

MHTC/MODOT Utility Vertical Depth and Encasement Requirements

Utility	Size	Depths		Minimum Required Encasement Material
		Parallel	Crossing	
cable tv (coaxial non-fiber)	N/A	24"	30"	duct (enclosed tubular casing or raceway)
electric	N/A	30"	30"	duct (enclosed tubular casing or raceway)
copper cable	N/A	24"	30"	duct (enclosed tubular casing or raceway)
fiber optic cable	N/A	30"	42"	smooth wall, welded steel pipe
fiber optic cable	N/A	30"	72"	polyethylene (PE) plastic and traceable
natural gas pipeline of (PE) plastic	> 6"	30"	30"	smooth wall, welded steel pipe
natural gas pipeline of (PE) plastic	> 6"	30"	72"	smooth wall, welded steel pipe
natural gas pipeline of (PE) plastic	≤ 6"	30"	72"	none, traceable
sewer	N/A	30"	30"	none ¹ otherwise smooth wall, welded steel pipe
water	≤ 2"	42"	42"	none, if copper, Type K
water	> 2"	42"	42"	smooth wall, welded steel pipe
welded steel pipelines	N/A	30"	30"	none ²

¹ Material made of vitrified clay, reinforced concrete, or cast iron, except when installation procedures would produce voids in the roadbed, heavy fills or installations under pressure.

² Carrying gaseous or liquid petroleum products that are cathodically protected against corrosion and triple coated in accordance with accepted pipeline construction standards.

Conduits permitted for encasement shall be new material or equivalent and shall conform to the requirements of the latest revision of the MHTC Standard Specifications for:

- reinforced concrete pipe culvert
- vitrified clay culvert pipe
- cast iron or ductile iron pipe
- corrugated metal culvert pipe only where design practices would permit its use as a crossroad culvert
- corrugated metal sectional plate culvert pipe

Smooth wall, welded steel pipe with a minimum wall thickness will be permitted as follows:

Casing Diameter (inches)	Minimum Wall Thickness
less than 6	0.188 (preferred)
6, 8, 10, 12, 14, 16	0.188
18, 20, 22	0.250
24, 26	0.281
28, 30, 32, 34	0.312
36, 38, 40, 48	0.344

Figure 9-2