

Executive Summary Finance Committee Meeting

DATE: February 16th, 2023

TOPIC: FirstNet Product Information

PREPARED BY: Jordan Stephen

Recommended for:

- Action
- Discussion
- Information

Purpose/Background:

Staff and student safety is a top priority across Campus. During this school year, our Administrative team has had the opportunity to learn and prepare for events that might include utility outages, fire, weather related events and even times where the District might need to relocate. Reliable communication is a vital part of any of these processes.

FirstNet is a nationwide, high-speed wireless broadband network with technologies and features specifically built for public safety. The FirstNet network was designed for first responders all over the country. Firefighters, EMS personnel, law enforcement, 9-1-1 communicators and emergency managers all can have access to FirstNet, as well as vetted members of our school community.

FirstNet, which is built by AT&T, provides much more than just another cell network. FirstNet prioritizes the traffic of its subscribers, providing them with a reliable, 24/7 unthrottled network in which to use apps, devices and solutions, during an emergency, to ensure that their messages and communications take top priority over the general public.

The District has been investigating how to improve our communications during situations and by working with FirstNet, we have come up to the following solution. The District will purchase a smartphone device for each building, keeping them located at the schools and admin center. In the event of any emergency or disaster, those phones would be utilized across the district or wherever we might need to relocate students or staff members. These devices would be equipped with a FirstNet plan that features un-throttled data, unlimited talk, unlimited texting, and complete priority access to the FirstNet network. These devices will

also be equipped with Push to Talk applications that can be used between the devices as well as installed mobile applications used by District personnel to access emergency information or send out communications.

Costs:

FirstNet Monthly Service Charge (State of IL)			
Description	Quantity	Monthly Price	Total Monthly Price
FirstNet Unlimited Smartphone Plan <i>Un-Throttled, truly unlimited talk, text, data plan, with priority</i>	4	\$38.49	\$153.96
FirstNet Unlimited Smartphone w Tethering Plan <i>Un-Throttled, truly unlimited talk, text, data plan, with priority</i>	0	\$43.49	\$0.00
FirstNet Unlimited Feature Phone Plan <i>Unlimited talk and text with priority (PPU Data \$10 per GB)</i>	0	\$22.99	\$0.00
FirstNet Unlimited Data Connect Plan <i>Un-Throttled, truly unlimited data plan, with priority</i>	0	\$34.99	\$0.00
Enhanced Push to Talk Add-on Feature	4	\$2.00	\$8.00
Enhanced Push to Talk Standalone (Feature-No Voice/Text)	0	\$15.00	\$0.00
Total Monthly Service Charge	4		\$161.96
FirstNet Equipment Charges (State of IL)			
Equipment Charges	Quantity	One Time Cost	Total One Time Cost
iPhone 12/12 Mini (64GB)	0	\$0.99	\$0.00
iPhone 13 (128GB)	4	\$99.99	\$399.96
iPhone 13 Mini (128GB)	0	\$178.99	\$0.00
iPhone 13 Pro (128GB)	0	\$448.99	\$0.00
iPhone 13 Pro Max (128GB)	0	\$548.99	\$0.00
iPhone 14 (128GB)	0	\$199.99	\$0.00
iPhone 14 Plus (128GB)	0	\$448.99	\$0.00
iPhone 14 Pro (128GB)	0	\$548.99	\$0.00
iPhone 14 Pro Max (128GB)	0	\$648.99	\$0.00
Sonim XP5s	0	\$0.99	\$0.00
Nighthawk M6 5G Mobile Hotspot Router	0	\$224.99	\$0.00

iPad 9th Gen (64GB 2021)	0	\$384.99	\$0.00
iPad Mini (64GB 2021)	0	\$574.99	\$0.00
iPad Air 5th Gen (64GB 2022)	0	\$674.99	\$0.00
iPad Pro 11" (128GB 2021)	0	\$924.99	\$0.00
iPad Pro 12.9" (128GB 2021)	0	\$1,224.99	\$0.00
Total One-Time Equipment Fees	4		\$399.96

Tower Discussions

During our initial discussions with the Finance Committee, there was a question raised about the stability of the FirstNet Network and how would the District react if a local cell tower was down. This led to another discussions with FirstNet about the details of the network and the possibilities of cell towers power outages and fiber cuts. Our representatives indicated that they work directly with AT&T and the following FirstNet departments as we continued to discuss their planning and redundancies. On the following page is a map of locations of local towers that are connected to FirstNet.

ROG - Response operations ground

This team specializes in understanding how and why a cell tower might be down. Operators are working constantly to keep the cell towers up and running. They monitor everything from lightning strikes to power outages as well as weather events and can plan these events in the future

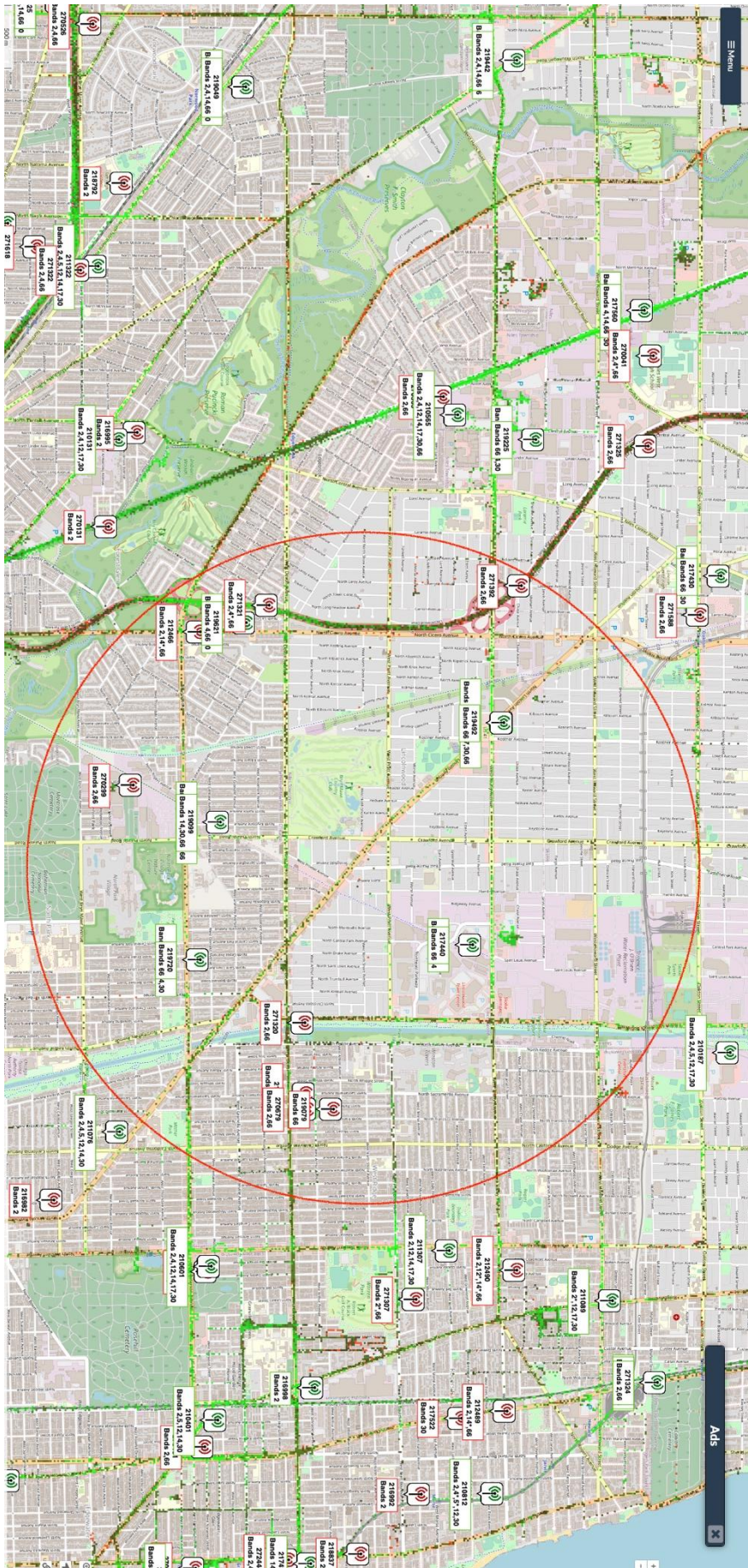
RAN - Radio Access Network

This team specializes in analyzing traffic from various cell networks and ensures that they have available bandwidth in all areas. This is especially important in high-traffic or dense areas when there might be an event going on such as a football game, concert etc. The RAN team also monitors weather events and understands the importance of these events as they approach the area.

We discussed the Naperville tornado event from 2021. During that event, they pointed out that only a single cell tower actually lost connection. All towers that were part of the FirstNet Network, were still operating, and balanced because of the work of these teams.

FirstNet customers also have access to maps that display tower status across the country.

The graphic on the following page displays how many towers are part of the FirstNet network with the Lincolnwood geographical area. This map displays 24 square miles and shows where about 50 cell towers are located around the area. A typical cell phone can reach towers up to 20 miles away depending on the technology and speed. Many of those that are high speed can be reached within a mile indicated by the red line.



SATELLITE PHONES

Satellite phones are not handled by a company like AT&T. We would have to go through a third-party company to purchase those. They are much more expensive to operate when it comes to equipment and monthly fees, but you also can buy units much like you would with Pay as You Go phone services. Finding the right satellite phone plan is key as there are a number of plans in the market. These plans will enable satellite communications and some data services, even in remote areas.

Globalstar Plans

Globalstar is one of the top providers of satellite phone plans and was one of the earliest in this market. Globalstar offers monthly plans and is very affordable compared to many other providers on the market today.

<i>Equipment</i>	Qty.	One Time Cost	Monthly Cost
Globalstar GSP-1700	1	499.00	
USA Phone Number (+\$10.00)	1	10.00	
Activation fee (+\$50.00)	1	50.00	
Globalstar Orbit 150 Minute Plan	1		99.00
TOTAL		559.00	99.99

Iridium Plans

Iridium plans are famous, and for a good reason. The launch of the Iridium satellite network and satellite phone plan service made satellite phones much more accessible for many people across the world.

<i>Equipment</i>	Qty.	One Time Cost	Monthly Cost
Iridium Extreme 9575 Satellite Phone Kit	1	1495.00	
USA Phone Number (+\$10.00)	1	10.00	
Activation fee (+\$50.00)	1	50.00	
Iridium 50 Minute Monthly Plan	1		79.99
TOTAL		1555.00	79.99

Inmarsat Plans

With 90% global coverage, excluding the north and south pole, Inmarsat makes this one of the most comprehensive satellite phone plan providers today.

<i>Equipment</i>	Qty.	One Time Cost	Monthly Cost
Inmarsat IsatPhone 2 Satellite Phone Extended Package	1	995.00	
USA Phone Number (+\$10.00)	1	10.00	
Activation fee (+\$50.00)	1	50.00	
IsatPhone 50 Minute Monthly Plan	1		59.99
TOTAL		1055.00	59.99

Thuraya Plans

Thuraya plans, which only come in prepaid rather than monthly versions and include options for Voice, Text, and Data to use mobile apps for the district to install and use to communicate with the community.

<i>Equipment</i>	Qty.	One Time Cost	Monthly Cost
Thuraya X5-Touch Satellite Smartphone	1	1399.00	
USA Phone Number (+\$10.00)	1	10.00	
Activation fee (+\$50.00)	1	50.00	
Thuraya Prepaid - 2500 Units (Data For 12 Months 250 MB)		2600.00	
Thuraya Postpay Nova Free On-net - 100 Minutes	1		55.00
TOTAL		4059.00	55.00

Fiscal Impact:

Varies depending on needs and wants for data, talk and text plans.

Recommendation:

The Administrative team is looking for guidance from the Finance Committee, on a recommendation as to the direction of this project and present more findings at a future Finance Committee meetings.