



Ministry of Housing, Utilities  
& Urban Communities



Housing & Building National Research Center  
International Conference

Future Vision & Challenges for Urban Development

**Green Smart Sustainable Building between Present & Future**

Cairo – Egypt, December 2024



Housing & Building National  
Research Center

## **Template No. (1)**

### **Workshop Title: Simplified Procedures for the Design and Construction of Geosynthetics Reinforced walls**

#### **Abstract:**

Geosynthetics are one of the most revolutionary product groups within civil and geotechnical engineering. They offer more efficient, cost-effective, and sustainable solutions to geotechnical problems and applications compared to the conventional ones. Geosynthetics are synthetic products, usually made from polymeric materials that could be planar, strips or three-dimensional structures. This workshop provides a simplified guide to the design, construction and quality control considerations for one of the most used applications of geotextiles in the field of geotechnical engineering: **Reinforced Earth Walls**. Projects that took place in Egypt or worldwide involving the use of geosynthetics in reinforced walls will be analyzed, with a focus on discussing any challenges encountered during the design and construction phases.

#### **Main outlines**

- Introduction to the different types of Geosynthetics.
- Geosynthetics Applications.
- Quality control tests.
- Examples of Geosynthetic reinforced earth walls constructed in Egypt.
- Observations received from the construction sites and challenges encountered.
- Proposals for future applications in Egypt.

#### **Suggested Speakers with related presentation:**

- Prof. Khalid Elzahaby, **HBRC**
- Prof. Suzan Saad Salam, **HBRC**
- Assoc. Prof. Hoda Hany Mostafa, **HBRC**
- Eng. John Erian, **STRATA for Geogrids**
- Eng. Ahmed el Wakeel, **Egypt-Grid**

#### **Expected Attendees:**

- New Urban Communities Authority
- General Authority for Roads and Bridges
- Armed Forces Engineering Authority
- Civil Engineers and Young researchers