CONTRACT REQUIREMENTS

1. **DESCRIPTION.** Schools United to Provide Enhanced Resources Network Consortium, SUPERNet, is seeking proposals for Internet Port Services or Lease Lit Fiber with Internet at the Tyler Vault Data Center at 110 N College Ave, Tyler, TX 75702 (POP) to meet the immediate and long-term needs of the Districts. The request for proposals seeks bids for Internet bandwidth that provides high quality access to the Internet backbone, highly peered to content providers and educational resources and a robust network connection infrastructure to the Dallas Internet and Peering Exchange Points that supports scalability and rapidly growing bandwidth needs and meets the members Internet service needs. The SUPERNet Consortiums consists of the following two currently existing consortiums, SUPERNet and SUPERNet II, that work in coordination and cooperation to service their member Consortiums. Proposals will be received for SUPERNET per this solicitation. If cost for fiber construction for transport is required, the fiber network cost should be identified separately and follow the rules and requirements for Lease Lit Fiber with Internet services specifications of the RFP. The special construction, installation, provisioning and/or any other non-recurring fees related to Lit fiber network services required to deliver the Internet service will be evaluated as total cost of the Internet service with Erate eligible cost of the total service as the highest weighted selection criteria.

   SUPERNet is in the process of upgrading the current SUPERNet Wide Area Network between the Districts to the Internet POP. Currently, Districts are connected on the Internet WAN with differing bandwidth ranging from 100 Mb to 10 Gb with the Internet POP location at the UT Health Northeast, NETNet Building, 11937 US Highway 271, Tyler, TX 75708-3154. The approved Internet WAN Upgrade will provide each district a up to a 10 Gb Internet WAN connection with bandwidths from 1 Gb to 10 Gb to the newly established POP at The Vault Data Center at 110 N College Ave, Tyler, TX 75702. This Internet Bandwidth and related services request will be implemented in conjunction with that initiative. This procurement process will allow The Consortium and/or the individual consortium members to purchase from this 470 and associated competitive procurement process.

   It is the intention of the Schools United to Provide Enhanced Resources Network, herein referred to as SUPERNet or The Consortium, to establish a contract for the Consortium's Internet and associated services. The Consortium will evaluate proposals for the following services: 1). Internet bandwidth for the Consortium for 10 Gb of committed Internet Bandwidth on a 10 Gb Ethernet Port from a Tier 1 or Tier 2 Internet Provider with a service POP at the Tyler Vault location, 2) leased lit fiber with Internet Service delivered at the Tyler Vault location, 3) Managed Demarcation Router with 14 x 1 Gb Ethernet Port Services upgradeable to 10 Gb Ethernet Port connections and 2 x 10 Gb Ethernet Ports for District Connectivity to the Demarcation Router with the ability to add Districts, 4) the option to support a connection to the SUPERNet II Internet Router with 10 GbE for failover and resiliency, 5) the cost option for layer 3 routers for the 16 Districts connecting to the SUPERNET Internet Service, 6) the cost option for the layer 3 routers for up to 6 additional participating Districts, 7) option for managed firewall services on the Managed Demarcation router, and 8) option for firewall services on the District Edge Routers. The requested base service is for Internet bandwidth. The Consortium reserves the right to award one or none of these services. Respondents may respond on one or all of the requested services.

2. **SCOPE OF SERVICES.**

2.1. GENERAL

The Consortium requests Internet and related services to meet the Consortiums' Internet requirements.

Total cost of ownership is the highest weighted criteria for selection.

The requested service(s) are the key services of The SUPERNet Consortium to the member Districts.

The Consortium will consider and evaluate multiple terms and contract vehicles for the solutions. A 3-year total service contract should be provided with the option for an additional 3-year term. Both term options should include one (1) one-year voluntary extension. The three-year contracts can be three (3) one-year contracts or a single three-year term.

Three years will be the term for evaluation of the proposals.

High availability, reliability and scalability are priority requirements of the service.

The SUPERNet Consortium is made up of 16 Districts connecting at The Vault on a next generation Internet WAN that is being implemented as part of the overall upgrade of the Consortium services.

	BEN	ENTITY	BANDWIDTH PORT CONNECTION
1a	223076	SUPERNET Consortium	10 GbE Internet Port
1	140715	ARP INDEPENDENT SCHOOL DIST	1 GbE
2	140721	BIG SANDY INDEP SCHOOL DIST	1 GbE
3	140707	CARLISLE INDEP SCHOOL DISTRICT	1 GbE
4	140713	CHAPEL HILL INDEP SCHOOL DIST	10 GbE
5	140729	HAWKINS INDEP SCHOOL DISTRICT	1 GbE
6	140688	HENDERSON INDEPENDENT SCHOOL DISTRICT	1 GbE
7	140730	JACKSONVILLE INDEP SCHOOL DIST	1 GbE
8	140734	LINDALE INDEP SCHOOL DISTRICT	1 GbE
9	140739	NEW SUMMERFIELD INDEP SCH DIST	1 GbE
10	140708	TATUM INDEP SCHOOL DISTRICT	1 GbE
11	140714	TYLER INDEP SCHOOL DISTRICT	10 GbE
12	140679	UNION GROVE SCHOOL DISTRICT	1 GbE
13	140710	WHITE OAK INDEP SCHOOL DIST	1 GbE
14	140749	WHITEHOUSE INDEP SCHOOL DIST	1 GbE
15	140628	WINNSBORO INDEP SCHOOL DIST	1 GbE
16	140750	WINONA INDEP SCHOOL DISTRICT	1 GbE
2a		SUPERNet II Consortium Connection Option	10 GbE

The Internet and related requested services will support over 40,000 users and an estimated 80,000 devices through the contract term.

The physical address and locations the Internet Port Service is available in The Vault Data Center in Tyler, Texas.

The respondent should include service descriptions and the associated SLA. The description should include, but is not limited to:

- The ability to provide a CDR up to the 10 Gbps capacity of the starting service.

- The ability to support a cost-effective solution to scale from 10 Gb bandwidth to 11 Gb to 20 Gb within the term of the contract.
- Provide IPv4 address space for 16 districts with a minimum of a /28 CIDR Prefix.

The proposal may include the physical address(es) that the Internet Services are available in the Tyler, Tx area in addition to The Vault Data Center.

The proposal should include but not limited to the following:

- Cost effectiveness
- Unlimited data transfers
- High quality service
- Dedicated, non-oversubscribed transport
- Dedicated, non-oversubscribed Internet Port Service
- Bandwidth monitoring
- High reliability
- Support Standard and Jumbo Frame Sizes

The proposal must provide the following:

- Dedicated 10 Gb Internet Port with a 10 Gb Committed Data Rate (CDR)
- Bandwidth scalable in 2 Gb increments.
- The Service will include an IPv4 Address space for each District of the Consortium. There are 16 Districts connecting to the requested service.
- The Consortium will maintain the contract and point of presence at the Port Service location that is selected.
- The Consortium is responsible for cross connects unless otherwise provided with the proposal.

Schools and Libraries Program Requirements

The Schools and Libraries Program reimburses telecommunications, Internet access, and internal connections providers for discounts on eligible services provided to schools and libraries. While schools and libraries apply for these discounts, USAC works in conjunction with service providers to make sure these discounts are passed on to program participants. The vendor must be eligible to participate in the Schools and Libraries Program and obtained a Service Provider Identification Number (SPIN) from USAC.

The proposal response must include the vendor's SPIN.

The Federal Communications Commission (FCC) has determined that in order to provide telecommunications services (voice, video or data transport), the service provider must provide such services on a common carrier basis. The vendor must be an eligible service provider for telecommunication and/or Internet services as defined by the Federal Communication Commission (FCC) for reimbursement from the Schools and Libraries Program.

By submitting a response, the vendor is signifying that the vendor is an eligible service provider for reimbursement.

Eligible ERate services requested with this CSP will include products and services contained in the USAC 2019 Eligible Services List, which can be found at https://www.usac.org/_res/documents/sl/pdf/ESL_archive/EligibleServicesList-2016.pdf

2.2. BASE BID: Internet Port Service for The Consortium.

The Consortium requests Internet Services to meet the Consortiums' Internet requirements.

The service will provide a 10Gbps Internet Port service with a Committed Data Rate (CDR) of 10 Gbps. The service provider should provide a description of the provider's network and capacity to deliver the service.

The proposal should include the cost to add another 10 Gb Port service with the bandwidth of 12 Gb scalable to 20 Gb.

The provider should be a Tier One provider or a high capacity/quality Tier 2 provider. If Tier 2/Blended Internet Service is proposed, the response should include the upstream Internet access providers used with the service.

The service provider's transport network from the port to the provider backbone Internet connection(s) should provide a CDR on the network for the contracted bandwidth, non-oversubscribed and dedicated to The Consortium.

The ISP must have a highly reliable and available network with a description of the Transit network including the last and middle mile.

The respondent should include network descriptions and the associated SLA. The network description should include, but is not limited to:

- The facility entries – dual verses single
- The network capacity and network architecture
- The ability to provide a CDR up to the 10 Gbps capacity of the starting service.
- The ability to support a cost-effective solution to scale from 10 Gb bandwidth to 11 Gb to 20 Gb within the term of the contract.

The Consortium must have continual service.

The ISP must provide appropriate technical support during the installation.

To ensure E-Rate compliance, the Consortium requests a scalable contract. The contract itself should include pricing to increase bandwidth and for an additional 10 Gb port service (or an alternative solution such as 40 Gb) and allow The Consortium the ability to upgrade to any of those service levels during the term of the contract, without entering into a new contract.

The contract may reference an attachment with those pricing levels as long as the attachment is submitted at the same time as the contract (e.g. – "Service provider will allow upgrades during the term of this contract to any service level/price identified in Attachment A").

OPTIONAL VALUE ADD SERVICES:

The ISP will provide secondary Domain Name System (DNS) service as an option.

The Service includes an DDOS protection service as an additional service offering for DDOS protection. The response should include the description of the service and all associated cost.

2.3. Leased Lit Fiber with Internet.

The objective of this Proposal option is to obtain a proposal for Leased Lit Fiber Services with Internet for Internet Bandwidth Services at the Consortium POP at the Tyler Vault.

The proposer will provide all materials, labor, easements, permits, right of ways, pole attachments, technical support, maintenance and operations of the fiber infrastructure required to delivery the Internet Service. The proposer will abide by all local, home owner, municipal, county and state easement and right of way ordinances. The proposer is responsible for obtaining the appropriate authorization for the easements, permits, right of ways, pole attachments and maintaining said agreements. The proposer is responsible for survey, inspection and associated make-ready for any components used to deliver the fiber network. The proposer will provide all equipment, technical support, maintenance and operations of both the equipment and fiber infrastructure for this service. It is the responsibility of the proposer for quality assurance, testing, and inspection of the service upon delivery to the Consortium.

The proposal will provide for one-time cost including but not limited to, easements, routes, pole attachments, project management, engineering, capital expenditures, network resource allocation and/or build out. All non-recurring cost should be specified as installation or special construction within the definition of E-Rate rules. The monthly recurring charges should reflect maintenance and operations of the network for the district.

The Consortium will require 10 Gb Ethernet Lit Fiber Services with the ability to grow to multiple 10 Gb Ethernet connections with 10 Gb Internet Bandwidth scalable in two (2) Gb options.

The Consortium will evaluate the solutions that meet the District's needs in the most cost-effective solution over a long-term contract evaluation.

The fiber network that supports the Internet service will have a robust design that provides a high level of service availability and lack of down time and maintenance. The underlying fiber network will have diverse, non-collapsed public routes when possible to meet the design requirements and to provide the most cost-effective overall design.

The acceptable lit fiber solution should provide for a one-time cost for an additional 10 Gb services or a one-time cost to increase the 10 Gb services to higher bandwidth.

2.2.1 10 Gb Internet and Ethernet Access Port Minimum Technical Specifications for all Services.
a) Ethernet User-to-Network Interface. The service will provide bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet interface (UNI).
b) Service Provider Infrastructure. The service will provide a highly available, robust infrastructure of equipment and transport to deliver the service. The provider will include information on the delivery network (transport), available services and equipment for reliability, speed and performance to deliver the service.
c) Usage Based Service. The service will provide a solution that provides an efficient usage of the contracted bandwidth by The Consortium(s). Either burstable, additional over-flow solution or capped Committed Data Rate (CIR) with adequate contracted bandwidth contracted to supporting bursting will be considered. High quality, high capacity bandwidth (capped or burstable) at the most cost-effective proposal will be given highest evaluation scores. Please describe the service as either Burstable with the associated cost of overage or Capped.
d) Maximum Frame Size. The service will support a maximum transmission unit (MTU) frame size of 1518 bytes at a minimum.
e) Address Allocation. The provider will provide the IP address space.

f) Option: Secondary Domain Name Service (DNS) will be provided with the service as needed.
g) Online Reporting. The service provider will provide access to online reports containing historical network traffic information.
h) Committed Bandwidth and Services. The contracted bandwidth capacity and any associated backhaul transport bandwidth will provide a Committed Data Rate (CDR) as a committed, non-oversubscribed service.
i) Monitoring, Technical Support and Maintenance
a) Network Monitoring. Services will be monitored on a 24x7x365 basis.
b) Technical Support. Provide technical support on a 24x7x365 basis. Provides technical support for service-related inquiries.
c) Escalation. Provide an escalation process, timeline and person responsible at each interval until problem resolution.
d) Maintenance. Scheduled maintenance will be performed during a defined maintenance. Service will provide a minimum of forty-eight (48) hour notice for non-service impacting scheduled maintenance. Service will provide a minimum of a seven (7) day notice for service impacting planned maintenance and the service will not be done during regular business hours. Emergency maintenance will provide an estimate service disruption time notice and communicate hourly updates until service restoration.
e) Service Level Objectives. The service proposal will define Service Level Objectives (SLO) for the service, including network availability, mean time to respond, and mean time to restore. The following are baselines; however, the respondent will provide a detail of the Service Level Agreement and proposed objectives based on their service capabilities. The SLO will be evaluated as part of the quality of the service criteria.
f) Availability. Availability is a measurement of the percentage of total time that the service is operational when measured over a 30-day period. Service is considered “inoperative” when either of the following occurs: (i) there is a total loss of signal for the service, (ii) output signal presented to the customer by Service Provider does not conform to the technical specifications provided.
g) Mean Time to Respond. Mean Time to Respond is the average time required to begin troubleshooting a reported fault. The Mean Time to Respond objective is fifteen (15) minutes upon receipt of a fault notification or from the time a trouble ticket is opened.
h) Mean Time to Restore. Mean Time to Restore is the average time required to restore service to an operational condition as defined by the technical specifications in Section 1 of this document. The Mean Time to Restore objective is four (4) hours for electronic equipment failure or six (6) hours for fiber optic facilities failure from the time a trouble ticket is opened.
i) The proposal should include the technical description of the solution to scale from 10 Gb to 20 Gb.

2.4 Managed Consortium Core Internet Wide Area Network Router

The Consortium will contract for a managed router service to terminate the District’s connections to the provided Internet Service. This service will provide the hardware, power, support, technical configuration and maintenance for the consortium Internet WAN connections. The Consortium currently has a Juniper MX 104 Router for this service with Built in - 4 X 10 Gig Ethernet - 2 used and licenses for 2, MIC -20 X 1 Gig Ethernet SFP - ports can be copper or fiber depending on SPF module, no ports on this module are used and MIC - 40 X 1 Gig Ethernet - copper only, 18 ports in use.

a) The solution will support the Internet Service requested within this procurement with a 10 Gb Internet Service Provider Port with the ability to scale to 20 Gb during the term of the contract.
b) The solution will support the District Internet Wide Area Network (WAN) connections with 14 x 1 Gb Ethernet connections and 2 x 10 Gb Ethernet Connections.
c) 3-year contract term with the option for an additional 3-year contract term.
d) One voluntary one-year extension.
e) Option to provide IPv4 Address Space

f) Option to configure and support a 10 GbE connection to SUPERNet II Internet Router for failover and resiliency of Internet Service for SUPERNet. The Consortium will provide the 10 GbE connection. The managed router service will provide the 10 GbE port and configuration.
g) Proposal will include the space and power at The Vault.
h) Proposal will include the cross connect at The Vault from the router to the Internet Service Provider.
i) The proposal will include the cross connects (16) from the WAN Service Provider (Suddenlink) to the Consortium Managed Router.
j) Proposal may include the use of the existing Juniper MX 104 router as part of the overall solution.
k) The proposal should provide any cost associated with hardware, hardware maintenance and configuration as a Non-Recurring Cost. Any ongoing services should be included as Monthly Recurring Cost.

2.4.1 Option for a Managed District Router for each District.
2.4.2 The Managed Internet Router service may include a basic Firewall service. The service must address the needs of the individual districts. The service must scale to meet the service levels of the Internet Service with 10 Gb bandwidth to the Internet.

2.5 Option for purchase and configuration of Consortium Core Internet Wide Area Network Router components.

2.5.1 Provide the hardware proposal for the Modular Interface Cards for the MX104 Router to support the 16 x 1 GbE connections with 1 GbE Optics for 3 Meter local connection.
2.5.2 Provide licensing, installation and configuration of Juniper MX 104 Router.

2.6 Option for purchase, configuration and maintenance of District Demarcation Router with 1 GbE upgradeable to 10 GbE Internet WAN connection and 10 GbE Internet District Connection. Quantity from 1 to 16.

3 TERMS AND CONDITIONS.

3.1 TERM OF CONTRACT. The Contract shall be in effect from date of award through delivery and acceptance by The Consortium of the final product and services. Contract terms proposed will be for one (1) year with three (3) one-year voluntary extensions or three (3) year with one (1) one-year voluntary extension.

3.2 TYPE OF CONTRACT. Firm fixed for the term of the contract.

3.3 LOCATION OF SERVICE. The response will provide the address, contact person and details of the proposed port location. If it is available at multiple locations, please provide the details on all locations

3.4 INELIGIBLE COST. The proposal should identify any services that are included that are ineligible for Erate Discount.

4 PRICING.

4.1 10 Gb Internet Port Service for The Consortium at The Tyler Vault

Alternative address locations for port service: _____

NOTE FOR OPTION c: A transport fee may be added to the port service at an alternative address for evaluation.

	1 Year Term	3 Year Term	Non-Recurring	Ineligible
Product	**Monthly**	**Monthly**	**Installation**	**Cost**
Internet Access				
10 Gbps - BASE	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
11 Gbps	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$
12 Gbps	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
13 Gbps	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$
14 Gbps	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
15 Gbps	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$
20 Gbps	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$

Additional "Added Value" Service Cost Option:

- _____.

  Price = $_____

4.2 10 Gb Lit Fiber with Internet Service at The Tyler Vault

Alternative address locations for port service: _____

NOTE FOR OPTION c: A transport fee may be added to the port service at an alternative address for evaluation.

Product	1 Year Term Monthly Cost	3 Year Term Monthly Cost	Non-Recurring Installation	Special Construction	Ineligible Cost
Internet Access					
10 Gbps - BASE	$	$	$		$
Other	$	$	$		$
Total	$	$	$		$
11 Gbps	$	$	$		$
Other Cost	$	$	$		$
Total	$	$	$		$
12 Gbps	$	$	$		$
Other	$	$	$		$
Total	$	$	$		$
13 Gbps	$	$	$		$
Other Cost	$	$	$		$
Total	$	$	$		$
14 Gbps	$	$	$		$
Other	$	$	$		$
Total	$	$	$		$
15 Gbps	$	$	$		$
Other Cost	$	$	$		$
Total	$	$	$		$
20 Gbps	$	$	$		$
Other Cost	$	$	$		$
Total	$	$	$		$

Additional "Added Value" Service Cost Option:

- _____.

  Price = $_____

4.3 Managed Consortium Core Router Service

Includes all cross connects, power, space and service for router at The Vault

	1 Year Term	3 Year Term	Non-Recurring	Ineligible
Product	**Monthly**	**Monthly**	**Installation**	**Cost**
Managed Core Router with 16 Districts Connections	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
Option: Additional District Connection.	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$
Option: Managed Firewall at Core	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
Option: Managed District Routers per Site	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
Option: Managed Firewall for District Routers per Site	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
OTHER SERVICES:	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$

Additional "Added Value" Service Cost Option:

- _____.

  Price = $_____

4.4 Hardware Components for Existing Juniper MX 104 Router and optional Site Routers

	Hardware Cost	Installation	Maintenance	Software, Other
Product				
20 x 1 Gb Ethernet Modular Interface Card	$	$	$	$
Other	$	$	$	$
Total	$	$	$	$
District Site Router with 1 x 10 GbE, 1 x 1 GbE upgradeable to 10 GbE	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$
Optional Firewall Service on District Site Router GbE	$	$	$	$
Other Cost	$	$	$	$
Total	$	$	$	$

Additional "Added Value" Service Cost Option:

- _____.

  Price = $_____