

A STUDY ON THE USE OF EXPANDED POLYSTYRENE BLOCKS (FOAM) AS BACKFILL FOR RETAINING WALL

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ABSTRACT

A study on the Expanded Polystyrene (EPS) blocks (Foam) as backfill for retaining wall is directed primarily to those who required an understanding of the basic theory and design guidelines on the use of polystyrene as an earthwork fill. The purpose of doing this project is to apply a range of techniques for generating, evaluating and selecting the design concepts to meet the specified requirement of this stand-alone course.

The introduction reviews the two phases involved in designing a retaining wall and intro to the soils and EPS blocks as backfill materials. Then, the subject matter has been arranged so that chapter 2 and 3 deal mostly with theory and analysis of the retaining walls with soil as backfill while the subsequent chapters cover the design and detailing of the use of EPS Blocks as backfill for retaining wall. The history of the use of polystyrene as a fill material is also outlined and detailed information is given on the properties fill material; there are chapters on the advantages and disadvantages of using EPS blocks as backfill material.

Important equations used in the analysis of retaining wall using soils and EPS blocks as backfill are also included. Recommendations on the design criteria are presented too.

The report concludes by providing a table showing comparison between soils and EPS Blocks as backfill to give everyone a clear understanding of the attractiveness of using EPS blocks as backfill.