

Open Work Session
Discussion on Broadband Technology
January 19, 2021

Mr. John Monar, Director of Information Technology, came before Council and thanked them for having him discuss broadband and how it pertains to Wicomico County specifically. He said he developed a report, and would like to go through that, and at the end he will open it up for discussion or questions, which he will be happy to answer.

Mr. Monar said broadband internet is defined by the FCC as internet service that meets minimum speeds of a 25-megabit download and a 3-megabit upload, and can be obtained by either wired line or fixed wireless services. He said broadband is not something new in Wicomico County, as it has been in the County for roughly 20 years; however, the emphasis of expanding to rural areas, mainly brought on by the pandemic, is a fairly new and evolving process with many moving parts. He explained, expanding broadband networks to provide service to rural areas is an expensive and labor-intensive task, not only in actual construction, but also in the planning and engineering aspects that require subsidizing by the State and Federal Governments. He said this is somewhat similar to the expansion of electricity in the early 1900s, and providing broadband service to all households will take many years to accomplish.

Mr. Monar reported, at the County level, they are staying informed by reviewing grant opportunities and monitoring Legislation activity at the State and Federal levels, and they are communicating with other local jurisdictions and governmental organizations in their area in an effort to share knowledge. He said they are also working through the process of communicating with existing and potential internet service providers regarding their plans on network expansion and any grants they may pursue or have been awarded. He said he has provided Council with a document that gives a brief explanation of the Maryland Office of Rural Broadband Grant Programs.

Mr. Monar reported, right now in Wicomico County there are some projects happening, and they are aware of some projects on the horizon. He said currently there are two projects on the west side of the County that are being provided by the Maryland Broadband Cooperative that were funded through the Governor's Office of Rural Broadband. He said the Quantico project is just about finished, and the project in Hebron just started, and it is his understanding that it should be done by the end of February.

Mr. Monar said the FCC recently released phase 1 of the Rural Digital Opportunity Fund Reverse Auction Grant Awards, and there were five companies in Maryland who received funding, two of which pertain to expansion in this area in particular. He said one company is Blue Surf, which is a fixed wireless provider in this area who was awarded nine locations in the amount of \$780, so a very small award. He said, on a much larger scale, a fiberoptic provider called Talkie Communications was awarded \$43 million dollars for a total of 31 build locations throughout the region. He said there are more than 80 location buildouts in Wicomico County in particular that are being subsidized by phase 1 of the FCC grant, and these buildouts will happen over a 6-year period, and are set to begin once the FCC releases its funding, which could be at some point later this year or in 2022. He said there is also a map in the handout of the buildout that will happen in Wicomico County, and that information was provided to him through Talkie, the FCC, and the County's GIS Division, who did a nice job of overlaying that on top of the County for him so they could get a good picture of how it pertains to Wicomico County. He said Talkie Communications is a small company out of Chestertown, Maryland, and will be expanding their

equipment assets, outsourcing the majority of the construction, and leasing capacity on existing backbone fiber infrastructure to complete the buildouts. He said he spoke with them about this over the last couple of weeks when they were informed they were one of the largest awardees of the FCC grant.

Mr. Monar said the map he provided Council has different shaded areas, and there are a lot of different build locations, and more than 80 of them are slated to happen. He said they are broken down, basically, in what are census blocks. He explained, the FCC looks at census blocks, and if they see that a block is either underserved or not served at all, they target that for buildout and this grant subsidy. He clarified, the map does not completely show the full picture of where broadband does not exist in the County, so it can be a little bit misleading. He clarified, if a particular census block has one household that is already served, the FCC, as he understands, it marks that block as completely served when, in reality, there could be several residences, homes, or businesses in that block that do not have access, so that is not the say all of where broadband does and does not exist in Wicomico County.

Mr. Monar said there are two pieces of Legislation at the State level that are important to broadband that he is actively paying attention to, and he provided Council with both of those House Bills. He said House Bill 43 establishes the Office of Broadband in the Maryland Department of Information Technology. He said, through his contacts with MACo, specifically the IT affiliate he communicates with, it is his understanding that this Bill does not have much support for it. He said they have been following House Bill 97, which establishes the Office of Digital Inclusion in the Maryland Department of Housing and Community Development, and it is his understanding through discussions he has had with MACo that this Bill has much more support. He clarified, maybe not in exact form, maybe in a hybrid of the two Bills, but this Bill, as he understands it, kind of builds off the Office of Rural Broadband that the Governor already has established, and makes it more of a permanent entity within the State Government.

Mr. McCain asked, when Mr. Monar says "support," is he referencing MACo, or is he referencing the Delegation, to which Mr. Monar responded, the Delegation. He said he thinks it is fair to say that MACo probably supports that one more from the IT affiliate standpoint from when he has had discussions with them. He said there are some particular parts of that Bill that are noteworthy, in particular, the creation of a Statewide audit of where broadband does and does not exist, including the creation of granular maps and other demographic information. He said this would be very key in helping local jurisdictions identify exactly where broadband expansion is needed because right now they do not actively know where it actually exists and where it does not exist. He explained, they do not have exact maps of where ISPs actually have their lines in the ground or on poles, and when they get into fixed wireless, which is invisible, they really do not know exactly where that covers and where it meets the minimum FCC standards to qualify for being covered for broadband.

Mr. Holloway said Choptank is in the motions of trying to do broadband, and then Mr. Monar brought up this company named Talkie. He then asked if they are in Worcester County, to which Mr. Monar responded, they are out of Chestertown, and he does not know if they actually have any cable in the ground in Worcester just yet. Mr. Holloway asked how they are going to decide who serves what areas? He asked if it will be a franchise type situation like they have with Comcast and Mediacom, or will there be competition among the companies, to which Mr. Monar responded, he thinks both could happen. He said he thinks this could bring competition for existing ISPs since Talkie does not exist in Wicomico County specifically, or it could require a franchise agreement between Talkie and Wicomico County as well. Mr. Holloway said it seems like it would be a lot better and get done faster if these companies

would pick different areas to work so they would not be doing the same thing over again. Mr. Monar responded, he agrees, and he is taking the stance of being very mindful of looking out for duplicate efforts, even on the County's part in terms of funding from the Federal Government through the State Government. He said he knows they have these builds subsidized through the phase 1 FCC grant, so the builds on the map will happen, according to Talkie. He said they have certain timelines they have to meet with each of these in terms of how they do them and what order they do them in, and they have requirements they have to meet according to the grant. He said it possibly could lay over existing ISPs in the County, such as Comcast or Mediacom. Mr. Holloway asked if it would be a situation of whoever can get there first, to which Mr. Monar responded, it could be, and he thinks the free market and competition coming into play could be positive as right now the citizens of the County have very limited choice between who they get their internet service from, so that certainly could be the case.

Mr. McCain asked if Mr. Monar can provide the map to Council in an electronic version so they can enlarge it because it is kind of hard to see, to which Mr. Monar responded, he will send it to Mrs. Hurley, and then Council can really zoom in and see exactly what roads the census block covers. He said the version he will send Council is colored, but the coloring on the blocks is irrelevant, it is just there to distinguish different buildouts. Mr. McCain said he does not know if he is interpreting the map correctly or not, but it still looks like there are a lot of unserved portions of the County, to which Mr. Monar responded, there very well may be.

Mrs. Acle asked if Mr. Monar has spoken with Choptank? She said Choptank met with Council a couple of years ago to talk about broadband, to which Mr. Monar responded, yes, he has spoken with them recently. Mrs. Acle said it was her understanding that they already have the optics laid, to which Mr. Monar responded, he thinks when they begin their buildout of their network they are going to utilize their existing infrastructure they have with their electricity utility. He clarified, that is how their plan was explained to him when they met.

Mrs. Acle asked how the hotspots work in these areas that do not currently have broadband, to which Mr. Monar responded, he believes those are Verizon devices, and are basically like a cell device. He said if someone were to take their cell phone and turn it into a hotspot, they act similar to that. He explained, they just connect up to whoever the cell provider is and create that connection. He said they actually have a little Wi-Fi radio in them, so it creates a little WIFI network locally, and creates a backbone connection to the service provider, whoever that might be. Mrs. Acle asked, if she is traveling down Nanticoke Road and cannot get cell phone reception past Quantico, would a hotspot work past that, to which Mr. Monar responded, if the cell phone does not work, the hotspot probably will not work. He said, if she has Verizon, maybe they do not have coverage in that area, or if she has AT&T, it could be a different coverage, so an AT&T hotspot may work, or another provider. He clarified, it just could be a lack of coverage by that particular provider where maybe they do not have a tower in that area and somebody else does.

Mr. Cannon thanked Mr. Monar for being here and said he does not think the public in general realizes that Mr. Monar is not responsible for the County's internet service Countywide, he is the Director of the IT Department within the County, which means that his responsibility is to take care of all of the internet within the County Government structure itself.

Mr. Cannon said he knows Mr. Monar has been talking with Mr. Padgham of Tri-County Council, and Council appreciates Mr. Monar's input on that as well. He then asked who Council or the County

Executive should be working with to make sure they are getting the best benefit from the funding that is coming in, as well as the infrastructure, to which Mr. Monar responded, he thinks there are probably multiple points of contact. He said certainly the Tri-County Council in coordination with Worcester County and Somerset County is important because this really is a regional effort, not just something that affects Wicomico in particular. He said he thinks it is important to stay in contact with State Delegates, particularly in regards to these two Bills he provided to Council today, as there are certainly some happenings there that he thinks would benefit the County in particular.

Mr. Monar said this is such a new thing and it is changing drastically. He clarified, something he learned three weeks ago might be totally different three weeks from now, so he thinks with broadband it is such an expensive endeavor and it takes a lot of money to put cable in the ground, or to string it across poles, so they are talking typically between \$80,000 to \$100,000 per mile to install cable plant. He said, obviously, at the Federal and State levels, that is where that level of funding is going to need to come from. He said that is quite a bit of money for the County to try to subsidize themselves.

Mr. Monar said he thinks there are also some aspects at the State level, and they have had some discussions with MACo IT affiliates as to how that process works between the State and the County, and how much burden the local jurisdictions can handle when it comes to building out networks. He said it is time consuming, and if they put a lot of emphasis on the local level, they are talking about creating positions to manage the funding and oversight of it, so, again, that would be a burden on the County, and they do not have that particular infrastructure in place right now to be able to handle that.

Mr. Cannon said of course there is also Maryland Broadband that the County could develop a relationship with. He said, from what he understands, Worcester and Somerset have either developed an MOE or actual contracts to get the expansion of broadband in their communities, and he does not think they are doing that in Wicomico County, at least he is not aware of that. Mr. Monar responded, Mr. Cannon is correct in that Wicomico County has not entered into any contracts with anybody to expand, and the reason is they wanted to sit back a little bit and make sure they were not jumping in headfirst and then find out there was another avenue of expansion in the works that was going to happen. He said he thinks in the case of what they discussed today, in particular the FCC grant, there is a significant amount of buildout that is going to happen in Wicomico County with that grant. Mr. Cannon asked how that is going to happen, and whether it is going to be through Maryland Broadband. He said he cannot tell Mr. Monar how many people are shaking their heads about this Talkie Communications. He said that one organization got 99 percent of the funding in the State of Maryland, and he is not so sure how qualified they really are, but here they have it, so this means that Wicomico County is going to have to deal with a company in Chestertown when they have the Choptank Electric Cooperative that already has lines in the ground, as Mrs. Acle said. Mr. Monar said, in his conversations with Talkie, he feels that they have the expertise. He said everyone who is involved in that organization has been involved in this business for years in their prior employment, so they have the expertise. He said they have already built significant networks in Kent County and Queen Anne's County, so he is not exactly sure and does not know the details of why the FCC awarded them in particular. He said he does not know, but maybe it is because they felt that the smaller company was a good place to create some competition, but he does not know. He said he knows from talking with Talkie that their business plan includes expanding their equipment they need to do these buildouts, and the majority of the construction itself is going to be outsourced, which he thinks would be what a typical company would be doing to put the cable in the ground, or string it across poles.

Mr. Cannon said, when he heard about the Hebron and Quantico buildout through Tri-County Council, he does not think anyone here knew. He clarified, he does not even think this Council knew that this broadband was coming to Hebron and Quantico. He said the Board of Education needs this buildout. He then asked if they are supposed to be coordinating their efforts with the Board of Education because he knows they received funding to enhance their educational abilities, which he thinks broadband would probably be a high priority with them. He clarified, he is asking for Council as a whole how and what should they do to coordinate their efforts as a Body to make it happen, to which Mr. Monar responded, as he said, right now they are gathering all the information they can by talking with all of the partners involved, and he thinks that is the first step they have to take. He said he actively communicates with Maryland Broadband Cooperative, and they have a good working relationship with them. He said the County does business with them, and he speaks with them probably at least on a monthly basis regarding County projects, and also projects that they have slated in the County outside of the government itself, so he has been aware for some time about those two projects on the west side of the County. He said those two projects in particular are fiberoptic projects, and are kind of what they call middle mile projects where Maryland Broadband is not actually the ISP that actually provides the internet service to the end user, so they are kind of providing the roadway for any ISP that would like to utilize that infrastructure, whether it be an existing ISP in Wicomico, or somebody from the outside, so they can then lease that fiber off them and provide service to those households. Mr. Cannon asked if Maryland Broadband is making that investment without even having an ISP to close the final mile, to which Mr. Monar responded, he does not know if they have one or not, as he thinks that is between them and the members of their co-op. He said he believes they have upwards of 100 different members, many of those ISPs, so maybe they do, or maybe they do not, but he believes that investment was funded through the Office of Rural Broadband at the Governor's Office to roll that out. He clarified, again, he just does not know the answer to whether they have an ISP or not.

Mrs. Acle asked if Mr. Monar was able to work with the Public School System when they received their initial funding for broadband. She said they still have kids in Tyaskin with hotspots who cannot access the internet, to which Mr. Monar responded, that is really a Board of Education topic. He clarified, it is not something that the County IT Department would necessarily get involved with, so he thinks that would be something the BOE would need to give Mrs. Acle an answer on.

Mr. Holloway said Mr. Monar keeps talking about wireless technology, and it looks like even the radio towers are now going to be somewhat obsolete because they are putting transmitters on telephone poles in different cities for phone use. He then asked why these companies would invest in broadband where they have to run cables and wires if the technology for wireless is so advanced, and advancing more all the time, to which Mr. Monar responded, even though wireless in terms of fixed wireless broadband, which he considers satellite, is advancing, it is not there in terms of speed yet. He said there are a lot of applications even when streaming video that do not necessarily work that well over satellite internet service. He said fixed wireless where they basically put a receiver on a house and a provider has access points on towers throughout an area is how fixed wireless is received. He said wireless is coming along, but does not nearly have the capacity that fiberoptic has, and he thinks that is why a cable in the ground or strung across poles is still the priority right now to get the speeds that are needed to people to even meet the FCC minimum requirements.

Mr. McCain said he thinks that was a good question, but what is interesting when talking about capacity is that fiberoptic gives them more capacity, but they are also talking about serving very remote rural

areas where capacity is not the need. He said just trying to get basic access is the need, and wireless seems to have advanced. He said that is how they serve all of their rural areas in Europe where they have satellite wireless hubs all over the place so people can have highspeed internet. Mr. Monar responded, if Mr. McCain is referencing 5G and what he sees advertised on television, which is only located in certain cities across the United States, actually in those cities it is only within certain blocks. He explained, he thinks one of the problems with 5G, if they call it a problem, is that it requires such a density of access points, and that is why they kind of try to make them blend in with the utility poles and the light posts, but it requires a density of access points to make that level of speed work. He said, if 5G were to come to Wicomico, probably the only place they could initially set it up would be in downtown Salisbury where they could put the number of access points. He said there are certainly hot button issues with 5G as well where some places do not want to see those things put on their street corners, or they do not want those devices in their neighborhoods on their poles, so he guesses there are two sides to that issue.

Mr. Monar said, in terms of satellite, part of the phase 1 FCC grant was awarded to Space Ex, who received a significant amount of grant funding to build out their satellite internet service network. He said there are some other providers out there, like Hughes Net, that also provide, but he thinks Space Ex received a significant amount of funding. He clarified, he does not know how much of that is going to be coverage in this region of the United States as he thinks a lot of it was more on the West Coast, but that is an evolving technology in terms of internet service via satellite. He said he is familiar with it firsthand, and it definitely has a way to go in terms of the throughput capacity, even just to service one household, particularly when talking about people streaming multiple televisions and doing video for school, so it is just not quite there yet. He said there are some latency issues with the amount of time it takes the data to transmit from a house up to space and then back, so it is an evolving technology.

Mr. Dodd said, from what he understands, 5G is not what people think by seeing all the advertisements for that certain vendor on TV, and he has read about a lot of concerns about 5G as well.

Mr. Dodd said Maryland Broadband was at the Tri-County Council a couple of years ago, and they did a good presentation, so he was surprised when Talkie was chosen because Maryland Broadband is right in town and they have a consortium of ISP providers to work with, so he was wondering why they were not chosen. Mr. Monar responded, it is interesting that Mr. Dodd brings that up. He said Talkie is one of their cooperative members, so he believes with this buildout with the FCC grant money that Talkie is going to utilize a great deal of the backbone that already exists in Wicomico County down the major corridors. He said there is fiberoptic, and he believes Maryland Broadband Cooperative owns that, so Talkie's plan, as he is told, is to lease capacity on those backbones, and they will build out those locations in Wicomico off that backbone. He said he kind of thinks of it as a tree where the main trunk is Maryland Broadband Cooperative and other entities that own the backbone fibers throughout the County, and then Talkie comes in and builds out those branches to service those areas on the map. Mr. Dodd asked if Talkie will be working with Maryland Broadband, to which Mr. Monar responded, yes, there is coordination going on. Mr. Dodd said that is good to hear.

Mr. Hastings said, just to be clear, this \$49 million dollars Mr. Monar is talking about is not local taxpayer dollars, it is federal money coming down, to which Mr. Monar responded, that is correct.

Mr. Hastings asked if the awards that went out are middle mile or last mile, and the intent of it is to try to reach these last homes, to which Mr. Monar responded, that is correct. He said the \$43 million that Talkie was awarded was purely federal grant funding.

Mr. Dodd said the last time he met with Mr. Monar he brought up the figure of about \$100,000 per mile, and that seems significant, but it has to be done, to which Mr. Monar responded, it is expensive.

Mr. Monar said a lot of these grants, specifically at the State level, do not cover the full cost of building these networks out. He said, as a matter of fact, in reality, as he understands it from talking to ISPs, they probably only cover in the range of 30 to 40 percent of the actual cost to put the cable in the ground or to string it across poles. He said there is a lot of planning that has to take place before the construction even happens. He said, when an ISP wants to build their network out, they basically need to put boots on the ground everywhere because they need to see exactly where everything is going. He said these companies do not own the poles they may need to use, so they have to get right of ways on those, and they have to get permitting. He said some of these poles may not be ready to handle additional cable or their equipment, so there are expenses in making them ready to put additional cable on it, and there is a lot of planning, engineering, and boots on the ground that goes into these projects even before a trench is dug and a piece of cable is put into the ground. He said a lot of these grants do not fund any of that, so he thinks they all have to be aware that these companies are private companies, they have business models, and they have certain thresholds they have to meet in order to make a project feasible and profitable down the road at some point for them. He said he thinks they look at projects, and they look at the grant opportunities, and they have to make a decision. He clarified, they have to decide, even if they receive the grant funding, is the project still something they can sell to their shareholders and stakeholders that it makes sense to do businesswise, so there are two sides to this. He said they are learning a lot about this as he goes and talks to all of them and gathers information.

Mr. Dodd said Mr. Monar said they may pay up to 40 percent on these grants, so who would pay the other 60 percent, to which Mr. Monar responded, that would have to come from the ISP, or if there was a partnership between a local jurisdiction and ISP. Mr. Holloway suggested it would come from the subscribers who would pay the rest of it, to which Mr. Monar responded, they will eventually pass it on to the subscribers because they are looking to get their return on investment over a certain timeframe. He said each of them have their own metrics that they need to meet, so they are not all the same, but Mr. Holloway is right that subscribers will eventually pay for that. He said, in the construction phase, that money has to be fronted by somebody, and most of the time it is the ISP itself.

Mr. Dodd said there was some discussion when he met with Mr. Monar that the County IT Department may have some involvement in these grants. He then asked if that is so, to which Mr. Monar responded, at this time they have no involvement in the grants. Mr. Dodd said, so that was inaccurate.

Mr. Holloway said years ago all the powerlines and phone lines used to be above ground, but then there was a big push back in the 1960s, 70s, and 80s to bury them, and he kind of thinks they probably wish they were all above ground again because it would be a lot easier. Mr. Monar said it can be significantly cheaper to string across poles than it is to put them in the ground; however, then they get into outages in terms of if there is a national disaster because poles certainly can be damaged easier than something under ground where it is a little safer.

Mr. Taylor asked if there is any rate regulation, as he does not think the Public Service Commission covers it, and he does not know whether any other government regulation applies, to which Mr. Monar responded, he does not know off the top of his head, but he can look into that and get Mr. Taylor an answer. There was no further discussion.



Larry W. Dodd, President, District 3



Joe Holloway, Vice President, District 5



John T. Cannon, At-Large



William R. McCain, At-Large



Ernie Davis, District 1



Nicole Acle, District 2



Josh Hastings, District 4



Laura Hurley, Council Administrator