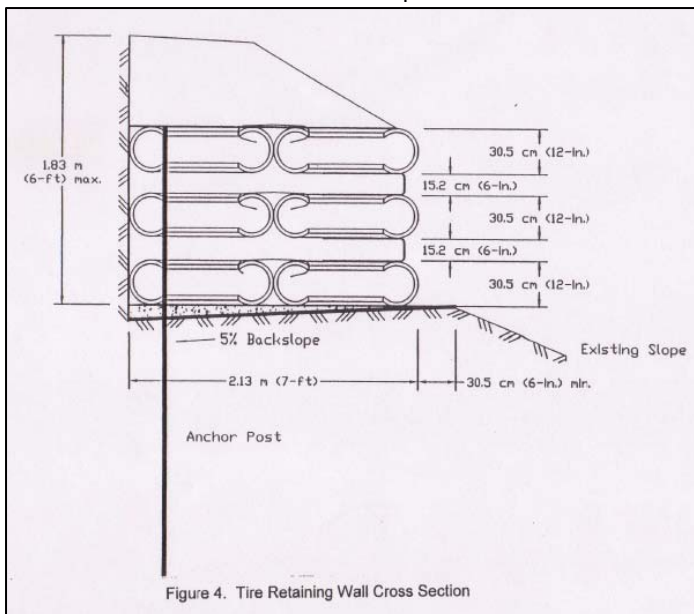


Scrap Tire Retaining Walls

Summary

- Rate of Placement: Varies
- Rubber Type: Whole Tires
- Tires Used: 0.6 tires per square foot for a tire mat that is 3 tires deep
 - Example: For a retaining wall 100 feet long and 10 feet tall (1,000 square feet), 600 scrap tires could be used
- Advantages
 - Lower cost than conventional concrete retaining walls
 - Beneficially utilizes waste tires
- Disadvantages
 - Lack of awareness (general public, contractors, and public officials)
 - Lack of access to specifications



A retaining wall is a wall built to keep a bank of sand or soil in its place. Although retaining walls are typically made of concrete, whole scrap tires may be used as an alternative building material for retaining walls. To construct a retaining wall with whole tires, the tires are stacked vertically on top of each other. Adjacent tires are then clipped together horizontally and metal posts are driven vertically through the tire openings and anchored into the underlying earth as necessary to provide lateral support and prevent later displacement. Each layer of tires is filled with compacted earth backfill.

- Sources
 - A Laboratory and Field Evaluation of the Use of Waste Materials in Highway Construction (S.N. Amirkhanian, 1999)
 - A Feasibility Study of the Use of Waste Materials in Highway Construction (S.N. Amirkhanian and D.M. Manugian, 1994)
 - User Guidelines for Waste and Byproduct Materials in Pavement Construction (Turner-Fairbank Highway Research Center, Federal Highway Administration, www.tfhr.gov/hnr20/recycle/waste/index.htm)