



# Why Wireless/5G Matters to Delaware County

# Leading the way

**FASTEST-  
GROWING  
CITY IN THE  
MIDWEST**



-U.S. Census Bureau, 2016

**No. 1 METRO  
FOR JOB  
GROWTH  
IN THE MIDWEST**



-Bureau of Labor Statistics, 2016



WINNER OF  
**SMART CITY  
CHALLENGE**



**MOST  
INTELLIGENT  
COMMUNITY  
IN THE WORLD**

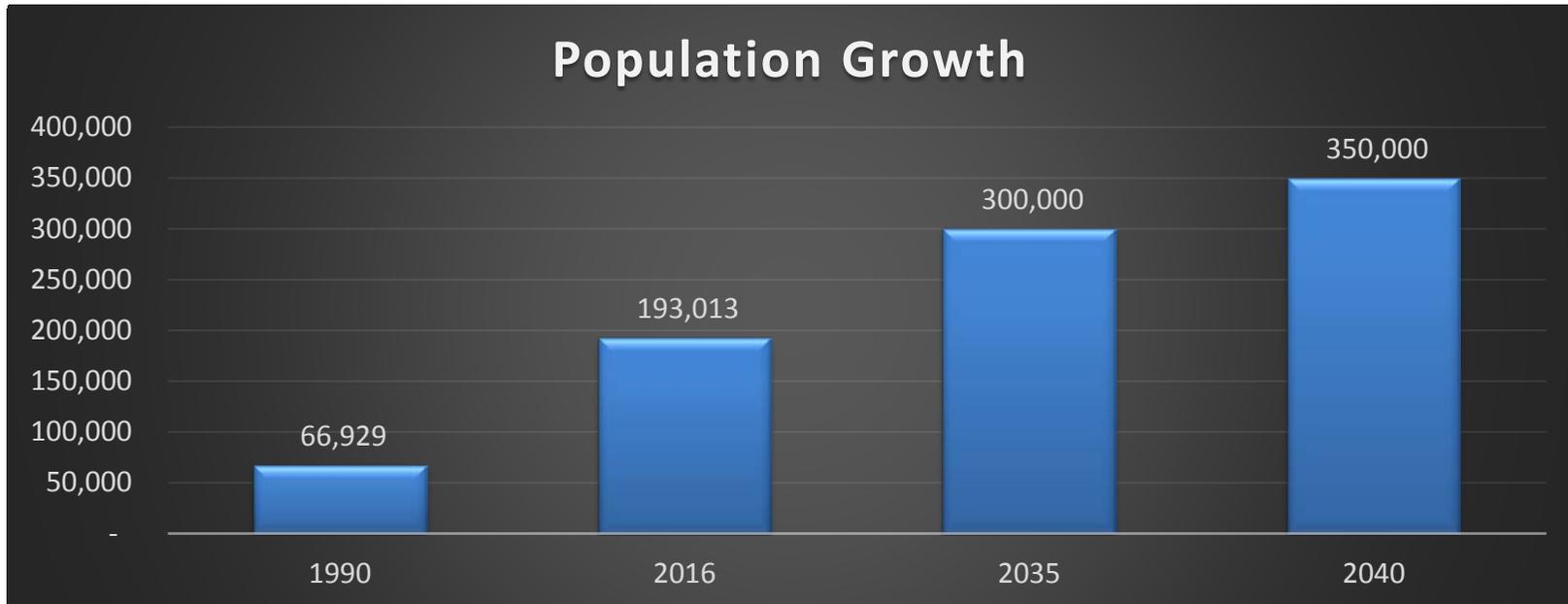
-Intelligent Community Forum, June 2015

**No. 1  
METRO FOR  
WAGE GROWTH  
IN THE U.S.**



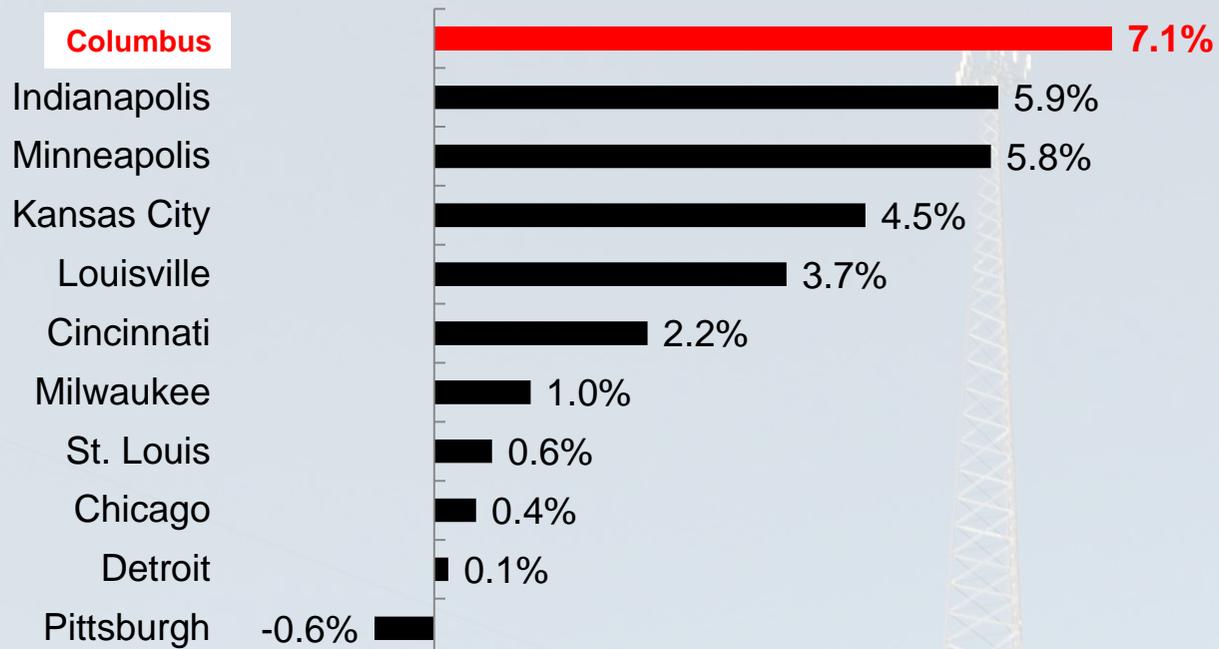
-Bureau of Labor Statistics, August 2015

# DELAWARE COUNTY POPULATION GROWTH



# Fastest population growth in the Midwest

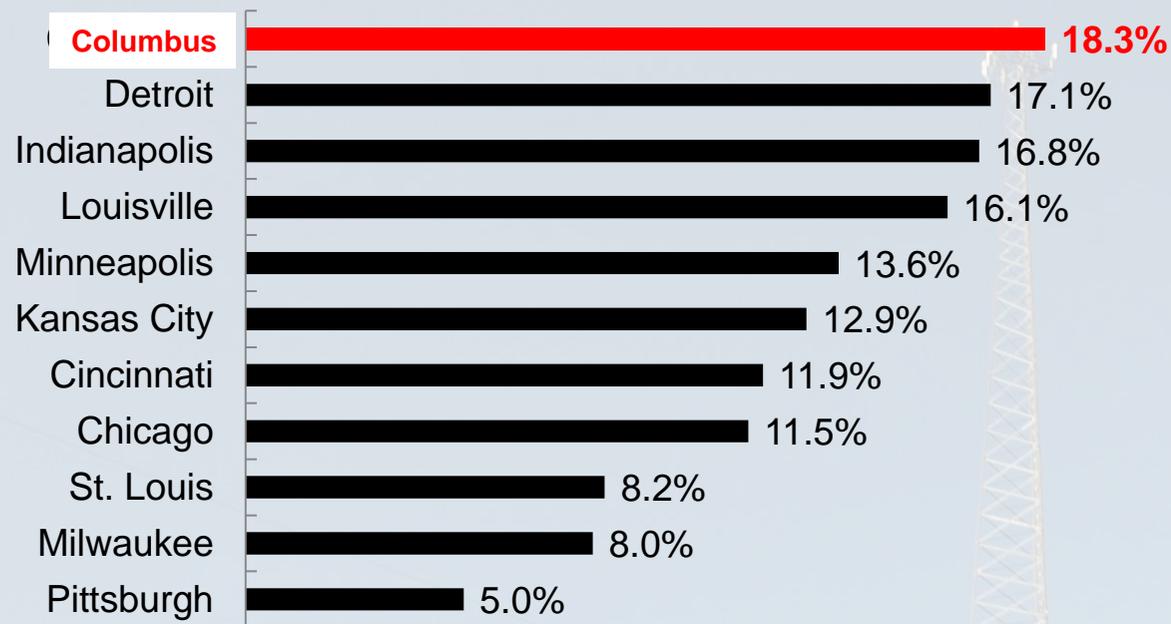
## Population growth from 2010 to 2016, major Midwest metros



Source: U.S. Census Bureau, Population Estimates, 2016

# Fastest job growth in the Midwest

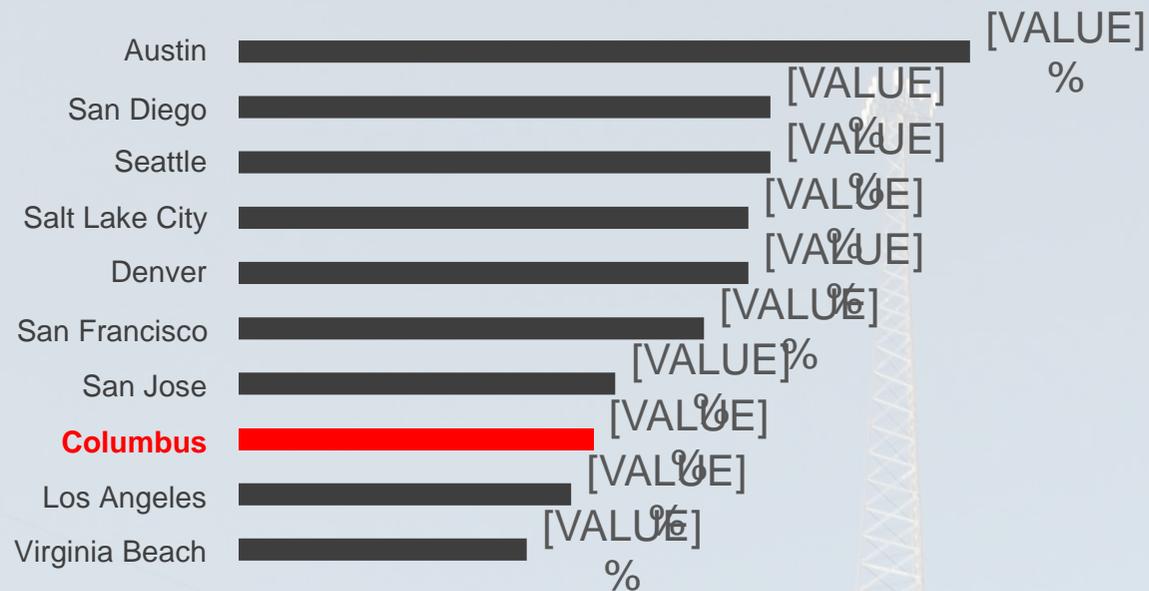
## Private sector job growth from 2010 to 2016, major Midwest metros



Source: Bureau of Labor Statistics, State and Area Employment

# Top 10 in U.S. for millennials

Percent of population age 25 to 34, large metro areas (1M+ population)

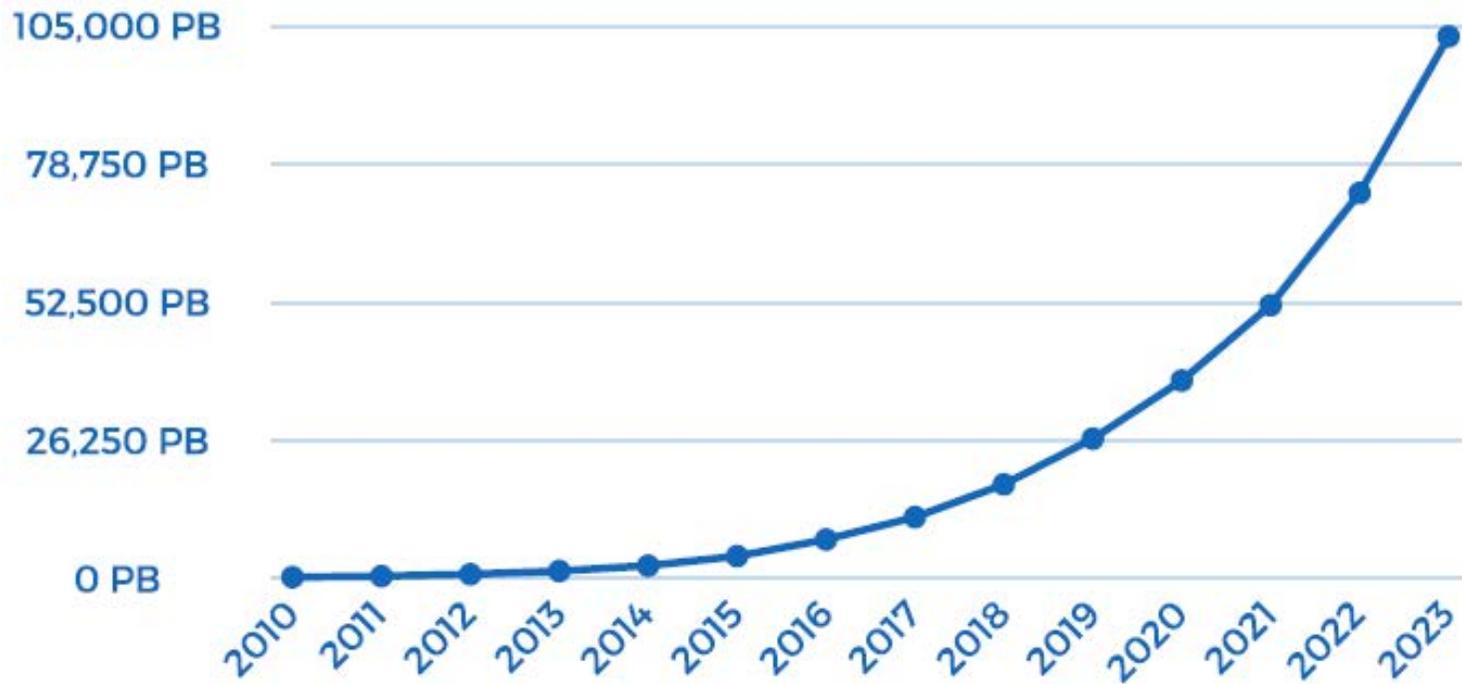


Source: U.S. Census Bureau, American Community Survey 2016



# THE TREND

## WIRELESS DATA USAGE



MEASURED AS PETABYTES PER MONTH. (PETABYTE = 1.0M GIGABYTES)  
\*NORTH AMERICA ONLY

# Fifth Generation Wireless 5G

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Dan Jones – VP of Sales and Relationship Management



A group of people, including a man and two women, are laughing and talking together in a bright, indoor setting. The man in the center is laughing heartily, and the women on either side are also laughing and looking towards him. The background is slightly blurred, showing what appears to be a living room or a similar indoor space with warm lighting.

# What is 5G?

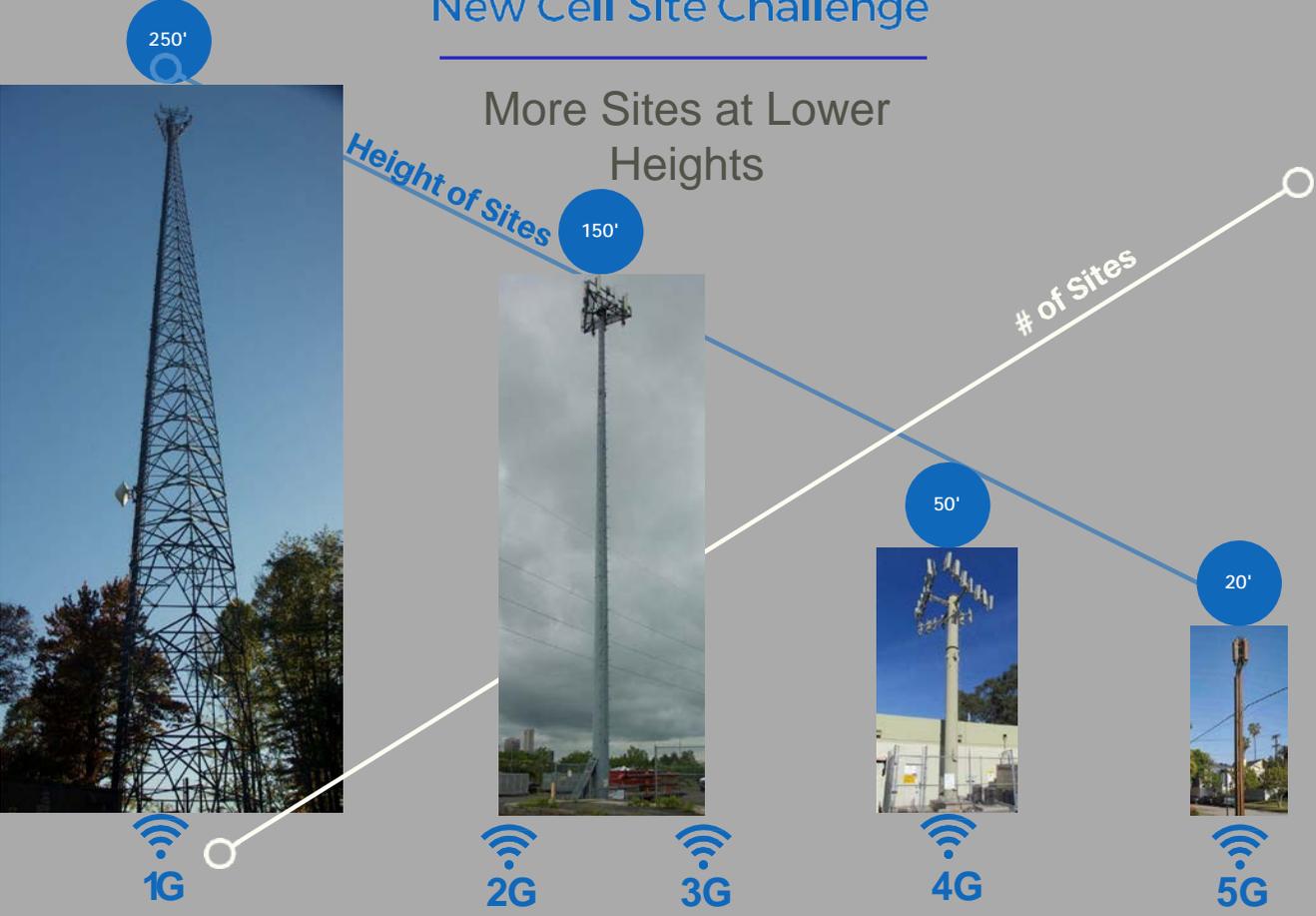
**Fifth generation wireless or 5G is the latest iteration of cellular technology, engineered to increase data and communications speeds.**

A photograph of a family of four—two adults and two children—sitting on a couch and laughing joyfully. The scene is brightly lit, creating a warm and happy atmosphere. The text is overlaid on this image.

# Who Delivers 5G?

Wireless carriers deliver 5G.

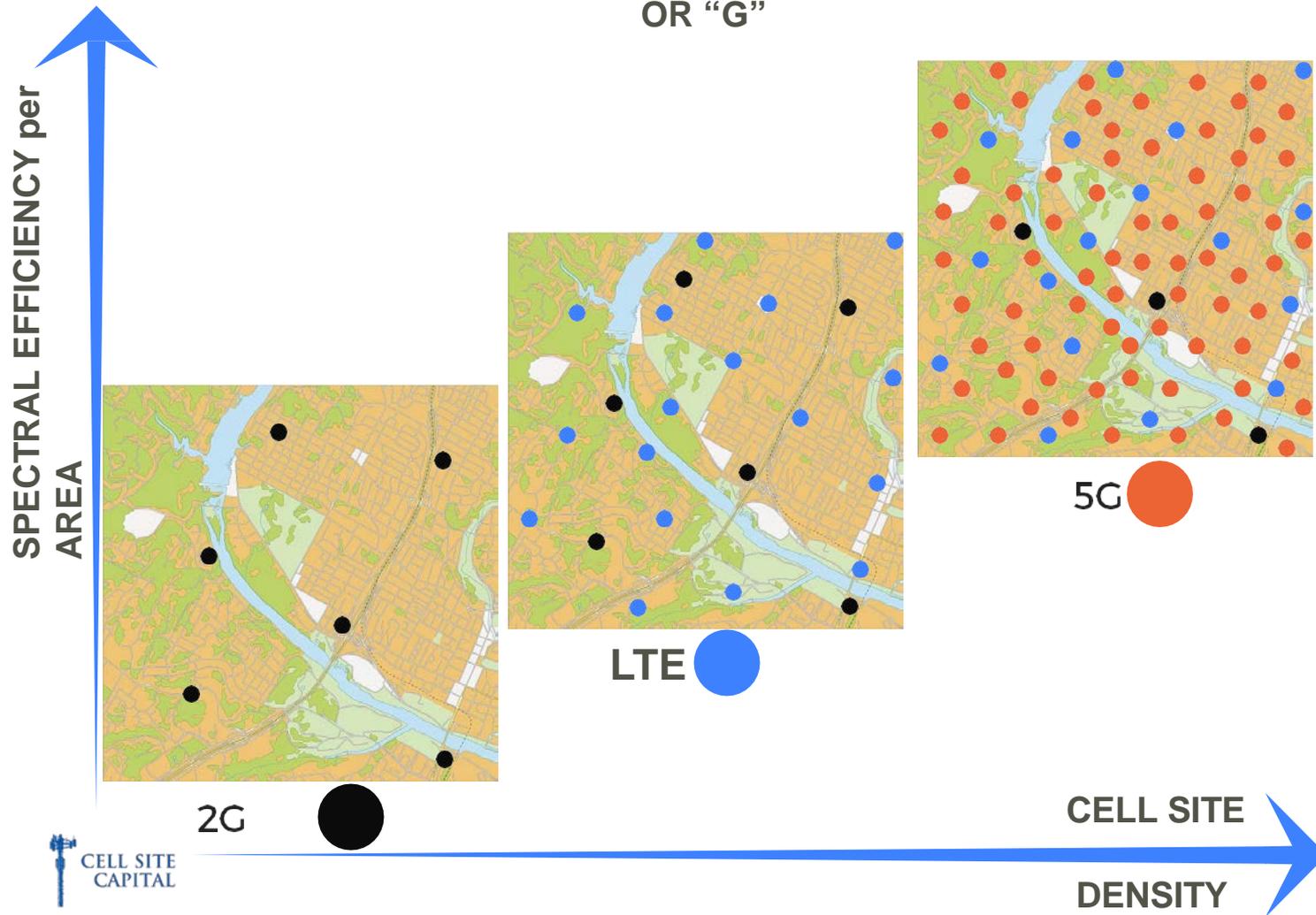
# New Cell Site Challenge



The number of sites needed to handle the rapid increase in mobile bandwidth consumption requires cell splitting (adding more sites at lower heights), while also maintaining existing macro (tower) sites. For the carriers, acquiring new real estate from shrinking asset pools creates opportunities for enterprising communities to identify and leverage real property and infrastructure assets.



DENSITY OF CELL SITES HAVE INCREASED WITH EACH GENERATION OR "G"

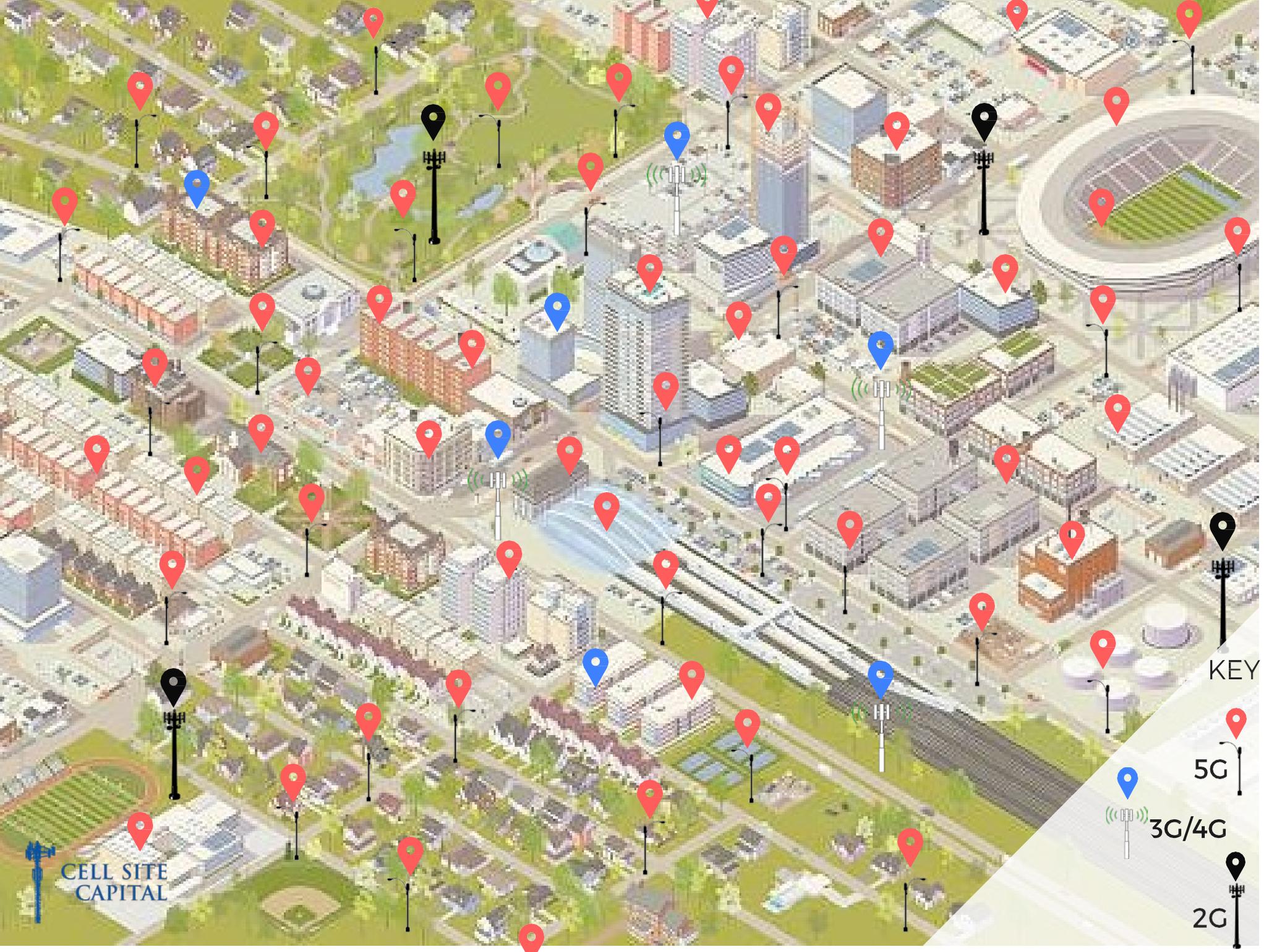


A group of people, including a woman with long blonde hair, a man with glasses, and another woman, are sitting on the floor in a meeting or collaborative setting. They appear to be engaged in a discussion. The image is overlaid with a semi-transparent orange filter.

# So why do we care since the wireless providers are delivering it?

**Cities must prepare now for the coming deployments of 5G.  
Understand the risks associated with 5G deployment by multiple carriers.  
Establish Community Priorities and Resources.  
Establish Expertise, Policy and Procedures.**

**ANDREW WECKER, ESQ.**  
**MANOS, MARTIN & PERGRAM**



CELL SITE  
CAPITAL

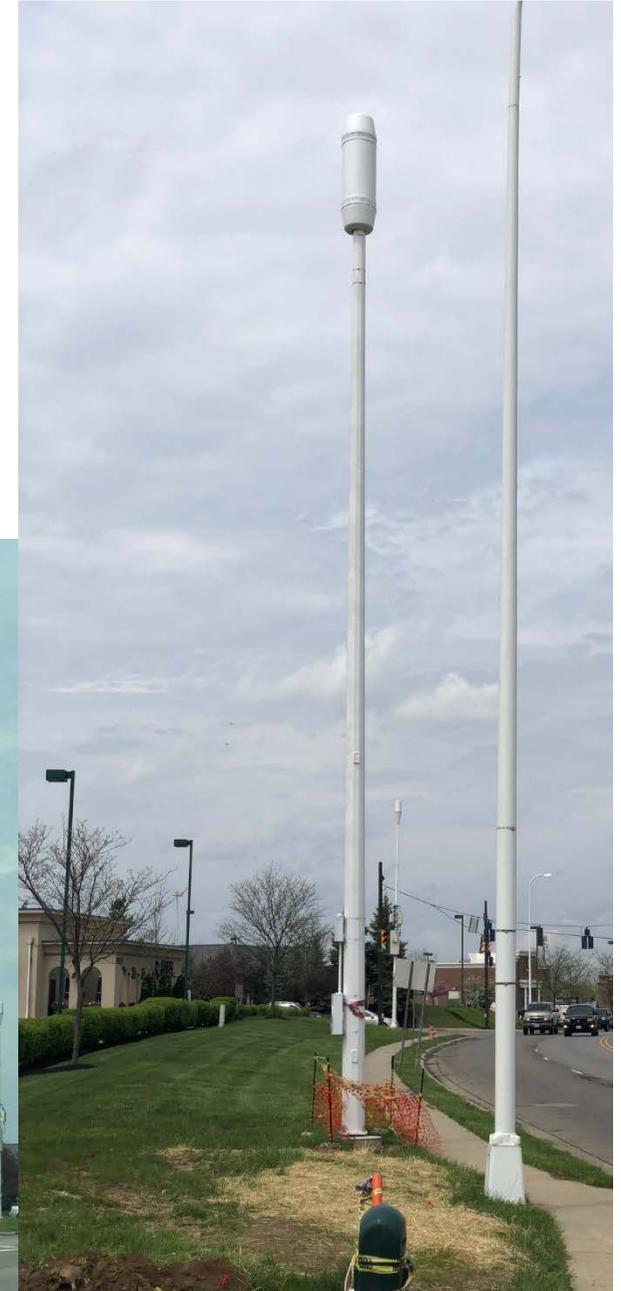
KEY

5G

3G/4G

2G

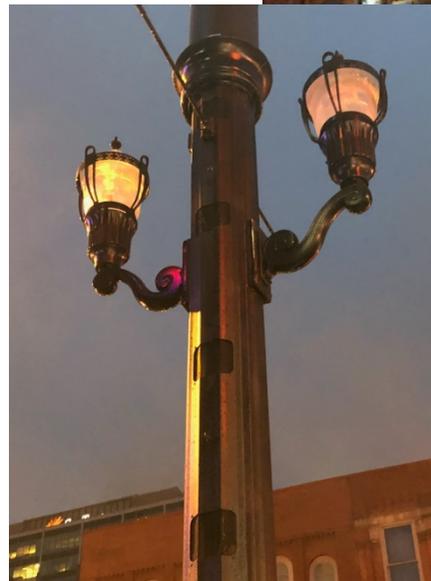
A Mr. Hyde small cell in Polaris, lurking at ground level....



A Mr. Hyde small cell in the air in  
Polaris .....



A Dr. Jekyll small cell in Nashville ....



Where we are right now in Ohio?

- Relatively strong “home rule” state for municipalities
- Townships and counties are creatures of statute

## SB 331 in the 131<sup>st</sup> General Assembly

- Snowballed from anti-animal cruelty bill into an industry vehicle to legislate their way through the municipal permitting process and even into municipal right-of-ways.
- Cities across the state banded together to challenge the constitutionality of SB 331 in 2017.
- After getting strong-armed in the statehouse, the cities started to string together court victories, not on the core issue of home rule, but on the single-subject rule.
- That is, a bill to prohibit puppy mills, cockfighting and bearbaiting probably shouldn't be used to dictate to cities what they had to do on small cells and microtowers.

# HB 478 in the 132<sup>nd</sup> General Assembly

- “A year after dozens of cities and villages sued the state and won, stakeholders say they've reached a compromise on how to regulate wireless equipment in Ohio communities.” *By Alissa Widman Neese, the Columbus Dispatch / April 23, 2018 (as reprinted in Government Technology magazine)*
- Takes effect July 31, 2018
- The big things to remember are that HB 478 gives permissive authority to municipalities to adopt design standards, subject to 90 to 120-day “shot clock” provisions.
- See, e.g., Ohio Rev. Code § 4939.0314 for authority on design standards.

But what about the township, county and state right of ways outside of municipalities?

Just for perspective – according to the Delaware Co. Auditor's office, the county's total surface area is 457.37 sq. miles, of which:

- 42.94 sq. miles, or 9.4% are in municipalities
- 414.43 sq. miles, or 90.6% are in townships

But population distribution across Delaware Co. is a different story ....

The bulk of Delaware County's population is in 3 southern townships and a handful of municipalities such as:

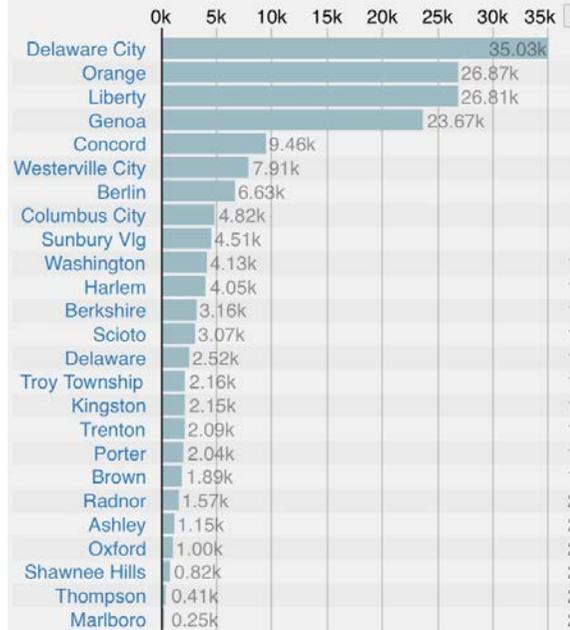
- Delaware,
- Powell,
- Shawnee Hills, and
- Sunbury & Galena.

## Population by County Subdivision in Delaware County

There are 25 county subdivisions in Delaware County. This section compares all 25 of those to each other.

**Total Population** by County Subdivision

Scope: population of selected county subdivisions in Delaware County

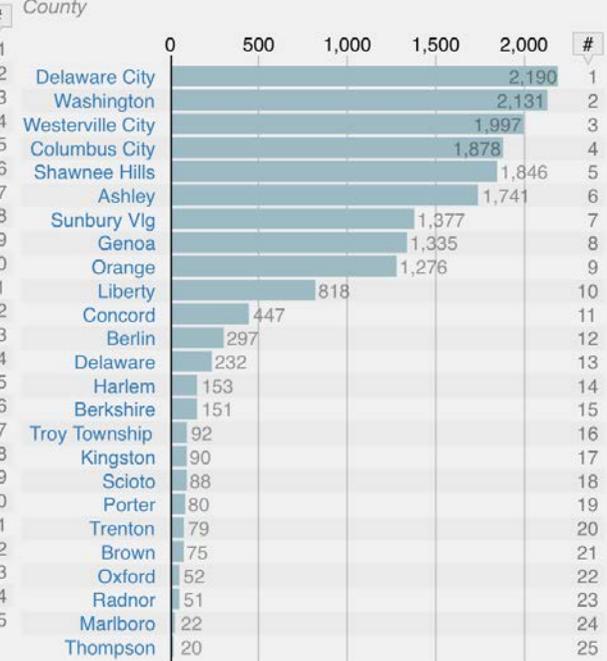


# rank of county subdivision out of 25 by population

**Population Density** by County Subdivision

People per square mile (excluding waters).

Scope: population of selected county subdivisions in Delaware County

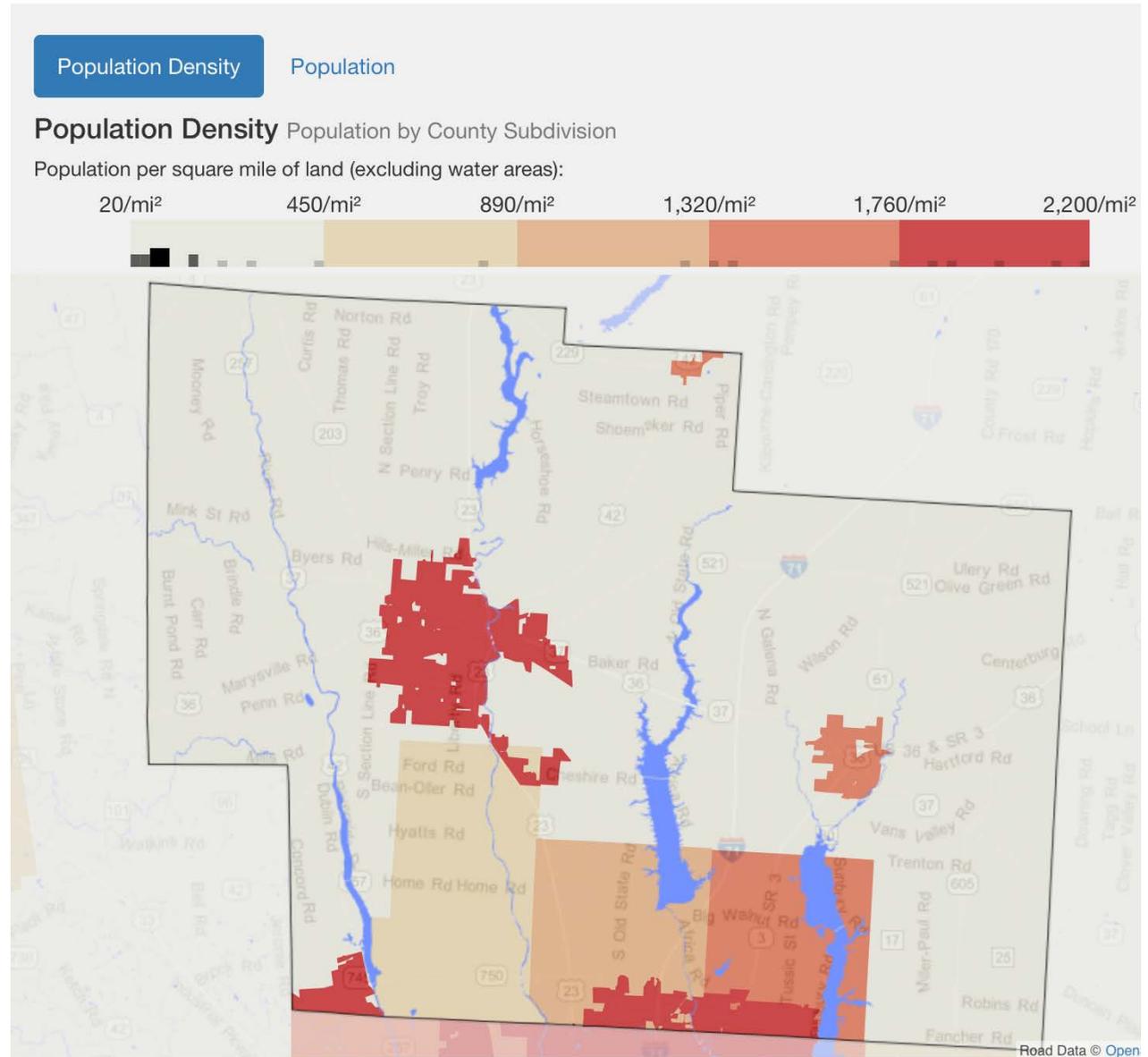


# rank of county subdivision out of 25 by population density

The red areas are population dense, which makes them appealing to big carriers like AT&T, Verizon, Sprint & T-Mobile.

Rural areas are the sorts of places that are economically challenging for those big carriers, **meaning we should be all the more thankful that a fiber optic provider like Consolidated Cooperative is solving at least part of the 5G puzzle in those areas.**

## Map of Population by County Subdivision in Delaware County



**Legally** ... there is no express authority for the ODOT director, boards of county commissioners or township trustees to set design standards for their road right-of-ways. But there is permitting authority, and if a tower company wants a permit for a new installation, enterprising local officials may decide to require certain design standards until threatened with litigation or successfully challenged in court.

- As to townships - [R.C. §5571.16 - Obtaining permit before installing driveway culvert or making excavation in township highway or highway right-of-way](#)
- As to counties - [R.C. §5547.04 - Removal of obstructions by landowners - consent and approval - signs and advertising](#)
- As to state roads and highways under ODOT - [R.C. §5515.01 - Permits granted to use or occupy portion of road or highway](#)
- Ohio Attorney General Opinion 2017-012, written under SB 331 as to non-municipal areas, more or less still holds under HB 478, to the extent it is construing R.C. §§ 5571.16, 5547.04 and 5515.01, all which HB 478 left alone.

# Practically ... for the foreseeable future,

- In more densely populated township areas like Liberty, Orange and Genoa ...
  - The anticipation is that the industry will more or less follow HB 478 to the extent that **if an adjoining municipality has adopted small cell design guidelines**, tower companies may find it operationally simpler to follow those municipal guidelines in adjoining township areas.
  - Dr. Jekyll or Mr. Hyde aesthetics with 5G capacity.
- In more rural areas, especially in the northern part of the county...
  - It stands to reason that the further one gets away from a municipal area, the more likely there will be no design guidelines applied.
  - Mr. Hyde aesthetics, **but carriers may not even decide to bring 5G capacity beyond interstate and state highway corridors.**