

TEXAS A&M UNIVERSITY–KINGSVILLE
Department of Civil and Architectural Engineering
CEEN 3145 – Sections 100, 101 and 102: Construction Materials
Spring 2022

Demonstration Date: Week of April 19 during regular lab session

Final report due date: April 28 for all lab sections

Construction Materials Lab
Design Project – Instructions

The goal of this project is to apply the knowledge gained in the course to design a solution for an engineering problem.

Your team has been assigned to design a new test procedure. The goal of the procedure is to define the flow of cement mortar to be used on the jobsite *without using the mortar-flow table*.

Your proposed method will be used instead of ASTM C 1437 Standard Test Method for Flow of Hydraulic Cement Mortar. Therefore, your test procedure must result in similar conclusions as this ASTM Standard.

Project Demonstration

In the final session of the lab your team will demonstrate the proposed method. Students attending the lab virtually can choose an alternative method to demonstrate their project. They have to record the video of demonstration of the proposed method and post it on YouTube.

Term Project Report

Your term project report has two sections. The first section describes the methods, theories, analysis and process to develop your experiment. The second section includes a proposed Standard Test Procedure in the format of ASTM Standards. Your procedure must cover the following sections: Scope, Summary of Method, Significance and Use, Apparatus, Materials, Temperature and Humidity, Preparation of Samples, Procedure, Calculation, Report, Precision and Bias. Reports must be submitted on Blackboard. *In your report describe the importance of ASTM standard tests and the process these tests are being developed.*