Section L: Electrical	Effective Date: 01-01-20 Revision #: 2

L 1 – TRACER WIRE (SOLID COPPER):

Effective Date: 01-01-20
Revision #: 2

SPECIFICATION:

Tracer wire shall meet or exceed the performance specifications of:

- Manufactured for the purpose of direct burial power applications in accordance with the National Electric Code.
- Conductor shall be soft drawn bare copper meeting the requirements of ASTM Standard Specification B-3.
- Shall be a minimum gauge size 10.
- Conductor shall be solid strand.
- Insulation shall be polyvinylchloride (PVC) or low density, high molecular weight polyethylene for applications of up to 600 volts.
- Insulation shall be color coded per type service.
- Shall be constructed in accordance with Underwriter Laboratories, Inc.
- Thermoplastic Heat and Water resistant Nylon coated (THWN).

COLOR-CODED:

- Blue: Potable water
- Green: Sanitary sewer/ force main

MANUFACTURER:

- OPEN

RESTRICTIONS:

- For service lines up to 2” in diameter installed by directional drill.

L 1.1 – TRACER WIRE (COPPER CLAD STEEL):

Effective Date: 01-01-20
Revision #: 2

SPECIFICATION:

Tracer wire (Copper-Clad Steel Wire) shall meet or exceed the performance specifications of:

- Conductor shall be copper-clad steel wire composed of a steel core with a uniform and continuous copper cladding thoroughly bonded to the steel throughout.
- Cladding: The steel and copper Interface must have a metallurgical bond achieved through a high heat and pressure bonding process. Established process for porosity-free material.
- Steel: Extra high strength with 0.54 carbon or greater. Verified to meet required mechanical properties.
- Copper: UNS-C10200; of copper according to ASTM B-170 (latest revision). High conductivity, oxygen free copper to achieve optimal signal performance.
- Shall be a minimum gauge size 12AWG (.0808" diameter).
- Shall have an average tensile break load of 1100 lbs.
- Conductor shall be solid strand.
- Surface Condition; Shall be free of any defects, including flakes, grooves, pits, and voids. Wire shall be smooth, bright and shiny, and free of excessive copper dust and residual drawing lubricants.
- Insulation shall be color coded per type service.

INSULATION & THICKNESS REQUIREMENTS:

- Insulation shall be high molecular weight-high density polyethylene (HDPE) jacket complying with ASTM-D1248, 30-volt rating.
- 30 mil insulation for 2" to 8" pipe Installed by directional drill and all sizes installed by open cut.
- 45 mil insulation for 10" and larger pipe and all subaqueous pipe installed by directional drill.

COLOR-CODED:

- Blue: Potable water
- Green: Sanitary sewer/ force main

RESTRICTIONS:

- Shall not be used in open cut installations.
- Required on pipe installed by horizontal directional drill.

MANUFACTURER:

- Copperhead Industries LLC. - 1245X EHS
- OPEN

L 2 – DIRECT BURY SPLICE KITS:

Effective Date: 01-01-20
Revision #: 2

SPECIFICATION:

Direct bury water proof wire connectors shall meet or exceed the performance specifications of:

- UL Standards 486D, direct bury wire splices.
- Shall be compatible with THWN insulation thickness and AWG solid strand copper wiring.
- Shall use a silicone insulating gel sealant.

DESIGN:

- Shall splice and effectively moisture seal three to four (minimum) # 10 conductors as part of the installation of tracer wire in pipe line construction.

MANUFACTURER:

- 3M- DBR-6 DIRECT BURY SPLICE KIT
- KING INNOVATION– KING 6 BLUE

RESTRICTIONS: