



## **Construction Placement Requirements:**

- \* All fiber optic cable when in underground locations will always be installed inside conduit. Conduit will provide protected continuous pathway for the fiber optic cable and will aid in the expense of repairing damaged fiber.
- \* OFS fiber type, AT-3XEH2YT-xxx fortex, light armor, single jacket, normal underground placement applications.
- \* OFS fiber type, AT-3XE17DT-xxx-CLEB, Typical ADSS single jacket power guide, all dielectric. Placement of this type of fiber cable could at times enter underground conduit from a aerial application. Detectible tape will be placed from the pole riser to the first vault, or where it first transitions back to armored fiber.
- \* Typical conduit placement types; Rural Areas, 1 ¼" SDR 9.0 Ribbed Orange in Color Urban Areas, 2" or 4" and or a combination of Sch. 40 or SDR 9.
- \* Conduit shall always be proofed for integrity prior to placement of fiber optic cable.
- \* Cable will never be pull over 600 pounds pulling pressure or blowing pressure.
- \* Avoid excessive cable twists.
- \* Pulling or blowing speeds will never exceed 150-200 feet per minute. Typical distances of 3000 ft. \* The use of capstan winches will be calibrated with never to exceed limits of 600 lbs of force. Capstans
- shall be sized to meet the minimum bend radius requirements under tension and using the correct diameter \* cable sheaves. Conduct cable slip and buckling test per equipment manufacturer's instructions.
- \* Slack loops, figure 8's and the use of extended radio communications is highly recommended during the fiber cable placement process. Large fiber optic cable pulling projects, the crew members will meet and discuss the pulling operation and assign responsibilities prior to starting of the fiber reel segment. The process will repeat itself after each new reel and or segment.
- \* Never bend over 15 x OD of cable, or a maximum bend radius of 18".
- \* Installation temperature must always stay between -22 to 140 degrees Fahrenheit.
- \* Cable pulling lubricants used shall be recommended for cable pulling and or blowing. Polywater, hydralube or equivalent. Never use soaps or detergents that cause the cable sheath to breakdown.
- \* Cable, Conduit sizing should have a diameter ratio of < 0.67. Cable OD / Innerduct ID = Diameter Ratio.
- \* Refer to design maps for splicing locations. Fiber Optic Cable is never to be cut except only where designed by engineer.
- \* Fiber optic cable sheath numbers are required at each vault wall. Sheath numbers will identify conduit length, and slack left in vaults.
- \* Plug conduits as required in vault standards document.
- \* Placement of Cable in vaults, slack coils and conduit requirements are covered under their respective standards requirement document.

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