



## Frost Probes: Measures Frost Depth down to 8 feet

**This system is recommended when retro-fitting to existing R/WIS stations.**

### Array of Single Waveguides

1. Time Domain Reflectometry (TDR)
  2. Measures soil dielectric
  3. R/WIS Compatible
  4. System Hardware
    - 12 – TDR waveguides (270.00)
    - 2 – TDR multiplier (450.00)
    - 1 – CR 10X (1400.00)
    - \*1 – AM16/32 (Thermocouple) (400.00)
    - 1 – TDR100 (4000.00)
  5. Power requirements
    - a. (remote location, relayed to R/WIS) 12 VDC
  6. Hardware cost estimate \$9490.00 + communication
  7. Communication Hardware
    - 1 – NL100 (500.00)
    - 1 – Sc32A (200.00)
    - 1 PS12LA (300.00)
  8. **\*\*Total cost estimate \$10, 500**



TDR Waveguide

**\*\* Assumes R/WIS RPU has either serial or Ethernet port available.**

**\*Resistance Probe**

Measure resistance

R/WIS – N/A

Recommendations:

Mn/DOT Office of Materials.

Don't recommend using this for future installations

**Photo unavailable at this time.**