

## UNIT III - CONSTRUCTION PRACTICE - SUB STRUCTURE

### Case Study - Shoring

#### Mixed Shoring Techniques for Building Renovation and Adjacent Excavation

##### *Project Overview*

A historic building in an urban area required extensive renovations, including foundation repairs. Simultaneously, a new underground parking garage was planned to be constructed adjacent to the building. Due to the proximity of the excavation site to the existing structure, multiple shoring techniques were implemented to ensure stability and safety during the construction process.

##### *Site Conditions*

- **Existing Building:** A three-story historic brick structure with fragile walls and shallow foundations.
- **New Construction:** A deep excavation planned for a two-level underground parking garage.
- **Soil Type:** Sandy soil with a moderate groundwater level, requiring both support for the existing building and soil retention for the excavation.