



Frontier
BUSINESS EDGE

Response to Request for Proposal for:



Telecommunications Transport Services

Proposal: CRFP 0212 SWC1600000002

February 9, 2016

Presented by:

Chad Stepp

Frontier West Virginia Inc.
Enterprise Account Executive
Cell: (304) 410-5659
Email: chad.stepp@ftr.com

02/09/16 13:09:46

WV Purchasing Division

January 17, 2016

Department of Administration, Purchasing Division
Attn: Stephanie Gale, Buyer
2019 Washington Street East
Charleston, WV 25305-0130

Dear Ms. Gale:

On behalf of Frontier West Virginia Inc., we appreciate the opportunity to provide a response to State of West Virginia CRFP #ISC150000002 Legacy Telecommunications Transport Services. Frontier will continue to be your conscientious and dedicated partner that can deliver the solutions and changes the State of West Virginia requires going forward, ensuring you a secure and profitable future.

With Frontier, you can consolidate your communications with one provider, giving you advantages such as:

- One Company for any issues impacting your network services. This will prevent the State of West Virginia from having to deal with multiple vendors for upgrading or troubleshooting.
- Direct Access to dedicated account management, engineering, and billing resources. This means dealing with people who know the State of West Virginia, your network, and you.
- Leading Edge, Reliable Services backed by Frontier technicians and around-the-clock network monitoring.

The reliability and security of the State of West Virginia's network is Frontier's first priority. Your account team includes experienced engineers and technicians, and we are available to serve you before, during and after installation. Should you have any questions or would like additional information, please do not hesitate to contact your Enterprise Account Executive, Chad Stepp at (304)410-5659, chad.stepp@ftr.com.

Sincerely,



Michael Flynn
Mid-Atlantic Area President
1500 MacCorkle Ave. SE
Charleston, WV 25396

Frontier Communications is honored to respond to CRFP# 0212 SWC1600000002 with useful information regarding our industry leading suite of data services including the latest generation of Ethernet to expand on the Switched Ethernet Service we have been providing to the State of West Virginia as part of MPLS07 and we all here at Frontier WV look forward to the expansion and continuation of our mutually beneficial business relationship.

Frontier Communications is proud of its more than one hundred year old legacy in telecommunications and to continue that telecommunications history here in West Virginia by continuously investing in the state's people and communications infrastructure. Our most recent investments have moved broadband availability in the Mountain State up to 90% coverage within the Frontier footprint which is an unprecedented 96% of our naturally beautiful geography.

From employing nearly 2,000 hard working men and women in West Virginia to the more than \$500 million Frontier has invested in the state, we are a part of community and look forward to developing and sustaining our home state as a leader in telecommunications technology and service availability. We're also proud to share our home base with State government maintaining the City of Charleston as our Mid-Atlantic regional headquarters since the acquisition of Verizon WV's ILEC assets in 2010. We continue to grow aggressively through acquisition which is evident in our most recent announcement to purchase Verizon LEC properties in Florida, Texas, and California.

As we grow as a Fortune 500 company we gain more national resources to create an information technology environment that enhances communications, learning, discovery, and collaboration while providing operational efficiencies and reducing costs. To this end, we consider our relationship with the State of West Virginia a strategic partnership and look forward to supporting your vision of the 21st century information environment, with next-generation capabilities and commitment to promote enhanced learning, emergency management, and public safety.

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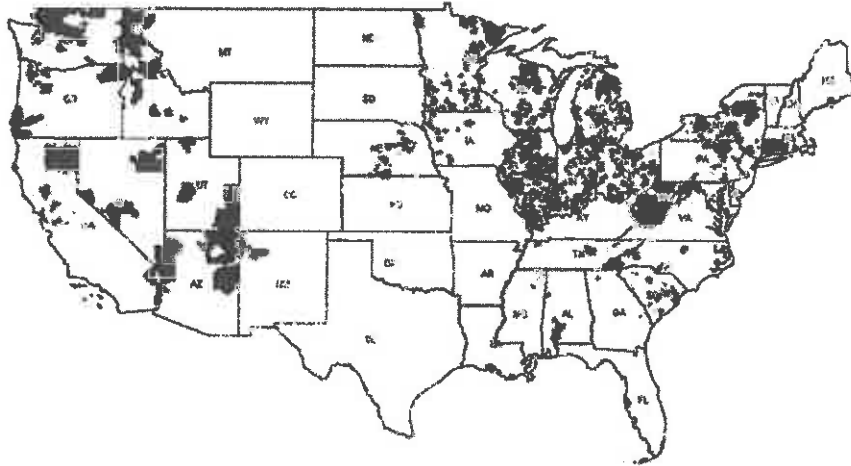
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Restriction on Disclosure and Use of Data:

This proposal includes data that shall not be disclosed outside of your organization and shall not be duplicated, used, or disclosed, in whole or in part, for any purpose other than in connection with your evaluation of this proposal. If, however, a contract is awarded as a result of, or in connection with, the submission of this proposal, you shall have the right to duplicate, use, or disclose the data only to the extent provided in the resulting contract. This restriction does not limit your right to use data contained in this proposal if it is lawfully obtained from another source without restriction or to disclose such data as may be required by law. If your organization is required by law to disclose such data (including, without limitation, pursuant to any Freedom of Information Act request), you shall timely notify us of such compelled disclosure so that we have a reasonable opportunity to limit or challenge such disclosure.

Frontier Communications Overview

Frontier's 18,600 plus employees are 100 percent U.S.-based. Frontier Communications Corporation was founded in 1935 and is based in Delaware. Our Corporate Headquarters are in Norwalk, Connecticut. Frontier is a Fortune 500 company included in the S&P 500 index (NASDAQ:FTR).



Frontier is the nation's largest provider of communications services focused on rural America, offering Broadband, Phone, Satellite television, wireless Internet data access, PC security solutions and technical support, Internet-based television, carrier services, specialized bundles for small businesses and home offices, and advanced business communications for medium, large and commercial businesses in 28 states.

Frontier is uniquely qualified to be the communications provider for your company, with decades of experience delivering a comprehensive range of services -- from traditional phone lines to high-performance voice, data, IP network, wireless and equipment solutions -- Frontier has the experience and capabilities to meet and exceed your expectations.

Frontier wants to be your first and only choice. We already make it possible for you to obtain reliable local, long distance, Internet and data services. Frontier is a state-of-the-art organization focused on excellence by offering you the added convenience of working with a **dedicated Frontier Account Team** who understands your business and focuses on the cost-effective handling of your communications needs – **and** your total satisfaction with Frontier products and services.

We make it our priority to be there when you need us, from first installation to the ongoing support of your specialized telecommunications solution. Our team of experienced engineers and highly trained technicians are available to assist you in taking full advantage of Frontier products and services. With the experience of the Frontier team behind you, you will be able to focus on other key areas vital to your core business.

Why you should partner with Frontier

Frontier offers end-to-end data, voice and video solutions to businesses of all sizes. We're committed to providing next generation technology that's flexible and reliable, ready to grow with your business. You will enjoy the convenience of having one single, responsive source for all your communications needs. Choose from our fully integrated product portfolio, including:

- Ethernet Solutions
- Dedicated Internet Access
- Managed IP VPN
- VoIP (hosted and premise based)
- Communications & Network Equipment
- Optical Transport Services
- Managed IT Services
- Audio, Web & Video Conferencing
- Wireless Data Access/Wi-Fi
- Data Backup & Recovery
- Business High Speed Internet
- Local & Long Distance Services
- Computer Security

Frontier Provides

- ✓ **100% U.S. based workforce**
- ✓ **State-of-the-art network**
- ✓ **24/7 expert tech support**
- ✓ **Global capabilities**
- ✓ **Customized solutions**
- ✓ **Comprehensive product portfolio**
- ✓ **Dedicated Account Executives**

Frontier has created a custom-designed plan based on your needs and budget – all backed by our 24/7 expert tech support. Plus, we monitor the Frontier network to ensure that your business communications run without interruption. It's all part of our dedication to helping you be successful.

Frontier Communications (NASDAQ: FTR) provides data, voice, video and equipment solutions to businesses of all sizes. We pride ourselves on our unmatched customer service, locally based tech support, customized solutions and commitment to help our customers succeed.

Frontier Facts / West Virginia

- Frontier, which operates in all 55 West Virginia counties, is divided into six geographic markets. A general manager leads each market and is responsible for the overall customer experience, as well as sales, marketing, government relations and community relations.
- Frontier maintains its Mid-Atlantic Region headquarters in Charleston and has nearly **2,000 employees** in West Virginia.
- Frontier has made total capital expenditures in West Virginia of more than **\$500 million** since its acquisition of the Verizon markets in July 2010.
- Frontier has made broadband available to nearly 190,000 additional households since July 2010, pushing broadband availability in Frontier's acquired service areas from 62 percent to 90 percent of the households in the acquired areas.
- Frontier Communications built a middle-mile network across West Virginia that supports increased bandwidth and service reliability in the state. The **2,600-mile** network supports leading-edge broadband services and encourages business investment.
- Frontier has dramatically expanded the number of Ethernet switches in West Virginia. Today, Frontier has 237 copper and 222 fiber Ethernet switches for a total of **459 switches – up from 60 in 2010**. Ethernet switches allow businesses to establish high-speed communications networks that support investment, expansion and job creation.
- Frontier competes for business in these areas: voice services, data services, voice and data equipment on customers' premises and television services through DISH.
- Through the use of bonded Asymmetric Digital Subscriber Line (ADSL) and Very-high-data-rate Digital Subscriber Line (VDSL) technology, Frontier is upgrading speeds in many areas of West Virginia to support download speeds of up to 24 megabits per second (Mbps) for residential customers and 40 Mbps for business customers.
- In 2013 Frontier completed construction of its portion of a federally funded and state-managed project that resulted in 645 West Virginia schools, libraries, health facilities and other community anchor institutions having fiber-optic connections. West Virginia is one of the few states in the nation where all public schools have fiber-optic connectivity.
- Because of Frontier's improvements in the core telecommunications network in West Virginia, network troubles and customer complaints have declined substantially since 2010.


Tab A

**Frontier West Virginia Inc.
Response To:**

State of West Virginia


**Request for Proposal
CRFP SWC 160000002**



	Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130	State of West Virginia Request for Proposal
	—	

Proc Folder: 172613				
Doc Description: Addendum #3 Telecommunications Transport RFP				
Proc Type: Central Master Agreement				
Date Issued	Solicitation Closes	Solicitation No		Version
2016-01-11	2016-01-26 13:30:00	CRFP	0212 SWC160000002	1

BID RECEIVING LOCATION	
BID CLERK DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON ST E CHARLESTON WV 25305 US	

FOR INFORMATION CONTACT THE BUYER	
Stephanie L. Gale (304) 558-7023 stephanie.l.gale@wv.gov	
Signature X 	FWV - 55-0142020 FCA - 06-1381497 FEIN# CTCWV - 55-0276420
	DATE 9 Feb 16

All offers subject to all terms and conditions contained in this solicitation

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: SWC160000002

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input checked="" type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input checked="" type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Frontier

Company
RC [Signature]

Authorized Signature
9 Feb 16

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012

State of West Virginia VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. Application is made for 2.5% vendor preference for the reason checked:

- Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
- Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
- Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,

2. Application is made for 2.5% vendor preference for the reason checked:

Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

3. Application is made for 2.5% vendor preference for the reason checked:

Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

4. Application is made for 5% vendor preference for the reason checked:

Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,

5. Application is made for 3.5% vendor preference who is a veteran for the reason checked:

Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,

6. Application is made for 3.5% vendor preference who is a veteran for the reason checked:

Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.

Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Frontier

Signed: 

Date: 9 Feb 16

Title: EAE

Tab A

Vendor Response Sheet

ATTACHMENT A: VENDOR RESPONSE SHEET

QUALIFICATIONS AND EXPERIENCE

3.0 Provide a response regarding the following qualifications and experience:

Company Name	Frontier West Virginia Inc.
Company Address	1500 MacCorkle Ave. SE, Charleston, WV 25396
Sales Contact Name	Chad Stepp
Title	Enterprise Account Executive
Phone	(304) 410-5659
Fax	(304) 342-6092
Email Address	chad.stepp@fr.com
Technical Contact Name	Kevin Walker
Title	Network Sales Engineer
Phone	(304) 344-6435
Fax	(304) 344-6123
Email Address	andrew.walker@fr.com
E-Rate Contact Name	Denise McIntosh
Title	Federal/USAC Team Leader
Phone	(260) 451-8574
Fax	(585) 262-9734
Email Address	denise.mcintosh@fr.com

3.1 Provide a brief history of your company, number of years in the telecommunications business, location of company headquarters and any offices in West Virginia.

VENDOR RESPONSE: Frontier Communications Corporation, a communications company, provides regulated and unregulated voice, data, and video services to residential, business, and wholesale customers in the United States. The company offers residential services, such as fiber-to-the-home and fiber-to-the-node broadband, video, and voice over Internet protocol products, as well as traditional copper-based broadband products; and commercial services, including Ethernet, dedicated Internet, multiprotocol label switching, time division multiplexing, data transport services, and optical transport services. It also provides Frontier Secure suite of products for computer security, cloud backup and sharing, identity protection, equipment insurance, and technical support; unified messaging services comprising call forwarding, conference calling, caller identification, voicemail, and call waiting services; long distance network services; and packages of communications services. In addition, the company offers switched access services that facilitate other carriers to use the company's facilities to originate and terminate their local and long distance voice traffic; satellite TV video services; a range of third-party communications equipment to small, medium, and enterprise business customers; and directories. The company was formerly known as Citizens Communications Company and changed its name to Frontier Communications Corporation in July 2008. Frontier Communications Corporation was founded in 1927 and is based in Norwalk, Connecticut, our West Virginia office is located at 1500 MacCorkle Ave. SE, Charleston, WV 25396.

3.2 Describe the size (i.e., number of offices, employees, customer base, etc.) and organizational

structure of your company.

VENDOR RESPONSE: Frontier's 100% American based staff has over 18,600 full time employees. As of December 31, 2014, Frontier Communications Corporation had approximately 3,214,800 residential customers; approximately 304,700 business customers; 2,373,900 broadband subscribers; and 586,600 video subscribers.

- 3.3 Describe any current legal actions against your company, in particular as it relates to the products and services you are proposing in response to this RFP, and provide the current status of any such actions. The Vendor should provide the company's Red Light status with the FCC.

VENDOR RESPONSE: Frontier Communications FRN # 0022071609 has no delinquent bills which would restrict them from doing business with the FCC. Please see Frontier Appendix D4 for verification that Frontier is in good standing with the FCC, and authorized to sell E-rate services.

- 3.4 Vendor should provide verification that your company is an authorized dealer, in good standing, authorized to sell, and able to deliver all services proposed within its response to this RFP and within the timeframes required by the RFP. Verification should include a letter from any vendor from which you are buying services to resell to the State.

VENDOR RESPONSE: Frontier's proposed solution will not include any resold services from Vendors. Please see Frontier Appendix D4 for verification that Frontier is in good standing with the FCC, and authorized to sell E-rate services.

- 3.5 Vendor should provide verification that your company is fully licensed in and by the State of West Virginia and authorized to sell all proposed services in the State of West Virginia.
VENDOR RESPONSE: Please see Frontier verification of licensing in the state of West Virginia in Frontier Appendix Tab D8.

- 3.6 Provide a minimum of three (3) references. If subcontractors are proposed, three (3) references should also be submitted for each subcontractor. The State reserves the right to contact the references submitted as well as any other references, which may attest to the Vendor's work experience as it relates to this RFP. References should meet the following criteria:

3.6.1 The references should be from entities with recent (within the last three {3} years) contract experience with the Vendor.

3.6.2 If the Vendor or its subcontractor has no recent contract experience, the references should be from organizations regarding work closely related.

3.6.3 The contacts should be individuals who can directly attest to the Vendor's qualifications relevant to this RFP.

3.6.4 The reference should be limited to organizational recommendations, not personal recommendations.

3.6.5 The reference should not be from current State of West Virginia employees or programs.

3.6.6 The reference should have been contacted in advance so that they may be contacted by the State without further clearance or Vendor intercession.

3.6.7 The format for each reference should be as follows:

Customer Name	
Address	
Name of Contact	
Title	
E-Mail Address	
Telephone Number	
Contract or Service Period	
Types of Services Provided	
Please briefly describe the scope of the services provided:	

VENDOR RESPONSE:

Customer Name	Duke University
Address	334 Blackwell Street Durham, NC 27701
Name of Contact	Joseph Lopez
Title	Directory - Duke OIT Communications
E-Mail Address	Joseph.Lopez@Duke.edu
Telephone Number	(919) 613-1000
Contract or Service Period	Current – under 3 year MSA
Types of Services Provided	POTS, PRI, Ethernet, SIP, Point to Point
Please briefly describe the scope of the services provided	
Frontier is a leading provider of services for Duke University with a monthly spend of \$145,000. Frontier provides SIP, Ethernet, PRI, POTS, Nortel Maintenance and Cisco Phones.	

Customer Name	State of Washington
Address	210 11 th Av SW Olympia, WA 98501
Name of Contact	Eric Talberg
Title	Manager, Telephony Services
E-Mail Address	eric.talberg@watech.wa.gov
Telephone Number	(360) 407-8736
Contract or Service Period	3 year contracts with 1 year renewals
Types of Services Provided	See below description.
Please briefly describe the scope of the services provided	
Frontier provides Ethernet EVPL, Centrex, and PRIs to the State of Washington government.	

Customer Name	Charleston Area Medical Center, Inc.
Address	400 Association Drive, Suite 200 Charleston, WV 25311
Name of Contact	Rocky F. Blake
Title	Interim VP of I/S and CIO
E-Mail Address	Rocky.Blake@camc.org
Telephone Number	304-388-3363
Contract or Service Period	60 month contract
Types of Services Provided	Internet Ethernet Access, Ethernet WAN,
Please briefly describe the scope of the services provided	
Frontier is the primary voice and data services provider for Charleston Area Medical Center's (CAMC) four hospitals and a multitude of other facilities in the area. Frontier provides a full suite of products including services over Ethernet and traditional voice products such as PRIs and POTS lines.	

PROJECT GOALS AND OBJECTIVES

4.0 The Vendor should describe how they will meet the goals and objectives that follow:

4.1 General Requirements

4.1.1 WVOT will place orders and be the billed entity for all services provided to WVOT and its state agency customers. Other government and education entities that desire to use these contracts must request and receive waivers from the WVOT to be able to place orders and receive bills directly from the provider. The Vendor should acknowledge that they understand this process and describe their implementation for handling.

VENDOR RESPONSE: Frontier read and understood this request and will not process any order pursuant to this contract from another government or educational entity without receiving the aforementioned waiver from WVOT.

4.1.2 While WVOT is responsible for this contract and will serve as your only contact regarding contractual issues, the Department of Education and the Library Commission will be directly involved with ordering, billing, and support issues regarding this contract. Please acknowledge that you understand this situation and describe your implementation for handling.

VENDOR RESPONSE: Frontier read and understood this request. After receiving the aforementioned waiver from WVOT, Frontier will work directly with WV Dept. of Education and the Library Commission for ordering, billing, and support issues.

4.1.3 The Vendor will be expected to partner with the State to bring its best resources to bear on behalf of the State in a manner that is consistent with the State's strategic plans, policies and procedures. In the event a conflict arises between the Vendor's business practices and the State's strategic plans, policies and procedures, both parties agree to meet and negotiate a reasonable and appropriate realignment of this partnership. Any failure to cure such a conflict shall be grounds for termination of any Agreement between the Vendor and the State. Please explain your position of such an instance and how you will meet this objective.

VENDOR RESPONSE: Frontier read and understood this request. Our proven track record is one of being a conscientious partner in both the data and voice services provided to the State of WV. We will continue to work closely with State of WV administrators and will always be willing to meet and negotiate a reasonable and appropriate realignment of our partnership when necessary.

- 4.1.4 Procurements under this contract support basic business productivity, therefore Vendor performance reports will be filed with the State Purchasing Division should performance fall below the expectations and requirements outlined in this RFP. Please acknowledge that you understand this issue regarding vendor performance and its potential effect on the State's business productivity.

VENDOR RESPONSE: Frontier read and understood this request.

4.2 Dedicated State Account Team

- 4.2.1 The Vendor should have a primary office location in the State of West Virginia. Provide the location and staffing at that location.

VENDOR RESPONSE: Frontier's Mid-Atlantic Regional Headquarters address is: 1500 MacCorkle Avenue S.E. Charleston, WV 25396 where we have a staff of nearly 700 Frontier employees.

- 4.2.2 The Vendor account team will be expected to participate in meetings with the appropriate State staff as described below. Please describe your participation in these meetings.

4.2.2.1 The Vendor account team should participate in weekly status meetings to discuss order status, issues, and any other information regarding pending orders, expected orders, and the ordering process.

4.2.2.1 The Vendor account team will be expected to meet with the WVOT Billing team on an "as needed" basis to report on or reconcile contract, service, or billing issues.

4.2.2.2 The Vendor account team should participate in design/strategy/planning sessions as needed for major network upgrades or other special projects related to this contract. Prior to these planning sessions, the Vendor should provide a written implementation plan that outlines Vendor responsibilities, State responsibilities, timelines, and any risks associated with the project that may impact the implementation. A major network upgrade or change would be any change to the network that would impact multiple customers on the network.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

- 4.2.3 The partnership between the State and the awarded Vendor is linked through the dedicated local account team. In order to minimize misunderstandings and maximize effective communications of the State's goals and objectives, all contact with governmental and educational entities regarding the services

under this contract should be done through the dedicated local account team. Under no circumstances should an authorized reseller contact a governmental or educational entity as a representative under this agreement without prior consent from the dedicated account team and the State. The Vendor should describe how this partnership will function.

VENDOR RESPONSE: Frontier read, understood this request.

4.2.4 The Vendor should provide the requested information for the following team members with proposal submission. Please provide detailed resume information, including name, title, total years of service, years in current title, description of current duties, and information about special training and pertinent certifications, for each individual proposed by role.

4.2.4.1 Account Manager- Responsible for overall account management including account team coordination, acting as primary point of contact, and serves as the corporate liaison for State, Education and Library issues.

4.2.4.2 Network Engineer (as many as required to adequately support customer base) - Provides technical support for the network and assists with design and planning for special projects and/or changes in the network.

4.2.4.3 Service Manager- Serves as the primary escalation point for service and maintenance issues, communicates with the State regarding routine network maintenance that may affect the network, provides documentation for service and maintenance functions as well as critical or chronic problems in the network, and manages and reports on contract SLA's.

4.2.4.4 Project Manager- Provides overall management of implementation or upgrade projects including actively monitoring and reporting on progress and providing written documentation of the project. Oversees and maintains inventory database of services maintained for the State. Provides oversight to ensure service provider compliance with the State contract. Proactively monitors service provider-billing accuracy. Responsible for resolution of all billing issues for all services under this contract, responds to information requests regarding State services under contract, and coordinates with the service provider's subcontractors or partners to ensure seamless delivery of contracted services.

4.2.4.5 Service Consultant (as many as required to adequately support customer base)- Coordinates implementation activities and interfaces with other State business partners involved in these projects, and maintains the inventory database of services.

4.2.4.6 Services Representative (as many as required to adequately support customer base) - Coordinates routine service requests (adds/moves/changes), responds to billing inquiries.

4.2.4.7 E-Rate Representative- Acts as a point of contact for e-rate related issues and providing technical support relating to E-rate eligibility.

The Vendor should provide the name, phone number, fax number and e-mail address of the person responsible for E-Rate within the Vendor's company. The Vendor should also commit to provide updated information should that contact information change within seven (7) days of the change.

VENDOR RESPONSE: Frontier read, understood and will comply with this request. Please see Frontier Team member resumes in Frontier Appendix Tab D7.

4.3 Billing Specifications: The Vendor should provide the following billing elements, at a minimum, for WVOT billing and for each of the other entities eligible to use the resulting contract, but not currently supported through WVOT billing: billing month, billed entity name, customer name (if different from billed entity), service location, circuit identification, service period, cost for individual billing components, itemized cost for any one time or non-recurring charges, and total cost.

4.3.1 Where the Vendor is issuing credits to a bill related to errors, missed service level objectives, etc. the Vendor should ensure that these credits are issued to the specific billed entity that was impacted. Please describe.

VENDOR RESPONSE: Frontier will issue credits at the circuit level.

4.3.2 The Vendor should identify a single point of contact for billing issues, disputes, or general questions and have an established process for resolving billing errors. If incorrect rates or quantities are discovered, they must be corrected immediately (prior to the next billing cycle) and must be credited back to the effective billing start date for that service. The customer shall reserve the right to withhold payment until corrections have been made and a corrected invoice is received. Please describe your dispute resolution process.

VENDOR RESPONSE: Frontier's SPOC will be the SOWVTEAM@FTR.COM (Vicki.Hayes@ftr.com & Michele.Crockett@ftr.com) and can also be reached by calling 304-558-3068. Once the billing issue, dispute, or question is received via email we will review and care for

the request prior to the next billing cycle. Once the issue has been reviewed we will issue any agreed upon credits at the circuit level.

- 4.3.3 The Vendor should make billing adjustments within 30 days, when services are disconnected. The Vendor should agree that upon notification of disconnect the Vendor will provide email verification of receipt and provide verification of the date of disconnect. Please explain how you will handle this.

VENDOR RESPONSE: Frontier will issue disconnect order and provide order information as well as Effective Billing Date (EBD) the circuit will stop billing within the requested 30 days.

- 4.3.4 The Vendor should provide credit or deduction to the customer for charges identified by the customer as incorrect on the Vendor's bill. These credits or deductions must be applied in the Vendor's next billing cycle after notification by the customer. Please explain how you will handle this.

VENDOR RESPONSE: Frontier's SPOC will be the SOWVTEAM@FTR.COM (Vicki.Hayes@ftr.com & Michele.Crockett@ftr.com) and can also be reached by calling 304-558-3068. Once the incorrect billing issue is received via email we will review and care for the request prior to the next billing cycle. Once the issue has been reviewed we will issue any agreed upon credits at the circuit level.

- 4.3.5 The Vendor should provide billing in one of the following ways:

- 4.3.5.1 Direct email with attachment
- 4.3.5.2 Direct download from a trusted website
- 4.3.5.3 Via compact disk storage.

VENDOR RESPONSE: Frontier will use the direct email attachment.

- 4.3.6 The State desires that back billing for services where the Vendor did not initiate billing in the appropriate timeframe should only be allowed for up to three (3) billing cycles. Additionally, where the State does not issue the appropriate disconnect notice when changing service at a given location, the Vendor should agree to credit the State for up to three (3) billing cycles after the new service was installed. Please explain how you will handle this.

VENDOR RESPONSE: Frontier will agree to issue credits for up to three (3) billing cycles.

- 4.3.7 The Vendor should describe how they will handle refunds/credits when E-rate is involved. This description should also address how credits will be issued to E-rate users when service level objectives are not met.

VENDOR RESPONSE: Frontier Communications does offer the SPI Invoicing option and may be requested through our website located at <https://frontier.com/discountprograms/ERate> or by contacting our Erate team directly at erate-cff@ftr.com. Upon verification of funding and the filing of the Form 486, Frontier will initiate the system generated discounts according to the FRNs and the associated billing accounts. Any retroactive credits that are due according to the approved

Form 486 effective date, will be manually calculated and applied within 2 billing cycles of the request. Any accounts that have an accrued credit balance may be requested in the form of a refund check by simply reaching out to the Erate team with a written request at erate-clf@fr.com. Erate is based upon the services billed on a monthly basis, if objectives are not met and a service credit is deemed necessary a manual adjustment would need to be applied prior to the closure of the Erate funding year. All Erate funding that is systematically generated is reviewed annually prior to the closure of the invoicing deadline of the corresponding Erate Funding Year (normally October 28) to ensure accuracy and compliance with the program rules.

4.4 Telecommunications Services

4.4.1 Point-to-Point Private Line Services. For the purposes of this RFP, P2P Private Line Services is defined as a dedicated end-to-end circuit from one State location to another State location.

4.4.1.1 The Vendor should describe its procedures for termination of demarcation blocks and modular jacks.

VENDOR RESPONSE: In the case of Digital Data Circuits or DS-1 level point-to-point circuits, Frontier will install the appropriate demarcation equipment in the established telco demarcation for each building.

4.4.1.2 The Vendor should provide DS3 local access services using fiber-optic transmission media. Please describe.

VENDOR RESPONSE: Frontier provisions all DS3 circuits on fiber optic transmission media.

4.4.1.3 The Vendor should provide multipoint bridging capabilities for aggregating P2P digital data circuits. Please describe.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

4.4.2 Ethernet Dedicated and Multi-point Switched Services

4.4.2.1 The Federal guidelines for K12 schools for bandwidth per student will be increasing every year during this contract. Given this increasing demand, capacity above 10Gbps may be required during the term of this contract. The Vendor should indicate their current capacity services available above 10Gbps, but all costing information must be shown on the Cost Sheet, Attachment C.

VENDOR RESPONSE: Frontier currently supports up to 10Gbps Switched Ethernet Services, and do have 100Gbps Switched Ethernet Services on our product roadmap for future release.

4.4.2.2 The Vendor's proposed circuits should support Ethernet jumbo frames with a data payload size of up to 9000 bytes. Please describe.

VENDOR RESPONSE: Any circuit provisioned on fiber facilities will be supported frames up to 9,000 bytes. Circuits provisioned on copper Ethernet facilities are currently limited to 1,600 byte frames.

4.4.3 Frame Relay and Asynchronous Transfer Mode Services

4.4.3.1 The ATM and Frame Relay services are being requested and are currently necessary to support State customers but it is the State's desire to migrate away from ATM and Frame Relay services and focus on P2P and Ethernet services moving forward. The Vendor should consider this long term goal in developing its response to these service requirements and describe their ideas on how this could be done.

VENDOR RESPONSE: Frontier will continue to support and maintain the ATM and Frame Relay network we currently provide to the State of WV. Frontier's long term goal is in line with the State's and we look forward to assisting in the migration of customers with these circuits to Ethernet transport. A major advantage of working with Frontier's Commercial Business Division is that we always have and will continue to work with the State to cover the sometimes very large special construction costs that can apply to the expansion of your Ethernet network to the corners of WV.

4.4.3.2 The Vendor should propose Frame Relay/ATM services that support open architecture industry standards. Please describe.

VENDOR RESPONSE: Frontier will continue to support your existing Frame Relay and ATM services which meet industry standards.

4.4.4 Multi-Protocol Label Switching (MPLS) Services

VENDOR RESPONSE: Frontier provides a Layer 3 private networking service offering named IPVPN. Please see Frontier Appendix Tab D5 for a full review of the features and benefits of this product set.

4.4.4.1 The Vendor's proposed network should support the forwarding of standard network monitoring protocols to allow customers to monitor their networks and end sites from centralized support locations on the network. Please describe.

VENDOR RESPONSE: Frontier read, understood and will comply with this request. Standard network monitoring protocols such as all versions of SNMP including 1,2c, and 3, Windows Management Instrumentation (WMI), Internet Control Message Protocol (ICMP), Syslog, Netflow, and Web Services-Management (WS-Management) are not blocked or filtered within the Frontier Ethernet network.

4.4.4.2 The Vendor's proposed network should support the forwarding of standard security protocols to allow customers to manage and secure their networks and end sites from centralized support locations on the network. Please describe.

VENDOR RESPONSE: Frontier read, understood and will comply with this request. Standard security protocols such as Internet Protocol Security (IPsec), Transport Layer Security (TLS), Secure Socket Layer (SSL), & Secure Shell (SSH) are not blocked or filtered within the Frontier Ethernet network.

4.4.4.3 The Vendor's proposed solution should support multi-media applications such as Voice and Video over IP. The Vendor should describe how the proposed solution is built to handle these applications and describe any special features

that this network may have to enhance support for these applications.

VENDOR RESPONSE: All Frontier Switched Ethernet Services and IPVPN Service support the applications of Voice/Video over IP. In particular, the EvPL and IPVPN provide enhanced Class of Service (CoS) and Quality of Service (QoS) parameters desired for these applications. Please see Frontier Appendix 5 for detailed information.

4.4.4.4 The Vendor should clearly label demarcation points with the site specific circuit identification information. Please describe.

VENDOR RESPONSE: As a standard procedure for new circuit installations Frontier will clearly label the demarcation points with specific circuit identification information.

4.4.4.5 The Vendor should provide a facilities plan that indicates where the vendor's telecommunications services are currently available and a proposed roadmap and schedule for future expansion and enhancement.

VENDOR RESPONSE: Please see the Frontier Appendix Tab D6 for ROADM 7.0 Network Map explaining current capabilities (i.e., number of Ethernet Switches), as well as Planned Ethernet Network enhancements.

4.4.4.6 The Vendor should define its ability to provide additional network services in support of the State of West Virginia network. This should include services such as Domain Name Services (DNS), Firewall Services, and Content Filtering Services.

VENDOR RESPONSE: Frontier offers Primary, Secondary, and Reverse DNS services for customer circuits that route to the public Internet. The circuits mentioned in this RFP are designed as private WAN connections, and thus do not route to Frontier's public Internet Egress points. For this reason, Frontier does not provide any Firewall or Content Filtering Services on the circuits requested within this RFP.

4.5 Installation Services

4.5.1 The Vendor will be expected to work with the State to establish standard procedures for ordering and implementing these telecommunications services. The Vendor should describe their standard procedures for these services. The State will provide the following information as part of a service order :

- 4.5.1.1 Agency Department
- 4.5.1.2 Agency Name
- 4.5.1.3 Division Name
- 4.5.1.4 Agency Primary Contact
- 4.5.1.5 Phone#
- 4.5.1.6 Cell#
- 4.5.1.7 Agency Onsite Contact

- 4.5.1.8 Phone#
- 4.5.1.9 Cell#
- 4.5.1.10 Email Address
- 4.5.1.11 Agency Onsite Address (including County)
- 4.5.1.12 Hours of Operation
- 4.5.1.13 WVOT Onsite Technician
- 4.5.1.14 Phone#
- 4.5.1.15 Cell#
- 4.5.1.16 Email address
- 4.5.1.17 UBI- Unique Billing Identifier
- 4.5.1.18 Requested Date
- 4.5.1.19 Direct Bill? Yes or No
- 4.5.1.20 Requested Data Services
- 4.5.1.21 Agency Authorization
- 4.5.1.22 TCR # (Telecommunications Change Request) Demarcation Extension
- 4.5.1.24 Move from Address (old address, if office move)
- 4.5.1.25 Office Move
- 4.5.1.26 Additional Detail

VENDOR RESPONSE: Frontier will work with the State to establish standard procedures for ordering and implementing these telecommunications services. The State will send an email to Frontier SPOC with the above information on a Telecommunications Change Request form. Frontier will review the request and respond within five (5) business days.

4.5.2 The Vendor should be able to receive service orders from the State electronically and provide confirmation of receipt and subsequent order detail electronically to the State. This detail must include, at a minimum, the following data elements. Please describe your process.

- 4.5.2.1 Date order received
- 4.5.2.2 Customer name
- 4.5.2.3 Customer onsite address
- 4.5.2.4 Projected due date
- 4.5.2.5 Circuit ID
- 4.5.2.6 Additional Order Detail

VENDOR RESPONSE: Frontier will be able to receive service orders from the State electronically and provide confirmation of receipt and subsequent order detail electronically to the State. This detail will include all agreed upon data elements.

- 4.5.3 The Vendor should provide implementation coordination that includes, at minimum, scheduling the due date, addressing facility issues, capturing service information, and providing that information to the customer. It is highly desirable that the Vendor provide a web portal for placing and tracking orders for services. This portal should not require any programming costs and additional process requirements, other than those which are already established. Please describe your implementation coordination procedures.

VENDOR RESPONSE: Frontier read, understood, and will comply with this request. Frontier and the State will continue as we have with a Service Representative member from the dedicated account team providing at minimum: scheduling the due date, addressing facility issues, capturing service information, and providing that information to the State. In addition to the process currently in place Frontier will work with the State to provide this information through a web portal and there will be no programming costs charged to the State for the portal.

- 4.5.4 The Vendor should specify its standard installation intervals for each type of circuit proposed in the Cost Sheet (Attachment C) and should understand that installation intervals and related guarantees/SLOs will be considered during evaluation. Please provide your standard installation intervals.

VENDOR RESPONSE: Standard interval is 90 days, average interval is 60 days.

- 4.5.5 The State desires that the standard installation charges for the proposed telecommunications services be waived by the provider. If the standard installation charges are not waived they must be clearly identified on the Cost Sheet for each type of service proposed and include all applicable charges for the installation. Please explain your position on this.

VENDOR RESPONSE: Frontier agrees to waive standard installation charges.

- 4.5.6 The Vendor should notify the State of any problems that will prohibit the Vendor from meeting the proposed installation interval, within a maximum of fifteen (15) working days after the order has been placed. The Vendor should identify the problem(s) and provide an estimated time that the installation can be completed. Please describe your process in this instance.

VENDOR RESPONSE: Your Frontier single point of contact (SPOC) will inform the State within a maximum of fifteen (15) working days after an order is placed what the estimated due date will be and identify any problems and an estimated time for completion if outside the standard interval.

- 4.5.7 The demand for bandwidth and flexibility in transport services continues to grow as initiatives in West Virginia and at the national level continue to evolve. To facilitate this kind of growth in bandwidth and provide the flexibility needed to adapt to these changes, many of the proposed services must be built on fiber optic infrastructure. Please provide your position in this instance.

VENDOR RESPONSE: Frontier will provide Ethernet transport services on fiber facilities whenever available. In times where copper Ethernet transport is available and the desired bandwidth rate is minimal, Frontier will provide the State of WV the option of copper based Ethernet transport facility, especially if a cost and/or time savings will be realized by the State of WV.

- 4.5.8 Network Buildout may be required in certain instances where fiber facilities do not exist to provide the requested services. The State prefers that any costs associated with network buildout be minimized and borne by the Vendor. In the event these costs are extremely burdensome to the Vendor, the Vendor will notify the State of the costs for this buildout and the State will evaluate if it in the best interest of the State to solicit a separate contract for such buildout. Please provide your position in this instance.

VENDOR RESPONSE: A major advantage for the State of WV is the direct relationship with Frontier's Commercial Business Division which has always worked very hard to minimize network buildout costs and as a result we have never charged the State special construction fees. We will continue to strive to minimize these costs however in cases where these costs are extremely burdensome Frontier has no objection to the State soliciting a separate contract for such buildout. Frontier will own and maintain the built facilities once brought into service up to the point of demarcation.

4.6 Support Services

- 4.6.1 The Vendor should provide a detailed description of its support center environment. The description should include, at a minimum, staffing numbers, staffing expertise, help desk software, and how trouble tickets are handled.

VENDOR RESPONSE: Frontier's Commercial Customer Support Center is staffed 24/7, 365 and consist of 200 plus associates consisting of Technicians and Administrators. These associates are staffed in the states of WV, CT, and NY and are skilled in all types of products to include TDM, Ethernet, Optical Transmission, MPLS and various switching technologies.

The Commercial Customer Support Center primarily uses a Remedy OS3 ticketing system for its daily operations along with various software for remote testing and isolation of network elements.

When a trouble ticket is entered it is picked up and triaged by a qualified technician for that product set, every attempt will be made to repair the circuit in house by the Support Center. If triage in house fails, a technician will be dispatched to the point of failure and the customer contacted with results and status.

- 4.6.2 When the State customer contacts the support center, the Vendor's technical support staff should not place the caller on hold for more than fifteen (15) minutes. If unable to connect the caller to talk to an actual technical support person that can assist them with their problem(s) within the aforementioned 15 minute period, the technical staff should inform the caller that they'll need to call them back. Call back response should be within one hour. Please describe your process.

VENDOR RESPONSE: Frontier's Customer Support Team has a team of administrators that handle

incoming calls. The team's Average Speed to Answer is 60 seconds. In the event that a technical call is needed Frontier's Administrative Team will 1) Connect the caller immediately to a technician. 2) Take the callers number and refer to a supervisor who will locate a product technician to call them back within 1 hour.

- 4.6.3 If when contacting the customer to report progress or answer support center questions the technical support staff are unable to reach the customer by telephone, the technical support staff should make at least two additional attempts within the next business hour to respond to the support center inquiry/issue. The support center staff may leave a voice message for the caller but such message should indicate the support center staff person's name, time called, and description of how to return the call to obtain further assistance. Please describe your process.

VENDOR RESPONSE: Frontier's Commercial Customer Support Team's goals are to make contact with the customer with initial test results, hourly if dispatch is necessary and active, and upon repair of the circuit to make certain the customer is up and working as required. The Support Team will call the local contact provided on ticket entry and if a message is left the staff will leave the name, contact/return call number and a brief description of the reason they are calling.

- 4.6.4 If investigation and research is required by technical support center staff and the problem cannot be resolved or question answered immediately, then the technical support center staff should call back within two (2) hours to report progress on the problem resolution. Support center staff should continue, on a daily basis or other basis agreed upon between the customer and Vendor, to keep the customer staff informed on progress of the problem resolution. For wide scale, high severity impact outages, the Vendor should provide conference call capabilities for both Vendor and Customer technicians to address and resolve the issue. After action report and summary will be required for all Severity Level incidents. After action report and summary are optional at customer's request for all Severity Level 2 and 3 level incidents. Please describe your process.

VENDOR RESPONSE: The Frontier Commercial Customer Support Team's goal is to contact the customer within 1 hour of ticket entry, regardless of the trouble report. If the trouble is one that needs additional support outside of the Customer Support Team we would engage Tier 1, 2, or 3 depending on the nature of the problem. In this situation a technical bridge would be established with all parties required to isolate and resolve the trouble. In the event that a customer support tech is needed their technical support could also be added to this bridge. If customer technical support is not needed Frontier would continue to update the local contact hourly until the trouble is resolved. Frontier will provide a Reason for Outage (RFO) or Root Cause Analysis (RCA) for any outage as requested by the customer. Typical turn around for an RFO/RCA is 48 hours.

- 4.6.5 Provide details regarding your trouble ticketing system including customer access

to the system, average response times, levels of trouble tickets and how those levels are determined, mean time to repair (MTIR), and any other relative statistics or functions.

VENDOR RESPONSE: Frontier's Commercial Customer Support Center uses Remedy OS3 as it's primary ticketing system. Remedy OS3 interfaces with various inventory, change management, dispatch and Major Service Interruption tools within Frontier so that the technician and administrator are aware of any potential disruptions that may affect the customers trouble ticket. Frontier's goal is to provide a 4 hour MTTR on circuits that are down hard or severely impacted to the point of being non usable.

- 4.6.6 Provide details regarding your escalation procedures or processes for all proposed services, when each escalation level is initiated, and provide the names, contact information, and escalation order for those individuals in the Vendor's escalation chain for support issues within the State of West Virginia. The Vendor should provide how the escalation levels are determined The Vendor must be able to initiate this process on a 24 x 7 basis for all critical or emergency situations or outages.

VENDOR RESPONSE: Frontier's Commercial Customer Support Center has a 24/7 Escalation Line. Documentation of our Escalation Process can be found in Frontier Attachment Tab D11.

Frontier has peer to peer contacts at 4th and 5th Level escalation that can be reached 24/7 if needed. Contacts can be found by clicking in the above document.

- 4.6.7 Provide details regarding your standard network change management procedures. These procedures should show the formal process used to track each network change and ensure that all changes to the network are introduced in a controlled and coordinated manner.

VENDOR RESPONSE: Please see Frontier's Safetime Procedure, in Frontier Attachment Tab D9, for an outline of the timeframe to be expected when potentially service affecting work is to be performed. Also, please refer to Frontier's Network Maintenance Process, in Attachment Tab D10, which outlines the Frontier network maintenance procedures which provide the guidelines for executing planned network changes.

- 4.6.8 Provide details regarding your disaster preparedness and recovery plans for the infrastructure that will support the requested services. Indicate your ability to support the customer in seeking application for priority service restoration of critical services in the event of a disaster (i.e. Telecommunications Service Priority (TSP) System, Government Emergency Telecommunications Service (GETS)).

VENDOR RESPONSE: Frontier Communications in the event of a disaster affecting communications service in the region has a plan independently, or in concert with efforts of other public and private organizations, will provide an efficient and effective response and recovery to a catastrophic event. Although we cannot address each type of possible disaster, our focus is on the information and human and physical resources necessary to respond and recover from any severe disruption to communications and operations. Once the damaged has been assessed the recovery process will begin for service restoration. Public relations would continue to update the public on status of restoral efforts.

Frontier Communications Principal Objectives are as follows:

- Minimize disruptions of service to customers and any external entities relying on us.
- Provide a road map of predetermined actions that will reduce decision-making during recovery operations, while ensuring our teams are trained on the plan to optimize implementation.
- Ensure timely continuation of critical systems and enable the resumption of normal business operations and services at the earliest possible time and in the most cost-effective manner.
- Limit the impact of the disruption on Frontier’s mission and reputation.
- Assist customers with assessing communication readiness, as well as supporting our mutual business continuity goals.
 - 1.) Evaluation
 - a. Detection
 - b. Reaction
 - c. Assessment
 - 2.) Activation
 - a. Authorization
 - b. Notification
 - c. Mobilization
 - 3.) Recovery Operations
 - a. Transitional Resumption (remotely)
 - 4.) Return to Normal
 - a. Reconstruction
 - b. Restoration

Our disaster recovery plan takes steps in phases and stages:

All of the Frontier Central Offices are equipment with the GETS (Government Emergency Telecommunications Services) and are monitored and tested on a monthly basis. Monthly conference calls are held with the support team appointed by Homeland Security to discuss various the previous months reporting, including issues, concerns, or potential Central Office upgrades. Frontier elects to do an annual test and allows Homeland Security to choose several offices for a massive influx of calls to ensure the GETS services are working properly and can handle a potential disaster.

Frontier does offer Telecommunications Services Priority (TSP) to our customers for a small minimal monthly cost. The TSP allows for priority restoration and provisioning of telecommunication services. Frontier offers three types of TSP Emergency Provisioning, Essential Provisioning, and/or Priority Restoration. If chosen, Frontier codes the account accordingly to indicate TSP to allow for a specific internal process according to the priority level that is chosen by the customer.

Frontier does offer Telecommunications Services Priority (TSP) to our customers for a small minimal monthly cost; according to tariff. The TSP allows for priority restoration and provisioning of telecommunication services. Frontier offers three types of TSP Emergency Provisioning, Essential Provisioning, and/or Priority

Restoration. If chosen, Frontier codes the account accordingly to indicate TSP to allow for a specific internal process according to the priority level that is chosen by the customer.

- 4.6.9 Provide a contract phase-out and transition plan that documents the transition methodology and activities necessary and to be used to exercise its best efforts and cooperation to effect an orderly and efficient transition to a successor.

VENDOR RESPONSE: In order to provide a contract phase-out and transition plan that accurately documents the transition methodology and activities necessary for a project of this magnitude, Frontier will require a customized action plan and input from all the appropriate stakeholders, including, but not limited to the State's priorities, future needs, and timetables. Obviously this cannot be a "Flash Cut", but rather a strategically coordinated and detailed action plan, with dates synchronized to ensure construction of State of West Virginia facilities has taken place and service is uninterrupted. Any other carrier installing new service for the State of WV for the purpose of replacing an existing Frontier circuit would be responsible for installing new service via their network facilities or requesting new wholesale transport from Frontier.

4.7 Security Services

- 4.7.1 Provide documentation of measures in place to prevent a security breach from happening as well as the documented processes and procedures in place to guide an effective response to a security breach that occurs via its access to the customer network infrastructure.

VENDOR RESPONSE: Frontier COs all have perimeter doors locked at all times. Access is by card key or manual key only. Some of our more critical sites, have cameras and/or security guards. Most doors are alarmed and monitored at the Security Operations Center in Rochester, NY which is manned 24/365. Any Security breaches are reported through the Security Incident Report Form and goes to a Security Professional. Security issues can also be called in to the Security Operations Center, the telephone number is imprinted on all ID badge lanyards. Further information regarding our corporate security policies are proprietary and can be presented to the State of WV upon advanced request in the oral presentation under a Nondisclosure Agreement (NDA).

- 4.7.2 Provide details regarding any security related services available to customers via the proposed solution infrastructure. These details could include pro-active measures your company employs.

VENDOR RESPONSE: Frontier has a documented response to this section however due to the sensitive nature of such information it is confidential and cannot be provide in a public response. This document can be presented to the State of WV upon advanced request in the oral presentation under a Nondisclosure Agreement (NDA).

- 4.7.3 Detail your process to ensure your employees have the appropriate clearance and training to have the required access, and include in the abovementioned documentation. This should include background checks and established screening criteria.

VENDOR RESPONSE: All Frontier employment offers and subsequent employment are contingent upon receipt of acceptable results of a background and reference checks including, criminal record check, drug screening, and verification of education, employment and professional references. Certain positions will also require a motor vehicle and/or credit check. All drug screens must be completed within 48 hours from when you received the chain of custody form. The drug test will be registered by Frontier.

4.8 Service Level Objectives (SLO) Services

Under no circumstances will the vendor provide pricing information as an example in response to these desirable requirements.

- 4.8.1 The Vendor should provide monthly SLO reports detailing all pertinent SLO statistics including SLOs missed and the related remedies applied. The reports should be provided electronically via a portal or email. The Vendor should provide copies of sample SLO reports for review and evaluation by the State.

VENDOR RESPONSE: Currently, Frontier does not have a customer facing report structure that provides SLO measurements or statistics. As these capabilities become available the State of WV is at the top of the list to receive the benefits.

- 4.8.2 The Vendor should detail the granularity (e.g. each circuit or all circuits) and the averaging period (e.g. each instance, daily, weekly, monthly) that will be used to calculate the SLO performance metrics for the Service Level Objectives submitted by the Vendor in response to 4.8.5 below.

VENDOR RESPONSE: Currently, Frontier does not have a customer facing report structure that provides SLO measurements or statistics. As these capabilities become available the State of WV is at the top of the list to receive the benefits.

- 4.8.3 The Vendor should clearly define how the remedy credits or rebates associated with each SLO are applied should the objectives be missed. The preference is that the Vendor(s) automatically apply the credits when objectives are not met and inform the billed entity electronically that credits have been applied. The Vendor should discuss how E-rate customers' credits will be applied when the discounting of bills is involved.

VENDOR RESPONSE: Currently, Frontier does not have a customer facing report structure that provides SLO measurements or statistics. As these capabilities become available the State of WV is at the top of the list to receive the benefits.

- 4.8.4 The Vendor should understand that should one or more SLOs be missed two out of three reporting periods, and the Vendor does not provide adequate resolution in a timely manner, that this may be grounds for terminating the contract for non-performance.

VENDOR RESPONSE: Currently, Frontier does not have a customer facing report structure that provides SLO measurements or statistics. As these capabilities become available the State of WV is at the top of the list to receive the benefits.

- 4.8.5 Post award, the Vendor should provide, at a minimum, the following service level objectives (SLO) for every service they are proposing in response to this RFP.

VENDOR RESPONSE: Frontier read, understood and will comply.

4.8.5.1 Network Availability (NA) - the percentage of total hours or partial hours during a calendar month that the services are available to the customer. Services shall be deemed to be unavailable when an outage is officially recorded with the Vendor because the customer does not have the ability to transmit or receive packets by means of the Vendor's services. The total outage should be deemed to be the length of time during which the services are unavailable to the customer beginning with the official notification and ending upon restoration of the service and notification to the customer. Outage minutes will not apply to scheduled maintenance activities, problems caused by the customer, or for reasons of Force Majeure or other causes beyond the reasonable control of the provider. When service is interrupted for four hours or more, a credit should be calculated and should be issued to the State entity experiencing the outage as follows: A month is considered to have 720 hours (24 hours * 30 days). Credit should be calculated based on the monthly rate for the service multiplied by the ratio of the number of hours of interruption to 720 hours.

VENDOR RESPONSE: Frontier is more than willing to invite members of the State of WV information Technology department to a non-disclosure presentation on the monitoring system currently in the final process of selection. Additionally, Frontier would welcome input from the State as to the type and level of reporting that would be most beneficial. Please refer to Tab D1- Frontier Ethernet Data Service – Service Level Agreement.

4.8.5.2 Mean Time to Repair (MTIR) - the monthly average time over any calendar month it takes for the provider to resolve any outage problem. MTIR is calculated by dividing the total outage minutes by the total outage occurrences. The Minimum monthly target MTIR should be four (4) hours. This objective should be measured and reported monthly. If the monthly MTIR is greater than four hours over the calendar month, a credit equal to 50% of the monthly charge should be given for those circuits that were out of service for more than four hours and were reported by the State via a trouble ticket to the Vendor.

VENDOR RESPONSE: Frontier read, understood and will comply.

4.8.5.3 Installation Due Date- the actual date that the services are activated and accepted as functional by the State. Exceptions to this SLO include reasons of Force Majeure or other causes beyond the reasonable control of the provider and customer applications, equipment or facilities problems. If the provider does not meet the agreed upon installation due date, the customer should receive a credit equal to 100% of the proposed installation charges for those services.

VENDOR RESPONSE: Frontier read, understood and will comply.

4.8.5.4 Average Latency- the monthly average round-trip latency of designated portions of the provider's network. The provider should provide detail as to how they measure latency and provide diagrams that indicate where in its network they measure latency.

The objective for Average Latency is to not be greater than 27 milliseconds. For any month in which the objective is not met, the customer should receive a credit equal to 10% of the monthly recurring charges for the services. Exceptions to this SLO include performance problems caused by the customer, for reasons of Force Majeure, circumstances beyond the control of the provider, or scheduled service maintenance.

VENDOR RESPONSE: Please refer to Tab D1 - Frontier Ethernet Data Service – Service Level Agreement.

4.8.5.5 Packet Loss- the monthly average round-trip packet loss of designated portions of the provider's network. The provider should provide detail as to how they measure packet loss and provide diagrams that indicate where in its network they measure packet loss. The objective for Average Packet Loss should not be greater than 0.5%. For any month in which the objective is not *met*, the customer should receive a credit equal to 1/30th of the monthly recurring charges for the provided services. Exceptions to this SLO include performance problems caused by the customer, for reasons of Force Majeure, circumstances beyond the control of the provider, or scheduled service maintenance.

VENDOR RESPONSE: Please refer to Tab D1 - Frontier Ethernet Data Service – Service Level Agreement.

Tab B

Mandatory Specification Checklist

ATTACHMENT B: MANDATORY SPECIFICATION CHECKLIST

5.1 E-Rate Requirements:

5.1.1 General E-Rate Requirements

5.1.1.1 The Vendor must comply with the requirements of the Universal Service Fund (USF) program. E-Rate eligible entities utilizing the contract (\$) resulting from this solicitation reserve the right to proceed with orders prior to receiving any funding commitments from the USF. They also reserve the right to proceed or not to proceed regardless of the outcome of USF funding commitments.

5.1.1.2 All services and products requested within this solicitation will be made available to schools, RESAs, consortia, and libraries statewide and therefore must meet all E-Rate guidelines for eligible services and products, service providers, and contracts.

5.1.1.3 The Vendor must prove eligibility for E-Rate by providing its Service Provider Identification Number (SPIN) (FCC Form 498). Vendor must provide the SPIN Number here 143001432.

5.1.1.4 The Vendor must meet all required participation guidelines.

5.1.1.5 The Vendor must provide eligible entities the "Lowest Corresponding Price" (LCP) for services (refer to FCC 47 CFR § 54.511(f) and 47 CFR § 54.511(b)).

5.1.1.5.1. Service providers shall offer schools and libraries services at the lowest corresponding prices throughout its geographic service areas that include all non-residential customer offerings that are similarly situated to a school or library. The "geographic service area" shall be the area in which a service provider Vendor is seeking to serve customers with any of its E-Rate services.

5.1.1.5.2. The FCC will only permit service providers to offer schools and libraries prices above prices charged to other similarly situated customers when those Vendors can show that they face demonstrably and significantly higher costs to serve the school or library seeking service. Factors that could affect the cost of service – volume, mileage from facility, and length of contract.

5.1.1.5.3. Vendor must operate within Rule 47 CFR § 54.511(b), which states that the provider of eligible services shall not charge

schools, school districts, libraries, library consortia, or consortia including any of these entities a price above the Lowest Corresponding Price (LCP) for supported services, unless the FCC, with respect to interstate services or the state commission with respect to intrastate services, finds that the Lowest Corresponding Price is not compensatory.

5.1.1.5.4. The Vendor, regardless of the size of the company, must provide LCP for a school or library. A service provider's obligation to provide the LCP shall not be tied to a response to an FCC Form 470 or this solicitation and should carry over throughout the billing life of the contract, as well.

5.1.2 Vendor Requirements and Responsibilities for Participation

5.1.2.1 The Vendor must agree to abide by all E-Rate rules, regulations, and limitations as described by FCC, USAC, and SLD. For a complete program overview, the Vendor can visit the following link:
[http://www .universalservice.org/SL/default.asp](http://www.universalservice.org/SL/default.asp) x.

5.1.2.2 Successful Vendor of telecommunication services must meet certain qualifications to be eligible to provide the services and receive USAC reimbursement.

5.1.2.2.1 Must contribute to the Universal Service Fund

5.1.2.2.2 Must provide telecommunications services on a common carrier basis

5.1.2.2.3 Must file an FCC Form 498, Service Provider Information Form and obtain a Service Provider Identification Number (SPIN), providing that number as part of this bid response, and an FCC Registration number tied to their IEN tax ID number

5.1.2.2.4 Must file an FCC Form 473, Service Provider Annual Certification Form, on an annual basis

5.1.2.2.5 Must file an FCC Form 499-A, Annual Telecommunications Reporting Worksheet, on an annual basis.

5.1.2.2.6 Must complete the FCC Forms 949-AjQ (Annual and Quarterly Telecommunications Reporting Worksheets) and receive a Filer ID. The FCC Forms 499-A/Q Filer ID will be tied to your SPIN. Certain service providers are not required to file or complete all items on an FCC Forms 499-A/Q, either because the company has a *de minimis* status or meets one of the exceptions noted in the "Filing Requirements and General Instructions" section of the instructions on the Contributors Forms page.

You can refer to the Service Providers section or the Contributors section of the USAC website for more detailed information on these forms and instructions.

5.1.2.3 The Vendor must work with the applicant to ensure that all services for which E-Rate discounts are being requested under the contracts

resulting from this solicitation, are indeed eligible services as described in the Eligible Services List (ESL) which can be found at the link provided below:

http://www.universalservice.org/sl/applicants/before_you_begin/eligible-services-list.aspx

- 5.1.2.4 Prior to the contract award, the Vendor must specify the name, phone number, fax number, and e-mail address of the person responsible for E-Rate within the Vendor's company. The Vendor must provide updated information should that contact information change, and must do so within seven (7) days of the change.
 - 5.1.2.5 The Red Light Rule states that the FCC shall withhold action on any request for benefits made by any applicant or service provider that is delinquent in its non-tax debts owed to the FCC. USAC shall dismiss any outstanding requests for funding if a service provider (or applicant) has not paid the outstanding debt, or made otherwise satisfactory arrangements, within 30 days of being notified.
 - 5.1.2.6 The result of a Red Light could be that all payments are stopped on all Funding Request Numbers (FRN) for that service provider (or applicant) and no invoices will be paid.
 - 5.1.2.7 The Vendor must agree to notify the State of West Virginia, WVDE and WVLC within 24 hours in the event the Vendor/Service Provider has been subjected to the "Red Light Rule".
 - 5.1.2.8 In the event of an E-Rate audit or Program Integrity Assurance (PIA) review, the Vendor must respond within 3 business days or less to any and all questions associated with its contracts, proposals, or processes.
 - 5.1.2.9 The Vendor must maintain all bids, quotes, records, correspondence, receipts, vouchers, delivery information, and other data relating to the Vendor's services to the eligible entities in the State of West Virginia. All such records must be retained for ten (10) years after last date of service or whatever retention period is required by the rules in effect at the time that services are delivered and shall be subject to inspection and audit by the customer.
 - 5.1.2.10 The Vendor must have an internal audit process in place to ensure compliance with E-Rate program rules and regulations.
- 5.1.3 If requested by an applicant, service providers must use the Service Provider Invoice (SPI) method for invoicing the applicant. It is understood that should a provider extend this service to an applicant, that the applicant will be responsible for the discounted portion of those invoices should E-Rate funding be denied; however, applicants will not be responsible for any discounted portion that is the direct result of negligence or error in the SPI invoicing process on the part of the service provider.
- 5.1.4 The Vendor must commit to work with the E-rate eligible entities using the resulting contract regarding E-rate discounts and billing.

Vendor Response: Frontier read, understands and agrees with section 5.1 E-rate Requirements.

5.2 Dedicated State Account Team

- 5.2.1 The Vendor must provide a dedicated account team to form a partnership with the State, Education and Library customers. This dedicated team will support all West Virginia State government levels (State, County and Municipalities), Education and Library customers only.

VENDOR RESPONSE: Frontier has a dedicated account team in place today serving the State of West Virginia which are identified in our included resumes (see tab 7). In addition to the dedicated State government team Frontier has three additional Account Executives dedicated to K-12 and Libraries and two additional Account Executives dedicated to Higher Education, Counties and Municipalities.

5.3 Billing Specifications

- 5.3.1 Prior to award, the Vendor must identify a single point of contact for billing issues, disputes, or general questions and have an established process for resolving billing errors. If incorrect rates or quantities are discovered, they must be corrected prior to the next billing cycle, and must be credited back to the effective billing start date for that service. The customer shall reserve the right to withhold payment until corrections have been made and a corrected invoice is received. The Vendor cannot back-bill for a service beyond three (3) months.
- 5.3.2 The Vendor's bill must include, at minimum, the following data elements; billing month, billed entity name, customer name (if different from billed entity), service location, circuit identification, service period, cost for individual billing components, itemized cost for any one time or non-recurring charges, and total cost. The cost identified in the bill must be the correct contract rates for the specified services. A uniform description of the circuit being billed that matches the description of circuits provided on the contract must also be included. The Vendor must provide a copy of its typical bill as part of this response.
- 5.3.3 The Vendor's bill must show E-rate discounts, per Funding Request Number (FRN), on the bill for E-rate eligible entities.
- 5.3.4 The Vendor must provide the billing information, at a minimum, provided in Attachment F (Billing Example). WVOT recommends that you use this format/layout when submitting monthly billing. The complete bill must be submitted in both .csv and .pdf formats.
- 5.3.5 The monthly bill provided to the State shall be an electronic version for the purposes of rebilling by the State. The following are the minimum requirements for this data.
- 5.3.5.1 The customer must be able to extract the data to specific file format (MS Excel and/or csv).

5.3.5.2 The Vendor's electronic bill must be received by the State within ten (10) business days of the end of the previous billing cycle. It should be understood that timely receipt of the Vendor's bill is directly correlated to timely payment of the Vendor's bill.

5.3.5.3 The Vendor must state any system requirements to operate the Vendor's billing software, if applicable.

5.3.6 The Vendor's billing cycle must be on a monthly billing cycle and must be consistent across all services. Services installed or disconnected for a partial month must be prorated based on the date the service is turned up or down relative to that monthly billing cycle. When new services are installed and old services are disconnected, the prorated billing must start and end respectively on the date the service is changed. **The State will not pay for both the old and the new service; therefore, the cost of the old service must end the date when the new service is activated and accepted as functional by the State.**

5.3.7 If the Vendor has multiple contracts with the State of West Virginia, the Vendor must provide separate billing for each contract.

VENDOR RESPONSE: Frontier read, understood and will comply with section 5.3 E-Rate Billing Specifications.

5.4 Telecommunication Services

5.4.1 The Vendor must provide transport services that terminate into customer owned equipment- this may include an extension from the entrance of the building to another area in the building, to be specified by the State.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.2 The Vendor must support services that provide a transport solution for the customer where the Vendor is responsible for any network issues associated with the telecommunications services from the termination at the customer site to the Vendor core equipment in its network. The Vendor must be able to test and trouble shoot the circuit continuity and integrity end-to-end.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.3 Point-to-Point Private Line Services

5.4.3.1 For the purposes of this RFP, P2P Private Line Services is defined as a dedicated end-to-end circuit from one State location to another State location, inclusive of any associated mileage component necessary for the entire connection.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.3.2 The Vendor must propose point-to-point (P2P) private line digital data circuits for DS0, DS1 and DS3 access.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.3.3 The Vendor must provide proper termination of demarcation blocks and modular jacks.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.3.4 The Vendor must clearly label demarcation points with the site specific circuit identification information, including demarcation extensions to the location of customer equipment where applicable.

VENDOR RESPONSE: As a standard procedure for new circuit installations Frontier will clearly label the demarcation points with specific circuit identification information.

5.4.3.5. The Vendor must acknowledge termination location will be specified by the customer.

VENDOR RESPONSE: Frontier read, understood and will comply with this request. Frontier will extend to your termination location with a customer provided path with the specifications of the service provided medium.

5.4.3.6. The Vendor must provide DS3 local access services using fiber-optic transmission media.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.3.7 The Vendor must provide multipoint bridging capabilities for aggregating P2P digital data circuits.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.4 Ethernet Dedicated and Multi-point Switched Services

5.4.4.1 The Vendor must propose high-speed packet transport that is based on Ethernet transmission parameters that meet current IEEE standards. Vendor must propose options for 1Mbps, 3Mbps, 5Mbps, 10Mbps, 20Mbps, 25Mbps, 50Mbps, 75Mbps, 100Mbps, 150Mbps, 200Mbps, 250Mbps, 300Mbps, 350Mbps, 400Mbps, 450Mbps, 500Mbps, and 1Gbps to 10Gbps services in 1Gbps increments. When forthcoming County Contracts for Ethernet services are awarded, Ethernet services will be transitioned to those contracts, with the exception of E-rate eligible entities whose service will remain on this contract

until the expiration of the current E-Rate program funding year. Change Orders will be executed to the awarded contract disallowing the ordering of Ethernet services once a County Contract is in place for that county, with the exception of the above E-rate allowance for the remainder of the funding year.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.4.2 The Vendor must provide multipoint bridging capabilities for aggregating Ethernet digital data circuits.

VENDOR RESPONSE: Frontier read, understood and will comply with this request; please see Frontier Appendix D5 for Ethernet Virtual Circuit (EVC) specifications.

5.4.4.3 The Vendor must clearly label demarcation points with the site specific circuit identification information, including demarcation extensions to the location of customer equipment where applicable.

VENDOR RESPONSE: As a standard procedure for new circuit installations Frontier will clearly label the demarcation points with specific circuit identification information.

5.4.4.4 The Vendor must provide circuits capable of supporting Q-in-Q Tunneling, VLAN Translation, and both tagged and untagged VLANs.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.5 Frame Relay and Asynchronous Transfer Mode Services

5.4.5.1. The Vendor must provide ATM and Frame Relay services including DSO, Fractional DS1, DS1, Multilink Bonded T1s (2- 6 T1s), Fractional DS3, DS3, OC3, OC12, and OC48 access, as well as support for Frame Relay to ATM Interworking (FRF.8).

VENDOR RESPONSE: Frontier will continue to support and maintain the ATM and Frame Relay network we currently provide to the State of WV. Frontier's long term goal is in line with the State's and we look forward to assisting in the migration of customers with these circuits to Ethernet transport.

5.4.5.2 The Vendor must provide ATM services that include UBR (Unspecified Bit Rate), CBR (Constant Bit Rate), VBR-RT (Variable Bit Rate -Real Time), and VBR-NRT (Variable Bit Rate-Non-Real Time) capabilities.

VENDOR RESPONSE: Frontier will continue to support your existing Frame Relay and ATM services which meet the requested capabilities.

5.4.5.3 The Vendor must provide the Data Link Control Identifier (DLCI) numbers for all Permanent Virtual Circuits (PVC) for Frame circuits, and VPI/VCI information for all ATM circuits.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.4.5.4 The Vendor must clearly label demarcation points with the site specific circuit identification information, including demarcation extensions to the location of customer equipment where applicable.

VENDOR RESPONSE: As a standard procedure for new circuit installations Frontier will clearly label the demarcation points with specific circuit identification information.

5.4.6 MPLS

5.4.6.1 The Vendor must provide MPLS based services with options for connectivity that include Ethernet, P2P, ATM, Frame Relay, DSL, Wireless Access, and VPN Access.

VENDOR RESPONSE: Frontier provides many options for WAN connectivity that include Layer 2 Switched Ethernet Access, Layer 3 IPVPN, and Layer 1 TDM point-to-point connections. Please see Frontier Appendix D5 for Product specifications.

5.4.6.2 The Vendor must provide MPLS based services with options for connectivity that include Ethernet, P2P, ATM, Frame Relay, DSL, Wireless Access, and VPN Access.

VENDOR RESPONSE: Frontier provides many options for WAN connectivity that include Layer 2 Switched Ethernet Access, Layer 3 IPVPN, and Layer 1 TDM point-to-point connections. Please see Frontier Appendix D5 for Product specifications.

5.4.6.3 The Vendor must propose speed options from 1.5 Mbps to 10 Gbps.

VENDOR RESPONSE: Frontier read, understood and will comply with this request; please see pricing in Tab C - Cost Sheet.

5.4.6.4 The Vendor's proposed MPLS network must support address and routing separation by Virtual Route Forwarding (VRF). The network must provide the ability for a single state entity to participate in multiple VRF arrangements.

VENDOR RESPONSE: Frontier read and understood this request.

5.4.6.5 The Vendor must support Quality of Service/Class of Service (QoS/CoS) levels within its proposed network.

VENDOR RESPONSE: Frontier read, understood and can support QoS/CoS in compliance with standards.

5.4.6.6 The Vendor must clearly label demarcation points with the site specific circuit identification information, including demarcation extensions to the location of customer equipment where applicable.

VENDOR RESPONSE: As a standard procedure for new circuit installations Frontier will clearly label the demarcation points with specific circuit identification information.

5.4.7 The proposed telecommunications services must support the transport of the existing applications and related data currently being utilized by the State of West Virginia. The Vendor's proposed solution(s) must allow the existing applications to function normally and perform properly. Existing applications include:

5.4.7.1	H.323 video
5.4.7.2	VOIP
5.4.7.3	Internet access
5.4.7.4	Internet 2
5.4.7.5	High Volume Database transmissions
5.4.7.6	Desktop Virtualization
5.4.7.7	Server Synchronization
5.4.7.8	Network Monitoring
5.4.7.9	Security Monitoring
5.4.7.10	Content Filtering
5.4.7.11	Virtual Private Networking

VENDOR RESPONSE: Customer data is encapsulated and transmitted across the Frontier network in accordance with IEEE or like Telecommunications standard for the implied transport method. Please see Frontier Service Level Agreement in Attachment Tab E1 to ensure the delivery metrics meet the state's application requirement.

- 5.4.8 The Vendor must propose telecommunications services that are capable of supporting 1) Border Gateway Protocol (BGP) and sharing routes between autonomous systems (AS) on provider networks as well as other public and private networks and 2) Enhanced Interior Gateway Routing Protocol (EIGRP) in support of a Cisco based network.

VENDOR RESPONSE: In the case of Layer 2 EvPL or E-LAN services, customers may route traffic with whatever Layer 3 routing protocol they choose. The only limitation to the desired routing outcome would be any limitation on the Layer 2 network VLAN assignment. For example, the state would only be able to route traffic from one location to another if those locations were within the same carrier VLAN (E-LAN), or if an EVC was built to send traffic from one VLAN to another (EvPL). In the case of Layer 3 Ethernet circuits (IPVPN), Frontier only supports the use of BGP Routing Protocol or static routing.

- 5.4.9 The Vendor's proposed telecommunications services must be compatible with customer public and private 1Pv4 or 1Pv6 addressing. The network must support the participation of customers that use private network addresses. The Vendor must be able to supply a public address space pool for network address translation (NAT) of a customer private network to public address space when requested.

VENDOR RESPONSE: Frontier provides IPv4 and/or IPv6 public IP address space for circuits destined to the public Internet only. This RFP is limited in scope to private WAN circuits, and therefore are not eligible for public IP address assignment. Routing of public or private customer IP addressing is supported across Frontier WAN circuits proposed in this RFP.

5.5 Installation Requirements:

- 5.5.1 Termination points will be specified by the State. The Vendor must be capable of extending the circuit to the desired location behind the minimum point of entry. The additional cost for this service must be provided in the Pricing Section (Attachment C) along with the identification of whether the Vendor or a subcontractor will be providing this extension.

VENDOR RESPONSE: Frontier read, understood and will comply with this request. Frontier will extend from the Minimum Point of Presence (MPOP) location with a customer provided path within the specifications of the transmission parameters that meet current IEEE standards.

- 5.5.2 The Vendor's installation services must include all required products and services needed to install a functional service. This includes planning/engineering, termination, cross-connects, splices, terminating hardware setup, programming, mounting, and related documentation.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

- 5.5.3 The Vendor must comply with all applicable codes, licenses, certifications, and standards in the State of West Virginia as it relates to the proposed installation

services.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

- 5.5.4 The Vendor must perform adequate testing after installation services are performed to ensure services are operating properly when turned up for the customer. The Vendor may be required to provide documentation of test results if so requested.

VENDOR RESPONSE: For the installation of new Ethernet circuits equipped with a RAD Network Interface Device, Frontier will provide the following:

- Y.1564 Test Certifications will be conducted on all EvPL circuits. As each circuit is provisioned and passes testing, SLA performance measurement is recorded. This record is termed the "Birth Certificate." "Birth Certificate" records will be made available to customers. EvPL circuits will not be put into service until a successful Y.1564 Test Certification is completed. These tests will be based on the standard SLA performance parameters for the QoS level of the identified for the EVC or the custom SLA approved for a specific customer.
- Y.1564 (SLA- Birth Certificate) works by using the MEPs from the Y.1731 configuration to generate up to line rate traffic to verify the configuration and performance of the EVC. The configuration checks to verify that Provisioning of the EVC is configured correctly by testing bandwidth and Class of service settings and verifying the SLAs meet the configured thresholds. Performance test will run a 1 hour Y.1564 for Birth Certificate testing.

- 5.5.5 The Vendor must define the process for expediting standard installation services where installation is required in a shorter timeframe than the standard intervals provided in response to this RFP. The Vendor must clearly identify any cost associated with expediting standard installation services on the Cost Sheet (Attachment C).

VENDOR RESPONSE: Once Frontier receives expedite request from SOWV, we will do what we can to accommodate. If we are able to complete install within thirty (30) days of the expedite request then charges will apply. Please see Tab C "Cost Sheet".

5.6 Support Requirements:

- 5.6.1 The Vendor must provide a telephone support center(s) that is available 24 hours a day and 7 days a week and accessible via a toll free number. The support center must 1) provide advanced technical expertise, 2) be staffed with resources that are proficient in spoken and written English, and 3) maintain and take responsibility for trouble tickets reported by the State of West Virginia customers until those troubles are resolved.

VENDOR RESPONSE: Frontier's Commercial Customer Support Center is staffed 24/7, 365 and consist of 200 plus associates consisting of Technicians and Administrators. These associates are staffed in the states of WV, CT, and NY and are skilled in all types of products to include TDM, Ethernet, Optical Transmission, MPLS and various switching technologies.

The Commercial Customer Support Center primarily uses a Remedy OS3 ticketing system for its daily operations along with various software for remote testing and isolation of network elements.

When a trouble ticket is entered it is picked up and triaged by a qualified technician for that product set, every attempt will be made to repair the circuit in house by the Support Center. If triage in house fails, a technician will be dispatched to the point of failure and the customer contacted with results and status. The toll free number for circuit trouble reporting is 888-637-9620.

- 5.6.2 The Vendor must provide telephone response to customer problems in one (1) hour or less and provide onsite support (when required) in four (4) hours or less.

VENDOR RESPONSE: Frontier's Customer Support Team has a team of administrators that handle incoming calls. The team's Average Speed to Answer is 60 seconds. In the event that a technical call is needed Frontier's Administrative Team will 1) Connect the caller immediately to a technician. 2) Take the callers number and refer to a supervisor who will locate a product technician to call them back within 1 hour.

- 5.6.3 The severity of the issue/support problem shall determine the average problem resolution response time under the contract as follows:

- 5.6.3.1 Severity Level shall be defined as an urgent situation, where the customer's services are out of service and the customer is unable to use/access the network. The Vendor shall resolve Severity Level problems as quickly as possible, which on average shall not exceed two (2) business hours. If repair inside the 2 hour window is not feasible, then regular 2-hour updates are required.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

- 5.6.3.2 Severity Level 2 shall be defined as significant outages and/or repeated failures resulting in limited effective use by the customer. The service may operate but is severely restricted (i.e. slow response, intermittent but repeated inaccessibility, etc.). The Vendor shall resolve Severity Level 2 problems as quickly as possible, which on average shall not exceed four (4) business hours. If repair inside the 4-hour window is not feasible, then regular 4-hour updates are required.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

- 5.6.3.3 Severity Level 3 shall be defined as a minor problem that exists with the service but the majority of the functions are still usable and some circumvention may be required to provide service. The Vendor shall resolve Severity Level 3 problems as quickly as possible, which on average shall not exceed ten (10) business hours. If repair inside the 10-hour window is not feasible, then updates are required at the start of the next business day and every day thereafter until repairs are complete.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

- 5.6.4 The Vendor must contact the State, Education and Library engineering points of contact by phone within 30 minutes of a network outage that affects multiple circuits on the State's network. This verbal notification must be followed with a written report that

provides an explanation of the problem, the cause of the problem, the solution to the problem, the estimated time for recovery, and the steps taken or to be taken to attempt to prevent a reoccurrence.

VENDOR RESPONSE: Frontier understood and will comply with this request. The Frontier Service Manager will contact the State by phone within 30 minutes of knowledge of a network outage that affects multiple circuits on the State's network. This verbal notification will be followed up with a written report based on available information that provides an explanation of the problem, the cause of the problem, the solution to the problem, the estimated time for recovery, and the steps taken or to be taken to attempt to prevent a reoccurrence.

- 5.6.5 The Vendor must provide both verbal and written notification sixty (60) days in advance of any planned upgrades, modifications, etc. that may affect the State customers to all State, Education and Library engineering points of contact.

VENDOR RESPONSE:

- At this time, it is a manual process to do notifications; it is done via email provided we have customer information. The Commercial Customer Support Center notifies specific customers and the local engagement model (account teams, GM, tech supervisors etc.) notifies other customers in their reporting area. We recently worked with IT to capture M6 data into Matrix4 to assist with manual research for impact.
- When we have events such as upgrades and modifications that are planned far enough in advance we will give the State sixty (60) days both verbal and written notice.
- There is an ISR in the requirements stage to assist with customer notification

- 5.6.6 The Vendor will be required to participate in regular customer status meetings with the State, Education and Library engineering contacts during the implementation and migration phases of the resulting contracts as well as ongoing contract management meetings to review new service issues, plan and coordinate network upgrades, and report on progress related to active network issues.
VENDOR RESPONSE: Frontier read, understood and will comply with this request.
- 5.6.7 The Vendor shall coordinate with and assist the Customer and its follow-on Vendor(s) in establishing the most cost-effective method for transitioning from the currently provided services to replacement services without degrading existing service.
VENDOR RESPONSE: Frontier read, understood and will comply with this request.
- 5.7 Security Requirements
- 5.7.1 The Vendor shall be responsible for the security of the network infrastructure that provides transmission services to the customer. The Vendor shall ensure the infrastructure providing transmission services to the customer has the capacity, redundancy, and secure monitoring and control capabilities to effectively protect against any action that causes the prevention of authorized access to system assets or services or the delay of time-critical operations.
VENDOR RESPONSE: Frontier provides the physical and network security measures to ensure that the network assets within its possession are secure from unauthorized access. Frontier is not responsible for ensuring the physical security of any network asset placed on a customer premise. Frontier cannot ensure network security for customer owned assets, as they may become compromised from a source outside of Frontier's control.
- 5.7.2 The Vendor shall be responsible for resolving all security vulnerabilities that may affect the transmission services provided to the customer.
VENDOR RESPONSE: Frontier shall be responsible for resolving any security vulnerabilities that may affect transmission services associated with network elements within our control.
- 5.7.3 The Vendor's policies, services, processes, or employees cannot create conflicts with the customer's standard security policy requirements. In the event of a standard security policy conflict, the customer's policy will be upheld.
VENDOR RESPONSE: Frontier will agree to this term upon receipt and pending review of customer's standard security policy.
- 5.7.4 The Vendor must have and provide documentation of measures in place to prevent a security breach from happening as well as the documented processes and procedures in place to guide an effective response to a security breach that occurs via its access to the customer network infrastructure.
VENDOR RESPONSE: Frontier utilizes three methods of ensuring the National Data Backbone is closely monitored for any security vulnerabilities that may occur. These methods ensure the appropriate steps can be invoked in a timely manner, to ensure customer impact is minimized. Frontier utilizes Arbor Networks' Peak Flow Denial-Of-Service (DoS) platform to monitor all National Data Backbone routers. If the platform detects an attempt to jeopardize our customers or our network, it will automatically alert

our 24x7 NOC and Tier-3 engineering group. The NOC and Tier-3 engineering support will evaluate the alert and take the appropriate action to resolve.

1) Frontier engineering has implemented strict routing policies and route filters on the National Data Backbone to ensure unauthorized access is mitigated. In the event access is breached, SNMP traps will automatically alert our 24x7 NOC and Tier-3 engineering group. The NOC and Tier-3 engineering support will evaluate the alert and take the appropriate action to resolve.

2) The Frontier engineering team possesses advanced Juniper certification, which allows direct access to Juniper's NOC team. This provides Frontier the ability to know about any upcoming security vulnerabilities that could impact our customers and/or network. Based on this information, the engineering team can evaluate the risk and make appropriate changes, prior to public knowledge.

5.7.5 The Vendor shall support customer evaluation of security incidents and also compliance verification evaluations, as deemed necessary by the customer.

VENDOR RESPONSE: Frontier will respond to customer's network security reports as deemed appropriate by its Engineering, Operations, and Corporate Governance.

5.7.6 The Vendor must have an established policy governing personnel security to include the validation of employee trustworthiness.

VENDOR RESPONSE: This offer and subsequent employment is contingent upon Frontier's receipt of acceptable results of a background check and reference checks including, criminal record check, drug screening, and verification of education, employment and professional references. Certain positions will also require a motor vehicle or credit check. All drug screens must be completed within 48 hours from when you receive the chain of custody form. The drug test will be registered by Frontier.

5.8 Pricing Requirements

5.8.1 Since this solicitation is for statewide telecommunications services to be provided by a single Vendor, the Vendor must provide costs for all services identified on the Cost Sheet (Attachment C). Failure to complete the Costs Sheet in its entirety will result in the Vendor's bid being disqualified.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.

5.8.2 Any non-recurring costs must be clearly identified and defined on the Cost Sheet. Failure on the part of the Vendor to include this information will result in the State denying any charges that exceed the monthly recurring costs for the specified services.

VENDOR RESPONSE: Frontier read, understood and will comply with this request.



Attachment B Mandatory Specification Checklist

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Frontier West Virginia Inc.

(Company)

Mike Flynn, Area President
(Representative Name, Title)

(304) 345-8080 / (304)344-6123

(Contact Phone/Fax Number)

(Date)

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Frontier West Virginia Inc.
(Company)



Mike Flynn, Area President
(Representative Name, Title)

(304) 345-8080 / (304)344-6123
(Contact Phone/Fax Number)

9 Feb 16
(Date)

Tab C

Cost Sheet

Please see Cost Sheet in sealed envelope in binder

Tab D

Frontier Appendix 1-8

- Tab1 Frontier Service Level Agreement Sample
- Tab 2 Frontier Certificate of Insurance Sample
- Tab 3 Frontier WV-W9
- Tab 4 Frontier FCC Green Light
- Tab 5 Frontier Ethernet Configuration
- Tab 6 Frontier Road M 7.0 Network Map
- Tab 7 Frontier Resumes
- Tab 8 Frontier WV Business License Certificate
- Tab 9 Frontier Safetime Procedure
- Tab 10 Network Maintenance Process
- Tab 11 Frontier Repair Contact & Escalation List

Tab D1

- Tab1 Frontier Service Level Agreement Sample



**Ethernet Data Service & Ethernet Internet Access
Service Level Attachment
Frontier Confidential**

This Ethernet Data Service & Ethernet Internet Access Service Level Attachment ("SLA") applies to Ethernet Services ordered pursuant to an Ethernet Internet Access Schedule, Ethernet Virtual Private Line (EVPL) Schedule, or Ethernet Local Area Network (E-LAN) Schedule executed by and between Insert Customer Name ("Customer") and Frontier Communications of America, Inc. ("Frontier"). The terms of this SLA apply exclusively to the Ethernet network elements directly within Frontier's management responsibility and control ("On-Net Service").

1. Operational Objectives

A. Availability: Circuit Availability is the ability to exchange data packets with the nearest Frontier Internet PoP or On-Net Customer egress port (Z location) via the ingress port (A location). "Service Outage" occurs when packet transport is unavailable or when the output signal is outside the limits of this service guarantee. Availability is measured by the number of minutes during a calendar month that the On-Net Service is operational, divided by the total minutes in that calendar month. Calculation is based on the stop-clock method beginning at the date and time of the Customer-initiated trouble ticket and ends when Frontier restores SLA-compliant circuit operation. Frontier's On-Net Service Availability commitment and applicable Service credit are outlined in Table 1A, subject to Sections 3 and 4 below.

Table 1A: Ethernet & EIA SLAs		
Circuit Availability (CA)		MRC Service Credit
Availability	99.95%	Below 99.95% Service Credit 30% MRC Below 95.0% Service Credit 50% MRC

B. Mean Time to Repair (MTTR): MTTR is a monthly calculation of the average duration of time between Trouble Ticket initiation (in accordance with Section 2B) and Frontier's reinstatement of the On-Net Service to meet the Availability performance objective. The MTTR objectives, and credits applicable to a failure to meet such objectives, are outlined in Table 1B, subject to Sections 3 and 4 below.

Table 1B: Ethernet & EIA SLAs		
Mean Time To Repair		MRC Service Credit
MTTR	4 Hours	10% MRC above 4 hrs 25% MRC above 6 hrs

2. Performance Objectives

A. Packet Delivery: The Frame Loss Ratio (FLR) is a round trip measurement between ingress and egress ports (NIDs) at the Customer's A and Z locations of packet delivery efficiency. FLR is the ratio of packets lost, round trip, vs. packets sent. Packet delivery statistics are collected for one calendar month. Credits will be based on Frontier's verification of packet delivery performance between NIDs at Customer's Service Location. The packet delivery SLA applies to CIR-compliant packets on Ethernet LAN / WAN circuits only. This packet delivery guarantee does not apply to Ethernet Internet services. Frontier offers three FLR Quality of Service (QoS) levels for Ethernet Data Service. The applicable SLA is based on the QoS level, as outlined in Table 1C. Ethernet Gold and Platinum are premium level services designed to support commercial customers' mission-critical and real time applications.

Table 1C: Ethernet Frame Loss Ratio (FLR)		
Packet Loss QoS Level	Frame Loss Ratio (FLR)	MRC Service Credit
Silver (Standard Data Service)	0.10%	10%
Gold (Priority Data Service)	0.05%	15%
Platinum (Real Time Service)	0.01%	20%

- Silver QoS service is Frontier's basic business class data service with improved performance across all standard performance parameters. Ethernet Silver SLA, termed Standard Data (SD) Service, is Frontier's upgraded replacement of Best Effort Ethernet designed specifically for the commercial customer.
- Gold QoS service is a premium business data service featuring enhanced performance parameters with packet forwarding priority set to Priority Data.
- Platinum QoS service carries Frontier's highest QoS performance parameters and includes voice grade packet forwarding priority set to Real Time.

If packet delivery performance falls below the applicable packet delivery percentage, Customer will be entitled to a Service credit as outlined in Table 1C, subject to Sections 3 and 4 below.

B. Latency: Latency, Frame Transfer Delay (FTD), is the maximum packet delivery time measured round-trip between Customer's A and Z locations at the Committed Information Rate (CIR). Latency is measured across On-Net Service paths between ingress and egress NIDs. Measurements are taken at one-hour intervals over a one month period. Credits are based on round-trip latency of 95th percentile packet. The Frame Transfer Delay SLA is limited to CIR-compliant packets on Ethernet LAN / WAN circuits ONLY. The FTD guarantee does not apply to Ethernet Internet services. Customer must meet the following criteria to qualify for Service credits on the EVPL Latency SLA outlined in Table 1D and Table 1E:

Table 1D: Ethernet Latency (FTD) - Fiber Loop			
Latency QoS Level	Round Trip Delay (+50 Miles)	Round Trip Delay (+50 Miles Intra-state)	MRC Service Credit
Silver (Standard Data Service)	20 ms	45 ms	10%
Gold (Priority Data Service)	12 ms	32 ms	15%
Platinum (Real Time Service)	9 ms	28 ms	20%

- Access loops at Customer locations A and Z must have optical fiber connectivity from the Serving Wire Center to the NIDs at each premise to qualify for Fiber Loop FTD SLA. Otherwise, Frontier will honor the Copper FTD SLA for the circuit.

Table 1E: Ethernet Frame Transfer Delay (FTD) - Copper Loop			
Latency QoS Level	Round Trip Delay (+50 Miles)	Round Trip Delay (+50 Miles Intra-state)	MRC Service Credit
Silver (Standard Data Service)	40 ms	65 ms	10%
Gold (Priority Data Service)	30 ms	50 ms	15%
Platinum (Real Time Service)	27 ms	42 ms	20%

- Each SLA guarantee is associated with ONLY one QoS Level. Frontier will honor the Service credit associated with the QoS level ordered for On-Net Services. Customer will be entitled to Service credits if the Service fails to meet applicable Performance Objective as outlined in Table 1D and Table 1E subject to Sections 3 and 4 below.



**Ethernet Data Service & Ethernet Internet Access
Service Level Attachment
Frontier Confidential**

C. **Jitter:** Packet Jitter, Frame Delay Variance (FDV), is the difference in end-to-end one way delay between selected packets in a data stream with any lost packets being ignored. Frontier guarantees average FDV (inter-packet differential) performance on On-Net Service transmissions will meet performance parameters outlined in the tables below. Credits are based on the monthly average Frame Delay Variance. This FDV SLA is limited to CIR-compliant packets on Ethernet LAN / WAN circuits ONLY. The FDV guarantee does not apply to Ethernet Internet services. Customer must meet the following criteria to qualify for Service credits on the EvPL Jitter SLA:

- Access loops at Customer Service Locations A and Z must have optical fiber connectivity from the Serving Wire Center to the NIDs at each Service Location to qualify for Fiber Loop FDV SLA. Otherwise, Frontier will honor the Copper FDV SLA for the circuit.
- Each SLA guarantee is associated with ONLY one QoS Level. Frontier will honor the Service credit associated with the QoS level ordered for On-Net Services, as outlined in the applicable Ethernet Service Schedule. Customer will be entitled to the credit as outlined in Table 1F and Table 1G if On-Net Services fail to meet applicable service level objectives, subject to Sections 3 and 4 below.

Table 1F: Ethernet Frame Delay Variance (FDV), Fiber Loop

Jitter QoS Level	Average Jitter per site	Average Jitter per site (< 50 Miles)	MRC Service Credit
Silver (Standard Data Service)	≤ 8 ms	≤ 14 ms	10%
Gold (Priority Data Service)	≤ 4 ms	≤ 10 ms	15%
Platinum (Real Time Service)	≤ 2 ms	≤ 7 ms	20%

Table 1G: Ethernet Frame Delay Variance (FDV), Copper Loop

Jitter QoS Level	Average Jitter per site	Average Jitter per site (> 50 Miles)	MRC Service Credit
Silver (Standard Data Service)	N/A	N/A	N/A
Gold (Priority Data Service)	≤ 10 ms	N/A	15%
Platinum (Real Time Service)	≤ 5 ms	≤ 7 ms	20%

- **Interstate SLA guarantees:** Specific SLA parameters for Frame Loss Ratio (FLR), Frame Transfer Delay (FTD), and Frame Delay Variance (FDV) guarantees are determined by Frontier Region Engineering assessment for each interstate circuit and not covered by this SLA.

3. Service Outage Reporting Procedure.

- Frontier will maintain a point-of-contact for Customer to report a Service Outage, twenty-four (24) hours a day, seven (7) days a week.
- When On-Net Service is suffering from a Service Outage, Customer must contact Frontier's Network Operations Center ("NOC") at 1-(800) 608-8028 to identify the Service Outage and initiate an investigation of the cause ("Trouble Ticket"). Responsibility for Trouble Ticket initiation rests solely with Customer. Once the Trouble Ticket has been opened, the appropriate Frontier departments will initiate diagnostic testing and isolation activities to determine the source. In the event of a Service Outage, Frontier and Customer will cooperate to restore the Service. If the cause of a Service Outage is a failure of Frontier's equipment or facilities, Frontier will be responsible for the repair. If the degradation is caused by a factor outside the control of Frontier, Frontier will cooperate with Customer to conduct testing and repair activities at Customer's cost and at Frontier's standard technician rates.
- A Service Outage begins when a Trouble Ticket is initiated and ends when the affected On-Net Service is Available; provided that if the Customer reports a problem with a Service but declines to allow Frontier access for testing and repair, the Service will be considered to be impaired, but will not be deemed a Service Outage subject to these terms.
- If Frontier dispatches a field technician to perform diagnostic troubleshooting and the failure was caused by the acts or omissions of Customer or its employees, affiliates, contractors, agents, representatives or invitees; then Customer will pay Frontier for all related time and material costs at Frontier's standard rates.

4. Credit Request and Eligibility.

- In the event of a Service Outage, Customer may be entitled to a credit against the applicable On-Net Service MRC if (i) Customer initiated a Trouble Ticket; (ii) the Service Outage was caused by a failure of Frontier's equipment, facilities or personnel; (iii) the Service Outage warrants a credit based on the terms of Section 1; and (iv) Customer requests the credit within thirty (30) days of last day of the calendar month in which the Service Outage occurred.
- Credits do not apply to Service Outages caused, in whole or in part, by one or more of the following: (i) the acts or omissions of Customer or its employees, affiliates, contractors, agents, representatives or invitees; (ii) failure of power; (iii) the failure or malfunction of non-Frontier equipment or systems; (iv) circumstances or causes beyond the control of Frontier or its representatives; (v) a Planned Service Interruption; or (vi) Emergency Maintenance. In addition, Customer will not be issued credits for a Service Outage during any period in which Frontier is not provided with access to the Service location or any Frontier network element, or while Customer is testing and/or verifying that the problem has been resolved. "Planned Service Interruption" means any Service Outage caused by scheduled maintenance, planned enhancements or upgrades to the Frontier network; provided that Frontier will endeavor to provide at least five (5) business days' notice prior to any such activity if it will impact the Services provided to Customer. "Emergency Maintenance" means maintenance which, if not performed promptly, could result in a serious degradation or loss of service over the Frontier network.
- Notwithstanding anything to the contrary, all credit allowances will be limited to maximum of 50% of the MRC for the impacted On-Net Service, per month. For cascading failures, only the primary or causal failure is used in determining Service Outage and associated consequences. Only one service level component metric can be used for determining Service credits. In the event of the failure of the Service to meet multiple metrics in a one-month period, the highest Service credit will apply, not the sum of multiple Service credits.

	<p>Ethernet Data Service & Ethernet Internet Access Service Level Attachment Frontier Confidential</p>
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- D. This SLA guarantees service performance of Frontier's Ethernet data services only. This SLA does not cover TDM services (DS1, NxDS1, or DS3 services) or other voice or data services provided by Frontier. This SLA does not apply to services provided over third party facilities, through a carrier hotel, or over Frontier facilities which terminate through a meet point circuit with a third party carrier.
 - E. The final determination of whether Frontier has or has not met SLA metrics will be based on Frontier's methodology for assessment of compliant performance. Service Outage credits are calculated based on the duration of the Service Outage, regardless of whether such Service Outage is the result of failure of the Service to meet one or more performance metric.
 - F. Credit allowances, if any, will be deducted from the charges payable by Customer hereunder and will be expressly indicated on a subsequent bill to Customer. Credits provided pursuant to this SLA shall be Customer's sole remedy with regard to Service Outages.
5. **Chronic Outage:** An individual On-Net Service qualifies for "Chronic Outage" status if such service fails to meet the Availability objectives, and one or more of the following: (a) a single Trouble Ticket extends for longer than 24 hours, (b) more than 3 Trouble Tickets extend for more than 8 hours, during a rolling 6 month period, or (c) 15 separate Trouble Tickets of any duration within a calendar month. If an On-Net Service reaches Chronic Outage status, then Customer may terminate the affected On-Net Service without penalty, provided that Customer must exercise such right within ten (10) days of the On-Net Service reaching Chronic Outage status and provide a minimum of 15 days prior written notice to Frontier of the intent to exercise such termination right.

This SLA constitutes the entire agreement between the parties pertaining to the subject matter herein and supersedes all prior oral and written proposals, correspondence and memoranda with respect thereto, and may not be modified in any manner except by mutual written agreement.

<p>Frontier Communications of America, Inc.</p>	<p><Insert Customer's Name></p>
<p>Frontier's Signature:</p>	<p>Customer's Signature:</p>
<p>Printed Name:</p>	<p>Printed Name:</p>
<p>Title:</p>	<p>Title:</p>
<p>Date:</p>	<p>Date:</p>

Tab D2

- Tab2 Frontier Certificate of Insurance Sample



CERTIFICATE OF LIABILITY INSURANCE Page 1 of 1

DATE (MM/DD/YYYY)
11/02/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Willis of Florida, Inc. c/o 26 Century Blvd. P. O. Box 105191 Nashville, TN 37230-5191	CONTACT NAME: PHONE (A/C NO. EXT): 877-945-7378 FAX (A/C NO.): 888-467-2378 E-MAIL ADDRESS: cert@certfocus.com
	INSURER(S) AFFORDING COVERAGE INSURER A: Continental Casualty Company NAIC# 20443-002 INSURER B: Associated Electric & Gas Insurance Servi F0540-001 INSURER C: American Casualty Company of Reading, PA 20427-001 INSURER D: Transportation Insurance Company 20494-001 INSURER E: INSURER F:
INSURED Frontier Communications Corporation and its Subsidiaries 401 Merritt 7 Norwalk, CT 06851	

COVERAGES CERTIFICATE NUMBER: 23212462 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSTR LTR	TYPE OF INSURANCE	ADDITIONAL CODES	SUBJECT MATTER	POLICY NUMBER	POLICY EFF. DATE (MM/DD/YYYY)	POLICY EXP. DATE (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			GL2095784254	6/1/2015	6/1/2016	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (EACH OCCURRENCE) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS-COMP/OP AGG \$ 2,000,000
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALLOWED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			BHA2095784268	6/1/2015	6/1/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input checked="" type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			XL5113004P	6/1/2015	6/1/2016	EACH OCCURRENCE \$ 2,000,000 AGGREGATE \$ 2,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC2095784531	6/1/2015	6/1/2016	<input checked="" type="checkbox"/> PER STATUTE
C	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/EMBER EXCLUDED? (Mandatory Initials If Yes, Check Limit)	Y/N	N/A	WC2095784545	6/1/2015	6/1/2016	E.L. EACH ACCIDENT \$ 1,000,000
D	DESCRIPTION OF OPERATIONS below			WC2095784559	6/1/2015	6/1/2016	E.L. DISEASE-EA EMPLOYEE \$ 1,000,000 E.L. DISEASE-POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 99L Additional Remarks, if applicable, may be attached if more space is required)

CERTIFICATE HOLDER For Info Purposes Only	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
---	--

Tab D3

- Tab 3 Frontier West Virginia W9

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return) Frontier West Virginia Inc.	
	Business name, if different from above	
	Check appropriate box: <input type="checkbox"/> Individual/sole proprietor <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ ----- <input type="checkbox"/> Exempt payee <input type="checkbox"/> Other (see instructions) ▶	
	Address (number, street, and apt. or suite no.) 3 High Ridge Park	Requester's name and address (optional)
	City, state, and ZIP code Stamford, CT 06905	
List account number(s) here (optional)		

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Social security number
or
Employer identification number
55 0142020

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here	Signature of U.S. person ▶	Date ▶
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,

Tab D4

- Tab 4 Frontier FCC Green Light

1/14/2016

Red Light Display System



Red Light Display System

[FCC](#) | [Fees](#) | [Red Light Display System](#)

Logged in as: Frontier Communications (FRN: 0022071609) [[Log Out](#)]

[Print](#) | [Help](#)

1/14/2016 1:13 PM

Current Status of FRN 0022071609

STATUS: Green

You have no delinquent bills which would restrict you from doing business with the FCC.

The Red Light Display System checks all FRNs associated with the same Taxpayer Identification Number (TIN). A green light means that there are no outstanding delinquent non-tax debts owed to the Commission by any FRN associated with the requestor's TIN. The Red Light Display System was last updated on 01/14/2016 at 6:37 AM; it is updated once each business day at about 7 a.m., ET.

Tab D5

- Tab 5 Frontier Ethernet Configuration

Tab E5

E-LAN (Ethernet LAN) Configuration

Frontier will work with the State of West Virginia to develop the best possible network solution to support the State's current and future needs.

We can support the State's existing ELAN network and can provide EVPL, Layer 3/MPLS/IPVPN, Fiber Optic Transport Service, along with continued support of the State's Frame Relay, ATM or DS1/DS3 networks if requested.

The Ethernet network configurations can be accomplished as follows:

E-LAN (Ethernet LAN) Configuration:

Frontier E-LAN is a "fully meshed" topology from the customer's perspective. All locations within a specific agency can be placed in a specific "VLAN" at the requested bandwidths. This will place all locations in a single Layer-2 VLAN topology. The State of West Virginia will be able to route traffic between the sites as they deem appropriate. All locations within a VLAN can be segmented by IEEE 802.1 customer VLAN tags.

Frontier E-LAN Service

Provide a reliable cost effective Ethernet-base replacement for TDM Private Line solutions.

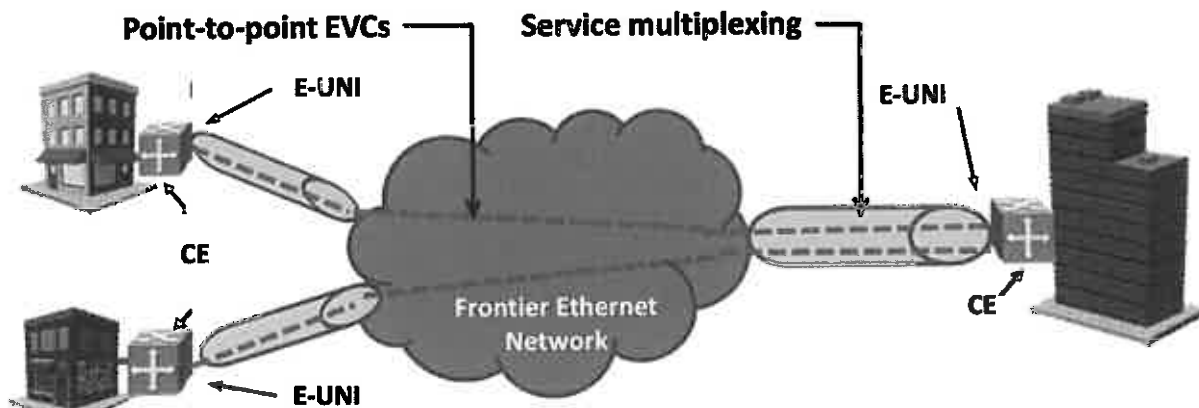
- Symmetrical data rates specified for individual sites available up to 10 Gbps
- Available over copper or fiber with service guarantees and a high degree of transparency
- Solutions span metro areas as well as intra and interstate WAN deployments
- Internet connectivity for any location can easily be added to the LAN / WAN

EVPL (Ethernet Virtual Private Line) Configuration:

Frontier EVPL is a point-to-point or point-to-multipoint Ethernet data transport service delivered over Frontier's private layer 2 network infrastructures. Each LAN can be setup as a point to point "VLAN" at the requested bandwidths. Through service multiplexing, a single connection to the Frontier network supports virtual connections to multiple sites.

Frontier E-LINE/EVPL Service

- Point-to-point connectivity at virtually any symmetrical data rate up to 10 Gbps.
- Provides scalability and granularity that can be quickly tailored to meet future growth
- Available over copper and/or fiber with operational service guarantees
- Secure connection that meets security standards
- Configure in a hub-and-spoke topology connecting a data center to multiple locations to form a highly secure LAN



E-UNI – External User-to-Network Interface
EVC – Ethernet Virtual Connection
CE – Customer Edge

Frontier Metro Ethernet provides:

- Private, dedicated connection that addresses security concerns
- 24x7 Network Support from Frontier Network Operations Center
- Performance
 - Inherent performance benefits of Layer 2 transport combined with simplified architecture
 - Highest bandwidth speeds available with low latency
- Reliability
 - Redundant equipment architectures and fast rerouting algorithms
- Simplicity
 - Simplifying protocols creates a network more suitable to time sensitive protocols
 - Allows LAN style management for the WAN
- Flexibility
 - Customer can have their bandwidth service increased or changed faster
 - Changes do not require new equipment or coordinate a visit from a service technician
- Convergence
 - With CoS, Frontier EVPL supports application convergence, eliminating the resources and capital required to maintain multiple network platforms.
 - Ability to prioritize traffic based on your business needs
- EVPL Solution includes:
 - QoS/Cos (Silver - Best Effort, Gold - Priority Data, Platinum – Real-Time Data)
 - SLAs

In summary, the State can benefit from the higher bandwidth and high performance attributes of EVPL to support their current and evolving WAN connectivity requirements.

The Dedicated Internet Access configurations can be accomplished as follows:

**Dedicated Metro-Ethernet Internet Access:
Ethernet Internet Access (EIA)**

Frontier EIA provides high-speed access up to 1 Gbps. Our solution includes:

- Integrated Internet access solutions with a single point of contact for service needs
- Limited susceptibility to peak time usage fluctuations
- Enhanced service reliability and performance
- Primary & Secondary Domain Name Service
- Reverse DNS Service



Dedicated Internet Access (DIA) supports services such as:

- Data Backup & Recovery
- Hosted VoIP
- Wi-Fi Network Services
- Audio, Web, & Video Conferencing

Standard Features:

- Bandwidths from DS1 to 10 GigE
- Primary & Secondary domain name service
- Reverse DNS Service
- Up to 8 IP addresses at no charge
- Ten 50 MB email accounts
- Managed Router service
- 24/7 Internet technical support

Benefits:

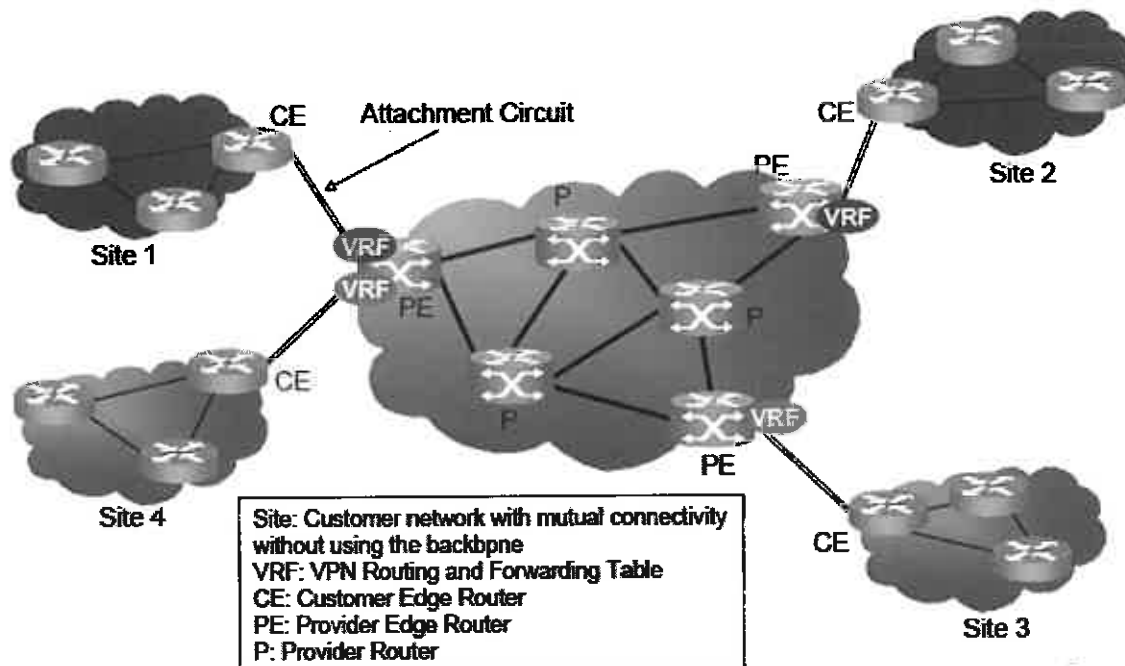
- Dedicated bandwidth providing you the assurance to run the applications needed for your business
- Scalable to accommodate customer growth and additional locations. Frontier can quickly increase service speed to meet demand
- Symmetrical upload and download speeds
- 24/7/365 monitoring providing a high level of availability and performance

IP VPN

Frontier managed IP VPN service is a site-to-site, network-based, Layer 3 solution providing any-to-any IP transport to enable interconnections across MPLS core network. The service supports full mesh, partial mesh or hub and spoke configurations.

Network Design

The diagram below is an example of two separate 2-site MPLS/IP VPN implementations. The first network (in red) shows customer site 1 connected to customer site 2. Each site includes a CE (customer edge) router - *Although the CE can be any routing device, customer's purchasing Frontier's MPLS/IP VPN service must use a Frontier managed router as the CE device.* The CE router connects to the MPLS network at the PE (provider edge) router using an attachment circuit which is normally either a dedicated TDM or Ethernet circuit. The MPLS network (the blue cloud in the diagram below), exists between the PE routers. The MPLS network is a fully meshed network in which all PE routers connect directly to each and every other PE router that is part of the MPLS network. In this diagram, customer site 1 connects to Customer site 2 using an attachment circuit at both ends, and a connection through the MPLS cloud in the middle.



Service Elements

MPLS/IP VPN service elements include the access circuit, the VPN port, the managed router, and internet access. The access circuit, VPN port and managed router are all mandatory service elements that must be purchased for each site that is part of the customer's network. Internet access is an optional service element that can be purchased for a single site, or for all sites of the customer network.

Access Circuit

Access to the MPLS network is available primarily through the use of an Ethernet or TDM access circuits. Ethernet access allows the customer to achieve bandwidth at each site from 1.5 Mbps up to Gbps+ levels, depending on the market. TDM access is available from 1.5 Mbps to 6 Mbps.

VPN Port

The VPN port represents the physical or virtual port of the MPLS router (usually referred to as a Provider Edger, or PE router). in which a customer site is be connected using either a TDM or Ethernet point-to-point access circuit.

Managed Router

Frontier's Managed Router service is a mandatory element of the IP VPN service unless otherwise approved by Frontier Engineering and Product Management. It enables Frontier to provide highly reliable, end-to-end connectivity and allows the customer to outsource the complexities of their network router selection, configuration, installation and management. In footprint, the router solution is provided by Frontier. Out-of-territory, the solution is provided by Level 3.

In the rare circumstances where the customer is insistent on using their own router it should be made clear to them that Frontier has no visibility to any problems that may occur between the Frontier network edge and the customer's site. Therefore any issues that arise can't be detected by Frontier and the customer assumes all the risk. The customer will be responsible for all management, routing and quality of service. In addition, SLA guarantees relative to MTTR are only applicable if customer agrees to provide the Frontier NOC access to their router during troubleshooting, and the actual MTTR metric must be approved by Product Management and Engineering.

Internet Port (Optional)

Frontier delivers Internet services over the same circuit as is used for access to the MPLS/VPN network. The physical circuit is divided logically into two virtual circuits, one carrying the VPN/WAN traffic while the other carries Internet traffic. This is accomplished by encapsulating the circuit as Frame Relay for Serial or SONET connections, or VLANs for Ethernet.

IP VPN customers can also elect to purchase Internet access from Frontier as a separate physical connection. In this case, pricing is consistent with that for DIA (Direct Internet Access).

Network Topology Options

Frontier's MPLS/IP VPN service is available in the following configurations:

- **Fully Meshed Network** – Each customer site is allowed to send and receive data to any other site that is part of the VPN

- **Hub and Spoke** – Each remote site that is part of the VPN can only communicate with the host site. Remote sites cannot communicate directly with each other.

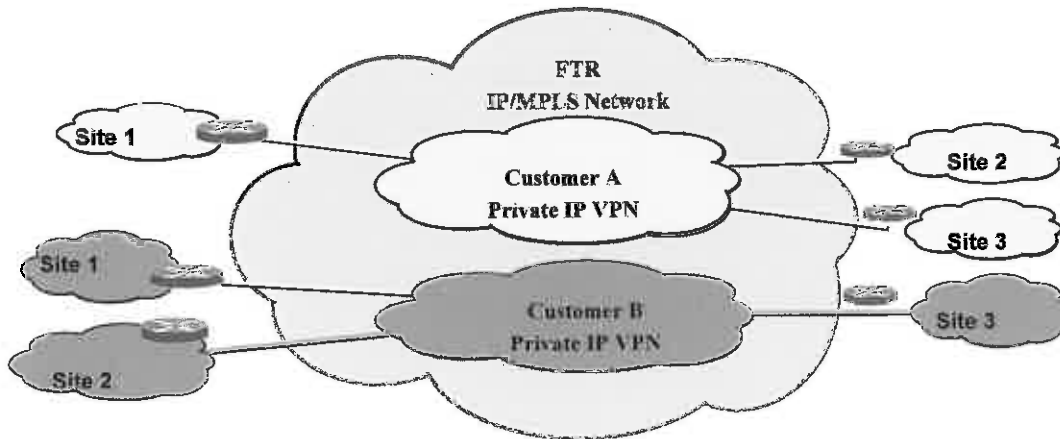
Quality of Service (QoS)/Class of Service (CoS) classes

With Frontier's IP VPN service, QoS is delivered within the MPLS Cloud from PE-to-PE router. An exception to this rule is a customer implementation where a T-1 (or bonded T-1s) are used to attach the customer site to the MPLS cloud. When service is delivered using a dedicated T-1/bonded T-1, QoS capabilities can be extended all the way to the customer premises.

QoS is the ability to assign priority to various applications, users and data flows, guaranteeing a certain level of performance to a data flow. The prioritization is accomplished by assigning traffic to one of several Class-of-Service queues. The queues are prioritized so that the traffic that is most sensitive to delay is mapped to the queue that receives the highest priority, while the less time-sensitive traffic is mapped to lower priority queues. Frontier offers six CoS queues into which the customer maps their traffic based on their requirements for traffic prioritization.

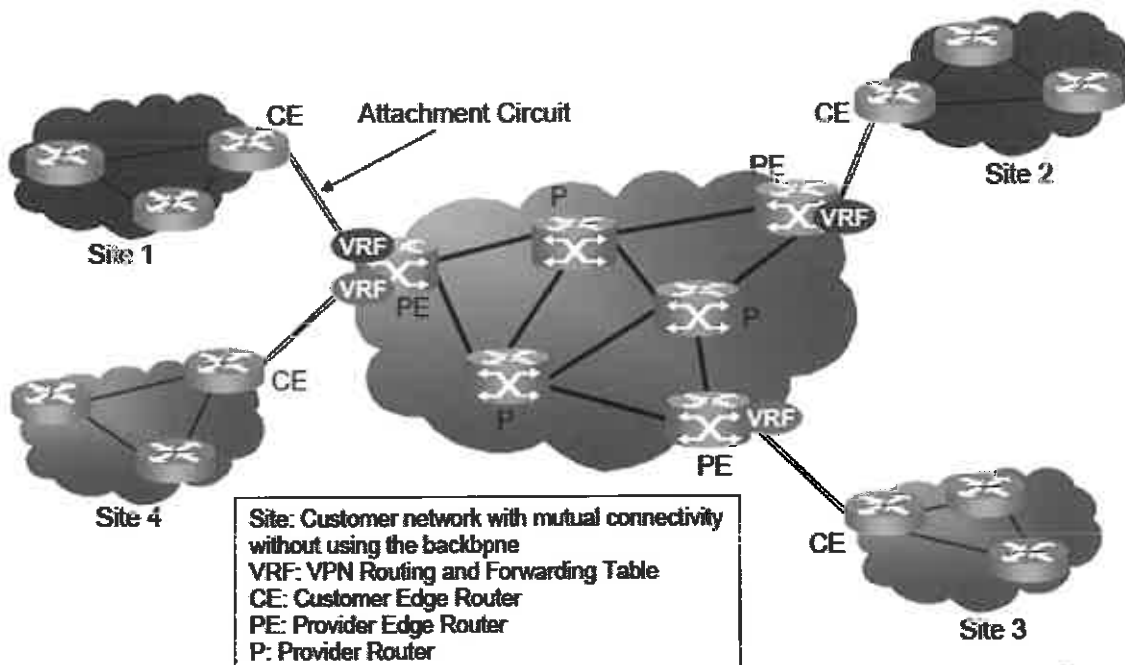
CoS Level	Description	Sensitivity	Traffic Types
Premium Plus	Traffic that has significant sensitivity to delay, loss, and jitter. This traffic must be protected at the expense of all lower priority traffic.	Traffic extremely sensitive to delay, loss, and jitter.	Real-time communication traffic like voice and video conferencing.
Premium	Traffic that has significant sensitivity to delay, loss, and jitter. This traffic must be protected at the expense of all lower priority traffic but will be dropped when network is congested in favor of Plus designation.	Traffic extremely sensitive to delay, loss, and jitter.	
Enhanced Plus	Traffic has moderate bounding delay and loss and is distinguishable between traffic that is best effort.	Traffic sensitive to delay and jitter.	SAP
Enhanced	Traffic has moderate bounding delay and loss and is distinguishable between traffic that is best effort but will be dropped when network is congested in favor of Plus designation.	Traffic sensitive to delay and jitter.	FTP
Basic Plus	Normal Internet traffic or best effort delivery traffic.	Data and Internet traffic.	DIA
Basic	Normal Internet traffic or best effort delivery traffic but traffic will be dropped when network is congested in favor of Plus designation..	Data traffic	Email

Layer 3 VPNs – Logical View



- Offers Private IP VPN service over a shared Infrastructure
- Based on RFC 2547 – Combines MPLS with other technologies
 - Multi-Protocol BGP (MP-BGP)
 - Virtual Router
- Provides any-to-any connectivity
- Customers can use private addressing

MPLS VPN Network Overview

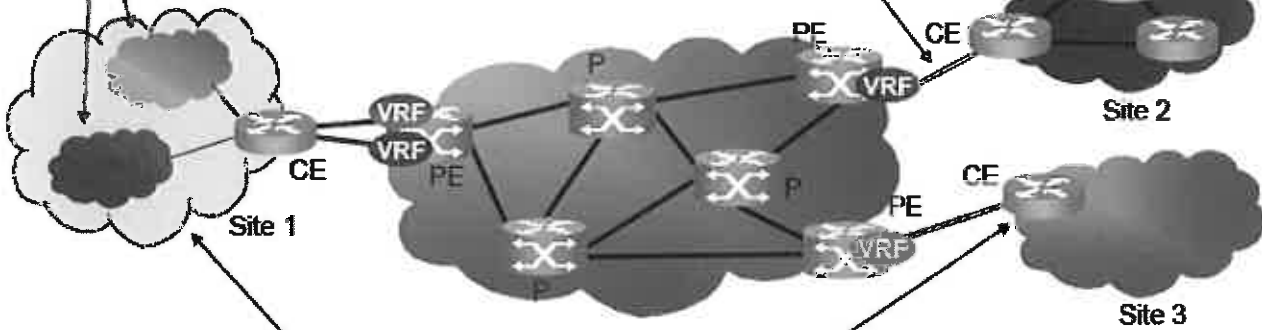


MPLS – Sites and Customer Edge Devices

Systems within a site may have different VPN memberships

Attachment circuits can be PPP connections, ATM VCs, Frame Relay VCs, Ethernet connections, or an IP tunnel

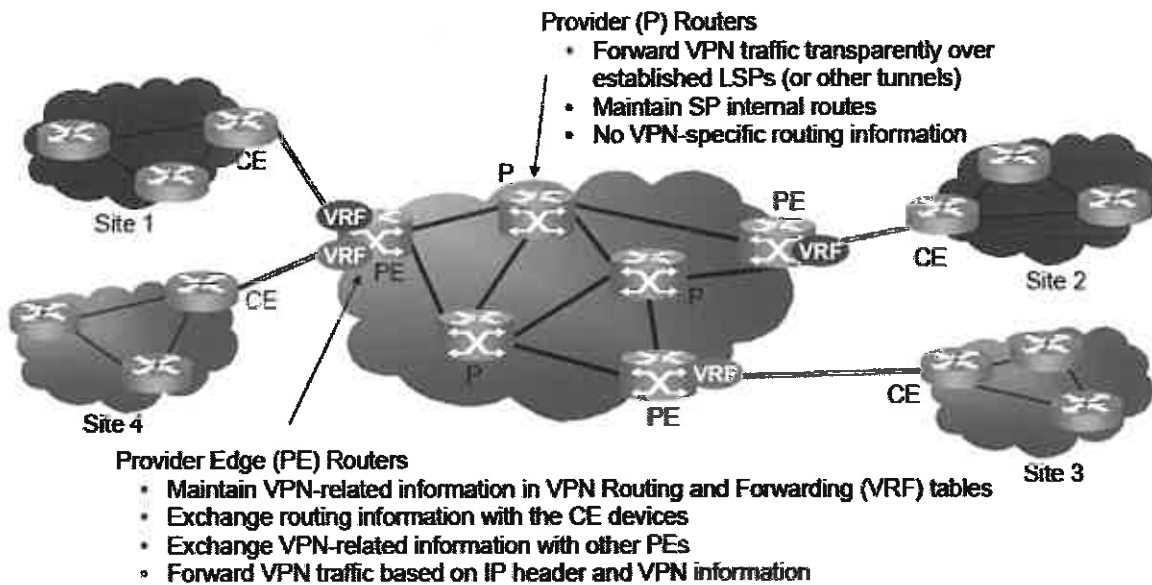
A site is a set of IP systems that have mutual connectivity without using the backbone



A site may belong to multiple VPNs

CE devices are hosts or routers that are connected to PE routers by an attachment circuit - Each VPN must contain at least one CE

MPLS – Provider Edge and Core Routers



Basic MPLS Network Terms

- **MPLS:** Multi Protocol Label Switching – A switching technology that utilizes labels to route data across a network. MPLS offers the advantages of VPNs, Layer 2 transport, traffic engineering, as well as the ability to create end-to-end tunnels, or LSPs, over different types of Layer 1 and Layer 2 transport mediums.

- **Provider Router (PR):** Responsible for swapping labels in the network core
- **Provider Edge (PE) Router:** Responsible for Pushing and Popping MPLS labels. The PE router interfaces with the customer equipment, which does not have to be MPLS-enabled.
- **Label Switched Path (LSP):** An end-to-end path through an MPLS network. LSPs can be routed automatically or statically, as well as have backup LSPs in case of primary LSP failure (known as FRR, or Fast ReRoute).
- **Customer Edge Router (CE):** A router located on the customer premises that provides an Ethernet interface between the customer's LAN and the provider's core network. Normally this is a Frontier provided router as part of the Managed Router service. However, this can be any IP-based router as it does not actually communicate using MPLS or any MPLS signaling protocol, but instead is pure IP.

Advantages of Frontier Ethernet:

At Frontier we take pride in delivering quality service, a reasonable price, and the expertise you need in a communications partner. Here are just a few characteristics our Ethernet services deliver.

- Easy integration with existing networks and infrastructures
- High availability and performance
- Engineered lines configured for performance to limit noise and environmental factors.
- Symmetrical upload and download speeds enable uncompromised traffic flow
- Well planned and coordinated migration from other carriers with minimal downtime
- Commercial grade network with a coast-to-coast data backbone

Metro Ethernet MEF 2.0 Certification

Frontier has successfully completed the Metro Ethernet Forum (MEF) 2.0 Certification for its Carrier Grade Ethernet portfolio "Frontier Ethernet Solutions", placing it in a select group of Certified Carrier Ethernet companies.

The MEF-CECP certification is the industry's first vendor neutral certification program and designates that Frontier has key competency and skills to design, market, deploy and support Carrier Ethernet equipment, networks and services representing the next-generation of telecommunications technology. Frontier's CE 2.0 Services certification process included rigorous testing for each type of standardized Ethernet service (E-Line, E-LAN, E-Tree and E-Access) and encompassed more than 600 test cases.



Point-to-point Private Line Services can be accomplished as follows:

Dedicated Point to Point Private Line Configuration:

Benefits of Private Line Service

When you choose a Frontier Private Line for your mission-critical communications, you'll enjoy:

- **Security** – A private Line is not part of a shared network. Your voice, data or video travels on a dedicated line from your location to another destination.

- Choice – Depending upon your specific bandwidth requirements, you can choose the Private Line connection that suits your needs.
 - Video conferencing/Distance Learning – With a DS1/DS3 Private Line, you can conduct meetings and training sessions without having to incur costs for business travel.
 - Disaster Recovery – DS1/DS3 Private Lines provide optional “survivability” features, including an alternate central office in the event of a power outage or other unforeseen event.
 - Versatility – Your voice traffic may be heavier or lighter than your data traffic. DS1/DS3 Private Lines allow you to determine how much sustained bandwidth to allocate for each.
- PIP Cloud – The State’s current Private IP cloud service would be carried over Frontier’s core network.

Frontier Optical Transport Service (FOTS)

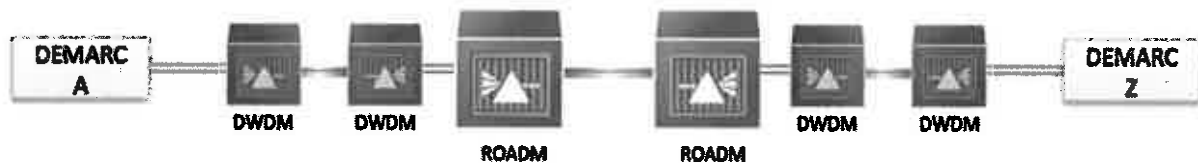
Frontier Optical Transport Service provides secure high bandwidth connectivity for economical bulk data transport. Our service allows for streamlined infrastructures with the ability to integrate lower bandwidths and varying protocols running on a 10Gb capable network, with future capability up to 100Gb. With a dedicated wavelength for each point-to-point circuit and private connectivity you will enjoy SONET level reliability with a migration path that leverages and preserves TDM investments with the ability to evolve beyond current capacity restraints. With 24/7/365 technical support and network monitoring, you can rest assured that our robust network is running smoothly. Let Frontier do the heavy lifting so you can focus on what you do best – providing great service to your customers.

Key Features by Service Level

Frontier Optical Transport Service is available with three levels of service:

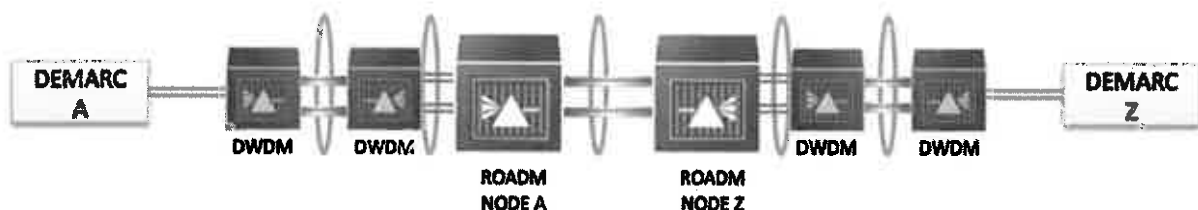
10G Unprotected 2-Fiber

- No card or route protection
- Unprotected circuit at both ends



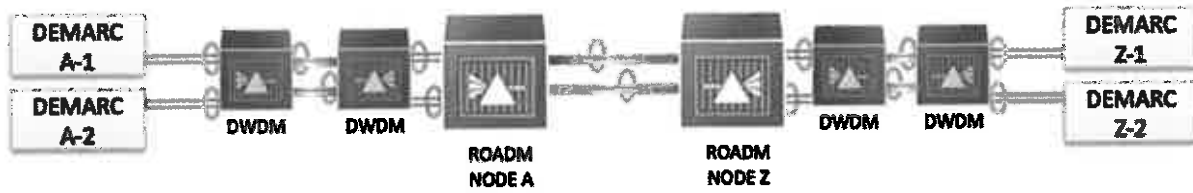
10G Protected 4-Fiber

- No card or route protection
- Unprotected circuit at both ends



10G protected 4-Fiber and Fiber Path Diversity

- Both card protection (1+1) and fiber path diversity
- Protected circuit at both ends



All service levels include service level agreements, and standard pricing.

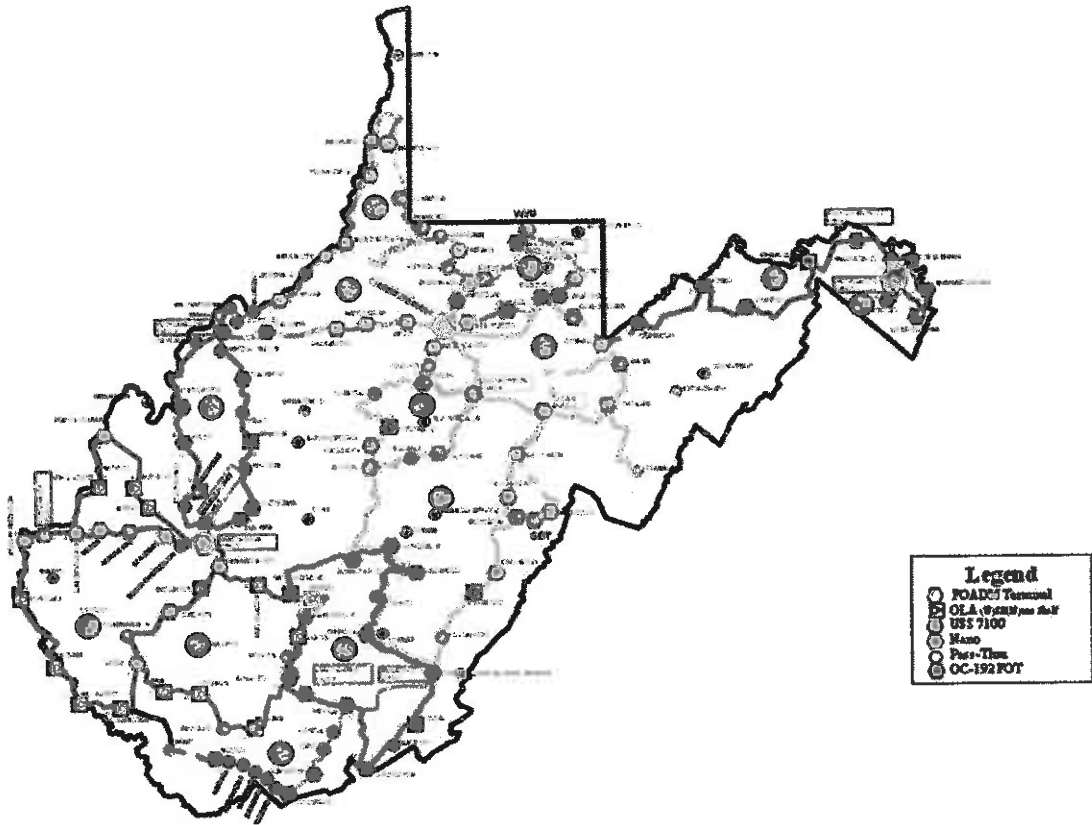
Tab D6

- Tab 6 Frontier 4.4.4.5 Road M 7.0 Network Map

Tab D6

Frontier Fiber 7.0 ROADM Network

Frontier has invested over \$310 million in a statewide next-generation network that is the first of its kind in the United States. It has nearly 500 Ethernet switches and 13 redundant fiber optic rings comprising more than 7,100 miles of fiber in West Virginia. This network is a Reconfigurable Optical Add-Drop Multiplexor (ROADM) Network. All of Frontier's Ethernet Services provided to the State will connect to this Fiber 7.0 Core Network.



Tab D7

- Tab 7 Frontier Team Resumes

➤ **Frontier Team Resume Snapshots**

➤ **Account Manager - Chad Stepp**

Frontier Communications, Inc.
Enterprise Account Executive
Charleston, WV
Phone: (304)410-5659; Fax: (304)342-6092; Email: chad.stepp@ftr.com

Chad has more than two decades of leading edge telecommunications experience which began in the U.S. Air Force as a computer programmer, UNIX Systems Administrator, and Network Security Officer.

After returning home to WV from four years of military duty Stepp completed degrees in Business Administration with Computer Information Systems and Computer Science while beginning a private sector career that includes representing major Silicon Valley networking giants Cisco Systems and Nortel Networks. Was named Cisco Systems Regional Account Manager of the Quarter in 2001 based on goal attainment while also holding the distinction as the only AM in the region to reach CCDA (Cisco Certified Design Associate) certification. An early adopter of Cisco's VoIP technologies; Stepp sold many of the first implementations in the state including packetized toll bypass tie lines using Voice over ATM for Walker Machinery in 1997 and IP Telephony for the City of Huntington in 1999, these solutions built the foundation for advanced production systems still in use today.

His career includes more than 15 years of selling progressive technology solutions to the State of WV; bookending that experience locally Chad has managed large client relationships to develop productivity enhancing technology solutions primarily for wire line carriers in West Virginia beginning with Bell Atlantic in 1997 through Frontier Communications today.

➤ **Network Engineer - Jeff Grimes**

Frontier Communications, Inc.
Senior Network Sales Engineer
Huntington, WV
Phone: (304)710-9156; Fax: (304)342-6092; Email: jeff.grimes@ftr.com

Jeff has worked in the telecommunications industry since 2001 as a network sales engineer. During his career Jeff has received numerous company awards, including President's Club and other distinctions. With Frontier, Jeff continues that experience and is responsible for the pre-sale network design and customer interaction in the WV market. The Frontier Network Sales Engineer serves as a technical resource in support of Frontier Account Executives and customer base.

Jeff is a veteran of the US Marine Corps Reserve, and graduated with a Master of Arts in Communications from Marshall University in 1999 and has continued his network and telecommunications education by completing training courses and certifications from Cisco and Adtran.

➤ **Network Engineer - Richard Fowler**

Frontier Communications
Senior Network Sales Engineer – WV
1108 N Mildred St, Ranson, WV
Phone: (540)931-4590; Fax (304) 342-6092; Email: richerd.a.fowler@ftr.com

Richard has over 16 years of experience in the telecommunications industry and is currently responsible for designing voice and data solutions for customers in West Virginia.

When it comes to customer service, Richard focuses on building relationships through trust and mutual respect, taking the time to get to know his customers and the companies for which they work. This approach ensures that the solutions he designs will not only meet his customer's technical specifications, but will also meet the current and future needs of their business.

He has experience in Telecom engineering, Network Operations Centers (NOC), and provisioning. These areas of experience have required designing, implementing, testing, and planning the following services: Private Line, Frame Relay, ATM, Ethernet, and Dedicated Internet ranging in speeds from DS0 to OC192 and 5Mb to 10 Gb. His job functions have also entailed working with Dark Fiber, DWDM, and PoP (Point of Presence) builds. One of his specific jobs was designing back-up data centers for large financial institutions. This became a specialized function after the terrorist attacks of 9-11. The FCC issued a directive for large financial institutions with data centers in New York City to establish back-up data centers at a geographically diverse location.

In addition to his work at Frontier, Richard keeps extremely busy as a father of four children and enjoys spending time serving in his community.

➤ **Network Engineer - Kevin Walker**

Frontier Communications
Senior Network Sales Engineer
1500 MacCorkle Ave. SE
Charleston, WV 25396
Phone: (304) 344-6435; Fax (304) 344-6123; Email: andrew.k.walker@ftr.com

Kevin has over 20 years of experience in the telecommunications industry in various sales, engineering, and project management positions. He graduated with a Bachelor of Science degree in Electrical Engineering (B.S.E.E.) from West Virginia Institute of Technology. Since 2011, he has served as Senior Sales Engineer for Frontier and is responsible for pre-sales engineering and technical sales support for the West Virginia Account Team.

His previous telecommunications work experience includes working as a Project Engineer for Virginia Power's Telecommunications headquarters in Richmond, VA where he managed voice and data projects. He worked as a Systems Engineer for Bell Atlantic where he provided technical support including the design, sales, and implementation of telecommunications systems involving voice, data, and video applications. He worked for Verizon as a Translations Engineer in their Network Operations department where he designed and maintained Verizon's network for business customer applications. He also worked as Specialist in Verizon's Network Trouble Center supporting their Voice Network Creation and Provisioning Department.

His responsibilities included providing 24x7 Tier II support for trouble investigation and resolution, billing referral resolution, Carrier Access Services and Wireless Services investigations, E-911 Emergency re-routes, and initiating continuous improvement projects.

➤ **Service Manager - Matt Sigman**

Frontier Communications

Specialist, Account Manager

Huntington, WV

Phone: (304) 344-6651; Fax (304) 342-6092; Email: matthew.sigman@ftr.com

Matt has more than 15 years of telephony experience in many areas of the industry, including sales, operations management, project management, quality assurance and provisioning.

Upon graduating high school in 1991, Sigman completed 2 years with the U.S. Air Force where he worked as an Electric Power Production Specialist. He was stationed at Loring AFB, Maine where he remained until base closure and received an honorable discharge from the USAF.

After the military, Sigman embarked on a career in banking and finance industry. From 1993 to 2000 he held various management positions with Huntington Banks. Sigman was assistant banking office manager for a 17 million dollar portfolio office, as well as the banking office manager for 4 different retail locations. He was also business development manager for an 18 county territory generating indirect mobile home loans. These experiences allowed Sigman to gain valuable customer service management and support skills that would prove to be an asset in the telecommunication industry

In 2000, Sigman began his telephony career at Fibernet, LLC in Charleston WV. His previous sales experience allowed him to begin the basic training and knowledge of the industry. By 2001, he was promoted to the Sales Operations Manager. This role included sales support and customer support from the point of sale to billing. Sigman managed 2 teams that were responsible for order integrity as well as coordination of facility installation. Lumos Networks acquired Fibernet in late 2010 where Sigman was again promoted the Quality Assurance Administrator. He was responsible for operating system training for all sales and customer support teams in WV as well as handling all Presidential level escalations.

December 2013, began Sigman's career at Frontier Communications. He was hired as the Client Services Analyst for all telecommunications for account of the State of WV. In September 2015, he was promoted to his current title of Specialist Account Manager, where he still is the customer support and escalations point of contact the WV Office of Technology as well as many other state agencies.

➤ **Project Manager - Heather Miller**

Frontier Communications

Project Manager

Charleston, WV

Phone: (304)380-3384; Fax (304) 342-6092; Email: heather.miller@ftr.com

Heather is the Project Manager for the overall process for each MPLS order, and she manages the Engineering & Construction piece of the order for the SoWV. She is going on 6yrs of telecom

experience. She previously work as the Service Manager Liaison for the SoWV for two years, and then moved on to the E911 Service Manager Liaison with FTR for the past 3yrs. She has recently moved over to the Project Management role in July 2015.

➤ **Service Consultant/Representative - Vicki Hayes, MBA**

Frontier Communications, Inc.
Communications Representative
Charleston, WV
Phone: (304) 344-6707; Fax (304) 342-6092; Email: vicki.hayes@fr.com

Vicki has over 23 years and 7 months service starting as C&P Telco, Bell Atlantic, Verizon, and now Frontier Communications.

Vicki has been in Enterprise dealing with the State of WV Government team for 11 years. She currently works on all Voice & Data Billing, Ordering, and Project Management for the SOWV orders.

Vicki has an Associate Degree in Marketing, a Bachelor's Degree in Communications, and a Master's Degree in Business Administration.

➤ **Service Representative - Michele Crockett**

Frontier Communications
Service Representative Commercial Sales and Support
Charleston, WV
Phone: (304) 344-7018; Fax (888) 483-6820; Email: michele.crockett@fr.com

Michele has more than 19 years of telephone experience beginning in the 90s with AT&T. She was able to obtain hands on sales experience and learned the critical importance of communication skills and customer support. Also during her tenure at AT&T, Crockett gained valuable team building skills and leadership qualities that allowed her to utilize those skills as a project leader for a self-reliant sales team. Additionally, she was able to establish and implement various policies and procedures as well as identify team strengths and weaknesses that added value and growth not only for the team environment but for the company as well. Crockett received several performance based awards that afforded her to participate in company sponsored trips.

Crockett has been an employee with Frontier Communications for nearly 9 years and was appointed as a service representative to the State of WV (SOWV) team in 2011. In this role she works directly with the WV Office of Technology (WVOT) to diligently process telecommunication service requests as it relates the voice related products obtained by the SOWV. Furthermore, she is the direct point of contact for voice related troubles and enters trouble tickets as it pertains to each issue thus creating less downtime for the SOWV and creating a more enjoyable customer experience. Finally, Crockett is also responsible creating and sending the manual bill as is required by the SOWV.

➤ **E-Rate Representative - Denise McIntosh**

Frontier Communications

Supervisor, Customer Service

Phone: 317- 219-9513; Fax: 585-262-9734; Email: denise.mcintosh@ftr.com

Mrs. Denise McIntosh is the Federal/USAC Manager for Frontier Communications She brings 15 plus years of e-Rate experience to this company which includes working with a variety of schools, libraries, and federal agencies. Denise has worked with the Frontier's regulatory teams, including legislative affairs to ensure Frontier remains in compliance with the Report and Order. She has been in the Telecommunications business for 30 years. Her experience in the telecommunications business includes supervision of sales processes and procedures, implementation of services and support of billing systems, as well as ensures compliance with Federal rules and regulations beginning with the bidding process. Her history includes bidding, contracts, orders, billing, and various types of audits (internal and external). Denise has strong communication skills which she uses to inform the sales team of the FCC guideline requirements and acts as a liaison with internal and external auditors. She maintains files in the standard format and reviews files to assure adherence to policy and procedures. Denise's experience with e-Rate makes her a valuable member of the Frontier Sales and Support Teams.

➤ **Buddy L. Reynolds**

Frontier Communications, Inc.

Vice President – Commercial Sales

Charleston, WV

Mr. Reynolds has nearly 30 years of wireline and wireless telecommunications experience, all of which as a life-long resident of West Virginia.

Buddy started his career in 1987 for C&P Telephone Company as the state's first small business account executive after graduating from West Virginia Institute of Technology in Montgomery with a B.S. in Business Management. Buddy progressed through various levels of ILEC sales, network integration, sales engineering and sales management roles for nearly 15 years before moving into corporate finance for Verizon Communications where he ultimately assumed the role of National Director of custom pricing solutions. In 2012 he accepted a position with Verizon Wireless as a member of its marketing organization focused on sales and service of its largest wholesale customers.

His career includes more than 20 years of developing, selling and supporting technology solutions to state governments across the U.S. including the State of WV. Buddy, and his wife Kathy (a middle school teacher) reside in Ripley where they both grew up and raised their two children who attend Marshall and West Virginia University.

➤ **Ryan Bailey, MBA**

Regional Sales Manager

Frontier Communications

Charleston, WV

Ryan is the Regional Sales Manager of Frontier Communications and has 18 years of IT/telecommunications experience including various leadership roles in operations, network infrastructure design, marketing and sales. He has commercial sales responsibility for all aspects of Frontier in the state of West Virginia. Ryan earned his BBA in Operations Management from American InterContinental University and his MBA from the University of Charleston.

Ryan is on the board of PROCTEC (Putnam Regional Organization of Technology and Economic Development) as well as the Glenville State College Alumni Council. Ryan has been employed with Frontier Communications for three (3) years.

Tab D8

- Tab 8 Frontier WV Business License Certificate

MO

State of West Virginia



Certificate

I, Joe Manchin III, Secretary of State of the State of West Virginia, hereby certify that

FRONTIER COMMUNICATIONS OF AMERICA, INC.

a corporation formed under the laws of Delaware

has applied for a Certificate of Authority to transact business in West Virginia as required by the provisions of West Virginia Code §§31-1-53 and 54. I further certify that the application conforms to law and is filed in my office.

Therefore, I issue this

CERTIFICATE OF AUTHORITY

to the corporation authorizing it to transact business in West Virginia and I attach to this certificate a duplicate original of the application.



Given under my hand and the Great Seal of the State of West Virginia on this day of May 8, 2001

A handwritten signature in cursive script, appearing to read "Joe Manchin III".

Secretary of State

Joe Manchin, III
Secretary of State
Building 1, Suite 157-K
1900 Kanawha Boulevard East
Charleston, West Virginia 25305-0770



Penney Barker, Supervisor
Corporations Division
Tel. (304) 558-8000
Fax (304) 558-0900
wvsos@secretary.state.wv.us

**WEST VIRGINIA
APPLICATION FOR
CERTIFICATE OF AUTHORITY**

PLEASE READ INSTRUCTIONS

www.state.wv.us/sos/
FILE TWO ORIGINALS
FEES PER SCHEDULE

CTRL # _____

1. HOME STATE INFORMATION:

- a. The name of the corporation as it is registered in its home state is: FRONTIER COMMUNICATIONS OF AMERICA, INC.
- b. State of Delaware Date of Incorp. August 19, 1992 Duration (# yrs. or perpetual) Perpetual
Warning: Tax reporting requirements in West Va. will not end until a withdrawal is filed.

2. PRINCIPAL OFFICE INFORMATION:

- a. Physical location address of the principal office of the corporation: No. & Street 180 South Clinton Avenue
City/State/Zip Rochester, NY 14646
- b. Mailing address at this location, if different: Street/PO Box 180 South Clinton Avenue
City/State/Zip Rochester, NY 14646

FILED

MAY 08 2007

IN THE OFFICE OF
JOE MANCHIN III
SECRETARY OF STATE

3. WEST VIRGINIA INFORMATION:

- a. Corporate name to be used in W. Va.: (check one, follow instructions)
 Home state name as listed on line 1.a. above, if available.
 DBA name _____
- b. Physical location address of principal office or activity in West Virginia: No. & Street _____
City/State/Zip _____
- c. Mailing address at this location, if different: Street/PO Box _____
City/State/Zip _____
- d. County in W. Va. where Certificate of Authority will be recorded: Kanawha County
- e. Proposed purpose(s) for transaction of business in West Virginia: Long distance reseller and CLEC To engage in any act or activity for which corporations may be organized.

4. AGENT OF PROCESS:

Properly designated person to whom notice of process may be sent: Name Corporation Service Company
Address 1600 Laidley Tower, Charleston, WV 25301

5. CORPORATE STATUS INFORMATION:

- a. Corporation is organized as (check one): For profit, stock (complete all remaining items)
 Non-profit, non-stock (complete all remaining items except c & d)

5. (cont)

b. Directors and Officers: (Add extra page if necessary; please list all officers.)

Office	Name	Address
See attached officers/directors rider		

c. Shares of Stock:

	No. of Shares	Class	Series	Par Value/Share or No Par Value
--	---------------	-------	--------	---------------------------------

(1) The aggregate number of shares which the corporation has authority to issue, itemized by classes and series within a class, if any, and par value of shares is:

200	Common		\$.01
-----	--------	--	--------

(2) The aggregate number of shares which the corporation has issued or are outstanding, itemized by classes and series within a class, if any, and par value of shares is:

200	Common		\$.01
-----	--------	--	--------

d. Stated Capital and Property (see instructions; estimates must be reasonable)

(1) The amount of stated capital is:

\$ 4,426,710

(2) A reasonable estimate of the value of all property to be owned by the corporation for the following year, wherever located, is:

\$ 34,688

(3) A reasonable estimate of the value of all property to be owned and used within West Virginia for the following year is:

\$ 0

(4) Proportion of all property in West Virginia is: (divide d(3) by d(2), give answer to 4 decimals)

0

(5) Apportioned value of issued capital stock is: (multiply d(4) X d(1))

\$ 0

(6) The number of acres of land it holds or expects to hold in West Virginia is:

0

e. Estimated Business to be Transacted (see instructions; estimates must be reasonable; minimal values not acceptable)
The total estimated gross amount of business to be transacted for the following year is:

(1) At or from all locations:

\$ 8,000,000

(2) At or from places of business in West Virginia:

\$ 500.

Dated: 4/18, 2001 By: [Signature], its Vice President

STATE OF New York [Signature], its Assistant Secretary
COUNTY OF Moravia Barbara J. LaVerdi

The foregoing instrument was acknowledged before me this day of 4/18/2001 by Robert L. Barrett and [Signature] (name of president or v.p. signing document)

Barbara J. LaVerdi of FRONTIER COMMUNICATIONS OF AMER, a Delaware corporation, on behalf of the corporation.
(name of secretary or asst sec. signing) (name of corporation) (state of incorporation)

My commission expires 10/31/2002

[Signature]
(Signature of Notary Public)

← (Place Notary Seal in this space)

Office of the Secretary of State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "FRONTIER COMMUNICATIONS OF AMERICA, INC." IS DULY INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL CORPORATE EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTIETH DAY OF APRIL, A.D. 2001.

AND I DO HEREBY FURTHER CERTIFY THAT THE FRANCHISE TAXES HAVE BEEN PAID TO DATE.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL REPORTS HAVE BEEN FILED TO DATE.



Harriet Smith Windsor
Harriet Smith Windsor, Secretary of State

2307210 8300

AUTHENTICATION: 1091115

010191431

DATE: 04-20-01

Officers and Directors Report

Frontier Communications of America, Inc.

Joseph P. Clayton Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Chief Executive Officer
James G. Dole Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Treasurer and Director
Donna L. Reeves-Collins Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Vice President
Josephine S. Trubek Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Secretary
Barbara J. LaVerdi Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Assistant Secretary
Richard N. Kappler Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Assistant Treasurer
James F. Mulcahy Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Assistant Treasurer
Susan I. Sipperley Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Assistant Treasurer
Robert L. Barrett Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	Exec. Vice President and Director
Joseph P. Clayton Bus Address: 180 South Clinton Avenue, Rochester, NY 14646	President and Director

Roy C. Martin
Attorney at Law
2020 Kanawha Boulevard, East
Charleston, West Virginia 25311

346-7131

4/24

5/18

Melinda

Please fill in line 5 E (2)

Missing

OK!

Tab D9

- Tab 9 Frontier Safetime Procedure

SAFETIME PROCEDURE

NOTICE

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Frontier Safetime Procedure

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1. General

1.1 Purpose

This procedure outlines the Frontier Safetime Procedure, which is the timeframe when potentially service affecting work is to be performed. This procedure replaces all existing Safetime and maintenance guidelines documents. It is intended to clarify Frontier's Safetime window policy and ensure uniform understanding and application for all Business Units.

Various departments within Frontier establish Safetime windows for their specific operations which may require a tighter window.

1.2 Responsibility

This procedure is published by the Frontier Network Operations Support Team; for more information, please contact the NOC Support Team at NOCStrategicSupportStaff@ftr.com.

1.3 Disclaimer

This procedure was prepared for the use of Frontier Network Operations and its customers. It must be used only by its employees, customers, contractors and end users when installing, operating, maintaining, and repairing Frontier Network Operations equipment, facilities, and services. Any other use of this procedure is forbidden. The information contained in this procedure might not be applicable in all circumstances and is subject to change without notice. By using this procedure the user agrees that Frontier Network Operations has no liability (to the extent permitted by applicable law) for any consequential, incidental, special or punitive damages that might result.

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2. Stop and Think – Outage Prevention

Prior to any work activity being performed on the Frontier network, the following questions must be reviewed and answered by the technician.

Ask Yourself:

- Why am I doing this?
- Is/does this activity have the potential to be service-affecting?
- Should this be done during Safetime?
- Has a change management notification been issued and approved?
 - Are all necessary parties aware?
- What is the expected result of my actions?
- Do I have a safe backout procedure?
- Do I know who to contact:
 - Pre activity?
 - For assistance?
 - Post activity?
- Should anyone be online with me?
- Am I comfortable with this method of procedure?
- Do I have all of the tools that I need to complete the task?
- Do I have a pre-test and post-test procedure for this task?
- How do I know that I did this task properly?
- Have I completed appropriate paperwork, labeling, database changes, or other records work?
- Am I willing to sign my work?

If you answer no to any of these questions, or feel that you cannot complete the job safely...



Do NOT attempt the job! Call your supervisor immediately.

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3. Scheduling Rules

3.1 Rules

- All activities that will impact customer service, or where the potential to impact customer service exists; except where noted, must be scheduled within the Safetime window.
- All network activities planned for a Safetime Window must be entered, approved and tracked in the Matrix4 application; which can be accessed via <http://matrix4.corp.pvt>.
- If a service affecting incident or service impact is imminent and remediation can't wait until Safetime, the situation should be addressed by standard fault (break/fix) management processes / emergency activity.
- For activities being performed at a customer premise where access to the building is limited to non-standard Safetime window, or a customer has agreed to the work being performed outside of the standard Safetime window, then the activity can be scheduled as such without requiring a business case.
- Advance notification is required for all **Planned** Network Maintenance activity. Upon approval, the Matrix4 application will send internal mass email communications based on submitter selections for that entry.
- A risk rating (Severe / Minimal) and potential customer impact must be assigned for all submitted maintenance activities.
- A detailed description of the work that is to be performed and/or a Method of Procedure (MOP) must accompany all maintenance requests which includes backout procedures and/or steps.
- For all activities scheduled, sufficient time should be allocated within the window for backing out of the activity should a problem arise while performing the work.
- Any deviations from established Safetime guidelines will require approval from the area General Manager and/or Central Office Equipment Installation (COEI) Manager, Technical Manager/Supervisor and possibly additional input from NOC leaders. Director level approval may be sought for those activities not following established guidelines.
- Network maintenance activities need to be updated and closed within the Matrix4 application shortly after the end of the window by the party submitting or executing the change.
- The Network Operations Center MUST be called PRIOR to executing and AFTER completing the work at 888-608-8029 - Transport activities use option 1; Switching/Power and Battery Rundown use option 2; HSI/Data/FIOS use option 3.

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4. Impact Type Risk Ratings

4.1 Severe (outage)

- Any Loss of service

4.2 Minimal (intermittent)

- Switch hits; Simplex conditions; Customer will not notice

Always STOP and THINK – Outage Prevention is the Priority. Please refer to the Questions on page 4 before performing an activity.

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5. Safetime Work Window

5.1 Normal Windows

00:00 – 06:00 Local Time

- Normal Safetime Window for all activities
- Maintenance activity should be completed by 05:00 local time, with 05:00–06:00 local time reserved for backout time

5.2 Exceptions

For those scenarios when the Safetime Window cannot be adhered to, they will be handled on a case by case basis involving the area General Manager and/or COEI Manager, Technical Supervisor and NOC leaders to determine the window.

The following scenarios (not a complete listing) will not require approval from the area General Manager, Technical Supervisor and NOC leaders:

- Customer dictates window
- Working with Department of Transportation
- Safety issues
- Involved activities where more than 5 hours is needed to execute changes

5.3 Safetime Work

The following is a non-comprehensive list of activities that need to be performed within Safetime:

- Building environmental system work, electrical circuitry
- Central Office conversion work
- Cable cuts/splicing repairs or cut-over work
- Equipment removals (cables and equipment within close proximity to working equipment exists)
- Additions:
 - Setting new bays alongside or between working bays containing equipment that supports critical infrastructure (Power, ROADM (Reconfigurable Optical Add-Drop Multiplexer), DACS (Digital Access and Cross-connect System), BUNW (Base Unit Network, GTD5 Internal Network), Space Switch, etc)
 - Running cables from an addition to working equipment
 - Equipment additions in common control areas of a central office
 - Building additions or repairs over or near equipment (roof, plumbing)
- Power/signaling:
 - Activity that could cause working equipment to lose power
 - Replacement of rectifiers and/or batteries
 - Grounding activity
- Transmission equipment work where activity could isolate trunks or a complete trunk group (e.g. radio, fiber or carrier) or host remote links
- System Version Release (SVR)/Trans
- Transmission Product Release Update (TPR):
 - Patch Level Updates
 - Generic Upgrades
 - Batch Change Supplement (BCS) implementation or generic upgrade
 - Auxiliary equipment generic upgrade work

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-
- Common control equipment work:
 - Any on-line common control activity
 - Additions to common control equipment

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6. Equipment Installation

6.1 Installation Safetime Window Activity Guidelines

The guidelines in this procedure apply to **ALL** Frontier Central Office/Technical Facilities installation personnel and installation suppliers performing any installation activities on or around Frontier's switching, transport, or video network. Any supplier that provides equipment or services for Frontier's network must follow the appropriate installation standards addressing equipment installation, method of procedures, access to buildings, job status reports, workmanship, equipment removal, and safety. Local Frontier Management will provide a copy of the standard and any guidance needed

All work performed during the Safetime Window must ensure sufficient time is planned so a graceful backout can be completed within the Safetime Window if trouble is encountered.

Local management has ultimate responsibility for scheduling of High-risk activities that have the potential to disrupt service. Contact Network Operations at 888-608-8029, Transport option 1; Switching/Power/Battery Rundown Option 2; HSI/Data/FIOS Option 3. If you are unsure about anything not listed in this procedure that may create a high-risk to Frontier's network, please contact the NOC..

No work may take place by any employee or contractor in a working equipment aisle or within close proximity of working equipment, without proper notification of local operations management personnel as documented in the MOP/High Risk/Matrix4.

No work may proceed unless documented in a properly approved Method of Procedure (MOP).

For purposes of this procedure, the term "supplier" is intended to include any personnel performing work operation on, in, or around any Network Equipment. This includes, but is not limited to contractors, Operational personnel, Outside Plant personnel, Telco Installation personnel.

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7. Network Operations Center (NOC) Contacts

7.1 NOC Contacts

Any questions should be directed to the Network Operations Center (NOC) at 888-608-8029.

1-888-608-8029 – NOC Tier I / Surveillance

- Transport – Option 1
- Switching/Power/Battery Rundown – Option 2
- HSI/Data/FIOS – Option 3

Additional NOC contacts, procedures and information can be found on the [NOC Sharepoint Site](#).

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Tab D10

- Tab 10 Frontier Network Maintenance Process

Network Operations Center

Implemented By: NetOps

Standard Operating Procedure

Title: Network Maintenance Process

Issue Date:

Revision Date: N/A

Purpose: This document outlines the Frontier network maintenance process which provides the guidelines for executing planned network changes. If the work has the potential to impact customers or the Frontier network, it must be done during a maintenance window and have an approved Matrix4 event.

Target Audience: This process applies to:

- ALL Frontier employees and contractors involved with installation, maintenance and/or support of Frontier's switching, transport, data or video network(s).
- Any supplier that provides equipment or services for Frontier's network

The criteria below are the rules governing network maintenance activities:

- All activities that will impact customer service, or where the potential to impact customer service exists; except where noted, must be scheduled within the maintenance window.
 - Midnight (00:00) – 06:00 AM local time
 - Activity should complete by 05:00 local time to allow any backouts necessary in the final hour
 - Possible exceptions (not a complete list) to performing work outside maintenance window
 - Customer dictates window
 - Work involving Department of Transportation
 - Safety issues
 - Involved events where more time is necessary to complete the changes
- All network activities must be entered, approved and tracked in the Matrix4 application; which can be accessed via <http://matrix4.corp.pvt>.
 - This is a non-comprehensive list of work that is to be performed within a maintenance window:
 - Building environmental system work, electrical circuitry
 - Central Office conversion work
 - Cable cuts/splicing repairs or cut-over work
 - Equipment removals (cables and equipment within close proximity to working equipment exists)
 - Additions:
 - Setting new bays alongside or between working bays containing equipment that supports critical infrastructure (Power, ROADM (Reconfigurable Optical Add-Drop Multiplexer), DACS (Digital Access and Cross-connect System), BUNW (Base Unit Network, GTD5 Internal Network), Space Switch, etc)
 - Running cables from an addition to working equipment
 - Equipment additions in common control areas of a central office
 - Building additions or repairs over or near equipment (roof,



Network Operations Center
Implemented By: NetOps
Standard Operating Procedure
Title: Network Maintenance Process

Issue Date:
Revision Date: N/A

plumbing)

- Power/signaling:
 - Activity that could cause working equipment to lose power
 - Replacement of rectifiers and/or batteries
 - Grounding activity
 - Transmission equipment work where activity could isolate trunks or a complete trunk group (e.g. radio, fiber or carrier) or host remote links
 - System Version Release (SVR)/Trans
 - Transmission Product Release Update (TPR):
 - Patch Level Updates
 - Generic Upgrades
 - Batch Change Supplement (BCS) implementation or generic upgrade
 - Auxiliary equipment generic upgrade work
 - Common control equipment work:
 - Any on-line common control activity
 - Additions to common control equipment
- The customer impact must clearly be identified on the entry.
 - A detailed description of the work that is to be performed and/or a Method of Procedure (MOP) must accompany all maintenance requests including backout procedures and/or steps.
 - Any deviations from the above established criteria will require approval from the area General Manager and/or Central Office Equipment Installation (COEI) Manager, Technical Manager/Supervisor and possibly additional input from NOC leaders. Director level approval may be sought for those activities not following established guidelines.
 - The Network Operations Center MUST be called PRIOR to executing and AFTER completing the work at 888-608-8029 Transport Option 1; Switching/Power/Battery Rundown option 2; Data/HSI/FiOS Option 3.
 - Standard interval for a planned event is 5 business days from the creation date.

Review Calls: Calls are held daily to discuss network changes to have additional discussion and approval for execution. The calls also cover network maintenance activities being performed by carriers affecting Frontier services.

Please be prepared on the call to cover the following associated with your entry:

- what is taking place

Network Operations Center

Implemented By: NetOps

Standard Operating Procedure

Title: Network Maintenance Process

Issue Date:

Revision Date: N/A

-
- why is this change necessary
 - is there a planned outage/interruption associated
 - what is the potential impact
 - what services are affected; major customer affected
 - is there a plan from start to finish outlining what is being done; method of procedure
 - what to do in the event of something unexpected/backout plan

Call logistics – Monday thru Friday 1:00pm ET (one hour)

- Conference bridge 585-254-7283 passcode 610877 changing 2/1/16
- Webinar: <http://webinar.frontiercorp.com/anne-webinar/>

Network Moratoriums: On occasion, it is necessary to limit network changes taking place during a specified timeframe and only those activities critical in nature are allowed to proceed. Events entered into Matrix4 during a moratorium are subjected to a higher level of approval by the network operations leadership.

- Events are placed in HOLD status of Matrix4 when the start or end date falls in the moratorium range
- It is the responsibility of the team requesting the change to provide details as to why the change needs to be executed during the moratorium to:
 - Brian Kavanagh
 - Michael Salmon
 - Larissa Singh?
 - Sheila Moseley?

Method of Procedures (MOP): MOPs are required for all Severity Level 3 activities outlining:

- Steps being taken (not high level)
- Vendor documentation for routine events is adequate
- Procedure and recovery must be included – thought process, if this then do x or if this then execute y
- Plan to mitigate any problems if they should arise

Tab D11

- Tab 11 Frontier Repair Contact & Escalation List



Repair Contact and Escalation

Carrier Services

Frontier Communications
Rochester, NY 14646

Revised: 7/21/2015

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Ticket Entry/Status Contacts and Hours of Operations

Area	Center	Number	Hours of Operation
ASR Chronic Ticket Entry/Status	Commercial Customer Support Center	855-521-0827	ChronOps@ftr.com
ASR, LSR for POTS/DSL/Line Share LSR UNI Repair/Maintenance Status and Ticket Entry	Commercial Customer Support Center	888-637-9620	24 Hours 7 Days a week

Executive Frontier Contact Listing

Frontier Communications Repair Services			
Escalation calls are to be directed to the Standard Escalation Hotline noted below. The Hotline is monitored 24x7. The Frontier Escalation Representatives are empowered to address and escalate trouble tickets. If necessary, Peer-to-Peer contact is available. Please have the correct level of management utilize the Peer-to-Peer contact list.			
Standard Escalation Hotline Commercial Customer Support Center Main number to report trouble is 1-888-637-9670			
Contact	Contact Telephone Number		
1st Level Escalation	1-877-902-1100 Option 1		
2nd Level Escalation	1-877-902-1100 Option 2		
3rd Level Escalation	1-877-902-1100 Option 3		
4th Level Escalation	1-877-902-1100 Option 4		
5th Level Escalation	1-877-902-1100 Option 5		
Peer to Peer Chart			
1	Escalation Manager		877-902-1100 Option 4 24 x 7
2	Escalation Manager		877-902-1100 Option 4 24 x 7
3	Escalation Manager		877-902-1100 Option 4 24 x 7
4	Center Manager	Matthew Freeman Matthew.Freeman@ftr.com	(O)304-526-0404 (C)304-266-5471 Business Hours
5	Vice President	Marion Wyand Marion.Wyand@ftr.com	(O) 585-777-3670 (C)585-364-9467 Business hours

Disclaimer: This documentation is for information purposes only and does not obligate Frontier to provide services in the manner herein described. Frontier reserves the right as its sole option to modify or revise the information in this document at any time without prior notice. In no event shall Frontier or its agents, employees, directors, officers, representatives or suppliers be liable under contract, warranty, tort (including but not limited to negligence of Frontier), or any other legal theory, for any damages arising from or relating to this document or its contents, even if advised of the possibility of such damages.

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CHANGE LOG

Date	Page #	Change
12/3/13	4	Escalation Organization Chart Updates
12/3/13	3	Update contact TN for LSR Repair and Maintenance
12/2/14	4	Escalation Organization Chart Updates
12/3/14	3	Combine contact TN for all Repair and Maintenance
3/24/15	3,4	Update contact TN for Escalation and Chronics
5/18/15	4	Update 5 th Level Escalation contact
5/29/15	4	Update Escalation contacts
7/08/15	4	Update Escalation contacts and name
7/21/15	4	Update Escalation contacts and name

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Frontier Communications

Authorized Signature: Ryan S. Bailey Date: 1/29/16

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 29th day of January, 2016

My Commission expires 12/27, 2020

AFFIX SEAL HERE

NOTARY PUBLIC Sheri Comer

