

REQUEST FOR PROPOSAL (RFP)

ERATE LIT FIBER AND DARK FIBER NETWORK

Scott County Public Schools

Issue Date: 12/08/2022

470 #: 230007717-Scott_470_CAT1_23-24

SCOPE OF SERVICES

Scott County Public Schools is requesting proposals for leased lit fiber and leased dark fiber services for delivery of wide area network (WAN) services to the district. The current WAN services are provided by leased dark fiber.

- Service is expected to be delivered from the district hub, the Scott County Public Schools District Office at 340 East Jackson Street, Gate City, VA 24251.
 - Demarcation Point: Dedicated Server Room
- Service is expected to be delivered to the eligible service locations from the district hub at the following locations:
 - Eligible Entity 1, Duffield Primary at 663 Duff Patt Hwy, Duffield, VA
 - Eligible Entity 2, Dungannon Intermediate at 113 Fifth Avenue, Dungannon, VA
 - Eligible Entity 3, Fort Blackmore Primary at 214 Big Stoney Creek Road, Fort Blackmore, VA
 - Eligible Entity 4, Nickelsville Elementary at 11415 Nickelsville Hwy, Nickelsville, VA
 - Eligible Entity 5, Rye Cove High at 164 Eagle's Nest Lane, Duffield, VA
 - Eligible Entity 6, Rye Cove Intermediate at 158 Memorial School Lane, Duffield, VA
 - Eligible Entity 7, Twin Springs High at 273 Titan Lane, Nickelsville, VA 24271
 - Eligible Entity 8, Gate City High at 178 Harry Fry Drive, Gate City, VA
 - Eligible Entity 9, Gate City Middle at 170 Harry Fry Drive, Gate City, VA
 - Eligible Entity 10, Hilton Elementary at 303 Academy Road, Hilton, VA
 - Eligible Entity 11, Shoemaker Elementary at 218 Shoemaker Drive, Gate City, VA
 - Eligible Entity 12, Weber City Elementary at 322 Jennings Street, Weber City, VA
 - Eligible Entity 13, Yuma Elementary at 130 Grover Cleveland Lane, Gate City, VA
 - Eligible Entity 14, Scott County Career & Technical Center at 387 Broadwater Avenue, Gate City, VA
 - Scott County Alternative Education at 361 Broadwater Avenue, Gate City, VA

The new service is being planned to begin on July 1, 2023, which represents the expiration of the current leased WAN service.

Scott County Public Schools is seeking two options for fiber bids. Respondents may bid either or both 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).**

1. The first option is a fully managed, leased lit fiber solution. One-time special construction should be bid separately from the monthly recurring cost for the fully managed leased service.

2. The second option is for a leased dark fiber solution that includes special construction, the monthly lease fee, and maintenance. One-time special construction costs should be bid separately from the monthly lease fee. Maintenance fees can be included in the monthly lease fee.
3. For any leased dark fiber solutions, we also require fiber termination in ST connection.

Scott County Public Schools will consider traditional network designs (such as hub and spoke) or alternative proposals that, in accordance with E-rate guidance, maximize cost effectiveness. Respondents should clearly illustrate proposed network design and construction routes. Scott County Public Schools is not advocating or mandating any preconceived network design or construction route and leaves this decision up to the vendor to present their best solution while recognizing the cited termination locations.

In E-rate terminology, **special construction** refers to the upfront, non-recurring costs associated with the installation of new fiber to or between eligible entities. If no new fiber is being installed, then any installation costs are considered standard **non-recurring costs (NRC)**. Applicants may seek funding for special construction charges in connection with leased lit fiber, leased dark fiber, and self-provisioning. Special construction charges eligible for Category One support consist of three components:

1. construction of network facilities
2. design and engineering
3. project management

Note: The term “special construction” does not include network equipment necessary to light fiber, nor the services necessary to maintain the fiber. Charges for network equipment and fiber maintenance are eligible for Category One support as separate services, but not as special construction.

All options can include special construction or one-time E-rate eligible non-recurring costs as well as E-rate eligible recurring circuit costs. To the extent that the winning service provider installs additional strands of fiber for future business ventures, the winning service provider assumes full responsibility to ensure those incremental costs are allocated out of the special construction charges to the district in accordance with FCC rules and orders. If, after the issuance of the FCDL, USAC or the FCC determines that the winning service provider did not cost allocate those charges associated with the additional strands, Scott County Public Schools will not be responsible for reimbursing the winning vendor and the winning vendor will assume all responsibilities deemed ineligible by USAC. For examples of cost allocation, please see document in Appendix C as prepared by the State E-rate Coordinators’ Alliance (SECA).

Based on the bids and both a short term and long term cost effectiveness analysis, Scott County Public Schools will determine which, if any, of the leased lit service, leased dark fiber, or some combination of solutions is acceptable. The specifications related to each solution option are as follows.

Leased Lit Fiber

Scott County Public Schools must have dedicated, symmetrical transport bandwidth of 10 Gbps with Service Level Agreement (SLA) guarantees between the designated endpoints. The solution must be scalable to 40 Gbps with 1 Gbps cost increments. Price quotes are requested for 12 month and 36 month terms of service. Each respondent is required to complete the leased lit fiber pricing matrix located in Appendix A of this RFP. If special construction is necessary, respondents are **required** to separate out pricing in Appendix B: Special Construction Pricing. No increased pricing will be allowed during the term of the quoted special construction, NRC, and MRC rate in each pricing cell of the matrix. If an increase in bandwidth is requested during the contract period the

contract does not 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.

Leased Dark Fiber

As an alternative, respondents can quote a leased dark fiber network solution from the specified hub to the eligible service locations. The price quote should be for a lease of two (2) strands (1 pair) of single-mode fiber from the hub to each eligible entity location for a 12 and 36 month terms of service. Each respondent is required to complete the leased dark fiber pricing matrix located in Appendix A of this RFP. If special construction is necessary, respondents are **required to** separate out pricing in Appendix B: Special Construction Pricing.

Fiber Maintenance Terms and Conditions

Scott County Public Schools requires on-going maintenance of the fiber on all leased dark fiber solutions. Maintenance responses are required as follows:

- All leased dark fiber responses require maintenance as part of the response, even if maintenance is subcontracted out to a third party. In the case of the 3rd party maintenance, the respondent must hold and manage the subcontract and is ultimately responsible for the SLA. It is assumed that the dark fiber network is part of a more comprehensive fiber infrastructure of the service provider. The respondent will include only the portion of maintenance that is required to support the Scott County Public Schools fiber segments versus overall network maintenance. If the fiber serves multiple customers, the cost of maintenance should be shared among all the recipients. It is assumed that maintenance costs are included in the monthly lease fee.
- Respondent shall maintain the applicable fiber seven days per week, twenty-four hours per day. Upon notification from the district of a malfunction relating to the applicable fiber, 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
 - Marker and handhole inspection and repair
 - 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
 - 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

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 Scott County Public Schools may find useful or necessary (or could differentiate the solution from a competing proposal).

Service Level Agreement

The respondent will provide a proposed service level agreement (SLA) with the RFP response. The proposal must include a description of the following services and how these services will be measured.

- Fiber Network Availability: the provider will make all reasonable efforts to ensure 99.99% network availability of each circuit.
- Leased lit fiber proposals only:
 - .25% frame/packet loss commitment
 - 25ms network latency commitment
 - 10ms network jitter commitment
 - There is no right of provider to limit or throttle the capacity of the circuit at any time for any reason

In addition to the required services, the proposal may include but is not to be limited to the following services:

- Network operations center: Solution will provide customer support functions including problem tracking, resolution and escalation support management on a 24x7x365 basis. Customer has the right and is encouraged to call concerning any problems that may arise relative to its connection with vendor provided services.
- Trouble reporting and response: Upon interruption, degradation or loss of service, Customer may contact Vendor by defined method with a response based on trouble level. Upon contact from the Customer, the Vendor support team will initiate an immediate response to resolve any Customer issue. Customer will receive rapid feedback on trouble resolution, including potential resolution time.
- Escalation: In the event that service has not been restored in a timely manner, or the Customer does not feel that adequate attention has been allocated, the Customer can escalate the trouble resolution by request. A list of escalation contacts will be provided when implementation schedule is completed.
- Resolution: The Customer will be notified immediately once the problem is resolved and will be asked for verbal closure of the incident.
- Trouble reporting, escalation and resolution: A detail trouble reporting, escalation and resolution plan will be provided to the district.
- Measurement: Vendor stated commitment is to respond to any outage within two (2) hours and a four (4) hour restoration of service. Time starts from the time the Customer contacts vendor and identifies the problem. Credits for outages of shortage will be identified.
- Reports: Upon request, an incident report will be made available to the Customer within five (5) working days of resolution of the trouble.
- Link performance per segment: The service will maintain the proposed link performance throughout the term of the contract.
- Historical uptime: Provide aggregate uptime statistics for your proposed service in the geographic area encompassing Scott County Public Schools.

Timeline

For each response, respondents must include a timeline for all bringing all sites online and an explanation of how much they are able to adhere to Scott County Public Schools' specified timeline. Respondents with existing infrastructure in the area should be able to bring all sites online by the July 1 start of the funding year.

Demarcation

All solutions whether leased lit fiber or leased dark fiber must terminate service or infrastructure in the demarcation point at each address specified in this RFP. 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 paths to be used to serve each endpoint.

References

For each response, respondent must provide 3 references from current or recent customers (preferably K-12) with projects equivalent to the size of Scott County Public Schools. If respondent responds to more than one option (e.g. leased lit fiber service as well as leased dark fiber), provide 3 references for each.

Special Construction Payment Plan Option

The applicant requests that the respondents consider allowing Scott County Public Schools to pay the non-discount share of special construction costs (portion of costs that are the responsibility of the applicant) to be paid in equal monthly installments over three years from Funding Year 2023 to Funding Year 2026 inclusive. Responses must include agreement or non-agreement of this request.

Special Construction Information for Form 471 and PIA Review

All E-rate applications including special construction are subject to detailed questioning during PIA review where the cost of proposed special construction will be reviewed based on the cost of historical fiber builds in the region. Additionally, certain information on necessary special construction is needed to accurately fill out the Form 471. Respondents are **required** to fill out the table in Appendix B. Additionally, respondents are encouraged (but not required) to submit the additional information described in Appendix B that will likely be requested during PIA review. If respondents do not submit this additional information with their bid, and their solution is chosen, they must be prepared to promptly provide that information and any additional information not described in this RFP when requested. Please note that vendors may assist applicants with preparing funding requests or responding to PIA questions and may speak directly with PIA reviewers.

Required Notice to Proceed and Funding Availability

Scott County Public Schools will follow the purchasing policies of the Scott County Public Schools 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 does not come available.

Additionally, any projects requiring **special construction** are also contingent on issuance of funds from VA matching funds. The district will have the right to allow the contract to expire without implementation if this specific funding does not come available.

E-rate Modernization Order Note

Special construction and service eligibility for reimbursement have changed starting funding year 2016. See the Federal Communications Commission E-rate modernization order 2 (WC Docket No. 13-184) (<https://www.fcc.gov/document/fcc-releases-order-modernizing-e-rate-21st-century-connectivity>) for more information.

RFP Scoring Rubrics**Leased Lit Fiber, Transport, Leased Dark Fiber, Leased Dark Fiber (IRU), Self-Provisioned**

% Weight	Criteria
45	E-rate eligible recurring and one-time circuit costs*
10	Adequacy of the responses to this RFP
35	Invoicing: Reimbursement/Discounts (preference given to vendors who are willing to discount invoice with E-Rate Discount)
5	Local or in-state vendor
5	Provider references

*this element must always be the highest weighted in each rubric

Appendix B: Special Construction Pricing

Required with all bid submissions that include special construction

Location	Strand Count	Segment Mileage	Total Segment Cost	Eligible Cost	Ineligible Cost
Total project mileage and costs					

Information that can be included now, but will be requested at a later date for chosen solution:

- Special construction cost breakout worksheet
- Route map of all build segments in kmz format
- Explanation of alternative routes that were explored and why the chosen route is the most cost-effective
- Explanation of special materials and procedures required that may have increased construction costs, such as:
 - Historical preservation or environmental issues
 - Bridge, waterway, railway, or highway crossings
 - Galvanized conduit
 - Directional boring through hard rock or under a paved surface
 - An excessive number of handholes, marker posts, or other OSP materials
 - Expensive pole attachment fees or make ready costs

**E-rate Special Construction
Excess Strands - Cost Allocation Scenarios
Funding Year 2023**

Prepared by the [State E-rate Coordinators' Alliance](#)
October 23, 2017

I. LEASED LIT FIBER AND LEASED DARK FIBER

A. Excess Strands for Applicant's Future Use

If the service provider installs additional strands for the applicant's exclusive future use in a leased dark fiber or leased lit fiber special construction project, and if the applicant can show documentation that buying a cable containing the number of strands placed in the fiber system for the applicant's future use is more cost effective than buying a fiber cable with the number of strands the applicant plans to place into service the first year, no cost allocation of the excess strands is required and no other special construction charges would need to be cost allocated.

If the service provider installs excess strands for the applicant's exclusive future use in a leased dark fiber or leased lit fiber special construction project where the excess strands will remain dormant until they are lit for the applicant in the future, and if the applicant cannot show that it is not more cost effective than buying the exact number of fiber strands being lit in the first year, the applicant must cost allocate the costs associated with the excess strands only. No other special construction charges would need to be cost allocated.

B. Excess Strands for Service Provider's Future Use

For lit services special construction and leased dark fiber special construction, if the service provider wishes to place extra strands in the build for its own use, the E-rate applicant must cost allocate the cost of the service provider-owned extra strands, as well as all incremental costs of those extra strands from the special construction E-rate funding request. It is not a pro-rata share, but an incremental cost calculation that must be backed by detailed documentation.

Example 1 from Funding Year 2018 USAC Fiber Training Slides applies:

COST-ALLOCATION: FIBER EXAMPLES

- **Example 1:** Leased lit fiber or leased dark fiber provider installs 12-strands in fiber run to a large school district hub and wants to add 36 additional strands for its own ineligible use, resulting in additional labor costs (e.g., splicing) and plant costs (e.g., larger termination boards, additional handholes).

Result: Cost of 36 additional fiber strands and all associated incremental increases in costs (e.g., the additional labor/outside plant costs) above what would be incurred if only the 12-strands of fiber were installed must be allocated out of the applicant's special construction funding request.

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Applicant's should seek documentation from the provider which outlines the added incremental costs attributable to designing, managing and constructing a fiber system with a 48-strand cable instead of a 12-strand cable. Such costs should include (but are not limited to):

- **Splice Labor.** If any fibers over the applicant's fibers are spliced, the labor for these additional splices must be cost allocated.
- **Splice Enclosures** are placed to protect splices. If any fibers over the applicant's fibers are spliced and require an enclosure, the enclosures for these additional splices must be cost allocated.
- **Fiber Installation Labor.** This represents the incremental cost of pulling a larger cable through the buried conduit.
- **Structured materials installation.** This represents the additional cost of burying a larger conduit to support the additional fibers.

Note that the costs associated with installing a larger cable strand than what is required by the applicant are ineligible and the service provider should not include such costs in their special construction billing to the applicant but should be prepared to show

evidence during PIA review that it did not charge the applicant for these incremental costs.

Figure 1: Here is a table outlining some possible incremental costs:

Item	12 Strand cable construction	48 strand cable construction	Cost Allocation Amount that service provider should remove from the special construction request
Fiber Cable	38 cents per foot	\$1.04 per foot	66 cents per foot
Design and Engineering	\$2.12 per foot	\$2.42 per foot	30 cents per foot to depict additional splices at A and Z locations
Project Management	\$1.18 per foot	\$1.18 per foot	0
Splice labor*	\$11.00 per splice	\$11.00 per splice	\$11 per splice over 12 splices at any splice site
Splice enclosures**	\$205 per enclosure	\$205 per enclosure	\$205 per enclosure for every enclosure over 12
Fiber Patch Panel	\$71.43 per panel	\$218.60 per panel	\$147.17 per panel
Conduit and other structured materials	1.25" conduit required \$1.95 per foot Handhole (40,000 lb rated) \$2695 per unit Fiber Marker \$30 per unit	1.5" conduit required \$2.35 per foot Handhole (40,000 lb rated) \$2695 per unit Fiber marker \$30 per unit	40 cents per foot No cost difference for handhole No cost difference per marker
Fiber Installation Labor ***	25 cents per foot	28 cents per foot	3 cents per foot
Structured Materials Installation (conduit, markers, handholes)****	\$2.85 per foot	\$3.10 per foot	25 cents per foot
Markers	Place every 500'	Place every 500'	No cost difference
Handholes	Place every 1000'	Place every 1000'	No cost difference