

Issue Analysis Form



Date: 27 September 2022
Item: Award of Contract – Network fiber replacements and enhancements
Lead Department(s): Information Technology
Contact Person(s): Clifton Young

Description and Current Status

Network fiber supporting the County Administrative building, and surrounding facilities, is in need of repair/replacement. Professionally conducted testing shows that many of the existing fiber connections are not passing an adequate amount of light. Several connections are not passing any light at all, rendering them unusable.

With network connectivity and reliability being critical to operations, the IT Department is recommending the repair of existing fiber connections and the addition of new connections that will provide better redundancy for geographically separated buildings.

After a careful evaluation, **staff recommends an award of contract to Net100** (cooperative VASCUPP Contract # UVA-AGR-1774).

Staff further recommends the allocation of contingency funding for this project to support any unexpected challenges that may require re-engineering of underground paths and handholds, and/or the installation of new fiber and fiber panels.

Board Action Requested:

- Authorize award of contract for fiber repairs and enhancements to Net100
- Approve a transfer from ARPA Fund Contingency of \$235,177.00 to support the quoted estimates and contingency funding.

Transfer Entry:

ARPA Funds

0231-03-500-0612-49199 ARPA Fund Contingency (\$235,177.00) Decrease

0231-01-002-0405-48107 ARPA Info Technology Equip Replacement \$235,177.00 Increase

Government Path

- Does this require IDA action? Yes No
- Does this require BZA action? Yes No
- Does This require Planning Commission Action? Yes No
- Does this require Board of Supervisors action? Yes No
- Does this require a public hearing? Yes No
- If so, before what date? Yes No

Fiscal Impact Statement

This project will require one-time payment, from ARPA funding, for the quoted services and equipment.

There are no additional recurring/annual costs.

Monthly internet service charges for Station 1 will be eliminated.

County Impact

Repairing fiber in our complex will improve network connectivity to support government operations more effectively. Installing redundant fiber paths will provide better continuity to our geographically separated buildings to help protect against service outages.

Notes

IT Recommendations for fiber replacement

Priority items:

- **Handhole documentation** (referring to the junction boxes in the ground between buildings around the complex).
 - The “as-built” diagrams we have are old and incomplete
 - Net100 would locate, document, and label all the connections properly
 - Having this information may also help reduce costs, or at least help zero-in the estimates better, for other fiber expansion projects we are discussing.
 - Cost: \$9,575.00
- **Fiber re-termination for all buildings**
 - The fiber panels in our network closets use old, obsolete, fiber connectors
 - Net100 believes that replacing and re-terminating our fiber with new connections will resolve most, if not all, of our problems with light loss between buildings.
 - Cost: \$68,393.43
- **New Fiber between floors in Admin Bldg**
 - The Admin Bldg is the County’s central hub for internet, and server connectivity
 - Existing fiber is insufficient and needs to be replaced
 - Cost: \$22,329.49
- **Garage connection** (Quote 2, Option 2)
 - The building expansion required us to remove the existing fiber connection from the Utilities Shop to the Garage
 - A new fiber line will need to be installed
 - Cost: \$8,299.95

Additional enhancements (Quote 2):

- **Option 1 – New fiber from Admin Bldg to Utilities Shop**
 - To provide a redundant fiber path for Utilities Shop, Garage, and trailers
 - Cost: \$38,451.78
- **Option 3 – Connection to FEMS Station 1**
 - Would give a direct connection to the station
 - Long term cost savings
 - Eliminate Comcast internet service to Station
 - Eliminate some network equipment
 - Cost: \$26,544.95
- **Option 4 – Fiber from Utilites Shop to Virginia Cooperative Extension trailer**
 - To provide redundant fiber path to trailer
 - Cost: \$10,887.62
- **Option 5 – New fiber from ECC to RCJA**
 - To provide redundant path for RCJA, Social Services, and General Services Bldgs
 - Cost: \$29,314.62
- **Option 6 – General estimate**
 - This is just a rough estimate for replacing fiber between buildings, if the re-termination is not successful in improving the connection.
 - Cost: \$9,249.62

Priority Items		Cost
	Handhole documentation	\$9,575.00
	Fiber re-termination for all buildings	\$68,393.43
	New fiber between floors of Admin Bldg	\$22,329.49
	New fiber from Garage to Utilities Shop	\$8,299.95
		Priority Sub-total: \$108,597.87
Additional enhancements		
	Redundant fiber from Admin to Utilities	\$38,451.78
	New connection to FEMS Station 1	\$26,544.95
	Redundant fiber from Utilities Shop to Coopertive Ext trailer	\$10,887.62
	Redundant fiber from ECC to RCJA	\$29,314.62
		Enhancement Sub-total: \$105,198.97
		Total: \$213,796.84
		10% contingency \$21,379.68
		Total with contingency \$235,176.52

Date: 9/7/22

Customer Information

Quote: Misc Items
Project: Prince George Fiber Network
Revision: Original
Job Location: Prince George, VA

Pricing

Handhole Documentation:

Subtotal Materials					\$0.00
Subtotal Labor					\$9,575.00
Subtotal					\$9,575.00
Sales Tax					\$0.00
Total Quotation					\$9,575.00

Fiber Turnkey Re-Term:

Subtotal Materials					\$38,635.42
Subtotal Labor					\$27,455.00
Subtotal					\$66,090.42
Sales Tax					\$2,303.01
Total Quotation					\$68,393.43

New Fiber Between Floors in Admin Building:

Subtotal Materials					\$9,870.60
Subtotal Labor					\$12,120.00
Subtotal					\$21,990.60
Sales Tax					\$338.89
Total Quotation					\$22,329.49

Scope of Work

Hand Hole Documentation:

NET100 will provide labor to locate and document all hand holes on the full campus. NET100 will tag each cable in handhole with documentation on route and where it lands. NET100 will take pictures of each handhole and document. NET100 will provide updated As-built drawing showing routes and descriptions of current infrastructure.

Fiber Re-terminations:

NET100 will provide and install new fiber enclosures in each building where it can accommodate rack mountable enclosures. NET100 will provide wall mounted enclosure where no rack space is available. NET100 will provide brand new multi-mode and single mode LC splice cassettes in each building for brand new terminations on each side. NET100 will provide new fiber jumpers for each cable terminated LC to LC. NET100 will test each cable and label on both ends. NET100 has accounted to do all work afterhours. NET100 has included to re-terminate all fiber that was previously tested on previous project.

New Fiber Between Floors in Admin building:

NET100 will provide and install the below fiber to the below locations. NET100 will provide new enclosures and LC splice cassettes on each end of the newly provided fibers. NET100 will test each fiber optic cable and label on both ends. NET100 will provide and install the appropriate amount of fiber LC to LC jumpers for connection to equipment.

- 24-Strand OS2 Fiber from Server Room to 1st Floor Data Closet
- 12-Strand OS2 Fiber from Server Room to 2nd Floor Data Closet
- 12-Strand OS2 Fiber from Server Room to 3rd Floor Data Closet

NET100 has also included the demo of all existing multimode in admin riser as requested. NET100 will remove fiber and old equipment offsite for proper disposal.

Logistics

VASCUPP Contract # **UVA-AGR-1774**

Work to be performed during normal operational hours

Exclusions

Lifts

Fiber Cable Unless described in SOW

Underground Boring

Contact Information

Net100 POC:

Derin Blom

Email: dblom@net100ltd.com

Phone: 804 346 1986

Cell: 804 852 4033

Client POC: Clifton Young

Email: cyoung@princegeorgecountyva.gov

Phone: Click or tap here to enter text.

Cell: Click or tap here to enter text.

Signature below indicates acceptance of the proposal detailed above (dated 9.7.2022) and intent to award.





TELECOMMUNICATIONS
INFRASTRUCTURE SERVICES
SCS, AV, Sound Masking,
Security and Optical LAN

Signature

Printed Name

Title

Company

Click or tap here to enter text.

Purchase Order / Contract Number





Date: 9/7/22

Customer Information

Quote: Prince George County New Fiber
Project: Fiber Pathway Additions and Connectivity
Revision: Original
Job Location: Prince George, VA

Pricing

#1

Subtotal Materials					\$3,738.06
Subtotal Labor					\$34,614.10
Subtotal					\$38,352.16
Sales Tax					\$99.62
Total Quotation					\$38,451.78

#2

Subtotal Materials					\$2,237.52
Subtotal Labor					\$5,982.10
Subtotal					\$8,219.62
Sales Tax					\$80.33
Total Quotation					\$8,299.95

#3

Subtotal Materials					\$4,202.52
Subtotal Labor					\$22,262.10
Subtotal					\$26,464.62
Sales Tax					\$80.33
Total Quotation					\$26,544.95

#4

Subtotal Materials					\$3,690.90
Subtotal Labor					\$7,097.10
Subtotal					\$10,788.00
Sales Tax					\$99.62
Total Quotation					\$10,887.62



#5

Subtotal Materials					\$6,572.90
Subtotal Labor					\$22,642.10
Subtotal					\$29,215.00
Sales Tax					\$99.62
Total Quotation					\$29,314.62

#6

Subtotal Materials					\$4,607.90
Subtotal Labor					\$4,542.10
Subtotal					\$9,150.00
Sales Tax					\$99.62
Total Quotation					\$9,249.62

Scope of Services:

Option 1

NET100 will provide and install one 2" PVC directional bore from the existing hand hole in the rear of the administration building (HH4) to existing hand hole north of the administration building (HH3). NET100 will directional bore new 2" PVC conduit from HH3 to the utility building. NET100 will set two (2) 18x24x18 hand hole between HH3 and utility building.

NET100 will provide and install one (1) 12-strand Indoor/Outdoor OS2 fiber optic cable from the administration IT room to Utility Building location. NET100 will terminate the fibers with fusion spliced pigtails in fiber splice cassettes secured within rack/wall mounted enclosure. NET100 will test the cable for performance and label on both ends.

Option 2

NET100 will provide and install one 2" PVC directional bore from utility shop to fleet shop. NET100 will set one (1) 18x24x18 hand hole between hand hole three and utility building.

NET100 will provide and install one (1) 12-strand Indoor/Outdoor OS2 fiber optic cable from the utility IT location to fleet IT location. NET100 will terminate the fibers with fusion spliced pigtails in fiber splice cassettes secured within rack/wall mounted enclosure. NET100 will test the cable for performance and label on both ends.

Option 3

NET100 will provide and install one 2" PVC directional bore from HH2 to firehouse. NET100 will set two (2) 18x24x18 hand hole between HH2 and the Fire Station.

NET100 will provide and install one (1) 12-strand Indoor/Outdoor OS2 Indoor/Outdoor fiber optic cable from the administration IT room to firehouse IT location. NET100 will terminate the fibers with fusion spliced pigtails in fiber splice cassettes secured within rack/wall mounted enclosure. NET100 will test the cable for performance and label on both ends.

Option 4

NET100 will provide and install one 2" PVC directional bore from Utility Shop to Virginia Cooperative Extension Building.



NET100 will provide and install one (1) 12-strand Indoor/Outdoor OS2 fiber optic cable from the Utility Shop IT room to Virginia Cooperative Extension Building IT location. NET100 will terminate the fibers with fusion spliced pigtails in fiber splice cassettes secured within rack/wall mounted enclosure. NET100 will test the cable for performance and label on both ends.

Option 5

NET100 will provide and install one (1) 2" PVC directional bore from the ECC to Building g (RCJA). This pathway will complete redundant pathway on this side of the campus.

NET100 will provide and install one (1) 12-strand Indoor/Outdoor OS2 fiber optic cable from the ECC building to the RCJA building. NET100 will terminate the fibers with fusion spliced pigtails in fiber splice cassettes secured within rack/wall mounted enclosure. NET100 will test the cable for performance and label on both ends.

Option 6

Budgetary Number to Add 12-Strand Fiber into existing building through existing underground pathways if available:

NET100 will provide and install one (1) 12-strand OS2 fiber from Admin building to designated building on campus. NET100 will utilize existing pathways underground for routing of fiber. NET100 will provide and enclosure and splice cassette on each side. NET100 will test fiber and label on both ends.

Logistics

VASCUPP Contract # **UVA-AGR-1774**

All work to be done during normal business hours.

Exclusions

120V Electrical

Contact Information

Net100 POC: Mitch Keeler

Email: mkeeler@net100ltd.com

Phone: 804 346 1986

Cell: 804-347-9641

Client POC: Clifton Young

Email: cyoung@princegeorgecountyva.gov

Phone: (804) 722-8722

Cell: Click or tap here to enter text.

Signature below indicates acceptance of the proposal detailed above (dated 9.7.2022) and intent to award.

Signature

Printed Name

Title

Company

Click or tap here to enter text.

Purchase Order / Contract Number



Board of Supervisors
County of Prince George, Virginia

Resolution

At a regular meeting of the Board of Supervisors of the County of Prince George held in the Boardroom, Third Floor, County Administration Building, 6602 Courts Drive, Prince George, Virginia, this 27th day of September, 2022:

Present:

Vote:

Marlene J. Waymack, Chair
Donald Hunter, Vice Chair
Floyd M. Brown, Jr.
Alan R. Carmichael
T. J. Webb

A-3

On motion of _____, seconded by _____, which carried by a vote of _____ in favor and _____ opposed, the following Resolution was adopted:

**RESOLUTION: AWARD OF CONTRACT FOR COUNTY FIBER UPGRADES
NET100 (\$213,796.84) AND A BUDGET TRANSFER FROM ARPA
CONTINGENCY ACCOUNT FOR \$235,177 TO COVER AWARD PLUS TEN
PERCENT CONTINGENCY**

WHEREAS, the County has experienced some fiber connectivity issues and desires to replace fiber and wishes to expand connections and redundancy at the County Government Complex and several neighboring County facilities; and

WHEREAS, the County has received an evaluation and a proposal from Net100, using cooperative VASCUPP Contract # UVA-AGR-1774, to replace and expand fiber in and around the County government complex and neighboring County facilities for a total price of \$213,796.84; and

WHEREAS, sufficient American Recovery Plan Act (ARPA) Funding is available to cover these project costs.

NOW, THEREFORE BE IT RESOLVED: that the Board of Supervisors of the County of Prince George this 27th day of September, 2022, hereby awards the contract for Fiber upgrades and expansion to Net100 using cooperative VASCUPP Contract # UVA-AGR-1774 for \$213,796.84.

NOW THEREFORE, BE IT FURTHER RESOLVED That the Board of Supervisors of the County of Prince George this 27th day of September, 2022, does hereby authorize the following increase of funds within the 2022-2023 Budget, such line items

increased as follows, which monies shall be expended for purposes authorized and approved by the Board of Supervisors of the County of Prince George:

<u>FUND/ORGANIZATION</u>	<u>AMOUNT</u>
<u>ARPA Fund</u>	
<u>Expenditure:</u>	
0231-03-500-0612-49199 ARPA Fund Contingency	(\$235,177.00) Decrease
0231-01-002-0405-48107 ARPA Info Technology Equip Replacement	\$235,177.00 Increase

A Copy Teste:

Jeffrey D. Stoke
County Administrator