Colorado Multifamily and Nonresidential Construction Forecast, 2022-2026

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MEP Alliance

Labor Management

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Development Research Partners

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Development Research Partners

Patricia Silverstein, President & Chief Economist

Hanna Scovill, Research Associate

10184 West Belleview Avenue, Suite 210

Littleton, Colorado 80127

www.DevelopmentResearch.net

303.991.0070

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This study presents a forecast of multifamily and nonresidential construction activity for Colorado and the state's metropolitan areas for the period 2022 to 2026. The following chart summarizes the outlook for construction activity by geographic area and by property type.

Average Annual Units/Square Feet Needed, Rate of Change, and Direction of Change in Construction Activity

	Office SF (000s)		Healthcare SF (000s)		Industrial SF (000s)		Retail SF (000s)		PreK-12 Education SF (000s)		Postsecondary Education SF (000s)		Multifamily Units	
	2016-2021	2022-2026	2016-2021	2022-2026	2016-2021	2022-2026	2016-2021	2022-2026	2016-2021	2022-2026	2016-2021	2022-2026	2015-2020	2021-2026
Metro Denver (11 counties*)	2,181.0	1,247.2	985.5	889.6	5,727.4	1,514.4	1,301.9	1,011.1	192.5	400.9	112.5	200.8	8,699	5,028
	-42.8%	↓	-9.7%	↓	-73.6%	↓	-22.3%	↓	108.2%	↑	78.5%	↑	-42.2%	↓
Northern Colorado (Larimer and Weld Counties)	107.1	184.4	116.1	209.8	903.1	225.3	345.4	283.1	173.0	325.9	299.8	219.8	1,550	1,424
	72.1%	↑	80.7%	↑	-75.1%	↓	-18.0%	↓	88.4%	↑	-26.7%	↓	-8.1%	↓
Colorado Springs (El Paso and Teller Counties)	138.0	443.2	101.0	115.5	1,120.7	545.8	282.5	302.3	105.0	233.3	40.4	11.0	889	522
	221.2%	↑	14.3%	↑	-51.3%	↓	7.0%	↑	122.2%	↑	-72.7%	↓	-41.2%	↓
Pueblo (Pueblo County)	0.0	33.2	15.9	23.4	13.3	192.5	48.0	0.0	0.0	0.0	3.9	0.0	12	28
	N/A	↑	47.4%	↑	1347.7%	↑	N/A	↓	N/A	↔	N/A	↓	132.8%	↑
Grand Junction (Mesa County)	15.1	36.3	14.4	32.5	19.8	99.1	12.1	32.7	2.0	41.4	1.7	4.3	90	234
	140.9%	↑	125.6%	↑	400.4%	↑	169.9%	↑	1970.0%	↑	151.8%	↑	160.5%	↑
Balance of State	54.1	262.6	66.0	215.0	105.0	242.8	111.3	103.9	83.1	259.7	13.2	0.0	566	696
	385.5%	↑	225.8%	↑	131.3%	↑	-6.6%	↓	212.6%	↑	N/A	↓	23.1%	↑
Colorado	2,495.3	2,206.9	1,298.9	1,485.8	7,889.3	2,820.0	2,101.2	1,733.0	555.6	1,261.2	471.5	436.0	11,806	7,933
	-11.6%	↓	14.4%	↑	-64.3%	↓	-17.5%	↓	127.0%	↑	-7.5%	↓	-32.8%	↓

*Note: Metro Denver consists of Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, and Park counties.

The intent of this study is to present a forecast of future demand for multifamily and nonresidential construction activity for Colorado and the state's metropolitan areas. The forecast projects demand five years out, meaning estimates calculated in 2022 are for the time period 2022 to 2026.

This study is an update of similar reports completed in 2020 and 2021 that forecasted activity for the 2020 to 2025 period. As economic conditions change and data gets revised, it is important to make business decisions based on the most current available information.

FORECAST METHODOLOGY AND THE ECONOMIC OUTLOOK

The construction forecasts by property type were estimated in one of two ways. First, future space needs for office, healthcare, and industrial were developed based on employment forecasts. Second, future space needs for retail, education, and multifamily were developed based on population forecasts. Data for the forecasts was generally collected and analyzed between January and March 2022. However, it is important to note that economic conditions have changed rapidly during the first four months of 2022.

The status of COVID-19 and its variants continues to influence economic activity across the globe, even though most health restrictions have been lifted. Since navigating the worst of the pandemic, there has been a shift in the main issues influencing the supply and demand for nonresidential and multifamily properties. While the direct effects of the pandemic and the shutdown of the economy were the biggest hurdles of 2020, the main challenges in 2021 and into the beginning of 2022 include worker shortages, supply chain bottlenecks, rising interest rates, and inflation. These concerns have been further exacerbated by the Russia-Ukraine war that began at the end of February 2022. Across the globe, the war has caused sky-rocketing gasoline prices and worsened supply chain constraints and inflation.

Total employment in Colorado declined by 375,000 jobs from January 2020 to April 2020 due to the pandemic, the steepest and swiftest employment decline in the state's history. Thankfully, the recovery of all jobs lost also was relatively quick by historic standards. Colorado added back 102 percent of the lost jobs as of the end of February 2022, a 22-month recovery period. In contrast, it took 38 months for the state to add back the 154,000 jobs lost during the Great Recession. The recovery has varied across the state with the Grand Junction, Colorado Springs, Denver, Pueblo, and Fort Collins metropolitan statistical areas (MSAs) surpassing their pre-pandemic employment levels as of February 2022. The Boulder MSA has nearly recovered, but only 47 percent of the employment lost in the Greeley MSA has returned. While future employment growth varies by industry, this analysis generally assumes that the state will post increases in employment throughout the forecast period. Although economic conditions have become more uncertain with the passing of each month of 2022, Colorado has generally enjoyed diverse employment growth and job opportunities with particular strength in high technology industries.

Inflation, caused by strong business and consumer spending fueled by pandemic relief funds, supply chain disruptions, and rising wages offered to attract and retain workers, is having a broad economic influence. The U.S. consumer price index (CPI) increased an average of 4.7 percent in 2021, the highest annual increase since 1990. Recent over-the-year increases have been even stronger, with inflation averaging 8 percent in 1Q 2022, representing a rate of price increase not seen in the U.S. since the early 1980s. While the increase in the Denver MSA CPI, which is used as the proxy for the state of Colorado, posted a more modest 3.5 percent increase in 2021, price gains have accelerated in the first months of 2022 to meet or beat the U.S. increase. The rapid increase in the prices of construction materials, building supplies, and worker wages is a key concern of the development community.

To combat inflation, the Federal Reserve increased its target federal funds rate by a quarter point to the 0.25 to 0.5 percent range at its March 2022 meeting, its first interest rate hike since December 2018. Most analysts expect that the Fed will approve a larger increase of 0.5 percentage points in the federal funds rate at its May 2022 meeting, with additional interest rate hikes to follow throughout the year. While interest rates are still low by historic standards, borrowing will be more expensive, which will undoubtedly affect developers' abilities to finance new commercial properties.

The availability of construction labor has been a consistent concern for more than 10 years, a problem that was made worse by the pandemic. With staffing shortages now prominent across industries, project timelines are being further affected by staffing shortfalls within the broader architecture and engineering industry as well as increased permitting times in most jurisdictions due staffing shortages. With 127,000 people unemployed and 210,000 open positions throughout Colorado in February 2022, the worker shortage is expected to persist for the foreseeable future.

Colorado's population growth reached a recent peak in 2015, as the state's population increased by nearly 102,000 people, representing a 1.9 percent increase. Population growth has slowed since then, adding just 48,000 people each year in 2020 and 2021. This 0.8 percent growth rate was the slowest growth rate since 1990. Population growth was influenced by the pandemic as death rates increased, birth dates declined, and net migration activity slowed. The Colorado Demography Office expects that population growth will gradually increase over the next few years, reaching a 1.2 percent increase by 2026.

Notably, Colorado is experiencing two major demographic shifts in the state's population. First, in 2012, the largest generational group residing in the state became the millennials (born 1981-1996), surpassing the baby boomers (born 1946-1964). Second, Colorado's share of the population 65 years and older is increasing rapidly. The State Demography Office projects that by 2026, Colorado's population 65 years and older will comprise 17.4 percent of the population, rising from about 905,000 in 2021 to nearly 1.1 million people in 2026. Working and living preferences vary for these two age cohorts, influencing future demand for residential and nonresidential space.

In general, the amount of new construction activity for each property type expected during the next five years is higher than what was forecasted last year as pandemic conditions have improved. Still, a high degree of economic risk and uncertainty remains. While this is a cause for concern for the construction industry, it is important to note that the forecast does not include construction activity related to refurbishing or repurposing existing buildings, which may be significant in the years ahead due to structural changes influenced by COVID. Further, this report does not include infrastructure projects such as water facilities, power generation, roads and bridges, airports, or rail projects.

REPORT ORGANIZATION

The geographic areas (market areas) covered in the forecast are defined by the state's seven metropolitan statistical areas (MSAs). Specifically, the market areas are:

- Colorado (total state)
- Metro Denver, consisting of the Denver MSA (Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson, and Park counties) plus the Boulder MSA (Boulder County)
- Northern Colorado, consisting of the Fort Collins MSA (Larimer County) plus the Greeley MSA (Weld County)
- Colorado Springs MSA (El Paso and Teller counties)
- Pueblo MSA (Pueblo County)
- Grand Junction MSA (Mesa County)
- Balance of State.

The report is organized by property type, as the estimated demand for new development is forecasted for several property types listed below. The forecasted amount of new development for the first three property types was estimated based on employment growth, whereas new development for the last three property types was estimated based on population growth.

- Office
- Healthcare (Hospitals and Medical Office)
- Industrial
- Retail
- Education (P-12 and Higher Education)
- Multifamily

For each property type, the analysis assesses current market conditions, discusses current supply and demand conditions, and forecasts the amount of square footage or number of multifamily units needed based on the most recent data available.

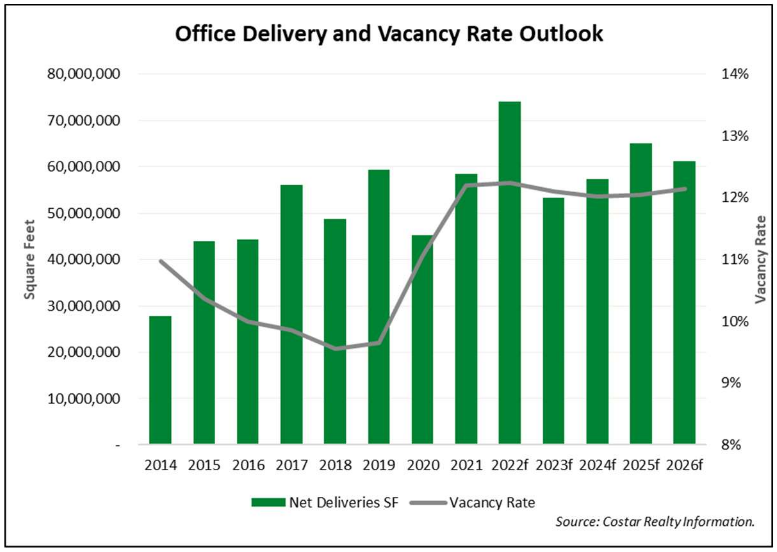
A variety of data for the market areas was used to estimate current conditions and develop the forecast. These sources included data from the Colorado Division of Housing, Colorado State Demography Office, CoStar Realty Information, U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, local governments, various commercial real estate brokerage reports, and other relevant economic, demographic, and real estate data. Development Research Partners made every attempt to collect necessary additional or missing information and believes the information used in this report is from sources deemed reliable but is not guaranteed. Further, not all data points may exist for each of the market areas or property types.

Some numbers in the study may not add exactly due to rounding. In general, numbers reported in the text of the report are rounded to the nearest hundred thousand if over $1 million. Figures that are less than $1 million are rounded to the nearest thousand.

NATIONAL OVERVIEW

U.S. office market recovery continued through the end of 2021, despite headwinds from the emergence of new COVID-19 variants which led many companies to pushed back return-to-office plans until 2022. In general, office employment fared better than total employment during the pandemic and the ongoing recovery period due to the flexibility for many office jobs to be performed remotely. Office employment growth led the rest of the broader economy in the second half of 2021, supporting increased demand for office space. According to the Costar Group, there was about 8.2 billion square feet of office space in the major markets in the U.S. at the end of 2021. The office vacancy rate increased to 12.2 percent at the end of 2021, up from 11.1 percent at the end of 2020 and up from a recent low of 9.6 percent in 2018 and 2019. The vacancy rate plateaued for the last three quarters of 2021, suggesting the vacancy rate may be at or near its peak.

Average rental rates steadily increased during 2021, although at a slowing rate. According to Newmark, asking rents increased 1.8 percent between 2020 and 2021, reaching $30.96 per square foot. Still, net effective rents have been under consistent downward pressure due to generous concession packages in most major markets aimed at attracting and retaining tenants. According to CBRE's *Scoring Tech Talent* report, up-and-coming tech markets including Charlotte, Nashville, and Atlanta are experiencing the fastest rent growth. Despite the potential for decreased office space allocations per employee due to remote work, this trend likely will be offset over time by new job creation above pre-pandemic levels, which has already occurred in the tech industry.



Office leasing activity increased nearly 50 percent between 2020 and 2021 but remained about 10 percent below pre-pandemic averages. After 5 quarters of negative absorption beginning in 2Q 2020, net absorption was positive in the second half of 2021, ending the year with annual net absorption of negative 41.1 million square feet, an improvement from negative 74.8 million square feet in 2020. Net absorption is expected to reach positive 61.1 million in 2022, based on Costar national outlook data.

New office deliveries hit a record high prior to the pandemic, with over 59.4 million square feet delivered in 2019. Although construction slowed during 2020 and 2021, an abundance of new construction remained on the market and contributed to high vacancy rates. At the same time, the large proportion of new construction put an upward pressure on asking rents, given that new office space is typically priced higher than the rest of the market.

Office market recovery is expected to continue into 2022, although the outlook is highly dependent on how COVID-19 and the emergence of new variants affect return to office plans as well as the overall economy. Organizations will continue to return to the office and norms surrounding workplace flexibility and remote work will continue to evolve. Although sublease space availability and the construction pipeline are trending down, both will contribute to higher vacancy in 2022. Rental rates will remain under downward pressure as tenants have increased leverage but will be offset by the abundance of new Class A office buildings that tend to have higher lease rates compared with Class B and Class C.

COLORADO OVERVIEW

Colorado had an office stock of about 248 million square feet in 2021, although about 30.3 million square feet was vacant at the end of the year, a 12.2 percent vacancy rate. The vacancy rate increased in the larger office markets in the state from 2020 to 2021. As about 62 percent of the state's total jobs are located in the Metro Denver region, much of the office space and construction activity is also focused in the region. Metro Denver has about 179 million square feet of (nonmedical) office space. According to CoStar Realty data, Metro Denver's vacancy rate rose 1.9 percentage points over-the-year to 14.5 percent vacancy at the end of 2021. The direct average lease rate rose by $0.57 or 2 percent between the fourth quarters of 2020 and 2021, reaching $29.46 per square foot.

The Colorado Springs region is the second largest office market in the state with about 24.8 million square feet of office space in 2021. The vacancy rate was 9.8 percent at the end of 2021, up 1.4 percentage points from 2020. The Northern Colorado region has about 14.9 million square feet of existing office space and its vacancy rate increased 1 percentage point over-the-year to 6.8 percent.

Across the country, the shift away from primary cities and urban centers to secondary and tertiary markets continued in 2021. While these trends were most pronounced in large coastal locations, it was also evident in Colorado. Vacancy in Pueblo fell 1.8 percentage points to 2.9 percent in 2021, while vacancy in Grand Junction fell 1.9 percentage points to 4.1 percent during the period.

Metro Denver recorded negative absorption of 1.6 million square feet in 2021 after recording negative absorption of nearly 3.9 million square feet in 2020, ending a 17-year expansion in positive net absorption of office space, according to Costar data. According to CBRE's 4Q 2021 Denver office report, negative absorption was driven by continued negative absorption in class B and C properties, which was offset by positive net absorption in Class A properties. This flight-to-quality trend is expected to prevail despite an extremely competitive market as occupiers stay committed to establishing physical locations suited to their company's needs.

Across Colorado, there was more than 2.3 million square feet of office space delivered in 2021, up 63.8 percent from 2020. Office completions in Metro Denver comprised nearly 80 percent of all office construction completed across the state. There was about 1.9 million square feet completed in Metro Denver in 2021, up 41.4 percent from 2020. Notable projects completed included Block 162 at 675 15th Street in Denver totaling 606,142 square feet and the 260,121-square-foot Kiewit Regional Headquarters in Lone Tree. The big surge in office completions was mainly a result of project timing as many projects that began in 2019 or 2020 were completed in 2021.

There was nearly 1.8 million square feet of office space under construction in Colorado at the end of 2021, with 96 percent of the space located in Metro Denver. Of the Metro Denver office space under construction, 60.9 percent was in the City and County of Denver in 2021, down from a share of 63.6 percent in 2020 and 69 percent in 2019, showing an expansion out of urban cores and into surrounding counties and suburban areas in proximity to the downtown business district. There was 1.7 million square feet of space under construction in Metro Denver at the end of the fourth quarter of 2021, a 34.4 percent decrease from the same time last year.

TRENDS IN NEW SPACE NEEDS (DEMAND DRIVERS)

Office tenants continue to re-assess their needs for office space, with an emphasis on sustainability, higher building quality, and the addition of amenities to create a higher quality experience in the office. Demand for office space strengthened throughout 2021, despite headwinds from the emergence of the Delta and Omicron variants which prompted many companies to delay their return to the office plans. The VTS Office Demand Index (VODI), which tracks tenant tours of office properties across the nation, followed closely with trends of COVID cases throughout 2020 and 2021. The VODI increased sharply from January to August 2021, fueled largely by prospective tenants who had been waiting on the sidelines and were prompted back into the market by improving pandemic metrics. Demand fell again at the end of 2021, impacted by concerns surrounding the emergence of the Omicron variant. In December 2021, new employer demand for office space was just 58 percent of normal pre-pandemic demand. Still, employment in office-using industries – including information, financial activities, professional and business services, and government – generally increased.

Throughout the pandemic, sublease availability has had a significant influence on the office market. According to CBRE, overall sublease activity was down 7.7 percent nationally between 2020 and 2021, driven by a decrease in the availability of Class A sublease space. In Metro Denver, sublease space peaked in 2Q 2021 at 3.38 million square feet, up from the most recent low of 1.1 million in 4Q 2019, according to Costar data. Sublease space trended down in the second half of 2021 but remained elevated compared to historical averages. Much of the sublease space that has been taken off the market has gone to occupiers in search of higher quality workspace and amenities with flexible lease terms.

Tech companies continue to be key drivers of office leasing activity, despite the rise of remote and hybrid work models. Tech companies benefit from clustering in areas with high tech concentrations and have generally been expanding in urban core areas including Denver, Boulder, Fort Collins, and Colorado Springs. According to CBRE, Denver ranked as the 12th top tech market, with tech job growth of 31.1 percent and office market rent growth of 9.3 percent between 2015 and 2020. Tech jobs have generally been safe during the pandemic, requiring less in-person business activity and having more flexibility with job location. Further, the increase in total tech employment has offset continued remote and hybrid workplace trends, leading to increasing demand for office space among tech companies.

While physical workplaces are an invaluable asset for increasing productivity, innovation, and creativity, companies will continue to offer and manage hybrid and remote models of work that have become the norm since the onset of the COVID-19 pandemic. According to a February 2022 survey by the Pew Research Center, 60 percent of workers with jobs that can be done from home say they would like to work from home all or most of the time. This is up from 54 percent who said the same in 2020.

Office demand is also influenced by the popularity of coworking and flexible office space models. Workforce behaviors were transformed during the pandemic and companies of all sizes are now reassessing how office space will be utilized in the future. Many occupiers are now looking for flexible office space to help them implement hybrid work arrangements, plan for headcount volatility and vacancy, accommodate new space utilization patterns, offer employees more choice, and enter new talent markets. Further, the demand for flexible office space options in suburban and rural areas is expected to increase. Flexible office space allows companies to remain agile as their space needs evolve and provides employees with work options outside of a company's main location.

Looking ahead, the demand for high quality space combined with a restrained development pipeline will help to stabilize vacancy rates as tenants occupy committed leases and absorption levels improve. Sublease space will gradually decrease from the high point in 2020 and lease rates will continue to increase. Demand for office space will continue to improve as more workers return to the office and occupiers take advantage of favorable market conditions. The shift to hybrid work will prompt more occupiers to redesign their space to enhance collaboration and employee preferences.

INFLUENCES ON THE CONSTRUCTION OF NEW SPACE (SUPPLY)

Through 2021, the construction pipeline across the U.S. declined as new projects were not breaking ground at the pace of deliveries during the pandemic. According to Cushman & Wakefield, the most recent peak in the office construction pipeline was in 1Q 2021, when there was 137.4 million square feet of office product under construction. At the end of 2021, the pipeline fell to 98.9 million square feet across the U.S. Still, the office construction pipeline in 2021 remained 29 percent above the 10-year historical average prior to the pandemic.

Office construction has been stronger in the suburbs in recent decades. According to a 2022 study from RentCafé, 67 percent of all offices constructed in the top 50 U.S. markets in the last 20 years were in the suburbs. In the west region of the U.S. – which encompasses Arizona, Nevada, Colorado, and Idaho – 81 percent of construction was in the suburbs, while 15 percent was urban, and 4 percent in central business districts.

According to Marcus & Millichap, the availability of capital for office transactions was limited in 2020 but the situation improved in the last half of 2021. Nonetheless, capital providers continue to be cautious, carefully considering the strength and experience of the borrower. Further, lenders for new construction are looking for higher levels of pre-leasing, ideally to one tenant.

Challenges for builders of all project types in 2021 included materials and worker shortages, supply chain bottlenecks, and inflation. Moving forward, these challenges are expected to continue to impact development from both a budgetary and timeline perspective. Following a period of loose monetary policy, the Federal Reserve has begun scaling down its quantitative easing programs, with multiple rate hikes anticipated for 2022, which will impact development financing.

Moving forward, CoStar predicts that the U.S. office inventory will rise 0.9 percent in 2022 and 0.6 percent in 2023, returning quickly to annual pre-pandemic growth rates of about 0.6 to 0.8 percent year-over-year. Supply is expected to continue to outweigh demand through 2022. The imbalance of supply and demand through 2022 is likely to continue to apply pressure on vacancies and rents. Office assets that do not feature strong amenities and flexibility, particularly those that are older and lack amenities, may have more difficulty leasing, given the preference of modern tenants and increased competition in oversupplied markets.

CONSTRUCTION FORECAST

The forecast for the additional office square feet that will be needed over the next five years is based on employment growth trends and current supply conditions. The forecast does not differentiate by class of space, size of building, or development amenities. Further, the forecast does not account for replacement of existing space that may become obsolete or damaged.

The base of the office development forecast is expected employment growth in office-using sectors. The office-using sectors are defined according to North American Industry Classification System (NAICS) codes, which is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS is a 2- through 6-digit hierarchical classification system; this analysis is based on 2- and 3-digit codes.

Employment projections from the Colorado Department of Labor and Employment provided the base to estimate potential growth rates for each industry sector and subsector in the analysis. Development Research Partners adjusted these long-term employment forecasts based on any differing expectations regarding potential employment trends. Projected growth rates were applied to the most recent annual data to estimate employment by 2026.

The office-using sectors in this analysis are:

- Mining (Metro Denver only)
- Utilities (Metro Denver only)
- Information
- Finance and Insurance
- Real Estate and Rental and Leasing
- Professional, Scientific, and Technical Services
- Management of Companies and Enterprises
- Administrative and Support Services
- Federal, State, and Local Government (except Education)

About 31 percent of the state's employees work in office space, with the concentrations ranging from about 34 percent of the employees in Metro Denver to 19 percent of the employment base in Grand Junction.

Colorado's office-using employment increased at an average rate of 1.3 percent per year from 2016 to 2021. The consistent increase in employment from 2016 to 2019 was halted by COVID in 2020 but employment grew again in 2021 across most office-using occupations. The office employment growth rate is expected to increase or remain relatively consistent in all market areas over the next five years, with growth averaging 2.1 percent per year across the state. Expected growth rates vary with the Metro Denver and Colorado Springs regions likely to grow at the fastest pace and the Pueblo and Balance of State regions posting slower increases. More than 87 percent of the state's office-using employment is located along the Front Range, with about 68 percent of the state's office employment in the Metro Denver area alone.

Colorado Office-Using Employment Growth Trends

Area	2016	2021	2026	Avg. Annual Employment Growth 2016-2021	2021-2026
Metro Denver	535,309	578,106	649,933	1.6%	2.4%
Northern Colorado	56,096	58,896	63,923	1.0%	1.7%
Colorado Springs	79,697	87,246	97,406	1.8%	2.2%
Pueblo	13,492	12,651	13,232	-1.3%	0.9%
Grand Junction	11,959	11,223	11,916	-1.3%	1.2%
Balance of State	95,311	97,545	102,315	0.5%	1.0%
Colorado	791,864	845,667	938,725	1.3%	2.1%

Source: DRP analysis of Colorado Department of Labor and Employment, Labor Market Information, Quarterly Census of Employment and Wages.

The next step in the forecast is to estimate the baseline conditions for the office stock, including the total square feet and the current vacancy rates. The forecast depends on an estimated "stable" vacancy rate, defined to be the rate that represents the tipping point for new construction, which generally falls in the 5 to 10 percent range. Specifically, new construction activity is more limited when vacancy rates are higher than the stable vacancy rate and more robust when vacancy rates are lower. The stable vacancy rate varies according to the size of the market, the amount of business churn, and the level of risk tolerance. As such, the stable vacancy rate is 8 percent in Metro Denver and Colorado Springs versus the 4 to 5 percent range in other areas of the state. Seventy-two percent of the state's 247.7 million square feet of office space is located in Metro Denver.

Colorado Office Square Feet Baseline Conditions, 2021

Area	Total Office Square Feet	Vacant Office Square Feet	Current Vacancy Rate	Stable Vacancy Rate	% of Employees Working in Office Space
Metro Denver	178,725,639	25,976,103	14.5%	8.0%	33.9%
Northern Colorado	14,865,348	1,005,185	6.8%	5.0%	21.6%
Colorado Springs	24,778,899	2,430,154	9.8%	8.0%	29.3%
Pueblo	3,090,211	88,163	2.9%	4.0%	21.5%
Grand Junction	2,742,495	112,021	4.1%	5.0%	19.1%
Balance of State	23,530,092	671,308	2.9%	4.0%	30.1%
Colorado	247,732,684	30,282,934	12.2%	7.3%	31.1%

Source: DRP analysis of Colorado Department of Labor and Employment, Labor Market Information, Quarterly Census of Employment and Wages and CoStar Realty Information data.

The adjusted office employment[1] was multiplied by 230 square feet per office employee to estimate the amount of office space demanded in 2021 and 2026. The difference between these two values represents the amount of new office space that will be needed. This value is adjusted by the amount of space currently under construction and the current over-supply or under-supply of office space in the area based on the difference between the current vacancy rate and the stable vacancy rate. The Metro Denver, Northern Colorado, and Colorado Springs

[1] The estimated employment in the office-using sectors will generally not match the actual office-using employment in the area as some companies may utilize different types of nonresidential space depending upon cost and availability, some employment in the office-using sectors may not be office-using in that area, and some employees located in office space in an area may not be counted in the office-using sectors. An adjustment factor for employment in each area was imputed to balance the estimated occupied square feet with actual occupied square feet.

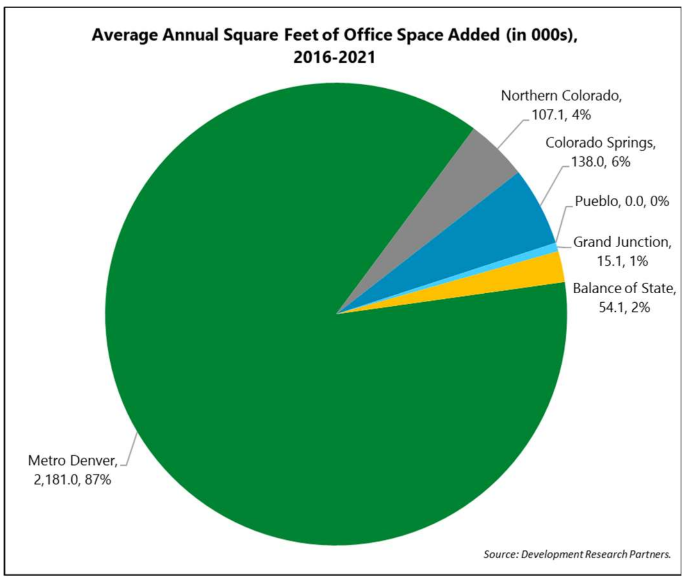
market areas are currently in an over-supply position as vacancy rates increased rapidly over the past two years. Pueblo and Grand Junction are in an undersupply position.

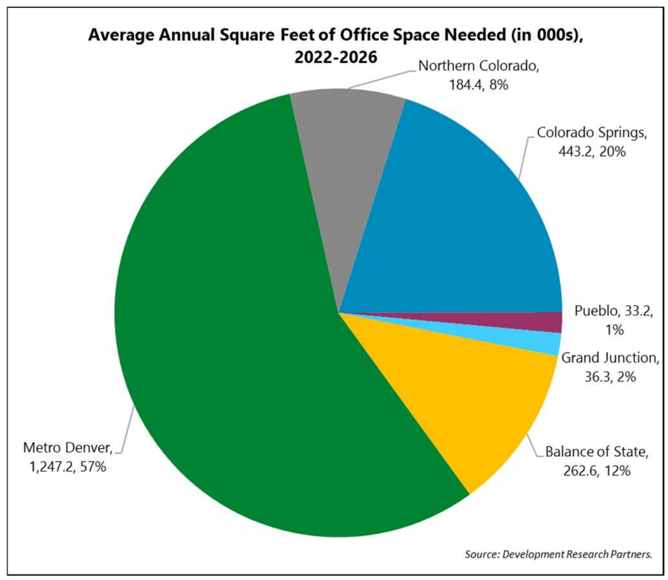
Forecast of Office Square Feet Needed (in 000s)

Area	2021 Office Demand (Column 1)	2026 Office Demand (Column 2)	Current Construction Activity (Column 3)	Over/(Under) Supply Current Vacancy Rate (Column 4)	Add'l SF Needed, 2022-2026 (# 2-1-3-4)	Avg Ann SF Added, 2016-2021	Avg Ann SF Needed, 2022-2026
Metro Denver	157,743.1	177,341.8	1,684.5	11,678.1	6,236.1	2,181.0	1,247.2
Northern Colorado	14,153.5	15,361.6	24.4	261.9	921.8	107.1	184.4
Colorado Springs	22,875.4	25,539.4	0.0	447.8	2,216.2	138.0	443.2
Pueblo	2,847.4	2,978.2	0.0	(35.4)	166.2	0.0	33.2
Grand Junction	2,532.6	2,688.9	0.0	(25.1)	181.4	15.1	36.3
Balance of State	22,435.4	23,532.5	54.1	(269.9)	1,312.9	54.1	262.6
Colorado	222,587.4	247,442.4	1,763.0	12,057.4	11,034.6	2,495.3	2,206.9

Source: Development Research Partners analysis.

Based on current conditions and employment trends, office construction activity is expected to slow slightly over the next five years. Accounting for the estimated over-supply and current construction activity, there will be an additional 11 million square feet of office space demanded in the state by 2026, or an average of 2.2 million square feet each year. The average annual demand for the next five years is 11.6 percent lower than the average amount of space added to the market from 2016 to 2021.

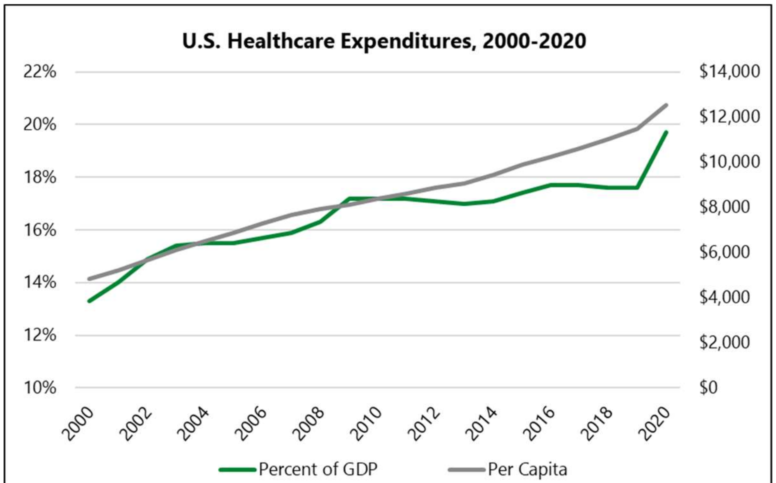




The need for new office space will be lower during the next five years compared with the previous five years in Metro Denver. The decrease in new space needed in Metro Denver is the reason for the decline in forecasted office construction. In contrast, the amount of new office space needed will increase in all other parts of the state.

NATIONAL OVERVIEW

The national healthcare market has been characterized by aggressive merger and acquisition activity and a push for off-campus urgent care, outpatient surgery centers, locally based medical office facilities in suburban neighborhoods, and sites further away from city centers. Despite the pandemic affecting most commercial properties in some shape or form, healthcare real estate has remained one of the most resilient assets with one of the best outlooks moving forward. Vacancy rates remained relatively stable through both the Great Recession and the COVID Recession, investment in medical office buildings remained strong, and healthcare expenditures continued to increase.



Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics.

The healthcare real estate market has been bolstered by healthcare expenditures that rose nearly 10 percent between 2019 and 2020, a much faster rate than the 4.3 percent in 2019. The acceleration in national health spending was primarily due to a 36 percent increase in federal expenditures for health care that occurred largely in response to the COVID-19 pandemic. Current projections place annual growth at an average of 5.4 percent through 2028, reaching $6.2 trillion in spending by 2028. Expenditures are expected to grow 1.1 percentage points faster than forecasted GDP growth, meaning the health share of the economy is expected to rise from 17.7 percent of GDP in 2018 to 19.7 percent in 2028. However, projections indicate that the insured share of the population will fall from 90.6 percent in 2019 to 89.4 percent in 2028. Medicaid spending growth is projected to increase at an average annual rate of 5.7 percent over 2021 to 2023, up from 4.5 percent in 2020, while private health insurance spending growth is expected to slow from 5 percent in 2020 to 4.6 percent in 2021-2023. As states continue to expand eligibility for Medicaid, prices continue to increase in part due to rapid growth in health sector wages and higher utilization of health care services.

National average rents for medical office space rose by an estimated 1.6 percent between 2020 and 2021, according to Marcus & Millichap. Medical office sales activity strengthened from October 2020 through March 2021, representing the strongest six-month stretch for deal flow in more than 20 years. In the year ending in March 2021, medical office closings accounted for nearly 30 percent of all U.S. office sales, after comprising 21 percent of all office trades from 2015 to 2019. In March 2021, vacancy rose to 9.6 percent over-the-year, the highest rate since 2015. This jump mainly occurred during the second half of 2020 as leasing velocity improved in 2021.

Looking ahead, construction is expected to rise through 2022. Demographic trends and an anticipated boost in health services are positioned to foster long-term tenant demand. Full-scale reopening of the economy will continue to fuel employment growth, which will raise the number of commercially insured households and boost health spending. This will fuel health-related hiring and supplement demand for medical office space.

COLORADO OVERVIEW

There is an estimated 72.5 million square feet of medical office and other healthcare space throughout Colorado, including hospitals and skilled-nursing facilities. An estimated 61 percent of healthcare space is in Metro Denver, representing the largest market area with over 44.3 million square feet. Colorado Springs was the second largest area with 9.3 million square feet, followed by Northern Colorado with 7.9 million square feet.

Demand for healthcare space – including medical office, hospitals, and skilled nursing facilities – remained strong over the past five years and vacancy rates across Colorado remained low. In Metro Denver, the vacancy rate increased only slightly from 4.7 percent in the fourth quarter of 2016 to 4.8 percent in 2021. The Colorado Springs market has recorded steady improvements with the rate falling from 6.5 percent vacancy to 5.2 percent over the same time. In Northern Colorado, healthcare vacancy decreased from 2.2 percent to 1.8 percent during the period. Current vacancy rates are much lower in many areas of the state, with levels falling as low as 0.1 percent in Pueblo. Grand Junction reported the only notable increase among the Colorado regions, rising from 2.3 percent in the fourth quarter of 2016 to 3.3 percent in 2021.

The expansion of healthcare space has varied over the past few years but averaged about 1.3 million square feet each year from 2016 to 2021. There was an estimated 919,000 square feet of space under construction at the end of 2021, of which 32.8 percent was in Metro Denver. There was 262,000 square feet of healthcare space under construction in Colorado Springs, boosted by new medical facilities under construction for Penrose St. Francis and UCHealth. The Community Hospital in Grand Junction broke ground on a 130,000-square-foot oncology center in September 2021 and has an expected completion date in 2023. The 60,000-square-foot Parkview Ortho Hospital and the 64,000-square-foot Pueblo Community Health Center are under construction in Pueblo, with opening dates expected in early 2022. In Northern Colorado, there is about 101,500 square feet of medical office space under construction.

TRENDS IN NEW SPACE NEEDS (DEMAND DRIVERS)

The pandemic has fundamentally changed the view of healthcare preparedness and highlighted the need for space changes in healthcare real estate moving forward. New solutions have become necessary to mitigate risk, including more flexible and multifunctional spaces that can quickly be scaled up or down based on capacity levels. Common areas throughout facilities will be designed to allow more ample space between patients in waiting rooms, entrances, and queuing spaces. Stronger consideration for the health and safety of patients and workers means more physical space and better airflow as well as more meaningful respite space geared toward caregivers.

While employment in healthcare services increased at a steady pace in the years leading up 2020, the onset of the pandemic and the suspension of nearly all non-life-threatening procedures lead to a sharp decline in healthcare spending and healthcare employment across the nation. As the U.S. economy reopened and began its recovery, healthcare employment returned to nearly pre-pandemic levels by the end of 2021. That employment recovery was affected by the large number of workers quitting their jobs in the second half of 2021 – often referred to as the "great resignation" – which was significant among healthcare workers. Despite challenges to employment, medical offices generally performed well, and healthcare occupancy held steady as demand for clinical medical office space recovered.

The pace of healthcare employment growth is expected to increase through 2026. In Colorado, healthcare employment averaged 2.2 percent growth annually from 2016 to 2021, a rate that was brought down by the decline in employment in 2020. The employment growth rate is expected to increase to 2.3 percent annually from 2021 to 2026. Even with healthcare employment levels returning to historic trends, there may be stronger consideration for the experience of caregivers and facility staff to help healthcare worker attraction and retention efforts. This may include more space per employee and better airflow to help keep workers and patients safe as well as more meaningful respite space geared toward caregivers.

Hospitals and health systems nationwide ended 2021 in a stronger position compared to the lows seen in 2020. However, levels of operating margins and volumes remained below pre-pandemic levels, while elevated revenues were offset by increased expenses, according to KaufmanHall. Hospital revenue (not including CARES) increased 14.7 percent annually between 2020 and 2021. Further, revenue was up 12.1 percent compared with 2019's pre-pandemic levels. Both inpatient and outpatient revenues were up at least 10 percent compared with 2020 and 2019. Still, rising revenues were offset by escalating expenses, exacerbated by widespread labor shortages, inflation, and supply chain challenges.

An aging Baby boomer population will continue to drive the rising demand for a wide range of medical services. According to Marcus & Millichap, the 65+ community accounts for 36 percent of all health spending because they tend to have more routine appointments, preventative screenings, and in-patient procedures than younger age groups. In 2021, 15.5 percent of Colorado's population was in the 65+ age group, up from only 11 percent in 2010. By 2030, that proportion is expected to increase to over 18 percent. The unevenly dispersed population will augment overall medical expenditures and demand for health services moving forward.

INFLUENCES ON THE CONSTRUCTION OF NEW SPACE (SUPPLY)

A downside risk to the healthcare forecast is higher development costs due to rising material costs, higher labor costs resulting from a lack of workers, and the lack of available land and/or rising land prices.

According to Marcus & Millichap, nearly 9.4 million square feet of medical space was delivered across the U.S. in 2020. A high percentage of this space was pre-leased, a trend that is expected to continue. As of the 2nd quarter of 2021, 70 percent of the 14 million square feet underway was already accounted for. However, medical office buildings continued to receive strong investor and developer interest. Strong fundamentals prior to the pandemic and the relative resiliency of medical office during the pandemic have attracted a broad range of investors to the sector. Recent heightened sales velocity suggests some capital typically allocated for other property types may be funneled into medical offices instead.

The shift in patient services away from hospitals and campuses will continue to increase the representation of healthcare services in shopping centers and traditional office buildings whose properties feature space with the proper infrastructure to service medical-related tenants. Common healthcare services that are popular in this setting include urgent care, medical spas, veterinary services, and imaging services. The growing popularity of alternative medicine like acupuncture, homeopathy, and naturopathy is also popular in more traditionally retail settings. Over the coming decade, more shopping centers across the nation are expected to see healthcare service occupiers. While telehealth has been important during the pandemic when a lot of these auxiliary services were not available in-person, analysts say the rise of telehealth has not supplanted onsite care, but rather supplemented it. While patients will certainly continue to use telehealth in their treatment when applicable, in-person visits will remain a crucial part of healthcare, resulting in a minimal threat to healthcare development moving forward. Rather, increased connectivity between patients and physicians could stimulate more in-person visits. Further, hospitals may require more dedicated spaces where providers can physically and acoustically isolate from the busy hospital environment to focus on telehealth.

CONSTRUCTION FORECAST

The forecast for the additional healthcare square feet that will be needed over the next five years is based on employment growth trends and current supply conditions. The forecast does not differentiate by class of space, size of building, or development amenities. Further, the forecast does not account for replacement of existing space that may become obsolete or damaged.

The base of the healthcare development forecast is expected employment growth in healthcare-using sectors. The healthcare-using sectors are defined according to North American Industry Classification System (NAICS) codes, which is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS is a 2- through 6-digit hierarchical classification system; this analysis is based on 2- and 3-digit codes.

Employment projections from the Colorado Department of Labor and Employment provided the base to estimate potential growth rates for each industry sector and subsector in the analysis. Development Research Partners adjusted these long-term employment forecasts based on any differing expectations regarding potential employment trends. Projected growth rates were applied to the most recent annual data to estimate employment by 2026.

The healthcare-using sectors in this analysis are:

- Ambulatory healthcare services (including offices of physicians, dentists, and other healthcare professionals)
- Hospitals

About 9 percent of the state's employees work in the healthcare sector, with the concentrations ranging from 16.3 percent of employees in Pueblo to 7.2 percent in the Balance of State.

Colorado Healthcare-Using Employment Growth Trends

Area	2016	2021	2026	Avg. Annual Employment Growth 2016-2021	2021-2026
Metro Denver	136,468	147,586	164,805	1.6%	2.2%
Northern Colorado	22,394	27,720	31,672	4.4%	2.7%
Colorado Springs	28,111	34,409	38,043	4.1%	2.0%
Pueblo	9,893	9,692	10,529	-0.4%	1.7%
Grand Junction	7,015	8,689	10,270	4.4%	3.4%
Balance of State	22,280	24,044	27,323	1.5%	2.6%
Colorado	226,161	252,140	282,642	2.2%	2.3%

Source: Colorado Department of Labor and Employment, Labor Market Information.

Healthcare employment increased over the past five years in Colorado, with ambulatory healthcare services increasing about 3 percent each year from 2016 to 2021 and hospital employment growing about 1.1 percent each year. Total healthcare employment in the state is expected to increase from the 2.2 percent annual rate posted from 2016 to 2021 to 2.3 percent from 2021 to 2026. Further, the state is expected to regain its pre-pandemic employment growth rate of 2.8 percent per year by 2024. About 87 percent of the state's healthcare-using employment is located along the Front Range, with nearly 59 percent in the Metro Denver area alone. Expected growth rates vary across the state with Grand Junction likely to grow at the fastest pace and the Pueblo MSA posting the slowest annual increase of 1.7 percent. Employment in the Balance of State is expected to increase 2.6 percent per year although this forecast may be aggressive as attracting healthcare workers to the rural parts of the state tends to be challenging.

Colorado Healthcare Square Feet Baseline Conditions, 2021

Area	Total Healthcare Square Feet	Vacant Healthcare Square Feet	Current Vacancy Rate	Stable Vacancy Rate	% of Employees Working in Healthcare
Metro Denver	44,325,933	2,116,516	4.8%	4.0%	8.6%
Northern Colorado	7,857,018	145,074	1.8%	2.0%	9.2%
Colorado Springs	9,259,092	485,064	5.2%	4.0%	11.0%
Pueblo	2,342,504	1,522	0.1%	2.0%	16.3%
Grand Junction	1,671,507	54,444	3.3%	3.0%	12.6%
Balance of State	7,070,670	57,591	1.7%	2.0%	7.2%
Colorado	72,526,724	2,860,211	3.9%	3.5%	9.0%

Source: DRP analysis of Colorado Department of Labor and Employment, Labor Market Information, Quarterly Census of Employment and Wages and CoStar Realty Information data.

The next step in the forecast is to estimate the baseline conditions for the healthcare market, including total square feet and current vacancy rates. The forecast depends on an estimated "stable" vacancy rate, defined to be the rate that represents the tipping point for new construction, which generally falls in the 2 to 4 percent range for healthcare space. Specifically, new construction activity is more limited when vacancy rates are higher than the stable vacancy rate and more robust when vacancy rates are lower. The stable vacancy rate varies according to the size of the market, the amount of business churn, and the level of risk tolerance. As such, the stable vacancy rate is estimated to be 2 percent in Northern Colorado, Pueblo, and the Balance of the State, 3 percent in Grand Junction, and 4 percent in Metro Denver and Colorado Springs.

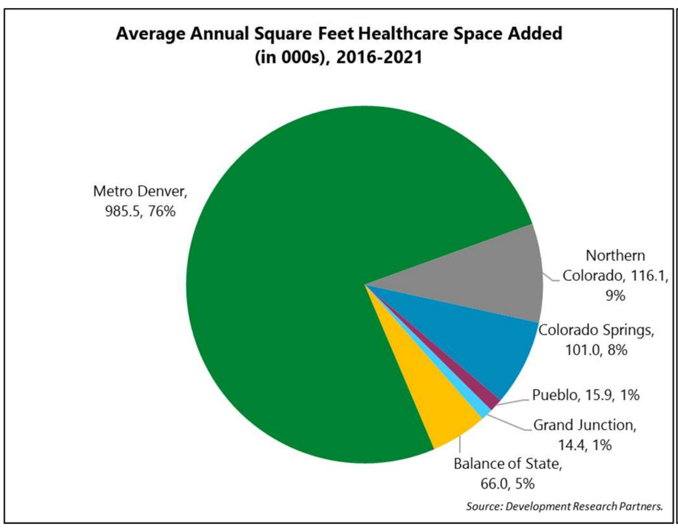
Projected healthcare employment was multiplied by the estimated square feet per healthcare employee in each market area to estimate the amount of healthcare space demanded in 2021 and 2026. Generally, the analysis assumes about 360 square feet per hospital employee and 240 square feet of space per medical office employee. The difference between the existing square footage and the amount of space estimated to be needed in 2026 represents the amount of new healthcare space that will need to be constructed. This value is adjusted by the amount of space currently under construction and the current over-supply or under-supply of space in the area based on the difference between the current vacancy rate and the stable vacancy rate.

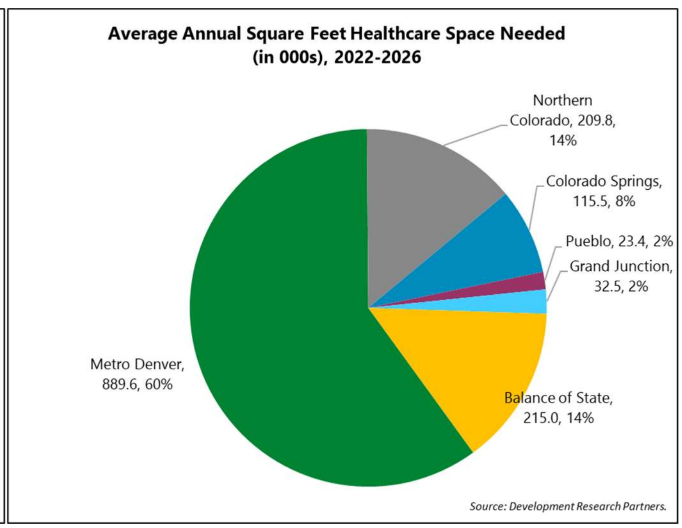
Forecast of Healthcare Square Feet Needed (in 000s)

Area	2021 Healthcare Demand (Column 1)	2026 Healthcare Demand (Column 2)	Current Construction Activity (Column 3)	Over/(Under) Supply Current Vacancy Rate (Column 4)	Add'l SF Needed, 2022-2026 (# 2-1-3-4)	Avg Ann SF Added, 2016-2021	Avg Ann SF Needed, 2022-2026
Metro Denver	43,654.4	48,747.6	301.5	343.5	4,448.2	985.5	889.6
Northern Colorado	7,983.5	9,121.7	101.5	(12.1)	1,048.8	116.1	209.8
Colorado Springs	9,035.6	9,989.7	262.0	114.7	577.4	101.0	115.5
Pueblo	2,269.0	2,464.9	124.0	(45.3)	117.2	15.9	23.4
Grand Junction	1,630.8	1,927.5	130.0	4.3	162.4	14.4	32.5
Balance of State	7,267.4	8,258.6	0.0	(83.8)	1,075.0	66.0	215.0
Colorado	71,840.7	80,510.0	919.0	321.3	7,429.0	1,298.9	1,485.8

Source: Development Research Partners analysis.

Based on current conditions and employment trends, construction activity is expected to increase in the healthcare market over the next five years. Accounting for the estimated over-supply and current construction activity, there will be an additional 7.4 million square feet of healthcare space demanded in the state by 2026, or an average of about 1.5 million square feet each year. The average annual demand for the next five years is 14.4 percent higher than the average amount of space added to the market from 2016 to 2021. The pace of activity is expected to slow in Metro Denver but increase throughout the other regions of the state.





NATIONAL OVERVIEW

The U.S. industrial market achieved record-high asking rents amid extremely tight space conditions in 2021. The combination of shifting tenant demand due to the pandemic and the reopening of the economy as vaccines became widely available led to a year that broke records across multiple indicators.

According to CBRE, net absorption totaled 432.5 million square feet, up 81.4 percent from 2020 and the highest volume since CBRE began tracking the market in 1989. CBRE noted that demand for industrial buildings of all sizes surpassed 2020 totals, including mega-distribution facilities of 1 million square feet or more. Further, the top 100 leasing transactions totaled 105.3 million square feet in 2021, slightly above 2020's total and the largest amount since CBRE began tracking this metric in 2017. General retail and wholesale companies leased the largest share of large warehouses, followed by e-commerce-only occupiers, and food and beverage users. According to CBRE, the trend of broad industrial demand by a variety of industries is expected to continue in 2022 as strong retail sales and the need to hold more inventory close to consumer markets is expected to increase the average transaction size.

A 5-story, 4 million-square-foot distribution center is under construction in Ontario, California. When completed, it will be the largest logistics building in the U.S. This giant warehouse development highlights a coast-to-coast surge of industrial demand driven by the shift in retailing toward online retail. Another similar five-story fulfillment center with 3.7 million square feet opened in 2021 in Colorado Springs and is being occupied by retail giant Amazon.

Industrial construction deliveries increased steadily each quarter in 2021 as the economy rebounded from pandemic lows. Despite quarter-over-quarter growth, 4Q 2021 industrial deliveries were down 10.3 percent year-over year. Demand outpaced supply, contributing to the record-low vacancy rate of 3.2 percent at year's end. At the same time, asking rent increased 11 percent over the year, the highest growth rate in recent history. Increases in tenant demand as well as the cost of tenant improvements and construction drove the rise in rental rates.

Materials shortages and rising costs of construction created additional building challenges; however, developers appear willing to assume higher construction costs as under-construction activity hit a record 513.9 million square feet at the end of 2021, according to CBRE. Further, the large volume of projects under construction at the end of 2021 is a leading indicator of a continued uptick in future completions. Despite the record high under-construction activity, strong demand for new quality space is expected to keep availability low in 2022.

The economic recovery and the accelerated buildout of e-commerce and third-party logistics last-mile facilities, fulfillment centers, and bulk warehouses will reinforce continued demand for industrial real estate, according to Cushman & Wakefield. Although the COVID-19 pandemic brought on new challenges for the industrial market, with port congestion, materials shortages, and rapid increase in commodity pricing, the market will continue to excel. Cushman & Wakefield forecast that new supply of industrial space will revert to outpacing demand slightly over the next two years. While vacancy is expected to remain low, average net asking rents will continue to increase, reaching a new high by the end of 2023.

COLORADO OVERVIEW

Demand for industrial space gained momentum throughout the pandemic and boosted industrial real estate to become the top-performing commercial property type. Forecasts for 2022 show no sign that this demand will slow. According to Newmark, tenants, developers, and investors remain bullish on the future and the continuing demand for all kinds of industrial space.

There is approximately 430 million square feet of industrial space in Colorado. Colorado's industrial market is largely concentrated along the Front Range in Metro Denver, Northern Colorado, and Colorado Springs, with the three markets representing 90 percent of the state's space.

The 289 million-square-foot industrial market in Metro Denver posted another strong year for completions in 2021, adding 6.5 million square feet and setting a record high for absorption activity. New deliveries and organic growth led annual absorption to 6.9 million square feet, outstripping the previous record set in 2014, based on Costar data. New deliveries are a driving source of the market's expansion and about half of the absorption in Denver's industrial market that delivered over the course of 2021 came from build-to-suit projects, according to Newmark.

While Metro Denver's industrial market is faring better than many other markets across the nation, the vacancy rate remains above the U.S. rate of 3.2 percent. The vacancy rate in Metro Denver dropped 0.4 percentage points to 5.7 percent between 2020 and 2021, due in large part to the abundance of speculative space delivered in 2021. Average rent continued to grow as demand for high quality industrial space remained persistent and the cost of construction climbed. The average lease rate rose 8 percent between the fourth quarters of 2020 and 2021, reaching $10.68 per square foot.

Construction in Metro Denver reached record levels in 2021 as 11.5 million square feet of industrial space was under construction at the end of 2021. About 10.5 million square feet of that space is set to come online in 2022. Despite a record amount of square feet under construction, strong demand for first-generation space is expected to keep availability low in 2022. According to Newmark, over 90 percent of the total square footage under construction is speculative, but there are several large built-to-suit projects planned.

Deliveries in Northern Colorado's industrial market slowed from 2020 to 2021, adding about 777,000 square feet of industrial space in 2021, down 27.2 percent from nearly 1.1 million square feet in 2020. However, industrial projects under construction totaled 1.5 million square feet as of the end of 2021, up from 877,000 in 2020 and 488,000 in 2019.

More than 4.7 million square feet of new space was added in Colorado Springs in 2021, a significant increase from the 5-year average of 184,000 between 2016 and 2020. The uncharacteristic increase in industrial space in was driven by the completion of a 3.7 million-square-foot Amazon facility in Colorado Springs in 2021.

TRENDS IN NEW SPACE NEEDS (DEMAND DRIVERS)

Demand for industrial space gained momentum throughout the pandemic, leading to a record year in 2021 for the U.S. industrial market. According to JLL, logistics real estate made up nearly 25 percent of all commercial real estate investment globally in 2021. Supply chain disruptions prompted tenants to make long-term plans for expanding warehouse space to allow for increased inventory. Rising transportation costs and uncertainty surrounding future supply chain disruptions led to companies needing increased space to house more onshore inventory.

At the same time, consumer behavior shifted towards more e-commerce shopping, as well as an overall increase in the volume of goods purchased. Given that online shopping is set to keep growing, so too will demand for logistics space. Based on JLL's 2021 survey of 720 logistics experts, 75 percent of respondents said demand for logistics space will increase by at least five percent in the next three years while 28 percent expect growth in demand of more than 20 percent. Logistics companies continue to seek creative options for new facilities in less urbanized areas, as there is the need for last-mile delivery facilities closer to the customer base.

Retail giant Amazon doubled in size between 2020 and 2021, but the company expects its industrial growth will moderate in the near future. At the end of 2021, Amazon's logistics network included 347.6 million square feet of active space in the U.S. and had 125.6 million more in the pipeline, according MWPVL International. By contrast, its nearest rival, Walmart, had 146.3 million square feet of active space in the U.S. and 14 million square feet of new logistics space on the way. Executives at Amazon say that spending on internet infrastructure and transportation will continue at a high level, but the warehouse building boom will not. This slowdown in warehousing expansion will be felt by the industrial real estate industry.

Employment recovery has varied across manufacturers and other businesses occupying industrial space. While wholesale trade and warehousing and storage are at or above pre-pandemic employment levels, manufacturing and repair and maintenance occupations are expected to take a few more years to fully recover. Notably, Colorado manufacturing bucked this trend as the state experienced a healthy increase in manufacturing employment in 2021, especially in aerospace, bioscience, and food and beverage production. Therefore, the health of Colorado's industrial market was driven by both logistics demand and manufacturing growth.

The continued steady delivery of new product, along with current available space, will be necessary to keep up with industrial demand. New state-of-the-art industrial buildings will be in high demand, while older Class B and C buildings will see higher vacancy rates. Given the large amount of industrial space under construction along the Front Range, industrial redevelopment opportunities are expected to increase over the next few years.

Rental rates for new deliveries will continue to rise due to the increasing cost of construction and tenant improvement. Large national tenants, who have unique requirements and can pay the increasing rental rates of new product, continue to be active in the market and will keep demand for warehouse space high.

Unlike other industrial space, flex space occupiers are following trends more similar to office occupiers and will continue to reevaluate their future space needs as they explore ways to cut costs and integrate employee demand for workplace flexibility.

INFLUENCES ON THE CONSTRUCTION OF NEW SPACE (SUPPLY)

Despite high levels of industrial construction activity, supply chain disruptions, increasing costs of construction and tenant improvement, and labor shortages have created challenges for developers. It is now more expensive than ever to source, build, and rent warehouse space. Further, volatility in commodity pricing has made it difficult to predict construction costs. Continued supply chain disruptions as well as shortages in labor availability mean it is taking longer for industrial projects to be completed and some projects are being paused or even canceled. Despite the large amount of industrial space currently under construction, delays and cancelations could lead to construction projects falling behind schedule and shortages of industrial space emerging.

Developers may look to alternative strategies – such as office-to-industrial conversions – to avoid the high costs of new construction. With many office buildings facing high vacancy, older suburban office buildings may make good candidates for industrial conversions. A report by Newmark found that since 2018 at least 45 office properties totaling 11.3 million square feet across the U.S. have been redeveloped – or are in the process of being redeveloped – into an industrial use.

In general, the supply of industrial space is expected to remain strong and pandemic-related issues will continue to subside through 2023. Future risks include inflation, supply chain shortages, and labor shortages.

CONSTRUCTION FORECAST

The forecast for the additional industrial square feet that will be needed over the next five years is based on employment growth trends and current supply conditions. The forecast does not differentiate by class of space, size of building, or development amenities. Further, the forecast does not account for replacement of existing space that may become obsolete or damaged.

The base of the industrial development forecast is expected employment growth in industrial-using sectors. The industrial-using sectors are defined according to North American Industry Classification System (NAICS) codes, which is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS is a 2- through 6-digit hierarchical classification system; this analysis is based on 2- and 3-digit codes.

Employment projections from the Colorado Department of Labor and Employment provided the base to estimate potential growth rates for each industry sector and subsector in the analysis. Development Research Partners adjusted these long-term employment forecasts based on any differing expectations regarding potential employment trends. Projected growth rates were applied to the most recent annual data to estimate employment by 2026.

The industrial-using sectors in this analysis are:

- Manufacturing
- Wholesale Trade
- Warehousing and Storage
- Repair and Maintenance

About 11 percent of the state's employees work in industrial space, with the concentrations ranging from 15.1 percent of the employees in Northern Colorado to about 7.5 percent of the employment base in Colorado Springs.

Colorado's industrial-using employment increased an average of 1.7 percent per year from 2016 to 2021. This pace is expected to slow over the next five years, with growth averaging 1.5 percent per year from 2021 to 2026. The rate of growth will slow slightly in Pueblo, Metro Denver, and Northern Colorado, while the growth rate will increase in the Balance of State, Colorado Springs, and Grand Junction.

Between 2021 and 2026, the rate of growth is expected to vary across regions, with the fastest growth expected in Colorado Springs at 1.8 percent average annual employment growth and the slowest growth in Grand Junction and the Balance of State at 1.4 percent. More than 90 percent of the state's industrial-using employment is located along the Front Range, with 67 percent in the Metro Denver area alone.

Warehousing and storage employment is expected to be the fastest growing source of industrial employees through 2026. However, growth in this sector will be concentrated in Metro Denver where 66 percent of the employment growth is expected to occur.

Colorado Industrial-Using Employment Growth Trends

Area	2016	2021	2026	Avg. Annual Employment Growth 2016-2021	2021-2026
Metro Denver	183,576	204,230	220,106	2.2%	1.5%
Northern Colorado	38,038	41,428	44,655	1.7%	1.5%
Colorado Springs	20,734	21,778	23,769	1.0%	1.8%
Pueblo	6,393	7,268	7,828	2.6%	1.5%
Grand Junction	5,900	6,177	6,631	0.9%	1.4%
Balance of State	25,097	23,021	24,736	-1.7%	1.4%
Colorado	279,738	303,902	327,725	1.7%	1.5%

Source: DRP analysis of Colorado Department of Labor and Employment, Labor Market Information, Quarterly Census of Employment and Wages.

In Northern Colorado, employment has been clustered in manufacturing and wholesale trade businesses that comprise an estimated 90 percent of the industrial-using employment base. The trend is similar in other parts of the state. However, the rise of warehousing and storage throughout the state due to rising demand for e-commerce has made that industry report the highest projected annual growth. Throughout the state, employment in warehousing and storage is projected to rise at an average annual rate of 7.2 percent through 2026, compared with 1.8 percent growth in repair and maintenance, 1.7 percent growth in wholesale trade, and 0.7 percent growth in manufacturing.

The next step in the forecast is to estimate the baseline conditions for the industrial stock, including the total square feet and the current vacancy rates. The forecast depends on an estimated "stable" vacancy rate, defined to be the rate that represents the tipping point for new construction, which generally falls in the 2 to 5 percent range for industrial space. Specifically, new construction activity is more limited when vacancy rates are higher than the stable vacancy rate and more robust when vacancy rates are lower. The stable vacancy rate varies according to the size of the market, the amount of business churn, and the level of risk tolerance. As such, the stable vacancy rate ranges from 2 percent in Pueblo and Northern Colorado to 5 percent in Colorado Springs and Metro Denver.

Colorado Industrial Square Feet Baseline Conditions, 2021

Area	Total Industrial Square Feet	Vacant Industrial Square Feet	Current Vacancy Rate	Stable Vacancy Rate	% of Employees Working in Industrial
Metro Denver	288,766,173	16,551,254	5.7%	5.0%	11.7%
Northern Colorado	51,554,661	2,267,088	4.4%	2.0%	15.1%
Colorado Springs	41,365,984	2,544,533	6.2%	5.0%	7.5%
Pueblo	13,618,385	332,930	2.4%	2.0%	11.3%
Grand Junction	8,741,594	450,831	5.2%	4.0%	10.1%
Balance of State	26,355,864	1,054,187	4.0%	2.5%	7.7%
Colorado	430,402,661	23,200,823	5.4%	4.4%	11.1%

Source: DRP analysis of Colorado Department of Labor and Employment, Labor Market Information, Quarterly Census of Employment and Wages and CoStar Realty Information data.

The adjusted industrial employment[2] was multiplied by the estimated square feet per industrial employee in each market area, which ranged from 1,000 square feet per industrial worker in Northern Colorado and the Balance of State to 2,000 square feet per industrial worker in Pueblo, to estimate the amount of industrial space demanded in 2021 and 2026. The difference between these two values represents the amount of new industrial space that will

Forecast of Industrial Square Feet Needed (in 000s)

Area	2021 Industrial Demand (Column 1)	2026 Industrial Demand (Column 2)	Current Construction Activity (Column 3)	Over/(Under) Supply Current Vacancy Rate (Column 4)	Add'l SF Needed, 2022-2026 (# 2-1-3-4)	Avg Ann SF Added, 2016-2021	Avg Ann SF Needed, 2022-2026
Metro Denver	272,214.9	293,375.8	11,476.0	2,112.9	7,572.0	5,727.4	1,514.4
Northern Colorado	49,142.9	52,971.9	1,466.5	1,236.0	1,126.5	903.1	225.3
Colorado Springs	35,065.0	38,270.3	0.0	476.2	2,729.1	1,120.7	545.8
Pueblo	13,285.5	14,308.8	0.0	60.6	962.7	13.3	192.5
Grand Junction	8,110.9	8,707.5	0.0	101.2	495.4	19.8	99.1
Balance of State	23,021.2	24,735.7	105.0	395.3	1,214.2	105.0	242.8
Colorado	400,840.4	432,370.0	13,047.5	4,382.2	14,099.9	7,889.3	2,820.0

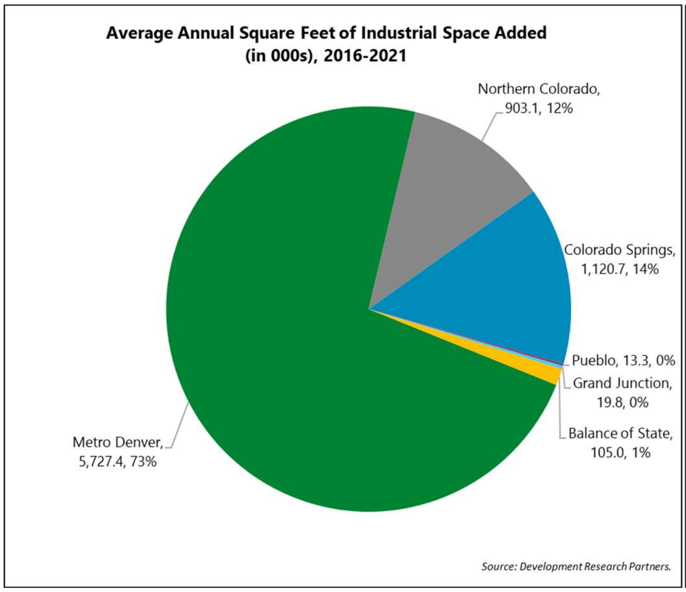
Source: Development Research Partners analysis.

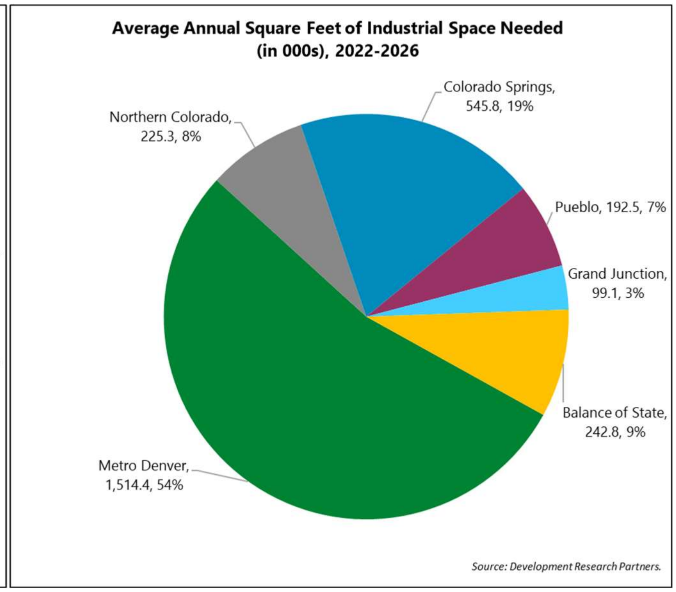
[2] The estimated employment in the industrial-using sectors will generally not match the actual industrial-using employment in the area as some companies may utilize different types of nonresidential space depending upon cost and availability, some employment in the industrial-using sectors may not be industrial-using in that area, and some employees located in industrial space in an area may not be counted in the industrial-using sectors. An adjustment factor for employment in each area was imputed to balance the estimated occupied square feet with actual occupied square feet.

be needed. This value is adjusted by the amount of space currently under construction and the current over-supply or under-supply of industrial space in the area based on the difference between the current vacancy rate and the stable vacancy rate.

Based on current conditions and employment trends, industrial construction activity is expected to decrease by 64.3 percent over the next five years compared with the prior five years. Accounting for the estimated over-supply and current construction activity, there will be an additional 14.1 million square feet of industrial space demanded in the state by 2026, or an average of 2.8 million square feet each year. In contrast, nearly 7.9 million square feet was added each year across the state from 2016 to 2021.

The rapid slowdown of projected construction activity is due to long-term expectations of more stable, consistent increases in industrial employment combined with the rapid increase in new product that occurred from 2016 to 2021. Indeed, the state added 5.8 million square feet or more in each of the past six years. Looking ahead, the construction pace is expected to increase in the Pueblo and Grand Junction market areas but slow in the Metro Denver, Northern Colorado, and Colorado Springs regions.





NATIONAL OVERVIEW

The pandemic upended some trends in the retail market and accelerated others. Many retailers struggled to survive through mass closures and stay-at-home orders, while others thrived. After a wave of 2020 bankruptcies, 2021 was marked by growth, acquisitions, and new business creations as the industry began to stabilize. Despite lingering effects of the health crisis, major challenges in 2021 were no longer pandemic-related closures, but rather supply chain bottlenecks and worker shortages.

More stores opened than closed in 2021, ending a six-year net contraction and erasing more than half of the net closures reported in 2020, according to Marcus & Millichap. The relatively low number of closings in 2021 reflected several factors including the large number of store closures in 2020, a stimulus-driven rebound in consumer spending, and pandemic-related lease re-negotiations. While the pandemic pushed many struggling retailers out of business, new businesses rose in their place. In 2021, a record 5.4 million business applications were filed, up from the previous record of 4.4 million in 2020. Store openings in 2021 were driven by dollar stores and discount, off-price, and warehouse club spaces.

National retail absorption totaled nearly 100 million square feet in 2021, after reporting negative absorption of 7.1 million square feet in 2020, according to CBRE. Net absorption was 20.6 million square feet in 4Q 2021, the fifth consecutive quarter of positive demand. Lifestyle & Mall was the only category to report negative absorption in either 4Q 2021 or for the entire year of 2021. The average rental rate increased 1.6 percent over-the-year to $21.87 per square foot as prime space grew scarce. Rent growth exceeded the long-term average rent for the final two quarters of 2021 and is expected to continue to increase due to a lack of new supply in the pipeline. Improving property fundamentals pulled more investors off the sidelines following elevated uncertainty in 2020, leading to a record number of retail property sales in 2021, according to Marcus & Millichap. Compared to sales made in 2015 through 2019, drug and convenience stores, fast food establishments, and mixed-use storefronts captured a larger proportion of all trades in 2021.

National consumer confidence increased considerably in 2021, rising by 20.4 percent from the fourth quarter of 2020 to the fourth quarter of 2021. In the second quarter of 2021, confidence hit its highest level since the beginning of the pandemic as vaccination rates increased and economic recovery continued. Through the second half of the year, confidence weakened slightly due to pandemic uncertainty and inflation concerns. Despite over-the-year improvements, confidence remained below pre-pandemic levels throughout 2021 and into the beginning of 2022.

The U.S. Census Bureau reported that total retail sales rose a staggering 19.3 percent from 2020 to 2021, well above the 5-year average of 3 percent between 2015 and 2020. All retail business types reported growth over the period. The largest increase occurred in clothing and clothing accessories stores, which reported robust growth of 48.2 percent. Food services and drinking places posted a 32.1 percent increase as consumers started to shift spending patterns from goods to services. The most modest growth was reported in food and beverage stores (+4.2 percent) and health and personal care stores (+9.7 percent). A successful holiday sales season ended 2021 on a strong note with holiday shoppers spending 8.5 percent more on holiday sales in 2021 compared with 2020 and 10.7 percent more compared with 2019, according to Mastercard Spending Pulse. Both online and in-store holiday purchases were higher in 2021 compared with the two previous years.

One caveat to the retail sales growth is that these calculations do not account for inflation. Between 2020 and 2021 the consumer price index increased 4.7 percent and reached a 40-year high of 7 percent growth over-the-year in December 2021. Some of the growth in retail sales was therefore due to an increase in prices as opposed to an increase in the amount of goods purchased, particularly for the sales of gasoline, autos, and groceries, which were among the main drivers of inflation in 2021. Inflation is expected to worsen in 2022 as the ongoing conflict between Russia and Ukraine will further exacerbate price increases for gasoline and many food products. Current data revealed that the consumer price index increased an average of 8 percent from 1Q 2021 to 1Q 2022. On a positive note, as pandemic restrictions loosen, domestic and international travel will continue to ramp up, leading to more in-person shopping and dining.

COLORADO OVERVIEW

Like much of the nation, retail fundamentals in Colorado were negatively impacted by the healthcare crisis but improved during 2021. Economic clarity, job gains, and the vaccine rollout generated greater demand for retail space. There is about 311.7 million square feet of retail space throughout Colorado, of which 57 percent is located in Metro Denver. There are also significant amounts of retail space in the state's mountain-resort communities that attract large numbers of visitors and tourists. Indeed, about 12 percent of the state's retail space is located in the Balance of State, a much higher percentage than any of the other property types covered in this report.

The pandemic that forced mass retail closures caused vacancy rates across Colorado to increase in 2020, but vacancy fell slightly in 2021 as retail activity picked up and the supply of new construction slowed. Across the state, the vacancy rate ranged from a low of 3.7 percent in Northern Colorado to 5.1 percent in Pueblo. On average, retail vacancy in Colorado fell 0.4 percentage points over-the-year to 4.5 percent in 2021. Markets such as Pueblo and Grand Junction were already facing big-box store vacancies and a changing retail landscape before 2020, and the pandemic sped up those trends.

Retail space under construction in Colorado fell 36 percent from the end of 2020 to the end of 2021, declining from about 1.5 million square feet to just under 1 million square feet. While retail construction in Metro Denver increased from 2020 to 2021, construction in the other five regions of the state declined, leading to the total statewide decrease.

In Metro Denver, retail vacancy fell from 5.2 percent in the fourth quarter of 2020 to 4.7 percent in the fourth quarter of 2021. Construction activity rose by 16 percent during the period but remained muted compared to pre-pandemic levels. Positive net absorption was reported in Denver for the third consecutive quarter in 4Q 2021, according to CBRE. Annual net absorption in 2021 made up for nearly half of the total negative absorption in 2020. Construction activity improved at the end of 2021 and overall quarterly sales volume reached $541.1 million, bringing the annual total to $1.3 billion, nearly double the total sales volume in 2020.

The Mountain Region Consumer Confidence Index, which includes Colorado, increased 14.5 percent in the fourth quarter of 2021 compared with the prior year. Nonetheless, the index remained well below pre-pandemic levels at the end of 2021. Heading into 2022, consumer confidence and consumer spending are expected to face headwinds due to rising prices. Further, political uncertainty and the potential for further waves of COVID cases may prompt consumers to tighten their spending in 2022.

TRENDS IN NEW SPACE NEEDS (DEMAND DRIVERS)

After many retailers spent much of 2020 and 2021 in survival mode, 2022 will be a year for reevaluating and rethinking their business strategy, especially as it pertains to their use of space. In general, retail is in a good position to continue its recovery, although limiting factors will include supply chain disruptions and labor shortages. While these factors are expected to moderate over the course of the year, they may ultimately cause retailers to change their space needs.

While many retailers are investing more in warehouse real estate to store inventory, it is unlikely that they will entirely pivot away from a brick-and-mortar footprint in favor of strictly distribution hubs. Rather, e-commerce will shift to a compliment rather than a substitute for physical retail space. Some retailers have opted for a hybrid approach where stores are used partially as a fulfillment center. According to a survey conducted by McKinsey, 44 percent of stores served partially or entirely as fulfillment centers during the pandemic. Survey respondents believe that moving forward, nearly 60 percent of stores will continue to serve at least partially as fulfillment centers. The pandemic forced traditional retail businesses to embrace online and hybrid models, including drive-thru services, ship-from-store services, and the option to buy online, pickup in store. These adaptations will help brick and mortar retailers compete in the ever-evolving, highly competitive consumer market.

The performance of regional shopping malls has changed significantly over the past several years and the pandemic accelerated certain trends that were already underway. Moody's Analytics estimates about 20 percent of the approximately 1,000 malls in the U.S. will close or go through a major repurposing. While some malls will close or be converted to new uses, the mall as we know it is not expected to go away completely. In many cities, shopping malls are among the biggest employers and taxpayers so closure or devaluation of those properties would have significant ripple effects on the local economies. As such, local governments will be reluctant to approve rezoning to replace malls, but rather will support efforts to transform malls to keep them relevant and successful. Even pre-pandemic, empty department stores in malls were being leased to non-traditional retail tenants, such as entertainment uses, and non-retail groups, including medical office or education facilities. Post-pandemic malls will see more space used as showrooms, experiential retail, green spaces, mixed-use development, and events in order to diversify income sources and bring foot traffic to retailers.

INFLUENCES ON THE CONSTRUCTION OF NEW SPACE (SUPPLY)

A continued decline in COVID cases will prompt the return of in-person activities, boosting foot traffic and retail activity in urban cores and office hubs. Further consideration for new consumer shopping patterns and expectations will shape longer-term trends and how retail space will be used moving forward.

New construction deliveries remained muted in 2021. Retail construction hit a 10-year low with 23.5 million square feet completed across the country in 2021, reflecting a 36 percent decrease from 2020 and a 40 percent decrease from 2019, according to CBRE. Rising costs for construction materials and continued labor shortages may further constrain new construction projects moving into 2022. As a result, CoStar predicts that the inventory of retail space will increase steadily at a 0.1 percent pace from now until 2026. The lack of new prime retail space will continue to drive up occupancy levels and support increased rent.

Marcus & Millichap noted that financing for ground-up retail construction has been limited and projects generally need to have a high percentage of the space already pre-leased, ideally to regionally or nationally known tenants. Mixed-use projects where the retail space joins a residential component have been preferred, along with necessity and grocery-anchored centers and single-tenant retail concepts.

CONSTRUCTION FORECAST

The forecast for the additional retail square feet that will be needed over the next five years is based on population growth trends and current supply conditions. The forecast does not differentiate by class of space, size of building, or development amenities. Further, the forecast does not account for replacement of existing space that may become obsolete or damaged.

The demand for retail space is driven by population growth, as forecasted by the Colorado State Demography Office, and the amount of retail space demanded per capita. Over the forecast period, population growth in three of the six analysis areas is expected to accelerate from rates posted from 2016 to 2021. Population growth is expected to accelerate in Metro Denver, Grand Junction, and the Balance of State, while it is expected to increase at the same pace in Colorado Springs and Pueblo. Northern Colorado is the only region where population growth is expected to slow slightly, although it remains the region whose population is expected to increase at the fastest pace (+2 percent). The slowest growing area is expected to be Pueblo (0.6 percent). Overall, the population in Colorado is expected to grow at a rate of 1.2 percent each year from 2021 to 2026, up from 1.1 percent between 2016 and 2021.

Colorado Population Growth Trends

Area	2016	2021	2026	Avg. Annual Pop. Growth (%) 2016-2021	Avg. Annual Pop. Growth (%) 2021-2026
Metro Denver	3,169,413	3,327,093	3,519,727	1.0%	1.1%
Northern Colorado	633,641	702,634	774,844	2.1%	2.0%
Colorado Springs	715,902	762,744	815,117	1.3%	1.3%
Pueblo	164,124	169,372	174,780	0.6%	0.6%
Grand Junction	150,346	156,702	166,565	0.8%	1.2%
Balance of State	696,205	712,617	738,372	0.5%	0.7%
Colorado	5,529,631	5,831,162	6,189,404	1.1%	1.2%

Source: Colorado Division of Local Government, Demography Section.

The amount of retail space per capita has declined in each of the analysis areas over the past five years. The shift in consumer preferences to online shopping, regional shopping centers, and fewer big-box stores has reduced the amount of occupied square feet per capita. The trend is expected to continue through the forecast period with continued investments in logistics and delivery that improve the convenience of online shopping, as well as the shift of shopping centers to more dining and entertainment-oriented options. In general, the amount of retail square feet per capita ranged from 47 to 55 in 2021, with a higher value of 65 square feet per person posted in Pueblo.

Colorado Retail Square Feet Baseline Conditions, 2021

Area	Total Retail Square Feet	Vacant Retail Square Feet	Current Vacancy Rate	Stable Vacancy Rate	Retail Space per Capita
Metro Denver	176,058,710	8,297,061	4.7%	4.0%	50
Northern Colorado	34,006,527	1,252,710	3.7%	3.7%	47
Colorado Springs	43,593,730	2,016,347	4.6%	4.0%	55
Pueblo	11,570,631	588,978	5.1%	4.0%	65
Grand Junction	8,900,338	345,282	3.9%	3.6%	55
Balance of State	37,554,456	1,622,236	4.3%	4.0%	50
Colorado	311,684,392	14,122,614	4.5%	4.0%	51

Source: DRP analysis of Colorado Division of Local Government, Demography Section and CoStar Realty Information data.

The next step in the forecast is to estimate the baseline conditions for the retail stock, including total square feet and current vacancy rates. The forecast depends on an estimated "stable" vacancy rate, defined to be the rate that represents the tipping point for new construction, which generally falls in the 3.6 to 4 percent range for retail space. Specifically, new construction activity is more limited when vacancy rates are higher than the stable vacancy rate and more robust when vacancy rates are lower. The stable vacancy rate varies according to the size of the market, the amount of business churn, and the level of risk tolerance. As such, the stable vacancy rate is estimated to be 3.6 percent in Grand Junction, 3.7 percent in Northern Colorado, and 4 percent throughout the rest of the state.

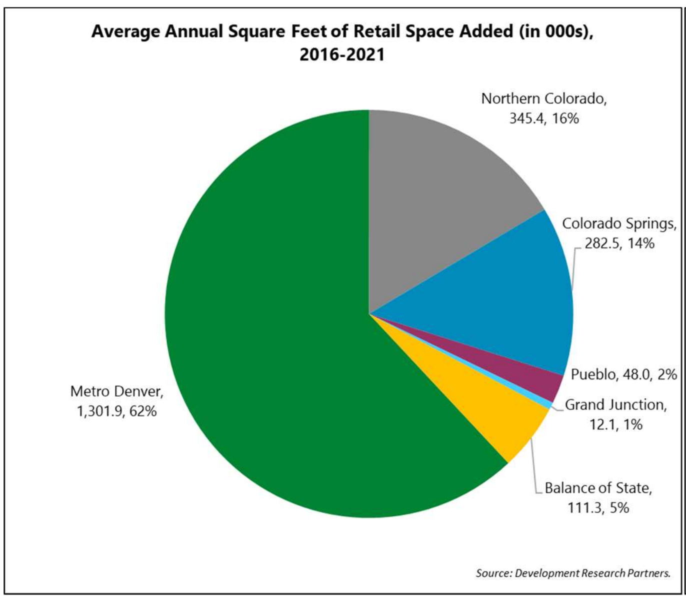
The projected population was multiplied by the estimated retail square footage demanded per capita to determine the amount of retail space needed in 2021 and 2026. The difference between these two values represents the amount of new retail space that will be needed. This value is adjusted by the amount of space currently under construction and the current over-supply or under-supply of retail space in the area based on the difference between the current vacancy rate and the stable vacancy rate.

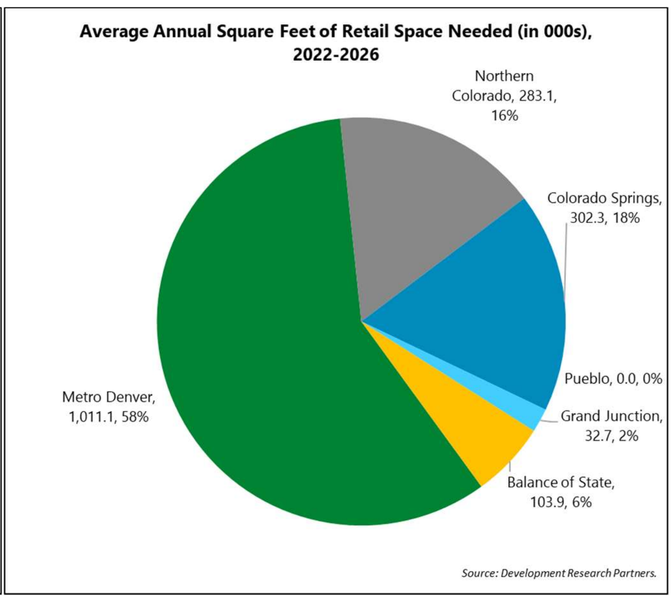
Forecast of Retail Square Feet Needed (in 000s)

Area	2021 Retail Demand (Column 1)	2026 Retail Demand (Column 2)	Current Construction Activity (Column 3)	Over/(Under) Supply Current Vacancy Rate (Column 4)	Add'l SF Needed, 2026-2026 (# 2-1-3-4)	Avg Ann SF Added, 2016-2021	Avg Ann SF Needed, 2022-2026
Metro Denver	167,761.6	174,864.9	793.3	1,254.7	5,055.3	1,301.9	1,011.1
Northern Colorado	32,753.8	34,213.8	50.0	(5.5)	1,415.5	345.4	283.1
Colorado Springs	41,577.4	43,377.1	15.8	272.6	1,511.3	282.5	302.3
Pueblo	10,981.7	10,943.4	0.0	(38.2)	0.0	48.0	0.0
Grand Junction	8,555.1	8,743.3	0.0	24.9	163.3	12.1	32.7
Balance of State	35,932.2	36,683.3	111.3	120.1	519.7	111.3	103.9
Colorado	297,561.8	308,825.8	970.4	1,628.6	8,665.0	2,101.2	1,733.0

Source: Development Research Partners analysis.

Based on current conditions and population trends, construction activity is expected to slow significantly in the retail market over the next five years. Based on the stable vacancy rate estimated for each market, there is still 1.63 million square feet of over-supply in the state that needs to be absorbed before the market moves closer to an equilibrium. Considering the estimated over-supply and current construction activity, there will be an estimated 8.67 million square feet of additional retail space demanded in the state by 2026, or an average of about 1.73 million square feet each year. The average annual demand for the next five years is 17.5 percent lower than the average amount of space added to the market from 2016 to 2021. The pace of activity is expected to slow in all market areas except Colorado Springs and Grand Junction.





NATIONAL OVERVIEW

In fall 2020, about 49.4 million students attended preK-12 public school, a decrease of 1.4 million students compared to fall 2019. This decrease was due almost entirely to disruptions from the Covid-19 pandemic. Public school enrollment was higher in all years from 2010 to 2019 than it was in 2020, ranging from 49.5 million students in fall 2010 to 50.8 million students in fall 2019. About 4.7 million students attended K-12 private schools in 2019-2020, but more recent data for K-12 private school enrollment is limited. A survey from Cato's Center for Educational Freedom found that the average private school enrollment declined about 6 percent between fall 2019 and fall 2020, with about half that decrease among pre-K enrollment alone. Between 2020 and 2021, Cato survey results suggest private school enrollment increased over-the-year, consistent with a larger trend among primary and secondary schools as vaccine rates increased and pandemic restrictions lessened. Enrollment in public elementary and secondary schools is projected to increase nationally by 2025, but at a slower pace than previous growth due to slower population growth and the pandemic, which has forced families to rethink education options. Expenditures on public elementary and secondary schools in 2020 totaled $586.4 billion, or $14,455 per student, up from $13,187 per student in 2019 and $12,559 per student in 2018.

Overall college enrollment increased from 2000 to 2010 before decreasing by 8 percent from 21 million in 2010 to 19.4 million in 2020. While enrollment has been declining every year since 2010, the sharpest decline was between 2019 and 2020 due to effects of the COVID-19 pandemic. In spring 2020, 87 percent of undergraduate students experienced enrollment disruptions or changes at their postsecondary institutions due to COVID-19, with 84 percent experiencing some or all in-person classes moved online. By fall 2020, 73 percent of postsecondary students were enrolled in at least one distance education course. The National Center for Education Statistics (NCES) predicts total undergraduate enrollment to increase minimally year-over-year through 2029. The rising enrollment will increase demand for more facilities, especially in areas of the country with faster growing populations.

In 2020, many colleges and universities struggled financially from revenue losses related to the pandemic. However, 2021 looked brighter for the nation's higher education systems. College and university endowments generated average returns of 30.6 percent in fiscal 2021, the highest average returns since 1983, according to the 2021 NACUBO-TIAA Study of Endowments. Endowments benefited in fiscal 2021 from a market recovery following volatility in 2020 when endowments posted average returns of only 1.8 percent.

The record year for university endowment growth coincided with a year of increased fundraising. Giving to U.S. colleges and universities reached $52.9 billion in 2021, an increase of 6.9 percent from the prior year, according to the Council for Advancement and Support of Education (CASE). Higher-ed institutions have increasingly come to rely on fundraising as a revenue source in recent years, especially as state funding declined following the 2008 financial crisis. Looking ahead, CASE expects giving to continue to rise in 2022, but not at the same rate as in 2021.

Demand for college, especially four-year universities and undergraduate programs, is likely to decline as tuition costs continue to rise and alternative options become increasingly popular. Rising tuition may push students to lower-cost educational options that will limit the need for new space such as online programs, pursuit of degrees that allow competency-based credit like work experience that reduce needed class time and school facilities, and platforms such as Coursera and ExecOnline that partner with universities to deliver online content.

On a positive note, international enrollment in U.S. schools will bounce back with travel barriers removed and COVID restrictions lifted. Further, the Biden Administration has prioritized education spending, estimating a total spending amount of $1.93 trillion from 2021 to 2030.

Enrollment is expected to continue to rise in the short term and reach close to pre-pandemic levels; however, the enrollment outlook provides the greatest uncertainty to the forecast analysis. A strong boost in enrollment will spur more construction activity. However, if demographic and accreditation factors result in declining enrollment, there will be less need for new construction in the mid- to long-term.

COLORADO OVERVIEW

There is an estimated 177.1 million square feet of PreK-12 educational space and 41.7 million square feet of postsecondary public and private university and community college space throughout Colorado. An estimated 58.2 percent of the PreK-12 space is in Metro Denver, while a lower 55.4 percent of the postsecondary institutional space is in Metro Denver. The Colorado Springs area has the second-highest amount of PreK-12 educational space, followed by the Balance of State. For postsecondary institutional space, Northern Colorado has the second-highest amount of space in Colorado, followed by the Balance of State area.

Public PreK-12 enrollment comprises about 95 percent of the pupil membership in Colorado based on data from the Colorado Department of Education. Public PreK-12 pupil membership grew consistently until 2019 with continued population growth in Colorado. However, the pandemic caused pupil membership to decline 3.5 percent from 2019 to 2020, representing the loss of over 30,000 students. About 8,000 of the "lost" students shifted to home school options and 13,000 were Pre-K students with nowhere to go during the pandemic. Pupil membership increased 0.5 percent in 2021, the fastest rate since 2017. It will likely be 2022 or 2023 before pupil membership returns to pre-pandemic levels, at which time student counts will once again track with expected population growth.

According to the Colorado Department of Higher Education, higher education enrollment was down 4.4 percent in the fall of 2020 and the pandemic significantly affected the state's allocation to institutions. However, the state's fiscal year 2021-2022 budget restored budget cuts made to both K-12 and higher education, nearly doubling higher education spending by restoring $494 million that was cut the year prior. Notably, additional funding has been allocated to new programs that support students in need and students who were disproportionately affected by the pandemic.

Despite ongoing economic concerns to the education sector, as schools across the state return to in-person learning and COVID restrictions lift, enrollment will rebound and stabilize. However, the projected declining rate of population growth in Colorado alongside declining birth rates will put downward pressure on PreK-12 enrollment in the long term.

TRENDS IN NEW SPACE NEEDS (DEMAND DRIVERS)

The COVID-19 pandemic forced higher education institutions to alter the way they serve students due to changing student and employer demands. As on-campus activities return and COVID restrictions end, a shift to more hybrid and remote learning may persist. Many families and students have turned to cheaper alternatives, off-campus options, and certificate or skill-based educational resources as the pandemic has challenged the need to investment in traditional four-year programs. In Colorado, this means institutions adapting to offer education that is more accessible while remaining competitive with out-of-state options.

Demand for community and technical college enrollment is traditionally expected to increase during a downturn due to fewer job opportunities resulting in an increase in time available to pursue additional education, training, and retraining. However, community college enrollment was hit harder by the COVID-19 crisis than higher education as a whole due to the disproportionate effect of the pandemic on low-income people and minorities who make up a significant share of community college students. By October 2020, more than 40 percent of households reported a prospective student had canceled all plans for community college, more than double the rate for traditional four-year college students.

Demand for higher education will rise as institutions look to increase capacity and attempt to recoup some of the revenue losses they suffered during the pandemic. Many universities missed out on on-campus revenue streams like food and housing while stay-at-home orders were in effect, and they must grapple with maintaining affordable options for students while attempting to expand budgets to attract new students and increase revenues.

In 2021, the Student Success and Workforce Revitalization Task Force was created by the Colorado legislature to provide a range of bold and innovative efforts Colorado can undertake to make the state's higher education and workforce development system more affordable and accessible. Suggestions from this taskforce included making investments in Colorado's higher education and workforce ecosystem that will ease the financial burden for students, closing the skills gap between education supply and employer demand, and eliminating equity gaps in postsecondary education. Implementing these ambitious recommendations will require concerted collaboration by the state, higher education institutions, and employers, but implementation is expected to lead to a framework of robust and cohesive policies to support the training and education of Colorado's workforce.

Experimental and nontraditional learning programs continue to emerge as a strategy to upskilling and reskilling workers. For example, Amazon has introduced its Career Choice program, where hourly Amazon employees in Colorado can pursue degrees, certifications, and other upskilling opportunities for free at select Colorado colleges and universities. If programs like this prove successful, Colorado may see more collaboration between businesses and higher education, increasing accessibility of higher education to low wage workers and non-traditional learners.

Colorado has mirrored the nation in moving from a model of funding primarily supported by state appropriations to one that considers all sources of revenue, including resident and nonresident tuition and fees. In FY 2000-01, the state covered 68 percent of the cost of college, while students and families were responsible for 32 percent. By FY 2011-12, the balance had effectively reversed. Although General Fund investment has since increased, the split has remained largely the same.

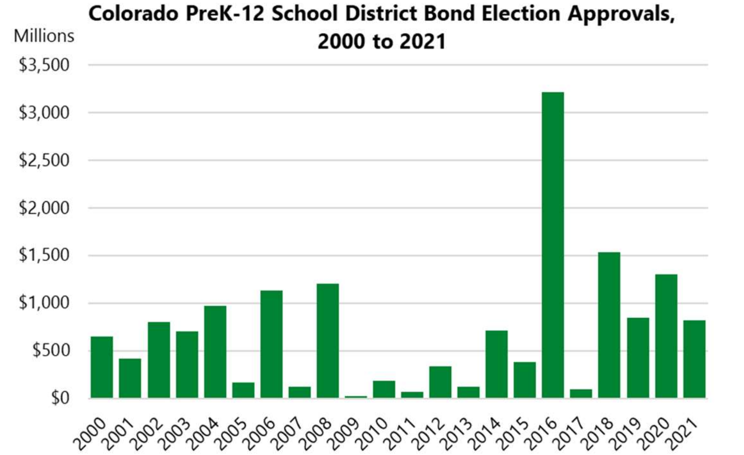
Demonstrated by limited or flat tuition increases across many of the state's institutions, both the state and institutions have made commitments to contain higher education costs. According to the Colorado Department of Higher Education, resident tuition increased an average of 1.6 percent across all of Colorado's public institutions from FY 2020-21 to FY 2021-22. At four-year institutions, the average increase was 2.4 percent and at two-year institutions, the average was 0.1 percent. This shifting funding structure comes at a time when a postsecondary credential has become an economic necessity. The Colorado Commission on Higher Education's Master Plan, Colorado Rises, established a goal of increasing the number of adults who hold a high-quality postsecondary credential to 66 percent by 2025. This attainment goal recognizes research suggesting nearly three-fourths of jobs now require some education beyond high school.

As PreK-12 and postsecondary institutions have largely shifted back to in-person learning options, it will be interesting to see if the importance of physical educational structures returns, or if there will be a lasting shift in preferences towards remote schooling options. While limited shifts in building needs are expected for PreK-12 education, it is possible that postsecondary institutions will rethink the amount of physical space needed.

INFLUENCES ON THE CONSTRUCTION OF NEW SPACE (SUPPLY)

The Russia-Ukraine war has further exacerbated existing issues of inflation and material shortages, especially in the construction industry. The Associated General Contractors (AGC) reported that diesel fuel in February 2022 jumped 57.5 percent from a year earlier and steel mill product prices increased 74.4 percent. Even though the February numbers represent some of the highest over-the-year prices increases ever recorded, even steeper price hikes are expected. As noted in the prior market sections, higher development costs due to inflation, shortages of materials and skilled workers, and the lack of available land and/or rising land prices will continue to hamper development opportunities. The AGC 2022 construction outlook survey found that about 45 percent of contractors expect the available dollar value of education projects in 2022 will be the same in 2022 compared to 2021 and about 35 percent thought the dollar value will be higher. However, the key determinant in an area's ability to construct new educational facilities is the availability of financing.

Colorado PreK-12 School District Bond Election Approvals, 2000 to 2021



Sources: Colorado Department of Education; Colorado School Finance Project.

Financing for school construction through local bond issuances will support PreK-12 construction activity over the next several years. In 2016, a record $3.2 billion in bonds were approved by the state's school districts. Funding approved in bond elections during 2018 to 2021 was relatively constant, averaging $1.1 million per year.

Several districts have also received voter approval for mill levy overrides, allowing a school district to increase its mill levy and generate more property tax revenue. A portion of the additional tax revenue could support renovations and maintenance for Colorado's schools. In 2021, 5 districts approved mill levy overrides, down from 11 district approvals in 2019 and 21 approvals in 2018. The value of the overrides was estimated to be $9 million in 2021 compared with $26.9 million in overrides approved in 2019 and $189.2 million approved in 2018.

Marijuana excise tax has also contributed to an increasing amount of funds for educational facilities construction. The Colorado Department of Education's Office of Capital Construction manages a series of programs and resources for public school construction funding and technical assistance. Marijuana excise tax revenue for the Colorado Department of Education was $175.4 billion in fiscal year 2020-2021. Since the excise tax collection began in 2015, marijuana tax revenue contributed $410 million to the state's Capital Construction Assistance Fund, $30.4 million for the Early Literacy Competitive Grant Program, and $108.5 million for the State Public School Fund.

The largest program funded through the Capital Construction Assistance Funds are Building Excellent Schools Today (BEST) Grants. In FY 2021, Colorado's BEST grant program generated $234 million dollars in school construction projects for Colorado schools, creating or supporting 4,095 jobs, including contractors, architects, and material suppliers. BEST grant projects consist of about 30 percent new schools, additions, and renovations, 30 percent roof repair and replacement, and 20 percent safety and security. Capital construction requests are expected to reach a high in fiscal year 2022-23 before cooling off through fiscal year 2025-26, indicating builders are taking short-term advantage of strong indicators during economic recovery.

CONSTRUCTION FORECAST

The forecast for the additional PreK-12 and postsecondary square feet that will be needed over the next five years is based on population growth trends, student enrollment, nonresident enrollment, and current supply conditions. The forecast does not differentiate by type of school, size of building, or development amenities. Further, the forecast does not account for replacement of existing space that may become obsolete or damaged.

PreK-12 Forecast

PreK-12 pupil membership fell 0.5 percent from 2016 to 2021, with Northern Colorado reporting the only growth from 2016 to 2021 of 1 percent. Pueblo reported the largest average annual decrease of 1.3 percent from 2016 to 2021, followed by Metro Denver (-0.8 percent) and Grand Junction (-0.7 percent). Nearly 58 percent of pupil membership was centered in Metro Denver in 2021.

Colorado PreK-12 Pupil Membership Growth Trends

Area	2016	2021	2026	Avg. Annual Pupil Growth (%) 2016-2021	2021-2026
Metro Denver	527,708	507,619	535,522	-0.8%	1.1%
Northern Colorado	91,475	95,935	104,337	1.0%	1.7%
Colorado Springs	126,141	125,420	134,992	-0.1%	1.5%
Pueblo	27,065	25,381	26,016	-1.3%	0.5%
Grand Junction	23,540	22,736	24,667	-0.7%	1.6%
Balance of State	106,163	104,147	115,090	-0.4%	2.0%
Colorado	902,092	881,238	940,624	-0.5%	1.3%

Note: Data for Colorado public school districts, excluding Detention Center and BOCES.
Source: Colorado Department of Education.

Much of the decrease in student membership occurred in fall 2020 as the number of pupils declined by 3.5 percent compared with the prior year. The largest student decreases were recorded in the early grades, most notably in preschool and kindergarten, as parents switched to home school or were left with no or limited enrollment options due to the pandemic. The 2020 decline in pupil membership was the first recorded at the state level since fall 1988.

Colorado is projected to increase pupil membership by 1.3 percent per year, rising by about 59,000 students from 2021 to 2026. Pupil membership is expected to remain concentrated along the Front Range through 2026, representing about 85 percent of all membership throughout the state. Pupil membership in Northern Colorado is expected to grow by 1.7 percent from 2021 to 2026, due to projected increases in private membership at the Colorado Early Colleges of Windsor and Fort Collins. Pupil membership in the Balance of State is projected to increase at the fastest pace of 2 percent per year. As noted previously, it will likely be 2022 or 2023 before pupil membership returns to pre-pandemic levels, at which time student counts will once again track with expected population growth.

Colorado Public PreK-12 Pupil Membership

Sources: Colorado Department of Education.; Forecast by Development Research Partners.

Utilization of education space varies by institutional level. Based on a sample of PreK-12 schools across Colorado for elementary, middle, and high schools, the average square feet per student ranged from 191 square feet to 196 square feet in Colorado's six market areas. Colorado's school districts supplied an estimated average of 194 square feet per student for middle schools and high schools.

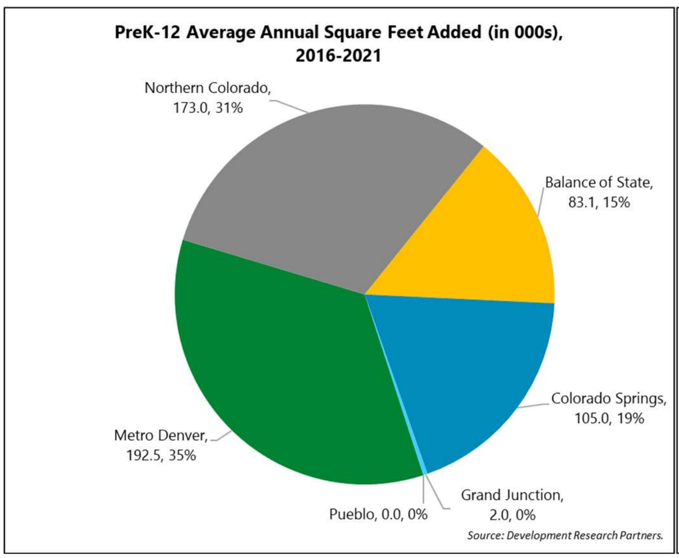
The education forecast depends on current construction activity based on institutional announcements. The forecast also assumes that demolition of existing educational space is likely limited. Therefore, forecast space is expected to increase with growing student enrollment, but will not decrease when enrollment declines.

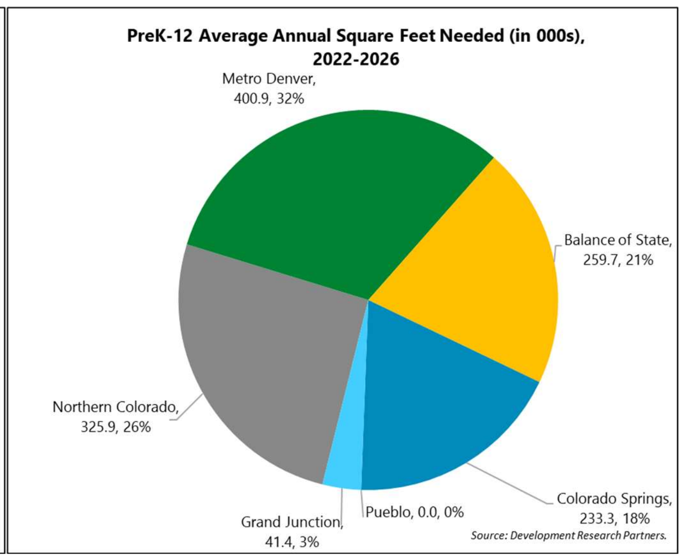
Forecast of PreK-12 Education Square Feet Needed (in 000s)

Area	2021 Education Demand (Column 1)	2026 Education Demand (Column 2)	Add'l SF Needed, 2022-2026 (# 2-1)	Avg Ann SF Added, 2016-2021	Avg Ann SF Needed, 2022-2026
Metro Denver	103,119.5	105,123.8	2,004.3	192.5	400.9
Northern Colorado	18,606.8	20,236.3	1,629.5	173.0	325.9
Colorado Springs	24,624.8	25,791.1	1,166.3	105.0	233.3
Pueblo	5,378.0	5,378.0	0.0	0.0	0.0
Grand Junction	4,542.0	4,749.0	207.0	2.0	41.4
Balance of State	20,799.6	22,098.3	1,298.7	83.1	259.7
Colorado	177,070.7	183,376.5	6,305.8	555.6	1,261.2

Source: Development Research Partners analysis.

Based on current conditions and population trends, new construction activity is expected to increase in the PreK-12 education market over the next five years. There will be an estimated 6.3 million square feet of additional space demanded in the state by 2026, or an average of about 1.3 million square feet each year. The average amount of new square footage needed for the next five years is more than double the average amount of space added to the market since 2016 and reflects a return to typical pre-pandemic construction levels. The pace of activity is expected to increase in all market areas with the exception of Pueblo, for which no change is forecasted.





Postsecondary Forecast

Total enrollment in Colorado's public postsecondary institutions increased 0.3 percent per year from 2016 to 2021. The enrollment increase was driven by attendance at the state's four-year institutions, while enrollment at the state's community and junior colleges decreased 0.3 percent from 2016 to 2021. These trends are expected to be relatively consistent over the next five years, as enrollment is expected to increase 0.3 percent per year from 2022 to 2026 due to student increases in Metro Denver, Grand Junction, and Northern Colorado.

Enrollment at Colorado's private universities fell from an estimated 30,100 FTE students in 2016 to 29,400 FTE students in 2021, a 0.5 percent average annual decline. The vast majority of Colorado's private university enrollment is in the Metro Denver region at institutions such as the University of Denver, Regis University, Colorado Christian University, and others. Based on the trend, enrollment is expected to continue to decline at Colorado's private universities through 2026, limiting the amount of new space demanded from the private sector. It should be noted that Colorado has numerous technical and trade schools. However, many of these systems enroll large numbers of online students, utilize traditional office space rather than college campuses, and have non-traditional programming. The square footage needs for technical and trade schools were excluded from this analysis.

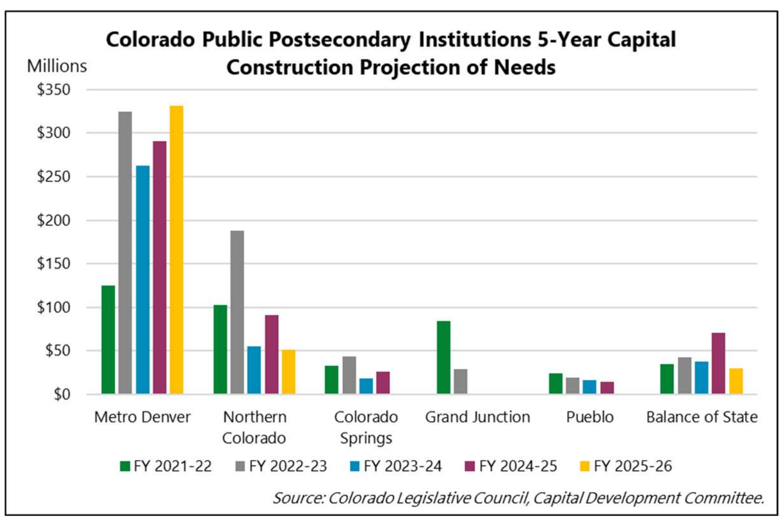
Colorado Higher Education Enrollment Growth Trends

Area	2016	2021	2026	Avg. Annual Pupil Growth (%) 2016-2021	2021-2026
Metro Denver	120,699	123,887	127,114	0.5%	0.5%
Northern Colorado	44,840	45,485	46,419	0.3%	0.4%
Colorado Springs	21,464	21,477	21,635	0.0%	0.1%
Pueblo	7,154	6,596	5,803	-1.6%	-2.5%
Grand Junction	7,830	7,766	7,965	-0.2%	0.5%
Balance of State	16,739	15,194	13,466	-1.9%	-2.4%
Colorado	218,726	220,405	222,402	0.2%	0.2%

Note: Includes public postsecondary and private university enrollment. Excludes federal, trade, technical , and other private postsecondary institutions.
Source: Colorado Department of Higher Education.

Combined, public and private postsecondary enrollment in Colorado increased 0.2 percent per year from 2016 to 2021. An average annual enrollment increase of 02 percent per year is expected to continue from 2021 through 2026.

Based on data published by the Colorado Office of the State Architect, there was an estimated 35.3 million gross square feet at Colorado's public postsecondary institutions in 2021, or an average of 185 square feet per student. The supply of space per student varies widely based on the type of institution. Square feet per student is as low as 74 square feet at some of Colorado's community colleges and is as high as 300 square feet per student in some universities. While online enrollment has influenced the supply of space in Colorado, putting downward pressure on square feet per student, modest enrollment increases have also resulted in a lower amount of square footage per student. An additional 6.4 million square feet of educational space is found on the state's private university campuses.



The education forecast depends on current construction activity based on institutional announcements. The forecast also assumes that demolition of existing educational space is likely limited. Therefore, forecast space is expected to increase with growing student enrollment, but will not decrease when enrollment declines.

Colorado's public postsecondary institutions project consistent capital project needs over the next five years, largely from institutions in the Metro Denver area. The projected value of capital projects in Colorado is expected to grow from $403 million in fiscal year 2021-22 to $647.6 million in fiscal year 2022-23, with 43 percent of the value in Metro Denver. Projected capital needs averaged $432.2 million per year over the last three years of the forecast period.

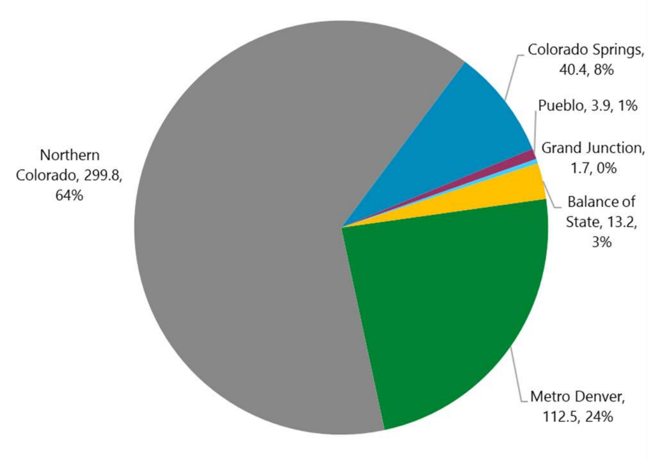
Based on current conditions and trends in the postsecondary market, construction activity at public and private institutions is expected to decrease over the next five years. There will be an estimated 2.2 million square feet of additional space demanded in the state by 2026, or an average of about 436,000 square feet each year. The average demanded each year to 2026 is lower than the average space added each year in the postsecondary market from 2016 to 2021 of 471,500 square feet. The average demand forecast for the next five years is about 7.5 percent lower than the average space added to the market since 2016. Slight increases in activity are expected in Metro Denver and Grand Junction. Northern Colorado is expected to have the highest need, followed by Metro Denver.

Forecast of Postsecondary Education Square Feet Needed (in 000s)

Area	2021 Education Demand (Column 1)	2026 Education Demand (Column 2)	Current Construction Activity (Column 3)	Add'l SF Needed, 2022-2026 (# 2-1-3)	Avg Ann SF Added, 2016-2021	Avg Ann SF Needed, 2022-2026
Metro Denver	23,058.3	24,418.4	356.0	1,004.1	112.5	200.8
Northern Colorado	9,543.2	10,728.4	86.0	1,099.2	299.8	219.8
Colorado Springs	2,304.0	2,361.2	2.1	55.1	40.4	11.0
Pueblo	1,281.8	1,281.8	0.0	0.0	3.9	0.0
Grand Junction	1,042.7	1,064.1	0.0	21.4	1.7	4.3
Balance of State	4,423.6	4,423.6	45.0	0.0	13.2	0.0
Colorado	41,653.6	44,277.5	489.1	2,179.8	471.5	436.0

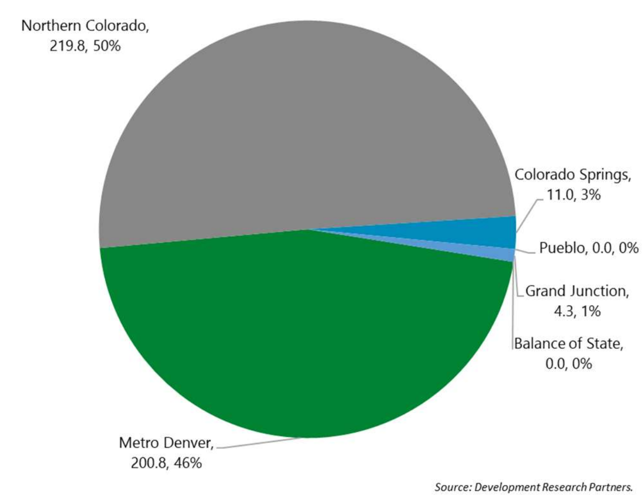
Source: Development Research Partners analysis.

Postsecondary Average Annual Square Feet Added (in 000s), 2016-2021



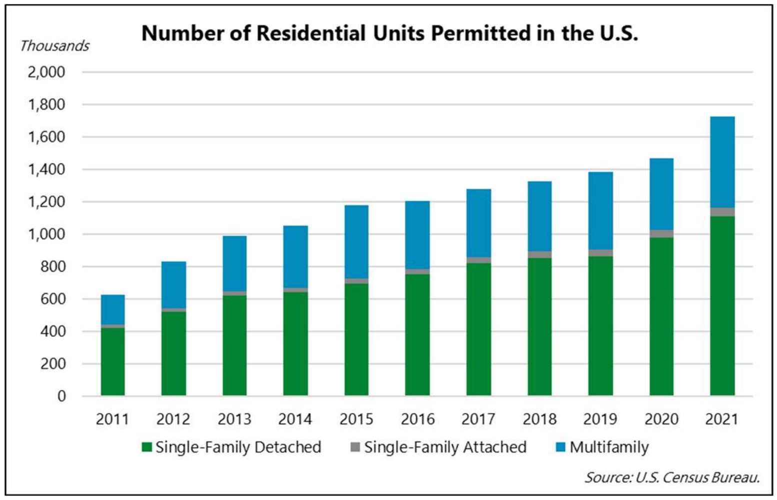
Source: Development Research Partners.

Postsecondary Average Annual Square Feet Needed (in 000s), 2022-2026



Source: Development Research Partners.

NATIONAL OVERVIEW



The pace of residential construction accelerated between 2020 and 2021, with total units permitted increasing 17.6 percent to 1.7 million, the largest annual increase since 2013. This was compared to an annual growth rate of 4.3 percent from 2018 to 2019 and a rate of 6.1 percent from 2019 to 2020. Total residential building permits increased at an average annual rate of 7.5 percent since 2016, with no over-the-year declines reported in the series.

In 2021, multifamily units as a share of total units permitted was 32.7 percent, down from a peak of 38.4 percent in 2015. The concentration of single-family attached units has remained constant around 3 percent, while the share of single-family detached units permitted rose from 58.9 percent in 2015 to 64.2 percent in 2021. The decline in multifamily units in proportion to single-family units reflects a shift in demand to rural and suburban living options, a trend that was accelerated during the pandemic as work-from-home orders decreased workers' needs to be located in an urban core. After an 11 percent increase in the number of multifamily units permitted in 2019, the number of multifamily units permitted fell by 7.7 percent in 2020. Growth in multifamily permitting then increased 27.4 percent between 2020 and 2021 to more than 566,000 units permitted, the highest annual level on record.

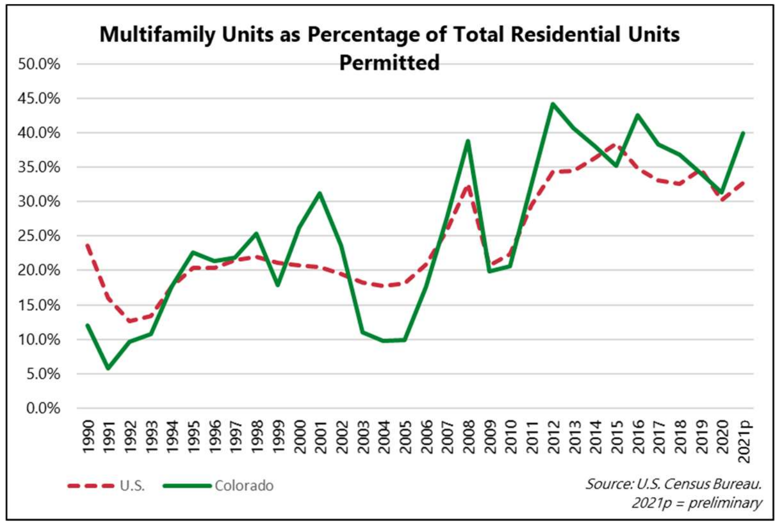
Strong job and wage growth in 2021 supported widespread household formation and housing demand, while sharply rising home prices and limited supply of single-family homes pushed much of that demand toward multifamily options. A record number of apartments were leased in 2021, which pushed asking rents higher and vacancy rates to new lows. Data tracked by CBRE indicated that investment in multifamily properties in the fourth quarter of 2021 was the highest quarterly total on record and totaled more than the annual volume in 2020 or any single year prior to 2015.

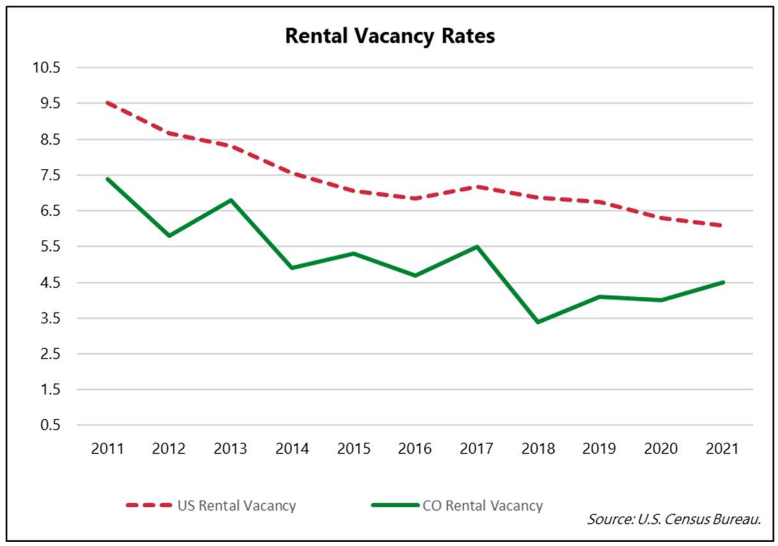
CBRE reported that national multifamily vacancy fell 2.2 percentage points year-over-year to a record low of 2.5 percent in the fourth quarter of 2021. Class A properties, which had been hit the hardest by the 2020 downturn, reported the largest annual decline in vacancy in 2021, largely driven by residents returning to urban submarkets in the second half of the year. At the end of 2021, Class A vacancy was 3.1 percent, while Class B and Class C vacancy had fallen to 2.5 percent and 2.1 percent, respectively. CBRE predicts new construction deliveries in 2022 will eclipse 2021 volumes, although persistently low vacancy rates suggest overbuilding is not a concern. National rent growth is expected to moderate between 6 percent and 7 percent in 2022.

COLORADO OVERVIEW

The availability of high-quality jobs, particularly in the urban core of Denver and along the Front Range, boosted apartment development in recent years. The number of multifamily units permitted in Colorado hit a record 24,044 units in 2021, up 90 percent from the 12,708 units permitted in 2020 and up 45 percent from the most recent peak of 16,599 units in 2016. Even with large fluctuations in permitting activity since the onset of the pandemic, an average of 16,238 units were permitted in each of the last five years.

In 2021, multifamily represented 40 percent of all residential units permitted in Colorado, up from 31.4 percent in 2020 and ending a year-over-year declining trend since the most recent peak of 44.1 percent in 2012. Over the past decade, the share of multifamily units permitted in Colorado has generally trended higher than the national share. In 2021, Colorado's share of multifamily permitting was 7.2 percentage points higher than the national share.





An underlying issue since the financial crisis has been multifamily demand that far outpaced supply. This was exacerbated during the COVID-19 pandemic as renter behavior shifted and many people reevaluated their living situations. Soaring home purchase prices added to the problem as many would-be first-time home buyers were priced out of homebuying options and were forced to remain in the rental market.

According to data from the U.S. Census Bureau, the household population living in multifamily units in Colorado increased from 14.4 percent in 2015 to 15.5 percent in 2020.

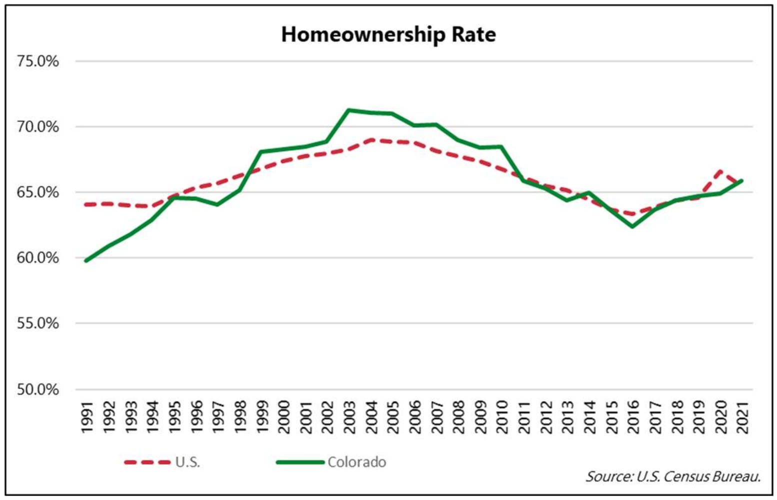
In general, the Colorado multifamily market outperformed the nation during 2021, with higher increases in average rental rates and some of the highest absorption rates in the country. Data from the U.S. Census Bureau revealed that the rental vacancy rate in Colorado was 4.5 percent in 2021, up from 4 percent in 2020. Despite the uptick of vacancy in 2021, Colorado's rental vacancy rate, which generally tracks below the national rate, was 1.6 percentage points below the U.S. rental vacancy rate.

Metro Denver was one of the nation's top performing multifamily markets in 2021. In 2021, Denver absorbed 12,500 units, the highest amount of annual absorption behind 2018 (10,500 units absorbed). RentCafé ranked both Denver and Colorado Springs among the top 50 most sought after rental markets in the country. Denver has long been one of the top destinations for millennials, a trend that continues as an analysis from Rent.com found that Denver is the fourth best city for young professionals in their early-20s to mid-30s. These robust trends bode well for the continued health of Colorado's multifamily market.

TRENDS IN NEW SPACE NEEDS (DEMAND DRIVERS)

Multifamily housing demand hit record levels in 2021, signaling a rebound for the industry after a challenged year in 2020. Prior to the onset of the pandemic, demand for multifamily housing had been bolstered by strong economic fundamentals through 2019 with the longest economic expansion on record, which lasted 128 months. In 2020, the pandemic unexpectedly created a robust housing market propped up by historically low mortgage rates and a shift in demand away from multifamily housing in urban cores to more spacious single-family homes in the suburbs. At the same time, multifamily housing demand declined across the country, characterized by a decline in net absorption, rising vacancy, and falling rental rates between 2019 and 2020.

Starting at the end of 2020 and throughout 2021, demand for multifamily housing rebounded even as the single-family market continued to flourish. In 2021, the housing market was supported by the ongoing economic recovery, job creation, wage growth, and household formation. Housing trends continue to be shaped by homeownership and renting trends of millennials – age 26 to 41 – who are now the largest working-class age demographic and make up about 22 percent of the U.S. population. Further, the oldest members of Gen Z are now 25 years old and have begun to form households, adding to housing demand – particularly in multifamily. At the other end of the age spectrum, the population aged 65+ is increasing at the fastest pace of the age cohorts and many of these individuals are looking for the more carefree housing options that multifamily units provide.



Housing choices were shaped by financial markets and household situations in 2021. The growing economy was boosted by household formation in 2021, which had been artificially suppressed by the pandemic. Although homeownership is generally trending upwards, rising home prices have created a barrier for many people hoping to transition from renting to owning. The homeownership rate in the U.S. fell slightly in 2021 but remained above the 2019 rate. The homeownership rate in Colorado continued to rise after hitting a low of 62.4 percent in 2016. The rate rose to an annual average of 65.9 percent in 2021, up from 64.9 percent in 2020. On an annual basis, homeownership rates are still below the peaks reached in the early 2000s but have generally been increasing for the past five years.

Historically low mortgage rates through 2021 offered better affordability options despite record home price increases. National home sales rose 8.5 percent from 2020 to 2021, and median existing-home prices for all housing types rose 15.8 percent between December 2020 and December 2021, according to the National Association of Realtors. Further, homes flew off the market in record times, with an average duration a property remained on the market of 19 days in December 2021, down from 21 days in December 2020 and down from 41 days in December 2019.

During this time, multifamily housing demand shot up across the country. Net absorption reached a new record of 167,000 units in 2021, up 238 percent from 2020 and up 97 percent from 2019, according to CBRE. Further, absorption was 58 percent higher than the previous record of 390,000 units in 2000. Nationally, 42 percent of annual net absorption in 2021 occurred in the third quarter and 25 percent in the fourth quarter, largely in dense urban markets that had suffered the greatest negative absorption trends in 2020. All 69 markets tracked by CBRE recorded positive net absorption in 2021. Denver was included in the top 15 metros across the U.S. that accounted for 62 percent of the total net absorption in 2021. Vacancy fell to a record low in the fourth quarter of 2021 and average rents exceeded their pre-pandemic high by 7.4 percent. Analysts expect that even with a record number of apartment deliveries expected in 2022, vacancy rates will stay low, and rents are expected to continue to increase. A similarly high level of deliveries will need to continue for several years in order for the supply of multifamily to catch up with demand.

The health crisis accelerated household migration from dense urban cores to more suburban settings and the aging population is expected to continue to support suburban relocations. Despite this longer-term trend, rising office occupancy will spur renewed renter demand in central business districts in the short term. While hybrid and remote working situations mean that living near the office may not be as important in the future as it once was, living near the office will remain a key consideration for many renters.

With the cost of homeownership out of reach for many residents, increased demand for apartments drove up rental prices in 2021. Increasing interest rates in 2022 may dampen demand for homeownership, shifting some of that demand to multifamily options instead. Even with record-breaking construction activity, continued multifamily demand is expected to cause swift absorption of the new units that come online in 2022, increasing vacancy only slightly as rental rates continue to climb.

INFLUENCES ON THE CONSTRUCTION OF NEW SPACE (SUPPLY)

Despite a host of challenges on the construction and development front, the new construction pipeline remained active in 2021. Builder confidence for newly built single-family homes remained near-record highs throughout 2021. According to the National Association of Home Builders/Wells Fargo Housing Market Index, builders struggled to keep up with demand in a time of limited existing inventory. Challenges for builders of all project types included materials and worker shortages, supply chain bottlenecks, and inflation. Moving forward, these challenges are expected to continue to impact multifamily development from both a budgetary and timeline perspective. Further, increases in interest rates throughout 2022 will affect future development.

Multifamily investment volume increased by 128.2 percent year-over-year in 4Q 2021, with the quarterly total higher than the annual total from 2020. Multifamily accounted for 41.5 percent of total commercial real estate investment volume in 2021. Denver was the 9th largest U.S. market for multifamily investment volume in 2021, according to CBRE.

In 2021, not only did investors pay record prices to acquire multifamily assets, but aggressive terms also became the norm. Seven-figure, nonrefundable earnest money deposits, shortened due diligence time frames, and cash offers became standard in Metro Denver and in similar markets across the country. The preference to invest in nontraditional gateway markets like Denver has continued to grow and will keep Metro Denver transactions highly competitive.

The Federal Housing Finance Agency (FHFA) has set a $78 billion cap on multifamily purchase volumes for Fannie Mae and Freddie Mac in 2022, an 11.4 percent increase over 2021. Analysts expect higher availability of debt and more investor appetite for multifamily assets to continue into 2022.

In some communities, especially those that have experienced rapid population growth, new development faces community opposition and more restrictive development regulations. In Colorado, residential development restrictions could be approved by more communities. In 2021, a new law was passed in Colorado which allows cities and counties to require the construction of more affordable housing, though developers must also be given an alternative to the construction of new affordable housing units, like paying a fee instead. There is concern that this requirement will hinder future multifamily development and pass costs on to market-rate renters and homebuyers. Another bill currently under consideration by the Colorado legislature would funnel $203 million worth of federal COVID relief funds into a state grant program targeted at encouraging both affordable and workforce housing. Traditionally, housing assistance has been for lower income brackets; however, this bill will improve support systems for middle income families who are caught between skyrocketing housing costs and ineligibility for assistance.

The built-to-rent market – consisting of single-family homes built specifically to be rented – has been growing rapidly over the last several years and is expected to continue gaining momentum in years to come. Built-to-rent has become an attractive option for investors and developers due to better potential for profit compared with multifamily investment. Further, as home seekers continue to be priced out of homeownership, single-family rentals may be a more desirable alternative compared with multifamily rentals.

Home prices have continued to increase across the nation and in metropolitan areas throughout Colorado. The decline in home affordability in many areas of the state is a continuing issue that will shape the supply of multifamily units for years to come.

CONSTRUCTION FORECAST

The forecast for the total number of multifamily units that will be needed over the next five years is based on population growth trends and current supply conditions. The forecast does not differentiate by number of bedrooms, product price, or development amenities. Further, the forecast does not account for replacement of existing units that may become obsolete or damaged.

Colorado Population Growth Trends

Area	2016	2021	2026	Avg. Annual Population Growth 2016-2021	2021-2026
Metro Denver	3,169,413	3,327,093	3,519,727	1.0%	1.1%
Northern Colorado	633,641	702,634	774,844	2.1%	2.0%
Colorado Springs	715,902	762,744	815,117	1.3%	1.3%
Pueblo	164,124	169,372	174,780	0.6%	0.6%
Grand Junction	150,346	156,702	166,565	0.8%	1.2%
Balance of State	696,205	712,617	738,372	0.5%	0.7%
Colorado	5,529,631	5,831,162	6,189,404	1.1%	1.2%

Source: Colorado Division of Local Government, Demography Section.

The base of the multifamily development forecast is expected population growth. Colorado's population increased an average of 1.1 percent per year from 2016 to 2021. This pace of growth is expected to accelerate over the next five years, with growth averaging 1.2 percent per year from 2021 to 2026. About 85 percent of the state's population is located along the Front Range, with about 57 percent of the state's population in the Metro Denver area alone. Expected growth rates vary across the state with the Northern Colorado region likely to grow at the fastest pace and Pueblo and the Balance of State expecting slower increases. The population of all 64 counties in Colorado is in Appendix A.

The pandemic caused downward revisions in population projections across all market areas due to rising death rates, decreasing birth rates, and decreasing in-migration due to stay-at-home orders and economic uncertainty that caused less movement across the country. Household population is projected to grow 1.2 percent per year from 2021 to 2026, up from the 1.1 percent annual increase experienced from 2016 to 2021. This higher growth rate also reflects decreases in average household size, which is expected to decline from 2.52 people per household in 2016 to 2.46 people in 2026. Northern Colorado and Colorado Springs tend to have larger household sizes than the rest of the state. The household size for renters and those in multifamily units tends to be smaller than for homeowners.

The rate of household formation in Colorado is expected to outpace population growth, rising at an average annual rate of 1.5 percent from 2021 to 2026, about 0.3 percentage points higher than projected population growth. The pandemic slowed local migration and moving patterns and caused some people to move back in with family members, causing the household formation rate to fall in 2020. With the recovery of the economy and the tapering of pandemic restrictions, household formation has risen. Northern Colorado is expected to have faster household growth, while Pueblo and the Balance of State are expected to have slower household growth.

The next step in the forecast is to estimate the baseline conditions for multifamily housing, including the number of units and typical occupancy rates. The latest data on housing units is from 2020 and housing unit data from both the U.S. Census Bureau and the Colorado State Demography Office were used to verify trends.

Of the more than 2.5 million housing units in Colorado, about 21.9 percent of them are multifamily units housing 15.8 percent of the state's household population. The percentage of multifamily units varies significantly throughout the state, with Metro Denver having the highest percentage and Grand Junction having the lowest. Occupancy rates also vary across the state, with the Balance of State having the lowest percentage, which reflects ownership of second homes and prevalence of short-term rental units in the resort regions. While occupancy rates vary from year to year depending upon market and economic conditions, the "stable" occupancy rate is the average occupancy rate from 2015 to 2020 based on U.S. Census Bureau data.

Colorado Multifamily (MF) Baseline Conditions, 2020

Area	Total Housing Units	Number of MF Units	MF as % of Total Units	Stable MF Occupancy Rate	% of Population Living in MF
Metro Denver	1,389,168	380,734	27.4%	91.7%	19.8%
Northern Colorado	280,454	43,272	15.4%	92.4%	12.2%
Colorado Springs	301,796	51,794	17.2%	91.2%	12.5%
Pueblo	72,124	7,068	9.8%	91.0%	6.6%
Grand Junction	67,696	5,822	8.6%	93.0%	6.8%
Balance of State	390,444	59,347	15.2%	44.5%	8.2%
Colorado	2,501,682	548,038	21.9%	85.8%	15.8%

Source: DRP analysis of Colorado State Demography Office and U.S. Census Bureau, American Community Survey data.

Assuming that occupancy trends, size of household, and percentage of the population living in multifamily units remains relatively stable between now and 2026, the projected increase in the state's population will support about 546,000 occupied multifamily units by 2026. This represents 70,405 additional multifamily units needed by 2026.

Forecast of Multifamily Units Needed

Area	2020 MF Demand (Column 1)	2026 MF Demand (Column 2)	MF Building Permits, 2021 (Column 3)	Over/(Under) Supply Current Occ. Rate (Column 4)	Add'l Units Needed, 2021-2026 (# 2-1-3-4)	Avg Ann Units Added, 2015-2020	Avg Ann Units Needed, 2021-2026
Metro Denver	347,953	396,282	17,017	1,142	30,170	8,699	5,028
Northern Colorado	40,204	50,614	2,092	(227)	8,545	1,550	1,424
Colorado Springs	47,962	54,309	3,925	(712)	3,134	889	522
Pueblo	6,594	6,600	0	(161)	167	12	28
Grand Junction	5,474	7,147	330	(61)	1,404	90	234
Balance of State	27,608	31,249	680	(1,217)	4,177	566	696
Colorado	475,795	546,200	24,044	(1,236)	47,597	11,806	7,933

Source: DRP analysis of Colorado State Demography Office and U.S. Census Bureau, American Community Survey data.

There were 24,044 multifamily units permitted in 2021, a record year for multifamily building permits, and about 70 percent higher than the annual average from the five previous years. Based on an analysis of the relationship between building permits and the number of units added, it was determined that a direct correlation between the two variables in the short-term is minor, while the long-term correlation is higher. This is because there is generally a lag between when the permit is issued and when the unit is completed. Therefore, the 70,405 units needed is reduced by the number of multifamily units permitted in 2021 as it is expected that the units already permitted will be completed by 2026. Factoring current estimated occupancy rates compared with the average from 2015 to 2020, an additional 47,600 multifamily units are needed, or an average of 7,933 units per year. This represents about a 33 percent reduction in the average number of new multifamily units needed each year for 2021 through 2026 compared with the average number added each year between 2015 and 2020.

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APPENDIX A: POPULATION BY COUNTY

Population by County

County	SDO Est. 2015	SDO Est. 2016	SDO Est. 2017	SDO Est. 2018	SDO Est. 2019	SDO Est. 2020	SDO Proj. 2021	SDO Proj. 2022	SDO Proj. 2023	SDO Proj. 2024	SDO Proj. 2025	SDO Proj. 2026
COLORADO	5,446,595	5,529,631	5,599,590	5,676,914	5,734,915	5,782,915	5,831,162	5,892,723	5,963,969	6,035,249	6,110,279	6,189,404
Adams	490,351	497,822	503,706	511,422	516,482	520,070	523,658	529,889	536,459	544,468	552,931	563,098
Alamosa	15,885	15,936	16,053	16,184	16,247	16,330	16,416	16,518	16,601	16,632	16,661	16,690
Arapahoe	629,965	637,656	642,976	650,167	653,804	655,044	658,284	665,143	672,831	680,585	688,688	696,148
Archuleta	12,009	12,362	12,758	13,034	13,194	13,367	13,540	13,695	13,862	14,031	14,200	14,376
Baca	3,530	3,505	3,523	3,550	3,565	3,478	3,450	3,422	3,394	3,369	3,345	3,321
Bent	5,966	5,753	5,968	5,984	5,980	5,585	5,590	5,570	5,551	5,538	5,528	5,504
Boulder	320,352	323,957	325,414	328,055	328,827	330,860	332,897	334,017	335,342	337,297	339,361	342,171
Broomfield	65,831	67,707	69,655	71,322	72,669	74,470	76,280	78,203	80,468	82,654	85,021	87,404
Chaffee	18,108	18,519	18,967	19,250	19,391	19,515	19,637	19,735	19,868	19,996	20,127	20,285
Cheyenne	1,806	1,794	1,788	1,783	1,777	1,741	1,730	1,732	1,735	1,738	1,741	1,743
Clear Creek	9,158	9,237	9,427	9,385	9,414	9,387	9,380	9,407	9,448	9,487	9,529	9,609
Conejos	7,930	7,842	7,757	7,660	7,551	7,439	7,320	7,293	7,272	7,253	7,235	7,214
Costilla	3,516	3,516	3,516	3,515	3,501	3,485	3,475	3,451	3,432	3,412	3,394	3,372
Crowley	5,839	5,837	5,837	5,837	5,840	5,843	5,861	5,881	5,906	5,931	5,959	5,984
Custer	4,467	4,496	4,539	4,591	4,646	4,711	4,725	4,704	4,684	4,664	4,643	4,622
Delta	30,039	30,489	30,703	31,033	31,237	31,160	31,079	31,186	31,337	31,481	31,680	31,965
Denver	675,534	686,468	693,134	702,679	710,143	717,632	725,109	733,281	743,929	752,761	761,528	769,877
Dolores	2,087	2,088	2,088	2,091	2,085	2,080	2,093	2,078	2,066	2,055	2,044	2,036
Douglas	322,079	328,333	335,933	343,267	351,212	360,037	368,862	373,735	378,980	384,634	391,025	396,427
Eagle	52,780	53,041	53,724	54,205	54,819	55,624	55,687	56,233	56,763	57,189	57,617	58,053
Elbert	24,061	24,450	24,942	25,366	25,667	26,188	26,473	27,262	28,167	29,063	29,986	30,943
El Paso	677,969	692,295	704,797	717,812	725,497	731,641	737,865	746,682	756,953	767,251	778,050	788,854
Fremont	47,213	47,284	47,564	47,990	48,379	48,885	48,971	48,920	48,892	48,877	48,875	48,941
Garfield	57,495	58,161	58,871	59,769	60,558	61,723	62,339	63,121	63,988	64,876	65,826	66,885
Gilpin	5,553	5,578	5,635	5,707	5,751	5,799	5,823	5,807	5,797	5,784	5,771	5,745
Grand	14,961	15,042	15,147	15,268	15,408	15,707	15,720	15,863	16,033	16,161	16,297	16,433
Gunnison	15,826	16,082	16,464	16,681	16,941	16,944	16,946	17,049	17,182	17,307	17,438	17,557
Hinsdale	813	809	805	801	798	795	792	795	799	804	810	815
Huerfano	6,706	6,721	6,737	6,758	6,778	6,804	6,810	6,789	6,778	6,766	6,754	6,738
Jackson	1,381	1,379	1,379	1,379	1,379	1,378	1,366	1,354	1,344	1,334	1,324	1,313
Jefferson	565,161	571,744	575,923	579,821	582,568	582,782	582,978	586,503	590,159	593,620	596,798	600,052
Kiowa	1,406	1,420	1,428	1,442	1,455	1,459	1,461	1,455	1,451	1,446	1,441	1,436
Kit Carson	7,561	7,480	7,400	7,285	7,182	7,078	7,026	7,022	7,024	7,026	7,030	7,038
Lake	7,159	7,246	7,352	7,332	7,555	7,417	7,380	7,444	7,518	7,591	7,666	7,749
La Plata	54,300	54,884	55,034	55,731	55,509	55,651	55,791	56,708	57,830	58,930	60,052	61,264
Larimer	333,445	339,128	344,187	350,661	356,800	359,701	362,616	367,181	372,573	378,055	383,898	390,111
Las Animas	14,997	14,906	14,817	14,729	14,643	14,560	14,442	14,402	14,372	14,339	14,308	14,269
Lincoln	5,553	5,573	5,591	5,621	5,642	5,661	5,674	5,746	5,786	5,822	5,867	5,917
Logan	21,873	21,772	21,691	21,611	21,505	21,408	21,334	21,439	21,548	21,667	21,791	21,917
Mesa	148,774	150,346	152,148	154,047	155,109	155,910	156,702	158,041	159,724	161,643	163,909	166,565
Mineral	756	771	789	811	835	863	890	897	904	911	919	925
Moffat	13,038	13,266	13,223	13,291	13,364	13,283	13,301	13,249	13,195	13,140	13,086	13,032
Montezuma	25,522	25,543	25,556	25,612	25,731	25,853	25,860	26,029	26,225	26,432	26,649	26,910
Montrose	41,457	41,594	41,768	42,084	42,501	42,810	43,306	43,799	44,375	44,939	45,518	46,111
Morgan	28,335	28,294	28,425	28,933	29,130	29,106	29,082	29,358	29,620	29,878	30,132	30,384
Otero	18,817	18,797	18,763	18,756	18,736	18,679	18,705	18,608	18,507	18,402	18,294	18,182
Ouray	4,550	4,721	4,730	4,736	4,887	4,880	4,873	4,887	4,909	4,931	4,942	4,961
Park	15,975	16,461	16,866	17,366	17,511	17,430	17,349	17,520	17,725	17,915	18,091	18,252
Phillips	4,499	4,505	4,514	4,515	4,521	4,528	4,551	4,543	4,541	4,539	4,541	4,542
Pitkin	17,701	17,691	17,658	17,643	17,413	17,363	17,313	17,318	17,356	17,390	17,434	17,516
Prowers	11,891	11,887	11,930	11,971	12,011	12,014	12,017	11,976	11,932	11,885	11,836	11,785
Pueblo	162,449	164,124	165,549	166,686	167,485	168,434	169,372	169,997	171,022	172,131	173,466	174,780
Rio Blanco	6,621	6,616	6,568	6,588	6,528	6,532	6,535	6,517	6,506	6,491	6,475	6,456
Rio Grande	11,778	11,734	11,688	11,644	11,600	11,555	11,510	11,500	11,504	11,509	11,538	11,562
Routt	23,824	23,952	24,162	24,314	24,521	24,840	24,723	25,070	25,527	26,056	26,584	27,112
Saguache	6,183	6,188	6,214	6,276	6,359	6,409	6,464	6,482	6,504	6,520	6,533	6,542
San Juan	696	697	700	703	706	708	706	704	701	698	697	694
San Miguel	7,825	8,001	8,014	8,154	8,123	8,068	8,075	8,196	8,372	8,544	8,715	8,885
Sedgwick	2,388	2,392	2,396	2,401	2,405	2,409	2,399	2,403	2,419	2,431	2,447	2,462
Summit	30,268	30,817	31,133	31,095	31,190	31,013	30,836	31,047	31,242	31,422	31,615	31,859
Teller	23,006	23,607	24,153	24,523	24,679	24,779	24,879	25,165	25,455	25,750	26,040	26,264
Washington	4,682	4,745	4,845	4,812	4,826	4,825	4,824	4,838	4,852	4,866	4,884	4,896
Weld	284,855	294,513	304,595	313,219	322,335	331,184	340,018	347,860	356,699	364,877	373,613	384,733
Yuma	10,039	10,056	9,973	9,955	10,010	10,001	9,992	10,005	10,029	10,052	10,081	10,121

Source: Colorado State Demography Office, Population Estimates and Projections, October 2021.

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