

**Request for Proposals (RFP):  
Network Solution Services**

**Texas Health Information Network Collaborative (THINC)**

Texas Health Information Network Collaborative  
c/o CHRISTUS Health  
2707 North Loop West  
Houston, Texas 77008

Document Number: THINC RHCPP RFP01

## 1. Introduction

The Texas Health Information Network Collaborative (THINC) is a nonprofit consortium created by health care providers in the state of Texas to enhance connectivity for expanding health care accessibility and availability through the utilization of telecommunications and information services. This network and its use are intended to benefit all Texas residents, with an emphasis on rural and remote communities. Participants in THINC include hospitals, rural health care centers, academic medical centers, local health departments and others. CHRISTUS Health is the designated agent for the coalition, acting as its fiduciary and contracting agent.

The goal of THINC is to enhance the ability of all providers, with an emphasis on rural healthcare providers, to utilize network and digital technologies to improve access, quality and efficiencies to health care services and share clinical information to improve health access and outcomes. To accomplish this goal, THINC must establish the network infrastructure to electronically connect providers, payers, state health agencies, patients and other health care organizations across the state.

The FCC Rural Health Care Pilot Program (RHCPP) preceded ARRA and the HITECH Act, and using electronic medical records in a meaningful way. The U.S. Department of Health and Human Services (HHS) joined the RHCPP as a co-sponsor from the program's inception. All RHCPPs are charged with assisting HHS in meeting its national goals for health care improvement. .

This RFP is issued in order to **obtain a comprehensive set of telecommunications and network services that in aggregate will compromise an interoperable, secure, and cost effective IP-routed WAN that interconnects at minimum 225 health care providers throughout the State of Texas.** THINC will accomplish this through the design, construction and maintenance of a secure, effective, and sustainable broadband telecommunications network connecting local Texas health care providers to advanced medical information and services, and with each other. This network will utilize funding provided by the Federal Communications Commission ('FCC') under the Commission's order 07-198 ('Rural Healthcare Support Mechanism') of 19 November 2007.

As the designated fiduciary agent for THINC, CHRISTUS Health is accepting proposals from qualified vendors for the design of a robust, secure, sustainable interconnected broadband and telecommunications network that will comprise an interoperable, reliable and cost effective IP routed WAN that will cover the entire state of Texas . This network will be used exclusively for health care purposes. The original application to the FCC included a pilot within our pilot using wireless connectivity. Respondents should address this component as well.

As originally proposed, the initial phase of the network included approximately 225 end user locations located across the State of Texas. The original list of participating facilities can be found in the original THINC application at

<http://fjallfoss.fcc.gov/ecfs/document/view?id=6519409810> .

In its final format the network may include every hospital, clinic and other provider locations in the state which will exceed more than 1,000 end user locations. The sites

included in this initial phase of the network are listed in Attachment A of this document, *Participating Health Care Providers* (PHCP). Any sites listed in the original application that are not included in Attachment A will be included in one or more future RFPs.

Respondents are expected to take into account “last mile connectivity” in developing their response and to consider the needs of each user so that the bandwidth speed will accommodate current and future needs of each individual user.

### **1.1 Background - FCC**

To significantly increase access to acute, primary and preventive health care in rural America, the Federal Communications Commission dedicated over \$417 million for the construction of 69 statewide or regional broadband telehealth networks in 42 states and three U.S. territories under the Rural Health Care Pilot Program (RHCPP).

Pilot project participants are required to advance the goals of HHS and the CDC, especially those of the National Health Information Network (NHIN) and will maintain health information technology standards as set forth by HHS. This will help advance the President’s goal of creating a national system to support patients’ electronic health records.

**1.2 Vision and Goals.** THINC’s primary goal is to construct a private broadband health care network available for use by any and all health care providers across the entire state of Texas in fulfillment of its obligation under the FCC Rural Health Care Pilot Program.

THINC’s long term vision is to allow health care providers, including hospitals, clinics, physicians and public health services, and community members to use the network to support the delivery of quality, cost effective health care and enable health information exchange.

THINC will work closely with the State of Texas, the FCC, and Federal agencies such as HHS, CDC, and other appropriate entities in enabling local, state and national Health IT priorities.

**1.3. Primary Objectives.** THINC’s initial task is the establishment of a private healthcare network, the addition and enhancement of broadband connectivity and concomitant hardware to all participating sites in Texas, with rural hospital infrastructure and connectivity as the major beneficiary.

The network will be used to advance connected health services to rural communities, enable health information exchange including information in electronic medical records, PACS, pharmacies, clinical laboratories and other care sites, improve access to continuing medical, nursing and other health professionals’ education programs through

distance learning and enhance disaster preparedness, disaster management and the capability to help maintain electronic personal health records for all citizens. Data and Information for all these purposes must be available in real time while fulfilling all requirements for ensuring security, privacy and confidentiality in a HIPPA compliant manner.

**1.4. Development Phases.** The THINC Network project will be developed in phases, including the initial implementation phase of the sixty eight (68) separate health care facilities dispersed across the state of Texas and listed herein as Attachment “A.”. We anticipate two additional phases that will connect the remaining facilities that will follow close behind the initial deployment. We also expect more than the 200+ facilities listed herein to participate in the network.

We request your response take into consideration these phases and that the overall design, multiple phases of implementation, and continuing expansion of network sites and services are addressed. While this RFP addresses the FCC supported phase of building the network in order for the initial 68 facilities to connect to it, we prefer a holistic approach that includes all the phases and to prepare a comprehensive and detailed overall design for a statewide THINC network which will help guide and assist the initial implementation and expansion phases. ***Respondents should consider addressing how THINC can support connectivity for health information exchange for all providers in Texas as is required for meaningful use under the HITECH Act.***

**1.5. Request for Proposals.** Under terms of this Request for Proposals (RFP), the Texas Health Information Network Collaborative (THINC) solicits proposals from qualified vendors to provide comprehensive design and build services for a new statewide broadband telehealth network which will provide connectivity and access to health information, telemedicine and related services for health care providers (HCP) in rural and geographically remote communities throughout Texas.

**1.6. Design Elements.** Services solicited by this RFP will address all aspects of the THINC project. Fundamental elements of the comprehensive overall network design include:

**Backbone** - network meta-architecture and topology, core NOC, primary POP, layers, protocols, redundancy and other planning issues relevant to highest speed broadband carriage.

**Secondary** – “middle mile” links to regional or local NAP, exchange or peering points, “roadmap” of current networks and existing broadband infrastructure in Texas, connection and access plans.

**Sites** – “last mile” connecting rural communities and HCP sites to THINC network, local platform considerations, options and specifications, choices for rural HCP user connection and service.

**Operations** – system components, standards, and procedures for efficient IT network; reliability, security, privacy, hardware, software, support, interconnection, applications, services, expansion.

**Development** – THINC seeks a model that is easily managed and requests a detailed design for creating and sustaining a successful network including administration, services, management, business and revenue models, pricing, cost allocation, outreach and communication, regulatory and program compliance, long term growth and development.

**Sub Network Management.** Since the HITECH Act and health information exchange, local geographies with multiple providers prefer to act as the “manager” for the part of the network that is in their geography. It will be necessary to describe how sub networks can act as the intermediary for their geography while maintaining a single network. Sub network management may be administrative only or it might include additional responsibilities, especially regarding monitoring the network and the ability to separate billing into regions.

**1.7. Vendor Selection.** THINC will review competitive proposals according to terms and procedures of this RFP and select the vendor(s) whose proposals and credentials best meet the goals of the FCC Pilot Program and the THINC initiative. Bids must include detailed prices for each contract service proposed. Vendors may submit bids for any or all design service elements.

CHRISTUS Health, on behalf of the THINC coalition, will be the contracting agent for this RFP. Selection criteria will include but may not be limited to the vendor’s experience, understanding of the project, solution innovation and responsiveness.

**1.7.1. Technical specifications and schematics.** One outcome is to provide written technical specifications and schematics describing necessary network components to accomplish current THINC goals and allow for future growth in the number of end users and traffic on the network. Responses should address clearly defined central services, network operations and management, privacy and security assurances and recommendations for connecting and calculating usage for all entities, including potential non covered entities. In order to accomplish this, it may be necessary to survey each participating site to evaluate any infrastructure currently in place and what upgrades are required so it has the infrastructure necessary to accomplish the defines goals. THINC is not specifying any particular technology, approach or minimum bandwidth requirements and asks all potential vendors to provide recommendations for all the above. Last mile connectivity is a major concern and each facilities needs must be considered.

**Wireless Pilot.** The original application as approved by the FCC included a pilot conducted using wireless technology with one or more facilities. This pilot must also be addressed in the response. THINC has no preconceived notion of the wireless pilot and anticipates responses that suggest innovative ways that a wireless pilot could be conducted. Proposals might include wireless connectivity for rural and frontier facilities and providers; wireless connectivity within an urban area or a wireless pilot that includes patients and chronic disease management in rural or urban areas, or some combination thereof. Any pilots should be realistic and sustainable over time, as wireless

infrastructure can be an important component of the THINC network. There is also the potential to work with geographically distinct councils of government in a wireless pilot that would include hospitals and emergency medical dispatch. The wireless pilot must be of sufficient geographic reach so as to be able to validate serviceability over time and distance. Respondents should consider a wireless pilot that includes multiple typographies, population densities with a minimum reach of 150 square miles.

## 2. Solution Services

**2.0** The network solution service provider selected under this RFP will be expected to deliver a clear, comprehensive design and plans for construction, implementation, operation and development of the Texas Health Information Network (THINC), a statewide broadband telehealth network.

**Design Elements.** While this is a “build” RFP, a successful build will require some design elements. The THINC network solution should address and integrate planning for all major aspects of project implementation and successful sustained operations. Examples of network project solution elements include:

- Architecture and topology
- Technology options
- Hardware specifications
- Construction planning
- Services for rural providers
- Community health & safety
- Security
- Healthcare communication
- Organization administration
- Financial management
- Operations management
- Long term sustainability
- Growth and development

More information regarding THINC network solution requirements and considerations is contained in the *Network Solution Information* section.

**2.0.1** The network solutions should:

- Effectively address needs of every community/Health Care Provider (HCP) participating in the THINC network
- Develop interface standards and coordination plans to integrate local HCP networks with existing and new regional, statewide and national networks and backbone connections
- Address security requirements of the network and how THINC could provide as part of network services the security infrastructure that would enable authorization, authentication and auditing of any and all users of the THINC network
- Prepare accurate estimates of options and costs for all aspects of network development, implementation, operation, and potential future expansion
- Assess the telecom needs, capacities and connectivity options for each network HCP site

- Prepare a detailed network design specifically for each community, including technology platforms, specific hardware, infrastructure, operations and administrative plans for delivery of health information, medical care, emergency services and related capabilities
- Offer options and support for local HCP telehealth services, equipment and operations
- Determine accurate estimates of costs (and options) for local HCP sites in the network
- Identify connectivity/platform options, capacities, and costs for each potential network site
- Recommend topology design and technology specifications for the entire network
- Propose elements for the sites included in the initial build out and others for subsequent phases
- Provide detailed timelines and roll-out plans for network creation, implementation and continuing development with steps, objectives, options and recommendations
- List principles, procedures, metrics and milestones for measuring progress of the THINC network, with method(s) for accurate assessment of outcomes and benefits
- Recommend a wireless pilot that will accomplish the same goals and outcomes across an area not less than 150 square miles
- Suggest methods for services that could be provided via the network that could support sustainability such as VoIP
- Provide a solution for the security needs, monitoring and operations of the network

Since technology is only part of a health network expected to deliver telehealth and other health services, the THINC network solution should include not only architecture, security, technology and equipment, data center needs, but also for any and all services that use broadband services, network operations, and other elements needed for a successful broadband network connecting community healthcare providers and advanced medical resource centers throughout Texas.

## **2.0.2. INNOVATION & NEUTRALITY**

As a Pilot Project of the FCC Rural Health Care telehealth program, THINC encourages innovative network planning. Thus this RFP cites goals for the network but does not specify how to achieve them. Instead, THINC invites qualified network project solutions

that consider any technology or provider, recommending whatever they think best, based on skill and experience.

Under terms of this RFP, the Texas Health Information Network Collaborative (THINC) solicits proposals from qualified vendors to deliver comprehensive solution services for a new statewide network dedicate to healthcare. The THINC network will provide broadband connectivity in order to enable delivery and access to healthcare services and information for health care providers (HCP) in rural and geographically remote communities throughout Texas, and connecting all facilities with one another regardless of their location.

Vendors may offer bids for any and all solution elements particularly suited to their expertise. Bids should include specific prices for each proposed area of service. THINC will review all valid proposals received according to terms and procedures listed in this RFP and select the vendor(s) whose proposals and credentials best meet the goals of the FCC Pilot Program and the THINC initiative.

### **2.0.3 Solution Delivery**

The THINC initiative is an innovative pilot project, created for simple and successful use by rural and urban healthcare providers. Therefore, network solution services provided by a vendor selected under this RFP must include delivery of complete sets of designs and plans, suitable for easy use by each group of network participants, with supplemental information and support services. For example, the overall network design has significant implications for a network technology systems administrator, who should receive a copy of design and planning documents containing all applicable information and specifications. But the needs of local healthcare providers, as intended beneficiaries of this network project, are different. So he or she should receive network solution information fully describing how they can use the network, clearly and appropriately expressed as well as the requirements and configuration of their individual end points. Vendors responding to this RFP should also include a plan for meeting directly with network participants to deliver information, explain details, answer questions, and provide follow-up solution support services.

## **2.1 Desired Network Characteristics**

THINC has identified the following attributes of the anticipated broadband network and is interested in potential providers' insights into other meaningful characteristics that enhance the network's overall value:

### **2.1.1. Very High Bandwidth with Maximum Scalability**

Low Cost for participants. It is essential that we maximize participation in the network. Many of the participating hospitals and community health centers have limited telecommunications budgets and are unable to increase them. In order to make it

attractive for these facilities, the level of services offered to them will need to be provided at a substantial discount relative to what they might otherwise pay.

### **2.1.2. Statewide Coverage**

The THINC network must provide coverage to the entire State of Texas, from border to border, and include all its urban, rural, and frontier communities.

### **2.1.3. Full Throughput between Participants**

Full bandwidth connectivity among all participants is required, as is access to Internet 2 or the National Lambda Rail. General Internet access should also be considered.

### **2.1.4. Ability to Connect With Other FCC Rural Health Care Pilot Programs**

The FCC supports 69 individual programs. As one of the stated goals from the FCC is to support the national Health Information Network (NHIN) infrastructure, the THINC network must include the ability to connect with other programs in other states, especially those states that share a border with Texas.

### **2.1.5. Nondiscriminatory Bit Transport**

It is critical that providers not discriminate in terms of bit transport or unnecessarily mediate between uses and content or application providers. This should not be construed as a prohibition on quality of service guarantees; the network provider(s) must ensure similar treatment by all providers of like services. Preferential treatment of users or data streams will distort the evolutionary path of the network, stifle creativity and innovation and ultimately abridge the ability of the Texas Health Information Network to be utilized to its full capacity.

### **2.1.6. Network Devices**

Customers should be able to attach any device to the network as long as they do not impair network performance. Customers must also be able to post and access any lawful content in non-discriminatory terms.

### **2.1.7. Ease of Use**

Users should be able to easily and economically use the network to create, store, and distribute content that supports their respective mission in the communities they serve. If

specialized equipment, training or expertise is needed to use the network, provision should be made by network operators to provide or support these needs.

#### **2.1.8. Services**

The network must be capable of providing any combination of voice, video and data services to members of THINC and do so in a manner that allows for real time use of any combination of services by all users if the network without service degradation.

#### **2.1.9. Privacy**

The privacy of the network's content must be preserved in any system architecture from intrusion or malicious destruction.

#### **2.1.10. Security**

The network will facilitate the provision of health care services. Personal Health information will be generated, stored and exchanged. It is imperative that the network has sufficient security measures designed into it that will enable authentication, authorization and provide complete audits of any access or attempts to access any information. Security design must take into account that not only will health care professionals share PHI and individuals may use the network as a means to enable a personal health record. Security design and development is a critical component of the network. Network users must be assured that the network can be trusted requiring a communication and notification plan e included as part of the security requirements.

#### **2.1.11. Business Model.**

The design should include a feasible business model for network operations that includes start up and ongoing operations for a fifteen year period. Services that could be provided to support sustainability should also be included.

#### **2.1.12. Hardware component.**

All hardware, routers and associated equipment specification should be addressed.

#### **2.1.13. Circuit specifications and provisioning requirements**

#### **2.1.14. Any to any VPN security**

#### **2.1.15. Explicit end to end QoS within the network**

#### **2.1.16. Participant site assessment**

#### **2.1.17. Network monitoring services**

## **2.1.18. Network performance, availability and reliability reporting services**

**2.1.8.19. Customer Service Center with phone and web based services for customer problem reporting as well as trouble ticket tracking and resolution reporting.**

## **2.2 VENDOR QUALIFICATIONS AND DECISION CRITERIA**

Any vendor submitting a proposal in response to this RFP must possess and be able to document relevant qualifications for the services to be provided. Vendor must be able to provide verifiable references for previous work of similar type or scope.

### **2.2.1 SPIN**

The Network Design Services Vendor selected must be certified by the Federal Communications Commission, with an authorized FCC Service Provider Identification Number (SPIN).

### **2.2.2 Experience.**

A key requirement of this RFP is for solution providers with substantial relevant skills and experience. The network solution services provider and team members are expected to possess appropriate credentials and direct experience in professional areas needed to successfully develop the THINC network design in areas including:

- broadband IP/Internet backbone infrastructure and connectivity experience in Texas
- complete transport/traffic spectrum, from national backbone to rural site CPE
- fundamental, enduring network design with flexible, scalable modular elements
- rural community/HCP telecommunications network development in Texas
- human and technical network plans including local outreach, training and support
- telecommunications technology use in medical and tele-health applications
- inter-modal platform technology comparison and design considerations
- accurate assessment of rural HCP needs, resources and capacities
- network operations, administration, reliability and failure protection
- highest standards of network data security and privacy (including HIPAA)
- “sustainable” network design, including revenue models and cost evaluation
- other expertise relevant to performance of these design services

### **2.2.3 Timeline**

The solution services proposal should contain a projected timeline for completion of the entire network build process, listing: distinct phases of the process; time required and date of completion for each phase; and milestones and outcomes to measure progress and completion. Any potential variables and/or possible delays which might affect this schedule should be clearly identified in the proposal.

Network solution service providers are expected to work in well-coordinated professional

efforts to complete and deliver a detailed network in a prompt and timely manner.

#### **2.2.4 Proposed Charges.**

Vendors submitting proposals for network solution services must include a budget for each service proposed, with a complete list, descriptions, and total of proposed service charges, plus any other costs or expenses. If any expenses are expected to vary according to circumstances, such as the travel required in performance of this network solution, please provide the basis for estimation and computation of those expenses. **A requirement of this RFP is that all cost information and budgets must be placed in a separate section of the vendor response.** Please refer to item 3.3 below.

#### **2.2.5 Travel.**

Solution staff must be able to travel as required to visit potential participants, sites, vendors, and aggregation or network locations anywhere in the State of Texas. In order to accomplish this project, it will be necessary to survey each participating site to evaluate any infrastructure currently in place and what upgrades/modifications are required to accomplish the defines goals.

#### **2.2.6 Information.**

Interested vendors should review all information in this RFP, including network requirements, standards, procedures, compliance, issues and other considerations. To assist prospective vendors the THINC project proposal approved by the FCC, with supplemental information and detail, will be available on the THINC network website: <http://www.THINCTX.org>.

### **3. RFP Terms and Procedures**

The following information, requirements and conditions apply to all proposals submitted in response to this Request for Proposals by the Texas Health Information Network Collaborative:

#### **3.1 Submission of Proposals**

Respondents must provide two electronic copies and six unbound printed copies of the proposal. Proposals must be mailed or otherwise physically delivered to:

Hank Fanberg, Associate Project Coordinator  
Texas Health Information Network Collaborative  
c/o CHRISTUS Health,  
2707 North Loop West,  
Houston, TX 77008

Proposals must be received at this location no later than twenty nine calendar days from the posting of this RFP on the USAC website. This receipt deadline is a mandatory requirement and is not subject to waiver by THINC, CHRISTUS Health, UTMB Medical Branch, TORCH or Texas A&M University System Health Science Center.

Proposals received after this deadline will be deemed non-responsive and will not be accepted.

#### **3.2 Proposal Format**

The unbound printed copies of the proposal must be in the English language and signed by an authorized company representative. Respondents shall also provide two electronic copies in digital format, preferably on a usb flash drive. A courtesy copy sent via e-mail to the named party in this RFP is encouraged. Any e-mailed copy does not constitute fulfillment of the submission requirements and is not considered the official submission. No proposal will be accepted by telephone, facsimile or other method.

Text and graphic content files must be submitted in format fully compatible with standard software (Microsoft Word, Excel, etc.). Any proposal containing PDF files will be accepted only if the PDF files are unlocked and individual bid components are extractable or if the PDF content is accompanied by a separate full set of similar document sections in a standard software format.

#### **3.3 Format for pricing/cost of services**

Any and all pricing information must be submitted as a separate attachment to the proposal. While price is an equivalent component of THINC's decision criteria, price is

not the sole criteria. All proposals will be evaluated against the decision criteria without the benefit of pricing. Only after all proposals are evaluated will pricing be considered.

### **3.4 Proposal Deadline**

The deadline stated is for actual receipt of the proposal at the THINC office address listed. Delivery, whether via postal mail or other service, must be arranged to arrive before the deadline stated. It is strongly suggested that vendors use certified delivery services in order to verify timely receipt of bids by THINC. This deadline is a mandatory requirement and is not subject to waiver by THINC. Accordingly, no bid proposals will be accepted after the date and time specified.

Any bid received that is incomplete, late, incorrect, or otherwise not fully compliant with the goals and instructions of this RFP may be excluded from consideration.

All information, documentation, and other material submitted by Vendor will be subject to compliance with federal and state Open Records laws. Vendor is hereby notified that it shall be deemed to have knowledge of this law and how to protect the legitimate interests of the vendor.

Proposals submitted become the property of THINC and are subject to no restrictions on use of the proposal and its content. No copyrighted, confidential or proprietary materials should be included in any proposal submitted.

### **3.5 USAC requirements.**

Any vendor submitting a bid is responsible for understanding USAC and FCC Pilot Program funding eligibility requirements. Any costs, fees, products, or proposed uses in the proposal that do not qualify as eligible for FCC/USAC funding should be clearly identified.

### **3.6 Compliance with Regulations.**

Proposals submitted and contract services provided hereunder must remain at all times fully compliant with all rules, regulations, procedures, principles, criteria and deadlines of:

- the Federal Communications Commission and Rural Telehealth Network Pilot Program
- the Universal Service Administrative Company, Universal Service Fund and Rural Health Care Support Mechanism
- member organizations of the Texas Health Information Network collaborative
- any and all other federal, state and local authorities or relevant entities

### **3.7 Decision Criteria**

**THINC will use the following criteria in evaluating provider responsiveness to this RFP:**

- Overall bidder qualifications including years in business, financial status and

- background information
- Technical quality of the proposed network infrastructure including quality of service (QoS)
- Bidder's Understanding of the project and approach to the project
- Solution Innovation
- Qualifications of personnel assigned to project
- Ability to accomplish tasks quickly and efficiently
- Understanding of privacy and security issues of health care
- Timeliness in executing a contract
- Speed of deployment
- Price proposal
- Other factors deemed important to the process such as coordination with ARRA and HITECH activities

### **3.8 Submission Costs**

Neither THINC nor its members or any affiliated parties are liable for any costs incurred by a provider in preparing or responding to this RFP.

### **3.9. Inquiries**

Vendor queries concerning the THINC project and this RFP may be submitted via the THINC website, which is the sole means by which questions from prospective vendors will be accepted. Queries to individual network partners or staff members via telephone, facsimile, electronic or postal mail, will not be answered.

In order to ensure all vendors have equitable access to information, responses to any questions will be posted promptly to the FAQ section of the THINC website. Questions should be received by THINC no later than 10 days prior to RFP deadline. These online responses constitute official communications from the Texas Health Information Network Collaborative project.

### **3.10 Issuing Officer**

The issuing officer is the official point of contact for this RFP and the subsequent procurement process. He is:

Hank Fanberg  
Associate project coordinator  
c/o CHRISTUS Health  
2702 North Loop West  
Houston Texas 77093

[Hank.fanberg@christushealth.org](mailto:Hank.fanberg@christushealth.org)

### **3.11 Timeline**

The anticipated timeline for this procurement process, subject to change, is as follows:

Posting RFP available to interested parties  
29 days later Responses due by 4 PM CDT to the issuing officer  
30 days later Successful bidder notified  
30 days later Service delivery start date

### **3.12 Project Experience**

Please indicate your experience with projects of this type.

### **3.13 Company Ownership.**

Please describe company ownership and any planned changes to company ownership.

### **3.14 Company Financial Stability**

Please provide a current report of the company's financial status including financial reports

### **3.15 Pending Legal Actions**

Identify any pending legal actions against your company, list and provide information regarding its status.

### **3.16 Department of Health and Human Services (HHS) IT initiative Compliance**

Provide details on how your proposed solutions complies with HHS health IT initiatives;

- Explain how your solution will help THINC participants meet interoperability standards recognized by HHS
- Explain how your solution will aid in the use of health IT products certified by the Office of the National Coordinator, NTIA, Certification Commission for Health information technology (CCHIT) and other certifying bodies that may impact the network
- Explain how your solution will aid in the use of the National Health Information Network architecture
- Explain how your solution complies with the Pandemic and All Hazards Preparedness Act
- Explain how your solution has coordinated with or used resources available through the Centers for Disease Control and Prevention (CDC) to facilitate interoperability with public health and emergency organizations

### **3.17 Failure to Comply**

Failure to comply with all terms of this RFP or to supply any and all information requested to accompany bid proposals may be cause for rejection of the proposal as non-compliant.

### **3.18 Validity of Proposal**

All proposals and terms must remain valid for a period of 60 days from the date of submission.

### **3.19 Agreement to Terms and Conditions**

By submitting a bid proposal the vendor agrees to all terms and conditions contained within this RFP.

### **3.20 Rule of Law**

U.S. and Texas law will be applicable for all terms and conditions of this contract.

### **3.21 Business Language**

The business language of this project is U.S. English. Vendors must be able to capably read and write English; Spanish language capability will be considered an added benefit.

### **3.22 Authorization**

Vendor must certify that it is authorized to do business in the state of Texas at time of bid and not suspended from doing business with the State of Texas, and any Texas County or City/Municipality to be served by this project.

### **3.23 Good Standing**

Vendor must certify **that** it is not suspended from doing business with the U.S. federal government or the Universal Services Administrative Company at the time of bid.

### **3.24 SPIN**

Any contract for services to be provided THINC will require chosen service vendors to provide an FCC Service Provider Identification Number (SPIN).

### **3.25 Proof of Insurance**

The selected vendor must provide certified insurance coverage for the contract duration.

### **3.26 Non Discrimination**

The selected vendor shall not in any connection with the execution of this contract discriminate against any employee, subcontractor, or applicant for employment or contracting services on the basis of race, religion, ethnicity, sex, age or national origin.

### **3.27 Resources**

The successful vendor must provide all specified personnel and other resources proposed in their submitted bid. Failure to provide all proposed resources can constitute grounds for cancellation of contractual agreement.

### **3.28 Service Date.**

The successful vendor shall, within ten (10) days after receipt of formal notice of award of the contract, enter into a contract prepared by THINC. The contract to be awarded

and any amount to be paid hereunder shall not be transferred, sublet or assigned without the prior approval of THINC. The successful vendor shall begin the work specified under the contract within five days of the contract's execution.

### **3.29 Compliance with USAC requirements**

Bid proposals will contain acknowledgement of, and provisions for providing, USAC invoicing requirements and formats. Vendor will comply with all USAC invoicing procedures, rules and processes.

### **3.30 Vendor Information**

The proposal should include vendor information, including:

- vendor company name, address, telephone number, fax number and e-mail address
- assumed names, d/b/a filings or other operating names of the vendor
- business form (proprietorship, corporation, partnership, limited liability company, etc.)
- state of registration (if a corporation or a limited liability company)
- office and/or facility location(s) related to performance under the terms of this RFP

### **3.31 Project Manager**

Vendor agrees to provide a project manager and/or other individual who will be the primary contact for all dealings with THINC throughout the service contract period.

### **3.32 References**

Vendor must provide verifiable references for previous work of similar type or scope.

**3.33 Authority.** The Rural Health Care Pilot Program (RHCPP) of the Universal Service Fund, which is administered by the Universal Service Administrative Company (USAC), is a support program authorized by Congress and designed by the Federal Communications Commission (FCC) to encourage the development of rural broadband networks to provide advanced healthcare telecommunications capabilities and services to rural health care providers (HCPs).

**3.34 Process.** The THINC project and this RFP are subject to all USAC procurement rules and procedures. Responding vendors must meet all USAC requirements. THINC has submitted a USAC Form 465 to USAC, which has reviewed the documentation and posted this RFP on the USAC website. More information on USAC bidding and posting rules can be found at <http://www.lifelinesupport.org/rhc-pilot-program/vendors>.

**3.35 RFP Changes.** In the event it becomes necessary for THINC to amend, add to, or delete any provision of this RFP, any amendments will be posted on the USAC web site, as required by FCC Order and by USAC-mandated bidding procedures, and will also be posted on the THINC website.

THINC reserves the right to make an award to the responsive and responsible vendor whose product or service meets the terms, conditions and specifications of the RFP and whose bid is considered to best serve THINC's interest. In determining responsiveness and the responsibility of the vendor, the following shall be considered when applicable: the ability, capacity and skill of the vendor to perform as required; whether the vendor can perform promptly, within the time period specified without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the vendor; the quality of past performance of the vendor; the previous and existing compliance by the vendor with related laws and regulations; the sufficiency of the vendor's financial resources; the availability, quality and adaptability of the vendors equipment, supplies and/or services to the required use. THINC reserves the right to accept or reject any or all bids.

#### **4. Network Solution Information and Scope of Work**

This section contains the scope of the THINC network solution, including principles, requirements, and relevant considerations. This, plus a few comments and some examples, is intended to assist any vendor interested in preparing a bid proposal in response to this RFP. Additional supplemental information will be available on the THINC website, including answers to questions submitted by prospective vendors.

##### **4.0 Design Issues & Considerations**

THINC has identified several network development issues as worthy of consideration. For example, some network characteristics and attributes can be easily, inexpensively enhanced for improved performance and benefit while other network issues may very well become potential problems that can and should be avoided. Proposed network solutions are encouraged to freely express advice and insights on the examples below and/or any other telehealth network considerations.

###### **4.0.1. Existing Networks**

There are a number of networks in Texas which already have eligible medical facilities attached. Some of these networks are considered private under HIPAA regulations. Some are not. These networks are run by the K12 community, Higher Ed, hospital associations, hospitals, State of Texas agencies, and others. It is in the best interest of THINC to make as many direct connections to the existing networks as possible. These

connections can be “meet points”, “peering”, or other acceptable industry methods which keep the traffic local. The successful responder will have investigated thoroughly the existence of these networks and will advise how THINC can connect to each with due consideration of cost, security, operations, and manageability.

#### **4.0.2 Privacy**

The privacy of the network’s content must be protected. Any successful proposal will include a thorough discussion of hardware, software, methods, and standards which they propose for maintaining the privacy of the data. A review of potential regulatory agencies which may have authority over, interest in, or purview on the privacy issues of this network shall be included.

#### **4.0.3 Security**

The network will facilitate the provision of health care services. Personal health information will be generated, stored and exchanged. It is imperative that the network has sufficient security measures designed into it that will enable authentication, authorization and provide complete audits of any access or attempts to access any unauthorized information. Security design and development is a critical component of the network. Any successful proposal will include a thorough discussion of hardware, software, methods, and standards which are propose for maintaining the security of the network and its data. A review of potential regulatory agencies which may have authority over, interest in, or purview on the security issues of this network shall be included.

#### **4.0.4 VPN**

The network design must assume that any user or group of users may choose to implement Virtual Private Networks using the THINC infrastructure. Network design should not prevent this.

#### **4.0.5 Wireless**

It is of strong interest to THINC to explore the utilization of wireless WAN connectivity at DS3 speeds and above. Vendors should evaluate the potential of creating multiple wireless “clusters” where terrestrial connections are economically or technically infeasible.

#### **4.0.6 Topology**

Where economically and technically feasible, the topology should consist of rings, protected rings, and mesh. Hub and spoke (star) topology should be limited to the extreme edge as much as possible.

#### **4.0.7 Connectivity Upgrades**

A number of sites already have network links which will be considered for upgrade to higher speed connections during the life of this project. The successful vendor will be provided a list of these sites after contract award.

#### **4.0.8 Growth and Future Needs**

The design of the network should allow for future growth in connectivity, data exchange, and service delivery. The network will ultimately be made available to all healthcare providers in Texas. While the sites enumerated in this document comprise the initial scope for this program, the intention is to offer the network to any and all health care providers, regardless of their corporate form – hospitals, clinics, physicians and others. THINC is especially interested in designs that include wireless technologies and other future technologies that may or may not be fully available today. Knowledge of industry trends, and discussing the impact and potential of future network infrastructure is encouraged.

#### **4.0.9 Expanded Participation**

The FCC specified the types of providers that are eligible for subsidized network services under this pilot program, The goal of this pilot program is to deliver the maximum possible benefits to rural Americans; RHC funds should not only provide support but also serve as catalyst for expanded broadband in rural communities. Thus the network should be designed to allow the widest possible appropriate participation. For example, local clinics and doctors should be allowed to participate in THINC by paying full pro-rata costs for their use of the network to provide improved patient care.

#### **4.0.10 Network Operation Center**

THINC may outsource the operation of the network. The solution should include a comparison of internal NOC ownership and operation with any alternative methods common in the industry. Information provided should include, but not be limited to, that detailed in section 4.22 below. The NOC will provide customer service via phone and web, initiate trouble tickets with resolution reporting that can be monitored by the user, monitor the network for service level agreement adherence, and maintain a limited access web portal providing network statistics. The solution should include details on all management needs and the ability for appropriate audit trails.

### **4.1 Solution Requirements**

The network solution vendor selected will be expected to deliver a comprehensive solution for construction, implementation and operation of the Texas Health Information Network, a high capacity statewide telecom broadband IP network connecting community healthcare providers and advanced medical resource centers throughout Texas. This should include detailed planning for network architecture, technological components and other services which will:

- Effectively address needs of every community/HCP participating in the THINC network
- Develop interface standards and implementation plans to coordinate local community HCP network with existing as well as new regional, statewide and national networks and backbone connectivity
- Prepare accurate estimates of options and costs for all aspects of network development, implementation, operation, and potential future expansion

- Assess the telecom needs, capacities and connectivity options for each network HCP site
- Where feasible, prepare a detailed network design specifically for each community, including technology platforms, specific hardware, infrastructure, operations and administrative plans for delivery of health information, medical care, emergency services and related capabilities
- Offer options and support for local HCP telehealth services, equipment and operations
- Determine accurate estimates of costs (and options) for local HCP sites in the network
- Identify and recommend connectivity/platform options, capacities, and costs for each potential network site
- Deliver recommendations for topology design and technology specifications for the entire network, and proposing elements and sites to be included in initial build out and in subsequent phases
- Provide detailed ‘timelines’ and ‘roll-out plans’ both for phases of the complete network implementation process, describing steps, objectives, options and recommendations
- Detail principles, procedures, metrics and milestones for measuring progress of the THINC network development and method(s) for accurate assessment of outcomes and benefits

## **4.2 Network Scope**

### **4.2.1 Statewide**

The THINC network solution should contain clear and workable technical and business plans for the development and operation of a high speed telecommunications network which can help extend and improve health services across the entire State of Texas by connecting community healthcare providers to advanced services, information and resources of urban medical centers and other network locations. The solution should enable THINC to offer reliable, secure and affordable connections to providers located anywhere in Texas, including communities and providers located in rural and geographically remote areas of the state. A significant portion of the rural residents in Texas live near or adjacent to the common borders with New Mexico, Oklahoma, Arkansas, and Louisiana. Often the nearest medical facility is across this “border”. The design should make special effort to outline possibilities of interconnection with the FCC Rural Pilot projects and other appropriate networks in these states.

### **4.2.2 National and Regional**

The network solution should include connectivity, either physical or logical, to the following in the most economically feasible manner:

#### **4.2.2.1 National Health Information Network (NHIN)**

#### **4.2.2.2 Internet2 (i2)**

#### **4.2.2.3 National Lambda Rail (NLR)**

#### **4.2.2.4 Other peer FCC Rural Healthcare Pilot Projects**

#### **4.2.2.5 The logical concept known as “The Internet”.**

#### **4.2.2.6 Local and regional HIE initiatives**

### **4.3 Network Connections**

The primary end users of the network are rural healthcare providers and those people they serve. Typical network nodes will include terminals located in rural facilities such as rural hospitals, clinics, doctors’ offices and other eligible sites which provide delivery of healthcare services.

### **4.4 Core Infrastructure**

Proposals should address fundamental issues of network technology design, including architecture, topology and end-to-end transit:

- IP only network connectivity supporting both IPv4 and IPv6
- Internet access (shared/switched carriage)
- packet traffic prioritization
- privacy and security of network traffic and content
- network operating centers and data center(s)
- system administration, support and development
- POPs, meet points, and peering points
- intra- and inter-network compatibility
- platform choice criteria and inter-platform interface
- short- and long-term bandwidth economics

### **4.5 Connection to Internet 2 and National Lambda Rail**

Network design should also incorporate consideration of the possible role of advanced backbone carriage available from networks like Internet 2 and National Lambda Rail.

### **4.6 Platform Technologies**

THINC is open to creativity in platform design as long as it meets the needs of the users. Suggested platform design may include:

- Primary – backbone fiber
- Secondary – fiber, Cu, DSL, cable, wireless
- Specialty – mobile devices, home monitoring

### **4.7 Solution Development**

The THINC solution should provide for network construction, implementation, equipment and services to be implemented in multiple phases, based upon the timing of participating community HCPs.

#### **4.8 Deployment Plan**

Proposals must include a detailed plan for network build out/deployment and operations, which includes specific policies and procedures for:

- Technical standards, interfaces and protocols (TCP/IP, etc.)
- selecting, ordering services and equipment
- QoS standards, Service Level Agreements, contracts and AUPs
- determining and configuring network and site telehealth applications
- provisioning, installing services and equipment
- testing, acceptance, and cutover
- system monitoring, usage/traffic analysis and reports
- network data collection, documentation, distribution (e.g. NSF)
- diagnostics, problem alerts, and trouble shooting
- cost determination, site allocation and billing
- Primary NOC(s) and POPs to be created in Phase One (initial) build out
- Community HCP sites to be connected in Phase One (initial) build out
- HCP sites to be connected in subsequent phases of system build out

#### **4.9 Technology/Provider Neutrality**

The “best technology” for connectivity may and will vary for different network sites depending on specific location, bandwidth requirements and telecom resources available. The network solution is expected to develop connectivity and technology strategies specifically suited to each community site in the network.

The THINC network solution must be as truly open and neutral as possible regarding technology methods and vendors. All network specifications should be objective and standards-based, recommended without bias favoring any particular technology platform, vendor, or provider.

#### **4.10 Bandwidth and Services**

The solution should include technical specifications and options for connectivity, capacity and standards, including minimum/maximum bandwidth contracted from providers selected for implementation phases. The minimum bandwidth requirement for participating sites is 45Mbps as stated in the revised THINC application.

THINC network design standards include:

##### **4.10.1 Site Connections**

**4.10.2 THINC Backbone** – The THINC backbone carriage should be at 1 Gbps or higher, incorporating a ring topology where technically and economically feasible.

**4.10.3 National Backbones** – THINC network solution should include plans and peering definitions for connection to the national Internet2 *NEWNet* backbone and to the National Lambda Rail at 1 Gbps or higher.

**4.10.4 LATAs** – THINC network solution includes plans for truly statewide coverage, with an economic aggregation point for every LATA in Texas.

**4.10.5 PROTOCOL** - The THINC network will be designed to operate under Internet Protocol (IP) standards. All computers, switches, routers, services, applications, and other network support equipment must be capable of supporting the IPv4 protocol and the IPv6 protocol as per the mandatory components of USGV6 Version 1 or later as published by the National Institute of Standards and Technology. Vendor will provide explicit details of non-conformance of any component proposed along with a good faith estimate of when the component will be fully compliant.

**4.10.6 TRANSIT** – The network solution will not require THINC to transit any traffic for a peer network. All traffic entering the THINC network must be targeted to a site on the network.

**4.10.7** THINC Solution will include ISO layer specifications for network traffic and aggregation.

#### **4.10.8 Traffic Shaping**

The THINC network will transport a significant amount of bi-directional video and audio data. The design should propose policies, strategies, locations and technology for network traffic shaping on the THINC backbone and regional aggregation circuits.

#### **4.11 Peer Networks**

A number of existing networks currently connect many rural and urban medical facilities in Texas. In order to maximize benefits of FCC pilot program support, the THINC solution should plan effective peering relationships with as many of these as possible. Similarly, THINC should participate in peering/sharing with networks outside Texas, particularly with others in the FCC pilot program.

#### **4.12 Flexibility & Scalability**

The THINC network should be fully flexible and scalable, allowing for possible changes, enhancements or reductions to bandwidth, connectivity and/or services in the overall network or at any site, including provisions for

- additional rural HCPs to be added, increasing size/number of network sites
- individual rural community HCP sites to readily increase bandwidth and access
- relocated/upgraded network access links as site facilities are moved/expanded
- downgrading, discontinuing or otherwise revising network services according to local HCP requirements
- accommodating increased use and growth to avoid congestion or latency at any point in the network
- making network adjustments without service interruption or prolonged delay

#### **4.13 Network Reliability**

Reliable service is essential for this telehealth network. The solution should fully consider and incorporate relevant strategies of diversity, redundancy, rollover and other protections from potential component failure.

##### **4.13.1 Service Level Agreements**

The solution should provide recommendations for terms and conditions of services and service level agreements (SLA) to be expected from providers, including:

- Technical criteria such as latency, throughput, jitter, downtime, and other Quality of Service issues
- Recommendations on how to negotiate for bulk SLAs on behalf of user's "last mile" connections.
- Standards and methods for repair and maintenance, such as monitoring, testing and fault isolation, response time for trouble reports, mean time to repair, outage and repair notifications, etc.

#### **4.14 Service Costs, Rates**

The solution should include options, recommendations and costs for connectivity, including factors such as transport and construction needed. Any applicable rate subsidies and discounts should also be considered. A "cost analysis" plan for assessing present and future network site additions is desirable.

##### **4.14.1 Charges and Billing**

The solution should provide recommendations for terms and conditions to be expected regarding charges and billing for bandwidth and services from providers, including:

- Bases for charges: accrual periods, usage units/levels, rate per unit, costs computation
- Billing procedures: number, periods, levels, starting dates, taxes, review/disputes, etc.

#### **4.15 Rates, Subsidies and Support**

The solution should reflect awareness and incorporation, where applicable, of applicable discount rates, subsidies and other valid programs of value for economical operation and fiscal sustainability. (e.g. Texas HB2128 rates, federal USF support mechanisms, etc.)

#### **4.16 Sustainability Plan**

The Texas Health Information Network Collaborative has been founded to offer all Texas rural health care providers enduring, affordable access to advanced telehealth resources. The network solution should include plans for economically sound, sustainable technical and administrative operations. The THINC project application contains further details of network & operations sustainability ([www.thinctx.org](http://www.thinctx.org)).

#### **4.17 Information/Interaction**

The THINC network project is a unique and unprecedented pilot telehealth initiative that is focused on best and most effective services for local health care providers and for the communities they serve. To help meet this goal, proposed network solutions should maintain interactive, responsive communications with network managers, administrators and health care providers throughout the network design process.

The network services provider will serve as a member of the THINC technical committee throughout the network design period. Recommendations are requested for continued design refinement during subsequent development of the network.

#### **4.18 Innovation, Alternatives and Options**

The THINC project and the FCC Rural Telehealth Network Pilot Program welcome and encourage innovative thought in developing effective telehealth tools and strategies to

meet the needs of community health care providers throughout Texas. The network solution vendor will be expected to consider and compare all alternatives for potential technologies, platforms and providers in creating the best possible network design.

#### **4.19 Public Health, Safety and Emergency**

As noted above, the THINC network solution should provide planning for local community emergency preparedness, disaster response and relief, and other appropriate public health and safety information, alerts and advisories, including include pandemic and biohazards.

A key purpose of this network is to connect health care providers in rural communities to the resources available from larger participating facilities in metropolitan areas. Therefore the network solution should also include detailed plans for the THINC network to assist and improve local public health and safety, including capacity for health advisories and information from sources such as the Centers for Disease Control on issues ranging from pandemics and bio-terrorism to health and wellness for communities and individuals.

The THINC network solution should also include planning for local emergency preparedness as well as disaster response and relief for rural communities and residents. Network connectivity plans should accommodate Emergency Alert Systems (EAS) and Common Alerting Protocols (CAP) cited in the June 26, 2006 *Executive Order: Public Alert and Warning System* issued by President George W. Bush.

#### **4.20 National Health IT initiatives**

The FCC order enabling this network requires the pilot program to support National Health IT initiatives of the Department of Health and Human Services (HHS) and the Center for Disease Control (CDC).

This FCC RHCPP began prior to the passage of the American Reconstruction and Reinvestment Act (ARRA) and the Health Information Technology for Economic and Clinical Health (HITECH), requiring the meaningful use of health information technology and the electronic exchange of health information.

THINC envisions its inclusion as a part of the solution for providing high speed broadband connectivity to rural facilities and providers so that they may achieve meaningful use. Any and all proposals must address how THINC can either support health information exchange or provide a core infrastructure for health information exchange for the State of Texas.

National Health IT initiatives include ongoing efforts of the ARRA and HITECH Act, the Office of the National Coordinator for Health Information Technology, National Health Information Network (NHIN), federal interoperability standards, the All Hazards Preparedness Act, the Public Health Information Network (PHIN) and public health emergencies and coordination with the CDC and HHS in the event of a health emergency. Any network design must incorporate these requirements into their response.

The THINC network will not only be used for traditional telemedicine delivery in support of rural areas and support national Health IT initiatives but will also support the State of Texas' goal of a statewide network infrastructure to enable access to care and delivery of care to every citizen, where and when it is needed. This objective and others were promulgated in the "*Roadmap for the Mobilization of Electronic Health Care Information in Texas*" published by the State in 2006.<sup>1</sup>

The *Roadmap* was an outcome of the 2006 Texas legislature in response to the Executive and Legislative branches initiatives to make health care in Texas more accessible, more affordable, with improved quality and safety. A core principle of this initiative is to enable the exchange of health information and the creation of a personal health record for every citizen as stated in President Bush's Executive Order 13335.

The *Roadmap* framework includes many components. Those supported by this activity include: (1) ensuring widespread connection to the Internet; (2) developing a mechanism for common patient identification; and (3) storing and managing health information for individuals and organizations regardless of size and ensuring that the information is confidential and secure. (*Roadmap*, pp.17-18).

The design of the network should take into account future needs for connectivity, data exchange, and service delivery. The network will ultimately be made available to all healthcare providers, not just the sites listed in this RFP. While the sites enumerated in this document comprise the scope for this program, the intention is to offer the network to any and all health care providers, regardless of their corporate form. And it will not be limited to hospitals and clinics, but could be offered to all physicians and other providers as well as individuals for accessing and populating their personal health records.

#### **4.21 Other Considerations & Issues**

- Resource Centers – access to shared telehealth, telemed information, services
- Site support - models for services, CPE, configurations, operations
- Programs for local HCP, community involvement, network support
- Regular, effective communications among all THINC partner organizations
- Maintain awareness, information exchange with other 68 pilot projects
- Continuing development support (services, funding) for THINC and HCPs
- Professional - telecom-enabled provider education, training, interaction
- Network Services – Electronic Medical Records, ASP capacity? Other?
- Assessment – goals, needs, applications, pre-/post-THINC resources, capacity
- Design Priority - user-based planning, focused on services provided/enabled
- Compliance – USAC, HIPAA, state, other regulatory requirements
- Regional management and billing for providers

#### **4.21.1 Acceptance**

The solution should recommend terms and requirements for acceptance (“sign-off”) of all network and local products and services provided. Implementation handoff/cutover criteria should include billing start dates.

#### **4.22 Deliverables**

Any contract under this RFP will require delivery of a network solution which contains, but is not limited to, the following specific (itemized) information, options and recommendations:

- A. Overall connection plan philosophy with,
  - 1.0 Complete list of Participant HCP sites, including
    - 1.1 Participant name
    - 1.2 Connection type (Partial T1, DS1, etc)
    - 1.3 Connection provider
    - 1.4 Estimated monthly connectivity cost
    - 1.5 Provisioned capacity over the connection
    - 1.6 Network ‘edge’ equipment required including recommended make,
    - 1.7 Model, and complete specifications
    - 1.8 Local and customer premise equipment (CPE) required
    - 1.9 Facility specifications: equipment, space, access, power, grounds, ambient, etc.
    - 1.10 Estimated equipment cost
    - Applicable aggregation/peering point
  - 2.0 Specific list of aggregation sites and concepts, including
    - 2.1 Aggregation name
    - 2.2 Connection type (Gigaman, fiber IRU, etc)
    - 2.3 Connection provider
    - 2.4 Estimated monthly connectivity cost
    - 2.5 Provisioned capacity over the connection
    - 2.6 Local equipment required including recommended make, model,
    - 2.7 and complete specifications
    - 2.8 Estimated equipment cost
    - 2.9 Aggregation/peering point
  - 3.0 Description of recommended NOC solution
    - 3.1 NOC equipment – hardware, cabling, etc.
    - 3.2 NOC OS and other monitoring software
    - 3.3 NOC installation/implementation plan
    - 3.4 Services
    - 3.5 Phone support
    - 3.6 Trouble ticket system
  - 4.0 Summary of itemized hardware
  - 5.0 Summary of itemized software
  - 6.0 Network architecture map(s), including
    - 6.1 Proposed new build
    - 6.2 Service provided connectivity

- 6.3 Existing networks to be utilized/peered with Implementation phases, timeline
- 7.0 Operations/administration plan, including
  - 7.1 System administration and support
  - 7.2 Traffic monitoring, control and trouble-shooting
  - 7.3 Privacy considerations in plan
  - 7.4 Security details at each level
  - 7.5 Suitable method for measuring usage of each participant
- 8.0 Business/Sustainability plan, including
  - 8.1 Cost recovery and revenue models
  - 8.2 Management, billing procedures, etc.
  - 8.3 Communication/collaboration among partners
  - 8.4 Outreach and development
- 9.0 Description of future growth capacity designed into system at each level.

## **10. EXCESS CAPACITY**

Excess capacity, especially in rural areas, are a major impetus for economic growth and enhancement of accessibility to remote education, training and other opportunities.

Respondents are requested to address any potential for excess capacity and its use as not only an opportunity for the local community but how it might be used to further the sustainability of THINC. The response should coincide with the method proposed for building or managing a statewide network.

**ATTACHMENT A: INITIAL PHASE**

**PARTICIPATING HEALTH CARE PROVIDER SITES**

The initial phase of the THINC network consists of the 68 sites listed in Attachment A

THINC intends to rapidly deploy the entire network, connecting all 250 designated facilities within a nine month span. THINC expects additional facilities to participate in the network also. These facilities will include both expense eligible and ineligible facilities.

**Note: This list of THINC network sites may be subject to revision. The solution vendor selected will be responsible for reviewing and confirming the list of sites to be included in the formal network design.**

FCC RHCPP PHASE I THINC SITES	ADRESS	City	County	STATE	ZIP
Atlanta Memorial Hospital	1007 S. William St.	Atlanta	Cass	TX	75551
Ballinger Memorial Hospital	608 Avenue B	Ballinger	Runnels	TX	76821
Bowie Memorial Hospital	705 East Greenwood Ave	Bowie	Montague	TX	76230
Brazosport Memorial Hospital	100 Medical Drive	Lake Jackson	Brazoria	TX	77556
CHRISTUS Spohn Alice Hospital	2500 East Main Street	Alice	Jim Wells	TX	78332
CHRISTUS Spohn Beeville Hospital	1500 East Houston Street	Beeville	Bee	TX	78102
CHRISTUS Spohn Hospital Kleberg	1311 General Cazavos Blvd	Kingsville	Kleberg	TX	78363
CHRISTUS Spohn Memorial Hospital	2606 Hospital Boulevard	Corpus Christi	Nueces	TX	78405
CHRISTUS Spohn Shoreline Hospital	600 Elizabeth Street	Corpus Christi	Nueces	TX	78404
CHRISTUS Spohn South Hospital	5950 Saratoga Blvd	Corpus Christi	Nueces	TX	78414
CHRISTUS St. Elizabeth Hospital	2830 Calder Street	Beaumont	Jefferson	TX	77702
CHRISTUS St. Mary Hospital	3600 Gates Boulevard	Port Arthur	Orange	TX	77642
CHRISTUS St. Mary Outpatient Center	3701 highway 73	Jefferson	Port Arthur	TX	77642
CHRISTUS Jasper Memorial Hospital	1275 Marvin Hancock Drive	Jasper	Jasper	TX	75951
Jasper Rural Health Clinic	1276 South Peachtree Street	Jasper	Jasper	TX	75951
Kirbyville Rural Health Clinic	205 East Lavielle Street	Jasper	Kirbyville	TX	75956

<b>FCC RHCPP PHASE I THINC SITES</b>	<b>ADRESS</b>	<b>City</b>	<b>County</b>	<b>STATE</b>	<b>ZIP</b>
Sam Rayburn Rural Health Clinic	2427 RR 355 West	Jasper	Sam Rayburn	TX	75951
CHRISTUS St. Catherine Hospital	701 South Fry Road	Katy	Harris	TX	77450
CHRISTUS St. John Hospital	18300 St. John Drive	Nassau Bay	Harris	TX	77058
St. John Day Surgery	2020 Nassau Parkway Suite 100	Harris	Nassau Bay	TX	77058
St. John Sports Medicine	415 East Parkwood	Harris	Friendswood	TX	77546
CHRISTUS Santa Rosa Hospital City Centre	333 North Santa Rosa Ave	San Antonio	Bexar	TX	78207
CHRISTUS Santa Rosa Hospital Medical Center	2827 Babcock Road	Bexar	San Antonio	TX	78229
CHRISTUS Santa Rosa Transplant Center	2829 Babcock Road	Bexar	San Antonio	TX	78229
CHRISTUS Santa Rosa Health Center	1614 West San Antonio Street	Comal	New Braunfels	TX	78130
CHRISTUS New Braunfels Hospital	600 North Union Avenue	Comal	New Braunfels	TX	78130
CHRISTUS Westover Hills Hospital	11212 State highway 151	Bexar	San Antonio	TX	78251
CHRISTUS Children's Hospital	333 North Santa Rosa Ave	San Antonio	Bexar	TX	78207
CHRISTUS Santa Rosa Imaging Center	403 Trelene Park Alamo Heights Building II	San Antonio	Bexar	TX	78209
Santa Rosa Ambulatory Surgery Center New Braunfels	173 east Common Street	Comal	New Braunfels	TX	78130
Community Action Corp - Gonzalez Community health Center	228 St. George Street	Gonzales	Gonzales	TX	78629
Community Action Corp - Lulling Community Health Center	115 T South Laurel Street	Caldwell	Lulling	TX	78648
Coryell Memorial Health System	1507 West Main Street	Gatesville	Coryell	TX	76528
Cuero Community Hospital	2550 North Esplanade St.	Cuero	De Witt	TX	77954
D.M. Cogdell Memorial Hospital	1700 Cogdell Boulevard	Snyder	Scurry	TX	79549
El Campo Memorial Hospital	303 Sandy Corner Road	El Campo	Wharton	TX	77437
Electra Memorial Hospital	1207 South Bailey Street	Electra	Wichita	TX	76360
Golden Plains Community Hospital	200 South McGee	Borger	Hutchinson	TX	79007
Goodall-Witcher Healthcare Foundation Hospital	101 South Avenue T	Clifton	Bosque	TX	76634
Goodall-Witcher Clifton Rural Health Clinic	201 South Avenue T	Clifton	Bosque	TX	76634

<b>FCC RHCPP PHASE I THINC SITES</b>	<b>ADRESS</b>	<b>City</b>	<b>County</b>	<b>STATE</b>	<b>ZIP</b>
Goodall-Witcher Meridian Rural Health Clinic	1110 North Main Street	Meridian	Bosque	TX	76665
Graham Regional Medical Center	1301 Montgomery Road	Graham	Young	TX	76450
Guadalupe Regional Medical Center	1215 East Court Street	Seguin	Guadalupe	TX	78155
Hamilton Hospital	901 West Hamilton	Olney	Young	TX	76374
Hansford County Hospital District Hospital	707 South Roland	Spearman	Hansford	TX	79081
Hereford Regional Medical Center	801 East 3rd Street	Hereford	Deaf Smith	TX	79045
Jackson County Hospital District Medical Center at Edna	1013 South Wells Street	Edna	Jackson	TX	77957
Knox County Hospital District	701 South 5th	Knox City	Knox	TX	79529
Lavaca Medical Center	1400 North Texana	Hallettsville	Lavaca	TX	77964
Limestone Medical Center	701 McClintic Drive	Limestone	Groesbeck	TX	79772
Matagorda County Hospital District	1115 Avenue G	Bay City	Matagorda	TX	77414
Mitchell County Hospital	997 West IH-20	Colorado City	Mitchell	TX	79512
North Runnels Hospital	7821 Highway 153	Winters	Runnels	TX	79567
North Texas Medical Center	1900 Hospital Boulevard	Gainesville	Runnels	TX	76240
Ochiltree County Hospital District Hospital	3101 Garrett Drive	Perryton	Ochiltree	TX	79070
Reeves County Hospital District	2323 Texas Street	Reeves	Pecos	TX	79772
Sweeny Community Hospital	505 North Main Street	Sweeny	Brazoria	TX	77480
Tyler County Hospital	1100 West Bluff Street	Woodville	Tyler	TX	75979
CHRISTUS Spohn Family Health Center Padre Island	14202 South Padre Island Drive	Nueces	Corpus Christi	TX	78418
CHRISTUS Spohn Family Health Center Freer	123 South Main Street	Duval	Freer	TX	78357
CHRISTUS Spohn Family Health Center Westside	4617 Greenwood Drive	Nueces	Corpus Christi	TX	78416
CHRISTUS Spohn Women's Health Center	301 South Hillside Drive, Suite 4	Bee	Beeville	TX	78104
CHRISTUS Spohn Family Health Center Robstown	1038 Texas Yes Boulevard	Nueces	Robstown	TX	78380

<b>FCC RHCPP PHASE I THINC SITES</b>	<b>ADRESS</b>	<b>City</b>	<b>County</b>	<b>STATE</b>	<b>ZIP</b>
CHRISTUS St. Michael Hospital	2600 St. Michael Drive	Texarkana	Bowie	TX	75503
CHRISTUS St. Michael Rehab Hospital	2400 St. Michael Drive	Texarkana	Bowie	TX	75503
CHRISTUS St. Michael Senior Center	1400 College Drive, Glenwood Building Suite 202	Texarkana	Bowie	TX	75503
CHRISTUS Bishop Rural Health Center	301 West Main Street	Nueces	Bishop	TX	78343
CHRISTUS Health Information Technology Center	10002 Rogers Run Road	Bexar	San Antonio	TX	78251