This solicitation is a request for proposals for services under Texas Education Code 44.031.
Checklist and Submission Guidelines

This checklist is provided to help you conform to all form/document requirements stipulated in this solicitation and attached herein.
(This is not a required form, it is not necessary to return this checklist with your proposal.)

Understanding the Proposal

Completed
☐ Read entire RFP document, appendices and attachments
☐ Review AISD Policy and Instructions on our website: Policy and Instructions
☐ Attend pre-proposal conference (not required)
☐ Submit questions properly before deadline
☐ Review addenda, Q&A and other additional attachments
☐ Review Proposal Format section of RFP

Forms

Completed | Required
☐ | ☑ Bid Certification
☐ | ☑ Notification of Criminal History of Contractor
☐ | ☑ Debarment, Suspension and Ineligibility Certification
☐ | ☑ Conflict of Interest Questionnaire (CIQ) – electronic
☐ | ☑ Strategic Partner Profile
☐ | ☑ EDGAR Vendor Certification
☐ | ☑ Software Vendor Certification Form

Submitting the Proposal

Completed
☐ Prepare the proposal in the format specified and sign all required forms
☐ Submit required hard copy marked “original”
☐ Submit requested quantity of digital copies on flash drive
☐ Submit requested quantity of hard copies marked “copy”
☐ Package proposal in sealed envelope or carton properly labelled
☐ Deliver proposal to delivery address by RFP opening / due date and time
Table of Contents

Section I  Introduction

Section II  Historically Underutilized Business (HUB) Program Requirement

Section III  Proposal Format

Section IV  Initial Review of Proposals

Section V  Competitive Selection / Evaluation

Section VI  Scope of Service and Performance Requirements

Section VII  Appendices and Attachments
I. INTRODUCTION

The Austin Independent School District (herein after referred to as “Austin ISD”, “AISD” or the “district”) is seeking proposals from firms qualified and experienced in providing Internet Access Service—Commodity Bandwidth to AISD North Campus locations. Being a legal method of procurement for school districts in Texas, AISD would like to utilize current platforms to engage suppliers.

Austin ISD reserves the right to award a contract for any or all areas of this RFP. AISD will make awards to qualified respondents providing the best proposal based on a combination of the program plan, scope of services, vendor’s capabilities and pricing. A Service Agreement will be executed with a successful vendor as a result of this process. A preview only copy of AISD’s Service Agreement is available on our website and should not be returned with a proposal.

The Austin Independent School district is a large urban district in Austin, TX with approximately 83,000 students. All of Austin ISD’s 130 sites are connected together over a metropolitan fiber network known as the Greater Austin Area Telecommunications Network (GAATN) which is arranged in multiple interconnected rings throughout the city and shared with several other government entities including the City of Austin, the State of Texas, and the University of Texas at Austin.

II. HISTORICALLY UNDERUTILIZED BUSINESS (HUB) PROGRAM REQUIREMENTS

The HUB Program promotes and strongly encourages the involvement and participation of Historically Underutilized Businesses in District-wide procurements. According to AISD policies CH (LOCAL) and CV (LOCAL), the HUB Program guidelines are not applicable for this type procurement.

III. PROPOSAL FORMAT

A. Preface
   The Contractor shall provide an executive summary of two (2) pages or less, which gives in brief, concise terms, a summation of the proposal.

B. Proposal
   The vendor’s proposal itself shall be organized in the following format and informational sequence:

   **Section I – Summary of Experience**

   This section shall contain the full name and address of the contractor submitting the proposal and a brief summary of the contractor’s experience and individual experience for personnel who will provide this product or service.
Section II - Scope of Service

A description of services and capabilities as outlined in the Scope of Service and Performance Requirements sections of this RFP, in the order shown. Clearly state any exceptions taken to the specifications of this RFP, or any conditions of the proposal.

Section III - Financial Proposal

This section shall contain a straightforward, concise delineation of the contractor’s fees to satisfy the requirements of this RFP. It is the contractor’s responsibility to specify all costs (i.e. administrative fees, processing fees, etc.) associated with providing the products or services required herein.

Section IV – References

References are to be from government agencies and/or firms, which are substantially serviced by the vendor (references most similar to Austin ISD should be provided). Each reference must contain the reference’s name, address, telephone number, and point of contact (including email address). A list of at least three (3) references from current customers must be provided.

C. Required Forms

Forms are required with Original response & flash drive only; they can be excluded from additional requested copies.

Contractor shall execute the following required forms (located on our website: Required Forms link), and return the signed original with the proposal:

- Bid Certification
- Notification of Criminal History of Contractor
- Debarment, Suspension and Ineligibility Certification
- EDGAR Vendor Certification
- Software Vendor Certification Form (when applicable)
- Conflict of Interest Questionnaire (CIQ). The CIQ is prepared by the Texas Ethics Commission, in compliance with Chapter 176 of the Texas Local Government Code. The form should be submitted on-line at Conflict of Interest Questionnaire - CIQ.

IV. INITIAL REVIEW OF PROPOSALS

Any contractor determined non-responsible or any proposal determined non-responsive will not be evaluated further. The contractor will be notified of a non-responsible or non-responsive determination.
**Responsive**
In order for a proposal to be responsive:

- ALL required forms listed above shall be signed and included with proposal;
- Proposal shall be received prior to the RFP opening date at the address listed on the cover page;
- Proposal shall respond to the entire scope of service and performance requirements as requested.

**Responsible**
In order for a proposal to be responsible, the contractor shall be in good financial standing with the Texas Comptroller of Public Accounts.

**V. COMPETITIVE SELECTION / EVALUATION**

A. This is a NEGOTIATED procurement and as such, award will not necessarily be made to the offeror submitting the lowest priced proposal. Award will be made to the firm submitting the best responsive proposal satisfying AISD’s requirements, price and other factors considered.

<table>
<thead>
<tr>
<th>Points</th>
<th>Item</th>
<th>Detailed Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 Points</td>
<td>Proposed Plan</td>
<td>The adequacy and completeness of the plan offered addressing the Scope of Service.</td>
</tr>
<tr>
<td>25 Points</td>
<td>Contractor’s Capabilities</td>
<td>The demonstrated ability of the contractor to provide services, including references.</td>
</tr>
<tr>
<td>15 Points</td>
<td>Management and Reporting Capabilities</td>
<td>The ability of the contractor to efficiently and accurately process management and reporting requirements as described in the RFP will be considered</td>
</tr>
<tr>
<td>35 Points</td>
<td>Financial Proposal</td>
<td>Costs for components as proposed in the unit costs on Attachment A – Unit Cost / Total Cost Estimate Worksheet will be the basis for this comparison.</td>
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</table>

B. The committee evaluating the proposals submitted in response to this RFP may require any or all contractors to give an oral presentation in order to clarify or elaborate on their proposal as well as to provide a demonstration. Upon completion of oral presentations or discussions, contractors may be requested to revise any or all portions of their proposals and submit a best and final offer (BAFO) for consideration.

C. If the district determines that additional evaluation steps are required to determine the best value between Contractors, the district reserves the right to consider any or all of the following additional criteria; the proposed price, contractor’s experience, references and record for responsibility, or any other relevant factor that the district deems necessary to determine best value.
VI. SCOPE OF SERVICE AND PERFORMANCE REQUIREMENTS

Term
The agreement(s) resulting from this solicitation will be in effect for an initial term of one (1) year from the date of award by the Board of Trustees, or such date established by the agreement. The parties by mutual consent may renew the agreement for up to three (3) additional one (1) year periods. In addition, the district reserves the right to extend the contract for an additional time beyond the final expiration date if necessary to ensure no lapse in service.

Scope of Services
Austin ISD needs to establish one or more strategic supply agreements for Internet access with one Internet Service Providers (ISP) for one 10 Gbps bandwidth link to AISD locations using the GAATN network as the connection point to the AISD network. The bidder must be a Tier 1 or Tier 2 provider of Internet services that include enterprise class network support and internet security / protection mechanisms as part of the standard service offering.

The AISD will determine the optimal service provider for the sites located on the North side of the AISD network. The North segment of the AISD network includes approximately 78 sites. AISD will choose the vendor for delivery of Internet access based on several criteria (as described later in this document).

AISD will consider several options to find the optimal method to establish an optimal location with an ISP. If the ISP already has a connection into a designated site on the GAATN network (see list below and GAATN.org for additional information), AISD may be able to cross connect to the ISP at a GAATN location. Also, it may be possible for AISD to bring GAATN fiber into a colocation facility or point of presence (POP) to connect to the ISP.

Evaluation Criteria for this section: Program Plan

1. Scope of Services

1.1 The vendor will be required to provide a list of colocation facilities or points of presence where Austin ISD can bring GAATN fiber in to create one 10Gbps (or greater) connections to the vendor’s network for Internet access. Alternatively, the vendor may provide the required service at an existing GAATN site (some are listed below). The AISD currently has a 10Gbps link at the Austin City Hall location. The contract for this link may be renewed or the link may be replaced. Detailed quotes for all costs for delivery of this bandwidth are required.

Some of the preferred sites on the GAATN network include:
- AISD HQ, 4000 South IH-35, Austin, TX 78704
- Austin City Hall, 301 W Second St., Austin, 78701
- Austin Convention Center, 500 East Cesar Chavez St., Austin, 78701
- Austin Emergency Management (CTECC), 5010 Old Manor Road, Austin 78723
- Cyrus One, 7100 Metropolis Dr., Austin, TX 78744
Austin ISD – RFP 20RFP070 Internet Access Service – Commodity Bandwidth, AISD North Campus Locations

- Northeast ECHS, 7104 Berkman Dr., Austin, TX 78752
- Crockett ECHS, 5601 Manchaca Rd., Austin, TX 78745
- Kealing Middle School, 1607 Pennsylvania Ave., Austin, TX 78702
- Gullet Elementary School, 6310 Treadwell Blvd., Austin, TX 78757

Some of the preferred colocation facilities under consideration include:

- VXchnge Data Center, 8025 N Interstate Hwy 35, Austin, TX 78753
- XO Communications, 2100 S IH 35 Frontage Rd 1st Floor, Austin, TX 78704

The bidder should provide a list of other locations where Internet access services can be provided to AISD. These additional locations should be added to the Attachment A Cost Estimates Worksheet.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.2 The initial deployment will require delivery to AISD from a vendor POP or colocation facility over the GAATN fiber network, or at a GAATN site listed above. Additional sites will be considered for future expansions or reconfigurations.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.3 The cost for bandwidth should be provided as a monthly cost per Gbps that is separate from any one-time costs for installation or other site related costs (see Attachment A – Price Sheet).

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.4 The requested link of 10 Gbps or more must be provided over a 10 Gbps multimode fiber or single mode fiber physical link (Ethernet) that can be expanded to higher limits as needed.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.5 The amount of Internet bandwidth required may be increased or decreased each year. AISD will update this information in January of each year, and may require an adjustment in the price quote before the PO is issued. The contractor must return the updated quote to AISD by February 1 of each year.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.6 The contract terms will be for annual the dates of service are from July 1 of one year to June 30 of the next year.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.7 The contractor must provide the option for the annual renewal of these contracts for 3 years after the initial contract. The contractor will be required to provide new quotes each year after making the adjustments based on the bandwidth requirements for the next year.
1.8 For each annual renewal, the contractor must provide new quotes based on the same or better discount rate (% off list price) as quoted in this original contract.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.9 The contractor must provide a detailed description of the network on which this service will be provided. This should include details of locations of POPs, Tier 1 carrier interconnections and peering, provisions made for redundancy and disaster recovery. See Attachment B – Technical Questionnaire for the required information.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.10 The contractor should provide pricing for the 10 Gbps bandwidth connections in order for AISD to evaluate the pricing structure and quantity discounts that are offered. See Attachment A – Price Sheet. The contractor, if available, should provide pricing for increased bandwidth in 10 Gbps increments, up to 100 Gbps. The information on the incremental pricing can be supplied by editing or duplicating Attachment A.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.11 IPv4 Advertisements - The contractor should assist AISD with the advertisement of AISD’s own ARIN-provided address space in the following way. The contractor should advertise one IPv4 "/21" prefix that summarizes all of AISD's address space. In addition, the contractor should also send an IPv4 "/22" advertisement that represents half of AISD’s address space. The contractor should be aware that AISD may contract with another Internet provider, using the same stipulation to cover the other half (the other /22) of AISD’s address space. Essentially, AISD would like to acquire an address space and advertise it via two different providers, requiring each provider to advertise the same superset prefix as well as a specific subset prefix. In this way, AISD would like to achieve redundancy as well as some control over inbound Internet traffic.

Vendor Response: Comply ☐ Exception ☐ Explanation:

1.12 The contractor must be an ERATE service provider and able to provide this service through the ERATE program. The AISD may require the contractor to coordinate reimbursement of the costs of the eligible services through the ERATE program.

Vendor Response: Comply ☐ Exception ☐ Explanation:

2. Goals and Objectives

The AISD is seeking diverse, reliable and scalable high speed Internet Access for the AISD Network. The AISD administers this wide area network, and may contract with multiple vendors for service through vendor-designated points of presence or at specified GAATN locations (with the option to locate at additional sites). These connections will specify bandwidth speeds with options to increase the subscribed bandwidth during the contract term. The final bandwidth allocations between connections will be established upon award of the contract. The current Internet bandwidth available at AISD from all
providers is approximately 25 Gbps. The AISD total usage minimum for each ISP will be 10 Gbps and could reach a maximum of 100 Gbps during the term of the contract as demand at AISD continues to grow. The AISD reserves the right to increase the bandwidth needs during the term of this contract as minor contract modifications.

The Vendor is expected to meet all technical requirements for this service as listed below. Please provide details for all available DDOS protection services that are offered in this response. The AISD will require that some level of DDOS protection is provided with this ISP service.

The vendor is also expected to comply with the Service Level Agreement requirements defined below.

3. E-RATE Terms and Conditions

3.1 The AISD intends to apply for discounts on the services/equipment listed in this RFP through the federal Universal Service Support Mechanism for Schools and Libraries, commonly known as “E-Rate.” Vendors submitting bids under this RFP must agree to meet the following conditions relating to the E-Rate program:

3.2 The Vendor must agree to execute a contract on or before March 31, 2020 that reflects terms and conditions that are mutually agreed upon by the AISD and the Vendor. This requirement may be extended by the AISD at its sole discretion. The AISD has defined its Standard Terms and Conditions in Master Purchase Agreement attached below. Others may be applied specific to the services being requested.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.3 The Vendor must obtain a valid E-rate SPIN number (Service Provider Identification Number), and must provide that SPIN in the Proposal submitted in response to this bid opportunity. If a Vendor does not currently have a SPIN but would like to apply for one, the Vendor must submit a completed FCC Form 498 to the E-rate program administrator, the Schools and Libraries Division of the Universal Service Administrative Company (“SLD”). The form is available on the SLD’s website at: www.usac.org/sl in the Forms section. If the Vendor is unable to obtain a SPIN before the deadline for responding to this Request, the Vendor may attach its completed FCC Form 498 and proof that the form was submitted to the SLD (for example, Postal Form 3817 or a copy of the envelope bearing the postmark date of the mailing of the form; or email confirmation, etc.).

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.4 The Vendor must agree to timely submit to the SLD a completed Form 473, Service Provider Annual Certification Form, which is a program requirement. The Vendor must also agree to provide a copy of the completed Form 473 to the AISD upon request. This form is available on the SLD’s website at www.usac.org/sl in the Forms section.
Vendor Response: Comply ☐ Exception ☐ Explanation:

3.5 The Vendor must agree to ship and/or deliver, and invoice for any services, goods and/or equipment requested in this Service Request on or after July 1, 2020.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.6 The Vendor must register with the FCC and obtain a FCC registration number. See https://apps.fcc.gov/coresWeb/publicHome.do for more information about this requirement.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.7 The Vendor must separately itemize the cost of E-rate eligible and ineligible products and/or services on its invoices. To determine what items are eligible, visit the E-rate Eligible Services List at: http://www.usac.org/sl/applicants/beforeyoubegin/eligible-services-list.aspx or call the SLD at 888-203-8100. This requirement applies to services provided to E-rate eligible entities (K-12 schools) and other AISD entities that are not eligible for E-rate. The Vendor must provide unit pricing to enable the AISD to compute the bid price of services provided to K-12 schools.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.8 The Vendor must be in good standing with the FCC and have no debts outstanding that are owed to the FCC and must not be on Red Light Status. The Vendor must immediately notify the AISD in any event that the Vendor is put on Red Light Status by the FCC and must take immediate measures to resolve and remove its Red Light Status. Vendor’s Red Light Status constitutes a material breach of contract and the AISD reserves the right to cancel the Agreement of the parties immediately and without incurring any termination charges.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.9 If Vendor learns of any federal, AISD or local investigation conducted by any regulatory authority that could have an impact on the AISD’s ability to continue to receive the benefit of E-rate funding, Vendor must notify the AISD within 30 days of learning of such investigation. The AISD reserves the right to cancel the agreement without penalty if the investigation impedes the AISD’s ability in any way to receive the benefit of E-rate funding subject to any investigation of wrongdoing.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.10 The Vendor must cooperate with the AISD in ensuring that the location names and addresses
listed on the Vendor’s bills are accurate and correct. The Vendor must agree to make any corrections to location names and addresses within 30 days of receiving such requests.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.11 The Vendor must cooperate with the AISD in providing documentation concerning the billing charges and calculations, and answering any questions that may be required during the SLD review of the AISD’s E-rate application.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.12 The Vendor must agree to retain copies of all bills and any other records such as work orders, change orders and request for price quotes, issued to the AISD for 10 years from the end of each fiscal year that this contract is in effect, and to provide copies of these documents to the AISD upon request. These records may be stored electronically and paper copies are not required to be retained.

Vendor Response: Comply ☐ Exception ☐ Explanation:

3.13 Vendors must agree to comply with the FCC's Lowest Corresponding Price rule and not charge a price above the LCP for E-rate eligible services. See 47 C.F.R. Section 54.511 and 47 CFR Section 54.500(f). The Vendor is obligated to provide the LCP not just in this bid response, but throughout the course of the contract. The contract is required to contain a process for annual LCP compliance. Vendors may refer to USAC guidance at http://www.usac.org/sl/service-providers/step02/lowest-corresponding-price.aspx for additional information.

Vendor Response: Comply ☐ Exception ☐ Explanation:

**Evaluation Criteria for this section: Contractor’s Capabilities**

4. Deliverables:

Provide a complete narrative detailing the assessment of the work to be performed, approach and methods to provide the requirements of this RFP, the Vendor’s ability to fulfill the requirements of this RFP, the Vendor’s approach, the resources necessary to fulfill the requirements, project management techniques, specialized services, availability to the project locale, familiarity with the project locale and a description of any options or alternatives proposed. This should demonstrate that the Vendor understands the desired overall performance expectations.

This response should identify each requirement being addressed as enumerated in all sections of this document. If you have an alternative methodology or deliverables you would like to propose, please include a detailed description of the alternative methodology or deliverables and how they will meet or exceed the essential requirements of the methodology and deliverables requested in this RFP.
There is also a list of technical questions, which is set forth in the various sections of this RFP. These questions must be answered and signed by the Vendor and will be used in the proposal evaluation.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5. Technical Specifications

5.1 Transport Requirements: During the term of this contract the AISD will support 10 Gigabit Ethernet (10GbE) links at all connection sites.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.2 The AISD also desires the support of 802.3ad standard LAG (Link Aggregation Group) groups using LACP active and fast polling for all transport options. The AISD expects by the end of this contract period to have either 100GbE links or multiple 10GbE LAG groups to supply bandwidth.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.3 Reliability is paramount; therefore, the AISD requires layer 1 redundancy, such as a SONET ring configuration or similar diverse routing option that will automatically i.e., without human intervention, restore connectivity in the case of a failure of the connection for the physical transport mechanism.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.4 ISPs (Internet Service Provider) must list all their Points of Presence (POP) in the Austin / Texas area, their locations, and whether the premises are owned or leased.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.5 ISPs must identify means of power protection; i.e., battery and/or generator for use in the event of a power failure and must identify length of continued POP operation under power protection.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.6 In general terms, describe the security system in place to protect against disruption of the network by unauthorized persons.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.7 Contracted bandwidth must be guaranteed across the Vendor’s network and across their peering partners.

Vendor Response: Comply ☐ Exception ☐ Explanation:
5.8 ISP Reliability – History: ISPs must provide information on downtime over the past year, including data reflecting the number and duration of outages. Describe your policy regarding discounts or rebates in the event of an outage and the associated criteria.

Vendor Response: Comply □ Exception □ Explanation:

5.9 ISP Backbone Requirements

5.10 The ISP must either be a Tier 1 or have fully operational, diverse connections connected directly to at least two Tier 1 providers.

Vendor Response: Comply □ Exception □ Explanation:

5.11 A Tier 1 ISP is defined as a backbone provider operating a National Internet network with a capacity of at least OC-192 carrying traffic that is exchanged at various public National Access Points (NAPs) and through private peering arrangements with other Tier 1 providers. A Tier 1 backbone must also maintain a Network Operations Center (NOC) 24 hours a day, seven days a week to manage its network. Because Tier 1 backbones form the core of the Internet, all other ISPs and users will connect through one of these backbones in order to access the Internet.

Vendor Response: Comply □ Exception □ Explanation:

5.12 If the ISP is not a Tier 1 provider, then connections to the Tier 1 provider must be subscribed in such a way that the loss of one Tier 1 connection would not cause any packet loss or latency for the AISD’s traffic outside of the normal SLA.

Vendor Response: Comply □ Exception □ Explanation:

5.13 If the ISP meets the definition below of a Tier 1 then ISPs peering point with the AISD network must have fully diverse connections to their backbone so that the loss of any one connection would not cause packet loss or latency for the AISD’s Traffic outside of the normal SLA agreement.

Vendor Response: Comply □ Exception □ Explanation:

5.14 The Vendor must provide detailed information outlining the facilities utilized by the Vendor. Please describe the current backbone network, including bandwidth; names of principal suppliers (e.g., interexchange carriers, fiber optic transport providers, etc.).

Vendor Response: Comply □ Exception □ Explanation:

5.15 The Vendor must identify peering/connection points to Network Access Points (NAPs),
Metropolitan Area Exchanges (MAE-‘s) and other major ISPs along with bandwidth and network types type of interconnection. Network maps detailing this information are required. Indicate the type of network (i.e., fiber optic, leased copper lines, cable, etc.) connections that would be utilized to handle the AISD traffic. Infrastructure preference will be given to providers who can demonstrate, through the use of network diagrams and other material, detail regarding route diversity, bandwidth, and hop counts.

Vendor Response: Comply □ Exception □ Explanation:

5.16 Describe any network diversity in the Vendor backbone network.

Vendor Response: Comply □ Exception □ Explanation:

5.17 Describe the Vendor’s method of diverse routing to be provided for the AISD connection, details of the hardware and software used to restore a failure of the primary connection, proof that restoration could be done without human intervention and the amount of time that restoration would take. Internet connectivity must be established in such a way that service is not relying on a single point or path of access to the overall Internet. This connectivity will ensure full and complete diversity through and beyond the provider’s own network.

Vendor Response: Comply □ Exception □ Explanation:

5.18 Provide information regarding the current utilization of Vendors network, including average and peak utilization data. Describe the Vendor’s current plans for upgrading the network as well as the criteria used to decide when an upgrade is necessary.

Vendor Response: Comply □ Exception □ Explanation:

5.19 If the Vendor offers any Quality of Service (QoS) features for traffic on the Vendor backbone, list those services and costs. Include in the response any technical documentation on such services or future plans for QoS Services.

Vendor Response: Comply □ Exception □ Explanation:

Routing and Security Requirements

5.20 The AISD network is currently allocated 1 AS number, and 3 IPv4 CIDR blocks by ARIN. The Vendor must be able to support the AISD advertising all of the different IP block types and AS number using Border Gateway Protocol (BGP) connections with the AISD network. The Vendor must be able to route the AISD and Higher Education IPv6 /32 blocks to the Internet backbone using IPv6 BGP peering with the AISD.

Vendor Response: Comply □ Exception □ Explanation:

5.21 The Vendor must fully support both IPv6 and IPv4 routing to the Vendors’ peers and to the AISD.
5.22 The Vendor must fully support the AISD’s use of Supernet and Subnet Addressing down to /32 prefixes for IPv4 and /128 for IPv6 for prefix announcements to the Vendor. While the AISD will try to use Supernetting to consolidate address blocks into as few announcements as possible, DDOS and other traffic engineering needs for brief times may require us to announce both a Supernet and at the same time a Subnet inside of the Supernet to the Vendor using different paths and metrics. The vendor should support the technique commonly known as Remotely Triggered Black Hole (RTBH) for accepting certain /32 advertisements from the AISD that can include a special BGP community and are to be interpreted as IP destinations that are under DDOS attack and for which traffic should not be forwarded to the AISD. The Vendor should not pass on any prefixes greater than a /24 to the Vendor’s peers but must accept them from the AISD and follow all BGP standards for routing to the AISD from the Vendor.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.23 The AISD makes full use of the BGP v4 standard to support the AISD’s ISP Connections. The Vendor must be able to support the AISD’s use of BGP and the BGP features that are used to load- balance incoming and outgoing traffic to the Internet. IPv4 and IPv6 will be separate BGP Peering Connections using IPv4 and IPv6 addressing respectively.

BGP Features Required:
- Support for 32bit AS numbers
- The following BGP Communities must be supported:
  - The following are Internet Engineering Task Force Request for Comment (RFC) standards and must behave per the RFC specifications when used.
  - NO-EXPORT (0xFFFFFFFF01)
  - NO-ADVERTISE (0xFFFFFFFF02)
  - NO-ADVERTISE-SUBCONFED (0xFFFFFFFF03)
  - NO-PEER (0xFFFFFFFF04)
  - AISD may also require the support for the AISD defined communities:
    - 14263:2000 - No local ISP Content Delivery Network access
    - 14263:3000 - Move subnet to DDOS Sink connection
    - 14263:2010 - Do not Advertise to Midwest Internet Cooperative Exchange (Regional Exchange Peer)
  - Use the BGP Metric routing sent from the AISD to route traffic from the Internet to the individual AISD peering locations.
  - Optional BGP Features:
    - Multicast BGP Routing
    - Bogon IP and AS routing updates that are updated for new allocations at least weekly.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.24 One or more of the AISD’s Peering Sites will make BGP connections to the Vendor. Over this connection the Vendor will supply full Internet Routing Table IPv4 and optionally IPv6 to the AISD and the AISD will advertise AS numbers and IPv4 CIDR blocks. The AISD will make use of Metrics, MED, Communities and AS Prepending BGP features that the Vendor must follow and pass out to the Internet in order to route the traffic from the Internet. The AISD will also advertise multiple routing prefixes, including some that are subsets of a larger prefix advertised at the
same time on the same connection. The vendor must support these subset advertisements and pass them on to the Internet without any summarization, except in the case of /32 prefixes that are temporarily used to mitigate DDOS traffic.

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.25 This connection will be a minimum of 10GbE connection except for the DDOS Sink connection. The DDOS Sink connection is described in the section 6.2.10 for DDOS (Distributed Denial of Service) protection. The AISD expects, during the course of this contract, to require up to 100GbE or multiple 10GbE links in a LAG group in order to supply the needed bandwidth.

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.26 The Vendor must be able to support 10GbE LAG groups and using Ethernet standard LACP protocols of up to four members in each LAG group. The AISD requires LAG groups to be configured for Source/Destination IP Load Balancing.

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.27 The Vendor must also be able to implement IPv4 and IPv6 filters on the connections to the AISD at the request of the AISD. These filters must be able to be either temporary or permanent in nature. The filter must be able to filter on the following parameters:

- Source/Destination IP Addressing
- Source/Destination TCP/UDP Port Numbers IP protocols

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.28 The Vendor must provide technical documents that details the Vendors handling of BGP connections and any documentation on limitations the Vendor will place on traffic and/or routing updates.

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.29 The Vendor must provide a detailed description of the procedures and timelines needed to request a BGP routing change.

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.30 The Vendor must submit a security response plan and escalation procedures in the event of a network Denial of Service (DOS) attack on the AISD. The Vendor must be able to respond quickly and work with the AISD to establish blocks to stop any DOS attack.

Vendor Response: Comply [ ] Exception [ ] Explanation:

5.31 The Vendor, in the event of a DDOS/DOS attack, must be able to place upstream Access
Control List (ACL) blocks or null routes at the request of the AISD to prevent the DOS/DDOS attack from overloading the Vendor connections to the AISD.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.32 The AISD and Vendor will establish a DDOS Sink connection at an agreed upon bandwidth. This Sink connection will be used only to temporarily redirect DDOS/DOS traffic from the main connections to this Sink connection to minimize impact upon the network as a whole. The method used to redirect traffic will utilize BGP MED/Community standards. The AISD will use these BGP standards to signal to the Vendor to move the requested CIDR blocks from the main connections to the DDOS Sink connection and back again without any manual involvement by the Vendor. The Vendor must support subnetting down to /32 for IPv4 and /128 IPv6 for this connection, routing from the Vendor to the AISD without changing upstream announcements to the Vendor’s peering partners.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.33 DDOS Service
The AISD prefers the Vendor’s service includes a full featured DDOS attack mitigation service based on current industry standards in blocking/filtering and scrubbing DDOS traffic from valid traffic and then preventing that invalid traffic from reaching the AISD networks. The terms DDOS and DOS are interchangeable throughout the RFP.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.34 Detection/Monitoring and Reporting
The service should be able to detect all known types of DDOS/DOS attacks automatically. The service should include automated reporting of attacks using e-mail, phone calls, and SMS alerts to provided addresses by the AISD. The service should be supported by a 24x7x365 NOC that can both report on attacks and assist in mitigation of all types of attacks.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.35 The service should be able to deliver monthly statistics on a per attack basis as defined by the AISD. The service should also provide After-Action Reports (AAR) no later than 48 hours after the attack for each high/critical attack. The AAR should include the following details:
- Timeline of attack includes the following;
- Bandwidth in packets per second
- Bandwidth in bytes per second
- Target(s) of attack(s)
- Source(s) of attack(s)
- Type(s) of attack with time reference
- Packet size distribution
- Source(s) of attack(s) by country
- IP Protocol(s) used
- Transmission Control Protocol/User Data Protocol (TCP/UDP) Port(s) used
- Stacked line graph based on attack type in bits per second
- Attack timeline must be shown in both table and graph formats
5.36 Bandwidth Starvation Attacks Mitigation
The service must be able to black hole/null route and/or scrub IPv4 and IPv6 traffic based on the following parameters in any and all combinations before the traffic is routed to the AISD network peering connections by the Vendor.
- IP Protocol
- IP Port Number (Source and/or Destination)
- Any IP/TCP/UDP Header parameter
- IP Address (Source and/or Destination)
- Hyper Text Transfer Protocol (HTTP) Header
- Domain Name Service (DNS) Query Payload
- Internet Control Messaging Protocol (ICMP) Type Codes
- Other parameters based on future attack patterns

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.37 Resource Starvation Attacks Mitigation
The service should be able to perform deep application level scrubbing to block bad requests from the target of the attack while still allowing as many legitimate requests to be passed to the AISD.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.38 The service should be able to scrub the following attacks:
- TCP SYN Flood
- HTTP Get Flood
- TCP connections per second
- DNS Query Flood
- HTTP Post Flood
- Slow Read attack
- R-U-Dead-Yet? attack
- Telephony Denial of Service (TDoS) / Voice over IP (VoIP) attack
- APDoS (Advanced Persistent DOS Attack)
- Other application / high level attacks

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.39 DDOS Service Level Agreement (SLA)
The service should include SLA(s) for the DDOS service for the following parts.
- Availability of the DDOS service
- Monitoring of DDOS attacks
- Alerting of DDOS attacks
- Reporting of DDOS attacks
- Mitigation of detected DDOS attacks
5.40 If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was not met in the current billing cycle.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.41 SLA credits should be applied to customers account within the next month’s billing cycle of occurrence. The amount charged of credit will be calculated using either of the following formulae:

- (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle charge.
- If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

Vendor Response: Comply ☐ Exception ☐ Explanation:

5.42 Please describe in detail the architecture, operations, and configuration of the DDOS service to meet the requirements above.

Vendor Response: Comply ☐ Exception ☐ Explanation:

**Evaluation Criteria for this section: Management and Reporting Capabilities**

6. **Network Management**

6.1 The Vendor must have a 24 hour 365 days a year Network Operations Center (NOC). The NOC is used for normal and emergency maintenance tasks and security management of the backbone and the physical and logical transport to the AISD.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.2 Network Operations Center (NOC) is a very critical element in the provisioning and operation of any network. The Vendor is requested to describe in reasonable detail the Vendor's NOC operation. In particular, the Vendors must address the following questions and issues:

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.3 Vendor must identify and describe the NOC(s) which would be supporting the AISD.
Vendor Response: Comply ☐ Exception ☐ Explanation:

6.4 Vendor must define hours of operation, operator responsibilities, degree of proactive monitoring, and support tiers.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.5 Vendor should provide any statistics that indicate the time duration from the time of problem detection to the time of problem resolution.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.6 Vendor should describe the service delivery / ticketing system in use. Details of the capabilities should be provided.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.7 Vendor must share information on resolved problems with the AISD.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.8 Vendor must allow the AISD to create trouble tickets within the vendor’s system.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.9 Vendor must allow AISD access to view trouble tickets.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.10 The Vendor’s staff must be versed in network security issues such as DOS/DDOS Attacks, Route Hijacking, DNS poisoning and be prepared to work with the AISD to resolve such issues and if necessary be able to make the required modifications to the Vendor network to stop such attacks.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.11 The Vendor will be expected to provide AISD staff training and documentation for no cost on any NOC software interfaces.
Vendor Response: Comply ☐ Exception ☐ Explanation:

6.12 Network operations and support personnel must be located in North America.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.13 Network operations and support personnel must not be outsourced to third parties.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.14 The Vendor will be expected to provide an Internet-accessible method for the AISD to view both real-time and historical data including at least the following types: status, utilization, latency and number of errors on the connections from the Vendor to the AISD. The method should utilize a web based interface that allows the AISD to specify the timeframe and dates to view the data from and the data must be presented in a graphical format with an option to access the raw number data via a read/write Application Program Interface (API). Historical data must be accessible for the duration of this contract.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.15 The Vendor’s submission should also describe the network monitoring performed by the NOC. Is monitoring accomplished up to the customer connection or does it only include monitoring of the backbone network? The software/hardware tools used to monitor the network must be identified. Provide a list of the standard statistics that the Vendor shares with customers. Identify statistical or data reports regarding on network utilization that will be shared with the AISD.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.16 The Vendor is given the option to provide additional technical support or to offer additional services such as network capacity planning or design. Any fee schedules must be included with the proposal.

Vendor Response: Comply ☐ Exception ☐ Explanation:

6.17 To fulfill billing requirements, the NOC must be able to correctly record and report on the 95th Percentile of usage on all circuits between the AISD and the Vendor.

Vendor Response: Comply ☐ Exception ☐ Explanation:

7. Maintenance Time and Procedures
7.1 The Vendor must establish or have a formal procedure for conducting maintenance service (to be approved by the AISD) that would include: 24-hour trouble desk, trouble reporting forms, trouble reporting procedures, toll free telephone numbers, e-mail addresses, maintenance organizational chart (showing supervision and key personnel), and escalation procedures. All listed personnel shall include their office and out of office telephone numbers and office e-mail addresses.

Vendor Response: Comply ☐ Exception ☐ Explanation:

7.2 The Vendor must ensure that all normal and scheduled maintenance that could affect the AISD connection to the Vendor and to the Internet will be performed during off-hours and must be reported to the AISD. These hours are from 2 am to 5 am CST (CDT if daylight savings is in effect).

Vendor Response: Comply ☐ Exception ☐ Explanation:

8. Prior Experience

8.1 Describe, in detail, the Vendors prior experience and expertise with BGP routing for customers or upstream providers. Include the following experiences:
- BGP IPv6 using Native IPv6 addressing
- BGP Multi-homing
- BGP MED Value Routing
- BGP Inbound and Outbound Route Filtering
- BGP AS Path Additions and Injections BGP Community Routing and Filtering BGP Route Reflectors
- BGP Multi-hop Connections
- BGP Multicast IPv4 and IPv6

Vendor Response: Comply ☐ Exception ☐ Explanation:

8.2 Describe any additional experiences that will add value.

Vendor Response: Comply ☐ Exception ☐ Explanation:

8.3 Vendor shall provide the name of its largest customer and/or any customer that has more than a 10 Gbps connection and the speed of that connection.

Vendor Response: Comply ☐ Exception ☐ Explanation:

8.4 Vendor shall provide corporate information identifying length of time in the Internet Service Provider market.

Vendor Response: Comply ☐ Exception ☐ Explanation:
8.5 Vendor shall identify other customers similar in requirements to the AISD for which they have provided substantial business services similar to that being requested in this RFP. Please provide references for existing customers and also the names of at least three past customers.

Vendor Response: Comply □ Exception □ Explanation:

8.6 Acceptable Use Policy (AUP)
The Vendor must provide any AUP that the AISD would be required to follow.

Vendor Response: Comply □ Exception □ Explanation:

8.7 The Vendor must provide any documentation defining any instances where a customer of similar size (service wise) to the AISD has been penalized for AUP violations.

Vendor Response: Comply □ Exception □ Explanation:

9. Service Level Agreements (SLA)

9.1 The Vendor must meet the following SLA requirements. In addition to the below requirements, the Vendor must submit a full definition of other SLAs that the Vendor offers with a detailed description of what the Vendor measures and how the Vendor performs the measurements required to fulfill the SLA.

Vendor Response: Comply □ Exception □ Explanation:

9.2 Installation SLA

- The service will be available for production on July 1, 2020
- Credit required:
- For every day up to 10 calendar days that the service is not available (Availability defined below in 6.11.2), the AISD will receive a 10% credit of the recurring monthly cost of Internet Service. This credit is cumulative until the service is operational. After a total of 10 days of non-service, this credit will increase to 100% of the monthly recurring cost, cumulative. SLA credits should be applied to the AISD account on the next month’s billing cycle of occurrence.

Vendor Response: Comply □ Exception □ Explanation:

9.3 Availability SLA

- The AISD and Vendor will acknowledge that the connection is in a working and available condition when the following conditions are met:
- The AISD connections to the Vendor will deliver packets with less than 0.0001% packet loss over a continuous 5-minute period. This is measured from each AISD peer site to the Vendor router at the Vendor peering site.
- The connection has a latency not exceeding 5 milliseconds measured from the AISD peering router to the Vendor peering.
- Credit required:
  - If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was not met in the current billing cycle.
  - SLA credits should be applied to customers account within the next month’s billing cycle of occurrence. The amount charged of credit will be calculated using either of the following formulae:
    - (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle charge.
    - If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

  Vendor Response: Comply ☐ Exception ☐ Explanation:

9.4 Packet Loss SLA

- The Vendor will measure and guarantee no more than 0.0001% packet loss across the link from the AISD to the Vendor. The Vendor will provide the AISD a web-based access method to view this tracking or the SLA will be measured by the AISD Network Surveillance Center (NSC) packet loss data.
- Credit required:
  - If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was not met in the current billing cycle.
  - SLA credits should be applied to customers account within the next month’s billing cycle of occurrence. The amount charged of credit will be calculated using either of the following formulae:
    - (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle charge.
    - If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

  Vendor Response: Comply ☐ Exception ☐ Explanation:

9.5 Latency SLA

- The Vendor will measure and guarantee no more than an average of
  - 55 milliseconds round trip time latency across its North American network. The Vendor will provide the AISD a web-based access method to view this tracking or this SLA will be measured by the AISD NSC latency data.
- Credit required:
  - If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was not met in the current billing cycle.
  - SLA credits should be applied to customers account within the next month’s billing cycle of occurrence. The amount charged of credit will be calculated using either of the following formulae:
    - (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle charge.
    - If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

  Vendor Response: Comply ☐ Exception ☐ Explanation:

9.6 Subscribed Bandwidth SLA

- Contracted bandwidth must be guaranteed through the Vendors network to its Peering Sites
to other Tier 1 Providers. The Vendor will provide AISD a web-based access method to view
this tracking or this SLA will be measured by the AISD NSC bandwidth data.

- Credit required:
- If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was
  not met in the current billing cycle.
- SLA credits should be applied to customers account within the next month’s billing cycle of
  occurrence. The amount charged of credit will be calculated using either of the following
  formulae:
  - (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle
    charge.
  - If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

Vendor Response: Comply □ Exception □ Explanation:

9.7 Network Management/Monitoring SLA

- Networking Management/Monitoring as listed in the section called
- Network Management must be available and working 365 days and 24 hours a day. Outside
  of schedule maintenance windows agreed upon with the AISD any downtime of the system
  for over 20 minutes will be considered a SLA violation.
- Credit required:
- If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was
  not met in the current billing cycle.
- SLA credits should be applied to customers account within the next month’s billing cycle of
  occurrence. The amount charged of credit will be calculated using either of the following
  formulae:
  - (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle
    charge.
  - If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

Vendor Response: Comply □ Exception □ Explanation:

9.8 Uncontrollable Conditions

- Fiber Cuts will not be considered uncontrollable conditions and will be subjected to full SLA
  agreements for all affected sites.

- The AISD reserves the right to change, amend, or revise this SLA policy at any time.

Vendor Response: Comply □ Exception □ Explanation:

9.9 Billing SLA

- The Vendor will provide the AISD an accurate and easy-to-understand invoice within one
  month of the billing cycle. Invoices must be provided to AISD electronically (Comma
  Delimited Format and Portable Document Format) and on paper for processing and bill
  paying. A sample of the invoice must be provided.
- Credit required:
- If an SLA is not met the AISD will receive credit for the amount of time in which the SLA was
  not met in the current billing cycle.
- SLA credits should be applied to customers account within the next month’s billing cycle of
  occurrence. The amount charged of credit will be calculated using either of the following
  formulae:
  - (Minutes not met by the SLA divided total minutes per month) multiplied by the billing cycle
charge.

- If the SLA has not been met for 20% of the billing cycle the entire billing cycle is credited.

Vendor Response: Comply ☐ Exception ☐ Explanation:

**Evaluation Criteria for this section: Financial Proposal**

10. **Financial Proposal**

The vendor should include pricing for all required costs in the designated sections of Attachment A.

- Cost will be evaluated independently from the technical proposal. All costs related to the provision of the required services must be included in the cost proposal offered.
- The Vendor shall submit a statement in the Cost Proposal that attests to the Vendor’s willingness and ability to perform the work described in this RFP for the price being offered.
- Charges for Internet service will be based on the 95th percentile of utilization for the monthly billing cycle as measured by the Vendor’s Network Operations Center.
- Monthly charges for the service will be via a Megabit per second rate. This rate will be the only pricing structure allowed for all services.
- Do not include other NRC, MRC, port charges or any other items.

Vendor Response: Comply ☐ Exception ☐ Explanation:
VII. APPENDICES AND ATTACHMENTS

- Appendices (Documents included within this proposal):
  - Appendix 1 – Purchasing and Acquisition Vendor Relations Policy CHE-LOCAL

- Attachments (Separate documents available to download):
  - Attachment A – Price Sheet
  - Attachment B – Technical Questionnaire