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Najafi,2012-12-06 The complete guide to trenchless technology project management planning costs and methods Written by an expert in the field of pipeline system engineering this book describes how to plan schedule and implement efficient cost effective trenchless technology piping projects Filled with detailed illustrations and real world examples Trenchless Technology Planning Equipment and Methods explains how to accurately compare the costs of trenchless projects considering geotechnical and rock mass impacts drilling fluids and locating and tracking equipment This in depth reference provides important information on how to estimate the cost of labor and equipment and schedule trenchless piping projects A wide range of trenchless technology methods suitable for various ground and project conditions are discussed in this practical resource Coverage includes Cost comparison of trenchless technology methods Planning for trenchless technology projects Project delivery methods Geotechnical considerations Rock mass properties impacts on trenchless project feasibility Tracking locating and planning tools for horizontal directional drilling Drilling and lubricating fluids Planning and construction requirements for horizontal direction drilling Horizontal auger boring Pipe ramming Microtunneling methods Pilot tube or pilot tube microtunneling method Pipe box jacking and utility tunneling Cured in place pipe method Sliplining Lateral renewal Localized repair Planning and construction requirements for pipe bursting Panel linings Spray in place pipe

Trenchless Technology Mohammad Najafi, 2005 Annotation Trenchless technology allows for the installation or renewal of underground utility systems with minimum disruption of the surface As water and wastewater systems age or must be redesigned in order to comply with environmental regulations the demand for this technology has dramatically increased This is a detailed reference covering construction details design guidelines environmental concerns and the latest advances in equipment methods and materials Design and analysis procedures Design equations Risk assessment Soil compatibility and more TRENCHLESS TECHNOLOGY PIPING: INSTALLATION AND INSPECTION Mohammad Najafi,2010-03-08 Design Install Inspect and Manage Trenchless Technology Piping Projects Trenchless Technology Piping offers comprehensive coverage of pipe installation renewal and replacement using trenchless technology methods. This step by step resource explains how to implement efficient design construction and inspection processes and shows how to save time and money with a state of the art project management system Packed with detailed illustrations the book surveys the wide variety of trenchless technologies available and discusses the recommended applications for each This cutting edge engineering tool also contains vital information on contracting project delivery safety quality control and quality assurance COVERAGE INCLUDES Trenchless technology methods for new pipe installations and old pipe linings and replacements Pipeline planning and design Pipe behavior under soil and traffic loads Details on different types of pipes such as concrete plastic PVC HDPE GRP and metallic Design and project management considerations for horizontal directional drilling HDD Trenchless replacement systems including pipe bursting and pipe removal methods Construction and inspection requirements for cured in place pipe CIPP Design and construction considerations for pipe jacking and microtunneling methods Quality assurance

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NIH to successfully accomplish its mission going forward Practical Tunnel Construction Gary B. Hemphill, 2012-10-05 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 blast 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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