



Request for Proposal (RFP) Construction, Make Ready and Drop Installation

Important Dates

**all times are COB*

RFP Posted: March 11th, 2025

NDA Completion : March 25th, 2025

Written Questions Due: April 1st, 2025

Response to Questions Sent: April 8th, 2025

Final Submission Due: April 22nd, 2025

Award Date: June 6th, 2025

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Introduction

Northwest Fiberworx Communication Union District doing business as “NWFx” is seeking qualified Outside Plant (OSP) and Inside Plant (ISP) contractors to construct the first phases of its fiber optic network across its 22 towns in North Western Vermont. This first phase of construction includes but are not limited to:

- The entirety of four (4) towns, together referred to as the “FSA Groups”, comprising approximately 243 distribution plant road miles with an additional 33 road miles of planned Backbone/Lateral routes that will follow existing rights of way to serve as the backhaul for the network. This scope of work is referred to as “Backhaul Routes”. These two groups will comprise approximately 276 miles of construction.

This Request for Proposals (RFP) seeks the qualified crews and equipment needed to physically construct the network's infrastructure. This will include but is not limited to Outside Plant, Inside Plant, splicing, Customer Premises Equipment (CPE) as well as One Touch Make Ready (OTMR), both simple and complex, in the telecommunication space.

The build includes three (3) phases over the next 1.5 years of construction with expected completion in Q4 of 2026. Phase 1 and Phase 2, consisting of a distribution plant, will be expected to be constructed simultaneously with the backhaul link being the last phase. More details of each phase including mapping, preliminary low level designs (LLD) and BOMs will be released once an NDA is established with the bidder.

- Phase 1 will consist of 15 FSAs and 105 road miles of plant with embedded backhaul routes.
- Phase 2 will consist of 10 FSAs and 138 road miles of plant with embedded backhaul routes.
- Phase 3 will consist of approximately 33 road miles of backhaul plant to connect both areas of the network.

The architecture of the network is a Passive Optical Network (PON) designed around Fiber Service Areas (FSAs) and Backbone Routes. FSAs are geographic areas that are organized to serve customers. They are independent of town boundaries and are generally limited to less than 300 premises and will connect back to network Points of Presence (POP).

FSAs are served by Points of Presence that house network equipment for transmission and distribution. Backhaul Routes will follow well maintained roads to interconnect the Points of Presence. A portion of these routes will reside outside of the FSA Group. This portion is described as the Backhaul Routes.

The network architecture will include Fiber Distribution Hubs (FDH), multiport service terminals (MSTs) and various types of splicing and splitting equipment. The OTMR component of this RFP will require that the contractor is authorized to work on but not limited to following incumbents' plant: Comcast, Consolidated Communications, VTel, and Firstlight

NWFX will release a KMZ sample of the detailed design to bidders after signing an NDA with NWFX. This will be released to give a bidder a chance to see the network design for more accurate bidding, analysis and to understand our design parameters. NWFX will use this opportunity to assess the bidders ability to work with, utilize and be comfortable with digital formats that will be common in this project.

NWFX encourages women- owned enterprises and small and minority-owned businesses to submit proposals in response to this RFP.

Organization Information

NWFX is a Communications Union District that was established in 2020 and now comprises 22 member towns in northwestern Vermont. A Communications Union District is a municipal district that has the sole purpose of providing high speed broadband to areas in which commercial providers have failed to provide adequate service. NWFX is managed by a Governing Board that includes an appointed representative of each member town.

Through legislation in 2015, 2019, and 2021, the state of Vermont established the legal framework for Communications Union Districts, designated these districts as the primary vehicle for delivering high-speed broadband to unserved and underserved areas, provided seed funding and technical support for initial planning, and established the Vermont Community Broadband Board (VCBB) to manage the distribution of federal funds provided to the state for this purpose through the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA). In 2021 and 2022, the VCBB has awarded grants to NWFX totaling \$20.2 million. NWFX expects to receive an additional grant award from the VCBB in 2025.

NWFX intends to build, own, and operate a fiber optic broadband network. To accomplish this purpose, NWFX has contracted Great Works Internet Vermont (GWIVT) of South Royalton VT to provide necessary professional services, including design, engineering, construction management and operations. GWIVT is managing on behalf of NWFX the issuance of this RFP, the evaluation of proposals submitted in response, and the negotiation of commercial terms. NWFX's Governing Board will make all final decisions regarding proposal selection and contract terms.

RFP Goals and Deliverables

1. Acquire a construction proposal detailing crewing, equipment, logistics and supervising capabilities of the contractor to achieve desired construction pacing, design and engineering plans set forth by NWFX for this build.
2. Obtain a price book for fixed pricing of construction and make ready line items including time and equipment billables with description of work.
3. Assess the contractor's ability to supply all necessary OSP/ISP strand hardware for construction and make ready needs that meet or exceed relevant industry standards and best practices. Include a cost plus sheet for OSP equipment and hardware supplied by Contractor.
4. Assess the respondent's ability to provide necessary management structure to allow precise coordination of construction and make ready operation as needed and desired by NWFX/GWIVT engineering teams.
5. Assess the respondent's ability to provide accurate and timely as-built reporting on work completed within negotiated turn around time frames within owner supplied digital platforms.
6. Assess the respondent's ability to implement, use and be accountable for any type of field work management software that the owner provides that can be used in the field by crews and management to track progress and help generate billing. (Examples Ocius X, Vetro Mobile)
7. Determine whether the respondent is currently qualified or able to be qualified to do OTMR for all attachees in the telecom space and coordinate communication of MR work with them (including but not limited to Consolidated Communication, Comcast, First Light, Vtel).

Time Frame and Pacing

Construction

This phase of the project is expected to start in the Q2 of 2025. The general pacing of this project will be based on a monthly construction schedule of approximately 16 miles a month of both OTMR and

Construction. This Volume Commitment is based on current utility make ready estimates and has been established as a baseline pace to support constant fiber construction operations.

This pace is expected to increase as the project ramps up and bids should include the contractor's ability and commitment to adding additional resources as necessary to accommodate new pacing. Contractor should be aware and able to compensate for some seasonal and weather related fluctuations of work. In particular noting winter and mud season pacing may be slower and summer and fall seasons faster.

Contractor will be required to meet these changing needs accordingly and will be expected at the very least to hold the basic pacing as described above while being able to increase pacing if the projects make ready pace allows.

Make Ready Operations

Simple OneTouch Make Ready on all incumbent communications plant is expected to be done by the contractor on the vast majority of this project's mileage. It is expected that the contractor has prior authorisation or ability to hire authorized subcontractors to do such work on the incumbent telecom carriers plant. This work will be simple make ready and is expected to be done inline with construction operations and as part of the 16 miles a month pacing.

Summary

This section of the RFP is meant to briefly and easily convey the general scope of this project and its needs. In the event that the respondent identifies any difference between the simplified explanation in this section of the RFP and the details of the scope of work and required terms and conditions found in Exhibits 1-6 below, the respondent should base its response on the details in Exhibits 1-6.

This project will require a skilled OSP/ISP contractor able to perform one touch make ready, construction, drop install and splicing work with its own internal management who is capable of communicating with the owner's engineering team and adhering to time frames and pacing listed above. They will also be capable of onboarding and utilizing the owner's project management software/practices for efficient construction, as built and billing purposes.

Most of the construction is in rural and underserved communities with varied terrain and may require specialized equipment for parts of the build including terrain and season aspect. This includes dealing with off road pole lines, river crossings and various ROW that may require specialized equipment (four wheelers, snowmobiles, drones etc) to access and assess.

Based on NWFx observations, the vast majority of OTMR will be simple in the form of lowering, raising and transferring when necessary of the incumbent plant. It is expected that the contractor will use its contacts

to get qualified with regional management of the existing incumbents. NWFX will have limited ability to help in this process.

The winning contractor is expected to be able to supply basic OSP strand hardware (Strand, nuts, bolts, clamps, snowshoes, anchors, bonding etc.) as part of their labor and materials setup including advanced materials (i.e., poles, push poles, etc) should they be necessary in OTMR or new plant builds. NWFX will supply OSP plant hardware (Cases, Pigtails, Multiports, etc) and Customer Premises Equipment (drop cables, ONT enclosures, electronics, etc).

The pacing of 16 miles a month is based on utilities make ready speeds. This is included to give the contractor an idea of what we expect as the baseline rate of construction/OTMR per month for keeping crews and trucks constantly rolling. We expect this rate will increase as the project progresses and that there will be some seasonal aspects (slowing down and speeding up) that are outside our control. We are doing so to be transparent with our future construction partner so they can rely on this pace for resource allocation as well as trust us to request commitments of additional resources only when new pacing allows.

Bidders are encouraged to bid on some or all of the scope of work, with priority given to full bids. Full bids may include existing relationships and use of subcontractors for sections of the RFP in one single bid package. Depending on the amount of bids received and the capabilities of the bidders, multiple contracts may be awarded.

At a minimum, bidders must provide: estimated project cost and contingencies, per line item pricing & description books, construction plan (crews, staging and logistical abilities) to meet the project pacing, ability to anticipate, store and supply a constant amount of materials based on projected needs and pacing. See full list for expanded directions.

Scope of Work for the Three (3) major categories are as follows:

1. **Outside Plant Construction (OSP) & Splicing, Scope A** includes all OSP construction and splicing necessary for fiber optic network build at desired pace and timelines. An expanded scope is included in **Exhibit 3**.
2. **Inside Plant and Customer Premises Equipment (CPE), Scope B** includes, at a minimum, drop fiber installation, ONT enclosure installation and a single fusion splice. Bidders may also include the installation of electronics and customer service activation. An expanded scope is included in **Exhibit 4**
3. **One Touch Make Ready (OTMR), Scope C** includes but is not limited to simple and complex make ready in the telecom space for any and all incumbent attachees. It includes the possibility of pole replacement and setting for some portions of the build. An expanded scope is included in **Exhibit 5**

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RFP Instructions and Procedures

Information provided to potential contractors/vendors is confidential and proprietary to NAFX. Information relating to this RFP (including this document) or NAFX organizational/business practices may be used solely for the purpose of preparing the proposal and is not authorized for release without written permission.

Biddeford Internet Corp. dba GWIVT is an independent telecommunications company contracted by NAFX to manage this RFP process. Unless otherwise directed, GWIVT will act as the single point of contact for this process and will collaborate with NAFX and participating bidders. GWIVT should be contacted by email at NAFX-Requests@staff.gwi.net

The steps and timing for NAFX's issuance of this RFP, bidders' responses, and NAFX's evaluation of these responses are presented at the top of page 1.

The first step following issuance of this RFP is execution of a Non-Disclosure Agreement ("NDA") that is attached as Exhibit 7. Upon submission by a potential respondent of an executed copy of this NDA, GWIVT will release on behalf of NAFX the contents of Exhibits 1, 2, and 3 and the KMZ sample described in the Introduction section above.

Prospective bidders may submit questions by email to NAFX-Requests@staff.gwi.net on or before the close of business on April 1st, 2025. NAFX will provide written answers to all questions received to all known potential respondents and publicly on NAFX.net on or before the close of business on December 16.

Proposal submissions are due on or before the close of business on April 22nd, 2025.

NAFX expects to award one or more contracts on or before June 6th, 2025.

All submitted proposals are prepared at the bidder's expense and considered valid for three (3) months.

NAFX will not reimburse for any costs incurred during the RFP process.

Bidders should include the following:

Proposal Format

For consistency and ease of understanding, proposals should utilize a structure as defined below:

1. Table of Contents
2. Executive Summary
3. Company Information
 - a. Provide your company information, including legal name, state of incorporation, year of incorporation, type of entity, all contact information, and a list of affiliated companies or other names you have done business as.

- b. How many employees comprise your workforce: a) full time; b) part time; c) contract?
 - c. Are you currently under contract or negotiations for a contract within the State of Vermont? Any other communication union district or municipality? Please list.
 - d. If selected as a vendor of choice, how soon can your company begin providing construction services to the owners?
4. Experience and References
- a. Please provide the following for your company and all Subcontractors:
 - b. Please provide three (3) customer/client references including name, email, address, project timeline, and description of work.
 - c. Please list the training certifications that your technicians hold and any experience with standards such as NECA 301 Standard and OTDR/loss testing.
 - d. Please provide your company's safety program, as well as any OSHA/VOSHA reportables within the past 3 years.
5. Key Personnel (description of their role, responsibilities and experience)
- a. How many employees comprise your workforce: a) full time; b) part time; c) contract?
 - b. What are the functional groups within your company?
6. Project Approach
- a. Which activities of Scope A, B and C will your company perform? Which activities will your company Subcontract out?
 - b. List what primary tools, equipment, software and hardware you use for Contractor project management.
 - c. Please identify how your company will conform to all requirements for all scopes on which you bid. Please identify any subsections you do not believe you can or will conform to. Please identify any particular subsections that you do not believe are necessary or will change your proposal.
 - d. Describe your recommended project management approach for coordination and communication.
7. Detailed Pricing
- a. Please provide a firm fixed price for the work described in either Scope A, B, C, or any combination of the three. Respondents must provide separate prices for each Section for which they are bidding. For each Section, the Contractor must provide their unit price labor costs for installation of the items included in the OSP Strand Hardware Exhibit 7.
8. Resource availability and expected timeframe to completion

- a. Describe the schedule you will meet for this project including seasonal and other changes that might occur. Also, specifically describe how you intend to meet that schedule and what kind of guarantees or assurances you can provide. In particular your company's ability to keep construction pace be it equipment and or experience during both winter and mud season months as well as a strategy to mitigate the risk of potential seasonal delays.
9. Miscellaneous (conflicts of interest, exclusions, etc)
 10. Acceptance of all terms and conditions stated in Exhibit 6.

Vendor Selection Criteria

NWFX will use the information submitted by the bidder to make a decision that best achieves the organization's goals. Fulfillment of these goals is achieved by evaluating the proposals based on the following criteria (weighted in accordance with the percentages below):

1. Contractor experience (10%)
2. Quality and completeness of response (5%)
3. Ability to fulfill all functions requested for Scope A, Scope B and Scope C (15%)
4. Available resources for project completion (30%)
5. Project Approach (10%)
6. Cost (30%)

Though budget restrictions may weigh heavily in the decision making process, NWFX reserves the right to select the best value, which may not be the lowest cost.

NWFX shall have the authority to evaluate responses and select the bidder(s) as may be determined to be in the best interest of NWFX and consistent with the goals and performance requirements outlined in this RFP. NWFX reserves the right to obtain clarification or additional information necessary to properly evaluate a proposal. Failure of bidder to respond to a request for additional information or clarification could result in rejection of that bidder's proposal. To secure a project that is deemed to be in the best interest of NWFX, NWFX reserves the right to accept or reject any and all bids, in whole or in part, with or without cause, and to waive technicalities in submissions. NWFX also reserves the right to make purchases outside of the awarded contracts where it is deemed in the best interest of NWFX.

Revisions to RFP

If the owner determines that it is necessary to revise any part of this RFP, or if additional data is necessary to clarify any of its provisions, a supplement will be posted to the owner's website. The owner reserves the right to amend the RFP at any time prior to the deadline for submission of responses, and will notify all bidders who are on the owner's distribution list.

Retainer

The winning bidder will negotiate an industry standard retainer with the owner upon acceptance of the Contract. This retainer will be a safe guard for both owner and contractor to follow through with the project scopes in a timely and professional manner.

Required Contract Provisions

Several provisions are required by the State of Vermont to be included in the final contract awarded to the winning bidder. These provisions are included in their entirety as **Exhibit 4**. Vendors must agree to follow all required Vermont Standard Contracting Conditions and incorporate all of the required conditions in the final contract.

Bid Delivery Instructions

1. E-MAIL BIDS: E-mailed bids will be accepted via submission to NWFX-Requests@staff.gwi.net. Bids must consist of a single email with a single, digitally searchable PDF attachment containing all components of the bid. Multiple emails and/or multiple attachments may not be accepted. There is an attachment size limit of 25MB. It is the Bidder's responsibility to compress the PDF to meet this limitation.
2. FAX BIDS: Faxed bids will not be accepted.
3. U.S.Mail: Paper bids will not be accepted due to delivery delays and staffing related issues.

EXHIBIT 1 - Scope A

Outside Plant and Splicing

A.1. Performance Requirements

A.1.1. General Information

This section provides information in regards to the construction of the Fiber Optic Broadband network. It is required that a bidder's proposal package have the fiber construction costs and the One Touch Make Ready costs separated for the owner's review.

A.1.2. Construction Requirements

A.1.2.1. Construction Scope

The phases of construction within this project are composed of 25 Fiber Serving Areas (FSAs) with multiple Point of Presence (POP) locations throughout. It supports a mix of Fiber Distribution Hubs (FDH) either at 288 or 432 depending on FSA needs. The fiber design utilizes 432, 288, 144 count, 72 count and 48 count loose tube fibers for both backhaul and distribution needs. Fiber for this RFP will be provided by the owner unless otherwise approved for special purposes.

Serving Terminals will utilize a multiport set up and will have varying port numbers and dedicated fiber counts in order to stay within the same buffer tube for splicing in the active fibers. There are also pre-engineered fiber counts within each terminal for future growth. The remaining growth will be provisioned using spare fibers.

All serving terminals will be placed eighteen (18) inches to the right of the serving pole. The only exceptions will be dead end poles and road crossings, where the terminal will be placed eighteen (18) inches to the left of the serving pole. The designated terminal placement is designed to ensure ladder access for the network operator's routine maintenance and future installations.

Each restoration slack loop is to be one-hundred and fifty (150) feet in length and placed per the design. Slack loops have been strategically placed throughout the network to help in the event of restoration efforts and future expansion needs. There is a specific slack loop symbol within the design to identify proper placement.

All fiber optic cable to be installed along the aerial pole line and in buried conduits shall be

installed in accordance with the engineering design and the pole attachment licenses issued by utilities . The project will encompass the complete installation of the fiber facilities, where it will be tested from end to end for attenuation and continuity.

A.1.2.2. Installation Materials

The Contractor shall be responsible for procuring both major and minor strand materials, and providing warranty for all of the major materials. The Contractor is held responsible for all materials through the owner's acceptance of the network. If the materials supplied by the Contractor are found to be defective, or do not conform to the specifications upon testing, the owner reserves the right to have the Contractor immediately replace the materials at the Contractor's expense, and through its procurement process. Excess materials purchased but not used during the construction will be property of the owner upon acceptance of the network.

A.1.2.3. Staging Area

The owner may operate a fiber staging area for the fiber construction or may under general condition request the contractor to make such arrangements. If it is owner supplied the location will be released to the winning bidder. If it is something to be assigned to the contractor it will be negotiated as part of the final contract with the Contractor.

A.1.2.4. Fiber Optic Facilities Installation Requirements

The Contractor shall be experienced in outside plant facilities installation on utility poles and conduits. The Contractor shall install new fiber optic cable and associated items according to the following:

1. As indicated in Fiber Design.
2. All fiber optic cable to be installed along the aerial pole line and in conduit shall be outside plant fiber optic cables supplied by NWFEX.
3. All fiber optic cable shall be installed as per manufacturer's best practices and tensioned and as per manufacturer's specifications.

4. The Contractor is responsible to install all necessary pole hardware suitable for the provided cable.
5. High visibility cable tags or markings containing the owner's information (provided by owner) shall be installed at every pole, splice enclosure, and riser guard, and be visible while standing on the ground.
6. High visibility cable tags or markings containing the owner's information shall be installed every 20 – 30 feet of fiber inside a commercial building.
7. Industry approved cable lubrication shall be used as required during cable placement in innerduct or conduits.
8. All conduits shall be weather sealed at both ends.
9. MSTs are to be installed approximately 18 inches to the right of the pole
10. All Terminal Ports will be spliced back to the FDH.
11. Labeling of the cable sizes and direction is required. All fiber strands spliced into ports will be tagged and identified per terminal splice design.
12. At each aerial splice location 150 feet of cable will be left on each cable end for splicing, or as otherwise indicated on the construction drawing. The cable ends must be sealed watertight at all times to prevent water from entering the cable.

It is important for the Contractor to follow the cable manufacturer's installation recommendations. At a minimum, fiber optic cables shall be installed and tested in according to NECA/FOA 301, Standard for Installing and Testing Fiber Optic Cables.

A.1.2.6. Fiber Optic Cable Splicing Requirements

1. All fibers and connector assemblies (pigtailed) shall be fusion spliced.
 - a. All splices are to be organized and secured within an approved fiber optic splice Closure.
 - b. The Contractor shall follow the manufacturer's recommended cable preparation

and routing procedures for cable entry into the provided fiber optic splice closure.

2. All splicing shall be completed as per splice details provided prior to the start of construction for each identified splice location.

a. Any changes shall be approved by The owner prior to completion.

3. The Contractor shall maintain a Splice Log Book for each splice enclosure.

a. Each splice enclosure will have a unique identifier as per the design prints and shall be large enough to be visible from the road. The splice enclosure identifier shall also be referenced on the Splice Log Book cover.

b. The Splice Log Book shall include a copy of the original splice detail sheet, a red-lined copy of the as-built detail, Optical Time Domain Reflectometer (OTDR) Test results of the fibers spliced at that location, pictures of the organization and layout of the interior of the enclosure, and pictures of the enclosure on the cable or strand.

c. The Splice Log Book shall also include any additional pertinent information not Listed.

d. The Splice Log Book shall be delivered to the owner electronically upon request and at the end of the project.

4. All splicing shall be measured with an OTDR and tested to ensure acceptable splice loss values are achieved.

5. Labeling of the cable sizes and direction is required. All fiber strands spliced into ports will be tagged and identified per terminal splice design. Please refer to Appendix O: Outside Plant Labeling & Naming Standards.

6. All tools and equipment used shall be in excellent working order.

a. The Contractor's cleaving, splicing and cable preparation equipment will be reviewed and approved by the owner prior to beginning any splicing work.

b. All splicing equipment shall be calibrated within 12-months of use on this project. Certificates of calibration for splice equipment shall be submitted to the owner for review and approval.

A.1.2.9. Documentation Requirements

The Contractor will provide an as-built packaging at the completion of assigned sections of this project. Contractor will be provided construction maps in digital format and will be required to update owner software and or mapping formats of any owner authorized changes in position and placements of equipment. This package shall include at a minimum the following items:

- Updated in owner provided software/formatting, including any and all changes implemented
- Detailed splicing report consisting of:
 - Network
 - FDH
 - POP
 - Splice cases
 - Terminals
- Fiber span footages
- Splice locations
- Strand grounding locations
- Multi-port locations
- Slack loop locations
- Routes of all wire/cables installed in format/software provided by owner
- Test results for optical fiber testing
- Warranty Package to include dates (Product Warranty)
- Certificate of Acceptance (pre and post-installation)
- Summary sheet of test results for quick reference

Test results shall be provided as indicated in the testing sections of this specification. A .SOR (or similar industry standard format)

file as well as a .pdf output will be required. If changes are noted in the field, they shall be indicated on the vendor's updated drawings. The updated drawings shall be provided to the owner in electronic format.

A.1.2.10 Job Completion

Job completion of the network occurs when the Contractor:

1. submits last invoice;
2. notifies the owner that construction is complete;
3. final inspection has occurred;
4. all punch list items have been completed;
5. all equipment and materials warranties have been transferred to the owner;
6. all construction materials and fiber reels have been returned to the owner's staging area with a list of remaining items;
7. all the Documentation for the Fiber Project is submitted
 - a. Design As-Builts
 - b. Reel Documentation and test data
 - c. Fiber Organization Drawing
 - d. Fiber testing results end to end for attenuation and continuity
 - e. OTDR results, including each individual Splice enclosure Log Book.

A.1.3. Safety Requirements

The Contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions to reasonably protect the public and private property connection with the performance of the work covered by the contract.

The Contractor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Contractor shall at all times

comply with the regulations set forth by Federal, State and local laws, rules, and regulations concerning "OSHA" and all applicable state labor laws, regulations and standards.

The Contractor will maintain a clean, organized and safe work environment with special attention paid to ROW work through private property for the duration of the project timeline. Private property ROW work will be part of this operation and may be done simultaneously to active farming operations or other active operation that will require additional caution and supervision by the contractor. The contractor is responsible for all damages incurred as a result of violating this provision brought up by private or public entities.

A.1.4. Warranty Requirements

1. The Contractor shall warrant that all materials furnished shall be new, and free from defects.

2. The Contractor shall warrant that the materials and workmanship used in this installation are as herein specified, and shall provide all material and labor required to make good any defects due to faulty materials or workmanship which become apparent within a one year period from substantial completion.

3. The equipment and materials manufacturers are expected to recognize that they are responsible for the failure of their products to perform in accordance with data furnished by them or their authorized representatives, as well as misrepresentations of such data.

a. When the products have been installed in accordance to the manufacturer's published or written instructions and recommendations, and such products fail, then the Contractor and the manufacturers are responsible for replacement of the products and all associated work and materials without additional cost to the owner.

4. Warranty information is required for all materials supplied by the Contractor.

5. Damage by vandals, fire, traffic accidents or "acts of God" is excluded from warranty.

EXHIBIT 2 - Scope B

Inside Plant and Customer Premises Installation

B.1. Performance Requirements

B.1.1. General Information

This section provides key material and workmanship requirements for Customer Premises Installation and their care, equipment installations or removal and shall be a basis for audit and evaluation of a job. These installs are based on pre-construction sign up and are expected to be in the range of 1100 to 2300 customer premises over the course of three (3) years.

The experienced customer premises installation firm shall not deviate from standards or guidelines outlined in the section without written permission from the owner. Any questions not answered by this section, the job specifications, drawings/records, etc. shall be referred to the owner for resolution and documented in the job log by the Installer.

B.1.2. Customer Premises Installation

A pre-construction signup period will commence at the earliest possible date, be done concurrently with Scope A and in those areas under the Phase 1,2 and 3 build plan. The pre-construction signup period will be available to qualified residents prior to the start of construction and limited to areas that will be constructed immediately following the signup period. This rolling pre-construction signup period will be determined by the owner and the schedule will be provided to the selected contractor. The customer premises list will be made available to the contractor 30 days prior to the commencement of the installation period. This list will include:

- Customer Name, Address and Contact Information
- Copy of a signed Customer Subscriber Agreement including permission to access the premises and install a fiber enclosure
- Type of drop: Aerial or via cleared buried conduit with available pull string

- Estimated fiber drop length

The Contractor is solely responsible for scheduling customer premises installations with the customers directly (if required). Scheduled appointments should not overlap between customers.

There are two elements of a standard Customer Premises Installation: premises drop installation and premises Optical Network Terminal (ONT) installation. At a minimum, the Contractor will be responsible for the drop installation, including the plastic fiber optic enclosure. Contractors are encouraged to include the installation of the electronics as an additional service for an added fee.

B.1.3. Premise Drop Installation

This operation consists of installing a fiber cable drop from the nearest aerial pole line Multiport Service Terminal (MST) via an aerial run and/or a cleared buried conduit to an exterior fiber optic enclosure attached to the Premises at a location directly adjacent to the electric, telephone and/or cable service drop or conduit.

This enclosure will contain any excess drop fiber. It is important for the Contractor to follow the cable manufacturer's installation recommendations. At a minimum, fiber optic cables shall be installed and tested in accordance with NECA/FOA 301, Standard for Installing and Testing Fiber Optic Cables.

B.1.3.1. Premises Drop Installation Count

All surveyed premises will have the drop and exterior enclosure installed during the Premises Drop Installation Period if they choose to subscribe to NAFX services. The owner has modeled the take rate of potential customers over the period of Phase 1,2 and 3 over the next two years and expect approximately 10 to 20 pre construction sign ups a month on average. This number may change at the discretion of the owner and operations.

B.1.3.2. Cleared Buried Conduits

When appropriate the Premises owner will be responsible for providing a cleared (or reliable open space) buried conduit prior to the scheduled arrival of the Contractor at the Premises location. Any required trenching or clearing of buried conduits is outside this scope of work.

B.1.4. Optical Network Terminal (ONT) Installation

Following the Premises Drop Installation, where specified by the Owner, the Contractor will install an Exterior ONT, a small UPS power protection device, a wireless gateway and the required cables to support the installation.

All ONT installations include the following:

- All fiber optic connections will be inspected using a fiber optic inspection microscope and cleaned (if necessary) before making connections to the optical infrastructure.
- The Exterior Clamshell enclosure must be grounded according to manufacturer specifications.
- The Customer must provide a 110v power receptacle, inside the home, within 10 feet of the ONT location.
- Once the ONT has been installed the Contractor will verify that the ONT, It's Ethernet, and Wi-Fi are operating properly.
- A brief overview of the service and testing results will be reviewed with the customer.

B.1.5. Standard Exterior ONT Installation

Each standard exterior ONT installation includes the following:

- Install Optical Network Terminal (ONT) inside External Fiber Enclosure
- Connect assigned MST port to optical splitter in the Fiber Distribution Hub (FDH)
- Install power supply inside premises
- Mount Battery Backup to interior wall
- Connect Battery Backup to AC power
- Connect Battery Backup to ONT by drilling a hole and running low-voltage power cable from the UPS to the ONT.
- Includes drilling a hole and running a Cat6 run no more than 25 feet inside the building.

Cat6 cable will be properly secured to prevent sags or accidental damage.

** A detailed installation guide with additional instructions will be provided to the winning bidder

B.1.7. Customer Premises Installation Testing

Installation testing will include:

- Measurement of optical receive power and confirmation that optical signal is within manufacturer specification.
- Connect Contractor laptop directly to ONT RJ-45 port
- Obtain public IP address
- Speed test using a testing service provided by the Network Operator
- Contractor must utilize a laptop that is capable of Gbps symmetrical speed test results
- Test results will be recorded electronically by the Contractor

B.1.7.1. Customer Turn-up and Testing

Turn-up and testing will include:

Wi-Fi

- Walk through Wi-Fi coverage with Customer
- This should be a brief walk-through that demonstrates in-building Wi-Fi coverage with the customer to better understand coverage issues before the technician leaves the premises
- Instruct the customer on use of WPS button for connecting their devices

Where the Customer chooses to use their own Wi-Fi router, the technician will:

- Disable Wi-Fi in the gateway/router
- Connect customer's router to gateway/router using customer-provided cable

- Provide the customer with documentation provided by NWFx
- Obtain signature from customer indicating their acceptance of the service

B.2. Customer Premises Installation Bid Structure

Because the actual count of ONTs will fluctuate, bidders should provide the following fixed and variable cost components:

- Per customer cost for the Customer Premises Installation at any premises identified during the pre-construction signup period.
- Per customer ONT installation cost to install an exterior ONT, UPS and Gateway/Router
- Details of other services that may be offered by the Contractor on a direct-to-customer time and materials basis, including but not limited to:

Cost to install a Cat6 outlet up to 100 feet

B.3. Optical Network Terminal (ONT) Specifications

** A Optical Network Terminal (ONT) Specifications sheet will be provided to the winning bidder.

B.4. Staging Area

The Contractor will make the necessary measures to utilize their existing yard and or create a new and secure yard for staging all necessary equipment and materials supplied by both the Owner and Contractor. There may be a possibility for the contractor to utilize part of an existing owner facility, this will be negotiated as part of the final contract with the Contractor.

B.5. Safety Requirements

The Contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions to reasonably protect the public and private property connection with the performance of the work covered by the contract.

The Contractor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Contractor shall at all times comply with the regulations set forth by Federal, State and local laws, rules, and regulations concerning "OSHA" and all applicable state labor laws, regulations and standards.

The Contractor will maintain a clean, organized and safe work environment with special attention paid to ROW work through private property for the duration of the project timeline. Private property ROW work will be part of this operation and may be done simultaneously to active farming operations or other active operations that will require additional caution and supervision by the contractor. The contractor is responsible for all damages incurred as a result of violating this provision brought up by private or public entities.

B.6. Warranty Requirements

1. The Contractor shall warrant that all materials furnished shall be new, and free from defects.

2. The Contractor shall warrant that the materials and workmanship used in this installation are as herein specified, and shall provide all material and labor required to make good any defects due to faulty materials or workmanship which become apparent when the equipment is installed and tested at the Customer Premises.

3. With respect to the ONT equipment the Contractor will provide that the manufacturer's customary warranty passes to the Town.

4. The equipment and materials manufacturers are expected to recognize that they are responsible for the failure of their products to perform in accordance with data furnished by them or their authorized representatives, as well as misrepresentations of such data.

- a. When the products have been installed in accordance to the manufacturer's published or written instructions and recommendations, and such products fail, then the Contractor and the manufacturers are responsible for replacement of the products and all associated work and materials without additional cost to the owner.
5. Warranty information is required for all materials supplied by the Contractor.
6. Damage by vandals, fire, traffic accidents or “acts of God” is excluded from warranty.

EXHIBIT 3 - Scope C

One Touch Make Ready

C.1. Performance Requirements

C.1.1. General Information

This section provides information in regards to the One Touch Make Ready (OTMR) construction services on all incumbent plants to current standards and specifications. Existing incumbents include but are not limited to Comcast, Consolidated Communication, FirstLight and Vtel. Pole owners will include, in descending order of pole amounts, Green Mountain Power, Jacksonville Electric and Consolidated Communications with the latter being the only owner that may require complex make ready like pole replacement and transfers. Contractor will need to be able to supply an engineering asset for the remaining pole application field surveys 'Ride Outs' at the time of operational start.

C.1.2. Construction Requirements

C.1.2.1. OTMR Scope

The OTMR operations for the first three (3) phases of this project will encompass 90% of the expected 508 build mileage and include the need for a qualified asset to represent the owner and all telecom make ready needs on approximately 40 pole application field surveys.

Description of Services and Deliverables

1. Contractor will provide Services which include, but may not be limited to: lowering or raising incumbent plant, transfer and/or removal of outside plant cable and service drops, transfer and/or removal of all hardware and connections, removal and placement of down guys, transfer

of pole mounted terminals, cable dips or pedestals, tree trimming removal and proper disposal of utility pole, topping of power pole when transfers are completed, and any other required miscellaneous pole work that would take place at the ground level, in coordination with their replacement of State- or incumbent-owned utility poles.

2. Contractor will provide a reliable engineering asset to complete the remaining pole application and make ready field surveys. This person shall be knowledgeable in all aspects of OSP to appropriately assess the condition and needs of existing plant for the owner's construction interest.
3. Contractor will already be qualified or become qualified prior to operations to conduct simple and complex make ready on all incumbent telecom plant in accordance with project needs. Failure to furnish such proof may disqualify contractor's bid.
4. Contractor shall furnish and be responsible for all supervision, labor, tools, equipment, power, transportation, fuel, material, and supplies required to perform the work, except those items that will be furnished by the owner.
5. It shall be the responsibility of the contractor to be familiar with the stipulations of all federal, U.S. Forest Service, County, City, State, and local regulations and required permits. If those regulations are more stringent than the owner's specification, then such regulations will govern.
6. Contractor shall, at their own expense, repair any damage attributed to them that may occur within 12 months after completion of a project. If, within five (5) days after being notified of such needed repairs, Contractor has not complied with the request, the owner may have the repairs made by other parties and bill the Contractor for such repairs. In all cases, the Contractor assumes full liability for the work performed and is responsible for settlement of all damage claims as promptly as reasonable.
7. Contractor will receive all work items through the owner's electronic work order system. Contractor will close out all applicable records following the completion of the work per the guideline provided. If applicable, the owner may request that the Contractor close items in State-owned applications (ex. NJUNS).
8. Contractor shall provide a before and after photo record of work completed by location. All photos shall be clear, and the owner must have the ability to readily and easily identify all work in the photos submitted by the Contractor.

9. If a transfer cannot be completed by Contractor, Contractor shall provide the owner with detailed field information on the work item.
10. If the owner is not the “next to go” at a location, then Contractor lower or raise the existing telecom plant accordingly.
11. Contractor will update and account for all work done through the owner's digital platform.
12. The Contractor will maintain a safe, clean and organized work environment for the duration of the project timeline. The contractor is responsible for all damages incurred as a result of violating this provision.

B.5. Safety Requirements

The Contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions to reasonably protect the public and private property connection with the performance of the work covered by the contract.

The Contractor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work. The Contractor shall at all times comply with the regulations set forth by Federal, State and local laws, rules, and regulations concerning “OSHA” and all applicable state labor laws, regulations and standards.

The Contractor will maintain a clean, organized and safe work environment with special attention paid to ROW work through private property for the duration of the project timeline. Private property ROW work will be part of this operation and may be done simultaneously to active farming operations or other active operations that will require additional caution and supervision by the contractor. The contractor is responsible for all damages incurred as a result of violating this provision brought up by private or public entities.

B.6. Warranty Requirements

1. The Contractor shall warrant that all materials furnished shall be new, and free from defects.

2. The Contractor shall warrant that the materials and workmanship used in this installation are as herein specified, and shall provide all material and labor required to make good any defects due to faulty materials or workmanship which become apparent when the equipment is installed and tested at the Customer Premises.
3. With respect to the ONT equipment the Contractor will provide that the manufacturer's customary warranty passes to the Owner.
4. The equipment and materials manufacturers are expected to recognize that they are responsible for the failure of their products to perform in accordance with data furnished by them or their authorized representatives, as well as misrepresentations of such data.
 - a. When the products have been installed in accordance to the manufacturer's published or written instructions and recommendations, and such products fail, then the Contractor and the manufacturers are responsible for replacement of the products and all associated work and materials without additional cost to the Owner.
5. Warranty information is required for all materials supplied by the Contractor.
6. Damage by vandals, fire, traffic accidents or "acts of God" is excluded from warranty.

EXHIBIT 4

Standard State of Vermont Provisions for Contracts and Grants

Required SLFRF Contractor Identifying Information:

Subrecipient DUNS number: [contractor to provide]

Award number: State of Vermont Agreement # 02240-FY22-ACT71Const-04

Contractor Full Contact Information:

Firm Name and d/b/a: [contractor to provide]

Primary Contact Name: [contractor to provide]

Primary Contact Email: [contractor to provide]

Primary Contact Telephone: [contractor to provide]

Primary Contact Mailing Address: [contractor to provide]

Period of performance start date: ADD DATE

Period of performance end date: ADD DATE

Payment Schedule: As per contract terms.

Notes on Attachments C through E

1. NWFx is required by the terms of a federal grant to include the provisions contained in Attachments C – E below in any contracts that utilize funds from the federal grant. The agreement to which these provisions are attached shall be funded substantially or entirely from the federal grant and, therefore, the provisions must be applied to this agreement.
2. If the contractor is required to include these requirements in any subcontract under this agreement, it is noted within the provision. If so noted, the contractor shall include such provisions in any subcontract hereunder.
3. Some provisions in Attachments C-E are repetitive or duplicative of other provisions in Attachments C-E. These are provided in multiple places on purpose to assure that this agreement is in compliance with both federal and State of Vermont guidance on the required provisions.
4. The State of Vermont is a third-party beneficiary to the provisions in Attachments C - E.
5. There are missing section numbers in Attachment C. The provisions that were not included in Attachment C are not applicable to this agreement.
6. In Attachment C, “Party” refers to the contractor.
7. Provisions in Attachment D where the title is underlined apply specifically to construction labor practices.
8. In the “Termination for Convenience” provision of Attachment D, the term “Agency” or the “State” can refer to the State of Vermont, any agency, department or political subdivision thereof, or NWFx.
9. In addition to the note at the end of Attachment D that all construction contracts shall include all the provisions in Attachment D in a subcontract under this agreement, the Clean Air Act and Federal Water Pollution Control Act provisions shall be included in all subcontracts regardless of whether they are for construction or not.

[NWFY Note: The State of Vermont requires the following standard provisions to be included in all contracts.]

Attachment C:

STATE OF VERMONT STANDARD PROVISIONS FOR CONTRACTS AND GRANTS

10. False Claims Act: The Party acknowledges that it is subject to the Vermont False Claims Act as set forth in 32 V.S.A. § 630 *et seq.* If the Party violates the Vermont False Claims Act it shall be liable to the State for civil penalties, treble damages and the costs of the investigation and prosecution of such violation, including attorney's fees, except as the same may be reduced by a court of competent jurisdiction. The Party's liability to the State under the False Claims Act shall not be limited notwithstanding any agreement of the State to otherwise limit Party's liability.

11. Whistleblower Protections: The Party shall not discriminate or retaliate against one of its employees or agents for disclosing information concerning a violation of law, fraud, waste, abuse of authority or acts threatening health or safety, including but not limited to allegations concerning the False Claims Act. Further, the Party shall not require such employees or agents to forego monetary awards as a result of such disclosures, nor should they be required to report misconduct to the Party or its agents prior to reporting to any governmental entity and/or the public.

12. Location of State Data: No State data received, obtained, or generated by the Party in connection with performance under this Agreement shall be processed, transmitted, stored, or transferred by any means outside the continental United States, except with the express written permission of the State.

14. Fair Employment Practices and Americans with Disabilities Act: Party agrees to comply with the requirement of 21 V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Party shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990, as amended, that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Party under this Agreement.

16. Taxes Due to the State:

A. Party understands and acknowledges responsibility, if applicable, for compliance with State tax laws, including income tax withholding for employees performing services within the State, payment of use tax on property used within the State, corporate and/or personal income tax on income earned within the State.

B. Party certifies under the pains and penalties of perjury that, as of the date this Agreement is signed, the Party is in good standing with respect to, or in full compliance with, a plan to pay any and all taxes due the State of Vermont.

C. Party understands that final payment under this Agreement may be withheld if the Commissioner of Taxes determines that the Party is not in good standing with respect to or in full compliance with a plan to pay any and all taxes due to the State of Vermont.

D. Party also understands the State may set off taxes (and related penalties, interest and fees) due to the State of Vermont, but only if the Party has failed to make an appeal within the time allowed by law,

or an appeal has been taken and finally determined and the Party has no further legal recourse to contest the amounts due.

18. Child Support: (Only applicable if the Party is a natural person, not a corporation or partnership.) Party states that, as of the date this Agreement is signed, he/she:

A. is not under any obligation to pay child support; or

B. is under such an obligation and is in good standing with respect to that obligation; or

C. has agreed to a payment plan with the Vermont Office of Child Support Services and is in full compliance with that plan. Party makes this statement with regard to support owed to any and all children residing in Vermont. In addition, if the Party is a resident of Vermont, Party makes this statement with regard to support owed to any and all children residing in any other state or territory of the United States.

20. No Gifts or Gratuities: Party shall not give title or possession of anything of substantial value (including property, currency, travel and/or education programs) to any officer or employee of the State during the term of this Agreement.

22. Certification Regarding Debarment: Party certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, neither Party nor Party's principals (officers, directors, owners, or partners) are presently debarred, suspended, proposed for debarment, declared ineligible or excluded from participation in Federal programs, or programs supported in whole or in part by Federal funds. Party further certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, Party is not presently debarred, suspended, nor named on the State's debarment list at: <http://bgs.vermont.gov/purchasing/debarment>

[NWFx note: Attachment E, item 3, is a required certification of compliance for this provision #22.]

30. State Facilities: If the State makes space available to the Party in any State facility during the term of this Agreement for purposes of the Party's performance under this Agreement, the Party shall only use the space in accordance with all policies and procedures governing access to and use of State facilities which shall be made available upon request. State facilities will be made available to Party on an "AS IS, WHERE IS" basis, with no warranties whatsoever.

32. Requirements Pertaining Only to State-Funded Grants:

A. Certification Regarding Use of State Funds: If Party is an employer and this Agreement is a State-funded grant in excess of \$1,001, Party certifies that none of these State funds will be used to interfere with or restrain the exercise of Party's employee's rights with respect to unionization.

[NWX Note: The State of Vermont requires NWFX to include the following Federal Terms in all contracts. For clarity, NWFX has underlined the Section Headings of terms that apply specifically to construction labor practices.]

Attachment D:

STATE OF VERMONT- FEDERAL TERMS SUPPLEMENT (Construction)

for all Contracts for Construction Using Federal Funds (Revision date: July 28, 2022)

PROCUREMENT OF RECOVERED MATERIALS

In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated

Items unless the products cannot be acquired-

1. Competitively within a time frame providing for compliance with the contract performance schedule.
2. Meeting contract performance requirements; or
3. At a reasonable price

Information about this requirement, along with the list of EPA-designated items, is available at the EPA's Comprehensive Procurement Guidelines web site,

<https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

The Contractor also agrees to comply with all other applicable requirements of section 6002 of the Solid Waste Disposal Act.

EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not

applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed.

CLEAN AIR ACT

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the State of Vermont and understands and agrees that the State of Vermont will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to the State of Vermont and understands and agrees that the State of Vermont will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA. **a.** Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, *Debarment and Suspension* (1986) and Executive Order 12689, *Debarment and Suspension* (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Nonprocurement Debarment and Suspension).

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

(a) Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

(b) Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate specified at 29 CFR 5.5(b)(2) per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards statute (found at 40 U.S.C. chapter 37). In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. 2461 Note), the Department of Labor adjusts this civil monetary penalty for inflation no later than January 15 each year.

(c) Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or Federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards statute.

(d) Payrolls and basic records.

(1) The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Construction Wage Rate Requirements statute.

(2) The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

(e) Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts that may require or involve the employment of laborers and mechanics and require subcontractors to include these provisions in any such lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause

DAVIS BACON ACT

All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. Part 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. Part 5 as applicable. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. Additionally, contractors are required to pay wages not less than once a week.

[NWX note: Attachment E, item 4, is a required certification of compliance related to this provision.]

COPELAND ANTI-KICKBACK ACT

a. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable, which are incorporated by reference into this contract.

b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment

CONTRACTOR BREACH, ERRORS AND OMISSIONS

1. Any breach of the terms of this contract, or material errors and omissions in the work product of the contractor must, at the State's direction, be corrected by the contractor at no cost to the State, and a contractor may be liable for the State's costs and other damages resulting from errors or deficiencies in its performance.
2. Neither the States' review, approval or acceptance of nor payment for, the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract
3. The rights and remedies of the State provided for under this contract are in addition to any other rights and remedies provided by law or elsewhere in the contract, such as termination for default. If the contractor is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

TERMINATION FOR CONVENIENCE

1. General

- a. The Agency may, with thirty (30) days written notice to the Contractor, terminate the Contract or any portion thereof when such termination would be in the best interest of the Agency. Upon notification the contractor may be directed to immediately stop all work and incur no further costs under the contract.
- b. Any such termination shall be effected by delivery to the Contractor an Order of Termination specifying the termination is for the convenience of the Agency, the extent to which performance of work under the Contract is terminated, and the effective date of the termination.
- c. In the event such termination occurs, without fault and for reasons beyond the control of the Contractor, all completed or partially completed items of work as of the date of termination will be paid for in accordance with the contract payment terms.
- d. No compensation will be allowed for items eliminated from the Contract.
- e. Termination of the Contract, or portion thereof, shall not relieve the Contractor of its contractual responsibilities for work completed and shall not relieve the Contractor's Surety of its obligation for and concerning any just claim arising out of the work performed

2. Contractor Obligations

After receipt of the Notice of Termination and except as otherwise directed by the State, the Contractor shall immediately proceed to:

- a. To the extent specified in the Notice of Termination, stop work under the Contract on the date specified.
- b. Place no further orders or subcontracts for materials, services, and/or facilities except as may be necessary for completion of such portion(s) of the work under the Contract as is (are) not terminated.
- c. Terminate and cancel any orders or subcontracts for related to the services, except as may be necessary for completion of such portion(s) of the work under the Contract as is (are) not terminated.
- d. Transfer to the State all completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would be required to be furnished to the State.
- e. Take other action as may be necessary or as directed by the State for the protection and preservation of the property related to the contract which is in the possession of the contractor and in which the State has or may acquire any interest.

- f. Make available to the State all cost and other records relevant to a determination of an equitable settlement.

3. Claim by Contractor

After receipt of the Notice of Termination from the state, the Contractor shall submit any claim for additional costs not covered herein or elsewhere in the Contract within 60 days of the effective termination date, and not thereafter. Should the Contractor fail to submit a claim within the 60-day period, the State may, at its sole discretion, based on information available to it, determine what, if any, compensation is due the Contractor and pay the Contractor the determined amount.

4. Negotiation

Negotiation to settle a timely claim shall be for the sole purpose of reaching a settlement equitable to both the Contractor and the State. Settlement shall be based on actual costs incurred by the Contractor, as reflected by the contract rates. Consequential damages, loss of overhead, loss of overhead contribution of any kind, and/or loss of anticipated profits on work not performed shall not be included in the Contractor's claim and will not be considered, allowed, or included as part of any settlement.

SUBCONTRACTS

Contractor shall include all above provisions of this Attachment D in all subcontracts for work performed related to this contract.

Attachment E:
ADDITIONAL STATE AND FEDERAL PROVISIONS

[NWX note: The following state of Vermont provision 1 applies to all contracts. See also federal provision 2 below.]

1. State of Vermont Cybersecurity Requirements

The State's Secretary of Digital Services issued SOV Cybersecurity Standard 19-01 February 19, 2019, and Directive 19-01 available on-line at <https://digitalservices.vermont.gov/cybersecurity/cybersecurity-standards-and-directives> prohibiting or governing the use of certain products and services. Contractor hereby certifies that in connection with this Contract, none of the products or services listed below are included in or being used in a manner subject to the limitations provided under the Standard. Specific prohibitions include:

1. The acquisition or renewal of any contract or grant, or use for a new purpose of Kaspersky-branded products on all State of Vermont information systems, or any vendor system, is prohibited.

a. "Kaspersky-branded products" means information security products, solutions, and services supplied, directly or indirectly, by AO Kaspersky Lab or any of its predecessors, successors, parents, subsidiaries, or affiliates, including Kaspersky Lab North America, Kaspersky Lab, Inc., and Kaspersky Government Security Solutions, Inc. (collectively, "Kaspersky"), including those identified below.

b. Kaspersky-branded products currently known to ADS are: Kaspersky Anti-Virus; Kaspersky Internet Security; Kaspersky Total Security; Kaspersky Small Office Security; Kaspersky Anti Targeted Attack; Kaspersky Endpoint Security; Kaspersky Cloud Security (Enterprise); Kaspersky Cybersecurity Services; Kaspersky Private Security Network; and Kaspersky Embedded Systems Security.

2. The acquisition or renewal of any contract or grant, or use for a new purpose of equipment manufactured by the companies listed in paragraph 2.a that is supporting any State of Vermont information systems, or any vendor system, is prohibited.

a. Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company. This includes equipment used to support any information technology, telecommunications, industrial control system, supervisory control and data acquisition system, systems used for the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other security purposes, building infrastructure support, or video surveillance purpose.

3. The acquisition or renewal of any contract or grant, or use for a new purpose of equipment manufactured by any telecommunications, or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense has identified as an entity owned or controlled by,

or otherwise connected to, the government of a covered foreign country as provided under United States Public Law 115-232 is prohibited.

4. Any request for exception to this Standard will be considered on a case-by-case basis, submitted with a plan of action with milestones for transition away from the prohibited items, by the Secretary of Digital Services after receiving a request, endorsed by the Secretary of the requesting State Agency and the Chief Information Security Officer, articulating the compelling justification for additional time to implement the requirements.

5. Nothing in this standard shall be construed to endorse or permit any current use of these technologies.

6. Internal point of contact for this Directive is Scott Carbee, State of Vermont Chief Information Security Officer, at Scott.Carbee@Vermont.gov.

[NWFX note: the following federal provision 2 describes the federal requirements that are included in the certification made in provision 1 of this Attachment E above.]

2. Prohibition on certain telecommunications and video surveillance services or equipment (2 C.F.R. § 200.216)

(a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(c) See Public Law 115-232, section 889 for additional information.

(d) See also § 200.471.

[NWX note: The following federal provision applies to any contract having a contract value of \$25,000 or more. Such a contract is a "covered transaction" under the rules governing federal grants that are a source of funding for this project. In addition, any subcontract under this contract that has a contract value of \$25,000 or more is also a covered transaction. For all such covered transactions, this provision is a required certification of provision 22 of Attachment C, State of Vermont Standard Provisions.]

3. Federal Collusion, Debarment, and Byrd Anti-Lobbying Certifications

In executing the agreement to which this required provision is attached, Contractor's authorized signatory certifies under the penalties of perjury under the laws of the State of Vermont and the United States that: the person, firm, association, or corporation that is entering into the agreement for this covered transaction has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid for this project.

I further certify under the penalties of perjury under the laws of the State of Vermont and the United States that said individual, partnership or corporation or any person associated therewith in any capacity:

(1) Is (are) not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Has (have) not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of

embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Is (are) not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification;

(4) Has (have) not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(5) Is (are) not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal; and

(6) Is (are) not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(7) Shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

8) Shall include the required language of this certification in all subcontracts over \$25,000.00 and that all such sub-recipients shall certify and disclose accordingly.

I further certify on behalf of the person, firm, association, or corporation entering into this agreement that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required

certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective contractor also agrees that they shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

[NWX Note: The following provision 4 applies specifically to construction labor practices. This is a certification of compliance with the Davis Bacon Act section of Attachment D, State of Vermont Federal Terms Supplement (Construction). The most recent Vermont State Construction Prevailing Wage Rate Schedule can be found at this link: <http://www.vtlmi.info/>.]

4. Required Certification for Infrastructure Projects

In executing the agreement to which this required provision is attached, Contractor's authorized signatory certifies that all laborers and mechanics employed by Contractor and subcontractors engaged by Contractor in the performance of this contract are paid wages at rates not less than those prevailing, as determined by the U.S. Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code (commonly known as the "Davis-Bacon Act"), for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the civil subdivision of the State (or the District of Columbia) in which the work is to be performed, or by the appropriate State entity pursuant to a corollary State prevailing-wage-in-construction law (commonly known as "baby Davis-Bacon Acts").

If and only if Contractor is unable to provide this certification, contractor shall provide to NWFX a quarterly project employment and local impact report as detailed below during the period in which Contractor performs construction work under this contract. The dates on which such quarterly reports shall be provided to NWFX are February 28, May 31, August 31, November 30. Contractor shall maintain sufficient records to substantiate each such report.

Contractor further certifies that it shall require any subcontractor engaged to accomplish the performance of the work under this contract to provide this same certification or, if such certification is not provided, to provide the quarterly project employment and local impact report to Contractor on a schedule that will enable Contractor to compile this information across all subcontractors and to submit the compiled information to NWFX.

Contractor further certifies that it shall require subcontractors to include these certification provisions in any lower tier subcontracts in connection with the work under this contract.

The quarterly project employment and local impact report shall include the following information:

- Contractor or Subcontractor firm name;
- The number of employees of contractors and sub-contractors that are working on the project and are reasonably categorized as laborers or mechanics;

- The number of such employees on the project hired directly and hired through a third party;
- The wages and benefits of these workers on the project by classification; and
- Which of those wages are at rates less than those prevailing as determined by the U.S. Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code (commonly known as the “Davis-Bacon Act”), for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the civil subdivision of the State (or the District of Columbia) in which the work is to be performed.

5. Domestic Preferences for Procurement (2 CFR § 200.322)

(a) As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

(b) For purposes of this section:

(1) “Produced in the United States” means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) “Manufactured products” means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.”

[NWX note: Provision 6 below applies only to contracts in which the scope of work specifically includes access to and/or management of personally identifiable information of NWFX customers.]

6. Protected Personally Identifiable Information (PII) and the Privacy Act

In accordance with Uniform Guidance (including but not limited to, sections §200.303 and §200.338) and the Privacy Act of 1974 (5 U.S.C. § 552a), the recipient is required to “take reasonable measures to safeguard protected personally identifiable information and other information the Federal awarding agency or pass-through entity designates as sensitive or the non-Federal entity considers sensitive consistent with applicable Federal, State, local, and tribal laws regarding privacy and responsibility over confidentiality.

EXHIBIT 5

Description of the NAFX RFP Process

The RFP is publicly issued, posted to NAFX's website (<https://www.nwfiberworx.com/>), and announced on social media. Contractors will be actively solicited by NAFX and/or the contracted project manager as required to ensure sufficient response rates. NAFX encourages women's owned enterprises and small and minority-owned businesses to submit proposals.

All phases of the RFP process will adhere to a strict timeline with clearly defined deadlines for each step. These deadlines are listed at the top of the first page of this document. Unless otherwise noted in the RFP, all dates assume an ending timeframe of 5:00PM EST on the date provided.

Step 1 : Questions

Potential bidders may ask questions about the RFP on or before the "Written Questions Due" date. The questions must be submitted to:

NAFX-Requests@staff.gwi.net

Step 2: Responses to Questions

A written response to all questions is provided within the period specified in the RFP. Only bidders submitting questions will receive an individual response by email. The responses to the anonymized questions will include the questions asked and the answers provided. NAFX reserves the right to modify and redistribute the RFP to correct erroneous data identified during this process. Bidders are responsible for obtaining and responding to the most current RFP.

Step 3: Final Submission

All bids are due by the "Final Submission" date. All completed bids must be received by this date. A confirmation of bid receipt will be provided to bidders within 24 business hours of receiving the complete bid. Bids received after this deadline may not be considered.

Step 4: Vendor Selection (Award)

Due to the complexity of the material being requested, NAFX may ask clarifying questions by email, phone or remote meeting. NAFX will make reasonable efforts to complete this process in a timely manner.

After selecting the winning proposal, NAFX will begin contract negotiations, which can take up to 30 days to complete. If terms are not reached, an alternative bid will be considered. Upon successful negotiations, terms of the contract will be available upon request, with confidential information redacted.

EXHIBIT 6

OSP Strand Hardware to be Provided by Contractor

This is based on 28 poles per mile in the build areas. This list is a general reference and not all inclusive of what hardware the project may need outside of this estimate. It does not include OTMR hardware needs. Actual needs and equipment numbers may vary from this estimate.

Product	Per Mile
1/4" EHS Galvanized Strand, 5000' Reel	1.07
.038 Type 302 Lashing Wire 1600' Coil	4.33
No-Wrench Screw Anchor (6" Helix, 3/4" x 66" Shaft)	2.17
5/8 Inch x 10 Inch Machine Bolt	6.73
5/8 Inch x 12 Inch Machine Bolt	5.17
5/8 Inch x 14 Inch Machine Bolt	10.50
5/8 Inch x 16 Inch Machine Bolt	7.00
5/8 Inch x 10 Inch Thimble Eye Bolt	1.77
5/8 Inch x 12 Inch Thimble Eye Bolt	1.77
5/8 Inch x 14 Inch Thimble Eye Bolt	2.83
5/8 Inch x 16 Inch Thimble Eye Bolt	1.43
5/8 Inch Square Nut	35.00
2" Square Washer 5/8	70.00
Straight Suspension Clamp	27.00
Angle Suspension Clamp	4.50
Crossover Clamp	0.73
Guy Attachment Strap	4.17
8FT Yellow Guy Marker - Box of 25	0.10
D Lashing Clamp	70.00
KUL Bonding Clamp	7.00
1/4" Helical Strand Splice	3.50
1/4" Helical Deadend	10.50
1/2" X 12.4" Aerial Support Plastic Spacer Tie (Box of 500)	0.17

5/8" x 8' Copper Ground Rod	3.33
5/8" Universal Ground Rod Clamp	3.33
6 AWG Bare Copper Wire, 315' Spool	0.33
1¼ x ¼ x 0.114 Copper Coated Staple- Pack of 100	0.33
17 Inch Plastic Snow Shoe Fiber Optic Storage Bracket	3.50

EXHIBIT 7

Splicing and Splitting Estimates

This equipment will be provided by the owner and should be used for the sake of bidding and understanding the equipment being deployed. These numbers are to give the contractor a rough idea of the numbers being installed in an average FSA and will vary in the field. This list may be added to and items may be deleted from it as the project progresses.

Splice Cases & FDH	Per FSA
Corning 432-Port FDH (Pole Mount)	1.00
FOSC450 D6	4.40
FOSC450 B6	32.73
MultiPorts	
Corning 2-port, 1050ft Pigtail Multiport	4.40
Corning 2-Port, 150ft Pigtail Multiport	2.64
Corning 2-Port 250Ft Pigtail Multiport	2.86
Corning 2-Port, 350ft Pigtail Multiport	15.84
Corning 2-Port, 450ft Pigtail Multiport	5.72
Corning 2-Port, 550ft Pigtail Multiport	5.50
Corning 2-Port, 650ft Pigtail Multiport	5.06
Corning 2-Port, 750ft Pigtail Multiport	5.06
Corning 2-Port, 850ft Pigtail Multiport	5.28
Corning 2-Port, 950ft Pigtail Multiport	5.28
Corning 4-Port, 1050ft Pigtail Multiport	3.30
Corning 4-Port, 150ft Pigtail Multiport	1.10
Corning 4-Port, 250ft Pigtail Multiport	3.96
Corning 4-Port, 350ft Pigtail Multiport	7.26
Corning 4-Port, 450ft Pigtail Multiport	3.74
Corning 4-Port, 550ft Pigtail Multiport	3.74
Corning 4-Port, 650ft Pigtail Multiport	2.64
Corning 4-Port, 750ft Pigtail Multiport	2.64
Corning 4-Port, 850ft Pigtail Multiport	3.30
Corning 4-Port, 950ft Pigtail Multiport	2.42
Corning 8-Port, 150ft Pigtail Multiport	0.66

Corning 8-Port, 1000ft Pigtail Multiport	0.66
Corning 8-Port, 350ft Pigtail Multiport	1.76
Corning 8-Port, 550ft Pigtail Multiport	1.54
Corning 8-port, 650ft Pigtail Multiport	0.44
Corning 8-Port, 850ft Pigtail Multiport	2.20

Fiber Access and Customer Premise Equipment (CPE)

Stock drops that will be on hand and provide for custom or install purposes.

Drops
Optitap Drop 1000'
Optitap Drop 200'
OptiTap Drop 300'
OptiTap Drop 500'
OptiTap Drop 750'