

**Appendix C**

| <b>Unit</b>          | <b>Unit Description</b>   | <b>Material Furnished by Owner</b> |
|----------------------|---|------------------------------------|
| BFO12                | Direct Buried 12 Fiber Cable. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.   | Fiber Optic Cable                  |
| BFO12I               | Buried 12 Fiber Cable installed in innerduct placed by the contractor. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.  | Fiber Optic Cable                  |
| BFO24                | Direct Buried 24 Fiber Cable. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.   | Fiber Optic Cable                  |
| BFO24I               | Buried 24 Fiber Ribbon Cable installed in innerduct placed by the contractor. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.   | Fiber Optic Cable                  |
| BFO48                | Direct Buried 48 Fiber Cable. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.   | Fiber Optic Cable                  |
| BFO48I               | Buried 48 Fiber Cable installed in innerduct placed by the contractor. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.  | Fiber Optic Cable                  |
| BFO96I               | Buried 96 Fiber Cable installed in innerduct placed by the contractor. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.  | Fiber Optic Cable                  |
| BFO144               | Buried 144 Fiber Cable installed in innerduct placed by the contractor. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.   | Fiber Optic Cable                  |
| BFO288I              | Buried 288 Fiber Cable installed in innerduct placed by the contractor. Cable must comply with .25dB 1310nm, 0.35dB 1550nm, G.625 standard.   | Fiber Optic Cable                  |
| BFOV(1-0.75)         | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. One duct, 0.75" diameter. (SRD 11 or 13.5 orange)   | Duct                               |
| BFOV(1-1)            | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. One duct, 1" diameter. (SRD 11 or 13.5 orange)  | Duct                               |
| BFOV(2-1)            | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. Two duct, 1" diameter. (SRD 11 or 13.5 orange)  | Duct                               |
| BFOV(1-0.75)(1-1.25) | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. Two ducts, one 1.25" and one .75" diameter. (SRD 11 or 13.5 orange)   | Duct                               |
| BFOV(1-1.25)         | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. One duct, 1.25" diameter. (SRD 11 or 13.5 orange)   | Duct                               |
| BFOV(2-1.25)         | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. Two 1.25" diameter ducts. (SRD 11 or 13.5 orange)   | Duct                               |
| BFOV(1-1.25)(1-2)    | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. Two ducts, one 1.25" and one 2" diameter ducts. (SRD 11 or 13.5 orange)   | Duct                               |
| BFOV(1-1.5)          | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. One 1.5" duct. (SRD 11 or 13.5 orange)  | Duct                               |
| BFOV(2-1.5)          | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. Two 1.5" duct. (SRD 11 or 13.5 orange)  | Duct                               |
| BFOV(1-2)            | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. One 2" duct. (SRD 11 or 13.5 orange)  | Duct                               |
| BFOV(2-2)            | Buried one or more vacant ducts placed in simultaneously in the same plow slot or trench. Two 2" duct. (SRD 11 or 13.5 orange)  | Duct                               |
| BHF(11x17x18)        | Buried Handhole for fiber optic systems.(Light Duty rated lid)  | Handhole                           |
| BHF(17x24x30)        | Buried Handhole for fiber optic systems.(Tier 15 rated lid)   | Handhole                           |
| BHF(24x36x30)        | Buried Handhole for fiber optic systems. Concrete Polymer HH with TIER 22 Traffic rated Lid   | Handhole                           |
| BHF(30X48X36)        | Buried Handhole for fiber optic systems. Concrete Polymer HH with TIER 22 Traffic rated Lid. Contractor shall include in this item the cost of installing the handhole with one 1.5" duct and two 2.5" ducts run from handhole to a location to be specified that is approximately 10ft from the handhole. Ducts are to be stubbed up 12" above grade and sealed at both ends.                                      | Handhole                           |
| BM2(5/8)(8)          | Consists of the necessary labor and material for the installation of a ground rod (installed in undisturbed soil), ground rod clamp and the required length of a bare #6 AWG copper ground wire connected to an auxiliary grounding connector (included in the housing assembly unit) within the housing. Indicate the desired diameter and length of ground rod. (5/8" diameter)(8' long) with #6 Hammerlock or eq | Ground Rod & Ground Clamp          |
| BM2I                 | Consists of the necessary labor and material for the installation detailed in the PON 1 entrance drawing included in RFP document.  | Cable & Duct                       |
| BM53                 | Warning Sign Assembly Unit  | Plastic Marker Post                |
| BM60(1-0.75)         | Underground Pipe Assembly Unit. Directional boring required.(1 duct - 0.75")(SRD 11 or 13.5 orange)   | Duct                               |
| BM60(1-1)            | Underground Pipe Assembly Unit. Directional boring required.(1 duct -1")(SRD 11 or 13.5 orange)   | Duct                               |
| BM60(2-1)            | Underground Pipe Assembly Unit. Directional boring required.(2 ducts - 1")(SRD 11 or 13.5 orange)   | Duct                               |
| BM60(1-0.75)(1-1.25) | Underground Pipe Assembly Unit. Directional boring required. (2 duct - 0.75" & 1.25")(SRD 11 or 13.5 orange)  | Duct                               |
| BM60(1-0.75)(2-1.25) | Underground Pipe Assembly Unit. Directional boring required. (3 ducts - 2 x 0.75" & 1.25")(SRD 11 or 13.5 orange)   | Duct                               |
| BM60(1-1.25)         | Underground Pipe Assembly Unit. Directional boring required. (1 duct - 1.25")(SRD 11 or 13.5 orange)  | Duct                               |
| BM60(1-1.25)(1-2)    | Underground Pipe Assembly Unit. Directional boring required. (2 ducts - 1.25" & 2") RR Crossing(SRD 11 or 13.5 orange)  | Duct                               |
| BM60(1-4)(1-1.25)    | Underground Pipe Assembly Unit. Directional boring required. (2 ducts - 4" & 1.25") RR Crossing(SRD 11 or 13.5 orange)  | Duct                               |

|                      |  |       |
|----------------------|--|-------|
| BM60(2-0.75)         | Underground Pipe Assembly Unit. Directional boring required. (2 ducts - 0.75")(SRD 11 or 13.5 orange)  | Duct  |
| BM60(2-0.75)(1-1.25) | Underground Pipe Assembly Unit. Directional boring required. (3 ducts - 2 x 0.75" & 1 x 1.25")   | Duct  |
| BM60(2-1.25)         | Underground Pipe Assembly Unit. Directional boring required. (2 ducts - 1.25")(SRD 11 or 13.5 orange)  | Duct  |
| BM60(1-1.5)          | Underground Pipe Assembly Unit. Directional boring required. (1 duct - 1.5")(SRD 11 or 13.5 orange)  | Duct  |
| BM60(2-1.5)          | Underground Pipe Assembly Unit. Directional boring required. (2 ducts - 1.5")(SRD 11 or 13.5 orange)   | Duct  |
| BM60(1-2)            | Underground Pipe Assembly Unit. Directional boring required. (1 duct - 2")(SRD 11 or 13.5 orange)  | Duct  |
| BM60(2-2)            | Underground Pipe Assembly Unit. Directional boring required. (2 ducts - 2")(SRD 11 or 13.5 orange)   | Duct  |
| BM60(1-1.25)R        | Underground Pipe Assembly Unit. Indicates when a specialized rock boring bit or reamer is required. The unit consists of the labor and equipment required to bore through rock that cannot be accomplished with typical equipment used for a similar bore where rock is not encountered. This unit will only be used when preapproved by the engineer and will be paid on a per foot basis only for that portion of the bore that is through rock. | Duct  |
| Mobilization         | Any costs associated with pre-construction mobilization, to the extent they are not reflected in per-unit prices.  | Event |

|                        |   |
|------------------------|---|
| <b>NOTE:</b>           | Material furnished by owner is stated in table above. All other material is to be furnished by contractor.  |
| <b>BM60 &amp; BFOV</b> | Labor for placement of all duct is to include tracewire installation per (1) foot of fiber placed. Tracewire installation is limited to one duct along a fiber path where multiple ducts are placed, and the bidder shall be responsible for supplying an adequate quantity to complete all underground pipe assembly units.  |
| <b>BM60R</b>           | Labor to bore through an area where a dedicated rock head is required to complete the bore, and the production is 1/2 of the typical production. This unit will be paid in addition to the standard bore unit and will apply to only the portion if the bore in rock. For example, if a 150-foot bore is called for and 25 feet of the bore meets the definition above, the pay will consist of BM60(Qbty-Size)=150 + BM60R=25  |
| <b>BFO</b>             | Each unit consists of one (1) foot (0.305 m) of buried fiber optic cable in place. This unit includes all material and labor for installing, ripping (where necessary as determined by the Engineer), and backfilling, except as specifically provided for in other units. Where the cable is plowed, ripping may be necessary to provide a ripped path to allow placement at the required depth, and may require more than one ripped pass.  |
| <b>BHF</b>             | Consists of labor and material for one (1) buried handhole installed in place, including the base, top cover and mounting hardware, and pea gravel. The handhole size, amount of pea gravel and the installation must be as specified by the Engineer. The handhole assembly unit must be used only in areas of non-vehicular traffic. When required for use in areas of vehicular traffic, the handhole must be rated to withstand vehicular traffic.  |
| <b>BM60</b>            | Consists of one (1) lineal foot (0.305 m) of Plastic pipe, with the inside diameter in inches (meters) specified in parentheses, installed in place. The standard dimension ratio (SDR) or schedule (SCH) must be specified in the parenthesis as necessary. This unit includes the pushing of pipe and any excavation, backfilling and tamping necessary for the installation of the pipe. The pipe must be installed at the depth specified by the Engineer. The installed pipe must be free of any sharp projections to avoid damage to the outer jacket of the buried cable or wire during its installation in the pipe. This unit includes all material and labor required in the repair and/or replacement of streets, roads, sidewalks, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities and any other property damaged by the excavating, except loss or damage to crops, gardens, trees or ornamental flowers in the construction corridor necessarily incident to the construction of the Project and not caused by the negligence of the Contractor. The contractor will be compensated for labor and material for the buried cable or wire under separate units. |