

# RFP for Category 6A ISO Structured Cabling System

Town of Orono  
59 Main Street  
Orono, Maine 04473

RFP For Cabling Renovation Town Office Building 2020

## **Table of Contents**

1. Introduction
2. General Requirements
3. Scope Of Work
4. Suggested Components
5. Testing
6. Administration And Documentation
7. Warranty

## **1.0 INTRODUCTION**

### **1.1 GENERAL BACKGROUND**

The Town of Orono is seeking qualified candidates to submit proposals to improve the CAT-6 cabling installation at the Orono Town Office and Public Safety buildings at 59-63 Main Street, Orono, ME. This will include installation, termination, and certification of new structured cabling and upgrade or removal of the existing cabling. The structured cabling system will improve the existing structure cabling infrastructure within the Town office building and its connection with other buildings and fiber infrastructure. This document describes the system requirements to be met in the proposals of the structured cabling vendors to secure under contract all materials, design, engineering, and installation for the structured cabling system that is a turn-key solution.

### **1.2 TERMS AND CONDITIONS OF BIDS**

This is an invitation to submit a bid based on the materials, systems and equipment described in this document. All bids must be submitted in accordance with the specifications and information contained herein, as well as with any addenda, if required, issued by the Town. It is the intent of the Drawings and Specifications to provide a complete workable structure cabling system ready for the Town's use. Any item not specifically shown on the Drawings or called for in the Specification, but normally required for a complete system, are to be considered a part of the contract. Consideration other than cost alone will be used in making the determination of award. These factors will include financial stability, availability, design support, project management and field supervision. The Manufacturers and Products specified in the document are to be used. No substitutions of components specifically referenced will be allowed, without prior written customer consent after submittal review.

### **1.3 INSTRUCTIONS TO THE BIDDER**

Bids shall be valid for 60 days and other factors such as material and labor rate increase during the duration of this project must be taken into account. The Bidder shall consider the nature and amount of work to be done as well as the difficulties involved in its proper execution. The bid shall include all costs deemed necessary to cover all contingencies essential to the installation of the specified system. Total cost for installation materials, labor project management, and other miscellaneous items must be listed separately.

A complete materials list, including description, manufacturer, part number, quantity, unit price and total price must also be included. A statement of estimated labor hours and prevailing hourly labor rates must be included.

All products and materials shall be new, clean free of defect, damage and corrosion.

Where discrepancies are found during the bid process, the most stringent requirements must be included in the bid. Any cost encountered, which is not specifically itemized in the bid, shall not be incurred unless specifically agreed upon in writing by both parties. No additional compensation will be allowed for extra work incurred on the part of the Contractor due to the bidder's failure to notice any existing condition, which may cause additional labor.

Bid responses shall be concise following the format and numbering of this specification. Items not requiring responses shall be acknowledged by the bidder as being understood. Bidders must notify the Town as soon as any omissions or errors are detected in the specification so corrective addenda may be issued. Such notification must be received by the Town, at least (7) days prior to the date for receipt of bids.

Bids will be accepted by Belle Ryder at 59 Main Street, Orono, ME 04473 by 2:00 p.m., on May 15, 2020. Inquiries and requests for clarifications should be directed to [arude@orono.org](mailto:arude@orono.org) by 5:00 p.m. on May 6, 2020 with the subject being 'RFP Cable Renovation Town Office Building 2020'.

#### **1.4 RIGHTS OF THE TOWN**

The Town reserves the right to accept any bid or, at its discretion, reject any or all bids for whatever reason it deems appropriate. The Town reserves the right to purchase ALL or PART of the cabling materials and hardware needed for the project.

Receipt of a bid response does not obligate the Town to pay any expenses incurred by the bidder in preparation of the bid response or obligate the Town in any other respect.

The Town reserves the right to modify the specifications contained in the Request for Proposal anytime during the bidding period.

Only changes issued as an addendum will be binding upon the Town. No verbal instructions or interpretations of requirements shall be accepted.

## 1.5 SCHEDULE OF EVENTS

The schedule below indicates the critical dates that must be satisfied by the Contractor. The Contractor must staff its work crews appropriately to meet the project's completion. The Contractor shall also have staff available to provide coverage during the cut over period.

<b>Event</b>	<b>Date</b>
Release of this RFP	04/24/2020
Mandatory Pre-Bid Meeting <sup>1</sup>	05/01/2020 at 10:00 AM 59 Main Street, Orono
RFP/BID Question Deadline	05/06/2020
RFP/BID Question Response	05/08/2020
Proposal Due & Bid Opening	05/15/2020

## 1.6 VENDOR REQUIREMENTS

The vendor must meet or exceed all minimum qualification requirements. All submitted quotes must provide at a minimum, all requested information in this quote document. Any portion not included will be cause for elimination from the quote process. Each response will be reviewed to determine if it is complete prior to actual evaluation. The information should be organized as indicated in the quote requirements. Any portions of the submitted quote, which are to be treated by the Town as proprietary and confidential information, must be clearly marked as such. The Town reserves the right to eliminate from further consideration any response, which is deemed to be substantially or materially unresponsive to the request for information, contained in this section.

Vendors must include three (3) references for a project of similar implementation that has been completed within the past five (5) years.

- Job Location
- Contact name and telephone number
- Date of contract
- Project Description
- Equipment/Service Installed

---

<sup>1</sup> Pre-Bid Meeting format may be altered if required by State of Maine restrictions. Interested vendors should email Belle Ryder at [bryder@orono.org](mailto:bryder@orono.org) with questions.

## **1.7 QUOTE EVALUATION**

Each response will be reviewed prior to the selection process for completeness and adherence to format. A response will be considered complete if all requested sections are included in the proper order and properly completed. Vendors may also provide any and all recommendations for consideration such as installation, maintenance, support and design that is relevant to the total solution of the Town's technology needs.

## **1.8 EVALUATION CRITERIA**

The successful bidder will be chosen based upon but not limited to the following criteria:

1. Price of eligible goods and services - 50%
2. Prior experience and references - 25%
3. Personnel qualifications (certifications, longevity within the sector, etc.) - 25%

The Town reserves the right to reject any or all bids.

## **1.9 CONTRACTOR QUALIFICATIONS**

The Contractor shall at a minimum possess the following qualifications:

Be in business a minimum of five (5) years.

Contractor shall demonstrate satisfactory financial conditions to carry out the work.

Possess those licenses/permits required to perform structured cable installations in the specified jurisdiction.

Personnel knowledgeable in local, state, province and national codes and regulations. All work shall comply with the latest revision of the codes or regulations. When conflict exists between local or national codes or regulations, the most stringent codes or regulations shall be followed.

Must possess the following minimum insurance requirements and name the Town of Orono as an additional insured.

1) Workmen's Compensation Part One: Workers Compensation Part Two: Employer's Liability Bodily Injury by Accident	Statutory \$100,000 each accident Bodily Injury by Disease \$300,000 policy limit Bodily Injury by Disease \$100,000 each employee
2) General Liability	\$1,000,000 per occurrence \$2,000,000 policy aggregate
3) Auto Liability CSL Liability and Property Damage Uninsured Motorists	\$1,000,000 per accident \$1,000,000 per accident
4) Professional Liability (if applicable)	\$1,000,000 per claim

*Contractor must be registered with Building Industry Consulting Service International (BICSI) and have at least one Registered Communications Distribution Designer (RCDD) on staff.*

### **1.10 REQUIRED CONTRACTOR TRAINING**

The Contractor shall be fully conversant and capable in the cabling of low voltage applications such as, but not limited to data, voice and imaging network systems. The Contractor shall at a minimum possess the following qualifications:

Personnel trained and certified in the design of structured cabling systems.

Personnel trained and certified to install the structured cabling system. Provide references of the type of installation provided in this specification.

Personnel trained and certified in fiber optic cabling, splicing, termination and testing techniques. Personnel must have experience using an optical light source and power meter plus OTDR.

Personnel trained in the installation of pathways and support for housing horizontal and backbone cabling.

The lead installer on this project must possess at least BICSI level 2 certification.

### **1.11 CONTRACTOR RESPONSIBILITY**

Contractor shall be obligated to exercise the highest standard of care in performing its obligations as defined in this request for proposal.

Contractor acknowledges that the Town of Orono will rely on the contractor's expertise, ability and knowledge of the system being proposed and shall be obligated to exercise the highest standard of care in performing its obligation as defined in the following Scope of Work.

### **1.12 MANUFACTURER QUALITY & PRODUCT SUBSTITUTIONS**

All structured cable connecting hardware must be made by an ISO 9001:2000 Certified Manufacturer. All products must meet the technical requirements listed in sections 5-7. Any products not meeting these requirements will not be considered.

## **2 GENERAL REQUIREMENTS**

### **2.1 CONFORMITY WITH RFP**

All Proposals must conform to the requirements presented in this RFP. Proposals not in conformity may be rejected. Exceptions to any requirement must be clearly noted in vendors' response.

### **2.2 UNIFORMITY OF PROPOSALS**

To facilitate evaluation, all proposals must be submitted in a uniform format as described in Section 7 of this RFP.

### **2.3 ADDITIONAL INFORMATION**

All inquiries or requests for information relative to this RFP should be directed by email to [arude@orono.org](mailto:arude@orono.org). All materials submitted by the Town of Orono must be treated as confidential and cannot be used for any other purpose than the response to this RFP.

Information submitted by a vendor will be considered confidential to the Town of Orono and will not be used for any other purpose than evaluating vendor responses.

### **2.4 CONTRACT**

The selected vendor **may be required to execute a contract written for and by** the Town of Orono. The Town of Orono may elect not to execute the vendor's standard contract. All Proposals should contain a statement indicating the vendor's willingness to accept a written contract. The vendor should indicate if this RFP and the vendor's written material could be included in the contract. Any exemptions to this requirement must be noted in the vendor's response.

### **2.5 RIGHT TO REJECT PROPOSALS**

The Town of Orono reserves the right to reject any or all proposals, to waive technicalities or informality and to accept any proposal deemed to be in the best interest of the Town.

## **2.6 LIABILITY AND INSURANCE**

When identified, the selected contractor will be notified of the necessity to provide required insurance as outlined in 1.9 above. Proof of insurance shall be provided within 15 days of the date of written notification to the contractor.

## **2.7 PRICE PROTECTION**

Prices quoted in the proposal shall be firm prices and not subject to increase during the term of any contractual agreement arising between the Town of Orono and a vendor. Vendors will quote on prices less any Federal Excise Tax. Vendors should stipulate the expiration date of their quoted price. All prices will include shipping and handling.

## **2.9 DELIVERY DATE**

Vendors will specify in proposals the delivery date of their equipment, services and/or products (i.e., how long from time of order to delivery of hardware and/or software). Delivery times will be correlated to actually placing the order after approval for funding is granted.

## **2.10 VENDOR COMMITMENT**

Vendors must state their commitment to maintain, support and upgrade their services at the current or the public-released level for at least the term of the contract.

## **2.11 MAINTENANCE AND SUPPORT**

Vendors must supply the names and addresses of all service organizations that will provide support and maintenance on all products proposed herein. If appropriate, vendors must also specify the maximum time to elapse between the time a service call is made and the time a service representative arrives on site.

## **2.12 SYSTEMS RESPONSIBILITY**

Notwithstanding the contents of the RFP, it is the responsibility of the vendor to verify the completeness, accuracy, and suitability of the vendor's proposal to meet the requirements of the Town of Orono. The vendor without claim for additional payment shall provide any additional equipment required after installation to meet the project requirements, even if not specifically mentioned herein. It is understood that a complete solution for the network, which operates effectively and to the satisfaction of the Town of Orono's representative, is required. The successful vendor will be obligated to provide a turn-key solution that meets all guarantees in their proposal for the price contained therein and that all products provided operate successfully with the Town of Orono's existing telecommunication infrastructure and related systems and networks. All products must be completely new.

## **2.13 RIGHTS TO SUBMITTED MATERIALS**

All proposals, responses, inquiries, or correspondence relating to or in reference to this RFP, and all reports, charts, displays, schedules, exhibits, and other documents provided by vendors will become the property of the Town of Orono when received. Supporting technical manuals will be returned at the request of the vendor. The Town of Orono retains the right to use any or all system ideas presented in any proposal, whether amended or not amended. Selection or rejection of a proposal does not affect this right.

## **2.14 DISCLAIMER AND CANCELLATION**

The Town of Orono reserves the right to waive any informality received where such acceptance, rejection, or waiver is considered to be in the best interest of the Town of Orono. The Town of Orono also reserves the right to reject any proposal where evidence or information submitted by the Vendor does not satisfy the Town of Orono that the vendor is qualified to carry out the requirements of the contract documents.

This RFP does not commit the Town of Orono to any specific course of action. The Town of Orono reserves the right to not select any vendor or purchase any goods or services resulting from this RFP.

### **3 SCOPE OF WORK**

The work shall consist of the following:

- Establishing a new communications closet for the building in the space identified
- Establishing cable pathways to facilitate both initial installation and future growth
- Installation and termination of Category-6 network cabling at identified drop locations
- Labeling and documentation of installed cable plant
- Category-6 certification testing and test results
- Installation of single-mode 24-strand count fiber between rack (including rack-mount FTP) and existing building demarcation point (including wall-mount FTP). Terminations will be SC type.
- Removal and demolition of pre-existing network cable post-migration

Respondents should note the following:

- Use of BICSI-certified installers is preferred. At least one BICSI-certified installer should be responsible for review of work. Responses should include proof of certification. In the absence of certification, responses should include references and examples of recently completed projects of similar or larger scale.
- Use of core drilling may be required to establish pathways in some locations.
- Installation of new electrical circuits are out-of-scope and will be coordinated separately.
- A written commitment to warranty of work for a 1 year minimum is required.

#### **3.1 PLANS AND SPECIFICATIONS**

The Town of Orono does not possess CAD drawings of the subject. Floor plans are available for review by appointment on-site.

Approximately 58 jacks across 58 drop locations have been identified for this project. Bidders will be given the opportunity for a walk-through of the facility prior to submitting their bids by appointment.

Responses may or may not use suggested components outlined for the solution provided they meet the objectives outlined.

##### **3.1.1 CABLING GUIDELINES**

- All network drops shall consist of Category-6 cable, jacks, and patch panels.
- All network riser cable shall be AWG copper and blue in color.
- The pin-out for all drops is to be 568A.

- Cable distance shall not exceed 90 meters (300 ft.)
- A 10 ft. service loop will be provided within 10 ft. of each termination.
- A minimum bend radius of 1-inch shall be respected for all cabling.
- A maximum bundle size of 24 cables shall be respected.
- Cable bundles shall use Velcro fastening where appropriate; nylon cable ties are prohibited.
- Each drop will make use of a blue keystone termination and appropriate faceplate.
- Patch panels shall be Cat-6 rated and make use of 110 termination.
- Pathways will be serviceable and consist of conduit and appropriate grommet and firestop (if applicable) for any wall or floor penetration; cable tray or EMT conduit for any exposed cabling pathway; and appropriate J-hooks above drop ceiling

### **3.1.2 COMMUNICATIONS CLOSET GUIDELINES**

- Equipment and cabling relay racks shall be full height 45U 19-inch two-post with #12-24 rack screw threading.
- Relay rack placement shall have a minimum of 3 ft. clearance on 3 out of 4 sides including vertical cable management and be anchored to the floor.
- Appropriate double-sided 6-inch vertical cable management will be used for outer sides and between adjacent racks.
- A cable tray system will be installed above racks to establish cable pathways to closet penetration(s).
- A minimum of 16 sq. ft. ¾-inch plywood backer board will be installed to facilitate wall-mount equipment in the closet. Cable tray system will extend to the backer board. A wall box with 4 network jacks will provide connectivity to the wall board to cabling racks. Room grounding bus bar shall be installed on the backer board.
- Cabling and equipment are to be in dedicated adjacent racks. All network patch panels should be located in one of two racks.
- Spacing of patch panels and cable management should begin 4U from the top of the designated cabling rack, alternating 2U between horizontal cable management and patch panels. Patch panels may be configured as a pair of 1U 24-port or 2U 48-port. 2U horizontal cable management should be used above, below, and between patch panels to facilitate patch cable routing.
- Relay racks shall be grounded to the closet grounding bus bar using a minimum gauge of #6 AWG grounding cable.
- The Fiber Termination Point may be located within the top 8U of either the cabling or equipment rack.

### 3.1.3 LABELING AND DOCUMENTATION

- A six-character labeling scheme, referred to as “Jack ID” hereafter, shall be used for all network drops as follows:
  - A single letter, A-Z indicating the network closet
  - A numerical digit 0-9 indicating the floor (e.g. 1 for first floor)
  - A three-digit numerical identifier representing the wall or biscuit box for the drop
  - A single letter A-Z indicating the individual jack within the wall box or biscuit. When a box provides multiple jacks, jacks are to be ordered left to right, top to bottom, like reading a book.
  - No punctuation shall be used.
  - Example identifiers: A1001A, A1001B, A1002A ... A2001A.
- For each cable the Jack ID shall appear using printed permanent labeling in 4 locations:
  - Each end of the cable within 1 ft. of termination.
  - Above each patch panel port
  - On the box or faceplate of the drop, once, omitting the jack letter (e.g. A1001 rather than A1001A and A1001B).
- A cut sheet of Jack ID to room number mappings will be provided as a deliverable in electronic form.
- An as-built floor plan with drop locations will be provided in electronic form (CAD or PDF).
- Test results will be labeled using the Jack ID and provided as a single report.
- Test results will include a pass-fail summary followed by detailed test results for each Jack ID.

## 4.0 SUGGESTED COMPONENTS

- Chatsworth Products, Inc. (CPI) 46353-703 19-inch 2-post 45U Relay Rack
- Chatsworth Products, Inc. (CPI) 11729-703 Double-Sided 6-inch Vertical Cable Managers
- Siemon HD6-24 24-port Category-6 patch panels.
- Panduit CMPHH2 2U Horizontal D-ring Cable Managers
- Chatsworth Products, Inc. (CPI) 13622-012 TMG busbar assembly
- Chatsworth Products, Inc. (CPI) cable tray system
- Commscope, Belden, or Hitachi Category-6 riser cable
- Either Leviton, Legrand, Panduit, or Siemon Keystone Jack systems.

## **5 TESTING**

Testing of all newly installed cable channels shall be performed prior to system cutover.

### **5.1 COPPER TESTING**

- All category 6A field-testing shall be performed with a Fluke Networks DTX-1800 tester or better.
- All balanced twisted-pair backbone cables exceeding 90 m (295 ft) or 100 m (328 ft) shall be 100% tested for continuity if applicant's assurance is not required.
- Category 6A balanced twisted-pair horizontal and backbone cables, whose length does not exceed 90 m (295 ft) for the basic link, and 100 m (328 ft) for the channel shall be 100 percent tested according to ANSI/TIA/EIA-568-B.1. Test parameters include wire map plus ScTP shield continuity (when present), length, NEXT loss (pair-to-pair), NEXT loss (power sum), ELFEXT loss (pair-to-pair), ELFEXT loss (power sum), return loss, insertion loss, propagation delay, and delay skew.

### **5.2 TEST EQUIPMENT CRITERIA**

- All balanced twisted-pair field testers shall be factory calibrated each calendar year by the field test equipment manufacturer as stipulated by the manuals provided with the field test unit. The calibration certificate shall be provided for review prior to the start of testing.
- Autotest settings provided in the field tester for testing the installed cabling shall be set to the default parameters
- Test settings selected from options provided in the field testers shall be compatible with the installed cable under test.

### **5.3 FIBER OPTIC TESTING HORIZONTAL FIBER TESTING**

- Fiber horizontal cables shall be 100% tested for insertion loss and length
- Insertion loss shall be tested at 850 nm or 1300 nm for 50/125 $\mu$ m and 62.5/125 $\mu$ m multimode cabling in at least one direction using the Method B (1-jumper) test procedure as specified in ANSI/TIA/EIA-526-14A.
- The horizontal link must be guaranteed to meet 10G-BASE-FL performance requirements.

## **6 ADMINISTRATION & DOCUMENTATION**

### **6.1 LABELING**

- All cables shall be labeled at each end. The cable or its label shall be marked with its identifier.
- A unique identifier shall be marked on each faceplate to identify it as connecting hardware.
- Each port in the faceplate shall be labeled with its identifier.
- Each port on the connecting hardware shall be labeled with its identifier.

### **6.2 DRAWINGS**

As-built drawings shall be supplied by the contractor showing the locations of and identifiers for all:

- Horizontal cable routing and terminations
- Data outlets/connectors
- Backbone cable routing and terminations

### **6.3 RECORDS AND REPORTS**

All records shall be created by the installation contractor and turned over at the completion of work

The format shall be computer based and both soft copies and hard copies

shall be part of the As-built package. The minimum requirements include:

- Cable records must contain the identifier, cable type, termination positions at both ends, splice information as well as any damaged pairs/conductors.
- Connecting hardware and connecting hardware position records must contain the identifier, type, damaged position numbers, and references to the cable identifier attached to it.
- Test documentation on all cable types shall be included as part of the As-built package.

All reports shall be generated from the computer-based program used to create the records above. These reports should include but not limited to:

- Cable Reports
- Cross-connect Reports
- Connecting Hardware Reports

## **7 WARRANTY**

Either a basic link or channel model configuration may be applied to the horizontal and/or backbone sub-systems of the structured cabling system. Applications assurance is only applied to a channel model configuration. All channels are to be qualified for linear transmission performance up to 250 MHz to ensure that high-frequency voltage phase and magnitude contributions do not prove cumulative or adversely affect channel performance.

### **7.1 SYSTEM WARRANTY**

A ten (10) year or greater warranty available for the category 6A structured cabling system shall be provided for an end-to-end channel model installation which covers applicant's assurance, cable, connecting hardware and the labor cost for the repair or replacement thereof.

### **7.2 PRODUCT WARRANTY**

The manufacturer of passive data equipment used in a manner not associated with the Systems Warranty must have a minimum five (5) year Component Warranty on all its products. The Product Warranty covers the components against defects in material or workmanship under normal and proper use.

### **7.3 APPLICATIONS SUPPORTED**

Existing and future applications supported for a channel model warranty include those approved by the Institute of Electronic and Electrical Engineers (IEEE), the Asynchronous Transfer Mode (ATM) Forum, the American National Standards Institute (ANSI) or the International Organization of Standards (ISO) that specify compatibility with the cable referenced herein.

**Edits to RFP released on 04/24/2020:**

Option 1: Submit alternative pricing for CAT6 and CAT6A cabling for price evaluation

Option 2: Add enclosed cabinet for rack-mounted switches and server

Option 3: Add one Voice line on the on Front office on first floor.

Option 4: Provide a separate line item for drilling hole through floor and wall. Figure 1 shows existing hole that needs to be widened going from second floor to first floor.

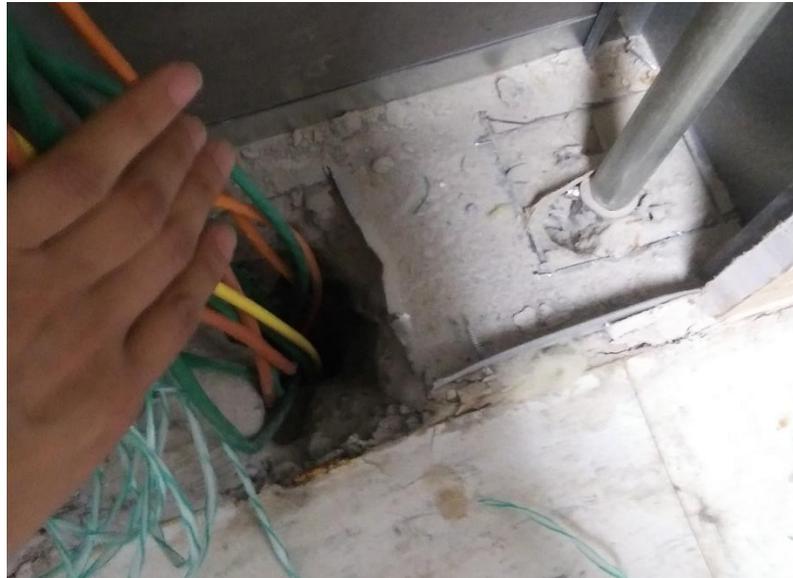


Figure 1: Hole in the floor between first and second floors showing existing cabling.  
Assume 12 inch thick floor