounds) to stem thrust (pounds). The stem factor shall be calculated using a minimum coefficient of static friction for lubricated surfaces of 0.15. For extreme conditions (e.g. non-rising stem, windblown sand, etc.) consult with the manufacturer to consider use of a higher coefficient. On rising-stem gates with manual actuators, the top of the stem shall be provided with a stop collar to be field adjusted according to the manufacturer’s instructions at the time of gate installation to prevent over-closing of the gate.

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1 Stem Factor, \( \text{feet} = \frac{(dm/24) \times ((L + \mu \times dm \times \sec \alpha) / (\pi \times dm - \mu \times L \times \sec \alpha))}{\pi \times \mu} \), where \( dm \) = basic pitch diameter (inch), \( L \) = thread lead (inch), \( \mu \) = coefficient of friction (e.g. 0.15 or 0.20), \( \alpha \) = \( \frac{1}{2} \) thread angle (e.g. 14½ degrees for 29 degrees ACME).

NOTE: Calculation of basic pitch diameter varies by thread type.