

PART VII

TYPICAL DETAILS & SKETCHES

Drawings are not to scale and range from 60 to 100k in file size.

Sewer

Fig. S-1-A Typical Manhole Section Showing Branch

Tie-In..... [TD-1](#)

Fig. S-1-B Typical Manhole Plan Showing Branch

Tie-In..... [TD-2](#)

Fig. S-1-C Typical Manhole with Drop Connection..... [TD-3](#)

Fig. S-1-D Typical Manhole Frame & Cover..... [TD-4](#)

Fig. S-1-E Typical Watertight MH Frame & Cover..... [TD-5](#)

Fig. S-2 Typical Sewer Service Lateral Connection [TD-6](#)

Fig. S-3 Typical Sewer Pipe Installation in Trench [TD-7](#)

Fig. S-4 Typical Anchor Detail for Sewers on

Grades Over 20%..... [TD-8](#)

Fig. S-5 Typical Steel Sleeve Installation Under

Roadways - Sewer..... [TD-9](#)

Fig. S-6 Typical Steel Sleeve Installation Under
Railroads - Sewer..... [TD-10](#)

Fig. S-7 Typical Stream Crossing - Sewer..... [TD-11](#)

Water

Fig. W-1 Utility Locations & Easements Widths..... [TD-12](#)

Fig. W-2 Ductile Iron Water Pipe Installation &
Bedding..... [TD-13](#)

Fig. W-3 Concrete Thrust Blocks..... [TD-14](#)

Fig. W-3A Concrete Blocking for Upper Vertical Bends [TD-15](#)

Fig. W-3B Typical Thrust Block in Fill Area..... [TD-16](#)

Fig. W-3C Cross Anchor Restraints for Valves.....[TD-31](#)

Fig. W-4 Typical Fire Hydrant Assembly..... [TD-17](#)

Fig. W-5 Typical Gate Valve..... [TD-18](#)

Fig. W-6 Typical Service Lateral Installation..... TD-19

Fig. W-7 Typical Meter Boxes (5/8" & 1")..... [TD-20](#)

Fig. W-7A Typical Meter Vault (outer dimensions for
1-1/2" & larger)..... [TD-21](#)

Fig. W-7B Typical Meter Vault (1-1/2")..... [TD-22](#)

Fig. W-7C Typical Meter Vault (2")..... [TD-23](#)

Fig. W-7D Typical Meter Vault (3")..... [TD-24](#)

Fig. W-7E Typical Meter Vault (4")..... [TD-25](#)

Fig. W-8 Typical Blow-Off Assembly..... [TD-26](#)

Fig. W-9 Typical Automatic Air Release & Vacuum
Valve..... [TD-27](#)

Fig. W-10 Typical Steel Sleeve Installation Under
Roadways - Water..... [TD-28](#)

Fig. W-11 Typical Steel Sleeve Installation Under
Railroads - Water..... [TD-29](#)

Fig. W-12 Typical Stream Crossing - Water..... [TD-30](#)

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