

APPENDIX B – SELF PROVISIONED FIBER SPECIFICATIONS

1.0.0 SCOPE OF WORK

1.1.0 GENERAL DESCRIPTION

The general description of the Scope of Work (SOW) for this project is to provide the District with a Self-Provisioned Fiber (SPF) system at ??? connecting back to either Wayne County RESA, 33500 Van Born Road, Wayne, MI 48184 and Livonia Public Schools Administration Office, 15125 Farmington Road, Livonia, MI 48154. The SOW consists of providing the labor, equipment, supplies and materials, and all operations necessary for the successful design and installation of a fully-functional, outside fiber optic network, in accordance with the specifications and the accompanying drawings included herewith this RFP. The selected vendor/contractor shall not be required to install any fiber patch cables nor connect any network electronics to the fiber optic network. In addition to the forgoing SOW, all Bids must comply with all sections of this RFP and the Products and Services Specifications set forth in sections 8.0.0 through 10.0.0.

1.2.0 SPF SITE LOCATIONS

1.2.1 The District shall provide any available documentation regarding each buildings engineering and end-point terminations, where applicable. (See Appendix C for full list of district building locations.)

1.3.0 PROPOSED SPF ROUTES/PERMITS

1.3.1 The selected vendor/contractor shall verify the viability of the route(s) and in the case of any changes or revisions, promptly notify the District of the proposed changes and any alternative(s).

1.3.2 The selected vendor/contractor shall provide the engineering and permitting for constructing the route(s) proposed by the District. Also, the District will consider alternative routes and will choose the most cost-effective route in accordance with E-rate program guidance.

1.3.3 The selected vendor/contractor shall field the proposed route(s) to obtain footages, pole locations, anchor locations, underground routing, etc., and any information necessary to fulfill the permit application requirements of all utilities and/or municipalities associated with the route(s).

1.3.4 The selected vendor/contractor shall overlay the fiber optic design onto routes, including FOC strand count(s), storage locations, and splice locations.

1.3.5 The selected vendor/contractor shall complete, submit, and follow-up until approval, all permit applications to the necessary authorities. In cases where access to certain permit authorities are required by the District (i.e., MDOT), the District shall work with the selected vendor/contractor to grant such access, as necessary.

1.4.0

SELECTED VENDOR/CONTRACTOR RESPONSIBILITY

It shall be the responsibility of the selected vendor/contractor to provide the configuration and system quantities to all locations stated herein. The intentional or accidental omission of necessary component(s) or system(s) shall require the selected vendor/contractor to supply said missing component(s) or system(s) at no cost to the District. The District and any Consultants associated with this RFP are not responsible for any omission, failure to detect any requirement, or any other condition required to complete the Scope of Work. **The awarded Bidder shall:**

- 1.4.1 Meet jointly with representatives of the District to exchange information and agree on details of equipment arrangements and installation interfaces for a Self-Provisioned Fiber (SPF) project.
- 1.4.2 Have sufficient resources to complete the SOW within the allotted timeframe and shall, upon request, demonstrate that they have the resources necessary to complete the SOW within the specified timeframe.
- 1.4.3 Furnish all labor, supervision, tooling, and miscellaneous mounting hardware and consumables for the (SPF) system installed at the District.
- 1.4.4 Install all cable in accordance with the Product and Services Specifications and/or manufacturer's recommendations and best industry practices.
- 1.4.5 Develop and submit for approval a labeling system for the cable installation. At a minimum, the labeling system shall clearly identify all components of the system; racks, cables, panels, and outlets.
- 1.4.6 Install a fire stop system in accordance with the specifications and/or manufacturer's recommendations which shall be completely installed and available for inspection by the local inspection authorities prior to (SPF) system acceptance, section 8.6.0.
- 1.4.7 Provide a written guarantee/warranty covering the installed (SPF) system against defects in workmanship, components, and performance, and follow-on support after project completion for a period of three (3) years.

PRODUCTS AND SERVICES SPECIFICATIONS

2.0.0 **SELF-PROVISIONED FIBER (SPF) SPECIFICATIONS**

2.1.0 INTRODUCTION

These Product and Services Specifications provide the Bidder with the requirements for an end-to-end Self-Provisioned Fiber (SPF) system that includes all necessary engineering, permitting, materials, installation equipment, services, configuration, coordination, installation, testing, documentation, and warranties requested by the District in this RFP. The intent of the (SPF) specifications is to provide relevant information that allows the Bidder to bid the engineering, permitting, labor, supervision, tooling, materials, and miscellaneous mounting hardware and consumables to install a complete (SPF) system.

2.1.1 The selected vendor/contractor is responsible for proposing any/all items required for a complete (SPF) system even though it may not be identified in the specifications incorporated herein, drawings and/or Bill of Materials, Appendix C, attached with the Bid.

2.1.2 The successful Bidder shall meet or exceed all requirements for the (SPF) system described in this RFP and any Bid attachment documents provided by the District.

2.1.3 If, for any reason, any Bid attachment document is in conflict with the details in the specifications herein this RFP, the forgoing written specification shall take precedence.

2.2.0 APPLICABLE DOCUMENTS

The (SPF) system described within the specifications is derived, in part, from the recommendations in industry standard manuals and documents. The Bidder is responsible for determining and adhering to the most recent release of applicable documents when developing their proposal for the (SPF) installation. The following list of applicable documents has influence on the desired (SPF) system and incorporated herein by reference.

- 2.2.1 1) All technical specification and associated drawings provided by the District
- 2) Local Building, Fire, and Right-of-Way Codes, along with Utilities specifications.
- 3) BICSI's Information Technology Systems Installation Methods Manual (ITSIMM) *latest edition*
- 4) BICSI's Telecommunications Distribution Methods Manual (TDMM) *latest edition*
- 5) National Fire Protection Agency (NFPA) - 70, National Electrical Code (NEC) – 2018

2.2.2 If a conflict exists between the applicable documents, then the aforementioned numeric list of applicable documents shall dictate the order of precedence in resolving such conflicts. This order of precedence shall be maintained unless a lesser order document has been adopted as code by a local, state, or federal entity. If a conflict further exists, documents adopted as code shall take precedence.

2.2.3 If the specifications incorporated herein and any of the aforementioned applicable documents are in conflict with each other, then the more stringent requirement shall apply. All applicable documents listed are, to the best of the District's knowledge, considered to be the most current releases of said documents.

2.3.0 PURPOSE AND BIDDER RESPONSIBILITIES

The intent of these (SPF) specifications is to make available to all Bidders a standard specification for (SPF) installation(s) in all K-12 educational facilities identified in the SOW, section 5.0.0.

2.3.1 The (SPF) specifications identify the minimum performance criteria for the components and sub-systems encompassing a complete (SPF) system that shall accommodate the District's Infrastructure Requirements, Appendix C.

2.3.2 The product specifications, general design considerations, and installation guidelines are incorporated herein this RFP.

2.3.3 Typical installation details, cable routing and outlet types for the specific educational facilities will be provided by the District herein this RFP.

2.3.4 The successful Bidder is required to furnish all labor, supervision, tooling, and miscellaneous mounting hardware and consumables for the (SPF) system installed at the District.

- 2.3.5 The forgoing specifications define the (SPF) system and subsystem components including cable, termination hardware, supporting hardware, and miscellany required to furnish and install a complete (SPF) system supporting data and fiber.

2.4.0 **SELF-PROVISIONED FIBER (SPF) SYSTEM REQUIREMENTS**

Fiber strands are to be 9/125-micron, single mode, Corning SMF-28E or equivalent. The optical fiber cable will be of loose tube (filled or water blocking tape), single jacket/single armored construction for all applications. All underground shall be installed in 1.25" outdoor grade conduit. The maximum allowed fiber attenuations shall be .35/.25 dB/km at 1310/1550 nm. The attenuation shall not vary by greater than 0.10 dB/km across the operating temperature range of the cable (measured at 1300 nm). In addition, the selected vendor/contractor shall adhere to all the following (SPF) system specifications.

- 2.4.1 **Fiber Cable Reels** - The selected vendor/contractor shall supply a copy of the factory test results for each reel to the District. If there is visible damage to the reel, and the reel is accepted at delivery, the selected vendor/contractor shall be responsible for ensuring that the integrity of the fiber strands has not been compromised.

2.4.1.1 All cable must be new from the manufacturer. Re-reeled cable shall not be accepted.

2.4.1.2 All cable splicing shall be of fusion type. Mechanical splices will not be accepted. Maximum estimated loss to be no greater than .05dB. All splices must be recorded for estimated loss and results presented to the District.

- 2.4.2 **Facilities Environment** - Each building identified in the SOW, Appendix C, has one (1) Main Distribution Facility (MDF) room. All fiber cable(s) will be rack mounted in these MDF locations.

2.4.2.1 It is recommended that each Bidder visits each facility to confirm the SOW conditions..

2.4.2.2 Bidders may request, from the District, a copy of the blueprints and/or drawings, per Appendix F.

2.4.2.3 All proposed building entrances and interior routes are to be coordinated with and approved by a representative for the District.

2.4.2.4 All above-grade entrances will 2.0" or larger PVC conduit, with appropriate LB's and clamps/straps as needed to secure the conduit to the building. All entrance penetrations will be sealed to avoid moisture from entering the building.

2.4.2.5 All below-grade entrances will be sealed to avoid moisture from entering the building.

2.4.2.6 The selected vendor/contractor is responsible for coring and sleeve installation through walls as necessary to rout fiber optic cable into the designated facilities.

2.4.2.7 All interior cable will be routed through flex plenum-rated duct from entrance point to the building MDF. The selected vendor/contractor will be responsible for installing pathway(s) if it is not currently present.

2.4.2.8 The selected vendor/contractor is responsible for fire stopping both sides of any penetrations they install in walls intended for the new fiber optic cable. (section 2.6.0)

2.4.2.9 All interior routes that are 50' or longer from the entrance point will require the fiber cable to be transitioned to plenum-rated interior cable. Outdoor or indoor/outdoor-rated cable will not be accepted for lengths exceeding 50'.

2.4.2.10 The selected vendor/contractor will abate any existing cable in each building, where applicable, and will properly dispose of such cable at the selected vendor/contractors' expense.

- 2.4.3 **Outdoor Splice Capsules** - All outdoor splice capsules shall be hung from the strand with proper brackets, and tail(s) shall be secured to the strand. Any return bends in the cable(s) shall be stored in sno-shoes of the proper size to meet the cable manufacturer's minimum bend radius.

2.4.3.1 Locations involving cables of 48 strands as the largest: Use CommScope 450B6, Preformed/Coyote PUP 8006622 or other approved equivalent.

- 2.4.3.2 Locations involving cables of 49-144 strands as the largest: Use CommScope 450D6, Preformed/Coyote Dome 8006877 or other approved equivalent.
- 2.4.3.3 All capsules shall contain sufficient and proper trays to hold single-fusion, heat shrunk splices and for the storage of unused buffer tubes (if applicable). Splices will be held in place by manufacturer provided receptacles. RTV, tape, or other non-standard method will not be accepted.
- 2.4.3.4 The selected vendor/contractor shall not be required to install any fiber patch cables nor connect any network electronics to the fiber optic network.
- 2.4.4 **Termination Shelves** - All indoor fiber termination shelves to be rack-mounted, with strain relief for the cable(s) to be terminated, and trays/brackets for the proper storage of single-fusion, heat shrunk splices. All connector panels shall be SC-type single-mode, blue in color. All termination shelves shall be clearly labeled.
 - 2.4.4.1 All strands to be terminated shall be manufactured 1-meter single-mode pigtails with SC-type connector fusion spliced to the strand. No mechanical or epoxy/polished connectors attached directly to the strands will be accepted.
 - 2.4.4.2 A storage coil of cable, 20' minimum in length, shall be left as close to the termination shelf as possible. Coil shall be no smaller than the cable manufacturer's minimum bend radius and shall be neatly attached with clamps or brackets as needed. Locations involving terminations of 0-24 strands, the shelf shall be 1RU in height. Locations involving 25-144 terminations, the shelf shall be 4RU in height.
- 2.4.5 **Fiber Installation** - Installation of the fiber optic cable shall be in strict compliance with the manufacturer's recommendations.
 - 2.4.5.1 Mechanical aids may be used, provided a tension-measuring device is used at the end of the cable and does not exceed the manufacturer's recommended pulling tension.
 - 2.4.5.2 Cable pulling lubricant recommended by the manufacturer shall be used when installing fiber in conduit.
 - 2.4.5.3 The selected vendor/contractor shall, at their own expense, replace any cables that have had excess strain and tension applied to them, or otherwise damaged during installation.
- 2.4.6 **Aerial Construction** - The selected vendor/contractor shall be responsible for confirming that there is clearance between the installed fiber and other utilities, as well as ground clearance, per the permitted utility's requirements.
 - 2.4.6.1 Aerial cable storage locations to be placed every 1500' +/- and shall be 150' in length. In/out footage identification numbers and total storage length shall be recorded.
 - 2.4.6.2 Cable shall be supported by lashing to a ¼", 7-wire, EHS galvanized, support strand using industry-standard hardware.
 - 2.4.6.3 All anchors shall be 6" screw-type. Strain insulators and yellow guy guards shall be installed at all anchor locations. Guying to other utility's anchors will not be accepted.
 - 2.4.6.4 Cable rollers must be placed on the strand at least every 30 feet to support the cable as it is being pulled out.
 - 2.4.6.5 All fiber shall be double lashed. All lashing wire will be .045" stainless steel. "D" lashing clamps are required on either side of all attachments. "Speed lashing" will not be accepted.
 - 2.4.6.6 Non-lashed cable(s) shall be secured to the strand with plastic strap/spacer combinations of sufficient length for the application. Excess strap tails must be cut off. Zinc or stainless-steel straps will not be accepted. A minimum of four (4) straps/spacers shall be installed per straight-through attachments.

- 2.4.6.7 All fiber shall be installed in accordance with the manufacturer's bend radius and tension rating specifications. All storage loops shall be stored in sno-shoes of the proper size to meet the cable manufacturer's minimum bend radius.
- 2.4.7 Underground Construction** - All underground conduit(s) shall be 1.25" SDR11 HDPE, orange in color, unless otherwise specified.
- 2.4.7.1 All conduit(s) shall be installed via horizontal directional boring.
- 2.4.7.2 All conduit(s) shall be placed at a minimum 36" depth or deeper, depending on permitting authority's requirements.
- 2.4.7.3 A locate/tracer wire will be placed along with all underground conduit(s). Wire to be 14 gauge, insulated, stainless steel.
- 2.4.7.4 All conduit splices shall be of the approved type and size for the conduit. Tape, or any other non-mechanical type of splice is not acceptable.
- 2.4.7.5 All underground "vaults" must meet the following specifications: 17" x 30"x 24" polymer concrete enclosure w/15K load rated single piece lid unless otherwise required. The lid shall be marked "FIBEROPTIC" Recommended Manufacturer: Quazite PD2436BB26/PG2436HA00 or *equivalent*.
- 2.4.7.5.1 Vaults are to be placed every 650' +/- of linear underground route.
- 2.4.7.5.2 Underground cable storage will be placed in each vault and shall be 100' in length. In/out footage identification numbers and total storage length shall be recorded.
- 2.4.7.6 A pull line or mule tape shall be left in all conduit(s) after cable installation for any future installation(s).
- 2.4.7.7 The selected vendor/contractor shall be responsible for all cleanup and restoration of areas disturbed during construction.
- 2.4.7.8 The selected vendor/contractor shall be responsible for calling in all locate requests through the MISS DIG system and recording all ticket numbers for those requests.

2.5.0 SELF-PROVISIONED FIBER (SPF) SYSTEM TESTING

All cables and termination hardware shall be 100% tested by the selected vendor/contractor for defects in installation and to verify cable performance under installed conditions. All conductors of each installed cable shall be verified useable by the selected vendor/contractor prior to system acceptance. Any defect in the (SPF) system installation including but not limited to cable, connectors, feed through couplers, patch panels, and connector blocks shall be repaired or replaced to ensure 100% useable conductors in all cables installed.

- 2.5.1 The District shall be notified prior to all testing procedures so that they may attend.
- 2.5.2 All cables shall be tested in accordance with the specifications contained herein and/or best industry standards and practices.
- 2.5.3 If any of these specifications are in conflict, the selected vendor/contractor shall be responsible to bring any discrepancies to the attention of the project team for clarification and/or resolution.
- 2.5.4 After installation, each single mode fiber strand will be tested at 1310 nm and 1550 nm.
- 2.5.4.1 All single mode optical fiber cable will be tested with an Optical Time Domain Reflectometer (OTDR).
- 2.5.4.2 All event thresholds will be set and tested at .01 dB.
- 2.5.4.3 All attenuation tests shall be performed with a laser optical power meter at 1310 nm and 1550 nm.
- 2.5.4.4 All terminated strands will be tested bi-directionally utilizing a 100-meter launch cable to ensure that all connectors and splices are accurately measured.

2.5.5 Test documentation shall be provided in an electronic media per the System Documentation specifications, section 10.0.0, within (3) three weeks after completing the (SPF) project.

2.6.0 FIRE STOP SYSTEMS

A fire stop system is comprised of the item or items penetrating the fire rated structure; the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure. Fire stop systems comprise an effective block for fire, heat, vapor and pressurized water stream.

2.6.1 All penetrations through fire rated building structures (walls and floors) shall be sealed with an appropriate fire stop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure).

2.6.2 Any penetrating items i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall be properly fire stopped.

2.6.3 Fire stop systems shall be UL Classified to ASTM E814 (UL 1479) and shall be approved by a qualified Professional Engineer (PE) licensed in the state where the work is to be performed. A drawing showing the proposed fire stopped system, stamped/embossed by the cognizant PE shall be provided to the District's Technology Director prior to installing the fire stop system(s).

2.6.4 All fire stop systems shall be installed in accordance with the manufacturer's recommendations and shall be completely installed and available for inspection by the local inspection authorities prior to (SPF) system acceptance.

2.7.0 MAKE READY FEES AND PERMIT COSTS

The selected vendor/contractor shall provide the engineering and permitting for constructing the route(s) proposed by the District.

2.7.1 The Bidder is required to include its best estimate of make-ready fees and permitting costs in the Bid plus 25% since based on past experience, utility companies consistently charge higher fees than estimates.

2.7.1.1 All make-ready fees and permit application costs shall be paid for by the selected vendor/contractor upon approval by the District's representative *and* in accordance with USAC E-rate requirements for invoicing.

2.7.1.2 The selected vendor/contractor is responsible for informing the District if and/or when those costs differ from the original cost estimate in the Bid.

2.7.2 The selected vendor/contractor shall complete, submit, and follow-up until approval by District, of all permit applications to the necessary authorities.

2.7.2.1 In cases where access to certain permit authorities are required by the District (i.e., MDOT), the District shall work with selected vendor/contractor to grant such access, as necessary.

3.0.0 SELF-PROVISIONED FIBER (SPF) MAINTENANCE REQUIREMENTS

The District will require on-going maintenance and operations of the SPF. When pricing maintenance and operations, the Bidder shall include an overview of the fiber maintenance practices including:

- 3.0.1** Provide estimated fiber maintenance fee for 100 annual hours of service for the next 5 years.
- 3.0.2** Schedule and perform routine maintenance and inspections.
- 3.0.3** Perform Fiber monitoring including information on what fiber management software is used, what fiber monitoring system is used, and who performs the monitoring.
- 3.0.4** Scheduled maintenance windows and scheduling practices for planned outages.
- 3.0.5** Handling of unscheduled outages and customer problem reports.
- 3.0.6** Contact the assigned district representative before any dig location services are performed.
- 3.0.7** Repair and/or replace damage fiber or fiber that no longer meets specifications.
- 3.0.8** Estimated Miss Dig registration and service fees must be included as part of the ongoing maintenance cost.

3.1.0 (SPF) SYSTEM TAGGING

The selected vendor/contractor will provide and install identification tags of all exterior (Outside Plant) cables. Such tagging will be done to the following specifications, unless superseded by local utility or municipality requirements.

- 4.1.1** Tags shall be a minimum 6" x 1.5" clip-on, panel type, clip size to match appropriate cable diameter. Tag label will be Black letters on Orange background, unless otherwise specified. Text height to be 0.75" to 1". Tags will be printed with the District Name, and a contact telephone number provided by the District.
- 4.1.2** Preferred product is William Frick Co "Cable Clipper", or other approved equivalent.
- 4.1.3** For Aerial applications, tags will be placed at every other pole minimum, all corner poles, and at all splice locations. Where multiple cables are present, only one (1) tag needs to be placed.
- 4.1.4** For Underground applications, one (1) tag will be placed at every vault location.
- 4.1.5** At building entrances, one (1) tag will be placed inside closest to the entry point as practicable.

4.0.0 SELF-PROVISIONED FIBER (SPF) DOCUMENTATION

The following sections describe the minimum installation, administration, testing, and as-built documentation required from and/or maintained by the selected vendor/contractor during the entire (SPF) installation project.

- 4.0.1 Drafting all route information into base .dwg file(s) and creating base maps in .dwg (AutoCAD) format.
- 4.0.2 Create charts for all splice and termination locations. The charts shall include location name, closure type, cable strand counts and footage identifiers, date(s) of splicing activity, and estimated splice loss.
- 4.0.3 Copies of all the test results will be provided to District upon completion per section 10.3.0.

4.1.0 (SPF) SYSTEM LABELING

The selected vendor/contractor shall develop and submit for approval by the authorized District representative a labeling system for the cable installation. The District will negotiate an appropriate labeling scheme with the selected vendor/contractor. At a minimum, the labeling system shall clearly identify all components of the system: racks, cables, panels, and outlets.

- 4.1.1 The labeling system shall designate the cables origin and destination and a unique identifier for the cable within the system. Racks and patch panels shall be labeled to identify the location within the (SPF) system and as follows:
- 4.1.2 Provide location and labeling plan in frame with clear plastic cover in each MDF and/or IDF, where applicable.
- 4.1.3 All labeling information shall be recorded on the “As-Built” diagrams and all test documents shall reflect the appropriate labeling scheme.
- 4.1.4 All label printing will be machine generated using indelible ink ribbons or cartridges.
- 4.1.5 Self-laminating labels will be used on cable jackets, appropriately sized to the OD of the cable, and placed within view at the termination point on each end.
- 4.1.6 Each cable shall be clearly labeled on the cable jacket behind the patch panel at a location that can be viewed without removing the bundle support ties.

4.2.0 “AS-BUILT” DOCUMENTATION

The selected vendor/contractor shall provide the District with drawings prior to the start of any construction, either in paper and/or electronic format. One (1) set of said drawings shall be kept at a designated location within the District for documenting all “As-Built” information as it occurs during project configuration and installation.

- 4.2.1 Provide installation, administration, testing, and “As-Built” documentation required from and/or maintained by the selected vendor/contractor during the entire (SPF) cabling installation project.
- 4.2.2 The drawings will be maintained by the selected vendor/contractor’s foreman daily and will be available to the District’s authorized representative upon request during the entire project.
- 4.2.3 The selected vendor/contractor shall add (mark-up) any changes and/or deviations to the “As-Built” diagrams as needed. The marked-up drawings will accurately depict the “As-Built” status of the system including termination locations, cable routing, and all administration labeling for the (SPF) system.
- 4.2.4 The selected vendor/contractor shall provide a set of “As-Built” drawing(s) to the District after the project is complete. These said “As-Built” drawing(s) will be submitted to the District in electronic copy, .dwg (AutoCAD) format.
- 4.2.5 The District shall require a narrative that describes any areas of difficulty encountered by the selected vendor/contractor during the installation that may potentially cause future problems with the (SPF) system.

4.3.0 TESTING DOCUMENTATION

Test documentation shall be provided on electronic media (CD, Thumb-drive, etc.) within (3) three weeks after completing the project. This said electronic media shall be clearly marked on the outside front cover with the words "Test Results", Project Name, and Completion Date (month and year).

- 4.3.1** Each Testing Type section of the electronic media files shall include one (1) folder for each test performed; fiber optic attenuation test results, and continuity test results.
- 4.3.2** The test equipment by name, manufacturer, model number and last calibration date will also be provided on the electronic media files. Unless a more frequent calibration cycle is specified by the manufacturer, an annual calibration cycle is anticipated on all test equipment used for this installation.
- 4.3.3** The testing documentation shall detail the test method(s) used and the specific settings of the equipment during the test(s). When repairs and re-tests are performed, the problem found and corrective action taken shall be noted, and both the failed and passed test data shall be co-located on the electronic media.
- 4.3.4** In order to read the documentation, a copy of the applicable viewer program shall be placed on the electronic media to read the file(s).

4.4.0 WARRANTY DOCUMENTATION

The selected vendor(s)/contractor(s) must furnish the District written warranty documentation. The warranty documentation shall include cable and connectivity components and have one (1) point of contact person for any/all (SPF) system issues, where applicable.

- 4.4.1** The warranty shall cover the installed (SPF) system against defects in workmanship, components, and performance, and follow-on support after project completion for a period of three (3) years from the date of the system installation acceptance by the District.
- 4.4.2** The warranty shall cover all labor and materials necessary to correct any/all failed portion(s) of the (SPF) system and to demonstrate performance within the original installation specifications after repairs are accomplished.
- 4.4.3** The selected vendor/contractor shall provide said (SPF) system warranty at no additional cost(s) to the District.