

# MDU Buildings Reach New High

Private construction of multiple-dwelling-unit buildings continues to rise and will hit a new record this year, with about 532,000 housing starts expected. That represents a significant opportunity for broadband deployers.

By Steven S. Ross / *Broadband Communities*

Construction of multiple-dwelling-unit (MDU) apartments by nongovernment builders continues to set records this year, according to the U.S. Census Bureau, with about 532,000 new starts expected in 2021. That seems realistic, but beware. MDU housing starts in 2020 were well below projections – 444,000 rather than the 481,000 the census projected and the 525,000 **BROADBAND COMMUNITIES** predicted.

What happened, of course, was the COVID-19 pandemic ... and a lot more.

Most units actually built received construction *permits* in 2019 and early in 2020, before many in the industry fully understood the devastating nature of the pandemic, but seasonally adjusted monthly average permitting and housing *starts* continued to increase, even into August 2021. Although only a quarter of all U.S. dwelling units are in multifamily buildings, 32 percent of new units are. In the 67 largest metropolitan areas for MDUs, the figure is 38 percent.

Nevertheless, it appears that 2020's slight decrease of 37,000 in MDU dwelling units (almost 7.7 percent) will be easily erased this year (Chart 1) and follows the long-term trend for MDUs since recovery from the Great Recession of 2008–2009 began with one exception: the Northeast (Chart 2).

In fact, the census predicts MDU construction this year almost 20 percent ahead of 2020's actual numbers and more than 10 percent ahead of the previous peak, 2019.

New, single-family housing production is still far below the pre-recession peak, but the volume of dwelling units in large MDU buildings – five units or more – has been on the rise since 2009 with only minor blips in 2017 and 2020. Volume has been above the pre-recession peak since 2014, setting new records almost every year.

New MDU construction has been the sweet spot for broadband deployments since the 1990s, and fiber deployments since Verizon began its first MDU Fios builds in 2005. Installing broadband in new MDU construction is by far the cheapest way to pass a dwelling unit, and using fiber is the cheapest of all. But only about half of new construction has used fiber since the technology became widely available 15 years ago, and that has only just begun to change. One reason is obvious: COVID-19 brought more work, education and health care to many households. It also brought federal subsidies, low-cost deployment technology and cheap financing, along with a new municipal concern: resilience against future pandemics. Thus, even the least technologically savvy developers now make broadband a priority.

Typical costs to pass an apartment door with fiber are far less than \$1,500 and typically less than \$1,000 in new construction. That allows builders to consider fiber even when projected full tenancy might take a year or more to achieve. The deployed network can also be sold for \$2,500 to \$3,500 per door these days.

## Privately Owned Dwelling Unit Starts 2004-2021

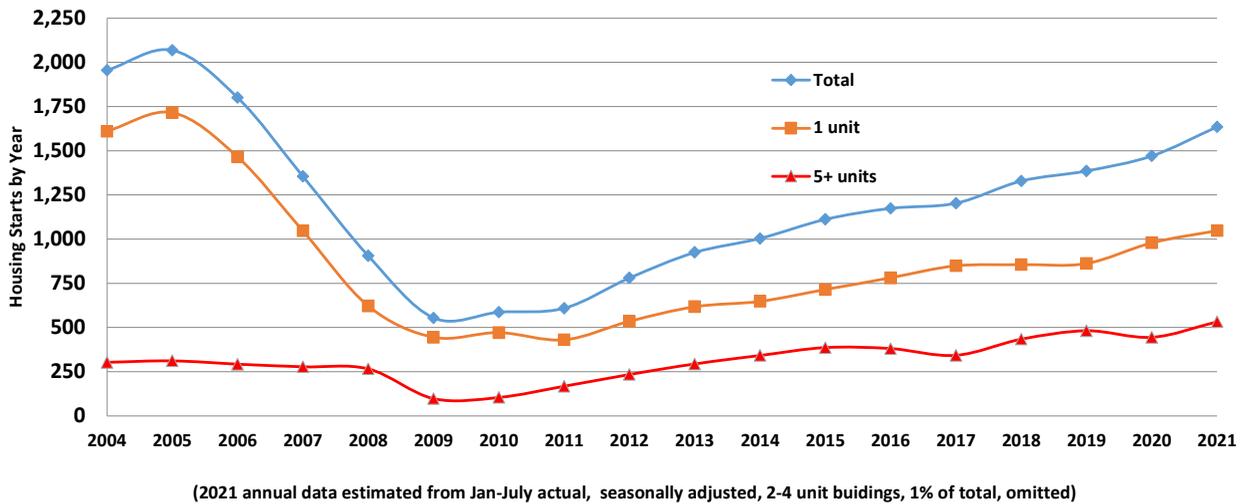


Chart 1: Construction starts for MDU buildings with at least five units plus single-family housing; 2021 data through July, estimated for last half of the year. Most new units are in buildings of 20 units or more; the average building size this year in MSAs permitted in 2020 is just under 30 units, down from 31 in 2019 but about the same as in 2018. Those numbers are down from 34 in 2017 as wood-framed MDUs become more common. In this chart, the roughly 12,000 annual construction totals for MDUs of two, three or four units is omitted to keep data after 2017 compatible with earlier years.

## MDU Privately Financed Dwelling Unit Starts by Region 2008-2021

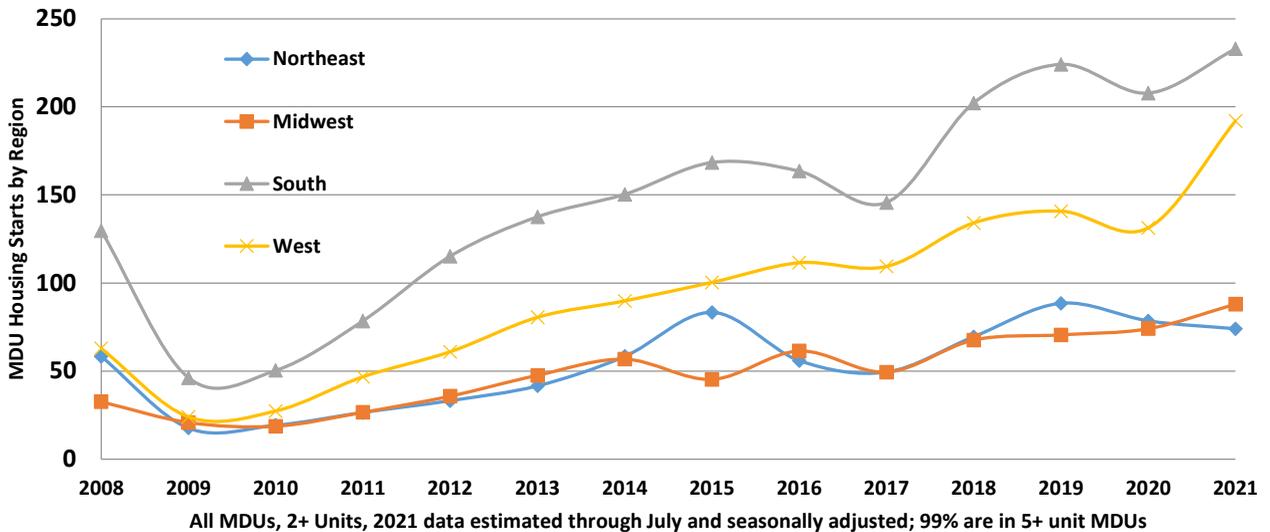


Chart 2: Regional variations in annual MDU construction. In this chart, MDUs of all sizes are aggregated; the census does not fully report MDU data by size in this data series. Note that most MDU growth has been in the South and West since the recession started in 2008, but MDU volume in the West declined in 2019 before rising again.

### HOW ACCURATE ARE PROJECTIONS?

Many unprecedented forces are at work, and most are not yet settled by society as a whole. In specific locations, they could tip the balance one way or another. The issues include:

- **Labor shortages.** At first, the pandemic did not slow the pace of construction much in 2020. Most jurisdictions that had severe lockdowns exempted most outdoor

construction work. Construction labor eventually became tight in 2020, mainly because many urban areas finally restricted on-site construction work, especially indoors, because of COVID-19. That loosened in 2021 as the winter COVID-19 peak subsided and vaccination rates began to rise. But it tightened again in a few locations as the Delta COVID-19 variant ignited a fourth surge. The

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trend toward wood-frame MDUs continues. That, in turn, allows more labor to be handled in factories.

- **Weather.** Winter was stormy in much of the country. Unusually hot weather in the West, unusually rainy weather in the East and plenty of strong tropical storms in the South hindered the summer construction season. Will the broadband industry need to adapt to regular bouts of rough weather?
- **Mortgage rates and availability.** All was fine until this past summer. Then rates started to rise. They are, however, still near historic lows. Younger households still report difficulty getting mortgage commitments, often because of high student loan balances. Congress could help solve this issue by making college loans dischargeable in bankruptcy. Instead, Congress is arguing over forgiving loans. That approach is politically more divisive. Either way, the issue is real, but overblown in many cases. The decline predates especially massive forest fires in the past few years but comes after several years of what had been record fires that have made fire insurance prohibitively expensive in many smaller communities. That, in turn, makes mortgages hard to get. Until this year, the issue did not impact MDUs in Western towns bigger than rural forest enclaves. Now it often does.
- **Own vs. rent.** Most new MDU housing is being filled by renters, not owners, even for cases in which individual mortgage financing is possible. That's good for broadband network deployers. It is always easier to deal with one landlord than a homeowners association or individual apartment owners. When and if those rental buildings flip to condominium ownership, broadband is already there.
- **Pricing.** Higher interest rates tend to erode prices for new homes, as families budget the balance between interest and principal in their monthly mortgage payments.
- **Migration from cities.** This "trend" is overblown. There is some flight from some cities (especially in California) that are particularly congested and high-priced. But in most places, the issue is secondary. For families seeking more space and considering the idea of having to commute only a few days a week, more-distant suburbs beckon. That puts demand on single-family homes. In urban

single-family neighborhoods and near-city suburbs, there's greater acceptance of multifamily housing. This is due partly to market demand and partly because in the future, not every dwelling unit will generate a commuter clogging local roads.

The tables in this article demonstrate that most small communities go for small MDUs as well. A recent long-term trend in the Northeast and Upper Midwest is an expansion of planned unit developments (PUDs) and cluster housing. In the West and South, PUDs have always been common.

- **Working space.** The recent idea of providing common MDU areas for communal workspace may be a victim of COVID-19 going forward. Instead, realtors report more interest in home offices. That means apartment floor area may grow. In many urban and dense suburban areas, parking requirements are already being eased.
- **Climate change.** Building codes have pushed for more insulation and natural lighting but have been blind on heating and cooling issues in small MDUs. The norm is usually for separate equipment in each apartment, and there is no easy way to convert such equipment to heat pumps in northern climes. Most environmental groups push universal electrification. But where gas distribution already exists, MDUs might expect "green" hydrogen from electrolysis, or even ammonia (both carbon-free fuels) to be phased into natural gas (methane) feeds. This also makes wind and solar power more efficient, as such power would generate those fuels in off-peak periods.
- **Is the market there?** Population growth is heading toward zero, propelled by 1 million more deaths than normal in 2020 directly due to COVID-19, a stressed health care system (especially nursing homes), comorbidities, and a sharp decline in legal immigration. On the other hand, household formation, though slowing, has remained stable. Many COVID-19 deaths were among the elderly, often living in group homes or in multigenerational households. This is tragic, of course, but unlikely to reduce overall household formation.

## TAKE HEED

There is a huge reservoir of qualified, potential buyers. Census surveys as late as 2020 show more than half of all adults ages 18 to 29 live with parents or guardians – the highest percentage in almost 75 years. Some increase that year may be the result of college students sent home from dormitories and off-campus housing by the census date – April 1, 2020 – as campuses closed, but that accounts for at most 2 percentage points of the increase.

According to a Pew Research Center analysis of census data, the number and share of young adults living with parents grew throughout the country in 2020. The increase was sharpest in the South, where the total rose by more than a million and the share increased from 46 percent to 52 percent. But the highest share of young adults living with parents (57 percent) was in the Northeast.

Many families had no choices at all. In 2020, a quarter of all U.S. families were unemployed or severely underemployed because of COVID-19 restrictions. Today, that's less than 10 percent.

Naturalization of legal immigrants until a few years ago was close to 1 million per year. In 2019, that fell to 800,000. In 2020, it was 600,000. True, the Trump administration delayed citizenship ceremonies during its years in office, so there is a backlog. But whether immigrants are citizens or legal aliens with work permits, they are already here. Citizenship does bring higher credit scores and greater mortgage-worthiness for those who are already legal residents.

Although the bulk of new construction is aimed at the current rental market, construction quality and design features often anticipate eventual conversion to condominiums. Typical units, even in MDUs meant for the college dorm market, are one or two bedrooms.

MDUs, as one might expect, tend to have fewer units per structure in rural areas and tend to be garden apartments. In rural population centers of fewer than 50,000 people, garden and dwelling-above-store apartments are not uncommon and are easy to wire with broadband, as long as the community itself is well connected to the outside world. Nonresidential MDUs – hotels, hospitals and dormitories – are more common in the South, as are retirement communities in rural areas, even though rural populations have declined more in the South than elsewhere since 2010. The South has more counties than any other region in which retirement or vacation housing is the dominant economic activity.

Small regional and local broadband carriers move quickly to take advantage of opportunities new residential construction presents. Local carriers do not usually need the census to tell them what is going on in their own communities. To take advantage of local opportunities, national property owners and managers need to strengthen connections to local carriers.

## THE BUSINESS CASE FOR BROADBAND

All this offers extra opportunities for broadband deployers, especially smaller deployers seeking to exploit the lower per-apartment deployment costs for MDUs. Deployers also find property owners easier to deal with than condominium homeowners associations.

More than half of all new MDUs are being built in the South (Chart 2), but 308 metropolitan statistical areas (MSAs) experienced construction permitting of at least one MDU with at least five units last year. MSAs have at least one urbanized area with a minimum population of 50,000.

The Census Bureau does not report detailed data at the city level for housing starts but does report them for permits issued. It also reports regional data less completely than it does national data.

As researcher Michael Render of RVA has reported consistently in his market surveys, broadband is the most sought-after amenity among renters and prospective buyers. But as noted previously, COVID-19 exposed the deficiencies of copper or exclusively wireless broadband distribution. A very high percentage of residents (Render says almost 60 percent) have always worked from home occasionally, but

## DATA UNCERTAINTIES

Large builders and deployers are well aware that national and regional real-estate trends are not usually mirrored exactly in local markets. They also are aware that local radio, TV and newspapers tend to report only aggregate national numbers for all housing starts, as local newsrooms in chain-owned media often do not exist. Almost two of every three new units are in single-family homes, and much of that is to replace old housing that has fallen into disrepair.

The data are collected by private contractors hired by the U.S. Census Bureau. But there are 40,000 communities in the United States, and just 19,000 require formal construction permits. So the census inflates the numbers it collects by about 3 percent in its national reports.

In many states, large developments are built outside city or town borders in unincorporated areas and then folded into those communities once construction is finished. Therefore, although nationally the number of units completed tends to be about 7 percent below the number started, the number of dwelling units completed is sometimes larger in a given location. That has rarely been the case for the past few years, however. In addition, MDU completions have tended to be successful at a higher rate in the past few years – closer to a 3 or 4 percent drop from starts. COVID-19, of course, changed this in 2020 and this year.

For clarity, the charts do not include the small number of housing units in buildings with two, three or four apartments – 10,000 to 12,000 units per year for the past decade, which is less than 1 percent of all housing starts. Aside from the pandemic, weather, catastrophic forest fires, and local seasonal patterns tend to account for much of this variation. There is, however, significant conversion of existing large single-family structures into MDUs. That activity is not represented in census data on housing starts and is rarely reported in permit data.

There are also regional variations, and those are reported about a year late by the census. The bureau does not break out number of units in very small MDUs – those of four units or fewer – in the regional data, but it does in the MSA-level data in Tables 1 and 2, which it reports about six months after the previous year ends.

# MULTIFAMILY BROADBAND

## NEW, PRIVATELY OWNED HOUSING UNITS AUTHORIZED IN 2020 UNADJUSTED UNITS FOR REGIONS, DIVISIONS AND STATES

| Consolidated metropolitan statistical area (ranked by number of units permitted, 2020) | Total  | 1 Unit | 2 Units | 3 and 4 Units | 5 Units or More | Structures, 5 Units or More | Average size, 5+ units |
|--|--------|--------|---------|---------------|-----------------|-----------------------------|------------------------|
| New York-Newark-Jersey City, NY-NJ-PA  | 54,835 | 10,993 | 1,674   | 828           | 41,340          | 1,264                       | 33                     |
| Houston-The Woodlands-Sugar Land, TX   | 70,540 | 49,915 | 306     | 35            | 20,284          | 601                         | 34                     |
| Austin-Round Rock-Georgetown, TX   | 42,264 | 22,570 | 346     | 71            | 19,277          | 406                         | 47                     |
| Dallas-Fort Worth-Arlington, TX  | 60,812 | 44,005 | 828     | 221           | 15,758          | 406                         | 39                     |
| Phoenix-Mesa-Chandler, AZ  | 48,219 | 31,658 | 680     | 208           | 15,673          | 464                         | 34                     |
| Los Angeles-Long Beach-Anaheim, CA   | 26,930 | 9,737  | 1,266   | 406           | 15,521          | 409                         | 38                     |
| Miami-Fort Lauderdale-Pompano Beach, FL  | 21,758 | 7,808  | 334     | 369           | 13,247          | 344                         | 39                     |
| Seattle-Tacoma-Bellevue, WA  | 23,039 | 8,860  | 542     | 703           | 12,934          | 418                         | 31                     |
| Minneapolis-St. Paul-Bloomington, MN-WI  | 22,341 | 10,277 | 150     | 136           | 11,778          | 174                         | 68                     |
| Nashville-Davidson-Murfreesboro-Franklin, TN   | 27,158 | 15,549 | 118     | 235           | 11,256          | 225                         | 50                     |
| Washington-Arlington-Alexandria, DC-VA-MD-WV   | 25,166 | 13,991 | 112     | 7             | 11,056          | 157                         | 70                     |
| Boston-Cambridge-Newton, MA-NH   | 14,248 | 4,457  | 562     | 309           | 8,920           | 490                         | 18                     |
| Orlando-Kissimmee-Sanford, FL  | 24,499 | 15,343 | 352     | 111           | 8,693           | 205                         | 42                     |
| Denver-Aurora-Lakewood, CO   | 19,732 | 11,234 | 252     | 101           | 8,145           | 148                         | 55                     |
| Philadelphia-Camden-Wilmington, PA-NJ-DE-MD  | 16,201 | 7,999  | 506     | 745           | 6,951           | 341                         | 20                     |
| Charlotte-Concord-Gastonia, NC-SC  | 26,548 | 19,690 | 108     | 26            | 6,724           | 207                         | 32                     |
| Columbus, OH   | 12,358 | 5,481  | 106     | 159           | 6,612           | 251                         | 26                     |
| San Francisco-Oakland-Berkeley, CA   | 10,156 | 3,386  | 70      | 114           | 6,586           | 185                         | 36                     |
| San Diego-Chula Vista-Carlsbad, CA   | 9,472  | 2,900  | 88      | 378           | 6,106           | 200                         | 31                     |
| Chicago-Naperville-Elgin, IL-IN-WI   | 14,995 | 8,122  | 334     | 519           | 6,020           | 225                         | 27                     |
| San Antonio-New Braunfels, TX  | 16,697 | 10,541 | 232     | 88            | 5,836           | 234                         | 25                     |
| Portland-Vancouver-Hillsboro, OR-WA  | 13,446 | 7,513  | 152     | 100           | 5,681           | 188                         | 30                     |
| Salt Lake City, UT   | 11,033 | 5,203  | 280     | 260           | 5,290           | 112                         | 47                     |
| Raleigh-Cary, NC   | 16,958 | 12,697 | 24      | 8             | 4,229           | 78                          | 54                     |
| Tampa-St. Petersburg-Clearwater, FL  | 20,348 | 16,088 | 72      | 46            | 4,142           | 74                          | 56                     |
| San Jose-Sunnyvale-Santa Clara, CA   | 5,851  | 1,814  | 10      | 19            | 4,008           | 62                          | 65                     |
| Jacksonville, FL   | 17,246 | 13,210 | 68      | 40            | 3,928           | 112                         | 35                     |
| Kansas City, MO-KS   | 10,728 | 6,173  | 304     | 326           | 3,925           | 135                         | 29                     |
| Sacramento-Roseville-Folsom, CA  | 11,164 | 7,279  | 112     | 89            | 3,684           | 132                         | 28                     |
| Atlanta-Sandy Springs-Alpharetta, GA   | 32,346 | 28,632 | 96      | 228           | 3,390           | 149                         | 23                     |
| Madison, WI  | 5,268  | 1,723  | 154     | 31            | 3,360           | 66                          | 51                     |
| Cape Coral-Fort Myers, FL  | 10,673 | 6,828  | 448     | 108           | 3,289           | 115                         | 29                     |
| Baltimore-Columbia-Towson, MD  | 8,094  | 5,010  | 2       | 4             | 3,078           | 56                          | 55                     |
| Las Vegas-Henderson-Paradise, NV   | 14,100 | 10,038 | 538     | 584           | 2,940           | 168                         | 18                     |

| <b>Consolidated metropolitan statistical area (ranked by number of units permitted, 2020)</b> | <b>Total</b>     | <b>1 Unit</b>  | <b>2 Units</b> | <b>3 and 4 Units</b> | <b>5 Units or More</b> | <b>Structures, 5 Units or More</b> | <b>Average size, 5+ units</b> |
|---|------------------|----------------|----------------|----------------------|------------------------|------------------------------------|-------------------------------|
| Charleston-North Charleston, SC   | 8,604            | 5,791          | 0              | 34                   | 2,779                  | 93                                 | 30                            |
| Richmond, VA  | 8,190            | 5,330          | 354            | 247                  | 2,259                  | 69                                 | 33                            |
| Indianapolis-Carmel-Anderson, IN  | 10,998           | 8,405          | 206            | 148                  | 2,239                  | 98                                 | 23                            |
| Greenville-Anderson, SC   | 8,734            | 6,511          | 156            | 11                   | 2,056                  | 99                                 | 21                            |
| St. Louis, MO-IL  | 7,863            | 5,719          | 110            | 57                   | 1,977                  | 88                                 | 22                            |
| Lakeland-Winter Haven, FL   | 9,492            | 7,395          | 28             | 103                  | 1,966                  | 66                                 | 30                            |
| Omaha-Council Bluffs, NE-IA   | 5,473            | 3,454          | 52             | 11                   | 1,956                  | 69                                 | 28                            |
| Durham-Chapel Hill, NC  | 5,505            | 3,528          | 14             | 11                   | 1,952                  | 27                                 | 72                            |
| Sioux Falls, SD   | 3,550            | 1,597          | 30             | 89                   | 1,834                  | 78                                 | 24                            |
| Riverside-San Bernardino-Ontario, CA  | 15,232           | 12,897         | 240            | 295                  | 1,800                  | 176                                | 10                            |
| Reno, NV  | 4,504            | 2,629          | 48             | 48                   | 1,779                  | 97                                 | 18                            |
| Cincinnati, OH-KY-IN  | 7,297            | 5,392          | 58             | 97                   | 1,750                  | 93                                 | 19                            |
| Detroit-Warren-Dearborn, MI   | 7,165            | 5,193          | 98             | 142                  | 1,732                  | 94                                 | 18                            |
| Des Moines-West Des Moines, IA  | 6,508            | 4,740          | 54             | 16                   | 1,698                  | 56                                 | 30                            |
| Virginia Beach-Norfolk-Newport News, VA-NC  | 6,951            | 5,242          | 18             | 44                   | 1,647                  | 33                                 | 50                            |
| Colorado Springs, CO  | 6,932            | 5,039          | 302            | 4                    | 1,587                  | 34                                 | 47                            |
| Lubbock, TX   | 3,857            | 2,023          | 254            | 4                    | 1,576                  | 138                                | 11                            |
| Wilmington, NC  | 3,857            | 2,248          | 104            | 0                    | 1,505                  | 37                                 | 41                            |
| Panama City, FL   | 2,846            | 1,311          | 32             | 4                    | 1,499                  | 64                                 | 23                            |
| Knoxville, TN   | 5,396            | 3,887          | 42             | 94                   | 1,373                  | 52                                 | 26                            |
| Blacksburg-Christiansburg, VA   | 1,748            | 394            | 2              | 4                    | 1,348                  | 26                                 | 52                            |
| Palm Bay-Melbourne-Titusville, FL   | 4,739            | 3,333          | 26             | 36                   | 1,344                  | 50                                 | 27                            |
| Fayetteville-Springdale-Rogers, AR-MO   | 6,365            | 4,579          | 400            | 69                   | 1,317                  | 93                                 | 14                            |
| Spokane-Spokane Valley, WA  | 3,362            | 1,848          | 162            | 37                   | 1,315                  | 62                                 | 21                            |
| Deltona-Daytona Beach-Ormond Beach, FL  | 6,443            | 4,906          | 254            | 4                    | 1,279                  | 36                                 | 36                            |
| Champaign-Urbana, IL  | 1,547            | 292            | 4              | 0                    | 1,251                  | 21                                 | 60                            |
| Coeur d'Alene, ID   | 2,929            | 1,669          | 44             | 18                   | 1,198                  | 63                                 | 19                            |
| Bridgeport-Stamford-Norwalk, CT   | 1,862            | 638            | 52             | 4                    | 1,168                  | 42                                 | 28                            |
| Boise, ID   | 9,762            | 8,158          | 144            | 351                  | 1,109                  | 65                                 | 17                            |
| Tallahassee, FL   | 2,445            | 1,337          | 20             | 0                    | 1,088                  | 41                                 | 27                            |
| Asheville, NC   | 3,432            | 2,335          | 18             | 0                    | 1,079                  | 53                                 | 20                            |
| Naples-Marco Island, FL   | 4,473            | 3,256          | 2              | 137                  | 1,078                  | 50                                 | 22                            |
| Pittsburgh, PA  | 4,824            | 3,441          | 142            | 194                  | 1,047                  | 29                                 | 36                            |
| <b>Total permits for MSAs permitting 1,000+ units in 5+ buildings, 2020</b>                   | <b>958,108</b>   | <b>571,241</b> | <b>14,696</b>  | <b>9,925</b>         | <b>362,246</b>         |                                    |                               |
| <b>Total for all MSAs, 2020</b>   | <b>1,360,910</b> | <b>888,173</b> | <b>25,052</b>  | <b>16,594</b>        | <b>431,091</b>         |                                    |                               |

Table 1: Residential permits issued in 2020 to private developers in 67 consolidated metropolitan statistical areas (MSAs). These are all MSAs with permits for at least 1,000 dwelling units in MDUs of five units or more. Source: U.S. Census Bureau

## Bulk services save residents money, cut deployer marketing and operating costs, and put building owners on the hook for the fees.

it was unclear from census data how many households or occupied dwelling units had residents working only from home. Do both members of a household work at home? Only one? Is the pattern different for couples than for young workers sharing living space to split the rent? Is the gig part-time or full-time? Now, this is known, thanks to COVID-19. Anyone who could work from home did.

Render also says that before COVID-19, one-fifth of all families ran a business from home – up from just 9 percent in 2010 (12 percent of residents with fiber connections in 2010). Is the home business a small added income or a major part of family income? With the pandemic, it may be the only source of family income.

The best advice is for existing MDU owners and managers to survey the needs of their tenants and prospective tenants. What is absolutely clear is that home-based workers need fast, reliable, symmetrical broadband. Many will need it, courtesy of COVID-19 and changing office practices, for years to come.

### NEW PRODUCTS FOR MDU DEPLOYMENTS

Vendors now offer new products to make MDU fiber deployments cheaper and cheaper. The fiber itself is thinner and more flexible. Connections rarely require fusion splicing, so deployments are faster and require less skilled labor. Fiber can be pulled inside with no splice at all – workers can simply strip off weather shielding.

Many techniques combine copper with Wi-Fi and 5G cellular, satellite, DOCSIS and true, all-fiber, passive optical networks terminating at the unit, property line, attic or basement. But, again, new buildings are cheaper to build and easier to maintain if they have all-fiber networks and good provision for wireless technologies, and

all-fiber networks take up less room in structures than other types of networks. New, all-wood construction requires fire-suppression sprinklers. Fiber can run near the water distribution system; copper cannot, even if the fire suppression system is “dry” until a sprinkler trips due to fire.

### THE RENTAL TRAP

How does a building owner manage the risks? The percentage of owner-occupied dwelling units overall has fallen from its peak – nearly 70 percent in 2008 – to about 60 percent today. This pushes demand for rental housing, so rental costs (in urban areas especially) have been rising faster than income. This has increased the number of people who share apartments and rental houses – complicating marketing for network deployers, but increasing the demand for broadband services in any one apartment. Rents, soft in 2020, have rebounded.

Deployers may wish to take some credit risks, however, as many young tenants buy only internet broadband – a high-margin sale for deployers, and one that avoids deployers being the bill collectors for conventional video-content providers. Video content is a low- to almost zero-margin business for deployers. On-demand video is not usually a deployer responsibility.

There has been an increase in the number of households offered bulk services through building owners and managers (to at least 6 percent of all users). That is, broadband costs are treated as part of the rent, not a separate fee. This saves residents money, cuts deployer marketing and operating costs, and puts building owners on the hook for the fees. But some owners and managers worried last year about adding bulk fees to rents that are already rising. That changed somewhat as federal COVID-19 aid bills offered good

broadband subsidies for homebound children; a bigger subsidy package is pending in the new infrastructure bill.

Bulk once reduced tenant broadband choice and induced many to take only the bulk package, with no extras. Instead, residents – especially younger residents – now buy their content directly through over-the-top services from Amazon, Netflix, Apple and a constellation of other providers. That, in turn, requires buildings or broadband deployers to spend on good wireless infrastructure – Wi-Fi and cellular.

Tenant churn creates a hidden cost for MDU deployers. Unrelated people renting an apartment together are particularly unstable tenant groups, even when each tenant has a good income. As tenants move in and out of apartments and swap housing partners, the actual monthly broadband revenue deployers earn tends to stay close to the lower, promotional price.

No longer can deployers depend on higher revenues from tenants who have completed promotional terms. What's the penalty? From 12 to 30 percent of “full price” revenue according to **BROADBAND COMMUNITIES'** two cash flow models – and the 12 percent is for short promo periods of three to six months. Even a 12 percent hit can destroy all profit potential. **BROADBAND COMMUNITIES** offers free monthly cash flow and revenue models to help providers do their own calculations. See [www.bbcmag.com/tools-and-resources/ftth-financial-analyzers](http://www.bbcmag.com/tools-and-resources/ftth-financial-analyzers). ❖



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Table 2 is available in the digital edition of this article at [www.bbcmag.com](http://www.bbcmag.com).