

Windham School District

School Administrative Unit #95

Winfried Feneberg
Superintendent

Adam Steel
Director of Business, Finance, and Operations

Kori Alice Becht
Director of Curriculum, Instruction, and Assessment

Rosalyn Moriarty
Director of Student Services

Carol St. Pierre
Director of Human Resources

• 19 Haverhill Road, Windham, NH 03087 • Phone: (603) 425-1976 • Fax: (603) 425-1719 • www.windhamsd.org •

To: Winfried Feneberg, Superintendent of Schools
From: Adam Steel, Business Administrator
RE: Fiber Optic Cable Connection to Town/ Internet Connectivity

Friday, April 17, 2015

Dear Mr. Feneberg,

Executive Summary

We intend to connect the School District with the Town of Windham via fiber optic cable to allow for shared services and cost savings to taxpayers. The District and Town prefer the option of paying a utility company for the service to avoid licensing, installation, and maintenance costs as opposed to an owned resource installed by the District/Town.

Two proposals from utility companies were received for this service with Comcast being the preferred option. If accepted, Comcast's proposal will increase the District's (and potentially the Town's) Internet connection from 300 Mbps to 1 Gbps and will provide a fiber optic cable connection between the Town and the School. Total monthly recurring costs will increase from \$2,980 per month for Internet only to \$4,000 per month for both the Internet and the private connection. Rack price for the services is \$10,250 with the proposed cost representing a 61% discount from the rack price.

Implementation will be a four phase process with services installed in the following sequence: video connection between the District and the WPD, shared Internet, extended phone service from the District to the Town, and finally, ancillary services such as network extension, radio link connections, disaster recovery, etc.

Background

We have been working with the Town over the last several months to develop a strategy to connect our two organizations together over a fiber optic cable connection. The purpose of this connection is to allow for greater collaboration between the two entities and to save money for taxpayers. Our initial investigation has defined the following potential advantages of such a connection:

1. Real time video streaming between the District's security camera system and the Windham Police Department in emergency situations;
2. Shared Internet connection to potentially eliminate the Town's need for a separate Internet connection;
3. Shared phone system to extend the District's phone system to the Town thereby eliminating a significant portion of the Town's phone service bills;
4. Offsite backup/disaster recovery for each entities' computer systems; and
5. Elimination of telecom radio links between the Town and WHS.

Connectivity Options

Fiber optic cable is a preferred medium because of its speed and protection from weather related issues as compared to other RF or microwave based mediums. There are two basic methods for connecting our entities via fiber: a private line/owned connection or a utility based service. In a private line connection, we would obtain permission from the utilities that own the utility poles to install our own fiber optic cable. We would be responsible for the installation and maintenance of the cable if any breakage or outage occurs. While this method has the advantage of low monthly recurring costs (if any), it does require a significant initial outlay, a lengthy licensing process, and responsibility for maintenance.

Alternatively, I have obtained pricing from two utilities which have existing access to utility poles: Comcast and 186 Communications. In both cases, the utility company would be responsible for installing the cable to our respective buildings, for ensuring the connectivity is reliable, and for maintaining the connection throughout the term of the contract.

Current Internet Connectivity

The District currently has a contract with Comcast for Internet connectivity for a 300 Mbps dedicated Internet service. The contract was signed on 10/30/2013 and expires on 10/30/2016 with a MRC of \$2,980 for Internet only.

Proposals Received

186 Communications provided a proposal that includes 1 Gbps Internet connection, a private fiber optic cable connection between the SAU and the Windham Police Department with a \$5,000 installation charge and \$3,550 per month for 60 months. 186 Communications has also stated that they will buy the District out of our existing contract with Comcast.

Comcast provided a proposal that includes the same 1 Gbps Internet connection and private FO connection between the SAU and WPD with no installation charges and MRC of \$4,000 for 36 months. By way of comparison, the rack prices for these two services is \$10,250 per month.

Recommendation

Both the Town and the District recommend the Comcast proposal as it does not require a buyout of our existing contract, is a much shorter term, and has no fixed costs. Although over the 36 month term, the District will pay \$11,200 more for the Comcast proposal, the shorter contract term is valuable in ensuring the District has pricing flexibility in three years. I did research 186 and found that they are registered in the State as an LLC with no public earnings or other financial information that could be used to determine their financial stability for the life of our potential contract. It should also be noted that Comcast did an extensive site survey of both installation locations in preparing their proposal and has extensive history with both the Town and the District.

Implementation Plan

The District and the Town are going to get proposals from networking service providers for network design services to ensure the connection between the two entities is secure, protects the unique interests of each entity, and allows for future shared services without requiring a re-design. It is anticipated that each entity will also have some minor hardware costs associated with the installation.

Once the fiber connection is made, the rollout of shared services will be done in four phases:

Phase 1: Video Sharing

The District's video server will be extended to the Windham Police Department so that in an emergency situation, the WPD can access real-time video streams from the District's video server to assist in a life safety situation. We expect this service to be live within the first few weeks after the connection has been turned up.

Phase 2: Internet Connectivity Sharing

In this phase, the Town will begin using the District's Internet connection, thus saving the Town Internet connectivity costs. We anticipate the design of this connection will be setup so that the Town and the District's connections are kept completely segregated from one another, that neither's Internet bandwidth is restricted/throttled, and that each entity will remain responsible for their own firewall, filtering, etc. In essence, the District will become the Town's upstream provider for Internet services.

Phase 3: Phone System

The Town has a need to replace their current phone system. Both the Town and the District currently pay for phone service on a monthly basis. In this phase, the Town can replace its phone hardware and extend the District's phone service to the Town. By extending the District's phone system, the following advantages exist:

1. The Town could drastically reduce their monthly phone bills. The Town would still need to maintain backup POTS telephone lines for things like fax machines, fire alarms, security alarms, etc.;

2. The Town would not need to purchase an entire phone system, but merely the phones themselves and any networking equipment necessary to use the District's existing system;
3. The Town and the School could call each other by extension as opposed to using outside lines; and,
4. Annual support contracts would be lower for the combined system than for two separate systems that would have duplicated sets of systems and components.

Phase 4: Ancillary Services

The final phase would include the provisioning of ancillary services such as the following:

- Disaster recovery/off-site backup for each entity in each other's location;
- Extension of network access to each other's buildings. For example, at the Nesmith Library, a wireless access point could be installed to allow students to access the District's network while at the Town library;
- Radio link reduction. Right now, the WPD pays a monthly recurring cost to connect their primary radio site (the police station) to their secondary radio site (WHS). This connection be transitioned to the wide area network and thus, eliminate a monthly recurring cost.

Requested Board Actions

1. Motion: To authorize the administration to enter into an agreement with Comcast to replace our existing Internet connection with a new connection with speed of one gigabit per second and a private fiber optic cable connection with the Town of Windham with a monthly recurring cost of \$4,000, no non-recurring costs, and a contract term of 36 months.

Attachments – 3

1. 186 Communications Proposal
2. Comcast Proposal

Services Agreement (E-Rate)

This Services Agreement (“Agreement”) is made on the 8th day of April, 2015 (“Effective Date”) by and between Comcast Cable Communications Management, LLC, a Delaware limited liability company, on behalf of itself and its applicable operating affiliates and subsidiaries offering services as identified below, with offices located at One Comcast Center, 1701 JFK Blvd, Philadelphia, PA 19103 and Windham School District (“Customer”), with offices located at 19 Haverhill Rd, Windham, NH 03087. Herein, the above shall be collectively referred to as the “Parties” and individually as “Party”.

| | |
|--|---|
| Description of Services to be provided by Comcast to Customer: 1000 Mbps Ethernet Dedicated Internet (“EDI”) Services, as set forth in the Sales Order Form(s) (“Sales Order Form(s)”) attached hereto. 1000 Mbps Ethernet Private Line (“EPL”) Services, as set forth in the Sales Order Form(s) (“Sales Order Form(s)”) attached hereto. | |
| Service Term (Months): Thirty-Six Months (36) | Agreement Number: NH-7401-040815-01 |
| Non-Recurring Charges (“NRC”): \$0.00 | Monthly Recurring Charges (“MRC”): \$4,000.00 |
| Number of Service Location(s): Two (2) | Estimated Service Date: Ninety (90) to One-hundred Twenty (120) days after mutual execution of Agreement. |
| Notes / Comments: 1. E-Rate funding, if applicable, to be sought solely by Customer. <i>*Please note – Customer is not seeking E-Rate funding for FY 2015-2016, per Sales Person.</i> 2. The Services specified herein shall be provided by Comcast Business Communications, LLC. | |
| Sales Person: David Buckley | Telephone Number: (617) 945-6689 |
| General Manager: Daniel Hickey | Telephone Number: (978) 825-2343 |
| Customer Contact: Kevin Verratti | Telephone Number: (603) 425-1976 |

This Agreement sets forth the terms and conditions under which Comcast Cable Communications Management, LLC and its applicable operating affiliates and subsidiaries (identified above, “Comcast”) will provide communications and other services (“Services”) to the above Customer. This Agreement consists of this document (“Service Agreement Cover Page”), the Comcast General Terms and Conditions for E-Rate (“General Terms and Conditions”), Sales Order Form(s), the applicable PSAs, and any written amendments to the Agreement and executed by both Parties (“Amendment(s)”), collectively referred to as the “Agreement”. In the event of an explicit inconsistency among these documents, precedence will be as follows: (1) Amendment(s), (2) PSA(s), (3) General Terms and Conditions, (4) this Service Agreement Cover Page, and the (4) Sales Order Form(s). This Agreement shall commence and become a legally binding agreement upon the mutual execution of this Service Agreement Cover Page by the Parties. The Agreement shall terminate as set forth in the General Terms and Conditions. All capitalized terms not defined on this Service Agreement Cover Page shall have the definitions given to them in the General Terms and Conditions.

Customer, by signing below, agrees and accepts the terms and conditions of this Agreement.

Windham School District

Comcast Cable Communications Management, LLC

| | |
|---------------|---------------|
| Signature: | Signature: |
| Printed Name: | Printed Name: |
| Title: | Title: |
| Date: | Date: |

CONFIDENTIAL and PROPRIETARY



COMCAST ENTERPRISE SERVICES SALES ORDER FORM

ETHERNET SERVICES AND PRICING

Account Name: Windham School District

Date: April 08, 2015

MSA ID#: NH-1596949-DBuck

SO ID#: NH-1596949-DBuck-3664679

Short Description of Service:

Service Term (Months): 36

Solution Charges

| Line | Request | Action | Service(s) | Description | Service Location A* | Service Location Z* | Comcast Metro | Performance Tier** | Tax Jurisdiction | Monthly | One-Time |
|--|----------------|--------|----------------|-------------|---|--|----------------|--------------------|------------------|-------------|----------|
| 1 | Change Request | Remove | EDI-NI-1000 | 1000 Mbps | WSD - 19 HAVERHILL RD 19 HAVERHILL RD | | | | Interstate | \$ 0.00 | \$ 0.00 |
| 2 | Change Request | Remove | EDI-300 | 300 Mbps | WSD - 19 HAVERHILL RD 19 HAVERHILL RD | | | | Interstate | \$ 0.00 | \$ 0.00 |
| 3 | Change Request | Add | EDI-NI-1000 | 1000 Mbps | WSD - 19 HAVERHILL RD 19 HAVERHILL RD | | | | Interstate | \$ 0.00 | \$ 0.00 |
| 4 | Change Request | Add | EDI-1000 | 1000 Mbps | WSD - 19 HAVERHILL RD 19 HAVERHILL RD | | | | Interstate | \$ 2,200.00 | \$ 0.00 |
| 5 | Change Request | Add | ENIGIGE | Port | WSD - 19 HAVERHILL RD 19 HAVERHILL RD | | Greater Boston | | Interstate | \$ 370.25 | \$ 0.00 |
| 6 | Change Request | Add | ENIGIGE | Port | Windham School District 4 Fellows 4 FELLOWS RD | | Greater Boston | | Interstate | \$ 370.25 | \$ 0.00 |
| 7 | Change Request | Add | EPL-BASIC-1000 | 1000 Mbps | Windham School District 4 Fellows 4 FELLOWS RD | WSD - 19 HAVERHILL RD 19 HAVERHILL RD | | PT1 | Interstate | \$ 1,059.50 | \$ 0.00 |
| * Services Location Details attached **Performance Tier Matrix Attached | | | | | | Page Total | | | | \$ 4,000.00 | \$ 0.00 |



COMCAST ENTERPRISE SERVICES SALES ORDER FORM

SERVICE LOCATION DETAIL INFORMATION

Account Name: Windham School District

MSA ID#: NH-1596949-DBuck

SO ID#: NH-1596949-DBuck-3664679

Date: April 08, 2015

| Line | Location Name / Site ID | Address 1 | Address 2 | City | State | Zip Code | DeMarc Location | Extend to DeMarc (Yes/No) | Inside Wiring (Yes/No) | Technical / Local Contact Name | Technical / Local Contact Phone # | Technical / Local Contact Email Address | Technical Contact On Site (Yes/No) | Satellite Location (Y/N) |
|------|--------------------------------------|-----------------|-----------|---------|-------|----------|-----------------|---------------------------|------------------------|--------------------------------|-----------------------------------|---|------------------------------------|--------------------------|
| 1 | Windham School District 4 Fellows | 4 FELLOWS RD | | WINDHAM | NH | 03087 | 1 | | No | Adam Steel | (603)425-1976 | asteel@windhamsd.org | Yes | No |
| 2 | WSD - 19 HAVERHILL RD | 19 HAVERHILL RD | | WINDHAM | NH | 03087 | | | | Kevin Verratti | (603)425-1976 | kverratti@windhamd.org | | No |

Internet Service Order



| | |
|--------------------|-----------------|
| Service Order #: | 20615 |
| Account Executive: | Nicole Pinault |
| System Engineer: | Jeff Harrington |
| Customer PO#: | |

Customer Information

| | |
|-------------------|--|
| Company Name: | Windham School District |
| Customer Contact: | Adam Steel |
| Address: | 2 Lowell Rd |
| Floor/Suite: | |
| City, State, Zip: | Windham NH |
| E-Mail Address: | asteel@windhamsd.org |
| Phone Number: | 603-425-1976 |

| | |
|---------------------------|--|
| Customer Type: | New |
| Billing Contact: | Adam Steel |
| Billing Address: | 2 Lowell Rd |
| Billing Floor/Suite: | |
| Billing City, State, Zip: | Windham NH |
| Billing E-mail Address: | asteel@windhamsd.org |
| Billing Phone Number: | 603-425-1976 |

Service Information

| | |
|-------------------|-------------|
| Service: | Internet |
| Bandwidth: | 500 Mbps |
| Protection Level: | Unprotected |

| | |
|---------------------------|-----|
| New Service: | New |
| Customer Requested Date*: | |

*Customer request date does not constitute a contractual obligation, but is for informational purposes only

A Location Information

| | |
|----------------------------|--|
| Location Address: | 2 Lowell Rd |
| Location Floor/Suite: | |
| Location City, State, Zip: | Windham NH |
| Location Phone Number: | 603-425-1976 |
| Local Contact: | Adam Steel |
| Local Contact Email: | asteel@windhamsd.org |
| Local Contact Phone: | 603-424-1973 |

| | |
|----------------|-------------|
| Hand-off Type: | 100 Base TX |
|----------------|-------------|

| |
|--|
| Location Details/Comments: |
| We would buy out your existing Comcast contract. This Circuit would be included with the point to point dark fiber for the MRC of \$3000.00 |

Pricing Terms

| | |
|---------------------------------|---------|
| Monthly Recurring Charge (MRC): | \$3,350 |
| Non Recurring Charge (NRC)*: | \$0 |
| Service Term**: | 60 |

*This section covers circuit installation only. Inside wiring and cross connects are not included unless otherwise stated.

**The Service Term shall commence on the date the Service (s) is/are delivered pursuant to this Service Order

The terms and conditions contained in the Master Service Agreement are hereby incorporated by reference and are made a part of this Service Order. Any ambiguity or conflict in such terms and conditions between this Service Order and the Master Service Agreement and all exhibits attached thereto shall be governed and controlled by the terms and conditions as contained in the said Master Service Agreement.

Additional Comments

Internet order to be accompanied by attached IP justification form.

Acceptance

186 Communications Signature:

Customer Signature:

Name:

Title:

Date:

Client Acceptance: Pricing contract, and payment information subject to

186 Communications management approval. Applicable sales tax and

regulatory fees will be added to the billed account

Name:

Title:

Date:

Dark Fiber Service Order



| | |
|--------------------|-----------------|
| Service Order #: | 20615 |
| Account Executive: | Nicole Pinault |
| System Engineer: | Jeff Harrington |
| Customer PO#: | |

Customer Information

| | |
|-------------------|--|
| Company Name: | Windham School District |
| Customer Contact: | Adam Steel |
| Address: | 2 Lowell Rd |
| Floor/Suite: | |
| City, State, Zip: | Windham NH |
| E-Mail Address: | asteel@windhamsd.org |
| Phone Number: | 603-425-1976 |

| | |
|---------------------------|--|
| Customer Type: | New |
| Billing Contact: | Adam Steel |
| Billing Address: | 2 Lowell Rd |
| Billing Floor/Suite: | |
| Billing City, State, Zip: | Windham NH |
| Billing E-mail Address: | asteel@windhamsd.org |
| Billing Phone Number: | 603-425-1976 |

Service Information

| | |
|---------------|--------------------|
| Service: | Dark Fiber |
| Strand Count: | 2-Strands (1 Pair) |

| | |
|---------------------------|-----|
| New Service: | New |
| Customer Requested Date*: | |

*Customer request date does not constitute a contractual obligation, but is for informational purposes only

A Location Information

| | |
|----------------------------|--|
| Location Address: | 2 Lowell Rd |
| Location Floor/Suite: | |
| Location City, State, Zip: | Windham NH |
| Location Phone Number: | 603-425-1976 |
| Local Contact: | Adam Steel |
| Local Contact Email: | asteel@windhamsd.org |
| Local Contact Phone: | 603-425-1976 |

| | |
|----------------------------|--|
| Location Details/Comments: | |
|----------------------------|--|

Z Location Information

| | |
|----------------------------|--|
| Location Address: | 4 Fellows Rd |
| Location Floor/Suite: | |
| Location City, State, Zip: | Windham NH |
| Location Phone Number: | 603-425-1976 |
| Local Contact: | Adam Steel |
| Local Contact Email: | asteel@windhamsd.org |
| Local Contact Phone: | 603-425-1976 |

| | |
|----------------------------|--|
| Location Details/Comments: | |
|----------------------------|--|

Pricing Terms

| | |
|---------------------------------|---------|
| Monthly Recurring Charge (MRC): | \$0 |
| Non Recurring Charge (NRC)*: | \$5,000 |
| Service Term**: | \$60 |

*This section covers circuit installation only. Inside wiring and cross connects are not included unless otherwise stated.

**The Service Term shall commence on the date the Service (s) is/are delivered pursuant to this Service Order

The terms and conditions contained in the Master Service Agreement are hereby incorporated by reference and are made a part of this Service Order. Any ambiguity or conflict in such terms and conditions between this Service Order and the Master Service Agreement and all exhibits attached thereto shall be governed and controlled by the terms and conditions as contained in the said Master Service Agreement.

Additional Comments

This Contract goes along with the 500Mb circuit MRC charge of \$3000.00 for both services.

Acceptance

| | |
|---|---------------------|
| 186 Communications Signature: | Customer Signature: |
| Name: | |
| Title: | |
| Date: | |
| Client Acceptance: Pricing contract, and payment information subject to | |
| 186 Communications management approval. Applicable sales tax and | Name: |
| regulatory fees will be added to the billed account | Title: |
| | Date: |