EXHIBIT 5

ATTACHMENT 1

Rural Health Care Division
www.usac.org/rhc
1-800-453-1546

COMMITMENT ADJUSTMENT LETTER

May 6, 2015

Ms. Angela Schneider
Iowa Communications Network
400 East 14th Street
Des Moines, Iowa 50319

Dear Ms. Schneider:

Our routine review of Rural Health Care (RHC) program funding commitments revealed applications in which funds were committed in error or in violation of program rules. USAC must now adjust the funding commitments and recover the funds. The attached Funding Commitment Report includes a list of the Funding Request Number(s) (FRNs) for the health care provider (HCP) for which adjustment is necessary. The HCP mailing contact is also being notified so you may work with them to implement this adjustment.

If the Funds Disbursed to Date amount exceeds your Adjusted Funding Commitment amount, USAC will have to recover some or all of the funds disbursed. If the Funds Disbursed to Date amount is less than the Adjusted Funding Commitment amount, USAC will continue to process properly filed invoices up to the Adjusted Funding Commitment amount. To remit payments, please review the payment addresses below and use the attached Payment ID Worksheet to identify the payment amount and reason for return.

If you wish to appeal this decision, you may file an appeal with USAC. The appeal **must be submitted to USAC within 60 days of the date of this letter**. Parties seeking waivers of FCC rules can appeal directly to the FCC. See 47 CFR Sections 54.719 and 720. Detailed instructions for filing appeals are available at: http://www.usac.org/rhc/about/program-integrity/appeals.aspx.

If you have questions or need help, you may call the Customer Service Support Center at 1-800-453-1546.

Sincerely,

/USAC

Attachments

Copy to: Art Spies, Project Coordinator – Iowa Hospital Association

Payment Addresses

U.S. Postal Service/Standard Mail for Payments:	USAC P.O. Box 105056 Atlanta, GA 30348-5056
Courier/Overnight Packages:	USAC c/o Bank of America (105056) 1075 Loop Road Atlanta, GA 30337 404.209.6377
ACH Payments:	Should be sent in a CCD+ format to ABA Routing #071000039, Account #5590045653
Wire Transfers:	Bank Name: Bank of America Location: 100 West 33rd Street, New York, NY 10001 Bank ABA Routing Number: 026009593 Bank Account Number: 5590045653 Account Type: DDA Account Name: UNIVERSAL SERVICE ADMINISTRATIVE COMPANY

More payment instruction information can be found at: http://www.usac.org/cont/making-payments/payment-instructions.aspx.

A Guide to the Funding Commitment Report

- Funds to be Recovered: This represents the amount of Funds Disbursed to Date that exceeds the Adjusted Funding Commitment amount. These funds will have to be recovered.
- Funds Disbursed to Date: This represents the total funds which have been paid up to now to the identified service provider for this FRN.
- Adjusted Funding Commitment: This represents the adjusted total amount of funding that RHCD has committed to this FRN. If this amount exceeds the Funds Disbursed to Date, RHCD will continue to process properly filed invoices up to the new commitment amount.
- Funding Request Number (FRN): An FRN is assigned by the RHCD to each Funding Commitment Letter. This number is used to report to applicants and service providers the status of funding requests for all RHC Programs.
- Service Provider Identification Number (SPIN): A unique number assigned by USAC identify service providers seeking payment from universal service fund programs.
- Billing Account Number (BAN): The account number your service provider has established with you for billing purposes, if any.

Rural Health Care Division
www.usac.org/rhc
1-800-453-1546

Funding Commitment Report

HCP 17226 (Iowa Hospital Association)

Funding Year:	2009
Applicant:	Iowa Rural Health Telecommunications Program
HCP Contact Person:	Art Spies
RHC Program:	Pilot Program

Funding Request Number(s):	64723
SPIN:	143003005
Service Provider Name:	Iowa Communications Network
Services Ordered:	Meshed Ethernet services
Billing Account Number:	

Original Funding Commitment:	$ 29,261.25
Adjusted Funding Commitment	$ 743.75
Funds Disbursed to Date:	$ 28,517.50
Funds to be Recovered:	**$ 28,517.50**

Funding Commitment Adjustment Explanation:

Recovery sought pursuant to Audit RH2013PP018 competitive bidding violation audit finding.

PLEASE SEND A COPY OF THIS PAGE WITH YOUR CHECK TO ENSURE TIMELY PROCESSING

Rural Health Care Division
www.usac.org/rhc
1-800-453-1546

Funding Commitment Report

HCP 17226 (Iowa Hospital Association)

Funding Year:	2009
Applicant:	Iowa Rural Health Telecommunications Program
HCP Contact Person:	Art Spies
RHC Program:	Pilot Program

Funding Request Number(s):	68296
SPIN:	143003005
Service Provider Name:	Iowa Communications Network
Services Ordered:	Meshed Ethernet services
Billing Account Number:	

Original Funding Commitment:	$ 350,180.03
Adjusted Funding Commitment	$ 0.00
Funds Disbursed to Date:	$ 350,180.03
Funds to be Recovered:	**$ 350,180.03**

Funding Commitment Adjustment Explanation:

Recovery sought pursuant to Audit RH2013PP018 competitive bidding violation audit finding.

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ATTACHMENT 2

Rural Health Care Division
www.usac.org/rhc
1-800-453-1546

COMMITMENT ADJUSTMENT LETTER

May 6, 2015

Mr. Tony Crandell
Access Integration Specialists
501 North Walnut Street
Lamoni, Iowa 50140

Dear Mr. Crandell:

Our routine review of Rural Health Care (RHC) program funding commitments revealed applications in which funds were committed in error or in violation of program rules. USAC must now adjust the funding commitments and recover the funds. The attached Funding Commitment Report includes a list of the Funding Request Number(s) (FRNs) for the health care provider (HCP) for which adjustment is necessary. The HCP mailing contact is also being notified so you may work with them to implement this adjustment.

If the Funds Disbursed to Date amount exceeds your Adjusted Funding Commitment amount, USAC will have to recover some or all of the funds disbursed. If the Funds Disbursed to Date amount is less than the Adjusted Funding Commitment amount, USAC will continue to process properly filed invoices up to the Adjusted Funding Commitment amount. To remit payments, please review the payment addresses below and use the attached Payment ID Worksheet to identify the payment amount and reason for return.

If you wish to appeal this decision, you may file an appeal with USAC. The appeal **must be submitted to USAC within 60 days of the date of this letter**. Parties seeking waivers of FCC rules can appeal directly to the FCC. See 47 CFR Sections 54.719 and 720. Detailed instructions for filing appeals are available at: http://www.usac.org/rhc/about/program-integrity/appeals.aspx.

If you have questions or need help, you may call the Customer Service Support Center at 1-800-453-1546.

Sincerely,

/USAC

Attachments

Copy to: Art Spies, Project Coordinator – Iowa Hospital Association

Payment Addresses

U.S. Postal Service/Standard Mail for Payments:	USAC P.O. Box 105056 Atlanta, GA 30348-5056
Courier/Overnight Packages:	USAC c/o Bank of America (105056) 1075 Loop Road Atlanta, GA 30337 404.209.6377
ACH Payments:	Should be sent in a CCD+ format to ABA Routing #071000039, Account #5590045653
Wire Transfers:	Bank Name: Bank of America Location: 100 West 33rd Street, New York, NY 10001 Bank ABA Routing Number: 026009593 Bank Account Number: 5590045653 Account Type: DDA Account Name: UNIVERSAL SERVICE ADMINISTRATIVE COMPANY

More payment instruction information can be found at: http://www.usac.org/cont/making-payments/payment-instructions.aspx.

A Guide to the Funding Commitment Report

- Funds to be Recovered: This represents the amount of Funds Disbursed to Date that exceeds the Adjusted Funding Commitment amount. These funds will have to be recovered.
- Funds Disbursed to Date: This represents the total funds which have been paid up to now to the identified service provider for this FRN.
- Adjusted Funding Commitment: This represents the adjusted total amount of funding that RHCD has committed to this FRN. If this amount exceeds the Funds Disbursed to Date, RHCD will continue to process properly filed invoices up to the new commitment amount.
- Funding Request Number (FRN): An FRN is assigned by the RHCD to each Funding Commitment Letter. This number is used to report to applicants and service providers the status of funding requests for all RHC Programs.
- Service Provider Identification Number (SPIN): A unique number assigned by USAC identify service providers seeking payment from universal service fund programs.
- Billing Account Number (BAN): The account number your service provider has established with you for billing purposes, if any.

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Funding Commitment Report

HCP 17226 (Iowa Hospital Association)

Funding Year:	2009
Applicant:	Iowa Rural Health Telecommunications Program
HCP Contact Person:	Art Spies
RHC Program:	Pilot Program

Funding Request Number(s):	41446
SPIN:	143033620
Service Provider Name:	Access Integration Specialists
Services Ordered:	Quality assurance inspection services
Billing Account Number:	

Original Funding Commitment:	$ 142,290.00
Adjusted Funding Commitment	$ 0.00
Funds Disbursed to Date:	$ 142,290.00
Funds to be Recovered:	**$ 142,290.00**

Funding Commitment Adjustment Explanation:

Recovery sought pursuant to Audit RH2013PP018 competitive bidding violation audit finding.

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Rural Health Care Division
www.usac.org/rhc
1-800-453-1546

Funding Commitment Report

HCP 17226 (Iowa Hospital Association)

Funding Year:	2009
Applicant:	Iowa Rural Health Telecommunications Program
HCP Contact Person:	Art Spies
RHC Program:	Pilot Program

Funding Request Number(s):	63145
SPIN:	143033620
Service Provider Name:	Access Integration Specialists
Services Ordered:	Quality assurance inspection services
Billing Account Number:	

Original Funding Commitment:	$ 8,160.00
Adjusted Funding Commitment	$ 0.00
Funds Disbursed to Date:	$ 8,160.00
Funds to be Recovered:	**$ 8,160.00**

Funding Commitment Adjustment Explanation:

Recovery sought pursuant to Audit RH2013PP018 competitive bidding violation audit finding.

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ATTACHMENT 3

To: Craig Davis, Vice President, Rural Health Care Division

From: Wayne Scott, Vice President, Internal Audit Division

Date: September 5, 2014

Re: **Independent Auditor's Report on Iowa Rural Health Telecommunication Program's Compliance with Rural Health Care Pilot Program Rules (USAC Audit No. RH2013PP018)**

Introduction

The Universal Service Administrative Company (USAC) Internal Audit Division (IAD) performed an audit of Iowa Rural Health Telecommunications Program (Beneficiary), Health Care Provider (HCP) number 17226, for compliance with the regulations and orders governing the Rural Health Care Pilot Program, set forth in the *Pilot Program Selection Order*, [1] as well as other program requirements (collectively, the Rules). Compliance with the Rules is the responsibility of the Beneficiary's management. USAC IAD's responsibility is to express a conclusion on the Beneficiary's compliance with the Rules based on our audit.

The Beneficiary provides health care services within the states of Iowa and South Dakota.

Purpose and Scope

The purpose of our audit was to determine whether the Beneficiary complied with the Rules. We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS) issued by the Comptroller General of the United States (2011 Revision).[2] Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our objectives.[3] Our audit included examining, on a test basis, evidence supporting the type and amount of services received, as well as performing other procedures we considered necessary to form a conclusion. We believe

[1] *In the Matter of Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, FCC 07-198, 22 FCC Rcd 20360 (2007) (*Pilot Program Selection Order*).
[2] *See* U.S. Government Accountability Office, *Government Auditing Standards*, GAO-12-331G, § 6.56 (Rev. Dec. 2011).
[3] *See id*.

that the evidence obtained provides a reasonable basis for our findings and conclusions based on our objectives.

The following chart summarizes the Rural Health Care Pilot Program support amounts committed and disbursed to the Beneficiary for Funding Year 2009 (audit period):

Service Type	Amount Committed	Amount Disbursed
Network Equipment	$3,921,289	$3,738,216
Network Management Costs	$231,590	$231,590
Infrastructure and Outside Plant	$4,385,473	$4,379,252
Leased Facilities or Services	$1,379,478	1,240,789
Ethernet Services	$381,161	$378,698
Total	**$10,298,991**	**$9,968,545**

Note: The amounts committed and disbursed reflect funding year activity as of July 10, 2014.

The committed total represents 26 FCC Form 466-A applications with 26 Funding Request Numbers (FRNs). We selected thirteen FRNs, which represent $9,480,910 of the funds disbursed during the audit period, to perform the procedures enumerated below with respect to the Funding Year 2009 applications submitted by the Beneficiary.

Our procedures were performed to determine whether the Beneficiary complied with the Rules. For the purposes of this report, a finding is a condition that shows evidence of noncompliance with the Rules.

Conclusion

Based upon the test work performed, our examination disclosed that the Beneficiary did not comply with the Rules as set forth in the four audit findings discussed below. A summary of the procedures and results is included below.

Findings

- Service provider involvement in Beneficiary's competitive bidding process.
- Rural Health Care Pilot Program support used to fund ineligible participants.
- Beneficiary certified and service provider submitted invoices to USAC prior to collecting payment for the minimum 15 percent contribution from the Beneficiary.
- Beneficiary did not notify USAC and the FCC that the network project was not initiated within six months of the funding commitment letter (FCL).

Exceptions Taken and Recovery Action

Findings	Monetary Effect of Finding	USAC Recovery Action
#1 – Service provider involvement in Beneficiary's competitive bidding process.	$529,147	$529,147
#2 - Rural Health Care Pilot Program support used to fund ineligible participants.	$78,828	$78,828
#3 - Beneficiary certified and service provider submitted invoices to USAC prior to collecting payment for the minimum 15 percent contribution from the Beneficiary.	$0	$0
#4 – Beneficiary did not notify USAC and the FCC that the network project was not initiated within six months of the Funding Commitment Letter.	$0	$0
Total Net Monetary Effect	**$607,975**	**$607,975**

Audit Procedures, Findings, and Responses

A. Application Process

We obtained an understanding of the Beneficiary's processes relating to the Rural Health Care Pilot Program. Specifically, we obtained and examined documentation to support its effective use of funding and that adequate controls exist to determine whether funds were used in accordance with the Rules. We used inquiry and direct observation to determine whether the Beneficiary used funding as indicated in its Network Cost Worksheet (NCW).

We obtained and examined documentation to determine whether the Project Coordinator obtained Letters of Agency from the Beneficiary's network HCPs and/or the HCPs' health systems authorizing the Beneficiary's lead entity and/or Project Coordinator to act on their behalf, confirming the HCPs' agreement to participate in the network, and that the entities agree to avoid improper duplicate support for any HCPs participating in multiple networks.

We also obtained and examined the FCC Forms 466-A and the FCC Form 466-A Attachments to determine whether the Beneficiary identified the participating HCPs and documented the allocation of eligible costs related to the provision of health care services. We also obtained and examined the NCW to determine whether ineligible costs, if any, were identified and ineligible entities, if any, paid their fair share. We did not assess the reasonableness of any fair share amount since the Rules do not define what is considered reasonable.

B. Competitive Bid Process

We obtained and examined documentation to determine whether all bids for the managed Ethernet services received were properly evaluated. We used inquiry and examined documentation to determine whether the Beneficiary considered price and the non-cost factors including prior experience, personal qualifications, management capability, and environmental objectives (if appropriate). We obtained and examined documentation to determine whether no evaluation criteria was weighted higher than price but we did not assess the reasonableness of the weight assigned to the non-cost factors because the Rules do not define how to value the non-cost factors. We also obtained and examined evidence that the Beneficiary waited the required 28 days from the date the FCC Form 465 was posted on USAC's website before selecting or signing contracts with the selected service provider(s). We evaluated the services requested and purchased for cost-effectiveness as well.

We did not examine the competitive bid process as it relates to the Internet2 annual subscription services because the Rules provide a waiver of the competitive bidding requirements for such services.[1]

C. Eligibility

We used inquiry and direct observation, and obtained and examined documentation to substantiate that the Beneficiary's eligible HCPs were public or non-profit eligible health care providers. We also obtained and examined documentation to determine whether the Beneficiary connected more than a *de minimis* number of eligible rural HCPs. For the purposes of our audit, *de minimis* is defined as one since the Rules do not define *de minimis*. We verified that a *de minimis* number of eligible HCPs are located in a rural area and verified that the eligible HCPs' physical addresses were the same as listed on the applications. We verified through inquiry, and obtained and examined documentation to determine whether the entities participating in the Project were not funded by the Rural Health Care (RHC) Pilot Program for the same services funded by the RHC Primary Program or any other Universal Service support program.

We used inquiry and direct observation, and obtained and examined documentation to determine whether ineligible entities, if any, were properly reported on the FCC Form 465.

D. Invoicing Process

We obtained and examined invoices for which payment was disbursed by USAC to determine whether the services identified on the service provider invoices submitted to USAC and the corresponding service provider bills submitted to the Beneficiary were consistent with the terms and specifications of the service provider agreements. We also obtained and examined documentation to determine whether the Beneficiary

[1] *See Pilot Program Selection Order,* 22 FCC Rcd 20368, ¶ 20.

provided proper notice of the services' initiation to the FCC and USAC. In addition, we obtained and examined documentation to determine whether the Beneficiary paid its required 15 percent minimum contribution and that the required contribution was from eligible sources. We also obtained and examined documentation to determine whether the Project's disbursements did not exceed 85 percent of the total costs.

E. Reporting Process

We obtained and examined documentation to determine whether the Beneficiary timely submitted its quarterly reports to USAC and the FCC, and that the reports included the required information, including an update on the Beneficiary's Sustainability Plan. We obtained and examined the Sustainability Plan to determine whether it included the required content. We did not conclude on the reasonableness of the Sustainability Plan or whether the Project can meet or maintain the objectives described in the plan because the Rules do not define how to assess the reasonableness of the content included in the Sustainability Plan.

F. Health Care Provider Location

We verified through inquiry and observation that the services provided existed and were functional. We also verified through inquiry and observation that the supported services for eligible HCPs were used for purposes reasonably related to the provision of health care services and in accordance with the Rules.

Our audit findings, as well as the responses to the findings, are provided below. We have evaluated the validity of the Beneficiary's and service provider's (where applicable) responses to our findings, and our position on these issues remains unchanged.

Finding #1
Service Provider Involvement in Beneficiary's Competitive Bidding Process

Condition

IAD examined documentation, including the FCC Forms 465, Requests for Proposal (RFPs), bids received for the services solicited in the RFPs, and bid evaluation matrices to determine whether the Beneficiary complied with the Rules governing the competitive bidding process for FRNs 41446, 63145, 64723, and 68296. In addition, IAD inquired of the Beneficiary and examined documentation to obtain an understanding of the RFP development and bid evaluation process that was used for the Beneficiary's Rural Health Care Pilot Program (RHCPP) funded network.

The Beneficiary issued the following six RFPs for its RHCPP funded network:

(1) RFP 08-001 (Outside Plant Fiber) (USAC RFP#00);
(2) RFP 08-002 (Network and Site Electronics) (USAC RFP#01);
(3) RFP 09-002 (Quality Assurance Inspection Services) (USAC RFP # 02);
(4) RFP 10-001 (Broadband Lit services) (USAC RFP #03);
(5) RFP 12-004 (Outside Plant Fiber, Quality Assurance Inspection Services, and Network Electronics) (USAC RFP #05); and
(6) RFP 12-005 (Meshed Ethernet Bandwidth Connectivity) (USAC RFP #04).

For RFP 08-001 (USAC RFP#00), the Beneficiary also requested Quality Assurance Inspection Services but did not award a contract after evaluating the bids for those services.

The Beneficiary selected Iowa Communications Network (ICN) as the service provider for RFP 12-005 (USAC RFP #04) (FRNs 64723 and 68296) and selected Access Integration Specialists (AIS) to provide Quality Assurance Inspection Services for RFP 09-002 (USAC RFP # 02) (FRN 41446) and RFP 12-004 (USAC RFP #05) (FRN 63145).

The Beneficiary informed the Rural Health Care Program (RHCP) on May 29, 2008, that ICN assisted in the development of the RHC Pilot Program application to the FCC, assisted in the development of the RFPs, functioned as the project manager for the fiber build-out and electronics, and staffed and evaluated the bids received.[1] On June 29, 2009, the Beneficiary informed RHCP that ICN also assisted in the development of the initial and revised Quality Assurance Inspection Services RFPs 08-001 and 09-002.[2] The Beneficiary also explained that Tony Crandell (AIS) assisted with the request for proposal and bid evalution for the network plan when the Beneficiary prepared its application for the RHCPP in 2007.[3] The Beneficiary confirmed that Tony Crandell (AIS), Dave Swanson (ICN) and Art Spies (IRHTP) were the main persons responsible

[1] Email from Arthur Spies, IRHTP, to USAC (May 29, 2008).
[2] Memorandum from Arthur Spies to RHCP, "Use of Vendors as Consultants and Project Funding for QA Inspection Services RFP 002," (June 29, 2009).
[3] Memorandum from Art Spies, IRHTP, to USAC (Oct. 2, 2013).

for reviewing the bids received in response to the RFPs, but Tony Crandell was excluded from the bid evaluations for RFP 09-002 (USAC RFP # 02) and the quality assurance section of RFP 12-004 (USAC RFP #05) and Dave Swanson was excluded from the bid evaluation for RFP 12-005 (USAC RFP #04).[1] The Beneficary further confirmed that Tony Crandell (AIS) was not an employee with ICN, but has been contracted by ICN "over the last six years for various projects such as developing scopes of work for various ICN projects and ensuring ICN construction contractors met all of ICN and industry construction standards and practices."[2] IAD reviewed documentation from the Benficiary that indicates Art Spies (IRHTP), Dave Swanson (ICN) and/or Tony Crandell (AIS) were part of the Beneficiary's evaluation committee responsible for reviewing the bid responses to the six RFPs.[3]

IAD noted that Tony Crandell, owner of service provider, AIS, and a consultant to ICN, participated in the development of RFP 08-001 (USAC RFP#00), RFP 08-002 (USAC RFP#01), RFP 10-001 (USAC RFP #03), RFP 12-005 (USAC RFP #04), and sections of RFP 12-004 (USAC RFP #05) (outside plan dark fiber and network electronics sections).[4] In addition, Tony Crandell assisted in the evaluation of the service provider bids received for the aforementioned RFPs. IAD also noted that Dave Swanson, employee of ICN, participated in the development of RFP 08-001 (USAC RFP#00), RFP 08-002 (USAC RFP#01), RFP 09-002 (USAC RFP # 02), RFP 10-001 (USAC RFP #03), and RFP 12-004 (USAC RFP #05).[5] Mr. Swanson also assisted in the evaluation of the service provider bids received for the aforementioned RFPs.

AIS submitted two bids and was awarded contracts for the services solicited in RFP 09-002 (USAC RFP # 02) and the *Quality Assurance Services* section in RFP 12-004 (USAC RFP #05). IAD examined the contracts and noted that Tony Crandell (AIS) was also the key individual that provided consultation services during the Beneficiary's network development, which included assisting with the development of RFPs 08-001 (USAC RFP #00), 08-002 (USAC RFP #01), 10-001 (USAC RFP #03), 12-005 (USAC RFP #04), and sections of RFP 12-004 (USAC RFP #05). IAD also noted that quality assurance services were originally requested in RFP 08-001 (USAC RFP #00), but a contract was not awarded for the quality assurance services after the Beneficiary evaluated the bids received for RFP 08-001 (USAC RFP #00). Mr. Crandell was one of the bid evaluators for RFP 08-001 (USAC RFP #00) and assisted in the development of this RFP.[6]

ICN submitted a bid and was awarded a contract for the services solicited in RFP 12-005 (USAC RFP #04). ICN was also involved in the development of RFP 08-001 (USAC RFP #00), RFP 08-002 (USAC RFP #01), RFP 09-002 (USAC RFP #02), RFP 10-001

[1] Memorandum from Art Spies, IRHTP, to USAC (Mar. 13, 2014).
[2] Memorandum from Art Spies, IRHTP, to USAC (May 15, 2014).
[3] *See, e.g.*, Memorandum from Art Spies, IRHTP to USAC (Mar. 13, 2014).
[4] Memorandum from Art Spies, IRHTP, to USAC (May 15, 2014).
[5] *Id*.
[6] *Id*.

(USAC RFP #03), and RFP 12-004.[1] Dave Swanson (ICN) also assisted in the bid evalaution of the service provider bids received for these RFPs.

The first FCC Form 465 was for RFP 08-001 (USAC RFP#00) and it was submitted to the RHCP on July 28, 2008. The FCC Form 465 and the associated RFPs 08-001 (USAC RFP#00) and 08-002 (USAC RFP#01) were posted on USAC's website on July 31, 2008. As noted above, the Beneficiary informed the RHCP on May 29, 2008, that ICN assisted in the development of the RHC Pilot Program application to the FCC, assisted in the development of the RFPs, functioned as the project manager for the fiber build-out and electronics, and staffed and evaluated the bids received.[2] On June 29, 2009, the Beneficiary informed RHCP that ICN also assisted in the development of the initial and revised Quality Assurance Inspection Services RFPs 08-001(USAC RFP#00) and 09-002 (USAC RFP # 02).[3] The Beneficiary did not identify Tony Crandell or AIS as a participant in the Beneficiary's competitive bidding process in either the May 29, 2008 or the June 29, 2009 notification letter. However, the Beneficiary informed the RHCP of AIS's assistance in the development of the RFPs 10-001 (USAC RFP #03) and 12-004 (USAC RFP #05) and the evaluation of the bids received for those RFPs on April 11, 2011, and June 21, 2012, (which was after the competitive bidding process was completed and a service provider was selected).[4] In addition, the Beneficiary informed the RHCP on April 19, 2012, that AIS assisted in the development of RFP 12-005 (USAC RFP #04) prior to posting the FCC Form 465 on USAC's website on April 27, 2012.[5]

The Beneficiary informed IAD that AIS was not involved in the development of RFP 09-002 (USAC RFP # 02) or in the *Quality Assurance Services* section of RFP 12-004 (USAC RFP #05) nor was AIS involved in the evaluation of the bids received for RFP 09-002 (USAC RFP # 02) or the *Quality Assurance Services* section of RFP 12-004 (USAC RFP #05).[6] In addition, the Beneficiary informed IAD that ICN was not involved in the development of RFP 12-005 (USAC RFP #04), or the evaluation of bids received for RFP 12-005 (USAC RFP #04).[7]

IAD examined the competitive bidding documentation for RFP 09-002 (USAC RFP # 02), and noted that another service provider submitted a bid of $192,214 and that AIS submitted a bid of $169,800. AIS was awarded the contract for FRN 41446. IAD also examined the competitive bidding documentation for RFP 12-004 (USAC RFP #05), and noted that AIS was the only service provider to bid for the *Quality Assurance Services*

[1] *Id*.
[2] Email from Arthur Spies, IRHTP, to USAC (May 29, 2008).
[3] Memorandum from Arthur Spies to RHCP, "Use of Vendors as Consultants and Project Funding for QA Inspection Services RFP 002," (June 29, 2009).
[4] Memorandums from Arthur Spies to USAC/FCC, 'Evaluation, Scoring and Award IRHTP RFP10-001', dated April 11, 2011 and 'Evaluation, Scoring and Awards for IRHTP RFP12-004, dated June 21, 2012.
[5] Memorandum from Arthur Spies to RHCP, 'Disclosures', (Apr. 19, 2012).
[6] Emails from Arthur Spies, (Mar. 13, 2014 and May 6, 2014).
[7] Memorandum from Art Spies, IRHTP, to USAC (May 15, 2014); Memorandum from Art Spies, IRHTP, to USAC (June 7, 2012); Memorandum from Art Spies, IRHTP, to USAC (Apr. 19, 2012).

requested in RFP 12-004 (USAC RFP #05) and that AIS' bid was for $12,000. AIS was awarded the contract for quality assurance services for FRN 63145.

IAD examined the competitive bidding documentation for RFP 12-005 (USAC RFP #04) and noted that ICN was the only service provider to bid for RFP 12-005 (USAC RFP #04) and that ICN's bid offered Ethernet connectivity to 88 locations with up to 1 Gigabits per second access at a monthly cost ranging from $50,550 to $204,550 depending on the speed of access selected for each location. ICN was awarded the contract for FRNs 64723 and 68296.

Because Mr. Crandell was involved in the development and execution of the IRHTP Pilot Project, the development of RFPs 08-001 (USAC RFP#00), 08-002 (USAC RFP#01), and 12-005 (USAC RFP #04), and the Beneficiary's vendor selection process for RFPs 08-001 (USAC RFP#00), 08-002 (USAC RFP#01), 10-001 (USAC RFP #03), and 12-005 (USAC RFP #04), and the *Outside Plant – Dark Fiber Construction or IRUs* and *Network Electronics – Spare Parts* sections of RFP 12-004 (USAC RFP #05), Mr. Crandell had extensive knowledge about the Beneficiary's network and competitive bid processes from his roles as a consultant to ICN and the owner of AIS. In addition, because Mr. Swanson (ICN) was involved in the development and excution of all the Beneficiary's RFPs, with the exception of RFP 12-005 (USAC RFP #04), Mr. Swanson similarly had extensive knowledge about the Beneficiary's network and competitive bid processes. The Beneficiary did not demonstrate that it used a firewall mechanism to prevent AIS or ICN from having an advantage in the competitive bid process for the requested services for FRNs 41446, 63145, 64723, and 68296. In addition, AIS and ICN's extensive involvement in the IRHTP Pilot Project and the development and vendor selection process for the Beneficiary's other RFPs may have disadvantaged one provider over another and discouraged other service providers from submitting bids for the requested services that were awarded to ICN and AIS. Further, ICN's consultant, Tony Crandell, was involved in the development and bid evaluation process for RFP 12-005, which resulted in the selection of ICN. Therefore, the Beneficiary did not comply with the Rules governing the competitive bidding process for FRNs 41446, 63145, 64723, and 68296 (criteria 1 to 6).

Cause

The Beneficiary did not demonstrate sufficient knowledge of the Rules governing the competitive bidding process and did not have adequate controls or procedures in place to prevent individuals with extensive knowledge of the Beneficiary's network from gaining a competitive advantage during the Beneficiary's competitive bid processes. In addition, the Beneficiary did not have adequate controls or procedures in place to ensure that representatives or consultants of its service providers did not participate in the competitive process for the requested services.

Effect

The monetary effect of this finding is $529,147. This amount represents the total amount disbursed for the following FRNs:

FRN	Amount
41446	$142,290
63145	$8,160
64723	$28,517
68296	$350,180
Total	**$529,147**

Recommendation
IAD recommends that USAC seek recovery of $529,147. The Beneficiary must implement controls and procedures to ensure compliance with the Rules governing the competitive bidding process, including ensuring that universal service support does not disadvantage one provider over another or unfairly favor or disfavor one technology over another.

Beneficiary Response

The Iowa Rural Health Telecommunications Program (IRHTP) through its Project Coordinator, has reviewed the FCC rules cited, the background information provided, and the conclusions, effect and recommendation by the USAC auditors regarding Service Provider Involvement in IRHTP's Competitive Bidding Processes and its purported effect on competitive bidding and competitive bidding results. IRHTP does not agree that the facts and circumstances presented involve any selective sharing of information that tainted the competitive bidding process, created any undue competitive advantage to any particular vendors, or skewed a competitive bidding result as to any of the contracts listed above. As discussed herein, the circumstances as presented by the USAC auditors further do not rise to the level of an infraction that should result in USAC Management seeking recoupment of RFP [*sic*] funding under those contracts, as the findings propose.

As a threshold matter, none of the FCC rules cited by the USAC auditors provide notice that the particular firewall that IRHTP put into place consistent with the FCC's competitive bidding rules was insufficient or failed to provide adequate insulation from any potential for bid manipulation by program vendors. While FCC orders adopting the rules discuss the need to keep potential vendors at arm's length during the RFP formulation and vendor selection process, that is what IRHTP did. The FCC rules, combined with these orders, simply do not provide notice that IRHTP's practical, good faith application of that arm's length requirement would be reviewed after the fact and found to be insufficient. Without adequate notice of the specific firewalls that USAC – or ultimately the FCC - would and would not deem sufficient, this after the fact second guessing of the mechanisms used by IRHTP is highly problematic on a basic procedural fairness level. This is particularly true as IRHTP in fact

disclosed all of its dealings with potential vendors to USAC as part of its FCC Form 465 applications for funding, including identification of the parties involved in each RPF's formulation. Having this information, USAC never before raised any issue as to how IRHTP went about its competitive bidding process or questioned any of the vendor selection results prior to funding them. As a result, it would be arbitrary and inequitable for USAC Management to now seek recoupment of funding in this case, as the very disclosure requirements USAC cites and that IRHTP complied with are for the purpose of USAC review of competitive bidding to discover possible improprieties and to deal with them *prior* to providing funding.

Specific Corrections or Clarification with respect to the Conditions:

1. There were two competing bids for the quality assurance inspection services portion of USAC RFP#02. These bids were closely scored with a lower price being the most heavily weighted of the determinative factors. (See Art Spies memo, dated September 16, 2009, showing the cumulative score of 94 for Adesta and 97.7 for AIS) [copy provided to USAC management]. The attached affidavit of Art Spies [copy provided to USAC management] discusses in detail how the RFP#02 was developed, who reviewed the bids received and how the IRHTP Steering Committee members voted in evaluating the competing bids. This affidavit demonstrates that there was a firewall that prevented the winning bidder from participating in the RFP formulation or the award process.

2 USAC RFP #05 included a section for a small project to add quality assurance services for up to five sites that were not included in USAC RFP#02 due to several additional rural hospital members joining after RFP#02 was bid. These additional sites were required to be competitively bid in a separate contract rather than simply added to the services of the existing bid RFP#02. The circumstances of the drafting of the quality assurance portion of RFP#05 are detailed in the attached Arts Spies' affidavit [copy provided to USAC management]. IRHTP believes that due to the very limited scope of this additional work, the limited number of sites that were spread out across the state with more than 240 miles between each of them, and the limited compensation associated with any award, there was only a single bidder, AIS. The fact that only a single bid for quality assurance for those five sites was received under those circumstances is not suprising [*sic*]. Futher, [*sic*] the cost of providing this service under USAC RPF #05 was at the same cost per site as USAC RFP#02. If there had been any insider knowledge or unfair competition or desire to circumvent the purposes of the competitive bidding process, then the AIS bid could have come in higher for these additional sites than those

in USAC RFP #02. The fact is that these additional site services were provided at the same cost-effective level. (Art Spies memo, June 21, 2012 showing same cost for addition of four sites as original bid) [copy provided to USAC management].

3 As the USAC auditors note, IRHTP received only one bid for USAC RFP#04, which was for recurring connectivity service or circuit fees, at each participating and eligible rural health care provider location. This bid was from the Iowa Communications Network (ICN), a fiber optic network owned, managed and operated by the State of Iowa by the Iowa Telecommunciations [*sic*] and Technology Commission (ITTC). The bid was to provide IRHTP member rural hospitals with Ethernet connectivity of up to 1GB to all 88 points listed on the RFP using "existing link-segments that emanate from the HCP's owned Alcatel-Lucent 7210 edge switch along the contructed [*sic*] hospital owned fiber link or a leased "IRU" to a point currently located in an ICN Point of Presence." (USAC RFP#04). While theorectically [*sic*] it would have been possible for potential communications service providers serving different communities within Iowa to collaborate and join together and bid to provide connectivity service to these 88 points located all throughout the state, the fact is that only one entity, the publicly owned Iowa Communications Network, had built and already was operating a statewide publicly owned fiber optic network. ICN's legal charter permits it to provide connectivity only to authorized users under the Iowa Code: these authorized users include schools, hospitals, state and federal government, National Guard armories, and libraries. ICN's rates for this service are published and known to any service provider or potential service provider in Iowa. These facts were not highlighted and apparently not considered by the USAC auditors and these facts are consistent with what occurred when IRHTP bid the contact for connectivity for 88 participating rural hospitals throughout the state; namely that ICN was uniquely in the best position to provide this service, not because of anything IRHTP did or did not do with respect to competitive bidding, but because of its state charter, published rates and its unmatched fiber network reach. Further, ICN was already providing these circuits to 53 participating hospitals as of May 2012 without program support for the circuits, making ICN the obvious party to seek to continue to provide and expand that service. No other entity responded to the RFP, apparently because no other entity or group of entities believed themselves to be in a position to provide rural broadband connections where the IRHTP specified they were needed for participating rural hospitals throughout Iowa at a rate lower than the published rate that ICN offered in its bid response. Attributing cupability [*sic*] to IRHTP for the lack of competitive bidders for RPF #04 when IRHTP had nothing whatsoever to do with ICN's unique status and market position in Iowa would be entirely arbitrary.

IRHTP has demonstrated that no employee of ICN was involved in drafting, reviewing or evaluating RFP#04. The fact is that IRHTP did not have the technical ability within its project management staff to draft RFP#04. Recognizing that, IRHTP turned to Tony Crandell of AIS to do the initial drafting of that RFP. Art Spies of IHA on behalf of the IRHTP reviewed the draft and the Steering Committee approved awarding the bid to the ICN. (See minutes from May 29, 2012 Steering Committee meeting) [copy provided to USAC management]. It is not contested that IRHTP, in its Form 465 to USAC, disclosed the fact that Tony Crandell of AIS had assisted in drafting the RFP. It is also a fact that USAC did not at the time or at any time afterwards question or investigate the disclosure as potentially problematic.

The Federal Communications Commission has not prohibited stated owned and operated systems from offering highly publicly beneficial broadband services, although Iowa is apparently one of the few states that has built out a statewide facility for the public safety and health benefits it can confer on the citizens of the state. By law, there is a state agency charged with running the ICN, and that state agency publishes the rates for service for this purpose. Those rates are the rates ICN provided to IRHTP in responding to RFP#04 and those rates would have been known in advance by any other potential bidder for circuit connectivity services. The ICN, as an agency of the state, was simply following its legal charter in providing an RFP response to IRHTP. The ICN plainly is not a typical commercial "vendor." To the extent that there was any commercial vendor interested and available to provide comparable circuit connectivity services at 88 different sites throughout the state of Iowa, it or they could have responded to the RFP. ICN was the only provider who responded. To mechanically apply broad brush "rules" and infer some competitive advantage was conferred on ICN by IRHTP's use of Tony Crandell of AIS as a limited purpose consultant for technical assistance on this single RFP is simply unfounded speculation that ignores the unique non[-]commercial nature of the ICN and the high likelihood it would be the only bidder to provide Ethernet connectivity to its backbone network at 88 different locations throughout the state. Whatever "inside" knowledge one might surmise ICN had about IRHTP's project would have come through its earlier work with IRHTP documentation for the FCC Pilot program, not through information theorectically [*sic*] provided by Tony Crandell. Further, ICN uniquely knew the technical requirements of its own infrastructure, and that use of the backbone infrastructure of ICN was expressly approved by the FCC in its grant of the Pilot program application. Tony Crandell was a part time hourly project management consultant to ICN with duties unrelated to the IRHTP and Mr. Crandell was not an employee of ICN. Mr. Crandell's company AIS has other

clients. Tony Crandell also performed what IRHTP viewed to be an entirely unrelated one time technical project for IRHTP in drafting RFP#04 at IRHTP's direction and under its supervision.

4. There were no contracts not subject to FCC competitive bidding processes and there were no special arrangements or specific or even general understandings with IRHTP or AIS or ICN as to how the RFPs that the USAC auditors reviewed were structured, what pricing would be preferred, or as to any other matter in the subject RFPs whatsoever. Neither AIS nor ICN personnel participated in the preparation of the RFPs that they were awarded, and neither reviewed or assessed their own or other party's bids. IRHTP did not discourage any potential bidders on any RFP, nor did it divulge additional information to any potential RFP bidder. How the USAC auditors can find under the circumstances that a competitive bidding advantage was conferred on any party, when IRHTP followed the FCC rules and created a firewall it believed in good faith was sufficient is not explained. As noted above, if there was a vendor that would come into the circuit fee RFP#04 bidding process with any potential advantage, it would be the ICN. But that would only be because the ICN was sufficiently built out so as to have a fiber optic network point of presence in each county in the entire state of Iowa and ICN had published rates that other potential bidders could review and conclude on their own as to whether they stood any reasonable chance of prevailing in a competitive bidding situation in which the FCC has directed that cost efficiency is to be the most heavily weighted factor in an award assessment. As a practical matter, the ICN "market" advantage certainly would affect whether other entities determine it would be worthwhile to compete against the state for this contract. But that is not any reason to determine that IRHTP failed to follow the FCC's competitive bidding rules.

The USAC auditors create undue inferences from the fact that ICN's engagement with IRHTP in its pilot program application having to do with its statewide backbone operations and in some unrelated competitive bidding assistance for other RFPs conferred unfair competitive bidding advantages on ICN. However, the USAC auditors failed to consider the unique nature of the state owned ICN. ICN was and is the only entity that has built out broadband fiber to all 99 counties in Iowa. While no entity was prevented or impeded from providing a competitive bid for circuit fee services, the reasonable inference from the fact that only ICN bid is not because it had some unfair insider network design or other informational advantage that chilled potential competition in bidding. Rather, it was uniquely situated to provide the Ethernet connectivity the rural Iowa hospitals banded together to seek as IRHTP. USAC Management should not adopt the inference that IRHTP tampered with the circuit fees bidding

process; IRTHP [*sic*] did not. Certainly prior to seeking any recoupment from IRHTP of the funds paid in support of the contracts, USAC should be required to do far more than merely offer an inference when there are other far more likely explanations for the lack of bidders for last mile circuit fee connectivity contract. There is no evidence of bid rigging, manipulation, or fraud or abuse. Only if they could be established would there be any possible grounds for seeking any recoupment.

5. Tony Crandell of AIS and Dave Swanson of ICN each have extensive knowledge and experience with utilizing the Iowa Communications Network to provide broadband connections and services to authorized entities throughout the state. Each person possessed this knowledge well before implementation of the FCC's Rural Heath Pilot Program or IRHTP's bidding processes to participate in the Pilot Program. Simply because these individuals assisted IRHTP at points along the way with parts of the project that did not involve them in a bidding vendor capacity does not prove that they had any special knowledge of IRHTP's plans or that any purported special knowledge of IRHTP's plans skewed competitive bidding in any way. IRHTP's plan was contained in its FCC Pilot program application, it was a matter of public record any potential bidder could have consulted. IRHTP has at all times been transparent with USAC in disclosing its relationships with everyone involved in the program in any way. USAC Management is asked to consider all and not selective aspects of these circumstances when reviewing these audit findings.

IRHTP's other comments in response to the USAC auditor findings:

- As described in the attached affidavit [copy provided to USAC management], IRHTP had a firewall to prevent potential vendors from participating in the development of RFPs, the review of bids, and making the various awards. While the USAC auditors suggest that the firewall IRHTP used was inadequate to prevent tainting of the competitive bidding process, all the auditors can point to as purported proof of their assertion is a lack of competitive bids, a situation that can readily and more obviously be explained by the nature of the ICN statewide, state owned network itself, not anything IRHTP might purportedly have done to surpress [*sic*] or skew potential competition.

- At all the times in question IRHTP had procedures in place to prevent any unfair advantage to any potential bidder, including AIS and ICN. The ICN and AIS personnel also were aware of the prohibition from including potential bidders from the RFP drafting and review process from the beginning of the project due to their experience in public

bidding. As a state-owned entity, ICN itself is also subject to competitive bidding requirements for its projects, so it would not have expected to play a different role in this case. This is reflected in documentation provided to USAC and the USAC internal auditors. (See disclosure materials provided) [copy provided to USAC management].

- As required by USAC, for each RFP, IRHTP disclosed those individuals and entities that participated in the development of each RFP, those persons or companies involved in the bid review process, and those responsible for making any award determination. Through each of the competitive bidding processes and the FCC Form 466 award process, no USAC reviewer ever raised issues regarding supposed inappropriate service provider involvement in any part of the competitive bidding process. As USAC auditors note, the whole point of the FCC disclosure requirement is to allow for USAC review of any potentially improper influences prior to the award of funding. IRHTP should have some reasonable right to rely upon USAC to timely notify it of any perceived concerns so that they could be handled in a less draconian fashion than seeking after the fact recoupment when the case for unfair competitive bidding has yet to be made as opposed to merely being asserted and relying solely on unproven inferences. To attempt to recoup funding after the fact, USAC would have to prove its case rather than rely on unproven inferences as well as demonstrate that the FCC's rules and published requirements plainly prohibited the fully disclosed relationships discussed in the USAC audit findings.

- IRHTP's application for FCC Rural Health Care Pilot Program funding plainly and prominently indicated the project was a joint effort of IRHTP, the ICN as statewide fiber optic backbone provider and a consortium of Iowa, Nebraska and South Dakota rural and urban hospitals. The application indicated the IRHTP network would be built using the ICN backbone network infrastructure. There was no other similar infrastructure available from any other vendor.
- Importantly, at the time of the FCC Pilot program application in May of 2007, IRHTP was not seeking circuit fee service funding; that only became possible to [*sic*] due to subsequent changes in the progam [*sic*]. However, at all times IRHTP was following program requirements to seek the least cost means of providing the supported rural broadband capability to rural hospitals. Thus, the FCC and the public had a record of what IRHTP had done with ICN previously.

The FCC approved the ICN relationship and network structure by making the initial pilot program award. When later there became a possibility of supported bridge funding for circuit fees, IRHTP disclosed all relationships and followed the competitive bidding rules. The USAC auditors would apparently only be satisfied if another vendor for that contract had materialized and prevailed, and that was not something IRHTP had any control over. The reasons why other vendors did not materialize are apparent and have been explained. Holding IRHTP financially responsible for the bidding results it did not preordain or control is manifestly unfair.

- Because the ICN was the entity that formed the backbone of the state fiber network, the ICN's knowledge of its network and access to that network was imperative for the success of the IRHTP pilot project. As discussed in this submission and affidavit, the IRHTP firewall as to vendors for particular follow-up RFPs was utilized throughout the RFP process. IRHTP in good faith believes that its processes prevented any improper influence or competitive advantage in any bidding process or bid award.

- The IRHTP firewall was utilized when Access Integration Specialists (AIS) was bidding on the RFPs for Quality Assurance. AIS was not involved in the development of these RFPs. AIS' role with the IRHTP was as a consultant with experience and knowledge of the technical details of the ICN and AIS' role with ICN was as an independent contractor consultant to provide program manager support on an "as-needed" hourly basis. An Internet seach [*sic*] shows that AIS is a communications consulting firm with Anthony Crandell as its principal. Mr. Crandell has indicated his client list includes Iowa Homeland Security, Iowa National Guard, Cherokee Community School District, among others.

- All relationships between the parties were fully disclosed in all documentation provided to USAC and the FCC. IRHTP enacted protocols to ensure there was no improper influence or competitive advantage during the request, bidding, or awarding process. Bids were awarded based on the most cost-effective awards offered by providers with relevant capabilities and expertise and nothing else. USAC's audit finding comes to erroneous conclusions in its review of the information presented. IRHTP respectfully disagrees with USAC's Internal Audit finding and asks that on USAC Management review, the conclusions and recommendations be altered to reflect the facts in this case. Certainly [*sic*] the proposal that funds be recouped cannot

stand given that there was a firewall in place. To the extent that USAC auditors believe that the FCC rules provide detailed notice as to what constitutes a sufficient firewall in this instance, IRHTP contends that that determination is arbitrary and capricious and will not survive review by the FCC.

The USAC auditor conclusions cannot and do not include any finding that the program was asked to fund excessive costs or that any vendor receiving an award that is questioned now lacked relevant experience or knowledge. Nor have the USAC auditors done anything beyond merely suggesting there could have been some prejudice to other potential bidders from what they assert was an insufficient firewall. The punitive nature of an action to recoup funds for services provided would be inequitable, particularly given that the ICN's historic and unique state role was disclosed and on the record at the FCC from the time IRHTP filed its application for pilot program funding in May 2007. USAC was well aware of ICN's unique position as a statewide state owned backbone and connectivity provider. It was also aware from reviewing and commenting on IRHTP's Sustainability Report in 2009 that IRHTP was assuming the use of ICN for network access and USAC knew that ICN had had a long term role with IRTHP [*sic*] starting with the FCC Pilot program. To seek full recoupment of the circuit fee discount and quality assurance discount under these circumstances, where IRHTP in good faith attempted to comply with competitive bidding rules and fully disclosed what it was doing and how it was doing it, would be inequitable.

USAC IAD Response

In its response, the Beneficiary states that "[t]he FCC rules, combined with these [FCC] orders, simply do not provide notice that IRHTP's practical, good faith application of that arm's length requirement would be reviewed after the fact and found to be insufficient." IAD does not concur with this statement as the Rules state that each Pilot Program participant is subject to an audit.[1] IAD is required to conduct its audits in accordance with Generally Accepted Government Auditing Standards (GAGAS)[2], which require auditors to obtain sufficient, appropriate evidence to substantiate audit findings and conclusions.[3]

[1] *See, e.g., Pilot Program Selection Order*, 22 FCC Rcd at 20362, ¶ 6 ("[T]he Commission will conduct audits of all selected participants, and if necessary, investigations of any selected participants to determine compliance with Pilot Program, Commission rules and orders, and section 254 of the 1996 Act."). *See also Erratum*, DA 07-5018 (Rel. Dec. 17, 2007) (clarifying that the FCC's Office of Inspector General will conduct an audit for each Pilot Program participant).

[2] *See also* 47 C.F.R. § 54.702(n) (2008).

[3] *See also Government Auditing Standards*, GAO-12-331G, § 6.56 (Rev. Dec. 2011) ("Auditors must obtain sufficient, appropriate evidence to provide a reasonable basis for their findings and conclusions.").

The Beneficiary's response does not dispute that Mr. Crandell, the sole proprietor of AIS and consultant to ICN, was involved in the development of and vendor selection process for RFP 12-005 (USAC RFP # 04), which resulted in the selection of ICN to provide meshed Ethernet bandwidth connectivity services for FRNs 64723 and 68296. The Beneficiary's response also does not dispute that Mr. Crandell developed and participated in the vendor selection process for multiple IRHTP RFPs, including the initial RFP requesting quality assurance inspection services (RFP 08-001/USAC RFP #00) for which a provider was not selected after reviewing the bids received. Mr. Crandell's company, AIS, later bid on the quality assurance services and was selected to provide quality assurance inspection services through RFP 09-002 (USAC RFP #02) and RFP 12-04 (USAC RFP #05) (FRNs 41446 and 63145). The Beneficiary's admission of Mr. Crandell's involvement with the development of the RFPs and the vendor selection process for RFP 12-005 and RFP 08-001 demonstrates that the competitive bid process was compromised for FRNs 41446, 63145, 64723, and 68296. Although the Beneficiary explained that it had a firewall in place to ensure its compliance with the Commission's competitive bid rules, the Beneficiary did not provide any documentation to demonstrate the firewall was in place. Therefore, the Beneficiary did not comply with the competitive bid requirements of the Rules (criteria 1 to 3 and 5).

In its response, the Beneficiary states that "none of the FCC rules cited by the USAC auditors provide notice that the particular firewall that IRHTP put into place consistent with the FCC's competitive bidding rules was insufficient or failed to provide adequate insulation from any potential for bid manipulation by program vendors." However, the Rules require the Beneficiary to ensure that the competitive bidding process does not disadvantage one service provider over another (criterion 6). The documentation provided by the Beneficiary during the audit to demonstrate that it had a firewall only consisted of acknowledgements that the Beneficiary, ICN, and AIS were aware of the Rules and did not describe the type and sufficiency of the firewall that the Beneficiary asserts was in place. The Beneficiary indicates, "there was a firewall that prevented the winning bidder from participating in the RFP [#02] formulation or the award process [and] no employee of ICN was involved in drafting, reviewing, or evaluating RFP#04." In addition, the Beneficiary states "[n]either AIS nor ICN personnel participated in the preparation of the RFPs that they were awarded, and neither reviewed or assessed their own or other party's bids." However, the Beneficiary did not provide any documentation to support it had a firewall in place. As noted above, the Beneficiary asserted it was aware of the Commission's rules regarding competitive bidding, but did not provide a description of the implemented firewall to ensure AIS and ICN did not have a competitive advantage during the Beneficiary's competitive bid processes.

Although the Beneficiary states that AIS was not involved in the development and evaluation of the quality assurance inspection service RFPs that resulted in the selection of AIS, Mr. Crandell was involved in developing the original RFP for quality assurance inspection services. In addition, Mr. Crandell served on the evaluation committee that reviewed the bids that were received for the requested quality assurance services. Mr. Crandell had knowledge of the services to be inspected and the requirements for the

quality assurance inspection services that was not available to other potential bidders. In addition, because Mr. Crandell served on the bid evaluation committee for the first RFP for quality assurance services, he was aware of the amounts of the bids received for these services and could use this knowledge to prepare AIS' bids for the two RFPs for quality assurance inspection services that were issued later.

The Beneficiary also states in its response that Mr. Swanson of ICN was not involved in the development or vendor selection process for the RFP, which resulted in the selection of ICN, and "Mr. Crandell was not an employee of ICN." However, the Beneficiary also acknowledges in its response that Mr. Crandell was an ICN consultant and was involved in the development of and vendor selection process for the RFP awarded to ICN. As noted above, the Beneficiary asserts that there was a firewall in place to prevent ICN from having a competitive advantage during this competitive bid process for RFP 12-005 (Meshed Ethernet Bandwidth Connectivity, however, the Beneficiary did not provide IAD with documentation to support this firewall was in place. In addition, IAD was not aware of Mr. Crandell's dual role as a consultant to ICN and as the owner of AIS until informed by the Beneficiary during this audit. [1]

The Beneficiary acknowledges in its response that "[w]hatever 'inside' knowledge one might surmise ICN had about IRHTP's project would have come through its earlier work with IRHTP documentation for the FCC Pilot program… [and] ICN uniquely knew the technical requirements of its own infrastructure…" In addition, the Beneficiary acknowledges, "IRHTP did not have the technical ability within its project management staff to draft RFP#04 [and] IRHTP turned to Tony Crandell of AIS to do the initial drafting of that RFP." Thus, ICN's previous work with the Beneficiary's initial RFP and its relationship with Tony Crandell, who drafted RFP 12-005, provided ICN with an unfair competitive advantage.

In its response, the Beneficiary states that "IRHTP in fact disclosed all of its dealings with potential vendors to USAC as part of its FCC Form 465 applications for funding [and] USAC did not at the time or at any time afterwards question or investigate the disclosure as potentially problematic." However, the Beneficiary did not communicate to USAC AIS's involvement in the Beneficiary's application to the FCC and the development of the network RFPs until October 2, 2013, which was after the competitive bid processes have been completed. While the Beneficiary disclosed AIS' involvement in developing RFP 12-005 (USAC RFP # 04) for which ICN was selected as the service provider, the Beneficiary did not indicate that Mr. Crandell was also a consultant for ICN.[2] As indicated by the Beneficiary, Mr. Crandell, the sole proprietor of AIS, already had a relationship with ICN through his consultant contracts with ICN.[3] Therefore, Mr. Crandell was in a position to influence the Beneficiary's service provider selection while serving as a consultant to ICN, and ICN was selected as the service provider for FRNs 64723 and 68296. Further, although the Beneficiary communicated Mr. Crandell's

[1] Memorandum from Arthur Spies to RHCP, 'Disclosures,' (Apr. 19, 2012).
[2] Memorandum from Arthur Spies to RHCP, 'Disclosures,' (Apr. 19, 2012).
[3] Memorandum from Art Spies, IRHTP, to USAC (May 15, 2014).

involvement in the development of RFPs 10-001 (USAC RFP #03) and 12-004 (USAC RFP #05) on April 11, 2011 and June 21, 2012, this was after the competitive bidding process was completed and the service provider was selected.[1] Therefore, the Beneficiary did not fully inform USAC of the level of IAS and ICN's involvement in the development of its RFPs and participation in the evaluation of bids for the RFPs prior to taking such action (criterion 5).

In its response, the Beneficiary states "ICN was expressly approved by the FCC in its grant of the Pilot program application." However, the FCC's approval of the Beneficiary's pilot program application was not an approval to use ICN as a service provider, and the Commission did not waive the Rules governing the competitive bidding requirements (criteria 1 to 6). In the *Pilot Program Selection Order*, the FCC stressed the importance of the competitive bidding requirements and explicitly stated that the projects selected for RHC Pilot Program awards were required to comply with those requirements.[2] Further, service providers participating in the competitive bid process are prohibited from assisting with or filling out a selected participants' FCC Form 465 for services they are competing to provide (criterion 4). Although the Beneficiary may have described the network infrastructure and the inclusion of ICN in its proposal to the FCC, the Beneficiary did not provide documentation demonstrating that it informed the FCC that ICN would also be a potential service provider for the recurring Ethernet services. In addition, the Beneficiary did not provide documentation demonstrating that it indicated to the FCC that Mr. Crandell, the owner of AIS and consultant to ICN, would be assisting with the development of the RFPs and evaluating the bids received for the services awarded to ICN.

In its response, the Beneficiary states that "the USAC auditors failed to consider the unique nature of the state owned ICN [who] was and is the only entity that has built out broadband fiber to all 99 counties in Iowa [and] was uniquely situated to provide the Ethernet connectivity the rural Iowa hospitals banded together to seek as IRHTP." IAD does not concur with this assertion. IAD did consider ICN's capacity to provide the services requested by the Beneficiary. Further, IAD does not concur with the Beneficiary's assertion that the "USAC auditors would apparently only be satisfied if

[1] Memorandums from Arthur Spies to USAC/FCC, 'Evaluation, Scoring and Award IRHTP RFP10-001,' dated April 11, 2011 and 'Evaluation, Scoring and Awards for IRHTP RFP12-004, dated June 21, 2012.
[2] *See, e.g., Pilot Program Selection Order,* 22 FCC Rcd 20414, ¶ 102 (providing "[t]he competitive bidding requirements ensure that selected participants are aware of the most cost-effective method of providing service and ensures that universal service funds are used wisely and efficiently, thereby providing safeguards to protect against waste, fraud, and abuse…..We find that it is in the public interest and consistent with the *2006 Pilot Program Order* to require all participants to participate in the competitive bidding process."); *Id.* at 20395, ¶ 70 ("Among other things, we deny waiver requests of the Commission's rule requiring that Pilot Program selected participants competitively bid their proposed network projects. In doing so, we reaffirm that the competitive bidding process remains an important safeguard to ensuring universal service support is used wisely and efficiently ensuring that the most cost-effective service providers are selected by selected participants…."); *Id.* n. 326 (directing "the Iowa applicants, and all other applicants, to follow the competitive bidding process detailed *supra* Part III.E.7" and denying their requests for waiver of the competitive bidding requirements).

another vendor for that contract had materialized and prevailed…" ICN's previous dealings with the Beneficiary in the development of the RHC Pilot Program application, ICN's assistance in developing previous RFPs for the Beneficiary's network and evaluation of the bids received, and ICN's direct relationship with Mr. Crandell who developed the RFP for the Ethernet services that ICN was awarded are at the core of this audit finding. As noted above, the Beneficiary did not provide documentation to demonstrate that it had a sufficient firewall in place to ensure the individual(s) that developed the RFP were not also the individual(s) that bid on the Ethernet services provided over the network.

IAD also does not concur with the Beneficiary's assertion that the only purported proof "that the firewall IRHTP used was inadequate to prevent tainting of the competitive bidding process… is a lack of competitive bids." As noted above, Mr. Crandell, AIS' sole proprietor and ICN's consultant, assisted in the development of and the competitive bidding process for the Beneficiary's original RFP for quality assurance inspection services RFP 08-001 (USAC RFP#00) and RFP 12-005 (USAC RFP#04) for meshed Ethernet services that resulted in the selection of ICN. Mr. Crandell and AIS also competed for and was selected to provide quality inspection services through RFP 09-002 (USAC RFP # 02) and RFP 12-004 (USAC RFP #05). In addition, Mr. Crandell and Mr. Swanson of ICN developed and participated in the competitive bidding process for the Beneficiary's other network RFPs, which provided AIS and ICN knowledge about the Beneficiary's network and competitive process that was not available to other providers. Further, the Beneficiary has not provided any evidence that there was a sufficient firewall in place to ensure that ICN and AIS were not provided a competitive advantage when the companies submitted their own bids for certain RFPs. Therefore, the Beneficiary did not comply with the competitive bidding requirements of the Rules (criteria 1 to 6).

For the reasons stated above, IAD's position on this finding remains unchanged.

USAC Management Response

FRNs 41446 and 63145

IAD determined that Mr. Crandell (the owner of AIS) received information that was not available to other prospective bidders for the Quality Assurance Inspection Services that AIS provided for FRNs 41446 and 63145. As discussed above, Mr. Crandell was involved in the development of and bid evaluation for RFP 08-001 that requested bids for Quality Assurance Inspection Services. Based on the documentation provided to USAC, prior to the audit, the Beneficiary did not disclose to USAC that Mr. Crandell or AIS was involved in the development of RFP 08-001. Although the Beneficiary received bids for RFP 08-001, it did not issue an award for the Quality Inspection Services because it determined that "the bids were too expensive for the project" after completing the bid evaluation process for the quality assurance services.[1] Afterwards, Mr. Crandell

[1] Affidavit of Art Spies, IRHTP, at 1 (Oct. 3, 2014) (*Affidavit*).

informed the Beneficiary "that he might be interested in bidding on a more scaled back quality assurance RFP if IRHTP decided in the future to issue one."[1] The Beneficiary later issued two RFPs with a smaller scope of Quality Inspection Services–RFPs 09-002 and 12-004–that resulted in awards to AIS.[2]

The Beneficiary does not dispute that Mr. Crandell helped develop RFP 08-001 and was part of the bid evaluation committee for this RFP. However, the Beneficiary asserts that there was no competitive bidding violation because Mr. Crandell was not involved in the development of or the evaluation of the Beneficiary's subsequent RFPs for Quality Inspection Services that resulted in awards to AIS. The Beneficiary explained that AIS was able to "provide a lower cost, more responsive service" based on the bids that the Beneficiary received for RFP 12-004, and that AIS was the sole bidder for the Quality Inspection Services for RFP 09-002.[3] Although Mr. Crandell did not develop or evaluate RFPs 12-004 or 09-002, that does not mitigate the competitive bidding violation for FRNs 41446 and 63145. Although the Beneficiary asserts that Mr. Crandell was not involved in the RFPs that resulted in the awards to AIS or in its discussions concerning those RFPs, Mr. Crandell had knowledge that was not available to other providers (*e.g.*, competing providers' pricing and information about IRHTP's competitive bidding processes) because of his involvement in the first RFP for Quality Inspection Services (RFP 08-001). Therefore, the Beneficiary's screening of Mr. Crandell from RFPs 12-004 and 09-002 did not prevent AIS from having a competitive advantage when it bid on RFPs 12-004 and 09-002. In addition, the Beneficiary also did not disclose that Mr. Crandell and AIS assisted with developing and evaluating the received bids for RFP 08-001.

USAC management agrees with IAD's recommendation for recovery of funds associated with these FRNs and that the Beneficiary must implement controls and procedures to ensure compliance with the Rules governing the competitive bidding process, including making the necessary disclosures concerning individuals involved in its RFPs. Additional information concerning the competitive bidding requirements for the RHC Pilot Program is available in the *Pilot Program Selection Order* and on USAC's website.[4]

FRNs 64723 and 68296

RFP 12-005 resulted in an award to ICN for meshed Ethernet services for FRNs 64723 and 68296. IAD determined that the Beneficiary violated the competitive bidding requirements because Mr. Crandell (the owner of AIS and consultant to ICN) was involved in the development of and evaluation of bids received for RFP 12-005. IAD

[1] *Id*.
[2] *Id*.
[3] *Id*. at 2.
[4] *See In the Matter of Rural Health Care Support Mechanism,* WC Docket No. 02-60, Order, FCC 07-198, 22 FCC Rcd 20360, 20412-20415, ¶¶ 100-104 (2007). *See also* http://www.usac.org/rhcp/participants/competitive-bidding.aspx.

also determined that ICN had extensive knowledge about the IRHTP Pilot Project as a result of its involvement in the development and implementation of the IRHTP Pilot Project, and as a result of Mr. Swanson's (an ICN employee) involvement in IRHTP's other RFPs for which ICN did not compete.

The Beneficiary does not dispute that Mr. Crandell was involved in RFP 12-005 or that ICN was involved in the development and implementation of the IRHTP Pilot Project and the other RFPs for which ICN did not compete. However, the Beneficiary states that a competitive bidding finding is not supported because of the unique nature of ICN, the purpose of the IRHTP, and its measures to exclude ICN employees from RFP 12-005. In addition, the Beneficiary provided an affidavit that further clarified the screening process that the Beneficiary used for RFP 12-005 to ensure its compliance with the FCC rules.

The Beneficiary's response explains that ICN is a statewide "fiber optic network, owned, managed, and operated by the State of Iowa." The Beneficiary also explains that "ICN's charter permits it to provide connectivity only to authorized users under the Iowa Code" including hospitals, and that "ICN's rates for this service are published and known to any service provider or potential service provider in Iowa."[1] The Beneficiary further explains that its public Pilot Program application requested funding to build out last-mile fiber to connect eighty-eight individual hospitals throughout Iowa "to the state-wide Iowa Communications Network (ICN) backbone" and disclosed that ICN would eventually charge hospitals for recurring circuit fees for those connections.[2] The Beneficiary's Sustainability Plan also stated that ICN would charge circuit fees to participating HCPs in order to sustain the network.[3] The Beneficiary did not initially seek RHCPP funding for these circuit fees. However, following the FCC's 2012 *Bridge Funding Order* (which provided additional temporary funding for continued support of broadband services provided to HCPs participating in the RHC Pilot Program), the Beneficiary issued RFP 12-005 which resulted in an award to ICN for meshed Ethernet services.[4] Before the Beneficiary issued RFP 12-005, ICN was already providing Ethernet services to HCPs participating in the IRHTP Pilot Project, as was contemplated in IRHTP's Pilot Program application.[5]

The Beneficiary's affidavit further explains that given the nature and mission of ICN and the purpose of the IRHTP Pilot Project, it was anticipated that ICN would submit a bid for RFP 12-005. Accordingly, "Dave Swanson of ICN and any other ICN employee was excluded from the development of the RFP" and the Beneficiary did not "discuss any aspect of the connectivity RFP at any point before the award of the contract to ICN with

[1] *See also, e.g.,* Iowa Code §§ 8D.1, 8D.3, 8D.13; ICN website at http://icn.iowa.gov/about-icn/agency-information-icn-story.
[2] *Affidavit*, at 3. *See also* IRHTP Pilot Program Application, at 39 (May 4, 2007).
[3] *Affidavit*, at 3. *See also* IRHTP Sustainability Plan at 2, 3 (June 2009).
[4] *Affidavit*, at 3. *See also In the Matter of Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, FCC 12-74, 27 FCC Rcd 7907, 7911, ¶ 10 (2012).
[5] *Affidavit*, at 3, 4, 5.

Dave Swanson or anyone else at ICN."[1] The Beneficiary further explains that "[i]t was necessary for IHRTP [*sic*] staff to have access to technical knowledge of the ICN technology to be able to draft the technical specifications for the competitive bidding RFP 12-005 to rely on the ICN backbone structure for providing circuit connectivity and to effectively review the bids received" and that there were "very few individuals within the state that could provide consultation on the necessary technical issues."[2] The Beneficiary states that because its staff did not have the necessary technical expertise to develop RFP 12-005, IRHTP engaged Tony Crandell to develop and evaluate bids for that RFP given his "extensive knowledge of the technology already in use in the IRHTP project."[3] The Beneficiary further explains that RFP 12-005 "was drafted to reflect the requirements for the network to function as proposed by the IRHTP project and the previous build-out and nothing more."[4] Based on the affidiavit that was provided, the Beneficiary took measures to ensure that ICN employees were not involved with the development or evaluation of RFP 12-005.

Although USAC management understands that the Beneficiary's affidavit demonstrates that the Beneficiary took steps to ensure that ICN employees were excluded from the development of the RFP, IAD has demonstrated that the beneficiary did not comply with the FCC's competitive bidding rules because it neglected to disclose the relationship. While USAC management further understands that: (a) the Beneficiary competitively bid the Ethernet services and ICN was the only bidder under the procurement; (b) ICN was uniquely situated to provide the most expansive network and services along with the best rates as the State of Iowa's fiber optic network; (c) ICN already possessed sufficient knowledge of the network's current topology and configuration as the preexisting Ethernet services provider to HCPs participating in the project; and (d) no result other than the selection of ICN would have been economically and technically rational, the FCC's rules do not allow consultants for service providers to participate in competitive bidding, and the recovery of funds as recommended by IAD, is required by the rules.

Conclusion

USAC management concurs with the finding, effect and recommendation for FRNs 41446 and 63145 for Quality Assurance Inspection Services and will seek recovery of $150,450. USAC management also concurs with the finding, effect and recommendation for FRNs 64723 and 68296 for meshed Ethernet services and will seek recovery of $378,697.

USAC management further concurs with IAD's finding that the Beneficiary did not sufficiently demonstrate or provide supporting documentation that sufficient controls were in place ensuring that ICN and AIS were not provided a competitive advantage when the companies submitted their own bids for certain RFPs. USAC management

[1] *Id*. at 4.
[2] *Id*.
[3] *Id*.
[4] *Id*.

directs the Beneficiary to implement policies and procedures ensuring that individuals associated with a service provider, including consultants, employees and agents, are not involved in the development of or bid evaluation for RFPs for which that particular service provider intends to compete. USAC will request that the Beneficiary provide a copy of its new procedures within 90 days so USAC can confirm corrective action was undertaken and that the Beneficiary has developed and implemented the appropriate controls.

Criteria

1. "To select the telecommunications carriers that will provide services eligible for universal service support to it under this subpart, each eligible health care provider shall participate in a competitive bidding process pursuant to the requirements established in this subpart and any additional and applicable state, local or other procurement requirements." 47 C.F.R. § 54.603(a) (2008).

2. "Pursuant to sections 54.603 and 54.615 of the Commission's rules, each eligible health care provider must participate in a competitive bidding process and follow any applicable state, local, or other procurement requirements to select the most cost-effective provider of the services eligible for universal service support under the RHC support mechanism." *In the Matter of Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, FCC 07-198, 22 FCC Rcd 20360, 20412, ¶ 100 (2007) (*Pilot Program Selection Order*).

3. "Consistent with the Joint Board's recommendation for eligible schools and libraries, we conclude that eligible health care providers shall be required to seek competitive bids for all services eligible for support pursuant to section 254(h) by submitting their bona fide requests for services to the Administrator." *In the Matter of Federal-State Joint Board on Universal Service,* CC Docket No. 96-45, Report and Order, FCC 97-157, 12 FCC Rcd 8776, 9133, ¶ 686 (1997) (*1997 Universal Service Order*).

4. "We note that vendors or service providers participating in the competitive bid process are prohibited from assisting with or filling out a selected participants' FCC Form 465." *Pilot Program Selection Order*, 22 FCC Rcd at 20405, ¶ 86, n.281.

5. "To further prevent against waste, fraud, and abuse, we require participants to identify, when they submit their Form 465, to USAC and the Commission any consultants, service providers, or other outside experts, whether paid or unpaid, who aided in the preparation of their pilot Program applications.… Identifying these consultants and outside experts could facilitate the ability of USAC, the Commission, and law enforcement officials to identify and prosecute individuals that may seek to manipulate the competitive bidding process or engage in other illegal acts. To ensure selected participants comply with the competitive bidding requirements, they must disclose all of the types of relationships explained above." *Pilot Program Selection Order*, 22 FCC Rcd at 20415, ¶ 104.

6. "The competitive bidding rules also ensure that universal service support does not disadvantage one provider over another, or unfairly favor or disfavor one technology over another." Federal Communications Commission, *Pilot Program: Frequently Asked Questions and Answers*[1]

[1] *See* FCC's website at http://www.fcc.gov/encyclopedia/rural-health-care-pilot-program#faq18.

Finding #2
Rural Health Care Pilot Program Support Used to Fund Ineligible Participants

Condition

IAD examined the Network Cost Worksheets (NCWs), the contracts between the Beneficiary and the selected Service Providers, the Rural Health Care (RHC) Pilot Program invoices submitted to USAC, as well as the associated service provider bills, to determine whether RHC Pilot Program support was used to fund eligible participants and services. IAD examined the contract between the Beneficiary and Alcatel-Lucent, the FCC Form 465 Attachments, and noted that the contract listed three ineligible participants and the FCC Form 465 Attachments listed two of the three ineligible participants. The three ineligible participants were not listed on the associated FCC Form 466-A Attachments or the NCWs (criteria 1, 2, 5). The Beneficiary informed IAD that the ineligible participants were not listed in the FCC Form 466-A Attachments or the NCWs to ensure that the ineligible participants did not receive RHC Pilot Program funds.[1] Because the Beneficiary did not list the ineligible participants on the FCC Form 466-A Attachments or the NCWs, the Beneficiary did not make a clear delineation between the eligible and ineligible components, apportion the costs to the ineligible participants, or demonstrate how the ineligible participants would pay their fair share of the network costs (criteria 1 to 5).

For FRN 37533, IAD examined the contract between the Beneficiary and the service provider, Alcatel-Lucent, for network electronic services and noted that it included 82 eligible participants and three ineligible participants. The service provider billed the Beneficiary $2,493,237 for core network electronic equipment on October 26, 2009. IAD examined the NCW and the invoice submitted to USAC and noted that the core network electronic equipment costs were allocated equally among the 82 eligible participants and that no costs were allocated to the three ineligible participants. USAC was invoiced for 85% of the costs (or $2,119,252) and USAC disbursed the full amount requested.

For FRN 57252, the service provider billed the Beneficiary $134,378 for software upgrades on June 3, 2011 and October 25, 2011. IAD examined the NCW and the invoice submitted to USAC and noted that the costs for the upgrades were allocated equally among the 82 eligible participants ($1,639 each) and that no costs were allocated to the three ineligible participants. USAC was invoiced for 85% of the costs (or $114,221) and USAC disbursed the full amount requested.

The Beneficiary informed IAD that "[a]ll three ineligible entities are invoiced [by the Beneficiary] for the operation and maintenance of the network just like all participating entities. [The Beneficiary] did not invoice [the ineligible participants] for the $1,638.75 allocated to the 82 IRHTP hospitals."[2] Because the three ineligible entities are using the RHC Pilot Program funded network and benefiting from the supported equipment

[1] Emails from Art Spies, Iowa Rural Health Telecommunications Program (IRHTP) (June 30, 2009 and Mar. 13, 2014).
[3] Memorandum from IRHTP (July 14, 2014).

received, the costs of the core network electronics and the network upgrades should have been allocated among all 85 participants rather than allocating the costs only among the 82 eligible participants. Thus, the three ineligible participants did not pay their fair share of costs and USAC was over-invoiced $74,797 for FRN 37533 ($2,119,252 / 85 * 3) and $4,031 for FRN 57252 ($114,221 / 85 * 3) for the ineligible participants' share of the costs.

Cause
The Beneficiary did not demonstrate sufficient knowledge of the Rules requiring the identification of ineligible entities on the FCC Form 466-A and NCWs and requiring ineligible entities to pay their fair share of the costs. In addition, the Beneficiary did not have adequate controls and procedures in place to ensure that ineligible participants paid their fair share of network costs and that USAC is invoiced only for eligible services delivered to eligible participants.

Effect
The monetary effect for this finding is $78,828. This amount represents the funding disbursed for the three ineligible participants' share of the costs for FRN 37533 ($74,797) and for FRN 57252 ($4,031).

Recommendation
IAD recommends USAC seek recovery of $78,828. The Beneficiary must implement controls and procedures to ensure that it identifies all ineligible participants in its NCW submitted to USAC with its FCC Form 465 and FCC Form 466-A, that ineligible participants pay their fair share of network costs, and that USAC is invoiced only for eligible services delivered to eligible participants.

Beneficiary Response

> **Regarding FRN 37533** we disagree with the finding and recommendation because all three ineligible providers were NOT participating in the program at that time and so there were only 82 participating health care providers to allocate the network costs to. All 82 HCPs signed Letters of Agency and Participation Agreements and paid their 15% share of the network costs. IHA, RCI and Iowa Radiology did not sign a Letter of Agency, Participation Agreement or made any payment, therefore, they were not participating at that time and should be excluded from the initial network build out. As I indicated to [the auditor] earlier the Alcatel Lucent contract listed IHA, Radiology Consultants of Iowa (RCI) and Iowa Radiology but were potential future additional sites at that time. Please note that the site electronics for IHA, RCI and Iowa Radiology were not included in the Bill of Materials that was part of the Alcatel Lucent contract because these ineligible entities were not part of the initial network. USAC required us to include IHA and Radiology Consultants of Iowa on [the] Form 465 Attachment and they were also included in RFP 01 as potential future sites. Please note Iowa Radiology was not

included in the RFP. We were told to think ahead… A "fair share" issue was NOT raised during the [Form] 466 Award package review by USAC. The FCL for FRN 37533 was issued on August 20, 2009. A critical determinate of participation is when each ineligible entity was connected to the IRHTP network.

Ineligible Entities Timeline – see attached ICN customer connection status [copy provided to USAC management][:]

Event	Radiology Consultants of Iowa	Iowa Hospital Association	Iowa Radiology
Connection to IRHTP Network	10/13/2010	9/21/2010	June 11, 2012

Network connectivity is the time when shared network fair share considerations should begin for ineligible entities.

Each ineligible entity paid 100% of the cost (fiber and electronics) to connect to the IRHTP network. Upon connection[,] each ineligible entity began paying the same monthly circuit fee and administrative and operational fees. The monthly administrative and operation fee covered: electronics service, repair and replacement; fiber locates, relocates and repair; and network software upgrades.

Regarding FRN 57252 we concur with the finding that participating ineligible entities should have been included in the software upgrade cost. It was our oversight. Per the above chart, only two of the ineligible entities were connected and using the network. Therefore based on your calculation, the monetary effect to be reimbursed should be $2,720 for FRN 57252 ($114,221 / 84 * 2) reflecting the two entities that are benefiting from the software upgrade.

We have noted the recommendations and will implement controls and procedures to ensure that we identify all ineligible participants in NCW submissions to USAC with its FCC Form 465 and FCC Form 466-A, that ineligible participants pay their fair share of network costs, and that USAC is invoiced only for eligible services delivered to eligible participants.

USAC IAD Response

IAD does not concur with the Beneficiary's statement for FRN 37533 that the Iowa Hospital Association (IHA), Radiology Consultants of Iowa (RCI), and Iowa Radiology "were NOT participating in the program at the time…[,] [had not] made any payment…[,] [and] should be excluded… [because they] were potential future additional sites at that time." IAD examined documentation substantiating that the Beneficiary, via IHA, invoiced RCI and Iowa Radiology to

obtain their fair share of the Beneficiary's shared network core costs on August 17, 2009, and September 9, 2009, respectively, and the Beneficiary, via IHA, received the payments for RCI's and Iowa Radiology's fair share on August 31, 2009, and September 9, 2009, respectively. However, the Beneficiary was not billed by the service provider for the network core equipment until October 26, 2009. Further, the invoice seeking reimbursement was not submitted to USAC until November 24, 2009. The invoice, which the Beneficiary certified, allocated the full cost of network core equipment evenly to the 82 eligible entities and did not exclude any costs for the ineligible entities' fair share. Although IHA was not invoiced for its fair share prior to the bill for the network core equipment, IHA is the project coordinator and administrator for the Beneficiary. IHA's significant involvement with the network development, its inclusion on the FCC Form 465 Attachment, and its inclusion in the original contract with the service provider demonstrates IHA was a known participant and should have been included with RCI and Iowa Radiology in the allocation of the network core costs.

The Beneficiary states that "the site electronics for IHA, RCI and Iowa Radiology were not included in the Bill of Materials that was part of the Alcatel Lucent contract because these ineligible entities were not part of the initial network." IAD examined the contract and agrees with the Beneficiary that IHA, RCI, and Iowa Radiology were not included for the site electronics. However, the issue for this finding is the purchase of the network core equipment to serve the entire shared network and not the specific site electronics. The Beneficiary informed IAD that the site electronics for the three ineligible entities were purchased at a later date. However, as noted above, the Beneficiary was aware of the three ineligible entities' future participation in the network, therefore, the network core equipment should have been allocated among all 85 participants.

In its response, the Beneficiary states "[n]etwork connectivity is the time when network fair share considerations should begin for ineligible entities." Using this logic, the costs of the network core equipment would be incorrectly allocated on its NCW for the eligible entities. In the Beneficiary's June 2009 Sustainability Plan, the Beneficiary states that its revenue and expense projections reflect "20 hospitals connected in 2009, 65 hospitals connected in 2010 and 84 sites in 2011." As noted above, USAC was invoiced for reimbursement of the network core equipment on November 2009 and RCI and Iowa Radiology were requested to pay their fair share in August 2009 and September 2009, respectively. Although the Beneficiary states that the ineligible entities were not allocated costs and therefore, not reduced from the network core costs invoiced to USAC because they were "potential future sites," the Beneficiary included other eligible sites that also were not yet connected in its Sustainability Plan. The network core equipment was purchased in anticipation of use by participants that would connect to the network, including the three ineligible participants. The network core equipment was delivered by the service provider on October 26, 2009, and at

that time, no participants were connected to the Beneficiary's network because they had not received their site specific network equipment.

For FRN 57252, IAD does not concur with the Beneficiary's statement that the monetary effect should be allocated by 84 entities rather than 85. As noted above, the Beneficiary should have allocated the shared network costs among all known participants regardless of whether they were connected to the network by the date of the bill or were to be connected at a later date. Because Iowa Radiology paid its fair share to the Beneficiary in September 2009, and was included in the contract, the Beneficiary was aware of Iowa Radiology's participation in the shared network.

For the reasons above, IAD's position on this finding remains unchanged.

USAC Management Response

USAC management concurs with IAD's finding that the three ineligible entities were benefiting from the supported equipment received and that the costs of the core network electronics and the network upgrades should have been allocated among all 85 participants rather than among the 82 eligible participants. This is evidenced by the fact that the Beneficiary invoiced two of the ineligible entities in August and September 2009. The network core equipment was purchased in anticipation of use by participants that would connect to the network, including the three ineligible participants. The Beneficiary was aware of the three ineligible entities' future participation in the network, therefore, the network core equipment should have been allocated among all 85 participants. USAC also concurs with IAD's finding that the Beneficiary should have included the three ineligible entities when allocating the software upgrade costs instead of the two claimed by the Beneficiary. Like the network core equipment, the Beneficiary purchased the software upgrades in anticipatiin of use by known participants including the three ineligible entities and, therefore, should have allocated the costs accordingly. USAC will seek recovery of $78,828.

Criteria

1. "Ineligible costs include costs that are not directly associated with network design, deployment, operations and maintenance. These ineligible costs include, but are not limited to:...Connections to ineligible network participants or sites (*e.g.*, for-profit health care providers) and network costs apportioned to ineligible network participants." *In the Matter of Rural Health Care Support Mechanism*, , WC Docket No. 02-60, Order, FCC 07-198, 22 FCC Rcd 20360, 20398, ¶ 75 (2007) (*Pilot Program Selection Order*).

2. "USAC may only fund eligible costs as described in this Order and is prohibited from funding ineligible costs or providing funding to ineligible participants. We require, as discussed below, Pilot Program participants to identify and detail all ineligible costs, including costs apportioned to for-profit and other ineligible network participants or sites, in their line-item network

costs worksheets submitted to USAC with FCC Forms 465 and 466-A, and to clearly demonstrate that Pilot Program support amounts will not be used to fund ineligible costs. We note that if a product or service contains both eligible and ineligible components, costs should be allocated to the extent that a clear delineation can be made between the eligible and ineligible components." *Pilot Program Selection Order*, 22 FCC Rcd at 20399, ¶ 76.

3. "Selected participants' network costs worksheet submissions shall demonstrate how ineligible (*e.g.*, for-profit) participants will pay their fair share of network costs. Selected participants shall identify these costs with specificity in their network costs worksheet submissions." *Pilot Program Selection Order*, 22 FCC Rcd at 20408, ¶ 90.

4. "A selected participant cannot sell its network capacity supported by funding under the Pilot Program but could share network capacity with an ineligible entity as long as the ineligible entity pays its fair share of network costs attributable to the portion of network capacity used." *Pilot Program Selection Order*, 22 FCC Rcd at 20416, ¶ 107.

5. "To prevent against violation of the prohibition on resale of supported services and to further prevent against waste, fraud, and abuse, we require participants to identify all for-profit or other ineligible entities, how their fair share of network costs was assessed, and proof that these entities paid or will pay for their costs." *Pilot Program Selection Order*, 22 FCC Rcd at 20416, ¶ 108.

Finding #3
Beneficiary Certified and Service Provider Submitted Invoices to USAC Prior to Collecting Payment for the Minimum 15 Percent Contribution from the Beneficiary

Condition

IAD examined documentation, including the Rural Health Care Pilot Program invoices the service provider submitted to USAC and the corresponding service provider bills provided to the Beneficiary, to determine whether the Beneficiary paid the required 15 percent minimum contribution to the service provider before certifying that the invoice was accurate and that the required minimum 15 percent contribution was paid from eligible sources for each invoice submitted to USAC. IAD examined the service provider bills and payments for FRNs 37533, 37534, 38196, 41316, 41446, 41820, 47731, 53313, 59779, and 60318 and noted that the Beneficiary paid its required 15 percent minimum contribution to the service provider after the Project Coordinator certified to the accuracy of invoices and that the 15 percent minimum contribution was paid, after the service provider submitted the invoices to USAC (criteria 1 and 2). The specific dates at issue for each invoice are provided below.

FRN	Date Invoice Signed by Lead Project Coordinator	Date Service Provider Submitted Invoice to USAC	Service Provider Bills Sought for Reimbursement in the Invoices	Date Beneficiary Paid the Bills
37533	November 24, 2009	November 24, 2009	One for October 2009	November 30, 2009
	September 9, 2010	September 10, 2010	One for August 2010	September 14, 2010
	January 19, 2011	January 25, 2011	Two for January 2011	January 27, 2011
37534	August 18, 2010	August 18, 2010	Two for July 2010	August 26, 2010
	November 1, 2010	November 1, 2010	One for October 2010	November 4, 2010
	May 31, 2011	May 31, 2011	Two for May 2011 One for October 2010	June 3, 2011
38196	October 15, 2010	October 15, 2010	Three for September 2010	October 21, 2010
	October 25, 2010	October 25, 2010	Two for June 2010 One for July 2010 Three for September 2010 Two for October 2010	November 4, 2010
	October 10, 2011	October 17, 2011	Three for September 2011	October 20, 2011
	November 29, 2010	November 30, 2010	Three for November 2010	December 20, 2010
	December 6, 2010	December 7, 2010	Three for November 2010	
	December 15, 2010	December 15, 2010	Five for November 2010 Three for December 2010	
	December 16, 2010	December 16, 2010	Two for November 2010 One for December 2010	
	December 22, 2010	December 23, 2010	Five for November 2010 Nine for December 2010	January 14, 2011
	January 10, 2011	January 11, 2011	Four for December 2010	
41316	August 18, 2010	August 25, 2010	One for May 2010	August 26, 2010

FRN	Date Invoice Signed by Lead Project Coordinator	Date Service Provider Submitted Invoice to USAC	Service Provider Bills Sought for Reimbursement in the Invoices	Date Beneficiary Paid the Bills
41446	April 19, 2013	April 26, 2013	One for April 2013	May 3, 2013
41820	June 8, 2010	June 9, 2010	Six for May 2010	June 17, 2010
	May 16, 2011	May 17, 2011	Thirteen for May 2011	May 19, 2011
	June 29, 2011	June 30, 2011	One for June 2011	July 5, 2011
	November 4, 2011	November 8, 2011	Three for September 2011	November 17, 2011
47731	June 29, 2011	June 30, 2011	One for June 2011	July 5, 2011
	November 4, 2011	November 8, 2011	One for September 2011	November 17, 2011
53313	December 7, 2011	December 8, 2011	Two for September 2011	December 15, 2011
59779	August 1, 2012	August 3, 2012	Four for July 2012	August 10, 2012
	April 19, 2013	April 22, 2013	One for January 2013	May 6, 2013
60318	May 1, 2012	May 1, 2012	One for April 2012	May 7, 2012

Cause

The Beneficiary and Service Provider did not demonstrate sufficient knowledge of the Rules and did not have adequate controls and procedures in place to ensure that the Beneficiary paid its 15 percent minimum contribution to the service provider before the Project Coordinator certified that the invoices were accurate and that the required 15 percent minimum contribution was paid before the service provider submitted the invoices to USAC.

Effect

There is no monetary effect for this finding as the Beneficiary paid its 15 percent minimum contribution in full to the service provider. However, by certifying that an invoice is accurate and that the 15 percent minimum contribution was paid prior to actually paying the required contribution, there is an increased risk that the Beneficiary may not pay its 15 percent minimum contribution as required by the Rules.

Recommendation

The Beneficiary must implement controls and procedures to ensure that it pays its 15 percent minimum contribution to the service provider prior to certifying that an invoice is accurate and that the Beneficiary paid the required 15 percent minimum contribution. In addition, the service provider must implement controls and procedures to ensure the Beneficiary's 15 percent minimum contribution is collected prior to submitting the invoices to USAC.

Beneficiary Response

> Each participating health care provider (HCP) forwarded/prepaid their 15% share of the cost to IHA prior to construction of fiber and acquisition of electronics. The HCP is an eligible source of funding. By forwarding their 15% share of the cost [to] the Beneficiary (HCP) prior to electronics

acquisition and fiber installation[,] the HCP has paid their share of the cost. As service provider invoices were received, the IRHTP Project Coordinator reviewed the service providers invoice for accurcracy, calculated the HCP's 15% share[,] and processed the service providers invoice for USAC payment and payment of the HCP 15% share to the service provider.

Your recommendation has been noted and procedures will be implemented to ensure the Beneficiary has paid the required 15% contribution and the HCP 15% cost share is paid to the service provider prior to certifying that the invoice is accurate.

Service Provider Response for FRNs 37533 and 60318

We processed both transactions at the same time with the understanding that the terms were net 45 with the customer and that USAC will follow with the remaining amount due. The problem is that the customer invoice comes as one and there is [*sic*] two sources of payment. Then the customer is slower in paying versus USAC. This process is hard to manage when you have to wait for a payment from the beneficiary before making the claim to UCAC [*sic*]. This is all back office systems that cannot support invoice once payment is delivered. We usually invoice as services are rendered not as beneficiary pays.

Service Provider Response for FRN 37534

We have reviewed the findings above and report the following in response: Findings are understood. Future claims will be audited to confirm 15% payment. All payments and requests on this order have been completed. There was no malice intended.

Service Provider Response for FRNs 38196 and 59779

Communication Technologies, LLC. had no control over the timing of the Beneficiary's contribution. Invoices were sent to Communication Technologies from Art Spies with the Iowa Hospital Association which we confirmed, signed and e-mailed to the USAC e-mail address for such purposes.

Service Provider Response for FRN 41316

Premier Communications ("Premier") agrees that the 15% was paid by the Beneficiary one day after Premier submitted the invoice to USAC for reimbursement. It was Premier's understanding that when it received the signed invoice from the Beneficiary, payment had been sent and received; however, we can assume that this was done via verbal confirmation and not through an actual check received, which occurred the next day according to USAC's audit. In the future, Premier will implement a control where our regulatory department will confirm with its accounting department that payment has been received prior to requesting the

signature of our CEO and submitting the invoice to USAC. We feel that this control will prevent future instances where payments are received after the invoice is submitted.

Service Provider Response for FRN 41446

The above finding has been read, is understood, and has been included in the AIS USAC Financial Documentation Book. A checklist is now in that book showing the date of the receipt of the 15% for future projects.

Service Provider Response for FRNs 41820 and 47731

MasTec has received all payments according to the email [from the auditor] dated August 19, 2014 [notifying MasTec of this finding].

Service Provider Response for FRN 53313

I did check back into the history of FRN 53313, and would agree that USAC was invoiced on December 8, 2011 (one week before payment was received from IRHTP for the 15% portion due by the HCP). Unfortunately I do not know the history of why this happened as the SDN employee that handled the Rural Health invoicing at that time is no longer with us. I can only assume that they were unaware of this specific rule with the Pilot Program.

Since that staff transition I have been diligent in working to improve SDN's accounting processes as they relate to the Rural Health and Erate Programs. We are also striving to be sure that all USAC requirements are met within the different programs through research, other Rural Health Consultants[,] as well as more open communication with the HCP's. This past year, we have transitioned from an outdated/inflexible billing system to a much more robust billing/receivables system. This new system allows us to better track HCP payments "real-time" as well as housing more detailed information at the account level so that we can be sure that USAC is invoiced correctly. Obviously the certification process must not be taken lightly and we will certainly do more due diligence on payments and requirements before sending on to USAC going forward.

USAC IAD Response to Service Provider Response for FRNs 38196 and 59779

Although Communication Technologies, LLC, had no control over the timing of the Beneficiary's 15 percent contribution, the Service Provider is still responsible for submitting the invoice to USAC and collecting the required 15 percent contribution from eligible participants. In this instance, the Service Provider submitted the invoice to USAC before ensuring it had collected the Beneficiary's 15 percent minimum contribution. For this reason, IAD's position on this finding remains unchanged.

USAC Management Response
While the Beneficiary certified that it collected the required 15 percent contribution prior to invoice submission, the contribution was actually collected *after* invoices were submitted to USAC in violation of the Rules. USAC management agrees with IAD's recommendation that the Beneficiary and Service Providers implement policies and procedures to ensure that USAC is invoiced only after the 15 percent contribution has been paid. USAC will request that the Beneficiary provide a copy of its new procedure to confirm the corrective action was undertaken.

Criteria
1. "USAC will disburse Pilot Program funds based on monthly submissions (*i.e.*, invoices) of actual incurred eligible expenses…Service providers shall submit detailed invoices to USAC on a monthly basis for actual incurred costs…All invoices shall also be approved by the lead project coordinator authorized to act on behalf [of] the health care provider(s), confirming the network build-out or services related to the itemized costs were received by each participating health care provider. The lead project coordinator shall also confirm and demonstrate to USAC that the selected participant's 15 percent minimum funding contribution has been provided to the service provider for each invoice." *In the Matter of Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, FCC 07-198, 22 FCC Rcd 20360, 20411 ¶ 98 (2007) (*Pilot Program Selection Order*).

2. "**Project Coordinator Certification.** I certify that I have examined the information provided in the Rural Health Care Pilot Program Invoice, and to the best of my knowledge, information and belief, the participating health care providers have received the network build-out or related services itemized on this invoice. I certify under penalty of perjury that the 15 percent minimum funding contribution for each item on this invoice required by the Rural Health Care Pilot Program rules was funded by eligible sources as defined in the rules and has been provided to the vendor." Rural Health Care Pilot Program Invoice Form, (OMB 3060-0804), Nov. 2010.

Finding #4
Beneficiary Did Not Notify USAC and the FCC that the Network Project Was Not Initiated Within Six Months of the Funding Commitment Letter

Condition
IAD examined the Funding Commitment Letter (FCL), FCC Form 467, and the initial service provider bill demonstrating the start of services for FRN 47731 to determine whether the fiber installation services were initiated within six months of the FCL dated September 16, 2010. The Beneficiary submitted its FCC Form 467 to USAC on September 28, 2010 and certified that the fiber installation services would start on October 1, 2010. However, IAD noted that the initial service provider bill dated June 28, 2011, was for services received between April 1, 2011 and May 27, 2011, which is more than six months after the FCL was issued (criterion 1). The Beneficiary informed IAD that it did not notify USAC or the FCC that its network project was not initiated within six months of the date of the FCL.

Cause
The Beneficiary did not demonstrate sufficient knowledge of the Rules and did not have adequate controls and procedures in place to ensure that the Beneficiary notified USAC and the FCC that its RHC Pilot Program funded network project was not initiated within six months of the FCL.

Effect
There is no monetary effect for this finding because the fiber build-out for the RHC Pilot Program funded network was initiated by April 1, 2011, prior to completion of the audit.

Recommendation
The Beneficiary must implement controls and procedures to ensure that it notifies USAC and the FCC when RHC Pilot Program funded network projects are not initiated within six months of the FCL and to do so within 30 days thereafter, explaining when it anticipates that the approved network project will be initiated as required by the Rules.

Beneficiary Response

> While construction began on April 1, 2011, there are many activities that must occur prior to the start of construction such as pathway engineering and drawings, procuring needed construction materials (e.g. fiber) and obtaining any needed permits[,] which means activity actually began prior to April 1, 2011. Your recommendation has been noted and controls and procedures will be implemented to ensure USAC is notified if service is not initiated within 6 months of the FCL.

USAC Management Response
USAC management agrees with the finding and recommendation. The Beneficiary should have notified USAC that its network build-out would not start within six months

after issuance of the FCL. USAC will request that the Beneficiary provide a copy of its new procedure to confirm the corrective action was undertaken.

Criteria

1. "If the selected participant's network build-out has not been initiated within six months of the [Funding Commitment Letter] FCL sent by USAC to the selected participant and service provider(s) approving funding, the selected participant must notify USAC and the Commission within 30 days thereafter explaining when it anticipates that the approved network project will be initiated." *In the Matter of Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, FCC 07-198, 22 FCC Rcd 20360, 20409, ¶ 94 (2007) (*Pilot Program Selection Order*).

This concludes the results of our audit. Certain information may have been omitted from this report concerning communications with USAC management or other officials and/or details about internal operating processes or investigations. This report is intended solely for the use of USAC, the Beneficiary, and the FCC and should not be used by those who have not agreed to the procedures and taken responsibility for the sufficiency of those procedures for their purposes. This report is not confidential and may be released to a requesting third party.

cc: Mr. Chris Henderson, USAC Chief Executive Officer
Mr. David Capozzi, USAC General Counsel

ATTACHMENT 4

DrinkerBiddle&Reath LLP

Laura H. Phillips
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202-842-8465 Fax
laura.phillips@dbr.com

June 29, 2015

VIA ELECTRONIC MAIL

Universal Service Administrative Company
Rural Health Care Division
Attention: Letter of Appeal/RHC
2000 L Street NW, Suite 200
Washington, DC 20036

RE: Denied FRN 13422321 for Apparent Competitive Bidding Violation

HCP Name	Iowa Rural Health Telecommunications Program
HCP Number	17226
Funding Request Number	13422321
Vendor	State of Iowa, Iowa Telecommunication & Technology d/b/a Iowa Communications Network (SPIN: 143003005)
Funding Year	2013
Application Type	FCC Form 462
Contact Information:	Arthur Spies Iowa Rural Health Telecommunications Program 100 East Grand Avenue Suite 100 Des Moines, IA 50309-1835 (515) 288-1955 (phone) (515) 283.9366 SPIESA@ihaonline.org

To Whom It May Concern:

The Iowa Rural Health Telecommunications Program ("IRHTP"), through its attorneys, and pursuant to sections 54.719 and 54.720 of the rules of the Federal Communications Commission ("Commission"),[1] submits this Letter of Appeal in connection with the determination of the Rural Health Care ("RHC") Division of the Universal Service Administrative Company ("USAC") relating to Funding Request Number ("FRN") 13422321 for funding year 2013. IRHTP respectfully requests review of this determination. As explained in more detail herein, the RHC Division must reverse its decision and grant the IRHTP's FRN 13422321 as well as subsequent "evergreen" circuit fee FRNs or, at the very least, hold its determinations in abeyance pending the

[1] 47 C.F.R. §§ 54.719-54.720 (2014).

IRHTP's anticipated request for review of the flawed determinations relating to FRNs 64723, 68296, 41446, and 63145 discussed in the USAC Audit No. RH2013PP018 ("USAC Audit").[2]

The RHC Division's determinations with regard to FRN 13422321 are set forth in two separate documents. On May 1, 2015, IRHTP was notified that the RHC Division had denied IRHTP's Form 462 FRN 1342232[1] "for all services" because of "[a]pparent service provider involvement in beneficiary's competitive bidding process."[3] A few days later, on May 11, 2015, the RHC Division notified IRHTP by email that its Form 462 had been denied because of a "Possible Competitive Bidding Violation."[4] These denial notifications were not accompanied by any findings of fact, or any information which would support a denial of universal service support funding totaling $626,097.01 in payments due to the State of Iowa, Iowa Telecommunication & Technology d/b/a Iowa Communications Network ("ICN") on the basis of any possible competitive bidding violation.

The IRHTP did not originally seek Pilot Program funding for circuit fees, instead planning to charge circuit fees to participating health care providers.[5] Following a Commission order allowing for additional temporary funding for continued support of broadband services for Pilot Program participants,[6] however, the IRHTP issued the Connectivity Services RFP, to which this FRN 13422321 relates.[7] The Connectivity Services RFP "solicit[ed] proposals from qualified fiber optic network providers to cost out the various bandwidth circuits required to connect all of the IRHTP link-segments into a fully meshed Ethernet network ranging in increments from 30 Mbs to1 Gb/s."[8] As set forth in the RFP and consistent with the Commission's program changes,[9] IRHTP intended to establish "evergreen" contracts for twenty (20) years with the selected

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[2] *See* Independent Auditor's Report on Iowa Rural Health Telecommunication Program's Compliance with Rural Health Care Pilot Program Rules (USAC Audit No. RH 2013PP018) (Sept. 5, 2014) (Attachment 1).
[3] Letter from Rural Health Care Division, Healthcare Connect Fund Program, to Arthur Spies, Iowa Rural Health Telecommunications Program (April 30, 2015) ("Denial Letter") (Attachment 2). The Denial Letter was received by Arthur Spies, IRHTP Project Manager, via email on May 1, 2015. *See* Email from Paige Pierce, Assistant Program Analyst, Rural Health Care Division, to Arthur Spies & Gabrielle Rodriguez (May 1, 2015) (attaching official denial letter for FY2013 FRN 13422321) (Attachment 3). Although the Denial Letter refers to "FRN 1342232," we believe this is a numerical typo, based on the cover email and IRHTP's records.
[4] Email from Rural Health Care Division, USAC, to Arthur Spies (May 11, 2015) ("May 11, 2015 email") (Attachment 4).
[5] *See* Affidavit of Arthur Spies, at 4 (Oct. 3, 2014), *in* IRHTP Response to USAC Audit Findings (Oct. 2014) (Attachment 5A); Iowa Rural Health Telecommunications Program, Sustainability Plan, at 2–3 (June 2009), *in* IRHTP Response to USAC Audit Findings (Oct. 2014) (Attachment 5B).
[6] *See Rural Health Care Support Mechanism*, WC Docket 02-60, Order, 27 FCC Rcd 7907, 7911 (2012) ("*2012 Bridge Order*").
[7] *See* Spies Aff. at 3.
[8] Notice to Vendors, Request for Proposal, IHRTP RFP 12-005 (USAC RFP #04), at 3 (2012) ("Connectivity Services RFP") (Attachment 6).
[9] *See 2012 Bridge Order*, 27 FCC Rcd at 7911, 1914.

vendor.[10] The IRHTP awarded the "evergreen" contract to ICN after a competitive bidding process[11] and subsequently filed the funding request form for FRN 13422321. The IRHTP has since filed other requests for annual program year funding in connection with this contract. These other requests remain pending before the RHC Division but may also be at risk based on the RHC Division's denial of FRN 13422321.

The RHC Division must reverse its determination for two principal reasons. First, the RHC Division has not made any findings that support its denial of FRN 13422321 on the basis of any apparent or possible competitive bidding violation. Second, to the extent that the RHC Division is relying on findings from the USAC Audit to support its determination as to FRN 13422321, several critical facts underlying the USAC Audit findings were reported incorrectly by USAC. IRHTP intends to timely appeal to USAC its determinations regarding the FRNs implicated by that audit.

A. IRHTP Has Not Committed Any Competitive Bidding Violations. Having Failed to Provide a Substantiated, Factually Accurate Finding of an Actual Competitive Bidding Violation, the RHC Division Must Reverse its Denial.

IRHTP has not committed any competitive bidding violations in connection with its participation in any Universal Service program. The RHC Division has made no findings that would support a different conclusion. Furthermore, the IRHTP has had no notice of which specific Commission rules or published policy are implicated in the RHC Division's denial determination, thus depriving IRHTP of an opportunity to meaningfully address why the relevant law and facts do not support a denial of funding. Absent a substantiated, factually accurate finding of an actual violation of the Commission's rules or policies, the RHC Division must reverse its denial of FRN 13422321.

The initial letter denying IRHTP's Form 462 FRN 1342232[1] "for all services,"[12] is a one page document providing no rationale for USAC's determination. The substantive part of the Denial Letter reads, in relevant part, as follows:

> The Universal Service Administration Company (USAC) completed the review of the above-mentioned funding request and [h]as denied the request for all services. The explanation for the decision made about this request is as follows:

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[10] *See* Connectivity Services RFP, *supra* note 8, at 3.

[11] *See* Memorandum from Arthur Spies to IRHTP Steering Committee, "May 29, 2012 Conference Call Summary" (May 29, 2012) ("May 29, 2012 Conference Call Memorandum") (Attachment 5B); Spies Aff. at 4.

[12] Denial Letter, *supra* note 3.

Explanation

Apparent service provider involvement in beneficiary's competitive bidding process. This issue was also raised under the recent RHCPP audit of IRHTP.

Supporting Portions from the Order
Section B 1. "Fair and Open" Competitive Bidding Process, paragraphs 229 thru 233.

Based on the text of the Denial Letter, it is difficult to know with any kind of certainty any specifics of the kind of service provider involvement the RHC Division objects to, or who the RHC Division believes has been "apparent[ly]" involved in the IRHTP's competitive bidding process in violation of the Commission's rules or policies.[13] The very vague reference to "the recent [RHC Pilot Program] audit of IRHTP" fails to elucidate which specific actions or omissions resulted in the "[a]pparent service provider involvement" that has led the RHC Division to incorrectly deny funding for "all services" in connection with FRN 1342232[1].[14]

The general reference to the "Supporting Portions from the Order" is equally vague.[15] One can reasonably assume that the "Section B 1. 'Fair and Open' Competitive Bidding Process, paragraphs 229 thru 233" reference relates to the *Healthcare Connect Fund Order*,[16] but the order is not even clearly identified in the Denial Letter. Moreover, these paragraphs contain, essentially, the entirety of the *Healthcare Connect Fund Order*'s discussion of the competitive bidding process. Other than reiterating that whatever "involvement" USAC has described as "apparent" relates to the competitive bidding process and not to something else, the reference is completely unhelpful as to providing specific information to IRHTP of the problematic action or inaction.

The RHC Division's email notification from May 11, 2015 is even sparser.[17] This communication simply states that the RHC Division has denied the IRHTP's FCC Form 462 "for the following reason: Possible Competitive Bidding Violation."[18] There are no references to the Commission rules or policy the IRHTP has been found in "possible" violation of and there are again no findings of fact.

The IRHTP has made every effort to comply with the Commission's competitive bidding rules and policies from the outset, in many cases conferring with USAC staff to confirm that IRHTP processes were in accordance with USAC expectations. The RHC

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[13] *See* Denial Letter, *supra* note 3.
[14] *See id.*
[15] *See id.*
[16] *Rural Health Care Support Mechanism*, WC Docket 02-60, Report and Order, 27 FCC Rcd 16678, 16778–79 (2012) ("*Healthcare Connect Fund Order*").
[17] *See* May 11, 2015 Email, *supra* note 4.
[18] *Id.*

Division has made no findings in connection with FRN 13422321 that would support a different conclusion, or allow IRHTP an opportunity to meaningfully respond to on appeal. Having failed to provide a substantiated finding of an actual violation of the Commission's rules or published policies, the RHC Division must reverse its denial of FRN 13422321, or at the very least, hold its determination in abeyance pending IRHTP's anticipated request for review of the determinations relating to FRNs 64723, 68296, 41446, and 63145 discussed in the USAC Audit.

B. To the Extent That the RHC Division Is Relying On Findings from the USAC Audit to Support its Denial of FRN 13422321, Several Facts That Are Said to Support its Findings are Incorrect. IRHTP Intends to Timely Appeal the Relevant Determinations.

As previously mentioned, the Denial Letter makes a vague reference to an "issue" which "was also raised under the recent RHCPP audit of IRHTP."[19] It is unclear exactly which specific "issue" the RHC Division correspondence is referring to, but to the extent that the RHC Division is generally or specifically relying on findings addressed in the USAC Audit to support its determination as to FRN 13422321, several facts cited by USAC that are said to support the findings of the USAC Audit are inaccurate. The RHC Division therefore has likely relied on a number of mischaracterized and incorrect findings.

For example, Anthony Crandell, the sole proprietor of Access Integration Specialists ("AIS"), is erroneously characterized throughout the USAC Audit as a "consultant" to the ICN.[20] The USAC Glossary of Terms provides that a "consultant" is "[a] company or individual (non-employee of the entity) selected to perform certain activities related to the application process on behalf of the applicant or service provider for a fee. A Letter of Agency (LOA) or consultant agreement must be in place before the consultant undertakes these activities."[21] In 2006, the ICN and AIS entered into a three-year contract under which AIS was contracted to perform project management services as needed and requested by ICN. Mr. Crandell, however, did not perform activities related to the application process on behalf of the [ICN].[22] He did not, for example, draft or evaluate any of the bids tendered for the RFPs he developed or reviewed[23] in his capacity

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[19] Denial Letter, *supra* note 3.

[20] *See, e.g.*, USAC Audit, *supra* note 2, at 7, 9, 19, 20-23, 25.

[21] USAC, Rural Health Care Program, *Glossary of Terms*, http://www.usac.org/_res/documents/rhc/pdf/handouts/RHC-Glossary-of-Terms.pdf (last visited Jun. 29, 2015). He is also not an employee under the terms of the contract with ICN. *See* Affidavit of Anthony Crandell, at 1–3 (June 29, 2015) (Attachment 7).

[22] *See* Crandell Aff. at 1–2.

[23] Mr. Crandell was involved with the following requests for proposals: RFP 08-001 (USAC RFP #00) ("Outside Plant Fiber RFP"); RFP 08-002 (USAC RFP #01) (Network and Site Electronics); RFP 10-001 (USAC RFP #03) (Broadband Lit services); RFP 12-004 (USAC RFP #05) (only with respect to Outside Plant Fiber and Network Electronics sections); and the Connectivity Services RFP. *See* Crandell Aff. at 2, 5.

as an independent contractor for ICN, or work on network design.[24] Mr. Crandell is therefore not a consultant as defined by USAC. It is also important to note that Mr. Crandell has never exercised any control or influence over ICN and his work for ICN did not influence the drafting or the evaluation of the RFPs for IRHTP with which he was involved.[25]

The USAC Audit document also reflects another erroneous understanding, namely that Mr. Crandell was involved in the preparation of the IRHTP's Rural Health Care Pilot Program Application in 2007.[26] As Mr. Crandell can attest, Mr. Crandell did not assist in any way with IRHTP's Commission application for Rural Health Care Pilot Program funding in 2007.[27]

Additionally, apparently misunderstanding the scope of a number of IRHTP RFPs, the USAC Audit infers from Mr. Crandell's participation in the Outside Plant Fiber RFP that he was privy to information that was not available to other bidders who participated in the later Quality Assurance Inspection Services RFPs, RFP 09-002 (USAC RFP #02) ("Quality Assurance Inspection Services RFP-1") and RFP 12-004 (USAC RFP #05) ("Quality Assurance Inspection Services RFP-2").

Contrary to the assumption made, the Outside Plant Fiber RFP and the subsequent RFPs were decidedly different as to scope and content. Specifically, the Outside Plant Fiber RFP was a fiber build-out with a quality assurance investigation component included.[28] This project required the presence of an individual at each build-out site to ensure safety and security protocols in addition to quality review to ensure that everything was built to industry standards,[29] but was not specific with regard to the hours needed or the type of work required.[30]

The Quality Assurance Inspection Services RFP-1, on the other hand, took a different, far more narrow, approach. It simply identified the number of sites and hours of work in response to which the bidder would provide its "burdened" hourly rate,[31] a much more "plug and play" approach to the work being bid. Later on, "a few hospitals that had previously declined to participate [in] the program sought to be included and participation agreements on the projects were completed....Despite the small number of hospitals

[24] *See* Crandell Aff. at 3, 5, 6.
[25] *See* Crandell Aff. at 6.
[26] *See* USAC Audit, *supra* note 2, at 6 ("The Beneficiary also explained that Tony Crandell (AIS) assisted with the request for proposal and bid evalu[a]tion for the network plan when the Beneficiary prepared its application for the RHCPP in 2007").
[27] *See* Crandell Aff. at 1-2.
[28] *See* Spies Aff. at 1.
[29] *See* Notice to Vendors, Request for Proposal, IRHTP RFP 08-001, at 3 (2008) (Attachment 8).
[30] *See* Crandell Aff. at 3–4.
[31] *See* Crandell Aff. at 3–4, *citing* Notice to Vendors, Request for Proposal IRHTP RFP 09-002, at §§ 3.1, 3.8, 3.13 (describing the burdened hourly rate requirements), Annex A (providing a model form for all bidders to complete) (2009) (Attachment 9).

seeking to be added to the existing service, the additional service had to be competitively bid."[32] This became Quality Assurance Inspection Services RFP-2, which sought services to oversee the quality control of Outside Plan vendors installing fiber optic facilities or IRU services at this small number of locations,[33] using also the burdened rate approach.[34] The distinct nature of these Quality Assurance Inspection Services RFPs, combined with the fact that the Outside Plant Fiber RFP was available to everyone who bid on the Quality Assurance Inspection Services RFP-1[35] do not support the inferences apparently drawn by USAC and set forth in the USAC Audit about apparent and unproven access to "inside" information.

Because IRHTP intends to timely appeal the determinations as to the FRNs implicated by the USAC Audit, and it is not plain on which of these facts, if any, USAC relied on in deciding to deny FRN 13422321, IRHTP will not address the remaining underlying facts in this appeal. However, to the extent that the RHC Division is generally or specifically relying on the USAC Audit to support its determination as to FRN 13422321, several critical facts underlying the USAC audit were inaccurately reported and the RHC Division has therefore likely relied on a number of mischaracterized and incorrect findings of fact. Not having provided any other findings in support of its determination, the RHC Division must reverse its denial of FRN 13422321 or return it to pending status while the matter is reviewed. IRHTP respectfully suggests that the denial of its 2013 "evergreen" circuit fee funding request not be finalized until USAC has had the opportunity to review the material IRHTP anticipates presenting in connection with the USAC Audit.

C. Conclusion

For the foregoing reasons, the IRHTP hereby requests that USAC's RHC Division reverse its previous determination as set forth in the Denial Letter and the May 11, 2015 Email and grant the IRHTP's FRN 13422321. Alternatively, the RHC Division must hold its determination in abeyance pending IRHTP's anticipated request for review of the determinations relating to FRNs 64723, 68296, 41446, and 63145 discussed in the USAC Audit.

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[32] Spies Aff. at 2.
[33] Memorandum from Arthur Spies to IRHTP Steering Committee, "June 20, 2012 Conference Call Summary" (June 21, 2012) (Attachment 5C).
[34] *See* Crandell Aff. at 3–4.
[35] *See* Crandell Aff. at 3–4, *citing* RFP 09-002, *supra* note 31, at 2.

Respectfully submitted,

IOWA RURAL HEALTH TELECOMMUNICATIONS PROGRAM

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Its Attorneys

Supporting Documentation:

Attachment	
1	USAC Audit No. RH 2013PP018 (Sept. 5, 2014)
2	Letter from Rural Health Care Division, Healthcare Connect Fund Program, to Arthur Spies, Iowa Rural Health Telecommunications Program (April 30, 2015)
3	Email from Paige Pierce, Assistant Program Analyst, Rural Health Care Division, to Arthur Spies and Gabrielle Rodriguez (May 1, 2015)
4	Email from Rural Health Care Division to Arthur Spies (May 11, 2015)
5	IRHTP Response to USAC Audit Findings (Oct. 2014) and Supporting Documentation, including: A. Spies Affidavit (Oct. 3, 2014) B. Memoranda and Emails regarding Connectivity Services, including: • Iowa Rural Health Telecommunications Program, Sustainability Plan (June 2009) • Memorandum from Arthur Spies to IRHTP Steering Committee, "May 29, 2012 Conference Call Summary," (May 29, 2012) C. Memoranda and Emails regarding Quality Assurance, including: • Memorandum from Arthur Spies to IRHTP Steering Committee, "June 20, 2012 Conference Call

	Summary" (June 21, 2012) D. Disclosure Memoranda
6	Notice to Vendors, Request for Proposal, IRHTP 12-005 (USAC RFP #04) (2012)
7	Crandell Affidavit (June 29, 2015)
8	Notice to Vendors, Request for Proposal, IRHTP 08-001 (2008)
9	Notice to Vendors, Request for Proposal, IRHTP 09-002 (2009)

ATTACHMENT 5

AFFIDAVIT OF TONY CRANDELL

I, Tony Crandell, swear or affirm:

Background

1. My name is Anthony Gene Crandell and I am the sole proprietor of Access Integration Specialists (AIS), which I formed in late 2002.
2. I have no criminal history and have never been charged with a crime beyond a speeding ticket.
3. I served in the National Guard from 1963 through 1986.
4. I worked in law enforcement from 1969 to 1977. I was the Chief of Police for the City of Lamoni from 1969 to 1972 and the Chief Deputy for Decatur County from 1972 to 1977.
5. I then worked for the State of Iowa as a project manager beginning in 1978 in the communications division of General Services and then for the Iowa Communications Network (ICN) under the Iowa Telecommunications and Technology Commission once it was formed in 1994.
6. This experience provided me with extensive knowledge of and experience with Iowa's broadband networks.
7. I retired from state public service in 2002 as a Senior Systems Design Engineer.
8. I then did project management work for Merit Resources, the Department of Homeland Security, and the Iowa National Guard. I also did RFP drafting as part of my work with Homeland Security.
9. In 2006, ICN and AIS entered into a three-year contract. I was contracted to

perform project management services as needed and requested by ICN as an independent contractor.

10. This included work on ICN's accounting/billing system and coordinating the installation of telephone systems for the Department of Human Services.

11. From 2007 to 2013, I continued working with the Iowa National Guard on a voluntary basis as a coordinator for the state search and rescue committee and gave communications seminars for Homeland Security.

Scope of Work With Iowa Rural Health Telecommunications Program (IRHTP)

12. I did not assist with the application for Rural Health Care Pilot Program funding in 2007.

13. After the award was made in 2008, my technical expertise and assistance was requested and I assisted Art Spies, Project Coordinator for IRHTP, with drafting and evaluating the following Requests for Proposal (RFPs):

- RFP 08-001 (Outside Plant Fiber) (USAC RFP #00)
- RFP 08-002 (Network and Site Electronics) (USAC RFP #01)
- RFP 10-001 (Broadband Lit services) (USAC RFP #03)
- RFP 12-004 (Outside Plant Fiber and Network Electronics sections only) (USAC RFP #05)
- RFP 12-005 (Meshed Ethernet Bandwidth Connectivity) (USAC RFP #04).

14. While USAC refers to me as a "consultant," I did not consider myself as such because the network design was already in place. I was the drafter for the above-identified RFPs.

15. In fact, Mr. Spies and the Steering Committee reviewed the RFPs and had the final say on their content.

16. The bids received for the Quality Assurance Inspection Services for RFP 08-001 (USAC #00) were too expensive and therefore, no evaluations were performed.

17. AIS did not bid on this RFP.

18. IRHTP determined it would have to submit another RFP for Quality Assurance Inspection Services that better identified the needs of the project.

19. I inquired whether AIS would be prohibited from bidding on a second Quality Assurance Inspection Services RFP.

20. To my understanding, Mr. Spies discussed this inquiry with the USAC coach, Barbara Sheldon, and Ms. Sheldon not see a problem with AIS bidding as long as I did not assist with the drafting of the second RFP (RFP 09-002).

21. The USAC coach and Mr. Spies were fully aware of AIS's relationship with ICN and my experience and knowledge of the ICN network from my prior work experience with the state and as an independent contractor.

22. That experience had little relevance to RFP 09-002, as RFP 09-002 used a "burdened hourly rate" approach where IRHTP identified the number of sites and hours of work. The bidder then simply had to provide its burdened hourly rate, which included all expenses. *See* RFP 09-002 Sections 3.1, 3.8, and 3.13

(describing the burdened hourly rate requirements). *See also* Annex A to RFP 09-002 (providing a model form for all bidders to complete).

23. This approach was entirely different than the Quality Assurance Inspection Services request in RFP 08-001 (USAC RFP #00), which was more of a general request that did not identify the hours or type of work required.

24. RFP 08-001 was available for review to all bidders on 09-002 upon request. *See* RFP 09-002 at 2.

25. I did not assist with drafting RFP 09-002 (Quality Assurance Inspection Services) (USAC RFP #02) nor the Quality Assurance Inspection Services section of RFP 12-004 (USAC RFP #05), which also used the burdened rate approach.

AIS Bidding

26. Based on the USAC coach's representation concerning the propriety of a bid from AIS on a second Quality Assurance Inspection Services RFP, AIS bid on RFP 09-002 (USAC RFP #02).

27. During this time, I continued to work with IRHTP and Mr. Spies on the other RFPs we were drafting and evaluating.

28. We did not discuss RFP 09-002 (USAC RFP #02) while the bidding was open.

29. I also did not discuss RFP 09-002 (USAC RFP #02) with ICN.

30. AIS was awarded the contract FRN 63145 over one other bidder.

31. AIS scored lower than the other bidder on project experience and vendor capabilities. It scored higher on cost and invoicing and audit compliance.

32. I had no knowledge of how my bid for RFP 09-002 would be considered as the bids for RFP 08-001 (USAC #00) were never evaluated and RFP 09-002 used a different submission calculation.

33. Because I had bid and won the contract on RFP 09-002 (USAC RFP #02), I also did not participate in drafting or evaluating the Quality Assurances Services section of RFP 12-004 (USAC RFP #05).

34. AIS was the only bidder for the Quality Assurances Services section of RFP 12-004 (USAC RFP #05).

35. AIS bid the same price as it had for RFP 09-002 (USAC RFP #02).

36. AIS won the contract for FRN 63145.

ICN Bidding

37. In drafting RFP 08-001 (USAC RFP #00), RFP 08-002 (USAC RFP #01), RFP 10-001 (USAC RFP #03), limited sections of RFP 12-004 (USAC RFP #05) (excluding the Quality Assurance Services section), and RFP 12-005 (USAC RFP #04), my role was to provide independent technical expertise that adequately identified the needs of the project.

38. In evaluating the aforementioned RFPs, I objectively considered the factors outlined in each RFP.

39. I did not draft or evaluate the bids for these RFPs in my capacity as an independent contractor for ICN.

40. While these RFPs were pending, ICN and AIS had no conversations related to the

RFPs.

41. At no point did ICN attempt to influence my decision on how to draft and evaluate the RFPs I was working on.

42. My work as an independent contractor for ICN during this time in no way influenced my drafting or evaluation of the RFPs.

43. ICN's role, in providing the backbone network infrastructure, was contemplated by the application for the Pilot Program funding, which was filed by the Iowa Hospital Association (IHA) and ICN.

44. The application, like many others, requested a waiver from the competitive bidding requirements due to Iowa's unique statewide network and ICN being the obvious cost-effective choice.

45. The FCC denied these waiver requests reasoning that the competitive bidding process was necessary to ensure that the identified service providers were the most "cost-effective." *See* Pilot Program Selection Order at ¶ 101.

46. IRHTP complied and conducted competitive bids for all RFPs.

47. Unsurprisingly, ICN was the only bidder for RFP 12-005 (USAC RFP #04).

48. It was awarded FRN 68296.

49. AIS did not do any work on FRN 68296 as an independent contractor.

AFFIANT FURTHER SAYTH NOT.

Anthony Gene Crandell

June 29, 2015
Date

Subscribed and sworn to before me, this 29th day of June, 2015.

Signature of Notary

SARA POTTEBAUM
Commission No. 776133
My Commission Expires
December 12, 2015

ATTACHMENT 6

NOTICE TO VENDORS
REQUEST FOR PROPOSAL
IRHTP RFP 09-002

Outside Plant Quality Assurance Inspection Services at 82 Health Care Locations Throughout the State of Iowa

Mr. Art Spies
Senior Vice President
Iowa Hospital Association
100 East Grand Avenue, Suite 100
Des Moines, IA 50309
spies@ihaonline.org

The Iowa Rural Health Telecommunications Program (IRHTP) will be receiving sealed bid proposals for RFP 09-002 until the 29th day following posting of the RFP 3:00 p.m. CDST, August 6, 2009.

Healthcare without limits™
faster
more reliable
co$t effective

SUPPLEMENTAL ON-DEMAND QUALITY ASSURANCE INSPECTION SERVICES

RFP 09-002

THIS REQUEST FOR PROPOSAL CONSISTS OF:

RFP 08-001 available on CD per request (for reference only)

CHAPTER 1
ADMINISTRATIVE ISSUES
RFP 09-002

1.0 General. The Rural Health Care Program of the Universal Service Fund (USF), which is administered by the Universal Service Administrative Company (USAC), is a support program authorized by Congress and designed by the Federal Communications Commission (FCC) to provide reduced rates to rural health care providers (HCPs) for telecommunications services and Internet access charges related to the use of telemedicine & tele-health. The Iowa Rural Health Telecommunications Program (IRHTP) and the Iowa Hospital Association (IHA) received approval to proceed with the connection of various Iowa hospitals to the Iowa Communications Network using newly constructed or existing fiber optic cable facilities. IRHTP is seeking bid proposals for supplemental on-demand quality assurance inspection services in support of an Outside Plant Fiber Optic Cable Project at 85 health care locations throughout the State of Iowa.

1.1 Notice. This project is subject to the USAC procurement rules. The IRHTP will submit a USAC Form 465, RFP, and supporting documentation to USAC who will review the documentation and will post the RFP on the USAC website. All RFPs will be open for response and bidding for a minimum of twenty eight (28) days after the posting. After documents are posted to the USAC website, the following process will commence:

1.2 Schedule and Submission of Proposal.

1.2.1 Questions and Answers. Vendors are invited to submit written questions and/or requests for interpretation/consideration/acceptance concerning this RFP on or before 4:00 p.m. CDST, July 17, 2009. Vendors with questions concerning this RFP may submit questions in writing via email to Art Spies at spiesa@ihaonline.org. Oral questions will not be accepted, and verbal communications shall not override written communications. Only written communications are binding on IRHTP. If the questions, requests for clarifications, or suggestions pertain to a specific section of the RFP, the page and section number(s) must be referenced. IRHTP will prepare a written response to all pertinent questions submitted by Vendors and will post questions and responses on the Iowa Hospital Association web page, www.ihaonline.org by the close of business on July 24, 2009. The IRHTP's written responses will be considered part of the RFP. If the IRHTP decides to adopt a suggestion, the IRHTP will issue an amendment to the RFP.

1.2.2 The IRHTP assumes no responsibility for verbal representations made by its consortium members and representatives unless such representations are confirmed in writing by the IRHTP and incorporated into this RFP.

1.2.3 Changes and Amendments. In the event it becomes necessary for IRHTP to amend, add to or delete any part of this RFP, the amendment will be posted on the IHA website. Vendor's bid proposal must include acknowledgment of all addenda issued by IRHTP. If the IRHTP amends the RFP after the closing date of receipt of proposals, the IRHTP may, in its sole discretion, allow Vendors to amend their bid proposals in response to the IRHTP's amendment.

1.2.4 Receipt of Bid Proposals. Bid Proposals must be received at IHA's office by the 29th day following posting of the RFP, no later than 3:00 p.m. CDST August 6, 2009. **This requirement is**

a mandatory requirement and is not a minor deficiency subject to waiver by the IRHTP. No bid proposals will be accepted after the date and time specified. A late bid proposal shall be returned unopened to the Vendor. Additionally, no bid proposal will be accepted by telephone, electronic mail or facsimile. **The bid proposals must be mailed (with mailing in sufficient time to arrive on or before this deadline requirement) or be delivered as follows:**

Mailing Address:
Iowa Hospital Association
Attn: Mr. Art Spies
100 East Grand Ave. Suite 100
Des Moines, Iowa 50309

Delivery To:
Iowa Hospital Association
Attn: Mr. Art Spies
100 East Grand Ave. Suite 100
Des Moines, Iowa 50309

If bid proposals are delivered by mail service, express courier, delivery service or company, or in person, it shall be the sole responsibility of the Vendor submitting the proposal to insure that such delivery takes place prior to the aforementioned deadline. There shall be no waiving of the deadline due to missed deliveries on the part of the Vendor, Vendor's delivery staff or Vendor's choice of delivery service(s). Deliveries made directly to IHA must be placed with the IHA staff person able to accept such delivery.

1.2.5 Bid Proposal Opening. Bid Proposals will be opened at 3:00 p.m. CDST on August 6, 2009. Vendors may attend the bid opening if they wish, but no price information or any other information contained in any bid will be made public at that time. The bid proposals and the evaluation documents created by the IRHTP will remain confidential until the evaluation committee has evaluated all bid proposals submitted in response to this RFP and the IRHTP has issued a notice of award. The bid proposals submitted and the evaluation documents created by the IRHTP may be available for inspection subject to FCC and USAC guidelines or other applicable law only after the selection process is complete.

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

1.2.5.2 All bid proposals shall be firm for a period of 60 days to allow the evaluation committee to fully evaluate all proposals and make an award deemed to be in the best interest of IRHTP.

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

1.3 Proposal Submission & Format.

1.3.1 Bid Proposals shall be printed on 8.5" x 11" paper. The proposals should be in 3-ring binders with appropriate tabs for reference. The original bid proposal must be in a package CLEARLY MARKED "**IRHTP RFP 09-002 Proposal"** on the outer envelope or wrapping. This is necessary to insure that the response package is handled properly for verification against the RFP deadline. Lack of notation of the RFP number may affect the receipt timing and affect the evaluation process. Vendor should consider this item as a critical factor when submitting a response.

1.3.2 **To achieve a uniform review process and the maximum degree of comparability, proposals shall be organized in the following manner:**

1.3.2.1 **Title page** that includes the subject of the bid proposal, the RFP number being responded to (**09-002**), name of Vendor, address, name of designated contact person, telephone number, facsimile telephone number, E-mail address for Vendor's contact person (and, if applicable, the cellular telephone number of contact person) and the date.

1.3.2.2 **Completed Bid Proposal Compliance Form (Annex C)**
1.3.2.3 **Completed Authorization to Release Information Form (Annex D)**
1.3.2.4 **Completed Vendor Certification Form (Annex E)**
1.3.2.5 **Completed and signed Cost Submittal Sheet (Annex A)**

1.3.3 Number of Copies. Vendors shall submit one (1) with original blue-ink signatures and three (3) copies; in addition four (4) soft copies of the bid proposal shall be provided on (4) CDs using Microsoft Word and Excel, if proposal contains spreadsheets.

1.4 Clarification of Proposals and Obtaining Information. IRHTP reserves the right to contact a Vendor after submission of bid proposals for the purpose of clarifying a bid proposal to ensure mutual understanding. This contact may include written questions, interviews, site visits, and a review of past performance if the Vendor has provided goods or services to the IRHTP or its consortium members, USAC, or the ICN or requests for corrective pages in the Vendor's bid proposal. This information may be used to evaluate the Vendor's bid proposal. However, the information received from the Vendor shall not be considered in the evaluation of a Vendor's bid proposal if the information materially alters the content of the bid proposal. IRHTP reserves the right to obtain information concerning any Vendor or any proposal from any source and to consider such information in evaluating the Vendor's bid proposal.

1.5 Waiver of Deficiencies. IRHTP reserves the right to waive minor deficiencies in a bid proposal if, in the judgment of IRHTP, the consortium's best interest will be served. The decision as to whether a deficiency will be waived or will require the rejection of a bid proposal will be solely within the discretion of IRHTP. There is no guarantee or assurance that any deficiency will be deemed minor and that a deficiency will be waived. Each Vendor is specifically notified that failure to comply with or respond to any part of this RFP requiring a response may result in rejection of the bid proposal as not responsive.

1.6 Cost of Bid Proposal. IRHTP is not responsible for any costs incurred by a Vendor, which are related to the preparation or delivery of the bid proposal, or any other activities carried out by the Vendor as it relates to this RFP. The costs of preparation and delivery of the bid proposal are solely the responsibility of the Vendor.

1.7 Bid Proposal Obligations. The contents of the bid proposal and any clarification thereto submitted by the successful Vendor shall become part of the contractual obligation and incorporated by reference into the ensuing Contract.

1.8 Bid Proposals Property of IRHTP. Except as otherwise stated herein, all bid proposals become the property of the IRHTP and shall not be returned to the Vendor unless all bid proposals are rejected. In the event all bid proposals are rejected, Vendors will be asked to send prepaid shipping instruments to the IRHTP for return of the bid proposals submitted. In the event no shipping instruments are received by the IRHTP, the bid proposals will be destroyed by the

IRHTP. Additionally, the evaluation documents created the IRHTP will be destroyed in the event all bid proposals are rejected. Otherwise, at the conclusion of the selection process, the contents of all bid proposals may be placed in the public domain and be opened to inspection by interested parties subject to appropriate FCC, USAC, and federal procurement regulations.

1.9 Rejection and Disqualification of Bid Proposals.

1.9.1 IRHTP reserves the right to reject any and all bid proposals, in whole and in part, received in response to this RFP at any time prior to the execution of a written Contract. Issuance of this RFP in no way constitutes a commitment by IRHTP to award the Contract. This RFP is designed to provide Vendors with the information necessary for the preparation of competitive bid proposals. This RFP process is for IRHTP's benefit and is intended to provide IRHTP with competitive information to assist in the selection of goods and services.

1.9.2 The IRHTP may reject a bid proposal outright and not evaluate the proposal for any one (1) of the following reasons:
1.9.2.1 Failure of Vendor to deliver the bid proposal by the due date and time.
1.9.2.2 Failure to include the Bid Proposal Compliance Form signed by an officer of the Vendor submitting the bid proposal. (Annex C)
1.9.2.3 Failure to include the Authorization to Release Information Form (Annex D)
1.9.2.4 Failure to include a completed Vendor Certification Form (Annex E)
1.9.2.5 The Vendor states that a technical requirement cannot be met.
1.9.2.6 The Vendor's response materially changes a technical requirement.
1.9.2.7 The Vendor's response limits the rights of the IRHTP.
1.9.2.8 The Vendor fails to respond to the IRHTP's request for information, documents, or references.
1.9.2.9 The Vendor's exceptions to the contract terms and conditions described in Chapter 2 and Annex H (Contractual Terms and Conditions) materially changes the terms and conditions of that section or the requirements of this RFP.
1.9.2.10 The Vendor provides misleading or inaccurate responses.
1.9.2.11 The Vendor's proposal is materially unbalanced.
1.9.2.12 The Vendor fails to submit a completed and signed Cost Submittal Sheet (Annex A)

1.10 Public Records and Requests for Confidentiality.

1.10.1 The release of information by IRHTP to the public is subject to appropriate FCC, USAC, federal procurement regulations, and other applicable provisions of law relating to the release of records in the possession of the IRHTP. Vendors are encouraged to familiarize themselves with these provisions prior to submitting a bid proposal. All information submitted by a Vendor may be treated as public information by IRHTP unless the Vendor properly requests that information be treated as confidential at the time of submitting the bid proposal**. In the event the Vendor marks each page of its bid proposal as proprietary or confidential without adhering to the requirements of this Section, the IRHTP may reject the bid proposal as noncompliant.**

1.10.2 Any requests for confidential treatment of information must be included in a cover letter with the Vendor's bid proposal and must enumerate the specific grounds which support treatment of the material as confidential and must indicate why disclosure is not in the best interests of the public. The request must also include the name, address and telephone number of the person

authorized by the Vendor to respond to any inquiries by IRHTP concerning the confidential status of the materials.

1.10.3 Any documents submitted which contain confidential information must be marked on the outside as containing confidential information, and each page upon which confidential information appears must be marked as containing confidential information. The confidential information must be clearly identifiable to the reader wherever it appears. All copies of the proposal submitted, as well as the original proposal, must be marked in this manner. **Failure to properly mark information as confidential shall relieve the IRHTP from any responsibility if the information is viewed by the public, a competitor, or is any way accidentally released.**

1.10.4 In addition to marking the material as confidential material where it appears, the Vendor must submit one (1) hard copy (printed) of the bid proposal from which the confidential information has been excised. This hard copy of the proposal MUST be clearly marked as "Excluding Confidential Materials". In addition to a hard copy, the Vendor must also include an electronic copy of the nonconfidential portions of the proposal on CD-ROM using Microsoft Word and Excel as appropriate. The confidential material must be excised in such a way as to allow the public to determine the general nature of the material removed and to retain as much of the document as possible. The excised version must be submitted with the cover letter and may be made available for public inspection. This submittal is a mandatory requirement and is not subject to waiver. Failure to mark the confidential items and to provide the required one (1) copy with confidential information excised shall be defined as allowance for the entire proposal to be treated as a public record.

1.10.5 The Vendor's failure to request in the bid proposal confidential treatment of material pursuant to this Section and the relevant laws and administrative rules will be deemed by IRHTP as a waiver of any right to confidentiality which the Vendor may have had.

1.11 Restrictions on Gifts and Activities. No gifts or other activities will be accepted.

1.12 Restriction on Communication. Vendors should funnel all communications thru the IRHTP Project Coordinator in order to receive the highest quality response from the consortium. Please refer to Chapter 1, sections 1.2.1 and 1.2.2 regarding questions and answers.

1.13 Nonmaterial and Material Variances. The IRHTP reserves the right to waive or permit cure of nonmaterial variances in the bid proposal if, in the judgment of the IRHTP, it is in the IRHTP's best interest to do so. Nonmaterial variances include minor informalities that do not affect responsiveness; that are merely a matter of form or format; that do not change the relative standing or otherwise prejudice other Vendors; that do not change the meaning or scope of the RFP; or that do not reflect a material change in the services. In the event the IRHTP waives or permits cure of nonmaterial variances, such waiver or cure will not modify the RFP requirements or excuse the Vendor from full compliance with RFP specifications or other contract requirements if the Vendor is awarded the contract. The determination of materiality is in the sole discretion of the IRHTP.

1.14 Copyrights. By submitting a bid proposal, the Vendor agrees that IRHTP may copy the bid proposal for purposes of facilitating the evaluation or to respond to requests for public records. The Vendor consents to such copying by submitting a proposal and warrants that such copying

will not violate the rights of any third party. IRHTP will have the right to use ideas or adaptations of ideas, which are presented in the proposals. In the event the Vendor copyrights the bid proposal, the IRHTP may reject the bid proposal as noncompliant.

1.15 Conflict Between Terms. IRHTP reserves the right to accept or reject any exception taken by the Vendor to the terms and conditions of this RFP. Substantial variations between the Vendor's terms and conditions and those contained in this RFP may be grounds for rejection of the Vendor's bid proposal as non-responsive and non-compliant.

1.16 Release of Claims. With the submission of a bid proposal, Vendor agrees that it will not bring any claim or have any cause of action against IRHTP or it's consortium members based on any misunderstanding concerning the information provided herein or concerning IRHTP's failure, negligent or otherwise, to provide the Vendor with pertinent information as intended by this RFP.

1.17 Construction of RFP with Laws and Rules. Changes in applicable laws and rules may affect the award process or the resulting Contract. Vendors are responsible for ascertaining pertinent legal requirements and restrictions. Vendors are encouraged to visit the USAC Rural Health Care Pilot Project website: http://www.usac.org/rhc-pilot-program and the FCC website, http://www.fcc.gov/cgb/rural/rhcp.html#orders.

1.18 RFP Copy. Copies of the RFP will be available on the USAC Rural Health Care Pilot Program web site at http://www.usac.org/rhc-pilot-program//tools/search-postings.aspx. In addition the RFP will also be available to vendors via the Iowa Hospital Association web site at http://www.ihaonline.org. Vendors may also request an electronic copy of the RFP by contacting Art Spies at spiesa@ihaonline.org.

1.19 Downloading RFP from the Internet. The RFP, Amendments, and all responses to Vendor questions will be posted on the Iowa Hospital Association web site at http://www.ihaonline.org. Vendors are advised to check the IHA website periodically for amendments to this RFP as Vendors will not automatically receive Amendments and responses.

1.20 Definition of Contract. The full execution of a written contract shall constitute the making of a contract for services and no Vendor shall acquire any legal or equitable rights relative to the contract services until the Contract has been fully executed by the successful Vendor and the IRHTP.

1.21 Award Notice and Acceptance Period. The IRHTP will send an "Award Notice" to all Vendors submitting a timely bid proposal. Negotiation and acceptance of the contracts shall be completed with the successful Vendor no later than sixty (60) days after the Award Notice. If an apparent successful Vendor fails to negotiate and deliver the executed contract by that date, the IRHTP may, in its sole discretion, cancel the award and award the contract to the next highest ranked Vendor. The IRHTP reserves the right to continue negotiations after sixty days if, in IRHTP's sole discretion, IRHTP deems it to be in the best interests of IRHTP to do so.

1.22 Criminal History and Background Investigation. The IRHTP reserves the right to conduct criminal history and other background investigations of the Vendor, its officers, directors, shareholders, or partners and personnel retained by the Vendor for the performance of the Contract.

1.23 Suspension and Debarment. IRHTP may review all vendors responding to this RFP to validate them against the FCC's Suspension and Disbarment list

http://universalservice.org/sl/about/suspensionsdebarments.aspx,

Persons who have been convicted of criminal violations or held civilly liable for certain acts arising from their participation in the Schools and Libraries Support Mechanism are subject to suspension and debarment from the program. FCC rules provide that there are two stages to this process. First, when the FCC becomes aware that a person has been convicted of a crime or judged civilly liable for certain acts arising out of that person's participation in the program, the FCC suspends that person from activities related to the program. The FCC issues a public Notice of Suspension and of Proposed Debarment. The notice of suspension informs the suspended person or other interested party that that they have 30 days to oppose the proposed debarment. The second stage of this process is the actual debarment. The FCC will, absent extraordinary circumstances, provide notice of a decision to debar within 90 days of receiving any information from the person proposed for debarment

CHAPTER 2
CONTRACTUAL TERMS
RFP 09-002

2.1 Contractual Terms Generally.

2.1.1 The Contract, which the IRHTP expects to award, will be based upon the bid proposal submitted by the successful Vendor (Vendor awarded the Contract) and this solicitation. The Contract between the IRHTP and the Vendor shall be a combination of the specifications, terms and conditions of the Request for Proposal, including those contained in the contract terms and conditions sample agreement identified as Annex H, (Contractual Terms and Conditions), the offer of the Vendor contained in its bid proposal, written clarifications or changes made in accordance with the provisions herein, and any other terms deemed necessary by the IRHTP.

2.1.2 The Contract terms contained in Annex H (Contractual Terms and Conditions) are not intended to be a complete listing of all Contract terms but are provided only to enable Vendors to better evaluate the costs associated with the RFP and the potential resulting Contract. Vendors should plan on such terms being included in any Contract awarded as a result of this RFP. All costs associated with complying with these requirements should be included in any pricing quoted by the Vendor.

2.1.3 By submitting a bid proposal, each Vendor acknowledges its acceptance of these specifications, terms and conditions without change except as otherwise expressly stated in the appropriate section of the Bid Proposal Compliance Form (Annex C) If a Vendor takes exception to a provision, it must state the reason for the exception and set forth in Annex C of its bid proposal the specific Contract language it proposes to include in place of the provision. Exceptions that materially change these terms or the requirements of the RFP may be deemed nonresponsive by the IRHTP, in its sole discretion, resulting in possible disqualification of the bid proposal. The IRHTP reserves the right to either award a Contract without further negotiation with the successful Vendor or to negotiate Contract terms with the selected Vendor if the best interests of the IRHTP would be served.

2.2 Additional Cost Items Not In Contract. IRHTP is unaware of any additional Contract terms that would add cost. Notwithstanding, should any Contract items arise that would cost additional monies; those costs shall be borne by the Vendor.

2.3 Fiber Optic Cable Installation Schedule. The actual fiber optic cable installation schedule shall be as agreed upon between the successful OSP Vendor responding to IRHTP RFP 08-001 and the IRHTP Project Coordinator. The IRHTP will closely coordinate with the winning Quality Assurance Vendor to ensure maximum efficiency of the field inspectors time on site.

2.4 Additional Vendor Information. The FCC's Fourteenth Order on Reconsideration (CC Docket No. 96-45, FCC 99-256, 11/3/1999) stipulated that telecommunications carriers are no longer required to be Eligible Telecommunications Carriers (ETC's) to participate in this program. All non-traditional telecommunications service providers may participate. Service providers intending on responding to this RFP must secure a Service Providers Identification Number (SPIN) from USAC. See the USAC website for details on how to secure a SPIN.

2.5 Bid Proposal Security & Performance Bond. Not Required

2.6 Vendor must acquire USAC SPIN and provide on Bid Proposal Compliance Form

2.7 Debarment, Suspension and Other Responsibility Matters. The Vendor and all of its subcontractors shall certify that the company or corporation is not presently, or within the last three years, debarred, suspended, proposed for suspension, declared ineligible, or excluded from covered transactions by any government agency; or has not been reported to or questioned by a consumer protection office regarding its business practices; or it or its officers or directors are not presently or within the last three years, indicted for or otherwise criminally or civilly charged by a government entity for the commission of a public offense related to its business; or has not, within the last three years, had any government transactions terminated for cause or default; or within the last three years, has been terminated from or denied extension of a contract for any of the reasons above in addition to the Vendor's failure to maintain compliance of contract specifications or has failed to bargain or negotiate in good faith, conflicts not clearly specified or contained in the contract.

CHAPTER 3
TECHNICAL SPECIFICATIONS
RFP 09-002

Reference: See IRHTP RFP 08-001 Outside Plant Fiber Optic Cable Project at up to 92 Health Care Locations Throughout the State of Iowa
Notice: Part II – Quality Assurance Inspection Services of the aforementioned IRHTP RFP 08-001 is cancelled and is replaced with this IRHTP RFP 09-002

3.0 Overview of Project Responsibilities

3.1 Background and General Information. The IRHTP is soliciting a vendor to provide supplemental on-demand Quality Assurance Inspection Services (QAIS) in the field to oversee the quality control of OSP contractor(s) installing the fiber optic facilities requested under IRHTP RFP 08-001.

Over the next three calendar years **(2009-2011)**, fiber optic facilities will be constructed in 66 locations throughout the State of Iowa. The fiber optic cable facility construction projects range in length from 1000 feet to 22 miles. The preponderance of the projects is less than five miles in length.

There are an additional nineteen (16) sites with fiber that are already on net or are utilizing IRUs for access and are for the purposes of this RFP considered on-net.

These Quality Assurance Inspections services are supplemental and are additional to the QAIS normally performed by the Iowa Communication Network who owns the backbone infrastructure to which this fiber attaches. The QAIS supplied by a vendor awarded a contract as a result of this RFP will be supportive in the form of augmentation services to the ICN Outside Plant Section and the ICN Outside Plant Manager.

In general terms, the services to be provided under this RFP are for Quality Assurance in the form of "spot-checking", problem resolution, and site coordination and completing the link-segment checklists.

Site Inspectors may oversee multiple projects concurrently.

Due to the nature of the many unknowns relating to the actual schedule of construction, and to provide a level playing field for bid response evaluation, a **model for bidding purposes** is provided as Annex A to this document.

All supporting costs (such as per diem and travel, communications, and administration) for the deployment of the site inspectors under this RFP 09-002 must be determined and included in an hourly rate, hereinafter referred to as the "burdened hourly rate."

This "burdened hourly rate." is then applied to the cost models and submitted on the Annex A-(Cost Submittal Sheet) attached.

The "burdened hourly rate." For Cost Model Number two can be different a different rate than that for Cost model Number One.

The calculated costs will result in a "firm fixed fee" for the specified number of hours in the cost models to be accomplished over the three-year project ending Dec 2011.

The selection of the Vendor for this RFP will be based on the Vendors understanding of the project, the vendor's qualifications, and the cost submitted on the Annex A - Cost Submittal Sheet. (See Annex F – Vendor Evaluation Criteria)

Upon award of a contract, the IRHTP Project Coordinator will negotiate the terms of payment based on a USAC Network Cost Worksheet, which will be jointly formulated by the IRHTP Project Coordinator and the vendor.

Upon award of a contract under this RFP, the ICN Outside Plant Manager (ICNOSPM) will negotiate mutually agreeable rules of engagement with the successful vendor. The model is for bidding purposes and the actual deployment for any particular project will be adjusted by the ICNOSPM based on the prevailing need.

The ICOSPM, will when making assignments to the Site Inspectors, work with the vendor to maximize the efficiency of time and travel.

All contracted hours will be used. Hours not used at one site will be used at other sites as needed.

Due to the nature of the funding of this project, no additional hours can or will be authorized. When the total numbers of hours are used, the vendor will be released from further obligation and the contract will be deemed complete.

3.2 Estimated Schedule. The estimated number of sites being constructed or brought on net each calendar year is as follows:

January 2009 through December 31, 2009 25 sites

January 2010 through December 31, 2010 42 sites

January 2011 through December 31, 2011 15 sites

The actual number of sites constructed will depend upon the prevailing weather each year and the progress of new hospitals planned for construction.

3.3 Intermittent Schedule. The schedule of implementation of this project is impacted by a number of factors: weather, the negotiated contract schedule with the winning OSP contractor, progress in hospitals under construction, funding timelines, and permitting issues.

3.3.1 The typical OSP construction year in Iowa is March through November. Depending on the particular site schedule, construction may start earlier or extend past the typical dates.

3.3.2 A Vendor desiring to provide these supplemental on-demand Quality Assurance Services must consider the above factors when sizing and planning the deployment of the SI (site inspector) workforce.

3.4 Number of Simultaneous Projects underway. For bidding purposes there will be no more than 10 OSP Construction projects requiring oversight on any one day.

3.4.1 Site Inspectors (SI) may be assigned to provide spot-checking oversight for multiple projects at the same time.

3.4.2 The ICNOSPM will coordinate with the vendor to ensure that the site inspectors are deployed in a logical and efficient manner.

3.4.3 "Spot-Checking" is defined as, but not limited to: the intermittent visitation to a construction route/site(s) for the purposes of observing the progress, quality, and safety of the

Outside Plant construction work being performed under this contract. It includes the verification of bore and plowing depths, and to ensure cable placement is in accordance with standard industry practices, that adjacent properties are being protected, One Call notifications are being made, and that the provisions of Annex G - **DETAILED OUTSIDE PLANT INSTALLATION SPECIFICATIONS** to IRHTP RFP 08-001 are being adhered to.

3.5 Eligible Vendors

3.5.1 Vendor qualified to bid. Any qualified Vendor who was qualified to bid on IRHTP RFP 08-001, but not awarded a contract may bid on this RFP.

3.5.2 Business relationship disqualifies vendors. Any qualified Vendor will not be awarded a contract if the Vendor has any business relationship with any Vendors who were awarded a contract under IRHTP RFP 08-001.

3.5.3 Other qualifications. Any other vendor meeting the Vendor Qualifications stated below.

3.6 Vendor Qualifications

3.6.1 Outside Plant Construction. The vendor shall be a knowledgeable Telecommunications Outside Plant construction firm and shall have been in the business of Outside Plant Construction for at least five years,

(or)

3.6.2 Consulting Firm or Civil Engineer. Shall be an Iowa registered consulting firm employing or retaining a registered professional civil engineer on staff with five years experience in the design and construction of fiber optic cable facilities.

(or)

3.6.3 Minimum required experience. A Project Management or Communications Consulting firm employing or retaining staff, wherein each SI candidate has a minimum of five years experience in the management of, supervision of, the construction of fiber optic cable facilities. Retained graduate electrical engineers on staff with a minimum of 5 yrs industrial experience shall also be deemed as qualified.

3.6.4 Narrative required. Applying vendors shall submit a narrative describing their firm, the scope of its experience in the area of OSP Fiber Optic Cable construction, and a resume` of the experience and qualifications of each site inspector that will be potentially assigned to this project.

3.7 Site Inspectors

3.7.1 Site Inspector Qualifications. Only knowledgeable and experienced OSP Field Personnel (Site Inspectors) experienced in the field of OSP Fiber Optic Cable installation will be accepted as qualified site inspectors. Electrical Engineers with Five Years of commercial experience will be deemed as qualified. Field personnel must be administratively supervised by the Vendor's registered engineer or by a designated qualified Supervisor approved by the IRHTP Project Coordinator.

3.7.2 IRHTP Approval of all Site Inspectors. The Vendor shall submit resumes to the IRHTP Project Coordinator for all site personnel who will be employed by the Vendor for this project. The IRHTP will pay particular attention to the practical experience and training of

each site inspector (SI) submitted for approval. The IRHTP must approve each SI before he/she can be deployed on this project.

3.7.3 Augmentation Support. Normally, the ICN Outside Plant Manager will assimilate the some of the IRHTP QAIS requirements into his daily workload. However, as workloads dictate, the ICN Outside Plant Manager (ICNOSPM) will request augmentation support in the form of additional qualified Site Inspectors from the Vendor under the contract that will be awarded as a result of this RFP.

3.7.4 Level of Oversight. The OSP Field Personnel (site inspectors) (SI) shall provide supplemental on-demand oversight at each construction location when requested by the ICNOSPM. The vendor providing services under this RFP will receive a minimum of 48 hours notice from the ICNOSPM prior to commencement of work at any particular site. The Vendor shall assign a SI to a project and notify the ICNOSPM who is assigned. The ICNOSPM or his designee shall have direct supervision over the SI while the SI is assigned to a particular IRHTP project.

3.7.5 Minimum period of work. When a SI is requested for assignment as a supplemental SI by the ICNOSPM, it shall be for a minimum period of not less than eight (8) hours, including travel time. The overall length of the assignment at any particular site is at the discretion of the ICNOSPM.

3.7. 6 Reporting. The assigned site inspector shall submit a weekly project progress report with daily time and travel logs to the Vendor for each assigned project at the COB each Thursday. The format and contents of the daily log will be negotiated with the vendor upon contract award. The Vendor will collect these reports and, in turn, will meet with the IRHTP designated representative each Friday of every project workweek. The IRHTP Project Coordinator will prescribe the report format and how this report will be communicated.

3.8 Expenses.

3.8.1 All supporting costs (such as per diem and travel, communications, and administrative) for the deployment of the site inspectors under this RFP 09-002 must be determined and included in the hourly rate referred to as the "burdened hourly rate."

3.8.2 The compilation of the Firm Fixed Fee as depicted on the Annex A - Cost Submittal Sheet must include **all** anticipated expenses for the entire three year contractual period.

3.9 Services Requested.

3.9.1 Examples of Quality Assurance Services Requested. The following are examples of, but not limited to, the types of quality assurance service requested. This is a partial list and does not limit the site inspector's responsibility. The site inspector is expected to rely on training and personal experience to guide performance. The ICNOSPM will dictate specific tasks as they are identified.

3.9.1.1 The site inspector (SI) shall act as the participating Health Care Provider's (HCP) construction representative during the phases of building penetration and cable placement upon the HCP's property.

3.9.1.2 The SI shall carefully monitor the installation of the inside fiber facilities within the HCP's building to ensure that construction does not interfere with Hospital

Operations. SI shall act as the primary interface between the HCP's designated representative and the Contractor's personnel.

3.9.1.3 The SI shall verify that all necessary permits and easements are in place before the Contractor begins work.

3.9.1.4 The SI shall observe that all the necessary barricades and signs are in place when the Contractor is working on site.

3.9.1.5 The SI shall act as the IRHTP Safety Officer over all work being performed under this contract in a particular community. SI shall stop work immediately anytime an unsafe condition is discovered and report situation at once to ICNOSPM. The SI shall maintain vigilance for traffic control issues and traffic circulation problems and resolve them as soon as possible.

3.9.1.6 The SI shall verify all bore, plow, and trenching depths to ensure they are in conformance with Chapter 3 Annex G.

3.9.1.7 The SI shall be knowledgeable of and responsible for compliance with all of the detailed specifications in Chapter 3 Annex G pertaining to OSP construction being done under this RFP.

3.9.1.8 The SI in concert with the ICNOSPM, shall coordinate a schedule for the entry into ICN Cable vaults, hand holes, pulling tubs, duct banks, and ICN FOTs rooms.

3.9.1.9 The SI shall verify that all construction drawings are redlined in accordance to the actual route constructed.

3.9.1.10 The SI shall note all pre-existing route conditions (such as cracked pavement, washouts, rocky areas not supporting grass, and document them with a digital camera.

3.10 Executive Summary

3.10.1 Content of Executive Summary. The vendor shall prepare an executive summary and overview of the services being offered, including all of the following information:

3.10.1.1 Statements that demonstrate that the vendor understands and agrees with the terms and conditions of the RFP and the proposed contract. .

3.10.1.2 An overview of the vendor's plans for timely delivery of services (including project management approach).

3.10.1.3 An overview of the vendor's knowledge of requirements and its proposed approach for delivering results.

3.11 Work Plan

3.11.1 The SI shall address each deliverable and performance measure in Section 3 of RFP 08-001. The work plan must be fully responsive to project requirements found in RFP 08-001.

3.11.2 Proposals must identify any deviations from the requirements of this RFP09-002 or requirements the vendor cannot satisfy. Any deviations from the requirements of the RFP or any requirement of the RFP that the vendor cannot satisfy may disqualify the vendor.

3.12 Background Information

3.12.1 The vendor shall provide the following general background information:

3.12.1.1 Name, address, telephone number, FAX number and e-mail address of the vendor including all operating names as well as those doing business as (d/b/a) and assumed names of the vendor.

3.12.1.2 Form of business entity, i.e., corporation, partnership, proprietorship, Limited Liability Company.

3.12.1.3 State of incorporation, state of formation, or state of organization.

3.12.1.4 Identify and specify the location(s) and telephone numbers of the major offices and other facilities that relate to the vendor's performance under the terms of this RFP.

3.12.1.5 Local office address and phone number (if any).

3.12.1.6 Number of employees per each location.

3.12.1.7 Type of business.

3.12.1.8 Name, address and telephone number of the vendor's representative to contact regarding all contractual and technical matters concerning this proposal.

3.12.1.9 Name, address and telephone number of the vendor's representative to contact regarding scheduling and other arrangements.

3.12.1.10 Name and qualifications of any subcontractors who will be involved with this project.

3.12.1.11 Identify the vendor's accounting firm.

3.12.2 The successful vendor will be required to register to conduct business in Iowa. If already registered, provide the date of the vendor's registration to conduct business in Iowa and the name of the vendor's registered agent.

3.12.3 Company Experience

3.12.3.1 The vendor must provide the following information regarding its experience:

3.12.3.1.1 Number of years in business.

3.12.3.1.2 Number of years experience providing the types of services sought by the RFP.

3.12.3.1.3 Describe the level of technical experience in providing the types of services sought by the RFP.

3.12.3.1.4 List all services similar to those sought by this RFP that the vendor has provided to other businesses or governmental entities within the last five years (include dates of service).

3.12.3.2 Past Outside Plant Construction Experience. List contact references from successful past or present clients knowledgeable of the vendor's performance in providing outside plant construction services or project management services to governmental jurisdictions, state or regional, with buried fiber optic cable networks.

3.12.3.3 Personnel. The vendor must provide resumes for all key personnel, as defined in Section 3, involved in providing the services discussed in this RFP. The following information must be included in the resumes:

3.12.3.3.1.1 Full name.

3.12.3.3.1.2 Years of experience and employment history, particularly as it relates to the scope of services specified herein.

3.13 Firm Fixed Price

3.13.1 Burdened Hourly Rate. The Vendor providing the Quality Assurance Inspection Services shall submit one price in the form of firm fixed price based on a "burdened" hourly rate for the oversight inspection and/or link-segment checklist completion of these 69 constructed sites and 19 on-net sites over a three-year period.

3.13.2 Must include All Costs. The firm fixed price must include all other costs such as communications, office supplies, and other specific requirements to do the job.

3.13.3 Price Held for Three Years. The Vendor must hold the firm fixed rate bid for a period of three years ending December 31, 2011.

3.13.4 Invoices for Payment of QAIS. The vendor shall submit Invoices to the IRHTP Project Coordinator for payment per an agreed upon schedule as shown on the USAC Network Cost Worksheet. (See USAC Payment Process document attached.)

3.13.5 Retainage. OSP Construction Vendors will have 10% retainage withheld until such time as IRHTP Project Coordinator is satisfied that all earth settling has occurred, all landscaping is healthy and growing, and there are no issues with drain tile or similar items. These sites will then require a return visit by the Quality Assurance SI after a specified period of time to again review the project and then if found satisfactory, recommend to the IRHTP Project Coordinator that he release the construction vendor's retainage.

3.14 Award Process.

3.14.1 Evaluation Committee. An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.

3.14.2 Recommendation. The evaluation committee will make its recommendation to the IRHTP Steering Committee indicating the committee's choice.

3.14.3 Selection. The IRHTP Steering Committee will select the Vendor to receive the award. The IRHTP Steering Committee is not bound by the evaluation committee's recommendation. All Vendors submitting Bid Proposals will receive notification of the award.

3.14.4 Contract. All applicable contracting requirements imposed by this RFP shall be met by the Vendor. The successful Vendor must, within sixty (60) days, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.

3.15 Bid Response Evaluation Criteria.

3.15.1 Award Criteria. The IRHTP may award a Contract to the most responsible and cost effective Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of this RFP.

3.15.2 Conflict of Interest Evaluation. The IRHTP will perform an in-depth due diligence process to ensure that that there are no conflicts of interest between the Part I and Quality Assurance Vendors. Vendors that received a RFP 08-001 Part I award to install fiber cannot bid or receive an award under this RFP 09-002.

ANNEX A

COST SUBMITTAL SHEET
RFP 09-002

<u>Costing Model One</u> – Sixty Six (66) Constructed Sites

Coordination meetings, problem resolution and resolution of administrative issues on site.	8 hours
Site Construction Quality Assurance Spot-Checking	8 hours
Completion of Final Link-Segment Checklist with contractor and the HCP representative. (May require dedicated travel)	8 hours
Re-inspection for release of retainage and the completion of The final site checklist (May require dedicated travel)	8 hours
Total Hours per constructed site	32 hours

Cost Calculation
Sixty six (66) sites times (x) 32 hours times (x) the burdened hourly rate of $_____equals (=) a Total Three-Year Firm Fixed Cost of $_____

<u>Costing Model Two</u> – Nineteen (16) On-Net Sites

Completion of Modified Final Link-Segment Checklist with contractor and the HCP representative. 8 hours

Cost Calculation
Nineteen (19) sites times (x) 8 hours times (x) the burdened hourly rate of $_____equals (=) a Total Three-Year Firm Fixed Cost of $_____

Total three year firm Fixed Cost (Cost Calculation One + Cost Calculation Two) $_____ (This is the evaluated cost)

Bid responses containing only an hourly rate "plus expenses" will not be considered by the IRHTP.

The undersigned submits the total of _$_____as our Total Three-Year Firm Fixed Costs for Quality Assurance Inspection Services:

Name of Vendor:_____
Address:_____

By:_____

Vendor's Authorized Agent Signature: _____

Note: The Vendor's authorized agent must sign this sheet. Sheet One of One Sheet

Annex B
LIST OF PARTICIPATING HCPs
RFP 09-002

SID	HOSPITAL NAME	LOCATION	ON NET
9.91	Monroe County Hospital	Albia	
16.4	Kossuth Regional Health Center	Algona	
11.6	Audubon County Memorial Hospital	Audubon	
7.3	Genesis Medical Center	Bettendorf	
7.5	Genesis Medical Center (Imaging Center)	Bettendorf	
9.5	**Davis County Hospital**	**Bloomfield**	**X**
14.4	Boone County Hospital	Boone	
1.6a	Hancock Co. Memorial Hospital	Britt	
14.3	St. Anthony Regional Hospital	Carroll	
5.2	Mercy Medical Center	Cedar Rapids	
9.7	**Mercy Medical Center**	**Centerville**	**X**
9.9	**Lucas County Health Center**	**Chariton**	**X**
1.2	Floyd County Medical Center	Charles City	
13.2	Cherokee Regional Medical Center	Cherokee	
12.2	Clarinda Regional Health Center	Clarinda	
7.1	Mercy Medical Center	Clinton	
11.4	Alegent Health Mercy Hospital	Corning	
9.8	**Wayne County Hospital**	**Corydon**	**X**
12.5	Jennie Edmundson Hospital	Council Bluffs	
12.6	Alegent Health Center	Council Bluffs	
2.1	Regional Health Services of Howard County	Cresco	
7.3	Genesis Medical Center	Davenport	
2.2	Winneshiek Medical Center	Decorah	
13.3	Crawford County Memorial Hospital	Denison	
10.1	**Mercy Medical Center**	**Des Moines**	**X**
10.7	**Mercy Lakes West (Mercy Capitol)**	**Des Moines**	**X**
7.7a	Genesis Health Systems - Dewitt	Dewitt	
3.1	Mercy Medical Center	Dubuque	
3.3a	Mercy Medical Center - Dyersville	Dyersville	
2.3	**Central Community Hospital**	**Elkader**	**X**

SID	HOSPITAL NAME	LOCATION	ON NET
16.2	Palo Alto County Health System	Emmetsburg	
16.3	Avera Holy Family	Estherville	
9.3	Jefferson County Health Center	Fairfield	
8.2	Fort Madison Community Hospital	Fort Madison	
11.1	Adair County Memorial Hospital	Greenfield	
12.1	Grape Community Hospital	Hamburg	
1.4	Franklin General Hospital	Hampton	
15.5a	Hawarden Community Hospital	Hawarden	
13.1	Horn Memorial Hospital	Ida Grove	
4.2	Buchanan County Health Center	Independence	
6.1	**University of Iowa Hospital and Clinics**	**Iowa City**	**X**
6.2	Mercy Iowa City	Iowa City	
1.3	Ellsworth Municipal Hospital	Iowa Falls	
8.3	Keokuk Area Hospital	Keokuk	
9.4	Van Buren County Hospital	Keosauqua	
10.5	Knoxville Hospital and Clinics	Knoxville	
17.2a	Stewart Memorial Community Hospital	Lake City	
13.6	**Floyd Valley Hospital**	**Le Mars**	**X**
3.2	Regional Medical Center	Manchester	
14.2	Manning Regional Healthcare Center	Manning	
6.4	Marengo Memorial Hospital	Marengo	
10.3	Marshalltown Medical and Surgical Center	Marshalltown	
1.7a	Mercy Medical Center – North Iowa	Mason City	
12.4	Alegent Health Community Memorial Hospital	Missouri Valley	
11.3	Ringgold County Hospital	Mount Ayr	
8.4	Henry County Health Center	Mount Pleasant	
14.1	Story County Medical Center	Nevada	
2.5	Mercy Medical Center	New Hampton	
13.4a	Burgess Health Center	Onawa	
15.2	**Orange City Area Health Systems**	**Orange City**	**X**
1.1	Mitchell County Regional Health Center	Osage	
9.1	Mahaska Health Partnership	Oskaloosa	
9.6	**Ottumwa Regional Health Center**	**Ottumwa**	**X**
10.4	Pella Regional Health Center	Pella	
10.9	Dallas County Hospital	Perry	
15.3	Baum-Harmon Mercy Hospital	Primghar	
15.8	Sanford Hospital	Rock Rapids	
15.7	**Hegg Memorial Hospital**	**Rock Valley**	**X**
15.4	**Sanford Sheldon Medical Center**	**Sheldon**	**X**
12.3	Shenandoah Medical Center	Shenandoah	
15.1	**Osceola Community Hospital**	**Sibley**	**X**
15.6	Sioux Center Community Hospital	Sioux Center	

SID	HOSPITAL NAME	LOCATION	ON NET
13.5	Mercy Medical Center – Sioux City	Sioux City	
16.5	**Spencer Hospital**	**Spencer**	**X**
5.1	Virginia Gay Hospital	Vinton	
6.3	Washington Co. Hospital and Clinics	Washington	
2.6	Veterans Memorial Hospital	Waukon	
4.1	Waverly Health Center	Waverly	
17.1	Hamilton Hospital	Webster City	
8.1	Great River Medical Center	West Burlington	
2.4	Palmer Lutheran Health Center	West Union	
10.6	**Madison County Health Care System**	**Winterset**	**X**
		66 sites	16 sites

Sites that are bold are the on-net sites that receive only the final link-segment checklist completion services. No spot-checking or other Quality Assurance services are required at these sites.

ANNEX C
BID PROPOSAL COMPLIANCE FORM
RFP 09-002

Vendor affirms that the information contained in the bid proposal is true and accurately portrays all aspects of the goods or services or both contemplated by this RFP. The Vendor is aware that any substantive misinformation or misrepresentation may disqualify the bid proposal from further consideration.

Vendor hereby certifies total compliance with all other terms, conditions and specifications of this RFP except as expressly stated below:

Chapter 1, Administrative Issues _____

_____

Chapter 2, Contractual Terms & Conditions (includes Attachment 1) _____

_____

_____

Chapter 3, Technical Specifications _____

_____

Chapter 4, Evaluation Criteria _____

_____

I certify that I have the authority to bind the Vendor indicated below to the specific terms and conditions imposed in this RFP and offered in this bid proposal, and that by my signature on this document I specifically agree to all of the waivers, restrictions and requirements of this RFP as conditions precedent to submitting this proposal. I further state that in making this bid proposal that the Vendor has not consulted with others for the purpose of restricting competition or violating State or Federal anti-trust laws and has not knowingly made any false statements in this proposal.

Authorized Signature: _____

Printed Name: _____

Title: _____

Telephone: _____

Fax Number: _____

E-Mail: _____

Business Name: _____

Address: _____

Federal ID Number: _____

USAC SPIN: _____

ANNEX D
AUTHORIZATION TO RELEASE INFORMATION
RFP 09-002

_____ (Name of Vendor) hereby authorizes any person or entity, public or private, having any information concerning the Vendor's background, including but not limited to its performance history regarding its prior rendering of services similar to those detailed in this RFP, to release such information to the IRHTP.

The Vendor acknowledges that it may not agree with the information and opinions given by such person or entity in response to a reference request. The Vendor acknowledges that the information and opinions given by such person or entity may hurt its chances to receive contract awards from the IRHTP or may otherwise hurt its reputation or operations. The Vendor is willing to take that risk. The Vendor agrees to release all persons, entities, and the IRHTP from any liability whatsoever that may be incurred in releasing this information or using this information.

_____
Printed Name of Vendor

_____ _____
Signature of Authorized Representative Date

ANNEX E
VENDOR CERTIFICATION FORM
RFP 09-002

<Vendor Letterhead>

Certification of [Vendor]

I, _____[name of corporate officer], on behalf of _____[Vendor name] (SPIN _____) certify and swear under the penalty of perjury, that to the best of my knowledge, information and belief, all federal Rural Health Care Pilot Program support provided to us will be used only for eligible Pilot Program purposes for which the support is intended, as described in the Pilot Program Order (WC Docket 02-60; FCC 07-498, released November 19, 2007), and consistent with related FCC orders, section 254(h)(2)(A) of the Telecommunications Act of 1934, as amended, and Parts 54.601 *et. seq.* of the FCC's rules.

_____
(Signature)

_____
Name (Printed)

_____
Title

_____
Date

_____

NOTARIZED BY: _____

ANNEX F
QUALITY ASSURANCE EVALUATION CRITERIA
RFP 09-002

4.1 Award Process - Quality Assurance

4.1.1 An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.

4.1.2 The evaluation committee will make its recommendation to the IRHTP Steering Committee indicating the committee's choice. The IRHTP Steering Committee will select the Vendor to receive the award. The IRHTP Steering Committee is not bound by the review committee's recommendation. All Vendors submitting Bid Proposals will receive notification of the award.

4.1.3 All applicable contracting requirements imposed by this RFP and Iowa law shall be met by the Vendor. The successful Vendor must, in a timely manner, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.

4.2 Evaluation Criteria – Quality Assurance

4.2.1 A Bid Proposal will not be evaluated if all of the Mandatory Requirements identified in Chapter 3 and Attachment 4 are not met and/or fulfilled.

4.2.2 The IRHTP may award a Contract to the most responsible Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of Chapter 3.

4.2.3 The IRHTP is not required to accept a low bid.

Evaluation Criteria Scoring

Quality Assurance

Overall Project Experience

IRHTP will take into consideration the qualifications of the vendor's proposed field staff and the size or number of like construction projects managed or overseen thus far by the vendor and/or by his staff.

Vendor may be awarded up to **15 Points**

Cost

Total firm fixed price as submitted per the costing model

Vendor may be awarded up to **40 Points**

Grasp of the Project and Design

Vendor demonstrates a clear understanding and grasp of the project. Response is clearly written and organized.

Vendor may be awarded up to **25 Points**

Vendor's Capabilities

Vendor has the necessary qualified field staff and resources to accomplish the work on schedule. Overall evaluation of vendor's technical ability.

Vendor may be awarded up to **15 Points**

Vendor Agrees to

Submit invoices in accordance with USAC requirements. Proactively engage with the final audit team at no additional cost.

Vendor may be awarded up to **5 Points**

Total 100 Points

ANNEX G
DETAILED OUTSIDE PLANT INSTALLATION SPECIFICATIONS
RFP 09-002

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SECTION 2 - Special Construction

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SECTION 3 - Excavation And Backfill

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SECTION 6 - Specifications For Aerial Placement Of Fiber Optic Cable

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SECTION 7 - Splicing And Testing

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SECTION 8 - As-Built Drawing

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SECTION 1 - General Requirements

1.0 Intent

0.1. To supplement the provisions of the **TECHNICAL REQUIREMENTS, SECTION 3.0** by outlining special conditions applicable to project. In the following the term Contractor and Vendor may be interchanged

0.2. To set forth requirements of performance, type of equipment or structure desired, and standards of materials and construction.

0.3. To describe work set out in Contract Documents, unless otherwise specifically indicated.

0.4. To require performance of complete work in spite of omission of specific reference to any minor component parts.

0.5. Contractor to provide for new materials and equipment, unless otherwise indicated.

2.0 Location

0.6. Work is located in public right-of-way and easements across private, City, School and hospital owned properties as located in RFP.

3.0 Right-Of-Way

3.1. Permits Contractor will obtain permits from departments and/or agencies of cities, state, county, and federal government, railroads, or other entities that provide for the placement of facilities within their respective rights of way, unless otherwise indicated.

3.2. Easements Contractor will provide easements for construction on private lands.

3.2.1.1. All Easements must be IRHTP approved prior to implementation.

3.2.1.2. It is preferred that all easements be one time, up front payments with no recurring charges.

3.3. Equipment Confine movements of equipment and personnel, storage of materials, excavation, and all other construction operations within the right-of-way provided.

3.4. Liability Contractor will be held liable by Iowa Department of Transportation, City, Schools and adjacent property owners for damages outside rights-of-way and easements; failure of Engineer to warn Contractor about incidence of trespassing does not relieve liability.

3.5. Gates Ingress and egress will vary according to right of way agreements. If necessary, the Contractor will provide gates in fences and remove after completion.

3.6. Traffic On freeways, installation must be accomplished without entering the through traffic roadway or ramps. No vehicles, equipment or materials shall be parked or stored upon any portion of the median, through traffic roadway and ramps or shoulders thereof or within the clear zone.

4.0 Order Of Construction

4.1. Construction Schedule Provide IRHTP Project Coordinator with proposed a schedule of construction showing start and completion dates. Show each section of construction and the estimated time of completion, to include project complete percentage. This schedule will be "on going process". An update of the aforementioned schedule will be provided to the IRHTP Project Coordinator every week by noon on Friday. This base schedule of work shall detail the activities, tasks and manpower associated with the project. Contractor shall provide to IRHTP a man-load schedule showing all tasks associated with the project, the number of crews, and the crew sizes (number of personnel) available for each task. The schedules shall contain sufficient detail to ensure that the IRHTP can measure project progress at least weekly throughout the project duration. The schedules shall comply with the requirements of the overall project schedule, and shall be updated by the contractor as necessary or as required by IRHTP. Work schedules shall be provided by the contractor within five (5) working days of contract award. Coordinate work with IRHTP Project Coordinator to assure orderly and expeditious progress of the work.

4.2. Work Schedule Contractor shall establish schedule of working hours for construction, subject to approval of IRHTP Project Coordinator.

5.0 Interruptions To Service

5.1. Utilities Existing utilities will remain in continuous operation during construction.

6.0 Construction Facilities By Contractor

6.1. Telephone contact Provide telephone at which Contractor can be reached by IRHTP Project Coordinator at all times during the working day; provide liaison between telephone and construction personnel for expeditious handling of messages.

6.1.1. Provide IRHTP Project Coordinator with at least two telephone numbers where Contractor's representative can be reached evenings, weekends and holidays in event of emergency. Place on construction schedule.

6.2. Construction Facilities Location of all construction facilities including storage yard, subject to approval by IRHTP Project Coordinator; remove all construction facilities upon completion of work.

6.3. Sanitary Facilities Provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.

6.4. Unauthorized Access Provide fence, barricades, and/or watchmen to prevent access of unauthorized persons to site where work is in progress.

7.0 Plans, Position, Line And Grade

7.1. Plans Contractor shall provide IRHTP Project Coordinator with one set of plans and specifications within 15 days after execution of contract unless otherwise stated in RFP.

7.2. Detailed Plans Contractor shall provide IRHTP Project Coordinator with additional and supplemental plans as may be required to show details of

construction after approval of Contractors' drawings and data on materials and equipment.

7.3. Revised Plans Contractor will provide IRHTP Project Coordinator with such revised plans and specifications as may be required to show any authorized changes or extra work.

7.3.1. Construct to lines and grades shown on plans or as specified hereinafter.

7.4. Benchmarks Contractor will establish required benchmarks and base lines as shown on plans.

7.5. Survey Contractor to provide detailed survey and staking for location, and elevation of construction.

7.6. Test Holes Contractor shall provide, without extra compensation, all people and necessary tools to make all test holes and exploration, at any time, for purpose of determining location of existing structures beneath ground surface that might conflict with work of Contractor.

7.7. Preservation Contractor shall preserve all monuments, reference points, stakes and benchmarks set by other entities. In case of destruction by Contractor's negligence or carelessness, he will be charged with resulting expense of replacement, and responsibility for any mistake or loss of time caused thereby.

8.0 Work Included

8.1. Provide requirements for Plan Furnish all plans, materials, labor and equipment to construct as set out in the attached plans and/or RFP.

9.0 Starting And Completion Time

9.1. Start Time Commence work within 20 calendar days after date set forth in written Notice to Proceed.

9.2. Completion Time Complete work within time set out in Notice of Hearing and Letting.

10.0 Information For IRHTP Project Coordinator

10.1. Submissions After award of contract, submit the following information and drawings for IRHTP Project Coordinator's review: manufacturer's specifications and catalog data for material and such other data as requested by Engineer.

10.2. Schedule Within 15 days after award of contract, provide construction schedule showing start and completion of various portions of work and construction plans.

10.2.1. Purchase orders and subcontracts without prices.

10.2.2. All materials test reports.

10.2.3. Proposed equipment and method for boring/jacking; details of boring/jacking pit.

10.2.4. Proposed equipment and method for trenching.

10.2.5. Proposed equipment and method for plowing.

10.2.6. Construction plans, unless otherwise indicated:

10.2.6.1. Location of facility in relationship to established landmarks.

10.2.6.2. Public or private r/w. Furnish a copy of permit and/or easement in IRHTP's name, unless otherwise indicated.

11.0 Plans And Specifications

11.1. Plans to IRHTP Contractor will furnish 2 sets of plans and specifications to the IRHTP Project Coordinator after award of contract unless otherwise stated in RFP.

11.2. Plans to Supervisors Contractor will provide one set of plans and specifications for each foreman or superintendent in charge of each crew on job.

12.0 Standards And Codes

12.1. Practices Do work in accordance with best present-day installation and construction practices.

12.2. Codes Conform to and test materials in accordance with applicable sections of latest revisions or tentative revisions of following codes and standards unless specifically noted to the contrary.

12.2.1. American Association of State and Highway Transportation Officials (AASHTO)

12.2.2. American National Standards Institute (ANSI)

12.2.3. American Society for Testing and Materials (ASTM)

12.2.4. Iowa Department of Transportation (IDOT); latest edition of standard specifications and addenda.

12.2.5. Federal Specifications (FS)

12.2.6. Occupational Safety and Health Act of 1970 (Public Law 91-596) (OSHA)

12.2.7. Iowa Occupational Safety and Health Act of 1972 (Chapter 88, Code of Iowa 1995) (OSHA).

12.2.8. Standard and codes of the State of Iowa and applicable local standards, codes and ordinances of the particular city where construction is taking place.

12.2.9. Other standards and codes that may be applicable to acceptable standards of the industry for equipment, materials and installation under contract.

13.0 Responsibility Of Contractor

13.1. Protection of work Protection of Contractor's work..

13.2. Protection of property Protection of all property from injury or loss resulting from Contractor's operations.

13.3. Replacement Replace or repair objects sustaining any such damage, injury or loss to satisfaction of the IRHTP Project Coordinator.

13.4. Protection of existing structures Without limiting GENERAL REQUIREMENTS of Contract Documents, protect flagpoles, sidewalks, streets, pavements, fences, pipe, conduit, utilities, trees, and shrubs and structures.

13.5. Locates Cooperate with IRHTP Project Coordinator and representative of utilities in locating underground utility lines and structures; incorrect, inaccurate or inadequate information concerning location of utilities or structures shall not relieve Contractor of responsibility for damage thereto caused by Contractor'soperations.

13.6. **Utility Coordination** Contractor will locate underground lines of third parties in the cable route area. Contractor will call Iowa One Call (800-292-8989) prior to any work commencement. Contractor will contact any utilities not participating in the One Call Service, directly. Contractor will hold a single locate "precon meeting" for all utilities. It will be the Contractors responsibility to document the name, address, phone and fax number of all persons present at meeting plus the locate confirmation number by project. All the aforementioned documentation will be supplied to the IRHTP as part of the "as built" package. Contractor will be responsible for hand digging any crossing such as pipeline, drainage tile, cable or any other buried facility prior to working in the area. Since all drawings are generally diagrammatic and not all utilities are included on them, the Contractor will take every precaution necessary to avoid damage to any underground facility.

13.7. **Cleanup** Keep cleanup current on a daily basis with construction operations.

13.8. **Compliance** Comply with all federal, state, and city laws and ordinances.

13.9. **Safekeeping** Contractor shall assume full responsibility for safekeeping of all materials and equipment and for all unfinished work until final acceptance by IRHTP. Materials and equipment that are damaged or destroyed from any cause shall be replaced at Contractor's expense.

13.10. **Receipts** Contractor shall issue written receipts for all such property and account to IRHTP for any damage to or loss of such property while in its custody or control.

13.11. **Storage** If IRHTP is providing warehousing with security for cable, conduit and other OSP materials on a temporary basis; it will be the responsibility of the contractor to arrange for their own storage facilities, and delivery of material from IRHTP warehouses. Should a contractor elect to provide their own storage facilities in their particular area, then contractor will be solely responsible for any materials supplied to that facility by IRHTP. IRHTP may require the Subcontractor to furnish Builders Risk Insurance for this material at the contractor's expense. Security for the job site areas is the responsibility of the contractor. Subcontractor is to comply with the security requirements of owner's site security and other applicable entities.

13.12. **Indemnity** Contractor shall indemnify and hold harmless IRHTP against any liens filed for non-payment of Contractor's bills in connection with contract work. Contractor shall furnish IRHTP satisfactory evidence that all persons who have done work or furnished materials, equipment, or service of any type, under the contract have been fully paid prior to acceptance by IRHTP.

13.13. **Lost Time** Contractors/subcontractors shall pay time and material charges of IRHTP personnel, when contractor has made a commitment to be on site by a certain time and is either late or no show.

13.14. **Damages** Liquidated damages in the amount of **Two Hundred Dollars ($200.00)** per consecutive calendar day will be assessed for each day that the work shall remain uncompleted after the end of the contract period with due allowance for extensions of the contract period due to conditions beyond the control of the contractor/subcontractor.

14.0 Subcontracts

14.1. Sub-letting Contractor shall not assign, sub-let or transfer the whole or any part of work herein specified without written consent of IRHTP. Assignment, sub-letting or transfer shall not relieve the Contractor from its responsibilities set forth herein.

14.2. IRHTP relation to sub-contractors Detailed specifications are separated into titled parts for convenience or reference and to facilitate letting of contracts and subcontracts. Such arrangement shall not obligate IRHTP Project Coordinator to establish limits on contracts between Contractors and subcontractors.

15.0 Contractor's/Subcontractor's Employees

15.1. Supervision Contractor shall personally supervise subcontracted work or provide a capable superintendent satisfactory to IRHTP Project Coordinator. Superintendent shall be authorized to receive instructions from IRHTP Project Coordinator/representative.

15.2. Dismissal of employees Incompetent or Incorrigible employees shall be dismissed by the Contractor or its representative when requested by IRHTP Project Coordinator. Such dismissed persons shall not be permitted to return to work on contracted IRHTP project without written consent of IRHTP Project Coordinator.

15.3. Local labor Contractor shall give preference to local labor in execution of this contract, insofar as is practicable.

15.4. Employee Data Contractor/subcontractor shall furnish the names, social security numbers, and addresses of all the employees on each job site by month, day, and year on a weekly basis.

15.5. Display Contractor/subcontractor shall have the name of their company clearly displayed on all their owned or leased vehicles and/or equipment.

15.6. Business Cards Contractor/subcontractors shall have business cards with their respective companies name, phone, and fax numbers listed.

15.7. Representation Contractor/subcontractor shall at all times be deemed to be representing and/or performing as an independent contractor and not as an agent or employee of IRHTP.

16.0 Permits, Regulations, Easements

16.1. Conformance to regulations In execution of work specified herein, Contractor/subcontractors shall conform to regulations and ordinances of any governmental body that may apply in execution of specified work.

16.2. Permits Contractor shall obtain such permits, licenses, and easements as may be required for construction of work unless otherwise indicated.

17.0 Safety

17.1. Safety first NO JOB IS SO URGENT THAT TIME CANNOT BE TAKEN TO PERFORM THE WORK SAFELY.

17.2. Safety Requirements Safety is the foremost concern in any contract operation. UNSAFE ACTS OR OPERATIONS WILL NOT BE TOLERATED to the point of shutdown and termination of contractor.

17.3. **Compliance** with all Federal, State, and Local laws, ordinances, and regulations concerning health and safety as well as IRHTP standards is mandatory.

17.4. **Weekly meeting** A weekly safety meeting involving the IRHTP field superintendent(s) will be held each Monday. The previous week and anticipated hazards will be discussed, with preventive measures outlined. For new types of activities, a hazard analysis form will be filled out and discussed with the contractor. Previous hazard analysis (as applicable to present work) will also be reviewed at this time. During the week the IRHTP representative will inspect the work sites. Any violations will immediately be brought to the attention of the contractor's supervision and corrected. Continued violations will be reason for termination of contractor. The IRHTP insists on having a quality, productive, and safe project.

17.5. **Hard hats** will be worn by all personnel in installation areas at all times. **No exceptions.**

17.5.1. During work in right-of-ways of interstate, secondary, and other roadways, and on all state projects, hard hats and reflective vests will be worn. **No exceptions.**

17.6. **Daily Inspection** Traffic cones, flagmen, warning signs will be inspected each day at each work site.

17.7. **OSHA compliance** Contractor will provide evidence that a written Confined Space Procedure, complying with the latest OSHA standards, will be adhered to. The contractor will provide a copy of their written procedure to IRHTP prior to any work that may involve entering a confined space.

17.8. **Open Excavations** All excavations left unattended or open shall be properly barricaded or plated (steel plate if in the street) until temporarily backfilled or complete restoration has been performed. During any non-working hours, contractor shall place steel plates over any open trenches that would pose a threat to vehicular traffic. The steel plates shall be of sufficient thickness to withstand the weight of a vehicle and anchored in place to prevent movement. Open trenches and holes, not exposed to vehicular traffic will be encircled by flexible orange snow fence and shall also be covered with plywood (or equal) and anchored in place. Plywood (or equal) shall be of sufficient thickness to withstand the weight of the anticipated traffic.

18.0 Barricades And Lights

17.1 **Pedestrian and Vehicle Protection** Erect and maintain barricades and lights and/or provide watchmen in conformance with current Manual of Uniform Traffic Control Devices (MUTCD), for protection and warning of pedestrians and vehicles; all barricades, lights and/or watchmen at expense of Contractor.

17.2 **Signage** IRHTP Project Coordinator/representative will not allow work to proceed until all signs, barricades and lights are in place; requirements for type of signs and number of signs will be strictly enforced; improper signage during construction will constitute "improper work" and IRHTP Project Coordinator will cause Contractor to suspend work.

17.3 **Responsibility for signs** All signs, barricades, and other traffic control devices used on the project shall be furnished, installed and maintained by Contractor; all traffic control devices shall be maintained in a state of good repair and shall be cleaned and washed periodically as needed.

19.0 The IRHTP Project Coordinator Or Representative

18.1 Work responsibility IRHTP Project Coordinator or Representative shall make general observations of work as an agent of IRHTP. IRHTP Project Coordinator or Representative's general observation shall not be construed that it shall direct or control operations of Contractor/subcontractor.

20.0 Line And Grade

20.1. Benchmarks Contractor shall provide benchmarks, base lines and other reference points. Contractor shall provide competent men and tools, stakes and other materials as required establishing temporary or permanent reference marks in connection with the work. Contractor shall perform such detailed measurements as required to properly lie out and construct work.

21.0 Testing

21.1. Cable Quality The Contractor/Subcontractor shall be responsible for on reel verification of cable quality prior to placement.

21.2. Testing Requirement One hundred percent (100%) of the cable's fiber count shall be tested at 1310 nm with an OTDR or approved acceptance sheet by manufactory or proof of testing by others. Test results will be recorded on a form supplied by IRHTP. Completed test forms on each reel shall be handed over to the IRHTP Project Coordinator.

21.3. Cable Responsibility Subcontractor assumes responsibility for the cable after testing. This responsibility covers all fibers in the cable.

21.4. Testing Tools The Subcontractor shall supply all tools, test equipment, consumables and incidentals necessary to perform quality testing.

21.5. Cable Ends The cable ends shall be sealed upon completion of testing.

22.0 Decisions By IRHTP Project Coordinator

22.1. Decisions IRHTP Project Coordinator shall make decisions, in writing, on claims between Contractor and IRHTP within a reasonable time after presentation. Such decisions shall be regarded as final except for appropriate legal recourse.

23.0 On-Site Review Or Observation

23.1. Materials Observation All materials used and all work done by Contractor shall be subject at all times to review, observation, test and approval by IRHTP Project Coordinator/representative. Contractor shall furnish samples of materials for observation and test as requested by IRHTP Project Coordinator. Contractor shall furnish any information required concerning nature or source of any proposed materials or equipment.

23.2. Construction Observation IRHTP Project Coordinator may observe construction, fabrication and manufacture of equipment or materials specified herein at plant or factory.

23.3. **Condemnation** IRHTP Project Coordinator may condemn materials, equipment or work that does not satisfactorily meet specifications by written notice to Contractor. Condemned materials, equipment or work shall be promptly removed and replaced.

23.4. **Rejections** IRHTP Project Coordinator may reject defective materials, equipment or work at any time prior to final acceptance by IRHTP even though said defective items may have been previously overlooked.

24.0 IRHTP Project Coordinator And/Or Engineer Technicians

24.1. **Plan Adherence** OSP Engineers and/or engineer technicians may be appointed by IRHTP Project Coordinator or IRHTP to insure that work is performed in accordance with plans and specifications.

24.2. **Notification** IRHTP Project Coordinator and/or engineer technicians shall have authority to notify Contractor in writing of work that is not being properly performed. Contractor shall be liable for any work determined by IRHTP Project Coordinator as not being properly performed.

24.3. **Deviations** IRHTP Project Coordinator and/or engineer technicians shall have authority to permit deviation from plans and specifications.

25.0 Time

25.1. **Specified Time** Contractor shall commence work within time specified and shall complete work within time specified in contract.

25.2. **Normal Hours** Contractor shall work normal working hours defined as ½ hour after sunrise and ½ hour before sunset unless it is an emergency situation or change has been approved by IRHTP Project Coordinator.

26.0 Delays

26.1. **Time Extensions** Delays caused by injunction or legal actions, damages by elements, or other causes beyond control of Contractor (of which IRHTP shall be sole judge) shall entitle Contractor to a reasonable extension of time within which to complete work.

26.1.1. Application for extension of time shall be made to IRHTP by Contractor and shall state reasons for request for extension of time.

26.1.2. No extension of time shall be valid unless made in writing by IRHTP.

26.1.3. Normal weather conditions shall not form the basis of request for extension of time.

26.1.4. Abnormal weather conditions shall form basis of request for extension of time only to the delay in excess of that resulting form normal weather conditions.

27.0 Ownership Of Materials

27.1. **Payment Responsibility** All materials and work covered by partial payments shall become sole property of IRHTP, but this provision shall not be construed as relieving Contractor from sole responsibility for all materials and work for which payments have been made, for restoration of damaged work, or as a waiver of rights of IRHTP to require fulfillment of all terms of contract.

28.0 Other Contracts

28.1. **Coordination of contractors** IRHTP reserves right to let other contracts in connection with this work. Contractor shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work, and shall properly connect and coordinate its work with theirs.

28.2. **Reports of defects** When proper execution of Contractor's work depends upon work of another contractor, it shall inspect other work and report any defects in writing to IRHTP Project Coordinator. Contractor's failure to inspect and report shall constitute an acceptance of other contractor's work except for defects that may develop after completion.

28.3. **Discrepancies** To insure proper execution of its subsequent work, Contractor shall measure work already in place and shall at once report in writing to the IRHTP Project Coordinator any discrepancy between the executed work and drawings.

29.0 IRHTP Right To Do Work

29.1. If Contractor neglects to prosecute work properly or fails to perform any provision of this contract, IRHTP, after three (3) days' written notice to Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided, however, that IRHTP Project Coordinator shall approve both such action and amount charged to Contractor.

30.0 IRHTP'S Right To Terminate Contract

30.1. **Termination of contract** IRHTP, upon certification of IRHTP Project Coordinator that there is sufficient cause to justify termination of contract, may, without prejudice to any other right or remedy, and after giving Contractor seven (7) days' notice may terminate employment of Contractor for any of following reasons:

30.1.1. Contractor makes a general assignment for benefit of its creditors, or is adjudged bankrupt.

30.1.2. Receiver is appointed on account of Contractor's insolvency.

30.1.3. Contractor persistently or repeatedly fails or refuses, except when extension of time to complete is granted, to provide enough skilled people or proper materials.

30.1.4. Contractor fails to make prompt payment to subcontractors/suppliers for materials or labor.

30.1.5. Contractor persistently disregards laws and ordinances or instructions of IRHTP Project Coordinator.

30.1.6. Contractor violates a provision of contract.

30.2. **Conditions of Termination** If IRHTP terminates employment of Contractor, it shall take possession of premises and all materials, tools and appliances thereon. It shall finish work by whatever method it may deem expedient. In such case Contractor shall not be entitled to receive any further payment until work is finished.

30.3. Unpaid Balance If unpaid balance of contract price exceeds expense of finishing the work including compensation for additional managerial and administrative services, excess shall be paid to Contractor. If expense exceeds unpaid balance, Contractor shall pay difference to IRHTP. Expense incurred by IRHTP as herein provided, and damage incurred through Contractor's default, shall be certified by IRHTP Project Coordinator.

31.0 Contractor's Right To Stop Work Or Terminate Contract

31.1. Failure to Pay If IRHTP Project Coordinator fails to issue any certificate for payment within fifteen (15) days after it is due, or if IRHTP fails to pay to Contractor with thirty (30) days of its maturity and presentation, any sum certified by IRHTP Project Coordinator, then Contractor may, upon seven (7) days simultaneous written notice to IRHTP and IRHTP Project Coordinator, stop work or terminate this contract. If Contractor elects to terminate this contract by written notice it shall recover from IRHTP payment for all work executed to date of notice and any loss sustained upon any plant or materials plus a reasonable profit.

32.0 Payments Withheld

32.1. Nullification of Payment IRHTP Project Coordinator may withhold or nullify the whole or a portion of payment certificate, based on subsequently discovered evidence, to such extent as may be necessary to protect IRHTP from loss from:

32.1.1. Defective work not remedied.

32.1.2. Claims filed or reasonable evidence indicating probable filing of claims.

32.1.3. Failure of Contractor to make payments properly to subcontractors/suppliers or for materials or labor.

32.1.4. A reasonable doubt that contract can be completed for balance then unpaid.

32.1.5. Damage to another contractor.

32.1.6. Claims of IRHTP for liquidated damages.

32.1.7. Payments shall be made for amounts withheld when above grounds are removed.

33.0 Final Review, Acceptance And Final Payment

33.1. Final Statement When work has been satisfactorily completed, IRHTP Project Coordinator will certify Contractor's final estimate stating that work has been completed in accordance with terms and conditions thereof with qualifications, if any, as stated. Balance found to be due Contractor according to the terms of payment shall be paid by IRHTP as specified in contract, provided, however, that any state laws which designate manner of final payment shall be followed in lieu of manner of final payment outlined above. Prior to receipt of final payment, Contractor shall file with IRHTP a receipt in full from each manufacturer, subcontractor, and dealer for all equipment and materials used on the work and a complete release of all liens, including tax liens, which may have arisen from this contract and required statements form Contractor and all subcontractors of sales and use tax paid. In lieu thereof, IRHTP, at its option, may accept from Contractor a statement showing balance due on all accounts.

33.2. Notification of Completion Notify Engineer when project is considered to be complete and ready for final review.

33.3. **Cost of Additional Inspections** IRHTP will not make more than 2 trips to any one site for inspections. If site requires more than 2 trips, OSP Cable Contractor will pay time, material & vehicles charges for additional inspections. This paragraph inclusive of item 13.13 in RESPONSIBILITY OF CONTRACTOR.

33.4. **Certification** When Engineer has certified that he has reviewed the work of Contractor and stated that it is complete and in substantial conformance with the plans and specifications.

When Contractor has submitted to IRHTP and Engineer documents called for in, Annex I, Link Segment OSP Completion Check List.

34.0 Suspension Of Work

34.1. **Notice to Suspend Work** IRHTP may suspend work, or any part thereof, at any time, by giving ten (10) days' written notice to Contractor. The work shall be resumed by Contractor within ten (10) days after date fixed in written notice from IRHTP to Contractor to do so.

34.2. **Abandonment of work** If work, or any part thereof, shall be suspended and if IRHTP does not give written notice to Contractor to resume work within one (1) year of date of suspension, Contractor may abandon suspended portion of work. Contractor will be entitled to estimates and payments for all work done on the portions so abandoned, if any.

35.0 Cleaning Up

35.1. **Rubbish** Contractor shall keep premises free form accumulations of waste material or rubbish caused by its employees or work. After completion of work it shall remove all its rubbish and all its tools, scaffolding and surplus materials from work site. It shall leave its work "broom clean" or its equivalent, unless more exactly specified. In case of dispute the IRHTP may remove rubbish and charge cost to Contractor as IRHTP Project Coordinator shall determine to be just**.**

36.0 Definition Of Terms

36.1.0 **MERGED AREA** The Numerical designation given to Merged Area HCP Districts and selected numbers given to other Part 1 End Points as below:

36.1.1. **BER** Bit Error Rate is a quality measurement for digital transmissions.

36.1.2. **CAPACITY** The sizing of the transmission links in terms of digital data rate requirements and refers to the traffic-handling capacity.

36.1.3. **CUTOVER OR ACCEPTANCE OF SERVICE** The date on which a specific element of the network has been accepted by the IRHTP and placed into service and the lease commences.

36.1.4. **dB** The abbreviation for decibel used to define relative signal strength.

36.1.5. **ELEMENT** A specific connection including all electronics, equipment and facilities required to provide Gigabit service.

36.1.6. **FACILITIES** Transmission lines or circuits available to provide service.

36.1.7. **FAR END** Refers to the network end point connected to an IRHTP access point.

36.1.8. **FCPC** Type of optical fiber connector with low connection loss and high reflection
loss characteristics.

36.1.9. **F.O.T.** Fiber Optic Termination equipment

36.1.10. **IRHTP** Iowa Rural Hospital Telecommunications Program

36.1.11. I**NTERPRETATION** Words used in the present tense shall include the future, the future tense shall include the present, the plural shall include the singular, and the masculine shall include the feminine.

36.1.12. **LINK-SEGMENT** A link-segment is a fiber optic facility that extends from a predetermined point to another predetermined point. For example, the fiber that extends from the "A" Location (the HCP) to the appropriate end point (Z) location. The link-segment includes the appropriate electronics necessary to make it operational.

36.1.13. **MEDIA** Channels of communications, i.e., digital signal transport facilities.

36.1.14. **MERGED AREA** (refers to locations-educational institutions) Each Iowa County is assigned to a geographic cluster of counties and each geographic cluster of counties is identified as a separate merged area. However, individual counties may be divided between or among more than one merged area.

36.1.15. **MTBR** A statistical method for estimating failures of electronic equipment (Mean Time Between Failure)

36.1.16. **MTTR** A statistical method for estimating electronics and facilities repair time (Mean Time to Repair)

36.1.17. **NEAR END** Refers to the IRHTP access point used to connect an individual network element.

36.1.18. **nm** Abbreviation for nanometers, a measure applied to the wavelength of light transmitted over an optical fiber.

36.1.19. **ORDERWIRE** A voice circuit with equipment connecting a far (remote) end point and the near end point for maintenance activities.

36.1.20. **PART I** All Part I Elements for the entire IRHTP.

36.1.21. **PART I END POINT** A State provided facility at which Part I link and Part II links are terminated. Regional switching functions are provided. Serves as the Point of Presence for the county in which it is located.

36.1.22. **PART II END POINT** A State provided facility at which Part I and Part II links are terminated. Switching (secondary) is provided. Serves as the Point of Presence for the county in which it is located.

36.1.23. **PART III END POINT** The communications connection between secondary switching centers and individual accredited nonpublic schools, public schools and city, regional, HCP's and county libraries.

36.1.24. **POP** Point of Presence is the IRHTP part I or Part II in a specific municipality that may be used as an IRHTP access point for interconnecting network elements.

36.1.25. **REGIONAL SWITCHING CENTERS** The Part I end points providing interconnectivity for Part II end points and future Part II and Part III and other IRHTP end points.

36.1.26. **RESPONSE** Refers to the time expended from receipt of trouble, through the testing process and dispatch of the repair technician if required.

36.1.27. **RFP Request** for Proposal.

36.1.28. **"SHALL"** Is always mandatory.

36.1.29. **SINGLE MODE** Single mode designates an optic fiber which passes only the fundamental or lowest order mode at the light wavelength of interest (namely, 1310nm and 1550 nm for this RFP)

36.1.30. **SITE Connection** within or adjacent to a new IRHTP end point.

36.1.31. **SONET** Synchronous Optical Network is an American and international transport system utilizing the STS - 1 (Synchronous Transport Signal, level 1) as a root base.

36.1.32. **SONET LIGHTWAVE SYSTEM** A digital (SONET based) network element consisting of OC-(n) fiber optic transmission equipment, fiber facilities, batteries, rectifiers, alarm system, and capable of being independently switched and utilizes the overhead for control.

SECTION 2 - <u>Special Construction</u>

1. General

1.1. Procedures outlined below are not intended to fully cover all special procedures or emergencies which may arise during construction but are offered as an aid to Contractor in planning work; Contractor will cooperate with City, Hospitals, Schools, and Engineer to minimize inconvenience, construction delays and interruptions to continuous operation of existing fiber facilities.

1.2. Determine location of all underground utilities before starting excavation work; locations of underground appurtenances are approximate and not guaranteed by IRHTP. (Reference 13.6, Responsibility of Contractor in PART 1 OF DETAILED SPECS)

1.3. Remove and replace all signs and other appurtenances that interfere with construction operations; replace damaged signs at no cost to IRHTP.

1.4. Limit construction operations to all provided property, rights-of-way and easements. Provide barricades, lights, signs and detours as necessary to reroute traffic around construction areas. **(Inclusive of 17.0, Safety & 3.0, Right of Way in PART 1 OF DETAILED SPECIFICATIONS.)**

1.5. Arrange with operating utilities for relocation or temporary removal of utilities in conflict with construction and for service needed during construction at no cost to IRHTP.

1.6. Dispose of materials removed during construction at locations as approved by Engineer.

1.6.1. Dispose of waste products containing prescribed materials at approved landfill.

1.6.2. Dispose of surfacing, broken concrete or rubble, excess excavated materials and spoil.

1.6.3. Place excess excavated material at locations designated by Engineer.

1.7. Notify businesses and residents two days in advance, when construction will disrupt or block access to property.

1.8. Provide snow fence along boundaries of construction area as specified hereinafter and as directed by IRHTP Project Coordinator.

1.8.1. Install snow fence when area is prepared for excavation; install on steel posts with maximum spacing of 8’; maintain until work is complete.

1.8.2. Provide snow fence around all open trenches or open structures when left unattended.

1.8.3. Provide snow fence to keep livestock away from construction activities.

1.9. Backfill trench as construction progresses.

1.10. Cleanup and provide surface restoration as work progresses.

1.11. Submit complete detailed construction procedure schedule after award of contract for planning, scheduling and controlling construction of project.

1.12. Contractor will be expected to provide adequate personnel and equipment to perform work within specified time of construction.

1.13. Extensions of contract period will be given consideration upon written request of Contractor; request must include valid supporting data and bona fide reasons for requesting extension; IRHTP expects work to be complete and ready for final acceptance within completion time specified.

1.14. Protect survey markers of lot corners.

2. Cooperation With Others

2.1. Advise all utilities prior to excavating in area where construction might affect underground gas, electrical, telephone, cable or water service.

2.2. Advise Telephone Company of proposed construction schedule as it relates to telephone service.

2.3. Advise Power Company of proposed construction schedule as it relates to electrical power.

2.4. Advise Gas Company of proposed construction schedule as it relates to gas service.

2.5. Advise Water Company of proposed construction schedule as it relates to water service.

2.6. Advise Cable Television Company of proposed construction schedule as it relates to cable television.

3. Continuity Of Existing Utility Systems

3.1. Prepare detailed construction procedure schedule after award of contract: show definite and positive action to be taken to minimize disruption to utility systems.

3.2. Meet with all utilities to determine operability of isolation to determine area for which service would be shut off for each utility.

4. Survey Markers

4.1. Contractor responsible for hiring registered land surveyor to inventory existing pipe, pins and registered survey lot corners disturbed by construction; land surveyor responsible for setting reference markers required to re-establish location of existing pipe, pins and registered survey lot corners; land surveyor will not be required to certify pins or pipe replace as being lot corners; replace all markers disturbed by construction including where more than one pipe, pin or other marker are present at a location, replace all markers in same location as removed; provide drawing to IRHTP showing locations where markers were found and reset; dimensional data not required on drawing; each pipe, pin or marker replaced must be the identical marker removed at that location

5. Contaminated Soil Finds

5.1. If during course of construction evidence of deposits of contaminated soils are found, cease operations affecting find and notify IRHTP who will notify Iowa Department of Natural Resources; no further disturbance of deposits will ensue until notification by IRHTP that work may proceed; IRHTP will issue notice to proceed only after contaminated soils have been identified and procedures for remedial action have been determined and approved by Iowa Department of Natural Resources and IRHTP; compensation to Contractor, if any, for lost time or changes in construction due to changed conditions will be in accordance with change order provisions of specifications.

6. Payment

6.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in appropriate unit prices.

SECTION 3 - Excavation And Backfill

1. General

1.1. Excavation for trenches as specified herein; provide pipe/fiber as specified and shown on Standard Drawings for pipe/fiber installation.

1.2. Protect existing pavement from damage during construction if not shown on plans for removal; if damage occurs, replace in kind at no cost to IRHTP.

1.3. Remove, replace and repair items such as fences, storm drains, signs, hanging wires and other obstructions to accommodate construction equipment or to facilitate excavation; cost to remove and replace is incidental to construction.

1.4. Haul away and stockpile excavated material suitable for backfill; haul remainder of excavated material to an authorized waste site.

1.5. Remove soil not suitable for backfill; waste at disposal area specified in PART 2, SPECIAL CONSTRUCTION, Section 1.6 & 5.0; removal is incidental to construction, include cost in unit prices.

1.6. Where new work crosses existing utilities or utility services, excavate in advance of construction; determine crossing arrangement including exact construction line and grade. As specified in PART 1 - GENERAL REQUIREMENTS, Section 13.4 - 13.6, Responsibilities of Contractor.

1.7. Bore or jack under existing streets, utilities and structures except as noted on plans or as modified by IRHTP Project Coordinator.

2. Definitions

2.1. Earth: all materials including clay, silt, sand, gravel, hardpan, rock, shale, debris, junk, and brick, which can be removed by use of suitable excavating equipment and pneumatic tools.

3. Excavation For Structures

3.1. Includes excavation for manholes and other appurtenances.

3.2. Excavate as required to firm, undisturbed soil for laying conduit. In the case of hand holes/manholes excavate six (6") inches below bottom of structure and fill with six (6") inches of ¾" river rock at no expense to IRHTP.

3.3. Provide sheeting, shoring, and bracing where required to hold walls of excavation or to protect existing structures or utilities.

3.4. When unstable material is encountered which will not, in opinion of IRHTP Project Coordinator, provide suitable foundation, remove and replace with granular stabilizing material as directed by IRHTP Project Coordinator in writing, cost incidental to construction.

4. Trench Excavation

4.1. Keep width of trench as narrow as possible and still provide adequate room for backfilling and jointing.

4.2. Keep sides of trench as nearly vertical as practicable; comply with federal and state safety regulations.

4.3. Maximum desirable width of trench at top of fiber; as shown on Standard Drawings.

4.4. Excavate by hand:

4.4.1. Under and around utilities.

4.4.2. Where overhead clearance prevents use of machine.

4.4.3. To protect trees and shrubs where shown on plans.

4.5. Remove top 18" of topsoil and store in segregated stockpiles for backfill prior to trench excavation.

4.6. The trench shall be as straight as practical. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.

4.7. The length of open trench shall not exceed 100' feet at the end of each working day. Any open trench, bore pit, or pothole shall be fenced, covered or otherwise barricaded to protect the general public at all times. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent persons from falling into the open trench, or other damages

5. Rock Sawing

5.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered solid rock.

5.2. Where solid rock is encountered, the cable will be protected by steel, PVC conduit, high-density polyethylene conduit (HDPE) at the desecration of the IRHTP or its authorized representative.

6. Rock Excavation (Not Recommended)

6.1. Use of explosives; submit detailed plans outlining all proposed blasting operations, locations, methods and use of mats and other safety measures.

6.1.1. Obtain written approval from IRHTP and Engineer before using explosives.

6.1.2. Provide Special Hazard Insurance covering liability for all blasting operations.

6.1.3. Use thoroughly experienced demolition personnel.

7. Rubble Excavation

7.1. Rubble, as specified and defined herein, may be encountered along route.

7.2. Removal: as specified for rock.

7.3. Use of explosives: as specified for removal of rock.

8. Sheeting, Shoring, And Bracing

8.1. Minimum shoring requirement; equivalent construction procedure to use of "sand box" to provide 8' vertical protection; provide stacked sand boxes as required to maintain construction within construction limits.

8.2. Construct sheeting, shoring and bracing to hold walls of excavation where shown on plans or at other locations, to provide safety for workmen, to protect existing utilities or structures or to permit construction in the dry, sheeting operations which in the opinion of IRHTP Project Coordinator cause excessive vibration will not be allowed.

8.3. Leave sheeting and shoring in place when removal, in the opinion of IRHTP Project Coordinator, might damage new facility, existing utilities or structures.

8.4. Sheeting, shoring and bracing is incidental to construction; include cost in appropriate unit cost.

9. Dewatering

9.1. All work must be done in a dry environment; obtain IRHTP Project Coordinator's approval on methods of dewatering.

9.2. Provide for handling of water encountered during construction.

9.3. Lay no pipe/fiber in or pour no concrete on excessively wet soil.

9.4. Prevent surface water from flowing into excavation; remove water as it accumulates.

9.5. Divert stream flow away from areas of construction.

9.6. Do not pump water onto adjacent property without approval of IRHTP Project Coordinator.

9.7. Dewatering is incidental to construction; include cost in appropriate unit cost.

10. Existing Utilities

10.1. Hold a preconstruction meeting 3 days prior to beginning construction. Document meeting with a sign-in sheet detailing names, addresses, phone & fax numbers of company representatives present. Take minutes of meeting and hand documentation in with as built package.

10.2. Locations of utility lines, mains, cables and appurtenances are the responsibility of contractor; confirm locations of underground utilities by excavating ahead of work; Contractor fully responsible for damage to utilities during construction.

10.3. Protect services during construction.

10.3.1. If utility services are in direct conflict with line and /or grade of new facility; notify IRHTP immediately; provide all necessary shut-down, repair, and relocation where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be paid by contractor; when broken due to carelessness, repair is incidental to construction.

10.3.2. Support and protect, by timbers or other means, all utility pipes, conduits, poles, wire and other apparatus not to be moved; protective measures subject to approval of IRHTP Project Coordinator.

10.3.3. No utility or utility service will be moved to accommodate equipment employment; method of operation or for convenience of Contractor when utility or utility services does not conflict directly with line and grade of work.

11. Tree Removal

11.1. Remove trees only in conflict with alignment of trenches or location of structures.

11.2. Removal includes grubbing and removing stump and roots, removal from site, disposal of debris and backfilling.

11.3. Tree and bush removal is incidental to construction; include cost in applicable unit price.

12. Backfill For Structures

12.1. Backfill after concrete, masonry, or glue has cured, and waterproofing, if specified, has been inspected and approved by Engineer.

12.2. Backfill with material removed form excavation; use no debris, frozen earth, large clods, stones or other unsuitable material.

12.3. Backfill simultaneously on all side of structure; save structure from damage at all times.

12.4. Terminate at original grade or at elevation shown on plans; dispose of excess excavation as directed by Engineer.

12.5. Prepare backfill for surface restoration as specified for adjacent trench.

13. Trench Backfill

13.1. Backfill trench immediately after contractor has recorded sequence marking on cable or location of connections and appurtenances or at IRHTP Project Coordinator's direction; backfill with select material excavated from trench.

13.2. Use no large stones, large clods, organic matter, rubbish, frozen or unsuitable materials in backfill; furnish extra soil from site to complete backfilling at no extra cost to IRHTP; remove and dispose of unsuitable material; backfill simultaneously on both sides of pipe to prevent displacement.

13.3. Hand place and carefully compact backfill to 1' over top of facility.

13.4. Backfill 1' over top of facility in layers not to exceed 18"; where compacted backfill shown on plans, compact to minimum 95% maximum density.

13.5. Backfill above PVC pipes:

13.5.1. Backfill with pipe bedding material to minimum 6" above top of pipe; do not drop pipe bedding material from equipment bucket more than 2' above pipe; all pipe bedding material including backfill material is incidental to construction.

13.5.2. Above pipe bedding material, backfill with excavated material, except frozen material, shale, and other non-suitable material; do not drop backfill material from

equipment bucket more that 2' above bottom of trench until backfill material is in place 18" above bedding backfill material.

13.5.3. Consolidate bottom 6" of trench backfill with hand tools and tampers; do not use vibratory plate compactor until above bottom 18" of trench backfill.

13.5.4. Cable marking ribbon shall be installed above all trenched direct-buried HDPE/conduits. The ribbon shall generally be placed at a depth of 12" inches below grade and directly above the fiber/HDPE/conduits.

13.5.5. Splice boxes/hand holes will be placed at all splice locations. Hand holes will be placed at intervals of approximately 1000' feet, change of direction, greater than 15% and as shown on construction drawings and typical drawings. Hand holes may be moved to locations more practical when necessary upon approval by the IRHTP.

14 Surface Restoration

14.1. All trenches: replace 18" of topsoil removed during excavation.

14.2. Grade tops of trenches to smooth, uniform lines without large lumps, clods or debris.

14.3. Dispose of all brush and rubbish as directed by IRHTP Project Coordinator.

14.4. Sod/seed all areas disturbed by construction unless otherwise shown on plans or as directed by IRHTP Project Coordinator.

14.5. Prepare site for seeding by disking, harrowing and had raking or other means following site grading; work soil to depth of 3".

14.6. Precede seeding with uniform application of commercial grade fertilizer at rate per acre of 20 lbs. of nitrogen, 40 lbs. of phosphorous and 20 lbs. of potassium (400 lbs. of fertilizer grade 5-10-5 per acre, or approved equal); cultivate area 3" deep and work with harrow within 24 hours before seeding; smooth surface to eliminate clods and lumps before seeding.

14.7. Seeding in street parkings, lawns and developed areas (Type 1):

14.7.1. Seed at rate of 85 lbs. per acre with following mixture proportioned by weight.

SEEDING	PERCENT
Kentucky Bluegrass	35%
Annual Rye	25%
Perennial Rye	20%
Creeping Red Fescue	10%
Chewing Fescue	10%

14.8 Seeding in City rights-of-way, railroad rights-of-way, pastures, farm fields and creek banks (Type 2):

6.2. 14.9 Seed at rate of 1.25 lbs. per 1000 SF with the following mixture proportioned by weight:

SEEDING	PERCENT
Brome grass	60%
Alfalfa	20%
Red Clover	12%
Alsike Clover	8%

14.10 Add rye to seed mixture at rate of 1 bushel per acre if seeded between August 15 and October 15; add oats at rate of 1-1/2 bushels per acre if seeded between April 1 and May 30.

14.11 Inoculate alfalfa and clover seed not more than 8 hours before sowing.

14. 12 Seed between dates of August 15 and October 15 or between dates of April 1 and May 30.

14.13 Cover seed by rolling with cultipacker, or by dragging or hand raking.

14.14 Mulch all seeded areas: mulch: dry oat straw at rate of 4000 lbs. per acre; stabilize mulch with tiller designed to anchor mulch to soil.

14.15 Water seeded area sufficiently to saturate seed bed; continue watering all areas until growth is established.

14.16 Contractor is responsible for turning over to IRHTP full stand of grass; replant or redevelop bare spots or areas not attaining full stand of grass during first growing season.

14.17. No separate payment will be made for work covered in this part of the specifications. Contract unit prices shall include all cost for restoral.

15. <u>Street & Driveway Replacement</u>

15.1 Replace surface with new surfaces to match construction for type, size and surface texture unless otherwise specified.

15.2 Gravel or crushed stone:

15.2.1 Place 6” compacted crushed stone in top of trench; conform to IDOT Class A crushed stone; place and compact in two lifts.

15.2.2 Place additional compacted crushed stone beyond trench limits to widths shown on plans to restore to existing conditions; minimum thickness: 2”.

15.2.3 No separate payment will be made for work covered in this part of the specifications.

16. <u>Field Drain Lines</u>

16.1 Field drain lines may be encountered along route of new sewer; notify IRHTP Project Management if drain conflicts with facility construction.

16.2 Where new facility crosses under field drain lines, replace with a length of Schedule 40 PVC pipe; match size of existing drain line; cut 1/8" to ¼" wide slots at 12" centers transverse to pipe for slots on bottom; replacement paid for by contractor.

16.3 Where new facility parallels field drain lines, replace damaged field drain lines; match size and material of existing drain line.

16.4 No separate payment will be made for work covered in this part of the specifications.

17. Fence Removal And Replacement

17.1 Remove fence for construction access as required within easements.

17.2 Miscellaneous fence removal and replacement is incidental to construction; restore fence to original or better condition; replace wooden fence posts with new posts unless directed otherwise by Engineer.

17.3 No separate payment will be made for work covered in this part of the specifications.

18. Directional Boring

18.1 This includes all labor, equipment, and materials to install a minimum of one 1-1/4 inch diameter HDPE using directional boring techniques. The running line of the duct shall be kept straight and level unless otherwise specified in the final construction drawings. Any changes, either vertical or horizontal, shall be gradual and not to exceed 1.5' deviation in less than 6" (inches). Special care shall be taken to insure that the duct connection between bores be kept straight and level. When installing inner-ducts, conduits shall be color coded or marked to aid in identifying the respective ducts. This color-coding shall be observed during connection to assure duct continuity.

18.2 This unit also includes any pothole excavation for whatever purpose along with the pothole restoration. The barricading and safeguarding of pothole excavations shall comply with **BACKFILL & EXCAVATION** section. Backfill and restoration of excavation shall comply with Federal, State or local governing agency requirements.

18.3 Entrance of HDPE conduits into manholes and hand holes/splice boxes shall be in a level and straight line to facilitate installation of fiber optic cable.

18.4 Every effort shall be made to maintain a minimum of twelve (12") inches of clearance between IRHTP conduit and other utilities.

18.5 The boring machine shall be grounded at all times during operation. The grounding method shall comply with the manufacturer's guidelines and requirements. Adequate barricades shall be erected to limit access to boring machine operation personnel only.

19. Payment

19.1 No separate payment will be made for work covered in this part of the specifications. Include all costs in appropriate unit prices.

SECTION 4 - Pipes And Structures

1. Pipe Materials

1.1. Polyvinylchloride pipe (PVC):

1.2. Steel casing pipe: 0.25" under roadway; use for casing pipe where shown on plans.

1.3. HDPE

1.4. Plenum raceway

2. Pipe Joints

2.1. Polyvinylchloride (PVC) schedule 40: couplings and/or integral bell.

2.2. HDPE connectors: approved by the manufacture.

2.3. Steel pipe

2.4. Plenum connectors approved by the manufacture.

3. Joint Protection & Inspection

3.1. Carefully protect joints from injury while handling and storing pipe.

3.2. Use no deformed, gouged or otherwise impaired joints.

3.3. Clean bell and spigot surface of dirt and foreign matter before jointing pipe.

3.4. Use cleaner or primer.

3.5. Make joints in strict accordance with manufacturer's recommendations.

4. Pipe Installation

4.1. All inner-duct, HDPE or conduit shall be tagged or color-coded.

4.2. Before laying pipe, verify all measurements at site; make necessary field measurements to accurately determine pipe make-up lengths or closures.

4.3. Keep pipe free of all dirt and foreign material

4.4. Use no defective pipe; check each length for defects and hairline cracks at ends prior to lowering into trench.

4.5. Lower pipe carefully into trench.

4.6. Pull joints together with equipment recommended by pipe manufacturer; do not use backhoe or similar equipment to push joints together.

5. Connections Between Dissimilar Pipe

5.1. Provide manufactured adaptor or coupling.

6. Pipe Conflicts

6.1. Where pipe parallels an existing facility maintain at least 1 foot of separation.

6.2. Where pipe crosses an existing facility maintain at least 1 foot of separation.

6.3. Provide all necessary shut-down, repair and relocation of existing facilities where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be

paid by contractor. When existing facility is damaged to carelessness repair is incidental to construction.

6.4. Conflicts as specified in EXCAVATION AND BACKFILL.

7. Tracer Wire Installation

7.1. Tracer wire shall be placed with all HDPE conduit installed unless armored or traceable cable is used. The tracer wire shall be provided by the contractor. The contractor that installs the HDPE conduits shall install, splice, and test (for continuity) the tracer wire. If the tracer wire is not placed or is broken during installation, the contractor shall notify IRHTP Project Management immediately. The area of the route that does not have tracer wire installed shall be identified on the as built documents submitted by the contractor. IRHTP will have the tracer wire installed by the subcontractor that installs the fiber optic cable or by other means. If the tracer wire is installed by a contractor other than the contractor that installs the HDPE conduits, the IRHTP will charge the HDPE installation contractor reflecting IRHTP cost to have the tracer wire installed.

7.2. On multi-duct installation install a 5/8" x 8' copper clad ground rod in the hand hole located on public r/w. Place a #12 insulated copper locate wire from the ground rod to the FOTS room or to the outside of the building directly below the pull box and terminated on one side of a Reliance 5533 insulated indoor/outdoor terminal block with copper connectors. Run a #12 copper wire from this terminal block to the master ground bar in the FOTS room or place a ground rod on the outside of the building. Locate block in an accessible location. This is for locate "purposes only". This is not for grounding purposes. Note on as-built where ground is placed and tag locate wire as "locate wire".

8. Proofing The Duct

8.1. All inner-duct, conduit/multi-duct will be proofed upon completion to verify continuity and integrity of the duct by pulling a solid rubber mandrel or a mandrel of other solid material such as steel or aluminum. The mandrel shall be at least 6" long and 1" in diameter. An IRHTP representative must be present to witness all duct proofing operations, duct that is not proofed in the presence of an IRHTP representative shall not be considered complete. The preinstalled mule tape of polypropylene rope may be used for this purpose but the tape or rope must be reinstalled upon completion of proofing. The reinstalled tape or rope must be free of damage, equal to its original integrity and free of other defects that would render it unsuitable for cable pulling.

9. Multiple Duct Installation

9.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct containing the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity. Refer to Appendix 1.17 on Sleeves.

9.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mileposts. However, hand holes may be moved to locations more practical when necessary upon approval by the IRHTP. All ducts shall enter and exit the hand holes. Should mid-assist points become necessary when pulling the cable, the ducts shall be

spliced together in a watertight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

10. Manholes/Hand Holes

10.1. Use non-shrink grout between pipe and manhole block out.

11. Payment

11.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in applicable unit prices for items to which work pertains.

11.2. Pipe in Place, LF:

11.2.1. Unit price includes furnishing pipe, handling, laying pipe bedding if required, materials, trench excavation, dewatering, connections between dissimilar pipes, connections to existing system, connections of existing pipes and appurtenances, sheeting, shoring and bracing, backfilling, service connections, tree and brush removal, surface restoration including seeding, fencing, and miscellaneous associated work.

11.2.2. Length will be measured along centerline of pipe with no deduction for manholes, including manholes.

11.3. Standard Manholes, Each Unit price includes furnishing, installing, excavating, concrete, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work for manholes 0 - 10' deep.

11.3.1. Diameter of manhole as shown on plans as specified.

11.4. Hand holes, Each Unit price includes furnishing, installing, excavating, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work.

12. Bedding Requirements

12.1. Bedding for manholes/hand holes: lay manholes/hand holes on 6" deep bedding material (3/4"river rock); fill around perimeter of manholes/hand hole to minimum depth of 6" deep bedding material (3/4"river rock). Compact all bedding material by vibration.

SECTION 5 - Specifications For Buried Installation Of Fiber Optic Cable

1. General

1.1. This specification covers the buried installation of a fiber optic cable by various methods for the IRHTP Network. Methods of direct burial are plowing, trenching or boring. Sections designated by the Contractor and crossings such as roads and streams shall be installed with external protection as specified herein. Installation of hand holes for use as pull boxes and splice boxes is covered herein, as is any work required at regenerator sites.

1.2. As required, the cable shall be removed from the reel by approved methods and pulled through the pipe crossings or under other utilities and replaced on the reel to continue the installation operation. The cable will be installed in various lengths up to 12 kilometers as determined by the Contractor.

1.3. Hand holes will be installed per the applicable Standard Drawing at intervals or locations called for in the specifications or drawings. Bends of small radii and twists that might damage cable shall be avoided. During the placing operation, cable shall not be bent in a radius less than 20 times the outside diameter of the cable.

2. Material

2.1. IRHTP Compatible/Specified Material: Contractor will furnish the materials listed below:

2.1.1 Armored Fiber Optic Cable meeting SMF-28/GR/253 fiber specifications

Single Jacket

Loose Tubes, Three tubes of 12 fibers each (Dri-Core)

36 total fibers

Color coded Buffer Tubes

2.1.2 Non-Armored Cable (Kevlar)

Kevlar Cable must be in duct and must include a #10 AWG tracer wire inside the duct.

2.1.3 All rack mounted bulkheads or FDP's shall be equipped with SC style connectors

2.1.4 Warning Tape

2.1.5 Hand Holes

2.1.6 S.I.P. Peds

2.1.7 Sign Post & Signs

2.1.8 Ground Rods & Clamps, Bare #6 Wire

2.1.9 PVC Pipe - Schedule 40

2.1.10 GIP

2.1.11 BIP

2.1.12 Cable Lubricant

2.1.13 Pulling Rope - 600 lb test

3. Definition Of Terms

3.1. Road Gravel. Material used for restoration of all gravel surfaces shall conform to IDOT spec. 4120, Class A road stone, Standard Specifications for Highways and Bridge Construction.

3.2. Erosion Control Fencing. Erosion control materials must conform to Section 4169 of the Standard Specifications for Highway and Bridge Construction.

3.3. Rip Rap. When riprap is needed it shall be Class "E". It shall conform to IDOT spec. 4130 Rip Rap Standard Specification for Highway and Bridge Construction.

3.4. Pea Gravel. Pea gravel used for bedding under manholes shall comply with IDOT Spec. 4131 Porous Backfill Standard Specifications for Highway and Bridge Construction.

3.5. Asphalt. Material used for asphalt restoration shall conform to IDOT Spec. 4126 of Standard Specifications for Highway and Bridge Construction.

3.6. Concrete. Concrete for sidewalk, curb and gutter replacement shall be class "C" 3000 lb. and shall conform to IDOT Spec. 2403 of Standard Specifications for Highway and Bridge Construction.

3.7. Cable Lubricant. Contractor shall supply a cable lubricant approved by the Contractor for installation of fiber optic cable.

3.8. Pulling Rope. Contractor shall supply pull rope with 600 LB proper tensile strength.

3.9. Bridge Attachments. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.

3.10. Duct Plug. Contractor shall supply a “JACKMOON PLUGS” blank plugs and Simplex to seal all conduit and casing openings.

3.11. Hardware Cloth. Contractor shall supply 2” x 2” mesh - 19-gauge wire for use over pea gravel and under manholes.

4. Protection Of Material

4.1. Contractor shall be responsible at all times for protecting the exposed portions of the cable from damage, including intrusion of water. Cable ends will be left at splice locations with sufficient protection to prevent water from entering the cable ends. The contractor shall re-place or repair at the IRHTP's option, and damage that occurs to the cable as a result of insufficient or improper protection of the cable.

5. Reporting Cable Damage

5.1. The cable shall be carefully inspected by the IRHTP during the plowing or trenching operation prior to its installation in the project to be certain that it is free from defects. Cable damage due to the contractor negligence will be the responsibility of the contractor. Every instance of damaged cable observed at any time shall be immediately called to the

attention of the Contractor; whether prior to installation, during construction, or during test or observation subsequent to installation. The method of repair or correction of such damage shall be in accordance with the written instructions of an authorized IRHTP's representative. The contractor shall make repairs or corrections promptly.

6. Cable Repairs

6.1. Minor damage to the outer jacket of the cable observed prior to or occurring during construction shall be repaired in accordance with instructions from an authorized IRHTP's representative.

6.2. Cable damage in excess of minor damage to the outer jacket, which is observed prior to or during construction, shall be corrected as follows:

6.2.1. The damaged section of cable shall be enclosed in (1) a buried housing located as specified by the IRHTP or in (2) a buried cable splice enclosure if approved by the IRHTP, buried to the same depth as that specified for the cable. If the shield has been broken or the conductor insulation damaged, the cable shall be restored to the equivalent of new condition. This may require cutting out the damaged section of cable if required by the IRHTP. It may also require the replacement of an entire section between two existing hand holes. Determination of the method of correction will be at the IRHTP's sole discretion.

6.3. Damage to cable discovered after burial, either through test or observation, shall be repaired as follows:

6.3.1. The damaged section of the cable shall be repaired as approved by the IRHTP. This may require cutting out the damaged section and replacing it with a short section of new cable with splices made in (1) buried hand holes or (2) buried cable splice enclosures, if approved by the IRHTP, which are buried to the same depth as required for the cable. It may also require the replacement of an entire section between two splice points. Determination of the method of correction will be at the IRHTP's sole discretion.

7. Depth Of Burial (Refer To Appendix 1.18)

7.1. Except where otherwise specified, the cable shall be placed to a minimum depth of 36 inches unless otherwise approved by the IRHTP. Greater cable depth will be required at the following location.

7.2. Where cable route crosses roads, the cable shall be placed at a minimum depth of 48" below the pavement or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.

7.3. Where the cable route crosses railroad rights-of-way the cable shall be placed at a minimum depth of 60" below the railroad surface or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.

7.4. Where cable crosses existing sub-surface pipes, cables, or other structures. At foreign object crossings the cable will be placed to maintain a minimum of 12" clearance from the object or the minimum clearance required by the objects owner, whichever is greater.

7.5. Where cable crosses small gullies, ditches, and washes, the cable will be placed at a minimum depth of 48” below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the Contractor's field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.

7.6. Where cable crosses large/major gullies, ditches, streams, rivers, washes or areas prone to flooding, the cable will be placed at a minimum depth of 10’ below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the IRHTP field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.

7.7. Additional cable depth required to satisfy the preceding items shall not be construed as Extra Work.

7.8. Where rock excavation is required, a minimum depth of the cable of 24 inches may be allowed, with IRHTP's written approval, when the cable has additional protection of Contractor-provided PVC or HDPE conduit. Otherwise, the minimum depth for placement in rock will be 36".

7.9. Where there is a layer of soil over rock, the minimum depth that the contractor may be allowed, shall be the shallower of: 1) the minimum depth of trench in rock, measured to the soil-rock interface; or 2) the minimum depth in soil, measured to the surface.

7.10. At other locations as may be specified by the IRHTP.

8. **Cable Marking Ribbon**

8.1. The cable marking ribbon shall be installed above all direct-buried cable and conduit. The ribbon shall generally be placed at a depth of 12 inches below grade and directly above the cable or conduit.

9. Hand Holes (Splice Boxes)

9.1. At all splice locations, hand holes will be placed as splice vaults. Hand holes may also be placed at the end of conduit runs to serve as pull boxes for the cable, at the option of the Contractor.

9.2. Hand holes will be set at all regeneration stations, at entrances to terminal stations, and at other locations required by the Contractor and/or shown on the drawings.

9.3. Hand holes shall be of the type shown on the applicable Standard Drawing. Hand holes shall be installed in accordance with the Standard Drawing.

9.4. Hand holes shall be spaced to allow sufficient length (75’) of cable at each end of the reel to be coiled in the hand hole.

9.5. After placing the hand hole, contractor shall backfill to a level even with the top of the hand hole. The excavation shall be left in the above condition until after the splice has been completed by others. Upon notification by IRHTP that the hand hole is ready, the contractor shall complete the backfill of hand hole pit in accordance with the drawings and with Clause 22.0 of these Specifications.

10. Cable Plowing

10.1. General

10.1.1. The contractor shall be familiar with general guidelines covering the construction of buried communications cable.

10.1.2. The equipment and construction methods used by the contractor shall be such as to cause minimum displacement of the soil.

10.1.3. Damage to banks, ditches, driveways and roads caused by the equipment shall be immediately repaired to the satisfaction of the IRHTP and public authorities having jurisdiction over highway and road rights-of-way.

10.1.4. Where cable is buried near the edge of pavements, the contractor shall take particular care to avoid damaging the pavement. If such damage does occur, repairs shall be made immediately to meet the complete satisfaction of state or local authorities having jurisdiction over the pavement.

10.2. Plowing Equipment Requirements

10.2.1. The plowing equipment shall be subject to the approval of the Contractor and the public authorities having jurisdiction over highway and road rights-of-way.

10.2.2. Plowing shall be performed by a prime mover with hydrostatic type steering and a static plow.

10.2.3. The design of the plowshare shall be such that the buried cable passing through the plow will not bind and shall not be bent in a radius less than 20 times the outside diameter of the cable. The feed chute must be a removable gate for the purpose of inspection and to allow the cable to be removed from or inserted into the feed chute at any intermediate point between splice locations. The cable path inside the feed chute must have low friction surfaces and be free of burrs and sharp edges to prevent damage to the cable as it passes through. Any welds must be smoothed. Internal guide rollers shall not be used.

10.2.4. The equipment shall be capable of extending the plow in order to maintain the required minimum depths under all terrain conditions.

10.2.5. The reel carrier shall be of adequate size and be configured so that the reel sizes being used can be safely handled.

10.3. Plowing Requirements

10.3.1. The slot made in the soil by the cable plows shall be closed immediately by driving a vehicle track of sufficient weight over the plow slot, to thoroughly compact the plow slot or by other suitable means approved by the Contractor.

10.3.2. Start and finish pits and pits at points of intersection, as needed must be excavated in advance of plowing cable. Ends of casings and crossings of foreign utilities shall be exposed prior to start of cable plowing operations.

10.3.3. The contractor shall exercise particular care in the use of trenching equipment and shovels in joining trenches to the slots made by the plow to be certain that the cable is not damaged.

10.3.4. To avoid possible damage to buried cable from exposure to traffic, livestock and other hazards, trenching of laterals, trenching around culverts, construction of aerial inserts and similar operations shall be completed as soon as practicable behind the plowing operation, but never more than 48 hours behind the plowing operation unless additional protective measures, as approved by the contractor, are employed. Notwithstanding this provision, the contractor remains responsible for the cable throughout the placing and acceptance intervals.

10.3.5. Care is to be exercised during the plowing operation, to feed the cable into the ground through the plow loose and at no tension. Equipment and construction methods shall be such as to assure compliance with this requirement. The contractor shall furnish competent supervision at all times at the site of plowing operations to assure compliance with this requirement.

10.3.6. If during the plowing operation, the plow should strike a buried object or rock that stops the equipment and necessitates removal of the plow from the ground, the precautions detailed in Section 9.4 shall be observed to avoid damage to the cable. Should it be necessary to back the plow to remove it from the ground, the cable shall be uncovered by hand a sufficient distance back for inspection by the IRHTP to determine whether the cable has been damaged.

10.3.7. Where casing pipe or foreign utility is encountered, the cable shall be unrolled and placed in a figure 8 configuration. After the cable is pulled through the casing pipe(s) or under the foreign utility (ies), it shall be replaced on the reel and the plowing operation restarted. EXTREME CARE must be used whenever the cable is handled so that it will not be kinked or damaged in any manner.

10.3.8. The plowing precautions detailed in Section 9.4 shall be strictly observed.

10.4. Plowing Precautions

10.4.1. Failure to observe precautions concerning proper operation of the prime mover and plow contributes to unnecessary cable damages. The following precautions shall be reviewed with equipment operators and shall be strictly observed.

10.4.1.1. The tractor shall always be started slowly and speed increased gradually after all cable slack is removed from the cable delivery system.

10.4.1.2. Plow attitude and depth shall be changed gradually. Such changes shall be made only while prime mover is moving.

10.4.1.3. Should it be necessary to raise the plow share to the surface when the plow is not moving, the cable to the rear of the feed chute shall be excavated and slack pulled so that the cable is not kinked over the feed chute exit.

10.4.1.4. Do not plow with the share set at extreme forward rake angles without a share specifically designed for this purpose.

10.4.1.5. When rigging for off-set plowing, the cable shall be re-routed over the cable feed systems to conform with the new configuration.

10.4.1.6. Abrupt changes in terrain along the cable path shall be graded off ahead of the plow. Such grading must be approved by IRHTP and IDOT.

10.4.1.7. The plowing operation shall be observed continuously for obstructions, proper feeding of cable, maintaining proper depth, etc.

10.4.1.8. Under no circumstances shall the plow be backed or the share moved to the rear with cable in the chute.

10.4.1.9. At no time shall the plow be wobbled either vertically or horizontally to break through an obstruction.

10.4.1.10. At no time shall the plow deviate from the normal route to seek an "on grade" crossing level for farm roads. Unless the road is bored, contractor shall level the plow train path in order to make a level crossing of the road. Subcontractor shall repair the road after passage, including repaving or gravelling, as required

10.4.1.11. No practice will be allowed that will cause an abrupt change in direction of the plowed in cable.

10.5. Cable Plowing In Rock Areas

10.5.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered as solid rock.

10.5.2. Where solid rock is encountered, the cable will be installed by the trench method described in Section 10.0, while also being protected by steel PVC conduit, high-density polyethylene conduit (HDPE), at the discretion of the Contractor.

11. Placing Cable At Reel Ends

11.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

12. Cable In Trench

12.1. Excavation

12.1.1. The trench shall be as straight as practicable. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.

12.1.2. The length of open trench shall not exceed 100' at the end of each working day. Any open trench shall be fenced. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent livestock or persons from falling into the open trench.

12.1.3. Driveways, lanes, or roadways, which are open cut, shall be opened just prior to the conduit and/or cable placing. In no case shall the driveway, lane, or roadway be left impassable at the end of the day. The general public safety is paramount and appropriate steps shall be taken to ensure safety at all times.

12.2. Backfill

12.2.1. The trench shall be backfilled and compacted to the satisfaction of the IRHTP or local authorities, promptly behind the pipe and/or cable placing, except at splice

locations. In general, the backfill shall consist of the earth removed from the trench.

12.2.2. Where a carrier, pipe, conduit, duct, or cable is placed by trenched construction beneath a roadway or a driveway or within five feet of the edge of an existing or proposed pavement or base course, the backfill within the roadway shall be placed and compacted in not more than 6" lifts, from the top of the installation to the ground line. The backfill shall be of suitable material free from boulders, frozen clods or roots or excessive sod or other vegetation. The fill shall be carefully hand tamped under and around the installation in lifts not to exceed 4" in loose thickness.

12.2.3. In areas inaccessible to tamping-type rollers where compaction is required, a mechanical tamper of a size suitable for the work involved shall be used.

12.2.4. Pneumatic tampers shall be operated at pressures no less than those recommended by the manufacturer.

12.2.5. Compaction of backfill shall be to the satisfaction of the IRHTP, and consistent with good highway construction methods.

12.2.6. On public right-of-way all backfilling must conform to the requirements of the authority having jurisdiction.

12.3. Trenched Road and Driveway

12.3.1. Generally all hard surfaced areas will be bored. The backfill at crossings of driveways, lanes, or roadways shall be the same as 10.2.

12.3.2. Pavement replacement shall match existing paving in type of pavement appearance, wear surface, and durability to the maximum extent practical. Replacement shall match existing structure and shall include curbing, walkways, or any other concrete structure damaged during construction. Pavement repair shall be subject to approval by the IRHTP and must conform to the requirements of the local governing authority having jurisdiction including required cutbacks, or "T" topping. Pavement repair not installed in accordance with the requirements of these Specifications shall be removed and replaced.

12.4. Trench In Rock

12.4.1. See Section 9.5 for a definition of solid rock.

12.4.2. Where solid rock is encountered, the trench may be excavated using a rock saw or other rock cutting equipment. The excavation, backfill and road crossings in solid rock areas shall conform to sections 10.1, 10.2 and 10.3 of these specifications unless specifically exempted in this section.

12.5. Placing Cable

12.5.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

13. <u>Multiple Duct Installation</u>

13.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors

and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct that will contain the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity.

13.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mile posts. . However, when necessary and upon approval by the IRHTP, hand holes may be moved to locations more practical. The duct containing the IRHTP cable shall enter and exit hand holes and the empty ducts shall pass around the hand hole on the field side rejoining the IRHTP duct as soon as practical without causing severe bending.

13.3. Should mid-assist points become necessary when pulling cable, the ducts shall be spliced together in a water-tight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

14. Cable Pulling

14.1. The optical fiber cable provides high capacity transmission channels. To ensure that the cable's qualities and characteristics are not degraded, excessive pulling tensions or excessively short bending radii should be avoided. The maximum pulling tension is 600 lbs. and the minimum bending radius is: dynamic (cable in movement) = 20 times outside diameter of the cable and static (cable in place) = 10 times outside diameter of the cable. These rules should be followed at all times when placing excess cable in hand holes for splicing and slack coils.

14.2. When pulling fiber, a break-away swivel, along with a Slip Clutch Capstan Winch that shows the dynamometer reading at all times shall be used.

14.3. Cable lubrication shall be used to reduce the pulling tension on longer segments of the cable placement operation. Contractor approved lubricants shall be used.

14.4. At each pulling hand hole a 35' coil of fiber will be left coiled in the bottom of the box. At each splice location 75' will be left on each cable end for splicing. Tags will be placed on fiber showing the direction of the cable. The cable ends will be sealed watertight to keep water from entering the cable.

15. Subsurface Obstructions

15.1. Contractor is responsible to locate and avoid all subsurface obstructions. It is the contractor's responsibility to verify the locations of subsurface obstructions shown on the drawings as well as any additional obstructions not identified on the drawings. Contractor shall notify owners and operators of foreign pipelines or other utilities at least 48 hours prior to excavation near the utility. Contractor shall keep a log of all telephone contacts to notify foreign utilities of excavation. Such log shall include date, time of day, name of individual contacted, name of Company contacted, telephone number, and confirmation number.

15.2. When crossing buried pipes, cables, and other utility lines, the cable shall be placed under the foreign utility line with a minimum separation of 12 inches. However, if the foreign utility line is 55 inches or more deep, the cable may be placed over the utility at the normal placing depth unless the utility owner specifically requires placing of facilities

below their lines. In this situation the new facilities will be placed a minimum of 12" below the existing line (see Section 6.0).

16. Inspection Of Buried Cable

16.1. The installed cable will be tested as a part of the cable splicing operation. Contractor shall be liable for the cost of any and all repairs or replacement necessary to correct any defect in the installed cable which can be attributed to actions by the contractor which are disallowed by these specifications, by the Cable manufacturer or by good industry practice, as determined by the IRHTP. The term "defect" as used in the preceding sentence shall mean any defect that the IRHTP determines to have an effect on current or future operations of the completed fiber optic communication system.

17. Highway, Railroad And Other Bored Crossings

17.1. All crossings of state or federal highways and railroads rights-of-way shall be made by boring and placing a pipe casing. The cable shall be placed through the pipe casing. Country roads and other roadways shall be bored, trenched or plowed, as directed by the IRHTP and approved by the appropriate local authority.

17.2. All work performed on public right-of-way or railroad right-of-way shall be done in accordance with requirements and regulations of the authority having jurisdiction there under.

17.3. At anytime the pipe casing bored under the roadway exits below the prescribed depth, a backhoe will be used to gradually return the bored ditch to plowed grade.

17.4. In no case shall the completed crossing be less than 48" deep at its shallowest point.

17.5. Certain roadways may be allowed to be crossed by trenching. In those cases, it shall be the contractor's option to split conduit and place it around the cable in lieu of placing whole conduit and pulling the cable through the conduit. Contractor shall split the casing and install it around the cable in a manner approved by the Contractor. Split conduit will be secured after cable placement in such a fashion as to prohibit collapsing to less than its un-split diameter. Split conduit shall be sealed or plugged to prevent entry of dirt, water and rodents.

17.6. In areas that the cable is being laid in conduit, the ends of the conduit shall be capped or plugged to prevent entry of dirt, water and rodents.

17.7. Under railroads rights-of-way, the bore shall extend from toe of fill to toe of fill.

17.8. In no case shall an encasement extend less than toe of slope to toe of slope except along freeway rights-of-way in which locations the encasement shall extend from right of way to right of way.

18. Stream And Canal Crossings

18.1. General

18.1.1. In general, the cable shall be placed by direct bury methods (plow or trench) with additional conduit protection when directed by the IRHTP, across small streams

and washes. Stream or river crossings may be made on non-freeways, through conduit attached to a highway or railroad bridge. Where required by local authorities, irrigation canals will be bored in the same manner as a road crossing.

18.2. Buried Crossings

18.2.1. Lake, canal, stream and river crossings shall be installed and restored in accordance with the Standard Drawings and the applicable Construction Drawings, and in accordance with the requirements of the permit, if any, and in accordance with the requirements of respective Federal, State and Local agencies, including those agencies concerned with water pollution and the protection of sport fisheries. Cable shall be laid across lakes, canals, streams and rivers as nearly level as practicable. Extreme care shall be taken to prevent damage to the cable during these installations.

18.2.2. The cable is to be installed in accordance with Clause 6.0, Depth of Burial. The banks of stream crossings shall be graded as necessary to provide the required burial depth under the stream and to provide a proper pathway for the plow train or trencher to traverse the bank and make a smooth transition to the stream bottom. Transitions from normal depth to stream-crossing depth shall be made smoothly without sharp bends in the cable. All cuts in banks and diversion berms shall be re-graded to match existing facilities and re-compacted to not less than 90% of maximum cf density at plus or minus 5% of optimum moisture content as determined by ASTM D698.

18.2.3. The banks of all canals, streams and rivers shall be restored to their former condition and bank protection materials or bulkheads will be installed where required. The methods of restoration and erosion control shall be as required by the landowner or agency having jurisdiction and as approved by IRHTP. IRHTP reserves the option to change the erosion control method in the field. Banks will be reseeded and mulched with grass seed and mulching material as required by the local governing authority. Berms will be constructed, where practicable, to divert water away from the trench line and disturbed bank areas. Costs for restoration of banks and installation of bank protection material and bulkheads shall be included in the price for completing the work.

18.2.4. As nearly as possible, the beds of all lakes, canals, streams and rivers shall be restored to their former elevation and grade, and spoil, debris, piling, cofferdams, false work, excavation, construction materials and obstructions resulting from installation of the cable shall be removed from the crossing to prevent interference with normal water flow and interference with any normal use of such canals, streams and rivers and shall be disposed of in a manner and at locations satisfactory to IRHTP. Underwater spoil shall be spread to a height not to exceed six inches above the bed of lakes, canals, streams and rivers.

18.2.5. Contractors shall not begin work on lake, canal, stream or river crossings before obtaining approval from the IRHTP.

18.2.6. It is the intent of these specifications to require contractor to install the cable underneath the bed of the lake, canal, stream, river or water course at a depth of ten feet below the flow line that shall prevent flood waters from affecting the cable by reason of the scouring action of the water. Particular attention shall be given to the

location of sag bends in the cable so that they shall be located back in the lake, canal, stream or riverbanks beyond any point that would be affected by a change due to erosion of the banks.

18.2.7. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn.

18.2.8. Unless specified otherwise, at individual stream crossings, the contractor shall be required to:

18.2.8.1. Grade banks of stream crossings by pulling the spoil back from the bank. Subcontractor shall not push the spoil out into the stream to grade the approaches.

18.2.8.2. Refrain from the use of cofferdams or from diverting the stream in any way in order to construct a stream crossing.

18.3. Attachment to Bridges (Non-Freeway)

18.3.1. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.

18.4. Bored Canal Crossings

18.4.1. Irrigation canals requiring boring shall be bored in accordance with Paragraph 13.0, Highway, Railroad and Other Bored Crossings.

19. <u>Cable Markers</u>

19.1. Location

19.1.1. Cable markers will be furnished by the IRHTP and shall be placed within 48 hours of cable installation. Cable markers shall be placed at all change in directions, splices, fence line crossings, at road and stream crossings, and at other points on the route not more than 1,000 feet apart.

19.1.2. Cable markers shall be located as directed by the IRHTP.

19.1.3. In addition, on highway (non-freeway) right-of-way, the markers shall be located at the highway right-of-way line. Markers shall always be located so that they can be seen from the location of the cable.

19.1.4. In addition, in freeway right-of-way, the markers shall be placed not more than 1000 feet apart in rural areas and 500 feet apart in urban areas. Signs will be required on each side of all transversing public roads on streets at a point where the freeway right of way line intersects the transversing public road or street right of way line. Signs shall be placed within the right of way fence line, at line of sight.

20. Right-Of-Way Protection And Restoration

20.1. General

20.1.1. The contractor shall protect the right-of-way and minimize the damage from construction operation.

20.1.2. Good soil erosion practices shall be practiced during all construction operations.

20.1.3. Depending on the location of the work, the Federal Environmental Protection Agency, the State Environmental Protection Agency or others may stipulate construction practices and crew behavior requirements in or around environmentally sensitive areas, such as cultural resource sites. Contractor shall adhere to any such stipulated construction practices and crew behavior requirements.

20.2. Restoration

20.2.1. Contractor shall keep the premises where work is being performed in a neat, clean, and orderly condition, and on completion of the work hereunder, contractor shall remove from the premises all of its tools and equipment, and any debris shall be removed and disposed of by contractor.

20.2.2. The right-of-way shall be restored to its original or better condition within 24 hours or as soon as practicable, in the IRHTP's opinion, following cable placing operations.

20.2.3. Where the cable is plowed in place, restoration shall be accomplished by driving a tractor or heavy truck over the plow furrow until the plowed area conforms to the surrounding terrain. A vibratory roller having a weight of three tons and a width of 4-6' may also be used.

20.2.4. In areas where open trench methods were used and backfill mounded over the trench, grading or filling will be required for final restoration of the right-of-way.

20.2.5. All rock and debris brought to the surface and left after backfilling shall be removed and disposed of, as directed by the IRHTP.

20.2.6. Improved landscape, lawns, shrubs, and hedge removed or damaged on the right-of-way shall be replaced. Lawns shall be repaired by re-soding with like grasses.

20.2.7. The contractor shall promptly repair or replace any other property damaged during construction.

21. Coexistence On Highway Right-Of-WaY

21.1. The cable route will parallel public highways and the cable will be laid within the highway right-of-way.

21.2. All work performed on public road right-of-way shall be completed in accordance with requirements and regulations of the authority having jurisdiction. It is the contractor's responsibility to be aware of, and comply with, all regulations and requirements pertaining to his work. The contractor shall be familiar with the location of "scenic enhancement areas" and with special requirements for construction on highway rights-of-way in such areas.

21.3. Unless otherwise specified on the drawings or by the Contractor, the cable shall be installed as close as practicable to the highway Right-of-Way line. If terrain or man-made obstruction(s) block the route, contractor shall modify the route with approval of IRHTP and the proper governmental authorities to avoid the obstruction.

21.4. Generally, the cable shall be buried in accordance with section 6.0, Depth of Burial. At particular locations, the cable depth will be controlled by depths of the facilities crossed (i.e. drainage, bridge structures, buried cables and/or other facilities.)

22. Fencing

22.1. The temporary fencing erected around contractor's excavations located outside of city limits shall be type 47 field fence or as approved by IRHTP. Temporary fencing around excavations inside the city shall be installed utilizing safety fencing to the satisfaction of the IRHTP.

22.2. Contractor, having first ascertained from IRHTP that permission has been secured from the landowner and/or tenant, shall build suitable temporary fencing and/or wire gaps in the fences crossing the route of the cable and maintain the same so that livestock shall be prevented from entering or leaving the property. Before cutting such fences to make these gates, contractor shall brace the fence to prevent damage. Gates shall be so constructed that they can be securely closed, and where necessary contractor shall furnish a watchman to maintain gates to prevent livestock from entering or leaving property and shall also furnish watchmen in any instance where required to do so by Contractor. Such temporary fences or gates shall be provided with suitable fasteners and shall be kept closed at all times except when necessary to be opened for construction purposes.

22.3. Following the completion of the cable construction, temporary gates shall be removed. All fences which have been cut or removed during the construction work shall be repaired by contractor in a first class and substantial manner and to match the original style of the fence, so far as possible. Where there is any doubt in the opinion of the IRHTP as to the usability of old fence material, contractor, at its own expense, shall furnish new wire and suitable post to rebuild said fence. Fence repairs shall be subject to approval of both the property owner and IRHTP.

23. Building Specifications

23.1. Installation Requirements

23.1.1. Installation shall comply with the latest edition of The National Electrical Code and other national, state and local codes as applicable.

23.1.2. Pull boxes will be required after 180 degrees of directional change and after every 120 feet of vertical rise (10 floors). Pull boxes will be mounted securely to the building structure and will not depend on the conduit for support. Pull boxes shall have removable covers and will be installed in such as way that the covers will be accessible.

23.1.3. Relocating and/disconnecting of any existing equipment within the building shall be coordinated with building management.

23.1.4. All metallic conduits shall be bonded to the building ground system.

23.1.5. All conduits shall be sealed (plugged), after cable installation at the point of interface and will be clearly marked to facilitate location.

23.1.6. Pull boxes should be clearly marked "IRHTP" on the cover for identification.

23.2. Material Requirements

23.2.1. Materials will comply with those standards as established by UL or NEMA and shall be commercial grade. All materials will be new and free from defects.

23.2.2. Conduits shall be one and one quarter inch (1 1/4") EMT (Electrical Metallic Tubing). EMT fitting shall be gland or set screw type, and each conduit shall be equipped with a graduated pull tape or rope. The exact requirements for location of conduit within the building shall be verified with the building owner.

23.2.3. Large radius sweeps shall be provided where required for offset or change in direction of conduit. The minimum radius recommended is 36", and the minimum radius acceptable is 24". If it is not possible to provide 24" minimum radius sweeps, pull boxes providing the same radii capability will be required.

23.2.4. Pull through pull boxes will be typically 6" high x 6" wide x 24" long with the conduit entering at each end. Pull boxes shall meet code requirements and will generally be placed to improve ease of pulling cable and inner-duct.

23.2.5. The cable will be secured at pull boxes on vertical runs with IRHTP-approved split Kellum grip as determined by the IRHTP representative.

24. <u>Splicing</u>

24.1. Direct Buried Splices - At points where the IRHTP determines a buried splice should be placed, the contractor will excavate, secure, fence, and protect a splice pit to accommodate placing the cable splice (by others) at the same depth as the cable installation. The splice pit will be left open until the splice is completed at which time contractor will return and complete backfill and restoration work as required by the authority with jurisdiction in the area. Slack cable footage will be coiled and placed vertically in line with the cable route at sufficient depth that the highest point in the loop and splice closure is a minimum of 36" below the surface. The coil diameter will be a minimum of 30". The contractor shall backfill with selected fines to a level 6" above the closure and coil and continue the backfill as required.

24.2. Splicing at Hand holes - At points where branch splicing occurs, as shown on drawings, or directed by IRHTP, the contractor will place a hand hole as per the specifications and manufacturer's suggested methods. Contractor will secure, fence and protect the hand hole excavation and maintain a safe open pit to allow a splice to be completed (by others) and placed in the hand hole. After splice is placed, contractor will return and complete backfill and restoration work as required by the authorities with jurisdiction in the area.

24.3. At all splicing locations contractor shall also install a SIP 40 pedestal, an 8' ground rod and connect the two via a #6 ground wire. Contractor shall also install a 1-1/4" HDPE conduit at 36" depth between the hand hole/splice pit and the SIP 40 for use by others.

25. Concrete

25.1. Description

25.1.1. This section covers the material requirements and placing of Portland cement concrete for roadways, driveways, sidewalks and other planned concrete works.

25.1.2. Concrete shall consist of a mixture of Portland cement, water, fine aggregate, coarse aggregate and approved additives, when required, mixed in the proportions as specified below or approved by Contractor.

25.1.3. Where permits apply to Work, concrete shall conform to the permit requirements.

26. Material Requirements

26.1. Concrete Materials

26.1.1. Portland cement shall conform to the requirements of AASHTO M85 and shall be Type II (low alkali).

26.1.2. Aggregate shall conform to the requirements of the IDOT for the specific use.

26.1.3. Water used in mixing or curing shall be reasonably clean and free of oil, salt, acid, alkali, sugar, organic vegetation, or other substance injurious to the finished product. Water may be tested in accordance with and all requirements of AASHTO T-26. Water known to be of potable quality may be used without test.

26.1.4. Air-entraining mixtures, when required, shall conform to the requirements of AASHTO M-154 (ASTM C-260).

26.1.5. Reinforcing steel for concrete reinforcement shall meet Grade 60 requirements for of ASTM A-615. Welded wire fabric for concrete shall conform to AASHTO M-55 (ASTM A-185). All bars and welded wire fabric shall be properly bundled and tagged with weather resistant tags.

26.1.6. The Subcontractor shall submit a supplier's mix design and material certifications for the mix being supplied one (1) week in advance for review and approval. No concrete shall be used on the project before mix design has been submitted and approved.

26.2. Concrete Classes

26.2.1. Concrete shall be of the class specified and as appropriate for the item for which it is being placed. Water content shall be controlled to produce a slump between two (2) and four and one-half (4 1/2) inches.

26.2.2. Classes of concrete and minimum strength and cement content shall be as follows:

26.2.2.1. Encasement Concrete. Class 3000 S&G shall be as sand/gravel mix with not less than 5.5 sacks (516 lbs) Portland cement per cubic yard to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding concrete and encasement concrete inmost locations.

26.2.2.2. Sidewalk and Driveway Concrete. Class 3000 CA shall be fine aggregate/coarse aggregate mix with not less than 5.5 sacks (516 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding, encasement concrete, sidewalks, and driveways.

26.2.2.3. Paving Concrete. Class 4000 CA shall be a fine aggregate/coarse aggregate with not less than 6.5 sacks (610 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 4000 psi. This class may be used in structures or roadway pavement. The mix proportions including air entrainment and other additives shall meet the requirements of Highway Department of the State in which concrete is being placed.

26.3. **Placing**

26.3.1. The Subcontractor shall notify the Contractor at least twenty-four (24) hours in advance of placing concrete to permit proper inspection and approval of forms and reinforcement by the Contractor.

26.3.2. Concrete and reinforcing steel shall be placed at the locations and in accordance with the details shown on the Plans.

26.3.3. No concrete work shall be done when the air temperature is below forty (40) degrees F, or if freezing weather is predicted before final set of the concrete, unless special means of heating and/or protecting the work are used for a period of at least seventy-two hours after it is poured. Concrete shall not be placed on frozen sub-grade.

26.3.4. Where splices in reinforcing steel are necessary, the bars shall be lapped twenty-four (24) times their least diameter.

26.3.5. Concrete shall be of workable consistency with slump between two (2) and four and one-half (4 1/2) inches when placed. It shall be compacted by spading or by mechanical vibrator to prevent honeycomb. The concrete shall be spouted so that the total free drop will not exceed six (6) feet. No concrete shall be used which has partially set before final placing or which has segregated in transport. Re-tempering will not be permitted.

26.3.6. All concrete shall be placed monolithically so that fresh concrete shall not be placed against concrete that has taken initial set except where construction joints are required.

26.3.7. All surface concrete shall be cured for a period of seven (7) days with a water saturated covering or by other approved methods that will keep all surfaces continuously wet.

26.4. Measurement and Pavement

26.4.1. Concrete shall not be measured and paid as a separate item but shall be subsidiary to the cost of applicable item for which the concrete is placed.

26.4.2. The furnishing and installation of reinforcing steel shall not be measured separately but shall be considered subsidiary to concrete work.

SECTION 6 - Specifications For Aerial Placement Of Fiber Optic Cable

1. General

1.1 General. All IRHTP owned poles and/or cable will be identified with ID tags. All cables will meet all standards set up by NESC, agencies of cities, state, county, federal government, railroads or other entities which provide for the placement of IRHTP facilities within their respective rights of way.

1.2 Lengths. Use the longest lengths to facilitate construction costs, placement, and splicing. Entire reels can be placed without splice points to minimize transmission loss and reduce splicing costs.

1.3 As-builts. Will reflect span measurements, size, class & ownership (percent of ownership if applicable) of all poles joint use and IRHTP owned. All IRHTP owned/leased poles shall be identified with ID tags and size of messenger. If over-lashing is used: who owns messenger and/or other cables (type, size, gauge if applicable) involved in over-lashing. The clearance height at mid-span at the completion of construction, all sequence numbers at each pole will be recorded as well as: location of all MGN grounds, size and lead of guying and size and type of anchor.

2. Placement

2.1 Minimum Bending Radius

Nominal Cable Diameter	**Minimum Bend Radius (No Tension) Installed**	**Minimum Bend Radius (Under Tension)**

143.1 Millimeters	**143.2 Inches**	**143.3 Millimeters**	**143.4 Inches**	**143.5 Millimeters**	***143.6 Inches***
6.0-10.0	¼ -3/8	10.0	4.0	15.0	4.0
10.1 - 15.0	4/10 - 6/10	15.0	6.0	22.5	9.0
15.1 - 20.0	10/16 - 8/10	20.0	8.0	25.0	10.0
20.1 - 23.0	13/16 - 9/10	23.0	9.0	25.0	10.0
23.1 - 25.0	15/16 - 1.0	25.0	10.0	30.0	12.0

2.2 Figure – Eighting Cable. If the cable must be unreeled during installation, use the "figure - eight" configuration to prevent kinking or twisting. Fiber optic cable should not be coiled in a continuous direction except for lengths of 30 meters (100 ft) or less. The preferred size of the "figure - eight" is about 4.5 m / 15 feet in length, with each loop about 1.5 m / 5 feet to 2.4 m /8 feet in diameter. Do not cut the cable under any circumstances without consulting the IRHTP field engineer on the job.

2.3 Dip Pole. At a dip pole, form a minimum of a 100-foot expansion loop using "snowshoes". Identify the cable with a caution tag. Protect the cable on the pole with "U guards," 18" inches below the strand to just above ground level.

2.4 Planning and Preparation.

2.4.1 Poles. Determine the ability of existing pole lines and guys to support the new cable plant, as well as any restrictions imposed by the pole owner. The guying should remove all of the lateral stress on each pole so that the pole simply supports the weight of the cables, hardware and equipment attached to it. Stated another way the facility being constructed should be supported independent of all other facilities on the pole line. Obtain a written contract from the owner of poles with IRHTP as the owner of the facility being placed on the pole line. Contract will state all the fees associated with the attachment either on a one time or annual basis. The written contact with owner of poles will also state the pole/strand replacement policy/cost involved. Obtain all necessary permits from the governing bodies involved. Contact the Iowa One Call system when placing new poles and anchors.

2.4.2 Clearances and Separations. On a case-by-case basis determine the clearances between the proposed fiber optic cable and the existing facilities. Be certain that the proposed facility is constructed according to the National Electrical Safety Code (NESC) and the appropriate local safety codes. See Example 1.29. The fiber optic cable should occupy the uppermost available communication space on the pole due to its small weight and resultant sag.

ITEM	URBAN
	Feet at Maximum sag
Where cables guys, line, or drop wires run along and within the limits of : a) Public highways, streets, and roads b) Public alleys c) Ways accessible to pedestrians only	 18' 15.5' 12'
Where cables, guys, line or drop wires cross over private property or ground a) Accessible to pedestrians only b) Accessible to people on horses or loaded farm vehicles	 9.5' 16'
Where cables, guys, line or drop wires cross over: a) Public highways, streets and roads b) Public alleys c) Driveways in general unless height of loaded vehicles or equipment using drive requires extra clearance.	 18' +15.5'

d) Farm driveway - accessible to combines	+15.5’
e) Driveways---residential garages	18’
f) Ways accessible to pedestrians only.	15.5’
g) Obstacles (billboards, roofs)	12’
h) Flat roofs which may be used by tenants or workmen.	2’
i) Railroads --- cable on messenger	9.5’
j) Waterways (rivers, canals, etc.) provide clearance specified by proper authorities and on work plans. (Human with fishing pole)	27’
+ Secure additional clearance on new construction when warranted at specific locations.	14’

MINIMUM CLEARANCE ABOVE GROUND FOR TELEPHONE FACILITIES

TYPE OF CROSSING WIRES & CABLE	*TELEPHONE CABLES, MESSENGER, DROPS, AND GUYS*	
	CROSSING OVER	**CROSSING UNDER**
Open supply wires 0-750 volts & supply cables having effectively grounded sheath or messenger - all voltages.		
a) Line wires	4’	
b) Service wires	2’	4’
Open supply, line or service wires		
a) 750 - 8700 volts	6’	
b) 8700 - 50,000 volts	6’	
Foreign guys, span wires, lightning protection wires	2’	2’
Foreign communication wires, cables, and fire alarm wires	2’	2’
Trolley contact conductors.		
a) 750 volts or less		4’
b) 750 - 8700 volts	-------	6’

* Clearance for (a) may be reduced to 4 feet if crossing is more than 6’ from communication pole.

Note: The above clearances apply where the crossing span length of the upper conductor or wire does not exceed 175

feet. For greater span lengths, increase clearances in accordance with NESC.

3. <u>Lashed Aerial Plant</u>

3.1 General. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand.

3.2 Suspension Strands

3.2.1 Suspension strands are susceptible to fatigue failure near pole-mounted suspension clamps if left under critical stringing tensions without supporting a load. Refer to the table below for the rated breaking strength and the type of steel used.

DIAMETER

146 RATINGS	**147 EHS**	**148 UG**
6M	¼"	5/16"
10M	5/16"	3/8"
16M	3/8"	7/16"
20M	7/16"	½"

"M" indicates the approximate breaking strength in thousands of pounds. "UG" or EHS indicates the tensile strength of the steel used in the messenger.

3.2.2 Refer to the table below for the <u>minimum</u> tensions stringing tensions for a particular cable weight using different messenger grades. Messenger tensions listed are the minimum tensions required for each span to reduce cable strain.

Minimum & Critical Messenger Tensions in Pounds Prior to Aerial Installation of Fiber Optic Cable

Maximum 0.18 lb/ft, 0.80 Inches Diameter Cable, (Using EHS Messenger, Not UG)

149 Messenger	**150 Span**

	Up to 200'	200 - 300'	300 -400'	Critical Tension
6M **EHS** ¼"	1200 lbs	1600 lbs	----	2000 lbs
10M **EHS** 5/16"	1500 lbs	1800 lbs	2400 lbs	3000 lbs
16M **EHS** 3/8"	1800 lbs	2200 lbs	2600 lbs	6000 lbs

Maximum 0.16 lb/ft, 0.68 Inches Diameter Cable (Using UG Messenger, Not EHS)

6M **UG** 5/16”	1600 lbs	---	---	---
10M **UG** 3/8”	1800 lbs	2200 lbs	2500 lbs	---

3.2.3 When specifying a strand for fiber optic cable, the two most important considerations are; (1) strength of strand and (2) excess cable stretch does not occur. When the diameter of a strand is enlarged to increase its strength, its weight and the effect of wind and ice loading is affected, which increases cable strain. Normally the “best” stand is not the question, but rather if the normal strand is satisfactory. Technically, the smallest EHS messenger with a satisfactory strength is “best”. When installing a dedicated suspension strand for fiber optic cable, standard hardware (eyebolts, clamps, etc) should be used.

3.3 Overlashing.

3.3.1 Considerations

3.3.1.1 Maximum span length (pole spacing)

3.3.1.2 Size of the existing messenger

3.3.1.3 Messenger- EHS or UG?

3.3.1.4 Weight & diameter of the existing copper (or fiber) cable(s)

3.3.1.5 Initial messenger tension (If not available, what is the present messenger tension? Measured at what temperature?)

3.3.1.6 Age of the existing copper (or fiber) cables

3.3.1.7 Loading conditions. In the Midwest IRHTP will consider only a heavy loading.

3.3.1.8 Size of the fiber cable being installed (cable, weight, O.D., etc).

3.4 Bonding and Grounding

3.4.1 If dielectric aerial cable is used, maintain the dielectric properties by using non-metallic lashing materials.

3.4.2 If using a metallic messenger or non-dielectric aerial cable on a joint use pole and/or a separate pole line form a continuous bond between all metallic items being placed and the MGN (multi-grounded neutral) used by the power company and/or any other

entity occupying the same pole line use. The purpose behind the aforementioned is to eliminate different electric potentials between independently owned facilities occupying the same pole line. No communication cable on a MGN system will have less than 4 grounds per mile. A non-dielectric aerial cable must occupy the communication space as defined by the National Electrical Safety Code. A dielectric fiber optic cable may occupy either the supply **or** the communication space on joint use construction. No communication cable shall occupy the space between what is defined as the communication and the supply space. Refer to NESC Section 224, par. 4 & 230F. Quote from NESC: Section 235C, E3; Note that a fully dielectric fiber optic cable carried on a nonmetallic messenger is considered as a supply neutral meeting Rule 230E1 (if located in the supply space) or an ordinary communication cable (if located in the communication space). Such cables must be located either in the supply space or the communication space, not in the safety zone between the two spaces.

3.5 Drip Loops Definition. A smooth-curve type loop form at each pole. The use of the 3" drip loop at each pole is required by the IRHTP for two reasons: 1) the extra slack provides for expansion and contraction by the messenger, 2) it provides extra slack if object falls on the messenger. Example: Prevents cable damage if a tree falls on the strand. Do not exceed the minimum bending radius of the cable. If contact is likely between the loop and the pole a cable guard will be required. Refer to Example for drip loop. Each drip loop will have the cable sequence numbers recorded and the IRHTP cable will be identified with an IRHTP ownership tag.

3.6 Lashing. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand. Contractor will replace any cable showing a deformation. Example: Rippling, or kinking. REQUIREMENTS: Contractor will provide one wrap of lashing wire per linear foot when lashing IRHTP fiber optic cable to messenger. Cable will be double lashed in 3 different circumstances: 1) over-lashing over existing aerial cables, 2) right of ay to right of way over railroads, 3) right of way to right of way over roadways. Cable will be lashed up on a span by span basis. All lashing wire should be terminated at each pole with a lashing wire clamp. Lashing wire will be terminated by placing a cable spacer between the fiber optic cable and strand. Locate the lashing wire clamp 2 inches from the strap and spacer. Pull out enough lashing wire for termination on to the lashing wire clamp. Wrap the lashing wire 3 times around only the strand between the lashing wire clamp and the planned location of the first wrap around both the strand and the fiber optic cable. Lashing wire should follow the spiral of the strand wires.

3.7 Splicing and Slack Storage. All cables will be butt spliced. All slack-cable loops will be placed a minimum of 4 feet from the pole using snowshoes. The minimum cable coil required at a splice location will be from the strand to ground level plus 20 feet on each side of the splice. In no case shall the splicing be done from a bucket. All splicing will be done on the ground in a protected environment (tent, van, or trailer). A minimum of a 100 foot cable coil (placed in snowshoes) will be required in the following circumstances: 1) railroad crossings, highway crossings, 3) Interstate crossings, 4) main thoroughfares in cities.

SECTION 7 - Splicing And Testing

1. **General.** This document addresses the IRHTP requirements for splicing, testing, documenting and enclosing fiber optic cable for use as part of the IRHTP system.

2. **Access To Work.**

   2.1 The Cable installer is required to provide their access to all splice locations.

   2.2 Access to splice points at all locations other than the freeways can be made from the shoulder of the road. In no case is access from freeways allowed from the shoulder of the road or ramps. No stopping or parking is allowed on the freeway.

   2.3 The Cable installer shall be responsible to repair any damages that it may cause to the right-of-way.

   2.4 The cable will be stored in hand holes at all splice locations. The Cable installer shall be responsible to access the cable at the splice locations and shall have equipment for removal of loose dirt and water or the removal of other obstructions to the performance of the Cable installer's work.

3. **Material.** The Cable installer shall be required to supply all material, tools, test equipment, splicing equipment, consumable items, and incidentals necessary to access the cable at the splice locations, perform quality splicing, termination, and testing to include, but not necessarily be limited to the following:

   3.1 Enclosure, inner-closure, splice trays, heat shrink sleeves and encapsulate.

      3.1.1 The splice closure shall be the Raychem FOSC 450 Fiber Optic Gel Closure or equivalent.

      3.1.2 Wire tags with clear heat shrink tubing for #6 insulated ground wire such as Panduit #HSDL9-50-31 or approved equal.

   3.2 #6 green insulated ground wire, mechanical lugs and bolts, nuts and washers for grounding terminations and cable sheath bonds.

4. **Pre-Placement Cable Testing.** In order to minimize the amount of rework in the right-of-way, which may be required and to check for fiber optic cable defects, the Cable installer shall be responsible for on reel verification of cable quality prior to placement.

   4.1 One hundred percent (100%) of the cable's fiber count shall be tested at 1310 and 1550nm with a Tektronix TFP2 or equivalent Optical Time Domain Reflectometer (OTDR), a stabilized light source and optical power meter, or, equivalent test equipment. Test results will be recorded on a form supplied by the IRHTP. Completed test forms on each reel shall be handed over to the IRHTP field engineer.

   4.2 Cable ends shall be sealed upon completion of testing.

5. **Ultimate Responsibility.** The Cable installer shall be ultimately responsible for providing installed fiber cable in which each fiber meets the specifications set forth in this standard.

6. **Splices.**

   6.1 All splices shall be placed in hand holes. There are to be no direct buried splices.

6.1.1 Cable and closure preparation shall conform to the manufacturer's standards and installation manuals.

6.1.2 Hand holes and pedestals shall be compatible with existing IRHTP components

6.2 All fibers are to be spliced according to the splice assignment sheets provided by the IRHTP.

6.3 All fibers are to be fusion spliced and placed in a Raychem FOSC 450 Fiber Optic Gel enclosure according to the manufactures technical installation instructions and a workmanlike manner.

6.4 All spliced fibers shall be protected by using the appropriate organizer tray and associated incidental items. If fiber optic heat shrink sleeves are used, a heat oven shall be used to shrink all sleeves. Care must be exercised to prevent damage to exposed fibers by overheating.

6.5 To insure acceptable splices prior to closing and encapsulating the splice case, the Cable installer shall monitor the splicing while it is being performed using an OTDR or a splicer with some type of optimizing capability, such as an LID unit or an optimizing alignment screen, or equivalent.

6.6 Splice Grounds (Refer to Example 1.26 - 1.27)

6.6.1 A number six (#6) insulated ground wire shall be installed from the SIP (pedestal) through the existing conduit to the splice enclosure and terminated at both ends. SIP termination nuts shall have a 3/8 inch head.

6.6.2 The ground wire at the SIP shall be identified with major direction associated with the running line of each of the links, e.g., WEST, on heat-shrink ID tags.

6.7 The IRHTP reserves the right to accept a splice at any time and waive the above requirements on a case by case basis as relates to splice loss. A waiver at any time shall not be construed to be a relinquishment of any requirements as spelled out in this specification.

6.8 Vendor must verify that all fibers are compatible end-to-end. That is fiber number 24 at location A is fiber number 24 at location Z.

7. <u>Loss Specifications</u>.

7.1 The maximum acceptable loss for the cable shall be:

7.1.1 0.35 dB/km @ 1310 nm

7.1.2 0.25 dB/km @ 1550 nm

7.2 The maximum acceptable loss per splice shall be:

7.2.1 Maximum splice loss in one direction shall be 0.2 dB.

7.2.2 Maximum bi-directional average splice loss shall be 0.2 dB.

7.3 Maintenance splice loss allocation. Each link shall have sufficient reserve loss margin at acceptance to accept the loss associated with six (6) future maintenance splices and still meet the link unallocated gain margin.

8. <u>Splicing At Active Locations</u>.

8.1 The Cable installer shall be notified of fibers in the area that are active. It shall be the Cable installer's responsibility to coordinate and supervise all work so that there is no interruption of service on these active fibers during cable/closure prep, splicing, testing, and so on at end points.

8.2 The Cable installer shall notify the IRHTP or its authorized representative at least five (5) working days prior to the commencement of any work at splice points with active fibers.

8.3 The Cable installer shall have a responsible supervisor monitoring all work being done at all splice locations having active fibers present.

8.4 Unless IRHTP or another governing agency (such as the ICN) grants an exception, all splicing on fiber sheaths containing active fibers will be done between the hours of midnight (00:00) and 6:00 AM local.

8.5 The Cable installer shall have all the materials required to make a temporary and or a permanent repair in the event a fiber is damaged in the course of work. The materials shall be at the site of the work prior to any work beginning. The Cable installer shall notify the IRHTP immediately in the event an active fiber is damaged.

8.6 In the event that active fibers are damaged by the Cable installer, the Cable installer shall supply all resources necessary and directed by the IRHTP to reestablish service on the active fibers. All costs relating to the damage of the active fibers shall be the responsibility of the Cable installer.

9. Testing

9.1 All test equipment shall be calibrated within ninety (90) days prior to testing. A sticker with the date of calibration shall be fixed to the equipment. A calibration certificate shall be presented to the IRHTP or its authorized representative upon request.

9.2 Each span shall be tested bi-directionally from end point to end point. Each span trace shall be recorded so that each splice can be clearly expanded (long range, mid range or high resolution). Some spans will need all three traces. A span map shall be filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.

9.3 The Cable installer shall be required to perform the following tests:

9.3.1 Damaged Cable. In the event it is suspected that the cable has been damaged by the Cable installer at any time, the Cable installer will be required to test the cable with an OTDR. A hard copy of the OTDR test shall be submitted to the IRHTP representative. The Cable installer shall be prepared to test the damaged cable within 24 hours of notification by the IRHTP's representative.

9.3.2 End to End Bi-directional OTDR Span & Splice Test. Each fiber of each span is to be tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.

9.3.3 Cable Sheath. The cable sheath of each installed reel of cable shall be tested for continuity and the results recorded on the span map.

10. Acceptance Criteria. The acceptance criteria shall satisfy, as applicable, the requirements of this standard which includes:

10.1 Verifying, and documenting, that at least a 3 dB unallocated margin of gain exists, at 1310 nm, on each link.

10.2. All as-built drawings as specified in the Iowa Communications Network As-Built Drawing Conventions and Symbols Standard.

11. Markers. All splice hand holes shall be marked with an IRHTP Cable signs (furnished by IRHTP) at the top of the post and an IRHTP Splice sign mounted on the post just below the IRHTP Cable sign.

12. Documentation

12.1 Splice Identification

12.1.1 Link Splices. Splices interconnecting one or more links will be defined by IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-13A.

12.1.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered by the Cable installer in sequence for a given link, e.g., B1210-1, B1210-2, and so on.

12.1.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to a maintenance splices and shall be identified as Maintenance Splice, MS"LINK #"-"x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The Cable installer will assign MS identification codes to maintenance splices all unaccepted links. On accepted links, the Cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

12.2 Documentation Package

12.2.1 The following hard copy documentation package shall be submitted to the IRHTP on the applicable forms within five (5) working days after completion of the span splicing and testing, or a minimum, of thirty days prior to the commencement of acceptance testing. Each package shall be neatly organized, with dividers in a separate loose leaf, 3 ring binder or other IRHTP approved binder. All forms shall be completely filled out. All forms and OTDR shall be legible and reproducible. All sheets/forms shall have a revision log and be titled and dated.

12.2.1.1 A splice identification sheet.

12.2.1.2 A span map for each span.

12.2.1.3 The splice assignment sheets.

12.2.1.4 Reproducible copies of each span trace.

12.2.1.5 Reproducible copies of splice traces.

SECTION 8 - As-Built Drawing

1. Introduction

1.1 Delivery Method. Two sets of legible, reproducible as-built drawings on 11 X 17 inch, white paper, in a hard cover binder shall be provided for each link. If available, it would be desirable to also have a set on a 3.5 inch diskette in a format compatible with the IRHTP's computer aided design (CAD) system. The IRHTP's current CAD system is an AutoCAD, Release 2002 or newer.

1.2 Symbols and Conventions. The as-built drawings are to use symbols and conventions specified in this document. If not specifically stated, the symbols and conventions to be used are those considered required by good engineering drawing practices. The vendor is to provide to the IRHTP, any symbol, icon, model, block, and so on that is used on, or as part of, the as-built drawings provided for any part of the IRHTP. These symbols, icons, models, blocks, and so on, are to be provided as defined in section 1.1.0.

1.3 Consistency. A key requirement is for the symbols, conventions, practices, scale, and so on, to be consistent from one drawing to the next.

1.4 Governing/Authorization Agency Permits. Where there is a governing agency permit associated with one or more as-built drawings, there shall be correlation between the method of showing project from and to points on the permit and the as-built drawings. For example, where an Iowa Department of Transportation (IDOT) permit uses highway stationing (HWY STA.), the as-built drawings, which includes these particular permit points will, as a minimum, show HWY STA. numbers at the start and end of the particular drawing.

1.5 Link As-Built Drawings. The IRHTP consists of a series of spans, segments, and links. The specific start and end point of each span, segment, and link has been or will be defined by the IRHTP or its' authorized representative. Each link is identified by a unique set of characters. A set of as-built drawings is to be provided for each link.

1.5.1 Each as-built drawing shall use the unique link identifier as part of the tile, e.g., Link 1234, and will be included in the drawing number, e.g., DWG 1234-08 of 20.

1.5.2 Drawing Revisions. As part of the title and status blocks, each drawing shall list the reason(s) that an individual drawing was changed.

1.5.3 The first sheet of a set of link drawings shall be numbered DWG 0. It is a title page and shall contain:

1.5.3.1 Link name/title.

1.5.3.2 A revision table for each of the link drawings listing the current revision of each drawing.

1.5.3.3 Cable specifications.

1.5.3.4 To-from information, including start and end point identification such as mile post numbers, highway station numbers, and or other readily recognizable identifiers.

1.5.3.5 A table listing each splice associated with the link, and, the drawing number containing that splice.

1.5.3.6 A revision record for DWG 0.

1.6. Scale. While drawings scale is specified as "none", to achieve consistency, the typical landscape drawing has 14 to 15 inches of running line, covering about 0.5 miles. Where appropriate, a single 17 X 11 sheet may contain 2 drawings. No specific scale is required for the direction perpendicular to the running line except that it shall be consistent and, reasonable distance differences shall be obvious. Individual drawings may deviate from the above scale requirements for the sake of clarity.

1.7 Link Drawing Order/Sequence. Each set of link drawings shall read from left to right. That is, when the major direction of the link is east/west, the left side or edge of a drawing will show the match line for a more westerly/lower numbered drawing. When the major direction of the link is north/south, the left side or edge of a drawing will show the match line for a more southerly/lower numbered drawing.

1.8 Highway Plan Drawings. If available, highway plan drawings from IDOT may be used as part of an as-built drawing for additional information.

2. Specific Requirements

2.1 Highway Location Signs/Markers. When available, drawings shall show highway mile post numbers and highway stationing numbers.

2.2 Street, Road, Highway Identification

2.2.1 The highway marker number, e.g., county E-16, I-80, and so on, will be shown on all county, state, or federal highways that are on a drawing.

2.2.2 Most counties in Iowa have or are in the process of acquiring Extended 911 capability. Individual addresses are a requirement for this capability. Therefore, most, if not all, Iowa counties have assigned names to all county roads which are to be included on the drawings.

2.2.3 Multiple Identifiers: Where there is more than one identifying name and or number for a street, road or highway, all identifiers shall be shown on the drawing, e.g., V-24, OLD HOME ROAD, and so on.

2.3 County, Township, Range, Section(s). As a minimum, the first and last drawing of a set of link as-built drawings shall show the county, township name and identifier, range identifier and section number(s) peculiar to that particular drawing. When the county, township, or range changes in a link drawing sequence, the previous and the new county, township, range, or section shall be shown. The city, county, state boundary symbol shown on the LEGEND AND SYMBOL sheet is to be used. The preference is to have the county, township, range, and section specified on each drawing.

2.4 Fiber Cable Specifications. The fiber cable specification shall be shown on each page. See example drawings and the LEGEND and SYMBOL sheet.

2.5 Link Continuity. The first and last page of each set of link drawings shall show the connections/splices to the connecting link(s). The connecting links shall be shown with their respective link identification.

2.6 Revision Log. Each drawing shall include a revision table that is used once a drawing has been distributed and or released, whether it be a pre release, bid issue, as-built, and so on. The reason for the change shall be included in the table.

2.7 Splice Identification

2.7.1 Link Splices. Splices interconnecting one or more links will be defined by the IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-A.

2.7.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered in sequence for a given link, e.g., B1210-1, B1210-2,and so on.

2.7.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to a maintenance splices and shall be identified as Maintenance Splice, MS"LINK #"-"x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The cable installer will assign MS identification codes to all unaccepted links. On all links that have been accepted by the IRHTP, the cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

ANNEX H
CONTRACTUAL TERMS AND CONDITIONS
QUALITY ASSURANCE SAMPLE AGREEMENT
RFP 09-002

1. Term. This Agreement is effective [EFFECTIVE DATE WILL BE LISTED], and will continue through project completion (date).

2. Documents incorporated by reference.

2.1 **Incorporation of Bid Proposal Documents**. The IRHTP RFP 08-001 and the Vendor's bid proposal in response to this RFP, together with any clarifications, attachments, appendices, amendments or other writings of the IRHTP or the Vendor (collectively bid proposal) are incorporated into this Agreement by this reference as if fully set forth in this Agreement.

2.2 **Contractual Obligations of Vendor**. The terms and conditions of the bid proposal and of the RFP are made contractual obligations of the Vendor.

2.3 **Contents of Agreement**. The parties acknowledge that this Agreement consists of this document as well as the RFP and the bid proposal and that the parties are obligated to perform as set forth in the RFP and the bid proposal to the same extent that they are obligated to perform the specific duties set forth in this document.

2.3.1 Order of Preference. In the case of any inconsistency or conflict between the specific provisions of this document, the RFP or the bid proposal, any inconsistency or conflict shall be resolved as follows:

2.3.2 First, by giving preference to the specific provisions of this Agreement.

2.3.3 Second, by giving preference to the specific provisions of the RFP.

2.3.4 Third, by giving preference to the specific provisions of the bid proposal.

2.4 **Intent of References to Bid Documents**. The references to the parties' obligations, which are contained in this document, are intended to change, supplement or clarify the obligations as stated in the RFP and the bid proposal. The failure of the parties to make reference to the terms of the RFP or bid proposal in this document shall not be construed as creating a conflict and will not relieve the Vendor of the contractual obligations imposed by the terms of the RFP and the bid proposal. Terms offered in the bid proposal, which exceed the requirements of the RFP, shall not be construed as creating an inconsistency or conflict with the RFP or this document. The contractual obligations of the IRHTP cannot be implied from the bid proposal.

3. Definitions. The following words shall have the meanings set forth below. Words in the singular shall be held to include the plural and vice versa, and words of gender shall be held to include the other gender as the context requires. For the purposes of this Contract, the following terms and all other terms defined in this Contract shall have the meanings so defined unless the context clearly indicates otherwise.

"IHA" shall mean the Iowa Hospital Association

"IRHTP" shall mean the Iowa Rural Health Telecommunications Program

"Vendor" shall mean [Vendor will be listed].

4. Scope of Work.

4.1 **Scope of Work**. The fiber optic cable facility to be constructed pursuant to and as a result of this Agreement by the Vendor is described and attached hereto as Schedule A and made a part hereof by this reference.

4.2 **Specifications** The Vendor shall prepare and deliver specifications to the IRHTP which will detail the design, technical and functional capabilities, look and feel, and other attributes related to the project, all as more fully described in Schedule A.

4.3 **Amendments to Scope of Services and Specifications**. The parties agree that Schedule A, Scope of Services, and the specifications, may be revised, replaced, amended or deleted at any time during the term of this Agreement to reflect changes in service or performance standards upon the mutual written consent of the parties.

4.4 **Industry Standards**. Services rendered pursuant to this Agreement shall be performed in a professional and workmanlike manner in accordance with the terms of this Contract and with generally acceptable industry standards of performance for similar tasks and projects. In the absence of a detailed specification for the performance of any portion of this Agreement the parties agree that the applicable specification shall be the generally accepted industry standard. As long as the IRHTP notifies Vendor promptly of any services performed in violation of this standard, Vendor will re-perform the services, at no cost to IRHTP, such that the services are rendered in the above-specified manner.

4.5 **Non-Exclusive Rights**. This Agreement is not exclusive. The IRHTP reserves the right to select other Vendors to provide services similar or identical to the Scope of Services described in this Agreement during the term of this Agreement.

5. Compensation.

5.1 Payment Terms – Progress Payments

5.1.1 USAC and IRHTP will disburse funds based on monthly submissions (*i.e.*, invoices) of actual incurred eligible expenses, and will respond to vendor invoices in accordance with its current bi-monthly invoicing payment plan. This invoice process will permit disbursement of funds to ensure that the selected Participants' network projects proceed, while allowing USAC and the FCC to monitor expenditures in order to ensure compliance with the program and prevent waste, fraud, and abuse.

5.1.2 Upon award of contract for a link-segment, the Vendor will assist the IRHTP project coordinator in the development of a USAC Network Cost Worksheet. (NCW) This work sheet will list the primary tasks to be completed for each link-segment. When specific line items are completed on each NCW, the Vendor may submit it for a progress payment. As soon as the line item completion is approved by the IRHTP project coordinator the vendor will be paid 15% of the line item amount by the specific HCP served by the link-segment. The Vendor will acknowledge receipt of the 15% payment and forward appropriate forms to USAC for payment of the remaining 85%. USAC will honor requests for payment twice each month.

The invoices when submitted must certify by signature that all construction specifications were met during the covered period on the specified segment and show the contract number and project/site number on each invoice. If the IRHTP disputes the amount of any

invoice, the IRHTP will notify the Vendor of the dispute within 10 days of receipt of the invoice. IRHTP may withhold payment of the disputed amount until the dispute is resolved

5.2 **Delay of Payment Due To Vendor's Failure**. If the IRHTP in good faith determines that the Vendor has failed to perform or deliver any service or product as required by this Contract, the Vendor shall not be entitled to any compensation under this Contract until such service or product is completed or delivered. In the event of partial performance, the IRHTP may withhold that portion of the Vendor's compensation, which represents payment for the unsatisfactory services.

5.3 **Audit** The IRHTP shall audit the invoices presented to the IRHTP to ensure that they are proper, current and correct. The Vendor has 30 days from the date of invoice to present and resolve any discrepancies with the IRHTP. The IRHTP shall notify the Vendor of any and all discrepancies that the audit(s) reveals.

6. Insurance.

6.1 **Coverage Requirements**. The Vendor, and any subcontractors performing the services required under this Agreement, shall maintain in full force and effect, with insurance companies of recognized responsibility, at its own expense, insurance covering its work during the entire term of this Agreement and any extensions or renewals thereof. The insurance shall be of the type and in the amounts as reasonably required by the IRHTP. The Vendor's insurance shall, among other things, insure against any loss or damage resulting from or related to the Vendor's performance of this Agreement. All such insurance policies should remain in full force and effect for the entire life of this Agreement and shall not be canceled or changed except with the advance written approval of the IRHTP.

6.2 **Types of Coverage**. Unless otherwise requested by the IRHTP, Vendor shall, at its sole cost, cause to be issued and maintained during the entire term of this Agreement (and any extensions or renewals thereof) the insurance coverage's set forth below, each naming the State of Iowa and the IRHTP additional insured or loss payees, as applicable:

Type	*Amount*
Workers Compensation And Employer Liability	As Required By Iowa Law
General Liability (including contractual liability) written on an occurrence basis	TBD
General Aggregate	$3 million
Product Liability	$1 million
Personal Injury	$1 million
Comprehensive Aggregate	$1 million

Each Occurrence	$1 million
Automobile Liability, including any auto, hired autos and non owned autos COMBINED SINGLE LIMIT	$1 million

6.3 Coverage for HCP Property on ICN Controlled Premises. The policies shall provide coverage for damages to the HCP's property, or on premises under the control of the ICN and/or the State of Iowa.

6.5 **Claims Made Coverage**. All insurance policies required by this Agreement must provide coverage for all claims arising from activities occurring during the term of the policy regardless of the date the claim is filed or expiration of the policy.

6.5 **Notice Regarding Cancellation**. Certificates of insurance, which provide that the IRHTP will be notified at least thirty (30) days prior to cancellation of the coverage required by this Agreement must be provided by the Vendor and any subcontractors to the IRHTP at the time of execution of the Agreement or at a time mutually agreeable to the parties.

6.7 **No Limitation of Liability**. The receipt of insured certificates by the IRHTP does not constitute approval of the coverage contained in the certificates, and the Vendor remains responsible for determining that its insurance coverage meets each and every requirement of this Agreement. Acceptance of the insurance certificates by the IRHTP shall not act to relieve the Vendor of any obligation under this Agreement. Only companies authorized to transact business in the State of Iowa shall issue the insurance policies and certificates required by this Section. It shall be the responsibility of the Vendor to keep the respective insurance policies and coverages current and in force during the life of this Agreement.

6.7 **Warranty**. The Vendor warrants that it has examined its insurance coverage to determine that the State of Iowa and the IRHTP can be named as additional insured without creating an adverse effect on the Vendor's coverage.

6.7.1 Waiver of Subrogation Rights. The Vendor shall obtain a waiver of any subrogation rights that any of its insurance carriers might have against State of Iowa and the IRHTP. The waiver of subrogation rights shall be indicated on the certificates of insurance coverage supplied to the IRHTP.

7. Confidential Information.

7.1. During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.

7.2. During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential

Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.

7.2.1. All written or electronic Confidential Information shall be clearly marked as Confidential Information by the party providing the Confidential Information at the time of disclosure to the other party.

7.2.2. If the Confidential Information is disclosed orally, and reduced to writing, the receiving party must treat the information as Confidential Information.

7.2.3. The Vendor shall limit such identification to information it reasonably believes it is entitled to confidential treatment pursuant to FCC, USAC or other applicable law.

7.3. The obligations of this Agreement do not apply to Confidential Information which:

7.3.1. Was rightfully in the possession of the receiving party from a source other than the disclosing party prior to the time of disclosure of the Confidential Information to receiving party.

7.3.2. Was known to the receiving party prior to the disclosure of the Confidential Information from the disclosing party;

7.3.3. Was disclosed to the receiving party without restriction by an independent third party having a legal right to disclose the Confidential Information;

7.3.4. Becomes public knowledge, other than through an act or failure to act by the disclosing Party;

7.3.5. Is publicly available or in the public domain when provided;

7.3.6. Is independently developed by the disclosing party; or

7.3.7. Is disclosed pursuant to law, subpoena or the order of a court or government authority.

7.4. The parties shall have the following duties relating to the Confidential Information:

7.4.1. The Vendor shall designate one individual who shall remain the responsible authority in charge of all data collected, used or disseminated by the Vendor in connection with the performance of this Agreement. The Vendor shall accept responsibility for providing adequate supervision and training to its agents and employees to ensure compliance with the terms of this Agreement. The private and confidential data shall remain the property of the IRHTP at all times.

7.4.2. The Confidential Information of either party shall be held in strict confidence by the receiving party and shall not be disclosed or used by the receiving party without the prior written consent of the disclosing party, except as provided in this Agreement or as may be required by law pursuant to available confidentiality restrictions.

7.4.3. The parties shall use their best efforts to protect the Confidential Information in its possession.

7.4.4. The parties shall restrict disclosure of the Confidential Information solely to those of its employees, agents, consultants and attorneys with a need to know in order to accomplish the purpose of this Agreement.

7.4.5. The parties shall protect the Confidential Information from disclosure to or access by unauthorized persons.

7.4.6. The parties shall use the Confidential Information solely for the purpose of this Agreement and for no other purpose.

7.4.7. The parties shall not duplicate the Confidential Information in any form, except as may be necessary to accomplish the purpose of this Agreement.

7.4.8. The parties shall advise each of its employees, agents, consultants and attorneys who receive the Confidential Information of the obligations of confidentiality and restrictions on the use set forth herein.

7.4.9. The parties shall immediately return the Confidential Information and all copies thereof, to each other upon the earlier of the expiration of the need therefore or the termination of this Agreement in order to accomplish the purpose.

7.5. The provisions of this Agreement shall apply to all Confidential Information disclosed by the parties to each other over the course of this Agreement. The parties' obligations under this provision shall survive termination of this Agreement and shall be perpetual.

The Vendor shall indemnify the IRHTP for a violation of this Section. The Vendor shall notify the IRHTP prior to the destruction of these materials and shall provide the IRHTP with the opportunity for proper destruction of these materials.

No Confidential Information will be exported to any country in violation of the United States Export Administration Act and the regulations there under.

8. Vendor Warranties.

8.1 Construction of Warranties Expressed in this Agreement with Warranties Implied by Law. All warranties made by the Vendor in all provisions of this Agreement and the bid proposal by the Vendor, whether or not this Agreement specifically denominates the Vendor's promise as a warranty or whether the warranty is created only by the Vendor's affirmation or promise, or is created by a description of the materials and services to be provided, or by provision of samples to the IRHTP, shall not be construed as limiting or negating any warranty provided by law, including without limitation, warranties which arise through course of dealing or usage of trade. The warranties expressed in this Agreement are intended to modify the warranties implied by law only to the extent that they expand the warranties applicable to the goods and services provided by the Vendor.

8.2 The Vendor warrants that all the concepts, materials produced, the work product and the information, data, designs, processes, inventions, techniques, devices, and other such intellectual property furnished, used, or relied upon by the Vendor or the IRHTP will not infringe any copyright, patent, trademark, trade dress, or other intellectual property right of the Vendor or others. Any intellectual property provided to the IRHTP pursuant to the terms of this Agreement, shall be wholly original with the Vendor or the Vendor has secured all

applicable interests, rights, licenses, permits, or other intellectual property rights in such concepts, materials and work.

8.3 The Vendor represents and warrants that the concepts, materials and the IRHTP's use of same and the exercise by the IRHTP of the rights granted by this Agreement shall not infringe upon any other work, other than material provided by the IRHTP to the Vendor to be used as a basis for such materials, or violate the rights of publicity or privacy of, or constitute a libel or slander against, any person, firm or corporation and that the concepts, materials and works will not infringe upon the copyright, trademark, trade name, literary, dramatic, statutory, common law or any other rights of any person, firm or corporation or other entity.

8.4 The Vendor warrants that all of the services to be performed hereunder will be rendered using sound, professional practices and in a competent and professional manner by knowledgeable, trained and qualified personnel.

8.5 The Vendor warrants that the deliverables under this Agreement will operate in conformance with the terms and conditions of this Agreement.

8.6 The Vendor warrants that it has full authority to enter into this Agreement and that it has not granted and will not grant any right or interest to any person or entity that might derogate, encumber, or interfere with the rights granted to the IRHTP.

8.7 The Vendor warrants that all obligations owed to third parties with respect to the activities contemplated to be undertaken by the Vendor pursuant to this Agreement are or will be fully satisfied by the Vendor so that the IRHTP will not have any obligations with respect thereto.

8.8 The Vendor warrants that it is the owner of or otherwise has the right to use and distribute the software, the materials owned by the Vendor and any other materials, and methodologies used in connection with providing the services contemplated by this Agreement.

8.9 The Vendor expressly warrants to the standards in the industry all aspects of the goods and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

8.10 The Vendor unconditionally warrants that all equipment supplied and installed for the purpose of fulfilling its obligations under this Agreement are fit for the purpose intended, that it complies with industry standards and that the equipment is compatible with the State's equipment.

9. Indemnification By Vendor. The Vendor agrees to defend, indemnify and hold the IRHTP, and the State of Iowa, its employees, agents, board members, appointed officials and elected officials, harmless from any and all demands, debts liabilities, damages, loss, claims, suits or actions, settlements, judgments, costs and expenses, including the reasonable value of time expended by the Attorney General's Office, and the costs and expenses and attorney fees of other counsel required to defend the IRHTP or the State of Iowa related to or arising from:

9.1 Any violation or breach of this Agreement including, without limitation, any of the Vendor's representations or warranties; or

9.2 Any acts or omissions, including, without limitation, negligent acts or omissions or willful misconduct of Vendor, its officers, employees, agents, board members, contractors, subcontractors, or counsel employed by Vendor in the performance of this Agreement, or any other reason in connection with the goods and services provided under this Agreement; or

9.3 Claims for any violation of any intellectual property right including but not limited to infringement of patents, trademarks, trade dress, trade secrets, or copyrights arising from the any of the goods or service performed in accordance with this Agreement; or

9.4 The Vendor's performance or attempted performance of this Agreement; or

9.5 Any failure by the Vendor to comply with all local, State and Federal laws and regulations; or

9.6 Any failure by the Vendor to make all reports, payments and withholdings required by Federal and State law with respect to social security, employee income and other taxes, fees or costs required by the Vendor to conduct business in the State of Iowa.

9.7 The Vendor's duty to indemnify as set forth in this Section shall survive the expiration or termination of this Agreement and shall apply to all acts taken in the performance of this Agreement regardless of the date any potential claim is made or discovered by the IRHTP.

10. Termination.

10.1 **Termination For Lack Of Authority or Funding**. Notwithstanding anything in this Agreement to the contrary and subject to the limitations, conditions and procedures set forth below, the IRHTP shall have the right to terminate this Agreement without penalty and without any advance notice as a result of any of the following:

10.1.1 The Legislature or Governor fails, in the sole opinion of the IRHTP, to appropriate funds sufficient to allow the IRHTP, the HCP's, or any state agency or department charged with responsibility to perform any of the IRHTP's obligations under this Agreement, to either meet its obligations under this Agreement or to operate as required to fulfill its obligations under this Agreement; or

10.1.2 If funds are de-appropriated, not allocated or if the funds needed by the IRHTP, in the IRHTP's sole discretion, are insufficient for any other reason; or

10.1.3 If the IRHTP's, or USAC's authorization to conduct its business is withdrawn or there is a material alteration in the programs or any other program the IRHTP administers; or

10.1.4 If the IRHTP's duties are substantially modified.

10.1.5 Written Notice of Cancellation. The IRHTP shall provide Vendor with written notice of cancellation pursuant to this Section.

10.2 **Termination for Cause**. The IRHTP may terminate this Agreement upon written notice for the substantial breach by Vendor of any material term if such breach is not cured by Vendor within the time period specified in the IRHTP's notice of breach or any subsequent notice or correspondence delivered by the IRHTP to Vendor. If a cure is feasible and an opportunity to cure is provided, the notice shall specify the exact date by which the condition must be cured. Following expiration of the opportunity to cure or notice from the IRHTP, the IRHTP may seek any legal or equitable remedy authorized by this Agreement or by law. Substantial breach events include but are not limited to the following:

10.2.1 Vendor fails to perform as required by this Agreement.

10.2.2 Vendor fails to make substantial and timely progress toward performance or fails to meet any of the material specifications and requirements stated in this Agreement,

including without limitation the warranties provided in this Agreement, in the RFP or in the Vendor's bid proposal.

10.3 **Termination for Convenience**. Following 30 days written notice, the IRHTP may terminate this Agreement in whole or in part for convenience without the payment of any penalty or incurring any further obligation to the Vendor. Termination for Convenience can be for any reason or no reason at all if it is in the best interests of the IRHTP.

10.4 **Immediate Termination**. The IRHTP may terminate this Agreement effective immediately without advance notice and without penalty for any of the following reasons:

10.4.1 Vendor furnished any statement, representation, warranty or certification in connection with this Agreement, which is materially false, deceptive, incorrect or incomplete.

10.4.2 Vendor fails to perform, to the IRHTP's satisfaction, any material requirement of this Agreement or is in violation of any material provision of this Agreement, including, without limitation, the express warranties made by the Vendor.

10.4.3 The IRHTP determines that satisfactory performance of this Agreement is substantially endangered or that a default is likely to occur.

10.4.4 Vendor becomes subject to any bankruptcy or insolvency proceeding under Federal or State law to the extent allowed by applicable Federal or State law including bankruptcy laws.

10.4.5 Vendor terminates or suspends its business.

10.4.6 The IRHTP reasonably believes that Vendor has become insolvent or unable to pay its obligations as they accrue consistent with applicable Federal or State law.

10.4.7 It is alleged that Vendor's processes or materials violate any valid patent, trademark, copyright, other intellectual property right or contract, and the IRHTP reasonably believes that the allegation may impair Vendor's performance of this Agreement.

10.4.8 Vendor has failed to comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement.

10.4.9 Vendor has engaged in conduct that has or may expose the IRHTP to liability, as determined in the IRHTP's sole discretion.

10.4.10 Vendor has a conflict of interest that interferes with fair competition or conflicts with an interest of the IRHTP as determined in the IRHTP's sole discretion.

10.5 **Liability for payment at termination** In the event of termination of this Agreement for any reason by USAC or the IRHTP, USAC and the IRHTP shall pay only the amounts, if any, due and owing to Vendor for services actually rendered up to and including the date of termination of the Agreement and for which the USAC and the IRHTP is obligated to pay pursuant to this Agreement. Payment will be made only upon submission of invoices and proper proof of Vendor's claim. This provision in no way limits the remedies available to USAC or the IRHTP in the event of a termination under this provision. However, the USAC or the IRHTP shall not be liable for any of the following costs:

10.5.1 The payment of Unemployment Compensation to Vendor's employees;

10.5.2 The payment of Workers' Compensation claims which occur during the Agreement or extend beyond the date on which the Agreement terminates.

10.5.3 Any costs incurred by Vendor in its performance of the Agreement including but not limited to startup costs, overhead or other costs associated with the performance of the Agreement.

10.5.4 Any taxes that may be owed by Vendor for the performance of this Agreement including but not limited to sales taxes, excise taxes, use taxes, income taxes or property.

10.6 **Vendor Obligations upon Termination**. Upon expiration or termination of this Agreement, or upon request of the IRHTP, the Vendor shall:

10.6.1 Immediately cease using and return to the IRHTP any personal property or material, whether tangible or intangible, provided by the IRHTP to the Vendor and in its, or any subcontractor's, control or possession;

10.6.2 Upon request from the IRHTP, destroy any personal property or material, whether tangible or intangible at no additional cost to the IRHTP, and verify in writing that the designated property or material has been destroyed;

10.6.3 Comply with the IRHTP's instructions for the timely transfer of active files and work being performed by Vendor under this Agreement to the IRHTP or the IRHTP's designee;

10.6.4 Protect and preserve property in the possession of the Vendor in which the IRHTP has an interest;

10.6.5 Stop work under this Agreement on the date specified in any notice of termination provided by the IRHTP;

10.6.6 Cooperate in good faith with the IRHTP, its employees, agents and contractors during the transition period between the notification of termination and the substitution of any replacement Vendor.

10.7 **Care of Property**. The Vendor shall be responsible for the proper custody and care of any of the HCP or State owned tangible personal property furnished for the Vendor's use in connection with the performance of the Agreement, and the Vendor will reimburse the IRHTP or the State for such property's loss or damage caused by the Vendor, normal wear and tear excepted.

10.8 **Reduction of Resources**. If, during the Term, the IRHTP experiences a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business (including, but not limited to, an election by Iowa Legislature to effect a sale or other disposition of material assets), which have or may have the effect of causing a decrease in the quantity or quality of the Services that will be needed by IRHTP, then IRHTP may request Vendor to reduce the level of Services and the annual Service charges to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

11. Contract Administration.

11.1 **Independent Contractor**. The status of the Vendor shall be that of an independent contractor. The Vendor, its employees, agents and any subcontractors performing under this

Agreement are not employees or agents of IHA. Neither the Vendor nor its employees shall be considered employees of IHA or IRHTP for Federal or State tax purposes. IHA and IRHTP will not withhold taxes on behalf of the Vendor (unless required by law).

11.2 **Compliance with the Law and Regulations**.

11.2.1 Compliance with the Law and Regulations. Vendor shall comply with all applicable Federal, State, and local laws, rules, ordinances, regulations and orders when performing within the scope of this Agreement, including, without limitation, all laws applicable to the prevention of discrimination in employment, the administrative rules of the Iowa Department of Management or the Iowa Civil Rights Commission which pertain to equal employment opportunity and affirmative action, laws relating to prevailing wages, occupational safety and health standards, prevention of discrimination in employment, payment of taxes, gift laws, lobbying laws and laws relating the use of targeted small businesses as subcontractors or suppliers.

11.2.2 The Vendor declares that it has complied with all Federal, State and local laws regarding business permits and licenses that may be required to carry out the work to be performed under this Agreement, including, without limitation, laws governing State of Iowa procurement and contracting.

11.2.3 The Vendor shall give notice to any labor union with which it has a bargaining or other agreement of its commitment under this section of the Agreement. The Vendor shall make the provisions of this Section a part of its contracts with any subcontractors providing goods or services related to the fulfillment of this Agreement.

11.2.4 The Vendor shall comply with all of the reporting and compliance standards regarding equal employment.

11.2.5 The Vendor may be required to submit its affirmative action plan

11.2.6 The IRHTP may consider the failure of the Vendor to comply with any law or regulation as a material breach of this Agreement. In addition, the Vendor may be declared ineligible for future USAC contracts or be subjected to other sanctions for failure to comply with this Section.

11.3 **Amendments.** This Agreement may be amended in writing from time to time by mutual consent of the parties. All amendments to this Agreement must be fully executed by the parties.

11.4 **Third Party Beneficiaries**. There are no third party beneficiaries to this Agreement. This Agreement is intended only to benefit IRHTP and the Vendor.

11.5 **Choice of Law and Forum**.

11.5.1 The laws of the State of Iowa shall govern and determine all matters arising out of or in connection with this Agreement without regard to the choice of law provisions of Iowa law.

11.5.2 In the event any proceeding of a quasi-judicial or judicial nature is commenced in connection with this Agreement, the exclusive jurisdiction for the proceeding shall be brought in Polk County District Court for the State of Iowa, Des Moines, Iowa, or in the United States District Court for the Southern District of Iowa, Central Division, Des Moines, Iowa wherever jurisdiction is appropriate.

11.5.3 This provision shall not be construed as waiving any immunity to suit or liability including, without limitation, sovereign immunity in State or Federal court, which may be available to the IRHTP or the State of Iowa.

11.6 **Integration**. This Agreement, including all the documents incorporated by reference, represents the entire Agreement between the parties and neither party is relying on any representation that may have been made which is not included in this Agreement. The parties agree that if a Schedule, Addendum, Rider or Exhibit or other document is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.7 **Not a Joint Venture**. Nothing in this Agreement shall be construed as creating or constituting the relationship of a partnership, joint venture, (or other association of any kind or agent/principal relationship) between the parties hereto. No party, unless otherwise specifically provided for herein, has the authority to enter into any agreement or create an obligation or liability on behalf of, in the name of, or binding upon another party to this Agreement.

11.8 **Consent to Service**. The Vendor irrevocably consents to service of process by certified or registered mail addressed to the Vendor's designated agent. The Vendor appoints _____ at _____ as its agent to receive service of process. If for any reason the Vendor's agent for service is unable to act as such or the address of the agent changes, the Vendor shall immediately appoint a new agent and provide the IRHTP with written notice of the change in agent or address. Any change in the appointment of the agent or address will be effective only upon actual receipt by the IRHTP. Nothing in this provision will alter the right of the IRHTP to serve process in another manner permitted by law.

11.9 **Supersedes Former Agreements**. This Agreement supersedes all prior Agreements between the IRHTP and the Vendor for the services provided in connection with this Agreement.

11.10 **Waiver.** Any breach or default by either party shall not be waived or released other than in writing or by a written notice signed by the other party. Failure by either party at any time to require performance by the other party or to claim a breach of any provision of the Agreement shall not be construed as affecting any subsequent breach or the right to require performance with respect thereto or to claim a breach with respect thereto.

11.11 **Notices**.

11.11.1 Any and all notices, designations, consents, offers, acceptances or any other communication provided for herein shall be given in writing by registered or certified mail, return receipt requested, by receipted hand delivery, by Federal Express, courier or other similar and reliable carrier which shall be addressed to each party as set forth as follows:

If to the IRHTP: *Mr. Art Spies*

Iowa Hospital Association

100 East Grand Ave – Suite 100

Des Moines, Iowa 50309

If to the Vendor: [Vendor may provide one (1) contact]

11.11.2 Each such notice shall be deemed to have been provided:

11.11.2.1 At the time it is actually received; or,

11.11.2.2 Within one day in the case of overnight hand delivery, courier or services such as Federal Express with guaranteed next day of delivery; or,

11.11.2.3 Within five days after deposited the U.S. Mail in the case of registered U.S. Mail.

11.11.3 Copies of such notice to each party shall be provided separately.

11.11.4 From time to time, the parties may change the name and address of a party designated to receive notice. Such change of the designated person shall be in writing to the other party and as provided herein.

11.12 **Cumulative Rights**. The various rights, powers, options, elections and remedies of either party, provided in this Agreement, shall be construed as cumulative and no one of them is exclusive of the others or exclusive of any rights, remedies or priorities allowed either party by law. Nothing in this Agreement shall be construed as affecting, impairing or limiting the equitable or legal remedies to which either party may be entitled as a result of any breach of this Agreement.

11.13 **Severability**. If any provision of this Agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, the invalid portion shall be severed from this Agreement. Such a determination shall not affect the validity or enforceability of any other part or provision of this Agreement.

11.14 **Express Warranties**. The Vendor expressly warrants all aspects of the items and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

11.15 **Warranty Regarding Solicitation**. The Vendor warrants that no person or selling agency has been employed or retained to solicit and secure this Agreement upon an agreement or understanding for commission, percentage, brokerage or contingency except bona fide employees or selling agents maintained for the purpose of securing business.

11.16 **Obligations of Joint Entities**. If the Vendor is a joint entity consisting of more than one individual, partnership, corporation or other business organization, all such entities shall be jointly and severally liable for carrying out the Agreement activities.

11.17 **Obligations Beyond Agreement Te**rm. This Agreement shall remain in full force and effect to the end of the specified term or until terminated or canceled pursuant to this Agreement. All obligations of the Vendor incurred or existing under this Agreement as of the date of expiration, termination or cancellation will survive the expiration, termination or cancellation of this Agreement.

11.18 **Time is of the Essence**. Time is of the essence with respect to the successful performance of the terms of this Agreement. The Vendor shall ensure that all personnel providing services to the IRHTP are responsive to the IRHTP's requirements in all respects.

11.19 **Authorization.** Each party to this Agreement represents and warrants to the other that it has the right, power and authority to enter into and perform its obligations under this Agreement and that it has taken all requisite action (corporate, statutory, or otherwise) to approve execution, delivery and performance of this Agreement. This Agreement constitutes a legal, valid and binding obligation upon the parties in accordance with its terms.

11.20 **Successors in Interest**. All the terms, provisions, and conditions of the Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, assigns, and legal representatives.

11.21 **Counterparts and Facsimile Signatures**. The parties agree that this Agreement has been or may be executed in several counterparts, each of which shall be deemed an original and all such counterparts shall together constitute one and the same instrument. The parties further agree that the signatures on this Agreement or any amendment or schedule may be manual, scanned, or a facsimile signature of the person authorized to sign the appropriate document. All authorized scanned or facsimile signatures shall have the same force and effect as if manually signed.

11.22 **Additional Provisions**. The parties agree that if a Schedule, Addendum, Rider or Exhibit is attached hereto by the parties, and referred to herein, then the same shall be deemed incorporated herein by reference.

11.23 **Use of Third Parties/Prime Vendor Responsibilities**. The IRHTP acknowledges that the Vendor may contract with third parties for the performance of any of the Vendor's obligations under this Agreement. All subcontracts shall be subject to advance written approval by the IRHTP. The Vendor may enter into these contracts to complete the project provided that the Vendor remains responsible for all services performed under this Agreement. All restrictions, obligations and responsibilities of the Vendor under this Agreement shall also apply to subcontractors. The IRHTP shall consider the Vendor to be the sole point of contact with regard to all matters related to this Agreement and is not required to initiate or maintain contact with any subcontractor. IRHTP may choose to deny use of any specific third party contractor at IRHTP's sole discretion, in which case the Vendor must obtain a different third party contractor.

11.24 **Data Processing Warrant**y.

11.24.1 The Vendor warrants that each item of hardware, software, firmware, or a custom designed and developed software program or a system which is developed or delivered under, or used by Vendor in connection with its performance of this Agreement, shall accurately process data, including, but not limited to, calculating, comparing and sequencing, from, into, between and among the nineteenth, twentieth and twenty-first centuries, including leap year calculations, when used in accordance with the item(s) documentation provided by the Vendor.

11.24.2 If the items to be developed and delivered under this Agreement are to perform as a system with other hardware and/or software, then the warranty shall apply to the items developed and delivered as the items process, transfer, sequence data, or otherwise interact with other components or parts of the system. This warranty shall survive the term of this

Agreement. The remedies available to the IRHTP for a breach of warranty includes, but is not limited to, repair or replacement of non-compliant items or systems.

11.24.3 Nothing in this warranty shall be construed to limit any rights or remedies of the IRHTP under this Agreement with respect to defects in the items other than the Data Processing Warranty.

11.25 Force Majeure. Neither Vendor nor the IRHTP shall be liable to the other for any delay or failure of performance of this Agreement; and no delay or failure of performance shall constitute a default or give rise to any liability for damages if, and only to the extent that, such delay or failure is caused by a "force majeure".

11.25.1 As used in this Agreement, "force majeure" includes acts of God, war, civil disturbance and any other causes which are beyond the control and anticipation of the party effected and which, by the exercise of reasonable diligence, the party was unable to anticipate or prevent. Failure to perform by a subcontractor or an agent of the Vendor shall not be considered a "force majeure" unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as defined in this Agreement. "Force majeure" does not include: financial difficulties of the Vendor or any parent, subsidiary, affiliated or associated company of Vendor; claims or court orders which restrict Vendor's ability to deliver the goods or services contemplated by this Agreement.

11.25.2 If a "force majeure" delays or prevents Vendor's performance, the Vendor shall immediately commence to use its best efforts to directly provide alternate, and to the extent possible, comparable performance. Comparability of performance and the possibility of comparable performance shall be reasonably determined solely by the IRHTP.

11.25.3 During any such period, the Vendor shall continue to be responsible for all costs and expenses related to alternative performance.

11.25.4 This Section shall not be construed as relieving the Vendor of its responsibility for any obligation which is being performed by a subcontractor or supplier of services unless the subcontractor or supplier is prevented from timely performance by a "force majeure" as described here.

11.26 **Records Retention and Access**. The Vendor shall permit the Auditor of the State of Iowa or any authorized representative of the State or any authorized representative of the United States government, or USAC, to access and examine, audit, excerpt and transcribe any directly pertinent validation records, financial records, accounting records, books, documents, papers, electronic or optically stored and created records or other records of the Vendor relating to or created as a result of the performance of this Agreement. These records shall be made available to the State, its designees, the Auditor, or an authorized representative of the United States government, or USAC, at reasonable times and at no cost to the requesting organization during the term of this Agreement and for a period of at least (5) years following the termination, cancellation or expiration of this Agreement.

11.27 **Taxes.** IRHTP declares and Vendor acknowledges that the Vendor and its subcontractors may be subject to certain taxes including but not limited to sales tax, motor vehicle fuel tax, personal or corporate income tax or other taxes or assessments, and to licensing fees or other miscellaneous fees or charges which may be imposed by Federal, State or local law or ordinance. The Vendor and its subcontractors shall be solely responsible for the payment of such taxes. The Vendor shall promptly pay all such taxes, fees or charges when due. IRHTP is

a tax-exempt entity and the Vendor shall not attempt to pass on any costs, including surcharges and fees, to the IRHTP that are attributable to federal, state, or local taxes, including sales tax, motor fuel tax, property tax, or personal or corporate income tax.

11.28 **Further Assurances and Corrective Instruments**. The Vendor agrees that it will, from time to time, execute, acknowledge and deliver, or cause to be executed, acknowledged and delivered, such supplements hereto and such further instruments as may reasonably be required for carrying out the expressed intention of this Agreement.

11.29 **Assignment and Delegation**. This Agreement may not be assigned, transferred or conveyed in whole or in part without the prior written consent of the other party. For purposes of construing this clause, a transfer of a controlling interest in Vendor shall be considered an assignment. If the State, in its sole discretion, determines that the Vendor's assignment of this Agreement to another person or entity is not in the State's best interests, the State may elect to terminate this Agreement with the Vendor without penalty upon thirty (30) days written notice to the Vendor.

11.30 **Headings or Captions**. The paragraph headings or captions are for identification purposes only and do not limit or construe the contents of the paragraphs.

SECTION 12. BUSINESS DOWNTURN.

12.1 **Alternative Agreement** In the event of a business downturn or budget difficulties beyond the control of the IRHTP, including budget difficulties of other HCP's or the IRHTP or significant restructuring or reorganization, any of which significantly reduces the volume of OSP plant required by the IRHTP, with the result that IRHTP will be unable to meet its revenue or volume commitments under this Agreement, Vendor and the IRHTP will cooperate in efforts to develop a mutually agreeable alternative.

SECTION 13. REDUCTION OF RESOURCES.

13.1 If, during the Term, the IRHTP or the HCP's experience a change in the scope, nature or volume of its business, or if the IRHTP elects to change the manner or method by which it does business, the Vendor will be asked to reduce the level of Services to IRHTP under this Agreement. However any such reduction must not adversely impact upon Vendor's ability to reasonably perform its obligations under the Agreement.

13.2 In such event, Vendor shall estimate, in writing and in good faith, the aggregate decreased charges to Vendor from IRHTP's ceasing to perform such Services and shall provide such written estimate to IRHTP, no later than 30 days from Vendor's receipt of IRHTP's notice. IRHTP, upon receipt of such estimate, may then elect by written notice given to Vendor within 15 days following receipt of Vendor's written estimate to:

13.3 Withdraw its request for a cessation of part of the Services;

13.4 Implement such partial cessation of Services based upon the estimate of Vendor; or

13.5 Request that Vendor negotiate with IRHTP regarding the aggregate reduction in the Contract Services due to Vendor from IRHTP hereunder as a result of the partial cessation of Services. If IRHTP shall elect to request Vendor to negotiate, the parties shall promptly negotiate in good faith regarding the amount.

SECTION 14. EXECUTION.

IN WITNESS WHEREOF, in consideration of the mutual covenants set forth above and for other good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the parties have entered into the above Agreement and have caused their duly authorized representatives to execute this Agreement.

IOWA RURAL HEALTH TELECOMMUNICATIONS PROGRAM

By: _____ Date: _____

Name: Mr. Art Spies

Title: Project Coordinator - IRHTP

(Vendor Name to be placed HERE)

By: _____ Date: _____

Name:

Title:

ANNEX I
LINK-SEGMENT COMPLETION CHECKLIST
RFP 09-002

A LOCATION – (HCP end)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with HCP instructions
FDP or Bulkheads mounted properly and securely
All FDP or Bulkhead connectors were covered with dust covers
Grounding was accomplished in a workmanship like manner
All building penetrations were properly sealed.
All firewall or building partition penetrations were properly sealed
Restoration Phase I (Initial) was performed to the best of the contractor's ability.
All construction debris and dirt was removed to the satisfaction of the HCP
Locate wire pedestal location is readily identifiable and connected

ROUTE

Cable was installed in accordance with IRHTP specifications
All hand holes and tubs have been readjusted for settling
All open ends of duct installed along the route have been sealed with appropriate duct plug material
Any pavement cracked during the cable installation process has been repaired.
Were pictures that were taken of pre-existing pavement conditions compared to final route reconnaissance and reviewed by HCP, Property owners, and the appropriate governmental entity?
Restoration Phase I (Initial) was performed to the best of the contractor's ability.

CABLE TESTING

Test equipment was calibrated within ninety (90) days prior to testing. A sticker with the date of calibration was affixed to the equipment. A calibration certificate was presented to the IRHTP or its authorized representative upon request.

Each span was tested bi-directionally from end point to end point. Each span trace was recorded so that each splice can be clearly expanded (long range, mid range or high resolution). (Some spans will need all three traces.) A span map was filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.

Each fiber of each span was tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.

Locate wires, cable sheathes, and/or locate wire terminals have been tested for continuity end-to-end
Boring Traces, As-built or red-line construction drawings have been handed off to IRHTP Representative

Z LOCATION – (Network endpoint or meet point)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with ICN instructions
Bulkheads mounted properly and securely
All unconnected bulkheads are covered with dust covers
Grounding was accomplished in a workmanship like manner
Tubs and hand holes have been properly closed
All duct and conduit seals have been replaced
Locate wire terminations are readily identifiable

SID_____ **HCP Name:** _____ **By:** _____

IRHTP Representative: _____ **Date:** _____

Annex J
Service Provider Identification Number
RFP 09-002

In order to participate in the USAC Rural Health Care project you must secure a USAC Service Provider Identification Number (SPIN) for your compnay

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Information on how to obtain a Service Provider Identification Number (SPIN)

To obtain a new Service Provider Identification Number (SPIN), a service provider must complete the Service Provider Identification and Contact Information (Form 498) and submit it to USAC for review and approval. USAC strongly encourages online filing of this form in order to more quickly process requests.
After online filing, a new service provider will be required to subsequently submit a hard copy of the form to USAC along with a certification letter signed by a company officer. To begin the online filing process, please visit USAC's e-file page.
To download a blank form or view the form instructions, please visit USAC's forms page.

Where to File

Service providers must submit the Form 498 and a signed letter of certification on company letterhead (See Attachments A, B, and C of FCC Form 498) before support payments will be authorized. Please send the form and certification letter to:
Universal Service Administrative Company
Billing and Disbursement
Attn: FCC Form 498
2000 L Street, N.W., Suite 200
Washington, DC 20036

Where to Get More Information

For any questions about completing this form, contact USAC:
E-mail: Form498@bcd.universalservice.org
Telephone: 888-641-8722
FAX: 888-637-6226

ANNEX K
USAC RURAL HEALTH CARE PILOT PROGRAM PROCESS
RFP 09-002

Competitive Bidding Requirement Overview

The RHCPP Selection Order requires the selected participants to conduct a competitive bidding process to select the most cost-effective vendor for design, evaluation, and deployment of the broadband network. To satisfy the competitive bidding requirement, among other things, selected participants must submit an FCC Form 465 that includes a description of services for which the health care provider(s) is seeking support and wait at least 28 days from the date on which this information is posted on USAC's website before making commitments with the selected service provider.

Please also see the Wireline Competition Bureau's Letter to Program Participants on December 20, 2007.

Please feel free to address any concerns to RHCPilot@usac.org or call 800-229-5476.

Vendor Eligibility

All vendors that provide services or equipment eligible for funding under the Pilot Program may submit bids for Pilot Program projects. To receive RHCPP support, vendors also need to obtain a Service Provider Identification Number (SPIN) from USAC.

All telecommunications providers, Internet service providers, and other vendors may receive up to 85% of eligible Pilot Program costs. Network design firms and various types of construction companies may also participate. Project participants may choose to self-provision for these services and/or equipment in that they may do their own design work and/or network deployment, subject to the FCC's competitive bidding requirements. This program will refer to all of these entities collectively as Vendors.

Eligible Pilot Program costs include, but are not limited to:

- the non-recurring costs for design, engineering, materials, and construction of fiber facilities and other broadband infrastructure;
- the non-recurring costs of engineering, furnishing (i.e., as delivered from the manufacturer), and installing network equipment;
- the recurring and non-recurring costs of operating and maintaining the constructed network once the network is operational; and
- carrier-provided transmission services and the costs for subscribing to such facilities and services.

All vendors that supply these services or equipment may submit bids for Pilot Program projects. Vendors interested in submitting bids should familiarize themselves with the 2007 Rural Health Care Pilot Program Selection Order, which details the RHCPP network components eligible and ineligible for support. Additional information concerning the Pilot Program is available on the FCC's Rural Health Care Pilot Program page.

All vendors (including self-provisioning project entities) must have a Service Provider Identification Number (SPIN), issued by USAC, to receive support for providing discounted service and equipment to eligible RHCPP project participants. If a vendor already has a SPIN, this number is good for all USF programs including the RHCPP. Vendors must ensure they have completed Box 8 of FCC Form 498. Vendors may edit this form if they have already obtained a

SPIN. For questions concerning eligibility, please call the Rural Health Care Call Center at 1-800-229-5476. For questions about obtaining a SPIN, please contact Client Services Bureau at 1-888-641-8722. Vendors that need to apply for a SPIN can go to USAC's E-File page.

Prior to receiving any RHCPP support, all vendors must complete a certification stating they will comply with RHCPP rules and use funding only for the purposes intended. A sample template of this certification is available for download. This certification should be submitted to the Project Coordinator.

Searching service requests or Request for Proposal (Online)

To search for and view Pilot Program service requests (e.g., RFP) postings, vendors will go directly to the RHCPP website search postings page.

Rural Health Care Pilot Program Project Detail

Vendors may view the posted service requests (e.g., RFP) and associated documents on the Search Postings page of the RHCPP website. Posted information includes:

- Services requested in PDF Format (e.g., RFP)
- Participating entities/HCPs
- Project Coordinator's name, location, and contact information
- Date Posted to USAC website
- Allowable Contract Date

Provide bids for requested service

After USAC posts a RHCPP Project's *Description of Services Requested & Certification Form* (Form 465) and associated supporting information, all vendors may view the information and provide bids.

The open competitive bidding process is a minimum of 28 days from the date USAC posts a Form 465 on USAC's website. During this minimum 28-day window, vendors may contact the Project Coordinator (or alternate point of contact (POC), if specified) to submit a bid for their service needs. RHCPP Participants must evaluate all bids and select the most cost-effective service or facility provider available. In selecting the most cost-effective bid, in addition to price, the FCC's 2007 Rural Health Care Pilot Program Selection Order requires Participants to consider non-cost evaluation factors that include prior experience, including past performance; personnel qualifications, including technical excellence; management capability, including solicitation compliance; and environmental objectives (if appropriate). Additional discussion of the cost effective standard can be found in paragraphs 78 to 79 of the 2007 Rural Health Care Pilot Program Selection Order. Project Coordinators may conduct bidding rounds that exceed 28 days and may have multiple rounds of selection.

Vendors can search for requests for services on the RHCPP Search Postings page.

NOTE: Vendors or service providers participating in the competitive bid process are prohibited from assisting with or filling out a selected participants' service request (e.g., FCC Form 465 and related materials).

Sign a contract for service

Vendors may enter into a contract with Participants after the minimum 28-day posting requirement has been met.

It is the Participant's responsibility to determine the most cost-effective service and select an eligible vendor before signing a contract. **Participants that enter into an agreement before completion of the 28-day posting requirement are in violation of the FCC's competitive bidding rules for the Rural Health Care Pilot Program and will not receive support.**

In addition:

(1) Vendors participating in competitive bidding process are prohibited from assisting or filling out the RHCPP Participant's Form 465 – see footnote 281 of the 2007 RHCPP Selection Order.
(2) Vendors must complete an RHCPP certification. This requirement is found in paragraph 93 of the 2007 RHCPP Selection Order. The template for this certification is available for download.
(3) Vendors must retain records for 5 years. This requirement is stated in footnote 277 of the 2007 RHCPP Selection Order.

Receive Funding Commitment Letter

When USAC has approved a request for service support (the *Internet Service Funding Request and Certification Form* 466-A, and associated attachments), USAC will send the Project Coordinator and the vendor a Funding Commitment Letter (FCL).

The FCL indicates that the project is eligible for the support specified in the letter contingent upon submitting a *Connection Certification Form* (Form 467).

Funding Commitment Letter Contents

The FCL includes the following information:

- Health Care Provider (HCP) Number, a unique five-digit code assigned to each Pilot project
- HCP Contact Name (person designated as the Project Coordinator)
- HCP Name and Address of the project location supported
- Service Provider Identification Number (SPIN)
- Vendor Name
- Funding Year
- Copy of Approved Network Cost Worksheet
- List of sites where service is being provided
- Type of Service Agreement (e.g., contract, tariff)
- Eligible Support Start Date: first date the project can receive support based on the *Description of Services Requested & Certification Form* (Form 465)
- Support End Date, last day service is eligible for support during the funding year
- Estimated Months of Support
- Non-Recurring Support Amount
- Monthly Recurring Support Amount
- Estimated Total Support Amount
- Funding Request Number, a unique five-digit code assigned by USAC for each project, vendor, and service combination.
- Approved Network Cost Worksheet Items

What to Do When You Receive the FCL

Vendors should validate the SPIN on the FCL. This ensures that future support provided by the vendor is credited to the correct SPIN. If the SPIN is incorrect, please contact the Rural Health Care Pilot Program at 1-800-229-5476.

Health care provider support can only be provided after the vendor receives the Support Acknowledgement Letter from USAC.

Receive Support Acknowledgement Letter

USAC sends a Support Acknowledgment Letter to the Project Coordinator (PC) and vendor.

After receiving the *Connection Certification Form* (Form 467), USAC creates a Support Acknowledgement Letter, which is sent to the PC and vendor.

The Support Acknowledgement Letter provides a detailed report of the approved service(s) and support information.

Health Care Provider (HCP) Support Acknowledgement Letter Contents

The HCP Support Acknowledgement Letter includes the following information:

- Funding Year: 2007, 2008, etc.
- Pilot Project Number (Also known as a HCP Number): unique five-digit number assigned to each Pilot Project
- Funding Request Number: a unique five-digit code assigned by USAC for each Pilot Project, vendor and service combination.
- Billing Account Number: account code for a Pilot Project credited with USF support
- Pilot Project Name: name of project being supported
- Pilot Project Address: address of the project being supported
- Pilot Project Mailing Organization and Address if different than above
- Service Provider Identification Number (SPIN) – number issued by USAC to a vendor
- Vendor name: name of vendor providing service or equipment to project
- Service: type of service or equipment provided
- Support Start Date: first date HCP can receive support based on the *Description of Services Requested & Certification Form* (Form 465)
- Support End Date: last day service is eligible for support during the funding year
- Support Date: month and year for support amount
- Support Amount: support for the month ($)
- Total: total support for the funding year ($)

This letter verifies that a Form 467 has been received. The support is credited to the Billing Account Number shown on the Support Acknowledgement Letter. A sample Support Acknowledgement Letter is available for download.

What to Do When You Receive the Support Acknowledgement Letter

The Support Acknowledgement Letter will be sent to the PC and vendor when the *Connection Certification Form* (FCC Form 467) is processed by USAC.

Once the vendor receives the letter, it can bill the project for services completed. The entity that receives the bill and pays for the service is defined as the "billed entity."

USAC requests that vendors check the SPIN on the Support Acknowledgement Letter to make sure it is correct.

Participants should check that the service provided was actually working or installed and is being billed for the time period on the Support Acknowledgement Letter. Be sure that the Billing Account Number listed on the letter is the same Billing Account Number attached to the service and PC location or PC mailing organization and address. This ensures support is credited to the entity paying for the service. If you are unsure whether the Billing Account Number is correct or if you find an error on the Support Acknowledgement Letter, please contact the Rural Health Care Pilot Program at 1-800-229-5476 and do not start applying program discounts.

Send invoice to USAC

Once the vendor provides the service and invoices the project, the Project Coordinator (PC) for each Pilot Project is responsible for approving invoices for the vendor's use. These invoices are based on the approved Funding Commitment Letter. The vendor then signs and returns these pre-filled invoices to USAC.

The Project Coordinator shall also confirm and demonstrate to USAC that the selected participant's 15 percent minimum funding contribution has been provided to the service provider for each invoice. USAC also will review invoices to ensure network deployments are proceeding according to the Participants' network plans.

Where and When to Send Invoices

Project Coordinators can mail or fax USAC a copy of the RHCPP Invoice:

Universal Service Administrative Company
Rural Health Care Program
100 S. Jefferson Road
Whippany, NJ 07981

Fax Number: 973-599-6514 (to the attention of the project coach)

Bi-Monthly Invoicing Cycle

Invoices received from the 1st through the 15th of the month will be processed by the 20th of the month. Invoices received from the 16th through the 31st of the month will be processed by the 5th of the following month.

Example

If an invoice is received January 29 it will be processed during the first five days of February. If an invoice is received February 1, it will be processed by February 20. The date the invoice is received by USAC will be used to determine when the invoice will be processed, not the date mailed by the project coordinator. Once an invoice is processed by USAC, it will take about 10 days to issue payment. If payment has not been received within 45 days of invoicing USAC, please call 1-800-229-5476 to be sure the invoice was received and is being processed.

Invoice Formatting

USAC has designed a sample invoice format that project coordinators and vendors may use in the RHCPP. The RHCPP Invoice consists of a header and individual invoice line items for each Pilot Program service credited. Support amounts are based on monthly submissions of actual incurred expenses.

Note

USAC has developed an administrative process to streamline the invoice submission and approval process. Please contact the Project Coordinator for additional information on this process.

ATTACHMENT 7

NOTICE TO VENDORS
REQUEST FOR PROPOSAL
IRHTP RFP 08-001

Outside Plant Fiber Optic Cable Project at 95 Health Care Locations Throughout the State of Iowa

Mr. Art Spies
Senior Vice President
Iowa Hospital Association
100 East Grand Avenue, Suite 100
Des Moines, IA 50309
spies@ihaonline.org

The Iowa Rural Health Telecommunications Program (IRHTP) will be receiving sealed bid proposals for RFP 08-001 until 3:00 p.m. CDST, September 12, 2008.

Outside Plant – Fiber Optic Cable and IRU

THIS REQUEST FOR PROPOSAL CONSISTS OF FOUR CHAPTERS, THREE ANNEXES, AND SIX ATTACHMENTS:

General Information

Iowa Rural Health Telecommunications Program

RFP 08-001

Introduction. The Iowa Rural Health Telecommunications Program (IRHTP) is a consortium of public and private hospitals seeking to solve the problem of isolation, travel, and limited resources that constrain health care delivery in rural Iowa and its surrounding region. To achieve this goal, IRHTP will leverage the expertise of the Iowa Hospital Association (IHA) as a health care collaborator, the capability of the Iowa Communications Network (ICN) in administering telecommunications services, and the Federal Communications Commission Rural Health Care Pilot Program in providing the funds to develop a statewide dedicated health care network. The goal is to use proven technology to connect approximately 95 mostly rural hospitals, with 1,000 megabits of high speed Ethernet access, to a secure, dedicated, and financially sound network.

Specifically, the IRHTP is seeking bid proposals to provide last mile fiber optic connections from consortium hospitals to the closest appropriate ICN Point of Presence (POP) to establish a statewide health care network.

Overview. This project is a "site by site" approach for infrastructure build-out for the proposed project. The contractor is responsible for all the right-of-way (ROW) procurement and the resolution of ROW issues. Indefeasible Right of Use (IRUs) will be considered as an alternative to construction, but as an optional response.

Other major duties of the contractor include acquiring city and county permits, securing all outside plant materials to complete the project, submitting red-lined construction drawings per site, documenting all fiber testing, and coordinating other related issues with the consortium's project manager. Contractor is responsible for all One-Call notifications.

The IRHTP has prioritized the build-out areas into what it considers a logical statewide workflow to meet the consortium's needs within the time permitted. The contractor will, however, receive latitude to proceed in a fashion maximizing its ability to economically mobilize and deploy its resources for the good of IRHTP. The project plan divides work to be performed into merged areas. Seventeen merged areas are developed and represent the natural break between the access portion of the network and the aggregation/core network. The project plan assumes the contractor will start and complete several merged areas in fiscal year 2008 with the majority of the merged area outside plant work completed in FY 2009.

Installation of edge network electronics and Coarse Wave Division Multiplexing (CWDM) access systems will follow the completion, testing, and acceptance of each fiber link-segment within the merged area. The installation of core electronics is not dependant on access portions of the network being completed. It is expected the procurement, testing, and installation of the core network electronics will proceed in parallel with the installation of sites in each merged area.

RFP Organization. Vendors Please Note! Chapter 3 of this RFP is comprised of **two parts**: Part One is the technical specification for the procurement and installation of fiber optic cable facilities. Part Two is the technical specification for the Quality Assurance inspection services, overseeing and monitoring the installation of the fiber optic facilities being procured under Part I. Vendors may submit proposals for both Parts One and Two. However, a Vendor cannot be awarded both Parts. A Vendor submitting a bid for Part II, will not be awarded a contract if the Vendor has any business relationship with the Vendor awarded Part I of this RFP.

Types of Proposals. The Iowa Rural Health Telecommunications Program is soliciting proposals from qualified fiber optic network providers to furnish and install additional fiber optic cable extensions to the existing Iowa Communications Network (ICN).

Type One Proposal – One inclusive price to provide statewide end to end fiber optic cable connectivity from each of the hospital endpoints to the designated ICN Point of Presence.

Type Two Proposal – One inclusive price to provide all of the end to end fiber optic cable connectivity within each or selected merged areas. Vendor must accommodate and account for all sites within that merged area.

Type Three Proposal – A vendor may offer a "site by site" bid. IHA will consider these bids on an individual basis. However, IHA is not required to accept a "site by site" low bid when the inclusion of that bid causes the total price for a merged area to be higher than that of vendor bidding the entire merged area.

Network Procurement. The RFP process will allow the consortium to receive competitive offers for fiber facilities from independent telephone companies, local exchange carriers, cable operators, municipalities, and others. These competitive offers will be weighed against constructing a new link-segment connection from each hospital to the fiber backbone. The RFP process coupled with leveraging the State of Iowa's current networking assets will ensure an economically reasonable statewide healthcare network. Indefeasible Right of Use (IRU) will be considered on a case-by-case basis as an alternative to the construction of some link-segment facilities.

Network Topology. The proposed network design assumes a fiber build-out from the rural healthcare providers' (HCPs) facilities to the ICN's closest appropriate Point of Presence (POP

Annex A. The ICN has prepared basic route and facility documents that describe ICN POPs, potential fiber routes, and fiber access at each health care location. The compiled information is available on CD and is refereed to as ANNEX A within this RFP. Vendors may request a copy of ANNEX A for purposes of assembling responses to this RFP. All requests for CDs are to be directed to Art Spies at (515) 288-1955 or spiesa@ihaonline.org.

CHAPTER 1

ADMINISTRATIVE ISSUES

RFP 08-001

1.0 General. The Rural Health Care Program of the Universal Service Fund (USF), which is administered by the Universal Service Administrative Company (USAC), is a support program authorized by Congress and designed by the Federal Communications Commission (FCC) to provide reduced rates to rural health care providers (HCPs) for telecommunications services and Internet access charges related to the use of telemedicine & tele-health. The Iowa Rural Health Telecommunications Program (IRHTP) and the Iowa Hospital Association (IHA) received approval to proceed with the connection of 95 Iowa hospitals to the Iowa Communications Network using newly constructed or existing fiber optic cable facilities. IRHTP is seeking bid proposals for an Outside Plant Fiber Optic Cable Project at 95 health care locations throughout the State of Iowa.

1.1 Notice. This project is subject to the USAC procurement rules. The IRHTP will submit a USAC Form 465, RFP, and supporting documentation to USAC who will review the documentation and will post the RFP on the USAC website. All RFPs will be open for response and bidding for a minimum of twenty eight (28) days after the posting. After documents are posted to the USAC website, the following process will commence:

1.2 Schedule and Submission of Proposal.

1.2.1 Vendors Conference. A Vendors Conference will be held on Tuesday, August 12, 2008 at 9:00 a.m. Central Daylight Saving Time (CDST), at the Iowa Hospital Association offices located at 100 East Grand Avenue, Suite 100, Des Moines, Iowa. **Vendors are encouraged to attend the vendors conference to help gain a full understanding of the project.**

1.2.2 Questions and Answers. Vendors are invited to submit written questions and/or requests for interpretation/consideration/acceptance concerning this RFP on or before 4:00 p.m. CDST, August 15, 2008. Vendors with questions concerning this RFP may submit questions in writing via email to Art Spies at spiesa@ihaonline.org. Oral questions will not be accepted, and verbal communications shall not override written communications. Only written communications are binding on IRHTP. If the questions, requests for clarifications, or suggestions pertain to a specific section of the RFP, the page and section number(s) must be referenced. IRHTP will prepare a written response to all pertinent questions submitted by Vendors and will post questions and responses on the Iowa Hospital Association web page, www.ihaonline.org by the close of business on August 19, 2008. The IRHTP's written responses will be considered part of the RFP. If the IRHTP decides to adopt a suggestion, the IRHTP will issue an amendment to the RFP.

1.2.3 The IRHTP assumes no responsibility for verbal representations made by its consortium members and representatives unless such representations are confirmed in writing by the IRHTP and incorporated into this RFP.

1.2.4 Changes and Amendments. In the event it becomes necessary for IRHTP to amend, add to or delete any part of this RFP, the amendment will be posted on the IHA website. Vendor's bid proposal must include acknowledgment of all addenda issued by IRHTP. If the IRHTP amends the RFP after the closing date of receipt of proposals, the IRHTP may, in its sole discretion, allow Vendors to amend their bid proposals in response to the IRHTP's amendment.

1.2.5 Receipt of Bid Proposals. Bid Proposals must be received at IHA's office no later than 3:00 p.m. CDST September 12, 2008. **This requirement is a mandatory requirement and is not a minor deficiency subject to waiver by the IRHTP.** No bid proposals will be accepted after the date and time specified. A late bid proposal shall be returned unopened to the Vendor. Additionally, no bid proposal will be accepted by telephone, electronic mail or facsimile. **The bid proposals must be mailed (with mailing in sufficient time to arrive on or before this deadline requirement) or be delivered as follows:**

Mailing Address:	Delivery To:
Iowa Hospital Association Attn: Mr. Art Spies 100 East Grand Ave. Suite 100 Des Moines, Iowa 50309	Iowa Hospital Association Attn: Mr. Art Spies 100 East Grand Ave. Suite 100 Des Moines, Iowa 50309

If bid proposals are delivered by mail service, express courier, delivery service or company, or in person, it shall be the sole responsibility of the Vendor submitting the proposal to insure that such delivery takes place prior to the aforementioned deadline. There shall be no waiving of the deadline due to missed deliveries on the part of the Vendor, Vendor's delivery staff or Vendor's choice of delivery service(s). Deliveries made directly to IHA must be placed with the IHA staff person able to accept such delivery.

1.2.6 Bid Proposal Opening. Bid Proposals will be opened at 3:00 p.m. CDST on September 12, 2008. Vendors may attend the bid opening if they wish, but no price information or any other information contained in any bid will be made public at that time. The bid proposals and the evaluation documents created by the IRHTP will remain confidential until the evaluation committee has evaluated all bid proposals submitted in response to this RFP and the IRHTP has issued a notice of award. The bid proposals submitted and the evaluation documents created by the IRHTP may be available for inspection subject to FCC and USAC guidelines or other applicable law only after the selection process is complete.

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

1.2.6.2 All bid proposals shall be firm for a period of 60 days to allow the evaluation committee to fully evaluate all proposals and make an award deemed to be in the best interest of IRHTP.

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

1.3 Proposal Submission & Format.

1.3.1 Bid Proposals shall be printed on 8.5" x 11" paper. The proposals should be in 3-ring binders with appropriate tabs for reference. The original bid proposal must be in a package CLEARLY MARKED **"IRHTP RFP 08-001 Proposal"** on the outer envelope or wrapping. This is necessary to insure that the response package is handled properly for verification against the RFP deadline. Lack of notation of the RFP number may affect the receipt timing and affect the evaluation process. Vendor should consider this item as a critical factor when submitting a response.

1.3.2 **To achieve a uniform review process and the maximum degree of comparability, proposals shall be organized in the following manner:**

1.3.2.1 **Title page** that includes the subject of the bid proposal, the RFP number being responded to (**08-001**), name of Vendor, address, name of designated contact person, telephone number, facsimile telephone number, E-mail address for Vendor's contact person (and, if applicable, the cellular telephone number of contact person) and the date

1.3.2.2 **Completed Bid Proposal Compliance Form (Attachment 2).**

1.3.2.3 **Completed Authorization to Release Information Form (Attachment 3).**

1.3.2.4 **Completed Bid Proposal Submittal Forms (Attachment 4 Part I and/or Part II).**

1.3.2.5 **Completed Indefeasible Right of Use (IRU) Form (Attachment 5).**

1.3.3 Number of Copies. Vendors shall submit one (1) with original blue-ink signatures and three (3) copies; in addition four (4) soft copies of the bid proposal shall be provided on (4) CDs using Microsoft Word and Excel, if proposal contains spreadsheets.

1.4 Clarification of Proposals and Obtaining Information. IRHTP reserves the right to contact a Vendor after submission of bid proposals for the purpose of clarifying a bid proposal to ensure mutual understanding. This contact may include written questions, interviews, site visits, and a review of past performance if the Vendor has provided goods or services to the IRHTP or its consortium members, USAC, or the ICN or requests for corrective pages in the Vendor's bid proposal. This information may be used to evaluate the Vendor's bid proposal. However, the information received from the Vendor shall not be considered in the evaluation of a Vendor's bid proposal if the information materially alters the content of the bid proposal. IRHTP reserves the right to obtain information concerning any Vendor or any proposal from any source and to consider such information in evaluating the Vendor's bid proposal.

1.5 Waiver of Deficiencies. IRHTP reserves the right to waive minor deficiencies in a bid proposal if, in the judgment of IRHTP, the consortium's best interest will be served. The decision as to whether a deficiency will be waived or will require the rejection of a bid proposal will be solely within the discretion of IRHTP. There is no guarantee or assurance that any deficiency will be deemed minor and that a deficiency will be waived. Each Vendor is specifically notified that failure to comply with or respond to any part of this RFP requiring a response may result in rejection of the bid proposal as not responsive.

1.6 Cost of Bid Proposal. IRHTP is not responsible for any costs incurred by a Vendor, which are related to the preparation or delivery of the bid proposal, or any other activities carried out by the Vendor as it relates to this RFP. The costs of preparation and delivery of the bid proposal are solely the responsibility of the Vendor.

1.7 Bid Proposal Obligations. The contents of the bid proposal and any clarification thereto submitted by the successful Vendor shall become part of the contractual obligation and incorporated by reference into the ensuing Contract.

1.8 Bid Proposals Property of IRHTP. Except as otherwise stated herein, all bid proposals become the property of the IRHTP and shall not be returned to the Vendor unless all bid proposals are rejected. In the event all bid proposals are rejected, Vendors will be asked to send prepaid shipping instruments to the IRHTP for return of the bid proposals submitted. In the event no shipping instruments are received by the IRHTP, the bid proposals will be destroyed by the IRHTP. Additionally, the evaluation documents created by the IRHTP will be destroyed in the event all bid proposals are rejected. Otherwise, at the conclusion of the selection process, the contents of all bid proposals may be placed in the public domain and be opened to inspection by interested parties subject to appropriate FCC, USAC, and federal procurement regulations.

1.9 Rejection and Disqualification of Bid Proposals.

1.9.1 IRHTP reserves the right to reject any and all bid proposals, in whole and in part, received in response to this RFP at any time prior to the execution of a written Contract. Issuance of this RFP in no way constitutes a commitment by IRHTP to award the Contract. This RFP is designed to provide Vendors with the information necessary for the preparation of competitive bid proposals. This RFP process is for IRHTP's benefit and is intended to provide IRHTP with competitive information to assist in the selection of goods and services.

1.9.2 The IRHTP may reject a bid proposal outright and not evaluate the proposal for any one (1) of the following reasons:

1.9.2.1 Failure of Vendor to deliver the bid proposal by the due date and time.

1.9.2.2 Failure to include the Bid Proposal Compliance Form signed by an officer of the Vendor submitting the bid proposal (Attachment 2).

1.9.2.3 Failure to include the Authorization to Release Information Form (Attachment 3).

1.9.2.4 Failure to include a completed Bid Proposal Submittal Form (Attachment 4).

1.9.2.5 The Vendor states that a technical requirement cannot be met.

1.9.2.6 The Vendor's response materially changes a technical requirement.

1.9.2.7 The Vendor's response limits the rights of the IRHTP.

1.9.2.8 The Vendor fails to respond to the IRHTP's request for information, documents, or references.

1.9.2.9 The Vendor's exceptions to the contract terms and conditions described in Chapter 2 and Attachment 1 (Contractual Terms and Conditions) materially changes the terms and conditions of that section or the requirements of this RFP.

1.9.2.10 The Vendor provides misleading or inaccurate responses.

1.9.2.11 The Vendor's proposal is materially unbalanced.

1.10 Public Records and Requests for Confidentiality.

1.10.1 The release of information by IRHTP to the public is subject to appropriate FCC, USAC, federal procurement regulations, and other applicable provisions of law relating to the release of records in the possession of the IRHTP. Vendors are encouraged to familiarize themselves with these provisions prior to submitting a bid proposal. All information submitted by a Vendor may be treated as public information by IRHTP unless the Vendor properly requests that information be treated as confidential at the time of submitting the bid proposal**. In the event the Vendor marks each page of its bid proposal as proprietary or confidential without adhering to the requirements of this Section, the IRHTP may reject the bid proposal as noncompliant.**

1.10.2 Any requests for confidential treatment of information must be included in a cover letter with the Vendor's bid proposal and must enumerate the specific grounds which support treatment of the material as confidential and must indicate why disclosure is not in the best interests of the public. The request must also include the name, address and telephone number of the person authorized by the Vendor to respond to any inquiries by IRHTP concerning the confidential status of the materials.

1.10.3 Any documents submitted which contain confidential information must be marked on the outside as containing confidential information, and each page upon which confidential information appears must be marked as containing confidential information. The confidential information must be clearly identifiable to the reader wherever it appears. All copies of the proposal submitted, as well as the original proposal, must be marked in this manner. **Failure to properly mark information as confidential shall relieve the IRHTP from any responsibility if the information is viewed by the public, a competitor, or is any way accidentally released.**

1.10.4 In addition to marking the material as confidential material where it appears, the Vendor must submit one (1) hard copy (printed) of the bid proposal from which the confidential information has been excised. This hard copy of the proposal MUST be clearly marked as "Excluding Confidential Materials". In addition to a hard copy, the Vendor must also include an electronic copy of the non-confidential portions of the proposal on CD-ROM using Microsoft Word and Excel as appropriate. The confidential material must be excised in such a way as to allow the public to determine the general nature of the material removed and to retain as much of the document as possible. The excised version must be submitted with the cover letter and may be made available for public inspection. This submittal is a mandatory requirement and is not subject to waiver. Failure to mark the confidential items and to provide the required one (1) copy with confidential information excised shall be defined as allowance for the entire proposal to be treated as a public record.

1.10.5 The Vendor's failure to request in the bid proposal confidential treatment of material pursuant to this Section and the relevant laws and administrative rules will be deemed by IRHTP as a waiver of any right to confidentiality which the Vendor may have had.

1.11 Restrictions on Gifts and Activities. No gifts or other activities will be accepted.

1.12 Restriction on Communication. Vendors should funnel all communications thru the Project Coordinator in order to receive the highest quality response from the consortium. Please refer to Chapter 2, section 1.2.2 regarding questions and answers.

1.13 Nonmaterial and Material Variances. The IRHTP reserves the right to waive or permit cure of nonmaterial variances in the bid proposal if, in the judgment of the IRHTP, it is in the IRHTP's best interest to do so. Nonmaterial variances include minor informalities that do not affect responsiveness; that are merely a matter of form or format; that do not change the relative standing or otherwise prejudice other Vendors; that do not change the meaning or scope of the RFP; or that do not reflect a material change in the services. In the event the IRHTP waives or permits cure of nonmaterial variances, such waiver or cure will not modify the RFP requirements or excuse the Vendor from full compliance with RFP specifications or other contract

requirements if the Vendor is awarded the contract. The determination of materiality is in the sole discretion of the IRHTP

1.14 Copyrights. By submitting a bid proposal, the Vendor agrees that IRHTP may copy the bid proposal for purposes of facilitating the evaluation or to respond to requests for public records. The Vendor consents to such copying by submitting a proposal and warrants that such copying will not violate the rights of any third party. IRHTP will have the right to use ideas or adaptations of ideas, which are presented in the proposals. In the event the Vendor copyrights the bid proposal, the IRHTP may reject the bid proposal as noncompliant.

1.15 Conflict Between Terms. IRHTP reserves the right to accept or reject any exception taken by the Vendor to the terms and conditions of this RFP. Substantial variations between the Vendor's terms and conditions and those contained in this RFP may be grounds for rejection of the Vendor's bid proposal as non-responsive and non-compliant.

1.16 Release of Claims. With the submission of a bid proposal, Vendor agrees that it will not bring any claim or have any cause of action against IRHTP or it's consortium members based on any misunderstanding concerning the information provided herein or concerning IRHTP's failure, negligent or otherwise, to provide the Vendor with pertinent information as intended by this RFP.

1.17 Construction of RFP with Laws and Rules. Changes in applicable laws and rules may affect the award process or the resulting Contract. Vendors are responsible for ascertaining pertinent legal requirements and restrictions. Vendors are encouraged to visit the USAC Rural Health Care Pilot Project website: http://www.usac.org/rhc-pilot-program and the FCC website, http://www.fcc.gov/cgb/rural/rhcp.html#orders.

1.18 RFP Copy. Copies of the RFP will be available on the USAC Rural Health Care Pilot Program web site at http://www.usac.org/rhc-pilot-program//tools/search-postings.aspx. In addition the RFP will also be available to vendors via the Iowa Hospital Association web site at http://www.ihaonline.org. Vendors may also request a copy of the RFP by contacting the Iowa Hospital Association (515) 288-1955 (copy requested will be issued via e-mail).

1.19 Downloading RFP from the Internet. The RFP, Amendments, and all responses to Vendor questions will be posted on the Iowa Hospital Association web site at http://www.ihaonline.org. Vendors are advised to check the IHA website periodically for amendments to this RFP as Vendors will not automatically receive Amendments and responses.

1.20 Definition of Contract. The full execution of a written contract shall constitute the making of a contract for services and no Vendor shall acquire any legal or equitable rights relative to the contract services until the Contract has been fully executed by the successful Vendor and the IRHTP.

1.21 Award Notice and Acceptance Period. The IRHTP will send an "Award Notice" to all Vendors submitting a timely bid proposal. Negotiation and acceptance of the contracts shall be completed with the successful Vendor no later than sixty (60) days after the Award Notice. If an apparent successful Vendor fails to negotiate and deliver the executed contract by that date, the IRHTP may, in its sole discretion, cancel the award and award the contract to the next highest ranked Vendor. The IRHTP reserves the right to continue negotiations after sixty days if, in IRHTP's sole discretion, IRHTP deems it to be in the best interests of IRHTP to do so.

1.22 No Minimum Guaranteed. The IRHTP anticipates that the selected Vendor will provide services as requested by the IRHTP. The IRHTP will not guarantee any minimum compensation will be paid to the Vendor or any minimum usage of the Vendor's services.

1.23 Criminal History and Background Investigation. The IRHTP reserves the right to conduct criminal history and other background investigations of the Vendor, its officers, directors, shareholders, or partners and personnel retained by the Vendor for the performance of the Contract.

1.24 Suspension and Debarment. IRHTP may review all vendors responding to this RFP to validate them against the FCC's Suspension and Disbarment list http://universalservice.org/sl/about/suspensions-debarments.aspx,

Persons who have been convicted of criminal violations or held civilly liable for certain acts arising from their participation in the Schools and Libraries Support Mechanism are subject to suspension and debarment from the program.

FCC rules provide that there are two stages to this process. First, when the FCC becomes aware that a person has been convicted of a crime or judged civilly liable for certain acts arising out of that person's participation in the program, the FCC suspends that person from activities related to the program. The FCC issues a public Notice of Suspension and of Proposed Debarment. The notice of suspension informs the suspended person or other interested party that that they have 30 days to oppose the proposed debarment. The second stage of this process is the actual debarment. The FCC will, absent extraordinary circumstances, provide notice of a decision to debar within 90 days of receiving any information from the person proposed for debarment

CHAPTER 2

CONTRACTUAL TERMS

RFP 08-001

2.1 Contractual Terms Generally.

2.1.1 The Contract, which the IRHTP expects to award, will be based upon the bid proposal submitted by the successful Vendor (Vendor awarded the Contract) and this solicitation. The Contract between the IRHTP and the Vendor shall be a combination of the specifications, terms and conditions of the Request for Proposal, including those contained in the contract terms and conditions sample agreement identified as Attachment 1, (Contractual Terms and Conditions), the offer of the Vendor contained in its bid proposal, written clarifications or changes made in accordance with the provisions herein, and any other terms deemed necessary by the IRHTP.

2.1.2 The Contract terms contained in Attachment 1 (Contractual Terms and Conditions) are not intended to be a complete listing of all Contract terms but are provided only to enable Vendors to better evaluate the costs associated with the RFP and the potential resulting Contract. Vendors should plan on such terms being included in any Contract awarded as a result of this RFP. All costs associated with complying with these requirements should be included in any pricing quoted by the Vendor.

2.1.3 By submitting a bid proposal, each Vendor acknowledges its acceptance of these specifications, terms and conditions without change except as otherwise expressly stated in the appropriate section of the Bid Proposal Compliance Form (Attachment 2). If a Vendor takes exception to a provision, it must state the reason for the exception and set forth in Attachment 2 of its bid proposal the specific Contract language it proposes to include in place of the provision. Exceptions that materially change these terms or the requirements of the RFP may be deemed non-responsive by the IRHTP, in its sole discretion, resulting in possible disqualification of the bid proposal. The IRHTP reserves the right to either award a Contract without further negotiation with the successful Vendor or to negotiate Contract terms with the selected Vendor if the best interests of the IRHTP would be served.

2.2 Additional Cost Items Not In Contract. IRHTP is unaware of any additional Contract terms that would add cost. Notwithstanding, should any Contract items arise that would cost additional monies; those costs shall be borne by the Vendor.

2.3 Fiber Optic Cable Installation Delivery Schedule. The Fiber Optic Cable installation schedule shall be as agreed upon between the successful Vendor and the IRHTP during the contract negotiation process.

Additional Vendor Information
The FCC's Fourteenth Order on Reconsideration (CC Docket No. 96-45, FCC 99-256, 11/3/1999) stipulated that telecommunications carriers are no longer required to be Eligible Telecommunications Carriers (ETC's) to participate in this program. All non-traditional telecommunications service providers may participate. Service providers intending on responding to this RFP must secure a Service Providers Identification Number (SPIN) from USAC. See the USAC website for details on how to secure a SPIN.

2.4 Bid Proposal Security & Performance Bond. Not Required

2.5 Vendor must acquire USAC SPIN and provide on Bid Proposal Compliance Form

2.6 Debarment, Suspension and Other Responsibility Matters. The Vendor and all of its sub-contractors shall certify that the company or corporation is not presently, or within the last three years, debarred, suspended, proposed for suspension, declared ineligible, or excluded from covered transactions by any government agency; or has not been reported to or questioned by a consumer protection office regarding its business practices; or it or its officers or directors are not presently or within the last three years, indicted for or otherwise criminally or civilly charged by a government entity for the commission of a public offense related to its business; or has not, within the last three years, had any government transactions terminated for cause or default; or within the last three years, has been terminated from or denied extension of a contract for any of the reasons above in addition to the Vendor's failure to maintain compliance of contract specifications or has failed to bargain or negotiate in good faith, conflicts not clearly specified or contained in the contract.

CHAPTER 3 – Part I

TECHNICAL SPECIFICATIONS

RFP 08-001

MANDATORY NETWORK REQUIREMENTS

3.0 Mandatory Requirements. The purpose of this Section is to identify the mandatory requirements and conditions a bid proposal **must** fulfill before any consideration will be given. Each mandatory requirement requires a positive response by providing confirmation of compliance and information describing how the Vendor doesn't meet, meets or exceeds the mandatory requirement. **VENDOR MUST RESPOND TO ALL SECTIONS (AND SUB-SECTIONS) OF CHAPTER 3 TO HAVE ITS BID PROPOSAL CONSIDERED.**

3.0.1 Vendor shall provide the following general background information of Vendor.

3.0.2 Name, address, telephone number, fax number and e-mail address of the Vendor including all d/b/as' or assumed names or other operating names of the Vendor.

3.0.3 Form of business entity, i.e., corporation, partnership, proprietorship, limited Liability Company.

3.0.4 State of incorporation (if a corporation). If a limited liability company, state of formation.

3.0.5 Identify and specify the location(s) and telephone numbers of the major offices and other facilities that relate to the Vendor's performance under the terms of this RFP.

3.0.6 Local office addresses and phone number.

3.0.7 Number of employees.

3.0.8 Type of business.

3.0.9 Name, address and telephone number of the Vendor's representative to contact regarding all contractual and technical matters concerning this proposal.

3.0.10 Name, address and telephone number of the Vendor's representative to contact regarding scheduling and other arrangements.

3.0.11 Identify the Vendor's accounting firm.

3.0.12 The successful Vendor will be required to register to do business in Iowa. If already registered, provide the date of the Vendor's registration to do business in Iowa.

3.0.13 Vendor must provide the following legal or administrative information.

3.0.13.1 During the last five (5) years, describe any damages or penalties or anything of value traded or given up by Vendor under any of its existing or past contracts as it relates to services performed that are similar to the services contemplated by this RFP and the resulting Contract. If so, indicate the reason for the penalty or exchange of property or services and the estimated account of the cost of that incident to the Vendor.

3.0.13.2 During the last five (5) years, describe any order, judgment or decree of any Federal or State authority barring, suspending or otherwise limiting the right of the Vendor to engage in any business, practice or activity.

3.1 Link-Segments.

3.1.1 A link-segment is defined as the fiber optic facility beginning at the health care providers (HCP) termination and continuing on until terminated at the designated ICN endpoint.

3.1.2 Each link-segment constructed or provided as part of this project must be engineered and tested for a minimum of one gigabit of throughput from the local rural hospital to the specified ICN POP.

3.1.3 Precise room and/or exact building located on contiguous property will be specifically defined at the time of contract negotiations. The successful vendor must agree to permit such minor end point location adjustments without cost impact to the consortium.

3.1.4 In the event there are changes in end point locations, which occur during installation, all actual end point locations will be compared to all proposed end point locations to determine the aggregate difference. The end point aggregate difference will be the basis for negotiated cost adjustments (increase or decrease) between the vendor and the consortium.

3.1.5 The ICN POP locations are all existing and defined locations. In each instance, there are, in most cases, ductwork entry facilities where the property line meets the ROW. When available, the Vendor must use this access point to make entry into the ICN's POP.

3.2 Outside Plant (OSP) Construction Specifications. All new fiber optic cable facilities (link-segment) designed and constructed as part of this project must be constructed in accordance with the OSP construction specifications as attached to this RFP.

3.2.1 Fiber installed must meet SMF-28/GR/253 fiber specifications with a minimum fiber count of any new constructed fiber optic facility of 36 fibers.

3.2.1.1 Armored Fiber Optic Cable

3.2.1.2 Single Jacket

3.2.1.3 Loose Tubes, Three tubes of 12 fibers each (Dri-Core)

3.2.1.4 36 total fibers

3.2.1.5 Color-coded Buffer Tubes

3.2.2 Non-Armored Cable (Kevlar) Kevlar Cable must be in duct and must include a #10 AWG tracer wire inside the duct.

3.2.3 All fiber placed within the incorporated city limits should be placed in continuous 2" HDPE.

3.3 Fiber Optic Cable Method of Termination Specifications. All fiber optic cable facilities furnished as part of this project must be terminated in accordance with Detailed Specifications. Unless otherwise stated, the vendor shall terminate all fiber optic cable on either rack-mounted bulkheads or wall-mounted Fiber Distribution Panels (FDPs), furnished by the vendor located inside the HCPs equipment room. All vendor provided rack mounted bulkheads or FDPs shall be equipped with SC style connectors. Where HCPs have designated cable demarcation rooms separate from the equipment room, contractors may request a waiver from the IRHTP Project Coordinator to allow them to terminate in the demarcation room. Vendor shall furnish the appropriate SMF from the rack mounted Bulkhead Panel or the FDP to the HCP's equipment rack.

3.3.1 Rack Mounted FDP at each hospital shall be:

CORNING Closet Connector Housing
CCH-01U (or approved equivalent)

3.3.2 Wall Mounted FDP if required for a hospital demarcation shall be:

CORNING Wall Mountable Connector Housing
WCH-02P (or approved equivalent)

3.3.3 Rack Mounted FDP at each ICN POP shall be:

CORNING Closet Connector Housing
CCH-04U (or approved equivalent)

3.3.4 Splice all fibers. There must be continuity of all 36 fibers from Location A through to location Z. Each fiber must be tested end for end. (See Chapter 3 Annex B Section 7 Clause 9.3.2)

3.3.5 Terminate fibers. The Vendor shall terminate two (2) pair [four fibers] at the "A" location and the same two pairs [four fibers] at the "Z" location.

3.4 Fiber Jumpers. Vendor shall provide the following singlemode fiber patch cables.

3.4.1 SC to SC Duplex Singlemode Fiber Patch Cord – 2 meters: Quantity 100

3.4.2 SC to SC Duplex Singlemode Fiber Patch Cord – 5 meters: Quantity 152

3.4.3 SC to SC Duplex Singlemode Fiber Patch Cord – 10 meters: Quantity 304

3.4.4 SC to SC Duplex Singlemode Fiber Patch Cord – 15 meters: Quantity 35

3.5 Vendor Responsibilities.

3.5.1 Vendor shall provide all OSP materials, labor, and services needed to install a fiber optic facility between the points listed in Chapter Three, Annex A, (Site Maps and Information). Installation is construed to mean, all digging, trenching, plowing or boring as needed for the placement of a 36-count fiber optic cable between the "A" location and the "Z" location. The installation shall also include all hand holes, tubs, connectors, splicing, terminations, pigtails, landscape and road restoration, and testing.

3.5.2 The contractor duties include acquiring city, county and state permits, securing all outside plant materials to complete the project, submitting red-lined construction drawings per site, documenting all fiber testing, and coordinating other related issues with the consortiums project manager. Contractor is responsible for all One-Call notifications.

3.5.3 Upon notice by the Vendor that each link-segment is ready for testing and acceptance, a representative of the IRHTP will jointly with the vendor, complete the checklist as shown as Chapter Three, Annex C, (Link-Segment Completion Checklist). The vendor, when submitting for payment, will submit the completed and signed copy of the checklist.

3.5.4 The vendor shall test each link-segment from location A bulkhead to the location Z bulkhead using appropriate and approved makes and models of test equipment. Vendor shall perform an Optical Time Domain Reflectometer sweep of the cable showing the total loss in db for the end-to-end link segment. Prior to testing, the vendor shall submit the list (make, model, and date of last calibration), of the proposed test equipment to the IRHTP project coordinator.

(See Detailed Specifications Part Seven (7) Clause 9.)

3.6 Local Rural Hospital. IRHTP has designated a local on-site coordinator at each participating hospital. The on-site coordinator will specify the route of the fiber path from the point it leaves the public ROW and enters the Hospital grounds. The on-site coordinator will also designate the location of the fiber termination within the building. The fiber will be either terminated on rack-mounted bulkheads or wall-mounted fiber optic distribution boxes depending upon the circumstances of the specific location. The Vendor shall furnish any required bulkheads or FDP's with SC Connectors.

All fiber from the Public ROW to the hospital penetration shall be placed in continuous 2" or greater HDPE.

Fiber in HDPE can be Kevlar but must be accompanied by a #10 AWG stranded copper wire inside the duct. At the vendor's discretion, armored fiber can be placed in the duct in lieu of Kevlar accompanied by the tracer wire

3.7 ICN Endpoints. At each ICN endpoint there will be an existing fiber hand hole or tub to facilitate the Vendor pulling the fiber into the existing ductwork. An ICN OSP Technician will supervise this entry into the tub and ductwork. The Vendor will terminate the fiber on rack-mounted bulkheads with SC style connectors or as otherwise specified by the ICN and furnished by the Vendor. Vendors must coordinate the ICN endpoint installation date with the ICN OSP Engineer.

3.8 Change Orders. The vendor must submit a firm fixed price for each site bid. There are no funds set aside or budgeted for contingencies or change orders. In the event a situation arises that is out of control of the vendor, he shall immediately notify the IRHTP Project Coordinator of the dilemma and the cost to overcome the problem. The IRHTP Project Coordinator will research the alternatives and resources available to see if the issue can be resolved.

3.9 Value Engineering. If after the award of a link-segment contract to a vendor, the vendor determines that there exists an opportunity to increase the value of a link-segment by modifying or changing the route as was depicted on an approved construction drawing, the IRHTP will consider that change even though the change may increase overall cost. The IRHTP is not bound to accept any Value Engineering proposals. Examples of Value Engineering are, but not limited to: "share the trench" or "share the duct" opportunities, newly identified IRU opportunities for part or all of the link-segment route, future risk mitigation to the fiber optic cable facility, permit or ROW issue mitigations, or changing a route to pickup an additional health care provider building or location.

3.10 Hospitals not requiring a last mile build-out. The following six hospitals listed in this RFP do not currently require a fiber build or modification:

3.10.1 Madison County Health Care System in Winterset, Iowa

3.10.2 Mercy Capitol in Des Moines, Iowa

3.10.3 Mercy Medical Center – Centerville in Centerville, Iowa

3.10.4 Ottumwa Regional Health Center in Ottumwa, Iowa

3.10.5 University of Iowa Hospitals and Clinics in Iowa City, Iowa

3.10.6 Wayne County Hospital in Corydon, Iowa

3.11 Hospital Relocations. During the next three years, the following hospitals will be relocating:

Hospital	**New Location**
Mercy Capitol (Westlakes), Des Moines, IA	1601 60th Street, West Des Moines, IA 50266
Story County Medical Center, Nevada, IA	640 S. 19th Street, Nevada, IA 50201
Ringgold County Hospital, Mount Ayr, IA	504 N. Cleveland, Mount Ayr, IA 50854
Jefferson County Hospital, Fairfield, IA	2000 So. Main, Fairfield, IA 52556
Hamilton Hospital, Webster City	100 Fair Meadow Drive, Webster City, IA
Clarinda Regional Health Center, Clarinda, IA	Farrens 3rd lot 3 Parcel D Fraction1-68-37, Hwy71 & Bypass 2, Clarinda, IA
Crawford County Memorial Hospital in Denison, IA	To be Determined
Baum-Harmon Mercy Hospital in Primghar, IA	To be Determined

CHAPTER 3 – PART II

QUALITY ASSURANCE INSPECTIONS SERVICES

RFP 08-001

3.12 Overview of Project Responsibilities

3.13 General: The IRHTP is soliciting a vendor to provide Quality Assurance Inspection Services in the field to oversee the quality control of OSP contractor(s) installing the fiber optic facilities requested under this RFP 08-001. Over the next three calendar years, it is estimated that fiber optic cable facilities will be constructed in as many as 95 communities and locations in the State of Iowa. The fiber optic cable facility construction projects range in length from 1000 feet to 22 miles. The preponderance of the projects is less than five miles in length.

3.14 Estimated Schedule: The estimated number of sites being constructed each calendar year is as follows:

Oct 2008 through Dec 31 2008	5 sites
Jan 2009 through Dec 31, 2009	57 sites
Jan 2010 through Dec 31, 2010	33 sites

The actual number of sites constructed will depend upon the prevailing weather each year and the progress of new hospitals planned for construction

3.15 Intermittent Schedule: The schedule of implementation of this project is impacted by a number of factors; weather, the negotiated contract schedule with the winning OSP contractor, progress in hospitals under construction, funding timelines, and permitting issues:

3.15.1 The typical OSP construction year in Iowa is March through November. Depending on the particular site schedule, construction may start earlier or extend past the typical dates.

3.15.2 A Vendor desiring to provide these Quality Assurance Services must consider the above factors when sizing and planning the deployment of the SI (site inspector) workforce.

3.16 Number of Simultaneous Projects underway: It is anticipated that there will be no more than 10 OSP Construction projects underway at any one time.

3.17 Eligible Vendors

3.17.1 Any qualified Vendor may bid on Part I (the construction of the network as described in this RFP) or Part II, (the Quality Assurance Inspection Services) but the Vendor will not be awarded both Parts.

3.17.2 Any qualified Vendor may submit a bid for Part II, but IRHTP will not award a contract if the Vendor has any business relationship with the Vendor awarded Part I of this RFP.

3.18 Vendor Qualifications:

3.18.1 The vendor shall be a knowledgeable Outside Plant construction firm and shall have been in the business of Outside Plant Construction for at least five years, (or) shall be an Iowa registered consulting firm employing or retaining a registered professional civil engineer on staff with five years experience in the design and construction of fiber optic cable facilities.

3.18.2 Vendors shall submit a narrative describing their firm, the scope of its experience in the area of OSP Fiber Optic Cable construction, and a resume` of the experience and qualifications of the Engineer assigned to this project.

3.19 Site Inspectors

3.19.1 **Site Inspector Qualifications:** Only knowledgeable and experienced OSP Field Personnel (Site Inspectors) with five years practical experience in the field of OSP Fiber Optic Cable installation will be accepted as qualified site inspectors. The vendor must employ knowledgeable and experienced OSP Field Personnel). Field personnel must be personally supervised by the Vendor's registered engineer or by a designated Supervisor, approved by the IRHTP Project Coordinator.

3.19.2 **IRHTP Approval of all Site Inspectors:** The Vendor shall submit resumes to the IRHTP Project Coordinator for all site personnel who will be employed by the Vendor for this project. The IRHTP will pay particular attention to the practical experience and training of each SI submitted for approval. The IRHTP must approve each site inspector before he/she can be deployed on this project. The IRHTP reserves the right to at any time dismiss inspectors for nonperformance.

3.19.3 **Level of Oversight:** The OSP Field Personnel (site inspectors) shall provide continuous over sight at each construction location any time the contractor is working on site. The vendor providing services under this RFP will receive a minimum of 48 hours notice from the Contractor prior to commencement of work at each particular site.

3.19.4 **Progress Reporting:** The site inspector shall provide a project progress report at the COB each Thursday. The Vendor, in turn, will meet with the IRHTP designated representative each Friday of every project workweek to provide appropriate updates. The IRHTP Project Coordinator will prescribe the report format and how this report will be communicated.

3.20 Services Requested

3.20.1 **Examples of Quality Assurance Services Requested**: The following are examples of, but not limited to, the types of quality assurance service requested. This is a partial list and does not limit the site inspector's responsibility. The site inspector is expected to rely on training and experience to guide performance.

3.20.1.1 The site inspector (SI) shall act as the HCP's representative during the phases of building penetration and cable placement upon the HCP's property.

3.20.1.2 The SI shall carefully monitor the installation of the inside fiber facilities within the HCP's building to ensure that construction does not interfere with Hospital Operations. SI shall act as the primary interface between the HCP's designated representative and the Contractor's personnel.

3.20.1.3 The SI shall verify that all permits and easements are in place before the Contractor begins work.

3.20.1.4 The SI shall verify all necessary barricades and signs are in place before the Contractor commences work.

3.20.1.5 The SI shall act as the Safety Officer over all work being performed under this contract in a particular community. SI shall stop work immediately anytime an unsafe condition is discovered and report situation at once to IRHTP Project Coordinator. The SI shall maintain vigilance for traffic control issues and traffic circulation problems and resolve them as soon as possible.

3.20.1.6 The SI shall verify all bore, plow, and trenching depths to ensure they are in conformance with Chapter 3 Annex B.

3.20.1.7 The SI shall be knowledgeable of and responsible for compliance with all of the detailed specifications in Chapter 3 Annex B pertaining to OSP construction being done under this RFP.

3.20.1.8 The SI in concert with the IRHTP OSP Manager, shall supervise all entry into IRHTP Cable vaults, hand holes, pulling tubs, duct banks, and IRHTP FOTs rooms.

3.20.1.9 The SI shall witness all testing as required in Chapter 3 Annex B Part 7.

3.20.1.10 The SI shall verify that all construction drawings are redlined in accordance to the actual route constructed.

3.20.1.11 The SI shall note all pre-existing route conditions (such as cracked pavement, washouts, rocky areas not supporting grass, and document them with a digital camera.

3.20.1.12 The SI shall maintain vigilance for traffic control and traffic circulation problems and resolve them as soon as possible.

3.21 Executive Summary

3.21.1 **Content of Executive Summary.** The vendor shall prepare an executive summary and overview of the services being offered, including all of the following information:

3.21.1.1 Statements that demonstrate that the vendor understands and agrees with the terms and conditions of the RFP and the proposed contract.

3.21.1.2 A vision and mission statement for service as requested in the RFP.

3.21.1.3 An overview of the vendor's plans for timely delivery of services (including project management approach).

3.21.1.4 An overview of the vendor's knowledge of requirements and its proposed approach for delivering results.

3.21.2 **Work Plan**

3.21.2.1 The vendor shall address each deliverable and performance measure in Section 3 of the RFP. Proposals must be fully responsive to project requirements. Merely repeating the requirements will be considered non-responsive and may disqualify the vendor.

3.21.2.2 Proposals must identify any deviations from the requirements of this RFP or requirements the vendor cannot satisfy. Any deviations from the requirements of the RFP or any requirement of the RFP that the vendor cannot satisfy may disqualify the vendor.

3.21.3 **Background Information.** The vendor shall provide the following general background information:

3.21.3.1 Name, address, telephone number, FAX number and e-mail address of the vendor including all operating names as well as those doing business as (d/b/a) and assumed names of the vendor.

3.21.3.2 Form of business entity, i.e., corporation, partnership, proprietorship, limited liability company.

3.21.3.3 State of incorporation, state of formation, or state of organization.

3.21.3.4 Identify and specify the location(s) and telephone numbers of the major offices and other facilities that relate to the vendor's performance under the terms of this RFP.

3.21.3.5 Local office address and phone number (if any).

3.21.3.6 Number of employees per each location.

3.21.3.7 Type of business.

3.21.3.8 Name, address and telephone number of the vendor's representative to contact regarding all contractual and technical matters concerning this proposal.

3.21.3.9 Name, address and telephone number of the vendor's representative to contact regarding scheduling and other arrangements.

3.21.3.10 Name and qualifications of any subcontractors who will be involved with this project.

3.21.3.11 Identify the vendor's accounting firm.

3.21.3.12 The successful vendor will be required to register to conduct business in Iowa. If already registered, provide the date of the vendor's registration to conduct business in Iowa and the name of the vendor's registered agent.

3.21.4 **Company Experience.** Vendor must provide the following information regarding its experience:

3.21.4.1 Number of years in business.

3.21.4.2 Number of years experience with providing the types of services sought by the RFP.

3.21.4.3 Describe the level of technical experience in providing the types of services sought by the RFP.

3.21.4.4 List all services similar to those sought by this RFP that the vendor has provided to other businesses or governmental entities within the last five years (include dates of service).

3.21.4.5 Past Outside Plant Construction Experience. List contact references from three (3) successful past or present clients knowledgeable of the vendor's performance in providing outside plant construction services or civil engineering services to governmental jurisdictions, state or regional, with buried fiber optic cable networks. All referenced projects shall have been completed in the last five (5) years. Include a contact person, title, project responsibilities and telephone number for each reference.

3.21.4.6 Personnel. The vendor must provide resumes for all key personnel, as defined in Section 3, involved in providing the services discussed in this RFP. The following information must be included in the resumes:

3.21.4.6.1 Full name.

3.21.4.6.2 Education.

3.21.4.6.3 Years of experience and employment history, particularly as it relates to the scope of services specified herein.

3.21.5 **Financial Information.** The vendor must provide the following financial information.

3.21.5.1 Audited financial statements (annual reports) for the last two (2) years.

3.21.5.2 A minimum of two (2) financial references.

3.22 Firm Fixed Price.

3.22.1 The Vendor providing the Quality Assurance Inspection Services shall submit one firm fixed price for the oversight inspection of these 95 sites over a three-year period.

3.22.2 The firm fixed price must include not only the fee, but all other costs such as travel, lodging, meals, communications, office supplies, and other specific requirements to do the job.

3.22.3 Bid responses containing only an hourly rate plus expenses will not be considered by the IRHTP. The bid response must contain the total three year costs and expenses.

3.23 Award Process.

3.23.1 An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.

3.23.2 The IRHTP evaluation committee will make a recommendation to the IRHTP Steering Committee indicating the committee's choice. The Project Coordinator on behalf of the Steering Committee will issue an Award to the Vendor or Vendors and begin contract negotiations. All Vendors submitting Bid Proposals will receive notification of the award.

3.23.3 All applicable contracting requirements imposed by this RFP and Iowa law shall be met by the Vendor. The successful Vendor must, within sixty (60) days, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.

3.24 Bid Response Evaluation Criteria.

3.24.1 The IRHTP may award a Contract to the most responsible Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of Chapter 3. Part II.

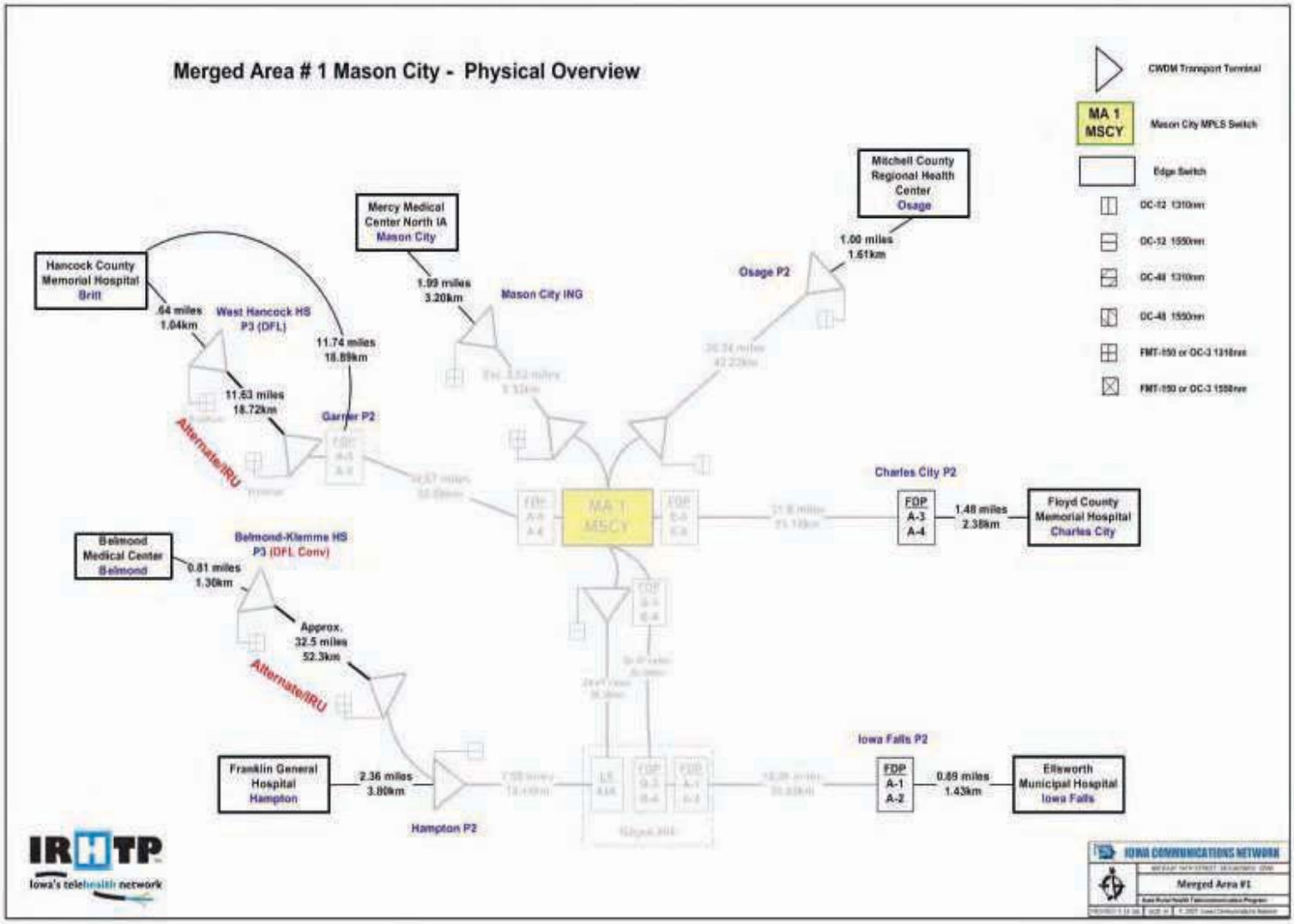
3.24.2 The Part II award will not be made until a Part 1 Vendor is chosen and a contract signed.

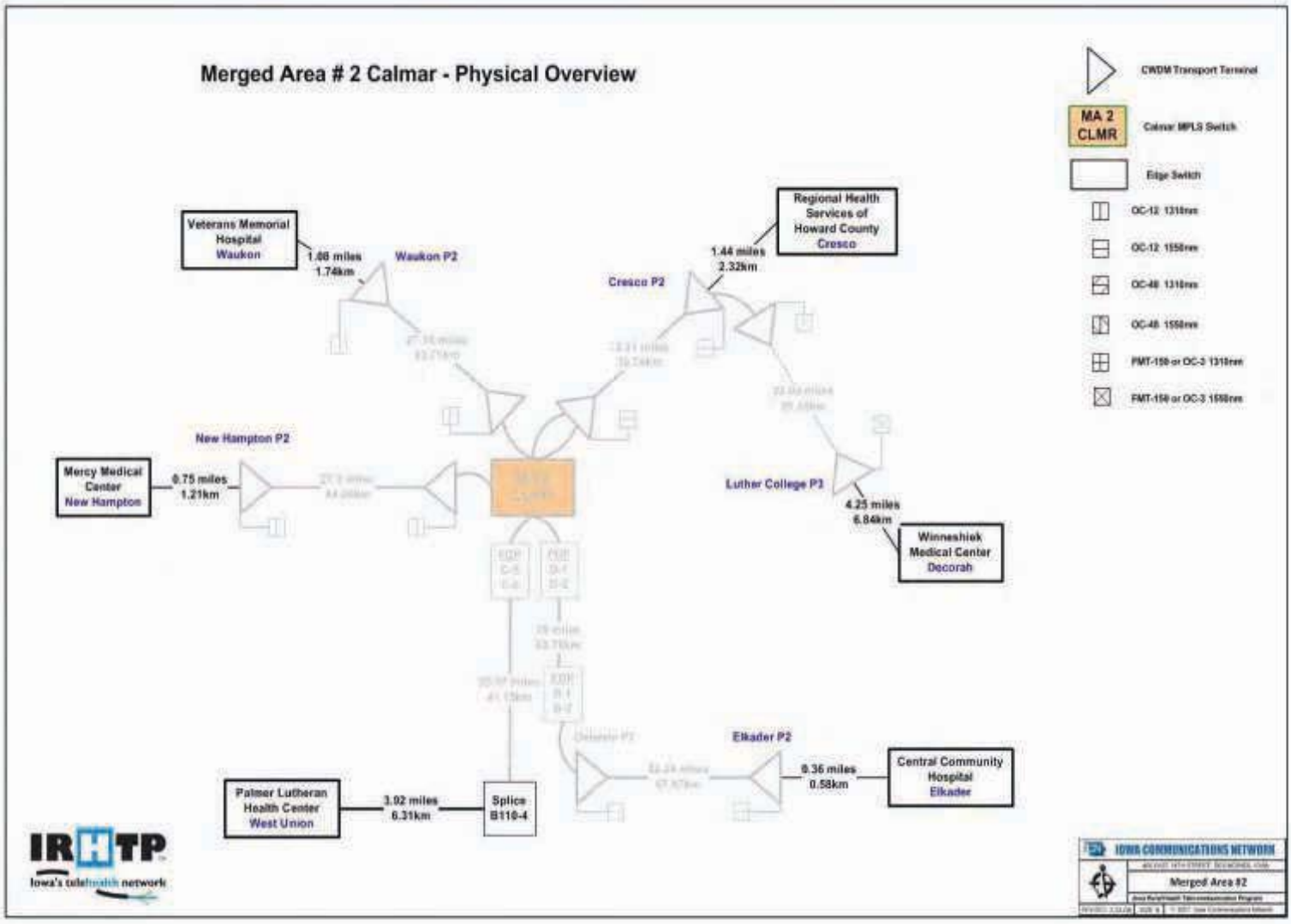
3.24.3 The IRHTP will do an in-depth due diligence to ensure that that there are no conflicts of interest between the Part I and Part II Vendors.

ANNEX A

NETWORK MAPS

RFP 08-001


Merged Area # 1 Mason City - Physical Overview
CWDM Transport Terminal
MA 1 MSCY
Mason City MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Mitchell County Regional Health Center Osage
1.00 miles 1.61km
Osage P2
Mercy Medical Center North IA Mason City
1.99 miles 3.20km
Mason City ING
Hancock County Memorial Hospital Britt
.64 miles 1.04km
West Hancock HS P3 (DFL)
11.74 miles 18.89km
11.63 miles 18.72km
Garner P2
Alternate/RU
MA 1 MSCY
Charles City P2
FDP A-3 A-4
1.48 miles 2.38km
Floyd County Memorial Hospital Charles City
Belmond Medical Center Belmond
0.81 miles 1.30km
Belmond-Klemme HS P3 (DFL Conv)
Approx. 32.5 miles 52.3km
Alternate/RU
Iowa Falls P2
Franklin General Hospital Hampton
2.36 miles 3.80km
Hampton P2
FDP A-1 A-2
0.89 miles 1.43km
Ellsworth Municipal Hospital Iowa Falls
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #1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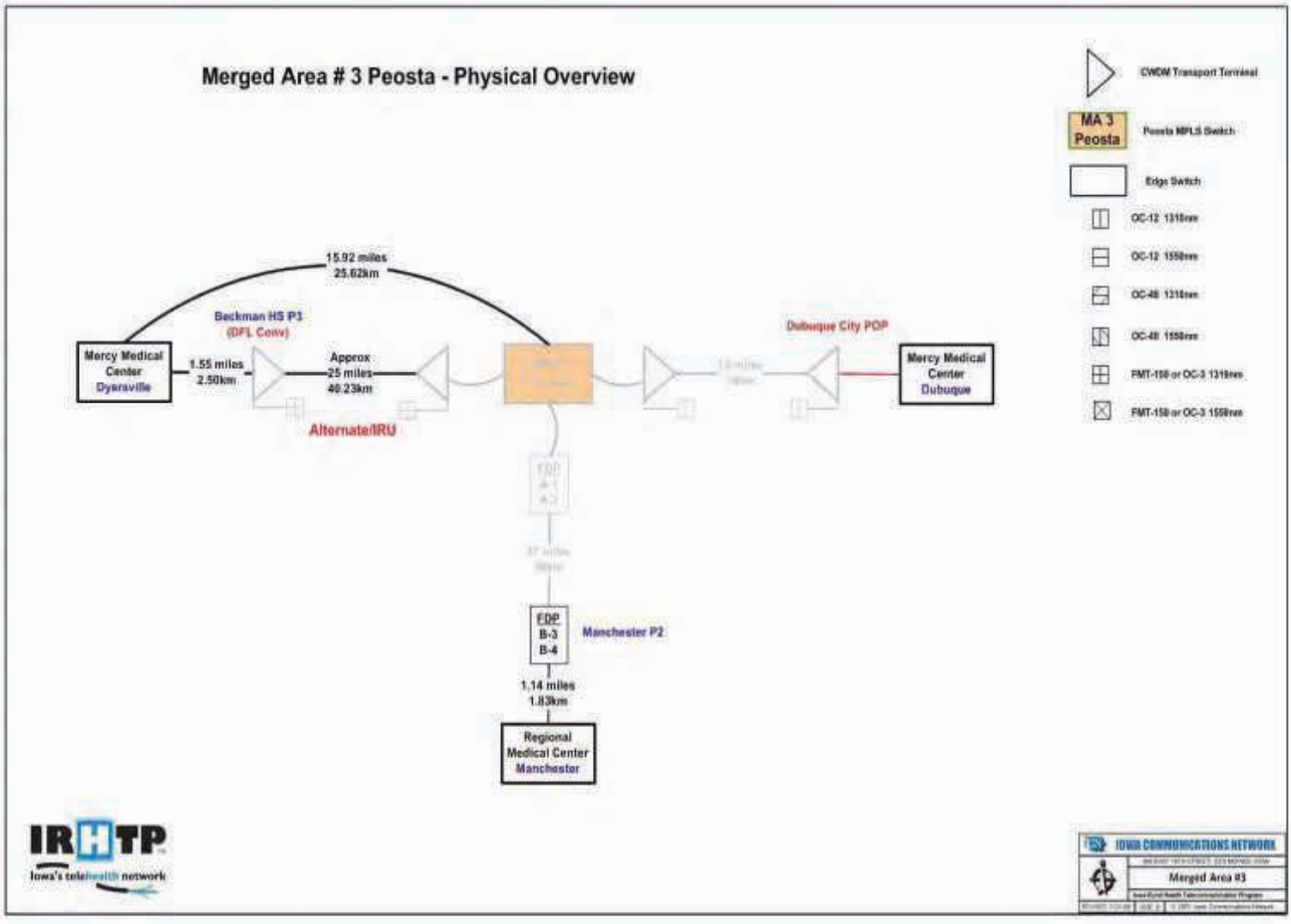
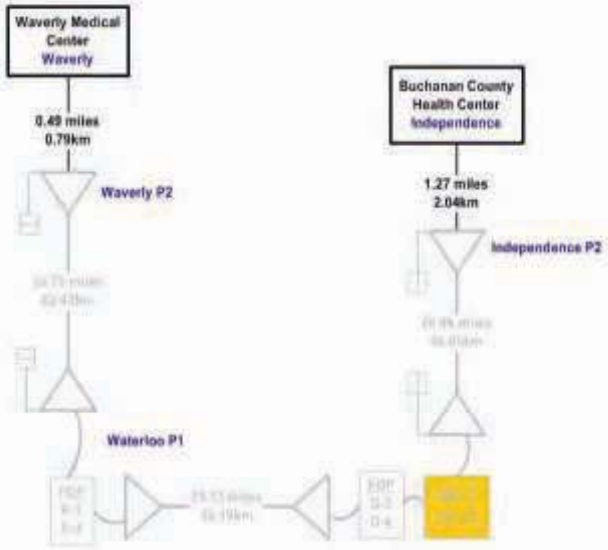
CWDM Transport Terminal
MA 2 CLMR
Calmar MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Veterans Memorial Hospital Waukon
1.08 miles 1.74km
Waukon P2
Regional Health Services of Howard County Cresco
1.44 miles 2.32km
Cresco P2
New Hampton P2
Mercy Medical Center New Hampton
0.75 miles 1.21km
Luther College P3
4.25 miles 6.84km
Winneshiek Medical Center Decorah
Elkader P2
0.36 miles 0.58km
Central Community Hospital Elkader
Palmer Lutheran Health Center West Union
3.02 miles 6.31km
Splice B110-4
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #2


Merged Area # 3 Peosta - Physical Overview
CWDM Transport Terminal
MA 3 Peosta
Peosta MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
15.92 miles
25.62km
Beckman HS P3
(DFL Conv)
Mercy Medical Center Dyersville
1.55 miles
2.50km
Approx
25 miles
40.23km
Alternate/IRU
Dubuque City POP
Mercy Medical Center Dubuque
EDP
B-3
B-4
Manchester P2
1.14 miles
1.83km
Regional Medical Center Manchester
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #3

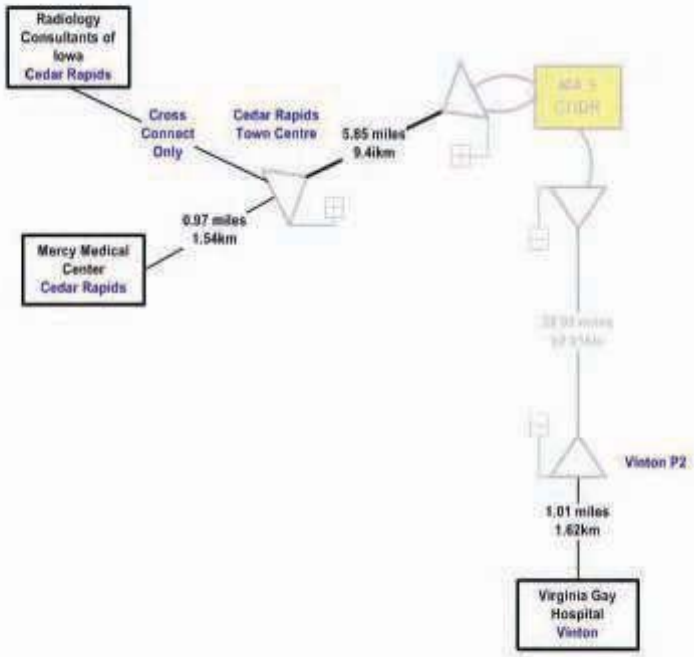
Merged Area # 4 SP 23 Independence - Physical Overview

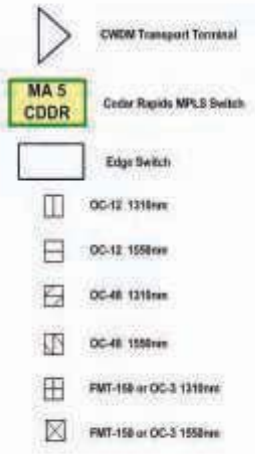


IRHTP
Iowa's telehealth network

IOWA COMMUNICATIONS NETWORK
Merged Area #4

Merged Area # 5 Cedar Rapids Physical Overview

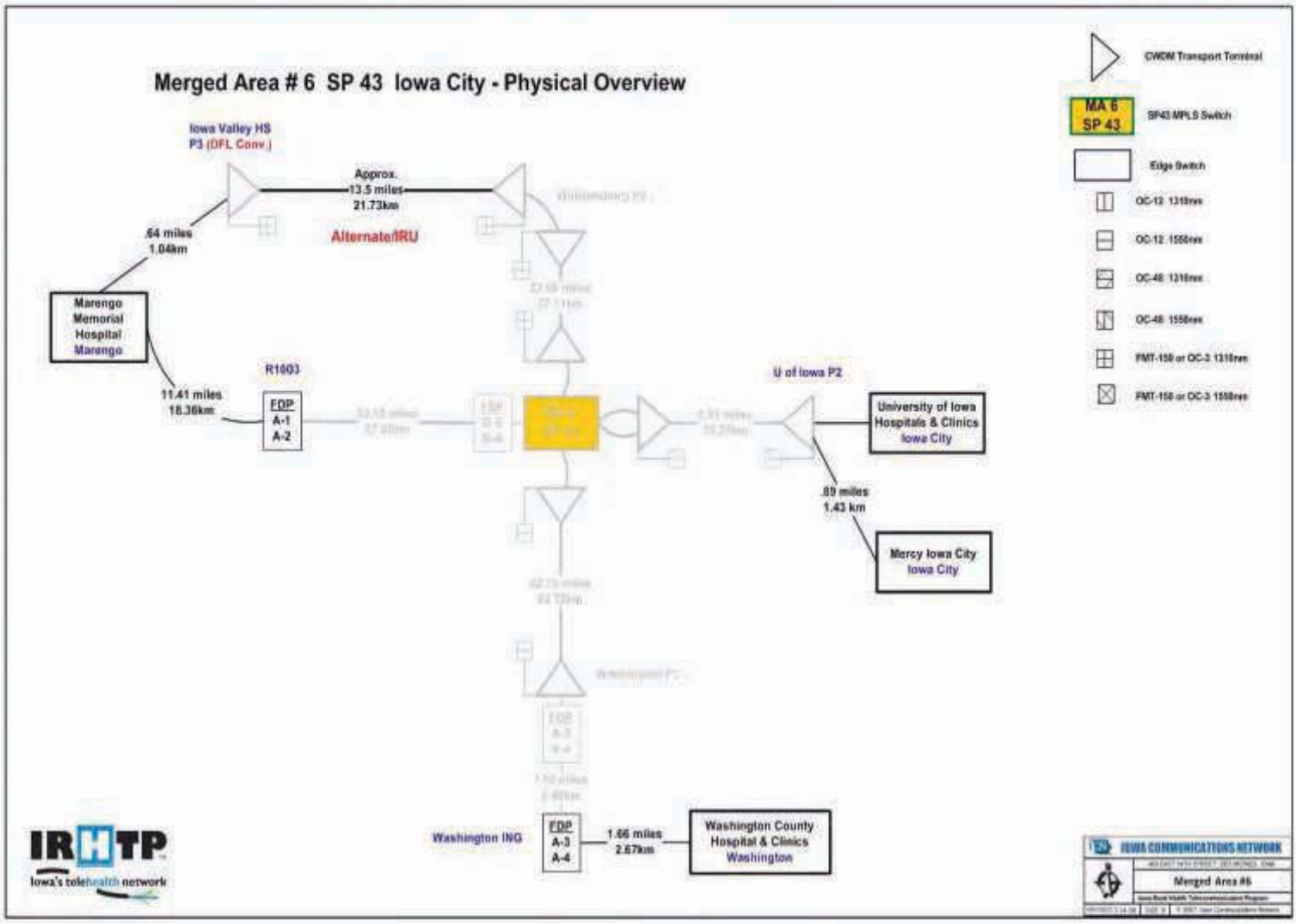




IRHTP Iowa's telehealth network

IOWA COMMUNICATIONS NETWORK

Merged Area #5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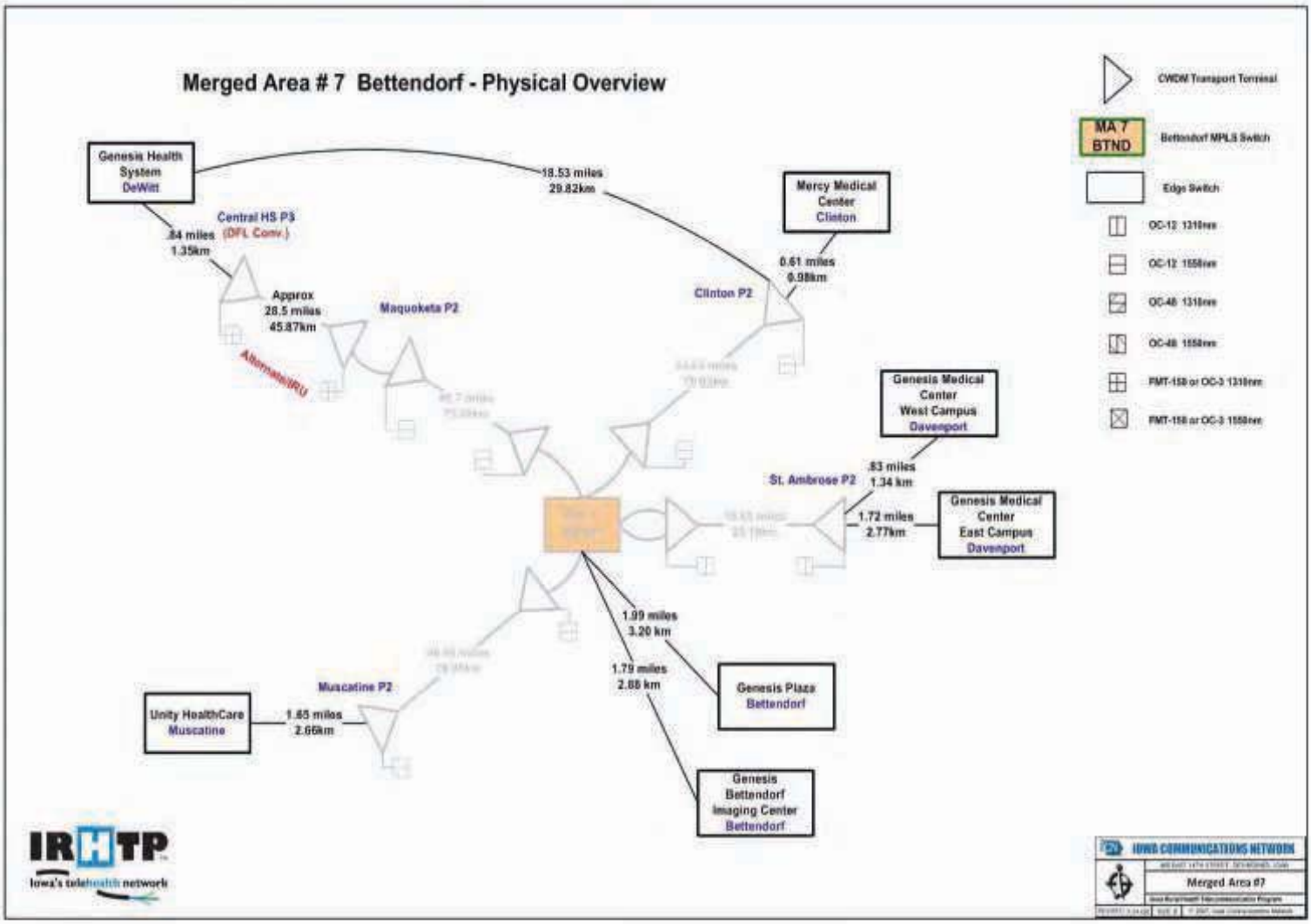
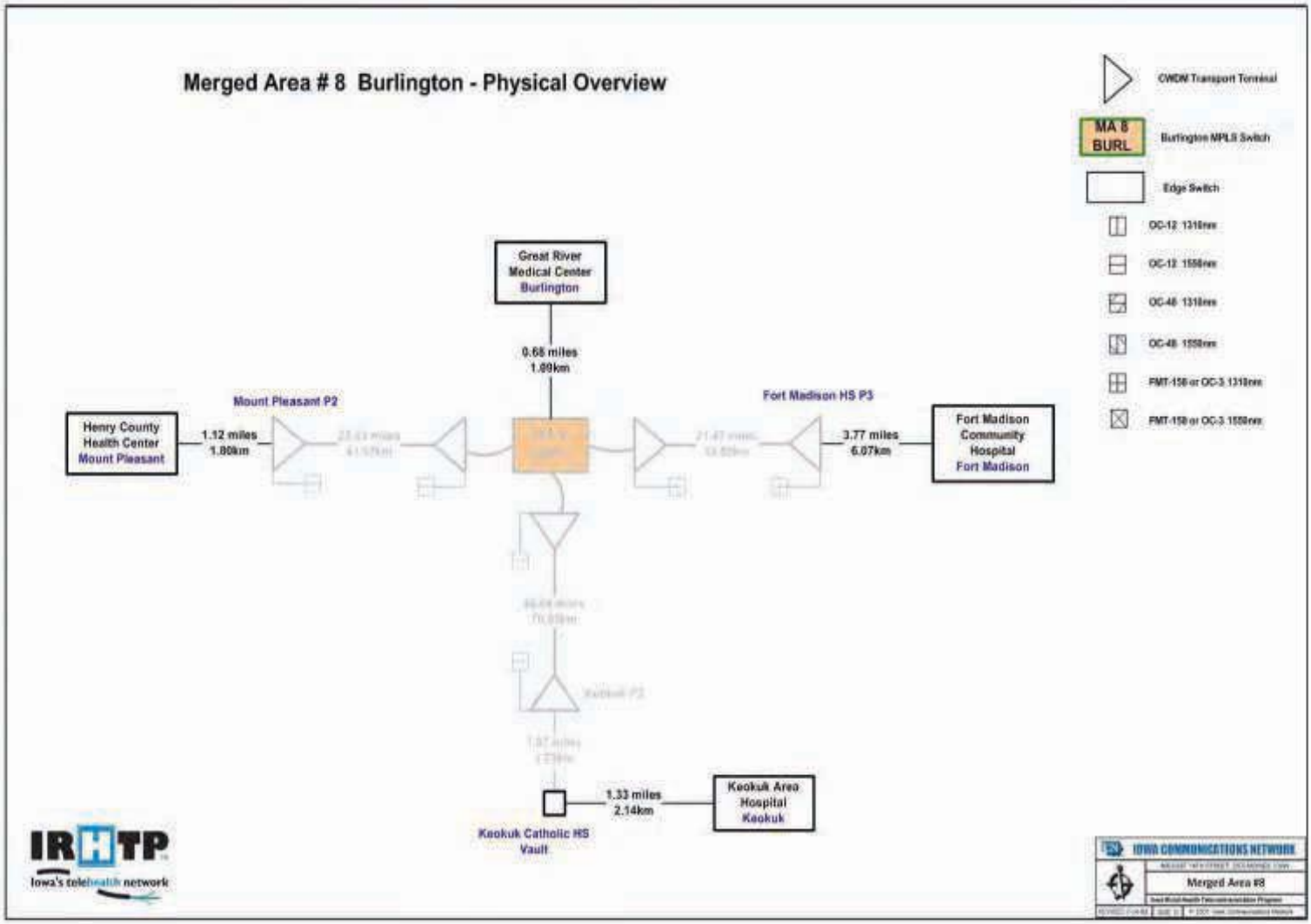
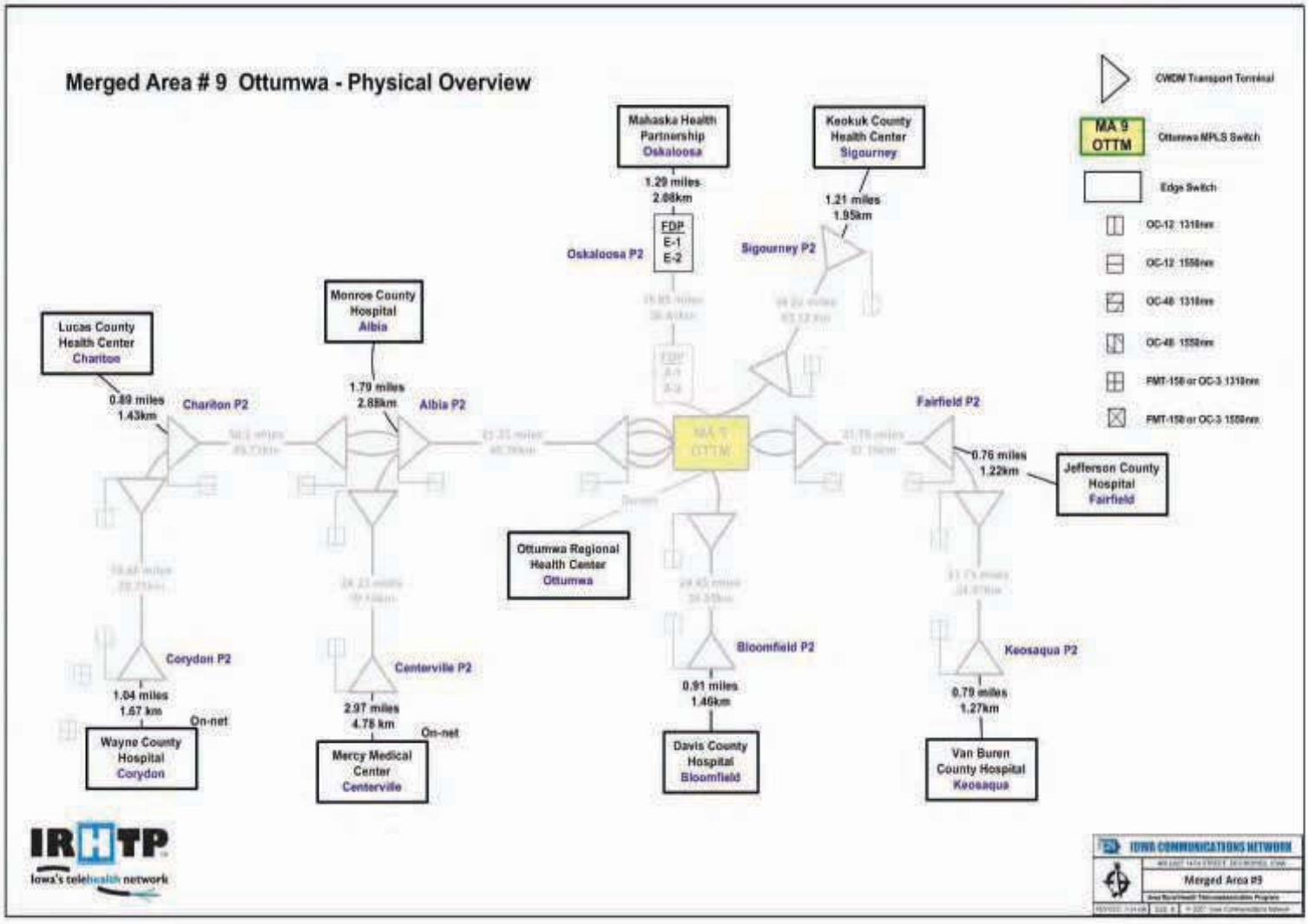
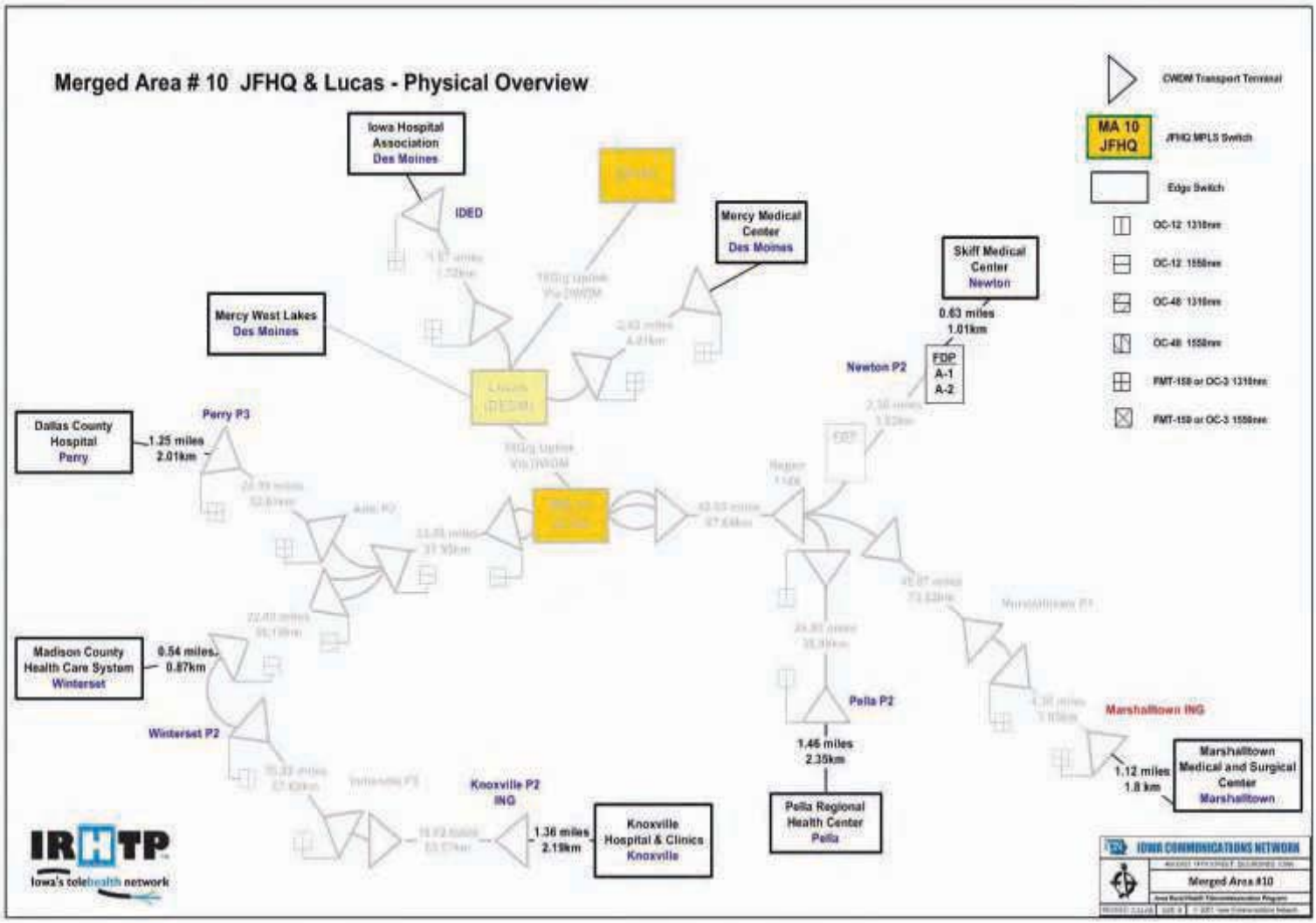
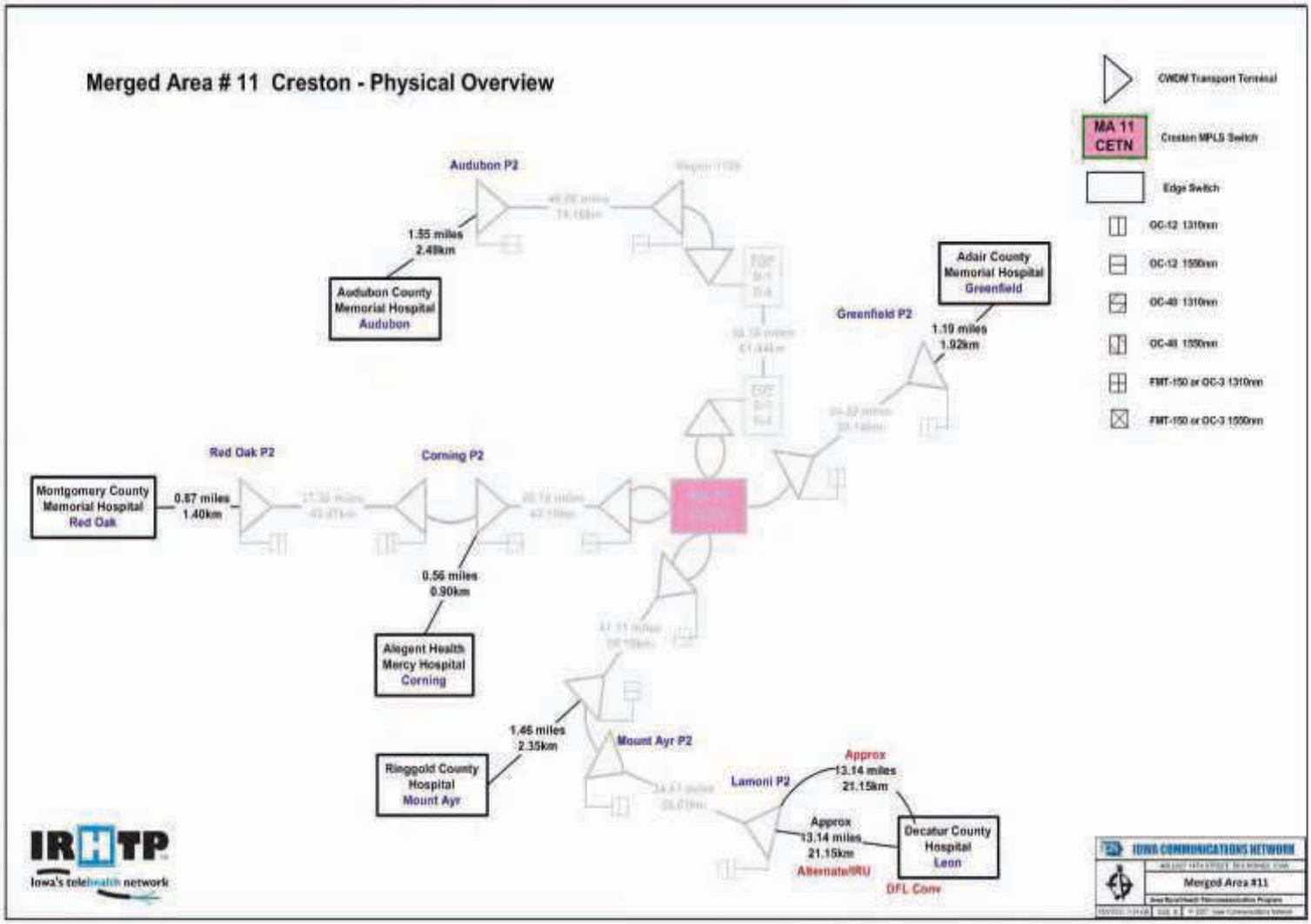
CWDM Transport Terminal
MA 6 SP 43
SP43 MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Iowa Valley HS P3 (DFL Conv.)
Approx. 13.5 miles 21.73km
Alternate/IRU
.64 miles 1.04km
Marengo Memorial Hospital Marengo
11.41 miles 18.36km
R1003
FDP A-1 A-2
U of Iowa P2
University of Iowa Hospitals & Clinics Iowa City
.89 miles 1.43 km
Mercy Iowa City Iowa City
Washington ING
FDP A-3 A-4
1.66 miles 2.67km
Washington County Hospital & Clinics Washington
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #6

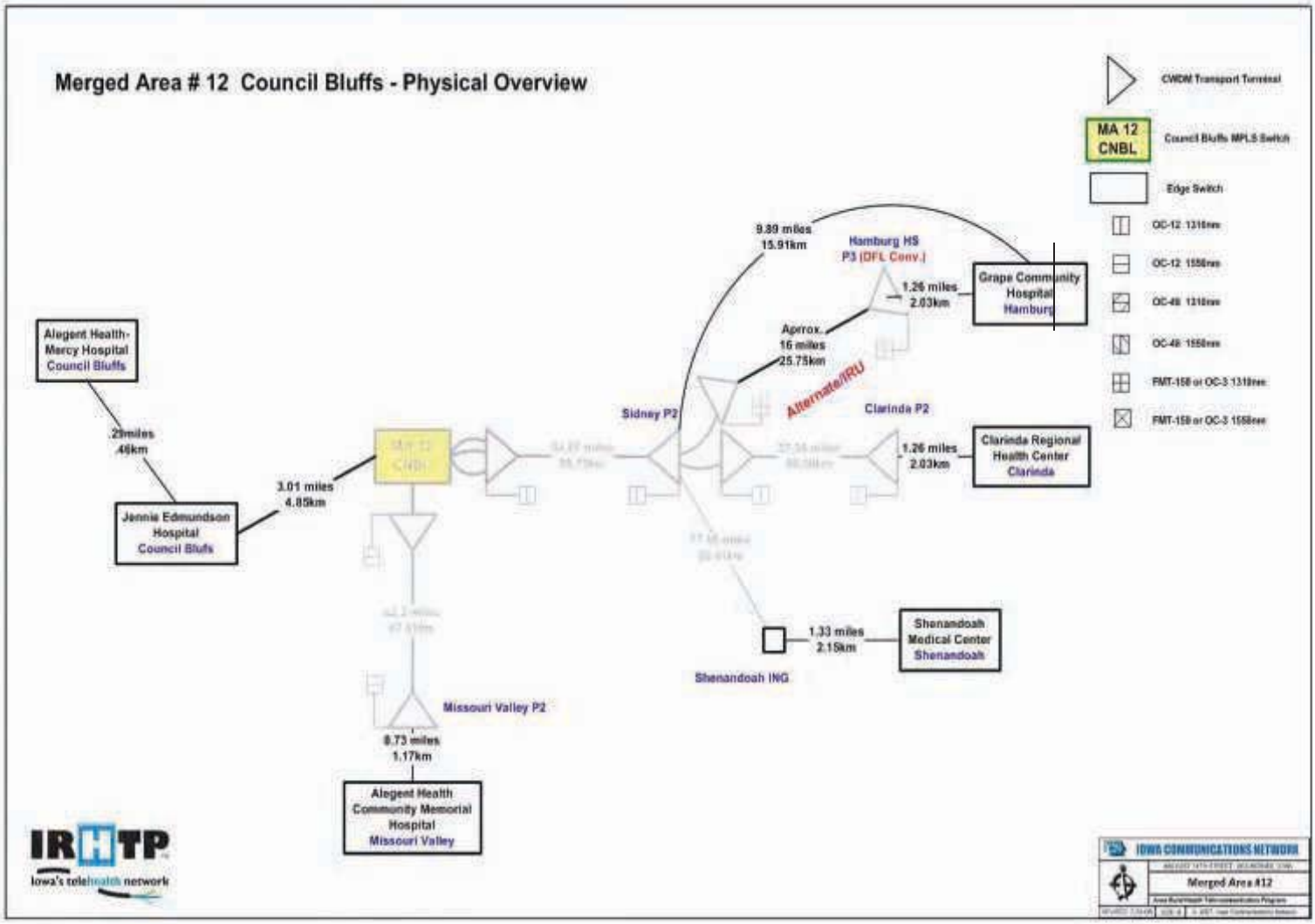

Merged Area # 7 Bettendorf - Physical Overview
CWDM Transport Terminal
MA 7 BTND
Bettendorf MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Genesis Health System DeWitt
18.53 miles 29.82km
Mercy Medical Center Clinton
Central HS P3 (DFL Conv.)
.84 miles 1.35km
0.61 miles 0.98km
Approx 28.5 miles 45.87km
Maquoketa P2
Clinton P2
Alternate IRU
Genesis Medical Center West Campus Davenport
.83 miles 1.34 km
St. Ambrose P2
1.72 miles 2.77km
Genesis Medical Center East Campus Davenport
1.99 miles 3.20 km
1.79 miles 2.88 km
Genesis Plaza Bettendorf
Muscatine P2
Unity HealthCare Muscatine
1.65 miles 2.66km
Genesis Bettendorf Imaging Center Bettendorf
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #7

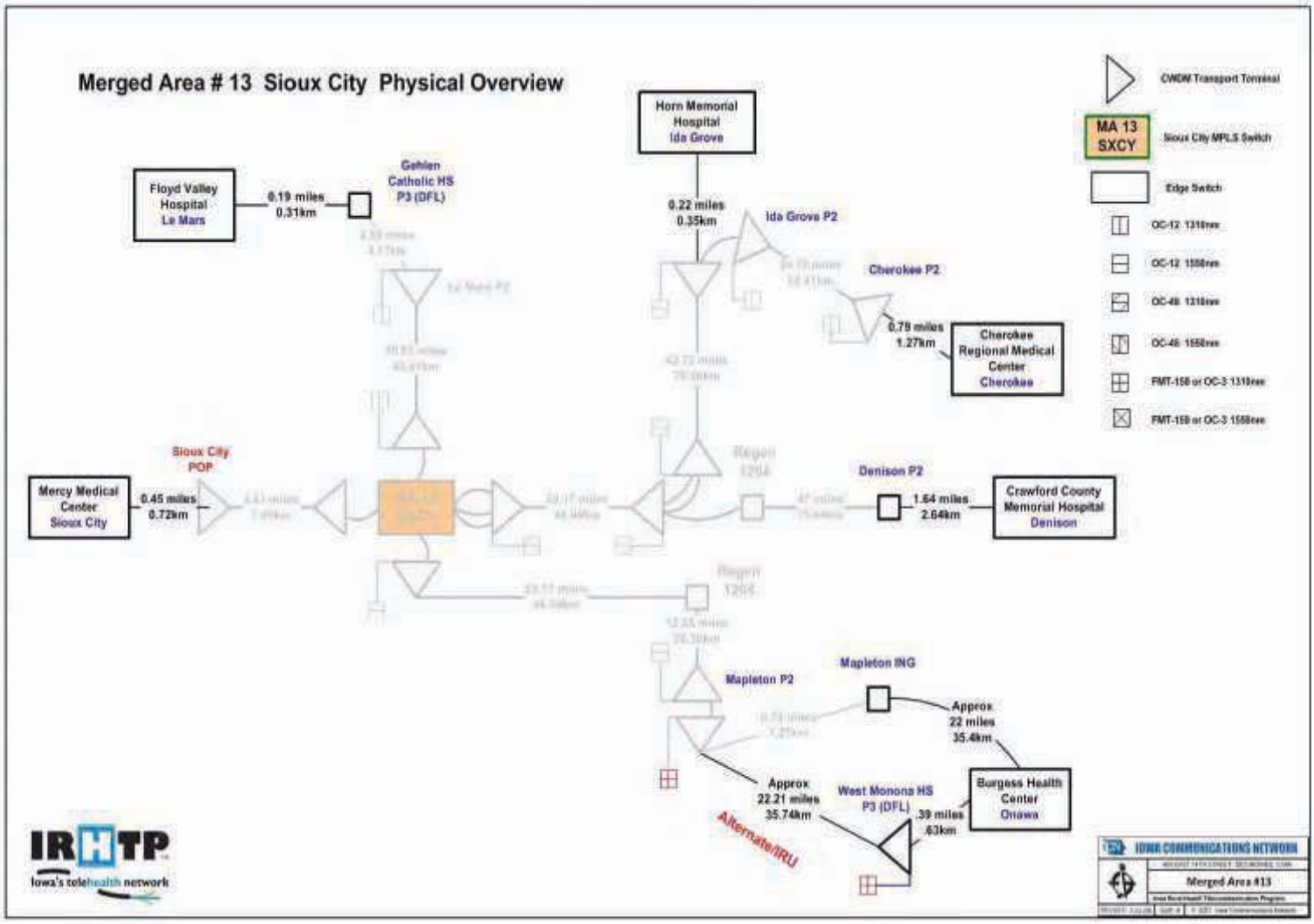

Merged Area # 8 Burlington - Physical Overview
CWDM Transport Terminal
MA 8 BURL
Burlington MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Great River Medical Center Burlington
0.68 miles 1.09km
Mount Pleasant P2
Henry County Health Center Mount Pleasant
1.12 miles 1.80km
Fort Madison HS P3
3.77 miles 6.07km
Fort Madison Community Hospital Fort Madison
1.33 miles 2.14km
Keokuk Area Hospital Keokuk
Keokuk Catholic HS Vault
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #8

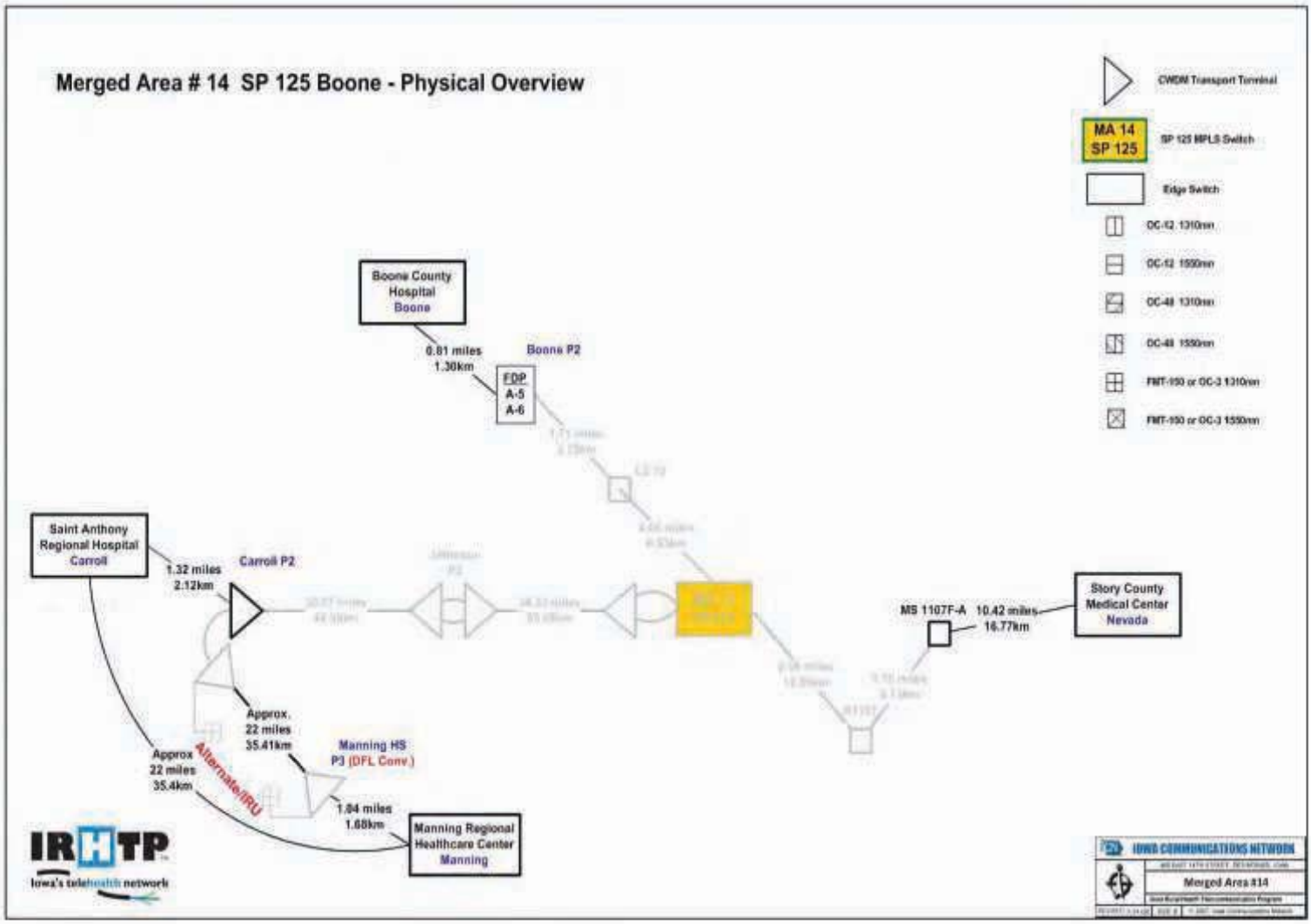

Merged Area # 9 Ottumwa - Physical Overview
CWDM Transport Terminal
MA 9 OTTM
Ottumwa MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Mahaska Health Partnership Oskaloosa
1.29 miles 2.08km
FDP E-1 E-2
Oskaloosa P2
Keokuk County Health Center Sigourney
1.21 miles 1.95km
Sigourney P2
Monroe County Hospital Albia
1.79 miles 2.88km
Albia P2
Lucas County Health Center Chariton
0.89 miles 1.43km
Chariton P2
Fairfield P2
0.76 miles 1.22km
Jefferson County Hospital Fairfield
Ottumwa Regional Health Center Ottumwa
Corydon P2
1.04 miles 1.67 km
On-net
Wayne County Hospital Corydon
Centerville P2
2.97 miles 4.78 km
On-net
Mercy Medical Center Centerville
Bloomfield P2
0.91 miles 1.46km
Davis County Hospital Bloomfield
Keosaqua P2
0.79 miles 1.27km
Van Buren County Hospital Keosaqua
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #9

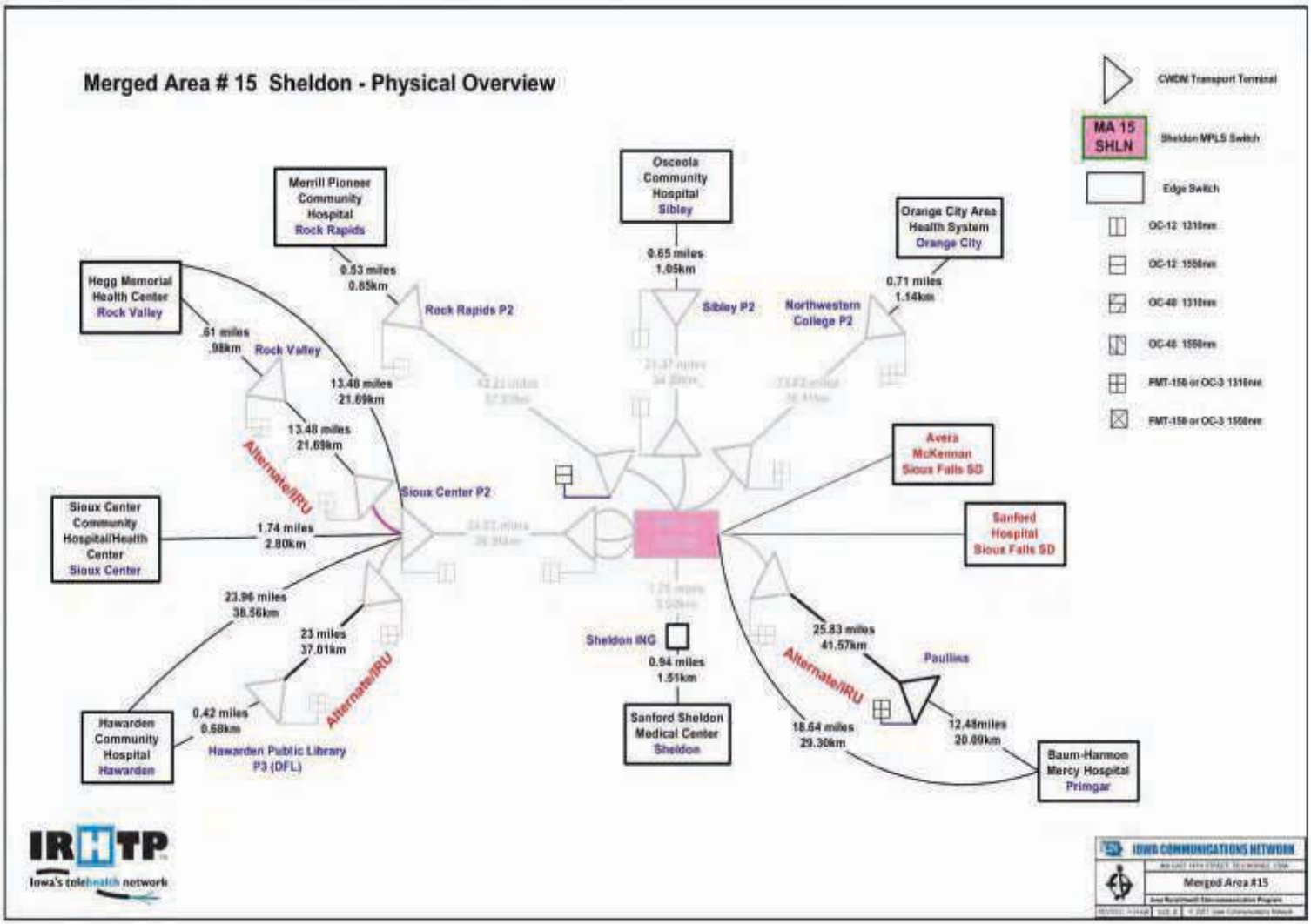

Merged Area # 10 JFHQ & Lucas - Physical Overview
CWDM Transport Terminal
MA 10 JFHQ
JFHQ MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Iowa Hospital Association Des Moines
IDED
Mercy Medical Center Des Moines
Skiff Medical Center Newton
0.63 miles 1.01km
FDP A-1 A-2
Newton P2
Mercy West Lakes Des Moines
Dallas County Hospital Perry
1.25 miles 2.01km
Perry P3
Madison County Health Care System Winterset
0.54 miles 0.87km
Winterset P2
Knoxville P2 ING
1.36 miles 2.19km
Knoxville Hospital & Clinics Knoxville
Pella P2
1.45 miles 2.35km
Pella Regional Health Center Pella
Marshalltown ING
1.12 miles 1.8 km
Marshalltown Medical and Surgical Center Marshalltown
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #10

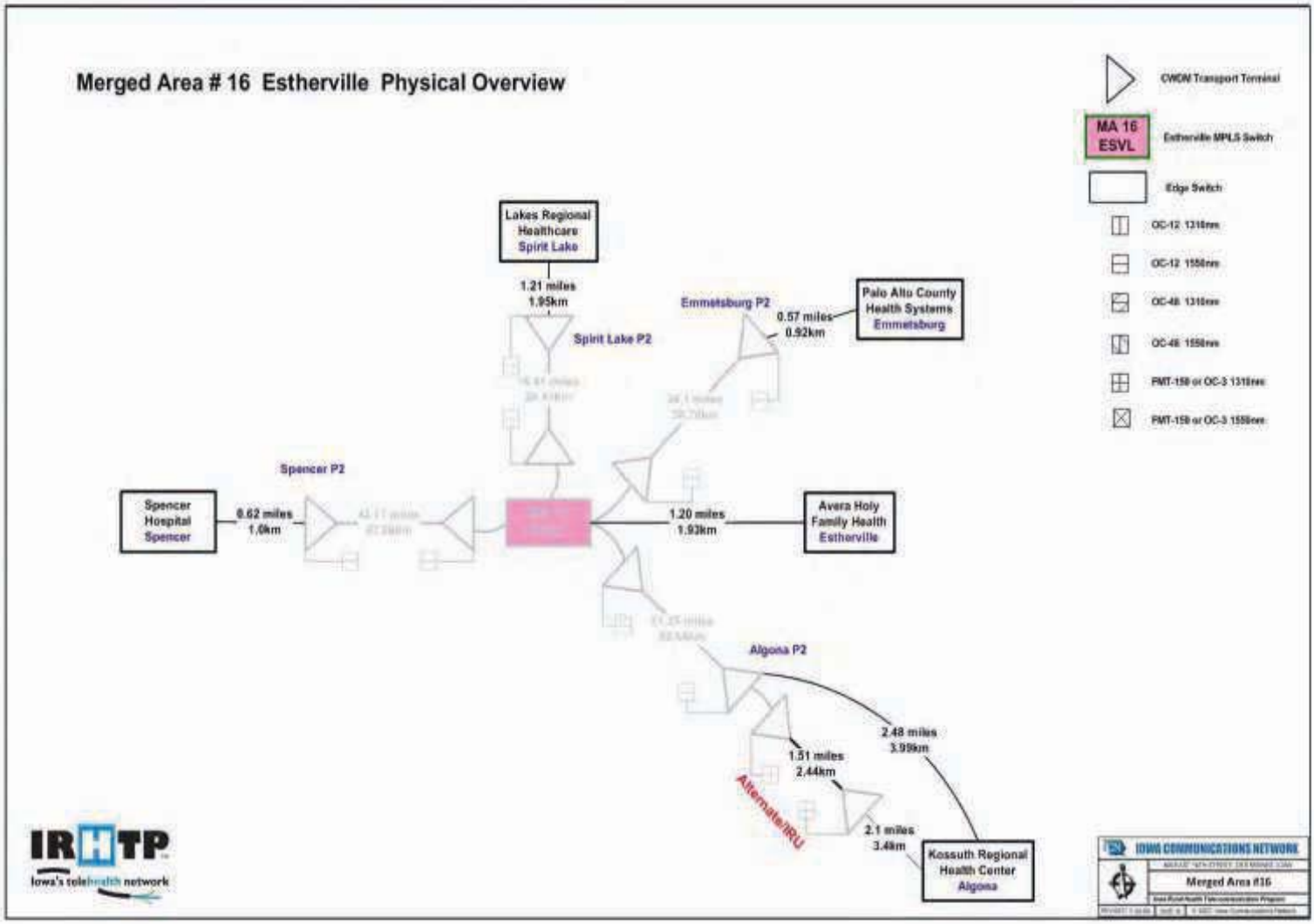

Merged Area # 11 Creston - Physical Overview
CWDM Transport Terminal
MA 11 CETN
Creston MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Audubon P2
1.55 miles
2.49km
Audubon County Memorial Hospital
Audubon
Adair County Memorial Hospital
Greenfield
Greenfield P2
1.19 miles
1.92km
Red Oak P2
Corning P2
Montgomery County Memorial Hospital
Red Oak
0.87 miles
1.40km
0.56 miles
0.90km
Alegent Health Mercy Hospital
Corning
1.46 miles
2.35km
Mount Ayr P2
Ringgold County Hospital
Mount Ayr
Lamoni P2
Approx
13.14 miles
21.15km
Approx
13.14 miles
21.15km
Alternate/IRU
Decatur County Hospital
Leon
DFL Conv
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #11

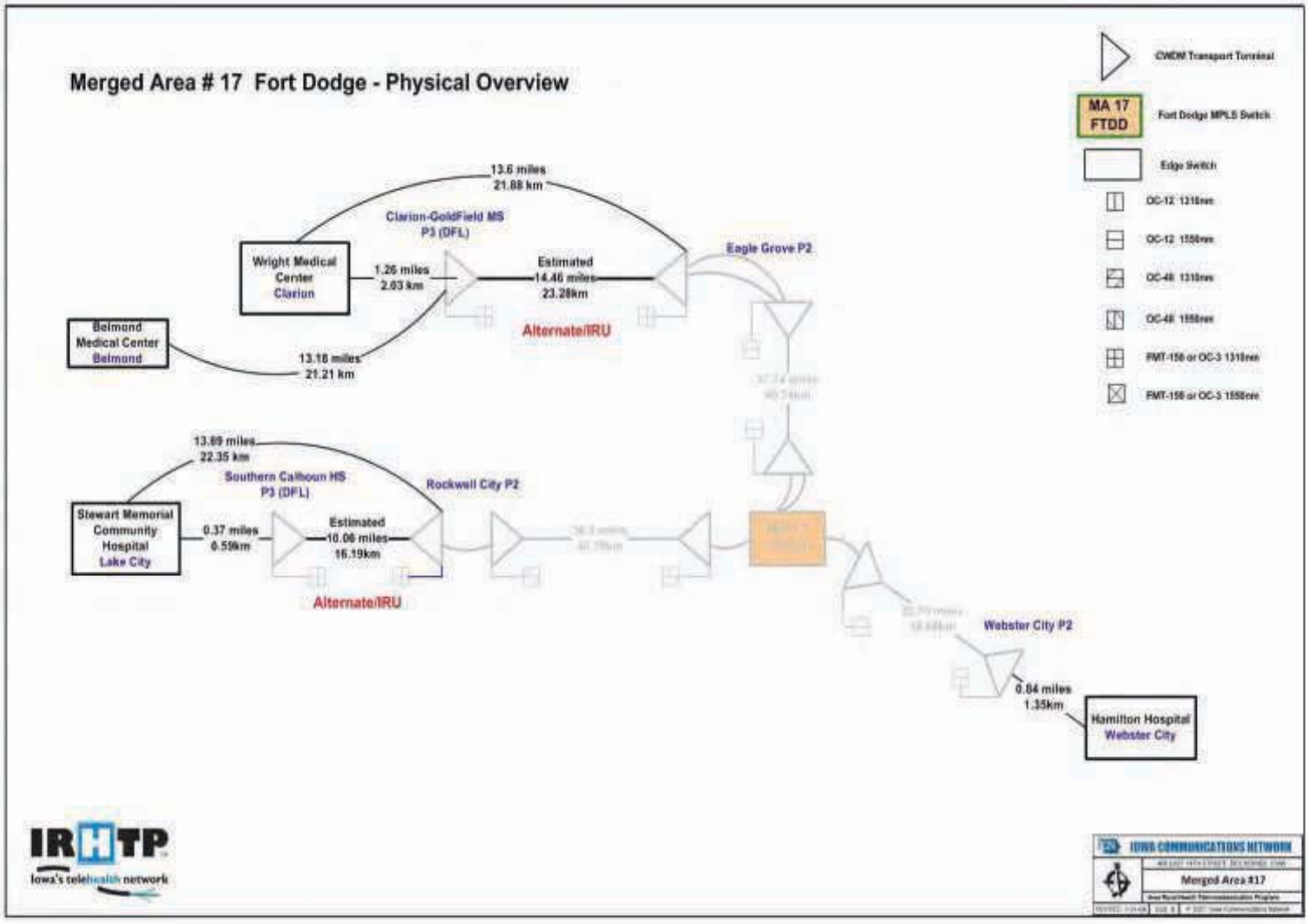

Merged Area # 12 Council Bluffs - Physical Overview
CWDM Transport Terminal
MA 12 CNBL
Council Bluffs MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
9.89 miles 15.91km
Hamburg HS P3 (OFL Conv.)
1.26 miles 2.03km
Grape Community Hospital Hamburg
Aprrox. 16 miles 25.75km
Alternate/RU
Clarinda P2
Sidney P2
1.26 miles 2.03km
Clarinda Regional Health Center Clarinda
Alegent Health-Mercy Hospital Council Bluffs
29miles 46km
Jennie Edmundson Hospital Council Bluffs
3.01 miles 4.85km
MA 12 CNBL
1.33 miles 2.15km
Shenandoah Medical Center Shenandoah
Shenandoah ING
Missouri Valley P2
8.73 miles 1.17km
Alegent Health Community Memorial Hospital Missouri Valley
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #12

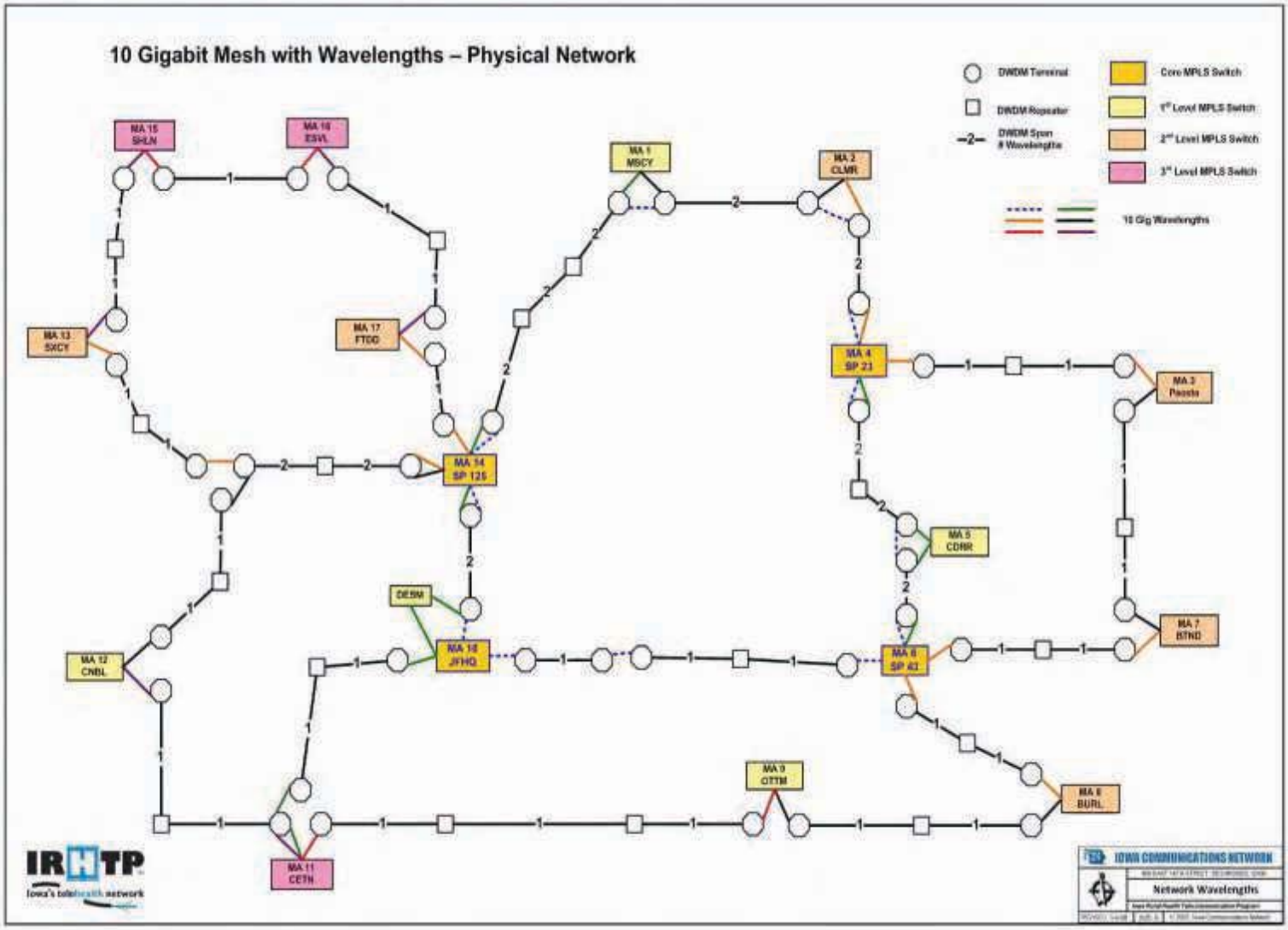

Merged Area # 13 Sioux City Physical Overview
CWDM Transport Terminal
MA 13 SXCY
Sioux City MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-15B or OC-3 1310nm
FMT-15B or OC-3 1550nm
Floyd Valley Hospital Le Mars
0.19 miles 0.31km
Gehlen Catholic HS P3 (DFL)
Horn Memorial Hospital Ida Grove
0.22 miles 0.35km
Ida Grove P2
Cherokee P2
0.79 miles 1.27km
Cherokee Regional Medical Center Cherokee
Sioux City POP
Mercy Medical Center Sioux City
0.45 miles 0.72km
Denison P2
1.64 miles 2.64km
Crawford County Memorial Hospital Denison
Mapleton P2
Mapleton ING
Approx 22 miles 35.4km
Approx 22.21 miles 35.74km
West Monona HS P3 (DFL)
.39 miles .63km
Burgess Health Center Onawa
Alternate/IRU
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #13

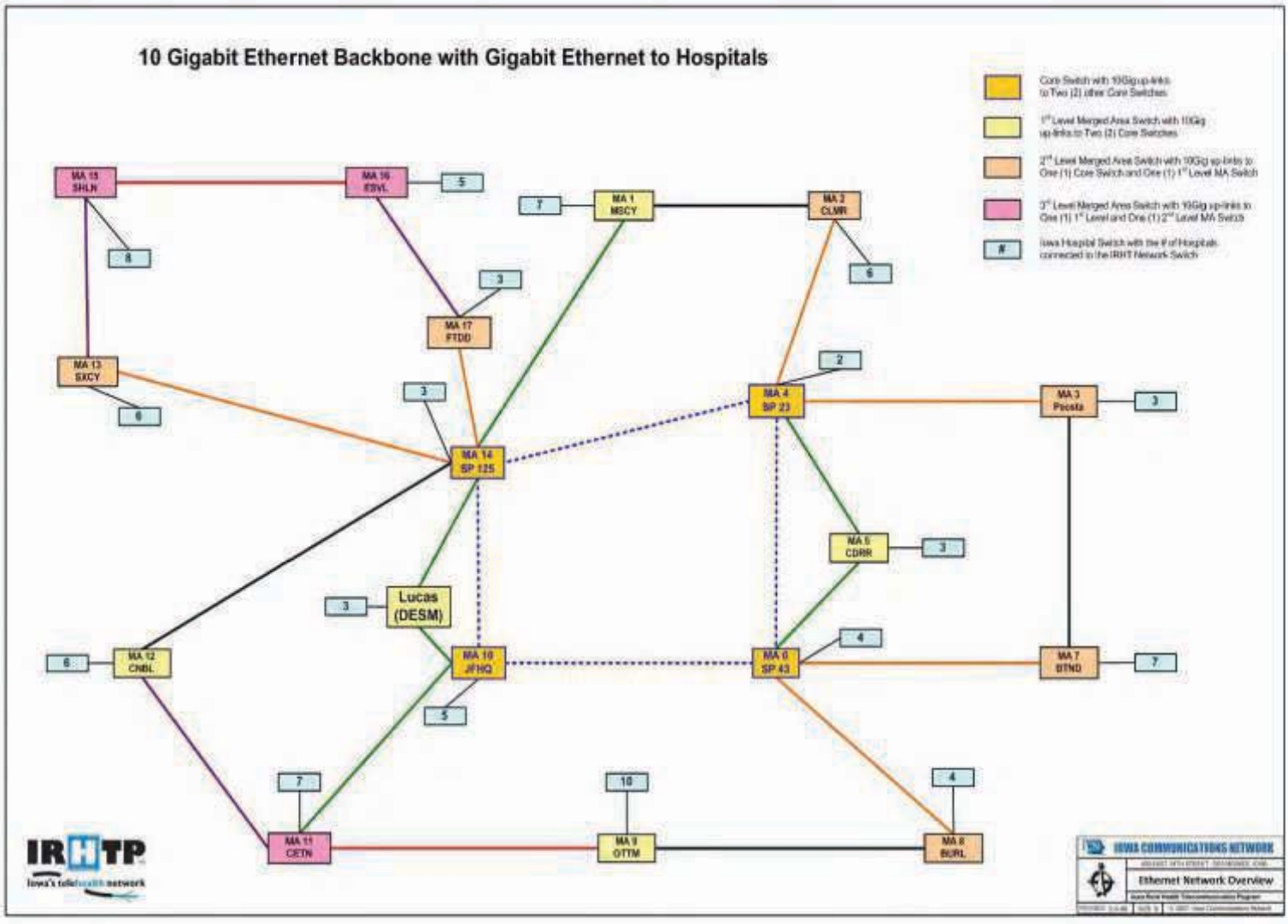

Merged Area # 14 SP 125 Boone - Physical Overview
CWDM Transport Terminal
MA 14
SP 125
SP 125 MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Boone County Hospital
Boone
0.81 miles
1.30km
Boone P2
FDP
A-5
A-6
Saint Anthony Regional Hospital
Carroll
1.32 miles
2.12km
Carroll P2
MS 1107F-A
10.42 miles
16.77km
Story County Medical Center
Nevada
Approx.
22 miles
35.41km
Manning HS
P3 (DFL Conv.)
Approx
22 miles
35.4km
Alternate/IRU
1.04 miles
1.68km
Manning Regional Healthcare Center
Manning
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #14

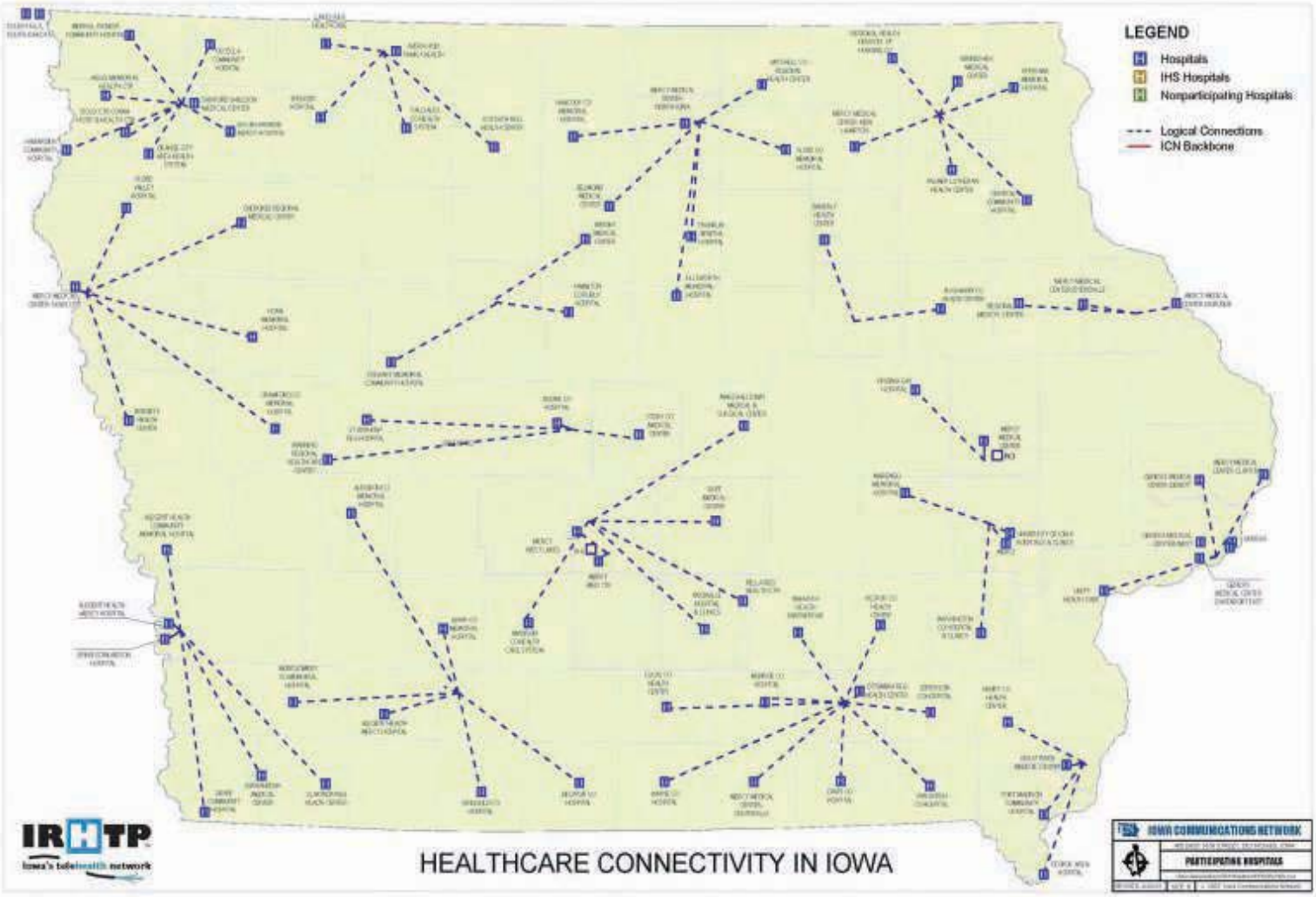

Merged Area # 15 Sheldon - Physical Overview
CWDM Transport Terminal
MA 15 SHLN
Sheldon MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
Merrill Pioneer Community Hospital Rock Rapids
Osceola Community Hospital Sibley
Orange City Area Health System Orange City
Hegg Memorial Health Center Rock Valley
0.53 miles 0.85km
0.65 miles 1.05km
0.71 miles 1.14km
Rock Rapids P2
Sibley P2
Northwestern College P2
.61 miles .98km
Rock Valley
13.48 miles 21.69km
13.48 miles 21.69km
Alternate/IRU
Sioux Center P2
Avera McKennan Sioux Falls SD
Sioux Center Community Hospital/Health Center Sioux Center
1.74 miles 2.80km
Sanford Hospital Sioux Falls SD
23.96 miles 38.56km
23 miles 37.01km
Sheldon ING
0.94 miles 1.51km
25.83 miles 41.57km
Paullina
Alternate/IRU
Hawarden Community Hospital Hawarden
0.42 miles 0.68km
Alternate/IRU
Hawarden Public Library P3 (DFL)
Sanford Sheldon Medical Center Sheldon
18.64 miles 29.30km
12.48miles 20.09km
Baum-Harmon Mercy Hospital Primgar
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #15

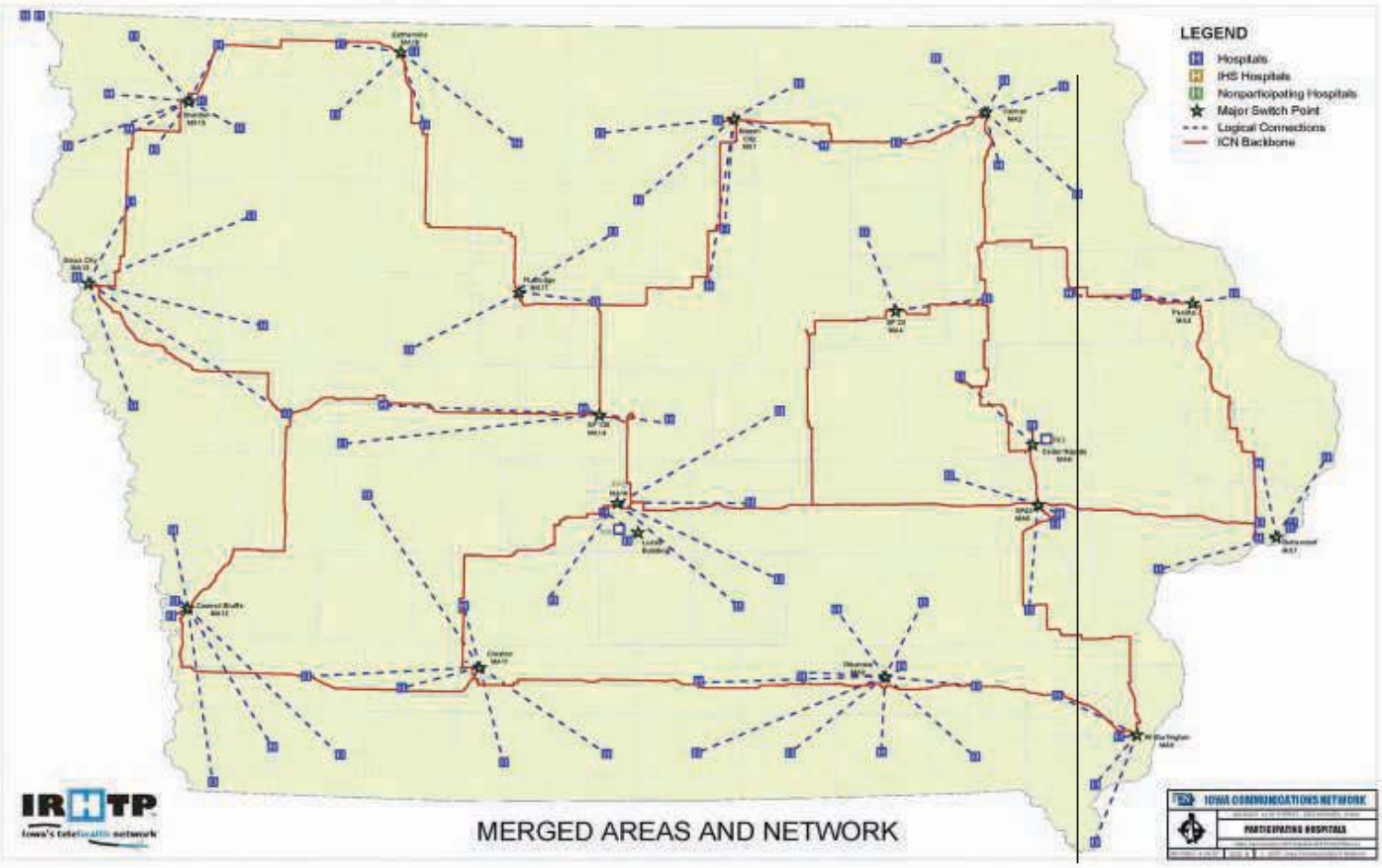

Merged Area # 16 Estherville Physical Overview
CWDM Transport Terminal
MA 16 ESVL
Estherville MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-15b or OC-3 1310nm
FMT-15b or OC-3 1550nm
Lakes Regional Healthcare Spirit Lake
1.21 miles 1.95km
Spirit Lake P2
Emmetsburg P2
0.57 miles 0.92km
Palo Alto County Health Systems Emmetsburg
Spencer P2
Spencer Hospital Spencer
0.62 miles 1.0km
1.20 miles 1.93km
Avera Holy Family Health Estherville
Algona P2
2.48 miles 3.99km
1.51 miles 2.44km
Alternate/IRU
2.1 miles 3.4km
Kossuth Regional Health Center Algona
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #16


Merged Area # 17 Fort Dodge - Physical Overview
CWDM Transport Terminal
MA 17
FTDD
Fort Dodge MPLS Switch
Edge Switch
OC-12 1310nm
OC-12 1550nm
OC-48 1310nm
OC-48 1550nm
FMT-150 or OC-3 1310nm
FMT-150 or OC-3 1550nm
13.6 miles
21.88 km
Clarion-GoldField MS
P3 (DFL)
Wright Medical
Center
Clarion
1.26 miles
2.03 km
Estimated
14.46 miles
23.28km
Eagle Grove P2
Alternate/IRU
Belmond
Medical Center
Belmond
13.18 miles
21.21 km
13.89 miles
22.35 km
Southern Calhoun HS
P3 (DFL)
Rockwell City P2
Stewart Memorial
Community
Hospital
Lake City
0.37 miles
0.59km
Estimated
10.06 miles
16.19km
Alternate/IRU
Webster City P2
0.84 miles
1.35km
Hamilton Hospital
Webster City
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Merged Area #17


10 Gigabit Mesh with Wavelengths – Physical Network
DWDM Terminal
DWDM Repeater
DWDM Span # Wavelengths
Core MPLS Switch
1st Level MPLS Switch
2nd Level MPLS Switch
3rd Level MPLS Switch
10 Gig Wavelengths
MA 15 SHLN
MA 16 ESVL
MA 1 MSCY
MA 2 CLMR
MA 13 SXCY
MA 17 FTDD
MA 4 SP 23
MA 3 Peosta
MA 14 SP 125
MA 5 CDRR
DESM
MA 7 BTND
MA 12 CNBL
MA 10 JFHQ
MA 6 SP 42
MA 9 OTTM
MA 8 BURL
MA 11 CETN
IRNTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Network Wavelengths


10 Gigabit Ethernet Backbone with Gigabit Ethernet to Hospitals
Core Switch with 10Gig up-links to Two (2) other Core Switches
1st Level Merged Area Switch with 10Gig up-links to Two (2) Core Switches
2nd Level Merged Area Switch with 10Gig up-links to One (1) Core Switch and One (1) 1st Level MA Switch
3rd Level Merged Area Switch with 10Gig up-links to One (1) 1st Level and One (1) 2nd Level MA Switch
Iowa Hospital Switch with the # of Hospitals connected to the IRHT Network Switch
MA 15 SHLN
MA 16 ESVL
MA 1 MSCY
MA 2 CLMR
MA 17 FTDD
MA 13 SXCY
MA 4 SP 23
MA 3 Peosta
MA 14 SP 125
MA 5 CDRR
Lucas (DESM)
MA 12 CNBL
MA 10 JFHQ
MA 6 SP 43
MA 7 BTND
MA 11 CETN
MA 9 OTTM
MA 8 BURL
IRHTP
Iowa's telehealth network
IOWA COMMUNICATIONS NETWORK
Ethernet Network Overview


LEGEND
Hospitals
IHS Hospitals
Nonparticipating Hospitals
Logical Connections
ICN Backbone
IRHTP
Iowa's telehealth network
HEALTHCARE CONNECTIVITY IN IOWA
IOWA COMMUNICATIONS NETWORK
PARTICIPATING HOSPITALS


LEGEND
Hospitals
IHS Hospitals
Nonparticipating Hospitals
Major Switch Point
Logical Connections
ICN Backbone
IRHTP
MERGED AREAS AND NETWORK
IOWA COMMUNICATIONS NETWORK
PARTICIPATING HOSPITALS

ANNEX B

DETAILED OUTSIDE PLANT INSTALLATION SPECIFICATIONS

RFP 08-001

PART 1 - GENERAL REQUIREMENTS
INDEX

PART 2 - SPECIAL CONSTRUCTION
INDEX

PART 3 - EXCAVATION AND BACKFILL
INDEX

PART 4 - PIPES AND STRUCTURES
INDEX

PART 5 -SPECIFICATIONS FOR BURIED INSTALLATION OF FIBER OPTIC CABLE
INDEX

PART 6 - SPECIFICATIONS FOR AERIAL PLACEMENT OF FIBER OPTIC CABLE
INDEX

PART 7 - SPLICING AND TESTING
INDEX

PART 8 - AS-BUILT DRAWING
INDEX

PART 1 - GENERAL REQUIREMENTS

1. INTENT

1.1. To supplement the provisions of the **TECHNICAL REQUIREMENTS, SECTION 3.0** by outlining special conditions applicable to project. In the following the term Contractor and Vendor may be interchanged.
1.2. To set forth requirements of performance, type of equipment or structure desired, and
1.3. Standards of materials and construction.
1.4. To describe work set out in Contract Documents, unless otherwise specifically indicated.
1.5. To require performance of complete work in spite of omission of specific reference to any minor component parts.
1.6. Contractor to provide for new materials and equipment, unless otherwise indicated.

2. LOCATION

2.1. Work is located in public right-of-way and easements across private, City, School and
2.1.1.1. Hospital owned properties as located in RFP.

3. RIGHT-OF-WAY

3.1. Contractor will obtain permits from departments and/or agencies of cities, state, county, and federal government, railroads, or other entities that provide for the placement of facilities within their respective rights of way, unless otherwise indicated.
3.2. Contractor will provide easements for construction on private lands.
3.2.1. All Easements must be IRHTP approved prior to implementation.
3.2.2. It is preferred that all easements be one time, up front payments with no recurring charges.
3.3. Confine movements of equipment and personnel, storage of materials, excavation, and all other construction operations within the right-of-way provided.
3.4. Contractor will be held liable by Iowa Department of Transportation, City, Schools and adjacent property owners for damages outside rights-of-way and easements; failure of Engineer to warn Contractor about incidence of trespassing does not relieve liability.
3.5. Ingress and egress will vary according to right of way agreements. If necessary, the Contractor will provide gates in fences and remove after completion.
3.6. On freeways, installation must be accomplished without entering the through traffic roadway or ramps. No vehicles, equipment or materials shall be parked or stored upon any portion of the median, through traffic roadway and ramps or shoulders thereof or within the clear zone.

4. ORDER OF CONSTRUCTION

4.1. Provide IRHTP Project Coordinator with proposed a schedule of construction showing start and completion dates. Show each section of construction and the estimated time of completion, to include project complete percentage. This schedule will be “on going process”. An update of the aforementioned schedule will be provided to the IRHTP Project Coordinator every week by noon on Friday. This base schedule of work shall detail the activities, tasks and manpower associated with the project. Contractor shall provide to IRHTP a man-load schedule showing all tasks associated with the project, the number of crews, and the crew sizes (number of personnel) available for each task. The schedules shall contain sufficient detail to ensure that the IRHTP can measure project progress at least weekly throughout the project duration. The schedules shall comply with the requirements of the overall project schedule, and shall be updated by the contractor as necessary or as required by IRHTP. Work schedules shall be provided by the contractor within five (5) working days of contract award. Coordinate work with IRHTP Project Coordinator to assure orderly and expeditious progress of the work.
4.2. Contractor shall establish schedule of working hours for construction, subject to approval of IRHTP Project Coordinator.

5. INTERRUPTIONS TO SERVICE

5.1. Existing utilities will remain in continuous operation during construction.

6. CONSTRUCTION FACILITIES BY CONTRACTOR

6.1. Provide telephone at which Contractor can be reached by IRHTP Project Coordinator at all times during the working day; provide liaison between telephone and construction personnel for expeditious handling of messages.
  6.1.1. Provide IRHTP Project Coordinator with at least two telephone numbers where Contractor's representative can be reached evenings, weekends and holidays in event of emergency. Place on construction schedule.
6.2. Location of all construction facilities including storage yard, subject to approval by IRHTP Project Coordinator; remove all construction facilities upon completion of work.
6.3. Provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.
6.4. Provide fence, barricades, and/or watchmen to prevent access of unauthorized persons to site where work is in progress.

7. PLANS, POSITION, LINE AND GRADE

7.1. Contractor shall provide IRHTP Project Coordinator with one set of plans and specifications within 15 days after execution of contract unless otherwise stated in RFP.
7.2. Contractor shall provide IRHTP Project Coordinator with additional and supplemental plans as may be required to show details of construction after approval of Contractors' drawings and data on materials and equipment.
7.3. Contractor will provide IRHTP Project Coordinator with such revised plans and specifications as may be required to show any authorized changes or extra work.
7.4. Construct to lines and grades shown on plans or as specified hereinafter.
7.5. Contractor will establish required benchmarks and base lines as shown on plans.
7.6. Contractor to provide detailed survey and staking for location, and elevation of construction.
7.7. Contractor shall provide, without extra compensation, all people and necessary tools to make all test holes and exploration, at any time, for purpose of determining location of existing structures beneath ground surface that might conflict with work of Contractor.
7.8. Contractor shall preserve all monuments, reference points, stakes and benchmarks set by other entities. In case of destruction by Contractor's negligence or carelessness, he will be charged with resulting expense of replacement, and responsibility for any mistake or loss of time caused thereby.

8. WORK INCLUDED

8.1. Furnish all plans, materials, labor and equipment to construct as set out in the attached plans and/or RFP.

9. STARTING AND COMPLETION TIME

9.1. Commence work within 20 calendar days after date set forth in written Notice to Proceed.
9.2. Complete work within time set out in Notice of Hearing and Letting.

10. INFORMATION FOR IRHTP PROJECT COORDINATOR

10.1. After award of contract, submit the following information and drawings for IRHTP Project Coordinator's review: manufacturer's specifications and catalog data for material and such other data as requested by Engineer.
10.2. Within 15 days after award of contract, provide construction schedule showing start and completion of various portions of work and construction plans.
  10.2.1. Purchase orders and subcontracts without prices.
  10.2.2. All materials test reports.
  10.2.3. Proposed equipment and method for boring/jacking; details of boring/jacking pit.
  10.2.4. Proposed equipment and method for trenching.
  10.2.5. Proposed equipment and method for plowing.
  10.2.6. Construction plans, unless otherwise indicated:
    10.2.6.1. Location of facility in relationship to established landmarks.

10.2.6.2. Public or private r/w. Furnish a copy of permit and/or easement in IRHTP's name, unless otherwise indicated.

11. PLANS AND SPECIFICATIONS

11.1. Contractor will furnish 2 sets of plans and specifications to the IRHTP Project Coordinator after award of contract unless otherwise stated in RFP.
11.2. Contractor will provide one set of plans and specifications for each foreman or superintendent in charge of each crew on job.

12. STANDARDS AND CODES

12.1. Do work in accordance with best present-day installation and construction practices.
12.2. Conform to and test materials in accordance with applicable sections of latest revisions or tentative revisions of following codes and standards unless specifically noted to the contrary.
- 12.2.1. American Association of State and Highway Transportation Officials (AASHTO)
- 12.2.2. American National Standards Institute (ANSI)
- 12.2.3. American Society for Testing and Materials (ASTM)
- 12.2.4. Iowa Department of Transportation (IDOT); latest edition of standard specifications and addenda.
- 12.2.5. Federal Specifications (FS)
- 12.2.6. Occupational Safety and Health Act of 1970 (Public Law 91-596) (OSHA)
- 12.2.7. Iowa Occupational Safety and Health Act of 1972 (Chapter 88, Code of Iowa 1995) (OSHA).
- 12.2.8. Standard and codes of the State of Iowa and applicable local standards, codes and ordinances of the particular city where construction is taking place.
- 12.2.9. Other standards and codes that may be applicable to acceptable standards of the industry for equipment, materials and installation under contract.

13. RESPONSIBILITY OF CONTRACTOR

13.1. Protection of Contractor's work. .
13.2. Protection of all property from injury or loss resulting from Contractor's operations.
13.3. Replace or repair objects sustaining any such damage, injury or loss to satisfaction of the IRHTP Project Coordinator.
13.4. Without limiting GENERAL REQUIREMENTS of Contract Documents, protect flagpoles, sidewalks, streets, pavements, fences, pipe, conduit, utilities, trees, and shrubs and structures.
13.5. Cooperate with IRHTP Project Coordinator and representative of utilities in locating underground utility lines and structures; incorrect, inaccurate or inadequate information concerning location of utilities or structures shall not relieve Contractor of responsibility for damage thereto caused by Contractor's operations.
13.6. Contractor will locate underground lines of third parties in the cable route area. Contractor will call Iowa One Call (800-292-8989) prior to any work commencement. Contractor will contact any utilities not participating in the One Call Service, directly. Contractor will hold a single locate "precon meeting" for all utilities. It will be the Contractors responsibility to document the name, address, phone and fax number of all persons present at meeting plus the locate confirmation number by project. All the aforementioned documentation will be supplied to the IRHTP as part of the "as built" package. Contractor will be responsible for hand digging any crossing such as pipeline, drainage tile, cable or any other buried facility prior to working in the area. Since all drawings are generally diagrammatic and not all utilities are included on them, the Contractor will take every precaution necessary to avoid damage to any underground facility.
13.7. Keep cleanup current on a daily basis with construction operations.
13.8. Comply with all federal, state, and city laws and ordinances.
13.9. Contractor shall assume full responsibility for safekeeping of all materials and equipment and for all unfinished work until final acceptance by IRHTP. Materials and equipment that are damaged or destroyed from any cause shall be replaced at Contractor's expense.
13.10. Contractor shall issue written receipts for all such property and account to IRHTP for any damage to or loss of such property while in its custody or control.

13.11. If IRHTP is providing warehousing with security for cable, conduit and other OSP materials on a temporary basis; it will be the responsibility of the contractor to arrange for their own storage facilities, and delivery of material from IRHTP warehouses. Should a contractor elect to provide their own storage facilities in their particular area, then contractor will be solely responsible for any materials supplied to that facility by IRHTP. IRHTP may require the Subcontractor to furnish Builders Risk Insurance for this material at the contractor's expense. Security for the job site areas is the responsibility of the contractor. Subcontractor is to comply with the security requirements of owner's site security and other applicable entities.

13.12. Contractor shall indemnify and hold harmless IRHTP against any liens filed for non-payment of Contractor's bills in connection with contract work. Contractor shall furnish IRHTP satisfactory evidence that all persons who have done work or furnished materials, equipment, or service of any type, under the contract have been fully paid prior to acceptance by IRHTP.

13.13. Contractors/subcontractors shall pay time and material charges of IRHTP personnel, when contractor has made a commitment to be on site by a certain time and is either late or no show.

13.14. Liquidated damages in the amount of **Two Hundred Dollars ($200.00)** per consecutive calendar day will be assessed for each day that the work shall remain uncompleted after the end of the contract period with due allowance for extensions of the contract period due to conditions beyond the control of the Contractor/subcontractor.

14. SUBCONTRACTS

14.1. Contractor shall not assign, sub-let or transfer the whole or any part of work herein specified without written consent of IRHTP. Assignment, sub-letting or transfer shall not relieve the Contractor from its responsibilities set forth herein.

14.2. Detailed specifications are separated into titled parts for convenience or reference and to facilitate letting of contracts and subcontracts. Such arrangement shall not obligate IRHTP Project Coordinator to establish limits on contracts between Contractors and subcontractors.

15. CONTRACTOR'S/SUBCONTRACTOR'S EMPLOYEES

15.1. Contractor shall personally supervise subcontracted work or provide a capable superintendent satisfactory to IRHTP Project Coordinator. Superintendent shall be authorized to receive instructions from IRHTP Project Coordinator/representative.

15.2. Incompetent or Incorrigible employees shall be dismissed by the Contractor or its representative when requested by IRHTP Project Coordinator. Such dismissed persons shall not be permitted to return to work on contracted IRHTP project without written consent of IRHTP Project Coordinator.

15.3. Contractor shall give preference to local labor in execution of this contract, insofar as is practicable.

15.4. Contractor/subcontractor shall furnish the names, social security numbers, and addresses of all the employees on each job site by month, day, and year on a weekly basis.

15.5. Contractor/subcontractor shall have the name of their company clearly displayed on all their owned or leased vehicles and/or equipment.

15.6. Contractor/subcontractors shall have business cards with their respective companies name, phone, and fax numbers listed.

15.7. Contractor/subcontractor shall at all times be deemed to be representing and/or performing as an independent contractor and not as an agent or employee of IRHTP.

16. PERMITS, REGULATIONS, EASEMENTS

16.1. In execution of work specified herein, Contractor/subcontractors shall conform to regulations and ordinances of any governmental body that may apply in execution of specified work.

16.2. Contractor shall obtain such permits, licenses, and easements as may be required for construction of work unless otherwise indicated.

17. SAFETY

17.1. NO JOB IS SO URGENT THAT WE CANNOT TAKE TIME TO PERFORM OUR WORK SAFELY.

17.2. Safety is the foremost concern in any contract operation. UNSAFE ACTS OR OPERATIONS WILL NOT BE TOLERATED to the point of shutdown and termination of contractor.

17.3. Compliance with all Federal, State, and Local laws, ordinances, and regulations concerning health and safety as well as IRHTP standards is mandatory.

17.4. A weekly safety meeting involving the IRHTP field superintendent(s) will be held each Monday. The previous week and anticipated hazards will be discussed, with preventive measures outlined. For new types of activities, a hazard analysis form will be filled out and discussed with the contractor. Previous hazard analysis (as applicable to present work) will also be reviewed at this time. During the week the IRHTP representative will inspect the work sites. Any violations will immediately be brought to the attention of the contractor's supervision and corrected. Continued violations will be reason for termination of contractor. The IRHTP insists on having a quality, productive, and safe project.

17.5. Hard hats will be worn by all personnel in installation areas at all times. **No exceptions.**

17.6. During work in right-of-ways of interstate, secondary, and other roadways, and on all state projects, hard hats and reflective vests will be worn. **No exceptions.**

17.7. Traffic cones, flagmen, warning signs will be inspected each day at each work site.

17.8. Contractor will provide evidence that a written Confined Space Procedure, complying with the latest OSHA standards, will be adhered to. The contractor will provide a copy of their written procedure to IRHTP prior to any work that may involve entering a confined space.

17.9. All excavations left unattended or open shall be properly barricaded or plated (steel plate if in the street) until temporarily backfilled or complete restoration has been performed. During any non-working hours, contractor shall place steel plates over any open trenches that would pose a threat to vehicular traffic. The steel plates shall be of sufficient thickness to withstand the weight of a vehicle and anchored in place to prevent movement. Open trenches and holes, not exposed to vehicular traffic will be encircled by flexible orange snow fence and shall also be covered with plywood (or equal) and anchored in place. Plywood (or equal) shall be of sufficient thickness to withstand the weight of the anticipated traffic.

18. BARRICADES AND LIGHTS

18.1 Erect and maintain barricades and lights and/or provide watchmen in conformance with current Manual of Uniform Traffic Control Devices (MUTCD), for protection and warning of pedestrians and vehicles; all barricades, lights and/or watchmen at expense of Contractor.

18.2 IRHTP Project Coordinator/representative will not allow work to proceed until all signs, barricades and lights are in place; requirements for type of signs and number of signs will be strictly enforced; improper signage during construction will constitute "improper work" and IRHTP Project Coordinator will cause Contractor to suspend work.

18.3 All signs, barricades, and other traffic control devices used on the project shall be furnished, installed and maintained by Contractor; all traffic control devices shall be maintained in a state of good repair and shall be cleaned and washed periodically as needed.

19. THE IRHTP PROJECT COORDINATOR OR REPRESENTATIVE

19.1 IRHTP Project Coordinator or Representative shall make general observations of work as an agent of IRHTP. IRHTP Project Coordinator or Representative's general observation shall not be construed that it shall direct or control operations of Contractor/subcontractor.

20. LINE AND GRADE

20.1. Contractor shall provide benchmarks, base lines and other reference points. Contractor shall provide competent men and tools, stakes and other materials as required establishing temporary or permanent reference marks in connection with the work. Contractor shall perform such detailed measurements as required to properly lie out and construct work.

21. TESTING CABLE

21.1. The Contractor/Subcontractor shall be responsible for on reel verification of cable quality prior to placement.
21.2. One hundred percent (100%) of the cable's fiber count shall be tested at 1310 nm with an OTDR or approved acceptance sheet by manufactory or proof of testing by others. Test results will be recorded on a form supplied by IRHTP. Completed test forms on each reel shall be handed over to the IRHTP Project Coordinator.
21.3. Subcontractor assumes responsibility for the cable after testing. This responsibility covers all fibers in the cable.
21.4. The Subcontractor shall supply all tools, test equipment, consumables and incidentals necessary to perform quality testing.
21.5. The cable ends shall be sealed upon completion of testing.

22. DECISIONS BY IRHTP PROJECT COORDINATOR

22.1. IRHTP Project Coordinator shall make decisions, in writing, on claims between Contractor and IRHTP within a reasonable time after presentation. Such decisions shall be regarded as final except for appropriate legal recourse.

23. ON-SITE REVIEW OR OBSERVATION

23.1. All materials used and all work done by Contractor shall be subject at all times to review, observation, test and approval by IRHTP Project Coordinator/representative. Contractor shall furnish samples of materials for observation and test as requested by IRHTP Project Coordinator. Contractor shall furnish any information required concerning nature or source of any proposed materials or equipment.
23.2. Construction, fabrication and manufacture of equipment or materials specified herein may be observed by IRHTP Project Coordinator at plant or factory.
23.3. Materials, equipment or work that does not satisfactorily meet specifications may be condemned by IRHTP Project Coordinator by written notice to Contractor. Condemned materials, equipment or work shall be promptly removed and replaced.
23.4. Defective materials, equipment or work may be rejected by IRHTP Project Coordinator at any time prior to final acceptance by IRHTP even though said defective items may have been previously overlooked.

24. IRHTP PROJECT COORDINATOR AND/OR ENGINEER TECHNICIANS

24.1. OSP Engineers and/or engineer technicians may be appointed by IRHTP Project Coordinator or IRHTP to insure that work is performed in accordance with plans and specifications.
24.2. IRHTP Project Coordinator and/or engineer technicians shall have authority to notify Contractor in writing of work that is not being properly performed. Contractor shall be liable for any work determined by IRHTP Project Coordinator as not being properly performed.
24.3. IRHTP Project Coordinator and/or engineer technicians shall have authority to permit deviation from plans and specifications.

25. TIME

25.1. Contractor shall commence work within time specified and shall complete work within time specified in contract.
25.2. Contractor shall work normal working hours defined as ½ hour after sunrise and ½ hour before sunset unless it is an emergency situation or change has been approved by IRHTP Project Coordinator.

26. DELAYS

26.1. Delays caused by injunction or legal actions, damages by elements, or other causes beyond control of Contractor (of which IRHTP shall be sole judge) shall entitle Contractor to a reasonable extension of time within which to complete work.
26.2. Application for extension of time shall be made to IRHTP by Contractor and shall state reasons for request for extension of time.

26.3. No extension of time shall be valid unless made in writing by IRHTP.
26.4. Normal weather conditions shall not form the basis of request for extension of time.
26.5. Abnormal weather conditions shall form basis of request for extension of time only to the delay in excess of that resulting form normal weather conditions.

27. OWNERSHIP OF MATERIALS

27.1. All materials and work covered by partial payments shall become sole property of IRHTP, but this provision shall not be construed as relieving Contractor from sole responsibility for all materials and work for which payments have been made, for restoration of damaged work, or as a waiver of rights of IRHTP to require fulfillment of all terms of contract.

28. OTHER CONTRACTS

28.1. IRHTP reserves right to let other contracts in connection with this work. Contractor shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work, and shall properly connect and coordinate its work with theirs.

28.2. When proper execution of Contractor's work depends upon work of another contractor, it shall inspect other work and report any defects in writing to IRHTP Project Coordinator. Contractor's failure to inspect and report shall constitute an acceptance of other contractor's work except for defects that may develop after completion.

28.3. To insure proper execution of its subsequent work, Contractor shall measure work already in place and shall at once report in writing to the IRHTP Project Coordinator any discrepancy between the executed work and drawings.

29. IRHTP RIGHT TO DO WORK

29.1. If Contractor neglects to prosecute work properly or fails to perform any provision of this contract, IRHTP, after three (3) days' written notice to Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided, however, that IRHTP Project Coordinator shall approve both such action and amount charged to Contractor.

30. IRHTP'S RIGHT TO TERMINATE CONTRACT

30.1. IRHTP, upon certification of IRHTP Project Coordinator that there is sufficient cause to justify termination of contract, may, without prejudice to any other right or remedy, and after giving Contractor seven (7) days' notice may terminate employment of Contractor for any of following reasons:
- 30.1.1. Contractor makes a general assignment for benefit of its creditors, or is adjudged bankrupt.
- 30.1.2. Receiver is appointed on account of Contractor's insolvency.
- 30.1.3. Contractor persistently or repeatedly fails or refuses, except when extension of time to complete is granted, to provide enough skilled people or proper materials.
- 30.1.4. Contractor fails to make prompt payment to subcontractors/suppliers for materials or labor.
- 30.1.5. Contractor persistently disregards laws and ordinances or instructions of IRHTP Project Coordinator.
- 30.1.6. Contractor violates a provision of contract.

30.2. If IRHTP terminates employment of Contractor, it shall take possession of premises and all materials, tools and appliances thereon. It shall finish work by whatever method it may deem expedient. In such case Contractor shall not be entitled to receive any further payment until work is finished.

30.3. If unpaid balance of contract price exceeds expense of finishing the work including compensation for additional managerial and administrative services, excess shall be paid to Contractor. If

expense exceeds unpaid balance, Contractor shall pay difference to IRHTP. Expense incurred by IRHTP as herein provided, and damage incurred through Contractor's default, shall be certified by IRHTP Project Coordinator.

31. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

31.1. If IRHTP Project Coordinator fails to Issue any certificate for payment within fifteen (15) days after it is due, or if IRHTP fails to pay to Contractor with thirty (30) days of its maturity and presentation, any sum certified by IRHTP Project Coordinator, then Contractor may, upon seven (7) days simultaneous written notice to IRHTP and IRHTP Project Coordinator, stop work or terminate this contract. If Contractor elects to terminate this contract by written notice it shall recover from IRHTP payment for all work executed to date of notice and any loss sustained upon any plant or materials plus a reasonable profit.

32. PAYMENTS WITHHELD

32.1. IRHTP Project Coordinator may withhold or nullify the whole or a portion of payment certificate, based on subsequently discovered evidence, to such extent as may be necessary to protect IRHTP from loss on account of:

32.1.1. Defective work not remedied.
32.1.2. Claims filed or reasonable evidence indicating probable filing of claims.
32.1.3. Failure of Contractor to make payments properly to subcontractors/suppliers or for materials or labor.
32.1.4. A reasonable doubt that contract can be completed for balance then unpaid.
32.1.5. Damage to another contractor.
32.1.6. Claims of IRHTP for liquidated damages.
32.1.7. Payments shall be made for amounts withheld when above grounds are removed.

33. FINAL REVIEW, ACCEPTANCE AND FINAL PAYMENT

33.1. When work has been satisfactorily completed, IRHTP Project Coordinator will certify Contractor's final estimate stating that work has been completed in accordance with terms and conditions thereof with qualifications, if any, as stated. Balance found to be due Contractor according to the terms of payment shall be paid by IRHTP as specified in contract, provided, however, that any state laws which designate manner of final payment shall be followed in lieu of manner of final payment outlined above. Prior to receipt of final payment, Contractor shall file with IRHTP a receipt in full from each manufacturer, subcontractor, and dealer for all equipment and materials used on the work and a complete release of all liens, including tax liens, which may have arisen from this contract and required statements form Contractor and all subcontractors of sales and use tax paid. In lieu thereof, IRHTP, at its option, may accept from Contractor a statement showing balance due on all accounts.
33.2. Notify Engineer when project is considered to be complete and ready for final review.
33.3. IRHTP will not make more than 2 trips to any one site for inspections. If site requires more than 2 trips, Contractor will pay time, material & vehicles charges for additional inspections. This paragraph inclusive of item 13.13 in RESPONSIBILITY OF CONTRACTOR.
33.4. When Engineer has certified that he has reviewed the work of Contractor and stated that it is complete and in substantial conformance with the plans and specifications.
33.5. When Contractor has submitted to IRHTP and Engineer documents called for in Chapter 3, Annex C, Link Segment OSP Completion Check List.

34. SUSPENSION OF WORK

34.1. IRHTP may suspend work, or any part thereof, at any time, by giving ten (10) days' written notice to Contractor. The work shall be resumed by Contractor within ten (10) days after date fixed in written notice from IRHTP to Contractor to do so.

34.2. If work, or any part thereof, shall be suspended and if IRHTP does not give written notice to Contractor to resume work within one (1) year of date of suspension, Contractor may abandon

suspended portion of work. Contractor will be entitled to estimates and payments for all work done on the portions so abandoned, if any.

35. CLEANING UP

35.1. Contractor shall keep premises free form accumulations of waste material or rubbish caused by its employees or work. After completion of work it shall remove all its rubbish and all its tools, scaffolding and surplus materials from work site. It shall leave its work "broom clean" or its equivalent, unless more exactly specified. In case of dispute the IRHTP may remove rubbish and charge cost to Contractor as IRHTP Project Coordinator shall determine to be just.

36. DEFINITION OF TERMS

38.1 **AREA** The Numerical designation given to Merged Area HCP Districts and selected numbers given to other Part 1 End Points.

38.2 **BER** Bit Error Rate is a quality measurement for digital transmissions.

38.3 **CAPACITY** The sizing of the transmission links in terms of digital data rate requirements and refers to the traffic-handling capacity.

38.4 **CUTOVER OR ACCEPTANCE OF SERVICE** The date on which a specific element of the network has been accepted by the IRHTP and placed into service and the lease commences.

38.5 **dB** The abbreviation for decibel used to define relative signal strength.

38.6 **ELEMENT** A specific connection including all electronics, equipment and facilities required to provide Gigabit service.

38.7 **FACILITIES** Transmission lines or circuits available to provide service.

38.8 **FAR END** Refers to the network end point connected to an IRHTP access point.

38.9 **FCPC** Type of optical fiber connector with low connection loss and high reflection loss characteristics.

38.10 **F.O.T.** Fiber Optic Termination equipment

38.11 **IRHTP** Iowa Rural Hospital Telecommunications Program

38.12 I**NTERPRETATION** Words used in the present tense shall include the future, the future tense shall include the present, the plural shall include the singular, and the masculine shall include the feminine.

38.13 **LINK-SEGMENT** A link-segment is a fiber optic facility that extends from a predetermined point to another predetermined point. For example, the fiber that extends from the "A" Location (the HCP) to the appropriate end point (Z) location. The link-segment includes the appropriate electronics necessary to make it operational.

38.14 **MEDIA** Channels of communications, i.e., digital signal transport facilities.

38.15 **MERGED AREA** (refers to locations-educational institutions) Each Iowa County is assigned to a geographic cluster of counties and each geographic cluster of counties is identified as a separate merged area. However, individual counties may be divided between or among more than one merged area.

38.16 **MTBR** A statistical method for estimating failures of electronic equipment (Mean Time Between Failure)

38.17 **MTTR** A statistical method for estimating electronics and facilities repair time (Mean Time to Repair)

38.18 **NEAR END** Refers to the IRHTP access point used to connect an individual network element.

38.19 **nm** Abbreviation for nanometers, a measure applied to the wavelength of light transmitted over an optical fiber.

38.20 **ORDERWIRE** A voice circuit with equipment connecting a far (remote) end point and the near end point for maintenance activities.

38.21 **PART I** All Part I Elements for the entire IRHTP.

38.22 **PART I END POINT** A State provided facility at which Part I link and Part II links are terminated. Regional switching functions are provided. Serves as the Point of Presence for the county in which it is located.

38.23 **PART II END POINT** A State provided facility at which Part I and Part II links are terminated. Switching (secondary) is provided. Serves as the Point of Presence for the county in which it is located.

38.24 **PART III END POINT** The communications connection between secondary switching centers and individual accredited nonpublic schools, public schools and city, regional, HCP's and county libraries.

38.25 **POP** Point of Presence is the IRHTP part I or Part II in a specific municipality that may be used as an IRHTP access point for interconnecting network elements.

38.26 **REGIONAL SWITCHING CENTERS** The Part I end points providing interconnectivity for Part II end points and future Part II and Part III and other IRHTP end points.

38.27 **RESPONSE** Refers to the time expended from receipt of trouble, through the testing process and dispatch of the repair technician if required.

38.28 **RFP Request** for Proposal.

38.29 **SHALL Is** always mandatory.

38.30 **SINGLE MODE** Single mode designates an optic fiber which passes only the fundamental or lowest order mode at the light wavelength of interest (namely, 1310nm and 1550 nm for this RFP)

38.31 **SITE Connection** within or adjacent to a new IRHTP end point.

38.32 **SONET** Synchronous Optical Network is an American and international transport system utilizing the STS - 1 (Synchronous Transport Signal, level 1) as a root base.

38.33 **SONET LIGHTWAVE SYSTEM** A digital (SONET based) network element consisting of OC-(n) fiber optic transmission equipment, fiber facilities, batteries, rectifiers, alarm system, and capable of being independently switched and utilizes the overhead for control.

PART 2 - SPECIAL CONSTRUCTION

1. GENERAL

1.1. Procedures outlined below are not intended to fully cover all special procedures or emergencies which may arise during construction but are offered as an aid to Contractor in planning work; Contractor will cooperate with City, Hospitals, Schools, and Engineer to minimize inconvenience, construction delays and interruptions to continuous operation of existing fiber facilities.

1.2. Determine location of all underground utilities before starting excavation work; locations of underground appurtenances are approximate and not guaranteed by IRHTP. (Reference 13.6, Responsibility of Contractor in PART 1 OF DETAILED SPECS)

1.3. Remove and replace all signs and other appurtenances that interfere with construction operations; replace damaged signs at no cost to IRHTP.

1.4. Limit construction operations to all provided property, rights-of-way and easements. Provide barricades, lights, signs and detours as necessary to reroute traffic around construction areas. **(Inclusive of 17.0, Safety & 3.0, Right of Way in PART 1 OF DETAILED SPECIFICATIONS.)**

1.5. Arrange with operating utilities for relocation or temporary removal of utilities in conflict with construction and for service needed during construction at no cost to IRHTP.

1.6. Dispose of materials removed during construction at locations as approved by Engineer.
- 1.6.1. Dispose of waste products containing prescribed materials at approved landfill.
- 1.6.2. Dispose of surfacing, broken concrete or rubble, excess excavated materials and spoil.
- 1.6.3. Place excess excavated material at locations designated by Engineer.

1.7. Notify businesses and residents two days in advance, when construction will disrupt or block access to property.

1.8. Provide snow fence along boundaries of construction area as specified hereinafter and as directed by IRHTP Project Coordinator.
- 1.8.1. Install snow fence when area is prepared for excavation; install on steel posts with maximum spacing of 8'; maintain until work is complete.
- 1.8.2. Provide snow fence around all open trenches or open structures when left unattended.
- 1.8.3. Provide snow fence to keep livestock away from construction activities.

1.9. Backfill trench as construction progresses.

1.10. Cleanup and provide surface restoration as work progresses.

1.11. Submit complete detailed construction procedure schedule after award of contract for planning, scheduling and controlling construction of project.

1.12. Contractor will be expected to provide adequate personnel and equipment to perform work within specified time of construction.

1.13. Extensions of contract period will be given consideration upon written request of Contractor; request must include valid supporting data and bona fide reasons for requesting extension; IRHTP expects work to be complete and ready for final acceptance within completion time specified.

1.14. Protect survey markers of lot corners.

2. COOPERATION WITH OTHERS

2.1. Advise all utilities prior to excavating in area where construction might affect underground gas, electrical, telephone, cable or water service.

2.2. Advise telephone company of proposed construction schedule as it relates to telephone service.

2.3. Advise power company of proposed construction schedule as it relates to electrical power.

2.4. Advise gas company of proposed construction schedule as it relates to gas service.

2.5. Advise water company of proposed construction schedule as it relates to water service.

2.6. Advise cable television company of proposed construction schedule as it relates to cable television.

3. CONTINUITY OF EXISTING UTILITY SYSTEMS

3.1. Prepare detailed construction procedure schedule after award of contract: show definite and positive action to be taken to minimize disruption to utility systems.

3.2. Meet with all utilities to determine operability of isolation to determine area for which service would be shut off for each utility.

4. SURVEY MARKERS

4.1. Contractor responsible for hiring registered land surveyor to inventory existing pipe, pins and registered survey lot corners disturbed by construction; land surveyor responsible for setting reference markers required to re-establish location of existing pipe, pins and registered survey lot corners; land surveyor will not be required to certify pins or pipe replace as being lot corners; replace all markers disturbed by construction including where more than one pipe, pin or other marker are present at a location, replace all markers in same location as removed; provide drawing to IRHTP showing locations where markers were found and reset; dimensional data not required on drawing; each pipe, pin or marker replaced must be the identical marker removed at that location

5. CONTAMINATED SOIL FINDS

5.1. If during course of construction evidence of deposits of contaminated soils are found, cease operations affecting find and notify IRHTP who will notify Iowa Department of Natural Resources; no further disturbance of deposits will ensue until notification by IRHTP that work may proceed; IRHTP will issue notice to proceed only after contaminated soils have been identified and procedures for remedial action have been determined and approved by Iowa Department of Natural Resources and IRHTP; compensation to Contractor, if any, for lost time or changes in construction due to changed conditions will be in accordance with change order provisions of specifications.

6. PAYMENT

6.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in appropriate unit prices.

PART 3 - EXCAVATION AND BACKFILL

1. GENERAL

1.1. Excavation for trenches as specified herein; provide pipe/fiber as specified and shown on Standard Drawings for pipe/fiber installation.
1.2. Protect existing pavement from damage during construction if not shown on plans for removal; if damage occurs, replace in kind at no cost to IRHTP.
1.3. Remove, replace and repair items such as fences, storm drains, signs, hanging wires and other obstructions to accommodate construction equipment or to facilitate excavation; cost to remove and replace is incidental to construction.
1.4. Haul away and stockpile excavated material suitable for backfill; haul remainder of excavated material to an authorized waste site.
1.5. Remove soil not suitable for backfill; waste at disposal area specified in PART 2, SPECIAL CONSTRUCTION, Section 1.6 & 5.0; removal is incidental to construction, include cost in unit prices.
1.6. Where new work crosses existing utilities or utility services, excavate in advance of construction; determine crossing arrangement including exact construction line and grade. As specified in PART 1 - GENERAL REQUIREMENTS, Section 13.4 - 13.6, Responsibilities of Contractor.
1.7. Bore or jack under existing streets, utilities and structures except as noted on plans or as modified by IRHTP Project Coordinator.

2. DEFINITIONS

2.1. Earth: all materials including clay, silt, sand, gravel, hardpan, rock, shale, debris, junk, and brick, which can be removed by use of suitable excavating equipment and pneumatic tools.

3. EXCAVATION FOR STRUCTURES

3.1. Includes excavation for manholes and other appurtenances.
3.2. Excavate as required to firm, undisturbed soil for laying conduit. In the case of hand holes/manholes excavate six (6") inches below bottom of structure and fill with six (6") inches of ¾" river rock at no expense to IRHTP.
3.3. Provide sheeting, shoring, and bracing where required to hold walls of excavation or to protect existing structures or utilities.
3.4. When unstable material is encountered which will not, in opinion of IRHTP Project Coordinator, provide suitable foundation, remove and replace with granular stabilizing material as directed by IRHTP Project Coordinator in writing, cost incidental to construction.

4. TRENCH EXCAVATION

4.1. Keep width of trench as narrow as possible and still provide adequate room for backfilling and jointing.
4.2. Keep sides of trench as nearly vertical as practicable; comply with federal and state safety regulations.
4.3. Maximum desirable width of trench at top of fiber; as shown on Standard Drawings.
4.4. Excavate by hand:
  4.4.1. Under and around utilities.
  4.4.2. Where overhead clearance prevents use of machine.
  4.4.3. To protect trees and shrubs where shown on plans.
4.5. Remove top 18" of topsoil and store in segregated stockpiles for backfill prior to trench excavation.
4.6. The trench shall be as straight as practical. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.
4.7. The length of open trench shall not exceed 100' feet at the end of each working day. Any open trench, bore pit, or pothole shall be fenced, covered or otherwise barricaded to protect the general public at all times. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent persons from falling into the open trench, or other damages

5. ROCK SAWING

5.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered solid rock.
5.2. Where solid rock is encountered, the cable will be protected by steel, PVC conduit, high-density polyethylene conduit (HDPE) at the desecration of the IRHTP or its authorized representative.

6. ROCK EXCAVATION (NOT RECOMMENDED)

6.1. Use of explosives; submit detailed plans outlining all proposed blasting operations, locations, methods and use of mats and other safety measures.
6.1.1. Obtain written approval from IRHTP and Engineer before using explosives.
6.1.2. Provide Special Hazard Insurance covering liability for all blasting operations.
6.1.3. Use thoroughly experienced demolition personnel.

7. RUBBLE EXCAVATION

7.1. Rubble, as specified and defined herein, may be encountered along route.
7.2. Removal: as specified for rock.
7.3. Use of explosives: as specified for removal of rock.

8. SHEETING, SHORING, AND BRACING

8.1. Minimum shoring requirement; equivalent construction procedure to use of "sand box" to provide 8' vertical protection; provide stacked sand boxes as required to maintain construction within construction limits.
8.2. Construct sheeting, shoring and bracing to hold walls of excavation where shown on plans or at other locations, to provide safety for workmen, to protect existing utilities or structures or to permit construction in the dry, sheeting operations which in the opinion of IRHTP Project Coordinator cause excessive vibration will not be allowed.
8.3. Leave sheeting and shoring in place when removal, in the opinion of IRHTP Project Coordinator, might damage new facility, existing utilities or structures.
8.4. Sheeting, shoring and bracing is incidental to construction; include cost in appropriate unit cost.

9. DEWATERING

9.1. All work must be done in a dry environment; obtain IRHTP Project Coordinator's approval on methods of dewatering.
9.2. Provide for handling of water encountered during construction.
9.3. Lay no pipe/fiber in or pour no concrete on excessively wet soil.
9.4. Prevent surface water from flowing into excavation; remove water as it accumulates.
9.5. Divert stream flow away from areas of construction.
9.6. Do not pump water onto adjacent property without approval of IRHTP Project Coordinator.
9.7. Dewatering is incidental to construction; include cost in appropriate unit cost.

10. EXISTING UTILITIES

10.1. Hold a preconstruction meeting 3 days prior to beginning construction. Document meeting with a sign-in sheet detailing names, addresses, phone & fax numbers of company representatives present. Take minutes of meeting and hand documentation in with as built package.
10.2. Locations of utility lines, mains, cables and appurtenances are the responsibility of contractor; confirm locations of underground utilities by excavating ahead of work; Contractor fully responsible for damage to utilities during construction.
10.3. Protect services during construction.
10.3.1. If utility services are in direct conflict with line and /or grade of new facility; notify IRHTP immediately; provide all necessary shut-down, repair, and relocation where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be paid by contractor; when broken due to carelessness, repair is incidental to construction.

10.3.2. Support and protect, by timbers or other means, all utility pipes, conduits, poles, wire and other apparatus not to be moved; protective measures subject to approval of IRHTP Project Coordinator.

10.3.3. No utility or utility service will be moved to accommodate equipment employment; method of operation or for convenience of Contractor when utility or utility services does not conflict directly with line and grade of work.

11. TREE REMOVAL

11.1. Remove trees only in conflict with alignment of trenches or location of structures.

11.2. Removal includes grubbing and removing stump and roots, removal from site, disposal of debris and backfilling.

11.3. Tree and bush removal is incidental to construction; include cost in applicable unit price.

12. BACKFILL FOR STRUCTURES

12.1. Backfill after concrete, masonry, or glue has cured, and waterproofing, if specified, has been inspected and approved by Engineer.

12.2. Backfill with material removed form excavation; use no debris, frozen earth, large clods, stones or other unsuitable material.

12.3. Backfill simultaneously on all side of structure; save structure from damage at all times.

12.4. Terminate at original grade or at elevation shown on plans; dispose of excess excavation as directed by Engineer.

12.5. Prepare backfill for surface restoration as specified for adjacent trench.

13. TRENCH BACKFILL

13.1. Backfill trench immediately after contractor has recorded sequence marking on cable or location of connections and appurtenances or at IRHTP Project Coordinator's direction; backfill with select material excavated from trench.

13.2. Use no large stones, large clods, organic matter, rubbish, frozen or unsuitable materials in backfill; furnish extra soil from site to complete backfilling at no extra cost to IRHTP; remove and dispose of unsuitable material; backfill simultaneously on both sides of pipe to prevent displacement.

13.3. Hand place and carefully compact backfill to 1' over top of facility.

13.4. Backfill 1' over top of facility in layers not to exceed 18"; where compacted backfill shown on plans, compact to minimum 95% maximum density.

13.5. Backfill above PVC pipes:

13.5.1. Backfill with pipe bedding material to minimum 6" above top of pipe; do not drop pipe bedding material from equipment bucket more than 2' above pipe; all pipe bedding material including backfill material is incidental to construction.

13.5.2. Above pipe bedding material, backfill with excavated material, except frozen material, shale, and other non-suitable material; do not drop backfill material from equipment bucket more that 2' above bottom of trench until backfill material is in place 18" above bedding backfill material.

13.5.3. Consolidate bottom 6" of trench backfill with hand tools and tampers; do not use vibratory plate compactor until above bottom 18" of trench backfill.

13.5.4. Cable marking ribbon shall be installed above all trenched direct-buried HDPE/conduits. The ribbon shall generally be placed at a depth of 12" inches below grade and directly above the fiber/HDPE/conduits.

13.5.5. Splice boxes/hand holes will be placed at <u>all splice locations</u>. Hand holes will be placed at intervals of approximately 1000' feet, change of direction, greater than 15% and as shown on construction drawings and typical drawings. Hand holes may be moved to locations more practical when necessary upon approval by the IRHTP.

14 SURFACE RESTORATION

14.1. All trenches: replace 18" of topsoil removed during excavation.

14.2. Grade tops of trenches to smooth, uniform lines without large lumps, clods or debris.

14.3. Dispose of all brush and rubbish as directed by IRHTP Project Coordinator.

14.4. Sod/seed all areas disturbed by construction unless otherwise shown on plans or as directed by IRHTP Project Coordinator.

14.5. Prepare site for seeding by disking, harrowing and had raking or other means following site grading; work soil to depth of 3".

14.6. Precede seeding with uniform application of commercial grade fertilizer at rate per acre of 20 lbs. of nitrogen, 40 lbs. of phosphorous and 20 lbs. of potassium (400 lbs. of fertilizer grade 5-10-5 per acre, or approved equal); cultivate area 3" deep and work with harrow within 24 hours before seeding; smooth surface to eliminate clods and lumps before seeding.

14.7. Seeding in street parkings, lawns and developed areas (Type 1):

14.7.1. Seed at rate of 85 lbs. per acre with following mixture proportioned by weight.

SEEDING	PERCENT
Kentucky Bluegrass	35%
Annual Rye	25%
Perennial Rye	20%
Creeping Red Fescue	10%
Chewing Fescue	10%

14.8 Seeding in City rights-of-way, railroad rights-of-way, pastures, farm fields and creek banks (Type 2):

14.9 Seed at rate of 1.25 lbs. per 1000 SF with the following mixture proportioned by weight:

SEEDING	PERCENT
Brome grass	60%
Alfalfa	20%
Red Clover	12%
Alsike Clover	8%

14.10 Add rye to seed mixture at rate of 1 bushel per acre if seeded between August 15 and October 15; add oats at rate of 1-1/2 bushels per acre if seeded between April 1 and May 30.

14.11 Inoculate alfalfa and clover seed not more than 8 hours before sowing.

14.12 Seed between dates of August 15 and October 15 or between dates of April 1 and May 30.

14.13 Cover seed by rolling with cultipacker, or by dragging or hand raking.

14.14 Mulch all seeded areas: mulch: dry oat straw at rate of 4000 lbs. per acre; stabilize mulch with tiller designed to anchor mulch to soil.

14.15 Water seeded area sufficiently to saturate seed bed; continue watering all areas until growth is established.

14.16 Contractor is responsible for turning over to IRHTP full stand of grass; replant or redevelop bare spots or areas not attaining full stand of grass during first growing season.

14.17 No separate payment will be made for work covered in this part of the specifications. Contract unit prices shall include all cost for restoral.

15. STREET & DRIVEWAY REPLACEMENT

15.1 Replace surface with new surfaces to match construction for type, size and surface texture unless otherwise specified.

15.2 Gravel or crushed stone:

15.2.1 Place 6" compacted crushed stone in top of trench; conform to IDOT Class A crushed stone; place and compact in two lifts.

15.2.2 Place additional compacted crushed stone beyond trench limits to widths shown on plans to restore to existing conditions; minimum thickness: 2".

15.2.3 No separate payment will be made for work covered in this part of the specifications.

16. FIELD DRAIN LINES

16.1 Field drain lines may be encountered along route of new sewer; notify IRHTP Project Management if drain conflicts with facility construction.
16.2 Where new facility crosses under field drain lines, replace with a length of Schedule 40 PVC pipe; match size of existing drain line; cut 1/8" to ¼" wide slots at 12" centers transverse to pipe for slots on bottom; replacement paid for by contractor.
16.3 Where new facility parallels field drain lines, replace damaged field drain lines; match size and material of existing drain line.
16.4 No separate payment will be made for work covered in this part of the specifications.

17. FENCE REMOVAL AND REPLACEMENT

17.1 Remove fence for construction access as required within easements.
17.2 Miscellaneous fence removal and replacement is incidental to construction; restore fence to original or better condition; replace wooden fence posts with new posts unless directed otherwise by Engineer.
17.3 No separate payment will be made for work covered in this part of the specifications.

18. DIRECTIONAL BORING

18.1 This includes all labor, equipment, and materials to install a minimum of one 1-1/4 inch diameter HDPE using directional boring techniques. The running line of the duct shall be kept straight and level unless otherwise specified in the final construction drawings. Any changes, either vertical or horizontal, shall be gradual and not to exceed 1.5' deviation in less than 6" (inches). Special care shall be taken to insure that the duct connection between bores be kept straight and level. When installing inner-ducts, conduits shall be color coded or marked to aid in identifying the respective ducts. This color-coding shall be observed during connection to assure duct continuity.
18.2 This unit also includes any pothole excavation for whatever purpose along with the pothole restoration. The barricading and safeguarding of pothole excavations shall comply with **BACKFILL & EXCAVATION** section. Backfill and restoration of excavation shall comply with Federal, State or local governing agency requirements.
18.3 Entrance of HDPE conduits into manholes and hand holes/splice boxes shall be in a level and straight line to facilitate installation of fiber optic cable.
18.4 Every effort shall be made to maintain a minimum of twelve (12") inches of clearance between IRHTP conduit and other utilities.
18.5 The boring machine shall be grounded at all times during operation. The grounding method shall comply with the manufacturer's guidelines and requirements. Adequate barricades shall be erected to limit access to boring machine operation personnel only.

19. PAYMENT

19.1 No separate payment will be made for work covered in this part of the specifications. Include all costs in appropriate unit prices.

PART 4 - PIPES AND STRUCTURES

1. PIPE MATERIALS

1.1. Polyvinylchloride pipe (PVC):
1.2. Steel casing pipe: 0.25" under roadway; use for casing pipe where shown on plans.
1.3. HDPE
1.4. Plenum raceway

2. PIPE JOINTS

2.1. Polyvinylchloride (PVC) schedule 40: couplings and/or integral bell.
2.2. HDPE connectors: approved by the manufacture.
2.3. Steel pipe
2.4. Plenum connectors approved by the manufacture.

3. JOINT PROTECTION & INSPECTION

3.1. Carefully protect joints from injury while handling and storing pipe.
3.2. Use no deformed, gouged or otherwise impaired joints.
3.3. Clean bell and spigot surface of dirt and foreign matter before jointing pipe.
3.4. Use cleaner or primer.
3.5. Make joints in strict accordance with manufacturer's recommendations.

4. PIPE INSTALLATION

4.1. All inner-duct, HDPE or conduit shall be tagged or color-coded.
4.2. Before laying pipe, verify all measurements at site; make necessary field measurements to accurately determine pipe make-up lengths or closures.
4.3. Keep pipe free of all dirt and foreign material
4.4. Use no defective pipe; check each length for defects and hairline cracks at ends prior to lowering into trench.
4.5. Lower pipe carefully into trench.
4.6. Pull joints together with equipment recommended by pipe manufacturer; do not use backhoe or similar equipment to push joints together.

5. CONNECTIONS BETWEEN DISSIMILAR PIPE

5.1. Provide manufactured adaptor or coupling.

6. PIPE CONFLICTS

6.1. Where pipe parallels an existing facility maintain at least 1 foot of separation.
6.2. Where pipe crosses an existing facility maintain at least 1 foot of separation.
6.3. Provide all necessary shut-down, repair and relocation of existing facilities where conflicts occur; furnish labor, equipment, pipe and fittings; repair and relocation will be paid by contractor. When existing facility is damaged to carelessness repair is incidental to construction.
6.4. Conflicts as specified in EXCAVATION AND BACKFILL.

7. TRACER WIRE INSTALLATION

7.1. Tracer wire shall be placed with all HDPE conduit installed unless armored or traceable cable is used. The tracer wire shall be provided by the contractor. The contractor that installs the HDPE conduits shall install, splice, and test (for continuity) the tracer wire. If the tracer wire is not placed or is broken during installation, the contractor shall notify IRHTP Project Management immediately. The area of the route that does not have tracer wire installed shall be identified on the as built documents submitted by the contractor. IRHTP will have the tracer wire installed by the subcontractor that installs the fiber optic cable or by other means. If the tracer wire is installed by a

contractor other than the contractor that installs the HDPE conduits, the IRHTP will charge the HDPE installation contractor reflecting IRHTP cost to have the tracer wire installed.

7.2. On multi-duct installation install a 5/8" x 8' copper clad ground rod in the hand hole located on public r/w. Place a #12 insulated copper locate wire from the ground rod to the FOTS room or to the outside of the building directly below the pull box and terminated on one side of a Reliance 5533 insulated indoor/outdoor terminal block with copper connectors. Run a #12 copper wire from this terminal block to the master ground bar in the FOTS room or place a ground rod on the outside of the building. Locate block in an accessible location. This is for locate "purposes only". This is not for grounding purposes. Note on as-built where ground is placed and tag locate wire as "locate wire".

8. PROOFING THE DUCT

8.1. All inner-duct, conduit/multi-duct will be proofed upon completion to verify continuity and integrity of the duct by pulling a solid rubber mandrel or a mandrel of other solid material such as steel or aluminum. The mandrel shall be at least 6" long and 1" in diameter. An IRHTP representative must be present to witness all duct proofing operations, duct that is not proofed in the presence of an IRHTP representative shall not be considered complete. The preinstalled mule tape of polypropylene rope may be used for this purpose but the tape or rope must be reinstalled upon completion of proofing. The reinstalled tape or rope must be free of damage, equal to its original integrity and free of other defects that would render it unsuitable for cable pulling.

9. MULTIPLE DUCT INSTALLATION

9.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct containing the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity. Refer to Appendix 1.17 on Sleeves.

9.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mileposts. However, hand holes may be moved to locations more practical when necessary upon approval by the IRHTP. All ducts shall enter and exit the hand holes. Should mid-assist points become necessary when pulling the cable, the ducts shall be spliced together in a watertight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

10. MANHOLES/HAND HOLES

10.1. Use non-shrink grout between pipe and manhole block out.

11. PAYMENT

11.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in applicable unit prices for items to which work pertains.

11.2. Pipe in Place, LF:

11.2.1. Unit price includes furnishing pipe, handling, laying pipe bedding if required, materials, trench excavation, dewatering, connections between dissimilar pipes, connections to existing system, connections of existing pipes and appurtenances, sheeting, shoring and bracing, backfilling, service connections, tree and brush removal, surface restoration including seeding, fencing, and miscellaneous associated work.

11.2.2. Length will be measured along centerline of pipe with no deduction for manholes, including manholes.

11.3. Standard Manholes, Each Unit price includes furnishing, installing, excavating, concrete, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work for manholes 0 - 10' deep.

11.3.1. Diameter of manhole as shown on plans as specified.

11.4. Hand holes, Each Unit price includes furnishing, installing, excavating, frame and cover, connections of or to existing facilities, backfill and miscellaneous associated work.

12. BEDDING REQUIREMENTS

12.1. Bedding for manholes/hand holes: lay manholes/hand holes on 6” deep bedding material (3/4”river rock); fill around perimeter of manholes/hand hole to minimum depth of 6” deep bedding material (3/4”river rock). Compact all bedding material by vibration.

13. PAYMENT

13.1. No separate payment will be made for work covered under this part of the specifications. Include all costs in applicable unit prices for items to which work pertains.

PART 5 - SPECIFICATIONS FOR BURIED INSTALLATION OF FIBER OPTIC CABLE

1. GENERAL

1.1. This specification covers the buried installation of a fiber optic cable by various methods for the IRHTP Network. Methods of direct burial are plowing, trenching or boring. Sections designated by the Contractor and crossings such as roads and streams shall be installed with external protection as specified herein. Installation of hand holes for use as pull boxes and splice boxes is covered herein, as is any work required at regenerator sites.

1.2. As required, the cable shall be removed from the reel by approved methods and pulled through the pipe crossings or under other utilities and replaced on the reel to continue the installation operation. The cable will be installed in various lengths up to 12 kilometers as determined by the Contractor.

1.3. Hand holes will be installed per the applicable Standard Drawing at intervals or locations called for in the specifications or drawings. Bends of small radii and twists that might damage cable shall be avoided. During the placing operation, cable shall not be bent in a radius less than 20 times the outside diameter of the cable.

2. MATERIAL

2.1. IRHTP Compatible/Specified Material: Contractor will furnish the materials listed below:

2.1.1 Armored Fiber Optic Cable meeting SMF-28/GR/253 fiber specifications
Single Jacket
Loose Tubes, Three tubes of 12 fibers each (Dri-Core)
36 total fibers
Color coded Buffer Tubes
2.1.2 Non-Armored Cable (Kevlar)
Kevlar Cable must be in duct and must include a #10 AWG tracer wire inside the duct.
2.1.3 All rack mounted bulkheads or FDP's shall be equipped with SC style connectors
2.1.4 Warning Tape
2.1.5 Hand Holes
2.1.6 S.I.P. Peds
2.1.7 Sign Post & Signs
2.1.8 Ground Rods & Clamps, Bare #6 Wire
2.1.9 PVC Pipe - Schedule 40
2.1.10 GIP
2.1.11 BIP
2.1.12 Cable Lubricant
2.1.13 Pulling Rope - 600 lb test

3. DEFINITION OF TERMS

3.1. Road Gravel. Material used for restoration of all gravel surfaces shall conform to IDOT spec. 4120, Class A road stone, Standard Specifications for Highways and Bridge Construction.
3.2. Erosion Control Fencing. Erosion control materials must conform to Section 4169 of the Standard Specifications for Highway and Bridge Construction.
3.3. Rip Rap. When riprap is needed it shall be Class "E". It shall conform to IDOT spec. 4130 Rip Rap Standard Specification for Highway and Bridge Construction.
3.4. Pea Gravel. Pea gravel used for bedding under manholes shall comply with IDOT Spec. 4131 Porous Backfill Standard Specifications for Highway and Bridge Construction.
3.5. Asphalt. Material used for asphalt restoration shall conform to IDOT Spec. 4126 of Standard Specifications for Highway and Bridge Construction.
3.6. Concrete. Concrete for sidewalk, curb and gutter replacement shall be class "C" 3000 lb. and shall conform to IDOT Spec. 2403 of Standard Specifications for Highway and Bridge Construction.

3.7. Cable Lubricant. Contractor shall supply a cable lubricant approved by the Contractor for installation of fiber optic cable.
3.8. Pulling Rope. Contractor shall supply pull rope with 600 LB proper tensile strength.
3.9. Bridge Attachments. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.
3.10. Duct Plug. Contractor shall supply a "JACKMOON PLUGS" blank plugs and Simplex to seal all conduit and casing openings.
3.11. Hardware Cloth. Contractor shall supply 2" x 2" mesh - 19-gauge wire for use over pea gravel and under manholes.

4. PROTECTION OF MATERIAL

4.1. Contractor shall be responsible at all times for protecting the exposed portions of the cable from damage, including intrusion of water. Cable ends will be left at splice locations with sufficient protection to prevent water from entering the cable ends. The contractor shall replace or repair at the IRHTP's option, and damage that occurs to the cable as a result of insufficient or improper protection of the cable.

5. REPORTING CABLE DAMAGE

5.1. The cable shall be carefully inspected by the IRHTP during the plowing or trenching operation prior to its installation in the project to be certain that it is free from defects. Cable damage due to the contractor negligence will be the responsibility of the contractor. Every instance of damaged cable observed at any time shall be immediately called to the attention of the Contractor; whether prior to installation, during construction, or during test or observation subsequent to installation. The method of repair or correction of such damage shall be in accordance with the written instructions of an authorized IRHTP's representative. The contractor shall make repairs or corrections promptly.

6. CABLE REPAIRS

6.1. Minor damage to the outer jacket of the cable observed prior to or occurring during construction shall be repaired in accordance with instructions from an authorized IRHTP's representative.
6.2. Cable damage in excess of minor damage to the outer jacket, which is observed prior to or during construction, shall be corrected as follows:
6.2.1. The damaged section of cable shall be enclosed in (1) a buried housing located as specified by the IRHTP or in (2) a buried cable splice enclosure if approved by the IRHTP, buried to the same depth as that specified for the cable. If the shield has been broken or the conductor insulation damaged, the cable shall be restored to the equivalent of new condition. This may require cutting out the damaged section of cable if required by the IRHTP. It may also require the replacement of an entire section between two existing hand holes. Determination of the method of correction will be at the IRHTP's sole discretion.
6.3. Damage to cable discovered after burial, either through test or observation, shall be repaired as follows:
6.3.1. The damaged section of the cable shall be repaired as approved by the IRHTP. This may require cutting out the damaged section and replacing it with a short section of new cable with splices made in (1) buried hand holes or (2) buried cable splice enclosures, if approved by the IRHTP, which are buried to the same depth as required for the cable. It may also require the replacement of an entire section between two splice points. Determination of the method of correction will be at the IRHTP's sole discretion.

7. DEPTH OF BURIAL (Refer to Appendix 1.18)

7.1. Except where otherwise specified, the cable shall be placed to a minimum depth of 36 inches unless otherwise approved by the IRHTP. Greater cable depth will be required at the following location.
7.2. Where cable route crosses roads, the cable shall be placed at a minimum depth of 48" below the pavement or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.
7.3. Where the cable route crosses railroad rights-of-way the cable shall be placed at a minimum depth of 60" below the railroad surface or 36" below the paralleling drainage ditch, whichever is greater; unless the controlling authority requires additional depth in which case the greatest depth will be maintained.
7.4. Where cable crosses existing sub-surface pipes, cables, or other structures. At foreign object crossings the cable will be placed to maintain a minimum of 12" clearance from the object or the minimum clearance required by the objects owner, whichever is greater.
7.5. Where cable crosses small gullies, ditches, and washes, the cable will be placed at a minimum depth of 48” below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the Contractor's field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.
7.6. Where cable crosses large/major gullies, ditches, streams, rivers, washes or areas prone to flooding, the cable will be placed at a minimum depth of 10’ below the flow line of the waterway unless IRHTP specifically waives this requirement. Such determination shall be made by the IRHTP field representative and recorded on the as-built drawings. In no case shall the cable be placed at less than the 36" minimum depth.
7.7. Additional cable depth required to satisfy the preceding items shall not be construed as Extra Work.
7.8. Where rock excavation is required, a minimum depth of the cable of 24 inches may be allowed, with IRHTP's written approval, when the cable has additional protection of Contractor-provided PVC or HDPE conduit. Otherwise, the minimum depth for placement in rock will be 36".
7.9. Where there is a layer of soil over rock, the minimum depth that the contractor may be allowed, shall be the shallower of: 1) the minimum depth of trench in rock, measured to the soil-rock interface; or 2) the minimum depth in soil, measured to the surface.
7.10. At other locations as may be specified by the IRHTP.

8. CABLE MARKING RIBBON

8.1. The cable marking ribbon shall be installed above all direct-buried cable and conduit. The ribbon shall generally be placed at a depth of 12 inches below grade and directly above the cable or conduit.

9. HAND HOLES (SPLICE BOXES)

9.1. At all splice locations, hand holes will be placed as splice vaults. Hand holes may also be placed at the end of conduit runs to serve as pull boxes for the cable, at the option of the Contractor.
9.2. Hand holes will be set at all regeneration stations, at entrances to terminal stations, and at other locations required by the Contractor and/or shown on the drawings.
9.3. Hand holes shall be of the type shown on the applicable Standard Drawing. Hand holes shall be installed in accordance with the Standard Drawing.
9.4. Hand holes shall be spaced to allow sufficient length (75’) of cable at each end of the reel to be coiled in the hand hole.
9.5. After placing the hand hole, contractor shall backfill to a level even with the top of the hand hole. The excavation shall be left in the above condition until after the splice has been completed by others. Upon notification by IRHTP that the hand hole is ready, the contractor shall complete the backfill of hand hole pit in accordance with the drawings and with Clause 22.0 of these Specifications.

10. CABLE PLOWING

10.1. General

10.1.1. The contractor shall be familiar with general guidelines covering the construction of buried communications cable.

10.1.2. The equipment and construction methods used by the contractor shall be such as to cause minimum displacement of the soil.

10.1.3. Damage to banks, ditches, driveways and roads caused by the equipment shall be immediately repaired to the satisfaction of the IRHTP and public authorities having jurisdiction over highway and road rights-of-way.

10.1.4. Where cable is buried near the edge of pavements, the contractor shall take particular care to avoid damaging the pavement. If such damage does occur, repairs shall be made immediately to meet the complete satisfaction of state or local authorities having jurisdiction over the pavement.

11. PLOWING EQUIPMENT REQUIREMENTS

11.1. The plowing equipment shall be subject to the approval of the Contractor and the public authorities having jurisdiction over highway and road rights-of-way.

11.2. Plowing shall be performed by a prime mover with hydrostatic type steering and a static plow.

11.3. The design of the plowshare shall be such that the buried cable passing through the plow will not bind and shall not be bent in a radius less than 20 times the outside diameter of the cable. The feed chute must be a removable gate for the purpose of inspection and to allow the cable to be removed from or inserted into the feed chute at any intermediate point between splice locations. The cable path inside the feed chute must have low friction surfaces and be free of burrs and sharp edges to prevent damage to the cable as it passes through. Any welds must be smoothed. Internal guide rollers shall not be used.

11.4. The equipment shall be capable of extending the plow in order to maintain the required minimum depths under all terrain conditions.

11.5. The reel carrier shall be of adequate size and be configured so that the reel sizes being used can be safely handled.

12. PLOWING REQUIREMENTS

12.1. The slot made in the soil by the cable plows shall be closed immediately by driving a vehicle track of sufficient weight over the plow slot, to thoroughly compact the plow slot or by other suitable means approved by the Contractor.

12.2. Start and finish pits and pits at points of intersection, as needed must be excavated in advance of plowing cable. Ends of casings and crossings of foreign utilities shall be exposed prior to start of cable plowing operations.

12.3. The contractor shall exercise particular care in the use of trenching equipment and shovels in joining trenches to the slots made by the plow to be certain that the cable is not damaged.

12.4. To avoid possible damage to buried cable from exposure to traffic, livestock and other hazards, trenching of laterals, trenching around culverts, construction of aerial inserts and similar operations shall be completed as soon as practicable behind the plowing operation, but never more than 48 hours behind the plowing operation unless additional protective measures, as approved by the contractor, are employed. Notwithstanding this provision, the contractor remains responsible for the cable throughout the placing and acceptance intervals.

12.5. Care is to be exercised during the plowing operation, to feed the cable into the ground through the plow loose and at no tension. Equipment and construction methods shall be such as to assure compliance with this requirement. The contractor shall furnish competent supervision at all times at the site of plowing operations to assure compliance with this requirement.

12.6. If during the plowing operation, the plow should strike a buried object or rock that stops the equipment and necessitates removal of the plow from the ground, the precautions detailed in Section 9.4 shall be observed to avoid damage to the cable. Should it be necessary to back the plow to remove it from the ground, the cable shall be uncovered by hand a sufficient distance back for inspection by the IRHTP to determine whether the cable has been damaged.

12.7. Where casing pipe or foreign utility is encountered, the cable shall be unrolled and placed in a figure 8 configuration. After the cable is pulled through the casing pipe(s) or under the foreign utility (ies), it shall be replaced on the reel and the plowing operation restarted. EXTREME CARE must be used whenever the cable is handled so that it will not be kinked or damaged in any manner.

12.8. The plowing precautions detailed in Section 9.4 shall be strictly observed.

13. PLOWING PRECAUTIONS

13.1. Failure to observe precautions concerning proper operation of the prime mover and plow contributes to unnecessary cable damages. The following precautions shall be reviewed with equipment operators and shall be strictly observed.

13.1.1. The tractor shall always be started slowly and speed increased gradually after all cable slack is removed from the cable delivery system.

13.1.2. Plow attitude and depth shall be changed gradually. Such changes shall be made only while prime mover is moving.

13.1.3. Should it be necessary to raise the plow share to the surface when the plow is not moving, the cable to the rear of the feed chute shall be excavated and slack pulled so that the cable is not kinked over the feed chute exit.

13.1.4. Do not plow with the share set at extreme forward rake angles without a share specifically designed for this purpose.

13.1.5. When rigging for off-set plowing, the cable shall be re-routed over the cable feed systems to conform with the new configuration.

13.1.6. Abrupt changes in terrain along the cable path shall be graded off ahead of the plow. Such grading must be approved by IRHTP and IDOT.

13.1.7. The plowing operation shall be observed continuously for obstructions, proper feeding of cable, maintaining proper depth, etc.

13.1.8. Under no circumstances shall the plow be backed or the share moved to the rear with cable in the chute.

13.1.9. At no time shall the plow be wobbled either vertically or horizontally to break through an obstruction.

13.1.10. At no time shall the plow deviate from the normal route to seek an "on grade" crossing level for farm roads. Unless the road is bored, contractor shall level the plow train path in order to make a level crossing of the road. Subcontractor shall repair the road after passage, including repaving or gravelling, as required

13.1.11. No practice will be allowed that will cause an abrupt change in direction of the plowed in cable.

14. CABLE PLOWING IN ROCK AREAS

14.1. Solid rock is defined as a consolidated rock that cannot be plowed to specified depth. Frozen ground is not considered as solid rock.

14.2. Where solid rock is encountered, the cable will be installed by the trench method described in Section 10.0, while also being protected by steel PVC conduit, high-density polyethylene conduit (HDPE), at the discretion of the Contractor.

15. PLACING CABLE AT REEL ENDS

15.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

16. CABLE IN TRENCH

16.1. Excavation

16.1.1. The trench shall be as straight as practicable. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual.

16.1.2. The length of open trench shall not exceed 100' at the end of each working day. Any open trench shall be fenced. Exceptions are subject to approval by the IRHTP. Good judgment and care must be exercised to prevent livestock or persons from falling into the open trench.

16.1.3. Driveways, lanes, or roadways, which are open cut, shall be opened just prior to the conduit and/or cable placing. In no case shall the driveway, lane, or roadway be left impassable at the end of the day. The general public safety is paramount and appropriate steps shall be taken to ensure safety at all times.

16.2. Backfill

16.2.1. The trench shall be backfilled and compacted to the satisfaction of the IRHTP or local authorities, promptly behind the pipe and/or cable placing, except at splice locations. In general, the backfill shall consist of the earth removed from the trench.

16.2.2. Where a carrier, pipe, conduit, duct, or cable is placed by trenched construction beneath a roadway or a driveway or within five feet of the edge of an existing or proposed pavement or base course, the backfill within the roadway shall be placed and compacted in not more than 6" lifts, from the top of the installation to the ground line. The backfill shall be of suitable material free from boulders, frozen clods or roots or excessive sod or other vegetation. The fill shall be carefully hand tamped under and around the installation in lifts not to exceed 4" in loose thickness.

16.2.3. In areas inaccessible to tamping-type rollers where compaction is required, a mechanical tamper of a size suitable for the work involved shall be used.

16.2.4. Pneumatic tampers shall be operated at pressures no less than those recommended by the manufacturer.

16.2.5. Compaction of backfill shall be to the satisfaction of the IRHTP, and consistent with good highway construction methods.

16.2.6. On public right-of-way all backfilling must conform to the requirements of the authority having jurisdiction.

16.3. Trenched Road and Driveway

16.3.1. Generally all hard surfaced areas will be bored. The backfill at crossings of driveways, lanes, or roadways shall be the same as 10.2.

16.3.2. Pavement replacement shall match existing paving in type of pavement appearance, wear surface, and durability to the maximum extent practical. Replacement shall match existing structure and shall include curbing, walkways, or any other concrete structure damaged during construction. Pavement repair shall be subject to approval by the IRHTP and must conform to the requirements of the local governing authority having jurisdiction including required cutbacks, or "T" topping. Pavement repair not installed in accordance with the requirements of these Specifications shall be removed and replaced.

16.4. Trench In Rock

16.4.1. See Section 9.5 for a definition of solid rock.

16.4.2. Where solid rock is encountered, the trench may be excavated using a rock saw or other rock cutting equipment. The excavation, backfill and road crossings in solid rock areas shall conform to sections 10.1, 10.2 and 10.3 of these specifications unless specifically exempted in this section.

16.5. Placing Cable

16.5.1. The cable will be placed to provide sufficient cable for splicing at ground level. This should be a minimum of 75 feet. Inside the regenerator station buildings, sufficient cable will be allowed to connect to the equipment.

17. MULTIPLE DUCT INSTALLATION

17.1. This item includes all labor, equipment and certain materials required to install four (4) 1.25" I.D. HDPE conduits in controlled access roadways and other locations as provided by in the utility accommodation policy. The HDPE conduits will be of different colors and will be plowed in place in such a manner that the duct to contain the IRHTP cable will be on top. The duct that will contain the IRHTP cable will be pre-inserted with a .25" nylon rope. All ducts shall have continuity.

17.2. Hand holes will be installed every mile to facilitate pulling, preferably at highway mile posts. . However, when necessary and upon approval by the IRHTP, hand holes may be moved to locations more practical. The duct containing the IRHTP cable shall enter and exit hand holes and the empty

ducts shall pass around the hand hole on the field side rejoining the IRHTP duct as soon as practical without causing severe bending.

17.3. Should mid-assist points become necessary when pulling cable, the ducts shall be spliced together in a water-tight condition. Upon completion of cable placement hand holes will be duct plugged and gopher proofed.

18. CABLE PULLING

18.1. The optical fiber cable provides high capacity transmission channels. To ensure that the cable's qualities and characteristics are not degraded, excessive pulling tensions or excessively short bending radii should be avoided. The maximum pulling tension is 600 lbs. and the minimum bending radius is: dynamic (cable in movement) = 20 times outside diameter of the cable and static (cable in place) = 10 times outside diameter of the cable. These rules should be followed at all times when placing excess cable in hand holes for splicing and slack coils.

18.2. When pulling fiber, a break-away swivel, along with a Slip Clutch Capstan Winch that shows the dynamometer reading at all times shall be used.

18.3. Cable lubrication shall be used to reduce the pulling tension on longer segments of the cable placement operation. Contractor approved lubricants shall be used.

18.4. At each pulling hand hole a 35' coil of fiber will be left coiled in the bottom of the box. At each splice location 75' will be left on each cable end for splicing. Tags will be placed on fiber showing the direction of the cable. The cable ends will be sealed watertight to keep water from entering the cable.

19. SUBSURFACE OBSTRUCTIONS

19.1. Contractor is responsible to locate and avoid all subsurface obstructions. It is the contractor's responsibility to verify the locations of subsurface obstructions shown on the drawings as well as any additional obstructions not identified on the drawings. Contractor shall notify owners and operators of foreign pipelines or other utilities at least 48 hours prior to excavation near the utility. Contractor shall keep a log of all telephone contacts to notify foreign utilities of excavation. Such log shall include date, time of day, name of individual contacted, name of Company contacted, telephone number, and confirmation number.

19.2. When crossing buried pipes, cables, and other utility lines, the cable shall be placed under the foreign utility line with a minimum separation of 12 inches. However, if the foreign utility line is 55 inches or more deep, the cable may be placed over the utility at the normal placing depth unless the utility owner specifically requires placing of facilities below their lines. In this situation the new facilities will be placed a minimum of 12" below the existing line (see Section 6.0).

20. INSPECTION OF BURIED CABLE

20.1. The installed cable will be tested as a part of the cable splicing operation. Contractor shall be liable for the cost of any and all repairs or replacement necessary to correct any defect in the installed cable which can be attributed to actions by the contractor which are disallowed by these specifications, by the Cable manufacturer or by good industry practice, as determined by the IRHTP. The term "defect" as used in the preceding sentence shall mean any defect that the IRHTP determines to have an effect on current or future operations of the completed fiber optic communication system.

21. HIGHWAY, RAILROAD AND OTHER BORED CROSSINGS

21.1. All crossings of state or federal highways and railroads rights-of-way shall be made by boring and placing a pipe casing. The cable shall be placed through the pipe casing. Country roads and other roadways shall be bored, trenched or plowed, as directed by the IRHTP and approved by the appropriate local authority.

21.2. All work performed on public right-of-way or railroad right-of-way shall be done in accordance with requirements and regulations of the authority having jurisdiction there under.

21.3. At anytime the pipe casing bored under the roadway exits below the prescribed depth, a backhoe will be used to gradually return the bored ditch to plowed grade.

21.4. In no case shall the completed crossing be less than 48" deep at its shallowest point.

21.5. Certain roadways may be allowed to be crossed by trenching. In those cases, it shall be the contractor's option to split conduit and place it around the cable in lieu of placing whole conduit and pulling the cable through the conduit. Contractor shall split the casing and install it around the cable in a manner approved by the Contractor. Split conduit will be secured after cable placement in such a fashion as to prohibit collapsing to less than its un-split diameter. Split conduit shall be sealed or plugged to prevent entry of dirt, water and rodents.

21.6. In areas that the cable is being laid in conduit, the ends of the conduit shall be capped or plugged to prevent entry of dirt, water and rodents.

21.7. Under railroads rights-of-way, the bore shall extend from toe of fill to toe of fill.

21.8. In no case shall an encasement extend less than toe of slope to toe of slope except along freeway rights-of-way in which locations the encasement shall extend from right of way to right of way.

22. STREAM AND CANAL CROSSINGS

22.1. General

22.1.1. In general, the cable shall be placed by direct bury methods (plow or trench) with additional conduit protection when directed by the IRHTP, across small streams and washes. Stream or river crossings may be made on non-freeways, through conduit attached to a highway or railroad bridge. Where required by local authorities, irrigation canals will be bored in the same manner as a road crossing.

22.2. Buried Crossings

22.2.1. Lake, canal, stream and river crossings shall be installed and restored in accordance with the Standard Drawings and the applicable Construction Drawings, and in accordance with the requirements of the permit, if any, and in accordance with the requirements of respective Federal, State and Local agencies, including those agencies concerned with water pollution and the protection of sport fisheries. Cable shall be laid across lakes, canals, streams and rivers as nearly level as practicable. Extreme care shall be taken to prevent damage to the cable during these installations.

22.2.2. The cable is to be installed in accordance with Clause 6.0, Depth of Burial. The banks of stream crossings shall be graded as necessary to provide the required burial depth under the stream and to provide a proper pathway for the plow train or trencher to traverse the bank and make a smooth transition to the stream bottom. Transitions from normal depth to stream-crossing depth shall be made smoothly without sharp bends in the cable. All cuts in banks and diversion berms shall be re-graded to match existing facilities and re-compacted to not less than 90% of maximum cf density at plus or minus 5% of optimum moisture content as determined by ASTM D698.

22.2.3. The banks of all canals, streams and rivers shall be restored to their former condition and bank protection materials or bulkheads will be installed where required. The methods of restoration and erosion control shall be as required by the landowner or agency having jurisdiction and as approved by IRHTP. IRHTP reserves the option to change the erosion control method in the field. Banks will be reseeded and mulched with grass seed and mulching material as required by the local governing authority. Berms will be constructed, where practicable, to divert water away from the trench line and disturbed bank areas. Costs for restoration of banks and installation of bank protection material and bulkheads shall be included in the price for completing the work.

22.2.4. As nearly as possible, the beds of all lakes, canals, streams and rivers shall be restored to their former elevation and grade, and spoil, debris, piling, cofferdams, false work, excavation, construction materials and obstructions resulting from installation of the cable shall be removed from the crossing to prevent interference with normal water flow and interference with any normal use of such canals, streams and rivers and shall be disposed of in a manner and at locations satisfactory to IRHTP. Underwater spoil shall be spread to a height not to exceed six inches above the bed of lakes, canals, streams and rivers.

22.2.5. Contractors shall not begin work on lake, canal, stream or river crossings before obtaining approval from the IRHTP.

22.2.6. It is the intent of these specifications to require contractor to install the cable underneath the bed of the lake, canal, stream, river or water course at a depth of ten feet below the flow

line that shall prevent flood waters from affecting the cable by reason of the scouring action of the water. Particular attention shall be given to the location of sag bends in the cable so that they shall be located back in the lake, canal, stream or riverbanks beyond any point that would be affected by a change due to erosion of the banks.

22.2.7. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn.

22.2.8. Unless specified otherwise, at individual stream crossings, the contractor shall be required to:

22.2.8.1. Grade banks of stream crossings by pulling the spoil back from the bank. Subcontractor shall not push the spoil out into the stream to grade the approaches.

22.2.8.2. Refrain from the use of cofferdams or from diverting the stream in any way in order to construct a stream crossing.

22.3. Attachment to Bridges (Non-Freeway)

22.3.1. Pipe for bridge attachments shall be hot-dipped galvanized rigid steel. Attachments to steel bridges will be accomplished by the use of approved galvanized beam clamps and hangers. Drilling steel bridge structures is not allowed. The attachment to concrete bridge structures will be accomplished by the use of expanding anchor bolts in drilled holes. The use of driven or explosive set anchors will not be permitted when not shown on plans. Exposed ducts shall be supported at intervals of 6' or less. Approved expansion joints will be installed at all bridge structure joints and in no case will exceed 100 LF intervals. Weep holes of 1/4" diameter will be drilled at 20' intervals, and 12" above ground level.

22.4. Bored Canal Crossings

22.4.1. Irrigation canals requiring boring shall be bored in accordance with Paragraph 13.0, Highway, Railroad and Other Bored Crossings.

23. CABLE MARKERS

23.1. Location

23.1.1. Cable markers will be furnished by the IRHTP and shall be placed within 48 hours of cable installation. Cable markers shall be placed at all change in directions, splices, fence line crossings, at road and stream crossings, and at other points on the route not more than 1,000 feet apart.

23.1.2. Cable markers shall be located as directed by the IRHTP.

23.1.3. In addition, on highway (non-freeway) right-of-way, the markers shall be located at the highway right-of-way line. Markers shall always be located so that they can be seen from the location of the cable.

23.1.4. In addition, in freeway right-of-way, the markers shall be placed not more than 1000 feet apart in rural areas and 500 feet apart in urban areas. Signs will be required on each side of all transversing public roads on streets at a point where the freeway right of way line intersects the transversing public road or street right of way line. Signs shall be placed within the right of way fence line, at line of sight.

24. RIGHT-OF-WAY PROTECTION AND RESTORATION

24.1. General

24.1.1. The contractor shall protect the right-of-way and minimize the damage from construction operation.

24.1.2. Good soil erosion practices shall be practiced during all construction operations.

24.1.3. Depending on the location of the work, the Federal Environmental Protection Agency, the State Environmental Protection Agency or others may stipulate construction practices and crew behavior requirements in or around environmentally sensitive areas, such as cultural

resource sites. Contractor shall adhere to any such stipulated construction practices and crew behavior requirements.

24.2. Restoration

24.2.1. Contractor shall keep the premises where work is being performed in a neat, clean, and orderly condition, and on completion of the work hereunder, contractor shall remove from the premises all of its tools and equipment, and any debris shall be removed and disposed of by contractor.
24.2.2. The right-of-way shall be restored to its original or better condition within 24 hours or as soon as practicable, in the IRHTP's opinion, following cable placing operations.
24.2.3. Where the cable is plowed in place, restoration shall be accomplished by driving a tractor or heavy truck over the plow furrow until the plowed area conforms to the surrounding terrain. A vibratory roller having a weight of three tons and a width of 4-6' may also be used.
24.2.4. In areas where open trench methods were used and backfill mounded over the trench, grading or filling will be required for final restoration of the right-of-way.
24.2.5. All rock and debris brought to the surface and left after backfilling shall be removed and disposed of, as directed by the IRHTP.
24.2.6. Improved landscape, lawns, shrubs, and hedge removed or damaged on the right-of-way shall be replaced. Lawns shall be repaired by re-soding with like grasses.
24.2.7. The contractor shall promptly repair or replace any other property damaged during construction.

25. COEXISTENCE ON HIGHWAY RIGHT-OF-WAY

25.1. The cable route will parallel public highways and the cable will be laid within the highway right-of-way.
25.2. All work performed on public road right-of-way shall be completed in accordance with requirements and regulations of the authority having jurisdiction. It is the contractor's responsibility to be aware of, and comply with, all regulations and requirements pertaining to his work. The contractor shall be familiar with the location of "scenic enhancement areas" and with special requirements for construction on highway rights-of-way in such areas.
25.3. Unless otherwise specified on the drawings or by the Contractor, the cable shall be installed as close as practicable to the highway Right-of-Way line. If terrain or man-made obstruction(s) block the route, contractor shall modify the route with approval of IRHTP and the proper governmental authorities to avoid the obstruction.
25.4. Generally, the cable shall be buried in accordance with section 6.0, Depth of Burial. At particular locations, the cable depth will be controlled by depths of the facilities crossed (i.e. drainage, bridge structures, buried cables and/or other facilities.)

26. FENCING

26.1. The temporary fencing erected around contractor's excavations located outside of city limits shall be type 47 field fence or as approved by IRHTP. Temporary fencing around excavations inside the city shall be installed utilizing safety fencing to the satisfaction of the IRHTP.
26.2. Contractor, having first ascertained from IRHTP that permission has been secured from the landowner and/or tenant, shall build suitable temporary fencing and/or wire gaps in the fences crossing the route of the cable and maintain the same so that livestock shall be prevented from entering or leaving the property. Before cutting such fences to make these gates, contractor shall brace the fence to prevent damage. Gates shall be so constructed that they can be securely closed, and where necessary contractor shall furnish a watchman to maintain gates to prevent livestock from entering or leaving property and shall also furnish watchmen in any instance where required to do so by Contractor. Such temporary fences or gates shall be provided with suitable fasteners and shall be kept closed at all times except when necessary to be opened for construction purposes.
26.3. Following the completion of the cable construction, temporary gates shall be removed. All fences which have been cut or removed during the construction work shall be repaired by contractor in a first class and substantial manner and to match the original style of the fence, so far as possible. Where there is any doubt in the opinion of the IRHTP as to the usability of old fence material,

contractor, at its own expense, shall furnish new wire and suitable post to rebuild said fence. Fence repairs shall be subject to approval of both the property owner and IRHTP.

27. BUILDING SPECIFICATIONS

27.1. Installation Requirements

27.1.1. Installation shall comply with the latest edition of The National Electrical Code and other national, state and local codes as applicable.
27.1.2. Pull boxes will be required after 180 degrees of directional change and after every 120 feet of vertical rise (10 floors). Pull boxes will be mounted securely to the building structure and will not depend on the conduit for support. Pull boxes shall have removable covers and will be installed in such as way that the covers will be accessible.
27.1.3. Relocating and/disconnecting of any existing equipment within the building shall be coordinated with building management.
27.1.4. All metallic conduits shall be bonded to the building ground system.
27.1.5. All conduits shall be sealed (plugged), after cable installation at the point of interface and will be clearly marked to facilitate location.
27.1.6. Pull boxes should be clearly marked "IRHTP" on the cover for identification.

27.2. Material Requirements

27.2.1. Materials will comply with those standards as established by UL or NEMA and shall be commercial grade. All materials will be new and free from defects.
27.2.2. Conduits shall be one and one quarter inch (1 1/4") EMT (Electrical Metallic Tubing). EMT fitting shall be gland or set screw type, and each conduit shall be equipped with a graduated pull tape or rope. The exact requirements for location of conduit within the building shall be verified with the building owner.
27.2.3. Large radius sweeps shall be provided where required for offset or change in direction of conduit. The minimum radius recommended is 36", and the minimum radius acceptable is 24". If it is not possible to provide 24" minimum radius sweeps, pull boxes providing the same radii capability will be required.
27.2.4. Pull through pull boxes will be typically 6" high x 6" wide x 24" long with the conduit entering at each end. Pull boxes shall meet code requirements and will generally be placed to improve ease of pulling cable and inner-duct.
27.2.5. The cable will be secured at pull boxes on vertical runs with IRHTP-approved split Kellum grip as determined by the IRHTP representative.

28. SPLICING

28.1. Direct Buried Splices - At points where the IRHTP determines a buried splice should be placed, the contractor will excavate, secure, fence, and protect a splice pit to accommodate placing the cable splice (by others) at the same depth as the cable installation. The splice pit will be left open until the splice is completed at which time contractor will return and complete backfill and restoration work as required by the authority with jurisdiction in the area. Slack cable footage will be coiled and placed vertically in line with the cable route at sufficient depth that the highest point in the loop and splice closure is a minimum of 36" below the surface. The coil diameter will be a minimum of 30". The contractor shall backfill with selected fines to a level 6" above the closure and coil and continue the backfill as required.
28.2. Splicing at Hand holes - At points where branch splicing occurs, as shown on drawings, or directed by IRHTP, the contractor will place a hand hole as per the specifications and manufacturer's suggested methods. Contractor will secure, fence and protect the hand hole excavation and maintain a safe open pit to allow a splice to be completed (by others) and placed in the hand hole. After splice is placed, contractor will return and complete backfill and restoration work as required by the authorities with jurisdiction in the area.

28.3. At all splicing locations contractor shall also install a SIP 40 pedestal, an 8' ground rod and connect the two via a #6 ground wire. Contractor shall also install a 1-1/4" HDPE conduit at 36" depth between the hand hole/splice pit and the SIP 40 for use by others.

29. CONCRETE

29.1. Description

29.1.1. This section covers the material requirements and placing of Portland cement concrete for roadways, driveways, sidewalks and other planned concrete works.
29.1.2. Concrete shall consist of a mixture of Portland cement, water, fine aggregate, coarse aggregate and approved additives, when required, mixed in the proportions as specified below or approved by Contractor.
29.1.3. Where permits apply to Work, concrete shall conform to the permit requirements.

30. MATERIAL REQUIREMENTS

30.1. Concrete Materials

30.1.1. Portland cement shall conform to the requirements of AASHTO M85 and shall be Type II (low alkali).
30.1.2. Aggregate shall conform to the requirements of the IDOT for the specific use.
30.1.3. Water used in mixing or curing shall be reasonably clean and free of oil, salt, acid, alkali, sugar, organic vegetation, or other substance injurious to the finished product. Water may be tested in accordance with and all requirements of AASHTO T-26. Water known to be of potable quality may be used without test.
30.1.4. Air-entraining mixtures, when required, shall conform to the requirements of AASHTO M-154 (ASTM C-260).
30.1.5. Reinforcing steel for concrete reinforcement shall meet Grade 60 requirements for of ASTM A-615. Welded wire fabric for concrete shall conform to AASHTO M-55 (ASTM A-185). All bars and welded wire fabric shall be properly bundled and tagged with weather resistant tags.
30.1.6. The Subcontractor shall submit a supplier's mix design and material certifications for the mix being supplied one (1) week in advance for review and approval. No concrete shall be used on the project before mix design has been submitted and approved.

30.2. Concrete Classes

30.2.1. Concrete shall be of the class specified and as appropriate for the item for which it is being placed. Water content shall be controlled to produce a slump between two (2) and four and one-half (4 1/2) inches.
30.2.2. Classes of concrete and minimum strength and cement content shall be as follows:
30.2.2.1. Encasement Concrete. Class 3000 S&G shall be as sand/gravel mix with not less than 5.5 sacks (516 lbs) Portland cement per cubic yard to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding concrete and encasement concrete inmost locations.
30.2.2.2. Sidewalk and Driveway Concrete. Class 3000 CA shall be fine aggregate/coarse aggregate mix with not less than 5.5 sacks (516 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 3000 psi. This class may be used for bedding, encasement concrete, sidewalks, and driveways.
30.2.2.3. Paving Concrete. Class 4000 CA shall be a fine aggregate/coarse aggregate with not less than 6.5 sacks (610 lbs) of Portland cement to produce a twenty-eight (28) day compressive strength of 4000 psi. This class may be used in structures or roadway pavement. The mix proportions including air entrainment and other additives shall meet the requirements of Highway Department of the State in which concrete is being placed.

30.3. Placing

30.3.1. The Subcontractor shall notify the Contractor at least twenty-four (24) hours in advance of placing concrete to permit proper inspection and approval of forms and reinforcement by the Contractor.

30.3.2. Concrete and reinforcing steel shall be placed at the locations and in accordance with the details shown on the Plans.

30.3.3. No concrete work shall be done when the air temperature is below forty (40) degrees F, or if freezing weather is predicted before final set of the concrete, unless special means of heating and/or protecting the work are used for a period of at least seventy-two hours after it is poured. Concrete shall not be placed on frozen sub-grade.

30.3.4. Where splices in reinforcing steel are necessary, the bars shall be lapped twenty-four (24) times their least diameter.

30.3.5. Concrete shall be of workable consistency with slump between two (2) and four and one-half (4 1/2) inches when placed. It shall be compacted by spading or by mechanical vibrator to prevent honeycomb. The concrete shall be spouted so that the total free drop will not exceed six (6) feet. No concrete shall be used which has partially set before final placing or which has segregated in transport. Re-tempering will not be permitted.

30.3.6. All concrete shall be placed monolithically so that fresh concrete shall not be placed against concrete that has taken initial set except where construction joints are required.

30.3.7. All surface concrete shall be cured for a period of seven (7) days with a water saturated covering or by other approved methods that will keep all surfaces continuously wet.

30.4. Measurement and Pavement

30.4.1. Concrete shall not be measured and paid as a separate item but shall be subsidiary to the cost of applicable item for which the concrete is placed.

30.4.2. The furnishing and installation of reinforcing steel shall not be measured separately but shall be considered subsidiary to concrete work.

PART 6 - SPECIFICATIONS FOR AERIAL PLACEMENT OF FIBER OPTIC CABLE

1. GENERAL

1.1 General. All IRHTP owned poles and/or cable will be identified with ID tags. All cables will meet all standards set up by NESC, agencies of cities, state, county, federal government, railroads or other entities which provide for the placement of IRHTP facilities within their respective rights of way.

1.2 Lengths. Use the longest lengths to facilitate construction costs, placement, and splicing. Entire reels can be placed without splice points to minimize transmission loss and reduce splicing costs.

1.3 As-builts. Will reflect span measurements, size, class & ownership (percent of ownership if applicable) of all poles joint use and IRHTP owned. All IRHTP owned/leased poles shall be identified with ID tags and size of messenger. If over-lashing is used: who owns messenger and/or other cables (type, size, gauge if applicable) involved in over-lashing. The clearance height at mid-span at the completion of construction, all sequence numbers at each pole will be recorded as well as: location of all MGN grounds, size and lead of guying and size and type of anchor.

2. PLACEMENT

2.1 Minimum Bending Radius

141. Nominal Cable Diameter	**142. Minimum Bend Radius (No Tension) Installed**	**143. Minimum Bend Radius (Under Tension)**

143.1 Millimeters	**143.2 Inches**	**143.3 Millimeters**	**143.4 Inches**	**143.5 Millimeters**	**143.6 Inches**
6.0-10.0	¼ -3/8	10.0	4.0	15.0	4.0
10.1 - 15.0	4/10 - 6/10	15.0	6.0	22.5	9.0
15.1 - 20.0	10/16 - 8/10	20.0	8.0	25.0	10.0
20.1 - 23.0	13/16 - 9/10	23.0	9.0	25.0	10.0
23.1 - 25.0	15/16 - 1.0	25.0	10.0	30.0	12.0

2.2 Figure – Eighting Cable. If the cable must be unreeled during installation, use the “figure - eight” configuration to prevent kinking or twisting. Fiber optic cable should not be coiled in a continuous direction except for lengths of 30 meters (100 ft) or less. The preferred size of the “figure - eight” is about 4.5 m / 15 feet in length, with each loop about 1.5 m / 5 feet to 2.4 m /8 feet in diameter. Do not cut the cable under any circumstances without consulting the IRHTP field engineer on the job.

2.3 Dip Pole. At a dip pole, form a minimum of a 100-foot expansion loop using “snowshoes”. Identify the cable with a caution tag. Protect the cable on the pole with “U guards,” 18” inches below the strand to just above ground level.

2.4 Planning and Preparation.

2.4.1 Poles. Determine the ability of existing pole lines and guys to support the new cable plant, as well as any restrictions imposed by the pole owner. The guying should remove all of the lateral stress on each pole so that the pole simply supports the weight of the cables, hardware and equipment attached to it. Stated another way the facility being constructed should be supported independent of all other facilities on the pole line. Obtain a written contract from the owner of poles with IRHTP as the owner of the facility being placed on the pole line. Contract will state all the fees associated with the attachment either on a one time or annual basis. The written contact with owner of poles will also state the pole/strand replacement

policy/cost involved. Obtain all necessary permits from the governing bodies involved. Contact the Iowa One Call system when placing new poles and anchors.

2.4.2 Clearances and Separations. On a case-by-case basis determine the clearances between the proposed fiber optic cable and the existing facilities. Be certain that the proposed facility is constructed according to the National Electrical Safety Code (NESC) and the appropriate local safety codes. See Example 1.29. The fiber optic cable should occupy the uppermost available communication space on the pole due to its small weight and resultant sag.

ITEM	**URBAN**
	FEET AT MAXIMUM SAG
Where cables guys, line, or drop wires run along and within the limits of :	
a) Public highways, streets, and roads	18’
b) Public alleys	15.5’
c) Ways accessible to pedestrians only	12’
Where cables, guys, line or drop wires cross over private property or ground	
a) Accessible to pedestrians only	9.5’
b) Accessible to people on horses or loaded farm vehicles	16’
Where cables, guys, line or drop wires cross over:	
a) Public highways, streets and roads	18’
b) Public alleys	+15.5’
c) Driveways in general unless height of loaded vehicles or equipment using drive requires extra clearance.	+15.5’
d) Farm driveway - accessible to combines	18’
e) Driveways---residential garages	15.5’
f) Ways accessible to pedestrians only.	12’
g) Obstacles (billboards, roofs)	2’
h) Flat roofs which may be used by tenants or workmen.	9.5’
i) Railroads --- cable on messenger	27’
j) Waterways (rivers, canals, etc.) provide clearance specified by proper authorities and on work plans. (Human with fishing pole)	14’
+ Secure additional clearance on new construction when warranted at specific locations.	

MINIMUM CLEARANCE ABOVE GROUND FOR TELEPHONE FACILITIES

TYPE OF CROSSING WIRES & CABLE	TELEPHONE CABLES, MESSENGER, DROPS, AND GUYS	
	CROSSING OVER	CROSSING UNDER
Open supply wires 0-750 volts & supply cables having effectively grounded sheath or messenger - all voltages.		
a) Line wires	4’	
b) Service wires	2’	4’
Open supply, line or service wires		
a) 750 - 8700 volts	6’	
b) 8700 - 50,000 volts	6’	
Foreign guys, span wires, lightning protection wires	2’	2’
Foreign communication wires, cables, and fire alarm wires	2’	2’
Trolley contact conductors.		
a) 750 volts or less		4’
b) 750 - 8700 volts	-------	6’
* Clearance for (a) may be reduced to 4 feet if crossing is more than 6’ from communication pole.		
Note: The above clearances apply where the crossing span length of the upper conductor or wire does not exceed 175 feet. For greater span lengths, increase clearances in accordance with NESC.		

3. LASHED AERIAL PLANT

3.1 General. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand.

3.2 Suspension Strands

3.2.1 Suspension strands are susceptible to fatigue failure near pole-mounted suspension clamps if left under critical stringing tensions without supporting a load. Refer to the table below for the rated breaking strength and the type of steel used.

DIAMETER

146 RATINGS	**147 EHS**	**148 UG**
6M	¼"	5/16"
10M	5/16"	3/8"
16M	3/8"	7/16"
20M	7/16"	½"

"M" indicates the approximate breaking strength in thousands of pounds. "UG" or EHS indicates the tensile strength of the steel used in the messenger.

3.2.2 Refer to the table below for the minimum tensions stringing tensions for a particular cable weight using different messenger grades. Messenger tensions listed are the minimum tensions required for each span to reduce cable strain.

Minimum & Critical Messenger Tensions in Pounds Prior to Aerial Installation of Fiber Optic Cable Maximum 0.18 lb/ft, 0.80 Inches Diameter Cable, (Using EHS Messenger, Not UG)

149 Messenger	**150 Span**			
	Up to 200'	200 - 300'	300 -400'	Critical Tension
6M **EHS** ¼"	1200 lbs	1600 lbs	----	2000 lbs
10M **EHS** 5/16"	1500 lbs	1800 lbs	2400 lbs	3000 lbs
16M **EHS** 3/8"	1800 lbs	2200 lbs	2600 lbs	6000 lbs

Maximum 0.16 lb/ft, 0.68 Inches Diameter Cable (Using UG Messenger, Not EHS)

6M **UG** 5/16"	1600 lbs	---	---	---
10M **UG** 3/8"	1800 lbs	2200 lbs	2500 lbs	---

3.2.3 When specifying a strand for fiber optic cable, the two most important considerations are; (1) strength of strand and (2) excess cable stretch does not occur. When the diameter of a strand is enlarged to increase its strength, its weight and the effect of wind and ice loading is affected, which increases cable strain. Normally the "best" stand is not the question, but rather if the normal strand is satisfactory. Technically, the smallest EHS messenger with a satisfactory strength is "best". When installing a dedicated suspension strand for fiber optic cable, standard hardware (eyebolts, clamps, etc) should be used.

3.3 Overlashing.

3.3.1 Considerations

3.3.1.1 Maximum span length (pole spacing)

3.3.1.2 Size of the existing messenger
3.3.1.3 Messenger- EHS or UG?
3.3.1.4 Weight & diameter of the existing copper (or fiber) cable(s)
3.3.1.5 Initial messenger tension (If not available, what is the present messenger tension? Measured at what temperature?)
3.3.1.6 Age of the existing copper (or fiber) cables
3.3.1.7 Loading conditions. In the Midwest IRHTP will consider only a heavy loading.
3.3.1.8 Size of the fiber cable being installed (cable, weight, O.D., etc).

3.4 Bonding and Grounding

3.4.1 If dielectric aerial cable is used, maintain the dielectric properties by using non-metallic lashing materials.

3.4.2 If using a metallic messenger or non-dielectric aerial cable on a joint use pole and/or a separate pole line form a continuous bond between all metallic items being placed and the MGN (multi-grounded neutral) used by the power company and/or any other entity occupying the same pole line use. The purpose behind the aforementioned is to eliminate different electric potentials between independently owned facilities occupying the same pole line. No communication cable on a MGN system will have less than 4 grounds per mile. A non-dielectric aerial cable must occupy the communication space as defined by the National Electrical Safety Code. A dielectric fiber optic cable may occupy either the supply **or** the communication space on joint use construction. No communication cable shall occupy the space between what is defined as the communication and the supply space. Refer to NESC Section 224, par. 4 & 230F. Quote from NESC: Section 235C, E3; Note that a fully dielectric fiber optic cable carried on a nonmetallic messenger is considered as a supply neutral meeting Rule 230E1 (if located in the supply space) or an ordinary communication cable (if located in the communication space). Such cables must be located either in the supply space or the communication space, not in the safety zone between the two spaces.

3.5 Drip Loops Definition. A smooth-curve type loop form at each pole. The use of the 3" drip loop at each pole is required by the IRHTP for two reasons: 1) the extra slack provides for expansion and contraction by the messenger, 2) it provides extra slack if object falls on the messenger. Example: Prevents cable damage if a tree falls on the strand. Do not exceed the minimum bending radius of the cable. If contact is likely between the loop and the pole a cable guard will be required. Refer to Example for drip loop. Each drip loop will have the cable sequence numbers recorded and the IRHTP cable will be identified with an IRHTP ownership tag.

3.6 Lashing. Fiber optic cables must be installed without loose lashing, twisting, or weaving along the strand. Contractor will replace any cable showing a deformation. Example: Rippling, or kinking. REQUIREMENTS: Contractor will provide one wrap of lashing wire per linear foot when lashing IRHTP fiber optic cable to messenger. Cable will be double lashed in 3 different circumstances: 1) over-lashing over existing aerial cables, 2) right of ay to right of way over railroads, 3) right of way to right of way over roadways. Cable will be lashed up on a span by span basis. All lashing wire should be terminated at each pole with a lashing wire clamp. Lashing wire will be terminated by placing a cable spacer between the fiber optic cable and strand. Locate the lashing wire clamp 2 inches from the strap and spacer. Pull out enough lashing wire for termination on to the lashing wire clamp. Wrap the lashing wire 3 times around only the strand between the lashing wire clamp and the planned location of the first wrap around both the strand and the fiber optic cable. Lashing wire should follow the spiral of the strand wires.

3.7 Splicing and Slack Storage. All cables will be butt spliced. All slack-cable loops will be placed a minimum of 4 feet from the pole using snowshoes. The minimum cable coil required at a splice location will be from the strand to ground level plus 20 feet on each side of the splice. In no case shall the splicing be done from a bucket. All splicing will be done on the ground in a protected environment (tent, van, or trailer). A minimum of a 100 foot cable coil (placed in snowshoes) will be required in the following circumstances: 1) railroad crossings, highway crossings, 3) Interstate crossings, 4) main thoroughfares in cities.

PART 7 - SPLICING AND TESTING

1. GENERAL. This document addresses the IRHTP requirements for splicing, testing, documenting and enclosing fiber optic cable for use as part of the IRHTP system.

2. ACCESS TO WORK.

2.1 The Cable installer is required to provide their access to all splice locations.
2.2 Access to splice points at all locations other than the freeways can be made from the shoulder of the road. In no case is access from freeways allowed from the shoulder of the road or ramps. No stopping or parking is allowed on the freeway.
2.3 The Cable installer shall be responsible to repair any damages that it may cause to the right-of-way.
2.4 The cable will be stored in hand holes at all splice locations. The Cable installer shall be responsible to access the cable at the splice locations and shall have equipment for removal of loose dirt and water or the removal of other obstructions to the performance of the Cable installer's work.

3. MATERIAL. The Cable installer shall be required to supply all material, tools, test equipment, splicing equipment, consumable items, and incidentals necessary to access the cable at the splice locations, perform quality splicing, termination, and testing to include, but not necessarily be limited to the following:

3.1 Enclosure, inner-closure, splice trays, heat shrink sleeves and encapsulate.

3.1.1 The splice closure shall be the Raychem FOSC 450 Fiber Optic Gel Closure or equivalent.
3.1.2 Wire tags with clear heat shrink tubing for #6 insulated ground wire such as Panduit #HSDL9-50-31 or approved equal.

3.2 #6 green insulated ground wire, mechanical lugs and bolts, nuts and washers for grounding terminations and cable sheath bonds.

4. PRE-PLACEMENT CABLE TESTING. In order to minimize the amount of rework in the right-of-way, which may be required and to check for fiber optic cable defects, the Cable installer shall be responsible for on reel verification of cable quality prior to placement.

4.1 One hundred percent (100%) of the cable's fiber count shall be tested at 1310 and 1550nm with a Tektronix TFP2 or equivalent Optical Time Domain Reflectometer (OTDR), a stabilized light source and optical power meter, or, equivalent test equipment. Test results will be recorded on a form supplied by the IRHTP. Completed test forms on each reel shall be handed over to the IRHTP field engineer.

4.2 Cable ends shall be sealed upon completion of testing.

5. ULTIMATE RESPONSIBILITY. The Cable installer shall be ultimately responsible for providing installed fiber cable in which each fiber meets the specifications set forth in this standard.

6. SPLICES.

6.1 All splices shall be placed in hand holes. There are to be no direct buried splices.

6.1.1 Cable and closure preparation shall conform to the manufacturer's standards and installation manuals.
6.1.2 Hand holes and pedestals shall be compatible with existing IRHTP components

6.2 All fibers are to be spliced according to the splice assignment sheets provided by the IRHTP.

6.3 All fibers are to be fusion spliced and placed in a Raychem FOSC 450 Fiber Optic Gel enclosure according to the manufactures technical installation instructions and a workmanlike manner.

6.4 All spliced fibers shall be protected by using the appropriate organizer tray and associated incidental items. If fiber optic heat shrink sleeves are used, a heat oven shall be used to shrink all sleeves. Care must be exercised to prevent damage to exposed fibers by overheating.

6.5 To insure acceptable splices prior to closing and encapsulating the splice case, the Cable installer shall monitor the splicing while it is being performed using an OTDR or a splicer with some type of optimizing capability, such as an LID unit or an optimizing alignment screen, or equivalent.

6.6 Splice Grounds (Refer to Example 1.26 - 1.27)

6.6.1 A number six (#6) insulated ground wire shall be installed from the SIP (pedestal) through the existing conduit to the splice enclosure and terminated at both ends. SIP termination nuts shall have a 3/8 inch head.

6.6.2 The ground wire at the SIP shall be identified with major direction associated with the running line of each of the links, e.g., WEST, on heat-shrink ID tags.

6.7 The IRHTP reserves the right to accept a splice at any time and waive the above requirements on a case by case basis as relates to splice loss. A waiver at any time shall not be construed to be a relinquishment of any requirements as spelled out in this specification.

6.8 Vendor must verify that all fibers are compatible end-to-end. That is fiber number 24 at location A is fiber number 24 at location Z.

7. LOSS SPECIFICATIONS.

7.1 The maximum acceptable loss for the cable shall be:

7.1.1 0.35 dB/km @ 1310 nm
7.1.2 0.25 dB/km @ 1550 nm

7.2 The maximum acceptable loss per splice shall be:

7.2.1 Maximum splice loss in one direction shall be 0.2 dB.
7.2.2 Maximum bi-directional average splice loss shall be 0.2 dB.

7.3 Maintenance splice loss allocation. Each link shall have sufficient reserve loss margin at acceptance to accept the loss associated with six (6) future maintenance splices and still meet the link unallocated gain margin.

8. SPLICING AT ACTIVE LOCATIONS.

8.1 The Cable installer shall be notified of fibers in the area that are active. It shall be the Cable installer's responsibility to coordinate and supervise all work so that there is no interruption of service on these active fibers during cable/closure prep, splicing, testing, and so on at end points.

8.2 The Cable installer shall notify the IRHTP or its authorized representative at least five (5) working days prior to the commencement of any work at splice points with active fibers.

8.3 The Cable installer shall have a responsible supervisor monitoring all work being done at all splice locations having active fibers present.

8.4 Unless IRHTP or another governing agency (such as the ICN) grants an exception, all splicing on fiber sheaths containing active fibers will be done between the hours of midnight (00:00) and 6:00 AM local.

8.5 The Cable installer shall have all the materials required to make a temporary and or a permanent repair in the event a fiber is damaged in the course of work. The materials shall be at the site of the work prior to any work beginning. The Cable installer shall notify the IRHTP immediately in the event an active fiber is damaged.

8.6 In the event that active fibers are damaged by the Cable installer, the Cable installer shall supply all resources necessary and directed by the IRHTP to reestablish service on the active fibers. All costs relating to the damage of the active fibers shall be the responsibility of the Cable installer.

9. TESTING

9.1 All test equipment shall be calibrated within ninety (90) days prior to testing. A sticker with the date of calibration shall be fixed to the equipment. A calibration certificate shall be presented to the IRHTP or its authorized representative upon request.

9.2 Each span shall be tested bi-directionally from end point to end point. Each span trace shall be recorded so that each splice can be clearly expanded (long range, mid range or high resolution). Some spans will need all three traces. A span map shall be filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.

9.3 The Cable installer shall be required to perform the following tests:

9.3.1 Damaged Cable. In the event it is suspected that the cable has been damaged by the Cable installer at any time, the Cable installer will be required to test the cable with an OTDR. A hard copy of the OTDR test shall be submitted to the IRHTP representative. The Cable installer shall be prepared to test the damaged cable within 24 hours of notification by the IRHTP's representative.

9.3.2 End to End Bi-directional OTDR Span & Splice Test. Each fiber of each span is to be tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.

9.3.3 Cable Sheath. The cable sheath of each installed reel of cable shall be tested for continuity and the results recorded on the span map.

10. ACCEPTANCE CRITERIA. The acceptance criteria shall satisfy, as applicable, the requirements of this standard which includes:

10.1 Verifying, and documenting, that at least a 3 dB unallocated margin of gain exists, at 1310 nm, on each link.

10.2. All as-built drawings as specified in the Iowa Communications Network As-Built Drawing Conventions and Symbols Standard.

11. MARKERS. All splice hand holes shall be marked with an IRHTP Cable signs (furnished by IRHTP) at the top of the post and an IRHTP Splice sign mounted on the post just below the IRHTP Cable sign.

12. DOCUMENTATION

12.1 Splice Identification

12.1.1 Link Splices. Splices interconnecting one or more links will be defined by IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-13A.

12.1.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered by the Cable installer in sequence for a given link, e.g., B1210-1, B1210-2, and so on.

12.1.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to a maintenance splices and shall be identified as Maintenance Splice, MS"LINK #"-"x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The Cable installer will assign MS identification codes to maintenance splices all unaccepted links. On accepted links, the Cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

12.2 Documentation Package

12.2.1 The following hard copy documentation package shall be submitted to the IRHTP on the applicable forms within five (5) working days after completion of the span splicing and testing, or a minimum, of thirty days prior to the commencement of acceptance testing. Each package shall be neatly organized, with dividers in a separate loose leaf, 3 ring binder or other IRHTP approved binder. All forms shall be completely filled out. All forms and OTDR shall be legible and reproducible. All sheets/forms shall have a revision log and be titled and dated.

12.2.1.1 A splice identification sheet.
12.2.1.2 A span map for each span.
12.2.1.3 The splice assignment sheets.
12.2.1.4 Reproducible copies of each span trace.
12.2.1.5 Reproducible copies of splice traces.

PART 8 - AS-BUILT DRAWING

1. INTRODUCTION

1.1 Delivery Method. Two sets of legible, reproducible as-built drawings on 11 X 17 inch, white paper, in a hard cover binder shall be provided for each link. If available, it would be desirable to also have a set on a 3.5 inch diskette in a format compatible with the IRHTP's computer aided design (CAD) system. The IRHTP's current CAD system is an AutoCAD, Release 2002 or newer.

1.2 Symbols and Conventions. The as-built drawings are to use symbols and conventions specified in this document. If not specifically stated, the symbols and conventions to be used are those considered required by good engineering drawing practices. The vendor is to provide to the IRHTP, any symbol, icon, model, block, and so on that is used on, or as part of, the as-built drawings provided for any part of the IRHTP. These symbols, icons, models, blocks, and so on, are to be provided as defined in section 1.1.0.

1.3 Consistency. A key requirement is for the symbols, conventions, practices, scale, and so on, to be consistent from one drawing to the next.

1.4 Governing/Authorization Agency Permits. Where there is a governing agency permit associated with one or more as-built drawings, there shall be correlation between the method of showing project from and to points on the permit and the as-built drawings. For example, where an Iowa Department of Transportation (IDOT) permit uses highway stationing (HWY STA.), the as-built drawings, which includes these particular permit points will, as a minimum, show HWY STA. numbers at the start and end of the particular drawing.

1.5 Link As-Built Drawings. The IRHTP consists of a series of spans, segments, and links. The specific start and end point of each span, segment, and link has been or will be defined by the IRHTP or its' authorized representative. Each link is identified by a unique set of characters. A set of as-built drawings is to be provided for each link.

1.5.1 Each as-built drawing shall use the unique link identifier as part of the tile, e.g., Link 1234, and will be included in the drawing number, e.g., DWG 1234-08 of 20.

1.5.2 Drawing Revisions. As part of the title and status blocks, each drawing shall list the reason(s) that an individual drawing was changed.

1.5.3 The first sheet of a set of link drawings shall be numbered DWG 0. It is a title page and shall contain:

1.5.3.1 Link name/title.
1.5.3.2 A revision table for each of the link drawings listing the current revision of each drawing.
1.5.3.3 Cable specifications.
1.5.3.4 To-from information, including start and end point identification such as mile post numbers, highway station numbers, and or other readily recognizable identifiers.
1.5.3.5 A table listing each splice associated with the link, and, the drawing number containing that splice.
1.5.3.6 A revision record for DWG 0.

1.6. Scale. While drawings scale is specified as "none", to achieve consistency, the typical landscape drawing has 14 to 15 inches of running line, covering about 0.5 miles. Where appropriate, a single 17 X 11 sheet may contain 2 drawings. No specific scale is required for the direction perpendicular to the running line except that it shall be consistent and, reasonable distance differences shall be obvious. Individual drawings may deviate from the above scale requirements for the sake of clarity.

1.7 Link Drawing Order/Sequence. Each set of link drawings shall read from left to right. That is, when the major direction of the link is east/west, the left side or edge of a drawing will show the match line for a more westerly/lower numbered drawing. When the major direction of the link is

north/south, the left side or edge of a drawing will show the match line for a more southerly/lower numbered drawing.

1.8 Highway Plan Drawings. If available, highway plan drawings from IDOT may be used as part of an as-built drawing for additional information.

2. SPECIFIC REQUIREMENTS

2.1 Highway Location Signs/Markers. When available, drawings shall show highway mile post numbers and highway stationing numbers.

2.2 Street, Road, Highway Identification

2.2.1 The highway marker number, e.g., county E-16, I-80, and so on, will be shown on all county, state, or federal highways that are on a drawing.

2.2.2 Most counties in Iowa have or are in the process of acquiring Extended 911 capability. Individual addresses are a requirement for this capability. Therefore, most, if not all, Iowa counties have assigned names to all county roads which are to be included on the drawings.

2.2.3 Multiple Identifiers: Where there is more than one identifying name and or number for a street, road or highway, all identifiers shall be shown on the drawing, e.g., V-24, OLD HOME ROAD, and so on.

2.3 County, Township, Range, Section(s). As a minimum, the first and last drawing of a set of link as-built drawings shall show the county, township name and identifier, range identifier and section number(s) peculiar to that particular drawing. When the county, township, or range changes in a link drawing sequence, the previous and the new county, township, range, or section shall be shown. The city, county, state boundary symbol shown on the LEGEND AND SYMBOL sheet is to be used. The preference is to have the county, township, range, and section specified on each drawing.

2.4 Fiber Cable Specifications. The fiber cable specification shall be shown on each page. See example drawings and the LEGEND and SYMBOL sheet.

2.5 Link Continuity. The first and last page of each set of link drawings shall show the connections/splices to the connecting link(s). The connecting links shall be shown with their respective link identification.

2.6 Revision Log. Each drawing shall include a revision table that is used once a drawing has been distributed and or released, whether it be a pre release, bid issue, as-built, and so on. The reason for the change shall be included in the table.

2.7 SPLICE IDENTIFICATION

2.7.1 Link Splices. Splices interconnecting one or more links will be defined by the IRHTP by the characters LS (link splice) and two or more identification characters, e.g., LS-A.

2.7.2 Backbone Splices. Splices placed at the end of reels are referred to as backbone splices and numbered in sequence for a given link, e.g., B1210-1, B1210-2,and so on.

2.7.3 Maintenance Splices. Splices that are required because of a maintenance or repair to the cable are referred to a maintenance splices and shall be identified as Maintenance Splice, MS"LINK #"-"x", with "x" identifying the time sequence that the splice was made, e.g., MS1210-1 is the first maintenance splice made on Link 1210. The cable installer will assign MS identification codes to all unaccepted links. On all links that have been accepted by the IRHTP, the cable installer will identify the time sequence that the splice was made and request a splice identification code from the IRHTP.

ANNEX C

LINK-SEGMENT COMPLETION CHECKLIST

RFP 08-001

A LOCATION – (HCP end)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with HCP instructions
FDP or Bulkheads mounted properly and securely
All FDP or Bulkhead connectors were covered with dust covers
Grounding was accomplished in a workmanship like manner
All building penetrations were properly sealed.
All firewall or building partition penetrations were properly sealed
Restoration Phase I (Initial) was performed to the best of the contractor's ability.
All construction debris and dirt was removed to the satisfaction of the HCP
Locate wire pedestal location is readily identifiable and connected

ROUTE

Cable was installed in accordance with IRHTP specifications
All hand holes and tubs have been readjusted for settling
All open ends of duct installed along the route have been sealed with appropriate duct plug material
Any pavement cracked during the cable installation process has been repaired.
Were pictures that were taken of pre-existing pavement conditions compared to final route reconnaissance and reviewed by HCP, Property owners, and the appropriate governmental entity?
Restoration Phase I (Initial) was performed to the best of the contractor's ability.

CABLE TESTING

Test equipment was calibrated within ninety (90) days prior to testing. A sticker with the date of calibration was affixed to the equipment. A calibration certificate was presented to the IRHTP or its authorized representative upon request.

Each span was tested bi-directionally from end point to end point. Each span trace was recorded so that each splice can be clearly expanded (long range, mid range or high resolution). (Some spans will need all three traces.) A span map was filled out recording each splice loss from each direction and the optical length between splices as well as any other information required by the span map.

Each fiber of each span was tested bi-directionally at 1310 nm and or 1550 nm as directed by IRHTP from end point to end point and record of results submitted to IRHTP for acceptance.

Locate wires, cable sheathes, and/or locate wire terminals have been tested for continuity end-to-end
Boring Traces, As-built or red-line construction drawings have been handed off to IRHTP Representative

Z LOCATION – (Network endpoint or meet point)

Cable was installed in a workmanship like manner.
Any exposed cable or jumpers are in accordance with applicable codes
Fiber Optic Cable is properly tagged and identified
Conduit was installed in accordance with ICN instructions
Bulkheads mounted properly and securely
All unconnected bulkheads are covered with dust covers
Grounding was accomplished in a workmanship like manner
Tubs and hand holes have been properly closed
All duct and conduit seals have been replaced
Locate wire terminations are readily identifiable

SID_____ **HCP Name:** _____ **By:** _____

IRHTP Representative: _____ **Date:** _____

CHAPTER 4

EVALUATION CRITERIA

RFP 08-001

4.1 Award Process.

4.1.1 An evaluation committee assigned by personnel within the IRHTP will review the bid proposals. The evaluation committee will consider all information provided when making its recommendations and may consider relevant information from other sources.

4.1.2 The evaluation committee will make its recommendation to the IRHTP Project Coordinator indicating the committee's choice. The Project Coordinator will select the Vendor(s) to receive the award. The Project Coordinator is not bound by the committee's recommendation. All Vendors submitting Bid Proposals will receive notification of the award.

4.1.3 All applicable contracting requirements imposed by this RFP and Iowa law shall be met by the Vendor. The successful Vendor must, in a timely manner, enter into a Contract with the IRHTP to implement the service contemplated by this RFP. Failure of a successful Vendor to agree to the terms of a Contract within a timely manner may be grounds for the IRHTP to award to the next compliant Vendor.

4.1.4 The IRHTP will accept the most cost effective solution presented, whether that be a lump sum bid for all sites statewide, or a combination of site-by-site bids. The final list of sites in any merged area may be modified by the acceptance of IRUs if available.

4.2 Evaluation Criteria – Part I.

4.2.1 A Bid Proposal will not be evaluated if all of the Mandatory Requirements identified in Chapter 3 and Attachment 4 are not met and/or fulfilled.

4.2.2 The IRHTP may award a Contract to the most responsible Vendor meeting the requirements of this RFP and which, in the sole discretion of the IRHTP, provides the best value to the project after considering price and compliance with the provisions of Chapter 3.

4.2.3 The IRHTP is not required to accept a low site-by-site bid if the low bid for a site raises the cost of either the lump sum price for a statewide bid or the total cost of a complete Merged Area bid or the consideration of an IRU opportunity.

4.2.4 The IRHTP may award a statewide contract or a complete Merged Area Contract reserving the right to substitute an IRU cost for any particular site-by-site location when it is in the best interests of IRHTP to do so. (See Attachment 5 IRUs) In that event, IRHTP will delete the particular sites from the statewide list of sites in the final contract or in the final Merged Area contract.

4.2.5 In the event an IRU for a particular site is considered by the IRHTP, the apparent winning vendor will have first right of refusal to provide construction at same cost as the IRU if he so desires.

4.3 Evaluation Criteria Scoring – Part I

Overall Project Experience
IRHTP will take into consideration the number of like construction projects completed thus far by the vendor.

Cost Breakdown

Grasp of the Project and Design
Contractor demonstrates a clear understanding and grasp of the project. Response is clearly written and organized.

Vendor's Capabilities
Vendor has the necessary manpower and resources to accomplish the Work on schedule. Technical ability.

Credibility
Vendor's current reputation with established organizations and within the industry.

Vendor Agrees To:

a. Submit invoices in accordance with USAC requirements.
b. Proactively engage with the final audit team at no additional cost
c. Submit all final construction drawings in the prescribed AutoCAD format.
d. Provide machine generated traces documenting all boring depths

4.4 Evaluation Criteria Scoring – Part II

Overall Project Experience
IRHTP will take into consideration the number of like construction projects completed thus far by the vendor.

Cost Breakdown

Grasp of the Project and Design
Vendor demonstrates a clear understanding and grasp of the project.
Response is clearly written and organized.

Vendor's Capabilities
Vendor has the necessary manpower and resources to accomplish the work on schedule.
Technical ability.

Credibility
Vendor's current reputation with established agencies and within the industry.

Vendor Agrees To:
a. Submit invoices in accordance with USAC requirements.
b. Proactively engage with the final audit team at no additional cost
c. Submit all weekly reports at the COB each workweek
d. Provide update briefings when requested at no additional cost

ATTACHMENT 1 – PART I
OUTSIDE PLANT – SAMPLE AGREEMENT
CONTRACTUAL TERMS AND CONDITIONS
RFP 08-001

SECTION 1. TERM. This Agreement is effective [EFFECTIVE DATE WILL BE LISTED], and will continue through (project completion).

SECTION 2. DOCUMENTS INCORPORATED BY REFERENCE.

2.1 Incorporation of Bid Proposal Documents. The IRHTP RFP 08-001 and the Vendor's bid proposal in response to this RFP, together with any clarifications, attachments, appendices, amendments or other writings of the IRHTP or the Vendor (collectively bid proposal) are incorporated into this Agreement by this reference as if fully set forth in this Agreement.

2.2 Contractual Obligations of Vendor. The terms and conditions of the bid proposal and of the RFP are made contractual obligations of the Vendor.

2.3 Contents of Agreement. The parties acknowledge that this Agreement consists of this document as well as the RFP and the bid proposal and that the parties are obligated to perform as set forth in the RFP and the bid proposal to the same extent that they are obligated to perform the specific duties set forth in this document.

2.3.1 Order of Preference. In the case of any inconsistency or conflict between the specific provisions of this document, the RFP or the bid proposal, any inconsistency or conflict shall be resolved as follows:

2.3.2 First, by giving preference to the specific provisions of this Agreement.

2.3.3 Second, by giving preference to the specific provisions of the RFP.

2.3.4 Third, by giving preference to the specific provisions of the bid proposal.

2.4 Intent of References to Bid Documents. The references to the parties' obligations, which are contained in this document, are intended to change, supplement or clarify the obligations as stated in the RFP and the bid proposal. The failure of the parties to make reference to the terms of the RFP or bid proposal in this document shall not be construed as creating a conflict and will not relieve the Vendor of the contractual obligations imposed by the terms of the RFP and the bid proposal. Terms offered in the bid proposal, which exceed the requirements of the RFP, shall not be construed as creating an inconsistency or conflict with the RFP or this document. The contractual obligations of the IRHTP cannot be implied from the bid proposal.

SECTION 3. DEFINITIONS. The following words shall have the meanings set forth below. Words in the singular shall be held to include the plural and vice versa, and words of gender shall be held to include the other gender as the context requires. For the purposes of this Contract, the following terms and all other terms defined in this Contract shall have the meanings so defined unless the context clearly indicates otherwise.

3.1 "IHA" shall mean the Iowa Hospital Association

3.2 "IRHTP" shall mean the Iowa Rural Health Telecommunications Program

3.3 "Vendor" shall mean [Vendor will be listed].

SECTION 4. SCOPE OF WORK.

Scope of Work. The fiber optic cable facility to be constructed pursuant to and as a result of this Agreement by the Vendor is described and attached hereto as Schedule A and made a part hereof by this reference.

The Vendor shall prepare and deliver specifications to the IRHTP which will detail the design, technical and functional capabilities, look and feel, and other attributes related to the project, all as more fully described in Schedule A.

Amendments to Scope of Services and Specifications. The parties agree that Schedule A, Scope of Services, and the specifications, may be revised, replaced, amended or deleted at any time during the term of this Agreement to reflect changes in service or performance standards upon the mutual written consent of the parties.

Industry Standards. Services rendered pursuant to this Agreement shall be performed in a professional and workmanlike manner in accordance with the terms of this Contract and with generally acceptable industry standards of performance for similar tasks and projects. In the absence of a detailed specification for the performance of any portion of this Agreement the parties agree that the applicable specification shall be the generally accepted industry standard. As long as the IRHTP notifies Vendor promptly of any services performed in violation of this standard, Vendor will re-perform the services, at no cost to IRHTP, such that the services are rendered in the above-specified manner.

Non-Exclusive Rights. This Agreement is not exclusive. The IRHTP reserves the right to select other Vendors to provide services similar or identical to the Scope of Services described in this Agreement during the term of this Agreement.

SECTION 5. COMPENSATION.

5.1 Payment Terms – Progress Payments

5.1.1 USAC and IRHTP will disburse funds based on monthly submissions (*i.e.*, invoices) of actual incurred eligible expenses, and will respond to vendor invoices in accordance with its current bi-monthly invoicing payment plan. This invoice process will permit disbursement of funds to ensure that the selected Participants' network projects proceed, while allowing USAC and the FCC to monitor expenditures in order to ensure compliance with the program and prevent waste, fraud, and abuse.

5.1.2 Upon award of contract for a link-segment, the Vendor will assist the IRHTP project coordinator in the development of a USAC Network Cost Worksheet. (NCW) This work sheet will list the primary tasks to be completed for each link-segment. When specific line items are completed on each NCW, the Vendor may submit it for a progress payment. As soon as the line item completion is approved by the IRHTP project coordinator the vendor will be paid 15% of the line item amount by the specific HCP served by the link-segment. The Vendor will acknowledge receipt of the 15% payment and forward appropriate forms to USAC for payment of the remaining 85%. USAC will honor requests for payment twice each month.

The invoices when submitted must certify by signature that all construction specifications were met during the covered period on the specified segment and show the contract number and project/site number on each invoice. If the IRHTP disputes the amount of any invoice, the IRHTP will notify the Vendor of the dispute within 10 days of receipt of the invoice. IRHTP may withhold payment of the disputed amount until the dispute is resolved

5.1.2.1 Retainer - Payment tied to Performance. The IRHTP shall withhold 10% of the fee for the project until the IRHTP has provided Final Acceptance of the project and as-built drawings are received and approved by the IRHTP. Upon Final Acceptance, the Vendor shall submit an invoice to the IRHTP requesting payment of the remaining 10% of the fee for the project. The invoice shall contain appropriate documentation as necessary to support the fee included on the invoice and shall comply with all applicable rules concerning payment of such fees.

5.1.2.2 Monitoring. The IRHTP shall monitor the Vendor's compliance with the scope of work and deadlines established for the project.

5.1.2.3 Review. Once the IRHTP has verified 100% completion of the project, the IRHTP shall review the Vendor's performance history under the Agreement and shall submit the Vendor's Invoice to USAC for payment of the 10% retainer. The retainer will be paid only upon Final Approval of the project, satisfactory restoral of any infrastructure or landscape disturbed by the cable installation process, site and route cleanup, and receipt of the as-built drawings

5.2 Delay of Payment Due To Vendor's Failure. If the IRHTP in good faith determines that the Vendor has failed to perform or deliver any service or product as required by this Contract, the Vendor shall not be entitled to any compensation under this Contract until such service or product is completed or delivered. In the event of partial performance, the IRHTP may withhold that portion of the Vendor's compensation, which represents payment for the unsatisfactory services.

5.3 The IRHTP shall audit the invoices presented to the IRHTP to ensure that they are proper, current and correct. The Vendor has 30 days from the date of invoice to present and resolve any discrepancies with the IRHTP. The IRHTP shall notify the Vendor of any and all discrepancies that the audit(s) reveals.

SECTION 6. INSURANCE.

6.1 Coverage Requirements. The Vendor, and any subcontractors performing the services required under this Agreement, shall maintain in full force and effect, with insurance companies of recognized responsibility, at its own expense, insurance covering its work during the entire term of this Agreement and any extensions or renewals thereof. The insurance shall be of the type and in the amounts as reasonably required by the IRHTP. The Vendor's insurance shall, among other things, insure against any loss or damage resulting from or related to the Vendor's performance of this Agreement. All such insurance policies should remain in full force and effect for the entire life of this Agreement and shall not be canceled or changed except with the advance written approval of the IRHTP.

6.2 Types of Coverage. Unless otherwise requested by the IRHTP, Vendor shall, at its sole cost, cause to be issued and maintained during the entire term of this Agreement (and any extensions or renewals thereof) the insurance coverage's set forth below, each naming the State of Iowa and the IRHTP additional insured or loss payees, as applicable:

Type	*Amount*
WORKERS COMPENSATION AND EMPLOYER LIABILITY	As Required By Iowa Law
GENERAL LIABILITY (including contractual liability) written on an occurrence basis	
GENERAL AGGREGATE	$3 million
PRODUCT LIABILITY	$1 million
PERSONAL INJURY	$1 million
COMPREHENSIVE AGGREGATE	$1 million
EACH OCCURRENCE	$1 million
Automobile Liability, including any auto, hired autos and non owned autos COMBINED SINGLE LIMIT	$1 million

6.3 Coverage for HCP Property on ICN Controlled Premises. The policies shall provide coverage for damages to the HCP's property, or on premises under the control of the ICN and/or the State of Iowa.

6.4 Claims Made Coverage. All insurance policies required by this Agreement must provide coverage for all claims arising from activities occurring during the term of the policy regardless of the date the claim is filed or expiration of the policy.

6.5 Notice Regarding Cancellation. Certificates of insurance, which provide that the IRHTP will be notified at least thirty (30) days prior to cancellation of the coverage required by this Agreement must be provided by the Vendor and any subcontractors to the IRHTP at the time of execution of the Agreement or at a time mutually agreeable to the parties.

6.6 No Limitation of Liability. The receipt of insured certificates by the IRHTP does not constitute approval of the coverage contained in the certificates, and the Vendor remains responsible for determining that its insurance coverage meets each and every requirement of this Agreement. Acceptance of the insurance certificates by the IRHTP shall not act to relieve the Vendor of any obligation under this Agreement. Only companies authorized to transact business in the State of Iowa shall issue the insurance policies and certificates required by this Section. It shall be the responsibility of the Vendor to keep the respective insurance policies and coverages current and in force during the life of this Agreement.

6.7 Warranty. The Vendor warrants that it has examined its insurance coverage to determine that the State of Iowa and the IRHTP can be named as additional insured without creating an adverse effect on the Vendor's coverage.

6.8 Waiver of Subrogation Rights. The Vendor shall obtain a waiver of any subrogation rights that any of its insurance carriers might have against State of Iowa and the IRHTP. The waiver of subrogation rights shall be indicated on the certificates of insurance coverage supplied to the IRHTP.

SECTION 7. CONFIDENTIAL INFORMATION.

7.1 During the course of this Agreement each party may disclose, to the other either directly or indirectly, certain data that is proprietary which shall be referred to as "Confidential Information" of the disclosing party and which must remain confidential. Confidential Information may include without limitation, among other things, such items as security information, user information, data, knowledge, trade secrets and other proprietary information, methodologies, developments, software, software documentation, inventions, processes, and other nonpublic information in oral, graphic, written, electronic or machine readable form.

7.2 All written or electronic Confidential Information shall be clearly marked as Confidential Information by the party providing the Confidential Information at the time of disclosure to the other party.

7.3 If the Confidential Information is disclosed orally, and reduced to writing, the receiving party must treat the information as Confidential Information.

7.4 The Vendor shall limit such identification to information it reasonably believes it is entitled to confidential treatment pursuant to FCC, USAC or other applicable law.

7.5 The obligations of this Agreement do not apply to Confidential Information which:

7.5.1 Was rightfully in the possession of the receiving party from a source other than the disclosing party prior to the time of disclosure of the Confidential Information to receiving party.

7.5.2 Was known to the receiving party prior to the disclosure of the Confidential Information from the disclosing party;

7.5.3 Was disclosed to the receiving party without restriction by an independent third party having a legal right to disclose the Confidential Information;

7.5.4 Becomes public knowledge, other than through an act or failure to act by the disclosing Party;

7.5.5 Is publicly available or in the public domain when provided;

7.5.6 Is independently developed by the disclosing party; or

7.5.7 Is disclosed pursuant to law, subpoena or the order of a court or government authority.

7.6 The parties shall have the following duties relating to the Confidential Information:

7.6.1 The Vendor shall designate one individual who shall remain the responsible authority in charge of all data collected, used or disseminated by the Vendor in connection with the performance of this Agreement. The Vendor shall accept responsibility for providing adequate supervision and training to its agents and employees to ensure compliance with the terms of this Agreement. The private and confidential data shall remain the property of the IRHTP at all times.

7.6.2 The Confidential Information of either party shall be held in strict confidence by the receiving party and shall not be disclosed or used by the receiving party without the prior written consent of the disclosing party, except as provided in this Agreement or as may be required by law pursuant to available confidentiality restrictions.

7.6.3 The parties shall use their best efforts to protect the Confidential Information in its possession.

7.6.4 The parties shall restrict disclosure of the Confidential Information solely to those of its employees, agents, consultants and attorneys with a need to know in order to accomplish the purpose of this Agreement.

7.6.5 The parties shall protect the Confidential Information from disclosure to or access by unauthorized persons.

7.6.6 The parties shall use the Confidential Information solely for the purpose of this Agreement and for no other purpose.

7.6.7 The parties shall not duplicate the Confidential Information in any form, except as may be necessary to accomplish the purpose of this Agreement.

7.6.8 The parties shall advise each of its employees, agents, consultants and attorneys who receive the Confidential Information of the obligations of confidentiality and restrictions on the use set forth herein.

7.6.9 The parties shall immediately return the Confidential Information and all copies thereof, to each other upon the earlier of the expiration of the need therefore or the termination of this Agreement in order to accomplish the purpose.

7.7 The provisions of this Agreement shall apply to all Confidential Information disclosed by the parties to each other over the course of this Agreement. The parties' obligations under this provision shall survive termination of this Agreement and shall be perpetual.

7.8 The Vendor shall indemnify the IRHTP for a violation of this Section. The Vendor shall notify the IRHTP prior to the destruction of these materials and shall provide the IRHTP with the opportunity for proper destruction of these materials.

7.9 No Confidential Information will be exported to any country in violation of the United States Export Administration Act and the regulations there under.

SECTION 8. VENDOR WARRANTIES.

8.1 Construction of Warranties Expressed in this Agreement with Warranties Implied by Law. All warranties made by the Vendor in all provisions of this Agreement and the bid proposal by the Vendor, whether or not this Agreement specifically denominates the Vendor's promise as a warranty or whether the warranty is created only by the Vendor's affirmation or promise, or is created by a description of the materials and services to be provided, or by provision of samples to the IRHTP, shall not be construed as limiting or negating any warranty provided by law, including without limitation, warranties which arise through course of

dealing or usage of trade. The warranties expressed in this Agreement are intended to modify the warranties implied by law only to the extent that they expand the warranties applicable to the goods and services provided by the Vendor.

8.2 The Vendor warrants that all the concepts, materials produced, the work product and the information, data, designs, processes, inventions, techniques, devices, and other such intellectual property furnished, used, or relied upon by the Vendor or the IRHTP will not infringe any copyright, patent, trademark, trade dress, or other intellectual property right of the Vendor or others. Any intellectual property provided to the IRHTP pursuant to the terms of this Agreement, shall be wholly original with the Vendor or the Vendor has secured all applicable interests, rights, licenses, permits, or other intellectual property rights in such concepts, materials and work.

8.3 The Vendor represents and warrants that the concepts, materials and the IRHTP's use of same and the exercise by the IRHTP of the rights granted by this Agreement shall not infringe upon any other work, other than material provided by the IRHTP to the Vendor to be used as a basis for such materials, or violate the rights of publicity or privacy of, or constitute a libel or slander against, any person, firm or corporation and that the concepts, materials and works will not infringe upon the copyright, trademark, trade name, literary, dramatic, statutory, common law or any other rights of any person, firm or corporation or other entity.

8.4 The Vendor warrants that all of the services to be performed hereunder will be rendered using sound, professional practices and in a competent and professional manner by knowledgeable, trained and qualified personnel.

8.5 The Vendor warrants that the deliverables under this Agreement will operate in conformance with the terms and conditions of this Agreement.

8.6 The Vendor warrants that it has full authority to enter into this Agreement and that it has not granted and will not grant any right or interest to any person or entity that might derogate, encumber, or interfere with the rights granted to the IRHTP.

8.7 The Vendor warrants that all obligations owed to third parties with respect to the activities contemplated to be undertaken by the Vendor pursuant to this Agreement are or will be fully satisfied by the Vendor so that the IRHTP will not have any obligations with respect thereto.

8.8 The Vendor warrants that it is the owner of or otherwise has the right to use and distribute the software, the materials owned by the Vendor and any other materials, and methodologies used in connection with providing the services contemplated by this Agreement.

8.9 The Vendor expressly warrants to the standards in the industry all aspects of the goods and services provided by it or used by the Vendor and the IRHTP in performance of this Agreement.

8.10 The Vendor unconditionally warrants that all equipment supplied and installed for the purpose of fulfilling its obligations under this Agreement are fit for the purpose intended, that it complies with industry standards and that the equipment is compatible with the State's equipment.

SECTION 9. INDEMNIFICATION BY VENDOR. The Vendor agrees to defend, indemnify and hold the IRHTP, and the State of Iowa, its employees, agents, board members, appointed officials and elected officials, harmless from any and all demands, debts liabilities, damages, loss, claims, suits or actions, settlements, judgments, costs and expenses, including the reasonable value of time expended by the Attorney General's Office, and the costs and expenses and attorney fees of other counsel required to defend the IRHTP or the State of Iowa related to or arising from:

9.1 Any violation or breach of this Agreement including, without limitation, any of the Vendor's representations or warranties; or

9.2 Any acts or omissions, including, without limitation, negligent acts or omissions or willful misconduct of Vendor, its officers, employees, agents, board members, contractors, subcontractors, or counsel employed by Vendor in the performance of this Agreement, or any other reason in connection with the goods and services provided under this Agreement; or