READ THIS FIRST

Notice to the Design Engineer, please refer to the Port of Seattle, Facilities and Infrastructure standards for reference before editing this specification.

This Project Spec Document REQUIRES an approved Competition Waiver per [CPO-6](http://compass.portseattle.org/corp/legal/Documents/CPO-6%2001%2006%2010%20FINAL.pdf) for Systimax Solutions Communication Backbone Cabling (including UTP copper backbone and tie cables, UTP cat 6/6a copper termination hardware, fiber optic cable, fiber optic cable termination and splice hardware) and Horizontal Cables (including optic fiber cable, patch panels, connectors, couplers, UTP copper backbone, data patch panels, blocks, wall plates, boxes, jumper/patch cords).

This Project Spec Document may need additional modifications to suit your project. It is recommended that you proofread each section, paying attention to any “Notes” boxes such as this one--you should remove these “Notes” sections as you go. Also, do a search for all bracket characters “ [ ] “ as they are used to show you areas containing options or project specific details (you can use Microsoft Word’s Find feature {Ctrl-F} to jump to an open bracket “ [ “ character quickly). Again, these bracket characters should be removed.

It is important that every paragraph be numbered to allow for easy referencing. If you use the document’s built in styles and formatting your outline should be fine (turn on the formatting toolbar by going to View > Toolbars > Formatting). Most paragraphs will use the style “Numbered Material” and can be promoted (Tab) or demoted (Shift-Tab).

You should not have to manually enter extra spaces, carriage returns or outline characters such as A, B, C, or 1.01, 1.02; the formatting will do this for you. The entire document is 11 pt. Arial. If you paste items in, you may need to reapply the “Numbered Material” format.

1. GENERAL
   1. SUMMARY
      1. The extent and location of “Communication Work” is shown in the Contract Documents. This Section includes general requirements for accomplishing Communcation Work as specified herein and indicated on the Drawings.
      2. Any item not specifically shown on the drawings or called for in the specifications, but normally required to conform to the intent, are to be considered as part of the Contract.
   2. GOVERNING CODES, STANDARDS AND REFERENCES
      1. The latest published edition of a reference shall be applicable to this project unless identified by a specification date.
      2. Building Industry Consulting Service International (BICSI) Telecommunications Distribution Methods Manual, current edition.
      3. American National Standards Institute /Telecommunications Industry Association (ANSI/TIA)
      4. Federal Communications Commission Title 47
         1. FCC Part 15
         2. FCC Part 68
      5. ISO/IEC 11801 International Organization for Standardization
      6. National Electrical Manufacturers Association (NEMA)
      7. National Electrical Safety Code (NESC)
      8. National Fire Protection Association (NFPA)
         1. NFPA 70 National Electrical Code (NEC)
         2. NFPA 75 Protection of Electronic Computer / Data Processing Equipment
         3. NFPA 101 Life Safety Code
      9. Federal Occupational Safety and Health Administration (OSHA)
      10. Underwriters Laboratories, Inc.
   3. SUBMITTALS
      1. Submit materials data in accordance with of Section 01 33 00 - Submittals. Furnish manufacturers’ technical literature, standard details, product specifications, and installation instructions for all products.
      2. Submittals shall include the following:
         1. Review of Shop Drawings and Brochures shall not relieve the Contractor of responsibility for dimensions and/or errors that may be contained therein, or deviations from Contract Document requirements. It shall be clearly understood that the noting of some errors, but the overlooking of others does not grant the Contractor permission to proceed in error. Regard­less of any information contained in the Shop Drawings and Brochures, the requirements of the Contract Documents shall govern and are not waived or superseded in any way by the review of the Shop Drawings and Brochures.
         2. Manufacturer Approval Drawings: Equipment that is laid out, configured, or designed by manufacturer based on performance specifications only shall be submitted to the Engineer for approval prior to release of drawings for manufacturing.

Increase time period for ordering materials as required for larger Projects.

* + 1. Ordering Materials: Order materials within two (2) weeks of receiving reviewed submittals from the Engineer. Provide proof of order placement upon request. Failure to comply will be considered non-performance and progress payments will be suspended until proof of order placement is reviewed and accepted by the Engineer.
  1. DRAWINGS
     1. The communications drawings are diagrammatic and are not intended to show all raceway, wiring, exact locations of equipment, terminations, or number or types of fittings required by the communication system. Provide all related communication Work which is specified herein, diagrammed or scheduled on the communication drawings, required by code enforcing agencies and as indicated on other details or elevations for complete and operating electrical systems. Since the drawings of floor, wall, and ceiling installation are made at a small scale, outlets, devices, equipment, etc. are indicated only in their approximate location unless dimensioned or otherwise indicated. Locate outlets and apparatus symmetrically on floors, walls and ceilings where not dimensioned and coordinate such locations with the Work of other trades to prevent interferences. Verify all dimensions on the job. Do not scale the electrical drawings. Refer to Architectural and Mechanical shop drawings and project drawings for dimensions as applicable.
  2. PRODUCTS
     1. General: Products are specified by manufacturer name, description, and/or catalog number to show intended function and quality. Report discrepancies, such as discontinued equipment or catalog numbers, to the Engineer prior to bidding. If the Contractor is unable to interpret any part of the plans and/or specifications, the Contractor shall notify the Engineer, who will issue interpretation and/or additional clarifications to Bidders before the project is bid.
     2. Manufacturers: Provide only equipment specified in the Contract Documents or approved by addendum. Manufacturers' catalog numbers and descriptions establish the quality of product required.
     3. Warranty: Comply with Section 01 78 36 - Warranties and Bonds. Warranty shall be manufacturer’s standard or a minimum of one year unless noted otherwise in Division 27 Communication Sections.
  3. SUBSTITUTIONS
     1. Comply with Section 01 25 00 - Substitutions.
  4. QUALITY ASSURANCE
     1. All materials shall be new and unused and free from defects. All materials shall meet all applicable codes provided a standard has been established for the material in question. Properly store all materials and equipment for protection from physical damage or damage due to corrosion
     2. Review accessibility of equipment for operation, maintenance and repair prior to installation. Proceed with installation only after unsatisfactory conditions have been corrected
     3. Equipment Manufacturer Qualifications: Equipment manufacturers shall have at least 10 years experience in manufacturing products and accessories similar to those for this Project, with a record of successful in-service performance.
     4. Any given item of equipment or material shall be the product of one manufacturer throughout the facility. Multiple manufacturers of any one item will not be permitted, unless specifically noted otherwise.
     5. All products, services and materials provided and performed under the scope of this Specification shall conform to the manufacturer’s requirements.
     6. Contractor is solely responsible for quality control of the Work and must comply with the Quality Control requirements specified herein.
     7. Installation Qualifications:
        1. In order to provide proper coordination, uniform quality and system integrity, the equipment and installation specified within this Specification shall be provided and installed by a single contractor with a proven track record in the field of the specified system. Personnel shall be competent and qualified by experience and training for the installation.
        2. Contractor shall be trained and certified by the manufacturer of the proposed system as a Certified Installer. A copy of the certificate shall be included with the bid.
        3. Upon award of the project and prior to the commencement of work, provide evidence that the General Foreman, Foreman or Crew Leader of the installation crew holds the designation of BICSI Technician, and that thirty- three percent (33%) of the installers have completed the BICSI Installer Level 1 or greater. The certificates of at least one BICSI Technician and one BICSI Installer Level 1 or 2 shall be submitted with the bid documents.
  5. COORDINATION AND SCHEDULING
     1. Comply with Section 01 32 16 - Bar Chart Schedule.
     2. Coordinate and schedule Communication Work with the Work of other trades. Every reasonable effort shall be made to prevent conflicts as to space requirements, dimensions, locations, code required working spaces, access openings, drawout and removal spaces or other matters tending to obstruct or delay the Work of other trades. All changes caused by failure to coordinate shall be made at the Contractor's expense.
  6. SAFETY AND PROTECTION
     1. Safety Measures To Be Taken: The Engineer has not been retained or compensated to provide design and construction review services relating to the Contractor's safety precautions or to the means, methods, techniques, sequences or procedures required for the Contractor to perform his Work. The Contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. The duty of the Engineer to conduct construction observations of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site. It shall be the Contractor's responsibility to comply with applicable safety and health regulations for construction. The Contractor shall consult with the state or federal safety inspector for interpretation whenever in doubt as to whether safe conditions do or do not exist or whether they are or are not in compliance with state or federal regulations.

Edit paragraph below. Depending on the severity of the violation, a warning citation first would be appropriate. For Seaport Projects, strike statement within 1.09.C. with Section 01 35 13.13 - Operational Safety on Airports During Construction.

* + 1. Comply with Section 01 35 13.13 - Operational Safety on Airports During Construction, Port of Seattle Construction Health & Safety Manuals and with applicable State of Washington safety rules and health standards, including WAC-294-45, and the Port of Seattle “Electrical Safety Rules.” Any violation shall [result in a warning citation.] [be cause for immediate termination of the Contractor’s authority to proceed with the Work and recourse to his Surety for completion of the Project.]
  1. DEMOLITION
     1. Existing material that is not to be reused or is not requested by the Port to be retained shall be removed from the site and shall become the property of the Contractor for salvage. All materials removed from the site shall be disposed of at facilities licensed for the material.
     2. In areas of where alterations are to be done, existing pathways may be reused, with the approval of the Engineer, in their original location, unless noted otherwise.
        1. Wiring that is discovered with damaged or deteriorating insulation shall be replaced with new.
        2. No existing wiring once removed may be reused, unless noted otherwise.
  2. CERTIFICATION AND WARRANTY
     1. All work and all items of equipment and materials shall be warranted for a minimum period of one year from the date of acceptance of the work. Where a manufacturer’s warranty is longer than one year, the Contractor shall offer the extended warranty. The Contractor shall, upon notification of any defective items, repair or replace such items within 24 hours without cost to the Owner, all to the satisfaction of the Owner/Engineer.
     2. Furnish a warranty in accordance with any General Conditions
     3. Listed Equipment: All applicable material, including accessories to the system and including all wire and cable, shall be listed by an approved agency recognized by Washington State Department of Labor and Industries for the use intended e.g., UL, CSA, ETL, or other NRTL.
  3. PROJECT FINALIZATION
     1. Fully test and adjust all equipment installed under this specification and demonstrate its proper operation.
        1. Testing that involves use of instruments other than meggers and volt-ohm meters shall be performed by an independent testing agency according to the requirements of Section 27 08 00 - Acceptance Testing.
     2. Present the Port with Certificate of Inspection from the Authorities Having Jurisdiction upon completion of the Work stating that all Work complies with all applicable Codes and Ordinances.
     3. Comply with Division 1 General Requirements for cleaning, closeout procedures, commissioning, training, operations and maintenance manuals, and record drawings.

1. PRODUCTS - NOT USED

A. If only one product is acceptable (single or sole source product), obtain an approved Competition Waiver and submit to the CPO Construction, Contract Administrator. The language shall read as: “Manufacturer Name, Product # XXXXX, No Equal.” Refer to CPO-6 Competition Waiver Policy for more information.

B. If a Competition Waiver is not approved or more than one product is acceptable, this section must list a minimum of 2 products plus the language “Or Approved Equal,” along with salient characteristics. Refer to CPO Construction’s Salient Characteristics Guidelines for more information.

1. EXECUTION – NOT USED
2. MEASUREMENT AND PAYMENT
   1. GENERAL
      1. No separate measurement or payment will be made for the Work required by this section. The cost for this portion of the Work will be considered incidental to, and included in the payments made for the applicable bid items in the [Schedule of Unit Prices] [Lump Sum price bid for the Project].

End of Section

Revision History:

05/01/2014 Conversion to 2004 CSI Numbering System

10/15/2014 Added Sole Source and Salient Characteristics Note to Part 2 and revisions

01/29/2015 Revised Sole Source

10/11/2018 Updated Specification to current standards, renamed and changed section number.

09/11/2020 Updated Specification per current F&I standards

02/25/2022 Revised for Clarity