In hollow Concrete Masonry Unit (CMU) design and construction, the term f'_m has been perceived as meaning different things, such as the actual strength of masonry, the tested strength of masonry, or even the strength of the CMU. The term, f'_m, is defined in TMS (The Masonry Society) 402, Building Code Requirements for Masonry Structures as:

2.1 Notation
f'_m = specified compressive strength of clay masonry or concrete masonry, psi (MPa)

Note: The term 'clay masonry' means the clay brick wall system and 'concrete masonry' is the concrete block wall system.

At first blush, this may sound like the strength of the masonry as determined by a test, but that is not the case. The word 'specified' is key to the definition. It means that the design professional, usually the Structural Engineer, determines and specifies the required strength of the masonry system, or f'_m.

Note: When project documents associate the term f'_m with the masonry unit only or specifies that the contractor will determine f'_m by testing, the provision should be clarified and corrected prior to the start of the project.

The contractor, through the Quality Control program, will be involved in the verification that the wall system will meet or exceed the design value, f'_m. Testing is by either the Prism Test Method or the Unit Strength Method and is performed by an independent testing laboratory.

The code (TMS 602, Article 1.4) requires that the masonry system equal or exceed the masonry design strength, f'_m, by one of two methods.

1.4 A. *Compressive strength requirements* – Compressive strength of masonry in each masonry wythe and grouted collar joint shall equal or exceed the applicable f'_m…..

1.4 B. *Compressive strength determination*
1. *Methods for determination of compressive strength* – Determine the compressive strength for each wythe by the unit strength method or by the prism test method as specified here.

Note: Only one method of verification of compressive strength is required by code, not both.

Verification of f'_m by the Prism Test Method replicates the wall by constructing a specimen of masonry units, mortar and grout (if applicable) for the purpose of destructively testing the specimen at 28 days. This is a compression test, so reinforcement is not included. Alternately, the Unit Strength Method, which is more conservative, may also be used. The Unit Strength Method simply tests only the CMU, then applies the result to TMS 602, Table 2 to verify the appropriate system compressive strength value as listed in the table.

Prism Test Method	**Unit Strength Method**
Build, then destructively test specimen at 28 days	Test CMU, then apply table values

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