



Wireless  
Infrastructure  
Association

**Testimony of**

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Wireless Infrastructure Association**

**Before the**

**Consumer Affairs Committee  
The Pennsylvania House of Representatives – 2018 Regular Session  
Room B31, Main Capitol Building, Harrisburg, PA**

**Thursday, August 9, 2018**

Chairman Godshall, Chairman Caltagirone, and members of the committee, thank you for holding this important hearing and for the opportunity to testify on Pennsylvania House Bill 2564, P.N 3863, known as the Small Wireless Facilities Deployment Act. My name is Arturo Chang and I am the State Government Affairs Counsel of the Wireless Infrastructure Association (WIA), the principal national trade association representing the companies that build, design, own, and manage wireless facilities in the U.S. and throughout the world. Our members include wireless carriers, infrastructure providers, and professional consulting firms that collectively own and operate more than 135,000 telecommunications facilities across the nation. WIA works to support the responsible and sustainable deployment of wireless infrastructure needed to deliver wireless services to all citizens and communities. WIA commends the efforts of Representative Farry and other members of the General Assembly for introducing a bill that will provide a pathway towards expedited 5G deployment in the Commonwealth.

It is undisputed that there is an increasing demand for wireless services. One report<sup>1</sup> indicates that global mobile data traffic grew 63 percent in 2016, and global mobile data traffic is expected to increase seven-fold between 2016 and 2021. These metrics should not come as a surprise; wireless services already play a substantial role in our everyday life giving us access to services such as efficient navigation while driving and allowing us to stay connected with our family and friends. Small cell technology will also enable a variety of services such as increased access to telehealth medicine, public safety response, autonomous vehicles, and expanded

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educational opportunities. These 5G services, which are fueled by small cell technology, can only be as good as the infrastructure on which it is deployed and will involve up to 100 times more antenna locations than 3G or 4G. Fully realizing the economic growth and international competitiveness of 5G, depends on how efficiently 5G infrastructure will be deployed. Building the networks of tomorrow requires sound policies from all levels of government today, and twenty-one states including Ohio and Delaware have enacted legislation similar to HB 2564 recognizing that small cells provide a unique opportunity to densify networks, provide additional coverage, and improve wireless transmissions.

WIA supports the Pennsylvania bill with amendment. Although we agree with the general framework and concepts of the bill, we have concerns about section 3 subsection(e)(2), located on page 8, lines 10 through 16, that introduces the concept of "height limit waivers." As you may be aware, one of the premises of HB 2564 is to streamline the deployment of utility poles up to fifty feet in the public Right-of-Way for small cell needs. In our view, any application for a proposed structure above fifty feet should be subject to the regular zoning process of that jurisdiction. Our members work closely with cities and communities around the country, and we strongly believe it is important that localities retain oversight authority for taller structures. Equally noteworthy, this policy is consistent with small cell bills enacted by the other twenty-one other states previously mentioned. For those reasons, WIA respectfully submits for your consideration amendment language that would address this small but important section. We believe this amendment strikes a good balance in enabling communities to maintain local control and decision making, while also providing the industry with a transparent and orderly set of standards to follow in support of improved as well as expanded service.

Small cell deployment will bring many benefits to the Commonwealth including expanded job opportunities and educational benefits, enhanced coverage, and heightened public safety response. WIA is also a member of the Pennsylvania Partnership for 5G, a business and technology advocacy group that represents over 20 businesses, industries, trade associations and local governments from across Pennsylvania. The Partnership aims to educate and promote the deployment of 5G technology infrastructure. I look forward to continuing to work with you and the rest of the Committee to make additional progress on this piece of legislation.

Thank you again, Chairman Godshall, Chairman Caltagirone and committee members for holding this hearing and allowing me to testify. I would be glad to answer any questions.

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**Wireless Infrastructure  
Association Amendment to  
HB 2564 (Printer 3863 -  
20180HB2564PN3863)**

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Amend Bill, page 8, lines 10 through 16, by striking out all of said line

10           ~~(2) Subject to the provisions of this act, a wireless~~  
11 ~~provider shall have the right to collocate and install,~~  
12 ~~modify or replace a utility pole that exceeds these height~~  
13 ~~limits along, across and under the right of way by including~~  
14 ~~a height limit waiver request in the application. Height~~  
15 ~~limit waivers shall be processed under section 4 and on a~~  
16 ~~nondiscriminatory basis.~~

## **Crown Castle Testimony**

### **Pennsylvania House Consumer Affairs Committee**

**August 9, 2018**

Good Morning Chairman Godshall, Chairman Caltigarone and members of the House Consumer Affairs Committee. My name is Paul Gilbert. I am here today, on behalf of Crown Castle - a company based right here in Pennsylvania, to offer testimony in support of House Bill 2564. Crown Castle has more than 15 years of experience deploying small cell networks and is the nation's largest owner and operator of shared wireless telecommunications infrastructure with 60,000 small cells in operation or under construction across the United States today. In Pennsylvania alone we currently have 2,800 small cells and 10,000 miles of fiber supporting them. We have more than 1,200 employees in Pennsylvania and our networks support the connectivity of 130 public school districts in the Commonwealth.

As you know, the use of wireless broadband is growing rapidly in Pennsylvania and throughout the Country. Today we all text, post, stream videos, and get directions – expecting to do so anywhere yet rarely thinking about what it takes to deliver that service. Indeed, recent studies indicate that nearly 50% of kids are growing up in a wireless only household in Pennsylvania.<sup>1</sup> The growing demand for wireless services can quickly overload existing networks. The best way to relieve wireless congestion is to add new infrastructure and redistribute the traffic to multiple locations through small cells.

Unfortunately, Crown Castle has faced significant difficulties deploying our networks in Pennsylvania. Some jurisdictions have flat-out denied our initial requests for applications; others simply imposed outrageous fees or permitting conditions; some jurisdictions took over 2 years to approve these facilities!

We enable wireless carriers to improve service for their users by providing additional network capacity to accommodate increased wireless demand. This capacity, created by our small cell wireless networks, not only allows large scale events to be successful, such as the Pope's visit to Philadelphia, the Democratic National Convention, the Penguins' crowds at PPG Paints Arena, and the Eagles' Super Bowl Parade, but it also ensures connectivity for every day usage, especially as the demand for mobile data continues to skyrocket.

Small cells are discrete, low-to-the-ground installations typically installed within the public right-of-way. Small cell equipment is the same size as common utility infrastructure like electrical transformers or traffic signal controllers. These networks can be pinpointed to areas of network congestion and supplement coverage from traditional "macro" towers and rooftops.

This chart represents the technological evolution we've experienced in the past two decades. While most of the smart devices in this room are operating using 4G – which ushered in the era of mobile internet – smart devices that can connect to 5G will experience connections at least 40 times faster and four times greater capacity than 4G LTE. Small cells will provide the backbone to enable 5G technology.

Let me give you a basic example to illustrate the difference between 4G and 5G connectivity. On today's 4G LTE device, you can download a 2-hour movie in roughly 90 minutes. On a 5G connected device, you

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<sup>1</sup> See National Health Interview Survey Early Release Program (2016).

can download that same movie in roughly 4 seconds. The increase in connection speed and data capacity will open the door to stimulate advancements in public safety, healthcare, transportation, and other sectors. Pennsylvania does not currently have that critical small cell backbone in place to give consumers access to 5G technology.

Crown Castle has worked with 71 municipalities across Pennsylvania, from large cities to small boroughs to deploy this critical infrastructure and we have recently begun working with hundreds more. We have encountered a myriad of approaches to managing small cell deployments in the public right-of-way.

The City of Butler only required that we notify the city and share our plans prior to deploying our utility infrastructure. Many communities, like Erie, require us to obtain an administrative permit that is similar to the permits that other utilities are required to obtain before deploying in the ROW. These can be issued as quickly as within a few weeks. Some towns, like Altoona for example, require us to obtain zoning permits and often involve public hearings... a procedure that rarely applies to other utilities deploying infrastructure in the public ROW. In Pittsburgh, before obtaining permits we were required to enter into a contract to utilize the public ROW. At lengthiest, towns like Doylestown have required us to enter a contract, obtain zoning permits and go through public hearings. This process has lasted longer than 2 years.

The legislation sets a clear structure, framework, and timeline for the processing of small cell applications. Often our networks cross municipal borders so one network deployment could be required to go through the many vastly different procedures that I mentioned before. Imagine trying to predict the process in 2,506 different local governments. For applicants, the certainty in the timelines and cost will lead to accelerated deployment. For municipalities, there is still a clear right and easy to follow guidelines to regulate their rights-of-way.

The fees that municipalities charge for small cell application submissions and installation are also inconsistent across the Commonwealth, with some jurisdictions charging as much as \$3,000/year for the right to collocate in the right of way. Understanding that the final fee in this legislation is negotiable, it is important that the bill set a uniform rate municipalities can charge for the use of the right-of-way. Ensuring that the fee is reasonable will promote continued investment in networks.

This legislation sets policy consistent with states across the country. Since 2016, 21 states have adopted laws similar to HB 2564, including our neighboring states of Ohio and Delaware. Overall, HB 2564 removes ambiguity for the wireless industry and municipalities by appropriately balancing the need for technology with the concerns of the community. It speeds the development of networks which are vital to education, public safety and economic development, and allows for continued job growth in the Commonwealth.

This bill would also positively impact an array of Pennsylvanians. Leaders from a diverse set of industries and communities have joined together to form the PA Partnership for 5G, in the hopes of creating a technologically progressive Pennsylvania. Members of this coalition include: Crown Castle, the Greater Pittsburgh Chamber of Commerce, the Wireless Infrastructure Association, Allegheny County, Philadelphia Fraternal Order of Police Lodge #5, The Technology Council of Central Pennsylvania, the Pennsylvania Fire and Emergency Services Institute and many others across the Commonwealth. These organizations all agree that stronger connectivity is a win for public safety and economic competitiveness, and are committed to moving the Keystone State forward.

It's important that Pennsylvania gets this right. A recent study commissioned by the wireless industry trade association, CTIA, predicts that accelerating deployment by a year could result in an additional \$100 billion impact on the national economy<sup>2</sup>. Let's make sure all Pennsylvanians benefit accordingly. With your leadership and support of House Bill 2564, the Commonwealth will be positioned to take advantage of all of the benefits 5G will bring. Thank you very much for your time today.

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<sup>2</sup> <https://www.ctia.org/news/modernizing-5g-rules-could-unlock-billions-in-economic-growth>

**Members of the Pennsylvania Partnership for 5G (August 6, 2018):**

- The Pittsburgh Film Office
- Innovative Technology Holdings
- Wireless Infrastructure Association
- Philly By Air
- PA Fire & Emergency Services Institute
- The Susquehanna Technology Association
- Pennsylvania Wireless Association
- Philadelphia Fraternal Order of Police, Lodge #5
- Philadelphia Alliance for Capital and Technologies
- Biondo Creative
- The Technology Council of Central PA
- Greater Pittsburgh Chamber of Commerce
- The Pittsburgh Technology Council
- Allegheny County
- Pittsburgh Downtown Community Development Corporation
- Omni Bedford Springs Resort
- Omni William Penn Hotel
- Pittsburgh Riverhounds SC
- AE Works
- Crown Castle
- PerfectVision Manufacturing
- Wall-to-Wall Studios

Good Morning, my name is Tim Baldwin, Treasurer of the Keystone (Pennsylvania) Chapter of the National Emergency Number Association (state 911 association). I'm here with John Haynes, Deputy Director of Chester County Department of Emergency Services. Pennsylvania NENA appreciates the opportunity to provide input on House Bill 2564.

As you can imagine, county 911 Public Safety Answering Points (PSAPs, also known as 911 centers) depend on technology to perform our duties. As the first, first responders, PSAPs rely heavily on our ability to communicate with callers. Considering our ever-mobile society, improvements to wireless voice infrastructure are especially meaningful to us.

House Bill 2564 will provide incentives for Small Cell Technology by reducing potential impediments throughout the Commonwealth. From our perspective, this should provide improved wireless phone and data coverage and greater capacity. More reliable and improved indoor and outdoor coverage, especially in very rural and very urban areas, will allow 911 centers to better serve those who may be experiencing the worst day of their lives.

Nearly half of the residences in Pennsylvania have discontinued landline service and now use only wireless devices. About 70% of 9-1-1 calls are from wireless devices. Although not specifically noted in the bill, we'd like to mention a number of wireless 9-1-1 features that PSAPs deem extremely important. They are:

- 1) Ability to view the caller's handset telephone number
- 2) Locating the caller within close proximity to their actual location
- 3) Presentation of the caller's geographical coordinates (Latitude and Longitude)
- 4) Ability to rebid (electronically query) the caller's location. This is especially important if the caller is moving, or they are lost.
- 5) Text2911
- 6) In-motion calls not dropping, i.e. effective roaming connectivity between cellular sites

For front-line 911 dispatch staff, the most important product of wireless technology, whether voice or text, is 9-1-1 call location accuracy. While caller location information continues to improve, the very nature of wireless calls makes it difficult for 911 telecommunicators to acquire and maintain the exact location of a caller. Accurate 911 caller location means faster response times.

Based on our experience with macrocells, which are traditional large cellular sites with shelters and towers, we feel small cell sites must continue to:

- 1) Permit simultaneous 9-1-1 calls, given the inherent mobility of wireless customers, who want to report incidents to 911. This is especially true when confronted with events visible to many onlookers, like vehicle crashes and structure fires. Events such as these tend to generate many 9-1-1 calls.



2) Ensure call integrity while mobile, as mobile caller's transition from cellular site to cellular site, the small cell must receive, maintain, and hand-off a "roaming" 9-1-1 call.

3) Remain available in the event of commercial power loss, will the small cells be equipped with battery backup and generator power?

We appreciate your interest in hearing our support for improved 9-1-1 wireless technology. We encourage you to visit your local county PSAP. We're sure you would enjoy seeing the staff and technology at work. We look forward to working with the committee and wireless providers to improve wireless infrastructure that increases quality 911 service in Pennsylvania.

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