

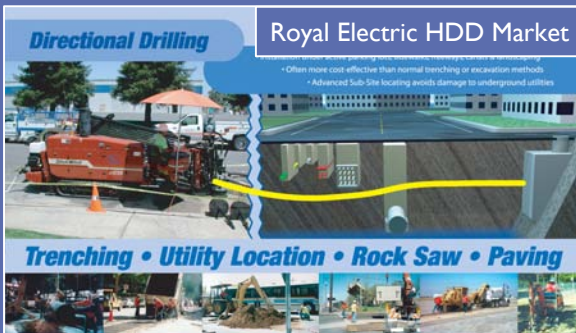
▶ Lessons Learned

Equipment Intensive: The biggest difference between underground utility work and most other building trades is that it is very equipment intensive which adds another huge element to cost tracking, estimating and production.

Estimating Methods: While a lot of building trades estimate on a unit basis doing a detailed take-off of the materials used and assigning labor units to them the method used for underground construction is usually crew-based or a combination. Understanding both methods has been crucial for putting together more complex projects and doing conceptual budgets.

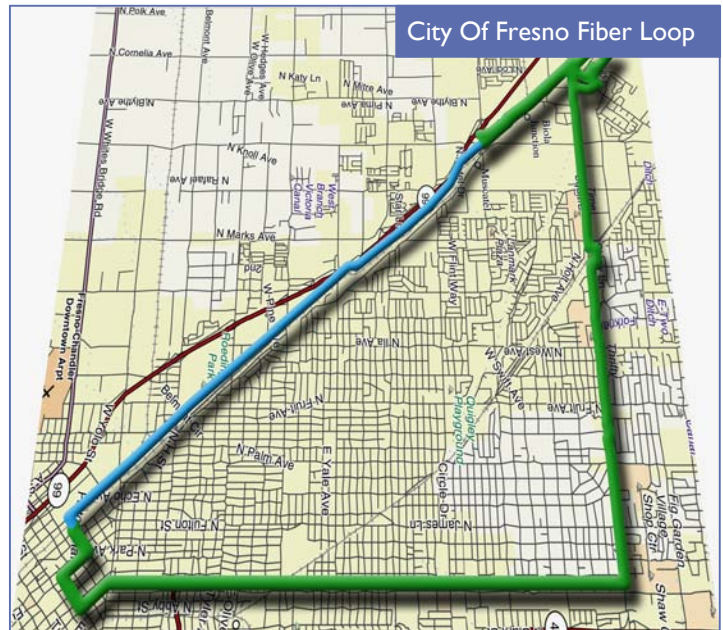
Schedule-Driven: As with airport construction almost all utility projects are very schedule intensive balancing the need to get the utility service installed with the work hour and safety restrictions imposed by various public agencies.

Planning: The costs of poorly planning, making a layout mistake or having a utility strike is so high that the very nature of the projects demands a much higher degree of planning and execution.



▶ Diverse Utility Experience

There are many types of underground utilities and many different methods of installation for each type. Having experience with a wide variety of these utilities ranging from water services to power utilities to telecommunications and the full range of installation methods including directional drilling (HDD), rocksaw, trenching and restoration provides a solid background for understanding and solving the unique problems encountered during utility installations.



Experience with various utilities includes field installation, project management, estimating, marketing and general management. Some highlights include:

- Turnaround management of a underground Utility/HDD department
- Implemented production tracking for SMUD installation contract which led to the first profits on the contract. Contract has continued to remain profitable.
- Oversaw growth of telecom division including expansion to aerial and wireless including both the rapid growth and collapse of the market.
- 72,000 Foot design and build fiber loop around City of Fresno

