



237-2014 ADDENDUM 2

REQUEST FOR PROPOSAL FOR THE PROVISION OF BASIC STRUCTURED DATA CABLING

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE
REQUEST FOR PROPOSAL**

ISSUED: November 28, 2014
BY: Carl Harris
TELEPHONE NO. (204) 986-2887

**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE REQUEST FOR PROPOSAL AND
SHALL FORM A PART OF THE CONTRACT
DOCUMENTS**

Template Version: Ar20131129

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Request for Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 9 of Form A: Proposal may render your Proposal non-responsive.

PART A – PROPOSAL SUBMISSION

Replace: 237-2014 Proposal Submission with 237-2014 Addendum 2 - Proposal Submission. The following is a summary of changes incorporated in the replacement Proposal Submission:

Form B(R1): Changed Unit of Measure to “each” and revised Total Bid Price line.

PART D – SUPPLEMENTAL CONDITIONS

- D2.3 Work shall be defined as a network drop/install (indoor) occurring from time to time (up to a maximum of 25 drops) including:
- (a) Installation of up to 300’ Category 6 cable from patch panel in wiring closet to office faceplate;
 - (b) Installation includes proper end to end termination including faceplates, labeling, etc.;
 - (c) Contractor will typically meet with a CR, **if required**, before any work in order to define the specific cabling job and review the safe work plan;
 - (d) Cable certification results for all cable runs shall be submitted to the Contract Administrator or the CR upon completion of Work;
 - (e) The Contractor shall abide by all bylaws including securing proper permits.

Revise: D21. WARRANTY to read

D21 WARRANTY

D21.1 Notwithstanding C13.2, the warranty period shall begin on the completion of a network drop/install and shall expire one (1) year thereafter.

PART E – SPECIFICATIONS

Add: E1.1.1 to read:

E1.1.1 Notwithstanding C6.10, the Contractor will not be required to provide drawings.

Revise: E1.3 to read:

E1.3 Work shall be defined as a network drop/install (indoor) occurring from time to time including:

- (a) Installation of up to 300' Category 6 cable per drop from patch panel in wiring closet to office faceplate at location as instructed by the CR;
- (b) Installation includes proper end to end termination including faceplates, labeling, etc.;
- (i) **Labeling shall not be done in handwriting;**
- (c) Cable shall be Panduit, Nordx/CDT, Belden, Amp-Netconnect or Commscope-SYSTIMAX;
- (d) Providing cable certification report to the CR upon completion of Work;
- (e) All Category 6 cable installations shall meet and adhere to industry standards including MB building codes, etc.;
- (f) Cables must be a minimum Category 6 and plenum rated. The Contractor shall specify cables proposed for use and submit documentation proving that the proposed cables meet these specifications before commencement of any Work;
- (g) The Contractor shall visually inspect all cables, cable reels, and shipping cartons to detect cable damage incurred during shipping and transport. Visibly damaged items shall not be installed,
- (h) All Category 6 cabling shall be terminated in the telecommunications closet on 19 inch rack mount RJ45 patch panels to match existing configuration;
- (i) The Category 6 cabling in the racks shall be installed with sufficient and appropriate mounting clips, brackets, and cable management to provide a secure and maintainable system;
- (j) No installed cabling may be exposed to view outside of the telecommunications closet. It shall be within a raceway, within a conduit, behind a suspended ceiling or concealed with wire molding as instructed by the CR;
- (k) All terminations must be wired according to the TIA568A pinout FIGURE 1.0: TIA 568A Standard Pinout;
- (l) Category 6 data cabling will be terminated TIA568A-Standard. The termination jack shall be of type RJ45 and shall be TIA/EIA certified Category 6, in **blue** unless otherwise specified;
- (m) The UTP Category 6 cable tail shall be terminated with a minimum of 14" of slack but not to exceed 18";
- (n) Analog or digital voice cabling will be Category 6 terminated in **black** using TIA568A Standard pinout at the drop location;
- (o) The CR will supply cable naming conventions for use by contractors for labeling each termination point;
- (p) Pull tension during installation of cables must not exceed the cable manufacturer's specifications;
- (q) Cables kinked, compressed, or otherwise damaged during installation will be considered destroyed, and must be replaced;
- (r) A single line run must not exceed 300 feet in length;
- (s) All horizontal cabling runs shall run from each work area in a star topology to a telecommunications closet. There shall be no connector or splice in the cable run between the outlet in the work area and the closet;
- (t) Cabling must be run a minimum of 12 inches from fluorescent lights and power cables;
- (u) Cabling must not be run directly adjacent to and parallel to power cables;
- (v) Minimum cable bend radius is 4 times the cable diameter;
- (w) Cabling runs cannot traverse floors;
- (x) Cable ties cannot distort the cable jacket. Staples will not be used to secure cables to any surface;
- (y) Maintain the manufacturer's wire twist of all conductor pairs as close as possible to the termination point. For Category 6 wiring, the maximum length of un-twisted pairs is 0.5";
- (z) During termination, the cable sheath shall only be removed the minimum amount required to properly terminate the cable.

Revise: E1.4 to read:

E1.4 Category 6 Testing Requirements:

- (a) Cabling must be minimum Category 6 and plenum rated.

- (b) The contractor must test the ANSI/TIA/EIA-568-C.2 Category 6 Cable standard.
- (c) All cabling must be certified using an instrument designed for communication cable certification to EIA/TIA 568-C.2 standards applicable to the cable category and acceptable to the Contract Administrator. Cable verification instruments are not acceptable. **The cable certification device must be able to provide detailed reporting. Cables must pass certification test Category 6 per TIA 568-C.2.**
 - (i) **Test parameter Results reporting (Minimum requirements)**
 - (i) **Wire map -Verify continuity and pairing of the wiring in the link. Identify wiring error, such as: shorts between any two or more conductors, an open circuit or break in the cable, reversed wire pairs, split pairs, and transposed pairs.**
 - (ii) **Propagation delay -Identify the wire pair with the worst-case propagation delay. The report shall include the propagation delay value measured, as well as the test limit value.**
 - (iii) **Delay skew -Identify the wire pair with the worst-case propagation delay (the longest propagation delay). The report shall include the delay skew value measured, as well as the test limit value.**
 - (iv) **Length -The field tester shall be capable of measuring length of all pairs of a permanent link or channel based on the propagation delay measurement and the average value for nominal velocity of propagation (NVP).¹ The physical length of the link shall be calculated using the pair with the shortest electrical delay. This length figure shall be reported and shall be used for making the Pass/Fail decision. The Pass/Fail criteria are based on the maximum length allowed for the permanent link configuration (90 meters; 295 ft.) or the channel (100 meters; 328 ft.) plus 10% allowing for the variation and uncertainty of NVP.**
 - (v) **Insertion loss (Attenuation) -Identify the worst wire pair (1 of 4 possible). The test results for the worst wire pair must show the highest attenuation value measured (worst case), the frequency at which this worst-case value occurs, and the test limit value at this frequency.**
 - (vi) **Return loss -Identify the wire pair that exhibits the worst-case margin and the wire pair that exhibits the worst value for Return Loss. These wire pairs must be identified for the tests performed from each end. Each reported case shall include the frequency at which it occurs as well as the test limit value at this frequency.**
 - (vii) **NEXT loss (pair-to-pair) -Identify the wire pair combination that exhibits the worst case NEXT margin ² and the wire pair combination that exhibits the worst value of NEXT (worst case). NEXT is to be measured from each end of the link-under test. These wire pair combinations must be identified for the tests performed from each end. Each reported case shall include the frequency at which it occurs, as well as the test limit value at this frequency.**
 - (viii) **Power Sum NEXT Loss -Identify the wire pair that exhibits the worst-case margin and the wire pair that exhibits the worst value for PSNEXT. These wire pairs must be identified for the tests performed from each end. Each reported case shall include the frequency at which it occurs, as well as the test limit value at this frequency.**
 - (ix) **ELFEXT (pair-to-pair) -Identify the wire pair combination that exhibits the worst-case margin and the wire pair combination that exhibits the worst value for ELFEXT. These wire pairs must be identified for the tests performed from each end. Each reported case shall include the frequency at which it occurs, as well as the test limit value at this frequency.**
 - (x) **Power Sum ELFEXT -Identify the wire pair that exhibits the worst-case margin and the wire pair that exhibits the worst value for PSELFEXT. These wire pairs must be identified for the tests performed from each end. Each reported case shall include the frequency at which it occurs, as well as the test limit value at this frequency.**
- (d) Certification records for each cable will be forwarded to the CR with cable number identification as per the CR.
- (e) The Contractor must test with their own equipment.
- (f) The Contractor must provide a record of the successful testing to the CR upon completion.

QUESTIONS AND ANSWERS FROM BIDDERS CONFERENCE

- Q1** Will any other cables be accepted as substitutes?
- A1** We are staying with the four cables listed in E1.3(c). They are trusted and known by us. See Addendum 1.
- Q2** Are patch cords included in the bid?
- A2** No.
- Q3** Are patch panels included in the bid?
- A3** No. If a patch panel is required it would be extra.
- Q4** Are pathways and j-hooks included?
- A4** No. Pathways are assumed to be available but if required they would be extra.
- Comment** New, larger than 25 drop installations are not included in the Work of this Request for Proposal.
- Q5** Can we assume the installs are only during normal business hours?
- A5** Yes.
- Q6** Can we assume you're asking for plenum rated cable?
- A6** Yes, please see E1.3(f).
- Q7** There are references to outdoor cabling. Is this accurate?
- A7** No. We will remove the references to "outdoor" in E1.3 and D2.3. See Addendum 2.
- Comment** Labeling of cables (noted in E1.3(b)) shall not be done in hand writing. See Addendum 2.
- Comment** Cable certification must be performed as per E1.4(c). See Addendum 2.
- Comment** Termination color for data cables listed in E1.3(l) should be blue. See Addendum 2.
- Comment** Termination color for voice cabling listed in E1.3(n) should be black. See Addendum 2.
- Q8** D14 talks about Contractor responsibilities at the site. What if we're not the prime contractor on site?
- A8** It is the City's intent that there will be no other work done in conjunction with this Work of the Contract.
- Q9** The General Conditions refers to drawings. Are drawings required?
- A9** No, drawings would not be required. See Addendum 2.
- Q10** D2.3 Site investigations.
- A10** See revision to D2.3(c) in Addendum 2.
- Q11** Please clarify C9.1 Material to stay onsite?
- A11** This clause is correct. To clarify, the Contractor shall not remove any Plant or Material that he has brought to the Site until the Work is completed.
- Q12** Is MSRT to be included on Form B?
- A12** Please see Addendum 2.
- Q13** Can Bidders submit bids by email or fax?

A13 No, bids shall be submitted in accordance with B8.11.

Comment Inspection and sign-offs can go to either the City Representative or the Contract Administrator.