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OUTLINE OF PLANNING AND CONSTRUCTION OF UNDERGROUND METRO STATION

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ABSTRACT: Evidently, India has been developing their infrastructure in various field which includes Power, dams, Roads and Metro Rail system. Rapid growth of Metropolis Cities has been requiring a transport system like Metros for scatter the traffic accumulation in a well-organized Pattern with stipulated time and travel. Since most of the surface land has been utilized for roads, Sub urban railway track, there is a compulsion to use the below surface for extending the Rail network as Underground Station, Tunnels and Subways. Execution of the Metro Projects in the City plays a vital role in the Country's Economy; hence it is mandatory to Ensure the Structural stability of the Metro line Effectively without compromising the Quality & Aesthetics. The main objective of the paper is to explain about Various aspects of the Underground station Construction and Methodology which have been implemented to make a safe and Cost- Effective transport. Also, it gives an Overall view of an Underground Metro Station and the relevant data interpretation which are being used for the Construction of the station building in the present projects. Systematic planning and selecting the Appropriate methodology dealing with the interface Contractors enhances the Project progress in a right way. The selection of the Top-down or Bottom -Up Methodology being done based on the Station location, Soil profile in and around the site, the availability of the resources where the depth of the station is shallow even 15- 20m from the surface then Cut-cover methodology has been used and other hand. Extremely the working space is restricted and Complex Rocky strata presence in the track line, it leads to implement the NATM (New Australian Tunnel method) or sequential Excavation method during Construction stage.

Keywords: *Underground station, Top-down, Bottom-Up Methodology, Permanent & Temporary Structures*