NAXSA
North American
Excavation Shoring Association

TIPS FROM THE TRENCH

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SURVIVAL GUIDE FOR UTILITY INSTALLATION

As every contractor can testify, working *harder* and working *smarter* are certainly not synonymous, especially when it comes to bottom line profitability. As the underground utility industry has grown and expanded over the last 50 years, many utility contractors have also expanded their businesses by adding more workers, new excavators, and other equipment. The industry has also seen tremendous growth as new contractors entering the industry bring new ideas on how to install utility pipe. More contractors are competing for fewer projects.

Without a trench shield, the slope required for this excavation would close most of the road and adjacent sidewalk.

Technology has also impacted the industry in a big way. In recent years, new pipe materials have been developed, new and more accurate lasers have been invented, and new and improved shoring techniques and equipment have been engineered and implemented.

However, as much as the utility industry changes, some things always remain the same: low job costs are critical to success; cost overruns can spell disaster; and an inefficient operation can negatively impact a contractor's ability to make payroll, pay bills, and literally, survive in business.

OVERCOMING THE MISCONCEPTION ABOUT PRODUCTIVITY AND PROFITS

When several utility construction foremen were asked the question, "what one thing determines whether or not your crew was successful and profitable on any given day?" the majority of them answered, "the amount of pipe put in that day."

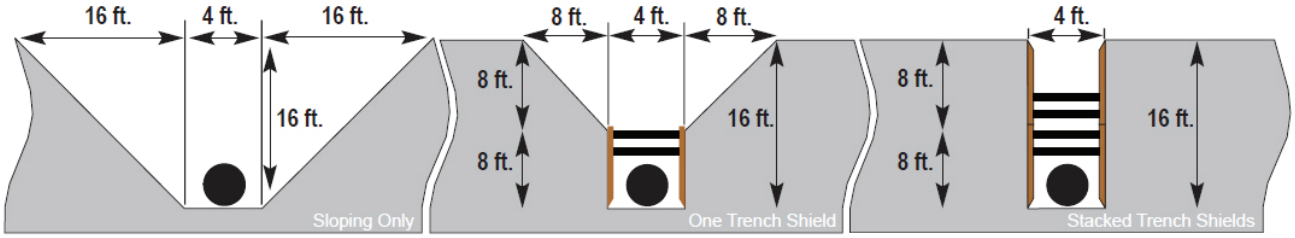
This response certainly comes as no surprise. Underground utility construction is a highly competitive industry, and many in the industry are indoctrinated with the concept that high *productivity* equals high *profits*. This mindset is not altogether true. Underground contractors have, literally, spent millions of dollars on cost overruns that could have been avoided if the crew foreman or job superintendent focused on beating their established job cost rather than just obtaining high pipe production.

Put simply, the underground utility construction industry is now too competitive for any contractor who is unwilling or unable to adapt and change with the times.

When installing a new water main across rural Texas, nothing prevented this contractor from open-cutting and sloping...except the time and money needed to excavate the excess dirt.

SLOPING vs. SHIELDING: The Cost of Excavation

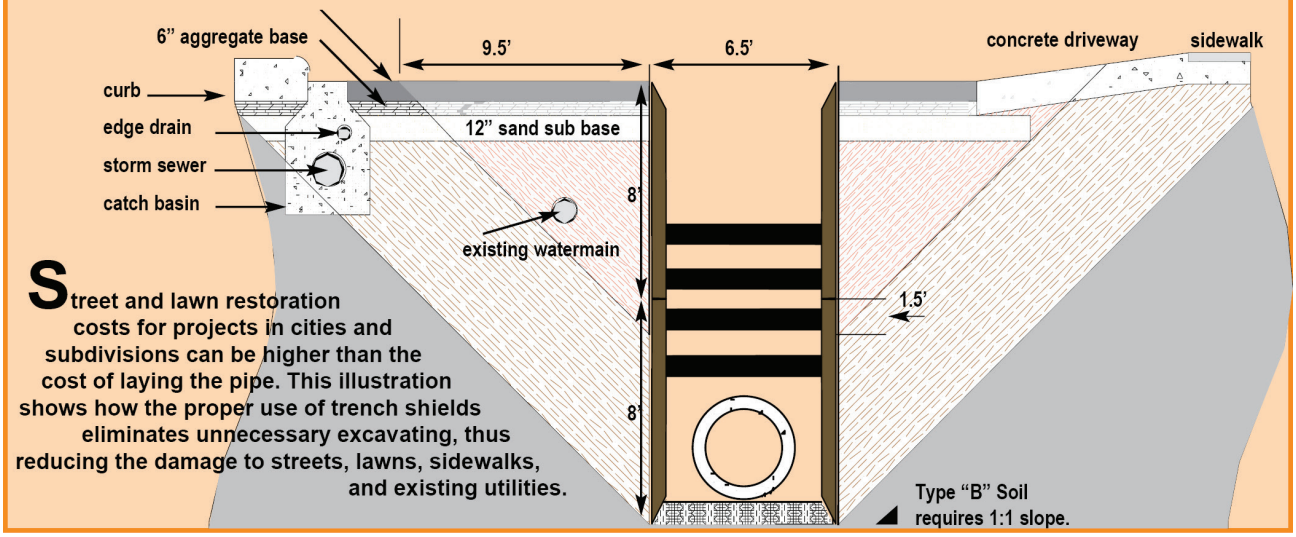
Data represents laying 400 Linear Feet of pipe at 16' deep–
a typical day's work for an underground utility contractor



	SLOPING			ONE 8' TRENCH SHIELD			TWO STACKED 8' TRENCH SHIELDS		
	Qty. (LF)	Cost/Unit (Per Ft)	Total Cost	Qty. (LF)	Cost/Unit (per Ft)	Total Cost	Qty. (LF)	Cost/Unit (per Ft)	Total Cost
EXCAVATE TRENCH; HAUL AWAY SOIL	5,000	$4.25	$21,250	2,500	$4.25	$10,625	1,500	$4.25	$6,375
BACKFILL WITH SAND	5,000	$7.75	$38,750	2,500	$7.75	$19,375	1,500	$7.75	$11,625
RESTORATION (replace road, curbs, sidewalks)			$40,000			$28,000			$7,500
TRENCH SHIELD RENTAL			$0			$300			$600
Totals			**$114,249**			**$65,955**			**$29,791**

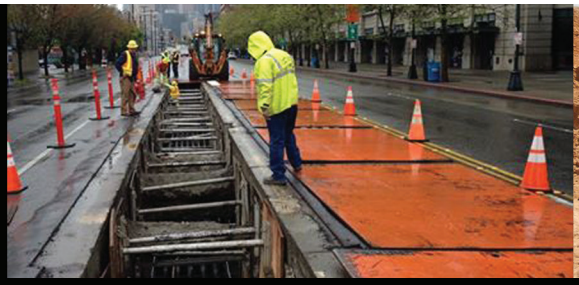
All pricing is an approximation for comparison puposes only

Trench Shielding Impact on Restoration Costs:



Street and lawn restoration costs for projects in cities and subdivisions can be higher than the cost of laying the pipe. This illustration shows how the proper use of trench shields eliminates unnecessary excavating, thus reducing the damage to streets, lawns, sidewalks, and existing utilities.

Disclaimer: This document does not provide or address all information, laws, standards, regulations, codes, requirements and safety procedures applicable to excavations, trench protection and shoring options. Readers should comply with all such measures.



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