The only modern guide to all aspects of practical tunnel construction

Practical Tunnel Construction fills a void in the literature for a practical guide to tunnel construction. By taking the reader through a brief introduction and history to a comprehensive discussion of how the geological factors affect tunneling, the author covers the stages and technology that are common today without using complex equations. Written for the individual who does not have an extensive background in tunneling but who has to make tunneling decisions, the various tunneling methods are discussed to help in the determination of the appropriate method. The methods discussed are: hand mining, drill/blasting, Tunnel Boring Machine (TBM), New Austrian Tunnelling Method (NATM), Norwegian Method of Tunnelling (NMT), Roadheader, Earth Pressure Balance Machine (EPBM), and Slurry Pressure Balance Machine (SPBM). This book focuses on driven tunnels.

This versatile handbook:

• Offers clear and accessible coverage of the state of the art in tunnel construction

• Introduces the essentials of design and construction of many types of tunnels, including TBM, EPB, Roadheader, NATM, drill and blast, and soft ground tunneling

• Provides nontechnical guidance on selecting the most appropriate tunneling methods for various situations

• Includes a brief history of tunneling and an introduction to geotechnical considerations
• Discusses tunnel access shaft construction, mucking methods, tunnel haulage, grout, water handling, and much more

*Practical Tunnel Construction* is an important resource for students, construction managers, tunnel designers, municipal engineers, or engineers who are employed by government agencies or corporations that are exploring the feasibility of planning and designing or building a tunnel.

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**ABOUT THE AUTHOR**

**GARY B. HEMPHILL, PhD, PE,** has more than thirty years of experience in the domestic and international construction industry. He has served as the project manager, designer, estimator, construction manager, field engineer, tunnel/shaft engineer, and project engineer on major projects throughout the world, including the Dallas Area Rapid Transit rail extension and the Taiwan High Speed Rail Project. He is the author of *Blasting Operations.*

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