SUITABLE SOIL TYPES:

The SmartDitch system is suitable for installation in soils that can be excavated and remain unsupported with a cross section that matches the SmartDitch cross sectional shape. Typical suitable soil types include the following:

SMARTDITCH SECTION SIDEWALL SLOPE	OSHA SOIL TYPE	USCS SOIL GROUP SYMBOL	AASHTO Classification
1H:1V (1 horizontal to 1 vertical)	Type A or B – stiff clays, silts, dense silty or clayey sands, angular gravels	Stiff CL or CH, ML, MH, SM, SC, SC-SM, GM, GC, GC-GM, angular, GP or GW	Angular A-1, A-2, stiff A-4, A-5, A-6 or A-7

Soils that will not remain unsupported at a sidewall slope of 1H: 1V may not be suitable for SmartDitch channel section installation. These soils may include very soft clays and very loose clean sands. Installation in these soils may be possible by over-excavating the unsuitable soil and replacing it with compacted soil fill meeting one of the typical suitable soil type listed in the table above.

Alternately, it may be possible to stabilize localized areas of unsuitable soil by treating the soil with quicklime (calcium oxide, do not use pulverized limestone or "ag lime") or fly ash prior to SmartDitch channel installation.

It is the responsibility of the designing engineer to ensure proper bedding and soil types are available and utilized. Where the specifications permit the use of native soil as backfill, care should be taken to ensure that the material does not the include rocks, sharp objects, soil clumps, debris, frozen or organic material.

Backfill between the sections and the ditch using material free of debris, rocks and sharp objects. Bedding backfill and general installation requirements shall be in accordance with project plans and specifications and manufacturer's recommendations.