1.0 INTRODUCTION

1.1 Connecticut Libraries Fiber Consortium ("Consortium") issues this Request for Proposals ("RFP") for leased lit fiber or leased dark fiber to connect the individual member libraries to their nearest Internet Access Point/Point of Presence (PoP) or to the main library branch in the system, as specified in the attached member list, including related installation, maintenance and operation services. While intended primarily for the use of member libraries, accepted bids may also serve as the basis for agreements between any other government or municipal entity in the state of Connecticut and the approved bidder(s).

Vendors may provide bids for all or part of the attached list of Consortium member libraries.

The Consortium is seeking options for a private dedicated network solution for the connections between the individual libraries and their nearest Internet Access Point/POP, or between the individual libraries and the main library branch in their system, as specified in the attached member list, with a peering connection to the Connecticut Education Network (CEN), where all fiber strands, whether fully managed lit service or dark fiber lease, and routing equipment are 100% dedicated to the member library's network. Any proposed fiber and routing equipment must be exclusive to the member library. The solution options should provide high availability, high bandwidth services that support data, voice, and video simultaneously.

The Connecticut State Library seeks proposals comprising competitive bids offering to sell the services and/or goods described in this solicitation to facilitate the acquisition of services by Consortium member libraries. Subsequent contracts will be required. All proposals and responses received shall be treated as offers to contract.

The Consortium members may choose to apply for discounts on the equipment/services listed in this RFP through the federal E-rate program. Several criteria and restrictions pertinent to the E-rate program are included herein and must be met by the successful Vendor in order for the proposal to be considered a Qualified Proposal.

1.2 Notice to Vendors: The Connecticut State Library is soliciting bids on behalf of the Connecticut Libraries Fiber Consortium. Contracts will be awarded by the individual member libraries of the Consortium. The State Library will NOT award on behalf of the Consortium NOR incur any financial obligation to the Vendors or the Consortium. This solicitation is a service in order to aid the Consortium member libraries in securing leased lit fiber or leased dark fiber.
1.3 Issuing Officer and Technical Contact

The Issuing Officer for this procurement is:
Kendall Wiggin
State Librarian
Connecticut State Library

The Technical Contact for Questions and Information is:
Maria Bernier
E-rate Coordinator
Connecticut State Library
clfc@ct.gov

Prospective Vendors must direct and confine all inquiries and communications concerning this procurement to the Technical Contact via e-mail. The last date to submit questions is November 16, Noon EST, and the Consortium encourages prospective Vendors to submit any questions they may have as soon as possible. Questions should include "E-rate Fiber RFP" in the subject line to ensure that the Technical Contact identifies the email as relating to this procurement.

All Q&As will be compiled and posted to USAC's E-rate Productivity Center (EPC) at least weekly. Oral answers are not binding.

1.4 Bids, including all files comprising the proposal, must be submitted by email to Maria Bernier at clfc@ct.gov. No physical copies are required for delivery.

The deadline for submission is on or before Noon EST on November 30, 2018.

1.5 The Consortium will review the proposals for compliance with the procedural requirements set forth in Section 8 and may reject any proposal that materially fails to comply. The Consortium reserves the right to waive non-material defects. The Consortium evaluation team will review proposals according to the process set forth in Section 9 and make recommendations to member libraries.

1.6 Reasons for Disqualification of Proposals: If any of the following conditions occur, Vendor's proposal is automatically disqualified from being evaluated.

1.6.1 Vendor's proposal is submitted after response deadline.
1.6.2 Vendor is on Red Light Status with the FCC or is delinquent on a debt to a state or federal governmental agency or entity.
1.6.3 Vendor is not authorized to do business in Connecticut.
1.6.4 Vendor has not been in business for at least 5 years performing services or furnishing equipment required in the bid.
1.6.5 Vendor has had an unsatisfactory performance or failure to perform in accordance with the terms of one or more contracts with the member libraries within three (3) years of the issuance date of this RFP.
1.6.6 Vendor does not have an E-rate SPIN number.
1.6.7 Vendor does not have E-rate experience.
1.6.8 Vendor is unable to provide all equipment and services required unless otherwise noted in this RFP that separate contracts may be awarded for subsets of equipment and/or services.

1.7 All providers will receive notification of their bid status upon completion of the evaluation process, either that the Evaluation Committee recommends their bid to member libraries or that their bid was unsuccessful. Recommendations shall have no legal effect unless and until the bidder and member library negotiate a mutually acceptable agreement that is approved by the library.

1.8 On-site work at the library sites cannot commence until the provider has obtained all relevant certifications, licenses, permits and/or required qualifications for its workers and has presented required documentation for the personnel to work in the Consortium's locations.

1.9 The Consortium and member libraries are exempt from Connecticut Sales and Use Tax and have other federal and state tax exemptions afforded to public library entities and/or similar political subdivisions. This notice shall serve to satisfy any notification required by the provider as to these tax exemptions. Vendors must ensure that their cost proposals specifically include all applicable taxes, fees and surcharges from which the Consortium and member libraries are not exempt or that are imposed or assessed by Vendor.

2.0 SCOPE OF EQUIPMENT/SERVICES REQUESTED

2.1 The Consortium seeks proposals for the most cost effective solution over the expected life of the facilities for the installation and use of fiber facilities to connect the individual member libraries to their nearest Internet Access Point/Point of Presence (PoP) or to the main library branch in the system, as specified in the attached member list, with a peering connection to the nearest Connecticut Education Network interconnect point.

The Consortium and the member libraries are seeking two options for bids. Respondents may bid for one or both options. Vendors may provide bids for all or part of the attached list of Consortium member libraries.

Members of the Consortium may require Category1 network equipment in order to place leased dark fiber into service. This would consist of a 10G capable switch equipped with 2 or 4 SFP modules at the premise of the member's facility. Respondents can bid to provide this switch as a separate part of their proposal. Network equipment vendors are also encouraged to apply directly.

2.1.1 The first option is a fully managed, lit service transport to these locations. Providers may either bid bundled transport and Internet Service Provider (ISP) service for these lit service circuits, bid the ISP service disaggregated from the transport circuit, or provide pricing for both.

2.1.2 The second option is for a dark fiber Indefeasible Right of Use (IRU) for 2 or 4 strands of fiber solution that includes pricing for the IRU fee and separately priced annual fee for fiber maintenance and operations for the circuit from the
library branch to the designated Internet Access Point/POP. The respondent should also bid a monthly fee separate from the IRU fee and maintenance fee to place the fiber into service and to manage the service.

2.2 All "end to end" costs must be included in the price proposal.

2.2.1 For fully managed lit service this should include all interconnect, rack, permit and all other fees.

2.2.2 For IRU'd fiber, the IRU fee should be an all-inclusive flat fee, with annual fiber maintenance bid separately.

2.3 Subcontractors must be identified in the proposal. If the successful Vendor would like to use additional subcontractors that were not identified in the proposal/contract, specific approval must be granted in writing by the member library.

2.4 **Vendor Responsibility:** The Vendor(s) will be responsible for investigating and recommending the most effective and efficient technical configuration. Consideration shall be given to the stability of the proposed configuration and the future direction of technology, confirming to the best of their ability that the recommended approach is not short lived. Several approaches may exist for hardware configurations, other products and any software. The Vendor(s) must provide a justification for their proposed hardware, product and software solution(s) along with costs thereof. Vendors are encouraged to present explanations of benefits and merits of their proposed solutions together with any accompanying services, maintenance, warranties, value added services or other criteria identified herein.

2.5 For all lit service circuits or dark fiber IRUs, an exact (required) scope of work listing all pertinent details, including but not limited to installation schedules, exact standards to be adhered to, identification of aerial vs. buried fiber segments, as well as detailed drawings showing fiber and equipment locations must be provided to the Consortium by the successful Vendor. This detailed scope of work may be delivered to Universal Service Administrative Company's (USAC) School and Libraries Program once all E-Rate applications are filed, a Funding Commitment Decision Letter (FCDL) is issued, and the member libraries have issued the Vendor a purchase order. **(NOTE: All responding Vendors must be registered Vendors with USAC and have USAC issued Service Provider Identification Numbers, or SPINs).**

2.6 **Notice to Vendors:** The Connecticut State Library is soliciting bids on behalf of the Connecticut Libraries Fiber Consortium. Contracts will be awarded by the individual member libraries of the Consortium. The State Library will NOT award on behalf of the Consortium NOR incur any financial obligation to the Vendors or the Consortium. This solicitation is a service in order to aid the Consortium member libraries in securing leased lit fiber or leased dark fiber.

Note that all member libraries will be billed entities. While the Consortium has filed an FCC Form 470 as the consortium lead, each member library and in some cases the member's library system will file the 471 and serve as the billed entity.

### 3.0 TECHNICAL SPECIFICATIONS FOR LEASED LIT FIBER
3.1 The Connecticut Libraries Fiber Consortium and member libraries must have dedicated Lit Fiber Transport Bandwidth throughput (upload and download) of 1 Gbps, upgradable to 10 Gbps, with Service Level Agreement (SLA) guarantees. The solution must be scalable from 1 Gbps to 20 Gbps in 1, 2, or 5 Gbps increments. The transport circuit endpoints will be from the member library to the service provider designated Internet Access Point/PoP) or to the main library branch in the system, as specified in the attached member list.

3.2 The pricing spreadsheet accompanying this RFP asks for price quotes for 1 Gbps service up to 20 Gbps service, with increments of 1, 2, or 5 Gbps. Price quotes are requested for a 120-month term of service. Prices should be all inclusive. All inclusive in this case means that all special construction or Non-Recurring Costs (NRC) required by the Vendor to commence service and all Monthly Recurring Costs (MRC) should be included in the requisite columns of the pricing sheets. No increased pricing will be allowed during the 120-month term. The federal E-rate program allows the Consortium and the member libraries to request payment of discount portion of NRCs in the first year of service.

3.3 All lit service circuits must support Quality of Service (QoS) and have the ability to apply rate limiting guarantees to specific packet types to ensure Quality of Service at each link. The network must have the ability to support multiple QoS policies and prioritization queues across each link to reduce latency and packet loss and guarantee throughput for data, voice, and video.

3.4 For lit fiber services the following specifications shall apply:

3.4.1 Required web portal or local monitoring of all circuits
3.4.2 Shared management of equipment
3.4.3 Must provide response time for outages
3.4.4 Must provide 99.99% guaranteed uptime
3.4.5 There is no right to rate limit or throttle the capacity of the circuit at any time
3.4.6 Symmetrical upstream and downstream bandwidth to the required levels
3.4.7 Network Latency Commitment <20 milliseconds roundtrip
3.4.8 Network Jitter Commitment <5 milliseconds
3.4.9 Bit-Error Rate commitment <0.25% between circuit endpoints
3.4.10 Mean Time-To-Repair for outages <4 hours

3.5 As part of its response, a network diagram displaying the paths to be used to serve each endpoint must be included in the respondent's proposal along with a minimum of 3 references from current customers.

4.0 TECHNICAL SPECIFICATIONS FOR LEASED DARK FIBER/INDEFEASIBLE RIGHT TO USE (IRU)

4.1 As an alternative to leased lit fiber services, the Connecticut Libraries Fiber Consortium is also interested in IRU-type pricing for each member library in the Consortium with a one-time capital cost payment for 20 year and 30 year IRU for 2 or 4 strands of fiber. The Vendor must also separately bid annual recurring payments for operations and
maintenance costs for the first 10 years of the IRU. The respondent should also bid a monthly fee separate from the IRU fee and maintenance fee to place the fiber into service and to manage the service.

Each respondent is required to complete the pricing spreadsheet accompanying this RFP. Proposals that offer pricing with most of the costs being paid up-front and minimal annual maintenance costs will be viewed favorably, when comparing proposals.

4.2 Broadband Service Technical Support: The Consortium and member libraries request that the respondent provide a quote for a MRC to oversee the technical support the dark fiber once it is placed into service. This MRC should include provision of:

4.2.1 Equipment necessary to place the circuits into service
4.2.2 Network monitoring on a 24x7x365 basis
4.2.3 Tier 1 through tier 3 NOC services taking incoming calls regarding service degradation and/or service outage
4.2.4 Creation and communication of service tickets to the Consortium and affected member libraries
4.2.5 Preventive maintenance activities
4.2.6 Incident response with timing standards that are in accordance to a respondent provided service level agreement that meets general industry standards
4.2.7 Other industry standard provisions of broadband service technical support

4.3 If all or a portion of the fiber proposed by the respondent for IRU to member libraries is fiber that is to be newly built, the Consortium requests that the Vendor quote include the portion of the NRC construction costs of the new build portion of the fiber. The Consortium specifications for a newly constructed fiber infrastructure are contained in the NEW BUILD FIBER STATEMENT OF WORK (Appendix A).

Respondents are encouraged to separate special construction charges as defined by E-rate Modernization Order 2. New fiber special construction charges as defined by the order include construction, design, engineering and project management.

If special construction charges are requested by the Vendor for a dark fiber IRU, the Consortium and member libraries expect significant reductions from prevailing market rates for the IRU fee and annual maintenance charges.

If requested by the member library, Vendor must provide documentation in response to USAC review questions by the member's stated deadline. This may include, but is not limited to:

4.3.1 Route assessment, maps, ROW access and/or easement requirements.
4.3.2 Complete specifications for the special construction project as a whole, including whether fiber will be buried, strung through conduit (existing or newly installed), and/or strung aerially on poles (existing or newly installed).
4.3.3 All terms and conditions associated with the completion of the work.
4.3.4 Invoice-level detail specifying quantities and costs associated with the special construction project as a whole (e.g., number and cost of fiber strands installed,
pole attachment make-ready costs, trenching and/or boring costs, costs and quantities with respect to any conduit, hand holes, vaults, splicing).

4.3.5 Charges for engineering, environmental assessments, traffic control and permits, surveys, testing, and the like.

4.4 The Consortium and member libraries will be unable to evaluate proposals that do not include at least one alternative for an up-front capital payment for the IRU combined with separately identified recurring maintenance payments.

4.5 The Consortium and member libraries will require on-going maintenance and operations of the fiber for at least the first 10 years of the IRU. When pricing maintenance and operations, the respondent should include an overview of fiber maintenance practices including:

- Routine maintenance and inspection
- Locate service in response to "Call before you dig" calls
- Scheduled maintenance windows and scheduling practices for planned outages
- Fiber monitoring including information on what fiber management software is used, what fiber monitoring system is used, and who performs the monitoring
- Handling of unscheduled outages and customer problem reports
- Service level agreement and alternatives that may be more robust at an additional cost
- Agreements that are in place with applicable utilities and utility contractors for emergency restoration
- Repair of fiber breaks
- Replacement of damaged fiber
- Replacement of fiber which no longer meets specifications
- Policies for customer notification regarding maintenance
- Process for changing procedures, including customer notification practices

5.0 E-RATE REQUIREMENTS

Vendors submitting proposals under this RFP must agree to meet the following conditions relating to the E-rate program and be willing to include such requirements in the Vendor's contract:

5.1 Vendor must agree to submit to the SLD a completed Form 473 prior to July 1 of each calendar year. This form is available on the SLD's website at www.usac.org/sl in the Forms section.

5.2 Discounted Bills: Should the member libraries so choose, Vendor must agree to provide discounted bills to member libraries which reflect the net charges due to the member library after E-rate discounts have been reflected (also known as the "non-discount" amount). The Vendor will then invoice USAC using the Form 474 SPI form for the E-rate discount amount. Vendor shall be solely responsible for timely filing of invoices with USAC. Accordingly, Vendor understands and agrees that Consortium and member libraries will NOT be liable to Vendor and Vendor shall have no recourse against the Consortium and member libraries for any discounted amount that Vendor submits late to USAC for payment, if USAC refuses to pay the invoice due to late filing. Further,
Vendor understands and agrees that Consortium and member libraries shall not be liable to Vendor and Vendor shall have no recourse against the Consortium and member libraries for any discounted amount that Vendor submits to USAC for payment if Vendor is at fault for USAC's refusal to pay. If the Consortium's or member libraries' actions or failure to act are responsible for the non-payment of the Vendor's invoice with USAC, the Consortium and member libraries shall not be liable to Vendor and Vendor shall have no recourse against the Consortium and member libraries for the amount at issue until both the Consortium/member libraries and the Vendor have exhausted their administrative remedies of appeal to USAC and/or the FCC.

5.3 Reimbursement Option: Should member library choose to pay for any equipment or services in full, Vendor must agree to promptly cooperate and provide any information required in order for the member library's E-rate reimbursement forms submitted to the E-rate administrator to be processed successfully including but not limited to responding timely to questions that the Administrator may ask or submit required documentation that the Administrator may request of the Vendor.

5.4 Vendor must separately itemize the cost of E-rate eligible and ineligible products and/or services on all invoices. To determine what items are eligible, Vendor must contact the equipment manufacturer or contact USAC at 888-203-8100.

5.5 If Vendor learns of any federal, state or local investigation conducted by any regulatory authority or law enforcement authority that could have an adverse impact on the Consortium's or member libraries' ability to continue to receive the benefit of E-rate funding, Vendor must notify the Consortium and member library within 30 calendar days of learning of such investigation. The Consortium and member library reserve the right to cancel the agreement without penalty if the investigation impedes the Consortium's or member library's ability in any way to receive the benefit of E-rate funding, subject to any investigation of wrongdoing.

5.6 Vendor shall maintain all bids, quotes, records, correspondence, receipts, vouchers, delivery information, memoranda and other data relating to Vendor's services and any subcontractors to the member library. All such records shall be retained for 10 years following completion of services and/or installation of equipment, and shall be subject to inspection and audit by the Consortium and member libraries.

5.7 In addition to the foregoing, Vendor must maintain and enforce an internal E-rate audit process that ensures that Vendor complies with all E-rate program rules and regulations. This process must include the following:

| 5.7.1 | Where labor is involved, maintaining detailed, signed individual timesheets. |
| 5.7.2 | Ensuring that ineligible charges are not submitted to USAC. |
| 5.7.3 | Invoicing to USAC that is consistent with the contract and the Consortium's Form 471. |
| 5.7.4 | Ensuring that services or products are not provided to the member library without member library's express written permission or official purchase authorization. |
| 5.7.5 | Ensuring that member library-approved substitute services or products are prominently noted on invoices submitted to USAC and the member library. |
| 5.7.6 | When E-rate eligible services or equipment are allocated or installed in multiple locations. |
buildings, support for the allocation consistent with the amount and buildings identified in the Form 471.

5.7.7 Documenting that E-rate funded services were provided within the allowable contract period and program year.
5.7.8 Charging proper FRN(s).
5.7.9 Ensuring that invoices and USAC forms are submitted to the member library in a timely manner.
5.7.10 Ensuring that USAC forms are filled out completely, accurately, and on time.
5.7.11 Ensuring that Forms 472 are signed/dated by Vendor's representative in a timely manner.
5.7.12 Maintaining fixed asset list of E-rate-supported equipment provided to the member library with detailed information for each item (model number, serial number, product description) and made available to the member library in electronic format upon project completion.

6.0 CONDITIONS, CONTRACT and BILLING

6.1 The Consortium and member libraries reserve the right to:

6.1.1 Amend, modify, or cancel this RFP or not make an award and to reissue this RFP as a new procurement.
6.1.2 Modify or add to the requirements contained in this RFP at any time after the issuance of this RFP for compliance by all providers.
6.1.3 Increase or decrease the quantities of equipment at the same price listed in the successful contract, or entirely omit an item or group of items to be purchased to reflect actual Consortium needs at the time that orders are placed. Such additional quantities will be purchased at the price indicated on the contract. Such modifications are expressly anticipated and included within the scope of this RFP.
6.1.4 Negotiate terms and conditions to meet requirements consistent with this RFP.
6.1.5 Request providers to clarify their RFP proposals.
6.1.6 Waive minor defects or any requirement of this RFP that has not been met by any of the bidders that submitted proposals.

6.2 Timeline for Work and Purchase of Equipment: The purchase of services and equipment may be contingent upon E-rate approval and will not occur unless and until a Notice to Proceed or Purchase Order is issued by the member library.

6.3 Lowest Corresponding Price: Per FCC rules, Vendors must offer the Lowest Corresponding Price when submitting proposals. Lowest Corresponding Price (LCP) is defined as the lowest price that a service provider charges to nonresidential customers who are similarly situated to a particular E-rate applicant (library member) for similar services. See 47 CFR, Part 54, Section 54.500(f). Service providers cannot charge E-rate applicants a price above the LCP for E-rate services. See 47 CFR Section 54.511(b). There is a rebuttable presumption that rates offered within the previous 3 years are still compensatory.

6.4 The Consortium and member libraries reserve the right to extend or abbreviate the contract period if such extension or abbreviation is necessary to make the Contract term coincide with an E-rate "program year" or an extended service end date for an E-rate
program year pursuant to a "service delivery deadline extension," as those terms are defined by the Federal Communications Commission and/or USAC.

6.5 Vendor shall itemize, price, and invoice separately any materials or services that are ineligible for E-rate funding. Vendor must include the following information on all invoices to the member libraries for E-rate eligible equipment and/or services:

6.5.1 Date of invoice
6.5.2 Date(s) of service
6.5.3 Funding Request Number ("FRN")
6.5.4 Vendor SPIN
6.5.5 Detailed description of services performed and materials supplied that matches member library's contract specifications and Form 471 descriptions of same
6.5.6 Clear, concise breakdown of amount(s) to be billed to USAC (discounted portion of eligible charges) and amount(s) to be billed to the member library (non-discounted amount of eligible charges)
6.5.7 Invoice on Vendor's letterhead or on a Vendor-generated form
6.5.8 Proper E-rate discount percentage as set forth by the applicable FRN and USAC funding commitment decision letter ("FCDL")

7.0 INFORMATION TO BE INCLUDED IN PROPOSAL

In addition to the other information required to be provided, Vendor also will include with their proposal responses to the following questions:

7.1 Provide a description of the nature and scope of your firm's business endeavors, including history of company.

7.2 Provide a description of your firm's previous and ongoing relationship, if any, with the Consortium.

7.3 Provide proof that the Vendor and all subcontractors are authorized to do business in Connecticut.

7.4 Provide the names and contact information of at least 5 current Connecticut clients of similar size to the Consortium that can attest to the quality of work provided by your company using or procuring similar goods and/or services as requested in this RFP.

7.5 Provide a description of the firm's experience with the federal E-rate program.

7.6 Provide federal Tax ID Number, E-rate SPIN Number, and FCC Registration Number (FRN).

7.7 Provide certification that the Vendor currently is not subject to the Red Light Rule and will notify the Consortium if they are placed on Red Light Status with the FCC. Further, provide a certification that the Vendor's principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation, by any federal department or agency, from transactions involving the use of federal funds. Where Vendor is unable to certify to any of the Statements in this certification,
Vendor shall attach an explanation to their offer.

7.8 Provide contact name and contact information for person authorized to negotiate terms and conditions.

7.9 Provide contact name and contact information where questions related to the proposal can be directed with statement certifying that this person (or his/her authorized representative) will be available in January through April 2019 in order to assist with the completion of the Consortium's and member libraries' E-rate applications, as requested.

7.10 Provide copy of terms and conditions for proposed contract.

7.11 Bidder must indicate their willingness to be bound by the terms of the RFP.

8.0 EVALUATION PROCESS

8.1 The Connecticut State Library is soliciting bids on behalf of the Connecticut Libraries Fiber Consortium. Contracts will be awarded by the individual member libraries of the Consortium. The State Library will NOT award on behalf of the Consortium NOR incur any financial obligation to the Vendors or the Consortium. This solicitation is a service in order to aid the Consortium member libraries in securing leased lit fiber or leased dark fiber.

8.2 The award decision is made based on multiple factors, including total cost of ownership, meaning the cost of acquiring, operating, maintaining, and supporting a product or service over its projected lifetime; the evaluated technical merit of the Vendor's proposal; the Vendor's past performance; and the evaluated probability of performing the requirements stated in the solicitation on time, with high quality, and in a manner that accomplishes the stated business objectives and maintains industry standards compliance.

8.3 Other Factors. While the evaluation criteria rank highest the price of eligible goods and services (see table below), the Consortium has strong interest in providers that can provide free or low-cost bundled services that address the specific needs of Connecticut libraries, such as the following:

8.3.1 Assistance with IP addressing
8.3.2 Bandwidth burst capability
8.3.3 Connectivity to state library data systems (e.g., researchIT CT)
8.3.4 Connectivity to other research networks (e.g., Internet2)
8.3.5 Content filtering
8.3.6 Direct connectivity to other content providers (e.g., Google, Microsoft)
8.3.7 Flexible rates based on usage (e.g., 95th percentile billing)
8.3.8 Local Support
8.3.9 Security (e.g., DDoS) protections and consulting

8.4 Evaluation Criteria. As per E-rate rules, Vendors will be selected based on the most cost effective solution. The Consortium intends to evaluate all proposals to determine the most cost effective solution based on the total cost of ownership over 20 – 30 years. The
price of E-rate eligible services and equipment will be the most heavily weighted factor in the bid evaluation. The scoring rubric is as follows:

<table>
<thead>
<tr>
<th>Evaluation Component</th>
<th>Points Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of the Eligible Goods and Services</td>
<td>30</td>
</tr>
<tr>
<td>Ability to Meet Technical Requirements</td>
<td>20</td>
</tr>
<tr>
<td>Other Factors and Costs</td>
<td>20</td>
</tr>
<tr>
<td>References and Prior Experience</td>
<td>15</td>
</tr>
<tr>
<td>Vendor Background and Financial Stability</td>
<td>15</td>
</tr>
<tr>
<td>Total Possible Points</td>
<td>100</td>
</tr>
</tbody>
</table>

8.5 Vendor may be disqualified from any evaluation or award if Vendor or any key personnel proposed has previously failed to perform satisfactorily during the performance of any contract with the State or library member, or violated rules or statutes applicable to public bidding in the State.

8.6 The Consortium will make every effort to adhere to the following schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 19, 2018</td>
<td>Consortium posts RFP (Form 470) to E-rate portal</td>
</tr>
<tr>
<td>November 16, 2018, noon EST</td>
<td>Deadline for Vendors to submit questions</td>
</tr>
<tr>
<td>November 30, 2018, noon EST</td>
<td>Deadline for Vendors to submit bids</td>
</tr>
<tr>
<td>December 3-10, 2018</td>
<td>Evaluation team reviews and scores bids, makes Vendor recommendations to member libraries</td>
</tr>
</tbody>
</table>

8.7 Award of Contract. The Vendor whose proposal is most advantageous to the Consortium members, taking into consideration the evaluation factors herein, will be recommended for contract award. Unless otherwise specified by the Consortium or the Vendor, the Consortium reserves the right to accept any item or group of items on a multi-item proposal.
APPENDIX A: NEW BUILD FIBER STATEMENT OF WORK

The Work is defined as:

Project Management
- Selected Contractor and its subcontractors shall provide all project management to accomplish the installation of all project work as outlined in the Statement of Work.
- Provide engineer(s), certified on selected fiber system specifications and procedures, to manage all phases of project as outlined in this proposal. This includes ordering and managing the bill of materials as outlined below, directing and managing cable placement and restoration, directing and managing splicing crews, and providing detailed documentation at the end of the project.
- Selected Contractor and its subcontractors will develop a project management plan, which will include a milestone chart. The milestone chart will outline any critical path events and then track these with the appropriate library members.

Material Management
- Selected Contractor and its subcontractors will provide all material management to ensure that the project remains on track according to the project milestones.
- Selected Contractor and its subcontractors will develop a material management plan in conjunction with selected Contractor plants and other suppliers.

Property Restoration
- All cable routes which are plowed will be restored to as near to original condition as possible.

Install overhead and underground fiber optic cable.
- For underground, bore or plow approximately 3' feet deep and place fiber optic cable through innerduct/conduit/hand-hole system.
- Install Consortium member approved hand-holes and place marker/locator posts.
- The member library will provide entry/exit holes into buildings for routing cables to distribution frames unless otherwise noted.
- The Contractor shall provide specific details of cable placement using aerial photography and CAD drawings.

Install and Splice Hardware at Head Ends and in the Field
- Install optical hardware and splice field cable to equipment tail at head ends and splice tail to pre-stubbed hardware with SC pigtails.
- Prep closures, cables, fibers and splice fibers at all field locations
- Fiber to fiber fusion splicing of optical fibers at each point including head ends.
- Individual splice loss will be \( \leq 0.10 \text{ dB} \) for single-mode unless after 3 attempts these values cannot be achieved, then the fibers will be re-spliced until a splice loss within 0.05 dB of the lowest previous attempts is achieved. Splice loss acceptance testing will be based on the fusion splicer's splice loss estimator.

Final Testing
- In addition to splice loss testing, selected Contractor will perform end-to-end insertion loss testing of single-mode fibers at 1310 nm and 1550 nm from one direction for each terminated fiber span in accordance with TIA/EIA-526-7 (OFSTP 7). For spans greater than 300 feet,
each tested span must test to a value less than or equal to the value determined by calculating a link loss budget.

- Inspect each terminated single-mode fiber span for continuity and anomalies with an OTDR at 1550 nm from one direction in accordance with OTDR operating manual.

**Documentation**

The Contractor shall provide final documentation consisting of:

- Route "As-Built" Maps/Diagrams
- End-to-End Insertion Loss Data
- OTDR Traces
- Individual Splice Loss Data

**General Scope of Work (Description of all routes)**

The Contractor's proposal shall include the following:

- Placing approximately (number of feet) of new (fiber count) SM cable to provide bored fiber connectivity in route that is used to provide connectivity to (Applicant's eligible facility).
- Placing approximately (number of feet) of (fiber count) SM underground cable to reach (applicant eligible facility).
- Placing approximately (number of feet) of buried (fiber count) SM fiber from an existing handhold at (address) to applicant eligible facility.
- Placing approximately (number of feet) of buried (fiber count) SM fiber from an existing handhold at (address) to applicant eligible facility.
- Placing of associated hand holes, marker posts, locator posts, inner duct, and miscellaneous materials.
- Splicing of fiber optic cables as specified.
- Procuring and Provisioning of hand holes and miscellaneous materials required to accomplish the above.

**Bid Specifications**

- All splicing shall be by the fusion method.
- All splicing enclosures and hand holes shall be of a type to be determined by the member library.
- All hand holes shall be (State) DOT approved, 45,000 lb. load rated CDR or comparable enclosures.
- All plowed cables shall be placed at a depth of 36" along roadways and 36" on private property.
- All road and driveway bores shall be at a depth of 36" and will have a 2" inner duct placed within.
- All buried splice locations will be marked with a locator post, and a copper ground wire shall be attached to the splice closure/cable sheath.
- Buried marker posts shall be placed every 1500'.
- A warning tape shall be placed 12" above the buried cable.
- All highway shoulders, library property, and ditch lines will be compacted and restored to satisfactory condition.
- All DOT encroachment permits, railroad encroachment permits, and National Park Service permits shall be submitted by member library in accordance with the permitting agency requirements.
• The applicant shall be responsible for the payment of any permitting fees and shall be the owner of said facilities.
• Contractor shall furnish an as-built drawing to the owner.
• Contractor shall perform an end-to-end continuity and loss test on each spliced fiber segment and provide the owner with the dB loss of each fiber segment.
• Contractor shall be responsible for submitting the appropriate ULOCO locate requests.
• The member library and the municipality shall grant contractor right of way permission for municipal-owned properties and roadways.
• All cables to buildings shall be fusion spliced within a minimum of 50' of entering a building at a location to be determined by the owner with an existing single mode fiber and terminated at customer's rack.
• A minimum of 100' coil of cable shall be left in each hand hole/building for splicing use.
• The member library shall provide the contractor with secured space to store materials and equipment if needed.

Responsibilities of the Awarding Library Consortium Member, hereinafter "Member":

Right-of-Way Acquisition & Permitting
• Member is responsible to ensure that all cable routes have approved access & rights-of-way for all proposed cables installations.
• Member will provide any information or points of contact to allow selected contractor and its subcontractors to facilitate the route prep "Make-ready" and actual cable installation.
• Member is responsible for pulling all required construction permits. Selected contractor and its subcontractors will provide Member points of contact with any information necessary to pull these permits in a timely fashion.

Termination and Splicing locations
• Member will, in conjunction with selected contractor, designate/decide on all termination locations, whether in-building, outside plant or in customer premises. This will include all hand-hole or manhole locations.
• Member will, in conjunction with selected contractor, designate/decide on all field splice locations, in-building splice locations (if applicable), or other splice locations necessary to connect the network.

Cable and Hardware Approval
• Member will approve all cable and hardware prior to ordering or installation. Selected contractor will provide any required consultation to assist Member in this effort.
• Member will approve all hand-hole or building entrance hardware prior to ordering or installation. Selected contractor will provide any required consultation to assist Member in this effort.

Material Delivery, Receipt & Storage
• Member will provide warehouse or yard space to accommodate all materials provided by selected contractor to accomplish this project. Member will inspect, receive and issue any materials to provide accountability. This will reduce the overall cost to the Member with no added costs being placed into the proposal to cover the receipt and storage.

Final Inspection
Member will provide, at their discretion, a person(s) to witness any final testing or construction verification. The person designated by Member will be required to initial/provide acceptance of any results. This person(s) will represent Member during any and all acceptance testing. This does not relieve the selected contractor from providing agreed upon documentation or absolve the selected contractor of any warranty support.

**Communications**

- Member is responsible for all communications with its customers or other interested parties concerning the proposed construction. Notification of any person(s) affected by this construction is the responsibility of Member. Selected contractor will work directly with any persons designated to handle project communications to facilitate awareness and reduce turmoil in the Member's facility. Selected contractor will provide consultation to assist in the development of a communications plan as required.