

Moorhead Area Public Schools (MAPS)
SCOPE OF SERVICES FIBER RFP FY2021-22

In accordance with Federal E-Rate funding requirements Moorhead Area Public Schools (MAPS) wishes to compare Lit Services **and** Dark Fiber services for the completion of their district Wide Area Network

(WAN). The current WAN connects twelve school entities within the city limits of Moorhead, MN to Moorhead High School via 4 strands of leased dark fiber. This Request For Proposal (RFP) requires connecting one additional school site to the MAPS' star network topology WAN as an individual spoke of the enterprise hub.

The network hub location is:

**Moorhead High School
2300 4th Ave S
Moorhead, MN 56560**

Site to complete spoke build out by 7/01/2021:

**Moorhead Career Academy
2800 27th Ave S.
Moorhead, MN 56560**

Respondent must run infrastructure or service to an existing network closet designated by MAPS located at the address listed above. A building penetration and cable route is provided by MAPS from the exterior of the new site to existing data closet. A site walk-through must be conducted. Please contact dmarkert@moorheadschoools.org to schedule. The walk-through must be completed no later than one week prior to the Allowable Contract Date (ACD) of the associated Form 470.

The new service is being planned to begin on July 1, 2021.

MAPS is seeking two options for bids. Respondents may bid either or both options. The first option is a fully managed, lit fiber service WAN circuit to this location. The second option is for a leased dark fiber solution that includes special construction cost, the monthly lease fee, as well as any recurring maintenance and operation fees.

Both options may include special construction or one-time E-rate eligible non-recurring costs as well as E-rate eligible recurring circuit costs. Based on the bids and both a short term and long term cost effectiveness analysis, MAPS will determine which, if any, of the solutions is acceptable. The specifications related to each solution option are as follows.

Timeline:

- January 18, 2021: Release of Request For Proposal (RFP) and Form 470 to vendors and public notice.
- January 25, 2021: Clarifying Questions Due at 3 pm local district time via email to dmarkert@moorheadschoools.org
- January 26, 2021 Q&A Addendum to be posted to the EPC portal
- February 23, 2021: RFP responses/bids are due by 3:00 pm local district time and per the Submission Requirements detailed below.
- February 25, 2021: Letter of Intent issued to vendor pursuant to school board approval.

Submission Requirements:

Bids must be submitted in sealed envelope and received by 3:00 pm local district time on February 12, 2021 at **Operations Center, 1313 30th Ave S., Moorhead, MN 56560**. Emailed responses will

not be accepted. All responses must be mailed to the Operations Center postal address labeled ATTN: ERATE
WAN RFP 2021 response. Respondent's submittals must include a completed WAN RFP Pricing Response Worksheet.

RESPONSE OPTION #1 Lit Service:

MAPS must have dedicated Lit Transport Bandwidth throughput (upload and download) of 10 Gbps with Service Level Agreement (SLA) guarantees between the designated endpoints. **All respondents must be capable of providing telecommunication services under the Universal Service Support Mechanism.**

MAPS will NOT accept wireless proposals for lit service connections. All connections must be single mode fiber based connections only and must include redundancy provisions.

Lit Service Price Proposal

The "Lit Pricing Sheet" worksheet in the attached "WAN RFP Pricing Response" spreadsheet includes columns for respondents to provide 10G pricing between the hub and the new site. Price quotes are requested for 60 and 120 month terms of service. Prices should be all inclusive. All inclusive in this case means, including all **special construction or non-recurring costs (NRC)** (see description in later section) 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 term of the quoted special construction/Non Recurring Costs and Monthly Recurring Costs rate in each pricing cell of the spreadsheet.

Additional Description

Each lit service response must also include description of proposal, SLA, timeline, network diagram, demarcation, references, description of service redundancy and Connect America Fund status as described in later sections.

Fiber Specification

- All lit fiber solutions must comprise of single mode fiber end to end.

RESPONSE OPTION #2 Leased Dark Fiber

Respondents can quote a leased dark fiber network solution providing 2 pair (4 strands) of single mode fiber between the designated endpoints. Respondents may offer maintenance services, equipment purchase, installation, and management either themselves or through 3rd party subcontractors. In the case that respondents use external 3rd party service providers or contractors to deliver some or part of the solution, these should be clearly indicated in the response.

Dark Fiber Lease Price Proposal

Each respondent is required to complete the pricing worksheet attached as the "WAN RFP Pricing Response" worksheet in the spreadsheet accompanying this RFP. Price quotes are requested for 60 month and 120 month terms of service. Respondents are encouraged to separate special construction charges as defined by E-rate eligibility rules. Preference will be given to proposals that offer pricing with the majority of the costs being paid up-front and minimal MRC and annual maintenance costs.

Additional Description

Each leased dark fiber response must also include description of proposal, description of maintenance, SLA, timeline, network diagram, demarcation, references, and Connect America Fund status as

described in later sections. Operations can be bid “bundled” with a leased dark fiber bid, or as a stand alone bid and must be described as such.

Fiber Specification

- All dark fiber solutions must comprise of singlemode fiber end-to-end.

Maintenance

MAPS requires on-going maintenance of the fiber on all Leased Dark Fiber solutions. Maintenance responses are required as follows:

- All 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 third party maintenance, the respondent must hold and manage the subcontract and is ultimately responsible for the SLA. It is assumed that the 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 MAPS fiber segments versus overall network maintenance. If the fiber serves multiple customers, the cost of maintenance should be shared among all the recipients.
- 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 fiber 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 which 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.

Equipment, Installation, and Operations

MAPS requests that the respondent provide a quote for an annual operations cost to oversee the technical support of the WAN once the leased dark fiber is available for service. Include price details for equipment necessary to place the circuits into service at different bandwidth levels, installation and configuration of equipment, and annual cost to operate the equipment/circuits. Operations and network equipment may be bid as a stand-alone service, however, “bundled” holistic solutions will be preferred, as outlined in the evaluation criteria.

Network Equipment (or equivalents) Necessary to Make the Service Operational

Qty 2 Cisco C9300-48UXM-EDU

Qty 2 Cisco C9300-NM-8X

Qty 2 Cisco SFP-10G-LR

Qty 2 Cisco STACK-T1-1M=

Qty 2 Cisco CAB-SPWR-150CM=

Qty 1 Cisco PWR-C1-1100WAC

Network Equipment Requirements

- 48x 1G RJ-45 ports with PoE+ and 36x 2.5G & 12x mGig RJ-45 ports with UPoE
- Layer 2, Routed Access (RIP, EIGRP Stub, OSPF – Up to 1000 routes), PBR, PIM Stub Multicast (up to 1000 routes)), PVLAN, VRRP, PBR, CDP, QoS, FHS, 802.1x, Macsec-128, CoPP, SXP, IP SLA Responder, SSO
- PoE+ switches must have at least an 715W AC power supply, with at least 437W of available PoE power
- UPoE switches must have at least an 1100W AC power supply, with at least 490W of available PoE power
- Must have modular uplinks and uplink modules must support at least 10G per port
- UPoE switches must have at least 12x mGig downlink ports and all other downlink ports should be at least 2.5G
- Must support dual redundant power supplies
- All switches defined in this section of the requirements must be the same series/product family and 100% compatible power and data stacking with each other
- Must support StackWise with up to 8 members per stack and stacking bandwidth of at least 480 Gbps
- Must support StackPower for redundant/shared power stacking
- Must include 2-post mounting hardware
- Must include any necessary licensing for operating the equipment at the license level (defined in the Category 2 RFP Network License column) <https://goo.gl/7WbPQJ> with at least a 5 year term
- Lifetime next-business-day (NBD) hardware replacement for switches
- Scoring preference may be given for switches with higher warranty, enhanced feature set or replacement levels
- All equipment must be new and from an authorized reseller of the manufacturers product for which they are quoting. No refurbished or “grey-market” gear will be accepted

The annual operations cost should include provision of:

- Procurement of necessary hardware to light the fiber path(s)
- Installation and configuration of equipment to put circuits into service
- Network monitoring on a 24x7x365 basis
- Creation and communication of service tickets to MAPS escalation list
- Incident response with timing standards that are in accordance to a Respondent provided service level agreement that meets general industry standards
- Other industry standard provisions of broadband service technical support
- Re-provisioning of equipment necessary to put circuits back into service after an outage

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, other detail MAPS may find useful or necessary (or could differentiate the solution from a competing proposal).

Service Level Agreement

Respondent will provide a description of the proposed services and service levels provided with the lit fiber, dark fiber, and operations responses. 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 99.9-99.99% network availability of each circuit.
- Lit and Operations proposals only: Frame/packet loss Commitment
- Lit and Operations proposals only: Network Latency Commitment
- Lit and Operations proposals only: 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 the MAPS.

Timeline

For each response, respondents must include a construction roadmap timeline for all sites. For lit and dark fiber responses, preference is given to responses with a service start for all sites on July 1, 2021.

Demarcation

All solutions must terminate service or infrastructure to an existing network closet inside of the designated demarc address specified in the "Addresses" worksheet of the included spreadsheet. Solutions bringing service to the property line but not inside of the demarc address are not acceptable.

Respondent must specify your expected demarc setup included in base fees, e.g. wall mounted CPE and Cat6a handoff.

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 MAPS. If respondent responds to more than one option (e.g. lit fiber service as well as leased dark fiber), provide 3 references for each.

Connect America Fund Consideration

For each school site, the respondent must note whether the address is included in a region where the respondent has already received (or is pending receipt of) funding via the Connect America Fund. In these cases, mention how the NRC or special construction charges have been adjusted considering the other source of funding.

Special Construction and Non-recurring Cost

Respondents providing option #1 lit fiber proposals which require an upfront payment may include a special construction cost or non-recurring cost. This upfront payment is considered **special construction** if any new fiber is being installed. If new fiber installation is not necessary, the payment is considered a **non-recurring cost** and must be entered into the pricing sheet accordingly.

New fiber special construction charges for lit service and leased dark fiber projects as defined by the order include construction, design, engineering and project management. The applicant requests that the respondents consider allowing MAPS to pay the non-discount share (share of special construction costs that are the responsibility of the applicant) to be paid in equal annual installments over the five years from Funding Year 2021 to Funding Year 2025 inclusive. Responses must include agreement or non-agreement of this request.

The amount of special construction capital requested will be reviewed based on the cost of historical fiber builds in the region. Respondents should consider other business that may be generated by building fiber into the region and request only the special construction capital allocated to the MAPS service.

Required Notice to Proceed and Funding Availability

Applicant will follow the purchasing policies of the MAPS 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.

All responding vendors must be a registered vendor with USAC and have a USAC issued Service Provider Identification Number (SPIN). Responding vendors who do not have a USAC issue SPIN must demonstrate reasonable efforts to obtain a SPIN before the service start date.

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

Lit Service (Also used for final comparison)

% Weight	Criteria
<i>Mandatory</i> 30%*	E-rate eligible recurring and one-time circuit costs ¹
<i>Mandatory</i> 15%	Timing: adherence to district preferred rollout timeframe ²
<i>Mandatory</i> 10%	Ability to support requirements as laid out in the RFP ³
<i>Mandatory</i> 10%	Proposed contract terms and conditions ⁴
<i>Mandatory</i> 15%	Service Reliability / Redundancy qualifiers
<i>Mandatory</i> 10%	Use of scalable technology (fiber optic) ⁷
<i>Mandatory</i> 10%	Provider references ⁸

* This element is required by law to be the highest weighted

Leased Dark Fiber

% Weight	Criteria
<i>Mandatory</i> 30%*	E-rate eligible recurring and one-time costs ¹
<i>Mandatory</i> 15%	Timing: adherence to district preferred rollout timeframe ²
<i>Mandatory</i> 10%	Ability to support requirements as laid out in the RFP ³
<i>Mandatory</i> 10%	Proposed contract terms and conditions ⁴
<i>Mandatory</i> 10%	Maintenance SLA
<i>Mandatory</i> 10%	Ability to offer turn-key solution (limited effort on behalf of district) ⁶
<i>Optional</i> 5%	Single vendor for service, maintenance, and operations.
<i>Mandatory</i> 10%	Provider references ⁸

* This element is required by law to be the highest weighted

Notes:

1: **E-rate eligible circuit cost** is the total cost of ownership that includes special construction and NRC in addition to MRC and includes any and all services that will be applied on a monthly recurring basis. E-rate special construction costs should be clearly indicated and separated from any other E-rate eligible NRC cost. All services offered must be eligible for E-rate Category 1 discounts.

2: **Timing of build:** all bidders are advised to commit to an initial roadmap for rollout of their solution per circuit, based on the E-rate and District timeline. The roadmap should include all steps towards deployment and “go live” of all circuits within this RFP. Any risks or contingencies on the timing should be clearly highlighted in the response.

3: **Requirements:** preference will be given to bidders who can provide the highest level of compliance to all requirements laid out in this document.

4: **Terms and conditions:** preference will be given to bidders that provide the most favorable conditions for implementation and ongoing service. These elements include (but are not restricted to): length of contracts, ability to scale bandwidth within the contract period, flexibility in timing of up-front payments, etc.

5: **Service Reliability:** preference will be given to bidders that provide a favorable SLA for the district, and have a robust network architecture and documented history of service reliability.

6: **Turn-key solution:** the district has a clear preference for providers who can offer a “bundled” holistic, all-in-one solution and effort required by the district before, during, and after installation is minimal. Therefore preference will be given to bidders who either offer all services independently or via 3rd party subcontractors as a complete package including fiber construction, terminating equipment, fiber installation and operations, and scheduled and unscheduled maintenance.

7: **Fiber optic solutions:** preference will be given to solutions based on fiber optic technologies, as the district believes that this will provide maximum future scalability. Bidders are encouraged to outline how fiber optic solutions could be scaled into the future, including potential pricing increments for additional bandwidth that may be likely during the contract period.

8: **References:** preference will be given to bidders who are able to demonstrate a track record of successfully working with K-12 school districts, have a history with the owner or similarly sized customers within the state to provide high-quality, affordable solutions and exemplary ongoing service. Bidders should be able to provide access to up to 3 references as part of the evaluation process, as and when requested by the District.

9: **Disclaimer:** This district reserves the right to reject any and all proposals

A copy of this RFP is posted online at: <http://www.moorheadschoools.org/rfp>. All bidder's submitted questions and owner clarification will posted at: <http://www.moorheadschoools.org/rfp>. Questions and answers will be posted at the web site listed.