

October 12, 2018

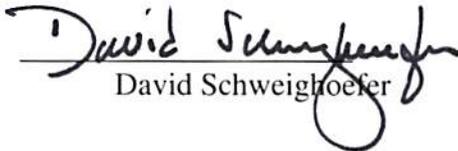
To the Members of Hudson City Council:

**Re: Initial Report to Hudson City Council Regarding Community Broadband**

As a working group of the Ad Hoc Committee, focused on reviewing legal and policy issues, we have completed our work and herewith submit our findings and recommendations concerning the proposed residential municipal broadband system. Further reports are forthcoming from other working groups of the Committee. We are, however, submitting our report at this point, in acknowledgement of Council's desire to receive timely input from the Committee and because travel and outside commitments prevent us from participating further in the work of the Committee at this time. To the extent that Council decides to pursue residential municipal broadband further, we recommend that associated research and planning efforts be conducted by an Advisory Board, under the leadership of the City Manager.

Our report is presented in two parts: a report of findings and preliminary recommendations and a decision-tree framework, which is appended as an Attachment. The Attachment is provided in digital form, but will also be distributed in enlarged hard copy form, for ease of reading. We hope that Council finds the information contained in these documents useful. We are happy to answer any questions that members of Council may have about this report.

Respectfully submitted,

  
David Schweighofer

  
Christina Tait

Enclosures

Cc: Jane Howington, City Manager

## **INITIAL REPORT TO HUDSON CITY COUNCIL REGARDING COMMUNITY BROADBAND, DATED OCTOBER 12, 2018**

An ad hoc committee was established by motion of Hudson City Council to review the issue of establishing a fiber optic cable network providing residential internet city-wide (“FTTH”) for the purpose of making recommendations to Council regarding community-wide and residential broadband service. The Committee was charged with the following tasks:

1. To review the current plans developed by the City for FTTH
  - a. Review assumptions and due diligence of City;
  - b. Review financial projections for capital and operational cost and projected sales;
  - c. Review City capabilities to provide and maintain service;
  - d. Review anticipated level of participation
2. To review funding options for a city provided FTTH network
  - a. Levy as proposed,
  - b. Operating as a utility
  - c. Pricing levels for FTTH to recoup costs.
3. To review the capability of the City to provide and maintain a reliable and well-serviced FTTH network
  - a. Time to install the system
  - b. Full time employees needed to maintain and provide service;
  - c. To Review current Velocity Broadband service results and capabilities;
  - d. Threats due to potential technological advances and the impact on FTTH
4. To review and investigate options for FTTH through means other than a city-owned network
  - a. Public Private Partnerships
  - b. Fairlawn model;
  - c. Open network - city fiber but no ISP
  - d. Commercial providers beyond the single cable and single DSS providers;
  - e. Other
5. Make recommendations to City council through a written report.

## I. REPORT OF FINDINGS

### A. With respect to the current plan developed by the City for FTTH

A thorough analysis of the financial projections associated with the current City FTTH plan will be submitted separately, as part of a subsequent report . This initial report purposely does not address the current plan's financial projections. We find that there is currently insufficient information upon which to make a finding with regard to the current plan, as a matter of policy. Plans and projections thus far have all been based on an incomplete understanding of actual demand or need for FTTH as a service in Hudson. Further, as will be discussed later, we believe that a property tax levy backed, general obligation bond financed, build-it-all-at-once, approach is not the best approach for pursuing a municipal broadband service in Hudson.

**Current average household demand.** The literature concerning internet service in the U.S., makes one thing clear - most residential users do not currently need or use internet bandwidth anywhere approaching a Gigabit of capacity per second.

According to a December, 2014 white paper published by the U.S. Department of Commerce Economics and Statistics Administration, entitled Competition Among U.S. Broadband Service Providers, by David N. Beede, Economist with the Office of the Chief Economist,

The Federal Communications Commission (FCC) currently suggests for single usage a range of 0.7 Mbps for “standard streaming videos” to 4 Mbps for “HD-quality streaming movie or university lectures.” The FCC says 1-2 Mbps is adequate for up to three users performing “basic functions” (“email, web surfing, basic streaming video”), but if more persons are using basic functions plus one or more “high-demand applications” (i.e., “streaming HD, video conferencing, OR online gaming”) then as much as 15 Mbps or more may be needed. Netflix recommends between 0.5 and 25 Mbps depending on the level of video picture definition. [See <http://www.esa.doc.gov/sites/default/files/competition-among-us-broadband-service-providers.pdf>]

Even though this paper is four years old, residential internet use has not changed that significantly during that time. Further, even if the average Megabits per second (Mbps) required by residential users has increased even moderately over 15 to 25 Mbps over the past four years,

that would still be far below the 1 Gigabit per second (Gbps) available with fiber. Current average usage far below 1 Gbps has been confirmed through discussions with a local private cable/internet service provider operating in Massillon, Ohio.

While there may come a day in the future, when households actually need regular speeds of 1 Gbps for internet access, that day has not yet arrived. Happily, this gives the City time to deliberate, plan, and build out a community broadband network, if residential demand supports it and it makes sense to make the project a priority among the various competing projects identified in the City's current or future five year project plans.

**A phased approach to build-out.** Some of the most successful municipal broadband networks in the United States have taken the longterm approach. Noteworthy among them is Santa Monica California, which began planning a community broadband network in 1998 (See Santa Monica City Net [smcitynet.com](http://smcitynet.com)). That City has proceeded cautiously and deliberately since that time, and is now hailed as a model for other communities. (See <https://medium.com/backchannel/san-francisco-of-all-places-has-lousy-connectivity-this-man-wants-to-change-that-439ac981196f>) As mentioned in the cited article, Santa Monica's efforts have been so successful that the nation's technology capital, San Francisco, is adopting a similar long term planning approach as it pursues its own municipal broadband network.

As concerns a potential phased build-out approach for Hudson, further detailed findings and recommendations will be forthcoming as part of a separate topical working group report to Council on that subject.

**B. With respect to funding options for a City provided FTTH, the basic options include:**

1. Voted tax-exempt general obligation bonds of the City, debt service on which would be paid from funds raised by a levy on the tax valuation of property in Hudson;
2. Voted taxable property tax bonds, debt service on which would also be paid from funds raised by a levy on the tax valuation of property in Hudson. Debt service would be somewhat higher on these bonds, because the interest to bondholders is not tax-exempt. However, the taxable nature of the debt would afford the City greater latitude in how it could operate the broadband system;
3. Unvoted Tax-Exempt General Obligation Bonds of the City, debt service on which would be paid from revenues generated by the FTTH program or otherwise with general funds of the City, subject to a levy on the tax valuation of property should revenues and general funds be insufficient to pay the debt service on the bonds. Debt in this case could be issued all at once, but could also be issued in smaller pieces and consolidated later, all depending upon the level of demand for FTTH service. Again the tax-exempt nature of these bonds would generally limit the City to owning and operating the system itself;

4. Industrial Development Revenue Bonds (IDRBs) to be issued in conjunction with the authority of the Summit County Port Authority, debt service on which would be paid from revenues generated by the FTTH program and the existing Velocity Broadband venture. In this case there would need to be an economic development purpose for the debt issue so at the very least, the existing Velocity Broadband service would need to be included as part of the overall financed project. The City would need to consult with bond counsel and the Port Authority to determine the extent to which commercial purposes must be part of the project in order to qualify the issue for IDRBs;

5. Available funds of the City, without the issue of debt. In this scenario, the City could use current revenues to begin expanding fiber infrastructure and could continue to build out the system with revenues from fiber leases and/or service subscriptions as demand warranted, and as available funds permitted. We refer to this approach elsewhere in this report as the pilot or test neighborhood approach. Further details are forthcoming from the Committee working group that has been focusing on a pilot or test neighborhood approach to build-out. This approach, while slower, involves the least risk to the City and taxpayers, virtually guarantees adequate take rates to justify expansion. It also affords the City the greatest latitude in system operations.

### **C. Some Concerns With Respect to Financing and Flexibility for the Future**

Given the inherent risks of undertaking any municipal broadband project, no matter how well planned, the City should endeavor to finance the project by means that involve the lowest risk to both taxpayers and to the City as public body. To that end, we recommend that any FTTH project be paid for, to the extent possible, with revenues generated by the project and otherwise with available funds. We recommend this approach for the following reasons:

1. FTTH is a risky venture. Nationwide, there are plenty of communities that have experienced downgrades in their bond ratings and have lost millions on community broadband systems that have failed to generate the expected revenues. In each of these cases, the community appears to have treated the venture like a road project as opposed to a business venture. They sought to save on construction costs by building out all at once and financed the endeavor with debt (usually revenue debt). In many cases Cities appear to have relied upon inadequate survey data or other community input, which caused them to substantially underestimate the rate of subscriptions to the public broadband service. They also appear to have underestimated the efforts of incumbent providers to maintain their customer bases by undercutting municipal prices and maintaining deep discounts for bundling internet service with television access.

2. Levying a general property tax may appear to avert the risk of revenue debt to the City, but it merely shifts that risk from the City as public entity onto the City's property taxpayers. Issuing general obligation (GO) debt creates further disincentives for the City to run the venture like a competitive business. With GO debt, whether community broadband succeeds or fails,

taxpayers will be required to cover the costs of the debt - whether individual property owners even subscribe to the service or not.

3. Notwithstanding the issues concerning risk and fairness to taxpayers, there is another critical reason to avoid the issuance of tax-exempt general obligation debt to finance community broadband. Tax exempt debt generally limits the flexibility available to the City in operating the system. We note the City's experience with Ellsworth Meadows Golf Course. The City would have preferred to transfer management to a private enterprise, but was prevented from doing so because the facility had been purchased with tax-exempt general obligation bonds.

The City should explore these issues more fully with bond counsel, but generally speaking, if the City issues tax-exempt debt to pay for fiber infrastructure, it will be limited in its ability to lease facilities to private providers, to bring in a private operator to run the service, if that becomes financially advantageous for the City, or ultimately to sell the infrastructure to a private entity should the City need to exit the business.

At an appropriate buildout pace and with sufficient input as to community demand, we believe that Council should focus on paying for an FTTH program with existing funds if possible. If demand proves high enough to justify expanding the program on a large scale, and if resulting projected revenues would be sufficient to support it, we feel that it may then be appropriate to pursue some form of non-property tax levy based, revenue-backed financing (non-voted GO or IDR).

**D. With respect to emerging technology.** No one can predict today when or if 5G broadband service will be a viable option for City residents. The only thing that can be said with certainty is that there is a lot of "buzz" about the topic and that major players in the telecommunications industry appear to be investing a lot of time, effort, and capital into development of 5G and related technology. Therefore, the best strategy in this regard may be to construct a fiber infrastructure and to pay for it, with an eye toward eventual leasing of dark fiber to private internet service providers. If individual property owners wanted to tie-in to City fiber via a lateral, they could do so. If private ISPs wanted to tap into the City's fiber for dissemination of 5G signal via small cell transmitters, the City could make that available as well. Both approaches could then generate revenue for the broadband operation. In order to keep things relatively simple, we have not addressed other possible competing technologies, such as non-5G fixed wireless or coaxial cable based Gigabit service.

**E. Potential Grant Financing.** We have not addressed potential grant moneys as a financing option. Federal grants for fiber appear to be limited to rural areas that have no or very limited access to broadband internet service. The FCC has, or had at one point, \$100 million in grant funds for which interested public entities could apply. We have not, however, looked into grants in detail.

**F. With respect to the capability of the City to provide and maintain a reliable and well-serviced FTTH network**

The capability of the City to provide and maintain a reliable and well-serviced FTTH network will depend first upon the actual demand for such a service in the community, which is still unknown. Beyond that, the City's capability will depend upon Council's longterm commitment to run the program like a business.

Government endeavors are, for various and good reasons, characterized by a lack of nimbleness. While businesses have the profit motive to drive their efforts, and can make decisions and change plans relatively quickly, government bodies are necessarily constrained by a more deliberative process. The need for transparency in the public process, competing municipal service priorities, and the need to be accountable to taxpayers make it inappropriate to simply turn over a business operation to City staff or to an outside contractor. These factors may make it difficult for the City to operate an internet service long term, in the face of potentially aggressive competition from incumbents and the dynamic nature of technology in the telecommunications industry.

Taking into account those inherent limitations, our general opinion is that whichever approach is chosen, the City should proceed as if this were an authentic business venture, as opposed to a public works project. Council needs to understand that this endeavor, while a service, is much more complex than the standard variety of government utility. Unlike roads, sewer, water, and distribution of electrical power, internet and telecommunications are distinct, whether they are labeled as a utility or not.

The industry is competitive - unlike traditional public infrastructure where people's choices are generally limited to one, depending upon where they live. If the City provides community broadband, there will still be at least two other service providers in town. These providers will engage in competitive business practices to maintain their customer bases.

Absent a solid indication of broad-based community demand for FTTH, the City needs to be prepared to pace build-out as a commercial venture would. McDonalds did not start out by blanketing the world with hamburger stands on every corner. Smart businesses expand as market demand increases for their services.

**A Pilot Approach to Manage Take Rate Risk.** Again, absent solid evidence that the City will hit necessary take rate projections (We don't believe that a consumer survey alone is sufficient for this.), the City should follow a cautious, demand-led strategy for community broadband by beginning with a test neighborhood or two. Let the lessons learned from those experiences guide expansion. Build the system out only in those areas where there is demonstrated demand and commitment to subscribe to the service.

The City should let the successes in one neighborhood fuel demand in others, such that the City provides FTTH in a particular neighborhood or district, only when it is assured of necessary take rates to keep the whole venture economically self-sustaining. If demand is so great that requests for build-out exceed available funds or labor resources, the City could implement a lottery system, pursuant to which contiguous areas would be selected for expansion of the system on a fair basis. The City has employed such a method in the past with respect to available home building permits. While some residents will complain about unfairness if neighborhood A has service while neighborhood B does not, it is likely that more residents will appreciate a measured approach and Council's responsible use of public resources, even if those residents aren't the ones directly contacting Council.

**Marketing and Pricing.** Council must recognize that marketing and pricing are key to the success of an FTTH endeavor, regardless of the form in which it is pursued. Council members and City staff may be experienced and wise in many areas, but for most, running an internet/ telecommunications business is not in their established field. Whether Council decides to build and operate the system or to build and lease dark fiber, Council should be prepared to hire or contract with personnel who are experienced in marketing and running an internet business, along with the customer service support staff to keep existing customers satisfied with the service. In any event, Council should maintain the necessary flexibility in financing and building out any FTTH system such that the City can gracefully exit the business aspect of the service, should that become advantageous or expedient in future.

**G. With respect to reviewing and investigating options for FTTH through means other than a City-owned network**

Among the options available to the City are the following. These are not necessarily our recommended approaches, but are provided to flesh out the various options. Council might want to consider combinations of the listed options as well.

**1. A public-private partnership between the City and one of the incumbent ISPs in Hudson, or with an outside established ISP, or with a start-up company.** In this scenario, the City would construct the fiber infrastructure, including the fiber to the home, and the private ISP would run the business aspects of the system. We acknowledge that the City has been unsuccessful thus far in finding a private ISP partner, but unburdened from the cost of installing expensive infrastructure, the City might find that one or more private ISPs would be willing to lease fiber from the City and provide internet, phone, and/or television service to businesses and homes.

**Louisville, KY - an interesting partnership approach.** While it doesn't follow the model above, Louisville, Kentucky is noteworthy as a city that has adopted a unique approach to public-private partnership. Louisville has leveraged its fiber to establish a tech business incubator, the Louie Lab. The facility allows local entrepreneurs and other tech savvy experts to share space to develop innovative applications, all based upon an open-source program platform,

that can be used in Louisville's efforts to establish itself as a smart city through the internet of things.

Coupled with the Louisville tech incubator is a model smart home/apartment, where interested residents can see how smart home and smart City apps can work together to make life easier for residents who take advantage of those innovations. This type of demonstrator facility could help Hudson build support for community wide fiber by allowing residents to experience first hand, the ways in which smart tech can enhance life for those who live and work in Hudson.

In pursuit of its own "Louie Lab," Hudson might be able to tap-in to talent at either Kent State or Akron University, or find it among the various tech industry folks who work here in Hudson. Given the right combination of talent, Hudson might even be able to foster a home-grown start-up business that could provide internet service to residents.

See <https://louisvilleky.gov/news/louisville-opening-louielab-collaborative-civic-innovation-performance-improvement>.

**2. Construction of the main fiber infrastructure, with dark fiber leased to private ISPs.** This approach would be similar to the standard municipal utility infrastructure approach. The City installs the water lines up to the edge of the right of way, and residents who choose to tap-in to City water pay to have laterals installed in order to connect and take advantage of the service. Unlike the water analogy, however, residents would choose from among (hopefully) various ISPs for their internet, phone, and/or television services.

This scenario is also analogous to the current market for package delivery services. The public owns the roadways, but FedEx, UPS, and others drive on the roads to deliver the goods. This approach creates significant opportunities for wins for both public services and consumers. The City can leverage the fiber to implement smart-City initiatives, while funding those efforts from the lease of its fiber to private ISPs. In addition, the City would avoid the administrative and financial burden of operating an ISP business. From the consumer standpoint, increased competition among internet service providers should lead to enhanced quality of internet/cable service and overall reductions in price for those services.

**Dublin, OH.** A nearby example of this approach is Dublin, Ohio. See <https://www.econdev.dublinohiousa.gov/dublink-broadband>. At this point Dublin's program focuses exclusively on commercial internet service, and the City does not appear to be contemplating residential service at this time. However, what is impressive about the Dublin program is that the City has been able to attract 15 private internet service providers who lease dark fiber from Dublin and thus enhance competition, service, and choice for Dublin area businesses. Dublin in turn uses the fiber lease revenues to maintain the infrastructure and to cover the cost of connection for new businesses. This program is a key aspect of Dublin's ongoing economic development strategy.

Another noteworthy aspect of the Dublink approach is that it involves multiple municipalities in a fiber ring that encompasses a significant area northwest of Columbus. Recently, the City of Solon announced that it is considering the feasibility of a municipal fiber internet service; and we are aware that the City of Cuyahoga Falls has been soliciting input from residents with regard to a possible municipal fiber system as well.

There are some significant opportunities here for creating a similar economic development hub and for realizing efficiencies of scale, were the City of Hudson to pursue a cooperative dark fiber ring approach with surrounding cities. In addition, the size of this potential market would make it more attractive for private ISPs to invest their efforts in providing competing services as part of the fiber ring. Such an approach could begin with businesses and expand to a residential component over time.

**Ammon, ID - Dark Fiber to Business and Home.** With respect to a combined business and residential system, the town of Ammon, Idaho is a much touted example of a municipal fiber broadband system in which the City constructs the infrastructure, leases its dark fiber to competing internet service providers and makes the service available to both business and residential customers. Like Santa Monica, California, the City has taken an incremental, demand-based approach to residential buildout, constructing fiber on a neighborhood by neighborhood basis, as it receives sufficient commitments from each area. See <http://b.ci.ammon.id.us/fiber-optic/>; <https://muninetworks.org/content/ammon-idaho-preparing-ftth-expansion>; <https://nextcenturycities.org/member/ammon-id/>.

**3. Advocating for Increased ISP Competition/Lower Prices Without Providing the Service.** Even if there is insufficient support on the part of residents or Council for FTTH community broadband, there are alternative steps that the City can take to address the issue of lack of competition among internet service providers in our area. The City can take these steps, either on its own or in concert with other local governments, to attempt to shift the general market environment in such a way that barriers to entry into the local telecommunications market are eased:

i. Evaluate the City's regulations and fee structures to make sure that City practices are not inadvertently discouraging participation of smaller players in the local internet service market.

ii. Be prepared to work with other local communities and state government to lobby for changes that might open barriers to competition.

iii. Partner with other local communities to in effect create a market large enough to entice one or more of the established large players in the industry to consider our area more like an urban market, such that they would consider it worth the expense to expand fiber, 5G, or other enhanced service into our area.

iv. As has been discussed above, by putting just the fiber mains (right of way fiber) in place, the City may relieve sufficient cost burden from private sector ISPs that they would be willing to partner with the City or lease dark fiber from the City or otherwise establish local broadband service, without the City having to connect every home to the network and operate the system itself.

v. Explore an aggregation type approach, possibly in concert with surrounding communities, pursuant to which the City would negotiate a group rate for residential internet service with an established provider, incumbent or otherwise. This approach would be similar to the approach that the City has taken with respect to natural gas and trash hauling. It would be preferable to attempt to work with surrounding communities in this case, to be able to attract the attention of the incumbent ISPs with a larger local market share.

**“The Fairlawn Model.”** We have not addressed the Fairlawn model as an alternative approach, because Fairlawn is also a city owned and operated fiber based system. The primary difference is the means of financing employed by Fairlawn, which was Industrial Development Revenue Bonds (IDRBs), issued through the Summit County Port Authority. Presumably, Fairlawn was able to issue IDRBs because the City built out its entire network at once, with both commercial and residential components.

To cover debt service and other costs of its system, Fairlawn is supplementing system revenues with certain funds that would otherwise have been used for street repair. Service director, Ernie Staten, is the staff head of Fairlawn’s program. He has indicated that because Fairlawn’s streets are primarily concrete and in sufficient good repair, the City can afford to use these funds for the time being to supplement debt service.

Another aspect of the Fairlawn program that is worth noting is that the City took advantage of the fact that most of its residents utilize a central trash compacting facility in assessing community demand for FTTH and for marketing the program. The City used written survey style ballots which were distributed at the compacting facility. In addition, Mr. Staten indicates that he spends much of his time and effort in public meetings and in visits to the various business clients of the system, both marketing the system and providing community education about the program to residents. If there is a Fairlawn model, it seems to be one of intense hands-on involvement in making municipal broadband a viable service in that community and of being willing to cannibalize other City service funds in order to pay for network costs.

## II. PRELIMINARY RECOMMENDATIONS AND THE NEED FOR FURTHER POLICY DETERMINATIONS

**Decision Tree Framework v. Definitive Recommendation.** Because we feel that Council still has significant policy decisions to make, we have not framed our recommendation in terms of a single, definitive recommended approach for pursuing municipal broadband service in Hudson. Instead we have provided the attached decision tree to assist Council in the process of policy clarification and refinement. As a general matter, however, we do not support the current plan, which contemplates an all-at-once system build-out, financed with general obligation, property tax backed bonds.

That approach is not favored for several reasons. Principal among them is that the issuance of tax-exempt general obligation (GO) debt significantly limits the flexibility of the City with regard to providing service to the community over the fiber infrastructure. With tax-exempt GO debt, the City would not be able to lease facilities to private ISPs or partner with a private operator to run the business side of internet service, if that became advantageous or expedient for the City.

In a similar vein, this approach does not take into account the rapidly changing nature of telecommunications. While no one can predict with certainty when new technologies such as 5G will be available to local consumers, what is certain is that innovations are always under development. The City should be poised to shift with these developments and to take advantage of opportunities to enter into cooperative and mutually beneficial arrangements with the private sector, when these innovations become available. GO debt limits the City's ability to do this.

Further, an all-at-once buildout makes the City too vulnerable to uncertain take rates. Even with the best consumer survey data and financial projections, municipal broadband is still a gamble. Residents may say they want the service when asked, but may not act on those stated desires when confronted with aggressive competitive tactics from incumbent ISPs, or with the next shiny new innovation in the world of internet service.

**Key Policy Questions.** In order to assist Council in the process of determining its policy with respect to community broadband, we invite Council to answer the following questions:

**What exactly is the reason that the City is considering expanding its current fiber network to residents throughout the City?;**

**What specific problems or issues is the City attempting to solve or address by pursuing this project?**

We are hopeful that the attached decision tree framework, which suggests distinct approaches or considerations with regard to possible answers to the above questions, will assist Council in this process.

**Community Broadband Advisory Board.** One concrete recommendation that we can make, independent of Council's ultimate policy determination, is that the analysis and other legwork associated with exploration and planning for this endeavor be conducted under the direction of the City Manager. Accordingly, we recommend that Council authorize the City Manager to establish a Community Broadband Advisory Board to be comprised of members of City Staff, representatives from City Council, and community stakeholders, such as interested members of the Ad Hoc Committee. We recommend this approach for the following reasons:

A Community-wide broadband program will be of sufficient scope and have such community impact that institution of a special advisory board would be appropriate to augment staff efforts and to serve as a general liaison to residents. The City has successfully employed this model in the past in the case of Downtown re-development efforts.

As Council deliberates on and refines present and future policy regarding community broadband, it is anticipated that the line between advice that the Ad Hoc Committee was charged with providing and the execution of policy could become blurred. By way of example, at the point at which Council determines to pursue a question and answer survey or pilot neighborhood projects, City contracts will be involved. Pursuant to City Charter, such contracts are within the express exclusive powers of the City Manager to pursue and execute. A Community Broadband Advisory Board would provide for appropriate administration and execution of these activities by the City Manager and staff, all while maintaining necessary Council involvement and allowing community members with expertise and interest to continue to be involved with the project and to serve as ombudsmen to the community at large.

### **III. SUGGESTED COUNCIL ACTION WITH RESPECT TO THIS REPORT**

This is the first report to Council from members of the Community Broadband Ad Hoc Committee. Additional reports are forthcoming which will focus in greater detail on certain topical areas that the Committee was asked to address and which may come to different conclusions than those contained in this report. If, after reviewing and considering the findings and guidance contained in this or any subsequent report, Council determines to proceed with further investigation and/or planning of a community broadband program, we invite Council members to identify the specific areas or action items they deem most worthy of pursuing to that end. We stand ready to answer specific questions about the contents of this report or to clarify any of the points contained in it. With respect to further planning or tasks related to pursuing a community broadband program, we respectfully recommend that appropriate direction for such activities be given to the City Manager. Members of the Ad-Hoc Committee would be pleased to lend expertise and insight to staff efforts in executing Council policy.

**Why is the City considering expanding its current fiber network to residents throughout the City?; What specific problems or issues is the City attempting to solve or address by pursuing this project?**

**I. Accolades from Progress Oriented Organizations such as ICF, ILSR, Century Cities, et al.**

An insufficient reason in our opinion

Council should be cautious of lobbying from outside organizations. These organizations have political objectives that may not be in line with the interests or aims of the local community.

For example, The Institute for Local Self Reliance describes its mission in part: "Since 1974, ILSR has championed local self-reliance, a strategy that underscores the need for humanly scaled institutions and economies and the widest possible distribution of ownership."

The Intelligent Community Forum, from whom the City has received recognition, is a global organization that advocates for making internet access a UN sanctioned human right. While this aim may seem innocuous or even beneficial on face, fulfillment of the ultimate objectives of its sponsors could lead to loss of local control and self-determination in favor of international regulation.

Hudson has traditionally been a community that prides itself on bucking general trends in favor of local control and safeguarding of community interests (e.g., through hard-won limitations on housing development and attention to preservation of historic and architectural character); there is no reason to shift that approach with respect to community broadband.

**II. Economic Development**

Focus on Enhancing and expanding current Velocity Broadband

Consider pursuing the approach undertaken in Dublin Ohio (See findings for further discussion and weblink)

Build a main fiber ring or trunk, as is appropriate with City zoning and geography.

Lease out the dark fiber to private ISPs

Use the lease revenues to pay for connections from the fiber main to business facilities

In this case, the City remains within its strong suit as builder of public infrastructure.

Private sector attends to the business side of the internet

Consider coordinating with surrounding communities to expand the potential impact of the program and to capitalize on efficiencies of scale

Consider expanding to residential service when fiber lease revenues are sufficient and a network of competing ISPs is in place to provide enhanced choice in service for residential customers

Finance to the extent possible with existing funds and fiber lease revenues; consider IDRBs if necessary

**III. a Expressed Desire on the Part of Residents, With Support for a Property Tax Levy, and a consolidated build-out**

Pursue a second survey to more accurately and objectively assess community support

The survey should provide sufficient information about residents' needs and experiences with existing internet to establish 1. whether there is an actual need and desire for internet service, and 2. that fiber to the home will actually solve reported problems with internet service, such as reliability

The survey should also be designed to assess community support for a tax levy to pay for city-wide FTTH and the priority that residents place on FTTH relative to other City services or capital projects.

Specific recommendations concerning the secondary survey are forthcoming and will be submitted separately from this report.

**III.b. Expressed Desire on the Part of Residents, Without support for a property tax levy**

**IV. Desire to Implement Smart City Amenities - with or without established community demand**

Provide as much information and education to the community as possible in order to help residents understand the value of such a project.

Consider utilizing free space in the City's downtown area to develop a demonstration smart home, to show how smart tech can integrate convenience with City services.

Conduct a phased expansion, pursuant to a coherent long term FTTH plan. Further information about this approach will be submitted by separate report.

A phased approach would allow the City to expand the network in tandem with take rates that would be established in advance, neighborhood by neighborhood.

The process should begin with pilot/test neighborhoods, and the experiences, good and bad, in those test areas should drive decisions concerning further expansion.

Because property owners would only pay for the service once they were receiving the benefit of it, concerns about fairness (associated with a property tax financed approach) would be mitigated.

The City should rely on neighbors talking to neighbors, on town hall style meetings and communications media, and potentially on a model smart home in order to educate community members about the benefits of FTTH

Should demand outpace City capacity to build within a given fiscal year, the City could institute a lottery style process pursuant to which additional areas would gain access to FTTH.

See examples discussed at Sections A and G2 of the Report of Findings:  
  
Santa Monica, CA  
San Francisco, CA  
Ammon, ID

**V. Desire to address the lack of competition among ISPs in Hudson, with or without established community demand**

Provide the infrastructure in order to remove the cost of fiber obstacle to incumbents and potential competing ISPs

Maintain resident's ability to choose their ISP by only installing infrastructure up to private property; residents

Pursue special financing options with local financial institutions which would make it easier for property owners to cover the cost of running fiber from the right of way to the home

Assemble a list of approved contractors who would be authorized to perform the right-of-way to the home fiber installation work

**A GENERAL NOTE ON FINANCING**

Finance to the extent possible with available funds and revenues from the enterprise; Pursue Taxable GO bonds as a last resort. See Findings Section 2 for further discussion.

This approach to financing provides the greatest flexibility, less risk to both the City and to taxpayers, and allows the City to lease facilities to private ISPs either by design or in the event that it becomes advantageous for the City to transfer ownership to private ISPs (when/if fiber becomes necessary for 5G internet)

While the City may incur additional construction costs by phasing construction over time, the savings associated with avoiding debt transaction fees and interest should also be considered.