

Applicant: Monroe Technology Consortium

BEN: 17035537

Form 470 #: 240021294

County Fiber Project – Feb 2024 Bid

I. Procurement Timeline

Task	Due Date
Optional pre-bid meeting	2/20/2024 2:00 pm
Deadline for vendors to submit questions	3/1/2024 11:00 pm
Answers to questions posted	3/7/2024 4:00 pm
Deadline for vendors to submit proposals*	3/14/2024 2:00 pm

*Applicant may, at its sole discretion, extend the due date for the submission of proposals when it is in its best interest to do so. Such extensions shall be done via addendum posted in EPC.

II. Communications and Questions

All communication with the Applicant regarding this solicitation, including questions or comments, must be submitted via email to **Nicholas Hay** at nicholas.hay@monroeisd.us no later than the deadline provided in the Procurement Timeline. Include the Form 470 number in the subject line. Contact initiated by an Offeror concerning this solicitation with any other Applicant representative will not be considered and answered. Answers will be posted to EPC by the deadline provided in the Procurement Timeline. It is the responsibility of every Offeror to ensure they have downloaded the latest version of the Form 470 and/or 470 RFP attachments, including any addenda. Applicant reserves the right to ask clarifying questions of vendors upon review of proposals.

III. Pre-Bid Meeting

For this solicitation, a pre-bid meeting is:

☐ Required

☒ Optional

☐ Not Offered

Meeting to be held virtually on **February 20th, 2024, 2:00 pm**, via Microsoft Teams. While attending the pre-bid meeting is not required, it is highly recommended.

[Click here to join the meeting](#)

Meeting ID: 284 975 571 919

Passcode: fTy5tC

Or call in (audio only)

[+1 734-418-9311,,102977578#](#)

IV. Proposal Instructions

Proposals must be submitted by the deadline for guaranteed consideration by the Applicant.

Proposals should be emailed to ALL the following recipients:

- bids@monroeisd.us

Proposal submissions should include the following information:

- Applicant name
- Form 470 number
- SPIN (Service Provider Identification Number)
- Clear indication of service offering
- Service provider's terms and conditions

Proposals should also include all costs associated with providing service, including but not limited to:

- monthly service fees, including all estimated taxes, fees, and/or surcharges
- network electronics necessary to light the circuit(s)
- maintenance and operations of the service
- one-time construction, installation, and/or connection charges

Proposal pricing should include a completed [Appendix A Data Transport Circuits 2024 Feb Bid.xlsx](#) workbook and be submitted in .xls or .xlsx format.

All Form 470 RFP bidding and reference documents are available at https://monroeisd-my.sharepoint.com/:f:/g/personal/nicholas_hay_monroeisd_us/Ei7nLrVnMu5Bp-6qjph_3YEBiwbWNfWLBKuCifU8qWMNRQ?e=lv9bMb

V. Service Request

Monroe Technology Consortium (Applicant) is seeking proposals for data transmission services and related equipment between the A Locations and Z locations. Offers are not required to bid every circuit to be considered. If warranted to bid all sites, Offerors are encouraged to partner with entities that own existing infrastructure along the Offeror's proposed route(s). The applicant reserves the right to award all, some, or none of the circuits represented in this procurement.

We are posting this 470/RFP for the initial project we posted in December 2023, because we want to give vendors more time to bid since we did not get bids for all the connections and we added additional connections we would like to consider.

The Applicant currently owns 12 to 18 fiber strands connecting each of our 9 local school districts DMARC site from the Monroe County ISD that was deployed around 1999 in a hub-and-spoke network design. We currently provide 10Gb WAN connection to each school district that the district uses to connect to our ISP and other consortium related services. We co-own fiber in the sheath with Everstream and they handle repairs and maintenance of the existing fiber. In your bid, we are open to utilizing some of this existing fiber to achieve a design where we can have 99.995% network availability. When we ask for a connection from A location to Z location, we are seeking an option that will allow us to create resiliency that connects each local school district to eliminate a single point of failure between every district in the network.

Data Transmission Service

Vendors are encouraged to leverage existing Monroe Technology Consortium fiber as part of your bid since we have dark fiber strands available for use. We are looking to provide resiliency/diverse paths to each site where only some segments may need a diverse path between the sites. On the KMZ file, it does not contain all the splice points as this map is at least 7 years old. Everstream is our current vendor that maintains our fiber and splices.

The existing fiber we have at each site has 12-18 strands that have ST connection blocks. If any of the existing fiber will be used by vendors, they will need to be terminated to SC or LC patch panel so it can handle the 20/40 Gbps connections.

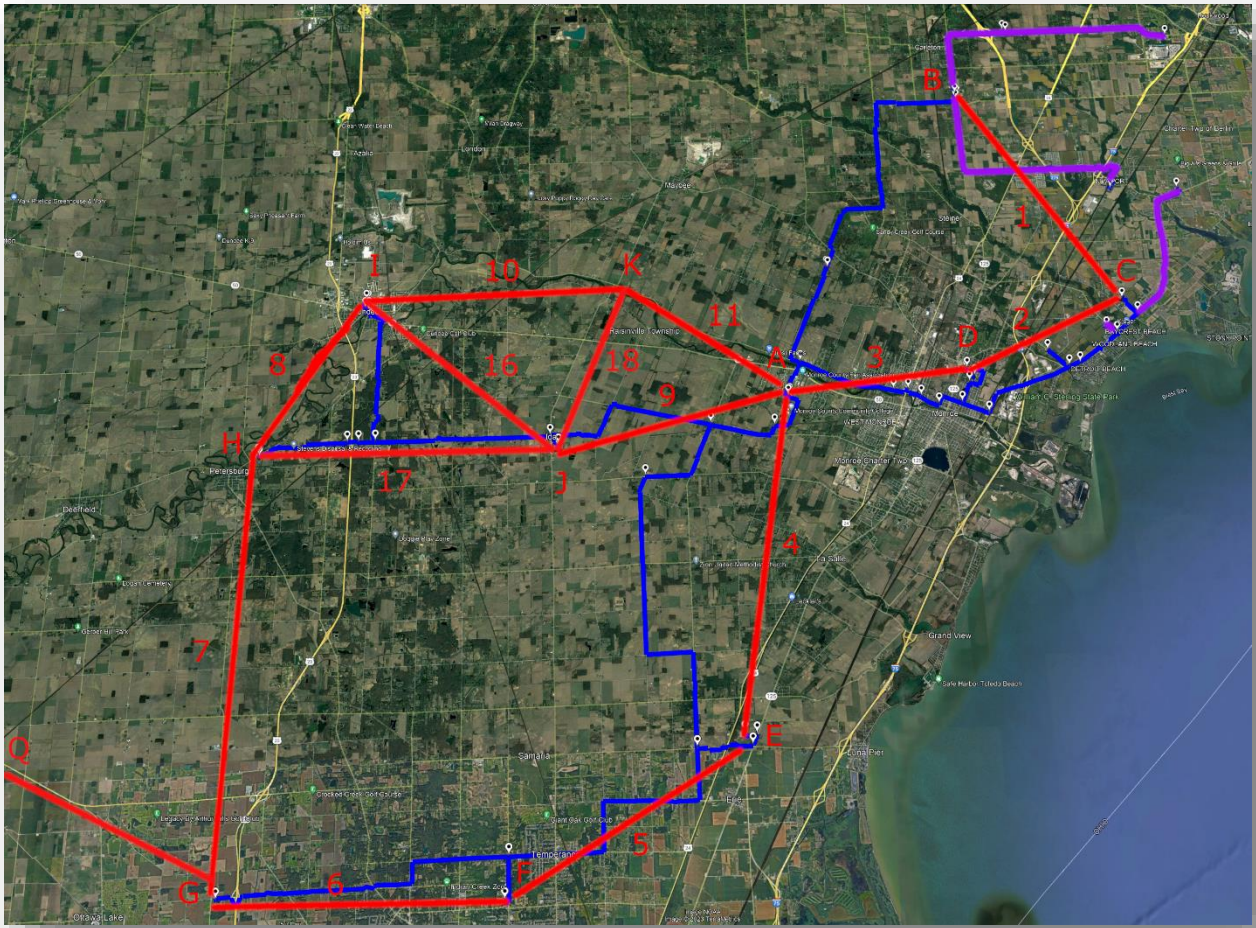
We will not be scheduling site visits and vendors are encouraged to estimate this expense on your bid. Vendors can leverage existing fiber paths we have coming into the building that have existing fiber in place.

We will be using spanning tree protocol for routing on the consortium network. At each site, we plan to have a direct connection from the Monroe ISD to the district and the resilient connection(s) between multiple sites.

Below are two maps of the Monroe County Wide Area Network and the Monroe Public Schools Wide Area Network that show existing fiber path and proposed connections we are asking vendors to bid. Links are below for higher resolution images and other file formats download.

Leased dark fiber solutions must include costs for the network equipment and network maintenance. For leased lit fiber solutions, a turn-key solutions with all expected costs are required. New service is being planned to begin on July 1, 2024, which represents the start of the E-rate funding year.

Monroe County Wide Area Network



Blue – Existing Monroe Consortium Fiber

Purple – Local School District Fiber

Red – Proposed Fiber Connections

Monroe County Wide Area Network Map Image Download

https://monroeisd-my.sharepoint.com/:i:/g/personal/nicholas_hay_monroeisd_us/EYa5HACnfKRfpt7d1Mgn1k8nFm7S_3ea4EdSqT-u7r05w?e=rilhqZ

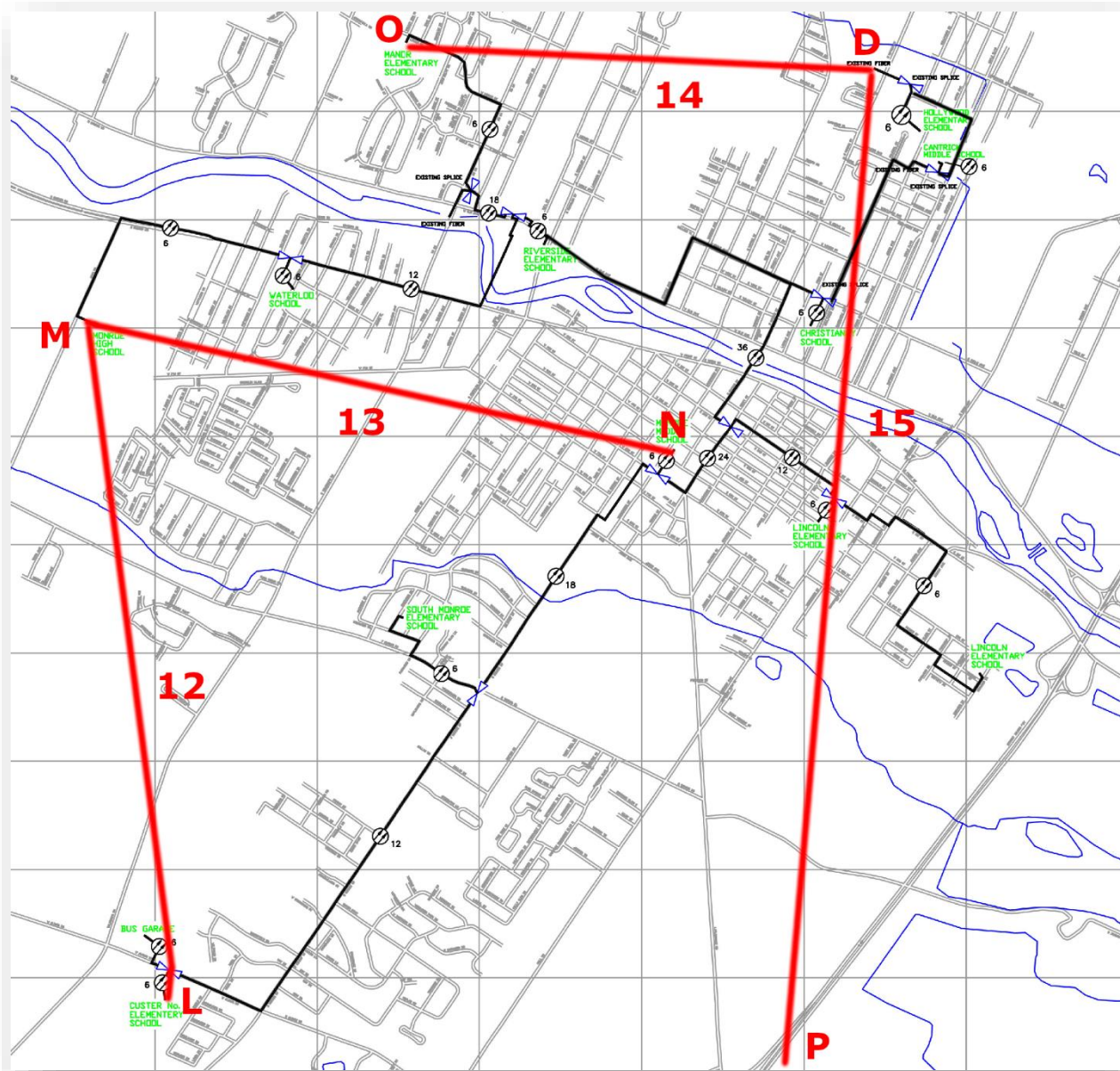
Monroe County Wide Area Network Available Fiber for Vendor Use Map Image Download

https://monroeisd-my.sharepoint.com/:i:/g/personal/nicholas_hay_monroeisd_us/Ef04vLKUT9xFgV_8Zs72KkwBIUDcY1x6vyp3l-FT0AH9LA?e=0a3IOP

Monroe County Wide Area Network Google Earth Overlay File (.kmz)

https://monroeisd-my.sharepoint.com/:u:/g/personal/nicholas_hay_monroeisd_us/EbVfWJR5sqlAga8eH95nUV8BwSsoIdQvezPieFAgpEChQg?e=iJbxTO

Monroe Public Schools Wide Area Network



Black – Existing Monroe Public Schools Fiber

Red – Proposed Fiber Connections

Monroe Public Schools Wide Area Network Map Image Download

https://monroeisd-my.sharepoint.com/:i:/g/personal/nicholas_hay_monroeisd_us/EXhNNM2TsXBfKUYp9PHUjTUBbihi_kef3R4jPz5dmSle-w?e=MogDYh

Monroe Public Schools Wide Area Network Available Fiber for Vendor Use Map Image Download

https://monroeisd-my.sharepoint.com/:i:/g/personal/nicholas_hay_monroeisd_us/Ebbs6A0D-mBErQKSU_YF58B5NMP9Fgl9Z_PDzgCmOJm9w?e=vnrSdo

Monroe Public Schools Wide Area Network Map .DWG Download

https://monroeisd-my.sharepoint.com/:u:/g/personal/nicholas_hay_monroeisd_us/Ef02xIubmqFBikRE9FNbtoEBjZSPG5Nnuh493mttxe8ogQ?e=ltZxSdo

VI. Scope of Services

Section 1: Wide Area Network

The Applicant must have dedicated, symmetrical data transport bandwidth options of 10/20/40 Gbps with Service Level Agreement (SLA) guarantees between the designated endpoints. For recurring services, price quotes are requested for 60-month, 120-month, and/or 180-month terms of service with a set number of voluntary extensions. However, all terms a respondent bid will be considered. No increased pricing will be allowed during the term of the quoted special construction, NRC, and MRC rate. If an increase in bandwidth is requested during the contract period, the contract does not automatically renew. As bandwidth needs are steadily rising, respondents are free to bid higher tiers of bandwidth than what is requested to demonstrate their future scalability.

Section 2: Bid Options

Applicant is seeking multiple options for bids. Respondents may bid on one, all, or any number of options. All respondents must be capable of providing telecommunication services under the Universal Service Support Mechanism, be a registered vendor with USAC, and have a USAC issued 498 ID (formerly Service Provider Identification Number-SPIN).

Option 1: Leased Lit Fiber

Offers will be accepted for leased lit fiber wide area network services. The service must include fully-managed symmetrical bandwidth connections, minimum 10 Gbps, between the A and Z Locations in the Service Request. Service providers are requested to submit offers for incremental bandwidths from 10 Gbps up to 40 Gbps, in 10 Gbps increments

Option 2: Dark Fiber Lease

This service option is for the lease of dark fiber strands, network electronics necessary to light the fiber, and maintenance & operations costs. One-time special construction should be bid separately from the monthly recurring costs.

Option 3: C1 Network Maintenance for Dark Fiber

This service option is for maintenance & operations for self-provisioned network solutions. Respondent may offer on-going or on-demand maintenance either themselves or through 3rd party subcontractors. If respondent intends to use 3rd party subcontractors to deliver a part or all of the service, this should be clearly indicated in the response.

Option 4: C1 Network Electronics for Dark Fiber

This service option is for necessary network equipment to light applicant-owned dark fiber at 10/20/40 Gbps once the construction is complete.

Section 3: Solution Specifications

Option 1: Leased Lit Fiber

Applicant must have dedicated, minimum symmetrical transport bandwidth of 10 Gbps with Service Level Agreement (SLA) guarantees between the designated endpoints. The solution must be scalable to 40 Gbps. If special construction is necessary, respondents are **required** to separate out pricing for construction from the monthly recurring costs. No increased pricing will be allowed during the term of

the quoted special construction, NRC, and MRC rate. If an increase in bandwidth is requested during the contract period, the contract does not automatically renew. As bandwidth needs are steadily rising, respondents are free to bid higher tiers of bandwidth than what is requested to demonstrate their future scalability.

Option 2: Dark Fiber Lease

Applicant must have dedicated transport bandwidth via lease of 2 to 6 strands of dark fiber between the designated endpoints. If special construction is necessary, respondents are **required** to separate out pricing for construction from the monthly recurring costs. No increased pricing will be allowed during the term of the quoted special construction, NRC, and MRC rate. Bids are required to include all services and components necessary to light and make the service operational. Respondent may offer services either themselves or through 3rd party subcontractors. If respondent intends to use 3rd party subcontractors to deliver a part or all of the service, this should be clearly indicated in the response.

Option 3: C1 Network Maintenance for Dark Fiber Solutions

Applicant is seeking bids related to maintenance & operations for self-provisioned network or dark fiber solutions. Respondent may offer on-going or on-demand maintenance either themselves or through 3rd party subcontractors. If respondent intends to use 3rd party subcontractors to deliver a part or all of the service, this should be clearly indicated in the response.

Dark fiber responses are not required to include a maintenance response. C1 network maintenance may be bid as a stand-alone service by anyone, even if they are not bidding on dark fiber service. Please note that respondents submitting a dark fiber proposal may also bid on maintenance services provided they bid it separately and do not bundle maintenance costs with their proposal. Responses for maintenance must include scheduled routine maintenance as a monthly or annual cost as well as unscheduled break/fix maintenance as an annual time and material cost estimate. Explanation of how the annual scheduled and unscheduled maintenance was estimated should be included.

Maintenance Terms and Conditions

Respondent shall maintain the applicable network seven days per week, twenty-four hours per day. Upon notification from the district of a malfunction relating to the applicable network, respondent shall respond to such malfunction within two (2) hours and thereafter proceed to correct the malfunction with reasonable diligence. When pricing maintenance, the respondent should include an overview of maintenance practices including:

- Routine maintenance and inspection
- Scheduled maintenance windows and scheduling practices for planned outages
- Handling of unscheduled outages and customer problem reports
- What service level agreement is included and what alternative service levels may be available at additional cost
- What agreements are in place with applicable utilities and utility contractors for emergency restoration
- Repair of fiber breaks
- Mean time to repair
- Replacement of damaged fiber
- Post repair testing
- Replacement of fiber that no longer meets specifications

Data Transmission Service

- Policies for customer notification regarding maintenance
- Process for changing procedures, including customer notification practices
- Process for moves, adds, and changes
- Process for responding to locate requests

Option 4: C1 Network Equipment for Dark Fiber Projects

The Applicant is also seeking bids for necessary network equipment to light dark fiber at 10/20/40 Gbps once the construction is complete. Pricing information, as well as manufacturer and model, should be included in the bid response. Network electronics may be bid as a stand-alone service by anyone, even if they are not bidding on any fiber service. Please note that respondents submitting a dark fiber proposal may also bid on equipment provided they bid them separately and do not bundle equipment costs with their proposal.

Vendors are encouraged to submit network equipment as part of your bid for consideration, but it will not be required. Vendors may also only submit network equipment bids without submitting a bid for the fiber.

Monroe Technology Consortium is seeking Cisco network switches, or equivalent, at each site with the following minimum specifications. We are open to any manufacturer's equipment and we are currently using Cisco and HP/Aruba network equipment.

- 12 or 24 port SFP+ 1/10/25 Gbps (C9300X-12Y-E or C9300X-24Y-E)
- 4-port QSFP+ 100/40 Gbps (C9300X-NM-4C)
- Dual Power Supplies - Secondary Power Supply 716 watts (PWR-C1-715WAC-P=)
- 5 Year 8X5XNBD Cisco Smartnet Support (CON-5SNT-C9300XYA)
- C9300X-24Y DNA Essentials, 5 Year Term License (C9300-DNA-L-E-5Y)

Please include pricing for the SFP, QSFP modules, and fiber patch cables. We will accept bids for OEM and non-OEM optics.

- 10GBASE-SR SFP+ LC MM (SFP-10G-SR)
- 40GBase-SR4 QSFP+ MMF Module (QSFP-40G-SR4)
- 40GBASE-ER4 QSFP+ SMF 40KM Module LC (QSFP-40G-ER4)
- 40GBASE-ZR4 QSFP+ SMF 80KM Module LC (QSFP-40G-ZR4)
- Cisco - SFP (mini-GBIC) transceiver module - GigE - 1000Base-T (GLC-TE)
- 2M SC to LC SM fiber patch cable
- 3M SC to LC SM fiber patch cable
- 2M ST to LC SM fiber patch cable
- 3M LC to LC MM OM4 fiber patch cable

Network Design and Construction Routes

Offerors should clearly illustrate proposed network design(s) and any necessary new construction routes. The Applicant is not proposing any specific routes or designs but rather is looking for creative solutions that meet the objective of creating a resilient network.

VII. Special Construction

Refer to USAC's Fiber Summary Overview for costs eligible as special construction and other considerations related to the construction of new network facilities: <https://www.usac.org/e-rate/applicant-process/before-you-begin/fiber-summary-overview/>

Bids with Special Construction costs represented in Appendix A, on tab titled "Bid Response Pricing" must include the Special Construction Key Information for each segment/section/circuit.

Bidders are strongly encouraged to include a milestone payment schedule in their bid response and resulting contract for projects that include special construction charges. Bidders must include an example of their contract with their bid response.

VIII. General Terms for All Proposals

Description of Proposal

- Respondent will provide a description of their proposal for all services and solutions.
- Description will include an overview of the proposal, any deviations from the requested architecture, design or requirements, assumptions made, and other detail Applicant may find useful or necessary (or could differentiate the solution from a competing proposal).

Timeline

- For each response, respondents must include a timeline for all bringing the site online.
- Proposals requiring little to no special construction should be able to bring the site online by the July 1 start of the funding year.
- For solutions requiring special construction, a schedule of bringing the site online should be included with an explanation of how this timeline shifts if the date of the E-rate funding commitment shifts.

Demarcation

- Solutions bringing service to the property line but not to the demarcation point are not acceptable.
- Respondent must specify specific demarcation setup included in base fees, e.g. wall mounted CPE and CAT6a handoff, rack mount patch panel, etc.

Network Diagram

- For each response, respondents must include a network diagram displaying the path to be used to serve each desired endpoint, as reflected in Diagram A.

References

- For each response, respondent must provide 3 references from current or recent customers (preferably K-12) with projects equivalent to the size of Applicant.

E-Rate Program Integrity Assurance (PIA) Review

- If their solution is chosen, respondents are required to promptly provide Applicant with any information being requested as part of PIA review.
- Vendors may assist applicants with preparing funding requests or responding to PIA questions and may speak directly with PIA reviewers.
- For all responses that include special construction, the respondent agrees to, by submitting its bid to produce all construction labor, construction materials and other cost information requested during PIA review.

Required Notice to Proceed and Funding Availability

- Applicant will follow the purchasing policies of the Applicant Board and requirements and procedures of the FCC's E-rate program as administered by the Universal Service Administrative Company to be eligible for all available funding.
- The implementation of any associated contracts resulting from this competitive bid process will be dependent on the district's issuance of a written Notice to Proceed.
- E-rate funding notification alone will not signify Notice to Proceed. The district will have the right to allow the contract to expire without implementation if appropriate funding (including any state matching funds for special construction projects) does not come available.

IX. Evaluation Criteria

Leased Dark Fiber, Leased Lit Fiber, Special Construction, & C1 Maintenance

% Weight	Criteria
35%	E-rate eligible recurring and one-time circuit costs¹
15%	Complete bid submission ²
10%	Ability to support requirements of this solicitation ³
25%	Proposed contract terms and conditions ⁴
5%	E-rate ineligible recurring or one-time costs ⁵
10%	Respondent references ⁶

Category 1 Network Equipment

% Weight	Criteria
<u>50%</u>	<u>E-rate eligible costs¹</u>
<u>10%</u>	<u>E-rate ineligible costs⁵</u>
<u>40%</u>	<u>Compatibility with existing network infrastructure⁷</u>

Criteria Explanation

1. E-rate eligible costs: the total cost of ownership for the eligible components of the proposed service. Total cost of ownership takes into account all one-time and recurring costs. Note that E-rate eligible costs refers to the pre-discount cost of the solution, not the post-discount portion of costs that are the responsibility of the Applicant. This criterion must be the highest weighted per E-rate program rules.

2. Complete bid submission: Bids concisely address Applicant's requirements, as set forth in the solicitation, and do not contain a significant amount of corporate boilerplate marketing information
3. Ability to support requirements of this solicitation: proposed solution clearly meets Applicant's requirements and needs
4. Proposed contract terms and conditions: Proposed contract has flexibility and terms desired by Applicant
5. E-rate ineligible costs: Any costs of the proposed service that are not eligible for E-rate funding. This does not refer to the post-discount portion of eligible costs that are the responsibility of the Applicant.
6. Provider references: response included K12 references that were similar in size and scope
7. Compatibility with existing network infrastructure: proposed equipment is easily compatible with the existing equipment used by the Applicant.

X. Service Level Agreements

Offerors must provide their SLAs with their response for lit and dark fiber solutions. They will be evaluated against the following standards:

- The provider will make all reasonable efforts to ensure 99.995% network availability of each circuit.
- .25% frame/packet loss commitment
- Sub 10ms network latency commitment for the leased lit fiber transport circuit measured between the Z location and the A location
- 20ms network jitter commitment
- There is no right of provider to limit or throttle the capacity of the circuit at any time for any reason
- These standards are a vendor stated commitment for fully operating service. Any degradation of service may be counted against the network availability standard.
- Vendor will provide monthly service reports and an annual service report showing: Peak link usage for the quarter and downtime on the link
- Impaired performance versus SLA standards for the link
- These are all aggregate statistics for the month

The Applicant is asking an Offeror for their commitment to respond to any outage within two (2) hours and a four (4) hour restoration of service (see schedule of service credits below), with credits for a greater than 2-hour response to a service outage.

Length of Service Outage	Credit is the following percentage of Monthly Fiber Maintenance Fee
Less than 2 hours	No Credit
Two (2) hours to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%

Data Transmission Service

Greaterthantwelve(12) hoursandless thansixteen (16) hours	20%
Greaterthansixteen(16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

XI. Contract Term and Modifications

Service providers submitting proposals for contracted service are requested to provide, at minimum 60-month, 120-month, 180-month term of service with a set number of voluntary annual extensions.

The service must be available by July 1, 2024. Vendors must state whether they anticipate being able to meet the required date for installation of new service or not. **If unable to deliver service by July 1, 2024, vendors are required to provide the date they guarantee service will be available.**

Contracts for leased lit fiber must allow for bandwidth increases up to 40 Gbps throughout the term of the contract; increases in bandwidth during the contract period and/or optional renewal periods shall be considered modifications to the existing agreement, not new agreements and thus do not automatically extend the term of the contract.

Contracts must include a provision permitting early termination of circuits, with no penalty, should a location be closed by the Applicant. Additionally, if the Applicant opens a new location, the final agreement must include a provision permitting that site to be added at the existing MRC rate for the duration of the contract, with the Applicant paying for any one-time charges associated with adding the new site to the network. Any additional sites added to the agreement will be co-terminus with the main agreement.

No increased pricing will be allowed during the term of the quoted special construction, NRC, and MRC rate. Service providers proposing equipment whose prices may increase depending upon new U.S. government tariffs imposed on imports are encouraged to (a) identify such products in their offers, and (b) propose an acceptable methodology for limiting price adjustments over the life of the contract. Subject to contract restrictions, services may be reevaluated for cost-effectiveness at any time during the life of the agreement including renewal periods.

Proposals should include the service provider's terms and conditions.

XII. Disqualifying Factors

Proposals will be disqualified for the following reasons:

- Unauthorized Service Provider contact with Applicant.
- Proposal submitted after the posted bid due date.
- Proposal includes generic/encyclopedic price lists and/or solution is proposed by an artificial intelligence system that does not take into consideration the specific needs of Applicant.

XIII. Bid Evaluation Factors

- Applicants should be aware that the evaluation of their proposals may be adversely affected by the following factors:
 - Proposal does not fully meet Service Requirements.
 - Proposal does not provide definitive costs for the services.
 - Proposal does not guarantee service by the requested date.

XIV. E-Rate Specific Considerations/Information

Per USAC E-rate rules, cost of eligible goods/services will be the highest valued criterion in the evaluation process; however, other criteria with a lesser value may also be considered.

Service providers proposing to temporarily loan equipment for product demonstration and/or evaluation purposes are required to clearly state that such loans are of limited duration. Product demos extending beyond thirty (30) days must be explicitly authorized by both parties and provided at a fair market rate.

By submitting a proposal on the requested services herein, the vendor certifies its proposed services and/or products comply with Part 47 Section 54.9 and 54.10 of the FCC rules which prohibits the sale, provision, maintenance, modification, or other support of equipment or services provided or manufactured by Huawei, ZTE, or any other covered company posing a national security threat to the integrity of communications networks or the communications supply chain. See <https://www.usac.org/about/reports-orders/supply-chain/> for more details.

As required by Section 54.500(f) of Part 47 of the Code of Federal Regulation all bids in response to this solicitation must offer the lowest corresponding price (LCP) which is defined as the lowest price that a service provider charges to nonresidential customers who are similarly situated to a particular E-rate applicant (school, library, or consortium) for similar services. See <https://www.usac.org/e-rate/service-providers/step-2-responding-to-bids/lowest-corresponding-price/> for more information on the requirements relating to LCP.

XV. Additional Considerations/Information

Applicant reserves the right to award all, part or none of the services set forth in this procurement. This procurement in no manner obligates Applicant until a valid signed contract and/or valid Purchase Order is executed.

Applicant may in its sole discretion extend the time for the submission of proposals upon a finding that it is in the interest of Applicant to do so. Such extensions shall be by addendum(s), which may be issued before the submission due date.

After final contract is negotiated, approved, and awarded, all proposal documents pertaining to this procurement will be open to the public, except for material which is proprietary or confidential. Applicant will not make public any pages of a proposal on which the Offeror has stamped or imprinted "Proprietary" or "Confidential" subject to the following requirements. Proprietary or confidential data shall be readily separable from the proposal to facilitate eventual public inspection of the non-confidential portion of the

proposal. The price of products offered, or the cost of services proposed shall not be designated as proprietary or confidential information.

By submitting a proposal, the Offeror certifies that no relationship exists between the Offeror and Applicant that interferes with fair competition or is a conflict of interest; and no relationship exists between such propose and another person or firm that constitutes a conflict of interest that is adverse to Applicant.

References, Standards, and Codes

Specifications in this document are not meant to supersede state law or industry standards. Respondents shall note in their response where their proposal does not follow the requested specification to comply with state law or industry standard. The following standards are based upon the Customer-Owned Outside Plant Design Manual (CO-OSP) produced by BICSI, the Telecommunications Distribution Methods Manual (TDMM) also produced by BICSI, ANSI/TIA/EIA and ISO/IEC standards, and NEC codes, among others.

It is required that the respondent be thoroughly familiar with the content and intent of these references, standards, and codes and that the respondent be capable of applying the content and intent of these references, standards, and codes to all outside plant communications system designs executed on the behalf of the district.

Listed in the table below are references, standards, and codes applicable to outside plant communications systems design. If questions arise as to which reference, standard, or code should apply in a given situation, the more stringent shall prevail. As each of these documents are modified over time, the latest edition and addenda to each of these documents is considered to be definitive.

Table 1 — References, Standards, and Codes

Standard/ Reference	Name/ Description
BICSI CO-OSP	BICSI Customer-Owned Outside Plant Design Manual
BICSI TDMM	BICSI Telecommunications Distribution Methods Manual
BICSI TCIM	BICSI Telecommunications Cabling Installation Manual
	Customer-Owned Outside Plant Telecommunications Cabling Standard
TIA/EIA – 568	Commercial Building Telecommunications Cabling Standard
TIA/EIA – 569	Commercial Building Standard for Telecommunication Pathways and Spaces
TIA/EIA – 606	The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
TIA/EIA – 607	Commercial Building Grounding and Bonding Requirements for Telecommunications
TIA/EIA - 455	Fiber Optic Test Standards
TIA/EIA - 526	Optical Fiber Systems Test Procedures
IEEE 802.3 (series)	Local Area Network Ethernet Standard, including the IEEE 802.3z Gigabit Ethernet Standard
NEC	National Electric Code, NFPA
NESC	National Electrical Safety Code, IEEE
OSHA Codes	Occupational Safety and Health Administration, Code of Federal Regulations (CFR) Parts 1910 - General Industry, and 1926 - Construction Industry, et al.