



*heartland unified broadband network*



# HUBNet

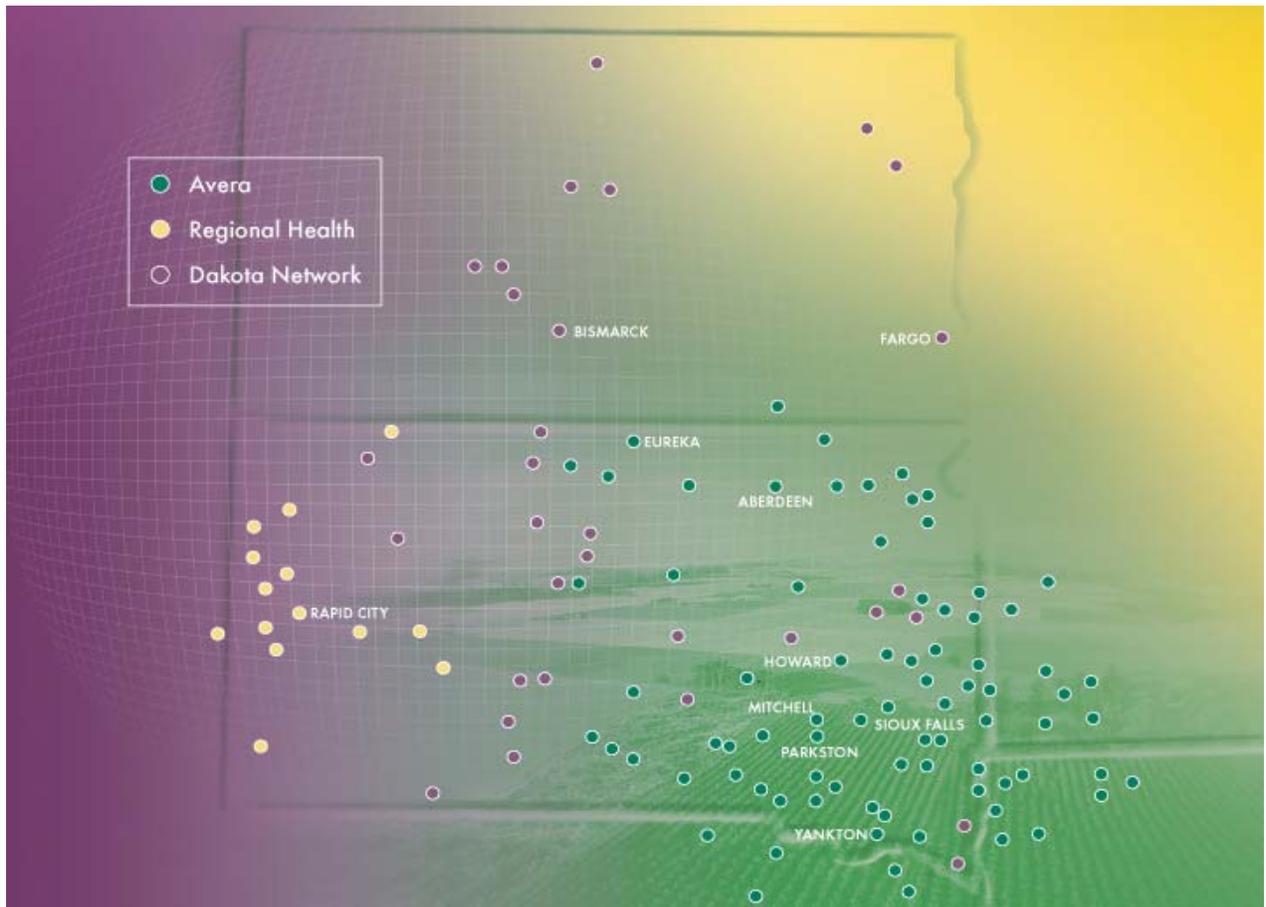
Heartland Unified Broadband Network



**Application to the Federal Communications Commission  
Under the  
Rural Healthcare Pilot Program  
W.C. Docket No. 02-60**

**Heartland Unified Broadband Network (HUBNet)**

**Avera Health  
Dakota Network of Community Health Centers  
Regional Health**



**Map of HUBNet Facilities**

## Project Abstract

**Title:** Heartland Unified Broadband Network--HUBNet  
Rural Healthcare Pilot Program Application W.C. Docket No. 02-60

### **Project Partners:**

#### Applicant:

*Avera Health* - A regional partnership of health professionals who share support services to maintain excellent care at more than 228 locations in eastern South Dakota and surrounding states.

#### Partners:

*Regional Health* - An integrated health care network of more than 40 entities working to provide and support health care excellence in South Dakota and Wyoming.

*Dakota Network of Community Health Centers (DNCHC)*- A not-for-profit corporation that supports the information technology needs of 24 FQHC Community Health Centers and 2 Primary Care Association Offices located in North and South Dakota.

### **Service Area Description:**

The HUBNet service area is very rural and underserved. The project will serve 1.6 million people in 121 counties across South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming. This network involves 191 facilities. Seventy-seven of these facilities are rural, fifty-nine are frontier, and fifty-five are urban. Twenty-eight facilities will have their connectivity doubled through the pilot project. Forty-six facilities will be receiving equipment.

- 78 of the facilities are located in isolated rural areas, having a Rural-Urban Commuting Area code of 10 or above.
- 24 facilities are located on or near 7 Native American Reservations and serve these minority populations
- 105 of the service area counties are federally designated Medically Underserved Areas (MUA), or have a Medically Underserved Populations (MUP).

**Project Goal:** To increase utilization of telecommunications and information services among public and non-profit healthcare providers serving rural and frontier communities across South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming.

**Project Vision:** Healthcare facilities in frontier, rural and underserved communities throughout South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming will be poised to participate in a national electronic health record which utilizes a secure, robust, interconnected, sustainable broadband network that expands the infrastructure for electronic transmission of patient information and delivery of telehealth services.

Objective 1: Construct a robust, secure, sustainable, interconnected broadband network that links health care providers serving frontier, rural and underserved communities throughout South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming.

Objective 2: Utilize HUBNet to expand telehealth services and enable electronic data exchange capabilities that address specific needs of health care providers in the region.

Objective 3: Fully implement the HUBNet administrative infrastructure and sustainability plans.

### **Budget**

The total budget for the first year of the HUBNet project is \$3,328,028 for network infrastructure needs. HUBNet is requesting \$2,828,824 from the FCC, or 85% of the total costs. \$499,204 will be paid for by the HUBNet Partners. Dollars are requested primarily for infrastructure and line costs.

### **Description of Network**

The proposed HUBNet architecture joins three Partners together to enhance the existing connection between Avera Health and the Dakota Network of Community Health Centers and to provide previously unavailable connectivity between Regional Health and the other two partners. The design provides a technically appropriate foundation for new applications and multi-disciplinary communications needs. HUBNet addresses these requirements by adding high-speed, resilient connections between the Partners and adding equipment and enhancing circuits within each Partner's network. The project also adds communications links to sites currently not served. In Year 2 of the project, additional partners and facilities will be added. One potential Year 2 partner is Aberdeen Area Indian Health Services, which is currently assessing its network needs. Aberdeen Area IHS serves 94,000 Native Americans on reservations in South Dakota, North Dakota, Iowa, and Nebraska.

To create HUBNet, the envisioned first-year build-out will add ten new digital private-line circuits, enhance the performance of 28 existing links, and add new and additional hardware to 45 sites. The three HUBNet partner networks will connect through a secure, resilient DS 3 connection.

### **Utilization**

The project will impact all 191 facilities of Avera Health, Regional Health, and the Dakota Network either through new or enhanced services. The project will have a direct effect on key telehealth applications used by the HUBNet partners and greatly improve healthcare services to residents of the area.

New and Improved Telehealth Services Include:

- Building the foundation of an interoperable Electronic Medical Records, resulting in 70% of South Dakotans having a statewide interoperable electronic medical record
- Expanding the coverage of Remote Intensive Care
- Increasing utilization and quality of Teleradiology
- Expanding the reach and number of Clinical Sub-specialty Consultations
- Allowing a greater number of distance Education & Administrative Activities

### **Sustainability**

HUBNet will finalize the preliminary sustainability plan by the end of the two-year pilot project. The partners have committed to sustaining the project. All services that the HUBNet partners provide over the network are necessary for the survival of the health systems. Therefore, the bandwidth and connectivity required by each of these services is necessary and each of the partners will ensure bandwidth availability. One of the benefits of the telehealth network is cost savings, which will contribute to project sustainability.

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# 1. Applicant Information

## Legal and Financial Responsibility for Activities Supported by the Fund and 501(c)(3) Status

Letters of commitment from each of the three HUBNet partners are located in **Appendix D**. HUBNet has the support of the Governor of South Dakota and many other parties who will reap the benefits of enhanced healthcare services resulting from the project. Letters of support are located in **Appendix G**. As the applicant, Avera Health will have overall administrative and fiduciary responsibility for the project and those activities supported by FCC funds. Avera Health is a 501(c)(3) corporation. It will administer the proposed Heartland Unified Broadband Network (HUBNet) Project by working with its partner organizations, Regional Health and the Dakota Network of Community Health Centers (DNCHC), who are also non-profit organizations. Regional Health and the DNCHC will have financial and legal responsibility for FCC funds used to purchase equipment, telecommunications lines, and design studies for facilities within their networks. Avera Health has a significant level of grant administration experience including the current administration of over \$2.2 million dollars from USDA and the Federal Office for the Advancement of Telehealth. Avera Health also has experience in administering dollars from the Universal Service Fund Program for Rural Health Care Providers.

Avera Health, based in Sioux Falls, South Dakota, is a regional, vertically integrated health care delivery network with 228 affiliated health care facilities, serving over 90 communities in South Dakota, Iowa, Nebraska, Minnesota, and North Dakota. The Avera Health mission is to make a positive impact in the lives and health of persons and communities by providing quality health care services. Working through a regionally integrated network, Avera provides quality, cost-effective health care services. Avera's facilities include five tertiary acute care hospitals; twenty-eight critical access hospitals; two Urban Indian Health Centers; nineteen nursing homes and long-term care facilities; home health services; and over 100 clinics. Nearly all Avera facilities are located in rural or frontier areas and serve medically underserved populations. Three of these facilities are located on American Indian reservations.

As a national leader in rural health care, Avera Health has developed several strategies for improving health care delivery on the Plains. Avera's telehealth program has become an essential piece of rural health care delivery. The organization has been utilizing telehealth services since 1993, and in 2006, created the Great Plains Telehealth Resource and Assistance Center (GPTRAC) in partnership with 4 other telehealth networks in a 5-state region. This program receives funding through a grant from the Office for the Advancement of Telehealth. The purpose of GPTRAC is to provide technical assistance to rural and frontier healthcare providers seeking to expand their telehealth utilization. In 2005, Avera became the first rural health care system to employ remote ICU monitoring and remains one of very few rural systems utilizing this lifesaving device today. Avera Health recognizes the value of ensuring access to telehealth applications for all rural healthcare facilities. The following are but a few personal stories related to Avera's use of telehealth applications and the reasons Avera continues to build and expand its program:

- A newborn infant in a rural community is diagnosed with a heart condition. The pediatric cardiologist is connected through telehealth and determines that the condition can be managed locally, eliminating the need for a transport...two days before Christmas.
- A patient is prescribed an expensive "high power" antibiotic for his medical condition. After a consult with the infectious disease specialist, the prescription is changed to two oral antibiotics and the patient is discharged.

- A recent Great Plains snowstorm prevented all emergency transport options from getting to rural Parkston, SD. A baby was born prematurely and needed assistance. An interactive video link with the Neonatal Intensive Care Unit (NICU) provided four hours of continuous assistance to the rural providers caring for this infant.
- A soldier serving in Iraq sees his newborn infant held by his nine-year old son.

## 2. Partner Information

**The Dakota Network of Community Health Centers** is one of Avera Health's two partners in the HUBNet project. The Dakota Network operates within Horizon Health Care, a South Dakota non-profit headquartered in rural Howard, South Dakota. The Dakota Network coordinates and supports the telecommunication and information system network needs for Federally Qualified Community Health Centers in North and South Dakota. There are thirty-four community health center clinics throughout these two states. The community health centers serve the majority of these states' uninsured and indigent population, while providing free services and services on a sliding fee scale. Six of the community health centers are located on American Indian reservations.

Dakota Network facilities work closely with Avera Health and Regional Health to provide a broad continuum of care and access to a complete cadre of services for the people they serve. These three providers work together to assure that patients needing specialized medical and emergency services can get this care, regardless of their ability to pay. As a result of other recent grant projects, all rural healthcare clinics in the Dakota Network are set up to provide telehealth services. Over the last year, specialty care services have begun to reach out past the original trial locations. It is anticipated that services will be accessible at all facilities by the end of Year 2 of the Pilot project. North and South Dakota are unique to most other states because the majority of their community health centers are rural clinics. In addition to their limited ability to manage and increase net incomes, their rural geography makes it especially difficult to build the infrastructure necessary to support telehealth applications.

**Regional Health** is a health care network based in Rapid City, South Dakota. Affiliated hospitals and clinics are located in western South Dakota, and northeastern Wyoming, with five of these being critical access hospitals. Many of these facilities are located within isolated frontier areas. Rapid City Regional Hospital is a large tertiary center and is Regional Health's largest facility. Its campus is home for a myriad of specialized medical clinics and specialists. It is the only large, tertiary facility within 300 miles, with the closest alternatives being in Sioux Falls, South Dakota (347 miles east), and Denver, Colorado (400 miles southwest).

Regional Health works closely with Avera Health on key issues affecting their facilities and the people they serve. As both organizations consist of a majority of rural facilities, they have much in common. Both facilities utilize the same health information system and are working to develop a shared electronic medical record. **These two health systems serve seventy percent of the population of South Dakota; therefore, it is logical that the two join forces to develop a statewide interoperable EMR.** Regional Health also works closely with the Dakota Network. Many Regional facilities are located in close proximity to the community health centers and the Rapid City community health center is actually located directly on the Regional Campus.

Due in part to network infrastructure limitations, Regional Health’s telehealth activities have focused on education related activities over the years. However, recently it became involved with a telehealth project working with the Pine Ridge Indian Health Service Hospital on the Pine Ridge Reservation, 110 miles southeast of Rapid City. Through the telehealth program, a Telesynergy® system installed at the Pine Ridge Hospital links via a T-1 line to Rapid City Regional Hospital. The Telesynergy® system is a medical consultation workstation that includes such tools as a diagnostic quality microscope, patient exam camera, color video printer, radiology monitors, and a document camera. The workstation integrates all of these imaging capabilities, allowing them to be used together during videoconferences. Native Americans suffer from a disproportionate rate of diabetes, which is a leading cause of kidney diseases. Thus, the system is vital to monitoring nephrology patients between visits to clinics in Rapid City. The system’s major benefit is that all medical specialties can use the equipment.

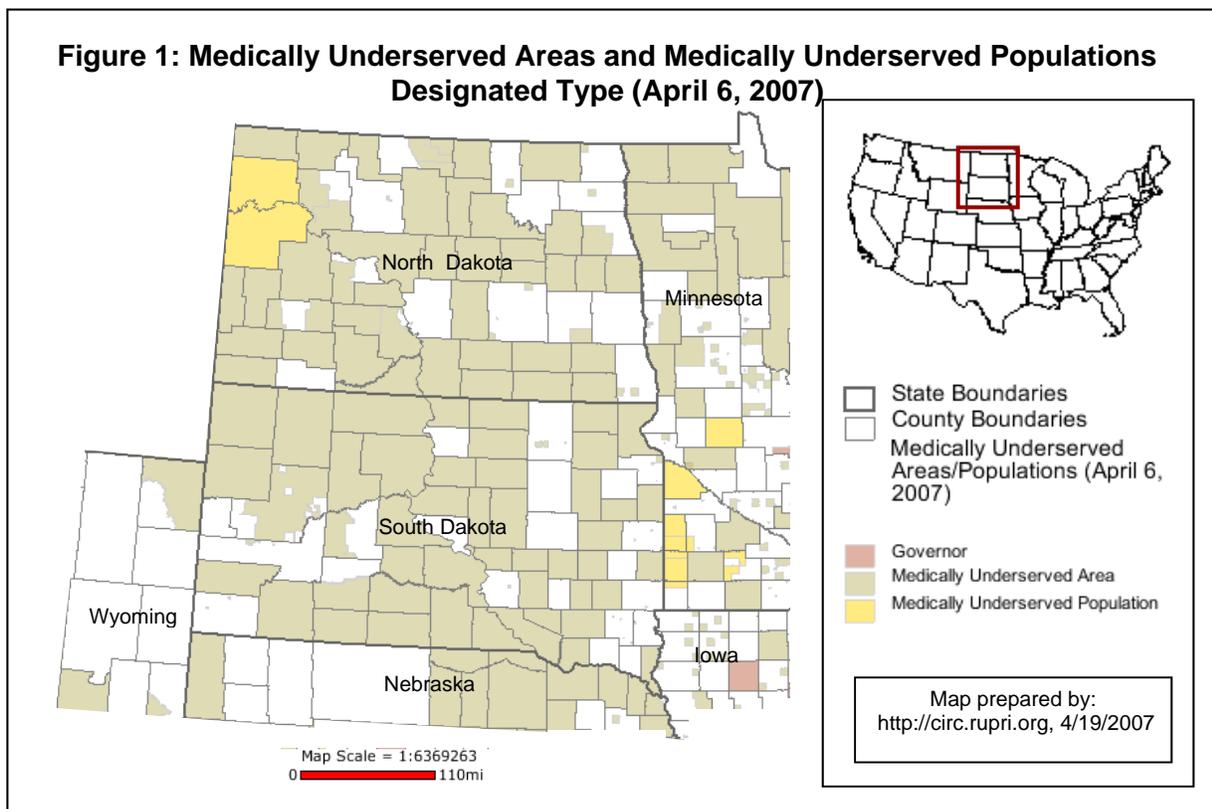
### 3. Background / Description of the Region to be Served

#### ***Needs Related to Demographics, Geography, and Current Network***

There are many challenges to providing health care services in the rural HUBNet service area. In general, HUBNet’s rural and frontier population tends to be older and “sicker” in that they suffer from chronic diseases at greater rates than their urban counterparts. In addition, these areas suffer from youth-out-migration and slow adoption of contemporary healthy-lifestyle practices. The service area also includes facilities on or serving American Indian reservations. Twenty-four of the HUBNet member facilities are located on or within twenty miles of these reservations and serve a large number of American Indians. ***Appendix F includes a list of these facilities.***

#### **Medically Underserved Areas**

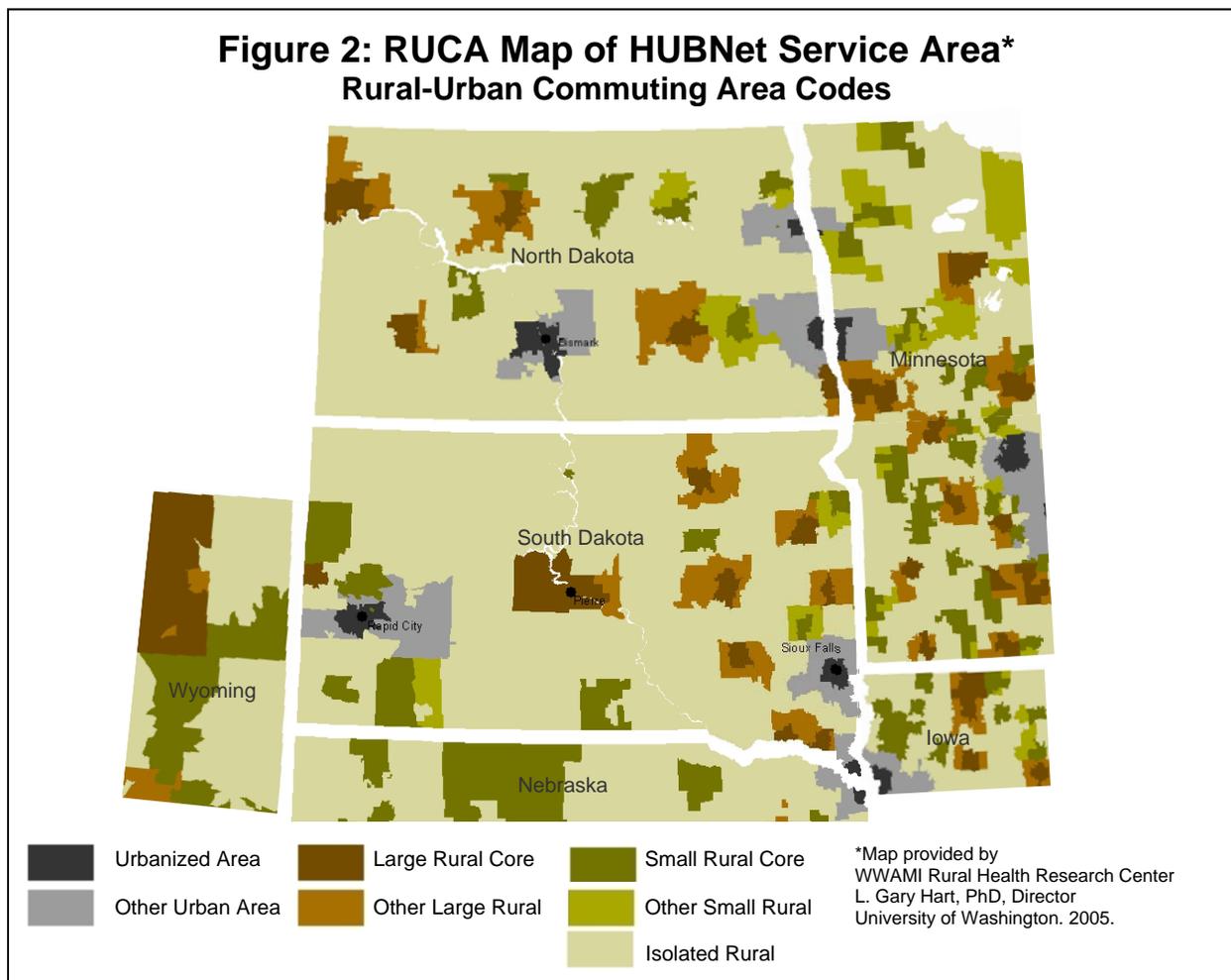
Rural areas suffer from a shortage of health professionals. The majority of counties served by HUBNet facilities are federally designated medically underserved areas (MUAs). ***See Figure 1.***



## Rurality

Out of the 121 counties served by HUBNet, only four are metropolitan areas (Bismarck, ND, Grand Forks, ND, Rapid City, SD, and Sioux Falls, SD.) The federal definition of rural (population under 50,000) does not adequately capture HUBNet's service area. It is actually much closer to frontier, or less than seven persons per square mile. The total population of the service area is 1.6 million, spread out over 132,000 square miles. The average population density of the entire region is twelve persons per square mile, compared to the national average of eighty persons per square mile. In fact, fifty-nine of the 121 counties in the service area qualify as being frontier, or less than seven persons per square mile.

Rural-Urban Commuting Areas (RUCAs) further show the extent to which the service area is isolated. **Figure 2** a map of the service area demonstrating the RUCA codes. Note that the lightest shade refers to isolated-rural, or frontier areas. **See Appendix B for a list of RUCA codes by HUBNet Facility.**



**The RUCA codes are classified as follows:**

- urban core: 1.0, 1.1;
- other urban: 2.0, 2.1, 3.0, 4.1, 5.1, 7.1, 8.1, 10.1;
- large rural core: 4.0, 4.2;
- other large rural: 5.0, 5.2, 6.0, 6.1;
- small rural core: 7.0, 7.2, 7.3, 7.4;
- other small rural: 8.0, 8.2, 8.3, 8.4, 9.0, 9.1, 9.2;
- isolated rural: 10.0, 10.2, 10.3, 10.4, 10.5, 10.6.

## 4. Network Design, Network Utilization, Impact

The Heartland Unified Broadband Network (HUBNet) accurately reflects the purpose of the Order, "...to support...broadband networks...designed to bring the benefits of innovative telehealth and, in particular, telemedicine services to the areas of the country where the need for those benefits is most acute," with the goal of increasing utilization of telecommunications and information services among public and non-profit healthcare providers serving rural and frontier communities across South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming.

Project objectives address specific infrastructure, utilization and administrative needs of providers in the region and will be accomplished through the implementation of this innovative, new regional broadband network that provides new and enhanced direct connectivity between the three partner networks.

### **Network Design**

#### **Network Summary**

Avera Health, Regional Health and the Dakota Network of Community Health Centers each currently have their own networks connecting their various facilities (**Diagrams of existing networks- Appendix A, Diagrams #4,#6,#8**), but there is limited or no connectivity among the three networks. Using Pilot Program funding, the three networks will directly connect over a dedicated, secure, resilient DS 3 connection (Network Diagram of Planned Interconnections between the Three Partners- **Appendix A, #3**). Additionally, Pilot Program funding will be used to enhance a number of connections within each of the three partner's networks (Network Diagram of Enhancements to Regional Health Network, **Appendix A, Diagram #9**; Network Diagram of Enhancements to Dakota Network, **Appendix A, Diagram #7**; and, Network Diagram of Enhancements to Avera Health Network, **Appendix A, Diagram #5**). In the first year of the project, this enhancement will consist of 10 new digital private-line circuits, upgrading bandwidth at 28 existing sites, and adding new network equipment at 45 sites (Network Diagram of New HUBNet Network Infrastructure, **Appendix A, Diagram #2**). **Diagram 1, Appendix A** represents the new community connections.

A HUBNet Technical Committee is responsible for the final design and implementation of the network infrastructure, creation of its operational policies, procedures, and Service Level Agreements (SLAs), as well as oversight of the network when operational. The Technical Committee or individual Partners will engage consultants for design and implementation services. The Technical Committee will also support additional Partner site additions and the inclusion of other healthcare organizations located in South Dakota and throughout the HUBNet region in Year 2 of the project. Furthermore, the Committee will create the technical specifications for the interface between the HUBNet and the surrounding state and regional healthcare networks via specific circuits and/or a national backbone, such as Internet2.

The current networks within Avera Health, Regional Health and the Dakota Network have numerous limitations. In general, the current networks are a star topology with point-to-point T1's. This configuration suffers from a lack of redundancy and the network is not able to self-heal. The current T1-based network also significantly limits the amount of traffic carried to the various locations. While quality of service helps allocate the available bandwidth, significant

constraints remain and certain clinical applications are slowed or delayed, negatively affecting patient care.

The HUBNet architecture will enhance the existing connection between Avera Health and the Dakota Network and will provide direct connectivity between Regional Health and the other two partners for the first time. The design will remedy deficiencies in the Partners' current connection environments, while providing a technically appropriate foundation for new applications and multi-disciplinary communications needs. This will be accomplished by adding high-speed, resilient connections between the Partners, adding equipment and enhancing circuits within each Partner's network, and adding communication links to sites that are not currently served.

### **Specific Enhancements**

The HUBNet regional network provides a cost effective solution by utilizing carrier-supplied private digital lines, building upon the Partners' existing infrastructure and tailoring bandwidth capacity to meet the needs of each connected site within the network. The accompanying network schematic drawings (**See Appendix A**) describe the basic topology of the interconnection between the Partners, as well as the architecture employed by each Partner within its own network.

Each internal Partner network supports Partner-centric applications such as hospital information system (HIS) processing, VoIP telephony, internal and external e-mail and internet access, pharmacy dispensing, administrative and payroll processing, and other standard business activities. Each of these applications and services has specific requirements for its transmission environment and must co-exist within the environment of the network as a whole. The new network must accommodate these internal Partner activities and their concomitant network requirements without compromising security, reliability, and response.

The HUBNet infrastructure will address these requirements through the addition of circuits, the enhancement or augmentation of existing circuits, and implementation of packet/circuit switching protocols (Asynchronous Transfer Mode ('ATM') and MultiProtocol Label Switching ('MPLS') for more efficient data transmission and Quality of Service ('QoS') for resource usage control. Bi-directional video will be supported using H.323-based sessions between endpoints or bridges with H.239 'data-showing' where provided by site equipment. The Technical Committee will employ industry-standard best practices in all phases of the design and implementation.

General network performance requirements, based on the most restrictive specification as defined by known applications are:

- Latency: < 60ms; video sites: good 0 – 150ms, acceptable 150 – 300ms
- Bandwidth, general: determined by application/site mix; minimum DS-3 (45Mbps between Partners and internal regions)
- Bandwidth, video sites: minimum 384Kbps / 450Kbps practical w/framing and control overhead per bi-directional video connection. Bandwidth to bridge sites must account for potential (reasonable median) concurrent session aggregation.

- Stability, video sites: Jitter: good 0 – 20ms, acceptable 20-50ms; packet loss: Good 0 – 0.5%, acceptable 0.5 – 1.5%
- Availability: Less than 100%, but to be determined by network design analysis. Maintenance window to be accommodated and Service level Agreements to be created for accountability for areas under each partner’s management.

Transmission protocols (ATM, MPLS) may be supported by carrier-supplied switches or by Partner-supplied and maintained devices, depending on location and the relative cost-efficiency of local ‘edge’ devices versus high-mileage ‘backhaul’ circuits to carrier points of presence. Individual partner networks will be connected by secured links with resiliency and redundancy as physically available. Partners will define and maintain the security standards at their specific network edge and within their internal network environments. Security, intra-Partner and external, to meet applicable state and federal law, statutes, and regulations, including the Health Insurance Portability and Accountability Act (HIPAA) of 1996, and applicable specific policies as implemented by each Partner.

If approved, the HUBNet Pilot Project will follow applicable FCC processes. The Partners will file Form 465s and receive bids. HUBNet will award bids based on technical and operational validity, compatibility with existing partner network equipment, and proposed pricing. Circuit and hardware requirements for the Partner interconnections and enhanced connectivity within the existing networks are listed in detail on the budget worksheets. Prices and fees are based on prevailing list prices of standard equipment and representative carrier charges. The Project Technical Committee and engineering staff will make final procurement decisions, in consultation with the appropriate financial departments of the Partners, and Avera will issue purchase orders on behalf of HUBNet. Partner shares will be calculated and billed appropriately to each entity. The Project Administrator will oversee this process.

In Year 1, the HUBNet will include the following enhancements:

### HUBNet Site Enhancements

Partner	Connection	New or Enhanced Circuit
<b>HUBNet Partner Interconnection Circuits with Network Equipment Upgrades / Additions</b>		
Regional to Avera	DS-3 (45Mbps) Resilient Packet Ring connection (‘RPR’ – IEEE 802.17), MPLS. Firewall and access control at each end.	<i>New</i>
Dakota Network to Avera	DS-3 (45Mbps) Resilient Packet Ring (‘RPR’ – IEEE 802.17) connection , MPLS. Firewall and access control at each end	<i>Enhanced</i>

Facility	Address	Circuit Addition/Enhancement	New or Enhanced Circuit
<b>Regional Health Circuit Additions / Enhancements with Network Equipment Upgrades</b>			
Spearfish Regional Hospital	Spearfish, SD	20MB Ethernet	<i>New</i>
Regional Medical Clinic Endocrinology	Rapid City, SD	5MB Ethernet	<i>Enhanced</i>
Belle Fourche Regional Medical Clinic	Belle Fourche, SD	10 MB Ethernet	<i>Enhanced</i>

Facility	Address	Circuit Addition/Enhancement	New or Enhanced Circuit
<b>DNCHC Circuit Additions / Enhancements with Network Equipment Upgrades</b>			
Presho Clinic	Presho, SD	T-1	<i>New</i>
Rapid City Community Health Center	Rapid City, SD	T-1	<i>New</i>
<b>Avera Circuit Additions / Enhancements</b>			
Avera Brookings Medical Clinic	Brookings, SD	2x T-1	<i>Enhanced</i>
Brookings Hospital	Brookings, SD	2x T-1	<i>Enhanced</i>
Floyd Valley Hospital	LeMars, IA	4x T-1	<i>Enhanced</i>
Southwestern Mental Health / Avera	Luverne, MN	2x T-1	<i>Enhanced</i>
Avera St. Anthony's Hospital	O'Neill, NE	4x T-1	<i>Enhanced</i>
Sioux Center Community Health	Sioux Center, IA	4x T-1	<i>Enhanced</i>
Avera Spencer Family Care Clinic	Spencer, IA	2x T-1	<i>Enhanced</i>
Avera Spirit Lake Medical Center	Spirit Lake, IA	2x T-1	<i>Enhanced</i>
<b>Avera Circuit Additions / Enhancements with Network Equipment Upgrades</b>			
Avera St. Luke's Hospital	Aberdeen, SD	DS-3 (45Mbps) Redundant, Resilient Packet Ring ('RPR' – IEEE 802.17) connection, Synchronous Optical Networking ('SONET'); MPLS	<i>New</i>
Avera Queen of Peace Hospital	Mitchell, SD	DS-3 (45Mbps) Redundant, Resilient Packet Ring ('RPR' – IEEE 802.17) connection, Synchronous Optical Networking ('SONET'); MPLS	<i>New</i>
Avera Sacred Heart Hospital	Yankton, SD	DS-3 (45Mbps) Redundant, Resilient Packet Ring ('RPR' – IEEE 802.17) connection, Synchronous Optical Networking ('SONET'); MPLS	<i>New</i>
Avera McKennan Hospital and Univ. Health Ctr	Sioux Falls, SD	To Data Center: Redundant, Resilient Gigabit Ethernet	<i>New</i>
Coteau Des Prairies Hospital & Clinic	Sisseton, SD	2x T-1	<i>New</i>
Community Memorial Hospital	Redfield, SD	2x T-1	<i>New</i>
Avera Selby Clinic	Selby, SD	2x T-1	<i>New</i>
Dells Area Health Center / Avera	Dell Rapids, SD	2x T-1	<i>Enhanced</i>
Avera Holy Family Health	Estherville, IA	4x T-1	<i>Enhanced</i>
Eureka Community Health Svc / Avera	Eureka, SD	2x T-1	<i>Enhanced</i>
Avera Flandreau Medical Center	Flandreau, SD	2x T-1	<i>Enhanced</i>
Avera Gregory Healthcare Center	Gregory, SD	2x T-1	<i>Enhanced</i>
Avera Louis Weiner Memorial Hospital	Marshall, MN	4x T-1	<i>Enhanced</i>
Milbank Area Hospital / Avera	Milbank, SD	2x T-1	<i>Enhanced</i>
Hand County Memorial Hospital / Avera	Miller, SD	2x T-1	<i>Enhanced</i>
Avera St. Benedict's Health Center	Parkston, SD	2x T-1	<i>Enhanced</i>
Pipestone County Medical Center	Pipestone, MN	4x T-1	<i>Enhanced</i>
Platte Health Center / Avera	Platte, SD	2x T-1	<i>Enhanced</i>
Hegg Memorial Health Center / Avera	Rock Valley, IA	2x T-1	<i>Enhanced</i>
Landmann-Jungman Mem. Hlth Ctr / Avera	Scotland, SD	2x T-1	<i>Enhanced</i>
Osceola Community Hospital	Sibley, IA	2x T-1	<i>Enhanced</i>
Avera Behavioral Health Center	Sioux Falls, SD	Gigabit Ethernet, wireless	<i>Enhanced</i>
Avera Weskota Memorial Medical Center	Wessington Springs, SD	2x T-1	<i>Enhanced</i>
Avera Worthington Specialty Clinics	Worthington, MN	2x T-1	<i>Enhanced</i>

## Equipment Additions and Upgrades

Location	City		Description
<b>Avera Health</b>			
Avera St. Luke's Hospital	Aberdeen	SD	Cisco 7206 Router Configuration
Dells Area Health Ctr/Avera Health	Dell Rapids	SD	Cisco 2811 / 4-port IMA
Avera Holy Family Health	Estherville	IA	Cisco 2811 / 4-port IMA
Eureka Community Health Serv/Avera	Eureka	SD	Cisco 2811 / 4-port IMA
Avera Flandreau Medical Center	Flandreau	SD	Cisco 2811 / 4-port IMA
Avera Gregory Healthcare Center	Gregory	SD	Cisco 2811 / 4-port IMA
Avera Louis Weiner Memorial Hospital	Marshall	MN	Cisco 2811 / 4-port IMA
Milbank Area Hosp/Avera Health	Milbank	SD	Cisco 2811 / 4-port IMA
Hand County Meml Hosp/Avera	Miller	SD	Cisco 2811 / 4-port IMA
Avera Queen of Peace	Mitchell	SD	Cisco 7206 Router Configuration
Avera St. Benedict's Health Ctr	Parkston	SD	Cisco 2811 / 4-port IMA
Pipestone County Med Ctr/Avera	Pipestone	MN	Cisco 2811 / 4-port IMA
Platte Health Center/Avera	Platte	SD	Cisco 2811 / 4-port IMA
Community Memorial Hospital	Redfield	SD	Cisco 2811 / 4-port IMA
Hegg Memorial Health Ctr/Avera	Rock Valley	IA	Cisco 2811 / 4-port IMA
Landmann-Jungman Mem. Hosp/Avera	Scotland	SD	Cisco 2811 / 4-port IMA
Avera Selby Clinic	Selby	SD	Cisco 2811 / 4-port IMA
Osceola Comm Hospital	Sibley	IA	Cisco 2811 / 4-port IMA
Avera Health Data Center	Sioux Falls	SD	Cisco 7606 Configuration
Avera McKenna Behavioral Health	Sioux Falls	SD	Cisco 7206 Router Configuration
Avera McKennan Hosp/Univ Hlth	Sioux Falls	SD	Cisco LS-1010 ATM Switch Upgrades
Avera McKennan Hosp/Univ Hlth	Sioux Falls	SD	Cisco 7513 Router Upgrades
Avera McKennan Hosp/Univ Hlth	Sioux Falls	SD	Cisco 7606 Configuration
Coteau Des Prairies Hospital and Clinic	Sisseton	SD	Cisco 2811 / 4-port IMA
Avera Weskota Meml Med Ctr	Wessington Springs	SD	Cisco 2811 / 4-port IMA
Avera Worthington Specialty Clinics	Worthington	MN	Cisco 2811 / 4-port IMA
Avera Sacred Heart Hospital	Yankton	SD	Cisco 7206 Router Configuration
<b>Regional Health</b>			
Belle Fourche Regional Clinic	Belle Fourche	SD	Network Router - standard Cisco 2821
Belle Fourche Regional Clinic	Belle Fourche	SD	Network Switching Cisco 3750
Lead Deadwood Regional Hospital	Deadwood	SD	Network Router - standard Cisco 2830
Fall River Health Services	Hot Springs	SD	Network Router - standard Cisco 2821
Fall River Health Services	Hot Springs	SD	Network Switching Cisco 3750
Bennett County Community Hospital	Martin	SD	Network Router - standard Cisco 2821
Bennett County Community Hospital	Martin	SD	Network Switching Cisco 3750
Philip Health Services	Philip	SD	Network Router - standard Cisco 2821
Philip Health Services	Philip	SD	Network Switching Cisco 3750
Family Practice Residency	Rapid City	SD	Network Router - standard Cisco 2821
Regional Behavioral Health Center	Rapid City	SD	Network Router - standard Cisco 2821
Regional Health	Rapid City	SD	Core Internet upgrade Router - 3845
Regional Health	Rapid City	SD	Core WAN Router upgrade - 7206
Regional Health	Rapid City	SD	Core Router - 3845
Regional Medical Clinic - Aspen	Rapid City	SD	Network Router - standard Cisco 2821

Location	City		Description
<b>Rapid Health</b>			
Regional Medical Clinic - Endo	Rapid City	SD	Network Router - standard Cisco 2821
Regional Medical Clinic - Endo	Rapid City	SD	Network Switching Cisco 3750
Regional Dialysis	Spearfish	SD	Network Router - standard Cisco 2821
Regional Dialysis	Spearfish	SD	Network Switching Cisco 3750
Regional Dialysis	Spearfish	SD	Wireless Bridge
Spearfish Regional Hospital	Spearfish	SD	Network Router - expanded Cisco 3845
Massa Berry Regional Medical Clinic	Sturgis	SD	Network Router - standard Cisco 2821
Massa Berry Regional Medical Clinic	Sturgis	SD	Network Switching Cisco 3750
<b>Dakota Network of Community Health Centers</b>			
Bell Medical Clinic	DeSmet	SD	Network Router - standard Cisco 2821
Bryant Clinic	Bryant	SD	Network Router - standard Cisco 2821
Lake Preston Clinic	Lake Preston	SD	Network Router - standard Cisco 2821
Howard Clinic	Howard	SD	Network Router - standard Cisco 2821
Whiting Memorial Clinic	Woonsocket	SD	Network Router - standard Cisco 2821
Jerauld County Clinic	Wessington Springs	SD	Network Router - standard Cisco 2821
Aurora County Clinic	Plankinton	SD	Network Router - standard Cisco 2821
Presho Clinic	Presho	SD	Network Router - standard Cisco 2821
Rapid City Community Health Center	Rapid City	SD	Network Router - standard Cisco 2821
Rural Learning Center	Howard	SD	Network Router - standard Cisco 2821

**Edge Devices-** The devices specified for installation at ‘edge’ sites replace existing equipment that is, in some cases, over eight years old. The new equipment – Cisco 2800-series routers – provides a significant enhancement in service capability in its own right, by permitting the use of current IMA (‘Inverse Multiplexing over ATM’) network modules for connection to the Avera Health ATM network, or for ATM backhaul to carrier MPLS points-of-presence. The routers also provide MPLS support capability for use with native MPLS connection (as opposed to carrier-based MPLS,) should a native MPLS network be chosen by the Technical Committee during its design operations. Additionally, the replacement devices confer all the advantages of current, state-of-the-art hardware, when compared to the existing devices. This includes higher speed processing and more memory, greater expandability, and the ability to run the most current router ‘operating system’ code for the highest efficiency and best control of the router’s functions.

**Firewall Upgrades -** Each Partner will be responsible for the creation, implementation, and monitoring of security policies and procedures for its own network, including connections to the Internet and other external (non-Partner) networks, as well as the connections between the Partners themselves. HUBNet will use firewall devices to provide the ‘gateway’ point between Partner networks, allowing each partner to direct and limit access to devices and applications on each network according to those policies.

HUBNet has not specified firewall configurations in order to permit each Partner to design the configuration most appropriate to its needs. The Technical Committee will work with staff from each Partner to assure that the access granted to and between each network is appropriate for the HUBNet mission.

**Cisco 7206 / 7604 Routers-** Connectivity between partners and between the Avera regional sites is critical to the proper performance of HUBNet. In addition, the Avera Health Hospital Information System / EMR application depends on the intra-Avera regional connections for the connection to client systems in the Avera hospitals that are involved.

The Cisco 7206 / 7604 router configuration specified for the various sites provides redundant, high availability enterprise-class devices at each Avera core site. The devices are configured with the highest level of hardware redundancy available and the specification of dual routers at the critical EMR-related sites provides positive, automatic failover between themselves in the event of a hardware or internal router software/firmware failure. Additionally, the online failover capability allows individual hardware and firmware upgrades on alternate routers on the redundant pair without significant impact to network traffic, allowing updates and patches to be applied without the necessity of defining a network 'maintenance window' time period during which the network is unavailable.

## ***Network Utilization***

HUBNet is the vehicle that will allow area public and non-profit healthcare providers to increase their utilization of telecommunications and information services through direct, secure connectivity between the Partners. HUBNet will provide for the following key activities:

- **Electronic Medical Record (EMR) applications within each Partner Network, and Future Development of a Regional Interoperable EMR**

Avera is already one year into an enterprise-wide technology consolidation and electronic medical record (EMR) roll out which is expected to take 3.5 years to complete. Through this endeavor, Avera will establish a paperless EMR for both inpatient and outpatient environments and will be positioned to implement electronic physician order entry. The first seven hospitals are scheduled to go live in October 2007, with an additional 20 hospitals scheduled to go live in 2008. **This enterprise-wide implementation will ultimately integrate clinical and financial applications at over 200 sites located in five states.**

The Avera EMR implementation process will serve as a model for both Regional Health and Dakota Network as those networks move forward with their own EMR projects. Through HUBNet, a work group dedicated to streamlining communications and enhancing the process will be established. While partner EMR repositories will initially remain separate, it is strongly believed that an interoperable EMR, with a single Master Patient Index (MPI), will be established among HUBNet partners within the next 5 years. It is important to note that Dakota Network, which does not include any hospitals, intends to use LSS, the same outpatient EMR software that clinics in the Avera and Regional Health networks will deploy. This will allow clinic patient records to use the same Master Patient Index as the hospitals within the HUBNet partner networks.

- **Avera eICU<sup>®</sup> Care Remote ICU Monitoring**

New infrastructure and planned enhancements will **allow six additional facilities to deploy Avera eICU<sup>®</sup> Care, and will better support the twelve healthcare facilities where Avera eICU<sup>®</sup> Care is currently deployed.** Of these 18 facilities, 17 are located in rural or frontier areas and just one of them is located in an urban area. Through Avera

eICU<sup>®</sup> Care, specially trained intensivist physicians at the command center in Sioux Falls, SD monitor patients and support bedside providers and care teams throughout South Dakota, Iowa, Minnesota, and Nebraska. Mortality rates in Avera facilities using eICU<sup>®</sup> Care were an average of 30% lower than predicted. This is calculated by using the APACHE III (Acute Physiology, Age, Chronic Health Evaluation) method of predicting mortality risks for critically ill hospitalized adults.

A list of Avera eICU<sup>®</sup> located in **Appendix E**.

- **Teleradiology Services**

New infrastructure and planned enhancements funded by the FCC Pilot Program will **allow five hospitals located in rural and frontier areas to implement fully-digital teleradiology capabilities**, and will **significantly reduce transmission times for teleradiology images for the nineteen Avera Health and twelve Regional Health sites currently offering this service**. For example, if a full T1 line is available, a computed tomography (CT) study containing 300 to 1200 images, may take anywhere from 13 to 52 minutes to transmit. In a trauma case, when the “golden hour” applies (a 52-minute wait time for a CT study to be sent) could mean the life or death of a patient. By contrast, at DS3 speeds, that same study could be sent within 1/2 to 2 minutes. Additionally, the increasing use of image reading services located in distant time- zones is making teleradiology capabilities and faster transmission times essential for rural and urban facilities alike. A list of teleradiology sites is located in **Appendix E**.

- **Telemedicine via ITU-T Recommendation H.323 digital video**

The International Telecommunication Union Standardization (ITU-T) recommends H.323 digital video for telemedicine consultations. To ensure this standard, participating facilities must have Quality of Service (QoS). New infrastructure and planned enhancements funded by the FCC Pilot Program will ensure that QoS is available across the entire network. Bandwidth increases and availability of QoS will improve the flexibility of the system in accommodating telemedicine. This will enable facilities to engage in more than one telemedicine or videoconference event at a time, something that is not currently possible due to bandwidth constraints and quality issues. With FCC support, each partner network will add new videoconferencing sites.

Avera Health is regarded as a national leader in clinical telemedicine. Network improvements will greatly improve clinical sub-specialty services and allow more facilities to have access to sub-specialty physicians. The number of clinical consultations provided by Avera Health sub-specialists to rural facilities, including the Dakota Network clinics, is dramatically increasing. Increasing video quality is important for most clinical consultations. Avera Health specialists in Sioux Falls, SD provide a variety of specialty consults to rural facilities via interactive video. Twenty-eight facilities are active participants in Avera Rural and Frontier Telehealth and Disease Management Network activities. Currently, many of the rural and frontier facilities are limited in the number of consults they can administer, due to bandwidth constraints. Sioux Falls’ specialists will be able to provide an increased number of consults to Dakota Network facilities with the infrastructure improvements. Additionally, with the new connections between Avera Health and Regional Health and Regional Health and the Dakota Network, many more rural facilities will have access to clinical specialists via telemedicine. To date- Avera Health specialty physicians have provided over 2,000 clinical consultations. Clinical subspecialties involved in telemedicine to date include the

following: mental health, dermatology, Pediatric Cardiology, Pediatric Infectious Disease, Pediatric Neurology, and Pulmonology.

Through its Great Plains Telehealth Resource and Assistance Center (GPTRAC), Avera Health will assist Regional Health and their sub-specialist physicians in working to deliver clinical telehealth sub-specialty services to their rural facilities. With the connectivity between the three partners, more Avera Health and Dakota Network clinics will be able to receive services from Regional Health's specialist physicians. Provider capacity has been a challenge in developing clinical telehealth services. Many of the key sub-specialists providers in Rapid City have excess capacity. Regional Health's clinical telemedicine activities to date have been limited, although they have recently begun providing services to the Pine Ridge Indian Health Service hospital.

- **Regional disaster preparedness and geographically diverse data replication**

The network infrastructure supported by FCC funding includes redundant connections, which provide an alternate means of access to data and information systems when a single connection could be easily severed. All Regional Health and Avera Health data stores will be systematically and continually backed up at both facilities' data centers through a process called "data mirroring." This will significantly increase the security of the data from loss or corruption. Additionally, the HUBNet infrastructure will enable partner networks, representatives of government, law enforcement, and emergency management agencies and other stake-holder organizations to coordinate crisis response efforts by establishing a communication center that remains viable, even when other systems may be compromised. For example, the sudden and unpredictable weather found in the nation's "Tornado Alley," is capable of transforming "situation normal" to chaos. On June 24, 2003, the entire hamlet of Manchester, South Dakota lifted from the earth and disappeared into a dark, half-mile-wide tornado. It was one of 67 tornadoes spawned in South Dakota that day by a massive collision of humidity and shearing winds that swept across the northern plains. HUBNet improved the time and quality of response to these types of disasters.

- **Inter-regional connectivity for telemedicine and other applications via dedicated links and Internet-2**

The Technical Committee will formulate the means and methods of interconnection with neighboring state and regional healthcare networks, as well as design and implement a connection to a national backbone to farther-flung networks as partner needs are identified and capability comes within South Dakota's reach.

## ***Impact***

The FCC's Rural Health Care Pilot Project support of the HUBNet project **will allow the three partners to significantly shorten the timeframe for important network improvements and enhancements.** Without funding, these improvements will take several years to complete, or possibly, will not be undertaken at all. The Dakota Network is made up solely of vulnerable safety network providers with limited financial resources. Without program support, these facilities would not be able to make any of the network infrastructure improvements within the next five years.

Network improvements for Regional Health facilities include equipment and telecommunications lines for the urban hospital and specialty physicians in Rapid City. However, these lines will primarily address the needs of their rural and frontier facilities and partners. Without support at this point in time, the rural and frontier facilities will not be able to afford these network improvements. The implementation and design studies are also imperative to improving the network infrastructure and cannot be budgeted for approximately two fiscal years.

Pilot Project support will enable the project to be completed in two years, where it otherwise would occur in five to ten. All three partner organizations are in the midst of Electronic Medical Record (EMR) projects which are currently tapping capital resources. Additionally, Avera Health and Regional Health are in the midst of building large, costly data centers where the electronic medical record data will be stored.

Information on all of the facilities that are part of the HUBNet network and will benefit from the project is located in **Appendix B**. **Appendix B** includes a list of phone numbers, addresses, RUCA codes, and other required information. This facility list is comprehensive, in light of the fact that due to many of the network planned improvements, all of the facilities on the network benefit to varying degrees.

## 5. Project Management- How the Project will be Coordinated Throughout the Region

### ***Project Leadership: Roles/Job descriptions, Key Personnel***

Bio-sketches for key staff are located in **Appendix C** of this application. Avera Health staff will direct and administer the HUBNet project with the assistance of the Dakota Network and Regional Health staff. The key Avera Health staff will work with the two partner organizations in the form of three primary committees. The Project Director and Project Administrator will oversee these committees. The three general committees have been divided among administrative/management activities; technical activities; and clinical activities. At the request of Regional Health and the Dakota Network, Avera Health staff will lead and administer the work of the three committees. Many activities will cross over and involve more than one committee. The committees will be key in assuring the success of the pilot project, as well as the long-term sustainability of HUBNet.

Key Avera Health staff includes the Project Director, Project Administrator, Network Manager, and Telehealth Director. These individuals and their roles are described briefly in the following paragraphs.

The **Project Director** will be Jim Veline, M.B.A., M.E, Chief Information Officer for Avera Health. Mr. Veline has over twenty-five years of experience in accounting and information systems/technology in health care environments. As the Project Director, Mr. Veline will have overall administrative and financial responsibility for the Project.

The **Project Administrator** will be Jason Wulf, M.B.A., Financial Analyst for Avera Health. Mr. Wulf will oversee day-to-day financial and administrative aspects of the project. This includes overall work plan tracking and reporting, filing for FCC Pilot Program reimbursement, and day to day financial management. Mr. Wulf has a significant level of experience with USAC

reimbursement and the reimbursement process, and is primarily responsible for both of these at Avera Health. Mr. Wulf will also assist the Network Manager in managing contracts related to the project and will lead the Administrative/Management Committee.

The **Network Manager** for the project will be Jim Burkett, the Information Center Technology Director at Avera Health's Avera McKennan Hospital. He is an electrical engineer and has approximately thirty years of experience working with information systems and networks. Mr. Burkett will have overall responsibility for finalizing preliminary design plans and implementing these plans. He will also have overall responsibility for over network design and construction. He will administer contracts related to design and network construction and will lead the Technical Committee. Mr. Burkett oversees a staff of approximately thirty engineers and network analysts that will also support the project as needed.

Mary DeVany, Avera Health's **Telehealth Director** will also have a key role in the project, and oversee the Clinical Committee. Ms. DeVany is recognized as a national telehealth leader. She is on the executive board of the Center for Telehealth and e-telehealth (CTL) and is the Director of the Great Plains Telehealth Resource and Assistance Center (TRAC).

Dr. Tad Jacobs, Avera Health's **Chief Medical Information Officer (CMIO)** will also provide assistance to the Project and serve on the Clinical Committee. Dr. Jacobs is the only CMIO at any of the partner organizations. Additionally, he practices part time at a rural clinic and has over five years of experience in clinical telehealth applications. Dr. Jacobs has a key role in the development of Avera Health's shared, interoperable EMR.

A brief description of the HUBNet committees is as follows:

**Administrative/Management Committee-** The administrative/management committee will be responsible for activities and functions that relate to management and administrative functions of HUBNet. This includes day-to-day management activities, as well as general policies, procedures and activities that relate to administrative infrastructure. This committee will be responsible for financial management issues and have a key role in working with organizations that have expressed an interest in participating in HUBNet in Year 2 and beyond.

**Technical Committee-** The Technical Committee will be responsible for technical aspects of the project, including the information system and network planning, design, development and implementation.

**Clinical Committee-** The Clinical Committee will have overall responsibility for development of clinical telemedicine activities and for providing clinicians' perspectives on telehealth applications. They will work with the Technical Committee to help ensure that the network infrastructure supports the planned development and enhancement of telemedicine applications. The work of this committee will be important to ensuring that the IT network fosters these telemedicine applications.

In addition to Avera Health staff, the Dakota Network of Community Health Centers and Regional Health will have representatives on the Committees. John Mengershausen is the CEO of the Dakota Network, and he will serve on the Administrative/Management Committee. Scott Weatherill is the IT Director for Horizon Health, and he will serve on the Technical Committee. Dr. Lance Lim is Horizon Health's Medical Director, and he will serve on the Clinical Committee. Dick Latuchie is the CIO for Regional Health, and he will serve on the Administrative/Management Committee. Alan Williams is the Assistant Director of Health

Information Systems at Regional Health, and he will serve on the Technical Committee. Dr. Brian Smith is a faculty physician at the Rapid City Regional Hospital Family Medicine Residency and the lead physician in development of Regional Health's EMR, and he will serve on the Clinical Committee.

The three HUBNet committees will form additional sub-committees and work groups for specific tasks and activities as needed. Each organization has a plethora of professionals in each of these three areas from which to draw. The key work groups will be an EMR Interoperability Work Group and a Disaster Preparedness and Response Work Group.

## 6. Work Plan, Implementation Schedule/Time-table

The HUBNet pilot project was developed collaboratively and addresses issues that relate to increasing utilization of telecommunications and information services among rural healthcare providers in the following categories: 1) Technical; 2) Clinical and 3) Administrative. The HUBNet work plan outlines major project milestones, identifies responsible staff to fulfill the tasks necessary, and includes a time line to which all parties are committed.

HUBNet staff will follow all FCC requirements for program administration, record keeping, bidding, and filing. If, as the project develops, specific activities are not in accordance with currently used policies and procedures, HUBNet will seek a waiver for the specific activity, policy, or procedure.

To accomplish the project goal, the HUBNet partners have identified three objectives and appropriate activities, as well as a detailed project management plan. The work plan links key sections of the narrative and demonstrates the ability of Avera Health and the HUBNet partners to conduct the project activities within the required time periods.

### ***Work Plan-***

**HUBNET PROJECT GOAL:** To increase utilization of telecommunications and information services among public and non-profit healthcare providers serving rural and frontier communities across South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming.

**Objective 1 – Network Construction:** Construct a robust, secure, sustainable, interconnected broadband network that links health care providers serving frontier, rural and underserved communities throughout South Dakota and portions of North Dakota, Iowa, Minnesota, Nebraska and Wyoming within a twenty-four month period from award notification.

#### Key Activity 1: Network Design

The Network Manager will oversee the network design process. The studies will include specific analysis and recommendations for each partner network within the HUBNet structure. This will be completed in the first project month. The Network Manager will also lead the Technical Committee in establishing standards and protocols for organizations wishing to join HUBNet in Year 2. Along with the Year-2 Partners, the network design for the second year will include links to a national backbone such as Internet2 and links to other regional networks in the surrounding states. In the first month of Year 2, a network design study will be

conducted for the Year-2 Partners, a national backbone connection will be created, and links to other regional networks will be formed.

*Project Milestones:*

- Network design studies complete (Year 1 & Year 2)
- Specific analysis for each Partner complete (Year 1 & Year 2)
- Recommendations for each partner identified (Year 1 & Year 2)
- Network design findings reviewed by project management (Year 1 & Year 2)
- Established set of standards and protocols for Year-2 Partners

**Key Activity 2: Request for Proposals- Form 465 Filing**

The Technical Committee and Project Director will file the appropriate Form 465's for each location and ensure that all FCC and USAC procedures are followed. During the required 28-day posting period, the HUBNet partners will construct a website for the dissemination of all requirements for the hardware, communication lines, and any other services required for the HUBNet. This website will work cohesively with the 465 so that potential bidders will all receive the same information and be able to provide bids that will allow for easy comparison and selection. Avera Health and the HUBNet partners will use a detailed set of requirements and criteria for scoring and ranking vendor proposals. While this scoring matrix has yet to be finalized, scoring criteria will include cost, service capability provided by the vendor, responsiveness and other factors to be determined by the Technical Committee. This will be completed by Month 1 of the project. A similar process will be completed in the second project year for Year-2 Partners' network infrastructure needs, as well as the requirements of the national backbone connection and links to other regional networks.

*Project Milestones:*

- Network design and requirements finalized (Year 1 & Year 2)
- Detailed bidding requirements and scoring criteria developed (Year 1 & Year 2)
- Form 465 filed (Year 1 & Year 2)

**Key Activity 3: Bid Review and Award**

The Project Director and Technical Committee will review, score, rank and award vendor bids. This will be completed in project months 2 and 3 in Year 1. A similar process will be completed in the second project year for Year 2 project needs.

*Project Milestones:*

- Review process and timeline are finalized (Year 1 & Year 2)
- Technical Committee and project staff members conduct initial review; score and rank proposals (Year 1 & Year 2)
- Project Director and Network Manager finalize proposal selection (Year 1 & Year 2)

**Key Activity 4: Implementation Schedule**

The Network Manager and the Technical Committee will develop a staged implementation schedule as well as a staged acquisition and provisioning schedule for network infrastructure. This will be completed in project months 3 and 4 in Year 1. A similar process will be completed in the second project year for the Year 2 project.

*Project Milestones:*

- Priority connections identified (Year 1 & Year 2)
- Acquisition and provisioning schedule finalized (Year 1 & Year 2)
- Implementation schedule finalized (Year 1 & Year 2)

**Key Activity 5: Acquisition and Provisioning**

The Project Administrator will initiate staged acquisition and provisioning of network infrastructure (includes 28-day FCC bid requirement). This will be completed in project

months 4 through 12 in Year 1. A similar process will be completed in the second project year for the Year 2 project.

*Project Milestones:*

- FCC Competitive Bid process complete (Year 1 & Year 2)
- Purchase orders executed (Year 1 & Year 2)

Key Activity 6: Implementation

The Network Manager and the Technical Committee will initiate staged implementation of network infrastructure. This will be completed in project months 4 through 12 in Year 1. A similar process will be completed in the second project year for the Year 2 project.

*Project Milestones:*

- Equipment Installed (Year 1 & Year 2)
- Service lines tested (Year 1 & Year 2)

**Objective 2 – Network Utilization:** Utilize HUBNet to expand telehealth services and enable electronic data exchange capabilities which address specific needs of healthcare providers in the region.

Key Activity 1: Needs Assessment

The Telehealth Manager will oversee a comprehensive needs assessment of all partner healthcare providers to identify specific administrative, clinical, educational, and information system needs of providers serving frontier, rural and underserved communities. Specifically, providers will be asked to determine what needs could be met, or more efficiently met, using the broadband connectivity of HUBNet. Initial efforts will be directed toward initiating telehealth and information services for which the need is most acute and will be tailored to the facility. This will be completed in project months 1 through 3 in Year 1. A similar process will be completed in the second project year for Year-2 Partners.

*Project Milestones:*

- Needs assessment tool identified
- Provider needs assessment completed (Year 1 & Year 2)
- Priority needs identified (Year 1 & Year 2)
- Telehealth options available to meet needs identified (Year 1 & Year 2)

Key Activity 2: Network Expansion

HUBNet will seek additional networks and providers serving rural communities to join the network in Year 2 and future years. Potential partners include independent, non-profit providers, as well as government funded providers, such as Indian Health Service, Veterans Administration, and state hospitals. This activity will continue throughout Year 1 and Year 2.

*Project Milestones:*

- Potential partners for Year 2 and future years have been identified
- Potential partners have an interest in joining HUBNet

Key Activity 3: Utilization Planning

Each partner, working with the Telehealth Manager, will develop a utilization plan, based on the needs assessments and priorities identified for each partner facility, to aggregate HUBNet usage and determine demand on the network infrastructure. Utilization of the HUBNet may require provider facilities to provide additional equipment, staff, or participate in training events and these needs will be taken into account. Utilization plans will include provider objectives for HUBNet, the time frame for implementation of telehealth and information services, a work plan detailing key tasks and responsibilities, as well as a budget. When additional technical assistance is needed, facilities will be referred to the Great Plains Telehealth Resource and

Assistance Center (TRAC). This will be completed in project months 1 through 3 in Year 1. A similar process will be completed in the second project year for Year-2 Partners.

*Project Milestones:*

- Telehealth needs and technical assistance resources identified (Year 1 & Year 2)
- Utilization objectives, time frame and work plan complete (Year 1 & Year 2)
- Training plan finalized (Year 1 & Year 2)

Key Activity 4: Implementation

The Telehealth Manager will work to coordinate implementation of clinical telemedicine and educational services with the planned network infrastructure implementation. Timely address of all administrative and regulatory requirements is necessary to ensure that services are not delayed due to non-compliance with current regulations or facility policies. This will be completed in project months 1 through 4 in Year 1. A similar process will be completed in the second project year for Year-2 Partners.

*Project Milestones:*

- Network infrastructure in place (Year 1 & Year 2)
- Administrative and regulatory requirements addressed (Year 1 & Year 2)

Key Activity 5: Future Utilization

The Telehealth Manager will lead preliminary utilization planning efforts with potential partners. Areas addressed will include needs assessment and prioritization, objectives, staffing demands, equipment and connectivity, time frame for implementation, as well as training, regulatory, administrative and budget requirements. Preliminary utilization plans will be used to aggregate HUBNet usage and will be considered in planning for future growth of the network. This activity will continue throughout Year 1 and into Year 2.

*Project Milestones:*

- Telehealth needs and technical assistance resources of potential partners identified
- Preliminary utilization objectives, time frame and budget identified

Key Activity 6: Service Initiation

The Telehealth Manager will lead the process of initiating new and/or expanded telehealth services. Acquisition of telecommunications services and necessary hardware and software at any given site will be initiated upon approval of the implementation budget once all equipment, regulatory, administrative requirements have been addressed. The Telehealth Manager will coordinate testing of the system and equipment, as well as training related to HUBNet policies and protocols. This will be completed in project months 3 through 12 in Year 1. A similar process will be completed in the second project year for Year-2 Partners.

*Project Milestones:*

- Implementation budget approved (Year 1 & Year 2)
- Training plan initiated (Year 1 & Year 2)
- Services initiated (Year 1 & Year 2)

Key Activity 7: Evaluation

The Telehealth Manager will lead development and implementation of evaluation plans related to clinical telemedicine and educational telehealth services delivered over the HUBNet. Standardized evaluation questions and data collection protocols will be developed for each clinical service and educational use of the HUBNet. These standardized components will then be assembled “a la carte” into evaluation plans for individual provider sites based on services utilized. Evaluation reports will be disseminated among project partners, as well as regionally and nationally. This activity will continue throughout Year 1 and into Year 2.

*Project Milestones:*

- Evaluation question(s) finalized and data collection protocol identified
- Data collection initiated
- Data reports written and disseminated

**Objective 3 – Network Administration:** Fully implement the HUBNet administrative infrastructure and sustainability plans within a twenty-four month period after award notification.

#### Key Activity 1: Administrative Structure

Upon receiving notice of award, the Project Director will implement the administrative and management structure. Qualified individuals have already been identified for the key staff. Leadership from the Partners has also been identified. According to their roles, the individuals will be assigned the tasks of administering project funds, coordinating project activities, designing the network, and planning for future activities. The administrative structure will also dictate responsibilities for reporting project progress to the FCC. **See Section 5- Project Management for more information.** The implementation of the administrative structure will occur within one month of award notice.

##### *Project Milestones:*

- Notice of award received
- Staff resources allocated

#### Key Activity 2: Committees

The key Avera Health staff will work with the Partners in the formation of three primary committees. The Project Director will oversee these committees consisting of members representing each Partner. The committees have been defined as Administrative, Technical, and Clinical. The groups will be formed in the first project month, will meet regularly throughout the project period, and will be assigned activities as appropriate.

##### *Project Milestones:*

- Formation of EMR Interoperability Work Group
- Formation of Disaster Preparedness and Response Work Group

#### Key Activity 3: Workgroups

Two work groups will be formed, one to address EMR Interoperability, and the other to address Disaster Preparedness and Response. These workgroups will be made of individuals with technical, clinical, and administrative backgrounds representing each partner. In addition, participants from future partners, local and state governments, and other stake-holder organizations will be invited to participate. Tasks will be delegated to the workgroups as appropriate; however, the primary responsibility of the EMR Interoperability Workgroup will be to work towards the creation of a regional EMR. Steps in this process include: 1) Partner adoption of facility-specific bylaws engaged in appropriate and interoperable sharing of electronic patient information; and 2) Definition of a regional standard for a minimum set of patient information that can be shared via electronic transmission among all project health care providers. The primary responsibility of the Disaster Preparedness and Response Work group will be to coordinate information technology and communications to enable health care providers in the region to launch a rapid, coordinated response in the event of a regional or national crisis. Both workgroups will draft plans towards realization of their goals, coordinate activities, and make recommendations to the HUBNet leadership and committees. The workgroups will be formed within month 2 of the project and will meet regularly throughout the project period.

##### *Project Milestones:*

- Creation of EMR Interoperability plan
- Creation of Disaster Preparedness and Response Plan

#### Key Activity 4: Memorandum of Understanding

The Project Director will lead the development and execution of a Memorandum of Understanding (MOU) with Year 2 partners. The Technical Committee will create a set of standards and protocols that must be met for entry into HUBNet. Once Year-2 partners are identified, this information, along with the unique needs of the prospective partner will be included in a MOU between the Year-2 partners and HUBNet. After agreeing on satisfactory terms, the MOU will be executed. The development of the MOU will be in months 10-12 of Year 1 and execution will occur no later than month 12 of Year 1.

##### *Project Milestones:*

- Executed MOU

#### Key Activity 5: Future Work Plans

All of the Partners will be involved in the creation of Year-2 and future objectives and work plans. The Project Administrator will draft two work plans. The first will deal exclusively with Project Year 2 and the second will project the five-year future of HUBNet. The Year-2 work plan draft will become the basis for reapplication to the Rural Health Care Pilot Project. After the Partners accept the initial draft, a finalized work plan with specific activities, timelines, and responsible individuals will be detailed. The Partners will also create corresponding budgets, network designs, and management structures. At the completion of Project Year 2, they will revisit and solidify the five-year work plan. This work plan will also include timelines, budgets, and management structure, in addition to plans for sustainability. The finalization of the Year 2 work plan will occur in months 11 and 12. The finalization of the five-year work plan will occur in months 11 and 12 of Project Year 2.

##### *Project Milestones:*

- Submission of Year 2 application to FCC
- Partners reach consensus on future HUBNet objectives and work plan

#### Key Activity 6: Evaluation

The Project Administrator will lead the project evaluation. The Administrative Committee will identify the appropriate tools and protocols for measuring outcomes and will develop a plan for carrying out the evaluation process. Once data is collected, the Project Administrator will compile and disseminate reports. The implementation of the evaluation plan will be completed by month 6. Project evaluation will continue throughout the project period.

##### *Project Milestones:*

- Evaluation question(s) finalized data collection protocol identified
- Data collection initiated
- Data reports written and disseminated

#### Key Activity 7: Sustainability

The Project Director and Administrative Committee will develop and carry out a sustainability plan for HUBNet, both for Year 2 and on into the future. The plan will address financial and administrative issues, as well as guidance for carrying out activities towards the five-year goals identified. The sustainability plan will be finalized in month 6 and carried out throughout the remainder of the project period.

##### *Project Milestones:*

- Partners agree on sustainability strategies
- Administrative requirements met





Implementation Schedule	Time-	Responsible Party	Year 1 Time Frame												Year 2 Time Frame											
			M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
<b>Objective 3 - Project Administration:</b>		Fully implement the HUBnet administrative infrastructure and sustainability plans within a 24-month period from award notification.																								
<b>KA1: Administrative Plan</b>																										
	Implement the administrative and management plan.	Project Director																								
<b>KA2: Committees</b>																										
	Form Committees: Administrative; Technical; Clinical and Initiate Activities	Project Director, Administrative Committee																								
<b>KA3: Work Groups</b>																										
	Form Workgroups: EMR Interoperability; Disaster Preparedness and Response and Initiate Activities	Project Director, Administrative Committee																								
<b>KA4: Memorandum of Understanding</b>																										
	Develop and execute Memorandum of Understanding with Year 2 Partners.	Project Director																								
<b>KA5: Future Work Plans</b>																										
	Finalize Year 2 objectives and work plan and identify HUBNet objectives and work plan for next five years.	All Partners																								
<b>KA6: Evaluation</b>																										
	Implement evaluation and reporting plan.	Project Administrator																								
<b>KA7: Sustainability</b>																										
	Finalize and implement HUBNet sustainability plans.	Project Director, Administrative Committee																								
<b>Year 1 Partners Only</b>																										
<b>Year 2 Partners Only</b>																										
<b>All Current Partners</b>																										

## 7. HUBNet Budget

The HUBNet budget is described in the following spreadsheet. An additional spreadsheet lists the equipment to be purchased for each site. Following the spreadsheets is the Budget Narrative. Detailed budget spreadsheets are provided for Year 1.

### Budget Spreadsheet

Site	City	State	Enhancement	Annual line costs	Installation & Services	Equipment	Total Year 1 cost	FCC Share at 85%	HUBNet's share at 15%
<b>Avera Health</b>									
Avera St. Luke's Hospital	Aberdeen	SD	DS-3 redundant	\$ 143,872.08	\$ 1,700.00	\$ 88,000.00	\$ 233,572.08	\$ 198,536.27	\$ 35,035.81
Avera Brookings Medical Clinic	Brookings	SD	2x T-1	\$ 18,378.00	\$ 600.00	\$ -	\$ 18,978.00	\$ 16,131.30	\$ 2,846.70
Brookings Hospital	Brookings	SD	2x T-1	\$ 18,940.56	\$ 600.00	\$ -	\$ 19,540.56	\$ 16,609.48	\$ 2,931.08
Dells Area Health Center/Avera Health	Dell Rapids	SD	2x T-1	\$ 9,586.32	\$ 600.00	\$ 10,095.00	\$ 20,281.32	\$ 17,239.12	\$ 3,042.20
Avera Holy Family Health	Estherville	IA	4x T-1	\$ 52,464.00	\$ 1,200.00	\$ 10,095.00	\$ 63,759.00	\$ 54,195.15	\$ 9,563.85
Eureka Community Health Services/Avera	Eureka	SD	2x T-1	\$ 43,200.00	\$ 600.00	\$ 10,095.00	\$ 53,895.00	\$ 45,810.75	\$ 8,084.25
Avera Flandreau Medical Center	Flandreau	SD	2x T-1	\$ 16,240.32	\$ 600.00	\$ 10,095.00	\$ 26,935.32	\$ 22,895.02	\$ 4,040.30
Avera Gregory Healthcare Center	Gregory	SD	2x T-1	\$ 29,058.24	\$ 600.00	\$ 10,095.00	\$ 39,753.24	\$ 33,790.25	\$ 5,962.99
Floyd Valley Hospital/Avera	LeMars	IA	4x T-1	\$ 44,940.00	\$ 1,200.00	\$ -	\$ 46,140.00	\$ 39,219.00	\$ 6,921.00
Southwestern Mental Health/Avera	Luverne	MN	2x T-1	\$ 35,536.32	\$ 600.00	\$ -	\$ 36,136.32	\$ 30,715.87	\$ 5,420.45
Avera Louis Weiner Memorial Hospital	Marshall	MN	4x T-1	\$ 30,922.56	\$ 1,200.00	\$ 10,095.00	\$ 42,217.56	\$ 35,884.93	\$ 6,332.63
Milbank Area Hosp/Avera Health	Milbank	SD	2x T-1	\$ 27,673.68	\$ 600.00	\$ 10,095.00	\$ 38,368.68	\$ 32,613.38	\$ 5,755.30
Hand County Memorial Hosp/Avera	Miller	SD	2x T-1	\$ 28,320.00	\$ 600.00	\$ 10,095.00	\$ 39,015.00	\$ 33,162.75	\$ 5,852.25
Avera Queen of Peace Hospital	Mitchell	SD	DS-3 Redundant	\$ 107,820.00	\$ 1,805.00	\$ 88,000.00	\$ 197,625.00	\$ 167,981.25	\$ 29,643.75
Avera St. Anthony's Hospital	O'Neill	NE	4x T-1	\$ 54,000.00	\$ 1,200.00	\$ -	\$ 55,200.00	\$ 46,920.00	\$ 8,280.00
Avera St. Benedict's Health Center	Parkston	SD	2x T-1	\$ 28,320.00	\$ 600.00	\$ 10,095.00	\$ 39,015.00	\$ 33,162.75	\$ 5,852.25
Pipestone County Med Center/Avera	Pipestone	MN	4x T-1	\$ 47,104.32	\$ 1,200.00	\$ 10,095.00	\$ 58,399.32	\$ 49,639.42	\$ 8,759.90
Platte Health Center/Avera	Platte	SD	2x T-1	\$ 28,320.00	\$ 600.00	\$ 10,095.00	\$ 39,015.00	\$ 33,162.75	\$ 5,852.25
Community Memorial Hospital	Redfield	SD	2x T-1	\$ 28,320.00	\$ 600.00	\$ 10,095.00	\$ 39,015.00	\$ 33,162.75	\$ 5,852.25
Hegg Memorial Health Center/Avera	Rock Valley	IA	2x T-1	\$ 23,268.48	\$ 600.00	\$ 10,095.00	\$ 33,963.48	\$ 28,868.96	\$ 5,094.52
Landmann-Jungman Memorial. Hosp/Avera	Scotland	SD	2x T-1	\$ 19,214.40	\$ 600.00	\$ 10,095.00	\$ 29,909.40	\$ 25,422.99	\$ 4,486.41
Avera Selby Clinic	Selby	SD	1x T-1	\$ 21,600.00	\$ 300.00	\$ 10,095.00	\$ 31,995.00	\$ 27,195.75	\$ 4,799.25
Osceola Comm Hospital	Sibley	IA	2x T-1	\$ 28,344.00	\$ 600.00	\$ 10,095.00	\$ 39,039.00	\$ 33,183.15	\$ 5,855.85
Sioux Center Hosp-Health/Avera Health	Sioux Center	IA	4x T-1	\$ 54,720.00	\$ 1,200.00	\$ -	\$ 55,920.00	\$ 47,532.00	\$ 8,388.00
Avera Health Data Center	Sioux Falls	SD	2x Gig-E	\$ 34,800.00	\$ 1,400.00	\$ 180,570.00	\$ 216,770.00	\$ 184,254.50	\$ 32,515.50
Avera McKennan Behavioral Health	Sioux Falls	SD	Gig-E Wireless	\$ -	\$ -	\$ 90,000.00	\$ 90,000.00	\$ 76,500.00	\$ 13,500.00
Avera McKennan Hosp/University Health	Sioux Falls	SD	2x Gig-E	\$ 108,000.00	\$ 750.00	\$ 222,360.00	\$ 331,110.00	\$ 281,443.50	\$ 49,666.50
Coteau Des Prairies Hospital and	Sisseton	SD	2x T-1	\$ 30,000.00	\$ 600.00	\$ 10,095.00	\$ 40,695.00	\$ 34,590.75	\$ 6,104.25
Avera Spencer Family Care	Spencer	IA	2x T-1	\$ 18,720.00	\$ 600.00	\$ -	\$ 19,320.00	\$ 16,422.00	\$ 2,898.00

**Budget Spreadsheet, 2.**

Site	City	State	Enhancement	Annual line costs	Installation & Services	Equipment	Total Year 1 cost	FCC Share at 85%	HUBNet's share at 15%
<b>Avera Health</b>									
Avera Spirit Lake Medical Center	Spirit Lake	IA	2x T-1	\$ 26,376.00	\$ 10,095.00	\$ -	\$ 36,471.00	\$ 31,000.35	\$ 5,470.65
Avera Wesskota Memorial Med Center	Wessington Springs	SD	2x T-1	\$ 30,000.00	\$ 600.00	\$ 10,095.00	\$ 40,695.00	\$ 34,590.75	\$ 6,104.25
Avera Worthington Specialty Clinics	Worthington	MN	2x T-1	\$ 28,344.00	\$ 600.00	\$ 10,095.00	\$ 39,039.00	\$ 33,183.15	\$ 5,855.85
Avera Sacred Heart Hospital	Yankton	SD	DS-3 Redundant	\$ 132,000.00	\$ 1,455.00	\$ 88,000.00	\$ 221,455.00	\$ 188,236.75	\$ 33,218.25
<b>Regional Health</b>									
Belle Fourche Regional Medical Clinic	Belle Fourche	SD	10 MB Ethernet	\$ 13,284.00	\$ -	\$ 31,636.00	\$ 44,920.00	\$ 38,182.00	\$ 6,738.00
Lead-Deadwood Regional Hospital	Deadwood	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Fall River Health	Hot Springs	SD		\$ -	\$ -	\$ 16,686.00	\$ 16,686.00	\$ 14,183.10	\$ 2,502.90
Bennett County Healthcare Center	Martin	SD		\$ -	\$ -	\$ 16,686.00	\$ 16,686.00	\$ 14,183.10	\$ 2,502.90
Philip Clinic	Philip	SD		\$ -	\$ -	\$ 31,636.00	\$ 31,636.00	\$ 26,890.60	\$ 4,745.40
Family Practice Residency Clinic	Rapid City	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Rapid City Regional Hospital	Rapid City	SD	DS-3	\$ 195,446.40	\$ 40,705.00	\$ 103,526.00	\$ 339,677.40	\$ 288,725.79	\$ 50,951.61
Regional Behavioral Health Center	Rapid City	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Regional Dialysis Center	Spearfish	SD		\$ -	\$ -	\$ 20,708.00	\$ 20,708.00	\$ 17,601.80	\$ 3,106.20
Regional Medical Clinic - Aspen	Rapid City	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Regional Medical Clinic-Endocrinology	Rapid City	SD	5 MB Ethernet	\$ 4,200.00	\$ -	\$ 16,686.00	\$ 20,886.00	\$ 17,753.10	\$ 3,132.90
Spearfish Regional Hospital	Spearfish	SD	20 MB Ethernet	\$ 32,124.00	\$ -	\$ 38,426.00	\$ 70,550.00	\$ 59,967.50	\$ 10,582.50
Massa Berry Regional Medical Clinic	Sturgis	SD		\$ -	\$ -	\$ 31,636.00	\$ 31,636.00	\$ 26,890.60	\$ 4,745.40
<b>Dakota Network of Community Health Centers</b>									
Bryant Community Health Center	Bryant	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Bell Medical Service	DeSmet	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Howard Community Health Center	Howard	SD	DS-3	\$ 63,540.00	\$ 705.00	\$ 9,211.00	\$ 73,456.00	\$ 62,437.60	\$ 11,018.40
Rural Learning Center	Howard	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Lake Preston Community Health Center	Lake Preston	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Aurora County Clinic	Plankinton	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Presho Clinic	Presho	SD	T-1	\$ 16,200.00	\$ -	\$ 9,211.00	\$ 25,411.00	\$ 21,599.35	\$ 3,811.65
Rapid City Community Center	Rapid City	SD	T-1	\$ 12,000.00	\$ -	\$ 9,211.00	\$ 21,211.00	\$ 18,029.35	\$ 3,181.65
Jerauld County Clinic	Wessington Springs	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
Whiting Memorial Clinic	Woonsocket	SD		\$ -	\$ -	\$ 9,211.00	\$ 9,211.00	\$ 7,829.35	\$ 1,381.65
<b>Subtotal</b>				\$ 1,685,197.68	\$ 77,515.00	\$ 1,385,315.00	\$ 3,148,027.68	\$ 2,675,823.53	\$ 472,204.15
<b>Additional Budget Items</b>									
Design Studies, Committees, Implementation				\$ -	\$ 180,000.00	\$ -	\$ 180,000.00	\$ 153,000.00	\$ 27,000.00
<b>TOTAL</b>				\$ 1,685,197.68	\$ 257,515.00	\$ 1,385,315.00	\$ 3,328,027.68	\$ 2,828,823.53	\$ 499,204.15

# Equipment

Location	City		Description	Unit Cost	Qty	Extended Cost
<b>Avera Health</b>						
Avera St. Luke's Hospital	Aberdeen	SD	Cisco 7206 Router Configuration	\$88,000.00	1	\$88,000.00
Dells Area Health Ctr/Avera Health	Dell Rapids	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Holy Family Health	Estherville	IA	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Eureka Community Health Serv/Avera	Eureka	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Flandreau Medical Center	Flandreau	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Gregory Healthcare Center	Gregory	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Louis Weiner Memorial Hospital	Marshall	MN	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Milbank Area Hosp/Avera Health	Milbank	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Hand County Meml Hosp/Avera	Miller	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Queen of Peace	Mitchell	SD	Cisco 7206 Router Configuration	\$88,000.00	1	\$88,000.00
Avera St. Benedict's Health Ctr	Parkston	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Pipestone County Med Ctr/Avera	Pipestone	MN	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Platte Health Center/Avera	Platte	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Community Memorial Hospital	Redfield	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Hegg Memorial Health Ctr/Avera	Rock Valley	IA	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Landmann-Jungman Mem. Hosp/Avera	Scotland	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Selby Clinic	Selby	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Osceola Comm Hospital	Sibley	IA	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Health Data Center	Sioux Falls	SD	Cisco 7606 Router Configuration	\$90,285.00	2	\$180,570.00
Avera McKenna Behavioral Health	Sioux Falls	SD	Cisco 7206 Router Configuration	\$88,000.00	1	\$90,000.00
Avera McKennan Hosp/Univ Hlth	Sioux Falls	SD	Cisco LS-1010 ATM Switch Upgrdaes	\$12,590.00	1	\$12,590.00
Avera McKennan Hosp/Univ Hlth	Sioux Falls	SD	Cisco 7513 Router Upgrades	\$29,200.00	1	\$29,200.00
Avera McKennan Hosp/Univ Hlth	Sioux Falls	SD	Cisco 7606 Configuration	\$90,285.00	2	\$180,570.00
Coteau Des Prairies Hospital and Clinic	Sisseton	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Weskota Meml Med Ctr	Wessington Spg	SD	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
Avera Sacred Heart Hospital	Yankton	SD	Cisco 7206 Router Configuration	\$88,000.00	1	\$88,000.00
Avera Worthington Specialty Clinics	Worthington	MN	Cisco 2811 / 4-port IMA	\$10,095.00	1	\$10,095.00
<b>Rapid City Regional</b>						
Belle Fourche Regional Clinic	Belle Fourche	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Belle Fourche Regional Clinic	Belle Fourche	SD	Network Switching Cisco 3750	\$7,475.00	3	\$22,425.00
Lead Deadwood Regional Hospital	Deadwood	SD	Network Router - standard Cisco 2830	\$9,211.00	1	\$9,211.00
Fall River Health Services	Hot Springs	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Fall River Health Services	Hot Springs	SD	Network Switching Cisco 3750	\$7,475.00	1	\$7,475.00
Bennett County Community Hospital	Martin	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Bennett County Community Hospital	Martin	SD	Network Switching Cisco 3750	\$7,475.00	1	\$7,475.00
Philip Health Services	Philip	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Philip Health Services	Philip	SD	Network Switching Cisco 3750	\$7,475.00	3	\$22,425.00
Family Practice Residency	Rapid City	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Regional Behavioral Health Center	Rapid City	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Regional Health	Rapid City	SD	Core Internet upgrade Router - 3845	\$31,763.00	1	\$31,763.00
Regional Health	Rapid City	SD	Core WAN Router upgrade - 7206	\$40,000.00	1	\$40,000.00
Regional Health	Rapid City	SD	Core Router - 3845	\$31,763.00	1	\$31,763.00
Regional Medical Clinic - Aspen	Rapid City	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Regional Medical Clinic - Endo	Rapid City	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Regional Medical Clinic - Endo	Rapid City	SD	Network Switching Cisco 3750	\$7,475.00	1	\$7,475.00
Regional Dialysis	Spearfish	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Regional Dialysis	Spearfish	SD	Network Switching Cisco 3750	\$7,475.00	1	\$7,475.00
Regional Dialysis	Spearfish	SD	Wireless Bridge	\$4,022.00	1	\$4,022.00
Spearfish Regional Hospital	Spearfish	SD	Network Router - expanded Cisco 3845	\$38,426.00	1	\$38,426.00

**Equipment, 2.**

Location	City		Description	Unit Cost	Qty	Extended Cost
<b>Rapid City Regional</b>						
Massa Berry Regional Medical Clinic	Sturgis	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Massa Berry Regional Medical Clinic	Sturgis	SD	Network Switching Cisco 3750	\$7,475.00	3	\$22,425.00
<b>Dakota Network of Community Health Centers</b>						
Bell Medical Clinic	DeSmet	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Bryant Clinic	Bryant	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Lake Preston Clinic	Lake Preston	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Howard Clinic	Howard	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Whiting Memorial Clinic	Woonsocket	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Jerauld County Clinic	Wessington Springs	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Aurora County Clinic	Plankinton	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Presho Clinic	Presho	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Rapid City Community Health Center	Rapid City	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
Rural Learning Center	Howard	SD	Network Router - standard Cisco 2821	\$9,211.00	1	\$9,211.00
<b>TOTAL</b>						<b>\$1,385,315.00</b>

**Projected Year 2 Costs**

Site	Annual line costs	Membership	Equipment	Total Year 2 cost	FCC Share at 85%	HUBNet's share at 15%
<b>New Sites</b>						
New Site 1	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 2	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 3	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 4	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 5	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 6	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 7	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 8	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 9	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 10	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 11	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 12	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 13	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 14	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
New Site 15	\$ 15,000.00		\$ 10,905.00	\$ 25,905.00	\$ 22,019.25	\$ 3,885.75
<b>Subtotal</b>	\$ 225,000.00	\$ -	\$ 163,575.00	\$ 388,575.00	\$ 330,288.75	\$ 58,286.25
<b>Additional Budget Items</b>						
National Backbone (Internet2)	\$ 192,000.00	\$ 32,000.00		\$ 224,000.00	\$ 190,400.00	\$ 33,600.00
Connection to Minnesota Network	TBA		TBA			
Connection to Iowa Network	TBA		TBA			
Connection to Additional Networks	TBA		TBA			
<b>TOTAL</b>						
	<b>\$ 417,000.00</b>	<b>\$ 32,000.00</b>	<b>\$ 163,575.00</b>	<b>\$ 612,575.00</b>	<b>\$ 520,688.75</b>	<b>\$ 91,886.25</b>

## **Budget Narrative Year 1:**

The budget reflects only network infrastructure, line costs and installation, and hardware such as routers and switches. The budget does not include personnel costs or telemedicine equipment. The total estimated cost of the HUBNet is \$3,328,028. There are three major components included in these costs including \$1,685,198 for monthly recurring line charges covering a 12-month period, \$257,515 for installation and related services, and \$1,385,315 for hardware such as routers and related equipment. HUBNet anticipates that the FCC contribution of 85% will be \$2,828,824 and the HUBNet partners' responsibility is the remaining \$499,204. Detail is provided in the budget worksheets above.

The monthly line charges include costs for 2 Gig-e links, 5 DS3 lines, and 69 T1's. These costs are based on the current going rate from the dominant carrier in the state. The estimates are conservative, as the bidding process should help drive these costs down.

The equipment costs include various Cisco pieces ranging from the 2821 router to the 7206 CORE WAN router. The devices specified for installation at 'edge' sites replace existing equipment that is, in some cases, over eight years old. The new equipment – Cisco 2800-series routers – provides a significant enhancement in service capability. The estimated costs provided are all at list price. The HUBNet partners expect to receive significant price breaks through the bidding process so the actual costs should be lower than projected. The Partners also anticipate purchasing standard service contracts for the hardware, and the network managers feel that the combination of hardware and service contracts should fall within the estimated costs. It is unclear whether the FCC will fund service/maintenance contracts or not; however, they are a necessary part of maintaining the network and thus, HUBNet asks that they be allowed.

The installation and related services will be required for some sites within the HUBNet. Avera Health and Regional Health have extensive engineering and information technology staffs that will design the network and install and configure the necessary hardware. As Avera and Regional will leverage the existing staff for design services, no dollars are required for design services. Should it be determined that outside engineering services are needed or required by vendors, budget amendments will be requested. The Dakota Network of Community Health Centers does not have existing engineering staff and will need outside assistance and funding to implement the network. \$180,000 is budgeted for design studies and implementation.

## **Budget Narrative Year 2:**

The HUBNet partners will continue internal design studies to solidify a plan for Year 2. Initial planning indicates a potential 15 new or upgraded sites at a cost of \$10,905 in hardware and an average of \$15,000 in annual line charges each. This equates to roughly \$163,575 in hardware charges for Year 2, and \$225,000 in recurring charges for a total of \$388,575. Additionally, the MPLS network will be carrier based so as the carriers are ready to provide MPLS in the Partners service area, MPLS will be added to the network structure. This will allow for some reduction in mileage costs as the lines are moved to the nearest MPLS point of presence, but will increase some costs for the addition of the MPLS service.

Additional costs for Year 2 will include Internet 2 at an estimated \$32,000 in membership dues and \$192,000 in projected connection costs. Internet 2 is not readily available in South Dakota and it is anticipated that a long back-haul is required. It is also anticipated that a connection directly to other regional networks in the boarder states of Minnesota, Iowa and potentially

Nebraska will be constructed. The costs associated with the connections will need to be determined through the design process. Organizations from Iowa and Minnesota are also submitting applications to the FCC Rural Health Care Pilot Program. HUBNet plans to connect to these networks via broadband lines.

The rough projected costs of \$612,575 for Year 2 will be dependent upon the final network design, the final number of new sites that choose to join the network, and the number of sites that are identified for upgrades. We anticipate that the actual request will be somewhat higher, but will likely remain under \$2,000,000. The HUBNet partners are committed to the implementation, enhancement, and expansion of the network with the FCC assistance.

### **Description of How For Profit Participants Will Pay Their Share of Costs**

Any for-profit or non-qualifying entity will pay their fair share of costs. Any equipment costs will be borne completely by these entities. Additionally, any monthly costs, such as line costs, will be paid for directly by those participants. In the event that there are shared services that are paid for by the FCC, those services will be blocked for non-qualifying sites. If services are not able to be blocked, the HUBNet partners will maintain a list of sites that are able to access the service and assign a percentage of allowed and non-allowed costs and request a reduction in funding. This process of assigning cost apportionment is similar to the current USAC program.

### **Source of Financial Support That Will Pay For Costs Not Covered By the Fund**

The HUBNet partners are committed to the proposed project, as well as the construction and enhancement of the wide area network throughout the region, with access to a national backbone. Within each partner network, the telehealth, telemedicine, and data exchange services discussed previously are all necessary services to the health systems. The HUBNet partners will pay for the 15% costs of the network not supported by the FCC Pilot Project out of their respective operating budgets. Additionally, the three network partners will pay for staffing and other resources necessary for the project. As the applicant, Avera Health has committed to providing all necessary resources for overall program administration. Attached letters of commitment express a financial commitment to the project and work toward full sustainability.

Each organization has the necessary financial ability and commitment to ensure that the needed bandwidth is in place to continue to provide all current and planned telehealth services. Since each organization is non-profit, any net income from overall operations is reinvested into the organization. Part of that reinvestment is in services such as remote intensive care, telemedicine and teleradiology, all of which require significant bandwidth in order to operate.

It is anticipated that additional partners will be brought into the HUBNet project in Year 2 and beyond. Avera Health, Regional Health, and the Dakota Network assist these members in addressing financial barriers they may have to participation.

## **8. Sustainability Plan**

In year 3 and beyond, the HUBNet partners anticipate three possible scenarios related to sustainability. In the first scenario, the Pilot Project replaces the current Universal Service, Rural Health Care (RHC) program and funding continues at up to 85%. In the second scenario, the FCC reverts to the current RHC program with little to no change. In the third scenario, the FCC phases out and eventually eliminates all funding. The HUBNet partner's strategy will depend on which scenario arises. Through its Great Plains Telehealth Resource and Assistance Center (TRAC), Avera Health is working with the Federal Office for the

Advancement of Telehealth (OAT) to demonstrate the value of telehealth applications and describe how this value relates to overall business plans.

All services that the HUBNet partners provide over the network are necessary for the survival of the health systems. Therefore, the required bandwidth and connectivity for each of these services is necessary and thus, each of the partners will ensure that the bandwidth is available. In general, the partners will fund the costs of the wide area network from operating budgets.

FCC Pilot Project support will provide the necessary “kick start” needed to make network infrastructure improvements necessary to greatly expand telehealth services across the region. The current need for infrastructure improvements has arrived more rapidly than anticipated, partly because of the rapid demand and need for telehealth services. Cost savings resulting from the telehealth network will also foster sustainability. Cost savings from reduced travel is one element that the health systems use to justify the costs of the network. For example, at the current rate of \$0.48 per mile, if staff from the hospital in Aberdeen, SD attend a meeting held in Sioux Falls, SD by video, they avoid an all day excursion and a 400 mile round trip, or roughly \$196 in expenditures for 1 vehicle for the day. If 10 meetings are held during a month, \$1,920 in costs per month are avoided. In addition to the hard savings, the staff is able to avoid several hours of unproductive windshield time and available to tend to matters locally.

Physician time is also saved through the implementation of telemedicine. This not only saves costs for travel, but allows the physicians to generate more revenue by seeing more patients with the freed time. A year long study at Avera Milbank Area Hospital, a CAH, concluded that \$24,456 in services was provided locally as a result of telemedicine and included specialist ordered services such as bone scans, ultrasounds, x-rays, and CT studies, as well as various lab tests. These services allowed 67 patients to remain in their home community near family and friends (which facilitates faster healing) instead of having to be transferred to Sioux Falls, 152 miles away. The provision of these services in the rural community helps maintain the economy of that local community.

There are other reasons beyond cost savings that ensure the network will be maintained. Avera eICU care is one very important service that is provided for which the health system cannot charge. Patient care significantly improved with decreased morbidity and mortality in the intensive care unit. **Centers for Medicare and Medicaid Services (CMS) regulations prohibit adding a specific telecommunications related fee to patient bills. Additionally, most private insurance plans follow CMS regulations.**

The following are the sustainability plans for each proposed scenario:

*First Scenario:*

In the event that the FCC replaces the current RHC program with a program that mirrors the Pilot Project, the HUBNet partners will be able to maintain the network as designed and potentially accelerate further network development. The 15% cost match will be borne by the partners and easily justified via the value generated by the network. The network partners would continue to fund their portions of the costs out of operations.

*Second Scenario:*

The current RHC program has been beneficial thus far to the HUBNet partners and they will have no trouble sustaining the current level of costs with the RHC subsidies. These costs have been manageable and are funded out of operating budgets. Since the current RHC program

does not fund equipment, the partner organizations will continue to fund the capital costs involved through their respective capital plans. This will mean that certain expansions or additions to the network (in Year 3 and beyond) will happen at a slower pace than the Pilot Project will allow.

*Third Scenario:*

The scenario in which all Universal Service funding for rural health care organizations is phased out and ceased completely is the most challenging for the HUBNet partners. The current program subsidizes a significant portion of the networks and if the hospitals and clinics involved are forced to shoulder the entire burden, some setbacks would be incurred. It is anticipated that the level of bandwidth would have to be reduced, not eliminated, such that video-based telehealth services would need to be scaled back. Impacts of bandwidth reduction would include increased transmission times for teleradiology. Network endpoints would also see increased response times for clinical and financial information, as well as internet access. To the extent that FCC support after Year 3 could be gradually reduced, the organizations involved would be better able to absorb the costs, as opposed to a quick reduction in funding. As the FCC's goal has been to increase the use of the fund, this is not a likely scenario.

*Summary:*

To summarize, because of current regulations, sustainability cannot be achieved through some form of revenue generation through the network. Instead, sustainability is justified by comparing the costs to the benefits. The costs are the on-going monthly line and service charges while the benefits include cost savings and cost avoidance, increased quality of care for patients, better utilization of scarce physician resources, and ensuring that electronic patient information is available wherever the patient is being treated.

A basic level of bandwidth can be maintained without Universal Service funds. However, the funds do allow the partners to increase network capacity much faster than without any subsidies. Additionally, the amount of services that can be provided simultaneously over the network is enhanced by the subsidies as they allow the expansion of bandwidth beyond what the organization is financially able to finance.

## **9. Coordination with Other Regional Networks**

### **HUBNet – Iowa and Minnesota Collaboration**

The HUBNet partnership has been working collaboratively with the Minnesota and Iowa organizations that will be submitting applications to the FCC. While each will submit separate applications, the intent is that the HUBNet partnership from South Dakota and surrounding states will connect via broadband lines to the networks in both Minnesota and Iowa.

The Iowa application is of particular interest to Avera as five hospitals that are part of Avera can utilize the fiber-based network that is being constructed there. Iowa has shared their network design and because there will be a fair amount of significant installation costs, the dollars for the five Avera hospitals will be requested in the Iowa application. However, the monthly bandwidth costs will be applied for in the HUBNet application. ICN is the underlying provider of the network and will bid for the service to be provided to Avera's organizations. Avera will specify during the bidding process the level of bandwidth required and service levels required, and ICN

will have the opportunity to bid to provide that service. ICN will incur any startup costs and will ask for those startup costs in the Iowa FCC application. If the Iowa network is not funded, HUBNet will still be free to accept bids for the service from other carriers, as ICN will be just another carrier that will have to bid for the service.

The Minnesota application (Greater Minnesota Telehealth Broadband Initiative) is another example of a collaborative effort to increase the bandwidth available to rural health care facilities for the purposes of improving the telehealth services provided. This effort blends very well with the HUBNet project. Avera was part of the Minnesota project's original planning and has supported its efforts to develop its project. Both parties have ascertained that the individual project budgets are separate and that no duplication has occurred. HUBNet has budgeted for an increase in the available bandwidth between the Avera network and the main connection point of the Minnesota project. This provides for the increased opportunity for quality telehealth connections across the border and establishes a foundation for a larger regional reach as the need for greater information connectivity continues to increase.

Letters of support from the Iowa Hospital Association and the Minnesota Department of Health are attached in **Appendix G**, Letters of Support. These organizations are coordinating the applications for groups of Iowa and Minnesota healthcare facilities, respectively.

## 10. Summary Of Waiver Requests:

Avera Health requests the following waivers for the HUBNet project.

### **Rural eligibility criteria:**

Under 47 C.F.R. Section 54.603(b)(1)(ii),

[A]n eligible health care provider seeking to receive telecommunications services eligible for universal service support under this subpart shall submit a completed FCC Form 465 to the Rural Health Care Division. FCC Form 465 shall be signed by the person authorized to order telecommunications services for the health care provider and shall include, at a minimum, that person's certification under oath that...[t]he requester is physically located in a rural area, unless the health care provider is requesting services provided under Sec. 54.621;

This section prohibits HUBNet's urban facilities from participating in the current Rural Health Care Program. Additionally, the two urban sites will be linked together by a high capacity line and no rural site will be involved directly in that connection. Thus, the rule that the requester of funding be physically located in a rural area prevents the funding of the line connecting the urban centers. Under the Pilot Project Order, urban areas are allowed to participate; however, the Universal Service Administrative Company will handle all of the processing and will generally follow the same rules and processes in place today. For this reason, the HUBNet Partners formally request that the FCC grant a waiver to allow urban hospitals and clinics located in Sioux Falls, SD and Rapid City, SD to file directly.

### **Modification of the funding year:**

Under 47 C.F.R. Section 54.623(b), "[A] funding year for purposes of the health care providers cap shall be the period July 1 through June 30..."

Since it is unclear when Year 1 begins and when the FCC will award funds, the Partners are constructing a twelve-month budget that will commence upon final approval. As final approval may fall somewhere between June and August of 2007, the actual funding year deadline would compress the time needed to implement the network. Due to the level of manpower and expertise required to implement the network, anything shorter than a twelve month project timeline is unrealistic. Therefore, the HUBNet Partners request a waiver to allow the expenditures for Year 1 to extend past the June 30 rule.

**Modification of the reimbursement process:**

Under 47 C.F.R. Section 54.611(a)-(d),

[A] telecommunications carrier providing services eligible for support under this subpart to eligible health care providers shall treat the amount eligible for support under this subpart as an offset against the carrier's universal service support obligation for the year in which the costs for providing eligible services were incurred...If the total amount of support owed to a carrier, as set forth in paragraph (a) of this section, exceeds its universal service obligation, calculated on an annual basis, the carrier may receive a direct reimbursement in the amount of the difference...Any reimbursement due a carrier shall be made after the offset is credited against that carrier's universal service obligation...Any reimbursement due a carrier shall be submitted to that carrier no later than the end of the first quarter of the calendar year following the year in which the costs were incurred and the offset against the carrier's universal service obligation was applied.

Due to the implementation of the system-wide EMR project, one HUBNet Partner must have certain equipment installed immediately. Since the anticipated award date will not occur before July of 2007, Avera would like to request a waiver only for those items that require immediate attention. The budget items include:

- Avera Health Data Center - \$184,654.00 – Cisco 7606
- Avera McKennan - \$227,044 – Enhancements to Cisco 1010, Enhancements to Cisco 7513, and 2 Cisco 7606's
- Avera Sacred Heart – \$88,000 – Cisco 7206
- Avera St. Luke's - \$88,000 – Cisco 7206
- Avera Queen of Peace - \$88,000 – Cisco 7206
- Avera McKennan Behavioral Health - \$90,000 – Gig-e Wireless equipment

Because the EMR project is on-going, some of the equipment was previously ordered, with anticipated installation dates somewhere between June and early August of 2007. This equipment comprises the core network upon which the EMR and many other telehealth applications will be founded. Though the 465 day process period and 28 day posting period must be followed, the anticipated funding schedule does not fit the time line required to bring the EMR and data center online. Therefore, the HUBNet partners request that a waiver be granted only for those items listed above. Should the waiver be granted, Avera will utilize an internal cost evaluation process developed using FCC rules.

**Removal of distance limitations:**

Under 47 C.F.R. Section 54.601(c)(1) and 54.613(a),

[A]ny telecommunications service that is the subject of a properly completed bona fide request by a rural health care provider shall be eligible for universal service support, subject to the limitations described in this paragraph. The length of a supported telecommunications service may not exceed the distance between the health care provider and the point farthest from that provider on the jurisdictional boundary of the largest city in a state as defined in Sec. 54.625(a)...[u]pon submitting a bona fide request to a telecommunications carrier, each eligible rural health care provider is entitled to receive the most cost-effective, commercially-available telecommunications service at a rate no higher than the highest urban rate, as defined in Sec. 54.605, at a distance not to exceed the distance between the eligible health care provider's site and the farthest point on the jurisdictional boundary of the city in that state with the largest population.

Since two of the major hubs within HUBNet are urban, by definition, the distance limitation would prevent them from receiving funding. The rule requires the distance be calculated from a rural site, and in this scenario, there are no rural sites. Additionally, the distance between the two urban centers of Sioux Falls, SD and Rapid City, SD of 348 miles is well above the Maximum Allowable Distance within South Dakota. Therefore, the HUBNet Partners request a waiver to remove the distance limitations of funded circuits imposed by Section 54.601(c) and 54.613(a) and any other applicable sections.

## 11. Attachments

### Appendix A- Network Diagrams

- #1 Map Representing Key Community Connections
- #2 Diagram of New HUBNet Infrastructure
- #3 Diagram of Planned Interconnections Between Partners
- #4 Diagram of Existing Avera Health Network
- #5 Diagram of Avera Network Enhancements
- #6 Diagram of Existing Dakota Network Infrastructure
- #7 Diagram of Enhancements to Dakota Network
- #8 Diagram of Existing Regional Health Network
- #9 Diagram of Enhancements to Regional Health Network

### Appendix B- List of HUBNet Facilities including RUCA Codes

### Appendix C- Biographical Sketches of Key Personnel

### Appendix D- Letters of Commitment from Avera Health, Dakota Network of Community Health Centers, Regional Health

### Appendix E- List of eICU<sup>®</sup> Care and Teleradiology Sites

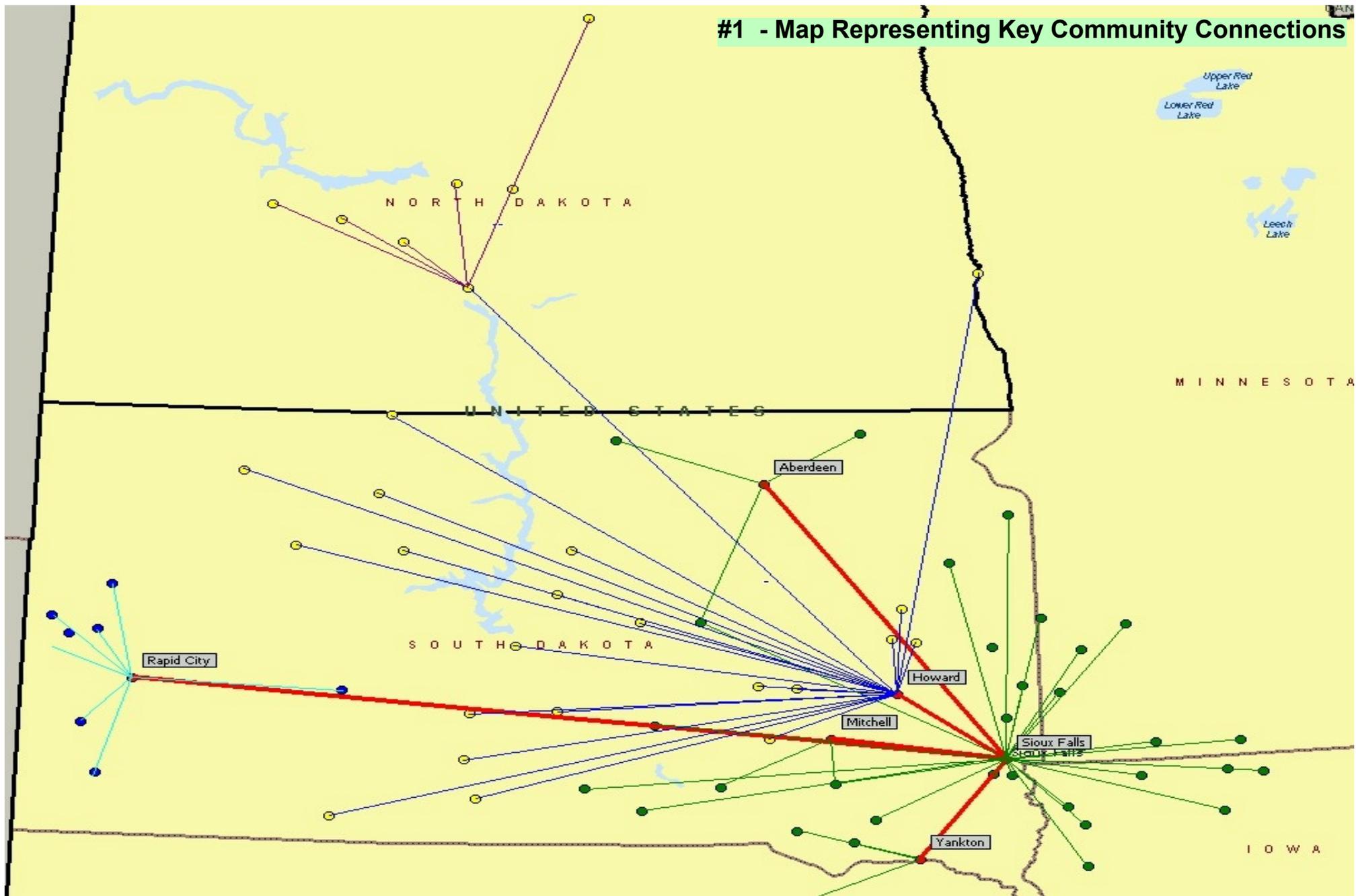
### Appendix F- List of facilities serving Native Americans

### Appendix G- Letters of Support

## **Appendix A - Network Diagrams**

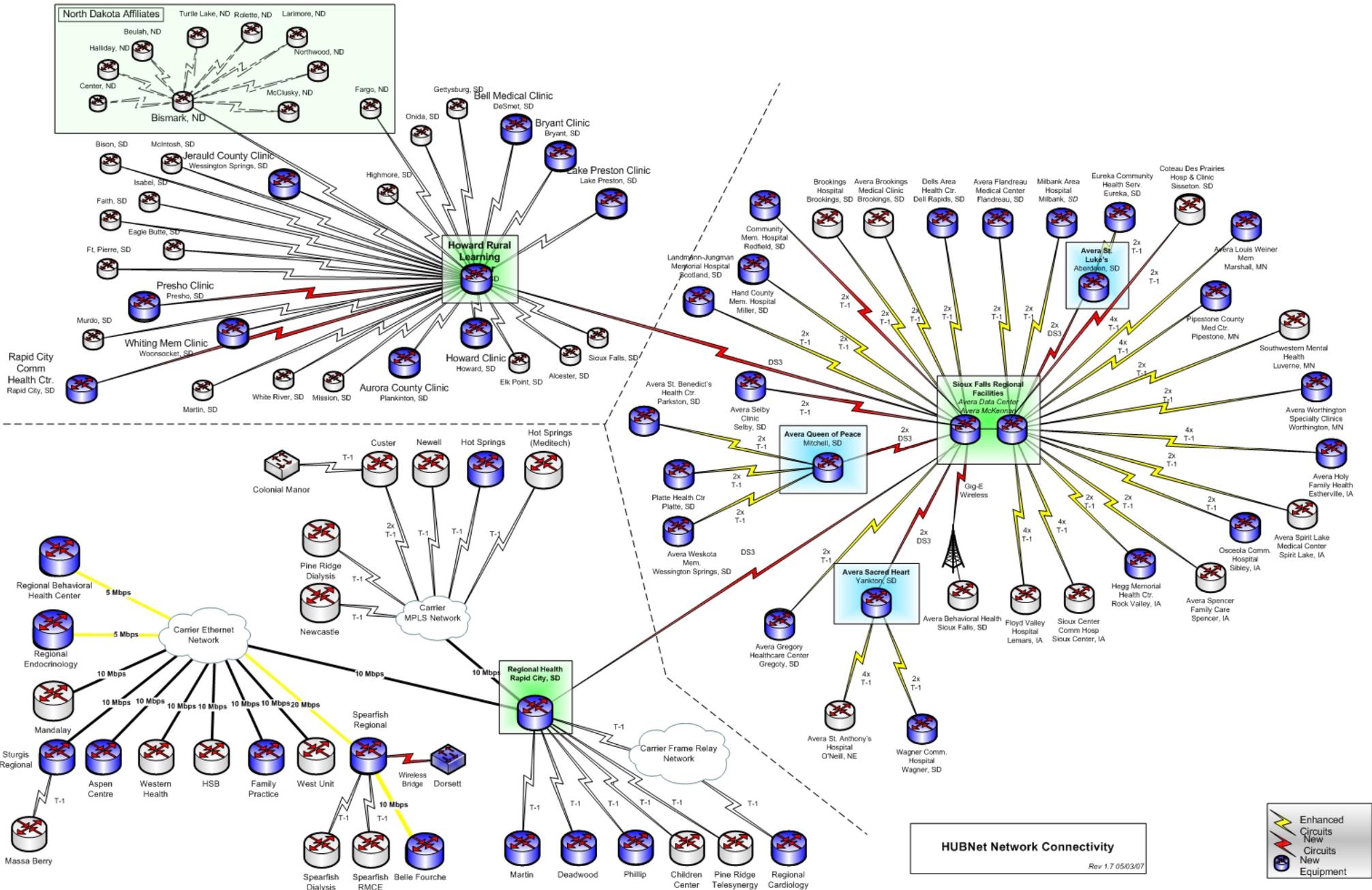
- #1. Map Representing Key Community Connections**
- #2. Diagram of New HUBNet Infrastructure**
- #3. Diagram of Planned Interconnections Between Partners**
- #4. Diagram of Existing Avera Health Network**
- #5. Diagram of Enhancements to Avera Health Network**
- #6. Diagram of Existing Dakota Network Infrastructure**
- #7. Diagram of Enhancements to Dakota Network**
- #8. Diagram of Existing Regional Health Network**
- #9. Diagram of Enhancements to Regional Health Network**

# #1 - Map Representing Key Community Connections

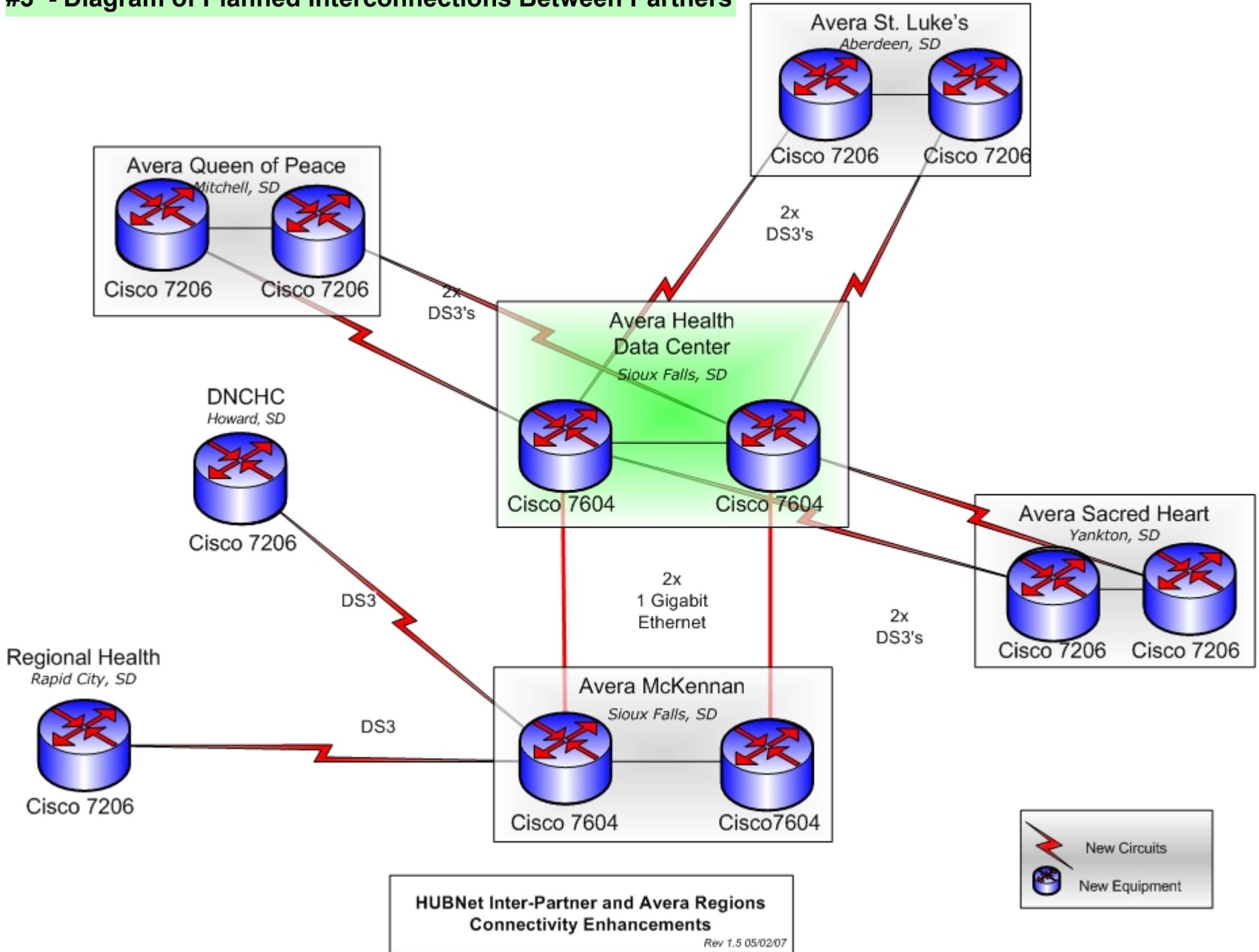


**Heartland Unified Broadband Network**

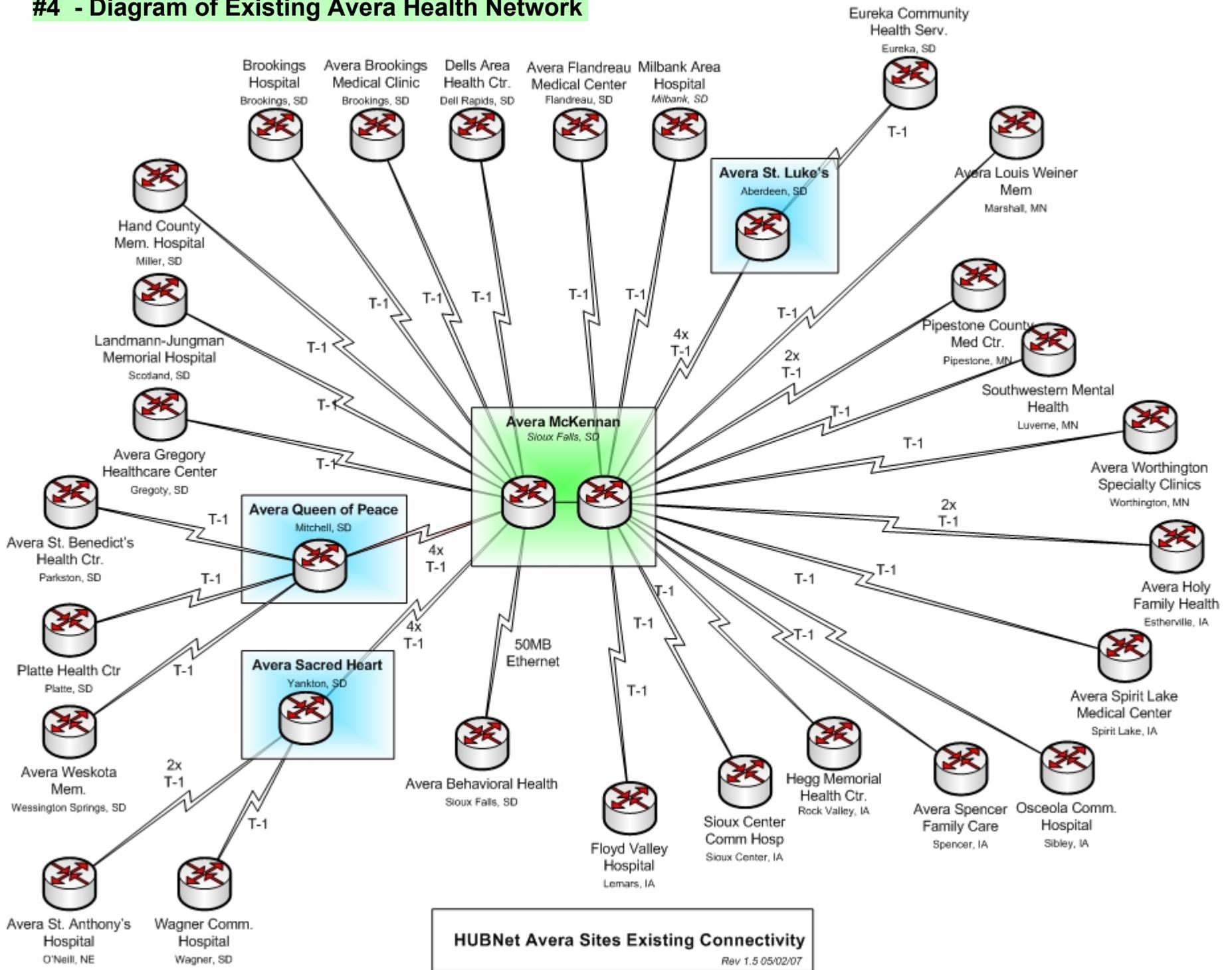
# #2 - Diagram of New HUBNet Infrastructure



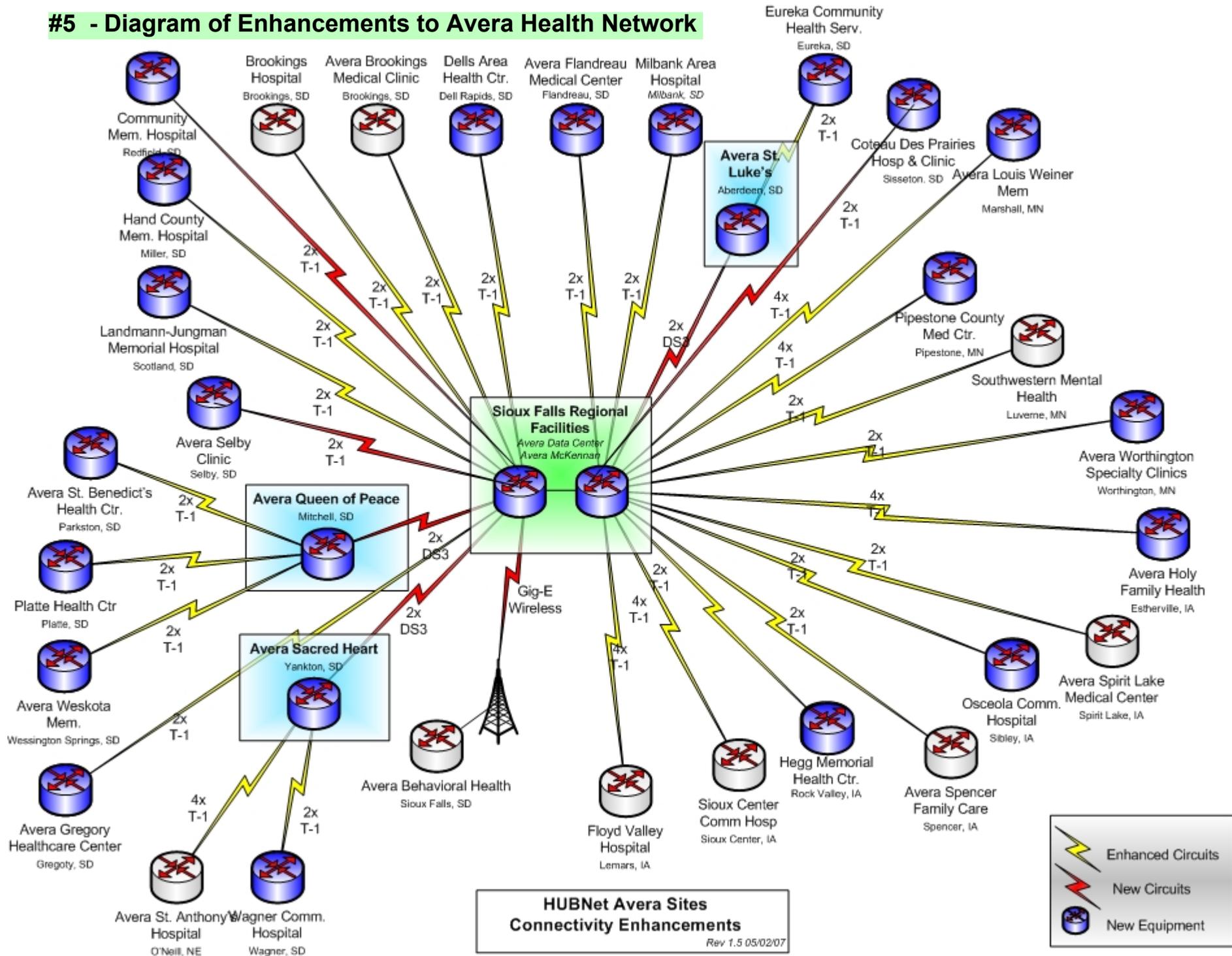
### #3 - Diagram of Planned Interconnections Between Partners



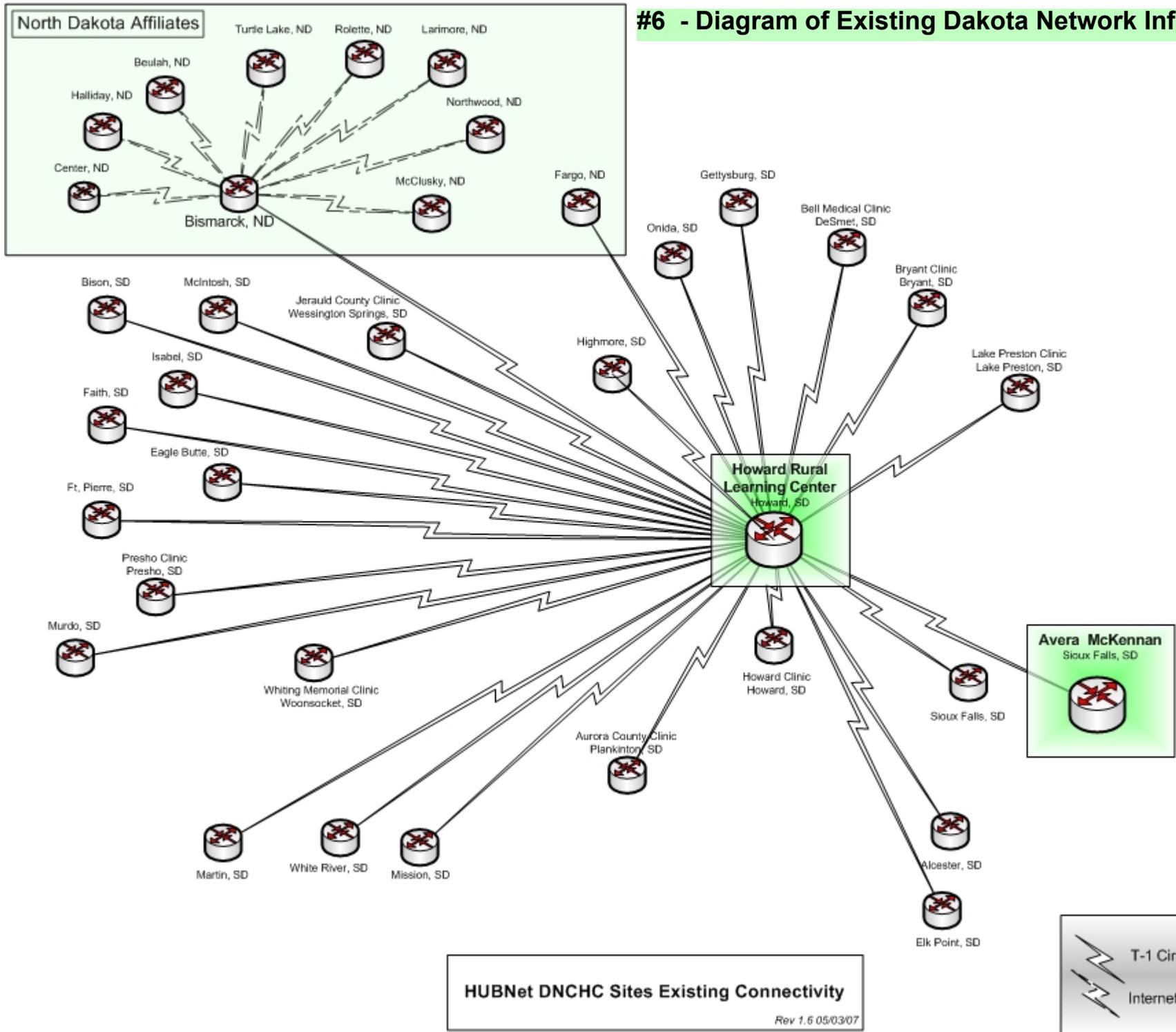
# #4 - Diagram of Existing Avera Health Network



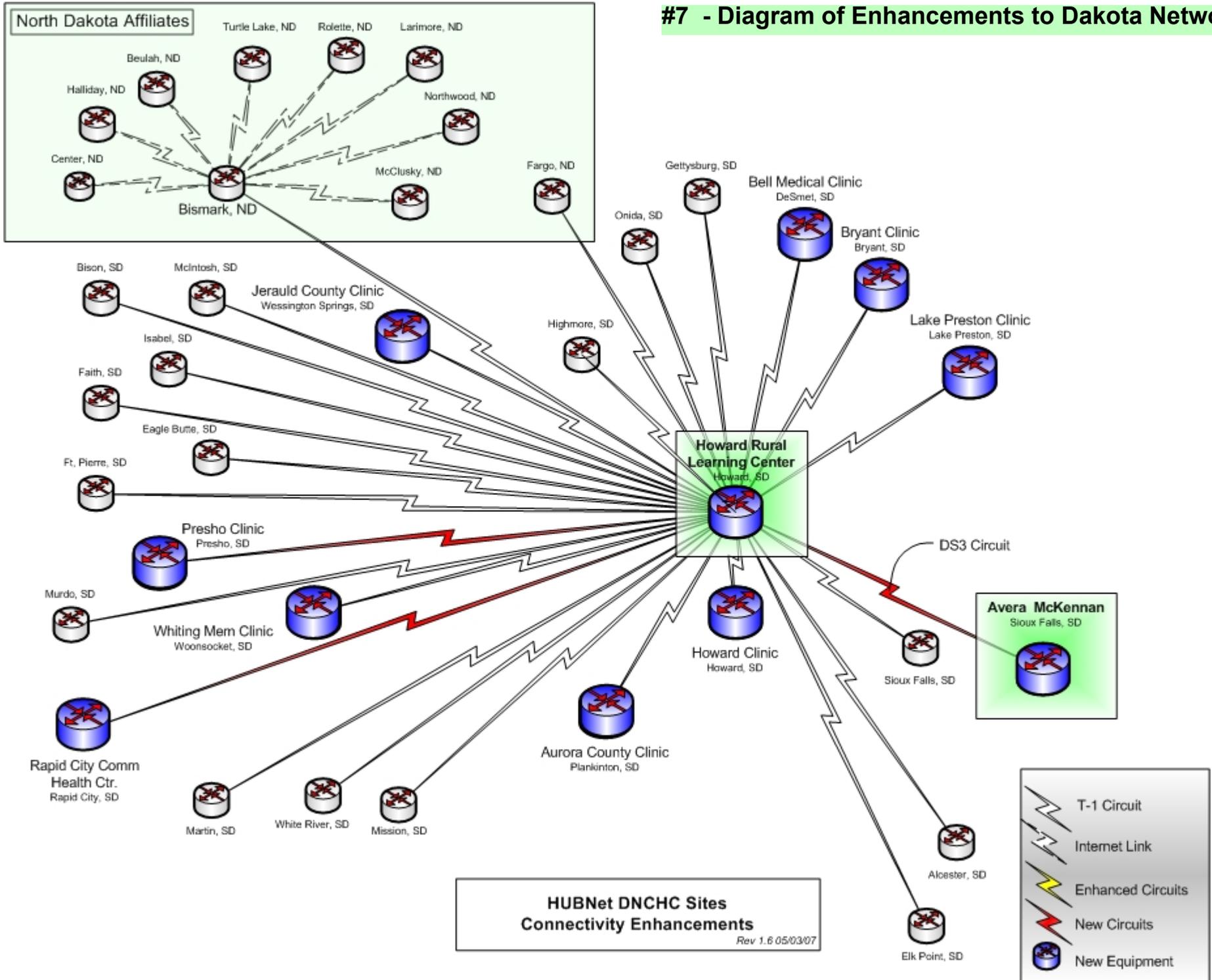
# #5 - Diagram of Enhancements to Avera Health Network



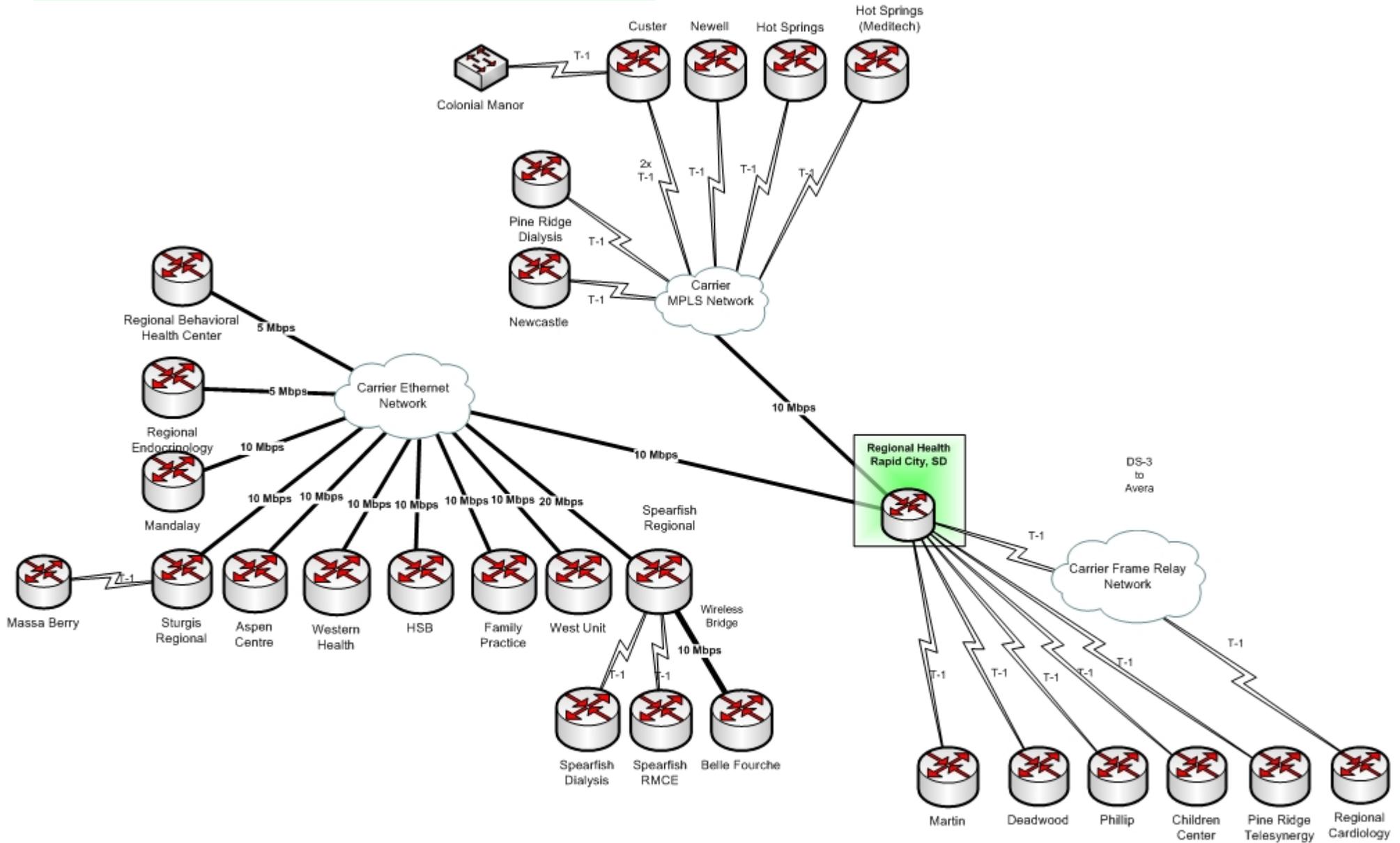
# #6 - Diagram of Existing Dakota Network Infrastructure



# #7 - Diagram of Enhancements to Dakota Network

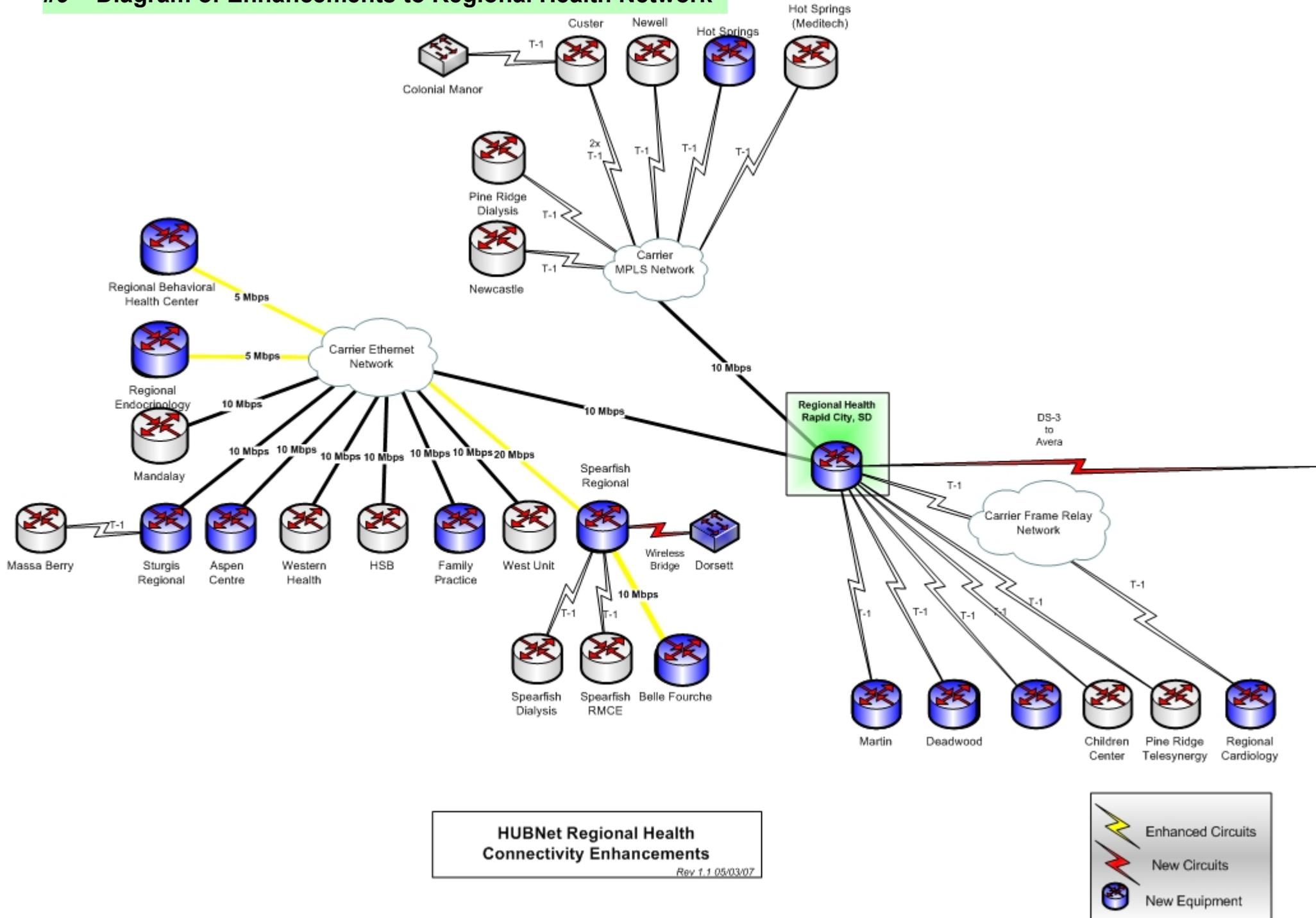


# #8 – Diagram of Existing Regional Health Network



**Regional Health Existing Connectivity**  
 Rev 1.1 05/03/07

# #9 – Diagram of Enhancements to Regional Health Network



## **Appendix B - List of HUBNet Facilities**

**List of:**

**Facility names**

**Facility Addresses**

**City**

**State**

**Zip-Code**

**Phone Number**

**Rural Urban Commuting Area Code**

**Rural Status**

**Frontier Status**

**HUBNet Network**

Information for Facilities Participating in the Network

Facility Names	Address	City	State	Zip Code	Phone Number	Type of Facility	RUCA Code	Rural*	Frontier
<b>Avera Health</b>									
Avera St. Luke's Hospital	305 South State Street	Aberdeen	SD	57401	(605) 622-5000	Hospital	4	X	
Aberdeen Pediatrics	Physicians Plaza, Suite E206, 201 South Lloyd Street	Aberdeen	SD	57402	(605)-622-4050	Rural Clinic	4	X	
Aberdeen Nephrology	3015 6th Avenue SE Suite 10	Aberdeen	SD	57401	(605)-622-2895	Specialty Clinic	4	X	
Aberdeen Psychiatric Associates	405 8th Ave NW Suite 333	Aberdeen	SD	57403	(605)-225-3622	Specialty Clinic	4	X	
Aberdeen Pulmonology	Physicians Plaza, Suite W240, 201 South Lloyd Street	Aberdeen	SD	57404	(605)-622-2530	Specialty Clinic	4	X	
Aberdeen Rehabilitation Medicine	Lafayette Mall, Suite 11, 3015 6th Avenue SE	Aberdeen	SD	57405	(605)-622-2898	Specialty Clinic	4	X	
Bon Homme Family Practice Clinic	Main Street Avon	Avon	SD	57315	(605)-286-3888	Certified Rural Health Clinic (RHC)	10	X	
McGreevy Clinic Avera	1200 S 7th Ave	Brandon	SD	57005	(605) 336-2140	Urban Clinic	2	X	
Marshall County Healthcare Center/Avera	413 9th St	Britton	SD	57430	(605) 448-2253	Critical Access Hospital	10	X	X
Marshall County Medical Clinic/Avera	413 Ninth Street	Britton	SD	57430	(605) 448-2253	Rural Clinic	10	X	X
Brookings Health System	300 22nd Avenue	Brookings	SD	57006	(605) 696-9000	Hospital	4	X	
Brookings Hospital	300 22nd Avenue	Brookings	SD	57006	(605) 696-9000	Hospital	4	X	
Avera Brookings Medical Clinic	400 22nd Avenue	Brookings	SD	57006	(605)-697-9500	Rural Clinic	4	X	
Avera Community Clinic	101 S Front St	Chamberlain	SD	57325	(605) 234-6584	Rural Clinic	10	X	X
Colman Medical Clinic/Avera Health	109 N Main St	Colman	SD	57017	(605) 534-3860	Rural Clinic	10.3	X	
Colome Family Clinic/Avera Health	308 Main Street, PO Box 108	Colome	SD	57528	(605) 842-1186	Rural Clinic	10.3	X	X
Colton Medical Clinic/Avera Health	300 S Sherman Ave, PO Box 7	Colton	SD	57018	(605) 446-3233	Rural Clinic	2	X	
Dells Area Health Center/Avera Health	909 N. Iowa Avenue	Dell Rapids	SD	57022	(605) 428-5431	Critical Access Hospital	2	X	
Avera Dell Rapids Medical Clinic	111 E. 10th Street, PO Box 8	Dell Rapids	SD	57022	(605) 428-5446	Rural Clinic	2	X	
Family Medical Clinic	303 5th Avenue North	Edgerton	MN	56128	(507)442-5424	Rural Clinic	10.6	X	
Avera Clinic of Ellendale	240 Main Street	Ellendale	ND	58436	(701) 349-3666	Rural Clinic	10	X	X
Avera Holy Family Health	826 N. Eighth Street	Estherville	IA	51334	(712) 362-2631	Critical Access Hospital	7.4	X	
Avera Estherville Medical Clinic	926 N. Eighth Street	Estherville	IA	51334	(712) 362-6501	Rural Clinic	7.4	X	
Eureka Community Health Services/Avera	410 9th Street, PO Box 517	Eureka	SD	57437	(605) 284-2661	Critical Access Hospital	10	X	X
Avera Flandreau Medical Clinic	212 North Prairie	Flandreau	SD	57028	(605) 997-2471	Certified Rural Health Clinic (RHC)	10.3	X	
Avera Flandreau Medical Center	214 N. Prairie Street	Flandreau	SD	57028	(605) 997-2433	Critical Access Hospital	10.3	X	
Freeman Community Hospital	510 E 8th St	Freeman	SD	57029	(605) 925-4233	Critical Access Hospital	10	X	
Avera Fulda Clinic	201 N. St Paul Avenue	Fulda	MN	56131	(507) 425-2933	Rural Clinic	10	X	
Avera Splitrock Clinic	980 4th Street	Garretson	SD	57030	(605) 594-3431	Rural Clinic	2	X	
Rosebud Family Clinic/Avera Health	405 Whittecar Street	Gregory	SD	57533	(605) 835-9611	Certified Rural Health Clinic (RHC)	10	X	X
Avera Gregory Healthcare Center	400 Park Avenue, PO Box 408	Gregory	SD	57533	(605) 835-8394	Critical Access Hospital	10	X	X
Avera Harrisburg Medical Clinic	220 South Cliff, Suite 120	Harrisburg	SD	57032	(605) 213-8000	Urban Clinic	1		
Hendricks Community Hospital	503 E Lincoln St	Hendricks	MN	56136	(507) 275-3134	Critical Access Hospital	10.5	X	
Avera St Joseph Clinic	213 South Main Street	Howard	SD	57349	(605) 772-4426	Certified Rural Health Clinic (RHC)	10	X	X
Southwestern Mental Health Center/Avera	401 West Street, Ste 0115, PO Box 27	Jackson	MN	56143	(507) 847-2423	Community Mental Health Center	7	X	

\*ZIP Code is Rural by FCC Definition

## HUBNet Network

## Information for Facilities Participating in the Network

Facility Names	Address	City	State	Zip Code	Phone Number	Type of Facility	RUCA Code	Rural*	Frontier
Avera St Benedict Certified Rural Health Clinic	756 East Lake, PO Box 279	Lake Andes	SD	57356	(605) 487-7878	Certified Rural Health Clinic (RHC)	10	X	
Avera Larchwood Medical Clinic	916 Holder Street, PO Box 8	Larchwood	IA	51241	(712) 477-2185	Rural Clinic	10.3	X	
Floyd Valley Hospital/Avera	Highway 3 East, PO Box 10	LeMars	IA	51031	(712) 546-7871	Critical Access Hospital	7.3	X	
Southwestern Mental Health Center/Avera	216 East Luverne Street	Luverne	MN	56156	(507) 283-9511	Community Mental Health Center	7	X	
Madison Community Hospital	917 N. Washington	Madison	SD	57042	(605) 256-6551	Critical Access Hospital	7	X	
Avera Louis Weiner Memorial Hospital	300 South Bruce Street	Marshall	MN	56258	(507) 532-9661	Critical Access Hospital	4	X	
Milbank Area Hospital/Avera	901 E. Virgil Avenue, PO Box 69	Milbank	SD	57252	(605) 432-4538	Critical Access Hospital	7	X	
Milbank Medical Center/Avera	803 East Milbank Avenue	Milbank	SD	57252	(605)-432-4587	Rural Clinic	7	X	
Hand County Memorial Hosp/Avera	300 W 5th St	Miller	SD	57362	(605) 853-2421	Critical Access Hospital	10	X	X
Avera Hand County Medical Clinic	300 W 5th St	Miller	SD	57362	(605) 853-2421	Rural Clinic	10	X	X
Avera Queen of Peace Hospital	525 North Foster	Mitchell	SD	57301	(605) 995-2490	Hospital	4	X	
Avera Queen of Peace Cancer Center	5th & Kittridge	Mitchell	SD	57301	(605) 995-5756	Specialty Clinic	4	X	
Avera St. Luke's Physician Specialist Clinic	1400 10th Ave W	Mobridge	SD	57601	(605) 845-7292	Specialty Clinic	7	X	
Avera St. Anthony's Hospital	300 N. 2nd Street, PO Box 270	O'Neill	NE	68763	(402) 336-2611	Critical Access Hospital	7	X	X
Avera Holt County Medical Clinic	555 East John - PO Box 551	O'Neill	NE	68763	(402) 336-4113	Rural Clinic	7	X	X
Avera St Benedict Certified Rural Health Clinic	401 West Glynn Drive	Parkston	SD	57366	(605) 928-7961	Certified Rural Health Clinic (RHC)	10.5	X	
Avera St. Benedict's Health Center	401 West Glynn Drive	Parkston	SD	57366	(605) 928-3311	Critical Access Hospital	10.5	X	
Southwestern Mental Health Center/Avera	1016 8th Ave SW, PO Box 85	Pipestone	MN	56164	(507) 825-5888	Community Mental Health Center	7	X	
Pipestone County Medical Center/Avera	916 4th Ave SW	Pipestone	MN	56164	(507) 825-5811	Critical Access Hospital	7	X	
Pipestone Medical Group/Avera	920 4th Avenue SW	Pipestone	MN	56164	(507) 825-5700	Rural Clinic	7	X	
Platte Medical Clinic/Avera	PO Box 200	Platte	SD	57369	(605) 337-2633	Certified Rural Health Clinic (RHC)	10	X	
Platte Health Center/Avera	601 E. 7th Street, P.O. Box 200	Platte	SD	57369	(605) 337-3364	Critical Access Hospital	10	X	
Community Memorial Hospital	111 West 10th Ave, PO Box 420	Redfield	SD	57469	(605) 472-1110	Critical Access Hospital	7	X	X
Hegg Memorial Health Center/Avera	1202 21st Avenue	Rock Valley	IA	51247	(712) 476-8000	Critical Access Hospital	7	X	
Hegg Medical Clinic/Avera	1202 21st Avenue	Rock Valley	IA	51247	(712) 476-8000	Rural Clinic	7	X	
Avera Salem Family Medical Clinic	741 South Hill Street	Salem	SD	57058	(605) 425-3038	Certified Rural Health Clinic (RHC)	10.3	X	
McGreevy Clinic Avera	740 South Hill Street	Salem	SD	57058	(605) 425-2855	Certified Rural Health Clinic (RHC)	10.3	X	
Landmann-Jungman Memorial Hospital/Avera	600 Billars Street	Scotland	SD	57059	(605) 583-2226	Critical Access Hospital	10.5	X	
Avera Selby Clinic	4401 Main St	Selby	SD	57472	(605) 649-9999	Rural Clinic	10.6	X	
Osceola Comm Hospital	600 9th Avenue N, PO Box 258	Sibley	IA	51249	(712) 754-2574	Critical Access Hospital	7	X	
Sioux Center Hosp-Health/Avera Health	605 South Main Ave	Sioux Center	IA	51250	(712) 722-1271	Critical Access Hospital	7	X	
Avera Cancer Institute	1000 E. 21 St.	Sioux Falls	SD	57105	(605) 322-3000	Certified Rural Health Clinic (RHC)	1		
Avera Heart Hospital of SD	4500 W 69th St	Sioux Falls	SD	57108	(605) 977-5000	Hospital	1		
Avera McKennan Behavioral Health	4400 West 69th Street	Sioux Falls	SD	57108	(605) 322-4000	Hospital	1		

\*ZIP Code is Rural by FCC Definition

**HUBNet Network**

Information for Facilities Participating in the Network

Facility Names	Address	City	State	Zip Code	Phone Number	Type of Facility	RUCA Code	Rural*	Frontier
Avera McKennan Hospital/University Health	800 E 21st St, PO Box 5045	Sioux Falls	SD	57105	(605) 322-8000	Hospital	1		
Sanford Health	1305 West 18th Street	Sioux Falls	SD	57117	(605) 333-1000	Hospital	1		
Avera Emergency Medicine Physicians	800 E 21st Street	Sioux Falls	SD	57105	(605) 322-2000	Other	1		
Avera Neonatology	800 E 21st Street	Sioux Falls	SD	57105	(605) 322-4425	Other	1		
Avera Health	3900 West Avera Drive	Sioux Falls	SD	57108	(605) 322-4700	Other-Administrative	1		
Avera Children's	Avera Doctor's Plaza 1, 1001 E 21st St, Suite 010	Sioux Falls	SD	57105	(605) 322-5437	Specialty Clinic	1		
Avera Dermatology & Laser Center	116 W. 69th Street, Suite 100	Sioux Falls	SD	57108	(605) 322-6960	Specialty Clinic	1		
Avera Endocrinology	Physicians Office Building, 911 E. 20th Street, Suite 601	Sioux Falls	SD	57105	(605) 322-7600	Specialty Clinic	1		
Avera Gastroenterology Clinic	Avera Doctors Plaza 1, 1001 E. 21st Street, Suite 501	Sioux Falls	SD	57105	(605) 322-8630	Specialty Clinic	1		
Avera Gutnik & Associates	Avera Doctors Plaza 2, 1100 East 21st Street, Suite 400	Sioux Falls	SD	57105	(605) 322-5750	Specialty Clinic	1		
Avera Healthworks	4928 N. Cliff Avenue	Sioux Falls	SD	57104	(605) 322-5100	Specialty Clinic	1		
Avera Hematology & Transplant	1000 E 21st St # 1200	Sioux Falls	SD	57105	(605) 322-8000	Specialty Clinic	1		
Avera Longevity Clinic	1001 E 21st St # 101	Sioux Falls	SD	57105	(605) 322-8000	Specialty Clinic	1		
Avera Maternal-Fetal Medicine	Avera Doctors Plaza 1, 1001 E. 21st Street, Suite 400	Sioux Falls	SD	57105	(605) 322-8933	Specialty Clinic	1		
Avera McKennan Transplant Institute	800 East 21st St	Sioux Falls	SD	57117	(605) 322-7350	Specialty Clinic	1		
Avera Medical Oncology/Hematology	Avera Cancer Institute, 1000 E 21st Street, Suite 2000	Sioux Falls	SD	57105	(605) 322-6900	Specialty Clinic	1		
Avera Midlife Care for Women	Avera Doctors Plaza 1, 1001 E. 21st Street, Suite 101A	Sioux Falls	SD	57105	(605) 322-3455	Specialty Clinic	1		
Avera Midwest Psychiatric Medicine	4400 West 69th St, Suite 500	Sioux Falls	SD	57108	(605) 322-7580	Specialty Clinic	1		
Avera North Central Kidney Institute	Avera Doctors Plaza 1, 1001 E. 21st Street, Suite 300	Sioux Falls	SD	57105	(605) 322-5800	Specialty Clinic	1		
Avera Rehabilitation Associates	Avera Doctors Plaza 2, 1100 East 21st Street, Suite 401	Sioux Falls	SD	57105	(605) 322-7300	Specialty Clinic	1		
Avera University Psychiatry Assoc	4400 West 69th St, Suite 1500	Sioux Falls	SD	57108	(605) 322-5700	Specialty Clinic	1		
Avera Women's Specialty Clinics	Avera Doctor's Plaza 1, 1001 E 21st St, Suite 010	Sioux Falls	SD	57105	(605) 322-8920	Specialty Clinic	1		
Pulmonary Associates/Avera Health	Avera Doctors Plaza 2, 1100 E. 21st Street Suite 601	Sioux Falls	SD	57105	(605) 322-6930	Specialty Clinic	1		
Avera Downtown Center	300 N. Dakota Ave.	Sioux Falls	SD	57105	(605) 322-6825	Urban Clinic	1		
Avera Kannan Clinic	911 E 20th St	Sioux Falls	SD	57105	(605) 322-8000	Urban Clinic	1		
Avera McKennan Health Care Clinic	1513 E 10th St	Sioux Falls	SD	57103	(605) 322-6800	Urban Clinic	1		
McGreevy Clinic Avera	1200 S 7th Ave # 2	Sioux Falls	SD	57105	(605) 336-2140	Urban Clinic	1		
Pediatric Critical Care Services	911 E 20th St # 303	Sioux Falls	SD	57105	(605) 322-3440	Urban Clinic	1		
Coteau Des Prairies Hospital and Clinic	205 Orchard Drive	Sisseton	SD	57626	(605) 698-7647	Hospital	10.3	X	X

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## HUBNet Network

## Information for Facilities Participating in the Network

Facility Names	Address	City	State	Zip Code	Phone Number	Type of Facility	RUCA Code	Rural*	Frontier
Spencer Hospital	1200 First Ave. E.	Spencer	IA	51301	(712) 264-6198	Hospital	4	X	
Avera Spencer Family Care	116 E. 11th Street, Suite 101	Spencer	IA	51301	(712) 264-3500	Rural Clinic	4	X	
Avera Lakes Family Practice	2700 23rd St # C	Spirit Lake	IA	51360	(712) 336-3750	Rural Clinic	4	X	
Avera Spirit Lake Medical Center	2700 23rd Street, PO Box AH	Spirit Lake	IA	51360	(712) 336-3750	Rural Clinic	4	X	
Avera Tea Medical Clinic	725 E Figzel Ct # 100	Tea	SD	57064	(605) 368-9899	Urban Clinic	1		
Avera St Benedict Certified Rural Health Clinic	PO Box 160	Tripp	SD	57376	(605) 935-7211	Certified Rural Health Clinic (RHC)	10	X	
Tyler Healthcare Center/Avera	240 Willow Street, PO Box 280	Tyler	MN	56178	(507) 247-5521	Critical Access Hospital	10.5	X	
Tyler Medical Clinic/Avera	240 Willow Street	Tyler	MN	56178	(507) 247-5521	Rural Clinic	10.5	X	
Bon Homme Family Practice Clinic	PO Box 27	Tyndall	SD	57066	(605) 589-3322	Certified Rural Health Clinic (RHC)	10.5	X	
St. Michael's Hospital/Avera	410 West 16th Avenue	Tyndall	SD	57066	(605) 589-3341	Critical Access Hospital	10.5	X	
Wagner Community Hospital	504 SW Third Street, PO Box 280	Wagner	SD	57380	(605) 384-3611	Critical Access Hospital	10	X	
Wagner Community Clinic	517 3rd St SW, Box 490	Wagner	SD	57380	(605) 384-3418	Rural Clinic	10	X	
Prairie Lakes Healthcare System	4019th Ave. NW	Watertown	SD	57201	(605) 882-7000	Hospital	4	X	
Waubay Clinic/Avera Health	PO Box 215	Waubay	SD	57273	(605) 947-3422	Certified Rural Health Clinic (RHC)	10	X	X
Avera Weskota Memorial Medical Center	604 First Street NE	Wessington Springs	SD	57382	(605) 539-1201	Critical Access Hospital	10	X	X
Southwestern Mental Health/Avera	94th Street, PO Box 353	Windom	MN	56101	(507) 831-2090	Community Mental Health Center	7	X	
Avera United Medical Clinic	820 2nd Avenue, PO Box 338	Windom	MN	56101	(507) 831-1703	Rural Clinic	7	X	
Southwestern Mental Health/Avera	1024 Seventh Avenue, PO Box 175	Worthington	MN	56187	(507) 376-4141	Community Mental Health Center	4	X	
Avera Worthington Specialty Clinics	508 10th St	Worthington	MN	56187	(507) 372-2921	Specialty Clinic	4	X	
Avera Sacred Heart Hospital	501 Summit	Yankton	SD	57274	(605) 668-8000	Hospital	10	X	X
<b>Regional Health</b>									
Bell Fourch Regional Medical Clinic	2200 Thirteenth Avenue	Belle Fourche	SD	57717	(605) 892-2701	Rural Clinic	7.4	X	X
Custer Regional Medical Clinic	1041 Montgomery Street	Custer	SD	57730	(605) 673-4150	Certified Rural Health Clinic (RHC)	10	X	X
Custer Regional Hospital	1039 Montgomery Street	Custer	SD	57730	(605) 673-2229	Critical Access Hospital	10	X	X
Lead-Deadwood Regional Hospital	61 Charles Street	Deadwood	SD	57732	(605) 719-6101	Critical Access Hospital	10.5	X	
Lead-Deadwood Regional Medical Clinic	71 Charles Street	Deadwood	SD	57732	(605) 719-6431	Rural Clinic	10.5	X	
Edgemont Regional Medical Clinic	908 H Street	Edgemont	SD	57735	(605) 662-7250	Certified Rural Health Clinic (RHC)	10.3	X	X
Hill City Regional Medical Clinic	PO Box 639	Hill City	SD	57745	(605) 574-4470	Certified Rural Health Clinic (RHC)	2	X	
Fall River Health	209 N. 16th Street	Hot Springs	SD	57747	(605) 745-3159	Critical Access Hospital	7	X	X
Bennett County Healthcare Center	102 Major Allen	Martin	SD	57551	(605) 685-6622	Critical Access Hospital	10	X	X
Weston County Health Services	1124 Washington Blvd.	Newcastle	WY	82701	(307) 746-4491	Critical Access Hospital	7	X	X
Newell Regional Medical Clinic	308 Girard	Newell	SD	57760	(605) 456-2462	Certified Rural Health Clinic (RHC)	10.6	X	X
Philip Clinic	PO Box 550 507 West Pine	Philip	SD	57567	(605) 859-2566	Certified Rural Health Clinic (RHC)	10	X	X
Hans P. Peterson Memorial Hospital	503 West Pine Street	Philip	SD	57567	(605) 859-2511	Critical Access Hospital	10	X	X
Pine Ridge Hospital	4500 Main Street, East Hwy 18: PO Box 1201	Pine Ridge	SD	57770	(605) 867-5131	Hospital	7	X	X
Regional Behavioral Health Center	915 Mountain View	Rapid City	SD	57701	(605) 719-7200	Hospital	1		
Family Practice Residency Clinic	502 E Monroe St	Rapid City	SD	57701	(605) 719-4060	Other Clinic	1		

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**HUBNet Network**

Information for Facilities Participating in the Network

Facility Names	Address	City	State	Zip Code	Phone Number	Type of Facility	RUCA Code	Rural*	Frontier
Rapid City Regional Hospital	353 Fairmont Boulevard	Rapid City	SD	57701	(605) 719-1000	Specialty Clinic	1		
Regional Behavioral Health Center	915 Mountain View Road	Rapid City	SD	57702	(605) 719-1000	Specialty Clinic	1		
Regional Cardiology Group	3501 Fifth Street, Suite 101	Rapid City	SD	57701	605-719-4900	Specialty Clinic	1		
Regional Dialysis Center	640 Flormann St	Rapid City	SD	57701	(605) 719-6950	Specialty Clinic	1		
Regional Medical Clinic-Cardiology & Cardiac Surgery	3501 Fifth Street, Suite 101	Rapid City	SD	57701	(605) 719-4900	Specialty Clinic	1		
Regional Medical Clinic-Endocrinology	640 Flormann St	Rapid City	SD	57701	(605) 719-6920	Specialty Clinic	1		
Regional Medical Clinic-General Surgery	640 Flormann St.	Rapid City	SD	57701	(605) 718-3100	Specialty Clinic	1		
Regional Medical Clinic-Internal Medicine	640 Flormann St.	Rapid City	SD	57701	(605) 718-3100	Specialty Clinic	1		
Regional Medical Clinic-Nephrology	640 Flormann Street, Suite 300	Rapid City	SD	57701	(605) 719-6980	Specialty Clinic	1		
Regional Medical Clinic-Neurosurgery	2805 Fifth Street, Suite 100	Rapid City	SD	57701	(605) 719-5650	Specialty Clinic	1		
Regional Medical Clinic-Pediatrics	640 Flormann St.	Rapid City	SD	57701	(605) 718-3100	Specialty Clinic	1		
Regional Medical Clinic-Pulmonology	2820 Mount Rushmore Road	Rapid City	SD	57701	(605) 342-3280	Specialty Clinic	1		
Regional Rehabilitation Institute	2908 Fifth Street	Rapid City	SD	57701	(605) 719-1100	Specialty Clinic	1		
Spearfish Regional Hospital	1440 N Main St	Spearfish	SD	57783	(605) 644-4000	Hospital	4	X	
Regional Dialysis Center	132 Yankee St.	Spearfish	SD	57783	(605) 644-9000	Other-Specialty	4	X	
Spearfish Regional Medical Clinic	1445 North Avenue	Spearfish	SD	57783	(605) 644-4170	Rural Clinic	4	X	
Sturgis Regional Hospital	949 Harmon Street	Sturgis	SD	57785	(605) 720-2400	Critical Access Hospital	10.4	X	X
Massa Berry Regional Medical Clinic	890 Lazelle Street	Sturgis	SD	57785	(605) 347-3616	Rural Clinic	10.4	X	X
Wall Clinic	PO Box 423	Wall	SD	57790	(605) 279-2149	Rural Clinic	2		
<b>Dakota Network of Community Health Centers</b>									
<b>Rural Health Care, Inc.</b>									
Oahe Valley Health Center	202 Island Drive	Fr. Pierre	SD	57532	(605) 223-2200	Community Health Center	4	X	X
Gettysburg Community Care Clinic	608 East Garfield	Gettysburg	SD	57442	(605) 765-2273	Community Health Center	10	X	X
Highmore Clinic	200 Commercial PO Box 259	Highmore	SD	57345	(605) 852-2238	Community Health Center	10	X	X
Jones County Clinic	609 Garfield, PO Box 425	Murdo	SD	57559	(605) 669-2121	Community Health Center	10	X	X
Onida Clinic	303 South Main, PO Box 23	Onida	SD	57564	(605) 258-2635	Community Health Center	10.5	X	X
Presho Clinic	116 N Main Ave	Presho	SD	57568	(605) 895-2589	Community Health Center			X
<b>Prairie Community Health, Inc.</b>									
Bison Clinic	110D West Main Street	Bison	SD	57620	(605) 244-5206	Community Health Center	10	X	X
Family Health Care	West Frontier Street, PO Box 260	Eagle Butte	SD	57625	(605) 964-2702	Community Health Center	10	X	X
Faith Clinic	PO Box 577	Faith	SD	57626	(605) 967-2644	Community Health Center	10.3	X	X
Isabel Community Clinic	PO Box 97	Isabel	SD	57633	(605) 466-2120	Community Health Center	10	X	X
McIntosh Clinic	208 Main Street PO Box 20	McIntosh	SD	57641	(605) 273-4335	Community Health Center	10	X	X
<b>Community Health Care Association, Inc.</b>									
Sioux Falls	132 North Dakota	Sioux Falls	SD	57104	(605) 367-8760	Community Health Center	1		
<b>Family Health Care Center, Inc.</b>									
Fargo HealthCare Center	306 4th Street North	Fargo	ND	58102	(701) 239-7111	Community Health Center	1		

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## HUBNet Network

## Information for Facilities Participating in the Network

Facility Names	Address	City	State	Zip Code	Phone Number	Type of Facility	RUCA Code	Rural*	Frontier
<b>Horizon Health Care, Inc.</b>									
Bryant Community Health Center	122 Main Street PO Box 176	Bryant	SD	57221	(605) 628-2318	Community Health Center	10.5	X	
Bell Medical Service	801 Third Street SW PO Box 49	DeSmet	SD	57231	(605) 854-3455	Community Health Center	10	X	X
Howard Community Health Center	208 South Main Street PO Box 99	Howard	SD	57349	(605) 772-4574	Community Health Center	10	X	X
Rural Learning Center	123 South Main St. PO Box 702	Howard	SD	57349	(605) 772-5139	Other-Administrative	10	X	X
Lake Preston Community Health Center	709 4th Street SE	Lake Preston	SD	57249	(605) 847-4484	Community Health Center	10.5	X	X
Bennett County Family Health Center	PO Box 70 D	Martin	SD	57551	(605) 685-6622	Community Health Center	10	X	X
Mission Medical Clinic	153 South Main PO Box 49	Mission	SD	57555	(605) 856-2295	Community Health Center	10	X	X
Aurora County Clinic	106 South Main PO Box 250	Plankinton	SD	57368	(605) 942-7711	Community Health Center	10	X	X
Jerauld County Clinic	602 First Street Northeast	Wessington Springs	SD	57382	(605) 539-1778	Community Health Center	10	X	X
Mellette County Health Clinic	PO Box 281	White River	SD	57579	(605) 259-3121	Community Health Center	10	X	X
Whiting Memorial Clinic	215 South Dumont PO Box 368	Woonsocket	SD	57385	(605) 796-4433	Community Health Center	10.5	X	X
<b>Falls Community Health, Inc.</b>									
Falls Community Health, Inc.	132 North Dakota	Sioux Falls	SD	57104	(605) 367-8760	Community Health Center	1		
<b>Union County Health Foundation</b>									
Alcester Medical Center	104 West 2nd Street, PO Box 468	Alcester	SD	57001	(605) 934-2122	Community Health Center	10.3	X	
Elk Point Community Health Clinic	PO Box 798, 204 East Main	Elk Point	SD	57025	(605) 356-3317	Community Health Center	2	X	
<b>Coal Country Community Health, Inc.</b>									
Beulah Clinic	1312 Highway 49 NW	Beulah	ND	58523	(701) 873-4445	Community Health Center	7	X	
Center Clinic	111 East Main Street	Center	ND	58530	(701) 794-8798	Community Health Center	10.3	X	X
Halliday Clinic	216 East Main Street	Halliday	ND	58636	(701) 938-4464	Community Health Center	10.5	X	X
<b>Northland Community Health Centers, Inc.</b>									
McClusky Community Health Center	122 East 2nd Street, PO Box 618	McClusky	ND	58463	(701) 363-2296	Community Health Center	10	X	X
Rolette Clinic	PO Box 430	Rolette	ND	58466	(701) 246-3391	Community Health Center	10	X	X
Northland Community Health Center	416 Kundert Street, Box 535	Turtle Lake	ND	58575	(701) 448-9225	Community Health Center	10	X	X
<b>Valley Community Health Centers, Inc.</b>									
Larimore Clinic	321 Towner Ave	Larimore	ND	58251	(701) 343-6418	Community Health Center	2	X	
Northwood Clinic	104 N. Park Street, P.O. Box 160	Northwood	ND	58267	(701) 587-6000	Community Health Center	10.3	X	
<b>Community Health Center of the Black Hills, Inc.</b>									
Health Care for the Homeless	504 East Monroe	Rapid City	SD	57701	(605) 394-2230	Community Health Center	1		
Rapid City Community Center	504 East Monroe	Rapid City	SD	57701	(605) 394-6665	Community Health Center	1		

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## **Appendix C - Biographical Sketches of Key Personnel**

**Project Director- Jim Veline, Avera Health**

**Project Administrator, Administrative/Management Committee Lead-  
Jason Wulf, Avera Health**

**Network Manager, Technical Committee Lead- Jim Burkett, Avera Health**

**Clinical Committee Lead- Mary DeVany, Avera Health**

**Clinical Committee- Tad Jacobs, D.O., Avera Health**

**Administrative Management Committee- John Mengenhausen, Dakota Network**

**Technical Committee- Scott Weatherill, Dakota Network**

**Clinical Committee- Lance S. Lim, M.D., Dakota Network**

**Administrative Management Committee- Richard S. Latuchie, Regional Health**

**Technical Committee- Alan T. Williams, Regional Health**

**Clinical Committee- Brian Smith, M.D., Regional Health**

## BIOGRAPHICAL SKETCH

NAME James T. Veline		POSITION TITLE Senior Vice President/CIO	
Role in Project: Project Director			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
University of Nebraska	Master Degree		Business Administration
University of Nebraska	Masters Degree		Education
University of Nebraska	Bachelors Degree		Business Administration
University of Minnesota	Certified		Healthcare Administration

### **Professional Positions**

2005 – Present	Senior Vice President, Chief Information Officer, Avera Health, Sioux Falls, SD
2000 – 2005	Executive Director, Information Technology, Nebraska Medical Center, Omaha, NE
1996 – 2000	Director, Information Technology, Nebraska Medical Center, Omaha, NE
1994 – 1996	Manager, Information Technology, University of Nebraska Medical Center, Omaha, NE
1992 – 1994	Coordinator of Information Systems, University of Nebraska Medical Center, Omaha, NE
1987 – 1992	Executive Director, Medical Services, Nebraska Methodist Hospital, Omaha, NE
1984 – 1987	Vice President of Business Development, Children's Hospital, Omaha, NE
1979 – 1984	Cost Accounting and Computer Service Bureau Liaison, Jennie Edmundson Hospital, Council Bluffs, IA

### **Speaking**

2003	Health Informatics, College of Nursing, University of Nebraska Medical Center
2003	Speaker, Speaker, CIO Physicians' Advisory Group
2001	Scripps Clinic, San Diego
2001	Speaker, National User Conference
1997	Long Distance Learning, University of Nebraska at Kearney, Nurses' Program
1994-1997	Business Management Course for Medical Resident Education, University of Nebraska Medical Center

### **Committees/ Association Memberships**

Present	CHIME
Present	HIMSS
Present	Omaha Area CIO Association
2003 - Present	Executive Advisory Council for University Healthcare Consortium
2003 – Present	Co-Chair, CIO Physician's Advisory Group
2003 – Present	IAIMS Task Force for the University of Nebraska Medical Center,
2003 – Present	National Institute for Science and Technology (NIST) grant committee for the implementation of rules-based decision making at UNMC
2001 – 2002	Creighton University Institute for Information Technology and Management
2000	Nebraska Department of Health Advisory Committee for Rural Nebraska Networking

### **Published Articles**

"CBTI: Friend or Foe? Computer Based Training is Physician Friendly," *Training Magazine*, 2000.

## BIOGRAPHICAL SKETCH

NAME Jason C. Wulf		POSITION TITLE Financial Analyst	
Role In Project: Project Administrator; Administrative Committee Lead, Avera Health			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
University of South Dakota, School of Business	Masters in Business Administration with a Health Services Option (M.B.A.)	2004	Business/Health Services
University of South Dakota, School of Business	Bachelor of Science (B.S.)	1998	Health Care Administration

### **Professional Positions**

2005 – Present      Interim Executive Director, Avera Communication, LLC., Avera Health, Sioux Falls, South Dakota  
 2000 – Present      Financial Analyst, Avera Health, Sioux Falls, South Dakota  
 1998 – 2000        Y2K Coordinator, Avera Health, Sioux Falls, South Dakota

### **Speaking**

2003                    Presented at the National Rural Health Association 2003 Annual Conference on behalf of the American Hospital Association

### **Committees/ Association Memberships**

2000 – Present      Association for Financial Professionals  
 1998 – 2000        American College of Health Care Executives  
 2003 – 2006        American College of Health Care Executives

### **Awards/Honors**

1998                    W.K. Kellogg Fellow, National Rural Health Association

### **Current Responsibilities**

Responsible for administrative and financial activities for Avera Health information technology and electronic medical record activities.

## BIOGRAPHICAL SKETCH

NAME James A. Burkett, Jr.	POSITION TITLE Technology Manager, Information Technology Center, Avera McKennan Hospital
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Role In Project: Network Manager; Technical Committee Lead, Avera Health

EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Broward Community College, Davie, FL		1972-1973	General Course Work
U.S. Air Force Training Center, Lackland AFB, San Antonio TX		1973	Electronic Systems Training
George Washington University, Washington,	BS	1976	Electronic Engineering

### Professional Positions:

1997 - Present	Director, Information Technology Center, Avera McKennan Hospital, Sioux Falls, South Dakota
1994 – 1997	Vice President – MIS Technical Services, Health International, Scottsdale, Arizona
1992 – 1994	Assistant Manager, Technical Services; VS Systems Support Analyst, Scottsdale Insurance Company, Scottsdale, Arizona
1988 - 1992	Vice President, Systems Engineering; Manager, Systems Engineering, Berkley Information Services, Luverne, Minnesota
1982 – 1988	Vice President, Sundown Vitamins, Inc., Ft. Lauderdale, Florida
1978 - 1982	Executive Vice President; Founding Partner, General Software Systems, Inc., Ft. Lauderdale, Florida
1974 - 1978	Manager, Data Processing; Product Manager, Programmable Products, Computer Products, Inc., Ft. Lauderdale, Florida

### Consulting Experience:

1980 – 1997	Independent Consultant – designed several systems and implemented on a consulting basis.
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## BIOGRAPHICAL SKETCH

NAME Mary E. DeVany		POSITION TITLE Manager, Avera McKennan Telehealth Network	
Role in Project: Telehealth Director, Clinical Committee Lead, Avera Health			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
University of South Dakota Graduate Class			Marketing of Healthcare Issues
University of South Dakota Graduate Class			Budgetary Management & Administration
University of South Dakota	Bachelor of Science (B.S.)		Mass Communications (Public Relations and Advertising)

### **Professional Positions**

2007	Director, Great Plains Telehealth Resource and Assistance Center (TRAC)
1998 – Present	Manager, Avera McKennan Telehealth Network, Avera McKennan, Sioux Falls, SD
1994 – 1998	Telemedicine Services Coordinator, Sioux Valley Hospital, Sioux Falls, SD
1989 – 1994	Telemedicine Program Specialist, Department of Health, State of SD Special Assistant, Office of the Governor, State of SD Occupant Protection & Public Information Coordinator, Office of Highway Safety, State of SD

### **Speaking**

August 15, 2006	National Telehealth Grand Rounds
May 18, 2006	NRHA Annual Conference, Reno, NV – “Telehealth: The Avera Regional Approach”
April 21, 2006	SDNA Workshop, <i>Rekindle Your Passion for Nursing</i> Mitchell, SD, – “Telehealth in South Dakota”
April 11, 2006	Senator Thune’s Healthcare Roundtable
2006-2002	Telehealth Leadership Conference, (University of Missouri/CTL/ATA sponsored), – Conference Planning Committee and Session Moderator
March 19, 2002	Testified before the U.S. House of Representatives, Committee on Small Business, Rural Enterprises, Agriculture and Technology Subcommittee Hearing, “Access to Healthcare in Rural America”
March 31, 2000	Wyoming Conference on Telehealth, Regional Telehealth Panel Discussion
1999 & 2000	South Dakota Rural Health Conference Presenter

### **Committees/ Association Memberships**

American Telemedicine Association	
1996 – Present	Member
Center for Telehealth & e-Telehealth Law, Board Member	
2002 – Present	Member
2006	President, Center for Telehealth & e-Telehealth Law
Polycom Users Group (formerly, Pictoretel Users Group)	
1996 – Present	Member
1997 – 2003	Board of Directors
2001	President

## BIOGRAPHICAL SKETCH

NAME Tad B. Jacobs, D.O.		POSITION TITLE Chief Medical Information Officer	
Role In Project- Clinical Committee; EMR Interoperability Work Group, Avera Health			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
Parkview Osteopathic Hospital, Toledo, OH	Internship	1981-82	
College of Osteopathic Medicine & Surgery, University of Osteopathic Medicine and Health Sciences, Des Moines, IA	Doctor of Osteopathy (D.O)	1978-81	Osteopathic Medicine
Youngstown State University, Youngstown, OH	Bachelor of Science (B.S.)	1973-75	Biology
Board Certified	American College of Osteopathic Family Physicians Certificate	1990	Osteopathic Medicine

### **Professional Positions**

2006 – Present Chief Medical Information Officer, Avera Health, Sioux Falls, SD  
 1982 – Present Physician, Avera Flandreau Medical Center, Flandreau, SD  
 1987 - Present Adjunct Assistant Professor of Family Medicine, Des Moines University, University of Osteopathic Medicine and Health Sciences, Des Moines, Iowa

1996 - Present Clinical Instructor, Department of Community Medicine and Rural Health, School of Medicine, University of North Dakota, Grand Forks, North Dakota

### **Speaking**

Sept. 11, 2000 “Medication Guidelines and Polypharmacy” Panel Presentation  
 South Dakota Medical Directors Association Fall Seminar

April 8, 1999 “Trauma Receiving Hospitals: WHY BOTHER,” 7<sup>th</sup> Annual Trauma Symposium Avera McKennan Hospital.

### **Committees/ Association Memberships**

American Academy of Osteopathic Family Physicians  
 1990 – Present Member

SD Osteopathic Association  
 1982 – Present Member

SD State Medical Association  
 1982 – Present Member

American Osteopathic Association  
 1981-Present Member

### **Awards/Honors**

2005 Physician Recognition Faculty Award, Avera McKennan & University Health Center

2002-2003 Regional Clinical Faculty Award, Des Moines University College of Osteopathic Medicine

## BIOGRAPHICAL SKETCH

NAME John Mengershausen		POSITION TITLE Chief Executive Office	
Role in Project- Administrative Committee, Dakota Network			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
Nettleton College	Business	1978	Business
Dale Carnegie Course		1978	
Howard High School	HS Diploma	1971-74	

### **Professional Positions**

1983-Present Chief Executive Officer; Horizon Health Care, Inc.  
 1980-2001 Self-employed accountant; Mengershausen Accounting  
 1978-1980 Accountant; Hine Accounting Service

### **Committees/ Association Memberships**

National Association of Community Health Centers (NACHC)  
 2001-2002 Board Chair  
 1996-2000 Treasurer  
 2006-present Board of Directors  
 1996-2003 Board of Directors  
 1987-1991 Board of Directors  
 National Rural Health Association (NRHA)  
 Present Member of the Association  
 Present Member of the NRHA/NACHC Joint Rural Task Force  
 1987 Member of the Frontier Task Force  
 Managed Care Assistance Corporation  
 1997-2000 Board of Director, Treasurer  
 Community Health Advocates, Inc.  
 2001-2009 Board of Directors, Vice Chair of the Board  
 Community Health Association of the Dakotas  
 1985 – Present Board Member State Association

### **Awards/Honors**

Present Community Health Association of Mountain/Plains States (CHAMPS)  
 2001 President's Award  
 1993 CEO of the Year Award

### **Consulting Experience:**

#### **1987-2001 Bureau of Primary Health Care:**

Assisted the Bureau in developing new policies and procedures for Community and Migrant Health Centers.

#### **1991-1995 Community Health Management Corp.:**

Assist NHSC sites and CHCs in accurate preparation of their RHC Cost Report, development of administrative policies and assist in preparation of Primary Care Effectiveness Review. Assisted a CHC, in the capacity of acting CEO, in the closing of one facility and stabilization of the practice in the remaining facility. Conducted public meetings to explain the process and to ease the transition.

#### **1990-1991 Union County Health Foundation:**

Provided technical assistance as the acting Executive Director to a federally funded community health center. Responsible for preparation of the grant application, federal reporting requirements and the RHC cost reports for two facilities.

## BIOGRAPHICAL SKETCH

NAME Scott Weatherill		POSITION TITLE IT Director	
Role in Project- Technical Committee, Dakota Network			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
Dakota State University, Madison, South Dakota			Web Publishing, Document and Presentation, Technical Writing, and Design
University of South Dakota, Vermillion, South Dakota	Bachelor of Arts (B.A.)		English Education and Social Science

### **Professional Positions**

2004 – Present	IT Director, Horizon Health Care, Inc.
2002 – 2004	IT Specialist, Horizon Health Care, Inc.
2000 – 2002	IT Specialist, Community Health Care Association, Inc.
1998 – 2000	Outreach Training Coordinator, “Wiring the Clinics Project”
1997 – 1998	School Administrator, STRIVE Alternative School, Dell Rapids, South Dakota

## BIOGRAPHICAL SKETCH

NAME Lance S. Lim, M.D.		POSITION TITLE Medical Director	
Role In Project- Clinical Committee, Dakota Network			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
VA/Medical Center/ Harvard Medical School, West Roxbury, MA	Fellowship	2000-01	Spinal Cord Injury
St. Francis Medical Center, Pittsburg, PA	Residency	1997- 2000	Physical Medicine and Rehabilitation
Overlook Hospital, Summit, NJ	Residency - Transitional Year	1996-97	Medicine
Cebu Institute of Medicine, Cebu City, Philippines	Doctor of Medicine (M.D.)	1988 – 92	Medicine
Velez College, Cebu City, Philippines	Bachelor of Science (B.S.)	1984 - 88	Medical Technology

### **Professional Positions**

2004 – Present            Medical Director, Horizon Health Care, Inc.  
 2003 – 2004             Staff Physician, Horizon Health Care, Inc., Wessington Springs, South  
 Dakota  
 1994                        Medical Officer III Family Practice, Camiguin Provincial Hospital,  
 Camiguin, Philippines

### **Committees/ Association Memberships**

Board Eligible – American Board of Physical Medicine and Rehabilitation  
 South Dakota Medical Association  
 Philippine Medical Society

### **Research Experience**

Lim, et al; “The Reproducibility of Intravesical Pressures in Neurogenic Bladders”  
 Lim, et al; “Melatonin Replacement for Sleep Deprivation in Spinal Cord Injury”  
 Lim, et al; “The Antimicrobial Effect of *Allium sativum* (garlic) on Staphylococcus  
 aureus induced Wound Infection in Mice”

## BIOGRAPHICAL SKETCH

NAME Richard S. Latuchie		POSITION TITLE Vice President of Business Development and Information Systems	
Role in Project- Administrative Committee, Regional Health			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
Wharton School, University of Pennsylvania	Masters of Business Administration (M.B.A.)	1975	Health Care Administration
Rensselaer Polytechnic Institute	Bachelor of Science (B.S.)	1973	Management

### **Professional Positions**

2000 – Present	Vice President of Business Development and Information Systems, Rapid City Regional Hospital
1999 – 2000	Independent Consultant
1998 – 1999	Associate Vice President for Non-Acute Business Development, Jefferson Health System, Philadelphia
1995 – 1997	Vice President for Planning and Marketing for the AtlantiCare Health System in Atlantic City, New Jersey
1975 – 1995	Partner in GLS Associates, Inc.

### **Committees/ Association Memberships**

Present	American College of Healthcare Executives
Present	College of Health Information Management Executives

## BIOGRAPHICAL SKETCH

NAME Alan T. Williams		POSITION TITLE Assistant Director of Information Systems	
Role in Project- Technical Committee			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
Black Hills State University	Bachelor of Science (B.S.)	May 2007	Business Administration
Denver Institute of Technology	Associates Degree	1982	Electronic Technology

### **Professional Positions**

2002 - Present	Assistant Director of Information Systems, Regional Health, Inc.
1994 – 2002	Director for Information Systems, Banner Health Systems
1993 – 1994	Systems Engineer supporting South Dakota State Department of Health and Human Services, Dakota State University Business and Education Institute
1987 – 1993	Field Service Engineer, Unisys Corporation
1982 – 1987	Filed Service Engineer, Wang Laboratories

## BIOGRAPHICAL SKETCH

NAME Alan T. Williams		POSITION TITLE Assistant Director of Information Systems	
Role in Project – Technical Committee, Regional Health			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
Black Hills State University	Bachelor of Science (B.S.)	May 2007	Business Administration
Denver Institute of Technology	Associates Degree	1982	Electronic Technology

### **Professional Positions**

2002 - Present	Assistant Director of Information Systems, Regional Health, Inc.
1994 – 2002	Director for Information Systems, Banner Health Systems
1993 – 1994	Systems Engineer supporting South Dakota State Department of Health and Human Services, Dakota State University Business and Education Institute
1987 – 1993	Field Service Engineer, Unisys Corporation
1982 – 1987	Filed Service Engineer, Wang Laboratories

## BIOGRAPHICAL SKETCH

NAME Brian Smith, M.D.		POSITION TITLE Faculty Physician	
Role in Project- Clinical Committee, Regional Health			
EDUCATION/TRAINING			
INSTITUTION AND TRAINING	DEGREE	YEAR(S)	FIELD OF STUDY
University of Colorado, Health Sciences Center	Medical Degree (M.D.)	1991-95	Medicine
Westchester Community College		1990	
Columbia University		1989	
Universite De Haute Bretagne		1985	
University of Colorado at Boulder	Bachelor of Arts Degree (B.A.)	1983-88	Physics
Front Range Community College	Associate of Arts Degree (A.A.)	1977-83	Electronics Technology

### **Professional Positions**

2004 – Present	Faculty Physician, Rapid City Regional Hospital Family Medicine Residency, Rapid City, SD.
2001 – 2004	Physician, Family Medicine Associates, PC, Broomfield, Co.
1998 – 2001	Humbolt Family Care, Arcata, Ca.
1995 – 1998	Resident Physician, Rapid City Regional Hospital Family Medicine Residency, Rapid City, SD.
1990 – 1991	Research Engineer, Sievers Research, Boulder, Co.
1988 – 1990	Engineer, IBMTJW Research Center, Yorktown Heights, NY

### **Published Articles**

2000	"Universal Newborn Hearing Screening." Journal of Family Practice, 49(11), November 2000.
1991	"Total Organic Carbon Analyzer." SAE Technical Paper Series #911434, 21st International Conference on Environmental Systems. San Francisco, Calif.
1990	"Pump Probe Investigation of Femtosecond Desorption: NO/Pd(111)." IBM Research Report, March 1, 1990.
1990	"Femtosecond Time-Resolved Studies of Desorption from a Surface" Invited talk to Optical Society of America, Nov. 4-11, 1990.
1990	"Femtosecond Time-Resolved Measurement of Laser Induced Desorption of NO/Pd(111)." Am Vacuum Society 37th Annual Meeting, Oct 8-12, 1990.

### **Awards/Honors**

1991 – 1993	Citation for Academic Excellence, University of Colorado Health Sciences Center
1983 – 1988	Magna cum laude, PHI BETA KAPPA, SIGMA PI SIGMA, University of Colorado at Boulder.

## **Appendix D - Letters of Commitment**

**Avera Health  
Regional Health  
Dakota Network of Community Health Centers**

April 24, 2007

3900 West Avera Drive  
Sioux Falls, SD 57108-5721  
(605) 322-4700  
Fax: (605) 322-4799

[www.avera.org](http://www.avera.org)

Honorable Kevin J. Martin, Chairman  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

Dear Chairman Martin:

We are pleased to submit the enclosed application to the Federal Communications Commission's Rural Health Care Pilot Program. Avera Health's proposal is submitted on behalf of the Heartland Unified Broadband Network (HUBNet). In addition to Avera Health, HUBNet partners include Regional Health, a network of facilities serving western South Dakota and parts of Wyoming, and the Dakota Network which is a network of community health centers serving South Dakota and North Dakota. Avera Health facilities serve eastern South Dakota, and portions of Iowa, Minnesota, Nebraska, and North Dakota. The HUBNet partnership represents a network that serves close to seventy percent of South Dakotans, as well as patients in North Dakota, Iowa, Minnesota, Nebraska, and Wyoming.

The goal of HUBNet is to increase utilization of telecommunications and information services among public and non-profit health care providers serving rural and frontier communities across the service area region. The partners serve vulnerable medically underserved communities, and much of the service area is considered frontier. HUBNet facilities are also located on or near eight reservations, providing care for these rural, minority populations. All of the partners serve patients regardless of their ability to pay for services. The Dakota Network represents Federally Qualified Community Health Centers (FQHCs) in the Dakotas and serves the majority of indigent patients in these areas.

Avera Health is strongly committed to this proposal and requests consideration of pilot project support. The project will allow HUBNet partners to build the network infrastructure necessary to enhance access to telehealth services for providers in the region. As a result of this project, the partners will be poised to participate in a national electronic health record utilizing a secure, robust, sustainable broadband network that expands the infrastructure for electronic transmission of patient information and delivery of telehealth services.

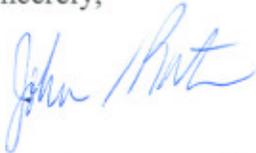
**As the applicant and lead organization, Avera Health will have overall responsibility for the project. Avera Health will be legally and financially responsible for the conduct of activities supported by the Rural Health Care Pilot Program. The specific resource commitments of the HUBNet partners are defined in the application.** We look forward to the privilege of taking a leadership role in the program. Avera Health's leadership in the

Honorable Kevin J. Martin, Chairman  
April 24, 2007  
Page 2

program will be built on a significant amount of existing experience, including its leadership in the Great Plains Telehealth Resource and Assistance Center. In 2006, because of its strong telehealth history, Avera Health was awarded a grant from the Federal Office for the Advancement of Telehealth to serve as one of five regional telehealth resource centers.

We thank you for considering this application. Additionally, we thank the FCC Commissioners and staff for the hard work they have done to develop the Rural Health Care Pilot Program. This program has the potential to provide the network infrastructure necessary to help the nation's most vulnerable rural health care facilities develop and implement vital telehealth services. If further information about our proposal is required, please contact us by phone at 605-261-9099, or email or [jim.veline@avera.org](mailto:jim.veline@avera.org), or [john.porter@avera.org](mailto:john.porter@avera.org).

Sincerely,



John T. Porter, President/CEO  
Avera Health



Jim Veline, Senior Vice-President/Chief Information Officer  
Avera Health



# REGIONAL HEALTH, INC.

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P.O. Box 6000 Rapid City, SD 57709

April 24, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

Dear Jim:

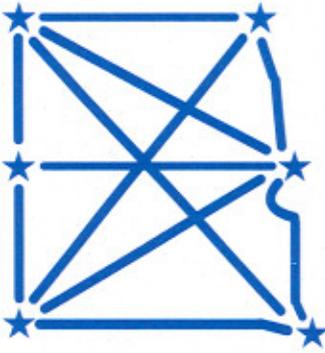
Regional Health is happy to be a part of Avera Health's Heartland Unified Broadband Network (HUBNet) project, and its application to the Rural Health Care Support Mechanism Pilot Program. Regional Health, Inc. maintains seven hospitals, and numerous clinics. These facilities are located throughout western South Dakota and parts of Wyoming and serve various rural communities, as well as the Pine Ridge and Standing Rock Reservations. Because our facilities are located among rural and reservation communities, we have observed first hand the effects of limited healthcare access for these individuals and would like to see this situation improved by the HUBNet project.

HUBNet seeks to connect three project partners, Avera Health, Regional Health, and the Dakota Network so as to serve the needs of rural facilities throughout Wyoming, South Dakota, Iowa, Nebraska, Minnesota, and parts of North Dakota through a robust, secure broadband network. This network would link these rural facilities together to enhance access to telehealth services. Regional Health's mission is to promote excellence in healthcare services in partnership with the communities we serve. The HUBNet project would help Regional Health to stay true to this mission by increasing interconnectivity and data sharing among the facilities while helping rural facilities provide a wider variety of quality health care services.

**Regional Health is committed to the HUBNet project, Avera Health's application to this program, and to providing the resources outlined in the application.** This project is an important one for rural areas around the Midwest and could dramatically improve the quality of health for the 1.45 million individuals who will be effected. HUBNet will significantly change the practice of medicine in the Midwest and the quality of services provided to rural residents.

Sincerely,

Richard S. Latuchie  
Vice President, Business Development and Information Systems  
Regional Health



# Dakota Network of Community Health Centers

April 24, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

Dear Jim:

The Dakota Network of Community Health Centers is pleased to be a part of the Heartland Unified Broadband Network (HUBNet), and its application to the FCC's Rural Health Care Support Pilot Program. We support the project's goal of increasing utilization of telecommunications and information services among public and non-profit health care providers serving rural and frontier communities across South Dakota, portions of North Dakota, Iowa, Minnesota, Nebraska, and Wyoming.

The Dakota Network consists of community health centers in South and North Dakota. These community health centers are the largest provider of services to the indigent and are dedicated to serving underserved populations. Ten of our clinics serve reservation communities and six of these are actually located on reservation lands.

The majority of community health center patients receive either free services or services at reduced rates, based on a sliding fee scale. This makes network infrastructure difficult to afford, particularly for the rural and frontier facilities where costs are typically greater. However, patients served by these clinics deserve access to appropriate health care services. A robust set of telehealth services including clinical services and data exchange through electronic medical records will help ensure this. Having to travel to an urban area for specialized medical services puts the services out of reach for many health center patients. Unfortunately, the costs related to network infrastructure have been a significant barrier so our health centers have been slow to develop telehealth applications.

Thank you for your leadership on the HUBNet project. The Dakota Network of Community Health Centers is **committed to active participation in this project and contributing the resources described in the application, including the required fifteen percent cost participation for direct pilot project expenses, denoted in the proposal budget.** This program has the potential to provide the network infrastructure necessary to help our community health centers significantly improve their ability to deliver health care services to vulnerable populations across the Dakotas.

Sincerely,

Thomas M. Olson, Network Director

27025 Windswept Place  
Sioux Falls, SD 57108-8121  
phone: 605-332-7692  
email: [tmolson@dakotanetwork.org](mailto:tmolson@dakotanetwork.org)

## **Appendix E – List of eICU<sup>®</sup> Care and Teleradiology Sites**

**Avera eICU<sup>®</sup> Care Remote ICU Monitoring Sites**  
*-New & Enhanced*

**Teleradiology Sites**  
*- New & Enhanced*

## ***Avera eICU<sup>®</sup> Care Remote ICU Monitoring***

12 Facilities will have an enhanced ability to provide Avera eICU<sup>®</sup> Care as a result of the project. Eleven of these facilities are rural or frontier and one of them is urban. These facilities include the following:

- Aberdeen, SD- Avera St. Luke's Hospital
- Brookings, SD – Brookings Hospital
- Estherville, IA- Holy Family Hospital
- Flandreau, SD- Flandreau Medical Center
- Marshall, MN- Avera Marshall Regional Medical Center
- Mitchell, SD - Avera Queen of Peace Hospital
- O'Neill, NE - Avera St. Anthony Hospital
- Parkston, SD - Avera St. Benedict Health Center
- Pipestone, MN- Pipestone County Medical Center
- Sioux Falls, SD- Avera McKennan Hospital & University Health Center- Urban Site
- Tyndall, SD- St. Michael's Hospital
- Yankton, SD- Avera Sacred Heart Hospital

As a result of network improvements, six facilities will be getting mobile electronic eICU<sup>®</sup> Care units and will be able to provide patients enhanced care because of this service. The mobile units are located in hospital emergency rooms and are particularly helpful in trauma care. Facilities adding mobile electronic intensive care units include:

- LeMars, IA- Floyd Valley Hospital- Rural
- Milbank, SD- Milbank Area Hospital/Avera Health- Frontier
- Miller, SD- Hand County Memorial Hospital- Frontier
- Platte, SD- Platte Medical Center/Avera Health in Platte- Rural
- Scotland, SD- Landmann-Jungman Memorial Hospital- Rural
- Sioux Center, IA- Sioux Center Hospital/Avera Health in Sioux Center- Rural
- Wessington Springs, SD- Avera Wessington Springs Hospital, in Wessington Springs, SD- Frontier

## ***Teleradiology***

The following Avera Health facilities are currently using Teleradiology services, and will be able to provide significantly enhanced services, and be able to transfer images at much faster transfer times. Only two of the existing sites (Sioux Falls) are urban.

### Avera Health Facilities Utilizing Teleradiology Services

- Aberdeen, SD; Avera St. Lukes- From 4 T-1s; adding a DS-3 for redundancy
- Britton, SD; Marshall County Healthcare Center- T-1
- Brookings, SD; Brookings Hospital- 1 T-1 to 2 T-1s
- Eureka, SD; Eureka Community Health Services- T-1
- Estherville, IA; Avera Holy Family- 2 T-1s to 4 T-1s
- Flandreau, SD; Avera Flandreau Medical Center- From 1 T-1 to 2 T-1s

- Gregory, SD; Avera Gregory Healthcare Center 1 T-1 to 2 T-1s
- Milbank, SD; Milbank Area Hospital/Avera Health- 1 T-1 to 2 T-s
- Miller, SD; Hand County Memorial Hospital- 1 T-1 to 2 T-1s
- Mitchell, SD; Avera Queen of Peace Hospital- 4 T-1s to a DS-3 for redundancy
- Pipestone, MN; Pipestone County Medical Center/Avera- Form 2 T-1s to 4 T-1s
- Rock Valley, IA; Hegg Memorial Health Center/Avera- From 1 T1-1 to 2 T-1s
- Spirit Lake, IA; Avera Lakes Family Practice- From 1 T1 to 2
- Sioux Center, IA; Sioux Center Hospital/Avera Health- 1 T-1 to 4 T-1s
- Sibley, IA; Osceola Community Hospital- 1 T-1 to 2 T-1s
- Sioux Falls, SD; McGreevy Clinic- 1 T-1
- Sioux Falls, SD Avera McKennan Hospital & University Health Center- 2 X Gig-E
- Tyler, MN; Tyler Healthcare Center/Avera
- Yankton, SD; Avera Sacred Heart Hospital- 4 T-1s & adding a DS-3 for redundancy

In addition to enhancing current Teleradiology services, five rural and frontier sites will also be adding services.

New Avera Health teleradiology sites are listed below

- Lake Andes, SD; Avera St. Benedict Certified Rural Health Clinic- VPN
- Parkston, SD; Avera St. Benedict Health Center- T-1 to 2 T-1s
- Platte, SD; Platte Health Center/Avera Health- adding 2 T-1s
- Wagner, SD; Wagner Community Memorial Hospital- adding 2 T-1s
- Wessington Springs, SD; Avera Weskota Memorial Medical Center- adding 2 T-1s.

Improvements to Regional Health's network infrastructure will enhance their teleradiology services.

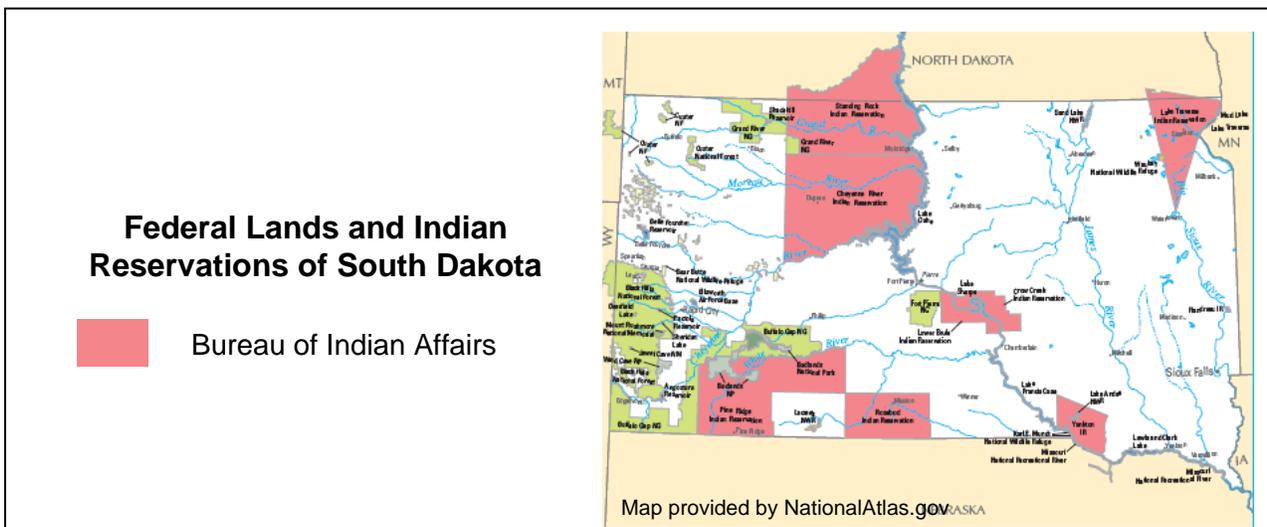
Regional Health Facilities Utilizing Teleradiology Services

- Belle Fourche, SD; Belle Fourche Regional Medical Clinic- 1 T-1 to 10 M ethernet
- Custer, SD; Custer Regional Hospital and Custer Regional Medical Center -3 M
- Deadwood, SD; Lead/Deadwood Regional Hospital -10M
- Edgemont, SD; Edgemont Regional Medical Clinic -DSL
- Philip, SD; Hans P.Peterson Memorial Hospital & Philip Clinic- T-1
- Rapid City, SD; Family Practice Residency Clinic- 10M
- Rapid City, SD; Rapid City Regional Hospital-10M
- Rapid City, SD; Regional Medical Clinic-Cardiology & Cardiac Surgery -Fiber
- Rapid City, SD; Regional Medical Clinic-Neurosurgery-Fiber
- Rapid City, SD; Regional Medical Clinic-Pulmonology- Fiber
- Spearfish, SD; Spearfish Regional Hospital & Spearfish Regional Medical Clinic 10 M
- Sturgis, SD; Sturgis Regional Hospita-10M

## **Appendix F – List of Facilities Serving Native Americans**

## List of HUBNet Facilities Directly Serving Reservation Communities

<b>Reservation</b>	<b>City</b>	<b>Distance from Reservation</b>	<b>Facility</b>
<b>Rosebud</b>	Mission	0 miles	Dakota Network Clinic
	White River	12 miles	Dakota Network Clinic
<b>Pine Ridge</b>	Martin	0 miles	Dakota Network Clinic
	Kadoka	5 miles	Regional Health Clinic
	Philip	20 miles	Regional Health Hospital
<b>Crow Creek</b>	Chamberlain	8 miles	Avera Health Clinic
	Highmore	20 miles	Dakota Network Clinic
	Wessington	23 miles	Avera Health Hospital, Dakota
	Springs		Network Clinic
<b>Yankton</b>	Lake Andes	0 miles	Avera Health Clinic
	Wagner	0 miles	Avera Health Hospital
<b>Sisseton</b>	Waubay	0 miles	Avera Health Clinic
	Wilmot	2 miles	Avera Health Clinic
	Webster	2 miles	Avera Health Clinic
	Britton	20 miles	Avera Health Hospital and Clinic
	Sisseton	0 miles	Coteau des Prairies Hospital
<b>Standing Rock</b>	McIntosh	0 miles	Dakota Network Clinic
	Isabel	0 miles	Dakota Network Clinic
	Lemmon	5 miles	Regional Health Hospital
	Selby	15 miles	Avera Health Clinic
<b>Cheyenne</b>	Faith	0 miles	Dakota Network Clinic
	Eagle Butte	0 miles	Dakota Network Clinic
<b>Fort Berthold</b>	Halliday	20 miles	Dakota Network Clinic
	Beulah	20 miles	Dakota Network Clinic



## **Appendix G - Letters of Support**

**Additional Letters of Support on File at Avera Health Letters from South Dakota's Congressional Delegation (Senator John Thune, Senator Tim Johnson, and Representative Herseth-Sandlin) have been sent directly to the FCC Chairman.**

**Attached Letters Include:**

**South Dakota Governor, Mike Rounds**

**Aberdeen Area Indian Health Services**

**South Dakota Public Utilities Commission**

**Community HealthCare Association of the Dakotas**

**St. Mary's HealthCare Center, Pierre, SD**

**South Dakota Department of Health**

**South Dakota Healthcare Commission**

**South Dakota Association of Healthcare Organizations (SDAHO)**

**South Dakota State Medical Association**

**South Dakota Foundation for Medical Care**

***The South Dakota Quality Improvement Organization (QIO)***

**South Dakota Board of Pharmacy**

**Great Plains Telehealth Resource and Assistance Center**

**Family Medicine Residency Program, Rapid City Regional  
Hospital**

**Prairie Lakes Hospital, Watertown, SD**

**Madison Community Hospital, Madison, SD**

**Congressman Adrian Smith, 3rd District, Nebraska**

**Congressman Collin Peterson, 7<sup>th</sup> District, Minnesota**

**Congressman Steve King, 5th District, Iowa**

**Minnesota Department of Health, Minnesota FCC Pilot Project**

**Iowa Hospital Association, Iowa FCC Pilot Project**



STATE OF SOUTH DAKOTA  
M. MICHAEL ROUNDS, GOVERNOR

April 24, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 West Avera Drive  
Sioux Falls, SD 57108

Dear Jim:

I am pleased to offer my strong support for the Heartland Unified Broadband Network (HUBNet) project and accompanying application to the Rural Health Care Support Mechanism Pilot Program. HUBNet seeks to construct a robust, secure, interconnected broadband network which would link healthcare facilities in rural, frontier and underserved areas throughout South Dakota, parts of North Dakota, Iowa, Nebraska and Minnesota. The three network partners, Regional Health, Avera Health and the Dakota Network, offer health care services to individuals from border to border across our great state. Linking these organizations, and including other South Dakota health providers in 2008, will bring us closer to realizing our goal of a statewide broadband network dedicated to health care.

HUBNet, which proposes to enhance public and non-profit health care providers' access to telecommunication and information services through a robust, secure, broadband network, is a very timely project for this area. Right now, the majority of South Dakota is considered rural or frontier and many counties have been federally designated medically underserved areas (MUAs). In these MUAs, there is a large disparity in the access to healthcare between rural and urban citizens. The HUBNet project is in direct alignment with statewide efforts and goals related to eliminating these disparities. The project will provide the tools rural facilities need to increase access to more specialized healthcare through telehealth, enhance disaster response communications, and provide a uniform medical record system compiling medical information on 70 percent of patients in South Dakota. By impacting 1.45 million people and 310 healthcare facilities, the project's wide breadth will provide considerable benefit to many rural healthcare centers.

I am very encouraged by the interest Avera Health has shown in the advancement of rural healthcare facilities around the region and offer any assistance I can provide. I believe the HUBNet project will increase the much needed connectivity in the state and serve as an important tool in the ultimate goal to provide the best healthcare to every individual, no matter how remote the location. The connections made by this network will not only link facility to facility, but more importantly, person to person.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Michael Rounds".

M. Michael Rounds



DEPARTMENT OF HEALTH & HUMAN SERVICES

---

April 15, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

Subject: Rural Health Care Pilot Program

Dear Jim:

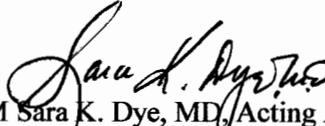
I am writing to express my support for the Heartland Unified Broadband Network (HUBNet) project, and your application to the Federal Communications Commission's Rural Health Care Pilot Program. Aberdeen Area Indian Health Services is in support of this project.

Aberdeen Area IHS looks forward to continued talks related to how we can participate in HUBNet. It is our hope that we can formally participate in your project in Year Two. We are currently conducting detailed assessments of our network infrastructure needs. The Aberdeen Area Office in Aberdeen, South Dakota, works in conjunction with its 13 Service Units to provide health care to approximately 94,000 Indians on reservations located in North Dakota, South Dakota, Nebraska, and Iowa. The Area Office's service units include nine hospitals, eight health centers, two school health stations, and several smaller health stations and satellite clinics. The health care facilities are predominantly in isolated, frontier areas.

Partnering with Avera Health, Regional Health, and the Dakota Network is a logical step, as many of our health care facilities are physically located near their facilities. Additionally, the possibility of a future shared electronic medical record is very exciting. Many Native Americans are very transitory and live on and off the reservations throughout their lives as circumstances such as education and jobs dictate. Because of this, continuity of care for Native Americans is a challenge that a shared electronic medical record could address. Additionally, as many of the IHS health care facilities are in very rural and frontier areas, many have very limited, or no connectivity and network infrastructure.

I looked forward to working with you in the future as a HUBNet participant. It is my hope that IHS can eventually secure FCC support for our telecommunication and information system infrastructure. I hope that the FCC will fund this project that has the potential to impact health care providers serving the most vulnerable and medically underserved residents of the nation.

Sincerely,

  
RADM Sara K. Dye, MD, Acting Area Director  
Aberdeen Area Indian Health Service



Dustin Johnson, Chair  
Gary Hanson, Vice Chair  
Steve Kolbeck, Commissioner

## SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

500 East Capitol Avenue  
Pierre, South Dakota 57501-5070  
[www.puc.sd.gov](http://www.puc.sd.gov)

Capitol Office  
(605) 773-3201  
(605) 773-3809 fax

Warehouse  
(605) 773-5280  
(605) 773-3225 fax

Consumer Hotline  
1-800-332-1782

April 25, 2007

Jim Veline, Senior Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Rural Health Care Pilot Program

Dear Mr. Veline:

The South Dakota Public Utilities Commission is pleased to extend its support to the Avera Health application to the Federal Communications Commission's Rural Health Care Support Mechanism Pilot Program. The proposed project, the Heartland United Broadband Network, has well-defined goals that seek to improve the lives of many South Dakotans through advanced telehealth technology.

We understand HUBNet will join together three of the state's leading healthcare providers – Avera Health, Regional Health and the Dakota Network – to link urban medical centers to rural healthcare facilities. These participants were wisely chosen in that their combined locations serve the vast majority of South Dakota.

The results of such a system are valuable and plentiful. With HUBNet, South Dakota's rural residents would no longer need to travel great distances to be served by a specialist; physicians could more effectively communicate by using interoperable electronic medical records; and complex, emergency procedures could be done during critical times rather than be delayed while the patient is transported to a larger facility.

The development and deployment of HUBNet will lay the foundation for extensive telehealth and data sharing activities that can only improve the quality of life for our state's residents. We look forward to the successful implementation of HUBNet.

Sincerely,

Dusty Johnson  
Chairman

Gary Hanson  
Vice Chairman

Steve Kolbeck  
Commissioner

North Dakota

1003 East Interstate Avenue, Ste 6  
Bismarck, ND 58503

Phone: (701) 221-9824  
Fax: (701) 221-0615

# CHAD

Community HealthCare  
Association of the Dakotas

South Dakota

1400 West 22nd Street  
Sioux Falls, SD 57105-1570

Phone: (605) 357-1515  
Fax: (605) 357-1510

April 16, 2007

Jim Veline, Sr. Vice President/CIO  
3900 W. Avera Drive  
Sioux Falls, SD 57108

Dear Mr. Veline

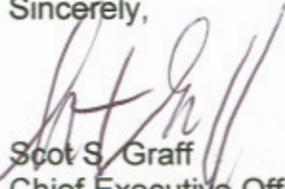
I am pleased to write a letter of support for the Heartland Unified Broadband Network (Hubnet) as submitted by Avera Health on behalf of the partners Regional Health and Dakota Network of Community Health Centers. The Community HealthCare Association of the Dakotas, Inc. (CHAD) is the State Primary Care Association (PCA), representing the Community Health Centers (CHC) in North and South Dakota.

The HUBnet pilot will help public and non-profit health care providers access telehealth and telemedicine services including utilizing advanced telecommunications and information services delivered through a secure, robust interconnected broadband network. This is a fantastic opportunity for the CHAD Community Health Center membership participating in the Dakota Network. The ability for the HUBnet partners to connect to a national backbone dedicated to health care will enhance communication, transmission of data, increase access to specialty services and facilitate region-wide disaster preparedness coordination.

The CHAD looks forward to working with its members through the Dakota Network in the HUBnet Pilot improving access to telehealth technologies.

Please feel free to contact me for more information.

Sincerely,

  
Scot S. Graff  
Chief Executive Officer



[www.communityhealthcare.net](http://www.communityhealthcare.net)

# St. Mary's Healthcare Center

April 30, 2007

Jim Veline  
Sr. Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program  
W.C. Docket No. 02-60

Dear Mr. Veline:

St. Mary's Healthcare Center is very pleased to offer our support for the HUBNet application to the FCC's Rural Health Care Pilot Program. St. Mary's frequently partners with Avera Health, Regional Health, and the Dakota Network of Community Health Centers.

St. Mary's supports the HUBNet goal of increased interconnectivity and utilization of telecommunications services. St. Mary's is very supportive of the statewide collaboration. In particular, we are excited about the future ability to share electronic patient data. **If the HUBNet project is funded, St. Mary's is interested in fully participating in Year 2.**

All of St. Mary's Healthcare Center's facilities are rural. Connectivity between St. Mary's and the HUBNet partners would help ensure that our facilities can keep pace with technology, as well as provide a better continuum of care for patients in South Dakota.

Sincerely,



Chad Cooper  
President/CEO  
St. Mary's HealthCare Center



**OFFICE OF THE  
SECRETARY**

600 East Capitol Avenue  
Pierre, South Dakota 57501-2536  
605/773-3361 FAX: 605/773-5683  
[www.state.sd.us/doh](http://www.state.sd.us/doh)

May 4, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 West Avera Drive  
Sioux Falls, SD 57108

Dear Jim:

I am writing in support of Avera Health's application to the Federal Communications Commission for a grant under the Rural Health Care Support Mechanism Pilot Project.

As I understand it, the goal of your Heartland Unified Broadband Network (HUBNet) is to build a secure, robust broadband network that will connect rural facilities across the region. This connection will allow for shared electronic health records and access to telehealth services. From a disaster preparedness and response standpoint, this interconnectivity is essential to participation in local, regional and national disaster response as well as accomplishing the overarching goal of improving coordination of responses to crisis situation. The Department of Health is certainly supportive of your efforts to provide rural facilities with the resources to better serve their communities and prepare for disasters and health care emergencies.

I wish you success in your efforts to obtain funding and look forward to hearing of your progress on this important issue.

Sincerely,

A handwritten signature in black ink, reading "Doneen B. Hollingsworth". The signature is written in a cursive style.

Doneen B. Hollingsworth  
Secretary of Health

401 West Glynn Drive  
Parkston, SD 57366-9606  
St. Benedict Hospital 605-928-3311  
Bormann Manor 605-928-3384  
St. Benedict Assisted Living 605-928-3561  
Wellness Center 605-928-4410

[www.averastbenedict.org](http://www.averastbenedict.org)

April 15, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

Subject: Rural Health Care Pilot Program

Dear Jim:

The South Dakota Health Care Commission is happy to extend its support to the Heartland Unified Broadband Network (HUBNet) project, proposed through Avera Health's application to the Rural Health Care Support Mechanism Pilot Program. Of particular interest to our Commission are the sections of the project which address electronic health records and access to healthcare. We feel that this project would significantly enhance the practice of medicine and provide South Dakota's rural and frontier healthcare facilities the resources they so desperately need.

The HUBNet project seeks to provide interconnectivity to rural and urban healthcare facilities across the region by first linking the following organizations: Avera Health, Regional Health, and the Dakota Network. The combined service area of these three project partners spans South Dakota, parts of North Dakota, Wyoming, Iowa, Minnesota, and Nebraska. These partners have served as leaders in the implementation of technological advancements across the region and are once again at the forefront of this exciting change. By increasing connectivity between the rural healthcare facilities, we are confident that important healthcare resources will be improved. One important development is ability to create a master patient index, which will allow doctors to improve communication and increase efficiency of care. Another important aspect of the project is the increased access to telemedicine for rural facilities. By expanding bandwidth capacity, rural facilities will be able to provide a wider range of services, thus improving the local healthcare options for their patients.

Increasing the interconnectivity of regional facilities is very important to South Dakota. Again, the Commission is eager to extend its support and excited to see this project take flight.

Sincerely,



Gale Walker  
Chairman, South Dakota Health Care Commission



April 24, 2007

Jim Veline, Sr. Vice President/CIO  
Avera Health  
3900 W Avera Drive  
Sioux Falls SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program, W.C. Docket No. 02-60

Dear Mr. Veline:

The South Dakota Association of Healthcare Organizations is pleased to provide its support for your application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60). The proposed project, the Heartland Unified Broadband Network, HUBNET, will provide much needed broadband support to South Dakota's rural hospitals and clinics. As an advocate for the healthcare needs of our state, we see this initiative as a very positive and promising development in enhancing access to needed health care services in this most rural part of the country.

To date, most initial applications of healthcare IT in our state, including broadband communications, have been internal to the healthcare establishment. This has led to a significant disparity in the sophistication of health IT technology among urban and rural facilities. Allowing "healthcare to follow the patient" is viewed as the next frontier; however, in order to achieve this vision, both rural and urban facilities must have the necessary equipment and resources. HUBNET will help close the gap in this respect, bringing our rural and underserved communities up to speed. It will also help to bridge the divide between our regional healthcare providers, providing them with the necessary hardware to interact and leverage resources. This in turn will lead to better health care for the communities we serve.

We strongly support your project and its potential to improve access to healthcare information technology.

Sincerely,

A handwritten signature in black ink that reads 'David R. Hewett'. The signature is written in a cursive style with a long horizontal line extending to the right.

David R. Hewett  
President/CEO

DRH/mla

SOUTH  DAKOTA  
STATE MEDICAL ASSOCIATION  
*Values. Ethics. Advocacy.*

PO Box 7406  
Sioux Falls, SD 57117-7406  
605-336-1965  
Fax 605-336-0270  
www.sdsma.org

April 15, 2007

Kevin J. Martin, Chairman  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Subject: Rural Health Care Pilot Program

Dear Chairman Martin:

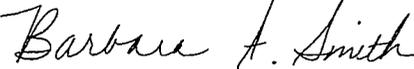
The South Dakota State Medical Association (SDSMA) is pleased to support Avera Health's application to the Federal Communications Commission's Rural Health Care Pilot Program. The proposed project will build a network between three of South Dakota's largest healthcare providers, providing our physicians and patients with greater access to quality health care. The Heartland Unified Broadband Network includes Avera Health, serving eastern South Dakota, Regional Health, serving western South Dakota, and the Dakota Network, a coalition of federally qualified community health centers spread throughout the state. This project has the potential to greatly impact clinical care in rural and frontier South Dakota and the surrounding states.

As the professional medical association representing nearly all physicians in South Dakota, we have a great interest in this project as it has the potential to help all physicians provide a higher quality of care for their patients. The project partners, Avera Health, Regional Health, and the Dakota Network, have a proven record in implementing technology. Each organization is making a tremendous commitment of resources in implementing an electronic medical records system with a master patient index. Furthermore, they have illustrated their commitment to telehealth through the extensive dedication of personnel and equipment. The proposed project will allow the three health systems to coordinate their efforts and build valuable connectivity and information exchange that will span the entire state.

The connectivity provided through the HUBNet will link 70% of South Dakota residents to advanced telemedicine applications such as remote intensive care monitoring, real-time teleradiology, and behavioral health consultations. Furthermore, it will lay the foundation for a statewide Master Patient Index and coordinated disaster response system. Ultimately, this means bringing advanced medicine and technology to the underserved areas of our very rural state, and improving the health care of all of our residents.

We sincerely hope you will fund this project.

Sincerely,

  
Barbara A. Smith  
Chief Executive Officers

Chief Executive Officer  
Barbara A. Smith

President  
P. Kenneth Aspaas, Jr., MD  
Sioux Falls

President-Elect  
Tony L. Berg, MD  
Winner

Vice President  
Charles E. Hart, MD, MS  
Rapid City

Secretary  
Cynthia A. Weaver, MD  
Rapid City

Treasurer  
Thomas J. Huber, MD  
Pierre

# Foundation for Medical Care

Street Address: 2600 West 49th Street, Suite 300 • Sioux Falls, SD 57105

Mailing Address: P.O. Box 7406 • Sioux Falls, SD 57117-7406

Phone: (605) 336-3505 • Fax (605) 373-0580

www.sdfmc.org

April 16, 2007

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Mr. Mark Schmidt  
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Aberdeen, SD

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Sioux Falls, SD

Gregory Wiedel, M.D.  
Huron, SD

Charles Yelverton, M.D.  
Vermillion, SD

Mr. Jim Veline, Senior Vice President/CIO  
Avera Health  
3900 West Avera Drive  
Sioux Falls, SD 57108

**SUBJECT: Rural Health Care Pilot Program**

Dear Jim:

I would like to extend our support for the Heartland Unified Broadband Network (HUBNet) project and application to the Federal Communications Commission's Rural Health Care Support Mechanism Pilot Program. Providing quality health care for all individuals has always been an important issue for South Dakota. This program serves an important function in bringing quality care to individuals living in rural South Dakota by expanding access through telehealth.

The proposed project brings together a core network of urban health care resources that will be linked to rural facilities around the region. The network combines Avera Health, which serves eastern South Dakota and surrounding areas, Regional Health, which serves western South Dakota and parts of Wyoming, and the Dakota Network, which serves areas throughout South Dakota and North Dakota. Once united, this network will be connected to rural health care facilities around the state, thus drastically increasing interconnectivity between urban and rural health care facilities and providing channels for them to easily exchange vital information. By moving toward a more connected health care system, the quality of care offered to rural communities will be significantly improved. Following implementation of this program, individuals who previously drove hours to receive specialized services, trauma patients desperately needing immediate attention, and health care professionals who need critical information from larger hospitals will receive the quality services they need through a broadband network with adequate redundancy.

All individuals deserve the right to have quality health care at their disposal. Because almost all of South Dakota is frontier or rural, many individuals suffer from lack of this necessary care. The program proposed here is a much needed component for expanding telehealth to rural areas and providing all individuals with the services they need. The project will provide the needed infrastructure to support a shared medical record. I strongly urge you to consider Avera Health's application on behalf of the HUBNet partners, and offer our unwavering support.

Sincerely,



Mark Hoven  
Chief Executive Officer

MH:sj



**DEPARTMENT  
OF HEALTH**

**SOUTH DAKOTA BOARD OF PHARMACY**

4305 S. LOUISE AVE.  
SUITE 104  
SIOUX FALLS, S.D 57106  
Phone: (605) 362-2737  
FAX: (605) 362-2738

May 4, 2007

Steve Statz  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

Dear Steve:

On February 13, 2007, a letter of Board support was address to Carolyn M. Clancy, M.D., Director, Agency for Healthcare Research and Quality, in support of Avera Health's grant application and their project that will test the ability of electronic prescribing with clinical decision support related to medication management: to improve the quality of patient care, and improve patient compliance in regard to medication management. It was my understanding this was to help the small rural areas that may be left behind for one reason or another.

It is the Board's understanding that Avera Health is now submitting a grant application for projectec costs to provide and install broadband intrastructure for Electronic Medical Record (EMR) systems transmission in its own facilities. Avera's pharmacists working in connected hospitals/pharmacies would view more complete patient records and share with other Avera partners using EMR. Eventually other partners and hea thcare facilities could be connected and share EMR information state wide. It is also our understanding that this EMR will have an electronic prescribing component. As stated in your letter to the Board members, the electronic prescribing only works when both the facility and the pharmacies are configured to receiving the information sent.

The Board is supportive of the use of electronic prescribing technology. The Board is supportive of the use of broadband technology for the transmission of EMR from facilities to pharmacies so pharmacists may better manage patient medication therapy. The Board would not support the use of this technology if it would prevent patients' free choice of pharmacies or exclude those pharmacies wishing to participate.

As your letter mentioned many urban retail pharmacies are waiting to be connected with healthcare facilities and share EMR information. Smaller pharmacies must be encouraged and helped with the cost of this technology and provided knowledge needed to participate.

Sincerely,

Dennis M. Jones, Pharmacist  
Executive Secretary  
South Dakota Board of Pharmacy



April 30, 2007

Jim Veline  
Sr. Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program,  
W.C. Docket No. 02-60

Dear Mr. Veline:

The Great Plains Telehealth Resource and Assistance Center (TRAC) is happy to extend our support to Avera Health's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Greater Minnesota Telehealth Broadband Initiative.

The charge of the Great Plains TRAC is to assist health care facilities and providers in their implementation and expansion of telehealth services within the region of Minnesota, South Dakota, North Dakota, Iowa and Nebraska. We understand the importance and value of establishing a more robust connection to the various telehealth networks across the region. Because patients regularly cross state borders to access their specialty care services, improving the overall access to quality health care services for the patients within our multi-state region is critical.

The creation of this secure broadband network will allow for increased utilization of telehealth, teleradiology, electronic patient records and other advanced information systems across the extended region.

The Great Plains TRAC is looking forward to providing whatever assistance we can to the HUBNet's participating facilities as they work to strengthen the availability of telehealth services to our region's citizens.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mary DeVany", written over a light-colored background.

Mary DeVany  
Program Director  
Great Plains TRAC

*Family Medicine Residency Program*

502 East Monroe Street Rapid City, SD 57701 (605) 719-4028 FAX (605) 719-4044 www.rcrhfmr.org

April 19, 2007

Jim Veline  
Senior Vice President/CIO  
Avera Health  
3900 W. Avera Drive

Subject: Rural Health Care Pilot Program

Dear Jim:

I am happy to support the Heartland Unified Broadband Network (HUBNet) project, and the proposal to the Federal Communications Commission's Rural Health Care Support Pilot Program. I have enjoyed being part of the project development team. This project is vital to improving access to health care services for rural residents in the project area.

As a faculty physician for the Rapid City Regional Hospital Family Medicine Residency Program, I know that building the information and telecommunications infrastructure in rural areas is vital. The residency program trains family physicians, some of whom will hopefully go on to practice in rural and frontier areas of South Dakota and neighboring western states. Recruitment to these areas is hampered by professional and informational isolation, but newer technologies can effectively reduce that isolation, making rural practice a more viable alternative.

In the future, rural physicians and their patients will have virtual access at any time to most of the resources their urban counterparts have. Applications like videoconferencing, remote intensive care units, and electronic medical records can make this possible. However, many of the rural communities endeavoring to recruit family physicians now, have far to go in this regard, and much progress to make. Support from the FCC pilot program can help these rural facilities make needed network infrastructure improvements to make a variety of telehealth applications possible. This technology fosters the ability of these communities to recruit and retain physicians, thus increasing access to care for their residents.

I sincerely hope that the FCC will fund this project. I look forward to continuing to serve on the project team, and sincerely believe in the project's mission.

Sincerely,



Brian Smith, M.D.

Faculty Physician

Rapid City Regional Hospital Family Medicine Residency

April 21, 2007

Jim Veline  
Sr. Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program,  
W.C. Docket No. 02-60

Dear Mr. Veline:

Prairie Lakes Healthcare System is excited to offer our support for Avera Health's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Heartland Unified Broadband Network, or HUBNet.

Over the years, Prairie Lakes has been a recipient of telehealth services (clinical and educational) provided through Avera Health. Currently, we are planning for expanding those services to include eICU® in partnership with Avera. We understand the benefits of being able to access specialty care at a distance.

However, these additional services also place a significant strain on our current network infrastructure. We support this project's goal of interconnectivity and increased utilization of telecommunications and information services among public and non-profit health care providers serving rural and frontier communities across our region.

Prairie Lakes Healthcare System is supportive of this state-wide collaboration. The creation of HUBNet as a secure, robust broadband network will allow for increased utilization of telehealth and other advance telecommunications and electronic health information technologies. These conversations have established a foundation for discussion of improved regional interconnectivity, the possibility of a regionally developed Master Patient Index, and improved disaster preparedness and crisis response.

We are an independent hospital and this project will assist our organization's ability to keep pace with technology opportunities and we look forward to being connected to the HUBNet in the future.

Sincerely,



Grant Tillett  
IT Director



**PRAIRIE LAKES**  
Healthcare System



# MADISON COMMUNITY HOSPITAL

917 NORTH WASHINGTON AVENUE · MADISON, SD 57042-1696 · (605)256-6551

---

April 21, 2007

Jim Veline  
Sr. Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program,  
W.C. Docket No. 02-60

Dear Mr. Veline,

Madison Community Hospital is excited to offer our support for Avera Health's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Heartland Unified Broadband Network, or HUBNet.

Over the years, Madison Community Hospital has received telehealth services provided through Avera Health. We have seen the positive impact to our patients and the benefits of being able to access specialty care at a distance. Unfortunately, the lines providing this connection (ISDN) are extremely expensive. This project will evaluate optimal network connections and, in the second year of this project, will expand connectivity to others. Madison Community Hospital is looking forward to the expansion discussions and being part of the plans being developed for the Year Two applications.

We are supportive of this state-wide collaboration to improve connectivity across our region. Through creation of this secure, robust broadband network, HUBNet will allow for increased utilization of telehealth and other advance telecommunications and electronic health information technologies across the extended region. Our on-going conversation have established a foundation for discussion of improved regional interconnectivity, the possibility of a regionally developed Master Patient Index, and improved disaster preparedness and crisis response.

We look forward to participating in this exciting project in the second year and being connected to the HUBNet in the future.

Sincerely,

Tamara Miller, CEO  
Madison Community Hospital

---

***In Touch With Life.***

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515**

May 3, 2007

Honorable Kevin J. Martin  
Chairman  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

RE: Rural Health Care Pilot Program, W.C. Docket No. 02-60

Dear Chairman Martin:

I am writing to bring to your attention an application for a \$2,111,000.00 grant submitted by Avera Health which serves rural communities in Nebraska, Iowa, Minnesota, South Dakota, North Dakota and Wyoming.

If I can be of any assistance as you review this application, please do not hesitate to contact me or Ms. Bonna Wanek of my Grand Island office.

Sincerely,



ADRIAN SMITH  
Member of Congress

AMS/bw

cc: Commissioner Michael J. Copps  
Commissioner Jonathan S. Adelstein  
Commissioner Deborah Taylor Tate  
Commissioner Robert M. McDowell

COLLIN C. PETERSON  
7TH DISTRICT, MINNESOTA

COMMITTEE ON AGRICULTURE  
CHAIRMAN

CONGRESS OF THE UNITED STATES  
HOUSE OF REPRESENTATIVES  
WASHINGTON, DC 20515

2211 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
TELEPHONE: (202) 225-2165  
FAX: (202) 225-1593  
INTERNET: [www.house.gov/collinpeterston](http://www.house.gov/collinpeterston)

May 4, 2007

Kevin J. Martin  
Chairman  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Subject: Rural Health Care Pilot Program

Dear Chairman Martin:

I am writing in support of Avera Health's application to the Rural Health Care Support Mechanism Pilot Program (W.C. Docket No. 02-60).

Avera Health would like to construct a secure, robust broadband network, linking their rural health facilities in Minnesota, South Dakota, Iowa, North Dakota, Nebraska, and Wyoming. Although only fifteen Minnesota facilities are directly involved, this project will impact several hundred Minnesota facilities through the cable-link between Avera Health and the Minnesota healthcare facilities broadband network. Linking up these facilities will have a positive impact in Minnesota and in the other five states.

By building the needed infrastructure in our rural and frontier communities this project will create greater access to more sophisticated health care technology for rural patients. This new network will leverage existing health care technologies and expertise, and expand the IT capacity in all rural facilities. It will also lay the groundwork for a master patient index, providing an electronic medical record that follows the patient throughout the area, and eventually, throughout the nation.

Thank you for your consideration Avera Health's Rural Health Care Support Mechanism Pilot Project.

Sincerely,



Collin C. Peterson  
Member of Congress

DISTRICT OFFICES

714 LAKE AVENUE  
SUITE 107  
DETROIT LAKES, MN 56501  
(218) 847-5056  
FAX: (218) 847-5109

1420 EAST COLLEGE DRIVE  
SW/WC  
MARSHALL, MN 56258  
(507) 537-2299  
FAX: (507) 537-2298

MN WHEAT GROWERS BUILDING  
2603 WHEAT DRIVE  
RED LAKE FALLS, MN 56750  
(218) 253-4356  
FAX: (218) 253-4373

CENTRE POINT MALL  
320 4TH STREET SW  
WILLMAR, MN 56201  
(320) 235-1061  
FAX: (320) 235-2651

# Congress of the United States

House of Representatives

Washington, DC 20515-1505

JUDICIARY

AGRICULTURE

SMALL BUSINESS

May 3, 2007

Mr. Kevin J. Martin, Chairman  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, D.C. 20554



RE: Avera Health's Application to the Rural Health Care Support Mechanism Pilot Program

Dear Chairman Martin:

I would like to bring your attention to the Heartland Unified Broadband Network (HUBNet) project and also for Avera Health's application to the Rural Health Care Support Mechanism Pilot Program. HUBNet seeks to increase interconnectivity between urban and rural facilities by developing a sustainable network infrastructure through a robust, secure broadband network. HUBNet believes that this project will significantly enhance the practice of medicine and provide the region rural and frontier healthcare facilities resources.

Iowa will be directly impacted by the implementation of HUBNet, as eleven of our hospitals and clinics are involved in the project. HUBNet has promised increased interconnectivity and data sharing opportunities, as well as enhanced services for rural Iowans. These services include: increasing access to more specialized healthcare, providing more immediate critical care, enhancing disaster response communications, and providing the platform for an interoperable electronic medical record.

I hope that you will give their application your consideration. I recognize the benefit of expanding telehealth to rural areas of the state and I am happy to see the health of rural communities better served.

Sincerely,

A dark, ink-like handwritten signature that appears to read 'Steve King'.

Steve King  
Member of Congress

SK\pas

Cc: Commissioner Michael J. Copps  
Cc: Commissioner Jonathon S. Adelstein  
Cc: Commissioner Deborah Taylor Tate  
Cc: Commissioner Robert M. McDowell



April 22, 2007

Jim Veline  
Sr. Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program, W.C.  
Docket No. 02-60

Dear Mr. Veline:

The Minnesota Department of Health's Office of Rural Health extends its support for Avera Health's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Heartland Unified Broadband Network, or HUBNet.

Avera Health has been a significant contributor to discussions on telehealth coordination between Minnesota, South Dakota, and neighboring states. They have been a pioneer in developing solutions that maintain health care access in the region. The goal of their proposed project, to increase utilization of telecommunications and information services among public and non-profit health care providers serving rural and frontier communities across South Dakota, and portions of North Dakota, Iowa, Minnesota and Nebraska, aligns with goals of the Greater Minnesota Telehealth Initiative application. The ongoing dialogue between the Minnesota and Avera project will assure continued regional coordination.

The HUBNet and the Greater Minnesota Telehealth Broadband Initiative's secure, robust broadband networks will allow for increased utilization of telehealth and other advance telecommunications and electronic health information technologies across the extended region.

We look forward to working with the Avera, the HUBNet and broadly in telehealth system development in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "MS", is positioned below the word "Sincerely,".

Mark Schoenbaum, Director  
Office of Rural Health & Primary Care  
Minnesota Department of Health  
P.O. Box 64882  
St. Paul, MN 55164-0882



May 1, 2007

Jim Veline  
Sr. Vice President/CIO  
Avera Health  
3900 W. Avera Drive  
Sioux Falls, SD 57108

RE: Federal Communications Commission, Rural Health Care Pilot Program, W.C. Docket No. 02-60

Dear Mr. Veline:

The Iowa Hospital Association on behalf of the Iowa Rural Health Telecommunications Program, a consortium of 97 Iowa hospitals, acknowledges Avera Health's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Heartland Unified Broadband Network, or HUBNet.

Five Iowa hospitals are part of Avera Health and are participating in the Iowa Rural Health Telecommunications Program. Broadband connectivity between the five Iowa hospitals and Avera McKennan Hospital & University Health Center in Sioux Falls, South Dakota aligns with the purpose and goals of each of our proposals and calls for coordinating and linking the efforts in not only South Dakota and Iowa but also in other neighboring states. Ongoing dialogue between the Iowa and Avera projects will assure continued regional coordination.

The secure, robust broadband networks of HUBNet and the Iowa Rural Health Telecommunications Program will allow for increased utilization of telehealth, telemedicine and other advance telecommunications and electronic health information technologies across the upper mid-west region.

We look forward to working with the Avera, the HUBNet and other neighboring states in coordinating the development and linking broadband networks across the upper Midwest in the future.

Sincerely,

A handwritten signature in black ink that reads 'Art Spies'.

Art Spies  
Senior Vice President



# HUBNet Partners

*Partners*

## Avera

228 health care facilities in  
SD, IA, NE, MN, and ND

## Regional Health

47 facilities in SD and WY

## Dakota Network

35 facilities in SD and ND

