## STAFF REPORT

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| **Agenda Item:** | 5 | **Date:** | May 24, 2016 |
| **Proposed No.:** | 2016-0239 | **Name:** | Nick Wagner |

**SUBJECT**

Authorization for the Executive to execute on behalf of King County an agreement with the University of Washington and the Community Connectivity Consortium to create a high-speed fiber-optic network around Lake Washington.

The Executive has requested final Council action by May 31, 2016.

**SUMMARY**

Proposed Ordinance 2016-0239 (Att. 1) would authorize the Executive to execute on behalf of King County an agreement (the C3 Agreement[[1]](#footnote-1)) (Att. 1-A) with the University of Washington (UW) and the Community Connectivity Consortium (C3).[[2]](#footnote-2) The purpose of the agreement is to create a high-speed fiber-optic network around Lake Washington for the exclusive benefit of “public, not-for-profit, and governmental institutions” (the C3 Project).

By sharing and combining existing telecommunication resources, the C3 Project is designed to provide reliable, high-speed, digital connectivity to C3 members and their partners more cost-effectively than commercial alternatives and with relatively low additional capital expenditure requirements. The proposed network would extend as far south of Lake Washington as Federal Way and Auburn, among other communities in south King County.

The network is scheduled to go live in January 2017.[[3]](#footnote-3)

A map showing the path that the network would follow is Appendix D to the agreement (Att. 1-A, p. 22). A summary of the agreement, provided by King County Information Technology (KCIT), is Attachment 3.

**BACKGROUND**

**The Community Connectivity Consortium**

The Community Connectivity Consortium (C3) was formed in 2002 by the Lake Washington School District, the Cities of Bellevue and Kirkland, and the University of Washington to develop a joint fiber-optic network. As described in the Executive’s transmittal letter, “The University of Washington had cable access, the Lake Washington School District had bond capital and the cities had right-of-way and existing conduit. Together they achieved what individually they could not and built the first network.” (Att. 8).

Since then, C3 has been organized as a public corporation under state law[[4]](#footnote-4) (RCW 35.21.730) and has expanded to include the following members:

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| Bellevue College | City of Seattle |
| Bellevue School District | City of Tukwila |
| City of Algona | Evergreen Hospital |
| City of Auburn | King County |
| City of Bellevue | Lake Washington School District |
| City of Federal Way | NORCOM[[5]](#footnote-5) |
| City of Kent | Northshore School District |
| City of Kirkland | Renton School District |
| City of Newcastle | University of Washington |
| City of Pacific | Valley Communications Center |
| City of Redmond | Valley Medical Center |
| City of Renton |  |

To minimize costs, C3 members continue to share certain assets that they own, such as fiber, node locations, technical expertise, and financing. (Transmittal letter; Att.8)

**C3’s Existing Fiber Optic Cable**

As described in a “Fast Facts” overview on its website[[6]](#footnote-6) (Att. 4), C3 has built over 35 miles of fiber-optic cable, which is being used by C3 partners to:

* Connect schools and universities to enhance learning;
* Connect hospitals, medical facilities and clinics to improve health care;
* Connect government facilities for public safety, transportation and other needs; and
* Provide an open access network to serve the public with wireless and broadband access.

**C3’s Goals**

C3’s goals, as described on its website,[[7]](#footnote-7) are to:

* Create a vibrant and competitive region by providing connectivity to meet the needs of our community institutions – hospitals, schools, city halls;
* Expand the use of our network to support new applications and needs;
* Build resiliency in our network and for our partners by adding redundancy and connecting with other regional networks; and
* Ensure a sustainable organizational, governance, and management structure to make sound, long-term decisions benefiting our members.

**C3’s Strategic Plan**

Completion of a fiber-optic network around Lake Washington is the first step in C3’s 2015-2018 Strategic Plan, which is Attachment 5 to this staff report.

**ANALYSIS**

**Purposes of the Proposed Network**

The proposed network around Lake Washington is intended, among other things, to:

* Meet the increasing bandwidth demands of modern digital devices and applications;
* Support new applications and needs of the C3 members and their partners; and
* Create additional resiliency in the system by providing multiple pathways for data, should the pathway in use become unavailable.

As an example of the need for these improvements, KCIT points to a 2012 report published by the State Educational Technology Directors Association (SETDA).[[8]](#footnote-8) The report, entitled “The Broadband Imperative: Recommendations to Address K-12 Education Infrastructure Needs,” projected a ten-fold increase in the need for bandwidth from the 2014-2015 school year to the 2017-2018 school year “to reach the goal of sufficient broadband access for enhanced K-12 teaching and learning and improved school operations.”[[9]](#footnote-9)

KCIT points to similar needs on the part of:

* Public health clinics;
* Government agencies providing police, fire, and other public safety and emergency services; and
* Public libraries, which provide access to broadband services for those who have limited or no access at home.

**King County’s Contributions**

Under the proposed agreement, King County would make in-kind contributions having a value of about $2.75 million over the 20-year term of the agreement, plus a cash contribution of $50,000, for a total contribution valued at about $2.8 million, which would constitute about 8.09% of the total value of the in-kind contributions from all the C3 members contributing to the C3 Project.

Specifically, the County would contribute:

* Two segments of fiber-optic cable with a total length of 44,033 feet, one within the City of Renton and the other running between Federal Way and Auburn,[[10]](#footnote-10) which would become part of the network (their use is valued at about $2.2 million for the 20-year term of the C3 agreement);
* Operation, maintenance, and security of two network nodes (connection points), one at the King County Regional Communications and Emergency Coordination Center in Renton, the other at the King County Data Center on the Sabey Campus in Tukwila (valued at about $215,760 per node for the term of the agreement);
* A fiber-optic connection on the Sabey campus between the King County Data Center and the UW point of presence there (valued at about $120,000);
* Funding of $50,000 toward the cost of a network node at Valley Communication Center in Kent; and
* King County Geographic Information System (GIS) services (valued at about $7,000).

The in-kind contributions of the other C3 members are listed in section IV.C of the proposed agreement (Att. 1-A, p. 10).

**Benefits to King County and Its Partners**

In exchange for its contributions to the C3 Project, King County would receive: (1) exclusive use of a one-gigabit network service and (2) exclusive use of five percent of the total C3 network bandwidth, which the County could share with other public, not-for-profit, or governmental entities.[[11]](#footnote-11) The ultimate beneficiaries would also include the public, educational, and governmental organizations with which the County would partner to provide them with connectivity that they could not otherwise afford. This service would supplement the County’s Institutional Network (I-Net) services and would generate revenue at the same rate as I-Net.[[12]](#footnote-12)

**C3 Project Governance**

The UW will act as the lead agency for the C3 Project and in that capacity will act as the project manager, system architect, and equipment, operations, and maintenance supplier (C3 Agreement, § III.A; Att. 1-A, p. 6). The UW will have exclusive use of half of the network bandwidth (C3 Agreement, § II.B.1; Att. 1-A, p. 5).

Decisions to be made by C3, such as the future allocation of network bandwidth[[13]](#footnote-13) and the pricing of optional services under section IV.B of the C3 Agreement (Att. 1-A, p. 11), are to be made by C3’s nine-member Board. The Board consists of representatives of the original four C3 members (the UW, the Lake Washington School District, the City of Bellevue, and the City of Kirkland) and five at-large representatives, who currently are representatives of the Renton School District, the City of Renton, the City of Auburn, Valley Communication Center, and King County.[[14]](#footnote-14) The current Board members are listed on page 2 of Attachment 4.

Action by the C3 Board requires a majority those Board members present at a meeting, as long as a quorum is present (a quorum being a majority of all Board members).[[15]](#footnote-15) The C3 bylaws include the following dispute resolution provision: “Disputes regarding asset ownership or any other aspect of the Consortium's business activities shall be brought to the attention of the Consortium Board for resolution. In the event a resolution is not possible, either party to the dispute may escalate the issue to the Membership at the Consortium's Annual Meeting or a Special Meeting. The vote of the Membership shall be the final decision of the Consortium.” § 6 (Att. 6, p. 5).

**FISCAL IMPACT**

According to the Executive’s Fiscal Note (Att. 9), the County’s performance of its obligations under the proposed agreement, including the contribution of $50,000, would not require any supplemental appropriation in the 2015-2016 biennium.

The fiscal impact in the 2017-2018 biennium, in addition to the in-kind contributions described above, would not exceed $20,000 per year, according to KCIT.

**LEGAL REVIEW**

The proposed agreement has been reviewed by both the Prosecuting Attorney’s Office and the Council’s legal counsel, who have noted that the term of the proposed C3 agreement (a minimum of 20 years; Att. 1-A, § VI, p. 13) is longer than the remaining term of both (1) the County’s agreement with Comcast to lease the fiber optic cable that the County would be contributing to the proposed network (about eight more years) and (2) the County’s lease of space at the Sabey Data Center in Tukwila, where the County would be required to maintain a network node (about five more years).

According to KCIT, those agreements are likely to be renewed; however, if they were not, or if the renewals did not extend through the entire term of the C3 agreement, the County might be unable to fulfill all of its duties under the C3 agreement as written. In that event, section III.G of the agreement (Att. 1-A, p. 10) provides that there may need to be changes during the term of the agreement and that “the parties agree to cooperate in good faith to resolve any such need for changes, to jointly determine how the associated costs should be allocated between the parties, and, if necessary, to modify this Agreement.” Such a scenario could result in additional cost to the County, which cannot be estimated in advance because it would be fact-specific.

The worst case scenario, which KCIT considers extremely unlikely, would be if the County had to build a similar fiber-optic cable elsewhere and move the network node from the Sabey Data Center, recreating it in a location separate from I-Net, which could cost up to $2.7 million (not adjusted for inflation), according to KCIT, depending on the circumstances. But much of that cost would not be attributable to the C3 Agreement, because a move from the Sabey Data Center would result in additional cost to the County even in the absence of the C3 Agreement, according to KCIT, since the County would still have a need for the equipment and fiber connections that currently are located there.

**INVITED**

William Kehoe, Director, King County Information Technology (KCIT)

Sharon Potts, Director of Regional Services, KCIT

**ATTACHMENTS**

1. Proposed Ordinance 2016-0239

Att. A: Consortium Project Agreement 70

1. Consortium Project Agreement Template Policy
2. Agreement Summary (provided by KCIT)
3. Community Connectivity Consortium – “Fast Facts” (from C3 website)
4. Community Connectivity Consortium – 2015-2018 Strategic Plan
5. Community Connectivity Consortium – Bylaws
6. King County’s Agency Joining Agreement
7. Transmittal Letter
8. Fiscal Note
1. The C3 Agreement is an addendum to the C3 Project Template Policy (Att. 2), which contains terms that are not specific to the project defined by the C3 Agreement. [↑](#footnote-ref-1)
2. C3 is a public corporation under state law and has 23 members, including cities, school districts, hospitals, public safety communication centers, the University of Washington, Bellevue College, and King County. C3 is described further in Attachment 3, which includes a complete list of C3’s current members. [↑](#footnote-ref-2)
3. C3 Agreement, § IX; Att. 1-A, p. 15. [↑](#footnote-ref-3)
4. The primary document defining C3 is an interlocal agreement (ILA) signed in 2011 by 18 of the members. (C3 also has a charter and bylaws.) King County has not signed the ILA, but is a voting member of C3 by virtue of an Agency Joining Agreement (AJA) that the County signed in 2012. The AJA provides in part: “By executing this agreement King County agrees that it has read, understands, agrees to and commits to working with other Consortium members on projects of interest under the Consortium charter, By-Laws and Policies of the Consortium.” (Att.7) [↑](#footnote-ref-4)
5. North East King County Regional Public Safety Communication Agency. [↑](#footnote-ref-5)
6. http://bit.ly/23WEwlN [↑](#footnote-ref-6)
7. http://communityconnectivity.org [↑](#footnote-ref-7)
8. SETDA describes itself on its website as “a 501(c)(3) not-for-profit membership association launched by state education agency leaders in 2001 to serve, support and represent their emerging interests and needs with respect to the use of technology for teaching, learning, and school operations.” [↑](#footnote-ref-8)
9. http://bit.ly/1cJy3nv [↑](#footnote-ref-9)
10. Segments 6 and 9, respectively, listed on p. 4 of Att. 1-A. These segments are leased by King County from Comcast under a franchise agreement approved by the Council on July 14, 2014, by Ordinance 17846, and are currently under-utilized, according to KCIT. They are not being used for King County’s Institutional Network (I‑Net), the County’s current fiber optic network, which connects “more than 300 public, education, and government organizations.” (http://1.usa.gov/1V8nKzI) [↑](#footnote-ref-10)
11. The network bandwidth is measured in “waves.” As described in section II.B of the C3 Agreement (Att. 1-A, p. 5), the County would receive exclusive access to four waves out of a total of 80 waves. Thirty of the 80 waves would be reserved “for C3’s future allocation.” [↑](#footnote-ref-11)
12. I-Net is the County’s current fiber-optic network, which uses cable leased from Comcast under a franchise agreement approved by the Council on July 14, 2014, by Ordinance 17846. [↑](#footnote-ref-12)
13. As described in note 11, 30 of the 80 waves of network bandwidth are to be reserved “for C3’s future allocation.” [↑](#footnote-ref-13)
14. C3 Bylaws (revised May 14, 2015), § 4.A (Att. 6, p. 2). [↑](#footnote-ref-14)
15. C3 Bylaws, § 7.E (Att. 6, p. 5). [↑](#footnote-ref-15)